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NUZI
VOLUME I

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NUZI

REPORT ON THE EXCAVATIONS AT YORGAN TEPA NEAR KIRKUK, IRAQ
CONDUCTED BY HARVARD UNIVERSITY IN CONJUNCTION WITH THE
AMERICAN SCHOOLS OF ORIENTAL RESEARCH AND
THE UNIVERSITY MUSEUM OF PHILADELPHIA
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VOLUME I

TEXT

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FOREWORD

Since the main body of this volume was completed—several years past—many discoveries have been made in the Near East which have a bearing on our findings at Yorgan Tapa. Unfortunately, the constant press of other work has given me but little opportunity to expand the manuscript in order to correlate this new material in relation to our own discoveries. This, in so far as the earlier levels are concerned, has been done in Appendix A by Mr. Eliot. Throughout the text the effort has been primarily to describe as completely as possible the various phenomena unearthed at Yorgan Tapa, rather than to interpret them in the light of Near Eastern history. It is hoped that by this means the Nuzians may be seen as human beings, rather than as ciphers in a chronological list.

It would be difficult indeed to name all those who through their kindness, criticism and advice have aided me in the course of this work. But to Dr. Robert H. Pfeiffer in particular I extend my most sincere thanks, not only for his constant assistance and patience, but also for allowing me to report on work performed in the field under his direction. Here, too, I record my gratitude to the late Dr. Edward Chiera for permission to report on that work at Nuzi instituted and pursued by him. I also take the opportunity here to express my gratitude to Mr. Forbes and Mr. Sachs of the Fogg Museum for their continued encouragement and trust. To Mr. Lauriston Ward, of the Peabody Museum of Archaeology and Ethnology, I am indebted for many valuable suggestions, and particularly to Mr. Henry W. Eliot, who painstakingly read, and often revised, my manuscript, and whose work on Chapters I and II of Part I really amounts to co-authorship. Nor would this account have been possible without the complete and willing co-operation of those with whom I worked in the field. My most grateful acknowledgment, however, must go to my wife, for without her sound judgment and continuous assistance this work might not yet be completed. In conclusion, for their substantial contributions toward the cost of printing this volume, it is a very real pleasure to express my gratitude to the American Council of Learned Societies and the American Schools of Oriental Research.

R. F. S. S.

August 31, 1938.

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¹ Abbreviations: Str., stratum; Gr., grave; IP., Pavement I; Dr., drawing; El., elevation. The numbers near or above any pavement or object show its distance in centimeters above or below plain level.

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The following table gives the section and the house-group under which each room of Strata II and III may be found in the architectural description.¹

STRATUM II					
Room No.	Section	Group	Room No.	Section	Group
A1	N.W.	26	C50	N.W.	35
A3	"	"	C51	"	"
A4	"	"	C52	"	"
A5	"	"			
			D1	N.W.	36
B20	N.W.	27	D2	"	"
B26	"	"	D3	"	"
B30	"	"	D4	"	"
			D5	"	"
C15	N.W.	31	D6	"	"
C17	"	"	D7	"	"
C19	"	"	D9	"	"
C20	"	"	D10	"	"
C22	"	"	D11	"	34
C23	"	"	D12	"	36
C24	"	32	D13	"	"
C25	"	31	D14	"	"
C26	"	32	D15	"	"
C28	"	31	D20	"	"
C29	"	33	D21	"	"
C30	"	"	D33	"	"
C31	"	"			
C32	"	31	F1	N.W.	24
C34	"	33	F2	"	22
C35	"	34	F3	"	23
C36	"	32	F4	"	"
C37	"	"	F5	"	26
C38	"	35	F6	"	23
C39	"	"	F7	"	25
C40	"	32	F8	"	23
C41	"	35	F9	"	"
C42	"	34	F10	"	26
C43	"	35	F11	"	25
C44	"	"	F12	"	23
C45	"	"	F13	"	25
C46	"	"	F14	"	24
C47	"	"	F15	"	23
C48	"	"	F16	"	25
C49	"	34	F17	"	24

¹ Abbreviations used: N.W., Northwestern Ridge; S.W., Southwestern Section; N.E., North-eastern Section; P., Palace; C.W., City Wall.

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Room No.	Section	Group	Room No.	Section	Group
F19	N.W.	25	H16	N.W.	29
F23	"	"	H17	"	31
F24	"	24	H18	"	29
F25	"	"	H19	"	33
F26	"	22	H20	"	29
F27	"	26	H21	"	"
F28	"	25	H23	"	30
F29	"	26	H24	"	33
F30	"	22	H25	"	"
F31	"	24	H28	"	29
F32	"	22	H29	"	30
F33	"	24	H30	"	"
F34	"	22	H32	"	33
F35	"	26	H35	"	30
F37	"	24	H36	"	"
F38	"	"	H37	"	33
F39	"	"	H38	"	36
F40	"	22	H40	"	34
F41	"	"	H41	"	30
			H42	"	"
G9	N.W.	27	H43	"	"
G10	"	"	H44	"	34
G13	"	28	H45	"	30
G17	"	25	H47	"	"
G20	"	27	H50	"	31
G21	"	28	H52	"	30
G21A	"	"	H59A	"	"
G22	"	"			
G24	"	"	I10	N.W.	36
G28	"	"	I17	"	"
G29	"	29	I18	"	"
G32	"	"	I19	"	"
G33	"	24	I21	"	"
G35	"	29	I23	"	"
G40	"	"	I24	"	"
G43	"	24	I25	"	"
G44	"	"	I26	"	"
G50	"	29	I28	"	"
G51	"	"	I29	"	"
G52	"	"	I31	"	"
G53	"	"	I32	"	"
			I39	"	"
H5	N.W.	29			
H6	"	"	K32	P.	"
H7	"	"	K36	"	"
H8	"	"	K38	"	"
H9	"	31	K41	"	"
H11	"	29	K42	"	"
H13	"	"	K54	"	"
H14	"	"	K62	"	"
H15	"	"	K62B	"	"

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Room No.	Section	Group	Room No.	Section	Group
K63	P.		L15B	P.	
K176	S.W.	10	L16	"	
K184	"	"	L19	"	
K189	"	"	L20	"	
K193	"	12	L22	"	
K199	"	10	L23	"	
K300	"	"	L24	"	
K301	"	12	L25	"	
K303	"	9	L26	"	
K303A	"	"	L27	"	
K314	"	"	L29	"	
K315	"	13	L30	"	
K327	"	"	L31	"	
K330	"	"	L40	"	
K333	"	9	L44	"	
K338	"	12	L101	"	
K339	"	"	L114	"	
K342	"	13	L115	"	
K346	"	12	L116	"	
K363	"	"			
K406	"	13	M1	P.	
K411	"	11	M2	"	
K419	"	"	M4	"	
K421	"	13	M7	"	
K425	"	11	M9	N.W.	30
K425A	"	"	M33	P.	
K432	"	13	M34	"	
K435	"	11	M61	"	
K438	"	"	M64	"	
K442	"	"	M69	"	
K453	"	"	M74	"	
			M77	"	
L1	P.		M78	"	
L1A	"		M79	"	
L2	"		M89	"	
L2A	"		M90	"	
L3	"		M91	"	
L3A	"		M92	"	
L4	"		M93	"	
L4B	"		M94	"	
L5	"		M97	"	
L6	"		M100	"	
L7	"		M296	"	
L8	"				
L9	"		N64A	P.	
L10	"		N120	"	
L11	"		N163	N.E.	18A
L12	"		N171	"	20
L13	"		N316	"	18A
L14	"		N318	"	20A
L15A	"		N336	"	"

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Room No.	Section	Group	Room No.	Section	Group
N337	N.E.	18A	P356	S.W.	6
N343	"	"	P357	"	"
N358	"	20	P361	"	2
N359	"	20A	P362	"	4
N364	"	18A	P369	"	"
N366	"	21	P370	"	2
N367	"	"	P375	"	5
N368	"	20A	P376	"	"
N373	"	20	P377	"	10
N383	"	20A	P378	"	4
N383A	"	"	P379	"	"
N385	"	21	P382	"	2
N386	"	20A	P387	"	"
N392	"	20	P388	"	5
N393	"	"	P389	"	"
			P399	"	2
P35	S.W.	3	P400	"	"
P37	"	"	P401	"	"
P39	P.		P444	"	10
P47	S.W.	3	P445	"	5
P302	"	9	P446	"	8
P309	"	"	P447	"	7
P310A	"	"	P448	"	8
P311	"	10	P449	"	7
P313	"	"	P452	"	8
P321	"	6	P456	"	"
P321A	"	"	P457	"	"
P322	"	"	P459	"	"
P323	"	3	P460	"	"
P324	"	4	P461	"	"
P325	P.		P464	"	3
P326	S.W.	10	P465	"	8
P326B	"	"	P466	"	"
P329	"	6	P467	"	"
P331	"	3	P468	"	2
P332	"	4	P469	"	1
P334	"	"	P469B	"	"
P335	"	3	P470	"	3
P335A	"	"	P471	"	1
P340	"	6	P472	"	3
P341	"	"	P473	"	2
P344	"	"	P474	"	3
P345	"	4	P475	"	1
P347	"	6	P476	"	"
P348	"	"	P478	"	2
P349	"	"	P479	P.	
P350	"	"	P482	S.W.	1
P351	"	4	P483	"	2
P353	"	"	P485	"	3
P354	"	"	P486	"	9
P355	"	5	P487	"	10

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P488	S.W.	2	S124	N.E.	19
			S126	"	18
Q103	P.		S128	"	19
R46	P.		S129	"	"
R46A	"		S130	"	"
R48	"		S131	"	18
R50	"		S132	"	19
R51	"		S133	"	"
R56	"		S134	"	15
R57	"		S136	"	19
R60	"		S137	"	"
R66	"		S137B	"	"
R70	"		S139	"	"
R71	"		S140	"	16
R72	"		S141	"	19
R75	"		S142	"	15
R76	"		S143	"	16
R80	"		S144	"	"
R81	"		S148	"	15
R83	"		S150	"	"
R84	"		S151	"	18A
R85	"		S152	"	19
R86	"		S153	"	18
R87	"		S154	"	15
R88	"		S155	"	18
R95	"		S156	"	"
R96	"		S157	"	15
R98	"		S158	"	"
R118	"		S159	"	"
R125	"		S160	"	19
R127	"		S161	"	18
R135	"		S164	"	"
R170	"		S165	"	"
R179	"		S166	"	19
R188	"		S167	"	"
R463	"		S175	"	15
			S178	"	18
S58	P.		S178A	"	"
S104	N. E.	18	S182	"	19
S105	"	15	S183	"	"
S106	"	"	S190	"	16
S107	"	"	S304	"	18A
S108	"	17	S307	"	"
S110	"	"	S395	"	20
S111	"	16			
S112	"	19	U374	S.W.	1A
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V2	C.W.		V408	C.W.	
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V5	"		V414	"	
V7	"		V417	"	
V8	"		V418	"	
V390	"		V422	"	
V394	"		V423	"	
V396	"		V424	"	
V403	"		V428	"	
V404	"		V439	"	
V405	"		V440	"	

STRATUM III

Room No.	Section	Group	Room No.	Section	Group
A1	N.W.	1	C5	N.W.	5
B1	N.W.	2	C6	"	"
B2	"	"	C7	"	"
B3	"	"	C8	"	"
B4	"	"	C9	"	"
B7	"	"	C10	"	"
B10	"	"	C11	"	"
B13	"	"	C12	"	6
B16	"	"	C13	"	"
B17	"	4	C14	"	"
B18	"	"	C15	"	"
B20	"	"	C19	"	"
B23	"	"	C20	"	"
B24	"	"	C21	"	"
B25	"	"	C21A	"	"
B26	"	"	C23	"	"
B28	"	"	C26	"	7
B30	"	"	C30	"	9
B32	"	5	C31	"	"
B33	"	4	C34	"	"
B34	"	"	C35	"	10
B35	"	5	C36	"	7
B36	"	4	C37	"	"
B37	"	"	C40	"	"
B38	"	5	C40A	"	"
B39	"	4	C41	"	8
B40	"	"	C42	"	"
B41	"	"	C43	"	"
B42	"	"	C44	"	"
B43	"	2	C46	"	"
C1	N.W.	5	C49	"	10
C2	"	"	C50	"	8
C3	"	"	C51	"	"
C4	"	"	F5	N.W.	1

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Room No.	Section	Group	Room No.	Section	Group
G1	N.W.	2	H49	N.W.	11
G2	"	"	H50	"	6
G3	"	"	H51	"	11
G4	"	"	H53	"	"
G5	"	"	H54	"	"
G10	"	4	H55	"	"
G11	"	2	H58	"	"
G12	"	"	H59	"	19
G14	"	3	H59A	"	11
G15	"	4	H60	"	19
G17	"	2	H61	"	"
G26	"	3	H62	"	"
G28	"	"	H64	"	"
G31	"	"	H66	"	"
G32A	"	"	H69	"	"
G34	"	"	H75	"	"
G36	"	"			
G37	"	"	I21	N.W.	19
G41	"	"			
G42	"	"	K327	S.W.	18
G49	"	"	K330	"	"
G55	"	"	K342	"	"
G56	"	"	K342A	"	"
G57	"	"	K346	"	"
G58	"	"	K381	"	"
G59	"	"	K406	"	"
G60	"	"	K421	"	"
G61	"	"	K434	"	"
G64	"	"	K436	"	"
G64A	"	"	K437	"	"
G65	"	"	K443	"	"
G66	"	"	K450	"	"
H1	N.W.	5	P309	S.W.	17
H4	"	6	P334	"	"
H9	"	"	P400	"	16
H17	"	"	P451	"	"
H19	"	9	P458	"	"
H24	"	"	P486	"	17
H25	"	"			
H30	"	11	S160	N.E.	12
H32	"	9	S166	"	"
H35	"	11	S168	"	"
H36	"	"	S169	"	"
H37	"	9	S174	"	"
H40	"	10	S185	"	14
H41	"	11	S186	"	"
H42	"	10	S191	"	13
H43	"	11	S191A	"	"
H44	"	10	S194	"	14
H46	"	11	S195	"	13

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Room No.	Section	Group	Room No.	Section	Group
S195A	N.E.	13	X147	N.E.	15
S195B	"	"	X162	"	"
S195C	"	"	X172	"	"
S305	"	14	X180	"	"
S306	"	"	X181	"	"
S308	"	"	X181A	"	"
S312	"	"	X187	"	"
S317	"	"	X192	"	"
S397	"	12	X196	"	"
S398	"	"			

INTRODUCTION

In the winter of 1925 Miss Gertrude Bell, at that time Director of Antiquities in the newly established kingdom of Iraq, became interested in the history of the people who produced the so-called Kirkuk tablets. A few of these inscriptions had come to light in recent years from well-shafts, or cuts into the side of the citadel of the modern city of Kirkuk, or from surface erosions in the immediate vicinity, but of the culture that produced them practically nothing was known.

As a result of these circumstances, Dr. Edward Chiera was commissioned to undertake exploratory excavations at Kirkuk under the auspices of the Iraq Museum in conjunction with the American Schools of Oriental Research, of which he was at that time Annual Professor. However, one look at the densely populated city that now covers this citadel convinced him that excavation in an open and scientific manner would be impossible. Consequently, the alternative was to find in the vicinity some other ancient site of the same culture, unencumbered with modern dwellings.

Here Dr. William Corner, the resident Civil Surgeon, was of great assistance. A man interested in the folk-lore, as well as the more ancient history of this region, he recalled the tale of a certain native, 'Aṭīyah by name, who, digging in a field, came upon a great cache of inscribed clay tablets. Twenty donkeys, so the story goes, were needed to carry them to Baghdad so that they might be sold. Time and repetition of the story no doubt had greatly augmented the size of the original find, but the fact remained that tablets had actually been found nearby within relatively recent times. This place, obviously, was worth investigating. Eventually the site was identified as a small mound (Plan 2) near the foot of the larger mound of Yorgan Tēpa, three kilometers southwest of the village of Tarkhalan and thirteen kilometers southwest of Kirkuk itself.

It was at this spot, where excavations were first conducted, that the city of Nuzi, provincial center of the Hurrians in the second millennium before Christ, was discovered.

Yorgan Tēpa is situated on the edge of the broad flat plain that lies between the foothills of the Kurdish mountains to the northeast, Jabal Ḥumrīn and the Tigris River one hundred and thirty kilometers to the southwest, and the River Zab on the northwest. It is a low flat-topped mound (Pl. 2, A), square in outline, measuring slightly over two hun-

dred meters in length and width, and rising on an average of five meters above the surrounding plain (Plan 3). In reality many irregularities and erosion channels cut its surface. One of these channels cuts its way through from slightly northwest of the center of the mound to emerge in the center of the northeast side; another, starting from the same point and running in the opposite direction, bisects the southwestern side.

The southeastern side of the *tepa* has been most affected by the processes of erosion. Its gradual but steady slope to plain level is broken only by two lesser gullies: one near the southern corner and the other close to the eastern corner. This is the usual type of erosion seen in the immediate vicinity. Almost without exception, the mounds of this Kirkuk region are weathered away to a greater extent on the southern and southeastern sides—the direction of the prevailing winds and storms.

The surface of the mound showed also a prominent ridge along the northwestern edge, a rise just southeast of the center, another at the southern corner, and the highest near the center of the northeastern side, well in from the edge; in each case rising to a height of over five meters above the present plain level.

In the vicinity there is a considerable number of other mounds (Plan 1). Toward the south are the two prehistoric sites of Kudish Saghīr and Kudish Kabīr and in the same direction is Barghūt (Nuzi period?). To the west are Alwan (prehistoric) and the Wiron Shehir group, partly prehistoric and partly (the Mughayr and Uwaynah mounds) of the Nuzi period. To the north is Hīṣār (Roman on top), Kusiliar (Nuzi period), and Debuk Tēpa (period undetermined), while far to the northwest is the mound of Yeichi (Roman). Far to the east is the citadel of Kirkuk, and closer is the high, steep Tell Jalau, the foot of which is reputed by present-day belief to have been the site of the village of Tarkhalan seventy or a hundred years ago. Besides these, there are numberless smaller mounds and rises, all showing evidences of early habitation. In the desert to the southwest are scores of other mounds of considerable size, the most imposing of which is the distant Buldakh, with Sassanian remains on its surface.

Thus we see a region which from very early times has been occupied by a large population. Many of the mounds are so situated that agricultural life without artificial irrigation is still possible; accordingly, their desertion cannot be wholly due to a lack of water. In the light of the warlike character of the early peoples of Mesopotamia, annihilation, or capture and captivity by enemies, would seem to be the most probable explanation for such complete desertion of homes and

possessions. There are, of course, less apparent causes which must be considered as possibilities: changes in trade routes, pestilence and migration.

Since this region is not dependent for moisture on the changing whims of a meandering watercourse, the belt of land about twelve miles in width parallel to the Kurdish foothills is the present-day seat of a sparse but constant agricultural population. The people vary in race according to the particular village they claim as home, some being Turkomans, others Kurds or Arabs. In the main, the Turkomans predominate, occupying most of the villages in the region of Yorgan Tepa, with a scattering of Kurds, and out towards the desert a few forlorn clusters of Arab dwellings. Actually, though an individual may claim purity of stock, these three races have become so intermixed that no group as a whole retains exclusively its typical racial characteristics.

Crops consist of wheat, barley, and cotton, with occasional patches of maize or fall vegetables. Neither dates nor rice, common in the local diet, are produced here. Variety beyond this, or interest in new products or better methods of production, is lacking among these people. Nevertheless, they have managed for many generations to wrest from the soil some kind of a living, relying largely on rainfall for their crops. The realization that toil is a necessary supplement to the grace of Allah has made of them steady and willing workers. It has also given them a serious, contemplative, stolid state of mind particularly conducive to careful work. This is especially true of the Turkoman. The Kurd is as hardy and steady a worker, but is so unreceptive to new ideas that he is seldom fitted for a post of any great responsibility on the excavations. The Bedouin Arab, on the other hand, differs from both. His inherent love of freedom and his volatile, carefree nature have made him a pleasant friend and companion, but a less reliable workman when careful, tedious and painstaking work is to be done. Of all the responsible positions among our workmen during the four seasons of excavation, only one was held by a Bedouin and only one by a Kurd.

The Turkomans who made up the greater part of our working force were, on the whole, honest, interested and capable workers, when properly trained and decently treated. They responded with loyalty and enthusiasm to fair treatment, partly because we represented the most lucrative source of their livelihood, and partly because they appreciated the novel experience of being treated as human beings.

The Turkoman seems to have none of the nomadic urge. Except for a month or two in the spring, when they take their flocks to graze on the fresh grass of the desert, they are permanently established within

their villages. Living there from generation to generation within the same house, repairing it when necessary and rebuilding it when an occasional cloudburst wrecks it, they have preserved the architectural forms of very early times. Architectural features that were puzzling on the excavations often found their explanation in the present-day houses of the village. One reason, of course, is that the building medium, which in both ancient and modern times is mud-brick, dictates to a large extent the result; but may not these very people, living here today, be the heirs to the past they are digging up? The very name of the chief village of the region, Tarkhalan, is an echo of Tarkulli, a village mentioned in the Nuzi texts 3500 years ago.

This village, in which the Expedition House was situated, may be taken as typical of its kind. The houses themselves vary in size according to the wealth of the owner rather than to the number of their occupants. Entering one of these houses from the street, one fights off the half-starved dogs that snarl before the gateway. The crude wooden door, swinging stiffly on a solid door-post socketed above and below, opens and one enters the large courtyard that is an essential part of each building. Here, except in the worst weather, the flocks stay at night; here, in the mire or dust, is thrown the slop and refuse of the house. At the far end of the court is the main group of rooms, covered with a flat roof reached by an outside stairway. The principal living room is in the center, high-ceilinged and provided with raised sleeping benches. On both sides are rooms for the storage of cotton or grain, their height, identical with that of the central room, divided into a story and a half to increase the space for storage. Farther along is a tiny three-walled room housing the circular bread-oven, and beyond are lesser rooms for storage and for sheltering cattle in quantity proportionate to the wealth of the owner. Perhaps there is even a separate roofed storehouse in the court to hold the porous water-filter jars and a high sleeping-platform for summer use. It is not uncommon for one courtyard to be shared communally between several separate families, but even in these cases the house groups remain distinct one from the other. Narrow, tortuous streets outside serve the double purpose of passageway and open sewer.

The social life of the village centers about a tea house where the men not at work sit, and gossip, and carry on that stream of languid, inconsequential talk so puzzling to the Occidental. Or perhaps they squat in the friendly shade of a wall near the door of the village Croesus, while the children play and shout from the prominent elevation of the communal dung heap.

The population is composed entirely of Sunnite Moslems: simple minded, stolid, and illiterate. They perform the required rites in a matter-of-fact fashion, but betray neither fanaticism nor deep religious emotions. Most of them pray with regularity, they abstain from pork and alcohol, and only the godless fail to keep, at least in part, the fast of Ramadān. It is of interest to note that frequently the industry and energy of a man working on the dig is in inverse ratio to his devoutness. In fact, the amount of time consumed in ablutions and prayers during working hours by certain of our more leisurely workers was astounding. Such creditable godliness eventually found its reward in a permanent release from all paid labor so that the pious could devote their entire time to these holy pursuits!

Brief account of the excavations. It has seemed advisable in this volume to treat the various cultures and the periods within these cultures in their natural chronological order, without reference to the individual campaigns or to the work of individual directors. For that reason it will be appropriate to give here a very brief summary of the work as it was done season by season.

During the winter of 1925-26 Dr. Edward Chiera started the first excavation at this site. Although the work of that season was sponsored by the Iraq Museum and the American Schools of Oriental Research, we have been allowed to include a report of that campaign in this volume. Excavating for a brief period with an untrained force and no assistance other than that of an interpreter, and with only a very limited sum of money, a very creditable amount of work was done. The point of excavation chosen was the small rise three hundred meters north of Yorgan Tēpa, reputed locally to be the spot where 'Atīyah found his legendary twenty donkey-loads of inscribed tablets. This site proved to be a private house, divided into courtyard, living rooms, storage rooms, etc., all of which will be described in greater detail in their proper place. The tablets found here conformed to the Kirkuk type and gave ample proof that this building, in antiquity, had been the property of an individual named Shurki-tilla.

Before the limited funds were exhausted, this house was excavated almost in its entirety, and a beginning was made on the adjoining house of Tehip-tilla, from which came a great store of tablets.

In the season of 1927-28 Dr. Chiera returned again to Tarkhalan, this time as Field Director of the American Schools of Oriental Research and head of the Harvard-Baghdad School Expedition, to carry on more completely and thoroughly the work he had started. He was accompanied by Mrs. Chiera and his two children; by Mr. Emmanuel Wilen-

sky, of Haifa, as architect; Dr. E. A. Speiser, Annual Professor of the American Schools of Oriental Research; and R. F. S. Starr of the Fogg Museum, general assistant. A house in the village of Tarkhalan was rebuilt and enlarged to serve as the expedition's headquarters.

In that season the house of Shurki-tilla was completely cleared, and the house of Tehip-tilla was excavated close to the limits of its remains. Work was started almost immediately on a neighboring small mound in which were discovered the two houses of Shilwi-teshub and Zigi. These two dwellings were cleared almost completely. During this same season, extensive work was begun on the mound of Yorgan Tēpa, proven by the tablets to have been the site of the flourishing Hurrian city, Nuzi. By the end of this season, the greater portion of the palace, which occupied the center of the mound, was brought to light, along with its great collection of courtyards, storage rooms, living quarters and reception rooms.

In the season of 1928-29, Dr. Robert H. Pfeiffer of Harvard University, Annual Professor of the American Schools of Oriental Research for that year, took over the direction of the expedition. He was accompanied by Mrs. Pfeiffer. Mr. Wilensky again returned as architect, this time with his wife, and was assisted in his work on the plans and drawings by Mr. Pinchas Delougaz. Mr. Starr continued as general assistant. The work in this season was devoted entirely to Yorgan Tēpa. The palace was fully uncovered, as well as the two large areas to the southwest and northeast of the palace. The latter appear to have been living quarters and, in most instances, are easily divisible into separate, independent units of the usual private house type. Beside this, Pit L4 was begun in order to obtain a cross-section of the levels of the *tēpa* from the surface down to virgin soil. This was carried down as far as Pavement V.

In the season of 1929-30, Dr. Frederick Lutz, Annual Professor of the American Schools of Oriental Research, and his wife spent a short time with the expedition. Mr. and Mrs. Wilensky were again with the expedition. Mr. Robert W. Ehrich represented the Peabody Museum of Harvard as anthropologist; Mr. Charles Bache represented the University Museum of the University of Pennsylvania as general assistant, and Mr. Starr succeeded to the post of Director.

The operations of that season were concentrated on the ridge along the northwestern side of the mound and resulted in the clearing of the temple which occupied the center of this space, opposite the palace. A portion of the city wall at the southeastern foot of the mound was cleared; soundings for culture identification were made in the low rises

surrounding the *tepa*, and at the end of the season's work at Yorgan Tēpa two weeks were spent in investigating the prehistoric mound of Kudish Şaghīr close by.

In 1930-31, Mr. and Mrs. Wilensky were again with the expedition. Mr. Bache continued as assistant. Dr. T. J. Meek, of Toronto University, Annual Professor that year for the American Schools of Oriental Research, was the epigraphist, and Mr. Starr, accompanied by Mrs. Starr, was again Director. In this season, Strata II and III of the Northwestern Ridge were further exposed, and the city wall area at the southeastern foot of the mound was enlarged. The majority of the season was devoted to the two major tasks of uncovering the successive levels of the temple below the one previously discovered, and of completing, in a much enlarged area, Pit L4.

It is evident even from this brief summary that the major portion of the work at Yorgan Tēpa was concerned with the uppermost levels. These yielded inscriptions similar to the previously known Kirkuk tablets, estimated by epigraphists to have been written about 1500 B. C. The constant reference to "Nuzu" in the texts proves this to have been the name of the Hurrian city which stood here some 3500 years ago. However, since the name in the genitive case, Nuzi, has passed into currency, it has seemed advisable to retain it. One of the Nuzi tablets, from Saushshattar, King of Mitanni, established a date of 1475 B. C., and shows that the citizens of Nuzi were then subservient to that king.

The occupants of these upper levels of the mound were not the last people to live on the site. There is a suggestion of Assyrian habitation in one spot, and certain proof of even later use in Parthian and early Sassanian times. Of the latter occupation there remained only a few walls immediately below the surface, and a few of the Nuzi period which became Partho-Sassanid through reclamation and re-use. Their storage pits, graves, coins, and terra-cotta vessels are the only substantial proofs of their past occupation. How much has been lost by erosion is uncertain. The scarcity of Partho-Sassanid sherds on the surface and at the foot of the mound would suggest a few scattered houses rather than a closely packed city.

Even later the mound was again used, if not actually lived upon, as shown by frequent Moslem graves of indeterminate date.

After the Hurrians, then, the Assyrians, Partho-Sassanians and Moslems used the mound. Discounting the Assyrian and Moslem traces as too unsubstantial, we have the Hurrian and the Partho-Sassanian as the last two to leave really important evidence of occupation. The latter,

because of its intermixture of basic Babylonian, Parthian, Sassanian, and Roman pottery forms, decorative motifs, and customs, will hereafter be designated by the general term "Late Period."

The Hurrians of Nuzi are responsible for a great part of the rise and lateral expansion of the mound. The period of occupation by this people was one of considerable length, and evidently one of sufficient prosperity in the peaceful intervals between raids to have allowed for a rapid and extensive rise in the elevation of the mound.

However, the test pits put through to virgin soil in Yorgan Tapa show that the Hurrian city of Nuzi accounts for by no means the greatest part of the total deposits of the mound from the time of its first settlement. Below are strata showing an occupation fully as long as that of Nuzi, if depth may be taken as an indication. Tablets in these levels indicate that the name of the town was then Ga.Sur, and it is by this name, therefore, that the culture will be referred to in these pages. Below these levels the deposits show a more or less indeterminate culture interpenetrating with that of Ga.Sur, which may represent the beginnings of Ga.Sur (since it is noticeably more crude), or may belong to an inferior people who occupied the site at that time; for convenience this has been included, in our discussions, with the Ga.Sur period. Still further down are four levels yielding an abundance of sherds and other objects which can unhesitatingly be ascribed to prehistoric times, since they are characterized by pottery painted in one color and having unmistakable affinities with the painted wares of other Near Eastern sites. These levels extend to virgin soil.

Thus, it is seen that the site was successively Prehistoric, Ga.Sur, Nuzi, and Late Period. To avoid confusion, it should be stated here that in the Foreword of Volume II these periods are referred to as Prehistoric, Akkadian, Hurrian, and Partho-Sassanid or Late Period. The Akkadian Period, thus denominated, is identical with the Ga.Sur Period referred to in this volume, the term Ga.Sur having been substituted to avoid raising the question of dating (which is positively determined for the latter part of this period by the tablets, but not so certainly for the earlier part). The term Nuzi was substituted for Hurrian as having a more precise application.

From the first three of these occupancies, objects and remnants of buildings of sufficient importance remain to justify detailed descriptions. In so far as it is possible, they will be described in their proper chronological order rather than in the reverse order, that of their discovery.

Method of the architectural account. As stated before, the Prehistoric and Ga.Sur levels are described in their proper chronological order, starting with the earliest level of each and working through to the latest. The situation in the Nuzi levels is more complex. Here, owing to the extent of the area under consideration, each section is described within its logical and natural boundaries, from its earliest to its latest period, before attempting to discuss an adjacent section. In that way the influence of the building plan of a preceding level will still be recognized in the discussion of the subsequent stratum.

The natural divisions into which the city of Nuzi is separated, and the order in which they will be discussed, are as follows (cf. Plan 3):

1. Temple (Squares G-H).
2. Palace (Squares L, M, R).
3. Northwestern Ridge (Squares A, B, C, D, F, G, H, I).
4. Southwestern Section (Squares K, P).
5. Northeastern Section (Squares N, S).
6. City Wall and Related Buildings (Squares W, X).
7. Suburban Dwellings (Plan 4, top of page).

The temple is given first place because it is the only building having a direct and unbroken sequence from Ga.Sur through to the uppermost levels of Nuzi. If strict order were kept, Temple G and part of Temple F should have been included in the account of Ga.Sur; but, since these are the beginnings of an important development and the direct antecedents of the Nuzi temples, they have been kept in their proper group under the description of Nuzi architecture.

The separate house units of each stratum have been given a group number by which they may be referred to alone. During the first two seasons at Yorgan Tapa, new rooms were given consecutive numbers in the order of their discovery, regardless of their position on the mound. At the end of the second season, the increased area of operations made it apparent that a more systematic and orderly manner of designation would be necessary. Consequently, with the beginning of the 1929-30 season, the surface was subdivided into contiguous squares 50 x 50 m. each. Each square was assigned a letter, and each new room, or point of excavation within the square, a consecutive number. Thus, G29 is the twenty-ninth spot excavated in Square G, and H29 the twenty-ninth in Square H. In order to aid the reader in locating the position of rooms numbered before the institution of this system, the proper letter for each square has been added to the simple consecutive numbers used earlier. Thus, those formerly called Room 334 or Room 20, for instance, have been changed to P334 and L20.

The designation "Stratum I" applies to the uppermost or latest level of the Nuzi period. Everything later than this is included under the general term "Late Period," or in more specific instances by the culture to which it belongs, such as Parthian, Assyrian, etc. Each level earlier than Stratum I is denoted by the next Roman numeral. (Strata II, III, etc., of Nuzi should not be confused with Pavements II and III of the L4 test pit of Yorgan Tapa, which has a nomenclature of its own.) In the case of the temple site, since it is impossible to identify each level of the temple with a corresponding stratum of the city, letters of the alphabet are used, Temple A being the latest (contemporary with Stratum II) and Temple G the earliest.

The attribution of certain of the floors and pavements encountered in the excavation of the Hurrian city, to one or another stratum, has necessarily to be a matter of judgment based on observation in the field. At no time in its observable history, one can be certain, was the city completely razed, levelled off, and rebuilt. One building or another might, owing to age, or to accidental circumstance, or to the exigencies of city planning, be ruined or demolished before its neighbor; their lifetimes could not be expected to coincide. Nevertheless, a reasonably certain degree of correspondence can be observed, and in the case of the large building complexes especially, a close synchronization attained.

The Late Period habitations, since they are in all cases scattered fragments, and are often reclaimed buildings of Nuzi origin, are described at the end of each topographical subdivision within the architectural description of Nuzi.

PART I

ARCHITECTURE

CHAPTER I

PREHISTORIC

The main test pit of Yorgan Tēpa showed that the mound had its beginning in a village of considerable proportions in prehistoric times. Before dealing with Yorgan Tēpa, however, it is advisable to set forth the results of the two weeks of excavation which were, unfortunately, all that could be devoted to the small neighboring mound of Kudish Şaghīr. Since many of the features of the early culture of Yorgan Tēpa are paralleled by similar or related ones at Kudish, it is well to have the latter in mind when considering those of the main site.

KUDISH ŞAGHİR

The two mounds of Kudish are, respectively, about 2½ km. south-east and 5 km. south of Yorgan Tēpa (Plan 1). The closer is known as Kudish Şaghīr (small Kudish) and the farther as Kudish Kabīr (large Kudish). Both mounds are relatively small, and both yield surface finds of the characteristic prehistoric painted ware. Neither had any evidences of habitation in historic times.

When it was decided to run exploratory trenches through a typical mound of this period, Kudish Şaghīr was chosen, not only because it was small, as its name implies, and nearer our base, but also because, unlike its neighbor, its surface was undisturbed by modern graves.

The plan of the mound is roughly ovoid (Plan 44), measuring approximately 90 m. across its greatest width and length. This measurement undoubtedly includes much that is talus, washed down during the thousands of years since the mound was abandoned. Rising gradually from the surrounding plain, the mound reaches a high point of 6.79 m. near its northern end. As in the case of most of the mounds in the vicinity, the prevailing winds and storms have brought about severe weathering of the southern slope, without greatly altering the steep slope of the north.

Unfortunately, the mound was not entirely undisturbed. Fifteen years ago a man of means in the nearby village of Tarkhalan chose it as a house site and started to level off the top in preparation for building. The earth was dumped down the northern slope, somewhat altering its earlier contour, shown on Section I-II of Plan 44 by dotted lines. How much was actually removed from the top is unknown, but the

popular belief that it was an amount greater than the height of a man seems excessive.

Our exploratory excavations consisted of two series of trenches (Plan 44). The first comprises the two northernmost trenches (7 and 17) lying beyond the foot of the mound; then the main cut (Trenches 4, 5, 6, and 9), which at a width of 2 m. cuts directly into the northern slope, advancing horizontally on four steps to the top of the mound. The second series consists of disconnected trenches, 21, 20, 18, 13, 16 and 19, beyond the foot of the mound, and 1, 8, 11, 9A, 10, 12, 14, 3 and 2, running up the southern slope to the summit. Each trench on the northern slope, from the base to the summit, represents one or two successively higher pavements. The same is true of the southern slope north of Trench 19, save for a few exceptions noted in the text.

The pottery of the mound falls into four principal classes: knobbed, incised, painted, and undecorated; besides which, however, there are many miscellaneous sherds which are of great interest because of evident resemblances to known wares of other sites.

Trench 7, the northernmost, was the deepest, and yielded from the lowest of its three pavements a few sherds of pots, vases and bowls (Pl. 42, F, G, O), most of which were unpainted. Only one of these was of incised ware. One sherd of a double-mouthed jar studded with knobs came from here (cf. Pl. 42, P). The upper pavement was more generous of sherds, including a considerable number painted in the usual banded (Pl. 47, A) and geometrical designs. One decidedly unusual sherd has a spout springing from the side just below the edge of a flat shoulder (Pl. 41, H). The ware is gray-green, and is painted in cross-hatching in a deep blue-green pigment. The unpainted sherds include several variations of raked incisions, two of herringbone pattern, and one with thumb-nail indentations. Two handles (Pl. 41, G), a biconoid clay pellet, and several flint knives were also found (cf. Pl. 39, G, H, and I). The specimen shown in Pl. 39, I, which is from this trench, appears to be roughly saw-toothed on one edge, and is not improbably a sickle section such as were set in a row in a slotted bone haft and secured with bitumen. Recognizable flints of this type, however, were relatively scarce at Kudish and Yorgan. In almost all cases the flints of these two sites were channel-flaked on the upper side, in long, even, concave surfaces, the under side showing a slightly convex, unworked fracture. Rounded ends (cf. Pl. 39, H) were quite common.

Trench 17, the next southward, showed no variation from these pottery types, but the quantity of objects was much smaller. A fragment

of a pot-handle in twisted rope pattern (Pl. 41, K) was found here at the same level as the undoubted prehistoric sherds.

Trenches 4, 5, 6, and 9, comprising the main northern cut, yielded a surprising preponderance of undecorated sherds. Also surprising is the fact that there is no evidence here of a transition from painted to undecorated ware, which is apparent in the trenches of the southern slope and at Yorgan Tapa. From the bottom to the top of this main northern cut, the typical shapes were the same; nor was this due to a too limited area having been uncovered, for the cut was of considerable breadth. The conclusion to be drawn is that on the northern slope a rapid succession of superimposed houses took place in the latter stages of the occupation of the mound, and that our northern cut has therefore uncovered only late levels, more or less of the same cultural period.

This conclusion is borne out by the evidence of walls. The course of the northern cut was intercepted at several points by walls, all built of precisely rectangular mud-brick, somewhat smaller than the usual size at Nuzi, and overlaid with plaster 0.5 to 2.5 cm. thick. The walls uncovered in the southern trenches, however, were of compacted clay or *pisée*, in which no individual bricks could be distinguished. And in Trench 2 (which, though on the southern slope, is almost at the summit of the mound and therefore at an intermediate point) walls of compacted clay were found to underlie walls of the same rectangular brick as was found in the northern slope. Furthermore, the occurrence of this rectangular brick in Trench 2 coincides with a preponderance of undecorated pottery and a tendency to coarser ware and severer line, such as was seen in the uppermost prehistoric levels at Yorgan Tapa.

Across the faces of the four steps of this main cut, eight pavements were found. None was found at the northern end of Trench 4, and it is not until one is within the room that the first is seen. Somewhat above this is the second pavement, serving as a later floor to the same room. Both were distinguishable by a layer of ashes 1 to 3 cm. thick. Above these the room was largely filled by regularly laid mud-brick, an expedient sometimes used in the buildings of Nuzi to raise the general level in preparation for rebuilding. The room itself has no features of particular distinction other than the offset in the northeastern corner and the two doorways to the north and west.

In Trench 5 is another pavement, a meter higher than the highest of the room in Trench 4; it consists of hard-packed earth covered to a height of 30 cm. with water-worn stones 2 to 4 cm. in diameter. These are laid in ash-filled earth, making a solid well-drained floor. Mixed with these, and above them, is a large quantity of sherds, mostly undeco-

rated, but some incised, painted, and knobbed. A spindle whorl was found (cf. Pl. 39, Q), fragments of two pottery wall-nails, and a sherd of a tall, vertically walled vessel pierced through in strainer fashion. Also of note is a fragment of the rim of a large, heavy storage jar with a broad protruding lip, and a second similar lip, or flange, a few centimeters below the first (cf. Pl. 45, D, which differs, however, in having punched decoration and a "buttress" connecting the two flanges).

The next wall southward belonged to a higher pavement, and had no relation to the stone-covered floor just mentioned. The northern face was too damaged to be traced, but the southern one, which was buried more deeply, could be followed. Its direction corresponds with that of the wall of Trench 4, and the departure from the right-angled corner is at variance with the usual custom. Two pavements of packed clay are found south of it, the upper (218 cm. above plain level) being higher than the top of the wall on the north and presumably not connected with it. This pavement extends south under the northernmost, angular wall of Trench 6. The pavement of Trench 6 slopes markedly uphill, and is of clean packed clay, as are the two of the final step, Trench 9. In Trench 6 was found a pottery wall-nail with a round head (Pl. 39, R, and cf. Pl. 39, U). Trench 9 was abundant in painted ware and flint and obsidian flakes, as was also Trench 4, the lowest of this cut. In the latter trench was found the animal figurine shown in Pl. 39, N, and another (an ox?) similar to that from Yorgan Tapa (Pavement XA), shown in Pl. 39, O.

Since the northern slope of the mound proved unreliable in establishing a chronology based on level, it would at first seem unreasonable to expect correct results from the same method on the southern slope. However, since the latter faces the direction from which come the prevailing winds and the violent winter rainstorms, its gradual slope does not represent its original contour, but is the result of thousands of years of denudation. Consequently, one is justified in assuming that this process had cut away whatever levels may once have existed, and that it had, in fact, prepared a cross-section for the excavator, needing for completion only the removal of the soil to floor level in a consecutive series of trenches. This has been borne out by the discovery that the higher the location of the trench on the mound's side, the steeper the upward slope of its pavement, showing that in each later level the inhabitants were forced to accommodate themselves to the gradually increasing slope of the mound.

Trenches 21, 20 and 18 were the southernmost of the southern slope, lying, in fact, well beyond the foot of the mound, near the edge of its

fan-shaped talus. None showed signs of habitation, and it may be assumed that all three are beyond the limits of the early settlement. Trench 18 revealed at minus 356 cm. a water-laid layer of clean clay over which was sand; this, of course, is a natural phenomenon and is not related to human occupancy. Trench 20 was the only one from which any objects came (Pl. 39, W; Pl. 42, B; Pl. 43, W; Pl. 47, N; Pl. 48, JJ). These objects must be débris washed down from above, and because of the great variation in depth of the objects it is impossible to assign them to any particular level of the mound. The sherds were mostly unpainted. The fragments of two three-footed stands of crude workmanship are of interest (Pl. 39, W); these are of very coarse, blackened ware.

Trench 13 had a sound, much-used pavement undoubtedly belonging to the same level as Trench 16. It was covered by a layer of ashes 3 cm. thick and yielded a moderate quantity of flints and sherds of plain, incised, and painted ware. Of note were: a few fragments of a broad-mouthed pot with an all-over red color; a fragment of a large bowl with incised herringbone pattern on its inner surface (Pl. 44, A); a fragment of a pot, stippled on the outside with the rake or comb ordinarily used in making designs of bands of parallel lines (Pl. 44, I); and the spout of a pot (Pl. 41, S), plugged up with clay in the center of its passage before firing. Also was found here a sherd of the rim of a heavy storage jar with flat right-angled lip and a parallel flange below it, of the same type as that found in Trench 5.

Trenches 16 and 19, at the foot of the mound, were the most prolific in objects of all the spots tested. In quantity, the painted specimens were outnumbered by the undecorated. Knobbed and incised decoration was rare, with none whatever of the common herringbone incised pattern. The plain ware is of three types of form: very large bowls (Pl. 42, I), round-bellied pots, and delicate thin-ware cups with straight sides flaring out from a slightly rounded bottom (Pl. 43, BB). It is likely that many of the plain sherds were the undecorated portions of decorated vessels.

On the painted sherds olive, olive-green, or drab pigment on buff or yellow-gray ware predominated; next in number were buff sherds painted in brown to reddish-brown, and there were occasional pieces of fine greenish-buff ware painted in grass-green or lustrous blue-black. The designs are of a few simple geometric types.

In conjunction with the sherds were scores of biconoid clay pellets (sling pellets or clay counters) such as are associated with prehistoric

pottery elsewhere; they are made of clean water-washed clay and show only slight variation in size and shape. It is interesting to note that these pellets, whatever their use, persisted in gradually decreasing numbers until Nuzi times. Spindle whorls, wall-nails, a pot-stand (Pl. 39, BB), terra-cotta weights (of "doughnut" shape) were found, and two stone weights (Pl. 41, A)—more possibly adzes or hoes, since the circumference in both cases is chipped to a rough but effective cutting edge part-way round; the hole is worked from both sides. Two well-made celts, one (Pl. 39, C) highly polished, were found here; also a polished stone pick (Pl. 39, D) and a hammer-stone or unfinished mace-head (Pl. 39, E). Stone beads were found, and a fragment of a small stone bowl, skillfully ground; also the tail of a scorpion (Pl. 39, F), delicately but conventionally worked in white limestone.

Two decidedly unusual sherds should be mentioned: one is from a tall, flat-shouldered jar (Pl. 41, P) and has a large unpierced lug; it is of coarse, muddy, reddish ware not unlike the ware of the sherds shown in Pl. 45, E and F, from Yorgan. This sherd is from Trench 16. The other, from Trench 19 (Pl. 41, I), is a tall, constricted pot neck, with three projections at the base suggesting a triple handle rising on three sides from the base of the neck to the lip. The sides are incised with intertwining, raked wavy lines. The ware is relatively fine and light brown in color.

Trench 16 had two pavements: the first, at minus 200 cm., to which belonged the wall shown on Plan 44, and the second, 66 cm. deeper, passing under the wall. Each was rich in objects and strewn with sherds. The wall, like all the walls on the southern slope, was of packed clay, which contained the impressions of chopped straw, but showed no evidence of bricks.

The pavement of Trench 19 is at approximately the same elevation as the upper floor of Trench 16, and is presumably a continuation of the same room.

Trench 1 at its southern end yielded generously of the same pottery types seen in Trenches 16 and 19, but incised sherds were rare. With these were large numbers of knives and flakes of chert, flint and obsidian. A fragment of an ordinary clay animal figurine was found, and a fragment of a highly polished small stone vessel.

The lower pavement of Trench 1 undoubtedly belongs to the same level as the upper floor of Trenches 16 and 19. The upward slope seen in these three pavements shows clearly that the pavements do not represent the earliest occupation of the spot, but followed the upward course of an already existing mound.

The upper pavement of Trench 1 is of particular interest because of the wall it served. It is significant that this wall is of the niched or buttressed type known from Levels VI-IV at Warka, and more recently from the al-'Ubaid levels at Tepe Gawra. Like the other walls of the southern slope (but unlike those of Warka and Gawra), the wall of Trench 1 is of compacted clay, no individual bricks being distinguishable. This upper pavement continues northward, ending in a small room of irregular proportions, with one complete door to the northwest. The packed earth pavement was not clear in the southern corner of the room, and it is probable that there was no doorway leading southward at the point where the plan shows a broken wall. Neither within the room nor outside it was there more than a scattering of sherds.

Trench 8 represents the next pavement in elevation above that of Trench 1, passing over the walls of the latter and terminating in a wall of its own of the same type and direction. The pavement was covered with a layer of black earth 2 cm. thick, baked hard and brittle by fire. Again the quantity of sherds was small; painted and undecorated were in equal proportions. The only noteworthy object is a bitumen-coated foot to a terra-cotta stand (Pl. 39, S), in form not unlike a wall-nail with a concave head.

Trench 11 is apparently a continuation of the same pavement as Trench 8, and is of no particular interest. Undecorated and painted sherds were in about equal quantity.

Trench 9A revealed the first of two circular rooms found on the mound. The line of the wall of this room is for the most part curved, except where a step in its course returns it to a straight line, evidently to form the entrance and to conform to the straight wall outside. As with the other walls of this slope, there are no signs of individual mud-brick, though the material shows clearly the marks of chopped straw. The pavement, of packed clay covered with a thin layer of very black earth, yielded a quantity of sherds in which the undecorated predominated.

Trench 10 represents the next pavement above Trench 9A, and except for a fragment of a wall at its northern end it yielded nothing.

Trench 12 has a wall against its lower end, which terminates with the beginning of the walls in *Trench 14*. The walls of Trench 14 are similar in appearance to those south of it, and in their relation to each other appear to have belonged to two neighboring houses separated by a lane. Both trenches contained sherds and flints in moderate numbers,

with undecorated pottery predominating. Biconoid clay pellets and terra-cotta weights were also found in small quantities. From Trench 14 came a complete bowl (Pl. 42, D), with a painted band around the outside of the rim.

Trench 3 disclosed more remains of walls than any other trench. The small rectangular room at the southwest is on the same level as Trench 14, and presumably represents the same stratum. A narrow doorway leads out to the northeast, served by a stone door-socket flush with the floor of the room. The socket is an irregular stone of conglomerate material into which a round-bottomed, cone-shaped depression has been bored, 9 cm. broad at the top and 6 cm. deep. Only the sides of the incision show any wear. The room yielded only a scattering of plain and incised sherds and biconoid clay pellets.

A few meters further up the slope, and on a higher pavement, is a stretch of wall showing somewhat the same niched construction as was observed in Trench 1, though here there is a possibility that the buttresses and recesses were not a decoration applied to an exterior wall, but were alcoves and door-jambs on the interior wall of a room. As in Trench 1, the wall is of packed clay, without individual bricks. Next to the alcove formed by the niches, and to a lesser extent along the full length of the wall, a large number of sherds was found. Except for a few, all were unpainted, and a considerable part was undecorated; the remainder were mainly incised in herringbone pattern (Pl. 46, D), or were knobbed sherds from double-mouthed pots. Here, too, was the double-rim sherd from an extraordinarily large jar, shown in Pl. 45, D. With these sherds were flints, clay biconoid pellets, and an evenly made circular stone weight.

A third and higher pavement was uncovered at the northeastern end of the wall, yielding only a few undecorated sherds.

Trench 2, the last to be mentioned, is on the southern slope but close to the summit. It is not in exact line with its predecessors, but to the eastward of Trench 3. Three pavements were uncovered in this trench, the lowest (III) being at 309 cm. above plain level, the next (II) 95 cm. higher, and the topmost (I) 88 cm. above II. The upper pavement yielded abundantly of undecorated and incised sherds, with but few painted.

The important feature of Trench 2 is a circular room, considerably larger than that of Trench 9A. The room had three pavements, corresponding with the three outside of it; therefore it could not by any possibility have been an underground construction of later times. The

two upper pavements showed hard use, and on them were found sherds identical in type with those found outside.

The circular room of the lowest pavement is somewhat smaller than the later one above it.¹ Like the circular room of Trench 9A, it begins as a straight wall, to which a semicircular addition has been made, joined at one end and open for entry at the other. Near the southern end of its straight wall, and placed against it, is a low platform standing 22 cm. higher than the pavement. This pavement yielded a few undecorated sherds, and the space separating it from the floor above was filled with a heavy deposit of ashes, probably the result of demolition by fire.

The wall of this earliest circular room is like those of the southern slope in that it is of packed clay, without individual bricks. The wall of its successor, on the contrary, is of perfectly made mud-bricks with parallel surfaces and right-angled corners, like the brick of the northern slope. We have then, at this spot, the transition point between the old and the new building method, both associated with objects of the same culture. The later circular room also differed from the earlier in that it had no sign of any doorway or entrance. Contemporary with the later circular room and its pavement is a wall of the same rectangular brick, extending toward the summit of the mound. The latter was apparently part of an interior room, and its line was altered, as shown on Plan 44, during the period of its use.

The ground plans of these circular rooms in Trenches 2 and 9A at once suggest domed edifices, and remind us of the *tholoi* of the Halaf period at Tell Arpachiyah.² It is evident, however, that the walls of the Kudish circular rooms are too slight ever to have resisted the thrust of a dome; moreover, their rise is vertical (in some places for more than a meter), without any sign of inspringing as at Arpachiyah. Consequently, we must assume that our rooms were either open to the sky or, as seems more likely from their interior condition, roofed in a horizontal manner.

Infant burials. Resting upright on the sandy floor of Trench 2 were two round-bottomed, vertical-sided jars, respectively 35 and 37 cm. in diameter (cf. Pl. 49, C, a similar one from Level X of Pit L4 at Yorgan Tepa). Both vessels were of undecorated coarse buff or yellow-gray ware, and each contained the barely recognizable bones of an infant, too decayed to allow even a conjecture as to the position of the bodies.

¹ On Plan 44 the earlier wall is shown in lines, the later in solid black.

² A *tholos* of Stratum XVII at Tepe Gawra is illustrated in *Bulletin American Schools of Oriental Research*, October, 1938.

Immediately northeast of the wall of the uppermost circular room, buried partly within the floor, was a large jar similar to the two just described. Other than this similarity there is no proof that the vessel originally served a burial. Within this jar was a pavement at the same level as the floor. Next to this jar was the small undecorated jar shown in Pl. 43, R, with its inner and outer rim pierced alternately with horizontal and vertical openings at four equidistant points.

Within the same circular room, resting on the uppermost pavement, was the skeleton of a new-born child, with legs contracted, hands raised to the head; it lay on its right side facing southwest. Over it was a large inverted bowl of crude handmade ware (cf. Pl. 49, E; Pl. 50, B). The location of the body, resting directly on the floor, showed the burial to have been contemporary with the floor level. It should be noted that the bowl rested at an angle, with only one point of its rim touching the floor, as would be the case if it were covering a body rather than a skeleton. In Nuzi times many, if not all, of the infant burials were completed after the body had so disintegrated that only the bones remained; in this example, the reverse is seen to have been true. It is evident that the building was destroyed and the room filled with debris soon after the bowl was put in position, thus fixing the bowl at the angle at which it had been originally placed.

Conclusions. Owing to the limited time available for the exploration of Kudish Şaghîr, these findings must necessarily be inadequate. They prove definitely, however, that all the habitation levels of the mound belong to the prehistoric period. The persistence at the upper levels of incised, knobbed and painted ware, and of the same fundamental shapes, is evidence that top and bottom levels represent basically the same culture. It is impossible, however, that the mound could have grown to such a height in a short time, hence it is unreasonable not to expect some development.

Two changes of major importance are recognizable. The first is the marked decrease of painted pottery in the latest levels. It is even possible that the painted ware ceased altogether, and that the examples found in the uppermost trenches were merely remnants of an earlier fashion. New shapes were added, but all except a few of the older shapes were retained. Also, the incised ware of raked and herringbone patterns continues in the same shapes and patterns; likewise the double-mouthed vessels of knobbed ware, the round-headed wall-nails, and the flints. This change is paralleled at Yorgan Tepa, where there was an almost complete absence of painted sherds in the late prehistoric period,

with a similar retention of the earlier shapes. It seems fairly certain that this change is due, not to the disappearance of the original culture, but to a fusion of the earlier peoples with a more dominating and less artistically minded race of newcomers.

The second change of importance is the adoption, at the end of the period, of rectangular mud-brick. This sudden appearance of a new and advanced building technique suggests, not a local improvement, but a foreign innovation. The same phenomenon is seen at Yorgan Tēpa in the late prehistoric levels.

Hurrian occupation. No signs of later habitation were found in any of the trenches nor in the mass of surface material. There was, however, in Trench 5, an interesting example of the use of the mound during the Nuzi period. Within a small area, 7 m. in a horizontal line from the zero contour and just below the present surface, were four Nuzi infant burials. Each funerary jar (cf. Pl. 80, A), contrary to the usual custom, was upright instead of inverted over the body. One was covered by a shallow bowl upright over the opening, and next to it was a typical Nuzi shouldered cup. Out of the large number of infant burials found during four years of work, this is one of only two having any object other than the container associated with it. Only three of the four jars contained skeletons, but because of their proximity to the surface it is not improbable that the fourth also had one which had disintegrated beyond recognition. The jars were not sufficiently close together or uniform enough in level to signify a simultaneous burial. Since there is no indication of Nuzi habitation even among the surface finds, we must assume that these sacrificial burials² were placed here by people of Nuzian culture not actually living on Kudish Şaghîr.

YORGAN TĒPA

At Yorgan Tēpa vertical shafts or pits to virgin soil were put through the mound in three spots (Plan 13, Stratum II, Nuzi): Courtyard G50 of Temple A; Room N120; and Room L4 (which with L11 forms one great room). Only in L4 and G50 were there indisputable signs of prehistoric occupation. Because of the limited area exposed in G50 and the probable difference in period,³ we are concerned here only with Pit L4.

² See Part I, Chapter XI, *Nuzi Burials*.

³ Mr. Eliot, in Appendix A, has attributed the finds from the G50 shaft typologically to the Uruk period. The levels and finds of these and related late prehistoric cultures are described under *Ga.Sur*.

Virgin soil in Pit L4 was found at 645 cm. below plain level. Fifteen pavements were found altogether, the highest being Stratum II, Nuzi; the lowest rested directly on virgin soil. To each has been assigned, in its order, a Roman numeral, with I representing the highest. Subdivisions within these, such as IIA, XA, etc., have been made, with the somewhat misleading result that the lowest pavement is XII instead of XV. These designations were made to meet special field conditions which need not concern us here.

L4, Pavement XII of Pit L4 was in the extreme southern corner of the pit (Plan 5, B), at a depth of 645 cm. below plain level. It was traceable for only a short distance on the northwest, and ran under the side walls of the pit on the southeast and southwest. On the northeast it was bounded by a wall cut vertically into the virgin soil. Since the 45 cm. between Pavements XI and XII comprises the full depth of the cut, it is clear that it did not obviate the necessity of building walls, but merely lessened their height by 45 cm.

The objects on this floor consisted mainly of painted sherds. The majority of these were of the typical buff ware, with plain horizontal bands around the lip or side of the vessel (Pl. 47, E), frequently in conjunction with wavy lines or multiple loops. Several undecorated sherds were found, as well as a number of variations of the incised raked design and some examples of knobbed ware. One unique piece, the stump of a handle from a painted vessel (Pl. 41, N), was found here; also a ring-stand (cf. Pl. 39, X), such as were commonly used for holding round-bottomed vessels upright; as well as a large cylindrical stone pestle and several flints.

The pit was continued $2\frac{1}{2}$ m. below Pavement XII without finding further signs of habitation. Occasional plain and incised sherds were found to a depth of 25 cm. below Pavement XII, but since there was no accompanying habitation layer, we may conclude that they actually belonged to Pavement XII, which at this particular spot, at least, was the first human construction.⁴ Below this point the earth took on the characteristic appearance of virgin soil—hard and granular, with a tendency to fracture into small lumps with minute unsymmetrically faceted surfaces.

L4, Pavement XI was the next above XII, and extended over the entire bottom of the pit at an average elevation of minus 600 cm. The floor, as usual, was of packed clay much blackened by use, and was

⁴ That sherds found below a floor can belong to the people who lived on it was proven by fragments of the same vessel above and below Pavement XI.

covered with a profusion of sherds, painted and unpainted, of the same types as those of Pavement XII, and in general, also, much the same as those of the deeper levels of Kudish Şaghîr. Horizontal bands, inside and outside the bowl, wavy lines and loops predominated markedly in the painted ware, the pigments being, as at Kudish, variations of olive and reddish-brown, but never the two in combination. More complex designs are found in smaller quantity and greater variety, such as the vertical panel (cf. Pl. 48, Q, U, W, X, Y, CC, from various levels of Yorgan and Kudish), the rare floral or vegetal motifs (cf. Pl. 48, Z, EE, FF, GG), and other designs, definitely exceptional, shown in Pl. 48.

One indubitable example of polychrome painted ware comes from Pavement XI, on which is a red band and a black band, contiguous along their length. Another example from Pavement XI (Pl. 47, HH) is painted in deep olive, with a very light olive wavy line between the dark parts of the design.

Considerable numbers of knobbed and incised sherds (raked and herringbone) were mixed with the painted, and a number of sherds of fingernail-indented ware (which at Kudish is rare). These are of rather thick ware for their size, and of buff paste. The technique, within its limitations, is varied, as may be seen in the examples in Pl. 45, of which I, K, L, M, N, O, P are from Pavement XI of Pit L4, and H, Q from Pavement XA; only one, J, is from Pavement X.

In Pl. 44, the following incised sherds are from Pit L4 of Yorgan: C, J, K, L, M, P (Pavement XI); F, G, H, Q (Pavement XA). Of these, Pl. 44, P and Q deserve special mention; the parallel incised lines are wider and deeper and made with more care than the finer incised lines of the raked ware; in specimens like P the edges and furrows are sharp, but in those like Q these edges have been rounded.

An undecorated U-shaped jar, in profile and ware similar to that illustrated in Pl. 49, C, was found 30 cm. above the floor.

From Pavement XI came also three crude animal figurines and several biconoid clay pellets of unbaked clay; a sherd worn smooth as a burnisher; two terra-cotta spindle whorls, fragments of several bone punches (cf. Pl. 39, K), bone needles, a goat's horn, many flints, two celts, and a beautifully worked chalcedony arrow-head, the only indisputable example of such a weapon found in any of the prehistoric levels at either site; also, a fragment of a small limestone plaque, 73 mm. wide, 12 mm. thick, and of unknown original length, well squared and highly polished; and a fragment of a stone bowl. Also from this pavement are a tiny pierced bowl with painted bottom and edge (Pl. 41, B); a stump of a cup handle, conspicuously stained on the inside

with bitumen (this may have served as a lamp) (Pl. 41, J); and the handle of a small undecorated cup.

L4, Pavement XA, of Pit L4 is at an elevation of minus 500 cm., one meter above Pavement XI. Like the latter, it is of packed earth, slightly blackened with use. A wall crosses the lower end of the pit (Plan 5, N), which is undistinguished except for its set-back; it is of packed clay, containing impressions of chopped straw, with no individual bricks discernible. In the northern corner of the room was an upright jar containing the bones of an infant. Though the base of the jar was on a level with the line of the pavement, it is a burial from Pavement X, immediately above. The shape of the jar was identical with that of the two burial jars found in Trench 2 of Kudish Şaghîr. Both here and at Kudish, therefore, these infant graves seem to appear toward the end of the prehistoric period.

Pavement XA yielded liberally of sherds, the relative proportions of the various types showing no change from Pavement XI immediately below, though some new motifs in painted design appeared. Flints, wall-nails, spindle whorls, and ring-stands were found; two celts, a stone bead, a clay bead, and a small pot-lid (Pl. 39, Y), which is a roughly circular pat of terra-cotta with a deep finger-made impression in the center by which it is lifted. Two complete bone punches were found (Pl. 39, K), made from what appears to be the shank of a sheep, with the rounded knuckle of the joint serving as the butt. Below the knuckle, half or more of the thickness of the original bone is cut away, leaving a shaft partly semicircular in section and ending in a blunt point. The tip of one punch was cut to form a point like the nib of an unsplit goosequill pen. A complete small vessel was also found, with four equidistant vertically pierced lugs.

L4, Pavement X signaled a distinct change in pottery types, corresponding with that noticed in the uppermost trenches of Kudish Şaghîr. Here, as at Kudish, it is convincingly demonstrated that the painted ware was superseded by unpainted.

The floor was of packed clay blackened by use, showing in places the effects of intense heat. The wall running diagonally across the northwestern end of the pit was solid and well built, and was of unbaked bricks of the rectangular type found in the trenches of the southern slope of Kudish Şaghîr. The occurrence of this type of wall, together with the change from painted to unpainted pottery, here as at Kudish Şaghîr, points strongly toward an intrusion of a new element in the population.

On the pavement were eight terra-cotta vessels, each resting in a hollow scooped in the floor (Pl. 49, A). To distinguish these we shall use the numbers assigned to them on Plan 5, M. Nos. 2, 3, and 8 (Pl. 49, C) are high-sided jars of coarse buff ware, flat-lipped and with roundish, slightly flattened bottoms, identical with those found in Trench 2 of Kudish and with that of the infant burial from Pavement XA, just mentioned. No. 1 (Pl. 41, Q) is of a type hitherto unexampled; it is a large, round-bodied pot with a small flat base. It has two sets of incised rings around the belly, and shallow slanting incisions around the upper half of the vessel. Nos. 4, 6 and 7 are roundish pots with high necks, more or less similar in form though of varying sizes (No. 4 is the largest, No. 6 the smallest). No. 4 (Pl. 43, A) is of coarse gray ware with black surface; it is covered all over, except for its rim, with fine unevenly raked incisions. No. 6 (Pl. 43, B) is of coarse reddish ware, and has around its shoulder two rows of short incisions, vertical and slanting respectively. No. 7 is altogether without decoration. The shapes have much in common with those of the early period, but the character of the incised work is more careless. Vessel No. 5, the last of the group of eight, is a large shallow bowl with a slightly flattened bottom, identical in size and shape with a complete example from Kudish Saghīr, Trench 16, shown in Pl. 42, I.

At this level were several other objects: one is a pitcher ⁵ with signs of a handle that could only have passed over the mouth of the vessel (Pl. 41, R); the vessel has an incised herringbone design around the shoulder and is round-bottomed like the earlier ware. Another is a small cup (Pl. 41, O) of reddish clay, with an all-over slip of deep red (more or less worn), and a handle springing from side to lip. The cup is round in form and well made. A few sherds were also found, of red-slipped ware, of somewhat finer paste. A polished celt of rather unusual form was found (Pl. 39, A), with a rounded butt. Another, of triangular form (Pl. 39, L), though found in a Nuzi room, would appear to belong to these levels. Another object, the first of a type frequently encountered in the Nuzi period, but the only one found in these early levels, is a double-horned clay loom-stand (Pl. 39, Z). This bulky object was made of purified clay, slightly hardened by fire and blackened by use. There can be no doubt but that this served the same purpose as the several almost identical specimens found in Nuzi (Pl. 118, A, B). The remarkable similarity of the Nuzi specimens to the clay loom-stands used

⁵ The level from which this came was not clearly recorded at the time of excavation. Consequently, there is some uncertainty as to whether it belongs to Pavement X or Pavement IX. Style associates it more closely with the earlier one.

by the Arabs today (Pl. 30, B) makes it seem highly probable that in both the prehistoric and the Nuzi periods the process of weaving was virtually the same as that employed by the present-day Bedouins. There were no indications that either the prehistoric or the Nuzi examples had any ritualistic purpose.

Infant burials. The infant burial of a Pavement X body, in Pavement XA levels, in a jar of the kind used at Kudish for infant burials, has already been described in the paragraphs on Pavement XA. In Pavement X levels another infant burial was found (Pl. 49, B) within and underneath the eastern end of the wall. The skeleton rested within a large sherd or jar bottom, lying on its right side, facing north, with legs contracted and hands raised to the face. The age of the child at the time of death could not have been over two months. The base of the container was level with the floor, and the wall was intentionally built over it, care having been taken to bridge the body so that the weight of the superimposed structure would not crush it. The jar barely missed not being completely covered by the wall, and it was the outside plaster that hid its projecting edge. Thus it can be seen that this burial represents something more than the mere disposal of a body. This interment is almost identical with several sacrificial burials of the Nuzi period which were similarly placed in order that the benefits accruing from the sacrifice would fall upon the house in which it was buried. There can be little doubt that this early example is their ancestor.

Conclusions. Five points of importance stand out in reviewing the objects of Pavement X. The first is the use of well-squared rectangular brick in building, which as is indisputably proven at Kudish, followed the use of packed clay or *pisé*. The second is the appearance of new forms in pottery: No. 1 (Pl. 41, Q), and Nos. 2, 3 and 8 of the eight found *in situ* on the pavement, the last three identical in type with the burial jars found in the Pavement XA burial from Pavement X and those in Trench 2 of Kudish. Third, the persistence of the old forms to a considerable degree, as seen in Nos. 4, 6 and 7 of the eight *in situ* (Pl. 43, A, B), though with a certain difference in ware and technique. Fourth, is the almost complete absence of painted ware, coinciding with a similar phenomenon at Kudish. Finally, the introduction of the custom of infant burial. It is true that we have only negative evidence—the absence of, or the failure to discover, burials of the earlier period—to prove that the first peoples at the site did not also practice infant burial; but the presumption seems justifiable.

The suddenness of the change in Pit L4 does not necessarily mean an equally abrupt change over the whole mound. It is quite possible that before Pavement X came into being, Pavement XA remained untenanted during a time when the rest of the mound was growing and changing. This of course is pure conjecture, and is suggested only because of the more gradual diminution of painted ware at Kudish. It should be said, however, that the soil separating the two pavements showed no indication of such a desertion.

The only reasonable explanation is that of an influx of a new people. Bringing new ideas and living beside the older culture, the newcomers produced a fusion of traditions and customs such as is evident in the latest prehistoric levels. Domination by the more practically-minded invaders would explain the abandonment of painted pottery and the use of cruder incised patterns. It is unlikely that the new people entirely replaced the older, for in such a case fewer older shapes would have been retained and more new ones would have been introduced.

CHAPTER II

GA.SUR AND EARLY NUZI¹

To the period represented in Pit L4 of Yorgan Tapa by Pavements IX to IIA inclusive (Plan 5, B) has been given for convenience the name Ga.Sur. This is the city name mentioned with by far the greatest frequency in the texts found between the prehistoric and the Nuzi levels, and in all probability the name applies to this site before the coming of the Nuzians. Since the Hurrian influx seems to have been a rather gradual one, the newcomers dwelling side by side with the older inhabitants and eventually dominating and finally superseding them, the Ga.Sur period will include both its beginnings and, at the other end, those levels which it shared with the Hurrians and even those in which the Hurrians became dominant. The Nuzi period succeeded the Ga.Sur period without a break in occupancy. There is less certainty of a continuity of occupation between the prehistoric and the Ga.Sur periods; a change in culture, however, takes place, for Pavement IX shows some new elements.

TEST PIT L4

Pavement IX (Plan 5, L) lay 417 cm. below plain level, and 40 cm. above Pavement X. In the northern corner was a remnant of a mud-brick wall forming two sides of an enclosure. Beyond this, and at a higher level, were two unique horizontal ovens (Pl. 20, B, D). These are shown on the plan of Pavement VIII, but since they are below the level of the floor and since the slope of all the levels in L4 is markedly upward to the north, it is probable that they belonged either to Pavement IX or to a level between VIII and IX too indistinct or short-lived to be recognizable. Their shape is that of a barrel lying on its side and somewhat flattened from above, with the ends as the only flat surfaces. The ovens are of purified clay, 2 to 3 cm. thick, with their outer surfaces covered with sherds to give protection and insulation. Since in each the northeastern ends and walls were solid, the missing southwestern ends must have been the points of entry. Each had a layer of black ashes in the bottom, made by the fuel that heated it for its last baking. In neither was there any smoke vent or draft hole. When in use, the ovens

¹ For a discussion of the chronology of the late prehistoric and historic levels as encountered in L4, N120 and G50—all grouped here, for convenience, under the heading *Ga.Sur*—see *Appendix A*.

were probably filled with hot coals and their otherwise open ends closed to conserve the heat.

Characteristic of this level are bowls of exceedingly crude workmanship with flat bases and either a rounded lip (cf. Pl. 50, B) or, more often, a flat rim sloping outward from the upper edge (cf. Pl. 50, A). The inside surfaces are roughly smoothed or scraped, but the outside, especially on the bottom, often suggests that the vessel was hewn out of, rather than modeled of, clay. Five such bowls were found at this level in complete form, as well as a small handmade vase of thickish ware (Pl. 50, P). Eight whorls and three stone beads, one of which was in a delicate leaf pattern (Pl. 55, G) were found; a moderate quantity of flints, some incised and some painted sherds, and strangely enough, two of the most nearly complete specimens of knobbed ware vessels so far found (Pl. 42, P). A quantity of large snail shells (*Helix cavata* Mouss) were found on the packed earth floor in the southern corner of the pit.

Pavement VIII (Plan 5, K) contained no constructions. The two ovens on the plan have been discussed as structures belonging to Pavement IX. The pavement itself was of packed earth, easily distinguishable, and showing unmistakable signs of use. Its level is minus 335 cm., or 82 cm. above Pavement IX.

At a depth of 30 cm. below the floor was a small handmade cup (Pl. 51, L) with a flat-sectioned handle. The crude bowl shown in Pl. 50, A, and another of the same type, was found, and a vase of very different type, small and well turned (Pl. 51, J), suggestive of the ware of later levels; many fragments of this same ware were scattered over the pavement (Pl. 50, C-F). A small copper animal figurine was found 30 cm. below the floor, bearing on it impressions of coarsely woven cloth. Its advanced state of corrosion makes it crude in appearance, with a blob of a head, four short projections as legs and another for a tail; its length is 12 mm., its height 14 mm. A stone drill socket (Pl. 56, E), a whorl, several stone beads (one shaped like that of Pavement IX), and the remnants of an oval bitumen trough were scattered over the floor; and a fragment of clay, accidentally baked, on which is the impressed geometrical pattern of a circular stamp seal (Pl. 55, O).

Pavement VII (Plan 5, J) was at a level of minus 255 cm., and 80 cm. above Pavement VIII. The pavement was of packed clay, without apparent signs of burning. Below the floor were the remains of an unusual vertical oven (Pl. 20, A). The plan is oval, 64x121 cm., decreasing both in length and width as it approached the bottom. In

the wall at the southeastern apex of the oval there is an aperture 9 cm. wide at the bottom and broadening out to 28 cm. near the top, its shape like that of an inverted round-bellied bottle. The walls are of mud-brick, baked to brittleness through constant heat. They are in all probability the sub-surface remains of the oven or kiln; in which case, the present existing portion would be the fire chamber, and the opening in its wall the vent through which the fire was fed, exactly as with the brick kilns used in the locality today. Its base is 25 cm. above Pavement VIII, and could hardly have belonged to that level.

The finds were meager: another complete crude bowl (Pl. 50, B), and many fragments of the same kind of ware; and a bowl of much more advanced type (Pl. 50, L) and finer ware, carinated, with round-pointed bottom; and fragments of other vessels of this ware. Beads were found, and a single tablet, identical in form, script and language with those from Pavements V and IV; this was slightly above the floor near the northwestern pit wall. Also there were found a small roundish pot of light reddish clay, badly broken; a curved spout of buff clay, well baked; and an interesting fragment of a bowl, unique for this site; it is shallow, with everted rim, and a spout with a V-shaped opening in the upper side (Pl. 50, H).

Pavement VI (Plan 5, I) was at an elevation of minus 231 cm., and only 24 cm. above Pavement VII; if depth can be used as a guide, little time elapsed between the two. The pavement is of packed clay, as usual. The only constructions were a circular oven, the first of a type commonly found in the Nuzi period, and three shallow pot-rests scooped in the floor.

Evidences of the influence of a markedly higher culture than that responsible for the crude bowls appear in the pottery forms and fabric. Two cups with rounded bottoms and straight sides, a tall, high-shouldered pot (Pl. 53, A), and a handsome tall vase (Pl. 53, H) with deep horizontal corrugations around the body, display new forms. Of cruder make and dark reddish clay is a globular pot with spout (Pl. 52, C). A remnant of a prehistoric pot (Pl. 49, D) with a handle and finely spaced raked incisions, such as were seen on Pavement X of L4, and a small fragment of knobbed ware, seem quite certainly to be misplaced fragments from earlier levels. Part of a miniature chariot of votive type, with two wheels (Pl. 54, H), was found, the earliest to appear. Two clay animal figurines, a balance weight, and a clay stamp seal impression were found (Pl. 55, N, and cf. 55, O, from Pavement VIII).

Pavement V (Plan 5, H) is at minus 196 cm., and but 35 cm.

above Pavement VI. Unlike the others, the floor had no well-defined signs of use over its entire surface. Instead of packed clay, it was made of flat-laid unbaked bricks, and had over it, near the southern end, a large quantity of ashes of reeds or brush. In the southeastern part of the pit was a wall, turning a corner to form part of a room still farther to the southeast. Whether the projections at both ends of the western face of the wall, toward the center of the pit, represent door jambs in a room now largely gone, could not be ascertained. At the northern end (taking the plan of Pavement IV as an indication of what was below) the projection appears to have been the stump of a wall once extending much further.

Three circular ovens were found here, identical with those of later times. Each consisted of a circular wall of purified clay 2 to 3 cm. thick, insulated on the outside with an additional coating of ordinary earth. They rise from slightly below floor level, and in their ruined condition no lower draft hole could be found.

It was surprising to find still in use here the crude bowls first discovered on Pavement IX; two complete specimens, and many more fragments, of this ware were found on the floor. With them was a round-bottomed cup (Pl. 50, K) of light brick-red clay, and a hand-turned pot (Pl. 51, M) of dark brick-red clay, with a fragment of a handle of flat section, grooved. On the other hand, a pot-stand (Pl. 54, A) suggests an advanced culture, as does a small pot-lid, wheel-turned and of fine fabric, with a flat knob on top (Pl. 54, B). This is the only lid found in Ga.Sur, and the only one in all Yorgan Tapa, regardless of period, exhibiting such precise manufacture. Another new form is a small terra-cotta vial with bulbous middle and small foot and neck. An animal figurine with incised scratches on the side, two copper scraps, two biconoid clay pellets, a drill socket, and a bone tool were found, as well as a small fragment of a chariot. A cylinder seal was discovered in the débris (Pl. 55, Q), out of position; its level is not known, but it could not have been higher than Pavement IV or lower than Pavement VI. Other objects are: a clay plummet (Pl. 55, E), some sherds of incised ware (Pl. 51, X), and a small sherd of red-slipped ware with a "corded" ridge in relief.

On this pavement, and in the débris above it, were large numbers of unbaked clay tablets. Of these, together with those from Pavement IV, the following is a brief description:

"The majority of the texts consists of records regarding land, the payment of wages to workmen, purchases, records of installments due and received, records of interest due, deliveries of goods, inventories

of goods, lists of workmen, and the like. They have to do with business dealings all the way from Ashur on the west to Simurru (modern Altun Kupri), Arbilum (modern Erbil), Hamazi, and Lulubum on the east, and as far south as Agade. There is a goodly number of wage lists, and the wages are invariably paid in kind, usually in grain, and that chiefly barley. There are also a few school texts or exercise tablets, a word list, and a few others of uncertain content. There are eight letters, and these too have to do with business. One of these is the oldest and longest letter in Akkadian known."²

Pavement IV (Plan 5, G) was at an elevation of minus 131 cm., and 65 cm. above Pavement V. Unlike its predecessor, the floor is of packed earth, with signs of considerable use over its entire surface. It is clear that there is no gap in time separating Pavements V and IV, for the walls of the earlier one were re-used in Pavement IV. New walls were also added, and though there is no doubt that they belong only to this level, it is impossible to say whether they represent a change in plan from that of Pavement V or a copy of the original Pavement V that was too demolished to be recognized. It seems fairly certain that the two wall fragments on the west were once one, and that the projection from the earlier wall on the east, broken by Grave 5A, joined it at a right angle. This projection has a corner on its eastern face indicating one of the limits of the room it served. Within this room was a crude pavement of scrap and complete baked brick. Southwest of this was a circular oven similar to those found on Pavements V and VI.

The objects were few in number: a terra-cotta vial, like that of Pavement V, a small vase of somewhat similar form (Pl. 51, G), a votive chariot and fragmentary wheel, a flat stone notched at both ends, and fragments of a large pot, the bitumen lining of which still retains the impression of wheat or barley. Another object of interest is a pellet of unbaked clay punched with thumb and forefinger at one side to make the nose and eye-sockets of a small human head. Holes punched in the sockets complete the eyes, and a similar one below the nose forms the mouth.

From the débris covering Pavement IV came the major portion of the Ga. Sur tablets found in Pit L4. Their general character has already been described together with those of Pavement V. Among them was a fragment, tantalizingly small, of a house plan (Pl. 55, L) with an outer compound wall, neatly incised on a flat clay slab. Though so fragmentary, it does at least show a developed architectural technique.

² Communication from Dr. T. J. Meek. See also his *Old Akkadian Texts from Nuzi* (Harvard University Press, 1935).

Most important of all the finds from Ga.Sur is the inscribed clay map (Pl. 55, T, U), found with the tablets. "The map is the oldest ever discovered in Mesopotamia, or anywhere else, for that matter. The interpretation of the map is still far from certain, but since it was found among business records and on its face there is a land record, it is natural to suppose that it was prepared to indicate the location of some estate. In the center of the map is a circle, to the left of which appears the inscription, 10 *bur* 10 *bur* minus 6 *gán ma-a*, i. e., '180, plus 180, minus 6 (354) *gan* or *iku*, of cultivated land' (slightly more than 300 acres). To the right of the circle is another inscription, apparently continuing the first and reading as follows: *ša-at A-za-la*, 'belonging to Azala.' Whether Azala is a personal name or the name of a city, indicated by the circle, is not clear. It is to be noted that other circles on the map do indicate cities, but they all have their names written within the circles. Unfortunately only one of them is completely preserved, viz. *Maš-gán-bàd-ib-la*, if we read the name as Sumerian, or *Maškan-dûr-ib-la*, if we read it as Akkadian. This appears in the lower left-hand corner of the tablet, on the side that is inscribed IM-MAR-TU, 'west.' The opposite side is inscribed IM-KUR, 'east,' and following KUR after a small space is another inscription beginning with *ba*, but the other signs are unfortunately broken away. In the left-hand corner of this east side of the map is another city which may possibly be *Gu-zi-ad* (a city name that appears in the business records), but only the last sign is clearly preserved. A third city appears to the right of the center of the map, but only the first signs are clearly preserved, *Bi-ni-za* . . . On the edge of the tablet that is marked IM-MIR, 'north,' is what looks like a body of water, with waves indicated by short strokes, and inscribed *Gur(?) -gi*; but it may simply indicate an indefinite, undefined region in the north, the source of the river which flows out of it in three channels, to be joined later in its course by another river from the western hills. The first river bears the inscription *Ra-ḫi-um*, 'the fructifier,' but the inscription on the other is too badly broken to be read. Only the two last signs are legible, *-ru-um*. The two mountain ranges are very clear, the one in the west and the other in the east. The southern edge of the map has lost its upper surface, so no inscription is preserved there. The probability is that the map represents a district somewhere between the Zagros Mountains and the chain of hills running north and south through Kirkuk, and the rivers may be the Lower Zab or the Radanu and the Tigris, or they may be only irrigation canals."³

³ Communication from Dr. T. J. Meek. See also his *Old Akkadian Texts from Nuzi*.

Among the tablets was a pot-sealing of clay, bearing on its back the impression of a cord and on the front the imprint of a cylinder seal depicting a struggle between human-headed bulls and lion-headed men (Pl. 55, M). On its edge was a fragmentary inscription referring to the "balance" of sesame remaining in the container. It is the only cylinder seal impression found in Ga.Sur, but it establishes the fact that both cylinder and stamp seals (cf. Pl. 55, N, O) were used within the same period for the identification of property.

Pavement III (Plan 5, F) was at an elevation of minus 69 cm., 62 cm. above Pavement IV. The floor was of packed clay, covered, on the southern half, with a layer of fine white ashes of straw 2 to 3 cm. thick.

A considerable number of objects was found on the floor. Several vases, cups, and pots were discovered, one of which is a tall pot with a spout rising at an upward angle from its shoulder (Pl. 52, D). Though detached spouts had been found earlier, this and the specimen from Pavement VI (Pl. 52, C) are the only spouted pots even approximating completeness. All the vessels are typical of the period, those with flat bottoms showing the characteristic string-cut base. Among these was a jar spout in the shape of a ram's head (cf. Pl. 57, V, W). Similar specimens had been found in the Nuzi levels and had been considered of earlier origin. Its presence here establishes one chronological limit and substantiates the belief that they date from before B. C. 1500. Several beads, a chariot wheel, and three cylinder seals (Pl. 55, R, S) came from this level, and in copper, two pins, a toothed sickle fragment, portions of a cup, and a large arrowhead.

The most important object from Pavement III is a terra-cotta mold (Pl. 56, G) for casting animal-shaped amulets. Each figure has a channel for the inflow of the molten metal, and a loop extending from the back or end of the figure by which the finished object could be suspended. The two horizontal grooves at the top were probably the key marks by which the opposite face of the mold was centered to this. The figures represented are a fish (two fishes, belly to belly), a fly, a bird, a gazelle, a human-headed bull, a four-spoked wheel or sun disc, and one other animal figure. The last is left unnamed for the moment because of a problem involved. One would expect the lion to be shown among these familiar animals and mythological beasts. By a not too great stretch of imagination this momentarily unnamed beast could be called a lion. The tail drooping to the ground, and the mane, are certainly characteristic; the thin body and hind legs might also be those of a lion, were it not that the figure has the unmistakable look of a

horse. The drooping tail, and the mane, are equally characteristic of the horse; the rather thin arched neck, the downward angle of the long head, and the representation of the front legs are exactly those of a horse. Certainly, if the artist had set a figure of a lion as his goal, he erred most convincingly toward that of a horse.

At this point it may be well to mention an animal figurine (Pl. 56, B) from this pavement—of a type occasionally found in the Hurrian levels. This animal, with its long curved neck, and its mane, is certainly not the conventional figurine of a sheep or ox. The tail is shown as a thin projection (broken off) rather than as the blob of clay seen on figures of sheep and oxen, and the ears extend back and upward from the head. Again, the long, thin, arched neck, with the mane in a ridge along the top, resembles the horse more than the lion. If horses are really depicted, it is evident that they were used and known in the country long before the time when they were commonly supposed to have been introduced. This supposition was happily corroborated by the positive identification of the true horse by a tooth found below Pavement IV of N120. This level was well within the Ga.Sur period and roughly contemporary with Pavement III of L4.

Except for a few tablets found in the west corner, similar to those of Pavements V and IV, Pavement III produced no other objects.

Pavements III-IIB. Overlying Pavement III is the greatest depth of soil encountered between any of the habitation levels of the shaft. A space of 229 cm. separates Pavement III from Pavement IIB—the latter at an elevation of 160 cm. above plain level. Pavement IIB is shown by its distinctive finds to have been influenced by a different culture from that of Pavement III; consequently, Pavement III, in this cross-section, becomes the last habitation level purely of the Ga.Sur period. However, the earth which separates the two pavements (Plan 5, E) is by no means sterile, and from the objects discovered there the intervening period must be reconstructed.

That no pavements were found in this intermediate period does not mean that the mound was uninhabited. On the contrary, the depth of the fill covering Pavement III shows that it was actively occupied and that a considerable period of time elapsed between the two floors to account for over two meters of deposit.

At various levels and at regular intervals between Pavements III and IIB, vases, bowls, and cups were found. The greater part of these are unmistakably Ga.Sur (Pl. 50, M; Pl. 51, F; Pl. 52, G), persisting up to Pavement IIB. One—a crude, handmade vial (Pl. 57, G)—might belong to any period, and another, a footed bowl or stand (Pl.

50, G) with marked protruding rings, is unique, and cannot be compared with any of the earlier finds, except in its faint similarity to the corrugated vase of Pavement VI. For the most part, however, these vessels are typical of the culture of Ga. Sur. The only vessels departing from this tradition are a small bowl (Pl. 62, I), found at an elevation of 25 cm., and, slightly higher, a large storage pot (Pl. 63, B) with three raised rings of rope design. In shape, they vaguely resemble the earlier ware, and in decoration they are identical with the ware of the Nuzi period. The clay of the bowl is dark gray and fine grained, and the surface is tool-burnished, giving it a polished appearance foreign to the undecorated ware of Ga. Sur. It is from these objects well below the level of Pavement IIB that the first indication of a changing culture is seen.

Two animal figurines were found, from which nothing can be deduced, and a miniature leg of a bull in terra-cotta, pierced horizontally at the center, cannot be compared with finds either above or below. In the votive figurines, however, there is more to be found. One, representing a man and woman seated side by side (Pl. 55, C), the right hand of the man clasping the left of his companion, is almost identical with one found at Ashur,⁴ and can be safely ascribed to a culture nearer Ga. Sur than Nuzi. The other, a torso of an Ishtar figurine, is so similar in ware, firing, and design to many found in Nuzi that it might almost have come from the same mold. This is another indication of the change taking place, slight though it is.

Besides these objects, there were whorls, votive chariot wheels, and stone beads, from which no conclusions can be drawn. Also from here was the head of an archaic Cycladic-type stone figurine (Pl. 57, 5), a type first encountered on Pavement VI of N120. A fragment of a deep bowl, a saucer—almost complete—and a toggle (Pl. 62, D), all in marble, complete the list of major finds of this intervening space.

A fragment of a wall was found along the northeastern side of the pit. Its base was at an elevation of 36 cm., but since it extended upwards 22 cm. beyond the level of Pavement IIB, we may assume that it, too, was used in that period. The depth of its base might easily have been the result of the prevalent custom of trench-built foundations.

Pavement IIB (Plan 5, D) was at an elevation of 160 cm. above plain level. The floor was of packed earth and showed signs of an intense fire. Walls were found separating the area into three rooms,

⁴ See E. D. Van Buren, *Clay Figurines of Babylonia and Assyria* (New Haven, 1930), Pl. XL, Fig. 192.

numbered 1, 2 and 3 from southwest to northeast. Room No. 1 contained a large quantity of bitumen which stained most of the sherds and vessels found there; this was doubtless also responsible for the intensity of the conflagration. Only three walls of this room remained, none of which had any doorway. Room No. 2 has a small projecting wall near its north corner, evidently a support for a storage pot. A doorway with a stone socket, in the east corner within the room, leads to room No. 3 over a door-sill of broken brick. Room No. 3 is partly paved with scrap brick, stones and large sherds, and was evidently a courtyard, open to the sky. A portion of a limestone mold for casting metal chisels (Pl. 62, F) was used as a paving block.

Great quantities of sherds, vessels and miscellaneous objects were scattered over the floor of the three rooms, but by far the largest number, as well as all of the unusual ones, came from room No. 1. The pottery showed both early and late forms, proving that the period of transition between two different cultures, first suspected in the fill above Pavement III, was an actual fact. The vessels seen here are of both Ga.Sur and Nuzi types, with the latter predominating.

The three concave-sided cups (Pl. 62, S, T) are unquestionably Nuzi. The small handmade bottle (Pl. 62, P) is an uncommon but by no means unknown shape in Nuzi times, and the small spouted drip bottle (Pl. 63, H) has parallels in many unquestioned Nuzi examples. A foot to a shouldered cup, hollow up to the very base of the container, is identical with those found in Temples F and G (cf. Pl. 62, K, M, O). These are the earliest forms, for this site, of the shouldered cups that were to become so common in the later, Nuzian times. The style, however, is not identical with that of the latest period of Nuzi. In comparison, there is a certain fineness and delicacy of design frequently missing in the later period, which here appears as the influence of the more subtle potters of Ga.Sur. Only two vessels from here can positively be assigned to Ga.Sur. These are two very small vases (Pl. 51, I; Pl. 57, E), each, from its shape and its string-cut base, unquestionably of the earlier times. Several unusual vessels cannot be definitely assigned to either period. Considering the completeness with which Nuzi has been uncovered, in contrast with the small area of the Ga.Sur investigation, it seems reasonable to presume that the lack of parallels in Nuzi indicates that these unusual pieces were products of the earlier culture. The first of these is a thick terra-cotta crucible (Pl. 57, F), ovoid in plan, and still retaining a patina of copper on its interior. Since this is the natural shape for such a vessel, regardless of period, it is hard to say whether it is early or late. Less problematical

are the following: a small handmade bottle (Pl. 57, C), pinched around the neck to make a successive series of vertical ridges between shoulder and rim, and, most unusual among the vessels found at Yorgan Tapa, a slipper-shaped contrivance in two decks (Pl. 57, A), the upper of which has a pitcher-like channel and dripper at its pointed end, allowing fluid to drip into the slightly larger container below. The lower is separated into two compartments, is open at the pointed end, and has three windows or openings in the side and rear walls that support the upper deck. The purpose of this amazing vessel is unknown, but one may observe that its upper channel and dripper allowed for the accurate transfer of liquids from the upper trough (perhaps with a fire below it) to the outer compartment of the lower deck.

More understandable, and certainly more attractive, is the last vessel of this class: a container in the shape of a bird (Pl. 59, E), with a small circular hole in the back and an outlet and spout through the bill. The incisions by which the feathers, legs and feet are portrayed are filled with a white paste. Fragments of a similar vessel (Pl. 59, A) were found below the Ga. Sur building, Temple G.

Two Ishtar figurines (Pl. 57, M; Pl. 63, D) came from here, both of the Nuzi type, as well as two votive chariots with high dashboards (Pl. 54, F)—a type never found in Nuzi in unequivocal location. A votive, model bed (Pl. 57, U) was discovered on the same pavement, with the weave of its matting accurately modelled on its surface. An unglazed wall-nail of the customary Nuzi type, and a porphyry cylinder seal (Pl. 62, B), unlike any either of Nuzi or Ga. Sur, was found in the center room. Also from here was an archaic stone figurine, a bone peg, and—in copper—a ring, a few nails and a chisel.

In addition to these, the floors held a considerable assortment of sherds, among which were several of the burnished gray-ware of Nuzi. On the whole, the assortment preserved the same proportion of Nuzi to Ga. Sur noted earlier. A fragment from the shoulder of a pot incised with crude representations of horned animals (Pl. 59, B), though archaic in appearance, bears a close resemblance to the decorated late Ga. Sur pot from Temple F (Pl. 58). Strangely enough, even on this pavement, a clay biconoid pellet was found, an object characteristic of prehistoric times.

The purpose of room No. 1, with its unusual objects, cannot be ascertained. However, it is of interest that four of the vessels are especially designed for pouring: the drip bottle, the crucible, the slipper-shaped and the bird-shaped vessels. If we may be allowed to include two vessels from the pavement directly above, which was undoubtedly

in use immediately after the destruction of Pavement IIB, we may add a conical cup (Pl. 57, B), with its side creased for pouring, and a drip bottle. Of these six, the use of only the crucible is known. Did the others also have to do with metallurgy? The ornate character of the bird-shaped vessel makes this seem unlikely. Animal forms in later times at Nuzi were restricted to religious uses. It is presumable, since this is the beginning of Nuzi, that such was the case here. It is possible that these vessels, except for the crucible, were used in the concoction of drugs and philters, which must have been a priestly craft.

Pavement IIA (Plan 5, C) was at an elevation of 217 cm. above plain level, and 57 cm. higher than Pavement IIB. The pavement, again, was of packed clay, showing signs of considerable use. The plan of the rooms is much like that of Pavement IIB, except for the addition of the southeastern room and minor changes in wall position. The retention in room No. 2, from one period to another, of such a minor feature as the projecting wall or screen, is clear proof that Pavement IIA followed IIB without any appreciable time intervening. The southeastern room has many things in common with No. 1 of Pavement IIB. The intense fire at the time of its destruction was again due to the presence of bitumen.

On the floor was a considerable quantity of terra-cotta objects, mostly in fragments, several of which are unusual. Mention has already been made of a tall, conical, footed cup (Pl. 57, B), with creased side, and a handmade bottle whose lateral opening was in the form of a bulge rather than the usual short spout. Of particular interest is a fragment of a creased pouring lip much like that of the upper deck of the slipper-shaped vessel from the lower pavement. If it belonged to such a vessel, we may assume that the same mysterious practices took place here as in room No. 1 of Pavement IIB. The presence of vessels especially designed for pouring—a feature seldom seen in Nuzi—would indicate likeness of purpose.

Bowls (Pl. 62, R, W) and cups (Pl. 62, X, Y) of undoubted Nuzi design were found, showing the same finish and delicacy of design noticeable in the Nuzi objects of the floor below. Also found here were two votive chariots (Pl. 57, I) of the high dashboard type; the rather crudely made dashboards of two more, even larger; two chariot wheels, one of which was exceptionally large (diameter 13 cm.); an animal figurine (Pl. 63, C); several beads of stone, glass and clay; two fragments of lead wire; a two-part bowl (Pl. 63, G); a ring and a long, square-headed pin of copper, together with many indeterminate frag-

ments of the same material; and seven thin rings (Pl. 63, F) of shell. Besides these, fragments of ordinary household pottery were plentifully scattered over the floor. Only a minority of the types were typical of Ga.Sur. Others, through a subtle delicacy of line, or, as with the shouldered cups (Pl. 62, O, V), through more definite structural indications, show a union of Ga.Sur and Nuzi technique.

More important than either of these is a single tablet and fragments of a few others which have been identified as Cappadocian. This is of particular importance, since it helps in establishing the period to which the level belongs.

Above this pavement are Pavements II and I, the latter belonging to Stratum II, Nuzi. Since neither has any discernible relation to Ga.Sur, a description of them will be given with that of the palace in Stratum II of Nuzi.

GRAVES OF TEST PIT L4

Beginning with Pavement XA, nineteen graves were found at various elevations in L4. The two lowest of these, Graves 13 and 12, were infant burials, and have already been treated under Pavements XA and X in the preceding chapter. All the others were of adults, or nearly so; this may safely be said despite the fact that in a few cases the remains were barely recognizable. In the case of Grave 5, six burials are included, as will be explained below. Since none of the burials—except Grave 12—belongs to the level at which it was found (but to some higher level), the graves are here discussed by themselves.

Grave 13 (Plan 5, N). Late prehistoric. Elevation, minus 500 cm. Infant. Body position indeterminate. In an upright, uncovered jar. Buried below the floor of Pavement X. No objects.

Grave 12 (Pl. 49, B; Plan 5, M). Late prehistoric. Elevation, minus 457 cm. Infant. Lying on right side, facing north. Legs fully contracted; arms raised to face. Placed on large sherd or jar bottom over which the wall of the room has been intentionally built. No objects.

Grave 11 (Plan 5, K). Pre-Ga.Sur(?). Elevation, minus 326 cm. Adult. Lying on left side, facing northwest. Legs partially contracted. Hands raised to face. No construction.⁵ No objects. Probably buried from Pavement VII.

⁵ The term *no construction* refers to the absence of any visible effort to cover or protect the body.

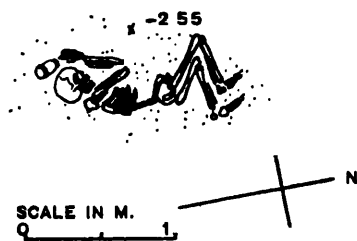


FIG. 1. L4, Grave 10.

Grave 10 (Fig. 1; Plan 5, J). Ga.Sur. Elevation, minus 255 cm. Adult. Lying on left side, facing west. Legs partially contracted; hands raised above face. No construction. One red ware vase at top of head. Probably buried from Pavement VI.

Grave 9 (Plan 5, I). Ga.Sur. Elevation, minus 239 cm. Adult. Bones in great disorder; evidently disturbed by the burials of the group called Grave 5, of which this is really a part. Body position unrecognizable. Head to the west, and upright. No construction. By the chest an egg-shaped vase (Pl. 52, F) and cup (Pl. 51, C). At the feet, two red ware vases. Pavement of origin not later than V.

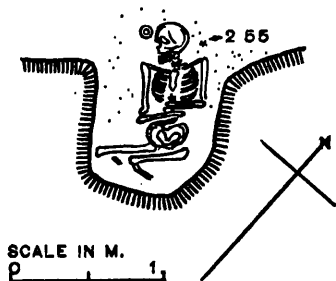


FIG. 2. L4, Grave 8.

Grave 8 (Fig. 2; Plan 5, J). Ga.Sur. Elevation, minus 255 cm. Adult. Skeleton lying on its back; face turned slightly to southwest; legs partially contracted; forearms crossed at waist. No construction. Red ware vase at forehead. Certainly not later than Pavement VI.

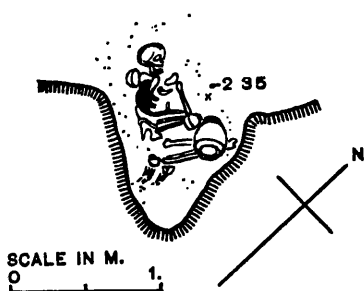


FIG. 3. L4, Grave 7.

Grave 7 (Fig. 3; Pl. 32, B; Plan 5, I). Ga.Sur. Elevation, minus 235 cm. Adult. Lying on left side, facing northeast. Legs well contracted. Forearms crossed at waist. No construction. Behind shoulder, a bowl; before the waist, a cup (Pl. 51, E); at the knees, a large shouldered pot (Pl. 52, H). At the feet, two shells (Pl. 55, A), stained inside a dull greenish-black (for cosmetics?). Behind the head, two composition spiral beads (Pl. 55, H), a black and a white plain stone bead. Not later than the earliest part of Pavement V.

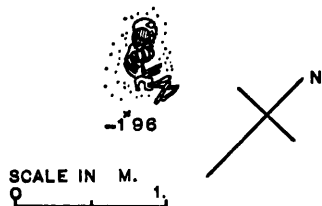


FIG. 4. L4, Grave 6.

Grave 6 (Fig. 4; Plan 5, H). Ga.Sur. Elevation, minus 196 cm. Youth, 10 to 15 years. Lying on left side, facing northeast. Legs partially contracted; upper arms at sides, with forearms extended. No construction. A small vase (Pl. 51, K) above the neck, a cup (Pl. 51, A) above the shoulder. Probably buried from Pavement IV.

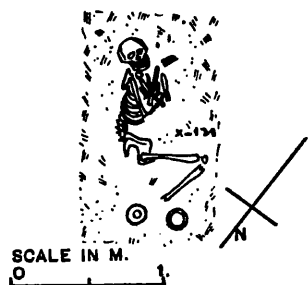


FIG. 5. L4, Grave 5A.

Grave 5A (Fig. 5; Plan 5, G). Ga.Sur. Elevation, minus 131 cm. Adult. Lying on left side, facing southwest. Legs partially contracted. Hands raised to face. Impression and ashes of straw matting under and beside the body. Two small spherical gold beads under the chin. Below the head, a lunate earring of thin gold (Pl. 55, I). Beyond the head, a plain copper pin with a large spherical glass bead at one end. Below the waist, a marble cylinder seal. Beyond the feet, a red ware vase and a bowl of

beautiful, polished, egg-shell ware (Pl. 50, O). Buried from Pavement III. Evidently a personage of importance.

Grave 5 (Plan 5, I, J, K). Grave 5 was at first thought to have been the grave of a group of people interred simultaneously. It proved, however, to be a series of separate, superimposed burials, each disturbing to a greater or lesser extent the burial below it. In most cases, the disturbance was so great that little could be determined of body position or object placement.

Considering the burials of Grave 5 in the order of their discovery, rather than in the reverse and proper chronological order, the first sign of a burial was seen below Pavement III. This was a pit leading down from the pavement at the southern corner of L4, exposing, at a level of minus 158 cm., two large shouldered pots (Pl. 53, C), one of which contained a cup. Each is of the familiar Ga.Sur burial type. Below these the pit could not be traced. It is probable that they were placed at the feet of a body close by, within the pit wall. The burial dates from the earliest phase of Pavement III, since the mouth of the grave shaft was covered by black earth 8 cm. thick, in which there were the striations of three separate habitation levels making up Pavement III.

The second burial was found below and southeast of this, at an elevation of minus 244 cm. Only one object, a pot, was with it. The bones were so disturbed (evidently by the diggers of Grave 8) and decomposed that not even the position of the body could be ascertained. The skeleton was that of an adult.

The third burial of Grave 5 was at the general elevation of minus 274 cm. Again the bones were greatly disturbed and decomposed. The body lay slanting downward, with a difference of 20 cm. between the skull position and that of the pelvis, owing probably to the settling of

the earth in the burials below it. As far as could be made out, the skeleton was that of an adult, lying on its back, with the legs extended. Around the top of the skull were three bowls, a red ware vase, a copper

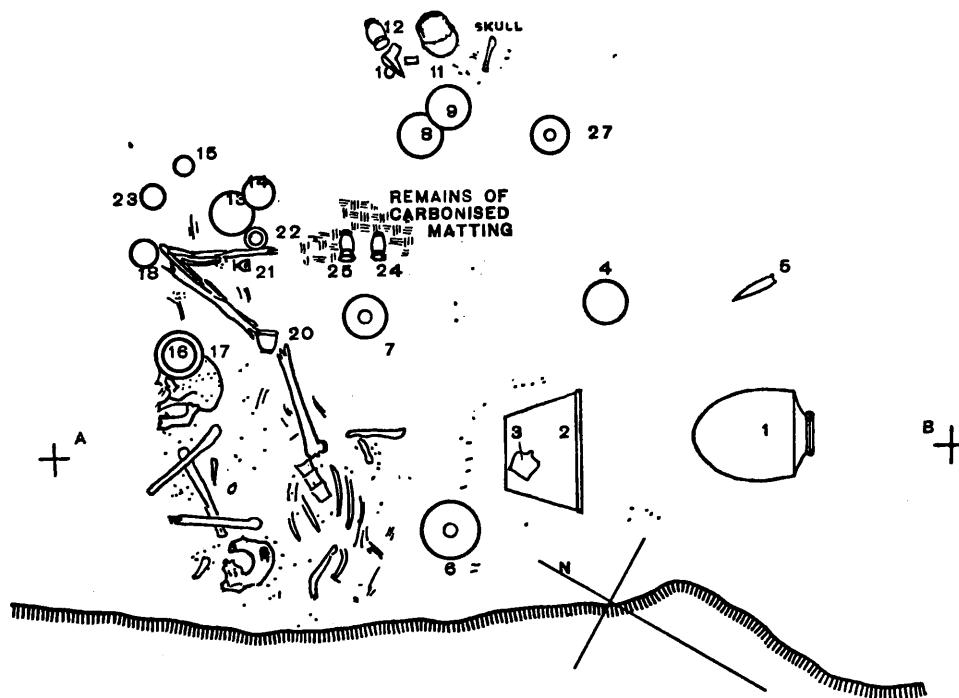


FIG. 6. L4, Grave 5, intermediate burials.

adze (Pl. 56, C), and a copper toilet set composed of a conical sheath containing five instruments all on one ring (Fig. 6, Nos. 8, 9, 10, 11, 12, 27).⁶

⁶ Elevation of objects in Fig. 6 in centimeters below plain level:

No. 1—272	No. 10—274	No. 20—320
" 2—259	" 11—274	" 21—322
" 3—289	" 12—274	" 22—322
" 4—287	" 13—305	" 23—329
" 5—282	" 14—305	" 24—324
" 6—273	" 15—314	" 25—324
" 7—312	" 16—	" 27—274
" 8—274	" 17—305	
" 9—274	" 18—322	

The numbers missing in Fig. 6, Nos. 19 and 26, refer to objects not belonging to the burials.

At a slightly lower level and south of the one just described, there was a fourth burial, its objects ranging in elevation from minus 259 to minus 289 cm. Although there is a great discrepancy between the heights of the objects, their general grouping makes them appear to have been the furnishings of a single grave. The objects consisted of a copper chisel, a large shouldered pot, a very large bowl or basin (Pl. 50, Q), two small bowls and a cup (Fig. 6, Nos. 1, 2, 3, 4, 5, 6). The position of two teeth imply that the skull was contiguous to the basin, and traces of bone extending eastward suggest this as the direction of the body. As before, the bones were greatly disturbed and decomposed.

The fifth burial was just north of this and slightly deeper, its objects ranging in elevation from minus 305 to minus 329 cm. Because of the quantity of objects found and the wide area over which the bone fragments were scattered, this may have been two separate burials, one placed directly on top of the other, but, as before, the remains were too disturbed and disintegrated to allow a verification of the supposition. The contracted legs of at least one skeleton could be distinguished, as well as a skull and a portion of pelvis, although the last two are obviously out of position (Fig. 6). Beyond the legs, where one would expect the foot of the normal burial to have been, were two large cups (Pl. 50, I), a footed cup (Pl. 51, H), three bowls (Pl. 50, J), and a bottle (Fig. 6, Nos. 13, 14, 15, 18, 21, 22, 23). To the southeast were two red ware vases (Pl. 52, A; Fig. 6, Nos. 24, 25) resting on the ashes of straw matting with which the grave was lined. Near these was a squat bottle (Pl. 51, D; Fig. 6, No. 7). By the knee was a cup (Pl. 51, B; Fig. 6, No. 20), and leaning against the skull was a large shouldered pot (Pl. 53, G), inside which was a cup (Fig. 6, Nos. 16, 17). The skull was that of an adult, and the bones were in such disorder that even those which appear to be in position cannot be accepted as a true picture of the original direction and position of the body. If this was the grave of a single person rather than of two, the quantity of objects,

as well as the matting, shows it to have been that of a person of some importance.

The sixth and last burial (Fig. 7; Pl. 33, A; Plan 5, K) was at an elevation of minus 322 cm. and was the only burial of the group relatively undisturbed. It lies slightly north-west and below the last burial described. The skeleton, that of an adult, was fully extended, lying on its back, with the knees only slightly bent and the head to the southwest. The face was turned sharply to the northwest. The left

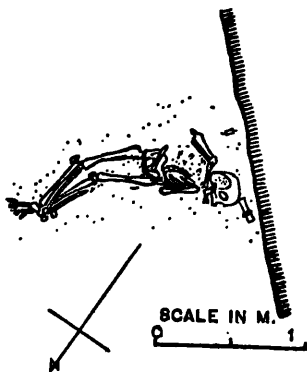


FIG. 7. L4, Grave 5, lowest burial.

forearm crossed the pelvis, and the right forearm was raised to the neck. No pottery was found with the body. Near the right shoulder was a copper dagger (Pl. 55, V), and near this a large cylindrical seal (Pl. 55, F, P) mounted on a copper pin pierced at one end. By the top of the skull was a copper axe (Pl. 55, W) of thin plate of sheeting, bent back at one end to form the hole for the handle. It is entirely too unsubstantial to have been of use, except as a ceremonial object.

An examination of the six or more burials comprising Grave 5 will show that each is a separate interment. With the first, the second and the sixth, this is made clear by their great difference in level, and in the other three by a similar though less pronounced divergence. The extreme disturbance of the bones may be due to one of two things: first, the settling of the earth in the graves below; or second, the physical displacement caused by digging a new grave at the same spot. Apparently, once the burial customs were properly observed and the body out of sight, little care was taken to insure that the deceased should rest undisturbed forever.

All of the graves belonging strictly to the Ga.Sur period have groups of objects placed with the dead. Similar groups are easily distinguishable in Grave 5 and point conclusively to these as separate interments.

Of all these burials only one can be definitely ascribed to a particular pavement. The shaft from Pavement III to the first shows its point of origin. The second, judged from level alone, could not have been earlier than Pavement VI, and, more likely, belonged to V or IV. The sixth, at a level of minus 322 cm., could not have been earlier than Pavement VII.

It is of particular interest to compare the sixth burial of Grave 5 with Grave 11. It will be noted that both are at the same approximate level, and that neither has any pottery furnishings. That these two, the earliest graves after the prehistoric period, should be without the deposits which were an inseparable feature of the typical Ga.Sur grave, is significant. That the lower one in Grave 5 had with it two copper implements and a cylinder seal does not materially alter the situation. Burial customs of an established culture, as a general rule, are not subject to rapid change or innovation. Alteration is usually slow and is almost always due to the introduction of a new people bringing new customs to the community.

The region around the southern corner of L4 is shown to have been a burial place of considerable popularity. Not only were there the six burials of Grave 5, but also those of Graves 7, 8 and 9. It is possible

that this is the edge of a more extensive burying ground extending southward into the unexcavated region.

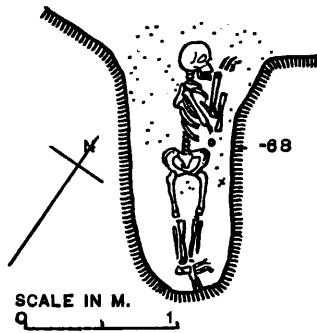


FIG. 8. L4, Grave 4.

Grave 4 (Fig. 8; Plan 5, F). Early Nuzi(?). Elevation, minus 68 cm. Adult. Upper part of body on its left side, facing northeast; lower part on its back. Legs fully extended; hands raised to face. No construction. No furnishings except copper fragments at the left of the waist, probably accidental. Burial originated from the area between Pavements III and IIB.

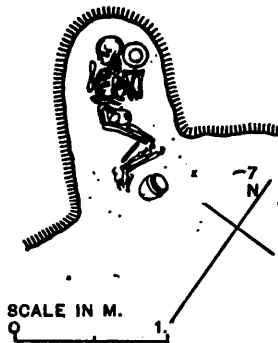


FIG. 9. L4, Grave 3.

Grave 3 (Fig. 9; Pl. 33, D; Plan 5, E). Late Ga. Sur. Elevation, minus 7 cm. Adult. Lying on left side, with head turned sharply in opposite direction, facing southwest. Legs partially contracted; left hand raised toward neck. Right forearm across waist. No construction. Round pot at feet, another at back of head. Burial originated from upper part of space between Pavements III and IIB.

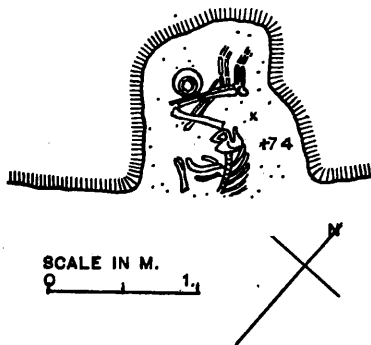


FIG. 10. L4, Grave 2.

Grave 2 (Fig. 10; Plan 5, E). Late Ga. Sur. Elevation, plus 74 cm. Adult. Lying on left side, facing southwest. Legs partially contracted; arms raised toward head(?). Skull demolished at time of discovery. No construction. Round pot (Pl. 62, Q) below the knees. Burial originated from Pavement IIB or from space directly below it.

*Grave 1*⁷ (Fig. 11; Pl. 33, C; Plan 5, E). Early Nuzi. Elevation, plus 164 cm. Adult. Body lying on its left side, facing west. Legs partially contracted; right forearm across waist, and left hand raised to the face(?). No construction. No objects. Could not have been earlier than Pavement IIA, possibly later.

⁷ This is also mentioned (as Grave 1) in Mr. Ehrich's account of the other burials found at Yorgan Tepa. See *Appendix E*.

Conclusions. In reviewing these burials it will be noted that the pottery of all except Graves 3 and 2 (and of course the prehistoric Graves 13 and 12) is identical with that found on and between Pavements III and VIII. Only Graves 3 and 2 show any difference in pottery.

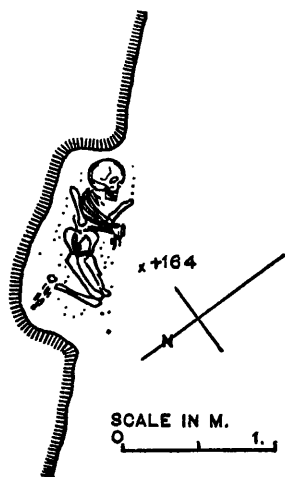


FIG. 11. L4, Grave 1.

Their pots (Pl. 33, D; Pl. 62, Q) have broad mouths and round bellies, unlike those found lower, though they have the thinness seen in so much of the earlier ware. Their forms are much more like Nuzi than Ga. Sur, though not identical with the established types of the later period. The question arises, are these two burials early Nuzi? The possibility seems doubtful. The only certain Nuzi burial found in the entire four years of excavation, Grave 1, contained no objects whatsoever. If this condition may be considered typical of the Nuzi burials, Graves 3 and 2 are eliminated from

that period. The Nuzi vessels of Pavements IIB and IIA have about them a finish and grace quite certainly the result of contacts with the makers of the graceful ware of Ga. Sur. Correspondingly, the newcomers, arriving in such force as soon to gain full control of the city, exerted a similar influence on the potters of Ga. Sur. It seems safe to assume, then, that Graves 3 and 2 are actually late Ga. Sur, and that the Nuzi-like appearance of their objects is due to the influence of the newcomers.

Grave 4 was as barren of objects as the Nuzi burial, Grave 1. Since we know that the change between Nuzi and Ga. Sur occurred between Pavements III and IIB, the region in which Grave 4 lies, and since we know that furnishings were an integral part of Ga. Sur burials and apparently not of Nuzi ones, we may argue that Grave 4 is the earliest Nuzi burial.

The two lowermost burials also deserve attention—Grave 11, and the sixth, or lowest, burial of Grave 5. Neither had any pottery, a condition which in itself is sufficient to militate against the belief in a cultural identity between these and the Ga. Sur graves of slightly higher level.

Concerning the Ga. Sur graves between these two lowest burials and the Nuzi levels, there is little constancy shown in body position. In the great majority of cases the skeleton lies on its left side, with legs partially contracted and hands raised to the head. The body direction

varies in each grave. The number of objects with any one skeleton ranges from 1 to 13, and evidently depended on the wealth of the individual buried. Where the objects are few, they are placed by the head. The fact that in a number of apparently undisturbed graves the bowls and cups were as often upside-down as upright suggests that they were intended for actual use by the spirit of the departed rather than as containers for foods, placed for his sustenance in the next world. Metal is rarely placed with the body, and, again, apparently indicated a person of importance. Beads were encountered in only two graves, 5A and 7. The only signs of special protection for the body at the time of burial were in Grave 5A and in the fifth burial of Grave 5, where ashes of straw matting could be traced under and beside the skeletons.

TEST PIT N120

Within the confines of N120, Stratum II of Nuzi, another test pit was put through to virgin soil. A very brief account of its findings will here be given, in order to show its relationship with L4 and Ga.Sur.

Eight pavements were found, the uppermost being that of Stratum II of Nuzi. Each is at the level given below:

Pav.	I	plus	276 cm.	Pav.	V	minus	194 cm.
"	II	"	195 "	"	VI	"	334 "
"	III	"	150 "	"	VII	"	422 "
"	IV	minus	3 "	"	VIII	"	524 "
Virgin soil—minus, 540 cm.							

The earliest habitation level was Pavement VIII. On this pavement were many unidentifiable animal bones and the skull of a crocodile (Pl. 29, D), 73 cm. in length. The terra-cotta was typical of the Ga.Sur period.

Viewing the results of this shaft as a whole, only the main conclusions need be given. That the space between and including Pavements VIII and V was of the Ga.Sur period is shown conclusively by the pottery. The floors were of packed clay, and fragments of walls were found. That on Pavement VI was made of mud-brick, 42x30x7 cm. Signs of intense fire were found on both Pavements VI and V.

The first of two graves was found between Pavements VII and VIII. The skeleton was that of an adult, lying on its right side and facing northwest. The legs were contracted and both hands were raised to the face. Beneath the body was a layer of white ash revealing the imprint of wood. Next to the body was a large shouldered pot, a red ware vase

(Pl. 52, B), and three bowls, two of which were upside-down, one within the other. At the right side of the head was an earring in the form of a silver loop on which was suspended a lunate lapis lazuli bead, in shape like that from Grave 7, L4. Around one wrist was a string of black composition(?) beads, and near the feet a similar quantity of beads suggesting a single anklet like the circlet on the wrist. The wooden coffin or pit bottom, the beads, and the earring indicate that this was a burial of importance.

The second burial, between Pavements V and VI, was also of the Ga.Sur period. The skeleton was that of an adult, lying on the right side, facing east, with legs partially contracted and hands raised to the face. Behind the head was a large shouldered pot and opposite the chest—on both sides of the body—were two copper daggers or spearheads (Pl. 55, X), each with a tang that once was wedged into a wooden handle. On either side of the skull were two small earrings or circlets of copper wire. It is of interest that both skeletons lay on the right side rather than on the left. It suggests that the position of the body, which in L4 was usually to the left, may actually have been a matter of no great consequence.

Nuzi shapes begin to appear immediately above Pavement V. Consequently, this stratum would correspond to Pavement III of L4 as the last purely Ga.Sur level, and the space between Pavements V and III in N120 would correspond to that between Pavements III and IIA of L4. Fragmentary offering stands (Pl. 62, A; Pl. 114, F; Pl. 115, D), below Pavement III, relate these levels to Temple F, and, consequently, to Pavement IIA of L4. It will be noted that the points in N120 are at a lower level than corresponding points of the same period in L4. This is due to the downward slope of the mound in Ga.Sur times, and suggests that N120 was close to the edge of the mound as it existed in that period.

It is seen, then, that N120 corroborates the main features of L4: first, an extensive Ga.Sur habitation, then, an intermediate period showing both Nuzi and Ga.Sur characteristics, and, finally, Pavements III, II and I, in which the people of Nuzi had reached complete dominance over their predecessors.

TEST PIT G50

Another test pit to reach virgin soil was within the area G50 (Plan 13, Stratum II, Nuzi) and below the bottom of the Temple A well. The well or shaft, made in the latter part of the Nuzi period, came to

an end at 548 cm. below plain level (882 cm. total depth). Digging further, through undisturbed soil, a well-defined pavement was found, 633 cm. below plain level. On this floor was a heap of twenty-three stone beads, twenty-three pierced shells, a quartz fragment, and twenty-five stamp and four cylinder seals (Pl. 40, A-Y; Pl. 41, C-F). The pavement was of packed clay, slightly blackened, and was covered by a layer of sand 2 or 3 cm. thick, which in turn was overlaid with a thin deposit of sherds of coarse reddish and greenish ware, fragmentary and undistinguished. Immediately below this floor was a sherd of typical prehistoric ware, across which was a single black band. Below this, however, no painted ware was found. There were occasional small sherds of a coarse gray or tan ware, unlike the fine-grained ware of Kudish and early L4, and a complete crude bowl (Pl. 49, E) was found, similar to certain of those from Pavements IX-V of L4 and very like the bowl used to cover the infant burial found within the circular room of Trench 2 at Kudish Şaghîr. Virgin soil was reached at 833 cm. below plain level.

In comparing the three soundings of Yorgan Têpa, one is struck by the variations in the depth of virgin soil: minus 540 cm. in N120, minus 645 cm. in L4, and minus 833 cm. in G50. In regard to the last-named, however, it should be borne in mind that the area exposed was hardly over a meter in diameter. Here the greater depth over that of L4 may possibly be explained by variations in the surface contour of the original terrain. The relative shallowness of virgin soil in N120, where no prehistoric strata were found, compared to that of L4 is probably due to the general rise in plain level between prehistoric times and the later cultural period exposed in the lower levels of N120.

CITY WALL

Stratum V of the City Wall Section yielded objects undoubtedly of the transition period between Nuzi and Ga.Sur. Since the inception of the wall itself was earlier than the room from which these objects came, the city wall may safely be considered as at least late Ga.Sur. The establishment of the city wall as Ga.Sur gives us the outer boundary of the early city on one side at least, and suggests that the mound as it existed in Nuzi times had not greatly expanded beyond that occupied by the earlier people. Since the city wall was incorporated bodily into the city plan of Nuzi (Plan 24), the detailed description of it has been placed with that of the later period.

TEMPLE

Both Temple G in its entirety and the northwestern unit of Temple F are products of Ga.Sur, Temple G dating from well within the period and Temple F originating during the transition from Ga.Sur to Nuzi. However, their descriptions have been placed with those of the Nuzi temple levels, since both exerted a profound influence on, and are an inseparable part of, this series of superimposed buildings.

CHAPTER III

NUZI: ARCHITECTURAL ELEMENTS

After the dominating culture of the uppermost levels at Yorgan Tapa had been identified as Hurrian, the purpose of the work became that of uncovering as completely as possible one synchronous level of this provincial Mitannian city. Stratum I of Nuzi was too fragmentary to be of any great use. Stratum II was chosen because of its relative completeness and because in it the two dominating buildings of the city—the palace and the temple—first came to light. Where Stratum II no longer remained, the next level below was followed, for the reason that the rebuilding that resulted in Stratum II would tend to follow to a considerable extent the plan of its predecessor. Thus even where the desired level was demolished one could hope to gain at least a relatively true conception of the missing buildings.

Particular care has been taken in reconstructing missing walls. No wall not actually found in the course of the work has been put on the plans. Structures not actually found but indicated by the position of door-sockets, door-sills, pavements, etc., have been represented by dotted lines. Those places where one might reasonably expect walls, but where no indications remain to prove their past existence, have been left blank, for the individual reconstruction of the reader.

Architecturally, the most important structures in the city of Nuzi are the palace and the temple. These two, in conjunction with the shape of the mound, govern and perhaps justify the plan and presence of the surrounding private houses. The whole forms a unit devoted in its parts to governmental, religious, and private use.

The two main buildings are distinct and self-sufficing. The private houses, where ancient damage has not been great, are also easily distinguishable as separate groups of rooms comprising single one-story house units. Sometimes grouped about an open courtyard, but, more frequently, as a series of covered rooms clustered about a larger one, they take the shape of intelligible, though haphazard, city architecture. The whole is built upon a skeleton of rudimentary city streets which by that time had become a necessary adjunct to crowded city life.

Mud-brick. Sun-dried brick, or *libin*, was the building material of all walls and buildings at Nuzi. The local alluvium is particularly suited to its manufacture, and when mixed with chopped straw, and carefully prepared, it makes a brick of surprising strength. The most

common size was 33x33x13 cm. and, except for occasional variants, this size was used throughout all the Nuzi walls. In addition to this, there is the half-*libin*, 33x17x13 cm., made to produce the even surface of a bonded wall. A *libin* with concentrically curved inner and outer

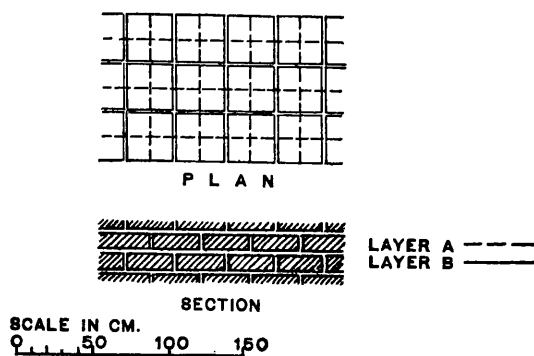


FIG. 12. L11, bond of mud-brick wall.

edge and non-parallel converging sides was also used. With these a complete circle of wall could be laid, having perfect contact between each two contiguous straight edges, and even, vertical bonding. The individual *libin* were well made, with smooth flat parallel sides. Seldom was there any mark or depression to disturb the even surface of its top or bottom. The only occurrences of such marks were in L20 of the palace (Pl. 16, A), and G29 of Temple A. Both will be described in detail in the accounts of those buildings.

The bond used was constant throughout the city, the overlap being both horizontal and vertical as shown in Fig. 12.

Baked brick. In baked brick one encounters a considerable variety of sizes¹ not found in *libin*, although the common *libin* size, with its accompanying half-brick, predominates.² The bricks were, in the great majority of cases, excellently formed and baked, with chopped straw in quantity and a slight amount of sand as the *dégraissant*.

The use of baked brick was confined to courtyard pavements and wall facings (Figs. 14, 23), drains, walks, door-sills, hearths, and other special structures. For mortar they employed the same viscous mixture of clay and chopped straw as was used in laying *libin*. Bitumen was used as mortar only where considerable moisture was expected. It is impossible that people living in an area of relatively abundant rainfall and frequent devastating cloudbursts should have failed to realize the importance of such permanent building material as baked brick. That it was sparingly used, even though their supply of clay was inexhaust-

¹ See Appendix C.

² It is possible that there was a variation in *libin* size corresponding to that found in baked brick. A comprehensive list of *libin* sizes could only be had by dissecting each mud wall, and this process—often impossible—is always difficult and tedious. However, on those mud walls in which the separate *libin* were visible, and in the many cases where dissection or accidental destruction gave us the dimensions, the size noted remained relatively constant.

ible and their knowledge of firing highly developed, leads one to believe that even in those times the scarcity of fuel was distinctly felt.

Stone. Stone was practically never used as a building medium. Except as the most valued material for door-sockets, its use was confined largely to the manufacture of small personal and household objects. With an unlimited supply of stone in the hills behind Kirkuk, it is strange that so little use was made of this permanent material.

Pavements. Most of the floors were of local earth levelled evenly and packed through continual use. Gravel was often added to the clay to insure a firmer texture. There were, however, frequent examples of true pavements. The finest of these were the baked-brick pavements laid in sand or sandy earth, to insure an even surface and good drainage. In the private houses, and even in the palace, a disregard was shown for uniformity in pavement bricks. Adjacent rooms or courts were sometimes paved in bricks of two sizes, and frequently, in buildings of lesser importance, the court was paved in anything the owner could provide—bricks of different sizes and shapes, some whole and some broken, flat field-stones, and even large potsherds. In a few cases, lime cement was used identical with that known today in Iraq as *juşş*. The most notable example of this was Street 5, in which layers of cement intermixed with small pebbles were spread from time to time over the accretion of rubbish to make new surfaces.

Libin paving, sometimes laid in sand, was frequently encountered in the more important rooms and courtyards. An unusual *libin* pavement, found in Group 36, Stratum II, was composed of parallel rows of standing *libin* 33 cm. apart. The space between rows was filled with porous earth, and the whole overlaid with a layer of flat *libin* (Pl. 25, A; Fig. 37).

In the main rooms of the palace, pavements were found built up, at one time, of alternate layers of clean clay and charcoal (Pl. 16, B). The depth of this type of pavement was 20 cm., with the alternate layers ranging from a millimeter to a centimeter in thickness.

Bitumen. Bitumen was frequently used as a plaster on baked-brick floors and wall-facings. In bathrooms, water-filter rooms, and on outside walls, this method of construction gave excellent protection against moisture. In rare instances the bitumen extended over the upright surface of the mud-brick to seal the union between baked-brick pavement and *libin* wall.

Doors. The frequent absence of door-sockets at doorways of adja-

cent rooms cannot be entirely accidental, and leads one to believe that within the house doorways had swinging, solid doors only where necessity demanded. It is possible that where only apparent rather than actual separation was needed, a curtain of cloth or matting was substituted for the more expensive wooden door. The usual door was of wood fastened to a door-post of the same material, pivoted at the top and bottom, the whole structure, door-post and all, swinging with the opening or closing of the door.

Door-sockets. The most common type of door-socket was that found in the private houses, a brick or a portion of a brick containing a depression 1 cm. or less in depth and 5 cm. in diameter. For more pretentious doorways in these buildings a stone was used, having in it either a conical or semicircular depression with an average diameter of 7 cm. Doorways in the palace and temple frequently had more impressive door-sockets, larger in size and showing signs of manufactured depressions instead of those created primarily through wear. The depression was an evenly-rounded hollow (Pl. 24, C, D), not unlike the interior of the common household stone mortar, and was obviously intended for a door-post of considerable size. The dimensions are not constant, but average 11 cm. in diameter and 3 cm. in depth. The one serving the doorway between L11 and L20 of the palace is of unique type, and by far the largest and most elaborate found (Plan 20). Unfortunately, the Nuzians did not follow the practice of placing inscriptions on these sockets.

In rooms of importance the socket was always placed within the enclosure, consequently, the door would swing inward and, when closed, it could be easily barred from within. If the doorway was in the center of the wall, the socket was placed at one of the inner corners. If, however, it was near the end of the wall, the socket was generally placed in the corner made by the projecting door-jamb and its right-angle wall.

The depth of the socket varied according to the weight of the door to be swung. The shallow brick and small stone sockets were often only flush with the pavement, or at the most not deeper than 20 cm. The larger sockets were placed between 40 and 60 cm. below the pavement, at the bottom of a well having packed earth, *libin*, or baked-brick sides.

*Door-pivots.*⁸ Several of these sockets showed signs of bronze stain, and a few specimens of copper sheathing have been found. The latter

⁸ See also Appendix D, *Metals*.

were secured around the rim with short nails, fitting the butt of the door-post snugly. More substantial were the copper pivots with conical bases and three equidistant flanges rising from the rim of the cup that held the bottom of the post (Pl. 124, B). Each flange was pierced by two nails, which, in two of the examples found, still retained the charcoal remnants of the post they once secured. Although only three pivots were found, the number of sockets having depressions of this same cone shape indicate that they were once relatively common.

How the upper end of the door-post was secured is still a matter of doubt. Since the securing member had little weight to bear other than that of keeping the post and the attached door in an upright position, it could well have been of a material less resistant than metal. The means used may even have been the same as those employed today, consisting of a stout, forked branch severed from its parent limb at the point of division. The two forking branches straddle the upper end of the post, with their ends deeply buried in the mud-brick wall.

Door-swings. In rooms of consequence a door-swing (Pl. 123, E; Figs. 16, 20) was often found—a narrow rail of pottery or stone, circular in plan and extending about 270 degrees. This was so placed that it rimmed the well of the door-socket and served as a further support to bear the weight and the scraping of the bottom of the door.

Doorways. The top of the doorway has been a subject of considerable discussion. One with a flat lintel, between L10 and L99, Stratum II, has been found intact; also three surmounted by true arches, between S174 and S397, Stratum IV (Pl. 26, B); C12 and C15, Stratum III (Pl. 26, A; Fig. 31); and G26 and G37, Stratum III (Fig. 29). The corbelled arch, the principle of which was known, may be eliminated at once as unsuited both to *libin* construction and to doorways of practical proportions. The flat-topped doorway just mentioned is considerably narrower than usual, with the *libin* laid flat across the top, remaining solid in that position without the aid of any supporting beam. Moreover, there are no indications that here such a support was ever used. If the usual door of normal width was flat-topped, the only means of supporting the *libin* lintel would be that used in the region today: stout wooden beams set into the wall and crossing the open space on which the *libin* lintel was built. Such a construction, depending on the support of non-permanent material, would collapse in the course of ruin and desertion, leaving not even the holes in which the beams were set, to indicate its past existence. With an arch one might expect that in a considerable number of cases the springs of the arch

at least would still be evident. That but three arched doorways remained, and those in perfect condition, indicates that they were unusual and that their superior construction alone preserved them. That in the vast majority of doorways no traces remained of either type is of itself proof of the complete obliteration that would follow the collapse of a flat lintel.

Door-sills of *libin* or of baked brick were customary, but by no means universal. The *libin* sills, one or two courses high, were always raised above the level of the floor and extended the full width and depth of the doorway. It is likely that they served several distinct purposes: to provide a vertical surface for the bottom of the door to swing against, ensuring greater security and seclusion for a closed room; to distinguish more clearly the separation between one room and another; and to ensure that the loose contents of one room stayed within their proper boundaries. The latter two are probably the paramount reasons, for many doorways provided with sills lack the sockets necessary for a solid wooden door.

Baked-brick sills were always set flush with the floors of the two rooms they connected. Probably for reasons of economy, they seldom extended the full depth of the doorway, but consisted merely of a single row of brick in line with the wall of one room or the other.

In doorways leading to an open court or street the sill served the outer half of the entry, thus providing firm footing immediately where it was most needed. Those householders who had the means placed more bricks across the width of the doorway on both sides, filling the space between with earth. In the palace and temple, and in some of the more pretentious private houses, the full depth of the doorway was paved. Even here symmetry of pattern was disregarded, as is shown by the use of odd-sized and even fragmentary bricks, in whatever arrangement would best serve to pave the space. In the poorer dwellings, complete and fragmentary bricks were used indiscriminately, and even large stones and potsherds were used to fill in the gaps left by the lack of brick. True sills of stone, especially made for the purpose, have never been found in a building of the Nuzi period.

Doorless rooms. Rooms were frequently found at Nuzi without any doorways whatsoever. Where a room was traced from remnants of walls half a meter or less in height, one could presume that the reason no doors were found was because the sills were exceptionally high; but when rooms were found with walls almost two meters high, as in F27, F29 and F35, Stratum II, and only slightly less high in several other doorless rooms, with a solid face of visible bonded *libin* on each

wall, such a supposition is impossible. That these rooms were used, is proven by the presence of quantities of household objects, and by their packed pavements. It is clear that there was access from above by means of ladders or wooden steps. There is no proof of overhead entry, but there is proof of entry over a high, separating wall (G73, Temple A). One would at first suppose such enclosures to have been storerooms; but the occurrence of several connected rooms having no outlet to the rest of the house-unit, yet having much-used pavements, indicates that in these instances at least they were lived in, and easily accessible. Doubtless, many were used only for storage, as in the case of G73 cited earlier; but just as many showing signs of considerable use were living quarters, which for reasons unknown demanded special segregation.

Upper stories. There is no doubt that the Nuzi buildings were, for the most part, of one story. This is apparent when one considers that the ground plan of each shows it to be a self-sufficient unit, capable of satisfying every need of a normal house. Moreover, the frequent presence of roofing material in contact with the floors, the usual absence of any extraordinary amount of fallen *libin* within the rooms, and the general frailty of the mud-brick walls indicate with some certainty that the vast majority of buildings had no superimposed structure other than the roof. However, in a few rare instances there are indications of what may have been superstructures extending over a limited portion of the ground floor (D12, F25, L99, Stratum II; L20, Stratum III). The rarity of any visible means of ascent, along with the other indications mentioned above, suggests that these superstructures, if indeed they were such, were uncommon additions to the accepted Nuzi house plan. Two Nuzi texts* mention a "pent-house" (*bît ru-uk-bi-šur*). The fact that in each case mention is made of a surrounding balustrade (*a-am-ri-šu*) suggests a single room or small group of rooms occupying only a limited portion of the roof.

Roofs. In all probability, the roofs of the Nuzi buildings were flat, and made in the same manner as those of the present-day mud-brick houses. In the latter, rough poles serve as rafters on which is piled a thick layer of brush or reeds, overlaid with plastic mud, liberally mixed with chopped straw. Many instances of beams, preserved as charcoal, found in the débris, are evidence of tumbled roofs, and in several instances roofing material baked in the fire of the destruction shows the clear impressions of reeds on the under side.

The roof or ceiling height is a question about which little is known.

* Semitic Museum Nos. 110, 2237. See Appendix D, *Houses*.

In only a few instances were there any remains of walls higher than two meters above the floor, and these were in buildings having much more substantial walls than the average structure. Thus, in G75 of Temple G the wall is standing to a height of 249 cm. above the floor level;⁵ and, again, at the point where L6, L9, L10 and L11 of the palace converge, the wall rises over two meters above the floor. This, however, only shows that in buildings having massive walls the ceilings were certainly not lower than 250 cm. It is reasonable to believe that the narrower walls, such as were found in the private houses, were topped by correspondingly lower roofs, since structurally they were less substantial. However, it is impossible to believe that the thickness of the walls was in an exact and constant ratio to the height of the roof; if so, some parts of the palace and the temple would have had a height out of all proportion to the building, and far beyond the needs of the separate rooms. While it is likely that the main rooms of the palace had higher ceilings than usual, to correspond with their large size, it is equally evident that the great thickness of the walls served the purpose of creating an air of massive grandeur such as bulk alone can give. It is highly improbable that the ceilings of such rooms were higher than three meters, and they may have been less. This height would have been sufficient to keep even an exceptionally large room from appearing cramped, and would have given ample overhead space for insulation against summer heat.

The greatest height in a wall of the narrower type, characteristic of dwellings and the lesser rooms of the palace and the temple, was two meters. This wall was found between H5 and G50, Temple A, just as it had fallen in ancient times. Judging from the straightness of its one upper edge, it probably represents the full height of the original wall. Although this is but a single instance, it presents sound evidence for the supposition that two meters or slightly more was the approximate height of the usual private house wall.

Foundations. Except in two instances seen in the house of Shurkilla, solid foundations of brick were never used. Partial brick foundations, laid as a sub-pavement wall-facing, were somewhat more common, reaching a depth of from two to four, and in one case (N120), eight courses. However, where necessary, the customary foundation was a continuation of the house wall in a trench below the general pavement level. If, as in the case of the wall of C20-C24, Stratum II, the underlying earth was not solid, the foundation was made deeper in

⁵ Although this building belongs to Ga.Sur rather than Nuzi, it may be taken as a guide in calculating the roof height.

order to insure stability. The greatest foundation depth observed in a Nuzi building was 77 cm. in the L8-L9 wall of Stratum III. In contrast with this, no foundations were used in cases where the underlying earth was particularly solid, or where the intended structure was of small size. Although foundations were used for most buildings, the use of them was dictated by necessity rather than by custom.

Lighting. How these closely crowded rooms were lighted is still a mystery. It is unbelievable that they were without any light except that which came through the doorway from the outside. If such was the case, the second room away from the courtyard must always have been in almost complete darkness. There are but two possibilities: first, an opening in the roof; and, second, a type of clerestory window. The first would have served as a smoke outlet as well as a light opening. To have been of any great use as a lighting aperture, however, its size would have to have been so large that a typical Kirkuk downpour would have been disastrous to the unprotected mud floors. It seems much more reasonable to believe that some adaptation of the clerestory type was used, serving at the same time both as smoke-vent and window. Overhanging eaves would have given protection from rain, and in rooms of staggered roof-height even the innermost of a complex group could have been lighted.

Ground plan. Many of the private houses show clearly that they are the result of a preconceived and carefully followed plan. The orderly arrangement of the rooms about the central court or main room and their efficient disposition in the space available, give ample proof of this. Almost the contrary can be said of fully half of the private houses, but in these cases the disorder is due not to a disregard for symmetry, but to a prosperous expansion, at the expense of the neighboring buildings, through a period of one or more rebuildings. In most of these cases it is possible to detect a reflection of the outline of the original house in the plan of its enlarged successor. On the whole, whether or not the symmetry of the whole plan is evident, the individual rooms are pleasingly proportioned wherever the space was sufficient to allow for it. Three features are at once apparent: the complete absence of curved walls; the preponderance of a rectangular, rather than a square outline in rooms (closets excepted); and the almost universal location of the door near one of the corners rather than in the center of the wall.

It is usually difficult to assign a definite use to any given room except where rows of storage pots and jars mark it as a storage room, or

a hoard of tablets in a small closet show it to have been devoted to the safekeeping of these objects. Similarly, a toilet or a brick pavement, well served with drains or coated with bitumen, identifies the bathroom. An entry-room and often a door-keeper's room were provided, these being obvious as such from their locations. The principal room of the house, identified only by its size, was, in one type of house, in the center, surrounded by lesser rooms; and, in another type of house, at the extreme back. To judge from the usual lack of household utensils in the main room, it was not used for the performance of domestic duties, but was a reception room and sleeping room.

Kitchens. The kitchen occupied varying positions in different houses, if the hearth—which is our only means of identification—may be taken as a positive guide. In the type of private house in which the principal room was at the extreme end of the building, as in Group 10, Stratum II, the hearth was frequently in the room immediately next in size to the main room. This, however, was not an invariable rule, but its relative frequency makes it appear to have been at least a partially observed custom. The hearth may be in any of the subsidiary rooms toward the front of the building, but is never in the main room itself, or in the entry-room, or in small sequestered rooms inconvenient of access. In the other type of well-ordered house—that in which the main room occupies the center and is surrounded by lesser rooms, as in Group 3, Stratum II—the hearth may be in any of the smaller rooms toward the front of the house, but, again, never in the main room, or in the entry-way, or in the less accessible rooms toward the rear of the building. Even these vague rules fail in the main rooms of the palace and temple where ritualistic observances call for changes in the positions and uses of these fireplaces.

The hearth was seldom, if ever, in the same room as the circular baking ovens. Houses were frequently without ovens altogether; and, if ovens were used at all, they were almost invariably in one of the subsidiary rooms against the outside wall of the group, or in a separate enclosure within the courtyard. Since the oven demanded an opening to take care of the large volume of smoke, it would of necessity have to be either in the court or in an enclosure especially given over to it.

Hearths. The customary hearth consisted of four bricks laid in a square (Pl. 17, A; Pl. 18, B), with their upper surfaces flush with the floor. As a general rule, the bricks appear to have been definitely fixed in that position, but in a few cases, as in C19, Stratum III, they rested on the top of the pavement as though for easy removal to another location.

The most frequent size of the hearth, which was by no means constant, was 66x66 cm., or four bricks laid to form a square. Where greater size was needed, nine bricks were used, as seen in H51, Pavement I, Stratum II (Pl. 19, A). The only instance of a hearth of one brick, a brick double the usual size, was found in G42, Stratum III. Many hearths were built of bricks of mixed sizes, of brick fragments, and of combinations of whole and broken bricks, as in H51, Pavement II, Stratum II (Pl. 19, C), and F13, Stratum II. Where the quantity of bricks was insufficient to make the hearth of the desired size, the area was sometimes completed with packed clay (Pl. 19, C), which, in time, became hard and brittle from the constant heat of the fire. This clay was washed free of stones, ashes and humus, but was not brought to the state of purity found in tablet clay.

It is obvious that, although the brick hearth was a customary fixture of Nuzi buildings, it was not subject to any rigid tradition of construction, size, or location. The only common characteristics are: right-angled corners, parallel sides, and square or rectangular outline, with a predominance of hearths of four bricks. The size varied from 40 to 90 cm. in length and width, with 66 cm. as the most common dimension.

The most complete hearths made entirely of purified clay were found in L11 and L8 of the palace. That of L11 was mud-brick overlaid with clay, the whole structure being flush with the floor. It was difficult to trace except where burning had hardened it, but its rectangular outline, approximately 60x90 cm., could be recognized. The hearth of L8 was unique. Encircling its clay floor was a raised rim of partially baked clay, rising in two steps to a flat top, which in the center of its southeastern side was broken by a gap of 19 cm. to allow the easy withdrawal of ashes (Pl. 17, C; Fig. 20, Dr. 2). The outline was rectangular and approximately 90x80 cm. in size.*

Stones were sometimes used to complete hearths of brick fragments, but only two hearths were found entirely composed of stone. Each was a single slab set flush into the pavement. That in P466, Stratum II, was a large, relatively flat stone, square in outline and placed in the customary position (Pl. 18, A). That in F17, Stratum II, was a flat slab, 66x44 cm., placed against the center of the southeastern wall (Pl. 17, D). Behind it an orthostat of two bricks protected the *libin* from fire.

The position of the hearth in the room was almost universally constant, being in the center of the short axis and at a point equal to

* This hearth is surprisingly similar to one found at Nippur (time of Ur Gur) made of packed clay, rimmed with brick, and having at one end a gap for the withdrawal of ashes; Clarence S. Fisher, *Excavations at Nippur* (Berlin, 1907), fig. 12.

approximately two-thirds of the long axis of the room. There are, however, notable divergences from this general rule, as in the case of F17 just cited, and in P472, Stratum II, and in H13, Temple A (Pl. 18, B), where the hearths are in the northern and southern corners, respectively. As in F17, H13 had on orthostat of upright bricks to protect the wall.

Few of the brick hearths show signs of having held fire. This must mean that the fuel did not produce a quick, fierce flame, but that it smoldered in glowing coals, much as does the Arab camel-dung fire of today. Since great heat is required to affect the color and texture of brick, we may assume that those hearths so affected had served as fire-places through exceptionally long periods.

In several instances, in private houses, the hearths show a thin coating or stain of bitumen. Since this is a readily inflammable substance, its presence indicates that in a few cases it was used as fuel.

Cooking stands. The unbaked clay cooking stands resembled in plan either those of Fig. 32 or Pl. 118, C. Used in pairs, partly encircling the fire, and in the latter type with the triangular end down, the flame would have been directed upward to the vessel resting on the upper surfaces. Only three were found, two in Stratum IV, I10 (Fig. 32), and one in the débris below Pavement I of H21, Temple A (Pl. 118, C). The scarcity of these necessary objects is probably due to their fragility. Having only the natural strength of unpurified clay, the slightest blow during the violent destruction of the building would have shattered them beyond recognition. It is also probable that some of the unbaked clay so-called loom stands (Pl. 118, A, B), of the broad-topped type, served as cooking stands.

Circular ovens. The very common circular ovens of Nuzi resemble those of modern Iraq, both in appearance and in their general inability to serve for other than bread baking. Except for a variation in size, they are all alike, and a description of one will suffice for the whole group. The example in H6 of Temple C (shown on the plan of Temple D) is the most complete and may be called typical (Pl. 19, D). The base was 35 cm. below floor level, making it necessary to maintain a shaft or trough downward from the floor of the room to serve the draft hole at the base of the oven. The material was red clay, modelled into a cylinder with converging walls, 70 cm. in diameter at the base, with the walls and bottom 2 to 3 cm. thick. Owing to their extremely fragile nature, none were found with the top intact (cf. Pl. 21, A, B). This is no exception, for at 40 cm. above the pavement, and 75 above its base, the walls were shattered beyond recognition. Those in use today

rise to a height of about a meter, with sides converging rapidly near the top, to an opening roughly 30 cm. in diameter. This is closed by a partially baked clay lid during the process of baking. It is likely that those of Nuzi were built with an upper opening of the same type.

At the base of the oven is a circular hole 9 cm. in diameter, which pierces the upright wall to allow a draft for the initial preparation of coals and hot ashes. It is seen that this oven has its base well below the floor of the room. Consequently, it cannot be considered as typical, for although most of the ovens are buried a few centimeters, this was the only one placed so deeply. In fact, there are many instances in which the floor of the oven and that of the room coincide exactly.

Although it could not be traced in this particular oven, many were insulated with an outer coating of 6 cm. or more of ordinary earth. In certain cases, as in C20, Stratum III, this final coating was inset with a protective layer of large potsherds to guard it from wear and to provide further insulation (Pl. 22, A). The heat of the fire makes the true oven wall excessively brittle and dark red, but apparently has no hardening effect on the outer coating of common earth.

The only other variations from this typical example are in floor construction and diameter. A floor of the same clay used in the walls is uncommon, and in the few cases where it is used the protective layer of ashes which soon accumulates in the bottom of the oven prevents the floor from becoming baked and brittle. Consequently, it is less apparent and is often missed when excavated. The more common practice is that of placing the oven directly on the natural earth of the floor. The diameters range between 50 and slightly over 100 cm., with an average of 80 cm. The outline is invariably circular, except in a few rare instances where (as in R118, Stratum II) lack of space has forced them to be placed against the side of an adjoining wall or oven.

Horizontal ovens. Another type of oven, infrequently found at Nuzi, is horizontal. So few were found, and those in such poor preservation, that little can be said concerning them. They consist of a horizontal chamber, 75 cm. in width, with mud-brick walls converging at the top in a roughly corbelled arch, at a height approximately equal to that of its width. The length, so far as could be told, was 150 cm.⁷ There was no evidence as to the means by which the ends were closed; nor was the arrangement of draft-holes and smoke-vents, and the division between baking and firing chambers at all discernible.

Kilns. Two examples of kilns were found, each built around a rec-

⁷ The example from which these measurements were taken was in R96 of the palace.

tangular fire chamber with fuel and draft openings at either end (Pl. 22, B; Fig. 36). Above was the baking chamber into which the smoke and heat passed through vents in the fire chamber roof. The walls of their upper chambers were not preserved in either case; consequently, there is no way of knowing what means of access there were from the outside or the arrangement of the final smoke vent. However, it is quite certain from their rarity, their large size, and their locations—in Courts C42, Stratum I, and H48, Stratum II, well removed from private quarters—that they did not serve for the preparation of common foodstuffs. It is more likely that they were for the manufacture of pottery or bricks, though there is no positive proof for either use. A more complete description will be given in the account of H48, Group 19, Stratum III.

The fragmentary remains of a pottery kiln were uncovered in W3, next to the city wall (Pl. 19, B; Fig. 46; Plan 24, 25). It is the only one of its type found at Yorgan Tepa. Since it was displaced by the Stratum VII city wall, it is likely that it belongs to the Ga.Sur period, or at least to the period of transition between Ga.Sur and Nuzi. A description as detailed as the remains permit will be given in the account of the city wall and its adjacent buildings.

Storage pits. The beehive-shaped storage pit of G17, Group 25, Stratum II, may be considered as typical. Circular in section throughout, with a bottom diameter of 175 cm., and converging rapidly toward the top to form the characteristic shape, the pit is 200 cm. deep, and is admirably suited to the economical storage of grain. That this was in fact its purpose is shown by the carbonized grain so frequently found on the floors of similar pits. Although there is no case in which the mouth is preserved, it is possible to ascertain by a projection of the curved sides that the opening was in no case greater than 60 cm. in diameter. Though the storage pits of Nuzi were sometimes smaller and frequently larger than this, the proportions remained constant. Those of Parthian and Sassanian intrusion retained the same shape, but were considerably greater in depth and in diameter at the bottom. No evidence remains to show the manner in which they were protected, consequently, the cover must have been either of wood, matting, or some other perishable material.

These pits were by no means an invariable feature of Nuzi houses, nor was their position within a house the same in each case. It is of interest to note that no storage pits were found in the palace, and only one in the temple. Since the palace had many rooms where grain was stored in jars, and since it was the most pretentious building of the city, one is led to the conclusion that the pit was an alternative open to those

who were without the means to store in a more satisfactory manner; for it is certain that the dampness of the soil, even in such a dry climate, and the lack of ventilation would tend to produce mould in grain thus stored for any length of time.

Only one pit was found earlier than Stratum II. This indicates that storage pits did not come into popular use until well toward the end of the Nuzi period.

Wells. Of the six wells found, three belonged to Stratum II, two to Stratum III, and one to Stratum IV. Since the two wells of Stratum III were definitely abandoned at the time of the rebuilding which forms Stratum II, we may assume that the well of Stratum IV served only during its own stratum, and that wells generally were not re-used in the subsequent periods. Thus in Stratum II, we have only three wells for the entire city. Two of these were within the palace, R57 and R96, and it is not at all certain that they were available to the dwellers in the houses outside. That leaves only one well, B10, to serve the whole of the city outside the palace. This, of course, would have been vastly insufficient, and it is evident that there must have been a considerable number elsewhere, conveniently situated for public use.

There are two possible areas where these other wells may have been located: one is in those regions where erosion has made excavation impossible; the other is around the base of the mound. Although the area first mentioned may have contained some of the wells, it seems more probable that they were not on the mound at all. All those wells not belonging to either of the two main public buildings—the palace and the temple—were found at the edge of the mound, and that of X5, Stratum IV, was actually at the foot of the slope. That the only three available to private house-dwellers were so situated makes it appear that the unlocated wells were also at the edge or just outside the area of the citadel. It seems reasonable to believe that the inhabitants of Nuzi would have commenced operations at plain level wherever possible, thus avoiding the necessity of digging through the mound.

The two wells of the palace are both brick-faced to their full depth. That of R57, Stratum II, is oval at the top, 110 x 90 cm., gradually revolving, with slightly diminished diameter, as it descends. The elliptical section is probably accidental. The lining is of the customary well-brick, of which three courses still protruded above the pavement as a coping. The depth was 24 meters, or 19.84 meters below plain level, and though the soil at that depth appeared quite damp, there was no water flow.

The well of R96 (Pl. 29, A) is rectangular in section, 121x114 cm.

throughout its full depth. Its brick-facing extends to the very bottom, which is 22.35 meters below the floor of R96 or 19.29 below plain level.

The well of B30, Stratum III, was a circular baked-brick shaft, expanding in diameter to an upper lining and coping of *libin*. A gap of 36 cm. separated the top of the brick from the bottom course of *libin*. The construction is clearly illustrated in Fig. 30 and need not be discussed here in greater detail. The well was not fully cleared and its total depth remains unknown.

The third type of well was that which is still common in this region, a roughly circular shaft, unprotected except for a scant lining of *libin* at the very top. In spite of its apparent insecurity, that of H7, Temple D and E, was sound throughout its whole depth. Bottom was reached at 21.32 meters below the pavement, or 18.37 meters below plain level. Although one example is not sufficient for proof, the distance of 119 cm. between the average depth of the two Stratum II wells and the one of Temples D and E, suggests that the final desertion of the city was due to the gradual recession of the water level.

All types of wells had common characteristics. All had vertical rows of small steps or holes along either side of the shaft at fairly regular intervals, those on one side staggered in relation to those opposite. These formed the toe-holes by which the original builders descended to their work. All had pillars or walls on both sides of the well-head to support an overhead draw-beam, though it could not in each case be over the exact center of the well. Each, except that of H7, Temple D and E, showed a great quantity of household pottery accumulated at the bottom. The most prevalent was a medium-sized, thin-walled, broad-mouthed pot (Pl. 69, B, C), which, if not the vessel in which the water was drawn, was at least the type in which it was carried from the well-head.

*Wall painting.*⁸ The private individuals of Nuzi, hard-headed as the tablets showed them to have been, nevertheless gave expression to an aesthetic sense in their frequent attempts at decorative wall painting. The colors used were red, pink, white, black and gray, the first four of which were often laid over a background of solid gray. The colors were in films of microscopic thinness, except in occasional instances where the white formed a thick layer that stands out beyond the surface, almost in relief. The colors, on the whole, were applied in thin, even solution, giving a surface of constant texture.

The most common motif was that of a vertical field of red between

⁸ For further discussion see Part II, Chapter III, *Wall Painting*.

two of gray, the three sometimes separated by a narrow band of spiral design, as in F24, Stratum II (Plan 23), each field occupying approximately a third of the width of the wall. It is fairly certain that these broad fields of solid color were topped by geometrical and conventional figured designs, such as were found in L15B, Stratum II (Pl. 128, E, G, H; Pl. 129, D). None was found in place, but the positions of the large fragments on the floor of L15B and those smaller fragments found in the débris fronting other painted walls would indicate that this more elaborate decoration was above eye level, between the cornice and the vertical panels. In any given room the vertical panel decoration was never on more than one wall, the other three being covered with plain gray. No hard and fast rule can be observed as to the wall selected, but in the majority of cases the special decoration was on one of the end or narrower walls opposite the principal point of entry. The room chosen for decoration was almost invariably one of importance within the house, seldom a small room or one not easily accessible.

There are a few exceptions to this usual manner of decoration. Thus, L11 of the palace showed traces of red across the whole width of its northwest wall, without signs of dividing panels. No color could be traced on the other three walls, which may be due to the intense fire that burned throughout most of the room at the time of destruction. C36, Stratum II, was a small room, with gray on all four walls and no traces of any other color. S185, Stratum III, showed traces of horizontal bands of pink, red, and gray, with a fragment of a design close to the level of the floor (Fig. 42).

The paint was seldom laid directly on the mud-brick. The plaster on which it was applied contained less chopped straw than usual, ensuring an unusually smooth surface for the paint. Re-decoration was a common practice. The old color was covered by a new coat of plaster, on which the older design would be repeated, though not necessarily following the exact dimensions of the original. It seems clear that an individual could exercise his own desires and tastes in the matter of proportion and spacing, but not in the choice of motif.

Another type of wall decoration, more simple in idea, is that found in L5 of the palace and in adjacent rooms, in which the walls were coated with a black pigment (probably bitumen) to a height of 130 cm. above the pavement. Above the even line on which the black ends, were traces of gray-white color. This arrangement was later altered. The black was covered with plaster and colored to the same height as before in gray-white color. Whether the upper walls were made black where they had once been light could not be ascertained. G29 and

G53, the two cellas of Temple A, had the same black painted walls, though the point at which the pigment ceased is uncertain.

Wall-nails. Terra-cotta wall-nails were also used as a decorative feature, although they were restricted principally to religious or governmental buildings. Two types were used: the first, rough and undecorated with a peg-shaped shank topped by a large flat head (Pl. 97, D, E, F, G, H, I). These were found in quantities in L20, Stratum II, and I21 and H60, Stratum III. Although none was found in position, it seems certain that they were inserted in the mud wall in a horizontal line above eye level. They bear no inscriptions, but they are undoubtedly the descendants of the inscribed cones found elsewhere.

The second type is an elaboration of the first. From the face of the nail a secondary, slightly smaller head rises to a mushroom top (Pl. 97, L, N; Pl. 98, A, D). The whole is covered, except for the shank, with the typical blue-green glaze. These were inserted in the wall with the flange flush with the surface and the secondary head protruding into the room (Fig. 21). In many cases the shanks were not of sufficient length to have borne any great weight; consequently, their main purpose must have been decoration. Since they were found only in the Ishtar section of Temple A, and in L5 and L8, the palace chapel, it is evident that this form of decoration was restricted to the cult. In L5 they were found in position, inserted in the wall 178 cm. above the pavement, 95 cm. apart, the first being 130 cm. from the corner (Fig. 21). Elaborations of this same type were found in Temple A (Pl. 98, E-H), used apparently in the same manner.

Miscellaneous wall decoration. In G29, Temple A, there were several additional means of interior decoration not found elsewhere. One is the use of numerous strings of composition beads suspended between the heads of the glazed wall-nails. Another is the insertion of glass eye-beads (Pl. 119, K) into soft *libin* to form a decoration or mosaic in the material of the wall itself. Similarly used were the limestone and terra-cotta plaques decorated on their outer faces with designs in different colored glass (Pl. 131, A, B). All these were found in the Ishtar group of Temple A and must be considered as solely restricted to temple use.

The walls of G29, Temple F, showed impressions of what appears to have been wooden paneling (Pl. 6, B). This again is unique, and, because it belongs to the Ga.Sur period, does not strictly concern us here.

Drains. The system of drainage as found at Nuzi was complete

and efficient, pointing, as such lowly things frequently do, to a considerable social development. It is doubtful if any completely native city of Iraq today has shown as much consideration for these necessary details.

The drains served separately and together three broad purposes: to receive the refuse from toilets; to receive the ordinary liquid refuse of the household; and to remove excess rain-water. In most cases, they extended to the nearest street and emptied into the main drain below the surface, flowing the length of the street with the natural slope of the mound. Because of erosion, not one of the outlets of these main city drains has been found. Consequently, it is unknown whether they emptied into the open at the base of the mound, or flowed into a specially constructed cesspool. The latter would seem improbably elaborate.

Drains used for carrying off rain-water from open courts usually emptied onto the surface of the nearest street, without an actual junction with the main street drain. Those drains serving for the removal of household refuse ordinarily joined the street drain, although occasionally they too emptied directly onto the surface of the street.

The most frequent type of drain was that made of baked brick, using full-sized brick for the floor and cover, and half-sized or broken brick for the walls (Pl. 11, A, B). The depth and width depended entirely on the amount of use to be given, and varied from the extraordinarily large corbelled drain of R96, Stratum II (Plan 21, 22), to the shallow open drain as seen within the confines of M1, Stratum II (Pl. 12). This is a matter of such great variation that it is impossible without undue elaboration to give a complete account at this point. Each separate case will be discussed in detail in the architectural description of the group or street to which it belongs.

Bitumen was seldom used as a lining, and it is probable that a large amount of moisture was disposed of through seepage from the joints of the brick.

Cylindrical terra-cotta drainpipes (Pl. 13, C) were less frequently used than baked brick, and only in one case, M100, Stratum II, were they found to have extended for any great distance (Pl. 14, A; Plan 22). A single drain was found which was made of open terra-cotta channels, semicircular in section (Fig. 43) and covered with a single course of baked bricks. In a few cases, flat-bottomed terra-cotta channels were used as the final outlet of a drain emptying onto the surface of the street (Pl. 11, C). Rain-water outlets were of brick and existed only within the width of the wall they pierced.

Covered drains serving toilets or carrying refuse which might clog

the passage must have required frequent cleaning or flushing with water especially brought for that purpose. Two drains showed that special attention had been given to this problem. One, that of R96, Stratum II, was large enough for a small boy to crawl through, and nine vertical, brick shafts, as manholes, led down to it at regular intervals so that any stoppage could have been cleared away. The other was that which originated in R50, Stratum II, and flowed through R49, R57 and R170 into Street 12. A shallow drain, serving the two toilets in R56 and R170, it is evident that some artificial flushing must have been necessary. In following the drain to its source, it was found to turn southwest into R50 and enter the wall within which it connected with a line of vertical drain pipes leading to the roof. Since there is no reason to believe that here there was a second story, the only possible explanation is that it carried the rain-water from the roof to flush out the refuse which had collected in the drain lower down.

The toilets were of a primitive nature, not unlike those in the cities of modern Iraq. They consisted of two platforms, each made of four or five courses of rectangular brick extending outward from the wall, 10 to 15 cm. apart (Pl. 13, C; Pl. 14, B; Pl. 15, A, C; Fig. 24). The drain began below the slit between the two platforms and sloped sharply to the point where it joined the more gradual grade of the final passage to the outlet.

Toilets were by no means universally found in private houses. In many dwellings, particularly in the smaller ones, there were no signs of drainage whatsoever. The palace, the concentration point of wealth and power, was also the building in which the greatest quantity and completeness of sanitary measures were found.

General remarks. This preliminary description of the salient characteristics of Nuzi architecture and construction is necessarily incomplete. The variations from the accepted types are so frequent that it would be unwieldy to include each in such an account. Moreover, each problem and condition of Nuzi architecture is so intimately related to the whole building in which it occurs that it would be difficult to discuss it adequately without also considering the structure and details of the adjacent rooms. For these reasons, the bulk of the architectural details are discussed at length as they appear in the regular sequence of house units.

CHAPTER IV

NUZI: TEMPLE

Directly across Street 5 from the palace of Stratum II is the complex group comprising the temple. Characteristic of temple architecture, its large size, its dominant position and its objects all show that this was the religious building of first importance in Nuzi. This spot was found to be one that had for centuries been devoted to sacred use, though not by one race of people throughout an uninterrupted period of habitation. Of the seven superimposed buildings the earliest two, Temples F and G, belonged to the people of Ga.Sur, and from these the temples of the Hurrians were evolved. Whether or not each rebuilding meant a corresponding change throughout the *tepa*, and thus a new stratum, cannot be certainly known, for in this region only the temple was excavated to a depth greater than Stratum III. It is quite likely, however, that the temple would have survived in a given plan throughout a length of time sufficient for several rebuildings of the surrounding private houses. This view is substantiated by the increase in height of the adjacent Stratum II houses of the Northwestern Ridge over that of Temple A, Stratum II. A similar condition is found with the houses which flank the sides of the palace.

In the plans of Temples A, C, and F, the outlines of adjacent buildings have been included as being probably of the same period. It should be remembered, however, that their association can never be considered as more than tentative, since their relation is based purely on the uncertain evidence of like elevation. Only the period of Temple A is certain, since it is in direct contact and association with Stratum II. Temple C appears to have served during the major period of Stratum III, with Temple B existing during the change from III to II. Although Temple C is included with the rest of Stratum III, there is a possibility that it may have originated long before the advent of Stratum III, and that it ceased to exist shortly after Stratum III became established.

Although there are different levels and alterations within these temple buildings, only those in which definite changes in plan and level have coincided have been considered as separate new buildings. The temples have been given letters from A through G, with A designating the uppermost.

TEMPLE G

Temple G (Plan 6) is the unit from which the elaborate complex of Stratum II evolved. In its symmetry and simplicity it is particularly

fitting for the purpose for which it was intended. Projecting walls at the northern end of its northeastern face form a portico for the entry to G29, the cella of the temple. This doorway is the only means of entry into the building. A large stone door-socket 60 cm. below the pavement was found within the room at the projecting northern corner of the door. The builders of Temple F re-used this same pavement, and it is probably owing to their renovation that no signs remain to indicate the position or nature of the cult structures that must have existed here. The position of the entrance, as well as the custom observed in all the later buildings, makes it certain that the focus of interest and worship was at the southeastern end of the room.

The cella, which occupies the major portion of the building, is bordered by three narrow rooms on the south and southwest. A doorway in the western end of the southwest wall gave entry to G75, and a similar doorway at the other end, to G74 and G77.

G75 was as barren of objects as was the cella, and its floor was barely perceptible from the earth above and below it. It is clear that this room had little actual use, and access to it must have been restricted to temple officials whose duty it was to tend its seldom used contents.

G74 shows more definite signs of use. Along either side of the room is a strip of floor surface 50 cm. wide and 35 high, leaving a trench 32 cm. in width down the center of the room. This is the usual form of storage room in the later buildings of Nuzi, and it is likely that this was the place in which jars were kept containing grain and goods paid to the temple. This trench was partially filled with large stones the size of a man's fist, giving good drainage in case of seepage from liquids stored in jars on the raised benches at either side.

Later a cross-wall was added, separating G74 from the doorway to G29. This, at first glance, would appear to be a room blocked off from use, but since the trench does not continue under this wall toward G77, we may conclude that G74 was altered into a storeroom and the cross-wall installed at approximately the same time. In that case, since the room was altered to serve a definite practical purpose, there must have been easy access to it. Entry was probably made over this low dividing wall, which in its ruined state rose 112 cm. above the pavement. Its slight proportions suggest that it originally did not extend much beyond this height. In this room a bronze statuette was found, depicting a woman with flowing locks and hands raised to her face (Pl. 56, H).

A special doorway from G74 led to G77. A door-socket showed that the latter could also be closed off and used for safe storage. Its pavement of packed earth showed no greater signs of use than those of

G74 and G75. The narrow passageway leading from the north corner of G77 was obviously not intended for practical purposes but followed the traditional style of temple architecture of southern Babylonia. Though it was a characteristic temple feature it apparently was not an essential one, for in the latter part of this same period it was filled up completely with *libin*, making G77 as normal in shape as its two companions. Since it served no apparent architectural or structural need and since we see it abandoned, revived and altered several times in this and the later buildings above it, we can safely assume that it had to do with religious practice and was retained or abandoned not for practical purposes but to satisfy the dictates of some religious superstition.

The cache of twenty-three ceremonial copper objects found in G77 (Pl. 123, J; Pl. 124, C, D; Pl. 125, R, S, T; Pl. 126, N, Y; Pl. 127, B, C), is in all probability a buried hoard secreted below the pavement of a later room.

Except for the stone door-socket of the outside doorway of G29 and the brick socket in G77, the entire construction is of unbaked brick. The separate *libin* were of approximately the same size as those used in Nuzi times, well-squared and regular. The buttresses on the northwest, southwest and southeast walls are shallow and approximately the same in width as the recesses in between. Both the northwest and southeast walls have three such projections, but since the northwest wall is longer than its opposite member, because of the portico in front of G29, the three buttresses with their separating recesses are correspondingly broader. On the southwest wall four such buttresses are seen equidistantly placed along its length.

The position and size of these structures are evidence of the builder's sound sense of proportion. It should be noted that, except at the corners, the recesses are of approximately the same width as the buttresses. In the exception just mentioned the length of the corner recess is half that of its adjacent buttress. This follows a sound principle of good proportion, that of concentrating the mass to accentuate the stability and grandeur of the corner. On the northern end of the northwestern wall this treatment is disregarded by continuing the line of the buttress to the very corner, in order to give the added width necessary for the portals of the entry-way. On the southeastern wall the center buttress is slightly less in width than the two at either end, again in order that the emphasis may be put on the corners. On the southwestern wall the two center buttresses are treated in the same manner.

Such indications leave little doubt that the original complete building had at its western, southern and eastern corners, towers projecting

slightly above the general line of the roof-top, to justify the accentuation of these points. The line of the northeastern wall, being broken by the entry-way to G29, was less adaptable to an even and simple use of such features. Nevertheless, two widely separated buttresses were found at either end of the wall. That they did not place a small buttress between them, as was possible without loss of symmetry, gives the impression that this side was not so much an exterior wall as the other three, and that at this side one was within the temple area even before entering the door to G29. No courtyard wall was found to prove that this was not a single free-standing building. However, the large open space before it on this side is indicative of the respect that restrained the encroachment of private dwellings. The probability that the area beyond the northeastern wall was as much a part of the temple as the interior of G29 is enhanced by the presence of several pottery offering stands (cf. Pl. 54, C, D) next to this wall near the eastern corner. Temple furniture of this kind would not be expected outside the confines of the temple area.

On the northeast a slight alteration in design was made during the period of Temple G. The line of the wall remained parallel to that of the earlier phase, but was moved 16 cm. further toward the cella. At the same time two stout buttresses were added near its eastern corner. These two structures detract from the appearance of the building and must have been necessary additions for the support of an insecure portion of the cella wall. The change in the line of the wall also indicates that the need for repair was the real reason for the reconstruction.

The workmanship throughout the whole building was of the very best. The *libin* was well made, evenly laid and in perfect alignment. The walls were solid and supported by trench-laid foundations 108 cm. deep. These foundations, as in the Nuzi buildings, were of mud-brick, laid in the same wall size and ground plan intended above the pavement.

The area cleared below this temple was too limited to give an intelligible ground plan of the building preceding it, but enough was excavated to show that the earlier structure did not even approximate the plan, which, as Temple G, governed the layout for six later temples. Although one cannot say with certainty that this was the first of the series of temples to occupy this particular spot, the variance in the position of the walls of the lower building makes such a surmise possible. At least it can be said that Temple G is the first to establish the design which was maintained with more or less uniformity in all of the buildings above it.

TEMPLE F

Temple F (Plan 7) shows a greater variation from the plan of Temple G than existed between any other two buildings of the series. G29 still remains the most important room, and was preserved in such perfection that it is possible to reconstruct its original appearance with considerable accuracy. Retaining the same pavement used in Temple G, the length and width of the cella was decreased by four new walls flush against the earlier ones, these additions resting directly on the older pavement. The total width of the early cella was decreased about 40 cm. more than the length, resulting in a room slightly changed in proportions as well as in size. The entry-way remains in the same position, but, of course, is greater in depth because of the walls added within the room.

Within the room the first object encountered is the raised mud-brick altar (Pl. 5, A; Pl. 6, A), centered on the shorter axis and well toward the southeastern end of the room. It rises 33 cm. above the pavement, maintaining this height with fair regularity on all four sides. The upper surface is regularly hollowed with an elevation at its center point of 28 cm. above the pavement. On it were black ashes and carbonized kernels of barley, leaving no doubt as to the use of the structure or the nature of at least one of the sacred offerings. On this upper surface at the southern corner is a single mud-brick 33 cm. in width and length and 10 cm. high, forming an integral part of the whole structure. The sides of the altar slope slightly inward and are smoothly plastered with mud-mortar devoid of the usual chopped straw.

In this room was an elaborate terra-cotta house model (Pl. 61, A, B), and it is not beyond possibility that the raised portion of the altar was the spot on which it originally rested. The largest group of its fragments was on the floor next to the northeastern side of the altar (Pl. 5, A); one was on top of the altar and the rest were scattered about the cella and even in the entry-room.

Across the southeast end of the room is a raised platform of two levels and against the center of the end wall, a pilaster, 126 cm. wide, projecting 56 cm. into the room. Fronting this is the lower platform, 15 cm. high and a few centimeters greater in width than the pilaster behind it. On either side, extending the same distance into the room, are the two higher platforms. Each is 32 cm. high, and is contiguous to both the side and end walls of the room, as well as to the sides of the pilaster. In the eastern corner, slightly removed from the northeastern wall but contiguous with that of the southeast, is a single flat

libin, the surface of which is 50 cm. above the pavement of the room. This, like the one on the southern corner of the altar, may have been the resting place for some special piece of temple furniture.

On the face of the pilaster are two holes, 5 cm. in diameter, 27 and 31 cm. above the platform before them and 38 and 36 cm. from either edge of the structure (Pl. 6, A). Though there is a slight variation in their distance above the pavement and from the edge, they are symmetrically placed and must have been peg-holes for the support of some external feature. Since this pilaster, as well as the rest of the room, is cut off 138 cm. above the pavement by the building on the next level, it is impossible to say whether this structure continued to the ceiling as a pilaster or ended with a flat top as a pedestal. However, there can be no doubt that the statue of the goddess must have stood here. If this pilaster were flat-topped to form a pedestal it would not have been wide enough to support a figure of the size to be expected in a temple of this extent. It is presumable, therefore, that a figure carved in relief was placed against this upright pilaster and that the two holes at the bottom were for the wooden pegs supporting it.

The sides and tops of these three platforms as well as the sides of the pilaster were coated with fine, strawless plaster, producing a smoothness and evenness of surface exceeding that of the sides of the altar. Nowhere else at Yorgan Tapa was such careful plastering found. The horizontal surfaces of these platforms were perfectly clean and showed none of the black that characterized the packed earth of the room.

On the floor, aside from the terra-cotta house model, were several fragments of shouldered cups of a type different from those of Nuzi (Pl. 62, K, M) and the fragments of a large storage pot ringed with raised indented circles and decorated on the shoulder with a raised and incised design representing cattle attacked by a wolf, which in turn is pursued by a man with upraised hand holding an axe (Pl. 58, A). From this same room came a large sherd, evidently belonging to a massive hand-moulded vessel, across which a crawling snake is represented with mouth open and tongue extended (Pl. 60, E). Though only one even partially complete house-model was found, fragments of another came from the same room. In other parts of the temple, further fragments show that at least two more existed (Pl. 60, F, H, M; Pl. 61, D, E).

A single bit of plaster in the débris, bearing traces of red wall-coloring, indicates that at least a part of this room was so decorated. Also in the débris were several impressions of carbonized straw matting, probably the support between the rafters holding the clay roof.

It is at once apparent to the observer that the walls of the room must originally have been in a more finished condition than they are now; for, though the altar and pilaster with its related platforms are plastered with extraordinary skill, the walls on three sides have no plaster whatsoever. Only the end wall against which the pilaster rests and the sides of the doorway have remnants of plaster clinging to them. The other three walls are as they were laid, with every *libin* visible (Pl. 6, B) and rough in comparison with the perfection of the added structures. It is unreasonable to believe that these rough walls were not originally covered in some way in keeping with the finish of the rest of the holy room. Close inspection of the walls shows the impressions of what may once have been a sheathing of wooden boards. At heights varying from 28 to 73 cm. above the pavement were impressions such as would be made by the squared end of a board pressed firmly against the still wet, newly laid *libin* (Pl. 6, B). The impression is always roughly horizontal with frequently a corner visible, showing that it represented the top and that the remainder of the board was toward the pavement. In no cases were both corners visible, the impression fading away from the deepest point at the one corner; consequently, it is impossible to tell their full width. The longest found was 36 cm., the full length of the *libin*, and the shortest 24 cm. Eleven such impressions remained on the southwest wall, none on the northwestern wall, and two on the northeastern wall.

The hope that these marks might be proofs of an original sheathing is dampened by the fact that no holes were found within the wall to show the position of nails or pegs that might have held it in place, nor any holes or trench in the pavement at the base of the wall to hold them upright without the aid of nails. The only possible conclusion is that the boards overlapped each other, one over the edge of the next, in vertical clapboard fashion. Thus, if secured to the wall only at the top, each board being secured only to the next and not to the wall, the sheathing would have stood firmly by itself. The variation in the height of the impressions would mark the varying lengths of timber used. Against this supposition is the fact that a corresponding opposite impression is not found above those noted and that the corners are both right and left and apparently without order. In answer to the first question, it may be that the absence of opposite impressions is due to accident, since the very impressions we have were only accidentally made. In answer to the second question, it may be postulated that the builders used a staggered overlap in which every other board was flat against the wall with each of the intervening boards overlapping its neighbors, to produce a panelled effect in miniature like the buttresses

and recesses of the outside wall. Several variations of this order are possible. The presence in the débris of but one small fragment of red wall-coloring would suggest that only a very small portion of the wall was painted, presumably that above the panelling and below the ceiling.

In altering the size of G29, the three subsidiary rooms of the earlier building were entirely blocked off and abandoned. It is probable that the alteration of G29 was not so much in an effort to change the outline as it was to preserve and strengthen the tottering remnants of an older building. Even in the time of Temple G it had been necessary to place two extra buttresses against the outside of the northeastern wall. When the new northeastern wall of Temple F was added, the mud-bricks were not laid flat but on a 10° angle, producing a wall with an even inward slope. This is a radical change from the vertical line construction, and is solely and aptly suited for the support of an already existing unstable wall. If, then, the major portion of the original building was in such disrepair, it is likely that the older subsidiary rooms were abandoned for the same reason. It should also be noted that in building the new northeastern wall it was made abnormally thick. Even as a support to the earlier wall, this would not have been necessary, except for the sake of symmetry, to balance with the other side, which, if its rooms were abandoned, would also be considered as solid wall space.

In the entry-way to the cella there is a marked variation from Temple G. Whereas in the earlier building the entry-way was a simple portico of two projecting walls, in Temple F these have been extended to form an entry-room, G78, with two doors leading to the northeast and northwest. The portal of the door into G29 has been altered from one with single right-angled corners to one with two vertical steps on both sides of the doorway, and a large stone slab extending the full width of the doorway has been set into the pavement between them as a door-sill.

Here, again, the demand for symmetry in design is illustrated. Where the jamb of the northwestern door juts out into the room a new line is created; and in order to balance this a similar projection in the opposite wall is introduced, although not architecturally necessary. Along both sides of this room is a bench, 56 cm. wide and 35 cm. high, made by placing a row of upright *libin* parallel to the wall, filling the space between the *libin* and the wall with earth, and covering the whole with flat *libin* to form the top. Over all this is a coating of mud-plaster.

No door-sockets were found at either of the two doorways leading from this room, and it is presumable that doors as such did not exist. The small curtain wall outside the temple compound, screening the

northwestern door to the entry-room, was not a part of the original structure but an addition to the building near the end of its period.

The introduction of the courtyard definitely segregates for temple use the open area which even in Temple G appeared to be temple property. An outer doorway is suggested near the northern corner, and the presence of such a doorway in all of the superimposed walls at this spot makes it appear certain. The only room connected with this court not belonging to the cella group is H21, which, though intruding into the area of the southern group, is, and remains even in the latest building, a part of this unit.

The most ambitious feature of this rebuilding is the addition of an entirely new companion group on the southeast with its own cella (G53), courtyard, outer doorway and entry-room. Like Temple G, this cella has the appearance of once having been a free-standing building to which the courtyard was added as an afterthought, though apparently no great lapse of time separates the two. The outside walls of the cella are buttressed with large projections, different in feeling and proportion from those of Temple G. The lack of restraint seen in the massive accentuation of the two exposed corners gives the impression that the building was designed by people with a different architectural tradition.

The cella of the southeastern temple (G53) furnishes further proof of the dilapidation of Temple G at the time of rebuilding. It will be noticed that the interior of G53 lies within the space formerly occupied by the southeastern wall of Temple G. If this wall had been intact, it is quite improbable that the unnecessary labor would have been expended, or the sacred outline of the earlier building violated by chopping away a portion of that wall, unless it was in so ruined a state at that point as to have been practically unrecognizable.

G53 had none of the elaborate structures that were present in G29, Temple F. The simplicity of G29, Temple G, cannot be accepted as indicative of its original condition, since the people of Temple F in re-using the same pavement would have removed the earlier structures to make way for their own newer ones. For that reason one cannot say that G53 resembles G29 of Temple G and was a return to an earlier simplicity. Rather, one can say that in form it resembles the cellas that were to follow and that it was the first of a new tradition existing in conjunction with G29, the last of an older tradition.

Two fragments of terra-cotta with animals in high relief (Pl. 59, D, G), like those from G78 (Pl. 59, I), and another with the body of a snake across it (Pl. 60, C), came from G53. Otherwise, it was abso-

lutely bare of objects. Two fragments of a terra-cotta house-model came from the courtyard (Pl. 60, H, K), similar to those of G29. The isolated nature of these objects suggests that the same cult was not followed in the southeastern temple as in its neighbor, and that these fragments, so scattered over the extent of the northwestern building, found their way here as fragments in alien territory. Along with the fragments of pottery typical of the culture of the northwestern temple were found here for the first time remnants of pottery characteristic of the upper levels. Thus, we see in this added building evidences of a different culture from that of Temple G, illustrated both in architecture and in terra-cotta.

This cella also has its courtyard with a tiny room at its outer doorway, the latter appearing as the first sign of the maze of rooms that was later to occupy this enclosure. Though the courtyard wall is missing at two points, it seems likely that the doorway to the outside shown here was the only means of direct exit.

In the southern corner of this same courtyard long, low benches of unbaked bricks were found against the walls on either side of the corner, the first appearances of what later became a characteristic feature of temple design. Since similar structures within the temple appear only in the cella in later periods, the natural inference would be that their presence here was also of religious significance. In the very corner of the court, in the gap between the two benches, was a heavy deposit of ashes mixed with occasional sherds. Whether or not the fire that burned here was for some sacred rite is uncertain.

It is of interest to note that there is a communicating doorway between these two temples. One would suspect, since the two were probably dedicated to different gods and represented two different cultures, that they would have remained not only separate but isolated from each other.

Throughout this period the buildings did not remain static. G78 rose in level to a second pavement, midway between the levels of Temples F and E, with a brick walk leading down from the northeastern door into the cella (Pl. 7, A). It is in this later period that the curtain wall outside of the northwestern door of G78 was built to screen it from undesired observation. The presence of this screen suggests that there never was a door in the northwestern doorway, and apparently one could enter here and leave at will. The upper pavement in G78 used the same walls as those of Temple F, and the few pottery sherds that came from there are of the early Nuzi type. At this same time, H68 was added to the lower end of G50 (shown in the plan of Tem-

ple E). It is also quite certain that the collection of separate rooms within the courtyard, shown on the plan of Temple E in the southeastern temple, had already been begun during this same period.

TEMPLE E

In studying the plans of the various levels, it must be borne in mind that the temples did not remain static during the interim between rebuilding and subsequent destruction. On the contrary, except for the temporary abandonment of the northwestern unit after Temple F, and the final destruction at the end of its history in Stratum II, the course of the temples was one of continued existence and of perpetual additions, alterations and rebuildings, made whenever the need arose. Thus, it is exceedingly difficult to separate the various constructions into definite strata. All that can be done is to represent on a plan each major change in design, and to include with this the changes which have taken place within the building between these major alterations. For the same reason, it is impossible to link each different phase of the temple with a corresponding change in stratum in the city, since where the major portion of the city may have been so demolished as to cause the rise of a new stratum, the temple may either have survived or been so faithfully repaired that no sign of reconstruction remained to mark it.

Moreover, the plans should be considered only in relation to the accompanying description. Either without the other is deceptive, for though the buildings were recorded in the order and relationship in which they were found, one cannot say that they existed simultaneously in their completed condition for the entire length of their period. This is strikingly illustrated in Temple E (Plan 8), in which the northwestern temple was abandoned and after a long period of time was rebuilt as shown on the plan, presumably at the time when the southeastern temple was preparing for its next rebuilding. Consequently, they are shown on the plan as existing together, though actually they did so exist only at the very end of the period.

During the abandonment of G29, G53 must have had the same relationship to the northwestern temple that it had in the time of Temple F, i. e., it was placed partially within the outline of the older building and had on the northwest as its outside wall the crumbling remains of the abandoned northwestern temple.

In the southeastern temple, the cella retained the same exterior, but was partially obscured from sight by the growing cluster of rooms that filled the courtyard. The sanctuary doorway is served by a stone socket, and in the southeastern end of the room, slightly off center and less

than a meter from the wall, is a free-standing, square column of mud-brick, a feature of cella arrangement here encountered for the first time (Pl. 8, A). In the later temples of this same design a much burned hearth fronted the column; consequently, we may assume that this column is not the altar on which the sacred fire burned, but was rather the base for the principal cult object or statue. Though no hearth was found here, its absence may be accidental. Against the northeastern, northwestern and southwestern walls are benches, 37 cm. in height, seen for the first time in the cella itself (Pl. 8, A, B). Both are smoothly plastered. It is of interest that 104 cm. from the end of the bench on the southwestern wall is an elevation of 6 cm. above the level of the rest of the seat. The abruptness of the rise has been tempered by the plaster covering the whole structure (Pl. 8, B). Whether this elevation was the place of some important individual, or whether it was given over to an object of special veneration, is unknown.

The southeastern wall that first confronts the eye is not the final wall of the room. Behind it is an enclosure of at least two small rooms which extend to the end of the cella as used in Temple F. Within the enclosure, directly behind the column outside, is the remnant of another column placed against the southeastern wall. The point of entry was from the southern corner of G53 proper. Since this room had been completely and intentionally filled with regularly laid mud-bricks, it is obvious that it was abandoned at some time during this period and the position of the statue changed to the point within G53 marked by the column first seen. Thus, originally, the cella was in two parts, the main room and the holy sanctuary. It is uncertain whether the seats and the column within the main part of G53 date from this earliest arrangement, but it is likely that the column at least was a new feature added when this innermost sanctuary was abandoned.

Turning to the courtyard, it will be noted that the entry has been shifted from the center of the southeastern wall to its very end at the eastern corner. Also, to the inner face of the northeastern wall have been added, rather unsymmetrically, the abrupt buttresses characteristic of this culture. The curtain wall extending from H21, shielding the entry to G50, is an addition put in at the very end of this period at the time the northwestern temple was again revived.

The rooms which have grown up in the southeastern end of the courtyard compose for the most part a self-sufficient unit and have the appearance of a separate chapel, with related rooms, set up within the confines of the older building. Entry is through the small room H27 into the court H70, partially paved in scrap-brick and having the rem-

nants of a baked-brick drain through its southeastern wall into the street beyond. At the point where this drain passes to the street, the wall is broken away, so it is uncertain whether the outside door of the earlier building, situated at this same point, was retained or not. However, the discrepancy in the width of the walls on either side of this break makes it likely that both here and in the level above, the doorway was retained.

A doorway in the southwestern wall of H70 leads into G67, the main room of the group. Along the northeastern wall of this room is a mud-brick bench, of the type seen in G53. Slightly off center in the northwestern half of the room is a four-brick hearth and through the northwestern wall at the northern corner is a doorway leading into the single room, G79. Within the latter a brick socket served the door that shut it off from G67.

Several things indicate that this room (G67) was the cella of a small group within the confines of the southeastern temple. The bench is one indication. Such benches are characteristic of a cella, and have been found in only two places outside the holy room. Both are within the temple. The first, in G78, Temple F—the entry-room to the northwestern cella—and in G71, Temple F—the southeastern temple courtyard. The brick bench of M94 of the palace is of a different nature. Further proof is given in this same room in the time of Temple C by two offering stands of most elaborate design (Pl. 114, D; Pl. 115, C). Although we know that the hearth can be an integral part of domestic quarters, we also see in the two uppermost phases of G29 that it is equally fitting to a cella. Also to be noted is the position of the entry-way in the side wall and at the back of the room, identical to both G53 and G29. The small room, G79, served in this case the same purpose as the separate room in the east corner of G53 in the earliest phase of Temple E, and the same purpose was served by the deep recess, G73, leading from G29.

H71, which has no door, belongs to this group, and probably had communication with H70 over a very high door-sill such as is seen between G53 and G32 in Temple F. The two small rooms, H28 and H28A, have left no clue as to the purpose they served. The circular depression in the floor of H28 is the result of intrusion from the succeeding building.

The irregularly shaped room, G71, at the southern corner of the court, is another doorless room, but one would guess from the alcove at its eastern corner that it communicated with G67 over a high door-sill. It should be remembered that here seldom more than 40 cm., and often less, separated the pavement of one level from that of the next;

therefore, the opportunity of distinguishing between a doorway with a mud-brick sill of any height and the solid wall is very slight.

G70 and G62 seem not to have belonged to the main group, and apparently had contact only with the outside.

Near the end of this period the northwestern temple was revived after many years of abandonment. This brought about a change in the southeastern temple in that at its western corner it became independent of the wall of Temples G and F into which it had been built, and rose at this point as a free-standing building. No doubt G53 from the very first of Temple E had the outline seen on the plan, but it was not until the northwestern temple was rebuilt and the débris of the earlier phase of G29 cleared away that it could rise free of the encumbering ruins of its neighbor.

It will be noted that the same type of blind passage seen in Temple G has been revived, in this case not within the confines of the building but outside, separating, except for one small point of contact, G53 from G29. This, again, appears as the demand of a custom common to this country rather than as a structural or esthetic necessity. It could not have been for the purpose of separating one group from the other, since we see it within the single unit, Temple G. It could not have been for aeration of an unusually thick wall, since they had no compunction in closing it off both here and in the previous case.

Shortly after it was created, the passage was filled up completely and two rooms were plastered against it and the walls of the two adjacent buildings. A similar occurrence in Temple G indicates that the blind passage in an open state was not considered an essential feature of temple design since it has thus twice been discarded.

It was directly beneath G54, within G77 of Temple G, that a pot was found containing a cache of copper objects consisting of two sun discs (Pl. 127, B), two crescents (Pl. 127, C), nine sickles (Pl. 123, J; Pl. 124, C, D), six pins (Pl. 125, R-T), a bell (Pl. 126, Y), a concave plate pierced at the edge and two bracelets (Pl. 126, N). These were stored within a narrow-necked pot of typical Nuzi design, and for that reason could not have belonged to the earlier Temple G culture. The sun discs had been bent out of shape in order to pass through the neck of the jar, showing that such a container was certainly out of the ordinary. Bronze sun discs and crescents, though smaller and less elaborate, have been found elsewhere in Nuzi, as well as sickles of the same general type. Consequently, it appears that this cache was one buried below the floor of G54, Temple E, though it was found within a room of Temple G. Attack and plunder, the imminence of which is illustrated

here, may explain the necessity for the constant rebuilding and alteration of these temples.

Proof of the long abandonment between Temple F and the end of Temple E is found in the courtyard, G50, and the entry-way to G29. Below the pavement of G50 in Temple E and extending down to the pavement of the previous period, there are a series of water-laid strata such as could have been deposited only where the rainfall throughout a long period of years had been allowed to collect and deposit its silt unmolested. This signifies an upward growth, not through the accumulation of occupancy but of vacancy. Final and most positive proof is above the point which in Temple F was G78, and which in Temple E became the doorway to G29. Immediately below the northwestern jamb of the doorway to G29 was a brick burial chamber (Fig. 13)

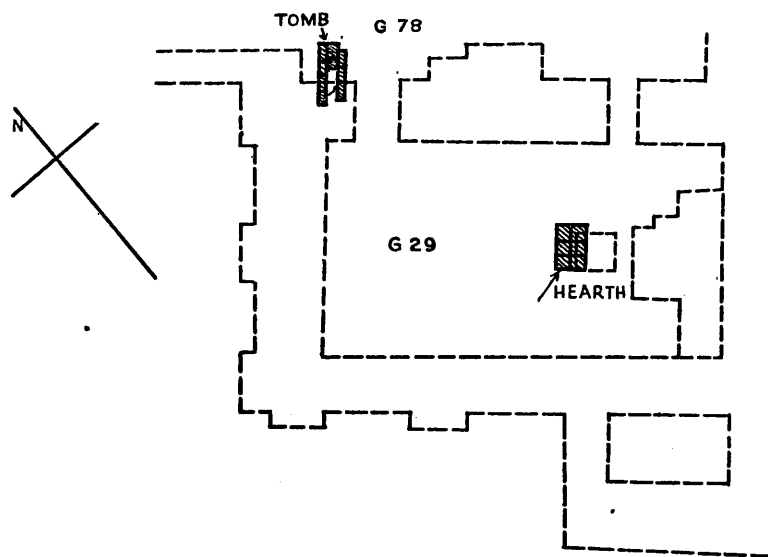


FIG. 13. G29, early Temple E hearth; G78, late Temple F tomb.

which had been uncovered, looted and built over when the wall of Temple E was erected (Pl. 9, A; Fig. 13). At the point where the wall covered it, it was broken away, though a bowl and fragments of bone were still to be found within it. The meaning of this is clear. It is too high to have ever belonged to Temple F, and even if the height were not so great, the entrance to the cella would never have been obstructed in this fashion. Therefore, it could have been placed there only after the northwestern temple had ceased to be used and after so much time had elapsed that it had become a ruin of so little veneration that it was used as a burial ground. The builders of Temple E struck the tomb in

laying their shallow foundations, opened, looted, and built above it.

In viewing this new northwestern building two things in particular should be mentioned. First: the cella, though differing in size, shape and position from that of Temple F, retains the position, proportions and one of the walls of Temple G, the inner face of the southeastern wall in Temple E being built directly on top of that of Temple G. This indicates that the earliest temple, in spite of its long disuse, was not entirely unrecognizable, and governed in part the rebuilding in this period. This is further substantiated by the retention of features of Temple F: the room H21, and the major portion of the courtyard wall in which is maintained the northeastern doorway and the principle of the entry-way on the northwest. Second: the essential architectural details within and without G29 differ entirely from those of the same room in Temples F and G. They are, moreover, remarkably similar to those of G53 in both Temples F and E. On the outside walls of G29 the broad shallow buttresses of Temple G have been replaced by the more abrupt ones typical of the newer architectural tradition of G53, and at the northern corner is the same pronounced accentuation seen at the corners of G53. Finally, the introduction of benches and of a free-standing column near the end wall verify the cultural identity between the two temple units.

There can be no doubt that the intrusive culture, which in Temple F had gained sufficient importance to have its own unit existing in conjunction with that of the older, had, after the abandonment of the latter, revived it according to its own ideas of design and observance.

In the earliest phase of Temple E, G29 lacked the protruding structure at its southeast end. Nor could any definite signs of corresponding benches or column be found, though they may have been removed to make way for the later arrangement shown on the plan. The latter contention holds true particularly for the column, for a hearth of six bricks (five baked, one unbaked) was found on the lower pavement partially under the northern corner of the later column (Fig. 13). Taking the arrangement of the later Temple E room as our standard of comparison, this hearth is correctly placed to front a column placed against the end wall as was that in G53. Thus, there was here when originally built a cella whose arrangement was very similar to that of G53, Temple E.

Belonging to this pavement were fragments of two terra-cotta offering stands of a type previously not found (Pl. 115, B).

This earliest pavement apparently was in use for only a relatively short time before it was altered to the arrangement seen on the plan. Evidently the same catastrophe whose imminence prompted the inhabi-

tant of G54 to bury his hoard of bronzes, and which necessitated the rebuilding of the southeastern temple, also necessitated the rebuilding of G29 shortly after it had been restored.

The principal difference in G29 from its predecessors and from its companion cella G53 is the introduction of a second doorway near the eastern corner. One cannot help but believe that this entrance was reserved particularly for those actually officiating in the religious ceremonies.

Seventeen centimeters above this earliest pavement of Temple E is the one shown on Plan No. 8. The construction at the southeastern end, filling up a great part of what before had been open space, appears to have been erected primarily in order to create the two alcoves on either side. In the succeeding level of G29, the alcove in the eastern corner is known to have been used as a storeroom, and there is little doubt that in Temple E it served some similar purpose, probably for objects and regalia pertaining to the cult. Originally it was built with two steps in the line of its southwest wall but was later altered to the outline indicated on the plan.

Almost directly in front of the mud-brick column, near the center of the room, is a four-brick hearth sunk flush with the pavement, in the center of which are the clear signs of countless fires, or, perhaps, one constant small fire. A few centimeters before it, toward the column, is an upright jar of the infant burial type, also sunken, with its rim less than a centimeter above the pavement level.

The part in the ritual played by the column and by the altar, or hearth, is more or less clear, but that of the sunken bowl is less so. Was it here to catch the blood of sacrificed animals, or did it receive and hold special offerings brought before the presence of the goddess?

As in G53, mud-brick benches are against the walls within the room. These seats, as well as the walls and column, were carefully plastered. The structural material throughout is mud-brick, carefully and truly laid.

No objects whatsoever came from this upper, clay pavement, indicating that the next cella above it was a rebuilding carried on after this had been carefully and studiously cleared of all its property and the room filled with the débris of toppling walls purposely thrown down and leveled off by the builders of Temple D.

The small room G51 has no apparent doorway, but obviously belongs to the temple group. In spirit it is a revival of the rooms flanking the cella of Temple G and is in the same relationship to its cella, though differing in size and proportion. Entry must have been from the southern corner of G29. Circumstantial evidence brought out in

the discussion of Temple A gives support to this as the only possible entry point.

At the point of contact between the courtyard wall and the northern corner of the cella a doorway was established, continuing the tradition or function illustrated by the doorway in much the same location in Temple F. At some time during its period this doorway was permanently blocked with *libin* and abandoned. Since in the subsequent level, Temple D, this northwestern unit remained exactly as it was built at the end of Temple E, it is impossible to tell whether this alteration took place in one period or the other.

A similar instance is seen in the well in the newly established room H7. This was cleared out to its bottom, 2132 cm. below plain level, but yielded no objects whatsoever. Does this, then, mean that the well was used only for the temple, throughout its full period, with such deliberate care that it never acquired the collection of accidentally lost vessels typical of a well bottom; or does it mean that this structure, though related and included on the plan of Temple E, was not built until the end of Temple D and never existed long enough to collect those signs of use?

Be that as it may, H7 appears to have been built only to house the well. It is accessible through a narrow doorway in the southeastern wall, outside of which was a large open jar, buried with its rim flush with the pavement. The location of the jar, so inconvenient for anyone carrying water away from the building, suggests that the well was purely for temple use. On either side of the well are two *libin* structures across which the draw-beam once rested. It is of interest that the draw-beam supports of the well in R96, Stratum II, were off center in the same way as this.

The principal doorway to the outside remains in the same position as in Temple F, at the northern end of the northeast courtyard wall. In this case, the corners of the jambs, both within and without, have been carefully and intentionally rounded.

In looking back over the development of Temple E, two things of major importance stand out: the inclusion of a separate chapel unit within the courtyard H20; and the revival of G29 after long disuse, not in accordance with the traditions of its predecessors, but adapted to the ideas of the newcomers, the original builders of G53.

TEMPLE D

Temple D (Plan 9) shows only minor changes from Temple E, and is distinguished principally in the southeastern group by a general

rise in level of approximately 30 cm. The northwestern group remains unchanged both in plan and in level. It is more than likely that the final arrangement of G29, with its projecting end wall, though included in the plan of Temple E, was not actually completed until the beginning of Temple D. Thus, we can imagine that G29 in Temple E was a plain, rectangular room, possibly with benches, with a free-standing column at its southeastern end, and that the final arrangements shown in the plans of both Temple D and Temple E were not actually completed until the beginning of Temple D.

The oven shown in H6 on the plan of Temple D is in reality not of this stratum. Since its walls rise well above the floor level of Temples C and B, we must assume that the oven belonged to one or the other of these two later phases, both of which have the same elevation.

It is of interest that the two rooms G54 and G54A outside the temple compounds have been abandoned, and that the blind passage separating the two cellas is again open to serve its mysterious purpose.

In G53 the column remains in the same position and, likewise, the bench on the northeastern wall. The latter is built directly on top of the bench of Temple E and extends slightly farther southeast than the earlier one. A stone door-socket is within the room at the northwestern door-jamb, and within the doorway, on a line with the inner wall of the cella, is a door-sill of two parallel rows of baked brick.

The small chapel within the courtyard H20 remains relatively the same, in spite of its rise in level. The door-jamb on the southeastern side of the entry from H27 to H70 has been shortened, and the walls of H28 and H28A rebuilt in a slightly less substantial manner. In H70 the brick pavement is repeated only at the entry to H28A. Here the doorway into Street 5 is conclusively established at the point where in Temple E it had been indicated only by a drain and a broken wall.

G67 remains relatively unchanged in outline, if not in detail. A scrap-brick sill has been added, and the hearth and bench of the previous level are not to be found. The northwestern wall when first rebuilt after the time of Temple E was several centimeters nearer the center of the room than in the previous building. This was soon changed back to the original position as in Temple E and as is shown on the plan of Temple D. In both phases it was decorated with wall painting. The earlier wall was gray for a distance of 135 cm. from the west corner; then came a broad belt of red, 150 cm. in width, with the remaining 17 cm. between its end and the door again in gray. Both jambs of the door to G79 show traces of gray, as do both the northeastern and southwestern walls. In the later phase no color was evident until

a point had been reached 90 cm. from the western corner, where the first trace of red was found. This continued to within 15 cm. of the doorway, where the color changed to gray. Other than traces of gray on the northeastern wall, no more color could be traced. Owing to the incomplete state of the paintings, only their general limits could be found in either case. It is of interest that on the lower wall the red is laid over the gray at both edges of its field, showing that the gray was first applied and allowed to dry. Scraps of plaster were found in the débris belonging to the lower wall bearing remnants of the design that must have been above these vertical panels. Thus, we have here the earliest appearance of that common Nuzi motif of vertical panels of solid color topped by more elaborate, figured designs.

G79 remains the same, with another brick door-socket to serve the door of its new level. G71, G69, G62, and G70, except for rise in level, maintain the same outline as in Temple E.

In reviewing the outline of Temple D, one notes only a general rise in level, in the southeastern group, without any important change in plan. It is evident that the condition or event which brought about the necessity for a rebuilding was certainly not of a violent nature and may possibly have been only the decay of peaceful long years.

TEMPLE C

With a few exceptions, the outline of Temple C (Plan 11), remains the same as that of Temple D. The most important change is the establishment of an entry-way to the northwestern building at a place never before used. To make this, what previously had been a blind passage separating G29 and G53 was broadened at the expense of the thickness of the G53 wall and continued until it emerged in G50. At the same time, the door which in previous levels had connected G50 with H13 was discarded, never to be restored again. One cannot help but wonder whether this severance of contact between the two temple units was not the result of a steadily increasing rivalry. Whether this is so or not, it is probable that the resulting absence of intercommunication necessitated the creation of the new entry-way at the southern corner of G50.

In this period G29 reaches its final stage of development, its pavement being 30 cm. higher than that of the courtyard and related rooms of Temple C. In Temple B, the northwestern unit remains unchanged, and in Temple A the courtyard G50, with its related rooms, builds up to the level of the still unchanged cella. The account of the objects found in this room will be given in the description of Temple A.

The change between Temples C and D in G29 is slight. The outline remains the same, in spite of the 85 cm. rise in level. The bench on the northeastern wall is slightly broader than that of Temple D, terminating in a round-topped ridge or railing 4 cm. in height and breadth across its northwestern end. There is no bench against the northwestern wall as there was in Temple D. Stone door-sockets in the northern and eastern corners serve the two doorways. The column at the end of the room has been built directly on top of the earlier one, and is a few centimeters greater in size (Pl. 9, B). The baked-brick hearth or altar is 15 cm. closer to the column than that of Temple D, and directly in front of it (Pl. 9, B). The surface of the brick is worn away in the center by many small fires (or a continuous fire). The bowl sunken in the pavement between the column and the altar is near the eastern corner of the hearth, rather than at the center of its southeastern side.

The alcove G73 has been made 29 cm. wider in its interior, though the width of the entrance remains the same. Across the entrance, in a straight line flush with the first vertical step of its outline and the door-jamb, a wall has been built, greater in width than half the depth of the alcove, completely blocking off this small space. However, it is absolutely certain that there was access to the inner portion over the top of this wall, as will be described in the account of Temple A. The post for the door to G50 slightly disturbed the outline of this straight wall and turned in a stone socket at the bottom of a *libin*-lined well 40 cm. below the pavement.

The construction throughout is of mud-brick. The plaster on the walls averages 10 mm. in thickness, and on the column as much as 20 mm. The bench is covered with a finer plaster, presenting a smoother surface than anything else in the room.

There is no means of telling the original height of the column, since in no case was its top preserved. In this building it extended 81 cm. above the pavement, and in the previous level it was even 4 cm. higher.

The only alteration to the outside walls of G29, other than the opening of the blind passageway, is the introduction of the stepped outline on both sides of the southeastern doorway.

Within the courtyard, G50, considerable alteration has taken place. The closing of the outside northwestern doorway in Temple D was evidently approved by the builders of Temple C, for they included no door at this point. The main entrance on the northeast was retained as before. The rather flat buttresses near the eastern corner, heavily

plastered so that their outline is curved rather than angular, are unique in the history of this building.

At least four rooms have been added to the courtyard, but the destruction that ended this period was such that only two have remained intact, G40 and G35.

As originally built, the inner face of the courtyard wall at H2 had only a single, small projection. The larger one was added later. It cannot be determined whether the first projection was purely a decorative feature and the second added as a copy of the outline seen between the two doors into G29, or whether the first was a door-jamb for a room whose walls are now gone and the later projection added either to strengthen it or to serve a new position for the same door. It is also likely that between these projections and the northern corner of G40 there was an outside doorway. In Temple A, which is immediately above this, the presence of a door in this same spot, with a similar single projection, makes it probable that there was also one here, unrecognizable because of its high sill.

Comparison between the remnants of walls in Temple C and the intact rooms of Temple A indicates that the area H6 was probably an enclosed room, the wall projecting from near the northwestern side of the Street 8 doorway forming at the same time a part of the southeast wall of H6 and the northwestern wall of H7. It is doubtful whether or not this wall continued to form a room similar in size to H5 of Temple A, for to do so it would have had to cross the area occupied in part by a beehive-shaped storage pit, over which heavy construction would have been impractical.

The oven shown in H6 in the plan of Temple D belongs, in reality, either to Temples C or B, both of which have the same elevation at this point. Since it is described in detail under "Ovens,"¹ it need not be discussed further at this point.

The well, which in Temple D was in H7, was used only in that period and is not retained in this level.

The projecting stump of a wall at H4, and a corresponding projection from the south corner of the entry-room, leave little doubt that their lines were continued to form a room contiguous and similar in width to H7. The projecting wall from the south corner of H7 gives the position of its doorway.

Southeast of H5, and northwest of the line between the doorway at H7 and that of the northern door to G29, was a beehive-shaped

¹ Part I, Chapter III.

storage pit, into which was undoubtedly poured the grain paid in to the temple.

H21 is retained in the same position and general proportion seen in Temple D, and in it was found one of the rare clay cooking stands (Pl. 118, C), the presence of which shows that someone actually lived within the temple compound. This may have been from the very first the living quarters of the attendant priest or priests of the temple.

In the southeastern unit the rise in level (30 cm.) is less pronounced than that in the northwestern temple, and only the lesser rooms within the court undergo any alteration in plan. The most ambitious change is seen in the shifting of the outside southeastern wall to a position farther to the southeast between G71 and H28. The wall is considerably greater in width than before and has no suggestion of a doorway between H70 and the street. H27 has ceased to be the entry to the lesser group, being a closed room with access only to H20. The entry-room to H20, as well as H28 and H28A, have all been thrown into one room and form the only approach to H70.

A more than usually wide brick door-sill leads one into G67. The room is longer than in the previous level, owing to the change in the position of the southeastern wall, and has a hearth, carelessly built, in its northwestern half. As if to form a substitute, a projection from the northwestern wall forms a small alcove where once had been the door to the now abandoned room, G79. One wonders whether this alcove had been created to satisfy the same ritualistic or practical demand that brought about those of G29. A corresponding alcove of uncertain depth is on the other side of the projection.

At this level in G67 two offering stands of unusual bulbous design (Pl. 114, D; Pl. 115, C) were found. Being essentially cella furniture, they furnish another proof that this room was the cella of a secondary temple within the confines of a larger one.

G71 remains in the same position as before, but revives the projecting wall on the south seen before in Temple F. After so long a period intervening, this rebuilding in exactly the same position could not have been an accident. It is evident that in Temple C, G71 served the same purpose as in Temple F, and that its use either for ritualistic or practical purposes demanded this projection. The wall between G71 and G67 still has a slight recess to indicate that a door with an exceptionally high sill connected the two. G69 is distinguishable for the first time as a complete room, and as such has no apparent doorway.

In reviewing the structure of Temple C, several major features are apparent. The independence of the two units, by the severance of

communication between them, is the most important. At the same time there is the establishment of a new point of entry to G50 on the south, and the beginning of an ambitious expansion within that courtyard. One cannot but wonder whether rivalry caused by this expansion and rehabilitation was responsible for the cessation of intercommunication between the two groups.

At the same time, the secondary group within the southeastern temple has not remained static, but its alterations have more the appearance of consolidation than of prosperous growth.

TEMPLE B

The extent of alteration in this phase of the temple's growth is not great (Plan 12). G29, with its courtyard and adjacent rooms, remains unchanged in level and in plan and need not be further described.

The passage G47, is another illustration of the continuous building within a period arbitrarily set by the excavators, and of the difficulty in showing on separate plans the changes that were made during supposedly static years. Thus, G47 was a passage in the early part of Temple B, of the proportions shown on the Temple B plan. Later, apparently at the end of the period, the passage was altered to the width shown in the plan of Temple A, but without the accompanying change in line of the outside western corner of G53, noted in Temple A. A square column was placed in the same relation to this earlier corner as is seen in the latest building, as though in support of a porch at this newly established entry. Later, in the time of Temple A, the western outside corner of G53 was stepped back in line, and the column correspondingly moved so as to be the same distance from the new corner position as it was from the old.

It is impossible to say when this alteration took place, but it seems probable that it occurred at the very end of the era of Temple B, and that the final change in the western outside corner of G53 was not made until the period and rearrangement of Temple A was well established.

The alteration within G53 was restricted to a rise in level, abandonment of the side wall benches, and the inclusion of a socket by its only doorway. It seems permissible to repeat that the absence of a socket is no sure proof that it did not once exist. Being of stone and an object of some value, it would be recovered and used again wherever possible. Consequently, we may assume that this had taken place in these few instances where the G53 doorway was found without a socket.

The arrangement of the secondary group within the southeastern

unit remains in part the same as in Temple C, but with two notable exceptions. The first is the absence of a doorway between H70 and G67. It is impossible to believe that the latter, throughout its entire history the focal point of its group, should have been entirely cut off from use. That it was not abandoned entirely is shown by the fact that it was rebuilt and had a pavement showing positive signs of use. Moreover, in this rebuilding the northwestern wall, which in Temple C was irregular in outline, is here straightened out along the line originally established in Temples D and E. Though its southeastern wall could not be found, it is more than likely that entry was not through it from the street but from H70 at the same point as in all of the previous levels. Since the remaining walls of this level at this point were not greater than 25-30 cm. in height, a mud-brick door-sill of that height or greater would not be distinguishable from the general body of the wall itself.

The second major change from the plan of Temple C is the elimination of what from its earliest level had been the southern corner of the courtyard of the southeastern temple. This means the entire abandonment of G71, G70, G69, and G62. So, for the first time since the establishment of the southeast group the massive walls of the cella stand out in at least partial view.

The completeness with which this secondary group obscured the walls of G53 is not as great as a first glance at the plans would suggest. A comparison of the width of the walls of this group with those of G53 show that even in Temples D and E, when the cella was flanked both on the south and southwest by these rooms, its mass would tower above the roof-tops of these intrusive structures and be visible from the outside in the completeness of its simplicity and unity (cf. Plan 14).

Opposite H27 is a baked-brick drain at pavement level going through the wall to the street outside. This is the first provision so far encountered for disposal of rain-water falling within either of the two main temple courts. It seems unlikely that none existed before this, since we have seen that in Temple E the small court H70 was so provided. That in all of these levels the drains should have been removed or completely demolished before rebuilding is also unlikely. It is more probable that they were not of baked brick, but were simple openings in the base of the wall, unprotected by brick or terra-cotta, such as are seen in native architecture today. Such an opening, through the collapse of its arch, or stoppage with *libin* fragments, might well be unrecognizable to the excavator.

The elapse of time between Temples B and C appears to have been

slight. The reconstruction in Temple B contributes no new features to either group and appears rather, through elimination of the southern corner of the southeastern temple courtyard, to have been a period of simplification.

TEMPLE A

In Temple A (Plan Nos. 13, 14)² we see the temple in its latest period (Stratum II). Its pillage and subsequent abandonment as a temple site are responsible for the complete state in which the northwestern temple is preserved. It is true that a portion of the city was restored in Stratum I, but the occupants had not sufficient strength or numbers to rebuild either the palace or the temple. Those who looted the building left behind whatever to them was not worth carrying away, and the collapsing walls of the devastated building preserved these remains. So, in Temple A we have not only the walls undamaged by the alteration of later reconstructions but many of the objects which originally served the cult.

However, in the southeastern temple the loss through erosion has been so great that only half of the building remains. It is only through reference to its earlier forms that we can reconstruct the original plan.

Although there has been no great change from the plan of Temple B in the position of the outer walls, several minor changes in detail have taken place. There is the rebuilding of the projecting wall from the southern corner of G51, present in Temple E. The buttress in the center of the northwestern outside wall of G29 is not included in this rebuilding. It is difficult to imagine why this projection should have been abandoned while that on the southwestern wall was retained. It is possible that this, which appears as a disregard of symmetry, was for the sake of closer uniformity with the corresponding wall of the companion cella, G53.

To the northwest of the entry-way on Street 8 there is a projection from the wall similarly related to the doorway as the single projection on the inner face of the door leading outside from H2 in both Temples A and B. It is strange that in the northwestern unit of Temple A there should be two such instances so clearly shown. Allowing for the limitations of space, the projection from the west corner of H7 accen-

² The restored perspective of Temple A (Plan 14) is intended merely to give an impression of the opposing masses of the group, rather than a picture of the details of the original structure. The roof is shown merely as a flat plane because nothing is known of the details of this architectural member at Nuzi. The tops of the doorways, as well as the height of the wall, are based solely on conjecture. In the light of later investigation, it seems probable that the height of the two cellas was considerably less than shown here.

tuates, in the same way, the right-hand side of the doorway into G50. Again, although the connection seems less distinct, one may say that the southernmost doorway into G29 is similarly treated. One wonders whether this has some significance which is entirely disassociated from structural necessity.

The curtain wall which protects the only entrance to the southeastern unit is an important addition in this level (Pl. 11, A), as are the alterations in the buttresses outside G53. However, the most important change in the outer walls is in G47, where the outer wall of G53 has been thickened, in order to narrow this entry-way. The projection near the northern corner of G53 within G50 was lessened slightly in order to be flush with the addition narrowing the passage. At the same time, there is a slight projection into G47 from the northwest at the point where the passage enters the court. This is the door-jamb, and it gives with relative accuracy the point at which this passage ends. As pointed out in the discussion of Temple B, this alteration took place before the completion of Temple A and, consequently, it is actually contemporary in its inception with the last phase of the preceding period.

The pillar within G54, outside the passage, is rectangular in section, and is flanked by the remnant of another pillar at an equal distance from the wall of G29. The only conceivable purpose of these pillars is for the support of a porch fronting the entry into G47. The presence of several glazed wall-nails (Pl. 97, L) within G47 is of interest. Since such decorative material has never been found outside the temple walls, except where it had been thrown out of the H7 doorway, we can safely assume that it was intended exclusively for interior decoration. Consequently, it shows that G47 was considered a part of, and not just a means of entry to, the northwestern unit, and that anyone within its confines was actually within the temple.

G29 has remained unchanged in level and is identically the same as in Temples C and B. It is significant that the cella remained unaltered while changes were being made within its courtyard. It indicates again that this room was the reason for the existence of the others of its group.

The objects found in the cella were probably accumulated throughout the time of Temples C, B, and A, and thus serve to clarify our conception of the final decoration of the building and of the cult objects in use.

The statue of the goddess to which this temple was dedicated was not found, but a portion of it came to light, sufficient to establish firmly

its past existence. From the storage pit in G50, where it was thrown during the looting of the building, came one complete eye (Pl. 102, F) and a fragment of the other. The finish of the workmanship is indicative of an effort to give to the statue the perfection of modelling that characterized the other temple sculpture. The socket is of black slate, carved three-dimensionally to fit the contour of the face and temples. The white of the eye is made of shell and fits perfectly within the socket to which it was originally glued by a thin coating of bitumen. The iris is a perfect circle, in diameter almost equalling the width of the white, and is made of green glass set into a cone-shaped hole piercing the shell. The adhesion between the two is so perfect that the glass must have been introduced in a molten state. The whole is considerably larger than life, but when we consider the accentuation given to the eye in figures from other sites, it is clear that this was quite certainly intended for a life-sized figure.

The natural supposition would be that the statue was of stone, but there are circumstances that conflict with that hypothesis. In considering the action of the looters, one would expect one of two things to have happened; either they carried away the statue of the god as booty, or else they destroyed it entirely. If it had been carried away as loot, it does not seem likely that they would have been so careless as to have smashed one eye and lost the other in a storage pit. It has been suggested that, being people of different race, they blinded the goddess and carried her away, more or less as a divine hostage. This hardly seems likely, for the looters were in all probability Assyrians—whom the tablets speak of as frequent raiders—and Ishtar had a place of some esteem in their pantheon. Though they might gladly have destroyed a foreigner's representation of their own goddess, it is unlikely that they would have carried her home bearing evidence of mutilation by their own hands.

On the other hand, if the figure was of stone and destroyed, fragments would have been found at some point; but none were ever found, either within or outside of the temple.

The only tenable belief is that the statue was destroyed on the spot, but being of perishable material only those more durable parts to which particular accentuation was given survived total disintegration. The probability is that the figure was of clay, to which the important features were added in a finer material. In this land where clay is the medium of all expression and in this city where sculpture in stone is exceedingly rare, this seems by far the most plausible. From the other objects in the room we know that the Nuzians were unusually skillful in model-

ling clay which they afterwards baked and glazed. It is not unlikely that such a figure was used and that its size alone prevented it being baked into imperishable terra-cotta. That the peoples of Mesopotamia in early times made figures from plastic material is shown by the relief in stucco in the G temple of Ishtar at Ashur and in the red-painted clay relief of the Larsa period at Ur.⁸

Another indication of this technique is seen in a stone eye-socket (Pl. 102, I) found in the neighboring débris. Smaller than the first, solid and wedge-shaped, it is obviously designed to be pressed into some plastic material, and certainly not to be inserted in a stone figure.

In the north corner of G29 was found a green-glazed terra-cotta representation of a woman's breast (Pl. 102, E) and fragments similar to it which may have been pieces of another. These may also have been applied to the original clay figure. It is probable that they would have been given special treatment, since the breasts were points of accentuation on the smaller Ishtar figurines. That they are smaller than life-size is accounted for by the frequent lack of proportion between the head and body as seen in figures from other sites of approximately the same period.

Since there was but one principal figure, it is certain that it was given the position of greatest prominence within the room. That would be on top of the pedestal against the southeastern wall. Although at Ashur the free-standing figures were thought to have been on the bench along the side of the room, these statues were less important than the relief at the end of the room. The bench in G29 is too narrow to have supported adequately a figure even approaching life-size. The column or pedestal is the only possible place for it.

No documentary evidence exists to show that this was a temple dedicated to Ishtar, but there can be no doubt that such was the case. The breast in glazed terra-cotta (Pl. 102, E), the lion and the boar figures (Pl. 110, A; Pl. 112, B) in the cella as attributes to the goddess, several amulets in the form of the primitive female symbol (Pl. 120, KK), glass Ishtar amulets, a glazed Ishtar figurine from the court of Temple B (Pl. 99, R), the bone statuette (Pl. 101, I) from the cella, as well as another glazed one (Pl. 101, H) from the court, all afford proof that is indisputable.

A discussion of the objects from the cella is difficult, since it is certain that the greater part of its contents was thrown out into the courtyard at the time of its looting. Because of this complete disruption of the cella furnishings and their mixture with what may legiti-

⁸ C. L. Woolley in *The Museum Journal*, vol. xxii, nos. 3-4, pl. xxxviii, fig. 1.

mately have belonged outside, an exact reconstruction of the original furnishing of the room is impossible. One can only conjecture what objects may have originally been here without any certainty of their exact locations. Several objects which appear to be approximately in their original positions should be noted first.

In the northern corner of the room was a large, straight-sided storage jar smashed into fragments. It was of the ordinary type without special decoration and apparently served a practical rather than a decorative purpose. It is possible that in this jar, next to the entry of the room, were placed the offerings to the temple brought by the devout people having recourse to the shrine. Those offerings which were for the goddess herself rather than for the temple could have been placed before her in a bowl resting on either one of the plain pot-stands found near the southeastern door (Pl. 10, A; Pl. 94, K), or on the glazed pot-stands of which several fragments were found. These stands must have served as offering tables, for with the exception of the jar, which stood in the corner, there were no pots or jars in either the cella or the court. The only other object of the usual nature was a plain bowl which may have held an offering supported by one of these stands.

A simple, blue frit cup of delicate proportions was also found within the room, as well as several small, glazed pots or bottles (cf. Pl. 75, Y) and two glazed tripod bowls (cf. Pl. 92, Z). A fragment of another frit vessel with lip vertically pierced for a string handle (cf. Pl. 56, I, L) also came from here. The persistence of this type, never before found at Nuzi, but so characteristic of earlier periods, is evidence of the tenacious conservatism of religious procedure.

On the pavement midway between the brick altar and the north corner was a massive whetstone showing on its upper surface the wear of constant use (Pl. 10, A). Near it was a bottle-shaped basket, woven of pliable twigs and covered on the outside with bitumen (Pl. 10, A; Pl. 133, A, B). These two objects, close to the altar, are significant. The whetstone was without doubt the one at which the priest whetted his copper knife before sacrificing the sheep or goat before the goddess, and the basket may well have been the depository for the liver and entrails used in divination.

It is of interest to note that the concentration of objects was to the north of the diagonal between the eastern and western corners, increasing in quantity toward the northern doorway. However, it is probable that this concentration gives false emphasis to one portion of the room. Since there are but few objects in the court outside the eastern door and many outside the northern one, we may presume that the eastern

one was closed and only the other used by the looters. If the room was poorly lighted, it is probable that the objects were gathered from all over the room and thrown toward the open doorway and into the court where there would be sufficient light to inspect and to retain or discard what was precious or worthless.

Thousands of beads were scattered over the floor, some still retaining remnants of the copper wire on which they were strung. These were mostly of glass, a few in blue frit, and fewer still in various types of stone (Pl. 119; Pl. 120). The variety of size and form among the glass beads was very great, ranging from elaborate multiform conceptions of four strings of beads of different type cast into one down to the simple tiniest, spherical bead. Spherical, semi-spherical, cylindrical, elliptical, fluted, ribbed, flat, and rectangular and many other variations and combinations of these shapes were present in large numbers. Many of the glass beads were multicolored, with one color laid over a foundation of another in the same manner as the Egyptian decorated glass of the same period (Pl. 130, L, etc.). The colors used, in the order of their frequency, are blue-green, white, yellow, and black. A more complete discussion of the beads will be given under that special heading.

One particular type—the eye bead—lent itself to other uses than personal ornament. In its most perfect state it was flat in section and elliptical in plan, with a raised ridge around the rim to indicate the edge of the eye (Pl. 119, K₇₋₈). The white of the eye was of white glass, and the iris a large circular spot of yellow or black. These, and many more of a type conventionalized to a flat circular bead with a concentric ring of different color around the edge (Pl. 119, K_{4,5}), were found upon the pavement. The fact that many of them were unpierced (Pl. 119, K_{9,10}), and that even many of those that did have the usual piercing parallel with the flat of the back had traces of bitumen on the reverse sides, leads to the belief that they must have been applied to some object as a decoration, rather than that they were strung in the usual manner. This belief was substantiated by the discovery of an unbaked brick in the northwest end of the room, in which had been set a row of elliptical and circular eye beads (Pl. 119, K₁). Since the walls, which were standing to a height of 80 cm., bore no traces of such decoration set into their black-painted plaster, we must assume that it was used above this height. It was not an unusual practice to have elaborate decoration at a considerable height on the wall, for many of the rooms whose walls had been painted in broad panels of solid color showed evidences that a more elaborate figured design

had once existed high up on the wall. The upper portion of the pedestal, which showed no traces of paint on its plaster, may also have been so decorated.

Two plaques of terra-cotta and limestone, respectively, overlaid with colored glass in which geometrical and conventionalized tree-of-life designs are inlaid (Pl. 131, B, A), were probably used for the same type of decoration. Neither was pierced nor showed any means of being held in a given position except by insertion into the wall in the manner of the eye beads.

Other eye beads were pierced vertically through the edge with either two or four equidistant holes (Pl. 119, Q). Although this does not preclude their having been strung, the variation from the usual piercing implies a bead especially made to fasten onto cloth or some such light material. Thus it is not beyond reason to imagine that besides glass mosaics there were hangings decorated with the same material. In this same class was a small, circular plaque of red frit, pierced at opposite points of its circumference, and inlaid in blue in an elaborate symmetrical design (Pl. 121, B).

The fact that the eye beads were used as architectural decoration suggests that the great majority of beads which were strung were also for the beautification of the room, and were not special offerings to, or decorations for, the statue of the goddess. If so, one can imagine the beads strung in ropes along the wall, supported just above eye level by the glazed wall-nails that studded the interior. This is substantiated by the fact that most of the wall-nails from G29 had been thrown out of the doorway into G50. Had they alone adorned the walls they would hardly have all been removed and certainly would not have been thrown outside the room; but if they were a support to such ropes of beads, their removal with the beads to the doorway or court would have been natural in order to obtain a better light for inspection and removal of any beads of gold or other precious material. It is hardly to be doubted that in this lavishly decorated room, in which there was gold sheathing of some sort, beads of gold as well as of other material were used. Two such beads, found in other parts of the city, and a tiny gold sun disc from this room show that trinkets of that metal existed.

Another gold object from the court was a small lunate earring (Pl. 126, S) of gold foil wrapped around a copper core, showing that though the Nuzians used the precious metal, they were not above padding its bulk.

Besides the glass beads of the more ordinary types, there was a variety of other beads or amulets of a more ornate nature. Those rep-

representing a figurine of Ishtar were the most elaborate. Two represented human heads, and many were in the shape of lions', bulls', and sheep's heads; birds, flies, frogs; plain and ornate sun discs; female symbols; and others of elaborate geometrical design (Pl. 119; Pl. 120). The glass beads generally were in very fragile condition, and many could not be saved. It has been estimated that over 16,000 beads of glass, frit, and stone were found in this temple. Most of them must have originally come from G29.

The frit beads were chalky in texture and invariably blue. They were found in considerable numbers, but were less common than those of glass, and seldom occurred in more elaborate forms than representations of frogs and flies. They were invariably small. Their most common forms were cylindrical, flat, rectangular, and multiform, representing a conventionalized, four-parallel string (cf. Pl. 130, F).

The stone beads were surprisingly scarce and were most frequently small and spherical, but occasionally flat, rectangular, or cylindrical. Most unusual and beautiful, in this class, was a tiny bird of amethyst (cf. Pl. 120, SS).

A single bead of iron was found and none of gold or silver.

Intermixed with the beads, and apparently strung with them, were large numbers of small, pierced sea-shells. With their original brilliant coloring, they must have made a display fully as gorgeous as the glittering glass of the beads. Many of the shells were still sufficiently well-preserved to allow an identification of species, and it is of distinct interest to find that three are types which are found exclusively in the Mediterranean Sea.⁴ The others, with the exception of a few fresh-water types, are Indo-Pacific, coming probably from the Persian Gulf. Thus we have not only positive proof of commerce between Nuzi and the Mediterranean coast, but of the importation of Mediterranean shells apparently for exclusive use in the temple, a practice suggestive of an earlier and particular form of decoration used by the Hurrians long before they settled at Nuzi. Thus they may be regarded as further evidence of the western relationships of the Hurrians.

Since, in L5 of the palace, we already have an example of wall-nails in place, we can assume that they were used in the same manner here, being inserted into the wall in a horizontal row slightly less than two meters above the pavement. Since G29 was the source of most of the objects scattered over the courtyard, we may conclude that the twenty-five wall-nails found in the court, as well as the two from G29 itself, originally belonged to the cella. Dividing the twenty-seven nails into

⁴ See Part II, Chapter III, *Shells*.

the total wall space we find that they would have been placed 72 cm. apart, a spacing which corresponds roughly with that in L5 of the palace. It is not likely that there were any more than this. Being considered of no value, they would not have been carried away. It is barely possible that a few of the nails from H7 may also have been mixed with those cast out of G29. However, they must have been very few, certainly not enough to alter the estimated spacing in G29 to a distance greater than 100 cm. apart.

With rare exceptions the wall-nails follow the traditional shape, having a protruding knob springing from a flange as great or greater than the diameter of the knob (cf. Pl. 97, L, N; Pl. 98, A, D). The unglazed shank which is thrust into the wall (cf. Fig. 21) is hollow or solid, square in section or round. The glaze is always of the same blue-green and occurs on the shank only through accident. To this there is one exception, a nail of exceptional size, the face of whose knob is yellow while the rest is of the usual color (Pl. 98, A).

In spite of this adherence to a familiar design, no two nails were exactly alike, and the difference between the least similar is very marked. This makes it certain that they were not all made at one time by one artisan, for a single craftsman executing such an order would have made them all in almost exactly the same size and shape. We must assume, then, that they were made either at different times or by different people. The first assumption is the least likely, for we see from their use in the palace that they are regularly placed and an integral part of the original decoration, rather than a haphazard decoration put in afterwards. In the temple it appears rather that the wall-nails came from many different sources at the time of the decoration of the building and that each donor fashioned one according to his notion of what its shape and size should be. They may have come either from those devout persons who wished to beautify the temple, or from those less devout ones who were ordered to provide. At any rate, they show a widespread knowledge of the art of potting and glazing among the people of Nuzi.

Small bronze nails were scattered over the floor in considerable numbers, as well as occasional flat scraps of bronze with piercing at the edge through which these nails passed. It is clear that this sheathing was originally the covering for something of wood, but whether it was for door, rafter, or for some structure of which there is now no indication cannot be discovered. Also from here were several fragments of thin sheet-gold; their jagged edges show that they were but scraps from larger sheets.

In the courtyard, but evidently from the cella, were three mace-heads of magnetite, marble, and siliceous hematite, slightly different in size and shape from one another (Pl. 121, N, U, Y). Within the cella was a glass mace-head or staff-head broken in ancient times and mended with bitumen (Pl. 121, P); the remnants of another larger glass mace-head of the conventional shape (cf. Pl. 121, U); and a circular mace-head of limestone (Pl. 121, S). From this same place came two delicate staff-heads, flower-shaped and fashioned in glass of two or three colors (Pl. 121, A; Pl. 130, B). Another from the cella was of white glass, shaped like the usual spindle whorl, pierced through the center, and 78 and 28 mm. in diameter and thickness. It is probable that these ceremonial mace-heads flanked the altar, or perhaps the pedestal of the goddess.

Near the eastern corner of the court was an object of greater significance; half of a ceremonial axe in green rhyolite lava (Pl. 121, Z), identical with the typical Hittite double axe. Its distance from the doorway to G29 makes it impossible definitely to assign it to the cella, but its presence even within the confines of the temple invites some interesting speculation as to the antecedents of the Hurrians.

Of the objects not definitely connected with architectural decoration, the most important is the small bone statuette (Pl. 101, I) found on the floor near the mid-point of the northwestern boundary of G29. It is of the utmost importance to note that this small figure carries in its right hand the Hittite battle-axe as seen on the Warrior Gate at Boghaz Keui and has on its one shod foot the familiar upturned toe of the Hittite boot. Both the horned head-dress and the cast of the features are also definitely Hittite in feeling. These, coupled with the stone double axe just mentioned, forge a strong link connecting the Hurrians with those regions much further northwest. The pegs projecting from both the top and bottom of the figure indicate that it was part of the decoration of a piece of ritualistic furniture of greater size and importance.⁵ There is nothing to show what this piece of furniture was, but that it should have been adorned with such a beautiful and important ornament as this statuette gives it an importance second to no other object.

Another figurine (Pl. 101, H) to be noted is one of glazed terracotta representing a standing figure with the hair caught up behind in a knot and the body covered with a long, all-enveloping cloak. Unlike

⁵ Wooden offering tables from the temple, inlaid with ivory and having feet carved to represent bull's heads, are mentioned in the Nuzi texts; see Appendix D, *Furniture*.

the bone figure, it rises from a flat pedestal and obviously stood alone as an independent object.

In the same medium is the rather crude figure of a bird (Pl. 110, B), broken from its base and probably once part of a larger object. One is reminded of the cruder offering table from S124 with its birds perched around the rim (Pl. 113, B). The head of another was also found. Even more crude is the headless figure of an animal in glazed terra-cotta. This piece is like the type so common in the private houses, except for the distinction of being baked and glazed. A portion of another was found.

Undoubtedly the most beautiful of the objects are the larger sculptures in glazed terra-cotta. A pair of standing lions 47 cm. long, covered by an even coating of green glaze and resting on a flat base which alone is not glazed, rank as the finest works of this type from Mesopotamia (Pl. 110, A). Another pair are couchant with fore-paws extended, their manes, tails, heads, and paws covered with a thick yellow glaze which streaks across their red-painted bodies (Pl. 111, B). The latter, more vigorous perhaps in appearance, lack some of the subtlety and grace of the more conventionalized all-green ones. They are, however, superb examples of sculpture in this medium.

Only one of these four was found within the cella, that being the unbroken green one (Pl. 110, A). The figure was obviously out of position and lay on the pavement at the northwest end of the room, resting partly on the *libin* in which the eye beads were inset and a few centimeters removed from the bone statuette (Pl. 101, I). The other three were found in many fragments scattered over the surface of the courtyard. The head of one red and yellow lion was found in pieces close to and northeast of the pedestal in G29.

In each set both animals are exact pairs, except for the fact that the tail of one curves up over the back and to the right, and that of the other up over the back, but to the left. This would seem to indicate that they followed some definite decorative or ritualistic scheme and that they flanked or fronted an object of greater importance. That object would of necessity have been the statue. Moreover, the lion being an attribute of Ishtar, it is fitting that this should be her statue. It is likely that all four stood on the edges of the pedestal, the two standing ones at either side and the two red and yellow ones crouching before her feet. Gods standing on the backs of lions are a familiar subject for the makers of figurines all over Mesopotamia, and representations of the Mother Goddess riding on the back of a lion are seen in the reliefs of Boghaz Keui, Tell Halaf, and in the northwest. Though

it does not appear that these terra-cotta lions of Nuzi were the actual support of the figure, their presence at her feet would be symbolical of their relationship.

Equal to the lions in beauty of design and execution is the green-glazed boar's head (Pl. 112, B) found in fragments within the cella. The head is hollow and terminates at the beginning of the neck in a flat circular disc, like the flange below the knob of a wall-nail. It is clear that the flange rested flat against or toward the wall, the whole supported on a peg extending from the wall. The muzzle is pierced horizontally at the point where the tusks should protrude. The horizontal course of this piercing is not well adapted to the insertion of the characteristic upturned tusks that should be there, and one wonders whether this was not the suspension point for some object now gone. There were, however, in the débris fragments of two tusk-like objects of blue frit which may have belonged here.

There is no clue as to the original location of this work of art, though one would suspect that it had to do with the central figure as did its companion pieces—the lions.

A portion of a sheep's head in the same material (Pl. 110, C), with large deep holes above the nostrils for the insertion of inlay, also came from here. It appears to be the same type of figure as the boar's head and was probably displayed in the same fashion.

One more glazed object should be mentioned, a single fragment of what must have once been a work of great beauty. It was an ear of a lion in terra-cotta, covered with a deep yellow glaze of exceptional thickness. The rim and veins within the ear were shown in relief and executed in green glass. Whether the original was a complete figure or merely a head, as in the case of the boar and sheep, remains unknown, as does its location and purpose.

A hollow terra-cotta socket (Pl. 99, A), covered with a thick, firm, white glaze, was found in fragments on the pavement of G29. Near its base was a low flange, not unlike that of a wall-nail, from which sprang the side walls terminating in a round flaring lip 65 mm. beyond. Below the flange, the walls extended only 15 mm. This lower portion is imperfectly glazed, and is obviously the part that was inserted into the body of the wall. The interesting feature of this piece is that on the inner surface, at the lower end, is an even, rather thick, coating of bitumen in which is the impression of a wooden pole or peg. The socket is for a wooden pole 6 cm. in diameter. The bitumen shows that the pole did not extend into the wall more than a few millimeters beyond the end of the socket, and since the portion of the socket in-

serted into the wall was only 15 mm., it is evident that it could not have sustained much weight. Even had it stood upright in the floor it would not have been capable of upholding a pole of any great height. What purpose this served is a matter of question. One wonders whether there could be any relationship between this object and the pole-socket found near the altar of the southern temple of Thutmose III at Beisan.⁶

In addition to the finer pieces of animal sculpture, many complete and fragmentary specimens of large crude terra-cotta animal figures were found in the débris fanning out into the courtyard from the cella doorway. One came from H5, and fragments of others from the street outside the H7 doorway. It is reasonable to believe that these were largely cella furnishings.

Most unusual are the figures with bodies of lions and fantastic heads with great hanging ears or horns and gaping mouths (Pl. 109). They are couchant and resting on flat bases, of which they are a part. One is nearly enough complete to be restored accurately in all its parts, and fragments were found showing that at least two more were used. These appear to have been identically alike in modelling, but vary slightly in the position and frequency of the incised lines on the body. It is of interest to note that the two of which the hindquarters are preserved are not oppositely formed as were the glazed lions, but both have the tail curving over the back and to the left. This gives the impression that they were not made to serve as a part of the preconceived arrangement of the room but were unrelated objects. It is interesting to note that on the rear surface, below the base of the tail and the pierced hole, is a conventionalized tree-of-life design (Pl. 108, B), incised in the body of the clay, exactly like those of the wall painting in the palace (Pl. 129, D).

The second type is a couchant figure of a lion, also on a flat base, with gaping mouth and pig-like eyes, and extremely crude in modelling (Pl. 107, D; Pl. 108, A). Fragments of three such were found, all different.

The third type is a wheel-turned jar slightly constricted at the neck to form the gaping mouth of the beast (Pl. 103, L; Pl. 104; Pl. 105; Pl. 106; Pl. 107, A). To this has been added sufficient clay at the shoulder to model mane, ears, eyes, and nose. The neck of the jar is generally slit on either side to represent the upper and lower jaw, both upper and lower canine teeth are added, and the tongue protrudes over the lower lip. The tail, when shown at all, is seldom free and usually curls upward over the back. The mane may be indicated simply by the

⁶ See Alan Rowe in *The Museum Journal*, vol. xviii, no. 4, p. 423.

shoulder of the jar, or, more elaborately, by crude modelling and incised lines. The eyes may be incised or *appliqué*, or both; they are sometimes placed within the contour of the ear. The nostrils are always shown but the form varies with each example. The short legs and feet vary from crude protuberances to easily distinguishable legs and paws. In short, no two are identical, and between the extremes of the crudest and the most finished great variation exists. Only two show signs of skillful modelling: one, showing the face and neck of a lion, is a fragment only (Pl. 107, B); while the other, less skillful but more complete, begins with the head of a lion (Pl. 107, A) and terminates with the jar bottom at a point where the shoulder should have been had the body been continued in the same scale as the head.

It is obvious that the last two classes of lion figures are not the work of a single craftsman or group of craftsmen, but were made by different persons untrained in the art of modelling and represent diverse conceptions of a zoomorphic ritualistic object. Whether they formed a part of the original scheme of the room and were levied from different persons as were the wall-nails or whether they were an accumulation of offerings over a period of years is impossible to say.

It has been thought that the latter class, being turned jars and having the front legs slightly longer than the rear, were the vessels in which offerings were presented to the goddess. However, a plain jar, the construction of which was familiar to the layman, would be the natural foundation on which to build these unfamiliar additions. Also, in spite of the slight tilt given by the longer front legs, the quantity of liquid or grain contained could not have been great without spilling out either through the open mouth or the hole so often realistically placed in the rear. The longer front legs, with the resulting tilt of the body, must be considered as an attempt at realism, rather than as a practical measure.

It is extremely difficult to conceive of the purpose of these objects or to determine their location in the cella. It seems more likely that they were offerings than containers for offerings. It is possible that, just as the bench in the archaic Ishtar temple at Ashur was a resting place for statues, the bench here served a similar purpose and was a common pedestal for these strange objects.

In spite of the resemblance of many of them to pigs, it is clear that the intention was to represent a lion. No doubt they were a copy of an already conventionalized model, such as the standing glazed lion, but this conventionalization cannot be blamed for the blunders of unskilled hands. Wherever sufficient effort is made, one or another of

the characteristic leonine details, such as the mane, upper and lower canine teeth, and paws, is definitely shown.

Besides these animals there were in the court, presumably from the cella, five small unglazed animal figurines of the usual household type. Only one showed signs of more than the most casual care in manufacture (Pl. 102, S).

Fragments of at least three small glazed bottles (cf. Pl. 75, Y) were on the cella floor, as well as many other glazed fragments too small to be reconstructed. A glazed terra-cotta pot-lid was among these, as well as the pot-stand already mentioned. Two wooden vessels covered with bitumen were found; one, a cup, was covered with bitumen inside and out (Pl. 133, C). The other, against the northwestern wall in G29, was a portion of what appeared to have been a flat-bottomed platter with sides at least 5 cm. high, slanting slightly from the vertical. The interior was painted red and the outer surface covered with a thin layer of bitumen. The profile is not apparent, so one can only say that in length it was at least 50 cm., in width 10 cm., and in height 5 cm.

The three copper arrow-heads (Pl. 125, Y, Z, BB) and a pike (Pl. 125, L) from G29 may have had a definite place among the cult furnishings of the room. This supposition is supported by the small size of the arrow-heads, two of them being so minute as to have been impractical, even for the smallest game. The presence of an identical pike and arrow-heads in the palace chapel lends further strength to the belief that these objects were merely ritualistic.

The presence of over fifteen tablets near the eastern doorway leads one to another and at first unsuspected section of the cella. The small alcove G73, which in Temple C had been open and which in Temple B was closed off, remained closed in Temple A, though it was far from being abandoned. Within it was a considerable store of tablets of the ordinary contract type, two glazed pots such as were found in fragments nearby (cf. Pl. 75, Y), a glazed wall-nail and many beads.

This is a most interesting case. We have here, appearing on the plan as a doorless room, an enclosure which was in reality not only accessible from G29 but in part open to the cella. It is certainly not thinkable that this tiny storeroom would have been decorated with a glazed wall-nail and beads had it been accessible only from the roof, nor would unbaked tablets have been stored in a room where the hole through the roof would of necessity have been almost as large as the floor itself. It is not likely that beads would have been strung here and a wall-nail installed had they not been visible from the cella. The

tablets scattered over the floor of G29 near here, and only near here, could only have been thrown out of the alcove into the cella over a separating wall not less in height than the 81 cm. which remained when excavated. This could easily be scaled with the aid of a wooden ladder or steps. Using the position of the wall-nails in the palace chapel (Fig. 21) as a guide for their height here we may safely assume that the dividing wall was less than 178 cm., since both the wall-nails and beads within the alcove would have lost their main decorative purpose had the dividing wall been so high as to make them invisible from the cella. Thus, the height of the wall may at least be restricted within the limits of 178 cm. and the 81 cm. of the existing wall.

It is quite probable that the glazed pots found in the alcove were in their proper storage place and that the alcove was the storeroom for business documents and for cult objects not in constant use. It is equally probable that the several similar glazed pots and the many lesser fragmentary glazed objects found in the cella close to the separating wall had also been stored in the alcove and had been thrown from it at the time of the looting. Looters, treading ruthlessly in the tiny alcove, would account for the shattered condition in which the tablets and vessels were found both within and outside the storeroom. Whether the priest wrote these tablets and stored them for others, or whether he accepted them only for safe-keeping cannot be known. The tablets pertain to ordinary commerce and seem to have no inscriptional connection with the temple.

G51, another doorless room, was even more abundantly supplied with temple beads, and doubtless was accessible to G29 in the same way as G73.

That the objects from the cella were dragged to the doorway and thrown out into the courtyard cannot be because of wanton destruction alone. The destruction could have been as thorough and the confusion greater had it been done all within the cella. It must mean that the room had no light, except that which came through the doorway, necessitating the removal of the plunder to the open light of the court where those objects deemed precious could be distinguished and removed.

Thus, without too great a stretch of the imagination one can recreate the picture of this sanctuary as it was last used. The dim interior is cut by shafts of light from either doorway. The black of the lower walls accentuates the gloom. Illuminated by the light from the further doorway is the statue of the goddess standing on her tall pedestal, flanked and fronted by lions. To the left is the storeroom partially walled off and obscured by the door open against it, and to the right a smaller

open alcove. Still more to the right, high above the pavement, is the opening leading to G51. The walls are studded with a horizontal row of glazed wall-nails, and, looped on the nails along the wall and across the room, are ropes of glittering beads of glass, frit and gold. Above these are mosaics of a thousand unseeing eyes of glass. The heads of animals in brilliant green glaze seem to emerge from the thickness of the walls to attend the holy rites. The open doors are sheathed with copper, and the soft brilliance of gold glows among the furnishings. Before the statue are the offerings in vessels resting on stands of simple and elaborate design, while on the bench against the left wall, a row of hungry-looking lion jars with gaping mouths and vacant eyes attend their divine mistress. The sacred fire glowing on the hearth pierces the central gloom, and behind it, in the robes of his office, kneels the priest, whetting his copper knife in preparation for the sacrifice.⁷

In considering the objects thrown out into the courtyard, it is at first puzzling that they should have been mostly outside the northern door and not equally distributed outside both doorways. This is clear when one understands the entry to the alcove G73. Being the storeroom, it was probably the first to be raided by the looters, and access could not be had to it if the eastern door of the cella were open, for it swung against that wall, cutting off entry and light from G73. With this door closed, the northern door would be the only place where light would enter the holy room. However, a few objects outside the eastern door indicate that this was used to a slight extent before or after the raiding of the storeroom. That so many of these were small vessels of the usual household type indicates that the furnishings of the cella were not all on the same scale of elegance as the glazed pieces but rather that they varied according to the means of the donor.

The concentration of objects in the courtyard was north of the diagonal between the east and west corners and principally in an area extending 6 m. outward from the northern cella doorway and 7.5 m. southeast from the wall of G35. Beyond this the quantity rapidly diminished, though beads continued all the way across the court as far as the eastern corner. It was outside this cella door that the fragments of three of the four glazed lions were found. Here were many of the wall-nails and the greater proportion of the beads.

That one of the large couchant unglazed lions was 35 cm. above the pavement near this doorway suggests that a willful destruction of the walls accompanied the general looting. This and a single mace-

⁷ Some idea of the sumptuousness of the furniture may be gained from the description of articles mentioned in the texts; see Appendix D, *Furniture*.

head must have been thrown there after the upper portion of the wall had been thrown down. The fire set by the invaders, evidenced by the much-burned condition of the plain pottery outside the eastern door of G29, may have been responsible for this collapse.

It could not have been anything other than wanton and mischievous destruction that led the invaders to throw so much of their loot down the shaft in the center of the courtyard. From bottom to top it was filled with objects from the cella. Here were found most of the zoomorphic jars, the broken bases and stands of the two green-glazed lions, the sheep's head, two glazed tripod bowls (Pl. 92, Z), many wall-nails, and lesser objects and fragments. That these were evenly interspaced in the fill from top to bottom is strong evidence that there was a structure around the mouth of the shaft, which was demolished and thrown down simultaneously with the temple objects. Unfortunately, this destruction was so complete that not even the foundations of such a structure could be found.

This shaft is of particular importance because it may well have been the one down which libations were poured to the gods of the underworld. Its depth is 5.48 m. below plain level, or 8.82 m. below the pavement of the court.⁸ Since its bottom is approximately 11 m. above the water level of Nuzi times, it could not have been a well. Was it then an unfinished well, its completion interrupted by the invasion of the city, or was it a shaft devoted to other purposes? Around the sides of its constricted neck is that greasy irregular surface that means the dripping of much water, but there is no means of knowing whether this may not be from innumerable libations poured down here or from the action of seepage water after the time of abandonment. The fact that the objects were interspersed with earth from top to bottom may be taken to prove either case. Either this earth is that which was dumped on the side during the original digging or it is part of some structure surrounding the well-head. It does not seem likely that the looters would have gone to the effort of shoving loose earth back merely to fill up a well, but they certainly would have taken delight in throwing down any structure about its mouth, particularly if it had a ritualistic purpose. That no great quantity of *libin* was found in the débris is inconclusive for either possibility. It is probable that this was the point at which the gods of the underworld were placated and that the invaders in destroying it intentionally inflicted an indignity to these deities as they did to the cella.

⁸ The depth shown on Plan 13, minus 950 cm., refers to the total depth reached by us in searching for virgin soil.

Because of the large diameter of this shaft, 158-160 cm., the builders could not climb up and down with footholes placed alternately on either side but had instead two sets of steps in the form of four vertical rows of holes cut into the side of the shaft. These four seem to have afforded two identical but opposed means of ascent and descent on opposite sides of the well, not equidistant on the curve of the shaft but in related pairs. Thus one is 80 cm. from its mate and the other 98 cm., whereas between either of the unrelated pairs the distance is from 101 to 140 cm. The vertical distance between holes in any one row varies between 45 and 72 cm. but each is staggered in relation to that of its mate. The deepest step is 122 cm. above the bottom and the highest 517 cm. below the courtyard pavement. No doubt there were others now unrecognizable, closer to the surface.

The destruction of the well-head made it impossible to determine exactly the diameter at the mouth, but, if one may judge from the amount and angle of the constriction as seen from Pavement II, it must have been close to 70-80 cm. Only the constricted portion was lined with *libin*, the rest of the shaft being completely unprotected.

Another underground structure should be noted: a beehive-shaped storage pit of the usual type, southeast of the brick walk which crosses the court. The pit is chopped out of the underlying soil and is entirely without brick or *libin* support. The bottom is slightly concave with a diameter of 420 cm. and a depth of 304 cm. below the courtyard pavement. Again it is impossible to tell with any accuracy the diameter of the opening or whether there was any construction to protect its mouth. It was in here that the eye of the statue (Pl. 102, F) was found along with a fragment of the socket of its mate. Near these was a triangular, flat piece of dolomite, hollowed in the center (Pl. 102, G)—the eye of another and far from lifelike figure. Also from the pit was a magnetite mace-head (Pl. 121, N), a glazed wall-nail, and many glass and frit beads. This storage pit was apparently empty at the time of the invasion, for it was bare of signs of any stored material. It is not likely that it would have been so completely bare had the removal been done in the haste of the looting.

The most striking feature of the courtyard other than its size is the broad brick walk, four bricks wide, leading from H7 across the court to the threshold of the northern door of G29 (Pl. 10, B). This processional way establishes the doorway from Street 8 as the principal entrance to the temple and in the same way confirms what the arrangement of the cella suggests, that the northern door was the main point of entry to the holy room. It is possible that the eastern door was used only by the priests and dignitaries of the temple.

The threshold of the northern door to G29 is a structure separate from the walk which it abuts, and is built in haphazard fashion of two sizes of brick, 29.5x29.5 cm. (the size of those in the walk) and 25.5x25.5 cm. This, and a corner of the first brick of the walk, is overlapped 13 cm. by the northwestern jamb of the door and considerably pressed out of level by the weight of the wall. This is proof that the brick walk and the threshold are survivals of reconstruction within the time of Temple A, either so slight or so accurate that it is apparent only at this point. Though the level of the walk is irregular, it is due to the settling of the soil below, and not to an original departure from the horizontal.

As stated before, the construction of Temple A brought about no change in the plan or level of G29, but the arrangement of the surrounding rooms has been considerably altered. The remnants of walls as seen in Temple B indicate that the builders of Temple A used their outline as a guide for the disposition, if not for the size, of the rooms of their own rebuilding.

The courtyard wall to the northwest of the northern door to G29 has been given a stepped outline to correspond roughly to the wall on the other side of the doorway and with those of the eastern door. G35 and G40 have been combined into one room, smaller in area than that of the two in the previous level. There was no sign of a northeastern wall in this room or a southwestern one in H5, and it seems likely that these two formed one long entry-room serving the outside doorway. In G35 an unbaked clay offering stand (Pl. 114, B) was found, in shape and size like the copper one of the palace (Pl. 114, E) but pierced with circular rather than triangular holes. The relationship between these two and those of Temples F and G is clear.

The faces of the jambs of the door leading from the court to H2 were not found, but they could not have been far removed from the broken wall-ends seen on the plan. H2 contained several beads, a cylinder seal and a copper spoon (Pl. 126, U) which may well have belonged with the objects in H5. The latter group consisted of many glass beads and the fragments of a blue glass vessel (?) crushed beyond hope of reconstruction; also a plain Ishtar figurine, a wall-nail, and a small lion-shaped jar (Pl. 103, L), the best example of its type found. Being cella furniture, the question arises as to whether this and even the other objects were not carried in from the court at the time of the looting.

Again there is on the right-hand side of the door leading to Street 7 the same projection as seen in the early part of Temple C. The south-

eastern wall has been built over the abandoned storage pit of the earlier period and even before the destruction was probably cracked by the settling of the fill below it. It is strange that at this point they should not have dug a deeper trench for their foundation as they did elsewhere when building on unstable ground.

In the extreme southeastern portion of H7, 9 cm. below the third and earliest pavement of the room in its final outline, was another pavement, and 39 cm. below this still another. Since both pass under the walls of the final room, they must represent a totally different ground plan in use between the time of Temple B and the final phase of Temple A. Also, since both pavements cease abruptly in their northwestern course at a point corresponding exactly to the outside face of the southeastern wall of the H7 of Temple D, we may assume that for a brief time between the end of Temple B and the end of Temple A, the outline of the well-room of Temple D was revived and used. The two pavements, being outside the confines of the Temple D room, must have been the packed earth floor of the courtyard. The upper was traceable under the full extent of the final H7 southeast wall. The lower could be followed only for 110 cm. eastward from the south outside corner of the final H7. Both extended equal distances under the southwest wall.

The doorway into G50 from one of these earlier rooms (probably the later) is shown by the useless but still retained northwestern door-jamb here shown within the courtyard. Its H7 face has five layers of plaster, in all 12 cm. thick, showing its long period of use. Both the *libin* and the plaster bear signs of intense fire. The corresponding jamb of the present wall is built against the older, and both existed simultaneously. This double width was not repeated in the opposite jamb, the wall continuing in the same thickness as that of the new addition. The new wall is placed directly on the pebble pavement of the older room, and it was not until this newest room was built and had been used that the brick walk was built leading from G29 into H7. Over it at the H7 door was placed a door-sill two mud-bricks high. One more minor change, the addition of the block in the northern corner, was made during the last period of its occupation, evidently at the same time the brick door-socket for the street door was set in its place.

H7, as the main entrance to the temple, must have been a room of considerable importance. Its decoration sustains this supposition. Traces of red coloring were found on the walls, and the pavement was, in the southeastern part of the room, evenly covered with a coating of the same color. That would indicate that as a room it was little more than

a symbol of the change from the outer world to the holy enclosure of the temple, for such color on the pavement would prohibit its use if the decoration was to be preserved, and the excellent condition of the coloring showed that only the northwestern half of the room had seen any use. Six glazed wall-nails (Pl. 98, C), and many beads of glass, frit and stone show that the decoration was elaborate and similar to that of G29. Besides these there was a copper pin, a copper spoon similar to that of H2 (Pl. 126, U), a chariot wheel (Pl. 98, I), and a fragment of a pottery lamp. Outside the doorway in Street 8 were other objects obviously belonging to the temple: principally, three glazed wall-nails, one of which was an elaborate combination of nail and wall-plate (Pl. 98, G), a bronze statuette of a standing female figure (Pl. 102, C), and two small standing terra-cotta lions, green-glazed and very badly disintegrated (Pl. 111, A). Besides these were many glass and frit beads and fragments of inlaid glass vessels. These are obviously temple objects thrown out of the doorway by the invaders, and it seems equally likely that they belonged originally in H7. If this is so, the room is second in importance only to the cella and certainly served a purpose ritualistic rather than utilitarian.

H6 has no distinguishing architectural features other than its door-socket, but its objects give it an interest it might otherwise have lacked. These consist of a shouldered cup, a few glass beads, five glazed wall-nails (Pl. 97, M; Pl. 98, B, D), and a fragment of a square glazed wall-nail plate (Pl. 99, B) of unusual design. It is possible that these objects were originally the furnishings of H7.

The small room H11, with its two ovens, was apparently for bodily rather than spiritual use. Neither its southwestern wall nor southern corner remained, and only the doorway gives a hint as to its original outline. A glazed wall-nail (Pl. 97, N), a portion of a glazed wall-nail plate (Pl. 98, H), a cylinder seal and several beads seem out of place here and probably belong to the cella loot. This room, with its ovens, must have been unroofed, and objects thrown about could easily have fallen inside. Two very large copper arrow-heads also came from this enclosure.

The ravishers of this temple appear to have taken a great delight in throwing the finery of the building about the court. In the eastern corner of the court there are several wall-nails, a cylinder seal, a lamp fragment, many fragments of inlaid glass and a great quantity of plain and fancy beads and amulets of glass, frit and stone. The possibility of their being near their original position is negated by the presence of the front legs of the green-glazed lion of G29 near the doorway to H11.

It is hard to understand why this eastern corner should be the only distant part of the court in which any great quantity of cella objects was found. Being in a line with the northern door of G29 and the courtyard well or shaft, it would almost seem as though the invaders in the exuberance of their victory flung their unwanted spoils from the cella door to the well, and with rather bad aim, for this collection of cella objects was found far away from the holy room.

H21 is the same in this level as in Temple B and is as devoid of objects as in its former states. A cooking-stand in a previous level suggests that this was the room in which the priest lived and cooked, but it is difficult to imagine that he lived so frugally that not even any of the commonest ware should remain to mark his habitation. If, indeed, it was the room of the priest, the door-socket within shows that he could enjoy unmolested the poverty of his quarters. Passing through this room, directly under the topmost pavement, and evidently belonging to an early stage of this latest period, was a discarded open brick drain carrying off the rain-water from G50 and draining it in neighborly fashion into the courtyard of the adjoining temple. As could have been foretold, this arrangement was not satisfactory to both parties, and it was soon discontinued in favor of the open brick drain flush with the pavement piercing the G50-Street 8 wall near the door to H21.

An interesting example of ancient economy is seen in the pavement of G50 directly southeast of the eastern door to G29. At this point the mud-brick pavement was so intensely burned that half of its thickness was baked to a friable and crumbling condition. This surface, however, was not the upper one but was the one in contact with the dirt floor. It is clear that after an intense fire some time within the period of Temple A the court was rehabilitated, but rather than repave the court anew the *libin* was turned over with its crumbling surface downward, thus restoring again the appearance of the temple court. It may have been the same fire that baked the wall and plaster of the earlier H7 and necessitated new walls at that point. It may also have been the same conflagration which wrecked the building to which belonged the glazed wall-nail plate (Pl. 98, H) of typical Stratum II type found on the pavement under the newly added oven in the east corner of H11.

The building material throughout the temple is mud-brick, except for the baked-brick walk and hearth and the stone and brick door-sockets. The construction is even and regular and the walls are carefully plastered in all cases. In the southern half of the northeast wall of G29 the mortar in which the *libin* was laid contained several hun-

dred glass beads.⁹ In this way they were incorporated into the very body of the building.

The pavements were of packed earth in all of the rooms except the court, which, being open to the air, was overlaid with *libin*. One brick threshold exists, that into G29. Four doorways had sills two *libin* in height across their width: G29-G50 eastern door, G50-H7, H7-H6, H7-Street 8.

As said before, it is impossible to tell whether the cella and temple furnishings belong only to this latest period, or whether they are an accumulation from the time the cella reached its final level in Temple C. But it seems likely that the great mass of material belonged exclusively to the final stage, or perhaps even to the later half of the final stage. The pavement of Temples B and C in G50 yielded a considerable quantity of glass, frit and stone beads similar to those of Temple A. In addition to this there was a terra-cotta fragment showing the haunch of a lion figure identical with the red and yellow ones but covered with the familiar green glaze; also a brick—117x127x43 mm.—glazed in white on one of its larger faces (Pl. 116, A); and an incomplete yellow-glazed Ishtar figure with black on the genitals and breasts (Pl. 99, R). These objects, broken and out of place, give the impression that between the time of Temple C or B (which are identical in this building) and Temple A, a destruction took place as thorough in the case of the objects, if not of the walls, as that which obliterated Temple A. G29 apparently suffered no great structural damage, for it remains the same in all these periods, but the surrounding rooms must have suffered complete ruin to justify the altered rebuilding in Temple A.

It is even possible that the fire that baked the wall of the earlier H7 of Temple A and crumbled the *libin* pavement of G50 also burned the cella. The glazed wall-nail plate found under the oven in the east corner of H11 and the reconstruction of the northern doorway to G29 noted earlier may be the only remaining bits of testimony to tell of a tragedy to a cella in the early phase of Temple A as completely furnished as that of the final phase. These scraps of evidence lead to the conviction that the furnishings of the cella at the time of the final demolition were largely the products of the latest phase of Temple A.

In many ways this temple is unique, but principally because of its objects it stands out as the most important building of Nuzi. The palace is greater in extent and grander in its generous rooms and massive walls.

⁹ Within the L6-L10 wall—the palace chapel—small objects and implements of copper were similarly incorporated into the body of the wall.

The temple has expressed itself in a different way. The abode of the spirit rather than the body, it has in its furnishings expressed that spirit in the splendor of its decorations and the beauty of its objects.

The southeastern temple, being at the beginning of the erosion channel dividing the southwestern half of the mound, has suffered greatly from the wear of surface-water. For that reason it has not been preserved in even half of its original plan. Fortunately, there is enough left to give us the salient points of its final period, and with the aid of the preceding levels it is possible to approximate what once was there.

The outside walls of the cella (G53) as stated before have been altered and elaborated, though not sufficiently so to change the character or general plan that this mass always had.

The interior has also been subject to slight alteration with the introduction of the seemingly useless alcove in the western corner and the decreased width in the northwestern half of the room. Erosion had completely swept away all traces of the southeastern wall, but the end of the packed clay pavement points definitely to its having been in the same position as in Temple B. Thus we can assume that the slight increase in the length of the outside wall over that of Temple B was an exterior addition only and had no effect on the interior arrangement.

No pedestal could be traced at the end of the room, but since it was present in all earlier levels, we may safely assume that its absence is due to erosion rather than to an original absence. The same cannot be said of the bench. Had there been one here, at least a portion of it should have been found along the sound part of the wall. It will be remembered that in Temple B there was also no bench here. Within the room, at the northwest corner of the doorway, is a stone door-socket 45 cm. below the pavement (Pl. 24, D), held fast in the bottom of the door-post well by a brick fragment on either side wedged between the side of the well and the socket.

The space between the pavements of Temples B and A in G53 was filled in with solid, regularly laid *libin*. This fill was in rows running the length of the room, and the *libin* within the rows bonded to one another but not to those of the adjoining rows. This is an unusual example of a leisurely, studied reconstruction intentionally raising the level of a room which apparently was intact at the time. The rise was obviously an adjustment to correspond to a higher level in the court outside and may have been necessitated by damage to the rest of the building.

The contents of this room were surprisingly meagre and included two plain bowls, less than three hundred beads of glass, frit and stone,

a few pierced shells, a fragment of a stone mace-head (Pl. 121, T), a shattered copper sheath looking like a dagger scabbard, a copper needle, a copper sun disc pendant (Pl. 126, T), scraps of copper sheathing in strips not over 3 cm. wide, pierced at the edges with nail-holes, and a considerable quantity of commercial tablets.

The beads presented about the same variety of decoration as those in G29, but few were of unusual shape. There were several plain circular pendants or sun discs (Pl. 120, WW) not decorated in relief as were the more elaborate ones of G29; also a single frog-shaped bead of blue frit, another in glass of a human head and another of glass, tubular and bent in the center at a 100° angle (Pl. 119, T). One identical with this was also found in stone. These are the only examples of the unusual types of which there were so many in G29.

It is of particular importance that not a single wall-nail was found in this whole temple, nor were there any fragments of glazed ware. This raises the question of how the beads were used in G53. It is beyond doubt that in G29 they served as a decoration to the room and were strung along the walls suspended from the wall-nails. Here there are but few beads and no wall-nails at all. Since it is probable that the origin of bead decoration was as a direct embellishment for the statue itself and that it developed later into an architectural decoration for the god's room, it may have been that here the earlier tradition alone was followed. This, however, does not explain the scarcity of other types of objects. Numerous possible explanations could be offered. Perhaps the building was in an unfinished state. This is not likely, for the pavement of G53 was a sound one showing signs of as much use as the much-burned hearth in H13 of the same level. If one were to suggest that this group was more thoroughly sacked than the other, it should be remembered that the looters would probably not have carried away from here objects that they considered worthless in their looting of G29.

It seems more reasonable to believe that either from the demands of the cult, or for some other reason unknown, this temple was less elaborately decorated and that the looters found little more than they left. It should be remembered that throughout the early history of these two buildings the northwestern one was always more productive of objects than the southeastern one. Since the construction of G53 does not at all indicate that it was a poor or unpopular temple, we may assume that the profuse and beautiful objects of G29 were not the fruits of greater popularity so much as they were a definite demand of the cult. In the same way the austerity of G53 would be following a similarly established order.

The complete absence of glazed ware in this temple and its profusion in G29 is also significant. It is so definitely connected with the cult of Ishtar that it may have been exclusively reserved for her use. If that is so, the few objects of glazed ware outside the temple may well have been cult objects for household shrines. In the same manner the considerable quantity of glazed objects in the palace chapel would identify it as having been dedicated to the same goddess.

One may say this even more definitely of the lion figures and zoomorphic jars. The only fragments of these in the southeastern temple were in an intrusive pit cutting the southeastern door-jamb of the G53-G32 doorway. Since the pit is itself intrusive, these fragments may also be considered as intrusive, particularly since none was found elsewhere in this building.

It cannot be pure accident that in none of the many levels preceding this was there any sign of a brick hearth or altar, and we can safely assume that here the practice of placing a fire or burnt offerings before the statue was not observed. This, as can be seen, is at direct variance with the rites observed in G29.

Just as G29 is without doubt a temple of Ishtar, G53 from its dissimilarity of objects must have been dedicated to a different deity. There are no concrete proofs as to which deity it may have been, but it is not improbable that it was Teshub. The frequent use of Teshub in the personal names seen in the Nuzi tablets shows that the god was well-known and considerably venerated. Moreover, we have seen in the northwestern unit of Temple A several tangible links between the Nuzians and the Hittites and other related peoples to the west and north. Teshub, as an important deity of these peoples, is associated with Ishtar, and is seen as her companion in the rock sculptures of Boghaz Keui and elsewhere.¹⁰ The Nuzians, it is known, were not native stock, but were strangers in the land. It is also known that they were subject to Mitanni, a western kingdom.

Since G53 in the time of Temple F was the first temple of these newly arrived peoples and was built in contact with that of the Ishtar temple of their predecessors, it is only natural that these newcomers should have dedicated their own temple to their own chief god. There is nothing in the history of this building to indicate a change of cult, and it is quite certain that in its last period it was devoted to the same use as at its inception. Consequently, if the association of the Nuzians with the regions loosely known as Hittite is as certain as it appears to

¹⁰ The Nuzi texts show Teshub and his consort, Ishtar of Nuzi, as foremost in the local pantheon, and that a temple was dedicated to each. See Appendix D, *Temples*.

have been, Teshub would have been their principal god and certainly the first one to whom they would have dedicated so pretentious a temple.

Turning to the courtyard, the most striking feature is the baked-brick walk curving in a broad sweep between the brick door-sill of H28 and the doorway to G53. The square of brick pavement in the corner north of this door and a smaller scrap to the east suggest that this whole entry-way once had a pavement of baked brick. Its narrowness gives the walk the appearance of a purely utilitarian pavement—a firm path in times of rain—rather than a processional way as in G50.

In the lower part of the court near the door to H28 is a baked-brick drain piercing the wall at floor level and connected with the drain in Street 8. It could only have been for carrying away the rain-water that fell in this open space.

The objects from this courtyard are few in number, and, in the main, unenlightening: a few fragments of ordinary bowls, a few temple beads, and copper nails. Near the wall of H39, just off the walk, was a group of cylindrical glass beads, obviously all of one string, the largest group ever to be found still in their original order (Pl. 31, B). It is not surprising to see among them a spherical bead and two sun-disc beads, but it is strange to find a stone cylinder seal in the group. Cylinder seals at that time had a definitely practical use, and though sometimes used for ornamentation, they were not primarily ornaments. One would hardly expect that a seal, even if it were more ancient than Nuzi, would be converted to pure decoration, when the Nuzians themselves knew them and considered them in a different light. This then appears to have served the purpose for which it was originally made, as an individual's signature, even though strung in conjunction with beads. Since these beads were temple furnishings, they strongly imply that the person who carried or wore such a string of them was someone intimately connected with the temple. It is a pleasingly fanciful but not impossible conjecture that a priest of the temple wore this long string of glittering beads as a part of his official regalia, and that his seal was attached to it to label it as his property and to be used in signing and witnessing documents.

H13 directly abuts H21 of the northwestern temple and appears to have served a similar utilitarian purpose. The hearth of four bricks set across the north corner of the room (Pl. 18, B), with an orthostat of upright bricks to protect the wall, is the only hearth found at Nuzi whose lines are not parallel with those of the room. One wonders why the builders did not more frequently show their appreciation of the

advantages of a hearth in a corner opposite a doorway where the draft would be best. An extension of the hearth along the northwestern wall evidently served smaller cooking fires. There seems to be no religious significance in the presence or position of this hearth, and no doubt it was the kitchen and living quarters of the attendant priest whose cylinder seal was found outside. As might be expected in a room so close to the cella, a number of temple beads were scattered over the floor (Pl. 120, K).

H28, as the entry-room to the group, lacks the lavish decoration of H7. The curtain wall outside its doorway, probably never more than a roofless screen, is placed so as to give protection to the doorway in the direction of the prevailing winds and storms. It is definitely an addition made long after the completion of the main group and is built over the lime pavement that covers the full width of Street 5.

Of the lesser group that filled the lower half of the court in the earlier levels, nothing is left but a fragment of the wall of H39 and a part of the paving which slopes sharply toward the floor-level drain carrying away the rain-water from the small court H70.

The presence of H39 and of this small court indicates that even in Temple A the outline and arrangement of this lesser group was relatively the same as in Temple B.

To what god this lesser temple was dedicated is not known. The hearth and the offering tables in its earlier cella, G67, show that the rites were more akin to those of G29 than to G53. Certainly it could not have been devoted to a god inimical to Teshub and still be granted shelter within Teshub's compound.

POST-NUZI OCCUPATION

There are two periods of habitation on the temple area after its final devastation at the end of Stratum II. The earliest is represented by a scrap-brick pavement extending over the walls of H6, H7, H9, H10, and H12. The latest is traceable only by the storage pits sunk from above into the temple building.

In spite of the fact that the scrap-brick pavement is similar in elevation to Stratum I, the two do not appear to be contemporary. It is known that the devastation of Stratum II was one from which the Nuzians never fully recovered, but in those few places where they did rebuild they followed more or less the plans of the preceding buildings. If there had been any attempt to rebuild the temple their efforts would have been spent primarily on the two cellas, and it is certain that they would not have altered materially the holy outline of the building.

Yet we find no attempt at a rebuilding of the temple, but, instead of that, a new pavement violating the temple inclosure, running indiscriminately over its walls and rooms. It seems certain that this could not have been built by the same people who formerly had venerated this spot.

The presence on this pavement of several fragments of the fantastic lion-bodied figures of Temple A (Pl. 109) at first suggests that the level on which they were found was still within the Nuzi period. However, since these are isolated fragments and since we know that there was intrusive digging into the temple area, they are probably displaced objects, the results of excavations long preceding ours.

It seems hardly possible that all of the pits dug through the temple area in later times, striking spots where other peoples in this land were in the habit of placing foundation deposits, could have been accidental. It seems certain that before the outline of the temple was completely lost, people dug at vital spots where they hoped to find dedication deposits of value. What other reasons can there be for the precision with which they struck the northern, eastern, and western corners of G29, the southern and eastern corners and the doorway of G53? That the fill of the pit cutting the G53 doorway contained temple beads and fragments of lion jars is good proof that the pit was not made to be used for storage but was filled shortly after completion with the same dirt or with dirt from nearby holes, containing objects considered worthless by the diggers. Four years of modern excavation at Nuzi show quite conclusively that the Nuzians were not in the habit of making such deposits, and it is comforting to think that these ancient, illicit diggers gained nothing from their labors. It is probable that these particular pits are the work of the same peoples who lived on the scrap-brick pavement.

Other evidences of later habitation, the graves, are described in detail in Appendix E.

The period later than this pavement is shown only by the beehive storage pits put through from above. Four of these were found in G32 and one in the east corner of G50 (Plan 7). All yielded fragments of stamped pottery or glazed ware (Pl. 135, G), characteristic of the so-called Parthian or Late Period. Two of these pits in G32 still contained carbonized kernels of wheat. The pits varied greatly in depth, the deepest being in G50 (its floor 260 cm. below Pavement III with a total depth of not less than 490 cm.), and the shallowest in G32, next to H13, its floor reaching the level of Pavement II after having cut through the brick walk of Temple A. That of G50 was apparently

for refuse rather than storage, its fill being plainly stratified, high in the center and sloping to either side as would be the case if poured through a small opening at the top. One is reminded here of the underground pits that form the drainage system of the winding lanes and passageways of modern Baghdad.

CHRONOLOGY

For the entire series of superimposed temples we have but one positive date, that being for Temple A, Stratum II. A letter from Saushshattar, King of Mitanni, found in a Stratum II building, dates this level with its contemporary temple at 1475 B. C. There is no additional inscriptional evidence by which to establish the dates of the lower buildings, and one is forced to base his conclusions entirely on the objects, the archaeological indications observed at the time of excavation, and their relation to the Ga. Sur levels of L4 and to related periods at other sites.

The earliest temple groups appear as the product of two different cultures, one displacing the other. The older culture is seen in Temple G and in G29 of Temple F, the latter being a reconstruction of Temple G. The younger culture appears for the first time in G53 of Temple F and continues throughout all of Nuzi.

In Appendix A, Mr. Eliot, under the heading "The Question of Ga. Sur Survival," is inclined to assign the entire series of exposed temples to Nuzian (Hurrian) builders, basing his conclusions primarily on the use of the non-axial entrance to the cella in the early as well as the later buildings. It is unnecessary to repeat here the arguments we have already given for the conviction that Temple G and the north-western unit of Temple F are Ga. Sur in origin and not Nuzian. It is true that the non-axial entrance is constant throughout the series, but as a common basic design for this region, it is perfectly natural to have the same general arrangement used by different peoples living within the same geographical and cultural sphere. The long history of this design cited by Mr. Eliot for Ashur implies that it was a Semitic practice, even though a somewhat localized one; and it would seem more reasonable to believe, even without the arguments previously given, that it was introduced to our site by the Semites of Ga. Sur, whom we know to have had close contacts with Ashur, than by the non-Semitic Hurrians.

One naturally wishes to correlate Temples F and G with the cross-section of the mound taken in L4 (Plan 5, B). The result of such a comparison is not entirely unsatisfactory, for we find that G29, in both

Temples F and G, corresponds exactly in level with Pavement IIB in L4. It will be remembered from the discussion of L4 that Pavement IIB was the location at which, in the upward growth of the mound, a definite change was recognizable from the culture of Ga.Sur which preceded it. It should also be borne in mind that the pottery types from Pavement IIB were not pure Nuzi but showed forms characteristic of both Nuzi and Ga.Sur. The inference to be drawn from this alone is that this level was one in which peoples of two different cultures lived simultaneously, each absorbing and borrowing from the other.

Temple F shows a corresponding, architectural change. It will be noted that Temple G (Plan 6) was a single unit made up of a cella flanked by three rooms, and that it has every appearance of having been built according to a definitely established architectural tradition. Temple F shows—though the three subsidiary rooms have been eliminated—no fundamental change from this tradition in G29; but it has added to it the southeastern temple, with G53 as its cella, which is built in an entirely different spirit. It seems clear that G53 is the product of a different people who had gained sufficient power in the city to build their own temple according to their own tradition and to maintain it simultaneously and in physical contact with the temple of the earlier culture. It is also fairly certain that the change of power from Ga.Sur to Nuzi was a gradual one, for not only does Pavement IIB of L4 show an intermingling of peoples, but Temple F shows them as having lived together, with the two temples side by side, apparently enjoying equal prestige. The later dominance of the Nuzians over their predecessors is seen in the final desertion of G29 during the greater part of the Temple E period and its subsequent rebuilding and maintenance in the architectural style and arrangement of G53.

Admitting, then, the contemporaneity of L4 Pavement IIB and Temple F, a date for one would also apply to the other. There is no positive means of dating Temple F independently; but in L4, Pavement IIB and its companion Pavement IIA can be assigned, by their tablets and by their level relative to Stratum II and Pavement III of L4, approximately to the period between 2100 and 2200 B. C.

In comparing Temple F with its closest foreign parallel—Temple G of Ashur—we are confronted by similarity and contrast. The similarity is at once striking and apparently contradicts our dating of Temple F. In viewing the two buildings together, it will be seen that in plan of cella and in certain objects Temple G at Ashur and G29 of Temple F at Yorgan Tepa have much in common. Each has the same principle of raised platforms of different heights at the end of the room,

although the arrangement at Ashur is more elaborate; and each has an end wall against which a relief was placed, fronted by a place for fire. Also, the position of the entry is the same in both. The closest parallel, however, can be drawn between the objects: the terra-cotta house models found in both; the technique of design on fragments of other house models; the similarity and frequency of the snake motif on terra-cotta; the animals in high relief on pottery; and the circular-section bell-shaped offering stands pierced with triangular openings.

This evidence would seem to justify an immediate assumption that the two temples were of the same period. However, the stratigraphic sequence of Temples G-A at Yorgan Tapa shows clearly that such an assumption is impossible, even if we accept the date of Temple G at Ashur as 2850 B. C. The explanation of the similarity of plan and objects at the two sites lies in the fact that all the material used for comparison is connected with religious practices. It is well known that in ancient as well as in modern times the principles of church design and the objects intended for religious use suffer but little change in the course of the centuries, as compared with buildings and objects unfettered by the bonds of religious convention.

In contrast to the points of similarity noted above, there are many objects found in the early Ashur temple having no counterpart at Yorgan Tapa. For instance, at Yorgan Tapa there were none of the grotesque, pellet-eyed, turbaned terra-cotta figurines seen in the early Ashur temple. Only three figurines were found belonging to the Temple F period of Yorgan Tapa (Pl. 57, L, M; Pl. 63, D). Each was modelled with considerable anatomical exactness and showed none of the grotesque features characteristic of the Ashur figures.

The objects from Ga.Sur which are more utilitarian in nature do not correspond as closely with those of the early Ashur temple as they do with those of Temple E at Ashur. This alone would suggest a certain contemporaneity between Temple F of Yorgan Tapa and Temple E at Ashur. The approximate date of the latter, as a product of the Third Dynasty of Ur, cannot be greatly at variance with that already suggested for Temple F of Yorgan Tapa. We can assume, at least, that the two fall within the same broad cultural period.

Temple G at Yorgan Tapa is even more difficult to date than its successor. Its complete renovation and alteration in the rebuilding of Temple F removed the greater part of those objects and interior structures by which our conclusions normally would be guided. Only a few objects can be definitely assigned to it: namely, the round-sectioned bell-shaped offering stands (Pl. 54, C, D) pierced with triangular open-

ings, mentioned earlier, and the copper statuette (Pl. 56, H) from G74. The former have almost exact parallels with Temple G at Ashur, and the latter has a resemblance, if nothing more, to the statuette of Temple E at Ashur. But this resemblance is rendered useless as a relating factor when we consider the even greater similarity between the copper statuette of Ashur and that found in S111, Stratum II, Nuzi (Pl. 101, G). Since the form of these objects was so governed by tradition that the possibility of change is negligible, these pieces are useful only in that they signify related cultures following the same ritualistic procedure. The same may be said of the sherd with the snake motif (Pl. 60, B) and of the animals modelled in high relief (Pl. 59, I). The latter was found outside the cella and may have belonged either to Temple F or G.

Architecturally there is one point of significant similarity to Temple E at Ashur, in addition to the obvious similarity of the position of entry to the cella and the arrangement of three subsidiary rooms. That is the projecting walls outside the main entry to the cella. It will be seen that it has gone beyond the earlier purpose of an accentuation of the doorway by buttresses on either side and appears to have become a structural unit serving as an entry-way to the cella, possibly roofed as a portico. This is the most valuable architectural parallel thus far encountered. Not only does it show that both were following the same architectural fashion, but it presupposes a certain rough likeness in date, since it is to be supposed that the exterior was more likely to follow the building fashion of the time than was the more strictly cult-governed interior.

Temple G at Yorgan Tapa is the only building of the series not tampered with or added to by the incoming Hurrians. Therefore, it is the last and only purely Ga.Sur temple of the series. Turning to L4, we find Pavement III as the latest Ga.Sur level unadulterated by Hurrian influence; it is logical, therefore, to ascribe Temple G to the same race of people as those who occupied Pavement III. Unfortunately, there is no certain date that we can give to Pavement III of L4, but the general period is clear. Pavement III is, from its graves and pottery types, identical in culture with Pavements IV and V, which lay immediately below. These, by their inscribed tablets, are clearly shown to belong to the time of Sargon of Agade, and there is little doubt that Pavement III is separated from Pavement IV by only a short space in time.

Another pointer toward the general period of Temple G lies in a particular type of pottery, many fragments of which were found imme-

diately outside the temple at, and below, the G level. The shape of the vessels is cylindrical, often with constricted neck and flaring lip, and vertically pierced lugs at the shoulder for the use of string handles (cf. Pl. 56, I, L). The ware itself is fine-grained, dark gray, and burnished; the surface is decorated with incised, white-filled designs, both geometrical and lifelike (Pl. 56, K, S; cf. Pl. 56, I, J, L-R). The ware is demonstrably early, and although the prototype for this ware is certainly as early as the Jemdet Nasr period, it is associated most commonly, in the south, with the time of Gudea. Again, this does not give a certain date for Temple G, but it does serve to point toward the general period to which it belonged.

In studying the chronological relationship between Temples F and G a wholly erroneous conclusion may be drawn if only the level is considered, for the same pavement served the cella of both buildings. However, it is evident that Temple G was not rebuilt—to form Temple F—until it had reached a state of such great disrepair as would normally come through long and continued use. It is quite possible, then, that it may have been erected two hundred years before its rebuilding into Temple F; and if it was given any care whatsoever, as would have been essential to and required for such a structure, it may have had its inception even earlier. Whether it could date from the very beginning of the Akkadian city Ga.Sur is a point in doubt. All that can be said is that it is the first of its type on this spot.

In so far as it was possible to ascertain in the short time available, the walls beneath Temple G showed no correspondence to the position of those of our earliest recognizable temple; if they belonged to an even earlier temple, it was certainly one of different design from that so carefully preserved in later times.

So far certain broad periods have been considered in connection with the founding of both the temples of the Ga.Sur peoples; but the question of the end of Ga.Sur has not yet been taken up. In this connection it will be remembered that a second pavement was found midway between the levels of Temples E and F within G78, leading into G29. In spite of this rise in G78, it is certain that there was no change in the elevation of G29 from that originally established for Temple F. Consequently, G78 was obviously keeping pace with the upward growth of the outer region, while the cella, protected and undisturbed, remained unchanged in level. The important point shown here is that G29, as a temple of Ga.Sur, remained in use for a considerable period of time after the construction of Temple F. How long a span of years this upward growth represents cannot be determined, but it seems probable that the turn of the millennium had been reached before the Ga.Sur

peoples ceased to exist as an important factor in the population of the city of Nuzi.

With the buildings between Temples F and A one is confronted by the impossibility of assigning even tentative dates for their inception or period of use. The history of the Nuzi temples is not one in which a whole temple group was rebuilt at a definite time. Actually, it was a continuous process of alteration, change and repair, accelerated by intermittent catastrophes which necessitated more complete reconstruction. Nor do the plans shown in volume II represent distinct buildings, each different from its predecessor and each wholly completed within a limited period of building. Rather, they are a cross-section taken through the mid-point of the period between separate major alterations in outline. It is also impossible to reach any certain conclusions as to the comparative length of life of a given building by trying to translate into years the depth of fill that separates it from its successor, for this is purely an arbitrary measure. Any rise in level is governed primarily by the amount of débris accumulated within the rooms before reconstruction. Since the greatest source of débris is from the fallen walls of the rooms themselves, this method is really more a measure of the completeness of the destruction at the end of a given period than a measure of the years a given building remained in use.

The one positive date in the temple series is that of Temple A. The letter from Saushshattar, King of Mitanni, found in another building of this same stratum dates the temple certainly as having been in use in 1475 B. C.

The last two post-Nuzi phases do not directly concern the evolution of the temple complex, for the temple as such was never rebuilt after its destruction at the end of the A period. The later post-Nuzi phase, marked only through its storage pits and pottery fragments, undoubtedly belongs to the latter part of the Parthian period. The earlier phase is marked by the pavement between the present surface of the mound and Stratum II. For reasons already pointed out, it does not appear to have been Nuzian. Since there was on it a collection of Stratum II temple fragments, we may assume that it belonged to the same people who dug the pits through the corners of the Temple A cellas. This would imply two things: first, that the earlier post-Nuzians lived there before the outline of the temple had become completely obliterated; and second, that they were people who knew of, or practiced, the custom of placing foundation deposits at the corners of important buildings. The Assyrians satisfy both these conditions, and as the dominant people following Nuzi, it is likely that they were the next inhabitants of the *tepa*, long after its final desertion by the Hurrians.

CHAPTER V

NUZI: PALACE¹

The next group of buildings to be considered is the extraordinarily large complex bounded by Streets 4, 5, and 12 (Plan 13). Located directly in the center of the city and occupying an area many times larger than any other group at Nuzi, there is little doubt as to its great importance in the civic life of 1500 B. C. This is attested not only by position and size, but by the solidity of its walls, the extensive use of baked brick in pavements and wall-facings, the drainage systems, and by a multitude of lesser indications. These factors, as well as its obvious dedication to the ordinary duties and needs of daily life, identify it beyond a doubt as the "Palace of the City of Nuzi," so frequently mentioned in the inscriptions.

Unfortunately, erosion is again responsible for the incompleteness of the recovered outline. The prevailing southeasterly winds have denuded a large area once occupied by the palace in that quarter, while the two transverse erosion channels have wrought like damage on the western and northern corners of the same building. Nevertheless, so much remains that there is every reason to believe that our portion comprised the major part, and certainly the most important part, of the building.

In calculating its probable extent, Streets 4, 5, and 12, three of the four original boundaries, remain as an aid in reconstructing the past. The strong tendency toward a straight direction in the other streets of the city argues a similar treatment of these now incomplete passages. Thus if we continue the lines of these three streets further in the directions in which they are already found, the northern corner of the palace would have been at the junction of Streets 5 and 12 near the western corner of Square N. A straight-line continuation of Streets 4 and 5 would arbitrarily place the western corner of the palace within the southeastern edge of Square F. It seems likely, however, that the original course of the southwestern end of Street 5 corresponded with the direction of the present transverse erosion channel just as it corresponds with the opposite channel on the northeast.² Consequently, we

¹ Those places where chance or necessity led to excavation below Stratum II are so scattered and disconnected as to be of little use, except in shedding further light on the building of Stratum II. Because of this, their description will be placed after that of the Stratum II building.

² For further discussion see Part I, Chapter VI, Stratum III, Group 19.

may assume that Street 5 turns slightly southward in its northwestern direction, placing its junction with Street 4, as well as the western corner of the palace, well toward the northwestern boundary of Square K.

The southeastern boundary is less clear. The most distant palace structure in this direction is the drain flowing from R96, but its outlet cannot be used as a guide, since at several different points on the three remaining sides of the building there are other drains extending for greater or lesser distances clearly beyond the walls of the palace proper. The small room R463 and its companion are the southeasternmost structures definitely a part of the palace ground plan. Consequently, it is probable that the whole structure extended at least as far southeast as this point. How far beyond this the building went is impossible to say. The heavy southeastern wall of P325 suggests that it was once an outside wall to which the room P479 had been added some time later. It can only be said with certainty that the palace did not extend as far southward as Square V, for the rooms there have the arrangement and impermanent aspect more typical of the private houses than of the palace. Moreover, the area to their east is composed largely of refuse earth such as accumulates only in unoccupied spaces.

It is unusual in this complex structure to encounter related groups of rooms which could have existed by themselves as independent units within the whole. The striking rarity of this feature, found even within the much smaller, private houses, suggests that the palace was a princely home for a single individual, his family and his immediate dependents, rather than a building wherein all the officers and servants of the state were sheltered. Thus it must be considered not as a community building, as has been suggested, but as one dedicated to the performance of a single, though no doubt complex service.

The most evident subdivision within the building is seen in that portion comprising the eastern corner of the group bounded by M94, and R95 and R96, not including those rooms giving out onto the great court M100. The decrease in the average room size is apparent at once; and, since the rooms were clearly not used for storage, one is justified in supposing that they quartered less important members of the household. The increase in the number of toilets shows that this region housed a larger number of individuals. In this section alone are the palace wells and ovens to show that it constituted, in part if not in entirety, the service portion of the building. It is of interest to note that in spite of the decrease in room size and the assignment of the rooms to the humbler duties of everyday life, the construction is still of the same high standard found in the more important parts of the

palace. The thickness and construction of the walls is well above that of the average private house; baked brick both in wall-facings and pavements is common; and the drainage system is superior to that of any other region in the city.

The remaining and major portion of the building is different. The average room size is considerably larger and the wall thickness is increased to correspond harmoniously with the larger rooms, though their added stoutness is structurally unnecessary. The infrequency of baked-brick paving suggests that these rooms were subject to a less constant use than those of the service quarters and that they served, in spite of their great size and quantity, a relatively small number of people. That they were used at all for living purposes is attested by the hearths found in various rooms and by the toilet in L25 (Pl. 15, A). Here again, the presence of but one such sanitary convenience, and that of a most pretentious nature, is strong evidence that this region served primarily but a single individual, the "Governor of the City of Nuzi" so frequently mentioned in the texts. Here he lived, close to his audience hall, his chapel, his storerooms, and to the host of other rooms devoted to his use.

Because of the obvious importance of this part of the whole group, it can rightly be considered as the main section of the building and should be given first consideration in the detailed description.

MAIN SECTION

The great court M100 is the largest complete enclosure in the entire city. Placed as it is within the palace, it serves as a rough boundary between the main and the service sections of the building. In the center of the northeastern and southeastern walls are its two main entryways, and from it access may be had to any of the rooms in the building. In spite of its usefulness as a means of access to all parts of the palace, one suspects that its principal purpose was to provide an impressive approach to the two great rooms L20 and L11 (Pl. 2, C; Pl. 4, A).

The court, as it was excavated, showed baked-brick paving only around the edge. It was possible, however, to trace the layer of sand in which the bricks were once laid over the entire extent of the unpaved section. The paving brick is of a quality unequalled anywhere else in Nuzi. The size is the usual 33x33 cm. over the greater part of the area, changing only at the entrance to L20 (Plan 18).

As a protection against the weather the entire circuit of the court was faced with baked brick to a height of from nine to ten courses

above the pavement. This facing is composed largely of an unusual size of brick, 28.5x12.5x7.5 cm., a type found only in this building and probably fired especially for this use. The minority are bricks the same in length and thickness and breadth, broken in two to correspond approximately to the depth of the intentionally made facing brick. The broken edge being within the wall naturally did not detract from its value as a facing brick. The concentrated weight of sheathing rests on a foundation of three to five courses of full-sized bricks (Fig. 14,

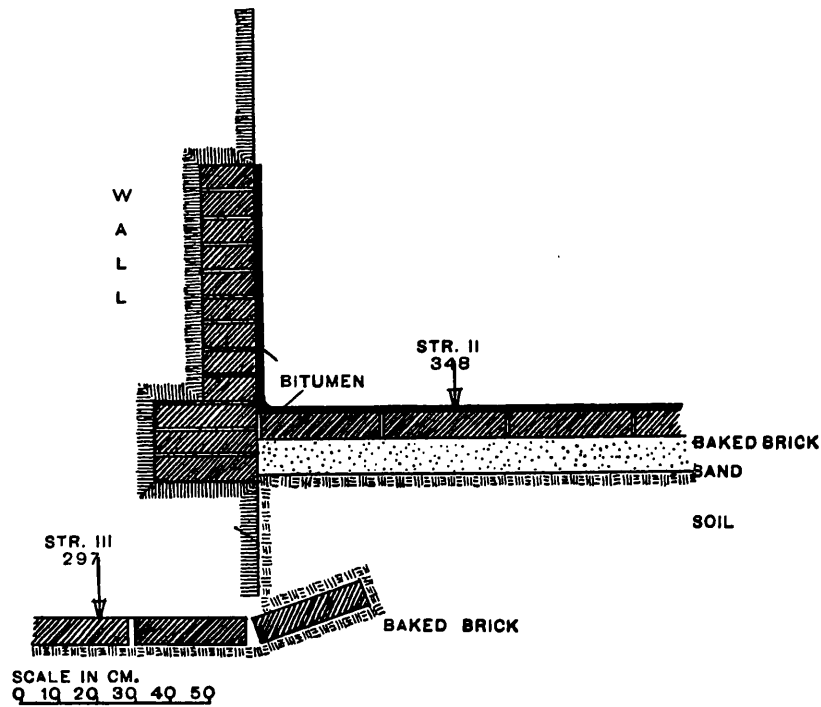


FIG. 14. M100, Stratum II wall-facing and pavement, Stratum III pavement.

Plan 18), extending well below the pavement line. To complete the wall protection, the facing was covered with a coating of bitumen which in some spots extends over the first course of the floor paving.

It is of interest that the facing extended not only completely around the court, but into each doorway whether or not the communicating room was similarly protected.

The floor of the courtyard slopes evenly and slightly from each boundary toward the center. Since there was no sign of a drain below the intact layer of sand in the center of the court, it is clear that no means other than evaporation was employed to remove the water that accumulated during the winter rains.

The channel of hollow drainpipes immediately below the pavement (Pl. 14, A), skirting the southeastern side of the court, has nothing to do with the surface drainage of this open area. Its upward course was traceable as far as the face of the badly ruined southwestern wall into which it disappears. Since it clearly enters this wall and does not reappear in the opposite undisturbed room L116, it seems relatively certain that the same device is used here that is seen in the service region in the origin of the R50 drain. In the latter the drain joins an upright channel in the center of the wall from which it presumably received the rain-water from the roof. Since the M100 drain clearly connected with that of R96, it is presumable that this same ingenious device was used in flushing out the most extensive drain of the city.

The great court contains two structures of an unusual nature and interest. The first is the rectangular baked-brick basin with vertical sides and flat bottom seen in the eastern corner. Its surface being plastered with bitumen, it is obvious that it was designed to hold liquids, yet its small size (depth 38 cm.) and its proximity to the two palace wells makes its use as a reservoir for a water supply not only inadequate but unnecessary. It is equally unsuitable as a storage place for oil or other manufactured liquid products when one considers its exposure to the open and consequent lack of security. What purpose it originally served is uncertain, but it is not improbable that it was a place where ablutions were performed, either for ceremonial purposes or for the sake of cleanliness itself.

The second structure of interest is the pair of baked-brick rectangles, only partially complete, before the door of L20 (Plan 18). A single course of mud-brick found still intact on the northwestern-most structure proves conclusively that they continued upward in mud-brick. Covering both the baked and mud-brick was a thin coating of mud-plaster. The sub-pavement extent of the baked brick is indicative of considerable superimposed weight and height, and though it is impossible to tell the original upward extent of the pillar, it may be surmised from the strength of the foundations that it may have been equal to that of the walls surrounding the court. There can be no doubt that they were pillars supporting a roof or portico over the entrance to L20. This would provide an entrance fitting to the importance of L20 and L11 and would explain the use of a brick of different size and inferior quality in the area which the portico would have covered.

There remains one further indication of the original architectural form of the courtyard. That is the considerable number of remnants of rounded wooden beams found close by the walls. On not a few of these next to both the northeastern and the southeastern sides were

recognizable remnants of red pigment still adhering to the charcoal. That they are in every case close to the walls and intermixed with the débris of tumbled *libin* is fairly good proof that they were part of the general structure of the building and not parts of independent structures. Moreover, they could only have been used at some point above the present wall-tops, that is, higher than 150 cm. above the pavement. Since there is no reason to believe that a second story was used at Nuzi, the only possible explanation is that they were the rafters of the adjacent rooms, the ends of which projected uniformly over the wall-tops into the court area, making wide overhanging eaves around the circuit of the courtyard. Thus, during the rains, they afforded shelter from one door to the next, and during the summer heat, an additional strip of welcome shade. At the same time, the under side of the beams with this red paint added color to the drab expanse of mud wall and roofing.

The objects from the courtyard are of relatively little assistance in refurnishing the area, since it is more probable that the greater part of the objects found here belonged originally in the rooms that bordered it. It seems unlikely that many small objects were permanent fixtures of the courtyard, though some of those found there may have been in use at the time of the destruction. The incised burnished gray-ware bowls (Pl. 56, R; Pl. 91, U), the painted cup fragments (Pl. 132, B), the marbled faience vase fragment (Pl. 119, I) and the many fragments of decorated glass (Pl. 128, A, D; Pl. 129, C) argue as much for the importance of the surrounding rooms as for the courtyard. Whether the many unidentifiable scraps and nails of copper were also from the neighboring rooms or were part of the structure of the court, it is impossible to tell.

Of the two main entrances to the court, the first to be considered is that from Q103 through R87. Q103 is a long, rectangular hall with the ordinary packed clay floor and a wall-facing of six courses of brick around its full determinable extent. Even in its incomplete state it extends close to where the southeastern outer wall must have been and may originally have opened directly to the outer world. Barren of important or significant objects, it was a room clearly differentiated from those used as living quarters.

Passing by the doorway to the three small subsidiary rooms Q115, L114 and L116, one enters R87, a room similarly paved and faced, though the facing in this case extends but half the circumference of the room. The ten-course facing of the courtyard is continued on both sides within the doorway, as with all the other doors leading off the court, and it is not until the wall of R87 proper is reached that the courses are diminished to six.

The doorway to M100 is all that remains to show the greater importance of this entry-way over that from M89. Not only is it considerably broader, but its two stone door-sockets on either side of the doorway, each 70 cm. below the pavement and each with its marble door-swing circling the rim of the shaft, show the double doors that opened from the courtyard. In the center of the doorway and slightly northwest of the line between the two shafts is a pit 71 cm. deep and 34 to 40 cm. in diameter extending downward from the brick pavement. This is undoubtedly the socket for a key post to which the double doors could be secured from the inside. Thus, though the position of the sockets at first gives the impression that the doors could be secured only on the outside (that is, from R87), this contrivance reversed the situation and made perfect security possible within M100.

In the two rooms R127 and R135 one is confronted again with the problem of rooms lacking outside communication. There can be little doubt that the means of access was over a high separating wall, just as the doorless room of Temple A. There is, however, no means of telling whether entry was made from Q103 and R87 or from the service section of the palace. Aside from this, the two rooms are of interest: R135 because of the brick-facing unaccountably protecting only half the circuit of the room, and R127 because in it were found not only a considerable number of bowls (Pl. 89, AA; Pl. 90, C) and several scraps of copper, but because here were two of the only four lingam-spouted pots found at Nuzi (Pl. 103, K). These two vessels with their probable ritualistic significance gave an importance to this otherwise undistinguished room.

The second important means of access from the outside is from M94 through M89. The dimensions of the entry-court M94 cannot be definitely established because of the damage done by the central erosion channel. It is presumable that the position of the northwestern wall of M94 corresponded to a continuation of the line of the northwestern wall of M89, making the length of the southwestern wall approximately equal to that of the complete southeastern wall. With one side intact, giving the length, and with strong indication that the width was approximately the same, it may be assumed tentatively, at least, that the area was originally a courtyard as square as that of its companion M100. Whether its main doorway to the outside was through the northeastern or the northwestern wall cannot even be surmised. It does seem probable, however, that both these sides were insulated from the streets by rooms such as N120, M4 and M92, and that through one of them, as a guard or entry-room, admittance was had to the palace proper.

The baked bricks with which M94 was paved were somewhat smaller than those of M100 (29x29x6.5 cm.) and only slightly inferior in quality. Beyond the present existent bricks the layer of sand in which the pavement was originally laid, and the imprint of the rows of missing bricks, was traceable almost as far as the supposed position of the northwestern wall (Pl. 4, B). As in M100, the floor sloped slightly from all sides toward the center with no remaining signs of means of drainage for carrying off the accumulation of rain-water.

Along the full length of the southeastern wall and the remaining portions of the southwestern and northeastern walls was a bench⁸ of unique type in the city of Nuzi (Fig. 15, Pl. 4, B), made of a row of

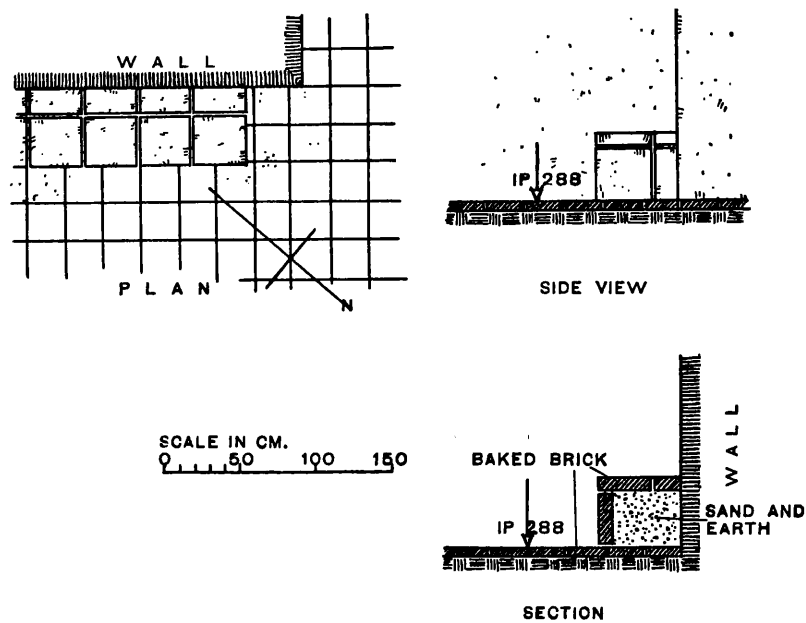


FIG. 15. M94, baked-brick bench.

full-sized upright bricks with a corresponding row of full and half-sized bricks as the top, surrounding a core of loose earth and sand. The result was a bench broad enough to accommodate a person with comfort, whether sitting or squatting, and strong enough to outlast even the destruction of the building it served.

No signs of the continuation of the bench were found northwest of the M89 doorway. Since the face of the wall was intact for a short distance beyond this point, one would expect to find the beginning of a similar bench had it originally continued in this direction. Thus it

⁸ The bench at the M89 doorway as shown in Fig. 15 is in correction of the error at this point on the main plan (Plan 13).

may be inferred that this convenience bordered only a part of the court, probably those sides where one might enjoy the comfort of a shaded seat.

The objects in the court are as scarce as one would expect from an enclosure of this type. A single bowl and a number of beads were the only things of consequence.

From this incomplete enclosure four doorways led away: one to the subsidiary room N120, two to the service section of the building through M77 and M34, and one to the ante-room M89. The hall last mentioned serves to isolate the great court M100 from the outside, both in the direction of M94 and from M4, M92, and Street 5. It seems improbable that it was used for any other purpose than that of a waiting-room for those seeking admittance to the inner building. The purpose of the nine-brick hearth toward the northwestern end is uncertain, but it may have been either for those who endured the long wait for admittance to the presence of the governor or for the guards who undoubtedly watched the doors. The fact that the two doorways to M94 and M100 both have sockets within the room shows the doors to have opened inward. In such a case, door-tenders or guards of responsibility must have stayed constantly in M89 to insure the security of the main section of the building. Each door had a large stone socket at the bottom of its door-post well, with that nearest to M100 served by a marble door-swing. The sockets show that both were doors of real consequence.

Subsidiary to this group are three rooms: to the northwest M4 and M92, and to the northeast N120. The first two are of interest architecturally: first, because of the recommencement of the brick paving and wall-facing, suggesting a more direct entry-way from Street 5 than that through M94; and second, because of the distortion of the line of the northwestern walls to conform to the line of Street 5. This latter condition shows that the street was already a recognized right-of-way before the palace was built, and that even such an important building dared not trespass in its territory.

N120, opening off M94, was of some consequence. Tablets in large quantities were on the floor intermixed with a great assortment of household terra-cotta. Here also were a pair of Persian Red Deer antlers, and charcoal far in excess of the amount one would expect from the burned rafters alone. The tablets include a large number of inventories of men in the army, along with lists of their armaments, horses and chariots. Intermixed with these was an equal number comprising the business records of a woman named Tulpunnaya. That she lived within the palace is alone an indication of a certain greatness. That she carried on a large business as shrewdly as any man is proof

both of her power and of the high place of woman in the communal life. Architecturally the room has but one point of interest, the facing bricks flush with and below the pavement. At the center of the southeastern wall these reach a depth of nine courses below the floor only to diminish gradually and disappear as they advance along the two flanking walls. This is one of the few cases in which baked brick may be considered as a true foundation. Being below the floor they could have had no other function, and the varying depth can only be an indication of the varying instability of the underlying soil. It is of interest, however, that they are still laid as facing brick and not as a solid foundation under the full width of the wall. Thus, a foundation is achieved that is almost as solid and certainly more economical, supporting the vital point of the wall's bearing surface.

In comparing this entry group with the entry into M100 through Q103 and R87 it is apparent that they are widely different from one another, and each served a different purpose. While one is simple, relatively small, and without apparent communication to the service region, the other is the opposite. The large court, M94, with its benches, has the appearance of a place where crowds might congregate and endure the long wait for admittance. Its direct communication to two units of the service section shows that at least it was readily accessible to the less important occupants of the building. It is not at all improbable that this was the public entry to the palace and that those who had business with the governor congregated here, squatted on the brick benches, discussed their troubles with their fellow-men and hoped for justice from the head of the state. The R87 entry-way has none of this aspect. It appears to have been intended for the use of a few rather than of many, and the great double doors in R87 give it an importance that the other has not. It is probable that while the other was the public entrance, this, leading directly to the southeastern city gate, was the private entrance whose double doors opened and closed only for the governor himself.

Among the rooms tributary to the great court is R88, a narrow, closet-like room, originally paved throughout with baked brick 29x29x6.5 cm. The doorway is faced with brick 28x14x7 cm. to a height of eight courses.⁴ Well below floor level is a large brick drain running the length of the room, beginning with the outlet of the terra-cotta pipe drain that crosses M100 (Plan 22). The same ancient intrusive digging that destroyed the pavement took away the continuation of the

⁴ The difference in the number of courses facing the great court and its doorways is not due to a variation in the level of the top row but to the gradual rise in the level of the pavement toward the corners.

drain, but there is no doubt that it did continue its course into R95 to join the main drain it so clearly resembles. Southeast of the point where the drain from the M78 toilet joins the main R88 channel are remnants of two earlier drains (Plan 22). The first is an abandoned channel flowing from the direction of R87, 30 cm. deeper than that of Stratum II. The second is but a remnant 30 cm. deeper still. These fragments are of particular importance; first, because they show the presence of two successively earlier drainage systems, implying for each a corresponding separate building; second, since in each the position and direction of flow is the same as that of Stratum II, they imply that each of the earlier buildings was of similar plan, at this point at least, to that seen in Stratum II.

In the débris filling this room was the only inscribed brick (an ordinary paving brick) found in the entire city. Unfortunately, it is of little help in reconstructing the past history of the building.⁵ The characters are hand-written, and extend along one edge of the broad surface.

Next to R88 is R80, a room of more normal proportions, paved throughout in baked brick (28x28x5.5 cm.) and having its doorway faced as usual with baked brick rising to a height of seven courses above the pavement. The low bench fronting the northwest wall and the portion of scrap-brick pavement in the north corner are the only structural features of note. The room was barren of objects except for a copper arrow-head and a fragment of a burnished bowl (Pl. 56, M). Like its neighbors, the room is without door-sockets and incapable of being closed off from the courtyard. The brick floor need not necessarily indicate that the room was open to the sky; the absence of any connection with the M78 drain shows that it was not a bathroom, as were so many of the small paved rooms. Its use must therefore remain unknown.

The rooms M79 and M78 both present features of interest: the first, M79, only because of its objects. The doorway to M100 was paved with brick 32x32x7.5 cm. and faced with eight courses of brick 29x14x7 cm., while in the south corner, 30 cm. below the pavement, was a small stone socket that served the door closing the group off from the court. On the packed clay floor was a considerable quantity of charcoal which in several instances could be identified as remnants of boards approxi-

⁵ The inscription on the brick reads as follows: ¹ a-gur-ú an-nu-ú šu-ú uš-bi-[il] (?) ki-i an-ni-i ù-maš-ša-lu ki-i an-ni-i pa-na-šu ² ú-tar-ra-su ù ú-za-ab-bu [. . .]. The translation is uncertain, but the following can be proposed tentatively: "(1) This brick he changed(?); in this manner they reproduced it in this manner its face (2) they turned, and surrounded (it) (?)."

mately 4 cm. thick. In one of these there was found in its original position a single piece of square bone inlay pierced through the center with a circular hole (cf. Pl. 127, K, M), while over the rest of the pavement were scattered squares, parallelograms, rectangles and triangles of bone used as inlays (Pl. 127, K, M, N). Among these were fragments of larger ovoid bone plaques and from M78 a single triangular inlay rimmed with copper (Pl. 127, P). Among the débris was a large fragment of charcoal 4 cm. thick which had once been a board colored on both sides in bright red. The scattered remnants of charcoal were too crushed and carbonized to allow even a conjectural reconstruction of this colored, inlaid structure.⁶ The bone eye inlay found here (Pl. 102, H) was probably also a part of the design of this same piece. Several fragments of decorated glass cups or vases complete the contents of the room. It is of interest that no objects of the usual household type were found here.

The communicating room, M78, is a bathroom. The floor and doorway to M79 are fully paved with brick (28x28x5.5 cm.), and the walls are faced above this paving to a height of five courses with brick 29x14x7 cm. Both floor and facing are plastered with bitumen. In the southern corner, against the southwestern wall, is a toilet of the usual type. The two brick platforms comprising the toilet are each 35 and 56 cm. in height and length and differ only in width, the southern one being 41 cm. and the western 25 cm. The two are separated by a slit 13 cm. wide, at the bottom of which is the square brick channel 21x15 cm. in section, running southwest to connect with the main drain of R88. Evidently for water-jars are the two platforms on either side of the stool, that in the corner in height, length and width being 31, 50 and 24 cm., while that on the western side is 12, 56, 25 cm. It is of particular interest that the tops of both the platforms of the stool, as well as the two of different height flanking these, are topped with slabs of Mosul marble. Such luxury is found only in one other instance, the toilet of the principal bathroom of the palace, L25 (Pl. 15, A).

The doorway to R71 has no socket and, consequently, had no door. It seems clear that the narrowing of this doorway was an effort to create a certain privacy in M78 without necessitating a door or entirely cutting off communication in this direction.

Little is left by which one may reconstruct the former use or purpose of M79. The absence of household objects makes it appear unlikely that it was a room in which an individual lived through all the

⁶ It is quite probable that this is one of the inlaid beds or tables mentioned in the texts; see Appendix D, *Furniture*.

ordinary routine of daily life, yet the two rooms together have all the appearance of a bedroom and bath, a combination certainly as convenient in antiquity as it is today. If it were this, the inlaid wooden structure must have been a couch, and, judging from its decoration, the resting place of a person of considerable consequence. It is significant that this is the only room through which there is direct communication both to the main and the service sections of the palace, and it is clear that whoever occupied these rooms not only had business to perform in both sections but had free and undisturbed access to both. Though purely conjectural, one is tempted to believe that these were the quarters of such an official as the steward or majordomo of the palace, a man of high rank, judging by his quarters, and one whose duties necessitated that he be in touch with both sections of the building.

Continuing around the great courtyard, the next subsidiary room is M91, a large room undistinguished by special construction or objects of any kind. The doorway, as usual, is paved with brick (34x34x8 cm.) and faced to a height of ten courses. Within the room, 26 cm. below the floor, is a stone door-socket whose two holes show a lengthy period of use. Traces of copper stain in the socket show that metal sheathing once protected the foot of the door-post.

In the western corner of M100 is the final and most extensive group of rooms purely subsidiary to the great court. Of these L44 is the first, a large room bare of objects. Its doorway to M100 is faced as usual and

paved with baked brick, 33x33x7.5 cm. Within the room is a heavy stone socket imbedded in the bottom of a baked-brick door-post well (Fig. 16), which is capped with a terra-cotta door-swing (cf. Pl. 123, E).

Passing from L44 to M90 one descends two steps to the level of the latter room. There is in this case no doubt as to the original use. The two broad platforms on either side of the room, raised 30 cm. above the level of the narrow isle that separates them, still retain thirty-seven hollows scooped out of their mud floor in which storage jars stood. These hollows, 20-45 cm. in diameter and 10-15 cm. deep, were used in places of permanent storage rather

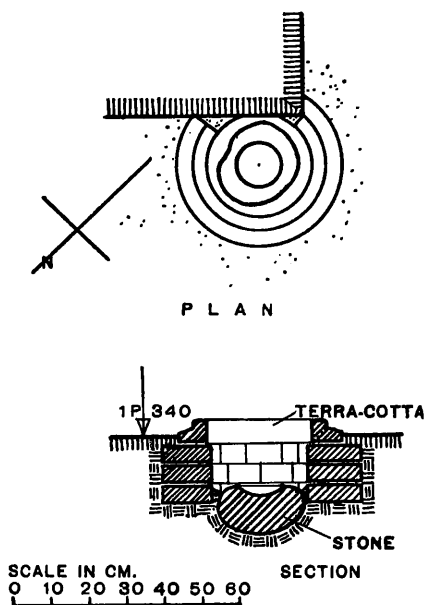


FIG. 16. L44, door-post well and socket.

than terra-cotta pot-stands. The arrangement of the hollows indicates that the vessels stored here were of varying sizes, and the remnants of twenty jars and vessels found in the room verify the supposition. Continuing the line of the northwestern platform and extending as far as the southwestern wall is another, slightly less high, on which must have been stored further material or vessels not in need of hollows to hold them upright. Beside the storage vessels, a considerable quantity of bowls and footed cup fragments were found, as well as a complete pot-lid (Pl. 95, K). The signs of intense fire seen in the storeroom show that the material kept here was highly inflammable.

Northwest of L44 is the principal enclosure of the series, L101. The fact that so large an area was paved throughout with baked brick suggests an open court rather than a covered room. Two types of brick were used in the paving. Those in the southwest, covering two-thirds of the floor space, were 34x34x6 cm. and had in the center of the upper face of each a shallow, thumb-made indentation. They are the only baked bricks of the Nuzi period on which intentionally made marks appear. The remaining third is paved with brick 26x26x6 cm.

Though the débris and pavement were considerably disturbed by later graves, the room was not unprofitable in objects. Fragments of three green-glazed wall-nails came from here, one of which, a head hollowed for the insertion of a separate shank, is of a rare type (Pl. 98, E). A portion of a small vase (cf. Pl. 75, Y) glazed in the same color and a bitumen mask of a bull (Pl. 103, G), probably the core to a statuette of precious metal, add further interest to the room. Several scraps of copper and fragments of inscribed tablets complete the contents of L101.

Near the northern corner of L101 is the doorway to the tiny room M7, in which a fragment of baked-brick paving still remains. The missing wall on the side toward Street 5 can in no way be taken to indicate the past existence of an outside doorway at this point. It seems probable that the continuation of the southwestern wall on Plan 13 to a point so close to Street 5 is an error in following a wall already much disturbed and weathered. It is more likely that the line of the northwestern wall corresponded throughout to the portion still remaining and to the direction of that of M2. Whether there was communication between M7 and M2 over their slight separating wall cannot be ascertained. The latter was presumably a bathroom, its brick pavement being covered with bitumen which extended upward over the mud-brick of the wall. Both rooms were devoid of objects.

Returning to L101, one enters M97 over a baked-brick threshold

near the eastern corner of L101. The room, except for a pot-stand and spindle whorl, held no objects. A large stone socket was found 22 cm. below floor level in the door-post well serving the L101 door and was assisted in its function by a terra-cotta door-swing similar to that of the L44-M100 doorway.

Within this brick-paved doorway (bricks 28x28x5.5 cm.) were two piles of baked brick (35x35x7 cm.) each four bricks high, with their sides parallel to and 15 cm. removed from the northwestern jamb. The two piles were separated by 16 cm., and before and against the base of the southwestern one was an additional brick, as though it were the beginning of a continuation of this barrier toward the center of the threshold. The structure was in the first third of the threshold as one entered from L101. The bricks were laid without mortar, and it was obviously a temporary construction.

The final room of the series, M1, is reached through M97. Its drain starts as an open brick channel and it flows from near the center of the room to the mid-point of the northwestern wall. On entering the body of the wall, it slants precipitously downward, no longer as a brick drain, but as a mud-brick chute, to emerge through the baked-brick wall of the main drain in Street 5 (Pl. 12, A).⁷ Within the room were three terra-cotta pot-stands, and the liquids that dripped from the vessels they held no doubt occasioned the need for the drain.

In viewing this series of rooms as a whole, one can see that it is in itself a self-sufficient unit with courtyard, storeroom, drainage and rooms that could have served as actual living quarters. The size of the rooms, as well as the pretentiousness of the two door-sockets and swings, suggests that the occupants were people of some importance. The glazed wall-nails in L101, however, are out of place in ordinary living quarters. Never anywhere in the city of Nuzi have they been found except in rooms connected with the cult. Of such, there have been but two groups, the northwestern unit of Temple A, and L8, L5 and L6, presumably the palace chapel. Moreover, when used at all they are invariably in large numbers, inserted in a single line around the wall at about one-meter intervals. Clearly, three such nails are inadequate and purposeless, not only for this group but for any single room within it. The only explanation of their presence is that they made their way in here from the neighboring L5, where they were found in abundance. The wall separating the two rooms was in a very fragmentary condition, and it is not at all improbable that it collapsed almost as a whole into the area which was L101. This sort of accident, which as a matter

⁷ See Part I, Chapter VI, *Street 5* for a fuller description of the street drain.

of fact has often been encountered in other parts of the city, would result in placing objects imbedded in the wall of one room (L5) within the confines of a separate, unconnected though contiguous area (L101).

Returning again to the great court, one comes at last to the principal doorway of the court (Pl. 2, C), the entrance to L20 and the great expanse of the main section. This, one feels, is the principal reason for the presence of the courtyard. The wall-facing of the court continues through the doorway in the same manner as is seen in the other rooms facing the court. The threshold is paved, and as a mark of special importance the end of the paving is edged across the full width of the doorway with marble blocks, 76x12x9 cm. This is the only instance in the whole city where marble, an imported and valuable stone, was used in the pavement. Its use enhances the importance of the rooms beyond. In the center of the threshold is a circular opening in the pavement, similar to that in the M100-R87 doorway and for the same purpose, namely, the insertion of a wooden key-post to which double doors like those of R87 were secured. However, since no sockets remain on either side of the doorway, it is clear that the doors had long been discarded, leaving only this break in the paving to show their past use. The fact that at one time both this doorway and the main exit from M100 had the same double doors adds to the conviction that R87 comprised the most important, perhaps a ceremonial, entry to the great court, as opposed to the common entry from M94.

L20 is a particularly large room, and as the ante-room to the great hall, L11, it is severely plain. The thick walls are evenly covered with mud-plaster, and in the débris were many complete and fragmentary undecorated, flat-headed, terra-cotta wall-nails (Pl. 97, D, E). None of these nails were found in position; and, since the wall at the north-west end was intact to a height of two meters, it is clear that they were affixed at a height greater than this.

The pavement is of considerable elaborateness. After the completion of the room the floor of the entire area was dug out to a depth of 20-30 cm. This was replaced by an equal depth of alternating layers of clay and pulverized charcoal (Pl. 16, B), the clay being from 0.5 to 2 cm. thick, and the charcoal rarely over 0.5 cm. in thickness. That this was intentional rather than the result of a gradual upgrowth is shown not only by the complete absence of sherds, stones and habitation refuse but by the fact that the brick pavement of the preceding building, left in place as the foundation of the surrounding walls, was laboriously removed within the area of the room so that this newly created floor could reach its full depth. This same type of pavement extends also into L10, L99, L11, L9, and L8.

The excessive thickness of the southwestern wall is due in part to the wall of the earlier building and in part to the contiguous wall added in the time of Stratum II. The latter is that comprising the present face of the southwestern wall and in thickness is equal to the distance between the offsets in the L20-L11 doorway and the present face of the L20 wall. Thus it is seen that the southwestern wall of L10 represents the line of the earlier building and that the added width in L20 is the Stratum II alteration built on the paving bricks that once formed an earlier courtyard.

The charcoal remnants that were once the rafters were found on the floor, as well as a piece of unknown use, a hollow log 110 cm. long with an inner and outer diameter 25 and 17 cm. respectively at one end and 16 and 8 cm. at the other.

Except for the terra-cotta wall-nails, the room was relatively bare of objects, though it yielded two bowls (Pl. 90, E), several beads and a considerable number of copper nails. The few door-studding nails (Pl. 123, G) were identical with those found in the charcoal of the L20-L11 door and obviously belong with those objects. The two unique double-shanked nails (Pl. 123, F) were found also near the L11 door. That they were clinched on the reverse of the object they pierced is clear, and it is not at all improbable that they pierced the door itself. If so, they remain as a positive measure of the thickness of body of this great door.

At the northwestern end of L20 are two small rooms tributary to the big hall. The first, L10, is undistinguished architecturally, except for the door-jamb protruding from its southwestern wall. Since it is not accompanied by a socket, it seems likely that it did not serve an actual solid door but was used only to create the impression of an enclosure separate from that of the southeastern half. A thin plaster of bitumen on the walls, rising to 115 cm. above the floor, suggests that the room was subject to damp, as was the water-filter room L99 next to it. A plain bowl, a colander and two copper nails were its only objects. There were, however, several objects in the body of the wall separating it from L6: namely, a fragmentary knife, two bars or chisels (Pl. 125, B) and a button (Pl. 126, M), all of copper. Their large size, as well as the unusual purity of the mud-brick in the palace, precludes any explanation of their presence other than that of their intentional inclusion, as is illustrated elsewhere by the beads in the walls of G29, Temple A.

Adjacent is the small room L99, an enclosure originally part of L10. The two door-jamb separating it from the latter were added

after the completion of the building. The small doorway, 75 cm. wide and 125 cm. high, is of great importance in that it is the only intact flat-topped doorway found in the entire city. Owing to the slight width of the door, the mud-bricks span the top without the use of horizontal wooden poles to bridge the gap and support the lintel. Within the room was a small stone socket serving the door that separated the two rooms. The purpose of the room is clear. Occupying the northeast end

there was found, still intact, a mud-brick structure holding two porous water-jars (Fig. 17). Here the water from the well was cooled and collected in basins placed in the openings below the jars.

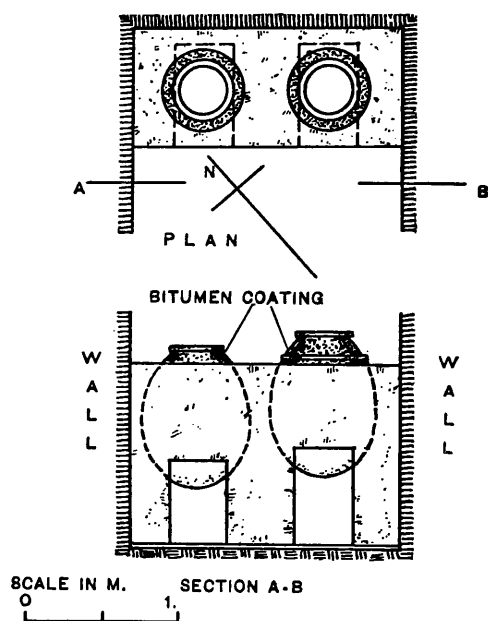


FIG. 17. L99, water filters.

A great number of facing and paving bricks, 25x9x6 cm., was found in the débris. One of the latter was coated on one face with the same red pigment used in the wall paintings. It is obvious that a superstructure of some kind existed above this point, though there is no means of determining its nature or the manner by which it was reached.

In L99 appears positive proof that the architects of this later palace built upon an at least partially preconceived plan. Knowing that L99 would be used for water-filter jars and that it would be continually damp underfoot, they sought some means to protect it against the destructive force of continual seepage. Consequently, under the northeastern end of the room and its adjacent walls a heavy coating of bitumen was spread on the brick pavement of the earlier courtyard on which they were building, leaving open only the mouth of the early courtyard drain (Plan 11). In this not very efficient but obvious manner the seepage was directed away from the bases of the surrounding walls and led into the drain just mentioned. Upon this was placed a pavement composed of large stones mixed with clay, giving a porous layer through which the water could flow easily.

A similar insulation against damp was used in L20 on either side of the L11 doorway. In the added width of the wall separating the

two rooms the first course of *libin*, which was directly on the earlier brick pavement, was laid in fluid bitumen (Pl. 16, A). The portion so treated extended for five horizontal *libin* away from the door-jamb on either side. Above this first course the mud-brick was laid as usual in ordinary mortar. This special provision was necessary to secure the foundation against damage, for if this doorway was flat-topped, as it is supposed most of the Nuzi doorways were, the timbers supporting the lintel and the wall above it would have been of such size that once in place no risk could be taken with weakened foundations.

It will be noted that the distance the insulation extends on either side of the doorway corresponds exactly to the extent of the upright facing bricks of the earlier wall (Plan 11). Undoubtedly this orthostat served as protection against the same danger that necessitated the precaution taken in the later addition. It is probable that the orthostat alone was not sufficient protection and that the builders of Stratum II instituted this more effective measure to prevent the damage which was ineffectually combatted in the earlier room.

The *libin* laid immediately over the bitumen is the only kind found with any distinguishing mark except in an isolated case in G29, Temple A. Each mud-brick has on its lower surface two indentations made with a roughly pointed tool, penetrating as deeply as two-thirds of the thickness of the mud-brick. The holes were not universally in the same position but generally were on opposite sides of the *libin*, near the mid-point of either side, and from 8 to 10 cm. from the edge. No care was taken to keep the line of the indentations of contiguous mud-bricks uniform. Therefore it is obvious that their position when laid was of no importance. It seems quite certain that the holes were for the entry of the viscous bitumen which in hardening would form dowels strengthening the wall against lateral slipping.

Through this same doorway one enters the great hall L11, which L20, a room large in itself, served as an ante-room. L11 was the largest covered room in the entire city, and its size as well as its location marks it as a room of the greatest importance. From it all of the main section of the building southwest of the court can be reached directly, and, so far as can be ascertained, only through it can access be had from them to the great court. Thus, it is in itself the reason for the great number of rooms that surround it.

Considering the importance of L11, both the furnishings and construction are relatively simple. The floor is of stratified clay and charcoal as described in L20, the walls are of perfectly made mud-brick overlaid by mud-plaster 3-4 cm. thick. Traces of red pigment were

recognizable across the full width of the base of the northwestern wall, but there was no evidence of a division into three panels—gray, red and gray—so common in the private houses (Plan 23). Nor could the customary gray pigment be traced on the other three walls as is usually the case where red decorates one of the four faces. This seeming variation from the usual custom may be due to the intense fire that accompanied the destruction.

At the corner of the southeastern jamb of the doorway to L20 was a massive stone door-socket of unusual type. The solidity of the brick construction supporting and surrounding it (Plan 20), as well as the heavy marble door-swing circling the top of the door-post well, is indicative of a door of unusual weight and importance. This is strikingly substantiated by at least twenty complete and fragmentary copper door-studding nails (Pl. 123, G) embedded in the charcoal that once had been the heavy door. These coals lay in a restricted area immediately south of the socket and were unfortunately too disturbed to allow for a calculation of the original height of the door. One or two nails found just within the confines of L20 suggest a further disturbance after the first destruction. As suggested earlier, it is probable that the two double-shanked nails (Pl. 123, F), found with these in L20, originally pierced the door, and that they may be used as a measure of its thickness.

Subsequent electrolytic cleaning of these door-studs revealed that at least four were decorated with a thin sheet of silver which covered the head and was crimped around the under-edge⁸ (Pl. 123, I). Of those sound enough for minute examination and treatment, over half showed no signs of a silver veneer. From this it may be assumed that copper and silver bosses were used together, perhaps in a pattern, to decorate the face of this impressive door.

Well toward the northwestern end of the room was a hearth of mud-brick flush with the level of the floor. Its surface showed only moderate burning, and it is clear that, being of such perishable material, it was intended for only occasional use.

The final feature is the platform or dais, 22 cm. above the floor, extending almost the full length of the northwestern wall. This, again, is a unique feature, distinguishing this room from all others. The structure was of mud-brick and was paved with packed clay. The plaster on its upright face still retained traces of the same red pigment seen on the wall above it.

The charcoal remnants of what were once the undressed rafters

⁸ See Rutherford J. Gettens, "Mineralization, Electrolytic Treatment, and Radiographic Examination of Copper and Bronze from Nuzi", *Technical Studies*, vol. i, no. 3.

were found in considerable numbers intermixed with the débris. Even in their present diminished size they average 20-30 cm. in diameter.

Objects of an extraordinary nature were rare. Besides the door-studding nails, there was a splendid steatite cup (Pl. 121, CC), found in fragments on either side of the L11-L20 doorway; a marble whorl-like staff-head; and a small incomplete figurine of a crouching animal of glass. Objects of a more common type were also sparsely represented. Four bowls were found on the floor, two cups (Pl. 76, E), a single section of drainpipe and a unique conical spout broken at both ends and decorated with horizontal bands of black color. Some beads, six of the usual animal figurines, a muller and tripod of basalt (Pl. 122, C), and a considerable number of copper nails complete the list of the more important finds. One of the latter, a nail 6 cm. long, was found driven two-thirds of its length into the northeastern wall approximately three meters from the north corner and 150 cm. above the floor. One wonders what article of decoration or of daily use it held in place.

The doorway from L11 to L14 leads to an extensive series of rooms. L14 itself is the meeting point of three sub-groups on the northwest, southwest, and southeast. The sockets by all its doorways show that the room could be closed off from every direction. A terra-cotta cup, a nail and an armor plate of copper, a hand mortar, two inscribed tablets, and a white marble staff-head were found here. The latter varies from the whorl-like type in that, though it is circular and flat-bottomed, the edge of the central hole piercing the object is bevelled from the top and is sharp.

In the neighboring L31-L28, it need only be noted that in both this group of two rooms and the similar L29-L30 group just described, the innermost room was in each case provided with a door by which it might be shut off from its neighbor.

L14 leads directly into L15B, which is but a passageway to two rooms of particular interest, L15A and L25. One enters L15B between imposingly wide door-jambs over which extends the baked-brick (27x14x7 cm.) facing seen within the room. This protection of five courses above the clay floor and two below is in itself protected by a lime plaster overlaid with bitumen. The room contained no objects of importance. However, mixed with the débris were fragments of wall paintings of a size and excellence of preservation unsurpassed elsewhere at Nuzi (Pl. 128, E, G, H; Pl. 129, D). The even distribution of the fragments suggests a mural decoration around the complete circuit of the room. Furthermore, the two main fragments were found respectively before the doors to L25 and L15A; and when one considers

their size and the weight of the wall on which they were directly painted, it seems almost positive proof that the decoration was a frieze high up on the wall and well above the tops of the doorways. This is in complete accordance with the custom in the private houses of having a figured design high on the wall above broad panels of red and gray. There was in this case no sign of solid color on the lower portion of the wall, doubtless because of the decomposition of the remaining wall above the brick facing.

An exceptionally wide doorway unprovided with sockets leads into L15A, a room whose walls were faced, plastered and water-proofed as were those of L15B and whose floor was paved with baked brick, 32x32x7 cm. The paving extends into the thresholds of both its doorways and is missing only in those places where there has been intrusive digging. Near the northern corner is a fragment of a hearth. This is the reverse of that seen in the usual clay-floored room, which is composed of four or more bricks resting on the floor; in this case the hearth is a clay-filled gap in the even brick paving. Approximately 10 cm. below the pavement are the remnants of two earlier drains, abandoned and partly destroyed in subsequent rebuildings. The room was devoid of objects other than a fragment of a deep, heavy, basalt tripod.

Returning to L15B, one enters the bathroom L25. The floor is fully paved with baked brick, and the wall protection, except for its reduction to four courses above and two below the floor, is like that of L15B in brick, plaster and water-proofing. Against the southwestern wall, almost in the southern corner, is a toilet, by far the most elegant of its kind found at Nuzi (Pl. 15, A; Plan 19). The two platforms comprising the stool are topped with heavy slabs of marble, on either side of which are lower platforms, presumably for water-jars. Set into the wall behind the fixture is an exceedingly large slab of white Mosul marble. What is of interest here is the fact that L25 as a bathroom is a recent conversion. The toilet was placed, not against the solid wall, but against a thinner partition blocking what was once the doorway to K38; and, though the brick forming the old threshold was removed in K38, the wall-facing on the jambs remains to show its former use. This change in plan did not involve the installation of a new drain, but simply a shifting of the position of the inlet of an earlier channel to a point closer to its outlet. It can be seen that the drain serving the toilet continues on under L25 into L15B, where it is broken off just beyond the doorway to L15A. Thus it is clear that the drain originally served a toilet some place beyond that point. In this connection, the two fragmentary drains below the floor of L15A are of distinct interest. It is

not at all improbable that they originally connected with the main drain at different successive periods and that they were the original reason for the main conduit. Thus we see the distinct possibility of the use of the two rooms L25 and L15A having been reversed, the latter, with its hearth, originally having been the bathroom, and the former, a passage to K38 and the outer rooms, later usurping its function.

To return to L25, it need only be said in conclusion that the objects were as scarce as one would expect from a room of its sort. Two large storage jars evidently held water for ablutions. A two-part bowl and a copper hook are of less certain purpose. Even less explicable is the final object, a wall-nail of burnished gray-ware (Pl. 97, J), identical in shape with those elsewhere invariably covered with green glaze. It is the only wall-nail of this ware and finish found at Nuzi, and as an isolated example its presence seems accidental.

Since the rooms south of L25 were readily accessible to it before the blocking of its southwestern door, it stands to reason that some equally easy means of access remained as a substitute. This could only have been through L3 and L4B. Unfortunately, erosion has destroyed all possibility of proving this. L3 is only a fragment of a room without objects or special construction. Nor is there any hint as to its former complete size, except the general wall line of the rooms on either side. L4B is a large room equally undistinguished by special constructions. The floor is of the usual packed clay and the walls are covered with thick rough mud-plaster. A tiny fragment of sheet gold remains to tell of some precious object once kept there. Several copper scraps and a boar's tusk, pierced through the end, are the only other objects.

It is presumable that both L3 and L4B opened into the large, irregular space, P325. The latter appears to have been a courtyard; and, to judge from the scarcity of objects and the indistinctness of its clay pavement, one that received little use. The only object whatsoever was a large marine pearl oyster shell (*pinctada sp.*) decorated around the rim with a foliate design of drilled holes (Pl. 127, CC). Only one other fragment of similarly treated shell was found in the city.

The walls here, both inside and out, are the only ones of the palace to have the characteristic decorative buttresses found only in the various levels of the temple and in the two other state buildings, Groups 15 and 19, Stratum III. Even where a change in wall direction is desired, the alteration is made by a series of steps suggestive of the buttress and recess. Again we see a street governing the position of the palace wall, just as it did in Street 5. Even so important a building as this was prohibited from encroaching on what had been recognized from early times as a public right-of-way.

P479 has the appearance of a later addition to the palace group, and it is not at all unlikely that its northwestern wall was once the outer face of the palace. The room, as with P325, was too damaged by erosion to be traced completely.

Returning to the rooms previously under discussion, one passes through K36 into K38, which originally communicated with L25 before the installation of the toilet. Though it was possible to locate the position of the walls, only near the K36 doorway and in the western corner were there any remnants of the brick wall-facing that apparently once protected the circuit of the whole room. The facing brick (27x14x7 cm.) rises to a height of five courses above the floor from the closed L25 doorway through the one into K36. This increase in courses over L25 does not mean a change in the level of the upper course of either room but is due rather to the lower floor level of K38. The facing of the southwestern jamb of the K36 doorway extends seven courses above the floor and three below it. It is presumable that this was the general facing height and that the western corner, where

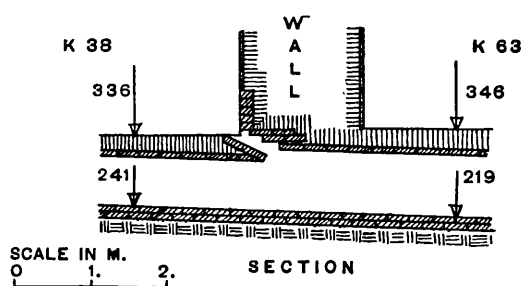


FIG. 18. K38-K63, drain.

but five courses remained, was disturbed by the later digging that so damaged the whole room. Also in the western corner, just below the facing brick, was a small brick channel (Fig. 18) connecting with the main drain from L25. Whether there had also been a toilet here, destroyed by intrusive digging, or whether

the channel was used as it was found, is uncertain.

K36 contained few objects, and those of little interest, but it has within it a construction of unique type. Extending from the southwestern wall and dividing the room in two is a partition made of upright bundles of reeds tied together and held in place by a heavy coating of mud-plaster applied on either side (Pl. 24, B; Fig. 19). Over this, on each face, was a final coating resulting in as smooth a surface as is found anywhere in the city. Since the partition does not tie to both walls, it is impossible that so frail a wall could have stood alone without having been secured to the rafters.

A slightly raised threshold and downward step lead from P39 into K32. In the latter room were forty-three complete bowls and fragments of many others. Mixed with these were remnants of both footed and shouldered cups, and a complete colander. The bowls are of import-

ance because of their unprecedented quantity, but one other object is of importance in itself. That is a lingam-spouted pot identical with the two from R127 (cf. Pl. 103, K). With the exception of a single specimen from S124, these three identical jars are the only phallic objects found at Nuzi, and the presence of even one, with its suggested ritualistic significance, gives an importance to the room in which it is found. The great quantity of smaller vessels found here suggests that K32 was a storage place for the utensils used in this series of rooms. It is of further interest that the phallic pot was stored here with vessels of ordinary types. It implies that this one had a definite place in the ordinary household routine.

The final room of the series is K62, a room of irregular outline as is K32, owing to the direction of the outside palace wall. Like its

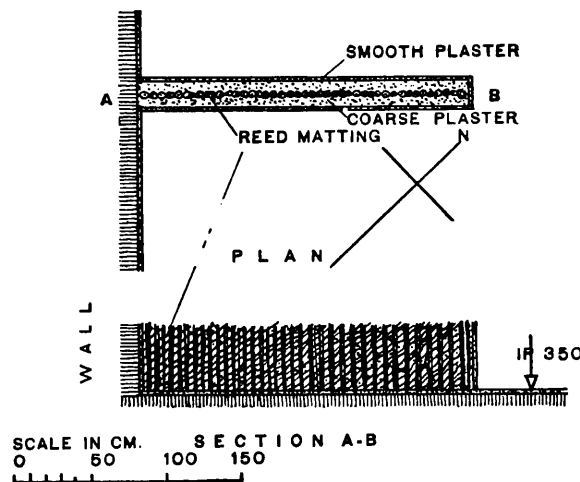


FIG. 19. K36, partition.

neighbor, it is undistinguished by special constructions; and, unlike it, it is only moderately productive of household objects.

Beginning again with the great hall L11 is another smaller series of rooms extending in a southwesterly direction. The first of the group is L12, with two door-sockets, each with terra-cotta door-swings beside the L7 and the L27 doorways. On the walls were occasional traces of gray pigment. The only object, a fragmentary green-glazed wall-nail, is probably displaced from the L7-L8 series.

The adjacent room, L13, connects the group with L14, thus affording communication between the three main series of subsidiary rooms without passing through L11. A small socket beside its L14 doorway permits it to be shut off from that direction. The walls were plastered as usual and showed occasional traces of gray pigment.

The entry to L27 is between door-jambs of unusual width, each of which has in its center, 150 cm. above the floor, a square recess 43 cm. broad, 51 cm. high, and extending to the length shown on the plan. Two steps lead downward to the floor of L27. A small stone door-socket rests on the floor in the east corner, showing by its size that its door was one of no great weight. Along the length of the southwestern half of the room are two broad steps, the first 17 cm. above the floor and the second 30 cm. above the first. This is an unfamiliar arrangement of the usual storage platforms, but there can be little doubt that it was used for that purpose. The absence both of large vessels and pot-hollows suggests that the material stored here stood or lay without need of large-bodied containers. The room was relatively free of objects of the usual nature. A cup, a bowl and two pot-stands of terra-cotta were here, as well as an arrow-head, two sickles, and a pointed ferrule of copper (cf. Pl. 126, C), within which was the imprint of coarse textile between the metal and the charcoal that filled the interior. Mixed with these was a considerable number of inscribed clay tablets.

The neighboring room, L22, was a storage room of considerable importance. Stepping down 15 cm. from L27, one enters the narrow walk that, in effect, created raised platforms on either side. On these platforms, resting in scooped-out hollows, were the shattered fragments of nineteen storage pots, and on the platforms were other pot-hollows for as many more. In a number of cases it was possible to identify the contents of the vessels as barley, and in at least one other case as small round pats of barley (?) bread (Pl. 33, F). The use of platforms on which to store the material was a precaution against dampness. In this case, where the floor is not actually raised, a trench serves to receive and drain off the accumulation of moisture. The large pots stored here were unusually ornate (Pl. 67, D), and in their elaboration give this storeroom an air of importance that none other has. The room was not without smaller vessels and objects. Two bowls (Pl. 87, O), a small vase (Pl. 74, B), a peculiarly shaped unglazed wall-nail (Pl. 97, K) and a tiny ivory (?) staff or wand-head comprise the major remaining objects.

The final series of rooms radiating from L11 is that beginning with L9. A small marble socket and terra-cotta door-swing served the door that closed it off from L11, and a brick socket served a door apparently of lesser weight and stability at the opening to L8. The northwestern wall was laid in a trench 96 cm. deep and slightly wider than the width of the wall, in order to secure—as is done today—a firm foundation where the immediately underlying soil is not solid enough to support

great weight. Two bowls, a whorl, and three pins, one of copper and two of bone, compose the objects of L9.

To the southwest is L7, which in turn communicates with L12. This doorway makes it a part of the corridor of small connected rooms by which all of the three major series of rooms tributary to L11 are afforded direct communication with each other, without the necessity of entering the great hall. A brick socket and door-swing at each doorway within the room allow it to be closed off from either direction. This provision for complete seclusion within L7, and the household pottery (Pl. 89, T) found in the room, suggests that, though it served as a passageway between groups, it was in fact a room more lived in than passed through. The single green-glazed wall-nail also found here is presumably displaced material from the main room of the group, L8, where such objects were found in quantity.

The walls bore traces of black pigment in the lower portions with gray above it, but the remains were too fragmentary to show the height at which the black ceased and the gray began. It is probable, however, that the decoration was similar to that of rooms L8, L5, and L6 (cf. Fig. 21). Since this wall decoration is common to all of the intact rooms of the group, except L9, it is further probable that the absence of this treatment in the latter is due to the conflagration and subsequent weathering.

L8 is the center of the group and as such demands special attention. A small stone socket, 28 cm. below the terra-cotta door-swing, served the door that shut off L5 (Fig. 20, Dr. 1). Near the center of the room was a hearth of unique design (Pl. 17, C; Fig. 20, Dr. 2)—a platform of purified clay raised slightly above the level of the floor and encircled with a double rim of the same material. A narrow opening through the rim at the northeast end allowed the hearth to be

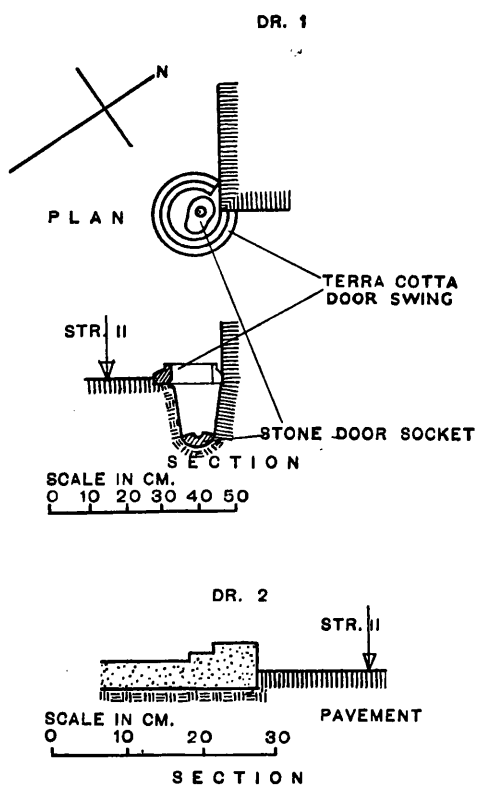


FIG. 20. L8, Dr. 1, door-post well and socket. L8, Dr. 2, clay hearth.

swept clean of its accumulated ashes. Continual fire had worn away the clay at its center, and had baked the outer portions almost to the hardness of terra-cotta.

The walls of the room were colored with black pigment to an even height of 130 cm. above the floor on the northeast and northwest, and to 110 cm. on the southeast and southwest. Though no gray could be traced above the black, it is presumable that this unstable pigment decorated the upper walls here as it did in L7, L5 and L6 (cf. Fig. 21).

Without doubt, the most important objects from this room are its green-glazed wall-nails. Two were found still in position inserted in the southeastern wall, 160 cm. above the floor, and one in the northeastern wall near the eastern corner, 190 cm. above the floor. This room and its companion, L5, are the only ones in which wall-nails have been found in place. Consequently, they serve as the only positive key to the placing of those found elsewhere.⁹ Including those found in position, the two in the doorways to L2 and L1 and the one displaced nail in L7, twelve were found in all. If these were all that were originally used, they must have been spaced approximately 160 cm. apart on the four major walls. However, it is likely that several have been lost and that their original spacing corresponded to that seen in L5 (Fig. 21).

It is of distinct interest that two unglazed wall-nails (cf. Pl. 97, D-G) were also found in the débris. It seems unlikely that they were used in conjunction with the glazed type, and it is not improbable that they are from a less ostentatiously decorated room in the demolished area to the northwest.

The other objects of the room are also in keeping with its architectural importance. Its six bowls (Pl. 87, L) and one footed cup (Pl. 76, T) are of the usual type, but the considerable quantity of decorated glass fragments along the base of the southeastern wall in shapes hitherto unencountered (Pl. 128, C; Pl. 130, A, C) is of the first importance. Unfortunately, as in most other instances, the glass was so decomposed that only a few well-preserved fragments remained. In copper, there was a door-studding nail identical to those of L11, a pike-head and a tiny four-sided arrow-head (cf. Pl. 125, L, Y, Z). The final object of copper is an amulet of thin metal, circular in outline, with two concentric circles around a raised circular boss. Between the boss and the first circle, four holes pierce the piece at equidistant points as though to allow it to be sewn to a cloth back. The piece is strongly

⁹ For discussion of the use and purpose of these objects see the description under G29, Temple A.

reminiscent of the less elaborate sun discs of Temple A (cf. Pl. 126, T).

Opening off from L8 is the narrow room L5, an enclosure of great importance in that it is the only one in which a consecutive series of glazed wall-nails was found in position (Fig. 21). These nails were inserted in the southwestern wall and the missing heads were found in the débris filling the room and within the doorway to L6. It is probable that the three nails found in L101 were originally fixed in the

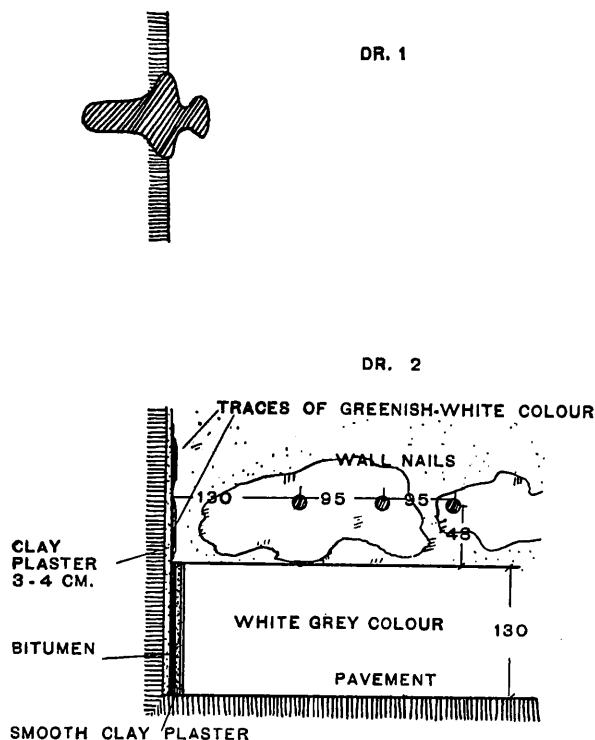


FIG. 21. L5, Dr. 1, section of wall-nail in position. L5, Dr. 2, section and elevation of southwestern wall showing wall-nails in position.

northeastern wall, and by the collapse of the wall in that direction, came within the confines of a room in which they had never been used. If these can be included as part of the furnishings of L5 and if the spacing of the nails on the southwestern wall is accepted, there must have been originally two or three more which were not recovered.

The wall decoration was originally like that of L8, the lower part of the wall being covered with black pigment, presumably bitumen in thin solution, and the upper part painted with the usual gray which in the course of weathering has taken on a greenish-white color. At a

later time the black base was covered with a thin coating of plaster and colored with the same gray.¹⁰

Aside from the wall-nails, the only objects were a scrap of copper and an Ishtar figurine (Pl. 100, C).

L6 opens directly off L5. Its walls were in an excellent state of preservation to a height of 250 cm. above the floor. Neither decorative wall-nails, nor the black and gray color scheme, were used. Instead, over the 3-4 cm. thickness of plaster, traces of gray were found, showing that this color covered the whole wall expanse as it did in the later phase of L6. A large number of displaced baked bricks lay in and about the one doorway, and in the débris was a quantity of charcoal in excess of what might be expected from the ruined rafters. A number of inscribed clay tablets were on the pavement, and among them a highly polished pierced marble weight-like object and a large copper fragment of indeterminate purpose. It should be remembered that within the southeastern wall were the several copper objects mentioned in the description of L10.

Two rooms open off from L8 to the northwest, but because of the damage of the central erosion channel, little of their outlines could be traced. The first is the room L1A-L2A, distinguished solely by its unique marbled faience bowl (Pl. 119, J). The second room, L1-L3A, was equally damaged, but the remnants of a platform in the eastern corner, in each of whose two remaining pot-hollows were large jars, show it to have been a storage room. Two unrelated wall-nail fragments, presumably from L8, a bowl (Pl. 86, M) and several smaller pieces of lesser importance were found on the floor.

Southwest of L8 was the larger room L2, on whose low remaining walls were traces of gray pigment. Its two bowls (Pl. 86, F; Pl. 88, N), its high-footed pot, and its vase are of the ordinary type, as are its three copper arrow-heads and nails, but its copper offering stand surmounted by lions (Pl. 114, E) is certainly the largest and the most important metal object from the entire city. The presence of this is in keeping with the importance already suggested by the wall decorations and other objects in the adjoining rooms. Mixed with the L2 objects was a large number of inscribed clay tablets.

Beyond this group and extending to the Street 4 wall is another series of connected rooms, more or less damaged, having no remaining communication with L11. Since the entire main section of the building revolves around L11 and the great court M100, there is no reason

¹⁰ The thickness of the wall coatings in the section of Fig. 21 is exaggerated to illustrate the separate distinct layers.

to believe that these rooms were an exception. Even had there been outside doorways in some rooms fronting either Street 4 or 5, it is unreasonable to believe that they were not in communication with the rest of the building. Consequently, the only routes must have been either through L19 or L16. In that case, all the rooms beyond were in a sense tributary to the L8 group as well as to L11 and M100.

The principal enclosure of the final group is L40, ostensibly an open court, paved with baked brick 29x29x6.5 cm. Other than a whorl-shaped staff-head of marble, it yielded no objects. At the southeastern end of L40 one passes into L24 over a threshold of baked brick, 28x28x6 cm., raised 6 cm. above the levels of both rooms. A brick socket in the northern corner served this doorway. The L24-L26 doorway had been intentionally blocked with solidly laid mud-brick at some time after the completion of the two rooms. A bowl and a footed cup suggest a domestic use for this small room.

Its companion room, L26, lacked a socket indicating any door by which it could be closed off from the court. Its bowl and whorl suggest domestic use. A single piece of bone inlay (Pl. 127, L) adds interest to the room.

An extremely broad doorway, over whose threshold the paving of the court extends, leads to L41. The enclosure, unfortunately, is incomplete, but the absence of paving indicates a covered room, and, judging from the size of the L40 doorway, one of considerable size and importance. Much charcoal and ashes of straw were found on its floor.

Opening directly southeast is K42, a room notable only for the niche with two raised steps, 1 and 10 cm. above the floor, cutting the outline of the southeastern wall. It is probable that these raised steps served the same purpose as the platforms of storage rooms and that the niche was in itself a miniature storage space. No socket was by the door, though, as stated before, this cannot be taken as positive proof that no door existed. The room, except for a single bowl (Pl. 87, F), was without objects.

The entry into K62B could only have been from a room to the northwest having access also to L41. Though the full extent of the northwestern wall is lacking so that the doorway cannot be shown to have existed, both the northern and the western corners are intact, and give the original size of the enclosure.

Through a doorway in the southeastern wall of K62B, one enters K63, a room of note only because of the large drain from L25 beneath its pavement. This, in the center of its course beneath the room, is 125 cm. below the level of the floor, the measurement being from the

floor of the room to the floor of the drain. A single bowl was the only object from this room.

In the center of K54 the L25 drain is 25 cm. deeper than in K63. This is an extremely rapid drop, and the most abrupt in its otherwise gradual slope. It will be noted that at the point where it pierces the outside wall there is what appears to have been a closed doorway. There is great doubt whether this actually was ever a doorway. Neither K54 nor the rooms connected with it have the appearance or arrangement of an entry-way; nor is the circuitousness and the meanness of the rooms when seen as an entry-way in keeping with a building of this importance. It is more likely that the wall was cut or left open for work in building the drain, and that, when closed, it appears as a blocked doorway where only easy access to a subterranean construction had been intended.

Noticeable in this series is the absence of objects of any importance, the small rooms, their rough plaster, and the general lack of spaciousness. It should be remembered, however, that this is but a fragment of a much larger group, and that the rooms here described are in all probability subsidiary to ones of more spacious plan.

Probable use of L11 and subsidiary groups. That L11 is the room around which the life of the main section revolved is evident not only from its size and from the deference paid to its entrance from the great court, but from the dependence of all the subsidiary groups on it for outlet and entry. More specific indications point in the same direction, such as the dais at the end, the red color on the northwestern wall, and the elaborate silver and copper studding on the great door. It can be said without question that the room is the most important one in the palace.

The question arises as to its exact function and to the purpose of the building as a whole. Considering the building as the palace of the ruler of Nuzi, the room L11 can safely be designated as the principal room of state; or, to use a more impressive term, the audience chamber. The contents of the room do not indicate that it was used for the ordinary routine of daily life, as were some of the main rooms of private houses outside the palace walls, and the slight signs of fire suggest that the use of the hearth was occasional, and perhaps ceremonial, rather than constant. Thus it would seem that the room, rather than a living room magnified to fit the importance of the owner, was one in which the more important duties and formal functions of state were performed.

Since all of the other groups in the main section are directly de-

pendent upon L11, they are, by this circumstance, intimately concerned with the royal personage for whom L11 was designed. Consequently, they can only be considered as part of his residence, housing his personal possessions, perhaps his intimate associates, and not concerned with the more routine function of state or palace life performed in the service section.

The original use of most of the rooms dependent on L11 is beyond conjecture. Others, by their objects or their design, offer clues as to their use. L29 and L30 offer no solution, nor do L31 and L28. L14, as the entry-way to one important group and as a part of the passage connecting the various groups subsidiary to L11, could hardly have been a room devoted to ordinary living purposes. L15B is the first of a series of obviously important rooms and is, judging from its shape, mainly a passageway to L15A and L25. That a hall presumably so used was brick-faced and decorated with elaborate wall paintings is a circumstance lending importance to the rooms it served. Of these, L25, with its sumptuous toilet, its large water-jars and its water-proofed floor, can be positively identified. The pretentiousness of the toilet and of the room as a whole shows unquestionably that it served the person for whom L11 was intended.¹¹ At the same time, it aids in identifying this series as the one in which the ruler lived.

One can reasonably suppose that the royal living room was not far removed from the bath, as is the case in the private houses of the city. Whether the living room was L15A or L3, or was even further on, cannot be told with certainty. Both L15A and L3 are in themselves a passageway to L4B, etc., and are unsuited for occupation, though the former with its hearth is suggestive of household uses. In spite of its distance from L25, it seems likely that L4B, the largest of the series, was the principal room of the ruler's private quarters. The fragment of sheet gold, exceedingly rare at Nuzi, is indicative of considerable past grandeur. Of the rooms further on, only K32, the storage room for the great quantity of household pottery used in this series, can be even partially identified.

Returning to L11, it is seen that the use of neither L12 nor L13 can be understood except as passageways between separate groups. However, L22 is indisputably shown to have been a storage room for grain and there can be little doubt that L27 served a somewhat similar purpose. As noted earlier, the absence of pot-hollows in the platforms of L27 shows that the material kept here was capable of storage without the use of full-bodied terra-cotta containers.

¹¹ The fact that but one such convenience was installed in the whole Main Section is further proof that this region as a habitation served primarily a single individual.

Turning to the northwestern series, it is seen that L8 is the center of this symmetrically arranged group and that its first two tributary rooms, L7 and L9, serve as a double entry to it. However, it is the objects and not the plan that characterize the group. The decorated glass vessels in L8, the marbled faience bowl in L2A and the magnificent copper offering stand in L2 are objects of a type intimately associated with the cult of Ishtar as seen in Temple A. Both frit and glass objects were found in large numbers in the temple, and the large quantity of lion figures from the temple, and their almost complete absence elsewhere, definitely link that animal with the cult. More important still are the green-glazed wall-nails, found elsewhere only in the northwestern unit of Temple A. The almost complete restriction of this splendid decorative feature to the temple of Ishtar suggests with fair certainty that its other places of use, L8 and L5, were similarly devoted to that cult. Moreover, the fact that both L8 of the palace and G29 of the temple yielded tiny lance-like arrow-heads, too small to have been of practical use, and that in each was an identical slender pike-head of copper (cf. Pl. 125, L), can hardly, with the other indications mentioned, be laid to mere coincidence. Add to this the Ishtar figurine of L5, and there seems little doubt that there was in this group a chapel to the goddess for private religious observance. Though the arrangement of rooms is different from that of Temple A, the similarity of furnishings is too marked to be without significance. The unusual hearth in L8, with its signs of continual fire, undoubtedly corresponds to that in G29.

It is extremely unlikely that L8 was the actual cella of the chapel, though its elaborate hearth at first suggests that it was. It lacks the privacy and seclusion that is characteristic of the holy room in the temples of Nuzi and elsewhere. Only one of the two rooms in the group as it now remains could have served as the cella. These are L16 and L6. The only argument in favor of L16 is its location on the central axis of L8 and L2, and its position as the termination of these two important rooms. The copper offering stand from L2 cannot be taken as an argument in favor of that room, for the very fact that the stand is incomplete¹² shows not only that it was out of position, but that it was displaced with considerable violence. Hence, it is as likely that it came from L8 as from L16 and that it never belonged in the room in which it was found. Being an incomplete room, L16 cannot be taken to have been adaptable as a cella in its complete form. It may, in fact, have been the passageway to L40. Furthermore, it is presumable that

¹² See description under Part II, Chapter III, *Offering stands*.

had it been the cella the glazed wall-nails would have been continued into L2. In Temple A they are part of the cella itself, and one would expect that, as appurtenances of the cult, they would have been carried at least to the doorway of the chapel cella.

L6, on the other hand, has the complete seclusion, the aloofness, that one would expect in a cella. It is close to the central room, L8, and the ante-room separating it from the main room is decorated with glazed nails right up to the doorway to L6. It is of interest that within the wall separating L6 and L10 were a number of small copper objects¹⁸ quite certainly dedicatory in nature. Correspondingly, the only other room found at Nuzi in which objects were similarly mixed with the wall structure is G29, the cella of the Ishtar group of Temple A. Though beads and not copper objects were placed in this wall, the purpose is essentially the same.

As an argument against L6 as a cella, one should note its divergence from the central axis of L8—though it is true that the hearth is in almost direct line with the L5 doorway through which L6 must be reached. Furthermore, the collection of tablets on the pavement of L6 is difficult to reconcile with so small a cella unless they were displaced from L5. Also to be considered is the absence of both wall-nails and decorations such as were seen in L5 and L8.

Though no definite conclusion can be reached from the material alone, a striking and significant parallel is seen in the chapel, Group 16, Stratum II, of the Northeastern Section. In the latter the relation of the cella, S140, and its ante-room, S111, to the main room of the building, S144, is the same as that between L8 and the right-angle series L5-L6, except that in the one case one would turn to the left to reach the cella, and in the other to the right.^{18a} This striking agreement with a definitely established chapel of the Ishtar cult not only helps to identify the cella of the palace chapel, but it serves as another, almost unnecessary, proof that Ishtar was the deity to whom this royal household sanctuary was dedicated.

There is no reason to believe that the religious function was the primary one of the building. The chapel is tributary to the main room of state, L11, which itself is devoid of cultural objects and indications. It occupies a place in the building less prominent and certainly not as grand as the private quarters of the ruler.

In surveying the rooms southwest of the chapel, one significant fact stands out—that these rooms are accessible, so far as can be seen, only

¹⁸ See description of L10.

^{18a} Compare also the small inner chamber of the end of the cella G53, Temple E.

through the chapel. Thus, this further series is in itself a dependent of the chapel, which in turn is subsidiary to L11.

SERVICE SECTION

It has already been pointed out that the rooms east and northeast of the great court, excepting those opening onto it, have a different appearance from those of the Main Section. To repeat briefly, here are the ovens and wells of the palace, here the rooms are small and distinguished neither in decoration nor in objects. In fact, the aspect is that of groups of rooms in which the more menial tasks of a great household were carried out. There is ample justification for the appellation, Service Section.

Unlike the Main Section, it is not subsidiary as a whole to one court or central room, but is divisible into a number of separate sections, each relatively self-sufficient, and each communicating with its neighboring groups indirectly.

Where the main entrances to the Service Section were, cannot be stated with any degree of certainty. There are, however, two entrances from the entry-court M94, and there is little doubt that it was equally accessible, if not more so, from the southeast into R96 and R57.

The first group to be considered is that entered from M94 through M77. The latter, though of considerable size, is undistinguished by objects or by architectural features except for its rise in level toward the southwest end and the high step up to the threshold of the M69 doorway.

M69 is in reality a long hall extending the full length of the group, for the door-jambes just beyond the entrance to M74 are without sockets and are a greater distance apart than are those of all but the most imposing doorways. They exist, apparently, to give the impression rather than the actuality of division. The room is paved throughout with baked brick, 29x29x6 cm., and faced to a height of three courses with brick, 25x14x7 cm. The facing extends from three to five courses below the pavement, a variation which is unaccountable unless it is considered as being a foundation protecting the lower edge of the wall at the varying depths that any given spot might require for a firm footing. Identically the same treatment was seen in N120.

The walls, as do all those of the Service Section, continue to have the same careful workmanship as was seen in the Main Section and are plastered with a rough coating, 2.5-3.5 cm. thick, overlaid with a fine-grained strawless coating 1-2 mm. thick. On this are still faint traces of gray pigment.

Opening off this is the largest room of the group, M74, a room with a door-socket by its jamb and a nine-brick hearth (bricks 27x27x6 cm.) in its center. The walls show signs of an intense conflagration, and the excessive quantity of charcoal on the floor speaks of a considerable amount of wood used or stored here. The objects help to explain the past contents. Among them, along with a number of nails, were two copper door-pivots (Pl. 124, B) through whose three tongues nails still bit into the charcoal that once was the butt of the post. There is no reason to believe that such a fixture protected any but the lower end of the post, nor does the socket found here correspond in shape to the end of the pivot. Consequently, there were two doors in this room, not belonging to it, at the time the building was burned. Whether they were stored here or whether this was the shop in which they were made or repaired, cannot be known.

R70 is a continuation of the corridor, beginning with M69 and terminating in an enlarged area, again giving the impression of a separate enclosure. The floor is paved with baked brick, 25x25x6 cm. and 28x28x7 cm. in the northwestern portion, and 34x34x8 cm. in the south-

eastern end. The wall is protected in part with facing brick as in M69 and over the major portion of its extent by an orthostat of a single row of upright brick (Fig. 22). The orthostat is coated with bitumen, and the plaster of the wall, still with traces of gray color on it, overlaps the top of the protecting bricks. That the face of the orthostat is flush with the mud-brick body of the wall, rather than with the final face made by the plaster, is an error in construction seldom encountered in the palace.

The first room opening off R70 is R72, a room with an orthostat of the kind just described and paved throughout with baked brick (29x29x6 cm.). Both orthostat and pavement are coated with bitumen. Against the southeastern wall, and near the east corner, is a toilet; the two brick platforms forming the seat

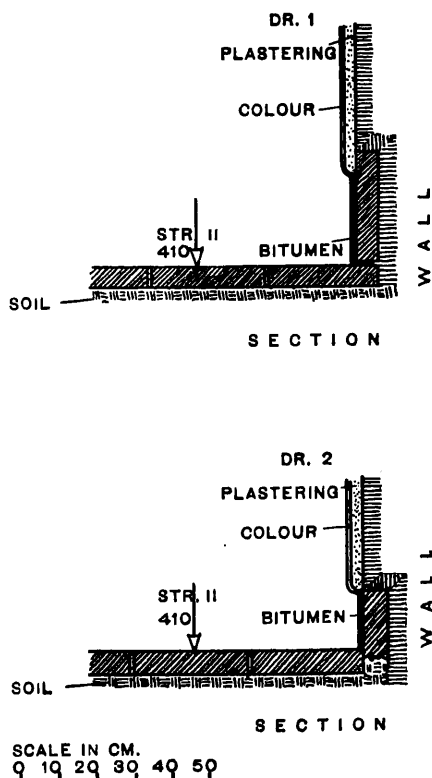


FIG. 22. R70, brick pavements, orthostats, and wall treatment.

are separated by 15 cm. and rise to a height of 40 cm. Between this and the east corner is a broader platform 25 cm. high and on the opposite side another rising 14 cm. The accompanying platforms, presumably for water-jars, are so frequently a part of the toilet construction that they may be looked upon as a part of the standard design of these fixtures. The drain carrying off the refuse passes off to the southeast and eventually joins the main drain of R96. It is of interest that the bottom of the drain at its beginning in R72 is only 4 cm. below the level of the pavement. This unusual height creates a sufficiently steep slope to permit the refuse, when flushed with water, to flow away without making the drain too deep when it reaches the position of the intended R66 toilet. The room, except for a single very small copper arrow-head, was devoid of objects.

At the end of the long hallway, M69-R70, is another doorway leading to the two final rooms of the group. The first is R75, a room with pavement and orthostat like those of R70. The inner room of this group of two is R66, paved throughout with baked brick (25x25x6 cm.) and protected with an orthostat like that of R75. Another toilet is in its eastern corner connecting with the same drain that served that of R72. The two benches of the stool rise 36 cm. above the pavement, separated by a slit 13 cm. wide. In lieu of the usual platform on one or both sides of the stool, the easternmost bench is extended clear to the east corner at a uniform height, thus making, by its broadened surface, an area on which accessories of the toilet might be placed. The floor of the drain, which itself is of the same width as the slit between the benches, is 34 cm. below the level of the pavement, showing a drop of 28 cm. from its inception in R72. From here the baked-brick drain flows out below the floor of R75, and turning in a broad curve, passes directly to the main drain in R96, entering at a level 150 cm. deeper than that of its inception in R72 (Plan 21).

The pavement in R66, directly above the course of the drain, is made of a row of exceptionally large bricks (47x47 cm.), in order that the drain below might be reached for repair or clearing without disturbing more than a single row of the overlying brick floor.

The aspect of this group is unusual, to say the least. Since the only room which could possibly have been used for ordinary living quarters (M74) is shown by its objects to have been used probably for other purposes, these latrines were certainly not for people living within the group. Its direct outlet to the entry-court M94, where large numbers of people congregated waiting admittance to the palace, is suggestive. It indicates with relative certainty that these rooms were for

public use. They might even be taken as evidence of a disregard for other peoples' time, as shown by the rich to the poor throughout the East today; on the other hand, they certainly show an unexpected regard on the part of the ruler for the comfort of those who waited on him.

The adjacent group, centering about R50, certainly was more closely connected with the daily routine of the palace household. It quite probably was accessible from the outside on its southeastern face, but the entrance from M94 into M34 is the only one that remains.

The latter connects both with M77 and M33, thereby making direct communication between the two groups. The lack of sockets by any of its doors shows this room to have been primarily a passageway to other sections. The room contains two structures of an unusual and obscure nature. Along the southeastern wall, on either side of the doorway, is a low mud-brick bench standing free from the wall. That to the southwest turns at a right angle near the M33 doorway to cross the whole width of the room (Plan 17). Each is flat-topped and each has an opening reaching almost to the floor level, presumably to allow unobstructed passage from both sides.

Three steps lead up to M33, a narrow passageway connecting the two sections of the group, which illustrates more graphically than any other room the adjustment of the Stratum II building to the already existing contour of the mound (Plan 17). The 217 cm. rise in level between M33 and R49 is not only indicative of an earlier irregularity of surface but shows that the general contour of the mound in antiquity was very close to that seen today (Plan 3). Consequently, it is presumable that the mound had grown to its full height well before the time of Stratum II and had lain idle for a long time before the construction of this portion of the building. The slope toward the central erosion channel can be more logically explained as the process of long weathering than as an irregularity of growth in a continuously and completely occupied mound.

The passage opens out into R50, an irregular room serving the series to the north. The baked-brick drain of R49, on being traced toward its source, was found to turn to the southwest in R50 and to enter the southwestern wall. There it changed to a vertical series of drain pipes extending upward within the wall. This situation, implied in M100, can lead only to one of two conclusions: that it served an upper story, or that it received the collected rain-water of the roof to flush the toilets emptying into the lower course of the main drain. In favor of the first theory is the fact that the débris of the adjoining room, R46, was filled practically to the surface with scattered paving and facing brick

(25x25x6 cm. and 25x7x6 cm.), suggesting that over this was another room so paved and faced. Moreover, the abandoned drain from R50, passing through R60 and S59, and emptying into Street 12, may once have been the outlet of an upper-story drain before the alteration of its course to R57. In favor of the second theory is the equal possibility that the brick in R46, which undoubtedly came from above, paved the roof around the intake of the drain to prevent erosion in this essential portion of the building. It has been amply demonstrated that the size of the paving bricks used in Nuzi was by no means uniform within one room or area. Consequently, it is by no means impossible that the paving and facing types of brick were used together.

Again, it is impossible to base the theory of a second story on the supposition that the abandoned drain of R60 was once connected with the upright pipes. It is quite as probable that it served some entirely different purpose. The main argument in favor of the rain-water theory is the fact that in none of the buildings in the city is there more than the vaguest indication of a second story. Only two stairways were found (F25, Stratum II, and L20, Stratum III), and neither was preserved higher than three steps. Consequently, there is no means of telling with certainty whether they were an adjustment between a slight difference in levels, whether they rose to a second story, or whether they rose to the flat roof. These few examples, by their scarcity alone, in a city the size of Nuzi, seem ample proof that a second story was not a standard part of Nuzian architecture. Correspondingly, there is no stairway, ramp or other recognizable means of ascent here by which one could have mounted to an upper structure.

Returning again to R50, there was but one object in the room, a large oval basin of coarse terra-cotta with pierced sides (Pl. 96, B). A considerable quantity of carbonized barley found in it shows it to have been a vessel in which grain was washed.

R60 opens directly off R50 and is of little interest except for the brick drain already mentioned. A brick socket was found 39 cm. below the pavement by the southeastern jamb of the R50 doorway. This is an unusual depth for so insignificant a socket, and it may have served an earlier indistinguishable floor.

S59 is barren of objects. The R60 drain, 67 cm. below the floor, passes below its pavement to empty into Street 12. Also piercing this wall is another drain of the same elevation, running from the northern corner. Both were abandoned and incomplete channels in the time of Stratum II. The floor is of packed clay and the walls are faced to a height of five courses above and one course below the floor with full-sized brick, 25x25x6 cm. (Fig. 23).

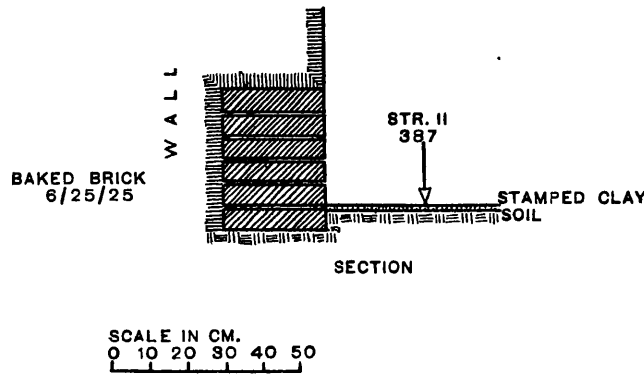


FIG. 23. S59, brick wall-facing.

Southeast of R60 is the brick-paved bathroom R56. On its wall, behind the toilet, are remnants of the lime-plaster that presumably covered the lower part of the whole room. Contrary to custom, both platforms forming the seat of the toilet, as well as the lower platform on the northwest, are capped with terra-cotta slabs of ware more resembling the fine texture of the usual bowl than the coarse ware of the ordinary brick (Fig. 24).¹⁴ They appear to have been made for this

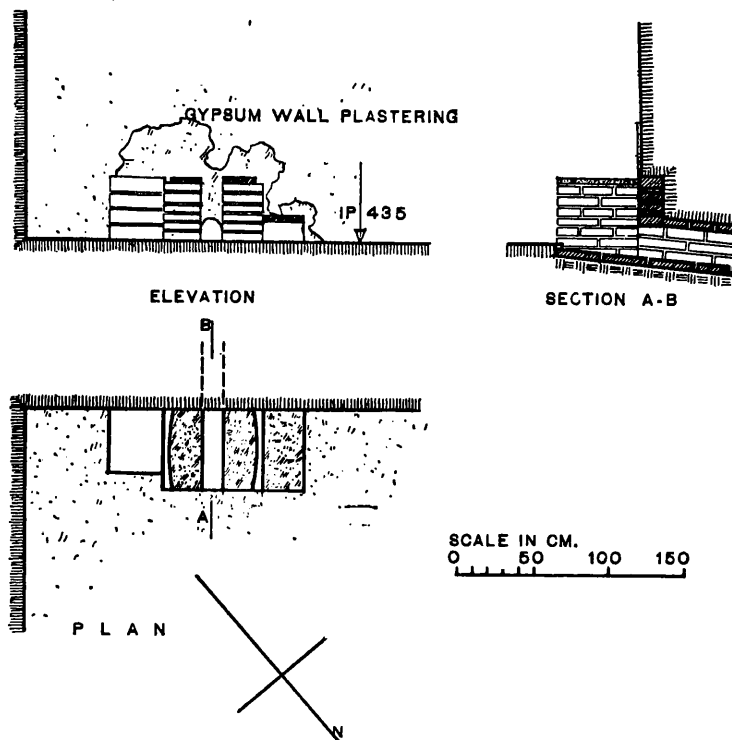


FIG. 24. R56, toilet.

¹⁴ That four of the six palace toilets (L25, M78, R56 and R170) were topped with material of finer texture than baked brick shows that sitting, rather than squatting (the universal posture throughout the Orient today) was the practice.

purpose alone. Also unusual is the lime-plaster that covers the exposed surfaces of the brick. The drain serving the toilet passes through the wall and joins the main drain of R49 in the manner shown in Fig. 25.

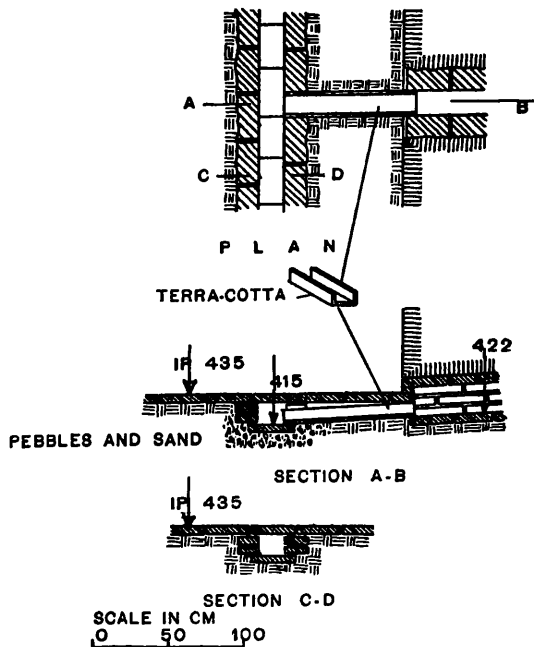


FIG. 25. R49-R56, drain.

The alcove in the eastern corner of the room is the result of a blocked doorway that once allowed direct entry from the courtyard.

In the northwestern wall of R60 is the doorway to M61, a small room with a floor of mud-brick (35x35x7 cm.), covered with 5-6 cm. of packed clay. In the south corner is a brick socket serving the R60 door. Directly below the mud-brick is an earlier pavement of baked brick (29x29x6 cm.).¹⁵

The immense thickness of the walls of M61 and N64 is inexplicable, as in fact is the great variation of wall thickness throughout the whole region. On account of this

apparent lack of method, thickness cannot be taken as a sure indication of a superstructure.

R49 is the continuation of the passage between M33 and R57 and is, in a way, the beginning of the latter courtyard. Its brick-paved floor suggests that it, too, was open to the sky. Connecting with it are the two subsidiary rooms R46 and R48, of which the former has already been mentioned for its unusual content of brick scattered throughout the débris. The walls are completely without plaster, showing with unusual distinctness the mud-brick of which they are made. Scattered over the pavement and in the débris was a large quantity of inscribed clay tablets. The absence of practically all other objects would indicate that this room served exclusively as a tablet storeroom and that these documents were held in containers of too perishable material to have been preserved. The communicating room, R48, shows, by its vase, bowl and large storage jar, signs of active use. The walls were

¹⁵ The door-socket shown on Plan 13 is that of the upper level. The baked-brick floor is that of the earlier pavement.

plastered in the usual manner, and in the western corner was a small brick platform 20 cm. above the level of the pavement.

In R57 is another instance of the custom so prevalent in private houses, of paving with odd sizes of complete and fragmentary bricks. This disregard for appearance is another of the many indications that this is the service section of the building. The complete degeneration into scattered groups of scrap-brick flooring toward the southeastern end is typical of the poorer dwellings outside the palace walls. The use of well-brick in the pavement, however, is not accidental, but serves to turn the direction of the brick to conform to that of the drain. Being shallow, the drain must have been in need of frequent cleaning. Consequently, it was made, unlike the others, part and parcel of the pavement, the cover of the drain being of the same bricks forming the floor of the court. Out of this necessity for frequent cleaning rose the need for a conformity between brick and drain direction.

It is of interest that the same drain also carried away the surface rain-water. An opening in its course just before it enters the R170 wall received the surface drainage which was directed to this point by an even slope of pavement from all sides.

The most interesting feature of the courtyard is the well in the northern corner. The shaft was oval at the top and continued downward in a slightly less pronounced oval, revolving as it descended, to a depth of 24 m., or 1974 cm. below plain level. Though the earth is of considerable dampness, there is, even at that depth, not enough moisture today to allow the accumulation of even the least bit of standing water. The shaft was faced throughout its full depth with well-bricks, beginning with a coping of two courses above the level of the courtyard pavement. Between this coping and the northwestern wall, and occupying the full distance between the two, was a mud-brick pilaster, presumably to hold one end of the draw-bar placed over the opening. The corresponding pillar on the opposite side was missing. Like the well of R96, the 3-4 m. of earth at the bottom was filled with an excessively large number of pottery fragments. Eighteen well-pots (Pl. 69, B) were found complete, along with the fragments of at least twice as many more. Fragments of footed cups, some of them painted (Pl. 79, P), were slightly less numerous, with plain cups and bowls composing the major portion of the remaining contents. The amount of material found here tells of an intensive and long period of use.

The courtyard itself was relatively free of objects. An Ishtar figurine (Pl. 100, J), a tablet and a few unimportant terra-cotta pieces were all that were found.

To the northeast is S58, whose lower floor level is connected with

the courtyard by three steps, each of different height and width. Two mud-brick storage platforms of different heights and sizes fill the southeastern end of the room.

Further to the southeast is the bathroom, R170. The room is paved with baked brick and the walls are protected with an orthostat of a single row of upright brick (Fig. 26). Near the northern corner,

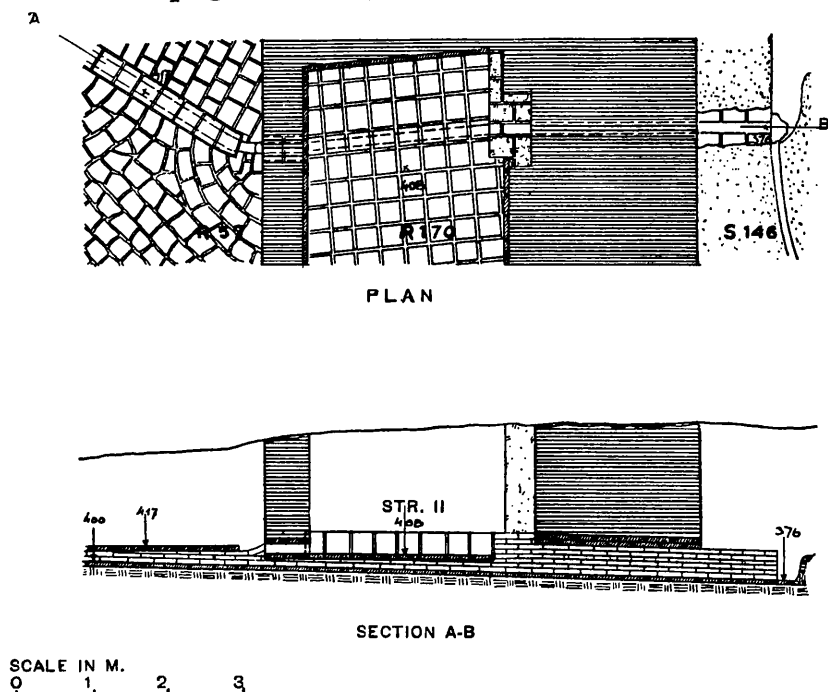


FIG. 26. R57, R170, S146, brick pavements, drain, and toilet.

against the northeastern wall, is a toilet, unique in that it is partially placed within an alcove. The whole of the upper face of the brick work is covered with lime-plaster, while the vertical surfaces are left bare. To compensate for the lack of space available for the two platforms on either side of the seat, that on the northwest is extended to the north corner, acting at the same time as shelf and wall-facing. The drain serving the toilet is that of R57, which from here extends as an exceptionally solid structure well into Street 12. There it joined, presumably, the now almost completely demolished Street 12 drain.

Directly over the R57 drain, as it pierces the wall to enter R170, is another brick drain no longer than the width of the wall about it. Being flush with the floor of R170 at one end and directly over the rain-water opening at the other, it is clear that it functioned as an additional outlet to water originating in R170. Thus, the term "bathroom" is correct.¹⁶

¹⁶ The almost universal presence of brick-paved floors and insulation against the dampness shows this to be equally true of the other bathrooms of the palace.

With R179 there is the beginning of a new group, whose entry is now lost. Of its three remaining rooms, only R179 deserves attention. At both ends the floor rises in one and two steps from the low passage across the center of the room. The two successively higher steps on the northwest, as well as the walls at that end, show unmistakable signs of continued hot fire. The step to the southeast is not burned. What the exact nature of this burnt area was, is not clear. R179 was, in its original outline, larger than seen here, the width later being diminished by an addition to the northeastern wall. It is of interest that when the addition was removed, both the floor and walls it covered showed the effect of the same intense fire noticed first. The room contained no excess of pottery sherds and had two bowls near its southeastern end.

To return to the main group, it is seen that there is a communicating series of rooms and passages originally leading to the R96 group of the Service Section. R188 is primarily a passageway, partially paved with scrap-brick. On either side, two lesser rooms open off it, the northwestern one, R51, containing the sherds of several broken storage jars, a vase, a pot-stand, and a large grinding-stone.

The passage R188 terminates with an abrupt step up into R98, a small room with a strange compartment within its northwestern wall (Pl. 27, B; Fig. 27). Owing to the poor condition of the compartment,

it was impossible to tell the height of its interior, but it is certain that it was greater than the top of the corbelled arch of its doorway. In it were three lozenge-shaped polishers (cf. Pl. 117, J) of purified clay, several pot-sealings with seal impressions, and a collection of fragmentary animal bones.

The third and final group of the Service Section centering about R96 was once directly accessible from the courtyard R57, through R188, R98 and R125, but the subsequent installation of ovens in two of the doorways of R118 completely cut off all access from that quarter. Judging from the

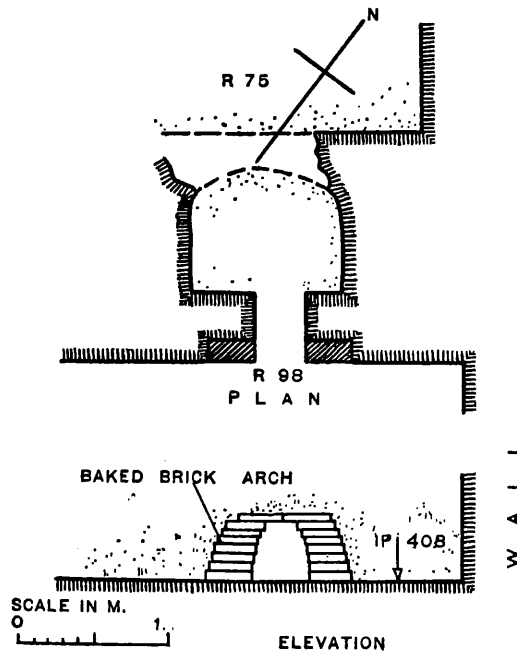


FIG. 27. R98, compartment within the wall.

arrangement of the remaining rooms, this early entry could, at best, have

been but secondary. There is no doubt that the main direction of entry was directly into R96 from the southeast. This long area, R96, and its right-angled continuation, R95, were paved throughout with baked brick. Both were courtyards open to the sky.

The most important group of visible architectural features is that near the rectangular well (Pl. 29, A) between R96 and R118. The most prominent of these is the toilet close to the entrance to R118 (Pl. 13, C). Although it is built in the customary form, it was first thought to have been intended for waste material from the kitchens in R118. However, since we have seen in C32 that the Nuzians knew full well the construction of drains intended purely for liquid waste, it is doubtful if in this case the inconvenient toilet form would have been retained purely for an ordinary kitchen drain. As in Stratum II Group 20, Stratum III Group 13, and in Stratum II Group 30, modesty, as we know it, did not demand that such an important a household fixture as a toilet be relegated to a secluded place. Consequently, one is forced to assume that this served the same need as the others of like construction found throughout the city.

Directly southeast of this, close by the edge of the well, is a rectangular brick platform five bricks long, four bricks wide, and 47 cm. high. Although the ancient use of this structure is not positively identified, its proximity to the well-head relates the two. It is likely that it served as a stand for the large square jar thrown in the well at the time of the destruction, the latter serving as a small reservoir for the convenience of those who came with well-pots to fetch and carry water.

Still further southeast, against the wall, was a fragment of a horizontal oven. All that remained was a flat-bottomed, brick-paved chamber 75 cm. broad and 115 cm. long, with walls and corbelled roof of mud-brick of a total height slightly greater than the floor width. The northwestern end was closed by a flat wall. The southeastern end was too disturbed to show the manner in which the oven was closed off and operated. Unlike the kilns, it was not divided into upper and lower chambers. It is placed below the pavement of the room. It is likely that both the fuel and the material to be cooked or heated were placed within the same chamber, and that the main opening was at the southeastern end, with a vent for smoke in the roof of the opposite end. The inside was baked hard and brittle, and was salmon-colored, showing a higher temperature was customary than in the common circular variety of oven.

Both R95 and R96 yielded generously of terra-cotta objects in a great variety of types, some of which were of the finest quality (Pl. 78,

S). Mixed with these were a few bone pins, scraps of copper and many beads. Lying flat on the floor of R95 close by the northwestern wall were two large limestone boulders (150x60x51 cm. and 170x55x33 cm.), each many times larger than the largest stone found heretofore at Nuzi. The irregularity of their surfaces showed that they were still to be shaped for their ultimate important use.

The construction below the floors of R95 and R96 is illustrative of the elaboration and completeness of the palace drainage (Plan 22). The drain has its beginning in the great court M100, as a line of interlocking terra-cotta pipes running along the southeastern side of the court under the brick pavement. The probability of its origin as a line of upright pipes within the M100-L116 wall, receiving the rain-water from the roof to flush the lower course of the drain (as in R50), has been discussed at length in the account of M100.

This supposition is supported by the relatively small size of the pipes and by their very gradual slope over a long distance. Although drains serving toilets have been found with a volume no greater than these, their slope, as a general rule, has been much steeper in order to overcome the handicap of small size. It can be seen that this drain is suited for the disposal of liquid rather than of solid matter.

On reaching the doorway to R88, the pipes turn toward that room in a right-angled bend. The ordinary pipe is used in the turn, and at those parts of the joint where the angle has destroyed the perfect fit the gaps have been plugged with potsherds held in place by clay (Pl. 14, A). Just outside R88 the pipes join the beginning of the main drain, a broad flat-bottomed channel of brick, covered with a high corbelled vault. This flows at a steeper angle than the pipes which enter it, and extends half the length of the room to the point where it was obliterated by later intrusive digging. Just above this point it is joined by a smaller, normal-sized brick drain which flows under the pavement of R80 from the toilet in M78.

The main drain is found again deep under the floor of R95, turning a right-angled corner into R96 to flow in a relatively direct course to the foot of the mound. In R95 it reaches its full size, 40 cm. wide at the bottom and 70 cm. high, with corbelled walls closed at the top by a single layer of brick. This size is maintained with fair consistence as far as the drain could be traced.

The most interesting feature of this drain is the means provided for clearance of obstructions. Throughout its course, at fairly regular intervals, are vertical brick shafts which lead from the surface down to the interior of the drain. These shafts and the main channel are

large enough to have admitted a small man or a boy to clean out the passage. It will be noted that at each turn of direction, where there is particular danger of obstruction, a manhole has been provided, as well as at regular intervals in the course of flow between corners. The shafts vary considerably in height, and from the level of their openings it is possible to reconstruct with certainty the slope and level of the southeastern face of the mound in the time of Stratum II. There is also a slight variation in the diameter of the shafts, but in no case are they so small as to defeat their supposed purpose. In two cases the plan is changed from the customary rectangular manhole to a circular one (Shafts V and VIII). It is clear that the builder did not meticulously follow a given plan, but built as it seemed to him would be most suitable for a particular spot.

Shaft M is the only other point at which subsidiary drains poured into the main channel (Plan 21). Drain I originates with the toilet next to the rectangular well and flows through a variety of conveyors before it reaches Shaft M. Its contents are first received into two sections of terra-cotta pipe of unusually large size (Pl. 97, B). The upper portion of the first section protrudes well above the pavement (Pl. 13, C), and is already set at the steep angle that characterizes the whole course of the channel. The pipes empty into a small covered brick drain of normal size at the point where it turns in the direction of Shaft M. This discharges into a length of open terra-cotta channel, square in section and covered with brick, and finally again into brick construction emerging well up near the top of Shaft M.

Drain II flows across R70 and R75 after serving the two toilets in R72 and R66, and empties into the main drain below the outlet of Drain III in Shaft M. It is of brick throughout and of the small size characteristic of channels of shorter length.

Drain III presents difficulties not encountered in the others. Its point of origin is a baked-brick square of pavement extending slightly under the northwestern wall of R96 and lying 70 cm. below the regular Stratum II pavement which spreads over it in an unbroken surface of evenly laid brick. This platform is edged on its southwestern side by a low wall of *libin*, as though forming a screen or basin at the source of the channel, while directly around the beginning of the channel is a circle overlaid with bitumen as though to seal the union with a vertical pipe. It is possible that here, at an earlier period, a supplementary supply of rain-water from the roof aided that coming from M100 in flushing out the main drain.

That Drain III is earlier than Stratum II is obvious. Its position

below the unbroken pavement and its own square of pavement extending under the Stratum II wall are sufficient proof. This same proof established the fact that the main drain also was built and used at a time prior to the Stratum II level of R95 and R96. Continuous use throughout two periods would have entailed no alteration other than the heightening of its vertical shafts. The outlet of Drain III into the main channel shows that from the beginning, Shaft M was an integral part of the system. Consequently, the ensuing rise in general level was accomplished with such care that no signs remain on Shaft M to show the change.

By the same token, Drain II is shown as contemporary with the earlier phase of the main drain, since its outlet into Shaft M could not have been built immediately under the course of Drain III without having disturbed the latter channel. Unlike Drain III, it continued in use to serve the toilets of the later building.

Drain I, on the other hand, clearly originated in Stratum II, for its outlet in Shaft M is at a height equal to the earlier pavement level as shown at the source of Drain III.

The final outlet of the main drain and the disposal of its contents is unknown. Its course could be traced well toward the foot of the mound before it completely disappeared. Its direction was roughly toward the city gate, but whether it flowed through it or through the wall to the outside of the city could not be determined. Considering the pains taken thus far to insure its course well beyond the palace confines, it is likely that it was continued beyond the city boundaries to discharge its unpleasant burden on the uninhabited plain outside the wall.

The square well and the battery of eleven ovens in R118 and R125 show these two rooms to have been the palace kitchens (Pl. 21, B). The absence of ovens elsewhere in the palace must mean that the cooking was done in one special place such as this. Since the palace was not preserved in entirety, it is uncertain whether this was the only kitchen in the building, but the size and arrangement of this kitchen, close to the well and to the drains of R96, show it to have been carefully planned and of sufficient size to care for the daily needs of the palace occupants.

The ovens did not always preserve the traditional completely circular outline but were built, in one case, against an adjoining oven, and against the wall in another, the required floor space thus being reduced without causing any great decrease in the baking surface inside.

It is apparent that the kitchen, at least in its final magnitude, was

a relatively late addition. The doorways to R98 and R125, blocked with ovens where once there had been free passage, show this clearly. It is also quite probable that the toilet in R96, whose drain has been shown to be later than Drains II and III just discussed (Plan 21), is contemporary with the later installation of ovens. To which period the well belongs is not clear.

The well separating R118 from R96 reached the depth of minus 19.25 m., or 22.35 m. below the pavement of R118 (Pl. 29, A). It is the only example at Nuzi of a rectangular well, and it is difficult to understand why that form should have been adopted. Not only does it lack the strength of the circular, brick-lined well, but it is more difficult to maintain a perfect line in a shaft of that depth. In spite of the difficulty involved, the evenness with which the rectangular outline is maintained is surprising. Throughout its entire depth, its corners remain perfect right angles, and the flat plane of its sides does not vary.

A brick lining extends from top to bottom and protrudes above the level of the pavement of R118, showing that a curbing had once been about the well-head. Too little is left to give even a hint as to its former height, but, judging from the quantity of lining bricks found loose within the débris filling the well, it would seem to have been at least waist-high.

On either side of the curbing to the northwest and southeast were two mud-brick structures, one a pillar and the other a continuation of a wall, on which once rested the draw-beam.

In the northeastern and southwestern walls of the shaft was the usual vertical row of holes, 60-80 cm. apart, forming the steps by which the workers ascended and descended in the course of original construction.

In digging out this abandoned well, great quantities of potsherds and complete vessels were found in the last four meters of its depth. The type of vessel most frequently found was the medium-sized pot which has been called "well-pot" (Pl. 70, A; cf. Pl. 69, B). Being practically the only type of pot found in the wells at Nuzi, there can be no doubt as to its function. The construction for an overhead draw-beam would indicate that there was a rope and permanent draw-bucket of some type and that these well-pots tumbled in from time to time from their resting places on the curbing. Shouldered cups were found next in quantity, with plain cups (Pl. 76, D) in slightly lesser numbers. Besides these were quantities of bowls, a few vases (Pl. 74, F) and fragments of a single narrow-necked, round-bellied pot having on its side remnants of an elaborate painted design (Pl. 69, A). This piece,

whose paint was preserved by insulation from the air, is the only example of a large vessel so decorated. These many vessels, as well as the cylinder seals (Pl. 118, H) and bone pins, must represent the accidental losses of those who came to gossip and quarrel and draw water.

The accumulation of four meters of débris at the bottom of the well, and the unusually large number of vessels found therein, indicate an intensive use and probably a long one.

Difficult to explain are the fragments of over a hundred bone pins, among which were the two beautiful and unique examples carved to represent gazelles' heads (Pl. 127, T, U). Evenly distributed throughout the sherd-filled débris, they must represent a gradual accumulation during the life of the well. That they were appurtenances of dress, possibly for the hair, and that they tumbled into the well while the wearers were drawing water seems fairly certain. Why, then, were none found in the other two fully excavated wells? It seems unlikely that they were worn only by a certain class of person using only this well, both because of their uniform distribution throughout the city and because of varying degrees of decoration and beautification seen on the separate specimens. It is more likely that they were the appurtenances of one sex which in the palace used this well alone.

Immediately overlying the deposit of sherds marking the last bottom level of the well when in use were the fragments of a large, square, terra-cotta tub or jar (cf. Pl. 82, E). This probably rested on the brick platform west of the well and was thrown down by the looters of the palace as an act of malicious destruction. Above this was a large quantity of brick of two different types, the majority being identical with those used for the well-head. The bricks of the other type, the same in width and thickness and twice its width in length, must have served a different purpose, and may have been either the top of the coping or the bearing surface for the overhead draw-beam. Above this deposit was plain, undisturbed, earth fill.

This last bit of evidence is important in that it shows the well to have been abandoned at the time the rest of the building was destroyed, never to be used again. If the palace had been rebuilt in Stratum I, it would be expected that such a perfectly made structure as this well would have been restored. That this débris is not the product of later use is evident from the absence of any upper structures in this region, from the intact condition of the rests for the overhead draw-beam, and from the fact that the well-lining extends to only slightly above the pavement of R118. All this serves as further proof that the palace, as such, ceased to exist after it was destroyed in Stratum II.

Other rooms besides R118 lead off from the courtyard R95-R96. R71 contained no objects of note and appeared to have been mainly an ante-room to the group M78-M79. The niche near its western corner to make room for a door of full width suggests that the M78 doorway had not always been as narrow as seen here. As it now is, it certainly was not a main entrance to the R96 group and probably was a purely private way for the occupants of the two connecting rooms.

R76 is next to it and is of note for its low bench along the north-eastern wall and the traces of red color found in the débris. Four pot-stands, several lesser terra-cotta vessels and a number of inscribed clay tablets lay on its floor.

At the extreme end of R95 is the small room R83, notable for its large number of copper nails (Pl. 123, K), of which one is a unique decorative piece with a flower or sun-disc head (Pl. 123, L). This was apparently the central figure of a design in which the plain nails also played a part, but what the original composition was, or what it decorated, is unknown.

In the western corner of R84 was a small stone door-socket serving the R95 doorway, and on the walls were still traces of red pigment. The room yielded but two objects. The first is a crude duck weight of twenty minas value, with two marks on its neck for the two units of ten minas each. The second is a pot-stand on whose side is smeared a black arrow symbol. It is of interest that several well-pots from the R96 well nearby are smeared with identically the same sign (Pl. 70, A). It is presumable that this was an owner's or user's mark, and that those pots so distinguished belonged in R84 and rested on this portable and similarly marked stand.

Communicating with R84 is the inner room, R81, also having a stone socket in its western corner. Three bowls (Pl. 89, O; Pl. 90, M), two very small shouldered cups (Pl. 78, D), a large storage jar and a pot-stand found in the fill serve as positive signs of the room's domestic use.

PRE-STRATUM II OCCUPATION

Important though it was, opportunity did not allow a thorough investigation of the levels preceding the complete palace of Stratum II. There are, however, certain spots where necessity or chance led to deeper excavations within its boundaries. Because these are so scattered and incomplete they do little but hint of the past history of the building, and are of interest mainly in illustrating the alterations in plan in the rebuilding that resulted in Stratum II.

Of interest in the region of L11 and L20 is the divergence of the

Stratum II building from its predecessor (Plan 11). In L11 the outline is apparently identical in the period immediately preceding Stratum II to that of the final building, with its doorways into room L9 and L20 remaining also in the same position. The early condition of the doorways into L12, L14 and L29 was not investigated.

In the earlier level of L11 is a raised platform along the northwestern wall such as was found in the room of Stratum II. L9 was originally much the same as in the later period, with a doorway into L7 and L8 over a wide, baked-brick door-sill. The lower level northwestern wall of L9 was not re-used in Stratum II, but the position of the succeeding one was so close to it that the slight divergence in direction can be regarded as an error of rebuilding rather than an alteration in plan.

The principal divergence in plan is seen in L20. That which in Stratum II comprised the rooms L20, L10 and L99 was, in Stratum III, a single paved courtyard whose bricks were kept as foundations for the later Stratum II walls. The boundary of this court on the southwest was the wall separating it from L11, continuing in a straight line from that which in Stratum II was the southwestern wall of L10, and extending at least as far southeast as the position of the later room, L116. The southeastern boundary could not be found. Had the southwestern wall extended farther southeast than the position of L116, Stratum II, the pavement of the court should have been found used also for the foundation of L116's southeastern wall as it was for all other Stratum II walls. We can then presume that the southern corner of the earlier court was somewhere within the confines of L116, Stratum II. On the northwest, the earlier wall corresponds to that of L99 and to the line of the northwestern wall of M100, Stratum II. At the northern end of this wall was a single facing brick showing a right-angle change in direction to the southeast. Whether this actually marks the beginning of the northeastern wall or whether it is just a step in its line cannot be stated with certainty.

The drain under the pavement flowing northwest toward Street 5 seems obviously to have belonged to the earlier courtyard and to have carried away the accumulation of rain-water. This same drain was re-used in Stratum II to carry away the moisture seeping down from the water filters built above this point.

In the western corner of this earlier court and extending northwest is one of the only two examples of a stairway leading to the upper part of a Nuzi building. Beginning as a relatively broad stairway it ascends three comfortable steps, each 9-10 cm. high and 30 cm. deep, before it

is broken by later rebuildings. That this stairway served a purpose apart from the adjustment of a slight difference in level between rooms is evident from the fact that no room exists beyond it. Instead, there is only a solid wall of unusual width. Only the city wall at its widest equals this, and it is obvious that for ordinary structural purposes it is not only unnecessary but uneconomical of space, material and effort. If, on the other hand, it had a stairway rising through it, the unusual width would be sufficient to allow the ascent of the stairway and to leave walls on either side suitable in width for the size and dignity of the room they served.

Since there is no reason to believe that second stories were common in Nuzi buildings, it is probable that the stairway ascended to the flat roof whose broad expanse may well have been put to a use other than that of protection from the elements.

The L11-L20 doorway is protected by an orthostat of a single row of upright brick the full width of both jambs. Turning the corner into L20, it extends 188 cm. southeast and 181 cm. northwest. These bricks are covered with bitumen, and, where they cease in L20, traces of bitumen were present to show that the mud-wall in its contact with the brick pavement was protected in the same way.

In the alteration which followed this building, drastic changes were made in the plan to create the palace of Stratum II. The area which had been courtyard was replaced by L20, L99 and L10; and a new courtyard, M100, was established beyond L20. The stairway was abandoned and in its place was put L10. It is of interest that the rebuilders added greatly to the thickness of the wall separating L11 and L20, beginning at the doorway to L10 and extending the full remaining length of L20. A wall of such great width was structurally unnecessary, since, other than the roof, it supported no known structure above it. It could have existed only to give an atmosphere of grandeur to the entrance of the main room, L11.

The most significant fact resulting from these discoveries is that L11, to judge from its size and end-wall bench, was a room as important in Stratum III as in Stratum II. In fact, the addition of subsidiary rooms on the northeast in the rebuilding of Stratum II suggests that even earlier the approach was not considered in keeping with the importance of the main room. One might suggest that just as L11 was the spot about which the whole building revolved in Stratum II, so it was in times earlier, and that from here the palace grew throughout the centuries to its final great size.

The difference in level between Strata II and III is only 15 to 31

cm., but it is doubtful whether this small separation would indicate as short a lapse of time as an equivalent one in the private houses. It is probable that any rebuilding would be preceded here by a much more thorough removal of débris, resulting in a slighter rise in general level.

Only 9 cm. higher than Stratum III there was a sign of an even earlier building. Within the outline of L11, as it stood in Stratum II, and directly in the center of its opening to L20, was a brick door-post well, at the bottom of which was a stone socket (Fig. 28). The wall

against which it was placed was exactly in line with that of Stratum II. Thus, there is here evidence of a third building preceding Stratum III in which the position of the L11-L20 doorway was slightly farther to the southeast.

It is, at first, confusing that the earlier socket in L11 is 9 cm. higher than the general average of the later Stratum III pavement in L20, but it is clear when one realizes that both Stratum III and Stratum II used the same L11-L20 doorway and that the wall against which the door-post well is placed passes across this same opening at a level deeper than either Stratum II or III. Consequently, the higher level of the well must mean that the general elevation was higher in L11 than in L20.

This is the deepest level in which the outline of L11, in more or less likeness to that of Stratum II, can be traced. An even deeper floor was found at a level of 304 cm. above plain level (Plan 5, B).

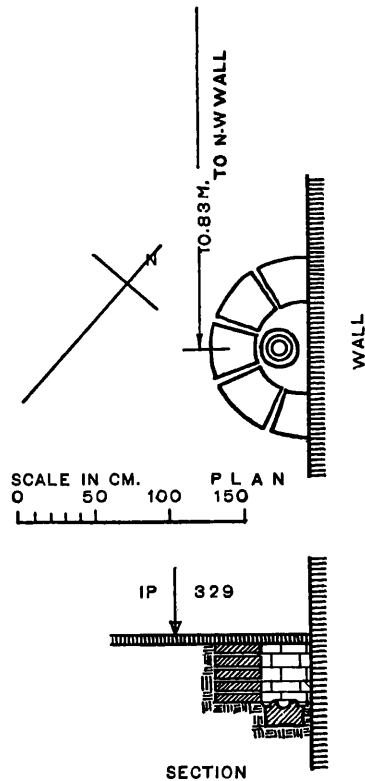


FIG. 28. L11, pre-Stratum II door-post well and socket.

Though it is bounded by the familiar walls of L11, it is not at all certain that it served a room of the same outline. The walls serving the upper three levels were shown to have been trench-laid walls and, consequently, are deeper than their earliest floor.

Still 34 cm. deeper, at a level of 270 cm. above plain level, was a portion of scrap-brick paving, again near the doorway to L20. The same doubt as before arises as to its association with a room of similar outline to the L11 of Stratum II. Below this no occupation layers were found until Pavement IIA of the transitional period was reached (Plan 5, B; 5, C).

Thus, there are three definite levels in which the palace as such can be recognized, and two further ones which may have been associated with even earlier central buildings. The probability of these two earlier levels having belonged to a similar palace building is strengthened by the evidence of the main drain as seen in R88 and R96. It was pointed out earlier that the main drain of Stratum II originated in a period considerably earlier than Stratum II as seen in R96. Consequently, it is a reasonable presumption that the main channel in its final state originated with the same level recognized in L20 as Stratum III.

Following the drain to R88, it is seen that there are remnants of two even earlier drains (Plan 22). These could have served only successively earlier buildings and would have been contemporary with the two earlier levels of L11 immediately preceding that of Stratum III. This is of particular importance in that it shows that the palace, in part at least, had the same plan seen in its final stage. It shows, moreover, that one more level than could definitely be assigned to the palace in L11 and L20 actually did belong to such a building.

POST-STRATUM II OCCUPATION

The evidence given by the R96 well, that the palace as a building was never re-occupied after its destruction in Stratum II, is substantiated by the conditions seen on its southwestern border in Stratum I. In this period two rooms, P341 and P357, belonging presumably to a private house, extend over the area which in Stratum II had been occupied by the southwestern boundary wall of the palace. Consequently, they serve as positive proof that the palace, at this point at least, did not exist in Stratum I, and offer a strong argument for the belief that the palace was never reclaimed after its Stratum II destruction. Moreover, there was nowhere in the entire building any indication of a rebuilding after this great demolition.

There is, however, evidence that one spot formerly within the palace confines was used again by the Nuzians. Scattered pavements, mostly of well-brick (Pl. 15, D), were found in the region south of R96 and R426. From these a drain flows north as far as, but not connected with, the main drain of R96 (Plan 13). The construction is undoubtedly Nuzian, yet its high elevation excludes it from any level other than that of Stratum I. It is significant that at this spot even the remains of Stratum II are scantily buried; and if there had been a Stratum I rebuilding of the palace, it would certainly have been more evident in the major part of the building than here. Thus, we must assume that

this was a single Stratum I structure unassociated with the plan or building that in Stratum II had been the palace.

There are further signs of a casual use of the palace area in much later times. An upper scrap-brick pavement in the region of K36, another within M100, and a pot of late type sunk into the upper section of the northwestern wall of L25 show this rehabilitation. The pavements were high above the Stratum II level and were similar in construction and material to the Late Period remains found scattered over other parts of the mound. But it is extremely doubtful whether the builders of these late pavements re-used the stumps of the earlier walls as they did elsewhere.

CHAPTER VI

NUZI: NORTHWESTERN RIDGE

That area called the Northwestern Ridge occupies the high and even rise between the palace and the northwestern edge of the *tepa*. It includes the temple which, because of its complexity and importance, has been treated separately. This area is the most extensive one of the city devoted to private dwellings. In it the plans of several house groups are preserved almost perfectly, and their size suggests that those who lived in them were people of a somewhat wealthier class than those in other residential districts. However, the units are not more perfectly planned than those of the Southwestern Section, nor are the objects any finer or more numerous than in any of the residential sections yet to be discussed.

The even appearance of the surface gave rise to the hope that what lay below would be equally intact, but as can be seen from the plan, many obscure and disturbed areas were encountered.

STRATUM IV

In three places on the Northwestern Ridge, levels earlier than Stratum III were reached. Two of these (Squares G and I) are isolated and incomplete, while the third (in Square H) is necessary for an understanding of its later phase in Stratum III. Consequently, though they are shown on the plan of Stratum IV (Plan 10), each will be described in conjunction with the group occupying the same area in Stratum III.

STRATUM III (Plan 11)

Group 1. A1, F5. Since this group consists of only two rooms, one would at first be inclined to say that it is only a fragment of a much larger building. However, in the level above this, the position and arrangement are the same as seen here, without any seeming relationship to the groups that surround it. This is almost positive proof that here it stands as it originally was in Stratum III in its entirety, since the later building undoubtedly reflects the plan of the earlier one. It is seen there that not only these two rooms, but the long passage-like room A3-F10 to the southwest, have no direct place in the surrounding groups. This leads one to believe that originally this was an open space too small for the size of house typical of this section. Later, after

the buildings hemming it in on three sides were well established, some neighboring householder put it to use by subdividing it into smaller rooms. They do not in any way appear to be ordinary living rooms, and they may well have been put up by either of the fronting householders for use as supplementary storage space. The same practice may be seen in the village of Tarkhalan today where the change in position of an outside doorway has made a dead-end street of one that had formerly been essential, and it is not uncommon for these abandoned passageways to be taken over by the adjacent householders, segregated by cross-walls and used as extra space for cattle or for storage.

F5 is one of those doorless rooms which cannot be explained by the presence of a high door-sill. From its lowest pavement on Stratum III to well above its last pavement in Stratum II it presents an even, perfectly laid, unbroken *libin* wall in which every separate mud-brick may be seen and its bond traced. Having one positive example (G73, Temple A) in which such a room is entered not from the roof but over an opening high in the wall between the two rooms, we may assume that this also was entered in the same way.

Little came from either of these two rooms. A1 yielded a bone pin and a faience cylinder seal of typical Nuzi design. F5 contained a copper arrow-head and pendant, a few pieces of pottery intrusive from the Late Period.

Group 2. B16, B10, B13, B4-G2, G4-G5-G17, G1, G11-G12, B7, B3, B43, B1, B2, G3. Group 2 has, in common with other buildings of the Northwestern Ridge, rooms within its boundary walls which have no connection with the main part of the house. This refers to B3 and to the series B43, B1, B2, G3. B3, having a doorway into the court B4-G2, was undoubtedly designed as an entry-room. However, this doorway, though not completely blocked off, had been rendered useless as a passage by its conversion to a hearth. Two roughly rectangular flat stones had been placed on edge against either jamb of the doorway, and the space in between showed a moderate deposit of ashes. These stones probably served a double purpose as wall protection and cooking-stand. Since the rest of the building was well supplied with ovens, it may be that this hearth and the two circular ovens within the room were for the use of the series of four rooms to the northeast and had communication with them either by Street 10 or in the manner of doorless rooms. The room was certainly a kitchen, judging from the quantities of household pottery, complete and fragmentary, as well as a large number of sheep bones, and a stone pestle and grinder.

If contact between B3 and B4 was permanently cut off, we may

assume that the point of entry was from Street 10 into the room between B10 and B16. The presence of a well piercing B10 from an upper level makes it probable that in this level also there was a well which was used again in later times. Except for an animal figurine and a votive chariot fragment, both B10 and the entry-room were barren of objects.

The courtyard B4-G2 is built on a grander scale than usual for private houses and evidently was the scene of considerable activity. Three large storage jars (Pl. 68, F) were found within it, and a considerable quantity of beads. On the earlier pavement of this level was a covered brick drain slightly larger than usual, running from B7 through the doorway into B4. When the latest pavement was laid the drain was in part removed. It is presumable that it served originally to carry refuse from B7 to Street 10 (the closest outside point)—an unusually long drain for a private house.

B7 is the most important room in size and can be entered either from B4 or from G11-G12. As is frequently the case with the main rooms of houses, it yielded few objects: namely, a crude animal figure, a spindle whorl, several glass beads, and the fragments of several bone pins.

G11-G12, with its broken wall at the southern corner, suggests another outside entry-way. This impression is a false one; there is no positive reason for believing that an entry ever existed at this point. The oven at its northeastern end means that this room must have been at least partly uncovered to allow the smoke to pass out. Unlike B3, it was relatively bare of objects.

G4-G5-G17, judging from the position of its ovens, must have been uncovered over the greater part of its area. The two ovens shown here are of the same earlier pavement to which the B4-B7 drain belonged. In the later pavement the northeastern one was rebuilt with a slightly larger circumference and the other was retained as seen here. Again, the quantity of objects was small, though not so meagre as in G11.

The series of rooms beginning with B43 and running the length of the building is a curious one. It has no doorway connecting it with the rest of the building, yet it is obviously a part of the group. One can only assume that it was for a separate purpose or for a family not needing entry to the main building. There were traces of an oven in the southern corner of B1. By far the greatest number of vessels and objects, all of the usual type, came from B2.

Perhaps the most interesting feature of this building is its large number of ovens. Though it is customary for these buildings to have ovens, it is unusual to find six; only the palace kitchen contained more. Since this number is far in excess of the demands of the household, it

is not impossible that this was the house of a baker who either made his products for the market or supplied the facilities to those who would come to bake for themselves. The duck weight from G3, though not positive proof, is indicative of trade carried on within the home.

Group 3. G14, G36, G66, G41, G59, G64, G65, G61, G64A, G32A, G58, G60-G49, G34, G26, G37, G31, G42, G57, G28, G56, G55. In this group we have to deal with a series of rooms so incomplete that little can be surmised as to its original layout. Because of its proximity to the temple, it must either have been one unusually large unit devoted to purposes other than those of most houses, or else it represents the fragments of two or more separate houses. In support of the first hypothesis is the unusual size of the courtyard G14 and the large room G32A, whose oven implies that a part, if not all, of this latter space was also without a roof. The strange circular room between G65 and G59, and the general absence of walls, gives to this northwestern portion of Group 3 an unusual aspect. Since the northwestern walls of G34 and G26 are both broken it is possible that there may have been doorways here. Though it is not true that every broken wall marks the position of a doorway, it is evident that a doorway is the wall's weakest point and the most likely place for collapse. Two large storage jars and an oven in G34 indicate that the room must have had a normal doorway uniting it with G32A. If G26 had a doorway to the northwest, all the rooms southeast of it were accessible to the whole group.

In contradiction to this it can be said that there is no proof of doors leading northwest from G34 and G26, and that G34 could well have been entered from G26, in the manner of doorless rooms, despite the absence of a well-defined doorway. The thickness of the walls between G58 and G59 and between G34 and G32A is such as would be expected between separate houses, and in both size and arrangement the rooms of the southeastern portion are essentially different from those on the northwest.

Although any opinion on this question must be based on supposition alone, it seems likely that this area is composed of two separate groups, with the northwestern walls of G58, G34 and G26 as the dividing line.

Ample proof is found to show that most of this area did not survive as a building site after the time of Stratum III. The greater part of G14, that part southwest of a continuation of the line of the northeastern fragmentary wall of G32A, was filled with a heavy deposit of ashes and refuse of the customary gray-green color found in streets and rubbish-heaps. This varied in thickness from 60 to 180 cm. above

the pavement of Stratum III and continued in diminishing thickness to the end of the traceable walls on the southeast.

The end of a fragmentary brick drain flowing southeast from near the southern outside corner of G36 no doubt marks the position of a street identical in location and direction to that of Stratum II. The end of a similar drain running from the southern corner of the circular room further substantiates this. The latter is obviously broken at its northeastern end and probably once extended far enough to serve G59.

The Stratum IV walls in this group are in many places at variance with those of Stratum III and should be used only with the greatest circumspection as a guide to the position of missing Stratum III walls.

In the southeastern half of this group it is possible that we have the remnants of two buildings. The wall between G58 and G34, being of two thicknesses built one against the other, may be the line of separation between the two. Deserving special notice are the door-socket within G58 at its door to G49-G60, and the scraps of brick pavement in G49. G42 has traces of red paint on its southeastern wall and a hearth made of one exceptionally large brick sunk in the pavement of the northwestern half of the room. G31 was filled with a more than usually thick bed of refuse earth and ashes, very black in color.

G37 is of particular interest in that it is connected with G26 by a low arched doorway (Fig. 29). This is one of three arches in mud-brick found at Nuzi. Its construction is more perfect than that of S174 (Pl. 26, B) and is almost a duplicate of the one of C15 (Fig. 31). Its clearance is typically slight, with only 120 cm. between the pavement and its highest point inside the doorway. G37 has the greatest quantity of household ware of the entire group, but even so, the quantity is small in comparison with rooms of other groups.

G34, as noted before, need not be considered puzzling simply because it has no communication to the south or southeast. The alcove near its southern corner suggests a high-silled doorway into G42. Its two large storage jars, one of which is shown in the eastern corner, and its oven in the northern corner, mark it as a room of considerable use.

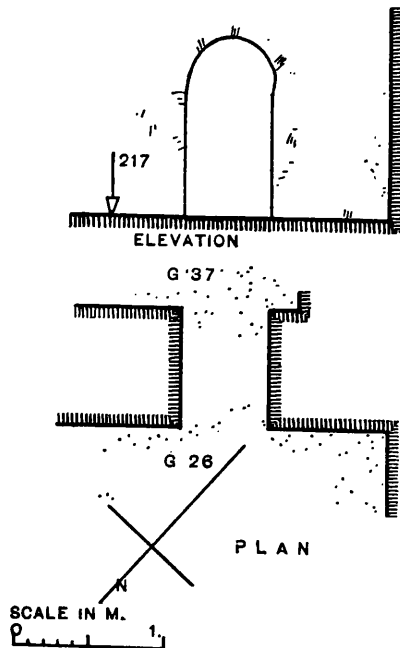


FIG. 29. G26-G37, arched doorway.

It is of interest to note the change of orientation to conform to the positions of the northwestern and southeastern temples. G36 and G14 maintain the orientation common for the mass of the Northwestern Ridge, but with G32A the direction has already changed more to the east-and-west orientation to conform with and occupy the space left by the offset of the southeastern temple.

Group 4. B30, B23, B34, B37, B42, B21, B25, B20, G10, B24-G15, B39, B40, B36, B18, B33, B28, B17. Entry to this house was from Street 10 through a doorway near the northern corner of B30. Apparently, there was another entrance south of this where the jamb of the doorway to B34 turns northwest to form the jamb of the second courtyard doorway. More than one entrance to a house is not uncommon, but this is the first of two examples in which both doorways lead into the same room.

The well next to the northwestern wall may help explain these double doors. This is the only certain source of water found for this whole Northwestern Ridge, although there may have been others at the foot of the mound or in buildings now washed away. Being thus centrally located, it is not unlikely that it was used by the neighboring householders. If so, two doorways to this well-court would not have been excessive for the continual traffic of those coming to fetch and carry water.

This well differs from any other found at Nuzi in that its baked-brick lining ceases before reaching the surface (Fig. 30). At that point the diameter increases sharply with a funnel-shaped shaft, unprotected

either by *libin* or baked-brick lining. When the full diameter has been reached, a lining of mud-brick seven courses deep is used, extending as a coping 25 cm. above the floor of the room it serves. This is the only example in which an intentional change in diameter has been found, and the only one in which baked brick has been used in conjunction with *libin* as a lining material. The shaft was not cleared to its full depth.

A portion of scrap-brick pavement extends from the

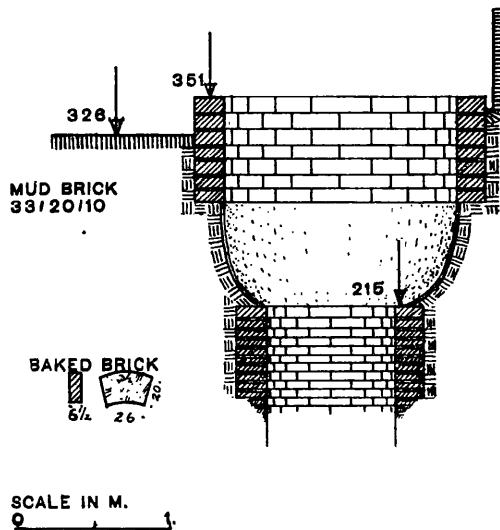


FIG. 30. B30, well-head.

doorway of B42 across the court, toward the northern outer doorway. Within it is a covered brick drain. The paving probably extended as a walk to the street door (cf. House of Shilwi-teshub and Temple A) to give firm footing to those who crossed the open court in wet weather. The drain must have poured into Street 10, either through the doorway or through the wall of B23. Thus we have here a second example of a drain leading from the doorway of the main room and crossing the court. It is of particular interest that only in these two neighboring houses, Groups 2 and 4, is this arrangement found. In all other cases the drain originates either in the courtyard, or in a small room requiring special drainage, as in a room definitely set aside as a bathroom. Such a pronounced difference, in quarters which were large enough to permit separate rooms to be set aside as bathrooms or cooking places (as was done in much smaller units in other sections of the city), would indicate that the occupants of this group lived according to a different custom, either because they belonged to a class demanding certain caste observances of daily life, or because they were an alien people retaining their foreign customs. The latter is not impossible when we consider the racial mixture inevitably following the subservience of the Nuzians to the Mitanni. It is to be expected that officials and their staffs would come from the Mitanni capital to settle in this new outpost of the empire.

B23 is in reality a part of the court and has been separated from it by the screen wall protecting the three ovens. The pavement about the ovens was covered with a thick layer of white ashes, probably the product of a store of fuel amassed for the next baking.

B42 is the room about which the group centers. Unlike most such rooms, it has but one entry-way. It had at one time another doorway, leading into B25, which was later closed by doubling the thickness of the separating wall within B25. In spite of this change, a former doorway was retained in B42 in the form of an alcove. Another alcove existed near the eastern corner, but it was originally built as such and was not the result of alteration in the opposite room. Still another alcove was created by the projecting wall near the southern corner of the room. This wall, from its very slightness, could not have extended much higher than its present 76 cm., the full remaining height of the Stratum III walls. The gray panel which flanks the central red panel on this end wall is within the space created by the alcove. Consequently, the screen wall could not have extended much beyond its present height without disrupting the traditional symmetry of the design. The screen is carefully plastered, as are all the other walls of the room, and its

projecting end is modelled to a rounded outline on which are traces of the same gray color which covered its sides.

Both the northern and western corners of the room are rounded by the plaster that covered the walls, giving a more finished appearance than is ordinarily seen. The other two main corners were probably finished in the same manner, though no traces remain.

All of the walls of the room were covered with paint. The northeastern and southeastern walls showed signs of two periods of decoration, the first placed directly on the *libin* wall and the second on a coating of thin plaster, 2-3 mm. thick, placed over this earlier decoration. The northwestern, northeastern and southeastern walls were covered with a flat gray color over their whole surface, as was the projecting wall in the south corner. The southwestern wall was the one singled out for special treatment. From the southern corner within the alcove created by the thin projecting wall the color is gray, changing to red after passing this projection and continuing red for 118 cm. At the end of the red color there are the faint but certain remains of two parallel black lines 2-3 mm. in width and separated by 17 mm. of gray. These are not vertical, but slope toward the south corner at a 12° angle. From this point on to the western corner, including the two door or alcove jambs, the color is again gray, with one exception: 45 cm. above the pavement and touching the northwesternmost of the two black lines just mentioned is the trace of a semicircle of red. This of itself is unimportant, except that it indicates that these two lines formed the border to the red panel and were themselves bordered by a more ornate design (cf. Plan 23). The broad red panel, as we have seen in G67 of the temple, is laid over gray, apparently the base color for more elaborate decoration.

The débris near this wall contained many fragments of wall painting in an elaborate figured design, and gives further evidence of the custom of placing the main design high above the broad red panel at the end of the room. The three fields of solid color extended unbroken to a height of 76 cm. Consequently, one can only say that the figured design began at some point higher than 76 cm. above the floor.

Traces of the Stratum II wall were found corresponding to within 2 cm. of the position of the older wall. In the later building the same decoration was maintained, though in somewhat different proportions. The red panel starts at the same point on the south, but extends 184 cm. instead of 118; and where it turns to gray there are no separating vertical black lines. The color used in the Stratum II decoration is different from the older, the red being lighter and nearer to vermilion,

while the gray is more bluish. This, at first thought to be due to exposure, is in reality a difference in pigment, for other Stratum II wall paintings, showing the tone of the earlier colors, have been found in even more exposed positions.

B21 unfortunately had no constructions or objects to indicate its use. On the other side of the court are the two rooms B34 and B37. Ordinarily, these would be gatekeeper's rooms, but since the walk from B42 shows that the owner used the further doorway, it is clear that they were not for this purpose, unless they served the other door used by those coming for water.

A doorway at the southern corner of the court leads into B25 and to the rooms that flank the southwest and southeast of the main room. B25, as noted before, once had a doorway to B42, but this contact was cut off by a thickening of its northeastern wall. A doorway leads into B20, whose only distinguishing feature is the small storage pot set into the pavement in the eastern corner. Directly connected with B20 is G10 in the southern corner of the group. The pavement of this room is unusual in that it is on two levels. A narrow strip extending from the B20 doorway parallel to the southwestern wall is 36 cm. lower than the rest of the room, the change being accomplished not by a slope but by a vertical step. The explanation of this is difficult, since the lower level is not in communication with the doorway, and therefore could not have been the usual passage to a platform on which jars were stored. It does not seem likely that it was a receptacle to receive liquid which seeped out of jars stored here, since this room fronts Street 6 and a drain would have served the purpose more efficiently and without danger of undermining the walls. It was certainly made for a definite purpose, and may have been a temporary bin for some article of household use or manufacture.

The only door-socket found in the building is in the northern corner of G10 serving the door to B24-G15. Near the western corner of this new room, and partly blocking the door to G10, was a large storage jar of the usual type on which was scratched the crude figure of a humped ox, done while the clay was still unbaked and when the jar was upside-down (Pl. 65, D, E).

The group of four rooms B33, B28, B36, and B18 is puzzling; it is the largest group so far encountered without visible means of entry. The walls extended to a height sufficient to show that there were no doors with high sills. The entry, as in G73 of Temple A, must have been over a high wall from one of the adjacent rooms. Since the wall separating B36 and B42 is the narrowest, it would seem likely that

entry was at that point. Of these four rooms, three are connected with doorways in the usual manner. The fourth, B28, is doubly isolated by having no doorway to the other three. The diversity of objects from this series proves that these were not storage rooms but were lived in. Why this peculiar seclusion? One at once thinks of the segregation of women's quarters in Muhammadan countries today, but this does not hold here, for doorless rooms are not universally found in Nuzi houses. Moreover, this is the only instance in which there is more than one room so placed in a group. All that can be said is that in certain cases seclusion in living rooms was desirable and followed some custom or tradition now lost.

B17 is of interest in that it bears the same relationship to its group as B43, B1, B2, G3 do to Group 2. As in Group 2, it is at the northern corner of the house and is also peculiar in having its own outside doorway and no communication with the rest of the group. Obviously it is a part of the group, and just as obviously it is separated from it. There can be no doubt that it served either a different purpose or different tenants from those of the rest of the building. The latter seems more likely, for if it had been the trading or storage place of the owner of the house, it would not have been cut off by him from the rest of his building, nor would he have taken on the additional hazard of a third outer door to guard. If, as it seems, this—and the more extensive and similar series in Group 2—was built for the use of persons not connected with the household, this sub-letting of a part of the group must have been contemplated at the time of construction.

This house is one of the most perfect on the Northwestern Ridge and may be taken as a model of the best type of city house at Nuzi. The arrangement is regular and the rooms amply yet compactly built. In so far as thickness of walls may be interpreted to indicate wealth, one could judge from this alone that it was the house of a family of means. Other things substantiate this appearance of wealth besides its general solidity and size, principally the unusual possession of a well and the care and decoration used in B42. Aside from this, the general impression given by its orderly arrangement is that the owner was keen enough to have built upon a carefully pre-arranged plan or one wealthy enough to have hired a master builder to do so for him.

Several things about this building are difficult to explain. B17 and the doorless group have already been mentioned. A third point is the great scarcity of even the commonest types of objects. The only explanation is that at the end of Stratum III the building was still sufficiently intact to permit the removal of the greater portion of the objects. After

this was done the walls were pulled down to an average height of a meter and the débris filling the rooms was levelled off and packed down. In both B17 and B42 signs of the Stratum II building exist to show that at these points the older plan was followed exactly. The later building, however, did not copy the previous plan in its entirety. As will be seen in the Stratum II plan, two rooms were placed in the southwestern end of the court, and three rooms and possibly an outside doorway were added to the southern corner of the group. Strangely enough, the well was not re-used.

It is hard to understand why this group had no outer doorway to the southeast in the direction of the palace and temple. These two buildings being the center of Nuzi life, one would expect that the owner of Group 4 would have provided an easier means for reaching them.

Group 5. B32, C3, C5, B38, B35, C1, C2, C4, C6, C7, C8, C11, C10-C16-H1, C9. It is possible to reconstruct this building without danger of any major error or omission. The main portions missing are the walls fronting Streets 7 and 9. The east corner of H1 gives the inner position though not the thickness of the Street 7 wall, and the position of the outside south corner of B32 gives the position of the Street 9 wall. A reconstruction on this basis, with the walls of Stratum II as a guide, seems absolutely convincing, and leaves uncompleted but in no great doubt only a portion of the northwestern wall of B35 and the possibility of further outer doorways.

Group 5 displays the two principal peculiarities of Groups 2 and 4. B32 at the west corner of the group is similar in general plan to B17 and occupies an opposed position at the corner. It has its own outside doorway and no communication whatsoever with the rest of the group. Undoubtedly it is for a purpose similar to that of B17 and to the B43 series in Group 2. The second peculiarity, shared only with Group 2, is the isolation of two rooms belonging to the main group by an obstruction in their doorway. In this case C3 and C5 are cut off from the building by a large storage jar placed directly in the doorway between C5 and C6, making its use even more impossible than does the hearth between B3 and B4 in Group 2. The isolated rooms, as in B3, have their own outside doorway to Street 10, an unnecessary feature if they were part of the main living group. We know that a doorway opened into B38 from Street 9 and directly served the main part of the house. This other one in C3 seems unnecessary unless used by people other than the principal occupants.

The buttressed walls of C5 are the only example of this construc-

tion within a room. Being found on outside walls only on such public buildings as the palace and the temple, they are, consequently, looked upon as a feature peculiar to these two types of buildings. If they had originally been external decoration in Group 6, one would expect them also in C6, C7 and C11, but they are found only in C5. The thickness of the wall separating the two groups implies one outside wall built against another and not the use of a single wall for both groups. If this is so, these buttresses must be an integral part of the original construction of C5. Since their purpose as buttresses to break the outline of a long wall is lost in such cramped space, we must assume that they served a more practical purpose. The big storage jar blocking the doorway to C6 already suggests that one or the other room was for storage, and it is not unlikely that these are symmetrically placed alcoves for other jars of the same type.

Neither B32 nor C3 and C5 yielded any quantity of objects, but a shouldered cup from C3 and another from B32 suggest that both rooms were used for living purposes.

The unbroken face of the northwestern wall of B38 shows that there was here a doorway to Street 9, and since it leads directly to the center of the building, it was no doubt the main entrance. The wall separating B38 and B35 is in part missing, but it is not unreasonable to suppose that there was a doorway in this missing portion and that B35 was the gatekeeper's room. C1, though small, is the main room of the group and is distinguished in no other way. C4 and C6 were originally one and were separated after completion by the narrow screen wall partly crossing the northeastern end. Few objects came from here to indicate the original use. A white marble whorl-shaped staff-head came from C4, and from C6 two of the ordinary Ishtar figurines. To the southeast is C7, a small undistinguished room yielding only a cup of the usual shape and of rather fine texture.

C2 is the most interesting of the series, both in objects and construction. The doorway to C1 here shown is the result of an alteration within the period of Stratum III. As originally built the door was at the opposite end of the northwestern wall at about the same distance from the northern corner as the later doorway is from the western one. The socket serving the earlier door was not in the corner, as is the custom, but on the opposite side of the opening. In this room was found an infant burial differing somewhat from the usual: a baby-grave jar of the customary type was placed upright (not inverted) and covered with two ordinary large bowls placed one above the other. The jar was carefully lined with clean clay 2 cm. thick, and the new-

born child was placed inside with feet down and head to the top. Though this rests on the pavement preceding the last phase of Stratum III, it is impossible to say whether it is of that pavement or whether it was buried below the floor of the period under discussion.

The southeastern half of the group has the appearance of being a separate unit, since in none of its rooms are there any doorways communicating with the northwestern half. It has been suggested that H4 is the entry-room to this unit, since it has an outside doorway. The absence of the wall separating it from C8 makes it impossible to determine whether there was communication between the two. However, being beyond the general dividing line between Groups 5 and 6, it can only be tentatively suggested as the entry-room. It is more probable that entry was directly into C8 from Street 7; this, then, would be the entry-room and C11 a subsidiary room to it. From C8 came the remarkable small terra-cotta figurine of a reindeer from whose back rises a small offering table (Pl. 114, A). This piece is unique at Nuzi and must have served in a private shrine within the house. C11 yielded only a bead and a bone pin and, though their significance is slight, they suggest a room in which someone lived or worked.

C10-H1 is the main room of the house, and its large size contrasts with the smallness of the unit to the northwest. This southeastern unit has less than half the number of rooms of its direct neighbor, and the relation of the rooms of various sizes to one another is suggestive of the buildings in the Southwestern Section rather than of Groups 2 and 4, with which they are associated. The latter two are at variance with what in the Southwestern Section appears to be typical of Nuzi; therefore, they may be the houses of powerful outsiders. This last unit, however, in its resemblance to those of the Southwestern Section, appears to be a house built in the local tradition and, consequently, the residence of a native of the region.

From this main room came fragments of household pottery and a small bronze statuette of a standing figure with hands folded in front and a flat, ring-like head-dress (Pl. 102, D). The figure is hollow and appears to have been used with a wooden stand or peg inserted in its base. This, no doubt, was a part of the group of votive furniture which included the reindeer from C8.

The unbroken surface of the C9-C10 northwestern wall on the line of the northwest-southeast dividing wall shows that a doorway once connected the two rooms. Whether or not the area comprising C9 was originally all one room cannot be said, but if so, it would not have been unusual. Among the scattered objects from the southeastern end of

C9 was a very large, shallow bowl with straight sloping sides pierced at opposite points at their junction with the flat bottom (Pl. 90, O). The holes were on a downward slope to the outside and afforded outlet for the liquid of whatever mixture may have been strained through the sand that still filled the interior. The second object of unusual character was a figurine of a man playing a stringed musical instrument. It is almost identical with one previously found on the surface (Pl. 100, Q).

In reviewing this portion of Group 5, one notes particularly the three votive objects and the reversion to the typical house plan of the Southwestern Section. The presence of these objects—the musician figurine, the bronze statuette, and the reindeer offering table—suggests a household shrine. Being next to the temple, it is not beyond belief that this building was the domicile of people connected with the temple, who therefore possessed objects of a votive nature.

Group 6. C20, C21, C21A, C14, C13, H50, H17, H9, H4, C15, C12, C19, C23. As in Group 5 the appearance is again that of two separate and distinct units within one group. Lack of any intercommunicating doorways between the two halves, just as in Group 5, makes this a definite possibility. If so, C12 and C19 would mark the northwestern limit of one unit and all beyond would be of the other.

Street 11 in Stratum II separates Groups 6 and 7, and the continuance of street-refuse earth in this same locality confirms the belief that it performed the same function in Stratum III. Since Group 6 has no entrance from Street 10, the only other possibility is that of one from Street 11, leading through an entry-room into C20.

In this supposed entry-room were two circular ovens, and a few centimeters to the west was a hollow in the pavement for some jar or vessel (Pl. 22, A). These ovens illustrate admirably the custom, of which traces have been found before, of insulating the outside with an extra layer of clay about 10 cm. thick, into which is set a complete outer covering of large potsherds. This practice is seen today in the native ovens of Iraq.

Since it was a common custom to set the ovens against a wall, one can place this missing Stratum III northeastern wall with considerable accuracy at a point where it would be tangent to both of the ovens, thus removing it a distance equal to half the diameter of the oven further to the northeast than the Stratum II wall. The latter, which is trench laid, is the one seen in Pl. 22, A, cutting the two Stratum III ovens in half.

To have been normally shaped C20 should have had a cross-wall

in a line approximately similar to the northeastern wall of C21, thus making an entry-room on Street 11 and properly segregating the ovens. C20 would then be the main room, and C13, C14, C21 and C21A would be rooms subsidiary to it.

Of all these rooms only C21 yielded anything of consequence, a splendid specimen of a copper sword or dagger (Pl. 125, KK), with inset iron grip and a blade 26 cm. in length. Iron was rare at this time and was certainly used here as a decorative metal. It is the only example of an offensive weapon, other than the arrow and spear-heads, ever found at Nuzi, and therefore is of great interest.

In the southern unit of this group we have first to deal with the single room H4. It has its own outside doorway but no means of entry to the rest of the house. The wall separating it from C8 is missing, so it cannot be ascertained whether or not this was in reality the entry to the southeastern half of Group 5. However, since the tendency of the buildings is toward straight outside walls and a regular rectangular outline, it seems more likely that H4 belongs to Group 6, into whose square outline it falls, and that it is a single isolated room at the corner of the group, as is B32 of Group 5 and B17 of Group 4.

Though they have no connection in this level, the isolated rooms H9, H17 and probably H50 seem to have belonged to this group. They definitely did in Stratum II, and the later builders certainly must have copied to some degree the outline of the Stratum III building. Thus, H9 would be the entry-room, with outside entry at the corner of Streets 7 and 8; the space northeast of H4 and C15 would be the main room and was probably divided to make one or more subsidiary rooms. The doorway in the eastern corner of C23 would lead to another subsidiary room which may or may not have had a doorway to the southwest. C23 deserves special notice for the considerable number of tablets scattered over its pavement. The niche near its northern corner is probably the spot where the jar or pot stood in which they were originally stored. H17 in Stratum II had a doorway to H9, and in both levels there is communication to H57 and, consequently, to the outside. It is possible that in Stratum III there was entry to H17 from H9 in the manner customary in doorless rooms. If this is not so, it must be considered as another example of an isolated room at the corner of a group without connection with the other rooms.

The use and peculiar construction of H50 is at present difficult to explain. The overlapping wall is unique for Nuzi and certainly is not designed to bear the strain of roof timbers. One can only believe that it did not bear any weight and that it did not rise to the same height

as the other three. Thus it might have been a stall walled in on three sides and separated on the fourth by a low partition or counter. Being directly across the street from the main entrance to the Ishtar temple, it is possible that this booth served in some way those who entered the temple, and the owner may even have bartered votive objects or offerings particularly acceptable to the cult.

C15 is on the opposite side of the supposed main room from C23 and had against the center point of its southwestern wall a large storage jar. The arched doorway separating it from C12, as in the only other examples found (G26 and S174), is of mud-brick and made with a degree of skill indicative of familiarity with this form (Fig. 31; Pl. 26, A). Again, the height is not great, that in C12 being 125 cm.

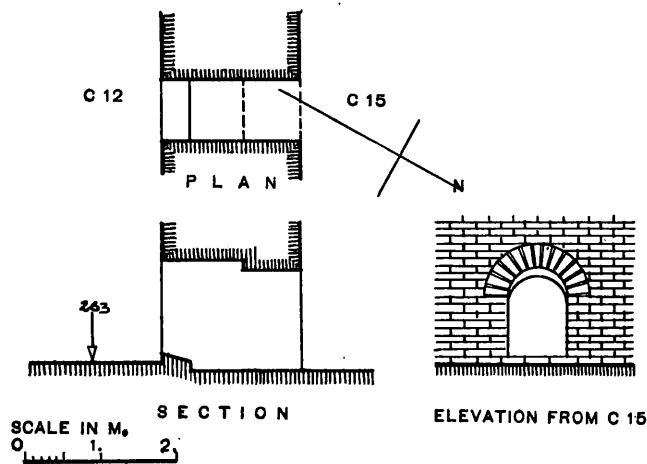


FIG. 31. C12-C15, arched doorway.

above the single *libin* door-sill and 15 cm. less in C15. The reason for this discrepancy is that the separating wall is in reality two walls, each with an arched doorway, built one against the other. That one is higher than the other need not necessarily prove a difference in age, since a mistake of 15 cm. is not great for builders unaccustomed to, or indifferent to, precision. What is puzzling is the presence of a double wall, each side with its own arched doorway. It has no apparent logical explanation, unless one was a support for an older wall weakened through age or disturbance.

C19 is another example of a doorless room. Judging from its location and from the extreme width of its northwestern wall, it seems obviously to belong to the southeastern unit. A marble staff-head (Pl. 121, W) and a stone duck weight from here give it an interest that it might otherwise not have had. A four-brick hearth near the north-

eastern end of the room rested on the pavement, contrary to the usual custom of burying the hearth with its upper surface flush with the floor. This appearance of mobility, combined with the fact that the sides of the hearth were not exactly parallel with the wall, suggests that in this case at least, and probably in others, the hearth was a movable feature placed where the need arose.

Group 7. C37, C36, C40A, C40. A glance at the plan of this group in Stratum II will give the key to the arrangement of Stratum III. In that upper level C40 is a complete room without any door to the outside, the only outer doorway being into C37. Since in Stratum III this entry-way from Street 11 is the same as in Stratum II, we may safely consider the later building as a reliable guide to the plan of the earlier one. The entrance is from Street 11 into C37, where a large storage jar stood against the southwestern wall, and whence one might pass directly into the main room C40A, or into the smaller room C36. The main room had an incomplete hearth (three bricks) in the center near the southwestern end, and on the floor against the southeastern wall was a heavy deposit of ashes of reeds. In the northern corner of the room is a brick door-socket serving the C40-C40A doorway, placed directly on top of another of the same type. The lower appeared to be in good condition and supplied no clue as to why it was abandoned rather than re-used for so slight a rise in pavement level.

C40 is incomplete, but an extension of the remnants of its northwestern and southwestern walls gives its outline with certainty. As a single large room, it corresponds to an arrangement typical of Nuzi dwellings.

The similarity between this group and the southeastern unit of Group 5 is remarkable. Except for a single doorway which the Group 5 unit lacks, and the orientation, they are identical. In room arrangement and total size they are the same, differing only slightly in the proportions of the various rooms. The position of the entry and the relation of one room to another is strikingly alike. It appears that these four rooms represented the essentials for any self-sufficient, independent dwelling at Nuzi.

Group 8. C41, C44, C43, C46, C51, C48-C50. Since what little remains of Group 8 corresponds so exactly with the building in the same position in Stratum II, we can safely assume that the later building copied the earlier one with considerable fidelity. In such a case as this, where in Stratum III the plan is extremely fragmentary, it seems best to refer to the architectural description of Stratum II for the probable plan of this earlier building.

Group 9. C30, C31, H19, H24, H25, C34-H37, H32. This group is the most unintelligible of all of the Stratum III buildings on the Northwestern Ridge. Even comparison with the later building is of little help, so altered is the Stratum II building from the plan of its predecessor. However, it does indicate that H32 and H37-C34, which in Stratum III appear cut off from the unit, are really a part of it as they are in the later building. The logical place for the entrance to the group would be from the east, from courtyard H60 into H32, but it hardly seems likely that the entry would lead into a doorless room. The only other possible entry would be from Street 11 on the northwest. It is shown that this street did not exist to serve Group 7 alone, for it continues past the doorway of C37. The only other group it could have served is that now under discussion, and it is highly probable that it formed the main point of entry for the building. In that case, H32 would have the same relation to its group as the single isolated rooms at the corners of Groups 4, 5 and 6.

The relation between C31 and C30 is of interest. At one time accessible through a normal doorway, the opening was intentionally blocked with regularly laid *libin*, making C31 the third doorless room in the group. It is probable that it was continued in use and that entrance was obtained over one of the surrounding walls. In C31 an even earlier room was discovered, presumably of Stratum IV. Its northwestern, northeastern and southeastern walls correspond to those of Stratum III, while its southwestern wall maintains the same direction, but is several centimeters farther within the room, and is flanked by a large stone door-socket at the eastern jamb. Fragments of many shouldered cups came from this Stratum IV room, as well as many bone pins decorated with knobbed ends or with herringbone pattern at the head.

The peculiarly shaped room C34-H37 was, doubtless, originally two rooms, as it was in Stratum II and as the projecting door-jamb on the southwest indicates.

H32, as stated before, apparently belongs to the group, though it is not in visible communication with it. It is possible that here again we have a single corner room cut off from the rest of the group and serving a purpose similar to those of the two units in Group 5, and in Groups 4 and 6. A door-socket was within the room at the corner of the northwestern jamb and on the pavement lay a high footed bowl, many fragments of ordinary pottery and a considerable quantity of bitumen. Also from here came a whetstone grooved at the end for a carrying string (Pl. 122, J).

H25 is another doorless room which probably communicated with

its equally doorless neighbor H37, but by what means we do not know.

H24 was at one time an entry to the group through the doorway in its southern corner. This was later completely closed when the outside wall of Group 11 was built against it. After the erection of this neighboring building, the people of Group 9 preferred not to retain this unwanted niche as a painful reminder of their lost right-of-way. They walled it up with a single vertical course of half-*libin* flush with the line of the southeastern wall, and filled the intervening space behind this *libin* screen with earth. The loss of this entrance is proof that Group 9 was in use before Group 11 was erected, and from the way in which Group 11 blocked this entry one would assume that the trespasser was a person of sufficient power to disregard the consequences, or of enough wealth to pay for the inconvenience he caused.

The appearance given by what remains of Group 9, both in this and in the following level, is that of a building placed within a limited irregular space already walled in on three sides by other buildings. Thus the new householder could not lay out his house plan in a regular symmetrical fashion, but was forced to use as best he could the space available.

Group 10. C35, C42, C49-D11, H40, H44. Group 10 has no resemblance to the usual living group and can hardly be placed in that category. It consists of a court of extraordinary size serving several subsidiary rooms. Within the court are fragments of walls so faint and unsubstantial that they must have been temporary structures within the open compound.

None of the buildings east or northeast of Groups 9 and 11 in Stratum III or II bear any resemblance to the familiar city dwellings, and it is quite evident that they served purposes distinct from those of the private houses just described. From their differing nature in both strata, it is also evident that they did not all serve the same purpose. Though there is little on which to base an opinion, it is possible that this great court and the nearby one, I19-I21, were open places where people met, exchanged goods and transacted business.

The courtyard C49-D11 contained a large number of fragments of ordinary ware, with the customary small bowl predominating. The sherds were somewhat sparsely scattered in the northern half of the court and increased to a considerable quantity toward the southern corner, where fragments of large jars and carbonized kernels of barley were also found. From this southern corner came a single fragment of red-painted plaster. This is significant, for if it actually belonged to the southwestern wall near which it was found, it is the only case of

such decoration applied in an exposed position. It raises the question of whether or not in certain cases the outer walls as well as the interior ones were decorated in color.

C35 is the largest room connected with the court and contained, besides a few fragments of bowls, a large quantity of sheep bones and the leg-bone of an elephant (Pl. 28, C). The sheep bones were not complete skeletons of animals killed by the destruction of the building but were miscellaneous bones brought into the room before its abandonment. The appearance is that of a place in which meat was dispensed.

H40 is a second independent room entered by a doorway in the southern corner of the court. It was bare of objects but may once have contained the bowls and jars that were found outside its door in the courtyard.

The wall separating H40 and H44 is trench laid, extending half a meter below its pavement. The wall rested on a large, square, flat-bottomed tub, near which was another, these tubs being similar to that seen in the House of Tehip-tilla (cf. Pl. 82, E). Many other household vessels were associated with them in the pre-Stratum III level intruded on by this foundation wall.

H44, as far as could be traced, had no doorway to C42. Unlike H40, it contained many fragments of bowls and pots, copper nails and a small marble toggle.

As stated before, the evidence of walls within the court was extremely faint, and they appear to have been temporary unsubstantial structures. The enclosure in the northern corner is perfectly intelligible, but those in the southeast remain as little more than suggestions of some passing need.

Group 10A. D3, D6, I32, D15, D33, D10, D4. This group is known to have existed on the Northwestern Ridge in Stratum III, occupying the extreme northern corner. Since the points at which Stratum III was reached are so few, the description of them will be included in the general account of the more complete upper building of Stratum II, Group 36.

Group 11. H55, H43, H41, H53, H51, H49, H46, H54, H59A, H30, H35, H36. This building is of particular interest, because of its proximity to the temple and because of the unusual arrangement of its rooms. It has already been pointed out that it is later than Group 9, since it conforms to the outline of the latter and is built against the outer doorway of H24, cutting off access to that group. However, this does not mean that the area was unoccupied before Stratum III, but

rather than the building preceding it was of a different plan from that seen here. The lower building was reached in one spot: a pavement which extended under the wall separating H53, H55 and H57, on which was found a unique painted cup (Pl. 132, A), shouldered cups (Pl. 77, N, S), a storage pot, and the largest collection of the relatively rare burnished incised ware ever found in one room (Pl. 91, C, G, H, M). The lower building, known only by this pavement, is thereby given unusual importance.

The point of entry in Stratum III was apparently from Street 8 into H55. Unfortunately, doubt must rest on the authenticity of the doorway between H55 and H43. Breaking through from above at this very point was an intrusive grave which completely wrecked everything in its downward path. The possibility that this grave may have created a door where none was before, together with the extraordinary narrowness of the opening, might suggest that this building was without any visible means of entry from the outside, just as in Groups 26 and 36 of Stratum II. However, this seems unlikely, for the scrap-brick pavement of the court extends into the gap, narrow though it is, as though to form a door-sill. Moreover, though Groups 26 and 36 have no outside entry, they are not living quarters of the ordinary sort, and could hardly be regarded as introducing what would be a unique feature in a building of the private house type.

The brick pavement over part of H43 suggests that it was open to the sky and, therefore, in need of a substantial path in times of rain. This leads one through the ante-room, H53, into the main room, H51, from which it is presumed there was access to the doorless adjacent rooms. A large brick hearth found here in Stratum II indicates that in this earlier level it was also a room in which the preparation of food and the performance of other domestic duties took place.

The most noticeable feature of the building is the number of rooms without communication with the remainder of the group. H46 is the first example, and must have had access either to H49 or to H51 in the customary manner. It is difficult to say from what direction H36 was entered, but if the thickness of the wall is any criterion, entrance should have been either from H41 or H53. The alcove in the northwestern wall of H54 strongly suggests a doorway at this point, with a sill of more than ordinary height. It is unreasonable to believe that H54 and H58, both of which showed signs of great use, and of which the latter had a floor of three flat courses of *libin*, should have been without easy access to the rest of the group. An alcove between H30 and H54 brings up the possibility of a similar doorway connecting the two groups of isolated rooms. The series H35, H30 and H59A had communication to

the outside through H29 and H23, but it is to be expected that they were accessible to the rest of the house as well. This outermost series, H23 and H29, with its own doorway to Street 8, is identical, in respect of the positions of secondary outside doorways, with Groups 2 and 6 in Stratum II.

For a building of such size and importance, it showed a surprising dearth of objects of ordinary household use. H58 was the most generous in this respect. The other rooms contained no vessels except those of the lower pavement of H55-H53, and yielded altogether only a few animal figurines, copper scraps, and beads.

The building is clearly of a different sort from those hitherto encountered. Can it be a living house of the usual sort, built upon a tradition or plan different from that of Nuzi, or is it devoted to a different purpose than that of the customary dwellings? Its size alone would set it apart as a building of particular significance, and the way in which it peremptorily blocked off the entry to Group 9 at H24 indicates that the owner could afford to disregard the consequences of such action. It is possible that it was the property of an institution rather than of an individual, and since it is directly across the street from the main doorway to the Ishtar temple, it may have been connected with or used by those who served the temple. Several indications point to this. Its size is indicative of wealth and power. The unusual plan is suggestive of the requirements of a cult. The remains of the building as seen in Stratum II carry on this unusual aspect. Finally, particular attention should be given to the fragment of a zoomorphic jar found in H53. This piece, in itself of no importance, is of real significance in that it is a type of vessel definitely restricted to use in the Ishtar temple. Fragments of others were found only in one other place, H64-H66, two rooms which appear also to have had a definite connection with the temple. Such vessels have never been found in private houses, and it is impossible that there is not a definite connection between any building in which they are found and the Ishtar temple where they existed in profusion.

Both in appearance and in detail the building has many features in common with a private house, and it is not impossible to believe the suggestion made earlier, that it belonged to those who served the temple. Knowing the power of the temple in the community, and the staff which must have been necessary for its maintenance and for the performance of its rites, it is clear that the number of rooms in the temple not devoted to cult practices was hopelessly inadequate for such a retinue. Since the priests were a separate and distinct class devoted to the work of an equally separate and distinct cult, it is not unreasonable

to believe that provision was made for their well-being in the manner suggested.

Group 19. H60-H69, H64, H66, H62, H61, H59, I19-I21. In order that Group 19 may be seen with the greatest clarity, it will be discussed first from the point of view of the Stratum IV building (Plan 10). This is permissible, since in its earliest phase it is seen in its most complete state, with a ground plan only slightly altered for its later use in Stratum III.

Fronting the large open space H60-H69, Group 19 is a remnant of the most unusual and perhaps the most important building, excepting the temple, on the Northwestern Ridge. Unfortunately, its position on the edge of the large erosion channel to the southeast has meant the destruction of all but a portion of the building. The size and uniformity of its rooms and their regular disposition put it immediately out of the class of private dwellings. Aside from this, it has two other features which connect it definitely with the palace and the temple. The first is the baked-brick facing of both the outside and inside walls, rising to a height of seven courses. This is a structural feature which even the temple lacks, and is found only in the great courtyard and in occasional rooms of the palace. The second feature is that of the buttresses on the outside walls, obviously of a decorative nature and not structurally necessary. These have been found in only three other buildings, Group 15 of Stratum III, probably a governmental building, the palace, and the temple. Thus, since we have two distinctive architectural features found heretofore only in administrative or ecclesiastical buildings, it is a fair assumption that their use was restricted to those types of buildings and that any having the same features can be classed in the same category. This is particularly justifiable when one realizes that church and state at Nuzi were probably very closely allied, though having separate buildings for their different purposes. Consequently, we come to the conclusion that Group 19 was a building devoted to either church, state or both, yet having no great similarity to any other buildings thus far described. Its location is of further interest. On the southwest it fronts Street 14, and in that respect it is not out of the ordinary. But on the northwest it fronts the large open space H60-H69, and on the northeast the great court I19-I21. Its importance is further increased by these open areas about it when one realizes the great demand for space and the crowded condition of the areas available for private buildings.

Fronting the building in H60-H69, and extending from the doorway of H64 almost to where the northern corner originally was, is a pave-

ment of scrap-brick approximately a meter in width, sloping downward sharply in the last 6 cm. of its width to the clay floor of H60. The pavement does not extend beyond the mud-brick door-sills of the rooms opening into the court.

In the main, the group consists of parallel, brick-faced rooms, each with a doorway at its northwestern end. At the western corner the face of the building is extended slightly further to the northwest than the rest of the facade, giving an accentuation to the corners when seen from H60 in much the same way as in the cella of the southeastern temple. The resulting longer interior was divided into two rooms, H64, H66, with a doorway between and an outlet into H60. At the northern corner of the group the continuation of the pavement well beyond the last point at which a wall was found and the beginning of an accentuated corner like that on the west, strongly suggest a room arrangement similar to and balancing that of the western corner. The discovery of five bricks in place giving the ground plan of the outside buttress and another giving the wall width, prove that it was in fact a symmetrically planned and balanced building.

A single facing brick in H61 gives the southern corner of that room and shows its end wall to have been on an identical line with that of H62. It is reasonable to believe that H59 and the reconstructed room northeast of it ended also on that same line.

Opposite the southeastern end of H62 is the beginning of another room identical in width and direction with H62, and brick faced as are all the others.

The obvious and only possible reconstruction of the rest of the building is that of an exact repetition of what we have already found, with its back against the end line of H66, H62, and with five similar doorways leading out to the southeast. An extension of this form would bring it almost to the line of Street 5, and certainly near the edge of the erosion channel which we know existed even in Nuzi times.

H64 and H66 were the only rooms in which pottery was found, or signs of domestic use. A shelf 20 cm. in height extended along the northeastern wall of H64, of the same type frequently found for storage of large jars. Near the western end of this shelf was a small circular oven of the familiar type. Both rooms had a large quantity of pottery fragments, bowls and small pots predominating. The pottery forms closely resembled those found both in the nearby early rooms in Square I and in Stratum VII of the city wall. The presence here of a considerable number of lion-shaped jar fragments of the temple type is of distinct importance and strongly suggests that the building was temple property.

H62 contained no pottery but did have a large number of seal impressions, some with the impressions of basketry on the reverse. The same can be said of H61. H59 had no such impressions but yielded a tablet of the usual commercial type. The general appearance of the rooms, both from their plan and from the labels found within them, is that of places used for storage. H64 and H66 appeared to have been lived in and may have served for the official whose duty it was to guard this royal treasury.

The building was destroyed by fire after having been thoroughly looted or emptied. Heavy ashes covered the floors, and the plaster was baked brittle and dull red. After this, it was subjected either to further intentional destruction or to the disintegration of a long lapse of time, for the walls with their brick facings have totally disappeared in places where under normal conditions the depth of the débris would have been sufficient to preserve at least a trace of the whole outline. The early aspect of the pottery lends support to the belief that even in the time of Stratum III the building had long been an abandoned ruin. That the building was used again after this catastrophe is shown by the door-sills, raised to correspond to a rise in level of H60; but there is no sign of later reconstruction, and it was probably used in its ruined state.

A single unglazed wall-nail in H62 and another in H64 at first suggest such decoration for these rooms. Since these are the only ones here of a type so prevalent in the court I19-I21 in Stratum II, it can be assumed that they are stray ones flung afar after the demolition of this later northeastern court, which fell into the already ruined H62 and H64 purely by accident. In H60-H69, the large open space on which this group fronts, were found three such nails which may also have come from I19. From here came a jar elaborately ringed (Pl. 74, D), again reminiscent of the pottery found in the early room of Square I. Also of note are two straight-sided pot-stands (Pl. 94, L, M), and a single copper armor plate. The spout to a jar in the shape of a ram's head was found here (cf. Pl. 57, V, W). Two others have been found at Nuzi, but their occurrence is so infrequent and their general appearance and design so unlike the Nuzi style that they seem to be foreign importations rather than indigenous ware.

It is evident that this building was not a copy of an older one existing on the same spot. The walls were built directly on top of an earlier clay pavement, heavily burned and covered with ashes. This pavement goes under the walls which separate H62, H61, H59, H75 and the area northeast of H75. Group 19, then, is clearly a rebuilding which fol-

lowed immediately the destruction of a house of different plan located on this same site.

Returning to Stratum III, one sees the courtyard I19-I21 fronting the northeastern side of Group 19. The court is, in this stratum, singularly incomplete, and one should turn to Stratum II in order to get a clearer conception of its probable boundaries.

Five floor levels, representing a total rise of 120 cm., were found in I19-I21. The uppermost is that shown on the plan of Stratum II, while the lowest, since it corresponds to the level of the H59-H64 series, cannot be later than Stratum IV. The pavement shown on the Stratum III plan was of heavily burned *libin* covered for a distance of 3.5 m. out from the southwestern wall with ashes and a white substance not unlike burned lime. It is possible that there was a curtain roof along this side of the court and that its material formed the fuel for the fire that so baked the pavement. The plaster on the southwestern wall is in excellent condition, aside from the baking effect of the fire, and strongly suggests that it was protected from the ravages of wind and rain. Beyond the point of the burned pavement, an irregular line of fallen bricks crosses the court in a northwest-southeast direction, and although they are now completely out of their original position, they may have been the material that once formed the support to the curtain roof.

This courtyard appeared to have been used for the same purpose throughout its entire history. Pot-stands with crenellated lip at one end (cf. Pl. 94, K) were found on all the four pavements below the uppermost. This type, much less common than those with plain edges, was found here exclusively and in considerable numbers, suggesting that they were devoted to some purpose out of the ordinary, and that custom demanded this shape. It may be that it was in a sense a pot-stand but that it served a double purpose of holding a vessel or crucible, while the crenellated edge on which the vessel rested gave vent to the passage of air and flame from below.

This supposition is not without support. On Pavement V, 425 cm. from the northeastern wall of Stratum II and 619 cm. from the northwestern wall, was a small, square platform of *libin*, showing on its surface ashes and signs of great heat and use. A narrow, flat-bottomed channel cut the upper surface from the edge toward the center. A fire built over the inner end of this channel and forced by a bellows whose draft came in through the channel, would produce more than sufficient heat for metal-working. For smelting or melting, one of these stands placed over the fire and draft channel, with the crucible on top resting on the crenellated edge, would concentrate the heat in one spot and

provide a passage for the draft produced by the bellows. It is of interest that the same type of hearth and draft channel is used today in the city of Kirkuk, although the present-day natives have not re-discovered the advantages of the superimposed stand.

On top of this hearth was found a copper figurine of a donkey(?) (Pl. 103, I) pierced horizontally through the belly. It is perhaps the last metal object cast at this forge, and was lost in the disaster that resulted in the abandonment of the hearth and the rise in pavement level.

There is, then, good reason to believe that from Pavement V to Pavement II, and probably even later, this court was a place of industry, and one of the centers of metal-working in the city of Nuzi.

On this same pavement were two circular ovens of the ordinary type, with no indication that they were used for purposes other than baking.

The rooms of Group 19 in Stratum III have undergone no rebuilding since their destruction at the time of Stratum IV. It is clear that if they were used in a ruined state they could not have served the same purpose for which they were originally intended. The floors of all the rooms show a rise in level to correspond with the rise in the courtyard outside. This rise in each case brought the floor level above the top of the original facing bricks placed as a protection to the bases of the walls.

Aside from this rise in level, the only evident alteration of plan was the closing of the outside doorway into H64. That the room continued in use in spite of this obstacle is shown by its upper pavement corresponding in level to the later pavement of the adjoining rooms. The two rooms at the northern end of the building which balance H64 and H66 were abandoned entirely, and the space was incorporated into the body of the courtyard I19-I21.

Group 19A. I1, I4, I7, I9, I3, I8, I10, I6. It is not at all certain that the series of rooms which composes this group is contemporary with that of the other Stratum IV units on the Northwestern Ridge. No physical contact exists to tie it definitely to any known stratum. The character of the pottery is somewhat similar to that of H64 and H66 of Stratum IV, but even more similar to that of Stratum VII, found at the foot of the city wall. The typical feature of the terra-cotta is an elaboration of decorative motifs, the frequent use of indented rings around the sides of the vessels, and an indefinable increase in grace of line over that of the more practical Stratum II shapes (Pl. 74, I; Pl. 75, A; Pl. 87, Q; Pl. 95, B; Pl. 116, B).

In spite of the slope toward the central erosion channel, which is known to have existed even in early times, it does not seem probable

that so great a discrepancy in level should have separated two groups of buildings so close as Groups 19 and 19A had they been of the same stratum. If the channel in its present course could be taken as a true guide to the contour of the mound in the time of Stratum IV, then, of course, the two groups could have been contemporary, but it is beyond question that the channel has cut below the earlier contour. If so, Group 19A, which is level with the channel's outlet, could not be contemporary with Group 19, which the channel cuts at its source. It is only possible to believe that Group 19A is the earlier of the two, and that from the similarity of its pottery it is close to being contemporary with Stratum VII at the city wall and thereby with the transition period between Ga. Sur and Nuzi.

The most interesting feature illustrated here is the street leading from the foot of the mound, where the northeastern city gate must have been, toward the place where the two great courts I19-I21 and H60-H69 were located in later times. One cannot conceive of these courts as they existed in Strata III and II being cut off from the direct course to the city gate. If the past levels may be taken as a criterion of what was to follow, it is clear from the presence and direction of this street that this portion of the mound was as accessible from the outside as were the other regions.

The rooms contained no distinguishing objects or architectural features. I7 contained two common circular ovens in its southeastern half, and all the rooms contained objects indicative of domestic use.

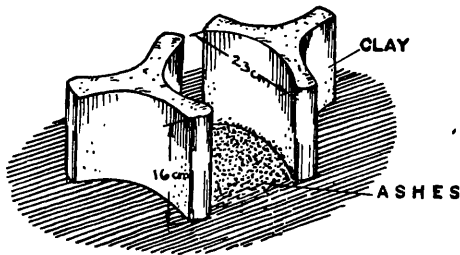


FIG. 32. I10, cooking stands.

I6 and I10 are apparently of the same period. The latter is of interest for its two triangular-sectioned clay cooking-stands (Fig. 32). A deposit of ashes between them left no doubt as to their being in the position in which they were last used.

STRATUM II

The Stratum II buildings on the Northwestern Ridge are concentrated at the two extremities of this area. Except for scattered, unconnected remnants of walls, the space between these two opposite points has been denuded of the Stratum II houses that once covered the whole ridge. There remains, however, sufficient to give an idea of the original layout of the region, particularly when viewed in conjunction with the

Stratum III plans. Since, in the main, a new building copied the outline of its predecessor, we can see with relative clarity the plan of the whole if we combine these two plans.

The northern end of the ridge continues in Stratum II the same unusual characteristics seen in Stratum III, and is as definitely devoted to a use other than that of ordinary dwellings. The opposite end, comprising Groups 22, 23, 24, 25 and 26, was not cleared to Stratum III, so that there is no way of knowing the degree of accuracy with which the upper level reflects the lower one. Its most striking feature had in the past level been the regularly planned, compact groups within a single rectangular or nearly rectangular boundary wall. In Stratum II only two groups, 23 and 26, even approach this arrangement, regarded as typical for Nuzi houses built under ideal conditions. The irregularity of outline in most of these houses is somewhat similar to that seen in the Northeastern Section, and has the appearance of gradual growth from a well-ordered plan of houses created in the past. Thus from time to time throughout several strata certain powerful house owners expanded their buildings at the expense of others less powerful. It may be assumed that this particular area is in reality an outgrowth of an earlier, more orderly plan, more so than the regularly arranged Southwestern Section, whose appearance suggests that later occupants wiped it clean of intertangled groups, and built afresh on an orderly basis. As it is, the southern end of the Northwestern Ridge in Stratum II is divisible into separate living groups sufficient in size to satisfy the requirements of even large households.

Group 22. F2, F34, F32, F30, F26, F41. This series of five rooms is but a fragment of what was once a much larger group. In fact, it is problematical whether or not the rooms all belong to the same unit. Again, there is a possibility that some, at least, may have once belonged to Group 24. The wall between F1 and F32 having been broken by an intrusive storage pit, there is no way of determining whether or not there was a doorway connecting the two. However, F30 and F26 seem to belong together, and the latter, through its doorway, could have had communication to F30 by means of F32, making these three rooms a connected unit. By the same means F34 may be supposed to have belonged with the other three. F2 could have had a doorway only in its missing southeastern wall, making very probable its connection with the other rooms of Group 22.

F2 is without doubt the most important room of this group, both in size, objects and special architectural features. Originally it had a doorway near the center of its southwestern wall, which was later carefully

blocked up with regularly laid *libin*. The later door must have been in its now missing southeastern wall. The projecting wall near its south corner with the circular oven at its end has no logical explanation unless it served merely to form the small alcove in the southern corner. At the southeastern traceable limit of the room is a baked-brick drain (Pl. 13, D) of a different and less substantial nature than is customary. Its side walls are made, not of half-bricks laid flat, but of a row of full-sized bricks on edge, standing on a horizontal row of bricks of the same size and covered with a horizontal row parallel to that of the bottom.

The small enclosure in the northern corner, with its slight walls, could have been little more than a screen to protect the two ovens contained within (Pl. 21, A).

On either side of the western corner, roughly equidistant from the corner and from one another, are four niches cut into the wall (Fig. 33; Pl. 28, A), each with a horizontal floor and of the section of a bisected cone. These have been numbered consecutively, with the northernmost as No. 1 and the southernmost No. 4, as seen in the following tabulation.

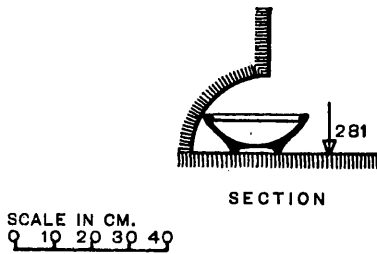


FIG. 33. F2, bowl niche.

No.	Width	Height	Depth	Elevation	Contents	Distance from West Corner
1	30 cm.	32 cm.	24 cm.	30 cm. above pavement	jar fragment	130 cm.
2	33 cm.	26 cm.	22 cm.	30 cm. above pavement	empty	46 cm.
3	29 cm.	21 cm.	17 cm.	on pavement	bowl	40 cm.
4	25 cm.	20 cm.	17 cm.	on pavement	bowl	150 cm.

The large bowls found in Nos. 3 and 4, protruding 8 and 7 cm. into the room, show that the niches were definitely designed to hold and protect the material contained within the vessels. The jar fragment found in No. 1 may be accidental, but, again, may show that the material placed here, not being liquid, could be held by a sherd used as a platter, as well as in a bowl. Most extraordinary is the difference in level between 1 and 2, and 3 and 4. There is no sign of a later pavement at the level of 1 and 2 which they might have served, after the abandonment of 3 and 4. The slight projection from the southwestern wall near No. 4 is important, since it serves to delimit the area in which the niches are as a portion of the room apart from the rest. There is no

similar projection on the northwestern wall, but the screen about the two ovens may have served the same purpose.

The reason for these niches is uncertain, but because of their rarity (only one other example, F38, was found) it is clear that they do not serve a common domestic need. It is probable that we have here a corner of a large room or court set aside as the private chapel of the household, and that the offerings to the god or gods were placed in the various four niches. As one would expect, these offerings vary in quantity and quality with the means of the individual suppliant, for we see that while 3 and 4 held well-made bowls, No. 1 had as its vessel merely a large plain sherd.

A large quantity of composition or glass beads was found here, mixed with a few of mother-of-pearl, turquoise, lapis, and other stones. Equally significant were two diorite ceremonial mace-heads. These two groups of objects are so definitely associated with the Ishtar temple of Stratum II that their presence here is strongly indicative of a similar use. The beads in the temple were used to decorate the cella and probably the cult figure, and were undoubtedly used here in the same way. It is a common practice to flank the altar by ceremonial mace-heads, and the two found here probably served that purpose.

Besides these objects there were two very large arrow or spear-heads of copper (Pl. 125, H), also a pair of tweezers, three needles and a small pierced disc, all of the same material. A cup, a votive chariot wheel, a lamp fragment, several sherds of Nuzi painted ware (Pl. 78, X; Pl. 79, B), a stone cylinder seal (Pl. 119, F), four bone pins and a shell ring complete the finds from this room. An Ishtar figurine was also found, but too high to have been of this pavement. The objects were scattered about in the heavy layer of black ashes that covered the western portion of the room, and the concentration point of objects was fittingly at the western corner close by the four niches. Mixed with the ashes and the objects were clay pot-sealings bearing seal impressions and several fragments of badly shattered tablets. The ashes on the floor show that a great conflagration had occurred, and the walls also show considerable damage.

The fact that such commonplace fixtures as baking ovens are found in close association with a household chapel is not out of keeping with the tradition. The Ishtar unit of Temple A had two ovens within its compound; however, these were not in the sacred room, nor are these of F2. Distance separates the southern one from the area devoted to sacred use and the screen wall separates the other two from the western corner. Moreover, it is hardly likely that such a large space within a private house could be devoted exclusively to religious use.

The position of the long outer wall of F2 shows that it probably was governed in direction by the edge of the mound. This wall is today on the very edge and probably in Nuzi times fronted the street that fringed the buildings on top of the *tepa*. The exceptionally straight line of the southwestern boundaries of Groups 23 and 24, continuing in the wall separating F2 and F34, leads one definitely to the conclusion that this line marked the outermost point on the southwest at a time when this section first started the growth which resulted in Stratum II. F2 and F3 would then be rooms added on newly created space, while at the same time the original outside line was still scrupulously maintained, though no longer as the outer boundary.

The projection on the northeastern wall in F2 is without apparent purpose. It is not a jamb of a doorway in a wall once cutting F2 in half, for the opposite side has no sign of a corresponding right-angled wall. Neither has it any great similarity to the decorative buttresses of the palace and the temple. It is more likely a structural feature introduced to strengthen a weakened wall above it.

F34 probably had communication with the rest of the group through its missing southeastern wall. Other than a single ordinary bowl, it gave no objects to explain its use. Its means of contact with the rooms to the northeast would have been through the passage F32.

F30 appears to have been another room of importance. Its southwestern wall was decorated in the customary manner. The broad field of red, 115 cm. wide, was flanked by panels of gray, 48 cm. wide on the west and 51 cm. wide on the east. Separating the red from the eastern gray panel were two vertical parallel black lines, each 2 mm. wide and separated by 10 cm. of gray color; none could be seen at the other edge of the red. The color could be traced as solid flat wall painting to a height of 80 cm. above the pavement. This was the third redecoration of F30. Fifteen millimeters below this was another plaster on which traces of only gray could be found, and 4 mm. below this a third and original plaster on which were traces of gray for the whole length of the wall. Thus it is clear that in this case at least the redecoration did not repeat the earlier color arrangement.

The southeastern wall showed traces of gray and had only one layer of plaster covering its surface. Apparently the southwestern wall, though having in the two earlier periods no red panel, was from the first given the greatest care as to its condition. The room had been subjected to a fierce fire which completely peeled off the plaster in many places and hardened the *libin* of the other two walls.

On the floor were several beads and two other objects of particular importance. One was a sun disc of thin sheet-gold 18 mm. in diameter,

with repoussé lines radiating from the center. It is the only one found in gold and shows expert knowledge in the use of the metal. The other object was an iron spatula 24 cm. long. If this is contemporary with Nuzi, it is the only all-iron object of that period found. That iron was known is already evident from the iron handle of the dagger from C21 (Pl. 125, KK). It is possible, however, that the spatula is intrusive material from the Late Period habitation of this same spot, though no signs of intrusive digging were to be found.

F26 has no architectural features of note, and the fierce fire of which the walls bear evidence has taken off the plaster and whatever color may have been on it. The objects from here are not without interest; a small duck weight (Pl. 122, O), a blue frit cylinder seal, a bone spindle whorl, a pierced whetstone, a bone pin, and several stone and glass beads.

Group 23. F3, F6, F4, F15, F8, F12, F9. Group 23 is one of the few buildings in this section which preserves any semblance of the customary rectangular house form, though the encroachment of Group 24 prevents it from being completely regular. The northwestern wall corresponds to the outer walls of the other groups on this edge of the mound and marks the position of the outside street just as it today marks the edge of the *tepa*. As mentioned before, the southwestern wall of F15 and its continuation between F3 and F6 is the line which marked the outside wall of the house and the mound's edge in an earlier time. F3, as with F2, is an addition probably first made in Stratum II, built on the new area added through the accumulation of refuse. The group has the appearance of having followed quite closely the outline of an earlier building, in which F4 was the entry-room. However, with the addition of F3 with probably another room northwest of it, F4 was robbed of its original purpose. It was presumably at the time of the rebuilding, in which F3 was added, that the entry through F12 was introduced, leading directly into the main room of the building. This mode of entry is contrary to the usual custom, for F12 is not a closed room but a short passage or street serving the Group 23 doorway. That this became the real entry-way is corroborated by the door-socket within F8. Had F12 been a subsidiary room to F8 and not the entry-way, the socket would have been on the F12 side of the doorway.

F9 is a continuation of this same street or entry-way, and may have served in an earlier period as a northwestern entrance to what later became Group 24. In this level it is evidently a storage room, since it had on its pavement a large, open-mouthed storage jar of the common Nuzi type.

F8, the main room of the house, was relatively barren of objects. Two features of interest should be noted concerning this room. One is the small projecting wall near the southeastern end, probably an alcove for a storage jar. The other is the small room, also at the southeastern end; this could have been little more than a closet and could not have contained or admitted through its doorway anything of any great size. Some time within Stratum II it was abandoned and completely filled with *libin*, though its doorway was left as a narrow, deep alcove. This intentional abandonment is impossible to explain on rational grounds when we consider the great demand for space on the mound.

The narrow jamb on the southeastern side of the F8-F6 doorway apparently served no purpose other than to narrow the passageway and to preserve the appearance of two separate rooms.

F4 in Stratum II probably never functioned as an entry-room, but it is quite certainly a reconstruction of an earlier one that existed before the establishment of the entry at F12. Two steps in the doorway to F6 connect it with the higher F6 and accompanying rooms. F3 may have been an open courtyard and has the same appearance of being a later addition as has F2. A small terra-cotta bottle (Pl. 75, T), two pins, a nail, and an arrow-head of copper show that F3 had active use in this level.

It is likely that another room similar to F3 extended along the wall of the group further to the northwest. It would have been a logical addition to accompany F3, particularly since the F3 doorway at the northern corner with its particularly thick door-jamb is more typical of interior than exterior doorways.

Group 24. G43, G44, F37, F39, F38, F33, F25, G33, F24, F31, F14, F17, F1. Group 24, if not originally the largest building of this section, is the most pretentious of those excavated. In its present state it is made up of thirteen rooms, either complete or definitely indicated. Judging from size alone, it must have been the dwelling of a person of large means. This supposition is strengthened by the quality as well as quantity of objects that came from the rooms.

A critical study of the plan gives the impression of a building, originally much smaller than seen here, which was expanded through several rebuildings, and finally occupied an area that had once served two distinct groups. One group would have been F31 and the rooms east of it, and the other, F17, F14, F1 and possibly F23. We have seen that F12 is in reality a dead-end street serving as an entry-way to Group 23 and that F9 is a continuation of the line of this street up to the wall of

F17. It is not unreasonable to believe that in an earlier level it was the street leading to the entry of this smaller group and that in a subsequent rebuilding the owner of F24 acquired this adjacent property, closed its outer doorway and established contact with it by the passage between F31 and F14. If we accept this hypothesis, we must do so on the condition that the change of outline was not later than the transition from Stratum IV to III, since in Stratum III it appeared to be the same as seen here. This subdivision would bring the group back from its present sprawling, haphazard outline to the roughly rectangular orderly arrangement which the Stratum II walls still reflect.

The northeastern boundary of the group is Street 15, which fronts G33, F38, G44, and G43. The entrance is through G44, which in an earlier phase of Stratum II had a pavement of scrap-brick. This leads directly into F38, near whose northern corner is a baked-brick drain, its channel at floor level, piercing the wall and connecting with the main drain of Street 15. In the center of the northwestern wall, flush with the pavement, is a single niche like the four in F2 (cf. Fig. 33; Pl. 28, A). In height it is the same as the average of those in F2, but the depth and width is somewhat greater in order to shelter partially the large bowl found in place within it. Since the niches in F2 appear to have been for offerings, this single example must have been devoted to the same cult use. It is impossible to believe that the whole room was dedicated to this purpose, for it is in a direct line to the outer street, and one would hardly suppose a chapel to have been used also as a thoroughfare.

Immediately under the pavement, 140 cm. from the northwestern wall and 35 cm. from the northeastern wall, was an infant burial. The body rested in the usual infant burial jar which was upright and covered by another jar of the same type inverted over it. This is an unusual variation; in conjunction with the niche and its offering bowl it gives an added significance to the room.

The projection in the east corner meets no apparent need, but may have been introduced as a strengthening member. The fact that the outer corner is broken away at the entrance to G44 suggests that it was in a weakened condition even before the destruction.

F38 leads directly into F33, whose pot-stand (Pl. 93, E), bone pin and fragment of Nuzi painted ware (Pl. 78, T) prove the room to have been actively used. It will be noted that it has the same small projection to the left of its western doorway that F38 has. It is certain that this has nothing to do with the door itself, for the socket within F24 shows the door to have been on the other side of the wall. It will

be remembered that in three cases in the northwestern unit of Temple A there were equally inexplicable but more massive projections at the right of certain doorways.

F37 contained no objects other than a lead needle and a delicate bird-shaped glass bead. Toward the northeast was a four-brick hearth resting on top of the pavement. F39 was presumably an enclosed room or court whose southwestern and southeastern boundaries have been eroded away. A circular oven was found toward its center. The rectangular projection in its north corner is an unaccountable addition, not as easily explained as the one in the south corner of F38.

F40, southeast of F37, was definitely a part of the group. The projecting door-jamb between it and G43 and the brick door-sill at the other end of the F37 dividing wall are proof of its now missing southeastern and southwestern walls. It is of interest that its southwestern wall was not a continuation of the line of that of F37, but takes its position either accidentally or intentionally from the northeastern wall of F24, the main room of the building. This incomplete room was served by a baked-brick drain running from its northeastern doorway across G43 into Street 15. The end of the drain within the doorway is broken and it may have extended even further into the room.

G43 has nothing to distinguish it, except the drain below its pavement. Only a part of its northeastern wall remains, so it is impossible to say whether it, too, contained an outside doorway. It is hardly probable that there should be two outside doorways side by side, one into G44 and the other into G43. It is possible, however, that there was another means of entry leading into the heart of the group through F39 and F37, but the loss of all the walls which bounded the group to the south and southeast makes it impossible to prove this.

F25 is the most unusual room of the whole group, and its features are in a way unique for this site. As originally built, it was a part of F33, and the floor was covered for two-thirds of its area with a regularly laid whole-brick pavement. Against the southeastern wall a large storage jar was buried with its rim flush with the baked-brick floor. Directly behind this was a thin curtain wall protecting two ascending steps with baked-brick treads. This is the only stairway found at Nuzi, except for that in the early palace and those connecting ground floor rooms of different levels. Since it is highly improbable that another room of slightly higher level existed in the space here shown as solid wall northwest of F38, these steps cannot be explained in that way. There are only two possibilities left: either it served a second story, or it led to the flat roof. Since there is no other instance of a stairway in

a private house, this cannot be used as proof that all were double-storied dwellings. For the same reason, it cannot even be used as absolute proof that in this single building there were two stories, for this would be at variance with all the other houses of the city. All that can be said is that we have here a stairway which would have made accessible a second floor and which may have been so used; also that the walls are heavy enough to have supported superimposed rooms over a portion of the building. The second possibility, that it merely led to the flat roof, seems equally reasonable. Though there are no other instances of stairways in private houses, it seems improbable that the inhabitants should have disregarded the usefulness of the flat mud roof, and it is likely that they put it to use just as many of the villagers of Iraq do today.

To descend again to F25, we find that it has been subject to unaccountable alterations. A curved walk two bricks wide has been laid directly on top of the brick pavement, beginning at a point which later became the line of the F33 northwestern wall and extending almost to the northern corner of F25. A new floor of clay was placed over the older brick pavement, flush with the top of the curved brick walk. This meant the abandonment of the storage jar built into the earlier pavement. A line of four bricks rested on the clay pavement at right angles to the southeastern wall and passed over the northeastern third of the rim of the jar. This line of bricks had the appearance of a door-sill, but no walls could be found corresponding to them. At the same time, another brick was added to the lowest tread of the stairway to make it level with the new pavement.

The bricks used in the floor of both levels show conclusively that the area was open to the sky. However, the goal of the walk is a mystery. The closet at the end of the room is too small to justify such a pretentious entry if it is only an ordinary member of a private house. The walk reminds one of that in the southeastern unit of Temple A; but if one considers the closet as the sanctuary of a chapel, it is disconcerting that no objects whatsoever were within it, and of those few ordinary things from F25 nothing was found similar to those which we have learned to know as temple furniture.

The adjacent room, G33, presents another obstacle to the chapel suggestion. Since we have proof that doorless rooms were entered over a high separating wall rather than through the roof, the width of the wall separating G33 from F38 means that its only entry could have been through the closet of F25, and it is not likely that a chapel sanctuary would have served as a passage to still another room. The elab-

orate construction involving the walk must remain unexplained until more illuminating material is unearthed from other sites.

After the curved walk was built, another and still more drastic change was made. A solid, doorless wall, as seen on the plan, was put across its southern end, making F33 and F25 two separate rooms. It seems unlikely that this room or court with its elaborate brick walk and stairway was entirely abandoned. It may have been entered over an exceptionally high door-sill, or in the usual manner of doorless rooms.

The objects from here were unimportant and in no way explain the original purpose of the room. The only pieces of interest were a copper adze of the customary type (Pl. 125, A) and half of a rectangular terracotta vessel (Pl. 81, C), divided in the center to make two compartments. The hard-baked walls are evidence of the considerable amount of combustible material in the room at the time of destruction.

Against the northeastern wall of G33 was a large baked-brick hearth or pavement fragment, on which the wall was partly built. It is plainly part of an earlier room re-used in the later construction. A baked-brick drain pierces the northeastern wall, to empty its contents onto the floor of Street 15. It is conclusive proof that this insignificant doorless room served a distinct and useful purpose in the group. The only objects found here were a single marble bead (Pl. 120, U) and a rectangular, two-part vessel (Pl. 81, A), like the fragment found in F25.

F24 is the principal room of the house, and proved to be one of considerable interest. In the northwestern end of the room, slightly northeast of the longitudinal axis, was a brick hearth made of two unusual bricks, one 49x49 cm. and the other of the same length and half the width.

On the northwestern wall was the most complete example of red and gray wall painting ever found at Nuzi (Plan 23). It follows the conventional style of a broad red panel, flanked by equally broad panels of blue-gray. The painting was sufficiently well preserved to make it possible to trace the decorative detail that separated the red from the gray on either side, namely: a narrow band of spiral design in red, black and white, of the kind so frequently found on the cylinder seals. It will be remembered that in B42, Stratum III, and F30, Stratum II, there were also traces of design at the point where the red and gray met. The color here was traceable for 60 cm. above the pavement without any sign of a figured design such as there appears to have been high upon the walls of other similarly decorated rooms.

The room had had three applications of color. The earliest was on the mud-brick itself and the other two on plaster coats each approxi-

mately 5 mm. thick. It was impossible to trace any design in the two earlier decorations, but it could be seen that the same principle of a red panel flanked by gray was followed. The panels do not correspond exactly in position, and it is evident that exact reproduction was not the aim of the redecorator.

No color was found on the other walls. The intense fire that seared the two plaster coatings of the northeastern wall and the absence of plaster altogether on the other two walls may explain the absence of the usual flat gray on these three walls.

The contents of F24 are of particular interest. Seventy-five inscribed clay tablets came from here, all of a business nature, and one inscribed on copper (Pl. 127, A), the only such tablet ever found in Nuzi. Though it is corroded beyond redemption, it is evident that the inscription deals with a grant of land. That copper was so used attests the wealth of the owner and the value of the document. So inscribed, it may have been a royal grant. It is also probable that it was a grant of great size, making this form of supposedly everlasting record desirable. Besides the tablets there were four bowls, fragments of many other common household vessels, two cylinder seals of clay and frit, respectively, a copper adze (Pl. 125, E) like that from F25, a stone tripod, and a socketed copper hook or crook.

The pavement below this was also uncovered, and its walls partly traced. It lay 66 cm. below the floor of Stratum II, and had a hearth of the customary four-brick type, exactly underneath that of the later period. In this lower level the northwestern wall is further to the southeast, but maintains the same line as the upper. On it, too, are traces of red paint. From this lower pavement came a triangular white marble vessel (Pl. 121, DD), shallow and badly burned, as well as two unbaked clay loom-stands (Pl. 118, B), similar to those used by the Arabs today.

F31 may be considered the last room of the original group and serves as the entry-way to the more recently appropriated group to the west. Against its southeastern wall were two large storage jars, and on its pavement an exceptionally large flat grinding stone. A bone needle, two bowls and other fragments of domestic pottery also came from here.

The passage beyond F31 served for storage space as well. Against its northwestern wall was a large storage pot, and a smaller one was against the northeastern wall. In the north corner, supported by the wall on two sides, was an unusual vessel made of unbaked clay, cylindrical in shape, with flat bottom and slightly constricted neck. Con-

tainers of the same material, though much larger in size, are used in the vicinity today, and attest the usefulness of clay as a container, even in unbaked form.

The curved walls seen here are unique for Nuzi and are evidently a copy of the greater part of the curved passageway originally chopped through to unite the two buildings in an earlier stratum.

F14 is the first room of this added group and was evidently the center of considerable domestic activity. Four bowls and a cup, as well as other vessels in fragments, came from here; with these were a stone tripod and a clay loom-stand (Pl. 118, A), both similar to those of F24, and several beads, perhaps lost while the wearer was grinding meal or weaving.

Just below the present surface of the mound, and resting partly on the wall separating F14 and F16, was a large scrap-brick hearth belonging to a much later room whose plan was not that of Stratum II.

The southwestern jamb of the doorway to F17 has been placed out of parallel to its mate in order that there may be a corner at the western apex of F14. A door-socket partly surrounded by an incomplete door-swing is within F17 near its southern corner. When F17 was taken over by the owner of F24, it was evidently changed from an entry-room to a kitchen. Against its southeastern wall was a much-burned hearth made of a flat, rectangular stone slab, 66x44 cm., flush with the pavement (Pl. 17, D). Set into the wall, and equal to the length of this slab, is an orthostat of two upright bricks. A smaller stone, similarly placed, in the northern corner, with an upright brick protection, served as a secondary cooking place. Against the northeastern wall, at the center, were the fragments of a large storage jar, and in the eastern corner was a well jar in which water had probably been carried for the preparation of the last meal. Strangely enough, for a room where many vessels would be expected, the only other object found was a small crude thick-walled hand-made bowl.

F1 is entered from F14 over a high door-sill that projects into either room. This was evidently a storeroom of some importance, for many clay pot-sealings, most of them bearing the impression of the same cylinder seal, were found on the floor with fragments of jars. A few tablet fragments and many bone pins were mixed with the heavy black ashes on the floor. Two shouldered cups (Pl. 78, O) also came from here, as well as a spindle whorl, a whetstone, and a shell ring. The most interesting objects are the beads. Six of the thirteen beads from here are of blue frit in the shape of tiny frogs, horizontally pierced (Pl. 131, F). Much larger is another of stone, beautifully and accu-

rately worked, a masterpiece of zoomorphic representation (Pl. 131, G). Above this room, as in F14, was a scrap of upper pavement not related to the walls of Stratum II.

The impression given by Group 24 is definite. It was the dwelling of a person of wealth and importance, whose increasing power made possible and demanded the enlargement of his quarters. The walls, as in all the other cases, are entirely of mud-brick, carefully laid and well and frequently plastered. The undeniable appearance of importance makes this the most interesting group on this end of the Northwestern Ridge.

Group 25. G17, F7, F11, F13-F19, F16, F28, F23. Group 25 also appears to have been an amalgamation of two groups of some earlier level. One consisted of F11, F7, G17, and probably G4 and G11, with entry from Street 15. The other would be F23, F28, F13-F19 and F16, with entry into F23 from F9, or into F11 from F10. The long, narrow room F10, and its continuation A3, as well as A1 and F5, have the appearance in this level and in Stratum III of being rooms filling what in an earlier stratum had been open space. If that is so, it is quite likely that entry to Group 25 was into F11 from F10.

The full extent of the group cannot be determined, for all that to the north and east has been lost; nor will the earlier plan afford much help. It is obvious that the building was considerably altered in the transition between Stratum III and Stratum II, for in the earlier building G17, G4, and G11 belong to a different group on the north, without communication in the direction of F7. Here, however, G17 clearly belongs to the same group as F7, and a doorway to G4 relates that room to the group, as does the continuation of the F7 drain to G11. The presence of a beehive-shaped storage pit in G17 precludes the possibility of this room having been a courtyard shared by more than one group, for such a storage pit is a thing to be guarded more carefully than would be possible in a communally shared entry-court. So we must assume that G4 also belonged to Group 25, as well as at least a part of G11. Two drains meet in G17 to flow out into Street 15, the one to the southwest serving F7, and the one to the northeast serving G11 and G5. Within G11 is a fragment of still another drain flowing down toward this same junction point. It is much higher in level and obviously of later construction. It followed the drainage plan as instituted in this phase of Stratum II and extends even further toward the northeastern known limits of the group.

The storage pit near the door to G4 belonged to the scrap-brick pavement that covered a part of G17. Its depth below this pavement is 200 cm., and it varies in bottom diameter from 165 to 185 cm. The

top is broken away in part, so the diameter of its opening can only be figured approximately. At a height of 155 cm. above its floor the diameter was 95 cm., and if the line of its wall continued on the same curve, the diameter at the top could not have been more than 60 cm. Tool-marks were plainly visible and were made with a straight-edged adze, with the flat of the blade slightly scoop-shaped. The cuts slope down at a slight angle, beginning at the right, and show that the original worker was right-handed. In the bottom of the pit were a few grains of carbonized barley.

The entrance to the group was from Street 15 into G17, as is shown by the clean uninterrupted outside corner of G33 in Group 24. The full extent of the group not being known, it cannot be said that this is the only entrance, but it appears to have been the main entry of that which remains.

Few objects came from G17. A large storage pot (Pl. 63, S), a shouldered cup (Pl. 77, H), and some other objects of lesser importance show that the room was one of regular household use.

F7 was in all probability an open court. The brick pavement of F11 and F7 on which the walls of this phase of Stratum II were built marks the position of an open court in an early state of the same stratum, and though the change shows an alteration of plan, it is probable that a court once established would be shifted rather than abandoned. Moreover, the northeastern wall of F7 was not traceable further than the point shown here and may never have extended any further than this. Certainly there is no sign of a corresponding door-jamb or union on the southeastern wall. If this wall did not cross the room, a roof would have been impossible. The small column of mud-brick near the southeastern wall, standing only to a height of four *libin*, is of uncertain use. It may have been the resting place of some object of household utility, or more likely a pillar supporting a curtain roof along the southeastern wall. Another such roof at the door to Street 15 would have given a covered way from the interior of the house and would have been of use both in wet weather and in the fierce heat of summer.

The northern corner of the room with its seemingly unnecessary projections is clearly a copy of the outline of Stratum III in which a similar outline was found in part. The earlier brick pavement on which later alterations were made passes under the F11-F7 wall and extends into F7 as far as the beginning of its drain. The finds include a large storage pot, a fragment of a votive bed model, a stone weight, several beads and bone pins.

F11 is the site of the court in an earlier arrangement of Stratum II. The brick pavement on which it was rebuilt goes partly under the wall

separating it from F13 and completely under those dividing it from F7. Its position next to F10 suggests that it may once have been another entry-room to the group, with communication to Street 10 through F10 and A3. A considerable quantity of household pottery showed that this room was actively in use before its destruction.

F13-F19 is the main room of the house and apparently remained unchanged in the alteration of F11 from a court to a covered room. Near the doorway to F28 was a hearth sunk in the pavement, first made of two complete bricks and later enlarged by the addition of several scraps about the edge. The southeastern half of the room, F19, yielded two pieces of Nuzi terra-cotta, a large quantity of composition beads (Pl. 120, GG), a copper pendant, fragments of copper wire such as held the beads of Temple A, and a copper chisel and a needle.

The presence of more than ordinary numbers of beads of the temple type immediately leads one to suspect here a similar use as religious ornamentation. From the plan one might judge F16 to have been the private sanctuary outside of which these beads were placed, but the absence of beads altogether within that room and its wealth of household vessels rule it out as a private cella. If these beads were for religious use, they must have been laid before some small statuette or in some offering place such as the bowls in the niches of F2 and F38. So little was left of the walls here that a niche the height of the highest in F2 would not have been discernible.

F16 is a descendant of an earlier room existing in this same spot before the establishment of the passage between F31 and F14. It is probable that it was then rectangular, and only after the passage had weakened its southeastern wall dangerously was it rebuilt and shortened in part of its length. Enough of the former length was retained to provide entry from F19 and full swing for its door. The room contained many large pots and stands, complete and broken, as well as several lesser objects. From the quantity of heavy vessels it seems evident that this was the storeroom.

F23, since it has no doorway whatsoever, is difficult to assign arbitrarily to any one group. It has been placed with Group 25 because its position seems more in accord with the arrangement of that group. Regardless of whichever unit it may have belonged to, the oven and the large number of terra-cotta cups and vessels found within it show it to have been a room actively used in the performance of domestic duties.

The condition of this building makes it difficult to draw any accurate conclusions as to the unit in its completed form. All that can be said is that as with Group 24 it has been subject to considerable altera-

tion from its original pre-Stratum II outline, and that unlike Group 24 it has had to utilize as best it could the space left between the houses of Street 10 and those that fronted on the continuation of the line of Street 5.

Group 26. A1, F5, A3, F10, A4, A5, F35, F29, F27. Group 26 is the most unusual of all the buildings at this end of the Northwestern Ridge and in certain respects is unique. It seems fairly apparent that in reality it is composed of two separate unrelated units. They are included here as one group, purely because of their propinquity. As mentioned in the description of Stratum III, A1 and F5 are not related to the buildings on their northeast, and apparently, in conjunction with A3 and F10, were separate from the buildings on the southwest as well. The block of five rooms beginning with A4 and F35 appears to be a complete unit without contact to the northeast. Thus, we have two separate units of four and five rooms included in this one group. The F5 unit, as has been said earlier, has the appearance of once having been an open, public square serving the buildings about it. A3 and F10 still retain much of this appearance and may have been the last to be changed. It is not known when this alteration took place, but the exact similarity of A1 and F5 in Stratum III shows that it must have been earlier than that time.

A1 has a doorway leading to Street 10, with a brick sill and a socket within the room at the point of the northern jamb. A bowl and a cup show that the room was used for living purposes. In F5, 28 cm. above the level shown in the plan, was another pavement, on which was a scrap-brick hearth, 106x81 cm., very close to the northern corner. On the hearth were fragments of a clay plaster which once covered the whole surface and formed a rim 2 cm. high and 5.5 cm. broad around the edge. This immediately brings to mind the only other similar example, that in L8 of the palace. Since L8 appears to have been part of the palace chapel, one is tempted to assign F5 also to religious uses, on the grounds of the coincidence of rimmed hearths. This, however, is by itself insufficient evidence on which to base such a conclusion.

Thirteen centimeters above this pavement was another, with a second hearth exactly above the one just described. This was made of four bricks of different sizes (31x31 cm. and 26x26 cm.) and showed no uncommon features. Both upper pavements were within the outline and below the top of the walls seen on the plan, and evidently mark later phases of Stratum II.

Pavement III, the deepest of Stratum II, had no hearth. Two jars and a bowl indicate that the enclosure, in this level at least, served as an ordinary living-room. The sound, unbroken bond of the mud-brick

on all the walls, from the bottom of Stratum III to the top of Stratum II, proves conclusively that entry was not by a door with an exceptionally high sill.

A3 and F10 were apparently used as living quarters, as indicated by the presence of scattered domestic vessels and other objects. They appear to have been the last to be abandoned as entry-ways to other groups, and may not have been converted to their present state until within the time of Stratum II when the alterations took place in F11.

The unit of five rooms southwest of A3 is decidedly unusual. It is a distinct group composed largely of rooms without doors; and what is even more unusual, it has no outside doorway whatsoever. The walls are excellently preserved, and the intact bond of the *libin* can be traced around the four sides of each room without a sign of a closed or obscure doorway. The walls are standing to a height that makes entry over a high door-sill improbable unless it was one of extraordinary height reached by a ladder or by wooden steps.

It has been suggested that these walls are not those used in Stratum II but are in reality the trench-laid foundations of a later building, and as such would naturally have no doorways. This theory, satisfying though it at first appears, does not bear close scrutiny, for though it explains the presence of used pavements, it does not explain how the outside wall was used as the inner face of the unquestioned Stratum II groups next door.

It has also been suggested that these rooms were in reality the basement of a two-storied house and had entry only from the floor above. The only support to this theory is the large amount of *libin* that comprised the débris.

It seems much more probable that we have here a unit, the property of an individual or of the government, given over entirely to the storage and safe-keeping of property. Rooms with means of entry high up in their walls could be filled almost up to the roof without the loss of space needed for the swing of a door. Outside entry would have been in the same manner, either from F12 or A3. A cylinder seal, a small terra-cotta drip bottle, several bone and copper pins, and a fragment of a stone tripod suggest that the unit may have been lived in, but it is equally possible that these were stored here. The presence of a considerable number of stone and composition beads and inlaid glass cup fragments of course suggests temple property.

The unit contains another puzzling feature in the step—20 cm. high—which begins just within A4 and extends through the doorway as far as the south corner of A5. Its purpose is uncertain, but may have been to facilitate entry into F27 and F29, though why it disregarded

F35 is not clear. Perhaps some day other or further excavations may shed more light on the purpose of these strangely inaccessible rooms. It seems reasonable enough that special rooms should be built for the storage of the bulkier products of these distinctly agricultural people. An individual might devote one or two rooms to this purpose, and the church or the state might well demand a whole group of such rooms for its greater possessions.

Group 27. B30, B26, B20, G9, G10, G20, G20A. Before passing directly to Group 27, it would be well to mention that between it and Group 26, in the area of Group 2 of Stratum III, were a few fragments of walls. They were too incomplete and scattered to aid in reconstructing a plan, particularly since they did not appear to have followed at all closely the outline of the preceding building. A large pot from B4 with a single handle (Pl. 134, A) is not Nuzian and is exactly similar to a sherd with a handle found in the later Sounding 1.¹ Even if the building known by these scraps of walls was a product of Stratum II, as the level suggests, it is clear that it was used again much later by people of the same culture as those of Sounding 1 in exactly the same manner as was done in F8 and F17.

Group 27 as it exists in Stratum II is of interest only in so far as it illustrates the changes that were made between Strata II and III. Here it is seen that the area which in Stratum III was the courtyard of Group 4 has been intruded on by two rooms, B30 and B26. Both the southeastern and southwestern outside walls remain in much the same position as before, and the eastern outside corner indicates that the side fronting on Street 9 is also the same. B20 and G10 appear in much the same position as separate rooms, though altered in size.

The most significant change is the establishment of an outer doorway to the head of Street 6, with G9 as the entry-room. A socket within G9 served the door, closing the room off from the rest of the house.

G20, G20A, as well as G9, are rooms which were not present at all in Stratum III. G20 has little to distinguish it, but G20A contains a unique construction. Over the northeastern end of the room, which is really separate from the rest of G20A, is a corbelled vault of mud-brick with an opening at either end. The peak of the vault is gone, but from the angle of the arch the height should have been about 160 cm. It is accessible from G20A through a very low, curved-top door approximately 60 cm. high. Another such opening, approximately 40 cm. high, leads out at its northeastern end. Since it is possible for a man to enter it only with extreme awkwardness, one wonders whether

¹ See Appendix E.

the name "The Kennel," facetiously given the vault at the time of discovery, is not correct. G20 may have been entered over the wall from G9. It is inconceivable that anyone would have entered through the vaulted chamber by means of a door so low that one must lie flat and wriggle through in caterpillar fashion. A bowl within G20 indicates that it was actively in use, and not shut off from the rest of the house.

The finds included several copper and bone needles, beads, and from G10 an Ishtar figurine (Pl. 100, A) of somewhat better workmanship than usual. G20 contained, besides the bowl just mentioned, one of those strange small vessels roughly in the shape of a duck (Pl. 103, H), pierced at the top by a small hole. As with the other specimens found, the head is missing.

Group 28. G13, G21A, G24, G21, G22, G28, G26. The position of G13, without communication to the south and southeast, gives one the impression that it was not related to the other rooms of the group, but served as an entry-room for a group to the southwest, all of whose walls have since disappeared. There is, however, one point of similarity between it and G24. Both rooms had identical infant burials, the body lying in a flat-bottomed, oval, clay container (cf. Pl. 29, C; Fig. 34), with a removable lid surmounted by a knob or handle. Each urn held the bones of a single child, and in this instance the urn contained fragments of three or four plain white spherical glass beads, while on the outside a single small vase leaned against the clay urn. Vase and urn seem undoubtedly to belong together. The burial was placed partly under the southwestern wall, near the doorway.

Since there are at Nuzi infant interments both underground and above the pavement, it is impossible to say in every case whether a given example belongs to the pavement below which it was found, or whether it is an open, uncovered grave of a lower level. This burial, however, seems definitely to have belonged to the Stratum II pavement. It is not in close touch with the floor below, and since it protrudes higher than the base of the wall, the wall must have been conscientiously and carefully built in such a way as not to destroy it. Thus its relation to the beginning of new building operations and its partial incorporation into the body of the wall has more of a sacrificial aspect than in any case yet encountered.

Only three such containers have been found at Nuzi: one here and the other two in the adjacent room, G24. The similarity of the urns and their restriction to these two rooms relates them as certainly as the presence of intercommunicating doors. It is of interest to note that a somewhat similar burial below and within a wall, with the infant in a

terra-cotta jar, was found in a prehistoric stratum of L4. The only burial jar of Nuzi times even faintly similar is that of Stratum III, Group 5, C2. In that case the jar was carefully lined with 2 cm. of purified clay.

The proximity of these three burials to the temple is not sufficient evidence on which to base a relationship between the two buildings, particularly since no burials were found in any of the levels of the temple. The prevalence of the custom in prehistoric times shows it to be far older than the cult procedure in its elaborated form in the temples.

Within G13 were two jars of the customary infant grave type, but not in use for that purpose. A tip of a copper scythe was the only other object. The floor had along its length and near the northeastern wall a strip of pavement composed chiefly of well-bricks, which may have been the only remains of what once covered the whole room.

G21A is the entry-room to G24 and has no points of interest other than the two sockets serving its opposed doors. That the door closing it off from G24 was within the entry-room, rather than within what appears the more important room it served, gives, as with G9, Group 27, an added importance to this otherwise insignificant room.

G24 is of unusual interest because of the aforementioned infant burials, and because of the unique construction on its pavement. The first interment is against the northwestern wall, near the G21A doorway.

It is like that of G13, except that it had neither the glass beads inside, nor the accompanying vase (Fig. 34; Pl. 29, C). The clay urn was below the pavement, with the top of its knob-handle flush with the floor. Even though it rested on the pavement below, it was undoubtedly buried from the upper one. The precedent established by that of G13, as well as the impossibility of such a frail vessel having withstood the havoc which necessitated a rise in pavement, shows its relationship to the pavement of Stratum II.

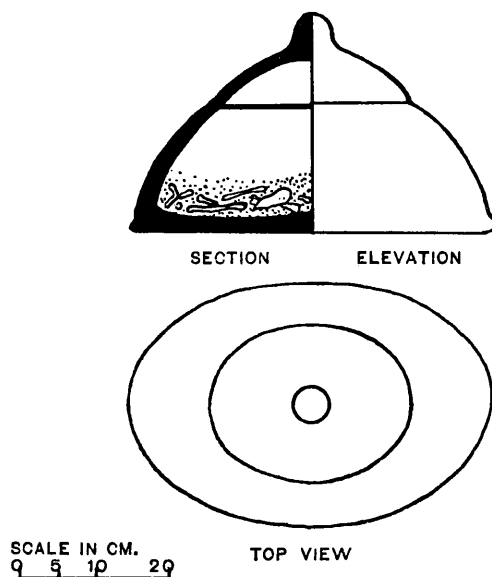


FIG. 34. G24, clay burial urn.

The second burial was at the same level, in the western corner, against the line of the northwestern wall and directly under the end of the southwestern wall. Since the bottom of the wall was lower than the top of the container, it is clear that they are contemporary and that the wall was placed with intentional care over the clay vessel. This second jar also held the bones of a single infant and was without any objects. It differed from the other in that it was more circular in plan, was of slighter construction, and had a large potsherd cover instead of a lid of clay. Because of this flat cover, the height to the lip of the vessel was greater than that of the others and its ovoid section less pronounced. Two such unusual burials give an importance to the room that cannot be overlooked. What their purpose was cannot be said with certainty, but as two of the three known examples appear to have been dedicated to the construction, and, therefore, to the purpose of the room, we may tentatively assume that here they gave sanction to the practices herein enacted.

These practices were concerned possibly with two circular constructions against the northeastern wall, crudely made of well-brick, sunk in the floor, their outside edges almost flush with the pavement. The sides slope gradually toward the center to a roughly circular brick floor, the thickness of one brick deeper. Scraps of bricks have been added about the outer edge. The use of these receptacles is unknown; they show no sign of burning. The slant to the center implies a flow of liquid, yet these people who knew so well the practice of water-proofing floors where necessary, did not do so here. Had these constructions been presses where oil was trodden, or special drip-pans over which jars stood, as much liquid would have leaked away through the interstices as would have remained for collection. Moreover, their depth is so slight that they could not have been used as jar stands, except for vessels of flatter bottom than was usual at Nuzi.

The objects from this room were few and give no clue to its purpose. They consist of a single glass bead, the head of a clay animal figurine, and an Ishtar figurine. The ubiquity of these three types of objects makes it unsafe to cite them here as a proof that this room was devoted to cult practices.

G21, G22, and G28 lie between G24 and the temple and contained no objects of significance. However, it is of interest that they have no communication with one another or with the rooms on the west and southwest. Each, however, has its own outer doorway to Street 6. Thus it can be assumed that they did not belong to that part of the group used as living quarters, but served some purpose for which little space

was required and direct street outlet was necessary, just as we have seen in Groups 2, 4, 5 and 6, Stratum III. Whether they were shops facing on this open street is not certain; if so, their contents did not indicate a very brisk trade.

The second feature of note is the wall between G22 and G28, which completely crosses the street as far as the outside wall of the temple. It is remarkable that such an essential thoroughfare as this could have been cut off so arbitrarily. The only explanation is that this extension of the wall is the result of rebuilding after the end of Stratum II, for at that time we know the temple had ceased to exist except as a ruin. Reclamation and extension of these two rooms on the same level as that on which they previously existed would have made possible the use of the ruined wall of the temple. The street would hardly be considered as blocked when all of that which had once been the temple was open to every passer-by.

Group 29. Temple A. (See Part I, Chapter IV).

Group 30. H43, H51, H41, H36, H54, H35, H30, H59A, H29, H23, H42, H47, H52, H45, M9. The northwestern or main portion of Group 30 shows but slight change in wall position from the arrangement seen in Stratum III. Moreover, several rooms in which the walls were missing had pavements which compared in outline to those of the earlier rooms, and one may consider the plan of the building to have been essentially the same as that of Stratum III. Both H54 and H51 had such pavements, the former of baked brick and the latter of packed earth. In H51 was an exceptionally large nine-brick hearth (Pl. 19, A). Immediately below this, and in contact with it, was a second hearth of the same size, made of scrap-brick (Pl. 19, C) and showing signs of long and continuous fire in its center. There was apparently no intentional change in pavement level to compensate for the difference in elevation of the two hearths. The only objects of interest from this upper pavement are an unglazed wall-nail and an unbaked clay loom-stand.

Three important differences from Stratum III should be noted. The first is the brick pavements and drains in H43 and H41. The second is the outside doorways in H41 and H35. The third is the lack of communication between H59A and H29.

In H43 is a paving of scrap-brick, which apparently once covered the whole room. A baked-brick drain flowing from this pierces the southwestern wall to carry its liquid waste to Street 8. Owing to the fragmentary condition of both this and the Street 8 drain, it was impossible to tell whether the two joined, or whether the former deposited

its contents on the surface of the street. Judging from four of the six similar cases on this street, it is to be surmised that actual junction was made. The wall at the point where the drain leaves H43 was only traceable to a height of a relatively few centimeters above the pavement. Because of this scant height, it is possible that there may have been a door at this point, just as there was in H41, and that the *libin*, which of necessity must be noted as wall, may in fact have been a door-sill of two courses.

H41 has a very similar arrangement, with remains of a whole-brick paving which also must have once covered the entire room. Here again a baked-brick drain flows out to Street 8 below the sill of the outside doorway. Again there is no certainty of union with the main drain of Street 8.

H35 has a brick door-socket in its southern corner to serve the newly created outlet to Street 8. Apparently the establishment of this means of entry removed the need of communication between H29 and H59A, which formerly had been the only means of entry to H30 and H35. The southeastern wall H59A was solid for the full length, without any sign of a doorway to H29 as there had been in Stratum III.

H23 and H29 show little change from Stratum III other than that just stated. We have only to add the door-socket at the southwestern jamb of H29 and the baked-brick drain rising well within the building joining the main drain of Street 8. Although communication has been cut off between H59A and H29, there is no reason to believe that it means the division of the plan of the earlier building into two separate units.

In the discussion of Street 8 it is pointed out that the H33 drain in joining that of Street 8 completely blocked the flow from all points above it. If this was a temporary measure it would have no significance, but if the brick placed across the channel of the street drain just above the point where the H20 drain flowed into it was a permanent fixture, as it appeared to be, the drains above this point must already have ceased to function. The increasing dilapidation of the drain as it extends northwest from this point would support the supposition. However, the drains of H43, H41, and H23 appear as integral parts of these rooms, and it is only reasonable to assume that if their drains ceased to be used, it was because they, as rooms, ceased to exist. Since the rooms are proven as being of Stratum II, we can only assume that they represent the earliest part of the period, and that within the time of Stratum II while the temple and M9 still flourished they and their drainage system were abandoned.

H42 and H47 both had clay pavements with scatterings of ordinary terra-cotta on them, but it was not until H52 was reached that there was any indication of a plan. Here, again, there are no walls, but the size of the baked-brick pavement gives the outline of the room, while the door-sill gives the width and position of the doorway. As in H43 and H41, this room has a baked-brick drain running from the edge of its pavement, through the wall, and pouring into the top of the main drain at a steep slope.

Little remains to tell of H45 except its fully paved threshold with door-socket, and fragments of its northwestern, southwestern, and southeastern walls. Its extent to the northeast could not be determined.

Though there may be uncertainty about the purpose of the other rooms with drainage into Street 8, there is none about that of M9. The room still retains a part of its brick paving, and in the southern corner is a brick toilet (Pl. 14, B), with its channel piercing the wall and sloping at a steep angle to join the Street 8 drain near its outlet. The southwestern wall and doorway, with the socket, are preserved intact, and the positions of both the northwestern and southeastern walls give the line, if not the full extent, of the room. The doorway is given unusual treatment. Not only is its threshold completely paved, but the paving continues almost half-way across the street at the same width. If it is merely an extended threshold without any destination, it is unique for Nuzi. In spite of its regularity, it has much the same appearance as the brick walks extending across open courtyards between covered rooms of the same building, as seen both in Temple A and in private houses; and its direction is clearly toward the doorway to the entry-room (H28) of the southeastern unit of Temple A.

M9 was the only room of these three which yielded any objects. They consisted of what evidently had once been a string of beads—ten of stone, one of frit, and one plain, spherical bead of gold.

It can be said with certainty that H52, H45 and M9 represent a separate unit from those rooms to the northwest included in the same group. Whereas the drains and, presumably, the rooms of the northwestern unit ceased to exist, those on the southeast remained in use until the end of the period. It is inconceivable that one part of a building should have remained in use and in good repair after another part had fallen into disuse. Moreover, the area embraced by both units is too great for any building except one equal in importance to the temple, and from the little that remains it appears unlikely that it had such prominence.

That five of the seven rooms fronting Street 8 were equipped with

brick pavements and drainage is decidedly unusual. This fact gives to the units in which they are found an importance they might otherwise not have had. The northwestern unit in Stratum III has been suggested as an adjunct to the northwestern temple, and the dissimilarity to the usual dwelling which prompted the suggestion in the case of Stratum III is fully as pronounced in Stratum II. Because the building is unlike any of the private houses and is opposite the entry to the Ishtar temple, it is not at all improbable that the two were related, and that Group 30 served those who served the temple, both as to bodily well-being and as to the observances of the cult in their daily life.

The same may be said of the three rooms on the southeast. The extension of the threshold of M9 leads definitely in the direction of the entry to the southeastern unit of Temple A at H28; and, as a firm walk across this open space between the two, it goes far in relating one to the other. This unit of Group 30 is even more positively related to the southeastern temple than the northern unit is to the Ishtar temple.

If these buildings did serve the dignitaries and retainers of the temples, it is unreasonable to believe that here there was a greater need for bathrooms than there was in private houses of a size considerably larger than the northwestern unit in its more complete Stratum III state. We can only believe that these bathrooms served some special demand of the occupants of these buildings. It is quite possible that ablutions were obligatory for those who were connected with the holy buildings across the street.

Group 31. H50, H9, H17, C22-C32, C25-C28, C23, C17, C15, C19, C20. Before dealing in detail with Group 31, it would be well to mention the few walls at the spot where Group 5 was in Stratum III. Both the southwestern and southeastern walls of C9 are preserved and point with considerable accuracy to the position occupied by the same walls of the earlier period. Again, the smooth face of the C9 southwestern wall is a strong indication that C9 was one long room rather than two. On the other hand, C10-H1 shows an alteration. A wall and a doorway crosses here from southwest to northeast, and makes in Stratum II two rooms where before there had been one. No outer doorways pierce C9 or H1 from either of the two streets on which they front, showing that the outer entrance must have been into C8.

In Group 31 proper, C20 appears to have belonged to a different unit, just as it did in Stratum III. Its position on Streets 11 and 10 indicates fairly closely the location of the corner as it must have been in Stratum III.

The southeastern unit is similar in most respects to the plan of

Stratum III and may be assumed to reflect approximately the missing portions of the older building. H50 has the appearance of an appendage not necessarily concerned with the working part of the house. As pointed out in the account of the previous level, its southeastern wall probably did not bear the weight of a roof, and may well have been only of counter or screen height. Being thus open, it is not surprising that some of the temple furnishings, which were thrown out of the door into the street, should find their way into this stall. These objects consist of a glazed wall-nail and a white stone mace-head.

H9 is the real entry to the group, with its doorway at the junction point of Streets 7 and 8. Though in the earlier level it had no communication with H17, we find here a doorway between the two, definitely including this long room into the active part of the house.

At the southeastern end of H17, belonging to a later phase of

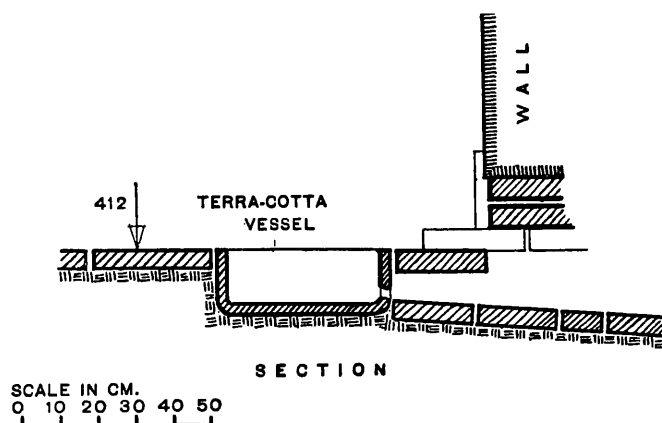


FIG. 35. C22-C32, drain-head.

Stratum II, was a portion of scrap-brick pavement and threshold, both of which from their positions showed that a wall with a doorway in its center once closed the lower end of the room. Flowing southeast through the remainder of the paving was an open drain, and close by it was the base of a large pot resting in a hole scooped in the earth at a point purposely left unpaved. In the main or earlier phase of Stratum II the cross-wall evidently had its doorway at the southern corner, as is indicated by the clean face of the wall at that point.

C22-C32 is paved for the most part with an even covering of whole brick, among which are only occasional fragments or well-bricks. Part of the lime mortar with which all of the paving was originally covered still adhered to it. In the alcove in the southern corner is an unusual drainage fixture consisting of an oval, flat-bottomed basin, sunk with its rim flush with the brick pavement (Fig. 35). At the end of the oval

is a hole in the side of the vessel at the base, with an outlet into the drain leading down Street 8. The basin was filled with potsherds and stones (Pl. 13, A), thus preventing any solid from reaching and clogging the small outlet. Although the drain which pierces the wall at pavement level is higher than the one which served the basin, it is the older, and probably served here before the basin—with its low outlet—was installed. Both were served by the same street drain. If this is indeed a bathroom, we have here another example of the absence of privacy customary for such a room. It is not only the second largest room of the house, but would have to be passed through in order to reach any of the rooms at the rear. The wall about this basin was protected by three courses of facing-bricks set into the end of the southwestern wall and by a brick orthostat at the back and other side of the alcove, as well as on the face of the projection.

C25-C28 is separate from C22 only in theory and is entered through so wide a door that the two rooms are really one. It is the only room of the group thus far encountered to contain any quantity of objects, among which were approximately eighty inscribed clay tablets. The two alcoves at the northern and southern corners were probably for storage of large vessels.

C23 has also been altered in the change to Stratum II, having only one door, where before there had been two. The room is larger than before and contained no objects whatsoever.

C17 has nothing either in construction or in objects to deserve special attention. It is only of interest here in that it is the means by which C15 and C19 are reached from C22. C15 is incomplete in this level, having only a fragment of its northwestern wall left, while C19 is considerably larger than in its earlier stage. The reason for the projection from the northern corner of C19 is obvious when one notices its outer face in C24 and C37. Seventy-five tablets came from here in fairly complete form, in spite of the fact that some were only 20 cm. under the surface. The slope of the pavement is an unusual feature, never so markedly apparent before. There is a difference of 42 cm. between the highest point at the northern corner and the main level along the southeastern wall.

As in Stratum III, a series of rooms bounded the southwestern face of the building, but the only sign of their past existence is the fragment of C15.

This group is of interest in that it is complete at those points where in the earlier level there was nothing. Thus, by an inspection of the two plans together, one obtains a single relatively accurate plan for

either level. It is of interest again that in this level H17 has been formally accepted into the group of rooms, and that it, too, appears to have been a bathroom.

Group 32. C40, C24, C37, C36, C26. This is one of the most complete groups on the Northwestern Ridge and has, in the main, retained the plan seen in Stratum III. The only radical change is the abolition of the cross-wall which in the earlier level made C40 and C40A.

The outside entry, as before, is from Street 11, and the position of the group at the corner of Streets 10 and 11 is accurately determined. Street 11 widens out into C24, which from its intentional enlargement may be considered the entry-room rather than a continuation of the street. The actual doorway to the group may have been either here or at the junction of the two streets. That Street 11 has been converted from a public passageway to private use is shown by the abandonment of the wall which in Stratum III separated C37 from the street.

A doorway led into C36, a small rectangular room with sockets in the western and northern corners serving its two doors. The walls of the room were evenly coated with two layers of plaster, the outer of which was painted gray on all four walls. The plaster and color were in excellent preservation to a height of 150 cm. and there was no trace of the broad red center panel which usually decorated one of the walls of painted rooms. The faces of both sets of door-jambes had but one coat of plaster, and only that leading into C40 had gray paint.

The difference in level between C40 and C36 was compensated for by four steps, 16 to 22 cm. high, with tread 20 to 36 cm. in depth (Pl. 23, C). The topmost step was higher than the pavement of C36 and in reality was a mud-brick door-sill continuing the upward line of the stairs.

Some time within Stratum II this room was abandoned and filled up completely with regularly laid *libin*. Judging from the perfection of the plaster and wall paint, this must have happened shortly after the room was re-plastered and colored. This was not due to a rise in level, for the fill could be traced to within a few centimeters of the surface of the mound almost two meters above the pavement. The *libin* and mortar were evidently made with this special purpose in mind, for the clay from which they were made contained all the sherds that would naturally be found in the earth at the foot of the *tepa*. Though sherds and stones are occasionally found in *libin*, they are usually accidental.

Why such elaborate means were used to take the room out of use is not easily answered. The natural supposition is that it was altered

to bear some heavy weight above it, but what that might have been is obscure. No means of ascent was found to serve such an upper-story structure. A triangular terra-cotta vessel (Pl. 80, F), an Ishtar figurine, and a copper arrow-head (Pl. 125, I) were the only objects from this strange room.

Before this alteration, C36 may have been the principal means of entry to C40, though the two doors closing it off both from C37 and C40 imply that it was a room in which seclusion could be had without interfering with the routine of the house. After the alteration, and perhaps even before it, the gap in the C37-C40 wall, which at first appeared accidental, must have been made to serve as the entry-way.

The space C40, which in Stratum III had been divided into two rooms of about equal size, is here similarly divided, but one is little more than a closet, containing an oven and the fragments of a large storage jar. This small room probably was roofless to allow the smoke from the oven to escape.

Only one room more remains of the group, C26, which, having no doors, one would at first be disposed to assign to Group 33 rather than to Group 32. One thing alone places it with the latter—the open brick drain which leads from the center of the room to empty into C37. It is uncertain whether or not C37 was an open court, but it is positively a part of Group 32, and it is unlikely that its owner would have allowed the refuse of another group to pass through it, even if it flowed all the way to the street in a covered drain.

The group as a whole is of interest because it shows with certainty the positions of the outer walls of Streets 10 and 11 which were missing in Stratum III, and also because of the inexplicable treatment of C36. Moreover, the stairway between C40 and C36 is an excellent illustration of the natural slope of the mound existing even in Nuzi times and serves to show that the erosion of its surface as seen today has followed much the same contour as in 1500 B. C.

Group 33. C29, C31, C30, H19, H25, H32, H37, C34. Unlike Group 32, this is again an incomplete unit and impossible of complete restoration. The impossibility of entry on the northwest in Stratum II is as evident as it was on the southeastern end in Stratum III. Consequently, we must assume that with the absorption of Street 11 by Group 32 the entry to Group 33 was shifted to the other end of the building. Again, with Stratum III as our only guide, it would seem that entry must have been through H32, for if Group 30 followed the outline of Stratum III as closely as the few remaining walls of Stratum

II indicate, both H24 and H25 would abut its outer wall and be blocked as a means of entry. Thus, we can safely assume that the outer doorway was somewhere southeast of H32.

The southeasternmost limit of H24 is the point at which the outer wall of Group 30 must have stood, and can be tentatively assigned as the line of the southeastern outer wall of Group 33. Had H25 and H32 extended to that line, they would have been rooms of unusual length, and it is much more likely that they were both subdivided into smaller rooms. Both rooms, H25 in particular, yielded vessels and objects of the ordinary domestic type.

H19 was paved with brick over its whole area, as was the adjacent room H19A. Both were probably open courts from which access could be had to various parts of the house. H19A, for some unaccountable reason, had a later pavement of well-bricks covering that seen on the plan. It extended along the length of the northwestern wall and, sloping sharply to the center of the room, terminated in an irregular line. H24 presumably had communication with H19, but since the wall is broken away in the center, this cannot be proven.

H37 and C34 are separated by a cross-wall which evidently had a doorway at either end. Both rooms contained objects of the ordinary type, but few, considering the area occupied. This is in accordance with the general rule of distribution, that fewer objects per square foot of floor space are found in the larger rooms of the house. From C34 came a small clay tablet, uninscribed and completely covered with seal impressions. A few others have been found, but their significance is still obscure.

The brick pavement of H19 extended into C30 as a door-sill. The doorway appears to have been completely blocked by regularly laid mud-brick, though this may have been merely a high door-sill to keep out the rain-water that fell into the open court outside of C30. A hearth of the usual four-brick type was flush with the pavement toward the northeastern end of the room, and the northeastern wall was decorated with the frequently encountered red and gray panels. The gray panel extends for 113 cm. from the eastern corner and is separated from the red by a strip of white 14 mm. wide, bounded on either side by black lines 3 mm. in width. From here the red panel extends 150 cm. before it fades away entirely with no further sign of a companion panel of gray. Traces of gray were found on the southwestern wall, but on neither of the other two. It may safely be assumed that they were gray also, in accordance with the usual system of decoration. The introduction of the white strip is a feature hitherto not encountered. The color

itself is a good clear white, laid on in a thick irregular mixture leaving a surface less flat than the gray, red, and black. Being thus about 1 mm. thick, it stands out in relief above the other colors and gives an accentuation which may not have been altogether accidental. This being the fourth variant so far encountered, it is clear that though the custom of decoration followed a rigid convention whereby a single wall had its gray surface broken by a broad belt of red, a certain amount of liberty was allowed in the manner in which the panels of different colors were to be separated.

The color just mentioned is on the outermost of three coats of plaster, on each of which could be found traces of red. The innermost coat varies in thickness from 2 to 20 mm., the center one is 30 mm., and the outer 15 mm. It is of particular interest to note that though the red comes to within 47 cm. of the surface it is the same in tone and intensity as those more thoroughly protected from weathering.

The objects consisted of a bowl, a cup, and thirty-seven composition beads (Pl. 120, BB). This is a relatively large number to be found in one place in a private house and may have composed a string once decorating a household shrine. A few tablets also came from here, and a fragmentary gaming board of white limestone (Pl. 123, B).

C31 is a doorless room and probably had communication with C30 over its southeastern wall. Several bone pins and terra-cotta objects from here show that the room though doorless was far from being unused. Also from here was a quantity of sherds of thick ware whose edges had been rounded by much polishing or scouring (cf. Pl. 117, H). The fact that many were concave on one surface and convex on the other suggests that they were used on both the inside and the outside of rounded objects. Though found in other buildings, they are rather unusual objects. It is not unlikely that they served to polish and even out the irregularities of surface to be expected in newly baked large terra-cotta vessels.

In reviewing this group, the wall painting in C30, as well as the large paved court, contributes to the impression of importance already created by its great extent.

Group 34. C42-C49-D11, H40-H44, C35. Group 34 in Stratum II shows but slight alteration from the plan of Stratum III. Few objects were found within it to show its original use. At the southern end of the great court, H40 and H44 are shown as one room which previously had been two. However, the similarity between what remains of the H40 walls and those of Stratum III points strongly to the existence of a northeastern wall just as there was in the earlier level.

H44 has been altered somewhat as seen by the encroachment of the wall of H38 on what had been its area in Stratum III. The unbroken surface of the outside western corner of H38 shows that here there was entry into H44 from the court, where in Stratum III there had been none. A fragment of a frit cylinder seal was the only object found here.

C35 is unaltered from its plan in Stratum III and remains the largest single room connected with the court. It contained nothing in the way of objects, and no animal bones such as were found in quantity in Stratum III.

The courtyard shows but slight alteration from the earlier plan. The unaccountable projection in the center of the southwestern wall is not so wide as that in Stratum III, and the ghosts of walls within

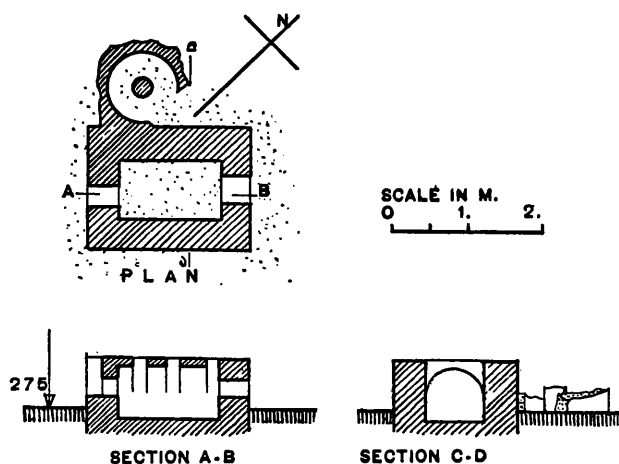


FIG. 36. H48, kiln.

the court are no longer found. It is likely that it had outer entries both at the northern corner, as the unbroken northeastern wall suggests, and in the southern corner through H40-H44 to the place where in Stratum III the court H60 had been.

It is as apparent here as in Stratum III that this group was not a private dwelling, and the suggestion as to its use advanced in the discussion of Stratum III seems equally applicable to Stratum II.

One other feature, though considerably removed from the group, should be noted. That is the kiln (Fig. 36; Pl. 22, B) in H48, near the spot where in Strata III and IV the doorway to H64 had been. It consists of a rectangular fire-chamber with an arched roof, through which are three broad slits the width of the oven, allowing the heat to pass to the now demolished baking-chamber. At the western end is a

square opening into the fire-box near its top, and at the other end a smaller opening, lower down. Next to it, but not connected with the oven, is a passage in the shape of a horizontal and much-burned arched circle, too thoroughly demolished to be reconstructed. Inside the fire-box was a great quantity of ashes and carbonized sheep droppings, evidently fuel.

Since this is an unusual type of kiln, it raises the question of whether or not it is intrusive. A similar one was found in C49 at a very high level, though it was not too high to have belonged to Stratum I. It is unwarrantable to classify the first kiln as intrusive simply because it is unusual or because it resembles one which is obviously later than Stratum II. Its position here, so deep within the level of accepted Nuzi buildings, makes it appear to be of that period. Although the base of the kiln is level with the pavement of Stratum IV, it is unlikely that it was an installation of that level or of Stratum III at the time when the H64 outside walls still formed one boundary to the court H60-H69. Both its variance with the wall line of H64, and the fact that it partly obstructs the way into Street 14, would make it seem to have been placed here at a time when buildings in this area had either ceased to be or had radically altered their outline. Its depth, however, would indicate that it was a fixture of Stratum II, in which case the fire-chamber must have been below ground and the baking-chamber above, according to the custom as seen in the kiln at W3 and followed in Mesopotamia even today.

That the Nuzians baked their own pottery is evident by the great quantity of it and the constancy of its design; and this, with the later example in C49, is the only kiln—except for the much earlier example in W3—found at Nuzi. Whether or not it served to bake pottery cannot be determined. It seems strange that none of the débris customary at kiln sites was found near either of these kilns. Both are made entirely of mud-brick and show no signs of violent vitrifying heat, such as were found on the kiln of W3.

Group 35. C41, C44, C43, C39, C51-C52, C38, C45, C46, C48, C50, C47. Except for a slight difference in the width of the walls, Group 35 of Stratum II corresponds exactly to the scant walls of Stratum III. The group is in all probability two separate houses, C51-C52, C48 and C50 being one unit, and those southwest of it the second. If so divided, the southwestern portion would correspond to the general size of the neighboring houses of Street 10. Its arrangement is complete, as a private house, without the use of the rooms farther northeast, and the rooms are of a size typical of a house of this smaller plan.

The entry into the southwestern unit is from Street 10 across a brick door-sill into C41. C39 was apparently an open court, as shown by its partly intact scrap-brick pavement and by the oven placed against the northwestern wall. A stone mace-head (Pl. 121, K) was the only object of note from the court. C47 is divided by a small wall, making two rooms where originally there had been one. In the eastern corner of this newly created room is a projection, the purpose of which is uncertain; it may have been a low shelf, or it may have extended to the ceiling as a strengthening member. The doorway to C45 was partly blocked with a brick, on top of which several courses of *libin* had been laid. This closed only half of the doorway and was probably a temporary measure in use at the time of the destruction of the building. Since the way to C45 was already thus partly blocked, implying the original lack of a solid swinging door, the socket found out of position in the débris of C47 probably served the door closing the room off from C38.

It is unlikely that C43, the main room of the group, extended as far as the Street 10 wall. It probably had one or two small rooms leading off from it at the northwestern end. It is also highly probable that it had a doorway to C44. Like the other rooms of the group, it contained few objects: only two glass beads, a copper chisel and a frit cylinder seal (Pl. 118, G).

The second unit of the group is made up of the three rooms to the northeast. C48 and C50 are subsidiary rooms to C51-C52, which appears from its size to have been the main room of the house. The evidence is entirely too scanty for complete reconstruction, but if the house extended, as it must have, to a continuation of the line of Street 10, its greater length and shorter width would have made a house unit of approximately the same total area as that of its companion. The orderly and symmetrical arrangement of the southwestern unit shows a care in design and construction not seen in the groups immediately touching it. On the whole, it is reminiscent of the more pretentious buildings of the Southwestern Section, particularly Groups 2 and 6, Stratum II. The similarity is so striking that one wonders whether there was not another doorway from Street 10 leading through an ante-room directly into C43. In that case, the entry into C41 would be the secondary one, leading primarily to the subsidiary rooms, as in the other two groups mentioned. As it is possible that certain types of house design indicate certain classes of owners, this similarity would place the owner of this group in the same class as those of the better houses of the Southwestern Section. In addition to this dubious means of ele-

vating his social status, his proximity to the unusual and most important Group 36 should not be entirely disregarded.

Group 36. D7, D5, D14, D10, D15, D33, I29, I39, D6-D3, I32, I28, I25, I31, I19-I21, D1, D2, D4, D20, D9, D21, D12, D13, I17, I18, I23-I26, I24-I10, H38, I30-I27. Group 36 is the most unusual and puzzling of all the buildings of the city, and is similar only to the much smaller and far-removed Group 26 at the opposite end of the Northwestern Ridge. Its most striking feature is its general lack of intercommunicating doorways. Of seventeen rooms whose outlines are complete, only two have doorways to the outside, and neither of these two communicate with any other rooms. There are four rooms without doorways at all, and there is one each of a group of five, three, and two rooms communicating with one another but having no outlet or entry. One more room has doorways to two incomplete rooms, and may have had entry through either or both of them. Thus, we have a group whose main part is entirely lacking in the conventional means of access.

The group as a whole forms a square block of rooms of orderly design and thick walls. Its southwestern wall fronts courtyard C42-C49 and is distinguished by a single buttress of a type characteristic of the temple and palace. It is hard to understand why this feature was not repeated along the face of the wall. H38 disturbs the rectangular outline of the building, and was probably added after the completion of the group, just as was the northeastern wall of I19-I21.

The southeastern boundary of the group faces courtyard I19-I21, and originally was unbroken by the long projecting northeastern wall of the court. It is probable that the buttresses continued on this portion of the wall, later covered to form I23. These buttresses place the group definitely in a class with the palace and temple to which this familiar architectural adornment is almost solely restricted.

The northeastern and northwestern boundaries of the group have been eroded away, but since they are at the present edge of the mound, and since that edge is straight, we may safely assume that these two outer faces were also relatively straight and parallel to their opposite sides.

The most interesting rooms are those forming the northeastern boundary of the building. D14 is but a remnant and shows nothing of special interest. Judging from its present position, on the very edge of two faces of the mound, it is likely that in antiquity it was also the corner room of the building.

D20, like many other rooms and sections of this group, had been filled up with regularly laid *libin*. This quite certainly is the work of

a later reconstruction and need not be considered further in the discussion of Stratum II. What is of interest is that D20 is the first of a group of rooms on this face of the building to show the unusual and elaborate floor construction characteristic of these six rooms. This consists, in the main, of parallel rows of *libin* on edge, running the length of the room, the center of each row separated from the center of that next to it by the width of a flat course of mud-brick (Fig. 37; Pl. 25, A).

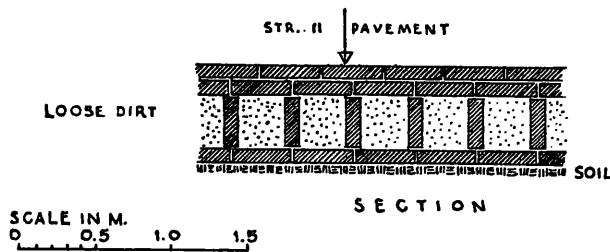


FIG. 37. D12, D13, D21, I17, I18, mud-brick pavement construction.

The space between these upright rows was filled with a mixture of sand and light ashes and the whole overlaid with from one to two courses of flat *libin*. In this manner a floor was produced which was not only solid, but as damp-proof as is possible with mud-brick. It has been suggested that this was a means simply of raising the level of the pavement with the least expenditure of *libin*; but this does not account for the intentional placing of the porous and absorbent earth between the rows and below the actual floor. That drainage and insulation from moisture is the purpose of this, is shown in D21. Here, though the rows run the length of the room, two parallel gaps, in width equal to the separation of the other parallel row, cut across the entire width of the room and drain through the D20 doorway into the outer room (Pl. 25, A). Had the purpose been simply stability or change in level alone, this would have been unnecessary.

It is not likely that this method of construction was used to take care of a flow of water from the room itself, for had there been a direct flow or seepage, it could have been cared for as efficiently and with less trouble by an ordinary baked-brick drain. Moreover, had the contents of the rooms been such as to give rise to any considerable quantity of moisture, it would be wholly inconsistent with local custom to employ mud-brick as a floor material. The purpose of this type of floor is without doubt to insure that no moisture from the surrounding earth might affect the contents of the room.

The purpose of these six uniformly treated rooms, D20, D21, D12, D13, I17, I18, is still a matter of doubt. It is evident that they were no more related to the ordinary living units than the group of rectangular rooms which in Stratum IV bordered the southwestern side of courtyard I21.

D21 was filled with a great quantity of fallen *libin*, with lesser and diminishing amounts in D12 and D13. None of the pavements of this parallel series showed any of the black coloring so typical of floors that have been lived on. As to objects, only D21 is of any help. In the débris of fallen *libin* which filled the room were a large number of clay pot-sealings, each bearing the impression of a cylinder seal, and many lumps of unused tablet clay apparently intended to be used for pot-sealings. Among these were the fragments of many tablets, and a piece of tablet clay on which was incised a five(?) pointed star within a double circle (Pl. 118, F). The remarkable thing about these objects is their height above the pavement. Being mixed with the *libin* débris filling the room, they are unquestionably contemporary with the destruction of the building, and it is equally evident that they were not stored on the pavement. There are only two possible explanations of their height within the fill: either the objects were stored on shelves along and high up on the wall, which in falling may have landed on top of a previously toppled wall, or they came from an upper story. This latter supposition has support, as will be shown in the general discussion of the building.

The contents of the other rooms shed little light on the question of use. Both D20 and D12 contained a few tablet fragments and pot-sealings close to the doorways to D21, strongly indicating D21 as the room of their origin. D12 also yielded a cup and a flint knife. D13 contained nothing; I17 a single bead; and I18 the fragments of two copper pins or wires.

The resemblance is very striking between the four rooms southeast of D21 and the brick-faced rooms southwest of the courtyard I21, discussed under Group 19, Stratum III. The shape and general relation of the rooms in these two groups is identical. The great pains taken in the construction here is comparable with the care with which the rooms of Group 19, Stratum III, were faced with brick. There are other features in common: both abut on court I21; both have the same room width; and both have buttressed walls. Since we know that Group 19, Stratum III, did not exist as a complete unit in either Stratum II or in Stratum III, it is not at all unlikely that this building (Group 36, Stratum II) is the successor of its earlier neighbor and was first built in the time of Stratum III. Although only a small portion of Group 36 was uncovered in Stratum III, enough was laid bare to show that it did not differ in general from the arrangement seen in the following period. If Group 36 is indeed the successor of the earlier neighboring building, its missing northeastern face, in so far as the four parallel

rooms are concerned, could normally be expected to have a facade and outer doorways like that which in Group 19, Stratum III, is seen fronting on courtyard H60. Also, if this be so, it more or less determines the character and purpose of the remainder of the building.

The characteristic condition of the floors of these six rooms, showing little use, is typical of the whole group, and helps considerably in placing it as a building for use apart from that of even royal living quarters. In several of the inner rooms no pavement could be recognized until the level of Stratum III was reached. This, however, does not mean that Stratum II had none of its own, but that they received so little use that it was impossible to differentiate between pavements and the hard fill covering them.

D7 is at the western corner of what remains of the group, but was probably not the outermost room. Judging from the present edge of the mound, the line of Street 10 was not a straight continuation of its direction at C40, but tended to curve somewhat towards the southeast as it approached the northern corner. In spite of this slight curvature, there is enough space beyond D7 to justify the assumption that another room was between it and the street. Like D21, the room was filled with fallen *libin*, mixed with which, high above the floor, were fragments of tablets. The walls showed signs of the fierce fire that destroyed the group. The room has communication with the outside through a curious bottle-necked doorway, but when entered there is no visible means of further penetration into the building. The height of the walls contradicts the possibility of intercommunication over a high door-sill.

On the *libin* pavement was a strange construction consisting of four separate courses of *libin*, flat on the floor, projecting at right angles from the southeastern wall two-thirds of the way across the room (Pl. 25, B). Being only four rows, this leaves a third of the southeastern wall at its southern end unbroken by projections. The floor, as usual, was unused, and no objects whatsoever were found on it. It is probable that these parallel rows were intended for the support and storage of the customary round-bottomed pots, though no fragments of such were found in the room.

D5 is a completely isolated room, without any visible means of entry. Like D7 it was filled with fallen *libin*, in which were many tablet fragments. The walls had also been badly burned, and the pavement was of *libin*. There were neither objects, nor any signs of use.

D1 is the westernmost of four rooms which appear to be the nucleus about which the building was constructed. No Stratum II floor level could be satisfactorily established. D2, on the other hand, has two

pavements, both exceptionally distinguishable. The upper was covered by a heavy layer of black ashes, and the second, 12 cm. below it, was blackened with use and yielded several partially baked tablets. In the débris between the two was an unglazed wall-nail and a scrap of lead foil. The room was evidently twice subject to a great conflagration, as is shown by the brittle condition and pink color of the plaster, and again by the baked state of the earlier tablet fragments.

D9 is the third of the intercommunicating rooms, and does not show the signs of use nor duplication of pavements found in D2. A doorway in the southeastern wall leads to that undetermined region northwest of I31. The room contained no objects. D4, the fourth of the group, had no recognizable pavement until that of Stratum III was reached. It is interesting to note here the indications of the destruction that devastated the Stratum III building. The space between Strata II and III was entirely filled with fallen *libin* to within 47 cm. of the lower pavement, where the débris changed to very black charcoal-filled earth. These lower walls were severely burnt, as would be expected from the presence of so heavy a deposit of ashes. A few objects of terra-cotta, clay and copper came from this lower pavement, as well as a number of goat horns. The southeastern end of the room was divided from the remainder in the lower level by a doorless wall, and in the enclosure thus formed were two common circular ovens surrounded by a light screen wall (Plan 11).

The most extensive group of connected rooms in the unit is the one associated with the long passage-like room, D3-D6. This long room had two well-defined pavements. The earliest pavement of Stratum II in D3-D6 used the outline of the earlier room (Plan 11) but was altered later in the period to the outline shown on the plan of Stratum II. The broad, shallow projection on the southwestern wall, northwest of the door to D33, is a retention of the outline of Stratum III, where it had a purpose which is here forgotten. D33 was as barren of objects as D3, and its pavement showed even less evidence of use. Considering the width of the wall which separates it from H38, the projection in the southern corner is entirely unaccountable, except as a corner shelf or bench.

The stump of the cross-wall which once separated D3 and I32 is in the same position as its complete predecessor in Stratum III. The latter room, like its neighbors, was barren of objects except for an intrusive Late Period flask. Amid all this sterility it is a relief to find positive evidence of use in the brick door-socket in the eastern corner. In all the rooms of this connected series, this door-socket gives the first proof

that the rooms were entered and occupied. This socket served the door that closed off I32 from the offset passage to I28, which was throughout its length paved with scrap-brick. In the contradictory manner typical of this group another brick door-socket is within the passage in the northern corner formed by its offset. Since the two doors at either end of the passage swing in opposite directions, it is evident that the intention was to shut off access from either side as desired. Since the security of a door was effected by a bar within the room in which seclusion was desired and necessitated the door swinging in, this could only be done by having two doors at either end of the passage swinging in opposite directions. There is no door-jamb opposite this second socket against which the door could be secured. There must have been some method of bolting the doors, the traces of which have been lost. I28 leads directly into the still smaller room I25, equally bare of objects and signs of habitation. It has, however, a stone door-socket just below the pavement in the west corner, making it possible to close off this tiny room from I28. These sockets and the scrap-brick pavement do not explain the use to which these rooms were put, but they lift somewhat the veil of mystery that hangs over the group. They show that these rooms were paved in the ordinary manner, were used, and had need to be closed off.

A brief digression should be made to discuss the building as seen in Stratum III. It is of interest that the few rooms cleared to that level showed positive signs of active habitation (Plan 11). D3 and D15 were connected by a doorway, its southeastern jamb being at the point where the projection was found in the Stratum II wall. The entrance to D15 is over a sill of a single line of baked brick into a room whose northwestern and northeastern walls correspond to the line of those of Stratum II and whose other two walls are so placed as to form a room slightly smaller than of Stratum II. The walls had been badly burned at the time of the destruction, and on the pavement were many terracotta household vessels, complete and fragmentary, votive chariot wheels, several beads, a single stone drill-socket, and, as in D4, several goat horns.

D10 had no doorway to D15, though its northeastern and southeastern walls corresponded to the outline in Stratum II. Both the southwestern and northeastern walls continued beyond the line of the northwestern wall of Stratum II. The northwestern wall in Stratum III was not located.

D6-D3 yielded several ordinary household objects, though fewer than found in D15, and again several goat horns. The doorway to

D33 in this lower level remained in the same position as in Stratum II, and the cross-wall separating D3 from I32 was intact, with the doorway near the eastern corner of the long room.

I32 has the same outline as in Stratum II and has a covered drain built of an assortment of various types of brick running from its northern corner diagonally across the end of the room and out into the passage to I28 (Fig. 38). A large stone slab was found placed on edge across this lower doorway, and in its lower edge was a rectangular opening through which the drain passed. The stone is but a hindrance to the easy installation of the drain and must have been intended primarily as a high door-sill to I28. The latter room and its companion I25 were not cleared to Stratum III, consequently their earlier outline must remain uncertain.

From the little that has been uncovered of Stratum III two important facts have been brought to light. One is the abundant signs of

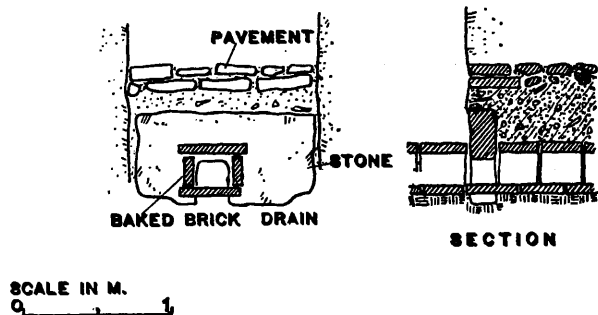


FIG. 38. I32, stone threshold and drain.

human occupation. The other is the drain coming from the direction of D2, strengthening the hypothesis previously advanced that these four center rooms were the principal ones of the group. It is also of interest to note that the objects wherever found consist mostly of small vessels such as would be used in the routine duties of ordinary life. The considerable number of goat horns is unusual, and unfortunately, is without explanation. The absence of any bones shows that the horns alone were brought here and devoted to some special use distinctive of this building. (Though it is impossible to prove a connection, it is of interest to note that in present-day Arab looms the weaver uses a gazelle horn in compacting the threads of the woof after each pass of the shuttle.) Finally, in summing up this group in Stratum III, the intense fire accompanying the destruction is evidence of the quantity of inflammable material contained within the building.

To return again to Stratum II, we find D10 and D15 connected by

a doorway, but without any visible means of entrance or evidence of any use. I29, southeast of D33, is a single room without doorway, whose uppermost pavement is barren of objects, except for a fragment of an Ishtar figurine. The space between its first and second pavements is filled with a heavy deposit of ashes, the only indication of habitation found. I31 is also doorless, yielded no objects, and showed no indications of any great use. I27-I30 is the second of two rooms with an outer doorway. A single *libin* on the pavement against the southeastern wall at the point opposite the pronounced corner in I21 suggests a cross-wall separating I27 from I30, and a brick socket by it, also against the southeastern wall and within I27, makes the cross-wall a certainty. The uppermost pavement was covered with a thin layer of ashes and yielded several objects and fragments of copper, as well as a few tablet fragments and a flint knife. The purpose of this room is uncertain, for, although it has an entry from outside, it does not lead to any of the interior rooms. The narrow termination of its southeastern wall suggests that I30 was roofless.

As first built in Stratum II, I29 and I27-I30 were one room. Its northwestern wall was the same as that of I29 and its northeastern wall a continuation of the line of that of I27. Its southwestern and southeastern walls are as seen here in I29 and I27, but the treatment of the southern corner and the presence or absence of outer doorways could not be determined.

H38 apparently belongs to the group and has the general aspect of an appendage added after the completion of the building. It is too incomplete in outline to be of use in reconstructing the group, except as an indication that in its completed form this group lost the rectangular outline with which it started.

Two more rooms must be mentioned, I23-I26 and I24-I10. It is certain that they were not a part of the group as originally planned, for the northwestern wall of I23 is built against the outside wall of I18. They probably became an integral part of the complex with the reformation of courtyard I19-I21 at the time when the symmetry of the original plan was abandoned in favor of expansion. Both rooms were of considerable size and were without doubt narrow rooms parallel to the northeastern face of the big court. Since they by their proximity are related to the D12 series, which in turn appears as the successor of the brick-faced rooms of Group 19, Stratum III, it is of particular interest to note that the length of I23-I26 is exactly that of H62 of the latter group. Had it been of the same width as H62, its outside street wall would have been at the point where the edge of the mound must

have been in Stratum II. What remains of I24 is symmetrically irregular and bears no resemblance in size and shape to its neighbor. From I24 came a complete tablet, and from I23-I26 a tablet and label fragments, and a few minor objects.

It is impossible to tell whether the courtyard I19-I21 was an enclosed part of the group, or whether it was merely an open space, free to all comers. Considering that it was bounded certainly on two sides, and probably on three, by government buildings, it is likely that it had a fourth wall on the line of Street 5, thus making it enclosed and in a certain sense private. Its northeastern wall is the one just mentioned as the boundary between the court and I23-I26 and is a later addition made either at the end of Stratum III, or at the beginning of Stratum II. The northwestern wall represents the face of the original rectangular group. The buttresses were obviously meant as a decoration to the outside of the building, rather than to the interior of the court, for had they been for the latter purpose, they would have been repeated on the northeastern wall. It is fairly certain that the remnants of Group 19, Stratum III, remained in use even in Stratum II, and that they formed the southwestern wall of I19-I21. This wall, as previously stated, was not the outer face of the older group, but was in reality the inner wall of the last or northernmost series of rooms.

The pavement of the court in Stratum II was of one and two layers of *libin*, rising gradually in level from south to north. Erosion had removed all of it, except that in the northern portion of the courtyard.

Diagonally across from the northwesternmost point of the southwestern wall, against the H60 side of the last buttress on the northwestern wall of I21, was a shallow brick socket which must have served a door swinging across the western corner. The socket so placed showed that the door swung into H60, and was to prevent entry into that area, rather than into I19-I21. Judging from the shallowness of the socket, the door was light, and must have been more a symbol of desired seclusion than a protection against determined force.

This socket is the strongest piece of evidence for the belief that what in Stratum IV had been a great building (H59, H61, H62, etc.) served a useful purpose even in Stratum II. This socket was clearly intended to serve a door swinging at this corner, but no companion wall was found to serve as a jamb, other than that which formed the northern corner of the older group. The fact that the walls of this early building were standing above the level of the bases of the Stratum II walls gave no assurance, until this socket was found, that they were not merely crumbling reminders of a past greatness. To what extent

the early group was used in Stratum II is unknown. There are no signs of restoration, and it is certain that the rooms were in an even more dilapidated state than in Stratum III. It is probable that only that part which formed the western outlet and the southwestern wall of I19-I21 was retained in use.

Returning once more to Stratum II, ghosts of walls were found below the uppermost pavement of I19-I21. One room with an oven, and fragments of other rooms, could be traced. Their orientation was not in accord with that of the court, and they were clearly temporary structures set up at will within the larger compound. This court has already been noted as a place of considerable activity in times before Stratum II, and it is not unlikely that this special activity would demand more shelter than was provided by an open court. It was impossible to tell whether these temporary rooms were a late phase of Stratum III or an early one of Stratum II.

That the building as a whole was one of particular importance is apparent from its size, its buttresses, its sturdy construction, and the peculiarity of its plan. The most significant indication, however, comes from Stratum I. After the building was destroyed at the end of Stratum II, it was completely rebuilt. The pavements of this later building were found in only two places, but they showed that the older building was copied with relative exactness. Furthermore, all those Stratum II rooms not completely filled by the débris of fallen walls were intentionally filled up with bonded, regularly laid *libin* until the desired height for the reconstruction was reached. In most cases, it was possible to differentiate between the fill and the older wall, and to trace the outline of the Stratum II room, but in some places, as in the area between D9 and I31, and that northwest of D4, the fill was so sound that it was impossible to distinguish fill from wall.

The significance of this discovery lies in the fact this was the only large building restored after the demolition of Stratum II. Both the palace and the temple ceased to be, yet this was with great and unusual care rebuilt and re-used. This means that it must have been the building most vital to the existence of the city, more so than the governor's palace or the houses of worship. It seems quite clear that Group 19, Stratum III, is the prototype of the D12 series of rooms, and it is as clear in one as in the other that they were rooms in which the earthly possessions of the state were stored—in short, the treasury. It is natural that the first state building to be rebuilt should be that in which to store the incoming wealth of taxes on which the security of the state depended.

This would explain the generally unused appearance of the pavements, for such a building would not show the signs of habitation to be expected in living quarters. There is, however, the contradictory evidence of the lower (Stratum III) building which, though of the same relative plan, showed unmistakable signs of habitation. Was there, then, a change of use, or was the Stratum II building destroyed too soon after its completion to have acquired the signs of use? The latter theory is supported by the fact that objects of any kind were rare, for if the building had been devoted to storage, objects might be expected in profusion. In spite of the certain indications of Stratum III, the plan shows that it is not a habitation group as we have come to know them at Nuzi. It would seem, if the building was not destroyed immediately after completion in Stratum II, either that in Stratum III it was more comprehensively planned as to doorways, and altered in use and, consequently, in plan when rebuilt in Stratum II; or else that in Stratum III it was not ultimately used for the purpose for which it had been built.

As to what manner of building it was, only two possibilities present themselves. The first is that it was the ground floor and basement of a two-story building, with entry into each doorless room or group of rooms from above. It is not improbable that the people of Nuzi sought shelter from the blinding heat of summer by this means, just as others have done in tropical regions. Moreover, if the lower space were devoted to storage, the best means of guarding it would be to live over it. This theory is supported by the great amount of mud-brick that filled the rooms along the northwestern edge of the group, and by the high position of the tablet fragments in this débris. However, there are strong arguments against this hypothesis. If entry were from above, guarded by the superimposed living quarters, one would expect somewhere the convenience of steps, which the Nuzians knew well how to build, as well as the convenience of intercommunication. Yet no such means of entry were found. Since the building, as it is, is unique, it is unreasonable to say that because a full-fledged two-story building is unprecedented this one could not have been so planned; but the fact remains that this paradoxical objection is the strongest argument against it. However, the possibility of a limited or "penthouse" type of second story along the northwestern edge of the building should be borne in mind.

The second explanation seems more satisfactory; being less ambitious, there is smaller chance for error. That is, that the building was used much as we see it now, built without doorways for greater storage

space and security, with its various enclosures entered in the accepted manner of doorless rooms as was seen in Group 26, Stratum II. A building of such size devoted entirely to storage and safe-keeping of goods would be fitting to the size and importance of ancient Nuzi.

Conclusion. In reviewing the layout of the Northwestern Ridge in Stratum II, two conditions stand out pre-eminently. The first is the diverse character of the living quarters in the same region, as shown by the occurrence, on the one hand, of regularly ordered and arranged houses, and, on the other hand, of houses that sprawl with no pretense of order. It is a combination of the characteristics of the Southwestern and Northeastern Sections, and is due apparently to the presence of prosperous families who through several generations have continued in a steady expansion of wealth and property at the expense of their immediate neighbors.

The second condition is the great importance given to the section by the presence of the temple and Group 36. Either of these two buildings alone would add prestige to the region. One cannot say whether their presence governed to any extent the class of house owners in the same area, but the variation in size, of the private houses, would suggest that they did not.

STRATUM I

Little can be said concerning Stratum I, except that it was traceable at intermittent points from one edge of the Northwestern Ridge to the other (Plan 29). At two points at opposite ends of the ridge, its pavements were found, and between these points the occasional presence of a wall showed that even after the destruction, from which the palace and the temple never recovered, a determined effort was made to rehabilitate this region.

The first concrete evidence of Stratum I comes from a pavement over part of the area which in Stratum II had been F1, F2, F3, F4, and F6. No walls were traceable, but the pavement was particularly sound and covered with several centimeters of ashes of chopped straw. Fragments of Nuzi tablets were found imbedded in the ashes, baked hard from the fire that consumed the straw.

The series of rooms, F21, F18-F20, F16 and F19, although definitely of Late Period habitation, as proved by the objects, showed such similarity to the general layout of the earlier building that there can be little doubt that it was originally a structure of Stratum I. It corresponds in level to the Stratum I pavements in F3 and F4, and is quite certainly a building of that level reclaimed and used again by the Parthians. In

fact, it is probably this very re-use with its consequent rebuilding that has preserved so much of its outline. These scraps of rooms have no architectural features of note, except the semicircular projecting wall at the northernmost point, apparently a protection or support for a large circular jar. However, it is highly probable that such a frail structure is not a part of the original Stratum I building, but is an addition made by the later inhabitants.

At G6, G16, and C9, Streets 6, 7, and 9 retained exactly the same position and relation to the temple that they had in Stratum II. Although the temple was never rebuilt, its area was apparently not trespassed upon by house-builders. It is not improbable that the people of Stratum I, had they been allowed to regain their prosperity, would have restored the temple, as had been done many times before. The pavement shown here over the walls of H7, H9, H12 and H6 was not a product of Stratum I, but was built by peoples who lived here long after the city had been deserted by the Hurrians.

On Pavement I of C49, 720 cm. from the northwestern wall and 570 cm. from the northeastern wall of Stratum II, was a kiln similar to that of H48, Stratum II (cf. Fig. 36; Pl. 22, B). The vault which separated the upper and lower chambers had collapsed, but the springs of the arch remained to show this division. Remnants of three chimneys sprang from the sides of the rectangular outline of the upper chamber and led straight upward. The red color inside indicated moderately heavy firing. Although it was not so complete as the kiln of H48, it was sufficiently intact to show that both were of the same type. Since the H48 kiln is undoubtedly of the Nuzi period, and since it is almost identical with that of C49, it is quite certain that the latter is of the same culture and, consequently, is a structure of Stratum I. Thus we may assume that here we have the only two examples of kilns belonging strictly to the Nuzi period.

The second and most extensive trace of Stratum I was found over Group 36 of Stratum II and has already been discussed in some detail. It concerns Stratum II particularly, in that those rooms which were not filled with débris at the time of destruction were filled with regularly laid *libin* to create a uniform level for the buildings of Stratum I.

Pavements were found here in two places. The first was in D1. Its southwestern wall was in the same position as in Stratum II, but its northwestern wall extended 30 cm. over and beyond the northwestern wall of Stratum II. The floor and walls were covered with a fragile coating of lime cement, but were not distinguishable for more than a meter in either direction from the western corner. The second Stratum I

pavement was of considerable extent, and was within the outline of D6-D3, which the later builders copied exactly on its southwestern, northwestern and northeastern walls. The pavement was traceable for more than half the total length of the room as known in Stratum II. Near the northwestern end, against the southwestern wall, was an enclosure, made by a wall one *libin* in width, on whose lime cement pavement were almost a hundred inscribed tablets of the usual commercial type, most of them in bad condition owing to their position only a few centimeters below the surface. Southeast of this enclosure were other tablets which appeared to have been displaced from this special storage bin. It seems likely that the walls of the storage compartment rose to more than the meter height customary in the construction of storage bins elsewhere. Small rooms have been devoted to the storage of tablets and may even have been originally designed for that purpose, but this is the only attempt made to give adequate protection against dampness to business records of vital importance.

STREETS

Street 5. The Northwestern Ridge was particularly blessed with streets and passageways to care for the continuous traffic there must have been between the living quarters and the palace and temple. The most important, both in position, width, and construction, is Street 5, separating the palace from the temple. In Stratum II (Plan 13) this is a broad way paved with a mixture of gravel and lime cement. Three such surfaces were found, giving proof of the growth of this travelled way during the time of Stratum II. The lowermost was 5 cm. thick; 2 cm. above this was another of the same thickness. The third and last was 3 cm. above this, and, as if in despair of this constant resurfacing, was made only 1 cm. thick. This is the only street that shows any attempt at artificial surfacing, and for that reason alone it may be regarded as the most important of the city.

Below the lime cement there were no recognizable floor levels, nor was there the usual grayish-green earth characteristic of refuse dumps. Instead, the earth contained an unusually large quantity of potsherds and stones, placed there intentionally to insure good drainage.

Toward the center of the street, below its surface and parallel with the palace wall, was a second wall, traceable from a point opposite the northeastern end of M4 as far as M2. The wall was faced with full-sized baked bricks, beginning with a single course at M4 and increasing to a depth of twelve courses opposite M7, the line at the top remaining horizontal. In no place could the wall be traced below the facing

bricks, and it is clear that the line of the lowermost courses represents the bottom of the wall as originally built. It was broken away at its deepest point opposite M7 and could not be followed farther.

Facing this, on the temple side of the street, was a wall made of half-sized, broken and melted baked brick. It was less carefully built and had the appearance of a drain wall rather than a brick-faced building wall. Its top line was level with that of the wall across from it, but in depth it varied only from one to five courses. The two walls appear to be contemporary, but that on the southeast is a more thorough and workmanlike job.

The channel thus created, into which the Street 8 drain emptied, was filled with an unusually large quantity of small stones and potsherds. The bottom of this deposit was not reached, and at a depth of over 2 m. below the Stratum II pavement it showed no signs of diminution. Since the channel between the two sub-pavement brick walls was covered by the hard-packed earth and cement pavement of Street 5, it is clear that it was intentionally filled with this loose rubbish so that the liquid emptying into it could seep away. Thus was avoided the necessity of a large, elaborately constructed drain or an open channel down the length of the street.

It is uncertain whether this trench was excavated for the purpose of being so filled, or whether it was created by the construction of the first palace building next to and on a level with the temple which may have previously occupied the place of prominence. However, the wall on the southeast was probably not the above-ground facing of a much older building, as was first thought, but an intentional sub-surface protection to insure that moisture draining into this porous filling would flow evenly downhill and would not seep too much under the foundations of the palace.

Proof that the main drain was intentionally and originally constructed in this manner lies in the two drains which empty into the channel from Street 8 and from M1. The drain of Street 8 was covered (Pl. 11, A), and flowed below the surface of its street. It was actively in use at the end of Stratum II, yet it poured into Street 5 *below* the level of the lime pavement, and ended abruptly as a brick drain in a clean unbroken end at the point where it emptied into the sub-soil of Street 5. Had the sub-pavement of Street 5 not been able to absorb and drain off this moisture, it would not have been made in this way, and as such would have been simply a blunder on the part of the ancient sanitary engineer.

The second drain, coming from M1, flows precipitously downward

from the Stratum II level so as to pour into the street below the impervious cement pavements (Pl. 12). This, too, finishes in a clean unbroken end, directly in contact with the sherd-filled soil. It is equally obvious in this case that the drain was not laboriously constructed in this manner, and with such an outlet, without definite knowledge that its contents would and could flow away.

Such drainage, though found in other ancient sites in Iraq in vertical shafts, is very unusual in horizontal channels, and due credit must be given to the ingenuity of the originators. It is strange, however, that its obvious fault, a relatively short period of usefulness, did not influence them toward the customary covered brick drain. The answer to this objection is that there was never during the period of its use a necessity for replacement by a covered or open brick drain.

Street 5 in its Stratum II pavement was traceable for only a short distance before being obliterated by the two main erosion channels, which bisect the southwestern and northeastern sides of the mound. Since the position of the street must have governed the course of these channels, it is likely that their position as seen today shows the original direction of the street. Moreover, the constancy of the wall direction on either side of these channels indicates that this street continued in a nearly straight line from the one point where it was found intact. It is also likely that the downward slope of these channels corresponds more or less to a similar slope of the street. At every point where there is erosion found today, there is a corresponding adjustment to this slope seen in the levels of the Nuzi rooms nearby. This shows that the slope existed in early times and that the erosion during centuries of desertion has only accentuated the original slope.

Owing probably to the formation of the sub-soil drainage system, there is no stratigraphical evidence to show the length of time the street had been in use. However, this point had been a boundary since the time of Temple F, and if not a street, it was at least open to passers-by as early as the latter end of the third millennium.

Street 6 on the southwestern side of the temples is not the customary narrow passageway, but a series of connected open spaces varying in width according to the building needs of the adjacent householders. It is strange that, except at its southeastern end, the line of the street was not definitely established or adhered to much before Stratum II. Instead, it appears as if the neighboring land-owners had been in the habit of cautiously appropriating open space which earlier had been the inviolable property of the temple. There is, in Stratum II, one point at which the passage is blocked, where the wall between G22 and G28

joins that of the temple. This, as pointed out before, may well be an addition of Stratum I, re-using and extending the Stratum II room at its Stratum II level, and using the wall of the then abandoned temple as its own. It is entirely against the practice of the preceding temple levels, and against common sense and convenience, so to obstruct this passage. It is likely that the northwestern end of the street in both Strata I and II followed the same outline as seen in Stratum III. Though the point of junction was lost, it is certain that Streets 5 and 6 joined each other.

During Stratum III the triangularly shaped passage at the southeastern end of Street 6 contained a fragment of a wall, probably the only remaining evidence of an addition to the temple structure, similar to that in the same place in Temple E. The northwestern end of the street was not cleared to Stratum III, but the line of the walls and the grouping of the buildings make it likely that Stratum II repeated Stratum III with some accuracy. Certain it is that from the time of the earliest temple, this remained unobstructed by cross-walls and was a free passageway.

The finds from this street included almost no household terra-cotta vessels. Though the street accumulated débris as did other streets, it was not the scene of the same domestic activity that resulted in so many complete and broken vessels in the fill of other passageways.

Street 7 combines the irregularity of Street 6 and the order of a well-defined passageway between close parallel walls. In character and objects it is the same as Street 6. At the junction point of Street 9 it has the parallel sides seen in its northeastern end, as it had in both Stratum II and Stratum III. Prior to this date, the opposite wall is not certain, but the way was undoubtedly unobstructed from the time of its inception with Temple F. The character of its objects remains the same, with, however, an increase in the quantity of temple beads and zoomorphic jar fragments which found their way to the outside through the H2 doorway.

At the corner of Streets 7 and 8 was a fragment of an early Stratum II drain flowing from Street 7, joining that from C22-C32 and flowing down Street 8. There is no indication of a drain in Street 9, so it is unlikely that it extended that far. It is more probable that it served the private house directly facing the northwestern side of the temple, and that its point of entry to that building was not far beyond the place where it now fades away.

Street 8 is the most complete of all the passages on the Northwestern

Ridge. Though in Stratum II the area between H52 and H35 yielded no rooms, pavements and other evidences of habitation were found there to show that this street was for its whole length a long narrow passageway hemmed in on both sides by parallel walls. The outer face of the temple wall was not uncovered in its entirety in all its levels, but it is likely that this was an unobstructed passage from the time of the first appearance of the temple court.

In Stratum II a covered brick drain extended in serpentine fashion under the greater part of the length of the street, carrying off the waste originating in the subsidiary drains of M9, H52, H33, H29, H41, and H43. The drain piercing the temple wall at the eastern corner of G50 had no connection with it and apparently dumped its rain-water onto the surface of the street without regard for the pedestrians. The drain at the far end of the street, coming from Street 7 and from C22, is lower than the level of this main drain and is, therefore, along with the rooms it serves, of an earlier phase of Stratum II than all of the structures southeast of and including H43. However, since Group 30, Stratum II (H41, etc.), was known to have existed in part in Stratum III, we can only presume that the Stratum III building did not succumb to the disaster that generally ended the period, but lasted well into Stratum II, and that it had no need to be rebuilt until sufficient time had passed for the drain of C22 to become obsolete because of the rise in level of the street and adjacent buildings.

An interesting problem is presented where the subsidiary drain from H33 joins that of Street 8. Several bricks had been placed across the course of the main channel immediately above the point of entry, thus preventing the flow of any material from the upper end of the street. Was this, then, a temporary measure in use at the time of destruction, or does it mean that at the end of Stratum II the main drain had ceased to function for the northern rooms and served only H33 and those rooms southeast of it? The blocking of the drain seems an unnecessary procedure, even as a temporary measure, and could only have been to prevent the flow of silt from an abandoned portion of the channel. Moreover, the main drain northwest of the junction with that of H33 becomes increasingly fragmentary, and though its condition may be due to accident, it is more likely due to abandonment during the active life of the city. This, then, means that just as H41, etc., is a later phase of Stratum II than C22, so also H52, H45, M9 and the H33 drain are later phases than H41, etc. This is an excellent example of the continuous growth of a city, house by house rather than level by level, and illustrates the great difficulty in categorically establishing uniform strata for any large area.

The drain itself is constructed without due attention either to straightness of line or uniformity of building material. Bricks of many kinds and conditions are used, as well as stones and slag from brick kilns. The size of the drain, however, is considerable, and quite ample to care for the number of users. It seems highly probable that the drain at Nuzi was not a municipally sponsored improvement, but a private enterprise of individual house-owners for their own accommodation.

The finds from this street are highly misleading, since much temple material found its way into it from the doorway at H7. With this properly eliminated, the objects are much the same as in Streets 6 and 7, though less in quantity. One object from near H52 is unique: a theriomorphic vessel of tiny size with the feet pierced for mounting on wheels (Pl. 103, E). Undoubtedly a cult object, its position is too close to the temple not to be assigned to that building.

Street 9. The presence of Street 9 has been established in Strata I, II and III. Though only its southeastern end was found in Strata I and II, its exact agreement with Stratum III, in which both the length and width are clearly shown, points to a correspondence in the subsequent strata. Its principal function is that of giving communication from Street 10, on the northwestern edge of the mound, to the center of the city. The block of the temple obstructs its course and divides its traffic to Street 5 by diverting it through Street 7 into either Street 6 or 8.

It is quite likely that a considerable portion of the traffic on this street was composed of people coming and going from the temple as well as those having business with the palace. Although there is a doorway into the temple compound near the southeastern end of Street 9, it does not in any way have the appearance of a main entrance. It is more likely a secondary entrance, and one cannot say that it governed the course of this public way. It must be remembered that most major features of the city plan have an ancient prototype, and that if a passageway corresponding to Street 9 existed at the time of Temple G, its end would have corresponded closely with the only temple entrance and still have left unobstructed the direct course of its pedestrians going further southeast. Later, when the temple court was added, Street 9 evidently remained unchanged in position, and Street 7 was introduced at right angles to it to allow passage around the increased size of the temple.

Like Street 8, the way is restricted between straight parallel walls, and because of this limitation in space did not contain the great quantities of terra-cotta sometimes found in public ways. Its fill, however, consisted of débris containing many discarded household objects, and

its rise was the result of use by the fronting houses as a dump for all sorts of rubbish.

Street 10 borders the northwestern edge of the city. Considering the precipitous slope immediately beyond the outside walls of the fronting houses, it is likely that this street marks the furthest northwestern point ever reached in the lateral expansion of the mound. Though not enclosed on both sides, it is a street in the true sense and is the longest one found in the city. This is due, probably, to the reasonable certainty that there was never a gateway through the city wall on this side of the mound. Consequently, having no roadway leading downward to serve as a water-course in the later erosion, the face of the *tepa* remained unbroken during all these centuries, subject only to an even loss of area along its whole length. It seems certain that at its northern and western ends it joined outside streets on the northeastern and southwestern edges of the mound, placed in the same relation to their buildings as is this street. The street was found in both Stratum II and III, and in each case occupied the same position. The steep side of the mound comes right up to the outer walls of the houses facing on it, so that little chance has been left of finding the objects that may once have been used here in the open. The fill, however, was relatively rich in discarded terra-cotta vessels and showed the character of refuse-built ground.

Street 11 runs off from the northern half of Street 10 and in Stratum II is more of an entry-way to Group 32 than a true street. In Stratum III, however, it not only served that building, but the one immediately southeast of it as well. The fill contained great quantities of sherds and had the gray-green color typical of earth composed largely of ashes and refuse. It would appear that this passage, being the private way of only two groups, was more freely used as a refuse heap than were the more public streets.

Street 14 is only a fragment of what once must have been the main outlet to Street 5 for court H60-H69 and its surrounding buildings, and leads southeast from H69 between the outer walls of Groups 11 and 19 of Stratum III. Thus, its initial point and its width at that point are established with certainty. Its length and direction seem fairly certain, since it must have proceeded directly to Street 5.

As was pointed out before, Group 19, though classed in Stratum III, originated some time in Stratum IV, and a street or open way on its southwest was a part of the original conception. In Stratum III the street was found between Groups 11 and 19, and the similarity of the

former building to its successor in Stratum II would indicate that the street existed in the later period as well. The fill of Street 14 showed little refuse material, owing, no doubt, to the fact that the street was flanked on one side by a non-residential group and on the other by residential groups whose entrances were on Street 8. Group 11, Stratum III, occupies the unique position of a house flanked on opposite sides by streets, and it is strange that it did not take advantage of the opportunity to have entry from both directions. The origin of the fragments of zoomorphic temple jars found in Street 14 can be traced to the bordering room H64, where they were found in quantities.

Street 15 occupies much the same position on the southwest of the temple as Street 14 does on the northeast. Unfortunately, in none of its levels could its width be established, but by combining the plans of different levels on the assumption that the position of a street would not vary much between strata, it becomes apparent that in Stratum III it was a narrow street, in width similar to Street 9 and similarly confined between parallel straight walls. As mentioned in the discussion of Stratum II, the area northeast of the street in this later level was apparently unoccupied and used as a community refuse heap. Thus, where in Stratum III the street was enclosed on both sides, in Stratum II it was faced by buildings only on the southwest. Outside walls fronting the street were found in Strata II, III and IV with fragmentary drains of Strata II and III below the pavement following the course of the passage toward Street 5.

The material composing the sub-pavement of the street was rich in sherds, ashes and other refuse, and was of the color characteristic of such débris.

Conclusions. What can be said of the streets of the Northwestern Ridge applies in general to those of the other sections of the city. Most important is their almost universal straight-line direction and their maintenance of position from one level to the next. This is important, since it shows the street to have been the inviolable framework about which the mass of dwellings was built. Prosperous individuals might absorb the property of their neighbors, but there is no case in which they have taken over or obstructed a used street, except where a change of entrance has made the street purposeless. It is indicative of a rudimentary but strong attempt at an adherence to a city plan and a maintenance of established rights-of-way. It is extremely doubtful whether the city plan, as seen in Strata II, III and IV, is the result of pre-arrangement. It is more likely the outgrowth of what was found to be convenient

and necessary in earlier periods. Once so established, it was maintained and, perhaps, even improved by a power that at first accepted and later enforced the plan. Considering the expansive tendencies of many of the inhabitants, it is certain that this plan could not have been adhered to, except under governmental control. In so doing, the government apparently was not actuated by any desire other than the maintenance of these rights-of-way, for it made no objection to the use of these streets as depositories of sewage and rubbish originating in the private houses.

POST-NUZI OCCUPATION

Only in a few places on the Northwestern Ridge were there structural remains of Late Period habitation, but the comprehensive area in which objects of this period were found shows conclusively that an extensive habitation existed on this portion of the mound (Plan 29). Though the Southwestern Section shows a few indications of similar occupation, it is quite clear that the Northwestern Ridge formed the center of a small but thriving village on the surface of the mound. That only a portion of the mound was thus used does not mean that this occupation was correspondingly small, for, as is pointed out in Appendix E, all of the low adjacent mounds circling the *tepa* to the south, southwest and west were of the same period, and altogether must have formed as large a city as Nuzi had originally been.

Actual walls of the period were found only in the region of F18, F19 and F28, and even these are so only through adoption. It is quite certain that this series is a structure of Stratum I, as discussed under that heading, and that it was renovated and used in later times by these people. The semicircular addition at the northern limit of the building, presumably a shelter for a large jar, is the only genuine Late Period contribution to the architecture.

From F21 came an ornate-headed bone pin (Pl. 141, T) much like that found in Grave 32. F18 yielded plain and glazed terra-cotta pitchers with single and double handles (Pl. 136, I; Pl. 139, G), and an unusual three-part vessel (Pl. 140, H). The character of this pottery is entirely different from that of Nuzi, and is typical of the Parthian and Sassanian wares. Within the room, near the doorway to F21, was a collection of objects. In the western corner was a vase (Pl. 138, M), and an empty pot with a brick covering its mouth, of the same type as that found covering a similar pot under the pavement at F16. Next to this, by the southwestern wall, were the fragments of a large storage pot. On the other side of the doorway were fragments of

another large pot, a complete terra-cotta lamp (Pl. 140, A), a pair of copper scale pans (Pl. 142, F), with eleven large, water-worn stones, and a cow's astragalus, objects evidently serving as weights. On the floor, toward the center of the room, was a flat terra-cotta basin containing an exceptionally long bone knitting needle (Pl. 141, M), and a pair of iron shears (Pl. 142, E). These objects are of particular importance, since they help in establishing the late date of certain objects found in Nuzi levels. The infant interment on the pavement of F16, Stratum II, is thus proven as a sub-pavement burial of this later period. The pot (Pl. 138, F) is of the same ware and type as that in the western corner of F18 and is undoubtedly of the same culture. Both pots were covered by bricks placed over their mouths, a covering not found in Nuzi infant burials. It is of particular interest to find this custom of infant burial practiced in all of the periods at Yorgan Tepa regardless of the ruling power. It was found in the prehistoric period in L4, in the Ga.Sur period below Temple G, abundantly in Nuzi and here in the Partho-Sassanian period. It is plain that the custom is based on some primitive belief common to these Eastern peoples and that it persisted despite their changing and expanding religious practices.

Also of interest are the large storage pots found here. Their condition was not complete enough to reconstruct a whole shape, but the ware was identical with the very large pots of F8 (cf. Pl. 134, F) and F17.

The lamp closely resembles those found in fragments elsewhere and casts a doubt on the authenticity of all such lamps found in Nuzi levels, even those which appeared to have been a genuine part of the furniture of an earlier room. It is, of course, quite within possibility that the form of this useful household convenience remained unchanged during many centuries, and that the Parthians retained unaltered its much earlier Nuzi form. The iron shears, the scale pans, the knitting needles, the flasks, and the triple jar are all foreign to the Nuzi period.

No walls, other than those described, were found, but the same pavement could be traced as far northeast as the F13-F10 wall, and as far southeast as the F19-F24 wall.

Within the area known as F8 we again find these late-comers using earlier buildings. Two extremely large pots (Pl. 134, F), and another of smaller size (cf. Pl. 134, B), were buried with their mouths protruding but slightly above the Stratum I floor level.² Each was covered by a baked brick (Pl. 31, A), and the interior of each showed a heavy incrustation of natural salts. Numerous fragments of iron in the débris

² The exposed floor level seen in Pl. 31, A is Stratum II.

covering the Stratum I level testify further as to the use of this level by these later peoples.

F17 is another of the rooms cleared and used by these peoples. The only doorway, as we know the room in Stratum II, was closed by a wall placed across the opening on the F14 side. In the resulting alcove was a large pot like the two in F8, half buried below the floor. Another identical pot was similarly buried in the northern half of the room. Though the outline of the room was exactly that of Stratum II, the floor to which the pots belonged was considerably higher. Consequently, we may assume that Stratum I was the level which was being used. Even later than this is a fragment of wall, slightly out of parallel with the earlier northeastern wall, crossing the northern half of the room. Since it is later than the two partly buried pots, it must date from well toward the end of Late Period habitation.

In H40 was a further example of excavation and re-use. On a level with the Stratum II floor was a roughly made baked-brick pavement, down the center of which ran an open drain. The walls of Stratum II bounded it on three sides. On the fourth side—the northeast—the paving ceased in an abrupt but even line after having extended across two-thirds of the width of the earlier room. At this point, we may assume, was the pit wall forming the final enclosing wall. The brick-work of the pavement was characteristic of the Late Period, and on it was the mouth of a glazed pitcher of the same culture. Across the center of the line of the southeastern wall of H40, and 40 cm. higher than the paving, was evidence of even later occupation by these people. This consisted of a broad, baked-brick door-sill, 101 cm. wide and 174 cm. long; running along its length at both edges was a row of bricks 25 cm. wide, superimposed on the threshold.

The pit room at F41 and the circular storage pit cutting the walls between F1 and F32 are both presumably post-Nuzi introductions. Other constructions, uncertain as to period and located above the last identifiable Nuzi walls, are very likely of this same later period. They are: two cement-lined pits in F2 and F3; a pavement of thumb-marked brick in B7; a scrap-brick pavement in B29; another over the walls separating G2-B4, G11-G12, and B7; and still another over the walls of H6, H7, H9, H10, and H12, described in detail in the account of the post-Nuzi period of the temple. C15 had a fragment of a brick wall, and G18 a row of rectangular bricks, each pierced at the end, standing with the pierced end up. B17 and B21 have a fragment of brick pavement of similarly late appearance passing over the wall between them.

The other major form of construction of the Late Period was the beehive-shaped storage pit, of which a number were found. One was in B7; all the rest were within the area earlier occupied by the temple. Four were within the courtyard G32-H20, one in the eastern corner of courtyard G50, and one in the entry G47. This does not include the pits which pierced the corners of the two cellas, apparently the work of looters searching for foundation deposits. These have all been described in detail in the account of the temple.

B36 has an oven extending below its now lost upper pavement which may be either Stratum I or post-Nuzi. Ovens buried to such a depth were not customary in Nuzi and may belong to a much later period. Aside from these, G7 yielded a large flat iron ring; G5, lamps; F10, a two-handled vase (Pl. 136, A) and a two-handled jar (Pl. 138, A); B4, a large pot with single handle (Pl. 134, A), like that from Sounding 1; G4, stamped pottery; and F24 and F5, flasks and lamp fragments.

Thus it can be seen that the finds came from almost the entire length of the ridge, from F2 and F3 at the one end to H40 at the other. A comparison of these finds with those of the soundings beyond the foot of the mound and those of most of the late graves shows conclusively that they are of the same culture. A silver coin of the Sassanian king Shapur I, from a late grave, suggests that the settlement existed in the latter half of the third century. Three silver coins of the Parthian king Vologases III came from the Southwestern Section and indicate that this slightly earlier period was still not so long past. The pottery has characteristics more Parthian than Sassanian, but may have represented a mixed population under Sassanian domination.

CHAPTER VII

NUZI : SOUTHWESTERN SECTION

As a residential district, the Southwestern Section is second in size only to the Northwestern Ridge. Served by Streets 1, 2, 3, and 4, it flanks the southwestern palace wall, occupying all that area between the transverse erosion channel on the northwest and the southern corner of the *tepa*. The relative completeness of its many house units and the orderliness of their designs marks this as a residential section of particular interest.

STRATUM III

Since Stratum II was the level being investigated, Stratum III was uncovered only in those few isolated spots where missing upper walls or chance led to deeper excavation (Plan 11). Consequently, the Stratum III remains are of little use to the student, except as a meagre illustration of the manner in which they influenced the rebuilding in Stratum II.

Group 16. P400, P451, P458. Northwest of Street 1 is a group of three rooms, of which P400, by the nature of its considerable contents, is the most important. The objects in it consisted primarily of household terra-cotta of the usual type, ranging in size from cups (Pl. 78, R), through vases and bowls (Pl. 88, B; Pl. 89, D; Pl. 92, L), to large pots and storage jars. Of these, one vase was of the unusual gray-ware type (cf. Pl. 72, G). Aside from this, there was a copper arrow-head and a pin (Pl. 125, U), and one of the only two stone cups (Pl. 121, BB) found at Nuzi. In the niche in the southeastern wall was a large storage pot 73 cm. in height, and next to it another storage pot of 52 cm. (Pl. 65, A). In the corresponding niche in the northeastern wall was another pot, and next to it a pot and jar, the three ranging from 56 to 66 cm. in height, and partly blocking the doorway to P451. The pavement was littered with pottery fragments of ordinary vessels, too fragmentary to justify reconstruction.

Particularly important were the infant burials which were found here. Resting directly on the pavement were three infant burial jars (Pl. 79, CC), each upside-down and each covering the bones of a single new-born infant. These were all in the traditional manner of Nuzi baby interments. A fourth, however, was of a different character: a pot 49 cm. in height, with a small circular hole in the bottom and a mouth

14 cm. in diameter. It contained the bones of eleven infants. The mouth of the pot was covered with a small bowl placed upside-down over the opening (Pl. 29, B). The bottom of the jar was 50 cm. below the pavement, and was placed directly under the wall at the northern corner. It is highly unlikely that it was a part of an earlier phase of the room at a time when the wall did not exist at that point, or that it was built over heedlessly by those making an alteration; for even though the lip of the jar was below the floor level, the covering bowl protruded beyond it and would have been dislodged in the course of construction. Keeping in mind similar instances in which infant graves have been intentionally placed within and under a wall (G13 and G24, Group 28, Stratum II), it becomes evident that these bones must also have been intentionally placed in this position. Considering also the sacrificial aspect of Nuzi infant burials and the frequency with which they appear in rooms of importance, it seems likely that these burials were dedicatory offerings placed within and under the wall at the time of construction.

The infant burials, one of an unusual and significant nature, and the large quantity of pottery, as well as the stone cup, mark this room as one of real importance. Unfortunately, not enough of its surrounding rooms was brought to light to make clear its probable use or its position within the unit, except in so far as the superimposed house of Stratum II may be considered as mirroring its predecessor.

Opening into P400 is the small room P451. It contained several cups, bowls (one of large size), a pot-lid, and a gray-ware vase, the second example of this rather rare pottery to be found. Since this room and its companion, P458, contained no pots, it is probable that the lid found here belonged to one of the large pots in P400 and was thrown here at the time the building was destroyed.

P458 yielded nine bowls (one of large size), a shouldered cup, a composition bead, and a pointed copper object of indeterminate nature. In most respects, it is an ordinary, small room, differing only in the projection in its southern corner, apparently a compensation for a corresponding variation in the line of the street wall outside.

With the exposed infant burials in P400, one would expect that that room would have been cut off from use, but its doorway to the northwest is unobstructed, and the quantity of objects in the two rooms which have communication only through P400, shows that it was by no means abandoned.

Group 17. P334, P334A, P334B, P309, P309A, P486. This group includes two separate clusters of rooms, not necessarily belonging to

the same original house unit. Their proximity alone relates them. P334 has access to P334A through a doorway of considerable width. The wall which separates P334 and P334B was broken in the center, so that it is impossible to tell exactly whether or not it, too, contained a doorway. The absence of any door-socket, sill, or pavement at this point suggests that it was a solid wall. The objects were but few, and comprised principally a small, unbaked-clay tripod, a shallow bowl, an unbaked-clay pot-lid, and several crudely shaped tiny bowls also of unbaked clay. These objects, so crudely made of perishable material, and of such small size, suggest the laborious efforts of a child.

Classed within this same group are P309, P309A, and P486. The series is too incomplete and undistinguished to enable us to tell anything of the larger unit of which it was once a part, especially since it is at complete variance with the plan of the superimposed Stratum II building.

Group 18. K406, K450, K342A, K327, K346, K421-K330, K443, K436, K437, K381. K406, being separated from the rest of the group by untouched ground, cannot definitely be said to be of the same house unit. Proximity alone is the reason for including it. The digression of its southwestern wall from the usual right angle undoubtedly means that the building was made to conform to the requirements of conditions beyond its boundary. Since in Stratum II the outside street is slightly southwest of this point, it is possible that the southwestern wall of K406 marks the position of the street in the earlier period to which it belongs. Thus the difference between the position of this wall and the outside street in Stratum II may be taken as a measure of the lateral growth of the *tepa* within one stratum.

Again it is impossible to say whether even the remaining rooms of this group all belong to one house unit. The solid unbroken line of southwestern walls in K450, K342A, and K342 indicate with some certainty that they were the southwesternmost boundary of this unit. It is quite possible that there was communication between K327 and K421 through the unexcavated area to the east and, similarly, between K327 and K443 from the west. In any case, we have one portion of a house unit in K327, K450, K342 and K342A.

This intercommunicating group has no architectural feature of note other than the offset in the southeastern walls of K342 and K450, the latter in reality serving as a bench or platform, probably used for storage jars. The one in K342 is definitely a part of the wall, either as a strengthening feature or as a means of conformity to a similar irregularity in the next room.

In the adjacent series of rooms, the outline of the southeastern wall of K421 does not necessarily mean that its door was of the width here implied, but rather that, as in K342, we have an offset coming to a door of normal size at the eastern corner. Special attention accorded in antiquity to the walls of this room give it added interest. A white lime plaster was visible on both its southwestern and northwestern walls, extending from the western corner along one-third of the length of the former and two-thirds the length of the latter, and traceable for a meter above the pavement. This had been overlaid with gray paint and again with at least two coats of very thin plaster. The brittle character and color of the latter is evidence of the fierce fire that destroyed the building.

Not communicating with either K330-K421 or K346 are the two rooms on the northwest. Both show signs of active use, and the doorless room K434 contained a circular oven of the customary type.

Conclusion. The principal value of these scattered and unrelated fragments of building lies in marking the positions of Streets 1 and 2 in Stratum III. Since it is unlikely that buildings of any importance existed beyond the confines of these boundary streets, the two points where Streets 1 and 2 were found must mark the edge of the mound as it was in the time of Stratum III. Group 16 gives a clue as to the arrangement of the missing walls at this point in Stratum II, and Group 18 serves the same purpose for that area where erosion had removed all evidences of Stratum II.

STRATUM II

Stratum II of this section shows a related group of house units crowded one against the other, determined in shape and limit by the position of the outside palace wall on the northeast and by the edge of the mound on the southwest and southeast. Its mass is composed of house units independent in themselves and easily recognized as such. These units are served by streets and passageways originally created because of the necessity of intercommunication rather than to conform with any pre-arranged city plan.

Group 1. P482, P471, P469, P469B, P475, P476, U477. This group, one of the most incomplete in the Southwestern Section, occupies a position on the very edge of the mound, outside the line of Street 2 and following in level the downward slope of the mound. That this building was adjusted to the slope is proof that at this point at least the sides of the *tepa* descended gently rather than precipitously. From

the small size and poor construction of the walls, it is apparent that the group was not of structural importance. In fact, it is quite possible that there were no important buildings beyond the limits of Streets 1 and 2. The finds at the base of the mound, in the refuse carried down by erosion, gave no indication of the use of brick or other permanent building material beyond the limits of these streets.

It is unlikely that P482 belonged to the same building as the rooms farther southeast. Its proximity alone places it in this group. A niche in the southeastern wall contained a large, broad-mouthed storage jar, in which an inscribed clay tablet was found. Although this type of pot was used for the storage of grain, this is the only example of its use in connection with tablets.

From its size, P471 is apparently a courtyard, and if it was separated in any way from P482, the separation must have been by a very narrow wall. In the room was a number of terra-cotta vessels and three bone pins. The space between P471 and Street 2 appears as waste area abandoned after the collapse of an earlier Stratum II wall. Rather than level, clear away the débris, and build again on the old foundations, the inhabitants abandoned the area over which the débris spread, and placed the new P471 street wall farther to the southwest, allowing the space occupied by the older wall to be gradually absorbed by the street. This disregard for interior space again indicates that P471 and P469 were courtyards, where the loss would not be of great importance.

In P475, P476 and U477 the early Stratum II walls were used throughout the period without change of position. Judging by the projection from the northeastern wall of P469, it is certain that there was a door at this point leading through the now missing northwestern wall to the courtyard beyond. A similar projection or door-jamb indicates another door and wall separating this same room from P469B.

Immediately below the bases of these walls and extending to a depth of a meter and a half (the deepest point reached) the soil was composed of refuse earth, typical of the accumulation found in streets and in refuse heaps at the edge of the mound. It is certain, then, that these rooms built upon newly made land had no predecessors in earlier levels.

Group 1A. U374, U415, U427, U410. These four rooms, also built on newly made land, are not sufficiently complete to furnish any conception of the original building. An entry-way from Street 1 gave access to the building, leading through U410 into U427-U429, and, on the opposite side, into U374. U374 was probably a courtyard, with U415 merely a subdivision or alcove within it. The great length of its north-

western wall points with some certainty to this supposition. In both early and late Stratum II the wall of the courtyard was pierced by a drain carrying away the refuse originating in the house. The earlier stage is a brick conduit which spills its contents on the floor of Street 1. The later drain extends no farther into the unit than the earlier one, but continues within the street as an underground channel, apparently connecting with some main sub-pavement drain now demolished. Because of its subterranean course, the outlet into Street 1 is at a lower level than that of the earlier surface drain, although at its inception it is 11 cm. higher.

It is not likely that the group extended much further southeast than is apparent here, for the new land on which it was built would have been necessarily limited in area. By the same token the original length must have been in much the same proportion to the present length.

Group 2. P399, P387, P400, P401, P382, P473, P468, P370, P361, P478, P483, P488. This building shows the rectangular outline typical of certain dwellings at Nuzi, and in the orderly and efficient arrangement of its rooms it shows ample evidence of attention given to design before building. Located as it is on Streets 1 and 2, there is ample opportunity for easy access to the building, but it is likely that the two doorways opening into Street 2 were all that it originally had. The unbroken southeastern walls of P458 and P451 in Stratum III indicate that, if the later building followed the outlines of its predecessor, it had no outlet at this point. Moreover, a greater number than two outer doorways would be unprecedented and improbable in this perfectly normal building.

The entry into P399, leading directly to the center of the house, seems to have been the main entrance of the unit, with the small room P387 serving presumably as a doorkeeper's room. P399, among whose few objects was a fine, small duck weight, leads into P401 through a doorway of such width as to suggest an open entry-way rather than one closed with a door. The latter room with its hearth of odd-sized bricks and its large number of bowls and vases, appears to have been the kitchen. P401 was heavily burned over its entire area, showing the large quantity of inflammable material (fuel?) originally stored here. The cylinder seal and ten tablets also found in this room are not in keeping with a kitchen, and may have been displaced from P382, which originally served as a storeroom for household pottery (Pl. 74, C; Pl. 87, G) and tablets.

A second doorway from Street 2 leads through P370 into P361,

apparently a more private entrance leading directly into the main living-room. The bathroom, P473, is paved with scrap-brick at the southeastern end, and is served by a baked-brick drain which pierces the southeast wall and crosses P468 (below the pavement) to empty onto the surface of Street 1 through an open terra-cotta channel (Pl. 11, C). A fragment of another drain joins this channel at the point where it enters the southeastern wall of P468, but it is too incomplete to allow its origin to be traced. Since there were no signs of it within the P468-P488 wall, it is presumable that it served P468 rather than any room beyond.

The three fragmentary rooms, P478, P483 and P488, have direct communication with P473. They form one of many examples at Nuzi in which communication to other rooms leads through the bathroom. Apparently, bathing and the bodily functions were not concerned with modesty as in modern times.

The walls between P387, on one side of the house, and P468, on the other, were destroyed beyond hope of recognition. This blank area probably duplicated the plan seen at this point in Stratum III, and in spots it presented remnants of good used pavements on which were examples of typical household pottery.

Group 3. P474, P485, P472, P464, P470, P335A, P335, P323, P331, P47, P37, P35. Group 3 appears as one would imagine the perfect Nuzi town house to be. The orderly and symmetrical arrangement of the rooms is such as was not possible in the crowded quarters into which the other units were squeezed. One enters the building through the only outside doorway, leading from Street 2 into the courtyard, P474-P485, the northern half of which is paved with scrap-brick. The principal and central room, P35, appears also to have been the work-room of the building, having in it not only pottery cups and bowls, but a large stone tripod with its muller in place, four other mullers, a whetstone pierced at one end, four crudely made, pierced stone weights, a copper needle, and two badly corroded knife-like objects of the same material. This was obviously the room in which the grain was ground and in which the daily household tasks were performed. Since the weights are those commonly called "loom weights," one may assume that weaving was done here also. The horn arrow-head (Pl. 141, U) found in the débris of this room is probably intrusive.

Although it is known from the inscriptions that the position of women in the community was one of dignity, it is not a presumption to believe that the women performed the routine domestic tasks. It is,

therefore, of particular interest to note that the principal room of this building is the scene of a woman's activities. Unless this was an establishment owned and occupied exclusively by women, which is unlikely, the assumption that women were restricted to separate quarters within the house is here proved to be entirely false.

This center room is completely surrounded by rooms of smaller size, devoted to purposes known and unknown. P472 is screened from the courtyard by two curtain walls which were apparently later additions to the house structure. In the southern corner is a four-brick hearth flush with the pavement and effectively located for protection and draft. The presence of this hearth suggests a kitchen, and it is surprising that no household utensils were found in the room. The divergence in the size of the jambs in the door leading from this room to P35 and to P464 suggests that they were without solid pivoted doors.

The quantity of objects in P470 would alone mark this as a room of importance. Its contents were nineteen footed and plain bowls (Pl. 89, C, J, N, V; Pl. 90, J), both large and small, two shouldered cups, three plain cups, two vases, a gray-ware vase, three storage pots, a storage jar, four pot-stands, a terra-cotta Ishtar figurine (Pl. 99, Q), thirteen beads of stone and composition, a stone balance weight, a fragment of lead wire, ten tablets, and fragments of many other incomplete terra-cotta utensils (Pl. 80, E). Most of these objects were indiscriminately scattered about the pavement, and only the storage pots seem to have retained their original positions. The storage jar and one of the large pots, both close to their stands, were in the northeastern end of the room. The other two pots, as indicated in the plan, were beside the northwestern and southwestern walls one near the door to P35 and the other near the door to P464. Both were buried so that their rims were flush with the earth floor. These two vessels, both of them permanently fixed in location, give the appearance of a store-room in which not only household utensils were kept, but also grain or such other agricultural or manufactured products as may have needed protection. The double, mud-wall bins in the northern corner point to the same conclusion. The presence of the Ishtar figurine cannot be taken as especially significant, since similar figurines were found in rooms of all kinds. The lack of veneration given these figurines is indicated by the considerable number found in street refuse and dump heaps.

The most interesting feature of P470 is its closed doorway to P37. In blocking the passageway, a wall, one *libin* thick, was built on the P37 side, while within the doorway a similar wall was built, thus form-

ing a compartment 28 cm. wide. Within this space, 40 cm. above the pavement of the door, was an infant burial, covered with the customary burial jar, resting upon earth which contained fragments of the bones of an individual approximately fourteen years of age. This door was again blocked so as to be flush with the interior walls of P470, and the space between this last wall and the compartment which contained the burial was filled with earth and potsherds. The jar was in the usual position—upside-down—covering the bones of an infant under a year in age (Pl. 29, E). Over this, and to one side, was an envelope tablet with a small inverted bowl covering it. If the tablet and this infant grave belong together, the jar was undoubtedly covered with earth soon after it was placed in this compartment, and the tablet inserted at a higher level. The tablet was found at a level near the surface where the wall ceases to be recognizable, and though it was at first considered to be intrusive, it is difficult to explain its presence in any other way, except as part of the burial. As is suggested in the chapter on "Burials," it seems likely that these interments were sacrificial. If this be so, such an unusual disposition tends to give added significance to both rooms. P37 has no distinctive finds or features, but P470 has. Could P470, then, have been a room later devoted to religious purposes, which was cut off from its neighbor so as to seclude it, and dedicated to this purpose?

P37 contained no objects other than two copper arrow-heads, and has no feature of distinction, except traces of red on its walls near the floor level. P47, however, proclaims itself at first sight as a storeroom. Six large storage pots and jars from 60 to 80 cm. high line the northeastern and southeastern walls (Pl. 23, B). P323 had an infant interment on the pavement, next to the northeastern wall. The jar, of the type usually employed for this purpose, lay on its side next to the tiny skeleton, just as it was displaced at the time the building was destroyed. On the floor of P335 was a similar, though undisturbed interment.

P335A, in whose niche is a circular oven, is illustrative of the location commonly chosen for this familiar household fixture. Far removed from the kitchen and from the center of the house, neither the smoke from the oven, nor the rain falling in the roofless area could seriously bother the occupants, or damage the walls of the main and central rooms of the building.

The purpose of this building hinges directly on the key room P470, since this is the only one which shows marked variation from the usual custom. The description was based on the supposition that this was a dwelling-house of unusual type, but the question asked earlier—whether

or not it was a chapel—reveals another point of view which cannot be passed by without some consideration.

There is little doubt that the house was used for living purposes. This use is shown by the household implements, hearths, oven, and storage room. Assuming, for the sake of argument, that it was a chapel, these features would not be out of the ordinary, for both the units of Temple A showed ovens, hearths, and signs of human habitation. Continuing on this premise, it is perfectly understandable that the priests in attendance at the chapel should have lived within its walls; or even that a building which served as a habitation for priests should have become, in part, a chapel. The infant graves in P335 and P323 are not sufficient to justify this supposition, but the third occurrence of an infant grave, found between P470 and P37, as though dedicatory to P470, together with the unusual nature of the room and its contents, raises the supposition to the realm of probability.

It should be remembered that in none of the definitely established dwellings of the city has this room an exact parallel, but there are significant points of similarity between the features of this building and those of Groups 16 and 17, Stratum II (Northeastern Section), both of which show definite indications of having been chapels. There is a strong connection between this room and S110, Group 17, Stratum II, in that both have pots similarly buried below the floor on either side of the entry-way. It should be remembered that the sanctuary of the Ishtar unit in Temple A had a large jar immediately within its entry-way, and though not buried, it may have served the same purpose as the pots flanking the doorways of P470 and S110.

In Group 3, the relation of the main room, P35, with its hearth, to the probable sanctuary P470 is paralleled by a similar arrangement in Group 16 between its main room, S144, also with a hearth, and the ante-room to its probable sanctuary, S111. Though the orientation is reversed, the relation is the same in both cases.

Returning to the consideration of Group 3 alone, the great quantity of objects within P470 is by no means inconsistent with a sanctuary, since an immense quantity of objects was found in G29 of Temple A. The two buried vessels and the bins in the northern corner might have served for the storage of bulkier products donated for the support of the church and for the glorification of the deity. The buried vessels may even have been used for liquid offerings, and have been so placed that the contents might drip through the porous pottery as a libation to the gods of the underworld.

The hearth in P35 corresponds to that in Group 16, and if fire was

an essential feature of the cult, as in G29, Temples A through G, it must have been located at this point. The stone mortar and mullers do not detract from the possibility of this room as a chapel if it be remembered that in the sanctuary of Temple A a basket and a large whetstone were found, in addition to the collection of strictly cult objects.

Other than the Ishtar figurine in P470, there is no object or feature sufficiently distinctive to determine the deity to which this building may have been dedicated. Figurines of this type are such common objects throughout all the houses of Nuzi that the presence of one is not alone sufficient to prove that this building served as a chapel of Ishtar. It would, however, point to this possibility, since it is unlikely that a figure of Ishtar would be used in a building dedicated to another deity. However, it should be remembered that while in this building the distinguishing feature is the number and peculiarity of its infant burials, no interments of any kind were found in any of the seven levels of the Ishtar temple.

It is clear that in this house there are as strong indications of a chapel as there are of a private house. Since there is the possibility of conflicting opinion, without positive proof for either side, the question is left open to the decision of the student, who in the light of subsequent discoveries in this field may be able to judge more positively.

Group 4. P354, P345, P324, P379, P378, P332, P369, P362, P353, P351, P334. The entrance to Group 4 must have been from Street 4, at some point beyond the traceable limit of the street wall. If the building covered that space northwest of the boundary line between P345 and Group 2, and south of a line continuing in the direction of Street 4, it in itself, without the inclusion of the four rooms P362, P353, P351 and P334, would constitute a fairly large Nuzi town house. The four rooms just mentioned appear to have been later additions to the original plan, built long before the time of Stratum II on space which even earlier had been a passageway or street.

If the supposition as to the extent of the main part of the building is correct, it is apparent that erosion has taken away the greater part of this structure. With so much of the building missing, it is difficult to reconstruct the original outline, or even to identify correctly the use of those rooms of which some portion remains. On the assumption that the shape of the original pre-Stratum II group was rectangular, and did not include the four northwesternmost rooms, we may assume that P369 was the entry-room at the time when P362 was an open street, and that P378 was then—as it was finally—an open court serv-

ing the rooms immediately next to it. The main room of the house would have been in the now missing portion either northeast of P324, in the center of the house, or northeast of P354, against its outside wall. The brick pavement in P354 suggests a bathroom, but not enough of it remains for corroboration.

When the four northwestern rooms were added, P369 ceased to be the outside entry-room, becoming the room leading to the new addition, while P378 remained a courtyard. It is likely that the other rooms remained unchanged, and that the position in which they are now seen does not differ greatly from that before the period of expansion.

The four rooms in line northwest of this group contained few objects of interest other than two tablets in P353, and a generous quantity of household pottery (Pl. 87, D; Pl. 88, M) in P351. P353 has a raised platform 15 cm. high, extending along its northwestern wall, similar to the platforms found in other rooms used for the safe-keeping of private property. P351, with a pot in its western corner and many terra-cotta vessels, was probably also a storage room.

The presence of three silver Parthian tetradrachms (Pl. 142, D), struck with the head of Vologases III, found on the floor of P351, was at first very confusing. The indisputable authenticity of the remainder of the household objects as Nuzi leaves only one explanation: that the coins are intrusive. A jug of the later era in the débris of P362 and an intrusive storage pit cut through the walls and doorway of P362-P353 are signs that this point was overlaid by a dwelling of considerably later date. This will be discussed in greater detail under the heading of "Late Period Occupation."

Group 5. P389, P388, P445, P355, P376, P375. Much damage was done to the walls and floors of this building by intrusive Muhammadan graves. Because of this damage, there is no positive proof that all the doorways illustrated on the plan originally existed as such. But one can say that under normal conditions they could be reasonably expected in these positions. However, there is no doubt that the original sizes and shapes of the rooms under question were as here represented. Provisionally accepting these doorways, one enters from Street 2 into the entry-room P389. A balance weight and a few small vessels were on the pavement, one of which was a fragment of a bird-shaped vessel pierced through the breast by a very small hole (cf. Pl. 103, H). To the right as one enters is P388, rather larger than the room which usually flanks the entry-room. In size, P445 is the most important room, and, as is usually the case, it was particularly barren of objects. This fre-

quently occurring phenomenon leads one to suggest that the main room was in most cases reserved as reception hall, sleeping quarters, or for some such distinct purpose, and that the clutter of everyday household utensils and possessions was rigidly excluded.

Northwest of P445 is P376, a room barren of objects except for a single bead and another balance weight. The adjoining room, P375, also has no distinguishing features, but contained a third balance weight, several beads and bone pins, and a fragment of a terra-cotta Ishtar figurine.

Though this building used the outside walls of Groups 3 and 4 as its own inside walls, it was forced to build an entirely new wall at the point where it touched Group 6. This must mean that the adjoining wall of Group 6 was either unsuited for the purposes of the householder of Group 5, because of height or condition, or else that the owner of the neighboring house was less generous than the others in sharing the products of his labor.

Group 5 varies considerably from the best of the houses seen in the Southwestern Section, and is primarily characterized by the relative smallness of its total area and the large average size of its few rooms. The scarcity of household objects and the unusual number of balance weights would suggest that it was a place of commerce rather than a home.

Group 6. P357, P344, P341, P322, P321A, P347, P321, P349, P348-P340, P329, P350, P356. This unit illustrates a certain perfection in city house planning. Through a slight decrease in room-size and compact, careful planning, it achieves a multitude of orderly rooms equal to that of a much larger building. Its two entry-ways, from Streets 3 and 4, provide both public or service entrance, and a more private entrance for those who had the right to proceed directly to the rooms at the rear of the house.

The doorway from Street 3 appears to have been the service entrance leading into entry-room P357. Seven tablets were found in this room, and one can only believe that either they were dropped here in the excitement of the catastrophe that wrecked the building, or that they were thrown out from P344 at the time the building was looted. Two small copper nails with traces of gold-leaf on the heads were found on the pavement, as well as a bowl, two wheels of a votive chariot, and one or two lesser objects.

The doorkeeper's room, P344, seems to have been used as a storage room, as is evidenced by the scattered fragments of a large pot. Three

bowls (Pl. 82, C) came from here, and one of the three examples, in the Southwestern Section, of the glazed ware used so abundantly in Temple A—a small vase, 12 cm. in height and 7 cm. in diameter. A door to the southwest leads into the large room P322. However, the normal procedure in entering the building would have been to cross the entry-room directly into the court, P341. This is paved in scrap-brick, over which lay a few small household vessels (Pl. 91, A). The most interesting feature of this court is the jar near the northwestern wall, buried till only its rim protrudes above the pavement (Pl. 28, B). It is of the usual infant burial type, but is here obviously used for a different purpose; what this purpose was, is an open question. Its small size and the slight elevation of its rim above the level of the brick pave-

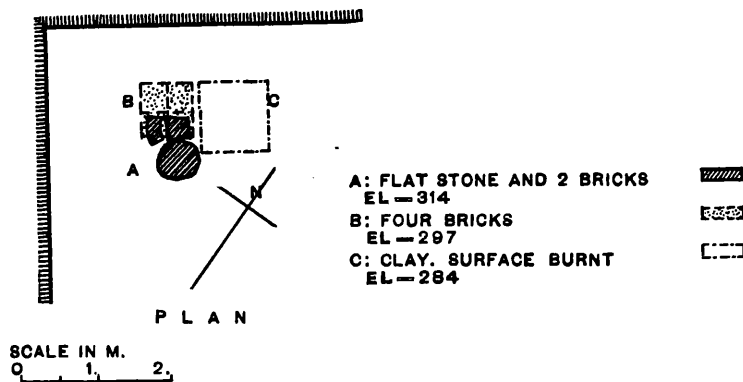


FIG. 39. P322, superimposed hearths.

ment precludes the possibility that it was a drainage fixture into which the rain-water flowed, eventually to seep away through its porous sides. Again, its small size and its immobility makes it useless as a watering vessel for animals. It may have been a container for some material of common domestic purpose unknown to us, or perhaps even a receptacle devoted to religious purposes, from which liquid offerings could seep away to the earth below.

Passing from the court, one enters the main room of the house, P322, through a doorway of extraordinary width. Immediately below the uppermost floor of this room was another, at the northwestern end of which was a hearth (Pl. 17, B) made of two types of brick and a large flat stone (Fig. 39, A). As usual, the hearth was flush with the floor, and showed signs of considerable use. A third floor was 17 cm. below the second, and on it was another hearth of the regular four-brick type in much the same position as the first (Fig. 39, B). A fourth pavement was 13 cm. below this, with a hearth made entirely of puri-

fired clay (Fig. 39, C). With each of these three hearths occupying the same relative position within the room, it is quite likely that the uppermost floor was also similarly used, and that the corresponding hearth was either displaced at the time the building was destroyed, or had been temporarily removed before the destruction. As might be expected in a room in which cooking was done, a considerable number of bowls (Pl. 88, C) of varying sizes was found here, as well as a hand mortar and a few other objects of lesser importance.

At the foot of the northwestern wall, in the center of its length, were traces of red wall-painting, but not enough remained to tell whether the favorite gray and red vertical panel was used, or whether the wall was of solid red as in L11 of the palace.

The remaining rooms are so placed that they insured perfect privacy to their occupants. Access could be had from P322 to the store-room (?) leading to the Street 4 doorway without entering either P347 or P349. It is difficult to say what purpose was served by the two rooms just mentioned. Neither yielded anything of significance. P349—because of its size and location—may have been a private living or sleeping chamber. P321 and P321A provide communication to the outer rooms, and in addition they undoubtedly served a more material purpose. A pot-stand (Pl. 94, F), more ornate than usual, and two large, pierced stone weights suggest storage space.

P340-P348, P329, P350 and P356 produced a greater quantity of small bowls, cups, and vases than any other rooms in the building. Accordingly, they may have served as living quarters for the lesser

members of the household, using the private door to Street 4. In P340-P348 was one of those rare examples in which even a small group of composition beads was found still in its original stringing order (Fig. 40). In P329 was a fragment of another green-glazed vase, with pointed bottom, similar to the glazed ware found in such profusion in Temple A.

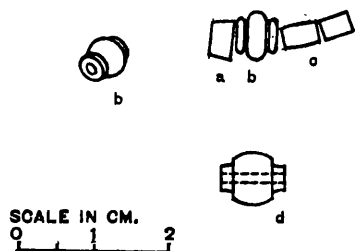


FIG. 40. P348, glass beads in situ.

Group 7. P447, P449. Portions of two rooms are all that remain of Group 7; and though but a fragment, they must be considered as an independent group, rather than a part of the unconnected, adjacent Group 8.

It is reasonable to believe that at this point Street 2 continued along the edge of the mound just as it did opposite Groups 2, 3, and 5. If so,

it must have been immediately beyond these two rooms, since they themselves are on the edge of the present mound. This would indicate that the two rooms were little more than stalls, such as are used today as shops in Arab cities.

Group 8. P448, P446, P446A, P452, P460-P466, P467, K465, P456, P459, P457, P461. This building, like Groups 6 and 3, is notable for the regularity of its outline, and it is particularly like Group 6 in the compactness of its arrangement and in the segregation of an inner group of rooms of a more private nature.

The entry-room, P448, leads directly into P446 over a baked-brick threshold. Farther ahead is the small room P446A, and connected by a doorway through an unusually thick wall is P452. Two jars found in the east corner of P452 mark this room as having been a storeroom, at least in part.

On entering the building, the normal procedure would be to turn from P446 into P460-P466, the center of domestic activity (Pl. 18, A). At the northwestern end of the room was a large flat stone sunk into the pavement, serving as a hearth. Three large pots were also here, one at the center of the northeastern wall, another near the southern corner, and the largest blocking the doorway to P446. Although out of position, it is probable that these pots were not far from where they originally stood. Two were probably located in the western and southern corners, and the other about where it was found against the northeastern wall. It is likely that the seventy inscribed clay tablets scattered over the pavement were stored in these pots and were dumped there by the invading enemy.

The lower part of a gray-ware vase containing several tablets was also found on the floor. This type of vessel is not large enough to be effective for the storage of such bulky things as tablets, and it must have been used here only as a temporary measure. This is the only instance of a direct association between tablets and this type of ware.

Directly connected with this room is P467, the largest room of the building. Contrary to the usual custom of keeping the main room comparatively free of objects, it contained twenty-eight tablets, two large jars, five bowls, a copper bar (Pl. 125, C) flattened at both ends by hammering, a considerable number of beads and several other copper and pottery objects.

K465, on the northwest, has every appearance of the customary tablet storage room. It is not beyond possibility that the tablets which were found scattered over the floors of P466 and P467, as well as some of the vessels which contained them, came from K465.

Southeast of P466 and P467 is a group of four small rooms all easily accessible to one another and so situated as to form an independent unit within the house. P456 is partially paved with scrap-brick, this pavement running into the doorway to P466 to form a solid threshold. It seems unlikely that such a small room should have been unroofed, and the absence of drainage rules it out as having been a bathroom. Its position next to the kitchen and its solid brick pavement indicate that it was probably the place in which water-filter jars were kept, and where constant dampness was to be expected. P461 has no distinguishing features, but its neighbor, P457, is obviously a room used for storage. Three large storage pots were in the western corner, and another—out of position—blocked the doorway to P459. P459, which completes this quartet, has a feature of note in its southern corner. Built out toward the doorway of P456, and parallel with the southwestern wall, is a thin partition, one *libin* in width, making a narrow compartment suitable for the storage and safe-keeping of small articles. The doorway into P448 is somewhat akin to the private outside doorway of Group 6, in that it provides exit from this more private region of the house.

On the whole, the building was relatively rich in pottery vessels and household utensils, distributed evenly among the various rooms.

A frequently encountered peculiarity of Nuzi construction is seen in the wall which later was to become the inside wall of P309, Group 9; one that is illustrative of the aversion to a curved line in correcting a mistake in wall direction. When it was found during the construction of this wall that the two faces were not parallel, but were running closer and closer together, the outer face was stepped out to a width greater than necessary, and the same mistaken line carried on. With the arrival of the newly built wall to K465, the inside line was altered to correspond with that of the outside line, but not until a new room was reached. This type of construction is best illustrated by the southwestern outer wall of the palace, where, rather than carry the wall through a turn in direction, the same effect was attained by building the wall in a series of steps, with each face parallel to the last, but with the longitudinal location farther and farther removed from the original.

Group 9. P486-P309, P302, K333, K314, K303, K303A, P310A. Group 9 shows a greater variation from the usual house plan than any other building in the Southwestern Section. The long unbroken stretches of wall in the courtyard, P309-P486, and within the largest room, P302,

preclude the possibility that other now demolished walls divided these large areas into smaller chambers. With the extraordinarily large courtyard, Group 9 appears as a series of three humble residences—P302 and P310A, K303 and K303A, and K314 and K333—all sharing in the use of the courtyard. Apportioning it equally would give to each a larger court than is found in the most pretentious buildings of this section. In this connection, one is reminded of the village house of modern northern Iraq. Of these houses, the courtyard is the largest and most important feature, often shared by two or more separate houses, and used at night as an enclosure for animals. Such an arrangement here seems quite probable, the animals occupying the court, and the shepherds and their families occupying the three groups of rooms. The relatively small amount of domestic pottery found in this court gives some slight support to this theory. The pavement, for the most part, was of clay and pebbles, forming a floor which was fairly well adapted to hard wear and exposure. Underneath this pavement, and in the débris covering the second pavement, was a large pot (Pl. 64, A), containing a mixture of unrelated adults' and children's bones. The neck of the pot was missing, and on the lower part of the belly was a neatly incised cross such as would be made by rubbing with the edge of a square-sectioned metal bar held at a tangent to the curved surface of the vessel.

The outside door to the group must have been at the offset in the northwestern wall of Street 3, near the doorway to P310A. This would make P310A the doorkeeper's room, with direct access to P302. The considerable quantity of household pottery (Pl. 86, E; Pl. 91, P), the stone mortar (Pl. 122, B), and several large flat grinding stones found in P302 are proof that only the court was reserved for cattle. On the walls of K303 were faint traces of wall-painting in red, black, and white. Faint traces of design were found at one spot in the form of parallel black lines on a red field, and a fragment of the looped ribbon motif in black and white on red.

Group 10. P313, P377, P326B, P326, P444, P311, P487, K199, K300, K176, K184, K189. Group 10 again follows the regularity of outline distinguishing the better buildings of this section, digressing from it only where a change in the direction of Street 4 demands a similar divergence in direction.

It is hard to imagine the reason for two outside doorways, both leading toward P326B. Neither leads to any group of secluded rooms or to any part of the house different from that served by the other. The difference in the size of the wall on both sides of the P326 doorway

to Street 3 is unusual for an outside doorway. It is likely that the southwestern half of this wall is a reconstruction, following the ruin of an earlier Stratum II wall, on a scale sufficiently large to insure future security. The other half, being still intact, remained until absolute necessity demanded that it be rebuilt and enlarged.

The wall separating P326 and P326B is obviously a later addition changing one room into two. P444 and P377 could both have served as doorkeepers' rooms to their respective outside doorways, although it seems more probable that only P444 was used as such. The presence of ten tablets¹ in P313 suggests more private quarters, with P377 serving in a less active capacity than as a doorkeeper's room.

The courtyard, P326B, is evenly and well paved with baked brick, extending as a threshold into the doorway to K199. The bricks which are missing in the eastern corner were probably carried away by the people who dug the intrusive Muhammadan graves that riddled this section. P311 furnished two pieces of pottery of a superior type. One was a small green-glazed vase of the temple type, pointed at the bottom and plainly showing the marks of the cones on which it rested during the process of baking. The other was a complete bowl of the rather rare black burnished ware (Pl. 91, N), with indented circles and triangles around the lip and rim. It is relatively certain that the dwellings contained private chapels, and the presence of ware of the type found most frequently in the temple confirms the possibility. P311 and P487 were both admirably suited to such a purpose.

K199, with its generous quantity of domestic pottery and its relation to the main room, K176, suggests a kitchen, just as K300, with a large pot against the center of the northeastern wall, suggests a storage room.

K176 is the main room of the house, and, as usual, was uncluttered with household utensils. K184, however, contained fragments of a number of large pots. Along the walls of K189 was a large storage jar, and six large storage pots (Pl. 64, E; Pl. 67, E; Pl. 68, M), all in their original position. A crack in the large jar in the southern corner had been mended by a heavy application of plastic bitumen. The purpose of these two rooms is obvious. The northeastern wall of K189 is faced for a few courses with baked brick, and the only drain in the whole building pierces the center of this wall at floor level, allowing the moisture from the pierced-bottom filter jar (Pl. 68, M), and from

¹ The fact that four of these are school or exercise tablets (S. M. Nos. 2560, 2561, 2562, 2563) suggests that this is the quarter or "city" of the scribes mentioned in the Nuzi texts.

the many porous storage vessels, to flow out onto the surface of Street 4. The drain does not enter the room, but is merely a brick channel extending the width of the wall it pierces. The pavement was sandy, thus providing a firmer footing in a wet area.

Group 11. K425, K425A, K419, K438, K411-K435, K442, K453. We can assume here that Street 2, on which this building must have faced, coincided roughly with the present edge of the mound upon which the southwestern wall of K425 is situated. The continuance of the outer wall of Group 11 in the same line as that followed by the outside wall of Group 8 strongly supports this theory, for only when governed by such an external boundary do they continue the same from one building to the next.

Although Group 11 varies from the ideal house, it retains the essential, characteristic features: entry-room, K425, with its subsidiary rooms, K425A, K438 and K419; main room, K411-K435; and inner rooms, K442 and K453. The double walls of K435 at first sight suggest that K442 and K453 once belonged to Group 8, with a doorway located where the alcove of K453 is, and that in the process of expansion Group 11 acquired this property, closed the doorway to Group 8, and opened another doorway from K435. However, there is no sign of a closed doorway between these two groups. Neither can the double wall along part of the southeast side of K435 be explained by this theory. It is more likely that these additions were structures strengthening or replacing unsafe older walls.

In the center of K442 was a hearth of the usual type. At a depth of 60 cm., in the loose refuse-filled earth underlying the hearth, was an infant burial jar, upside-down and in proper burial position, but without the infant skeleton. Though possibly this position was accidental, it has the appearance of the performance of a rite.

Group 12. K193, K363, K301, K339, K338, K346. With the exception of Group 9, this house differs more than any other from the so-called typical house plan of the Southwestern Section. The position of the main room and the positions and irregularities of the other rooms indicate either a lack of a preconceived building plan, or the necessity of using the cramped space available between two more important buildings.

From the quantity of household pottery found in K193, it appears that this room was used for domestic purposes rather than merely as an entry to the building. This room leads into K363, whose drain, flowing into Street 4, suggests that the room was open to the sky. The

varying thickness of its northwestern wall can be explained only as an additional support to a weakened earlier wall. K301 is the main room of the house, and following the usual custom, was bare of household objects. However, on its pavement was a single complete clay tablet and fragments of several others.

If the house consisted merely of these four rooms, it would indeed be small. However, the narrow wall which separates the house unit from K338 and K346 makes it appear that these two also belonged to Group 12. Although they had no apparent outlet, they must have had communication with the outside in the usual manner for doorless rooms, with the entry-way probably from K339 into K338. Four shouldered cups and a gray-ware bowl in K338, and in K346 a bowl, a vase, and two storage pots partly buried under the pavement show the active use to which these rooms were subjected. The narrow partition wall across the northwestern end of the latter suggests bins for the storage of material, either in bulk or in large jars. In conformity to the slope of the mound, which apparently was almost as marked in the time of Nuzi as it is now, K346 is 25 cm. lower than its neighbor, K338. A small platform from the door projects into K346 at the higher level of the neighboring room, in the form of a protruding step between these two different levels.

Group 13. K421-K330, K327, K315, K342, K432, K406. Nothing definite can be said about the architectural arrangement of this group, comprised as it is of fragments of unrelated rooms. However, it is unlikely that all belonged to the same house unit. It is more probable that they are the only remaining fragments of what was once three separate dwellings.

Conclusion. In Stratum II of the Southwestern Section we have the most perfect and extensive series of dwellings found at Nuzi, and from it mainly we must draw our conception of domestic, urban architecture. It seems beyond a doubt that in most cases the dwellings were built from a preconceived plan rather than haphazardly as the space allowed. The general position and area which was allotted to a group depended on the size and location of the house to be built, just as one would expect in the construction of private houses on property unencumbered by tradition. It is interesting to note the freedom with which one house-owner used the external walls of his neighbor's house as the inner walls of his own dwelling. Although there are cases of double walls between groups, as well as extra wide walls—indicating the same necessity—they are not necessarily the rule.

The lack of drainage in so many of the buildings is puzzling, particularly when one considers the completeness and efficiency of the drainage system in the palace. It is hard to understand why with such knowledge of sanitation, so little evidence of it was found in the private houses. As it is, only Groups 2, 10 and 12 have drainage to the outside streets. However, the lack of baked-brick or terra-cotta channels cannot be taken as conclusive evidence that the buildings were without drainage. It is possible that liquid waste-matter was carried out to the street, as it is in Arab houses today, through a hole in the base of the wall. Such a small, crude channel, unprotected as it would have been by any material harder than mud-brick, would, through settling, long since have become indistinguishable.

Observation of the levels of the various rooms show that the erosion channels of today mark the location of similar depressions existing in the time of Stratum II, and that the mound even at that time was badly weathered. It is not the nature of a living, growing city to alter its contour during the time of occupation except in the form of relatively uniform lateral and vertical growth. This fact points to a period preceding Stratum III, during which the mound had already grown to its present general outline, and after which a long period of desertion intervened before the final Nuzi occupation began.

The only time at which such a gap could have occurred is the period between the end of Ga.Sur and the beginning of Nuzi, discussed in greater detail under the description of Ga.Sur and Temples F and G. Suffice it to say that in neither L4 nor the temples is there any indication of a distinct gap between the two cultures, but, rather, a union of the two, with that of Nuzi finally coming into complete supremacy. However, since the mound does show the erosion that could have come only from desertion, it is possible that a decline in the population and power of the city of Ga.Sur aided an alien race in obtaining a foothold, and that the city which was taken over by the Hurrians was, and had been, only partially inhabited for some time.

It should be noted that no wells were found in this section, though there must have been a plentiful water supply near at hand. The locations of the wells in other parts of the city, except those of the palace and the temple, were on the edge of the mound, and in the corresponding Northeastern Section, the only well was the one at the base of the *tepa*. It is reasonable to suppose that here also the wells were equally near at hand and down the slope at a point where less effort would be needed to dig to water level.

This section was barren of objects of unusual interest. Of the

household terra-cotta, cups, pots, and bowls were the most plentiful. Next in quantity were the beads. One or two from almost every room showed that their owner must have searched in vain to recover the last of that broken string of beads. Bone pins seem to have been almost as easy to lose, and certainly easier to break. Complete and fragmentary, they were found in all parts of this section. Copper arrow-heads were as evenly, though less plentifully, distributed. Their uniform presence shows that this weapon of war and chase was always close at hand.

STRATUM I

Only in one spot is there enough left of Stratum I to give us even a portion of a building plan (Plan 29). This most complete series of rooms occupies relatively the same position as Group 3, Stratum II. Three of its rooms—P35, P37, and P47—retain the same position as in the level below, with the addition of a door between P35 and P37 and the elimination of the one in the northwestern wall of P47. Whether there was a series of rooms northwest of P35 and P47, as in Stratum II, is not definitely established, but the northwestern continuation of the wall from P335A makes such a series of rooms a distinct probability. This would make at least two sides and the center of the group similar in plan to that of Stratum II. Unfortunately, that part of the building occupied in Stratum II by the interesting room P470 is here completely demolished.

The southeastern boundary of the building has been considerably altered since Stratum II. P370 and P361 were added to the building from land which previously had been the property of another group. This acquisition of new area in the transition from one stratum to another is an excellent example of the expansion and growth of the buildings of prosperous or acquisitive house-owners.

P416 has an outlet to the southwest, as is shown by the scrap-brick paving within the point where the actual doorway was located. Originating at this point, a drain leads out to the southwest, probably once extending to the outside of the house. It is of interest that remnants of three additional drains pierce the wall between P407 and P416, all apparently flowing southeast. Although the level of each is approximately the same, it is doubtful if they functioned simultaneously. Since repair of faulty operation would entail as much or more labor as the construction of a new drain, each probably represents an effort to maintain the free passage of waste during different periods of one stratum.

P407 is faced with several courses of brick, which, in conjunction

with the drains, give it the appearance of a bathroom. P485, which in Stratum II was the entry-court, appears from its brick pavement to have been still open to the sky, although considerably altered in shape and decreased in size. A drain pierces the wall from P35, flowing in the direction of P485.

This building is an admirable example of the lateral growth of the mound. It has been noted in Stratum II that the outermost street in each section was in reality the edge of the mound, and that the accumulation of refuse on this area gradually raises it from a sloping bank to a horizontal platform, broad enough to accommodate additional building, as in the case of Groups 1 and 1A, Stratum II. Here we see the process carried one step farther. That area which in Stratum II was Street 2 is here absorbed by the dwelling, becoming two rooms, P407 and P416. Moreover, that area formerly occupied by Group 1 on the southwestern side of Street 2 has also been appropriated and incorporated into this enlarged, new building. The new building probably extended its holdings to the very edge of the mound, displacing those which formerly had been squatters on newly made land. The outside street, then, again becomes merely the edge of the mound, remaining so until further accumulation of rubbish extends and levels its surface.

Perhaps the most instructive remnants of Stratum I are the two rooms P341 and P357. Their importance lies in the fact that they conflict with the outside palace wall of Stratum II, proving that the palace, at this point at least, did not exist after the time of Stratum II. This, when viewed in conjunction with the evidence presented under the description of the palace, points with considerable certainty to the complete demolition and abandonment of the palace at the end of Stratum II.

Except in P302 and K435, there are no more walls of Stratum I in the Southwestern Section. The other remains—portions of brick pavements, hearths, door-sills and pottery—are in themselves of no value except as symbols of what once was here. Viewing all of these together we have an area in which we know Stratum I existed, extending from P416 as far northwest as K435 and K301. Although not in itself great, it is indicative of a once flourishing community which carried on even after the abandonment of its palace and its temples.

STREETS

It is certain the townspeople of Nuzi planned their buildings with considerable care, but it is less apparent that they gave heed to a definite city plan. In spite of the seeming disregard for public passageways,

a comprehensive study of the streets throughout all Nuzi shows that an effort was made to prevent the usefulness of these urban thoroughfares from being diminished, even though no attempt was made to improve them.

The streets are the outgrowth of the adaptation of construction to the natural limits beyond which building could not proceed, as well as the recognized necessity of easy intercommunication. Being so created, by chance rather than by intention, their necessity as an adjunct of city life was recognized, and the right-of-way maintained in all those of major importance. Considering the acquisitive nature of many of the private house-owners, it is highly improbable that the streets could be kept free from encroachment unless they had been guarded by the highest governmental authority. This protection, however, was given only to those streets which fronted governmental and religious buildings, and to those which were flanked on both sides with established and important houses. Passageways which affected only one or two groups were changed at will, and apparently all that was required was the mutual consent of those concerned. In the case of streets at the edge of the mound, where expansion was possible without detriment to important householders on the outer side, this rigid control was not evident, for we have seen Street 2 gradually shifted outward with each new stratum.

Streets 1 and 2 originally marked the edge of the mound, beyond which building could not proceed. Communication around the outside being necessary, these streets came into being naturally, and as the refuse thrown at the edge of the mound accumulated, new buildings occupied the added territory on the opposite side.

Street 1 was found to have existed in the same location throughout at least two strata, though considerably disturbed by erosion. A brick drain in Stratum II runs for part of the length of Street 1, entering from U374 and advancing northeast as far as the southern corner of P458. Erosion has wiped out further trace of this drain.

The substance of the street floor is refuse-dirt filled with great quantities of discarded potsherds, as well as bone, stone, and metal cast-off objects. As is the case today in Arab cities, the street was the dumping ground for refuse of all kinds. The considerable number of complete pottery vessels found throughout the streets of Nuzi can only be explained by the supposition that, as in modern native villages, the streets were used for a large number of domestic activities that could better be performed there than in the confinement of the home. Such

utensils as were in use at the time of the destruction were hastily abandoned, to be buried by the tumbling walls of ruined buildings.

Street 2, being at the edge of the *tepa*, was equally liable to change of position. A comparison between the position of Street 2 in Stratum III, as shown by the southwestern wall of K406, and its well-defined course in Stratum II shows a considerable outward movement. Again, we can recognize another shift in position outward in Stratum I where the area which in Stratum II had been a street is here appropriated by rooms beyond which must have been the final position of the street.

The foundation of Street 2 consisted entirely of refuse earth containing great quantities of discarded, broken objects and having that gray-green, almost mouldy appearance so characteristic of this type of fill. Again the street was used by householders for domestic purposes, as is shown by the quantities of complete pottery concentrated about the entries to the buildings facing the street.

Change in direction resulting from the stepped course of the street is a matter of chance, rather than intent. The street naturally took its position beyond the outside wall of the houses fronting it, and if the position of the houses in relation to the edge of the *tepa* changed, the position of the street changed correspondingly.

Street 3 is not a public thoroughfare in the real sense of the word, since its main purpose was that of giving entry to a single inner group. Consequently, it is narrower than the main arteries, but is sufficient to serve the needs of a single building. Its position here means that Group 9, either in this stratum or in its previous history, was built before Group 10 came into being, and that it forced its right-of-way upon the builder of Group 10. Since it served completely only one house, and in part but one other, the quantity of refuse on the pavement is not great. Moreover, the absence of a continued deposit of this material below floor level indicates that the street in this exact position is a recent institution.

Street 4. Of the natural barriers that governed the positions and extent of the buildings and streets, one has already been mentioned. The other is the palace. It is, in fact, a more formidable barrier than the edge of the mound, for we have seen, in Groups 1 and 1A, that even the latter was capable of supporting buildings of a sort. But the palace could not be encroached upon, nor could its external walls be used as the inner ones of private houses. One would suspect that this was due as much to the authority forbidding such use as it was to the need for communication. So we see the palace in Stratum II isolated

from lesser buildings by Street 4, its stepped change in direction being followed with more or less constancy by the opposed buildings, maintaining a street of relatively even width. Since the width of this street is greater than that of any other in this section, it speaks not only for its importance as a thoroughfare, but for the respect paid to the palace by the householders.

The lack of any great amount of refuse on or below the pavement indicates that the occupants of the palace considered this street as part of their own building, and that its use as a general dumping ground was forbidden. However, as is shown by the two drains which empty into it from K189 and K363, it did receive a certain amount of waste, but not the great quantities to which the other streets were subjected. The only drain flowing below the street is that emerging from K54. Flowing northwest, it is soon obliterated by the erosion that destroyed the northwestern end of this thoroughfare.

It is shown here that sub-pavement drains were not an integral part of Nuzi street construction, conferred on the populace by a munificent central government. Evidently, whosoever had sufficient need and wealth to put in such a drain was allowed to do so, to the benefit of the humbler or thriftier people who lived close by; and, since Street 4 had none, the houses fronting the street were deprived of adequate drainage. In Street 12, however, where the palace needed a drain for the greater length of the street, each adjacent house had its own system pouring into the central sewer.

The door-jamb at the southeastern end of Street 4 can have but two possible explanations. The first would be that the street carried on down the southeastern slope as a through-way, and that this doorway afforded protection in times of war, or privacy in times of peace. The other explanation is more likely: that, as with Street 12 on the other side of the palace, this was not a through-way, but terminated in an entry-way to a private building. Thus, one might suppose that this doorway was the real entrance to Group 4. If this be so, Group 4 was, in a sense, part of the palace, and may have served as the living quarters of someone connected with the government, since it uses the walls of the palace as its own. Arguing on this premise, one could say that all the buildings on the Southwestern and Northeastern Sections were government property for the use of officials or for those who could supply sufficient rental, since Groups 4 and 19 are in contact either directly or indirectly with all the buildings in their sections. If this be so, it would seem that the tenants, so long as they satisfied the demands of their overlord in service and payment, had considerable liberty in

the use of their rented property, since in times of rebuilding they altered and expanded at will to meet changing demands.²

Street 4 is another example of the manner in which Stratum II followed the already existing slope of the mound. Beginning at its highest point opposite Group 6, Stratum II, it slopes regularly downward in both directions.

In Stratum III insufficient area was uncovered to establish the presence of Street 4, but in Stratum I we know that it did not exist, at least at that point opposite P357. Whether it existed at all is a matter of great doubt.

POST-NUZI OCCUPATION

Few remnants of buildings of this period are to be found in the Southeastern Section, but characteristic objects were found close to the surface in sufficient quantities to show that this Partho-Sassanid culture (Late Period) used Yorgan Tepe as a town site. These came from points scattered evenly enough over the surface to indicate that in this section the whole area was inhabited.

P400 is the southernmost point at which objects were found, the principal one being a large two-handled pot (Pl. 136, C) decorated with stamped animal cartouches and dots of black pigment. From P482, on the southwestern edge of the mound, came a fragmentary glazed jar, and from K421, at the opposite end of the Southwestern Section, came another identical one. The three silver tetradrachms of Vologases III (Pl. 142, D) from P351 have been spoken of in the discussion of Stratum II. Whether or not the pit made through the Stratum II wall and doorway of P353 and P362 is Stratum I or Late Period, cannot be said. At P467 iron fragments of uncertain age were found; at P356 glass of a similarly doubtful era. From P347, P321 and P362 pavement fragments were found from which came three flasks (Pl. 139, M), and a double-handled vase (Pl. 135, F) with stamped design of the common Late Period type.

No traces of Muhammadan buildings were found on any part of the *tepe*, but numerous burials of that period show that the mound was used by Muhammadans at least as a cemetery. Such burials were found in the Southwestern Section in P198, P321, P313, P360, P375, P376, P445, and between P387B and Street 1. All except the last were of the simplest nature, with no sign of construction over them. The last was more pretentious (Plan 40). Into a pit dug through the Nuzi Stratum II wall,

² See Dr. Lacheman's suggestion (gleaned from the Nuzi texts) that buildings once comprising part of the palace were sold to private individuals, Appendix D, *Palace*.

in the sides of which the spade marks were still visible, was built a narrow tomb of well-bricks, each bearing on its upper surface a horseshoe-shaped thumb smear. The bricks were laid, in part, with lime and sand mortar. The sides were corbelled, and two courses of brick covered the top. Over the eastern end of the tomb was a heterogeneous layer of large potsherds and brick-scrap, while the western half of the pit was filled with solid, regularly laid mud-brick. The body lay fully extended, on its left side, and facing south.

There is some uncertainty as to whether this tomb is of the Partho-Sassanian (Late Period) or the Muhammadan era, because of characteristics it shares in common with both. Though corbelled walls were found in several Late Period tombs, this building practice was certainly as familiar to the Muhammadans as to the Parthians. The trapezoidal bricks with a semi-circular thumb smear on one face are definitely Late Period, and are found in quantities in this period in Sounding 1. Moreover, it is very close to the point at which a sufficiently large quantity of Late Period sherds was found to establish positively a habitation of that culture.

But Late Period bricks do not establish the period of the tomb. Looting ancient sites for bricks has been practiced in this region for many centuries, and later people would have no compunction against re-using such valuable building material. To say that since it is close to a Late Period pavement it must be of the Late Period is no more a proof than if one said it is Nuzi because it cuts a Nuzi wall and pavement. The association with Late Period pottery may be as accidental as its association with Nuzi pottery. Since the mud wall filling the pit above the tomb rises half a meter higher than the only extant Late Period pavement, the inference is that it is correspondingly later.

The absence of objects of any kind in the tomb is not in keeping with the Late Period tradition as seen at Nuzi, particularly for a burial of this importance, whereas it is entirely in keeping with the Muhammadan tradition. The position chosen—the highest point at the southern corner of the *tepa*, with an unimpeded view to the south—is typical of similar burials of holy men buried on ancient sites in this vicinity today. Moreover, the position of the body—fully extended, lying on the left side, with the face to the south, and Mecca—is entirely in keeping with Muhammadan tradition.

CHAPTER VIII

NUZI: NORTHEASTERN SECTION

The third major residential district of the city is the Northeastern Section. Flanking as it does the northeastern face of the palace, it forms an opposed and companion area to the Southwestern Section. Erosion at its southeastern end has carried away a great many of the buildings that must have existed there in the time of Stratum II, buildings of which we can know only indirectly through their plans in Stratum III. Combining the remains of both levels we have an area slightly less in width and greater in length than the Southwestern Section. The present abrupt slope of the northeastern face of the mound (Plan 3), indicates that the buildings of Stratum II did not originally extend much beyond the point at which they disappear today. However, it is probable that much has been lost on the northwest and southeast and that originally the mound was solidly built upon in those directions as far as the line of Street 5 in one direction and to the city wall in the other.

It is a matter of some doubt whether the buildings of this section served the same domestic need as those of the Southwestern Section. This will be taken up in greater detail in the discussion of the separate groups comprising the section.

STRATUM IV

Stratum IV in the Northeastern Section was uncovered only in a very limited area, but those few rooms are of such interest that they justify a description in some detail (Plan 28, Fig. 41). The first to be uncovered were the two rooms S174 and S174A, occupying that area which in Stratum III had been the single room S174.

Connecting S174A and the third room of the series, S397, is a doorway surmounted by a true arch of mud-brick (Pl. 26, B), the same type of doorway construction occasionally used much later in Stratum II. It should be noted that the curve of the arch is relatively flat. The bricks which form the first of the spring are not horizontal, but are already at a 30° angle, with the triangle between their under surface and the impost filled with mud-brick fragments and mortar. The top of the doorway is but 90 cm. above the pavement, affording passage between the rooms only with considerable inconvenience.

From S174 and S174A, intermixed with a great quantity of ashes

and numerous fragments of terra-cotta vessels, came a tan burnished bowl and two gray-ware burnished bowls (Pl. 91, E), one of which has an indented design on the lip. Most unusual amid the contents of the room were the several hundred fragments of clay labels, each bearing the impression of the same cylinder seal. Of these, not a few were segments of spheres, 90 mm. in diameter and 18 mm. in depth. The impression is on the rounded surface. On the flat surface, projecting upward 7 mm. from the center, is a knob 28 mm. long and 15 mm. wide.

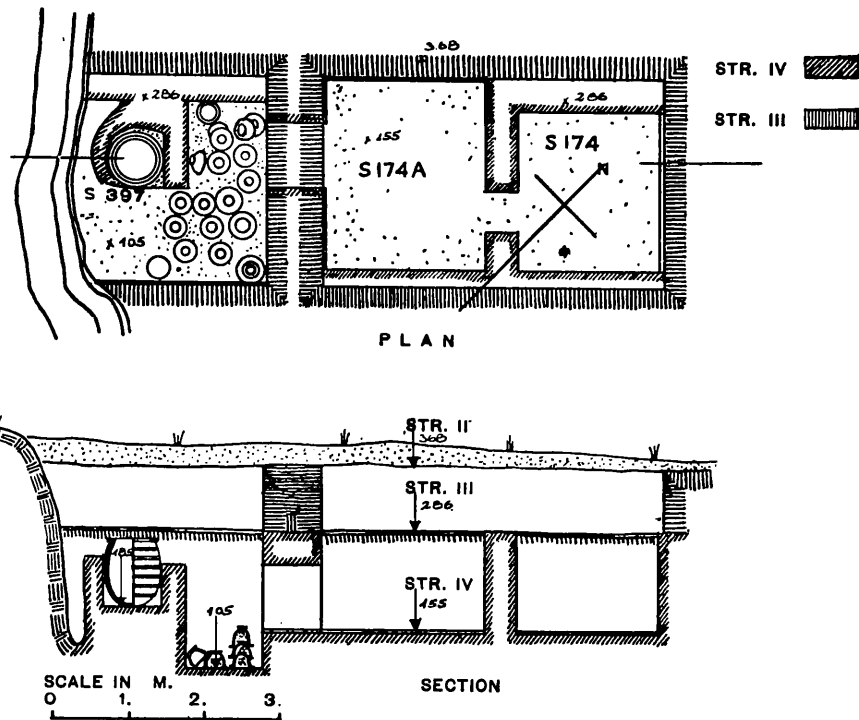


FIG. 41. S397, S174, S174A, infant burials.

It is hard to imagine their purpose, for they are entirely different from the usual pot-sealing or *bulla*. Their general shape and the knob on the back suggests covers for cups or small vases rather than sealings, in which case the seal impression would be for identification of the owner rather than for protection of the contents. It is apparent that these covers and labels were made in these rooms, for among the débris were several handfuls of tablet clay still bearing the finger-prints of the worker who kneaded them into proper plasticity.

In the neighboring room, S397, was a storage jar of monumental proportions (Pl. 63, Q), resting on a mud-brick platform with two supporting mud-brick walls on either side (Fig. 41). This, the largest

terra-cotta vessel of any type found at Nuzi, stood without a stand, being held upright and solely supported by the walls on its three sides. Beside it, within the confines of the projecting walls, was a fragmentary small clay animal figurine of the indeterminate breed so common throughout all the Nuzi levels.

On the pavement, filling the northeastern end of the room and blocking the doorway to S174A, were twenty-one jars, each containing the much-decayed skeleton of one or more new-born babes. All but one were the usual infant burial jars (cf. Pl. 80, A). Of these, all but two were placed in the usual manner, inverted over the body. The two variants were in the reverse of the customary position, being upright and holding the bones rather than covering them. In two instances the inverted containers were stacked one on top of the other to a height of three jars. The one variant in form, upright in the eastern corner, was a small pot with the bottom pierced and the lip of its broad mouth grooved to receive the inverted bowl that served as a cover (Pl. 71, C). Although the covering bowl does not fit exactly, it is distinct in shape from any other found at Nuzi; and this, with the unusual form of the pot, leads to the belief that both were made for each other and for this purpose. It will be remembered that the only other example of a jar with cover found in position was a similar burial in P400, Stratum III, though in that case both the pot and the bowl were of the usual domestic type.

Since these bodies were not put in the jars until the flesh had completely decomposed,¹ it can be understood why they could be left above the pavement. It is hard to understand, however, why they should be placed blocking the doorway to S174A unless entry at this point was forbidden, unnecessary or infrequent. The discrepancy of 50 cm. in level between S397 and S174A would indicate that passage through the connecting doorway was sufficiently infrequent to justify the inconvenience. Since S174A and S174 have no means of entry other than through S397, it is reasonable to believe that they were related in purpose as they are in plan, and that the activity within these two was definitely associated with that of S397. If S397 served for some cult practice, as it seems to have done, the objects within S174A must also have been used in this same connection. The great quantity of seal impressions, and the absence of any type of container on which they could be used, except cups and bowls, suggests that the impressions were for the sole purpose of establishing the identity of the donor, or owner of the contents of these small vessels brought here as offerings.

¹ See Part I, Chapter XI, *Infant Burial*.

The discussion of burials has brought up the probability that these burials were of a sacrificial nature. If this is true, we have here a room which either records a sacrifice of monumental proportions or the accumulated sacrifices of one establishment over a long period of years. In either case, it is more than would be expected from a private house dweller. Infant burials within other private houses are seldom more than two for a house, and, more frequently, none at all. Judging from the infrequency of this practice in dwellings, S397 must have been the place of atonement for some establishment of great importance. The position and outline of S397 in Stratum IV shows that the Stratum III room is a direct outgrowth from it, although not used for the same purpose. The same relationship is seen between Strata III and II through S169 and S160. As we can see in Stratum II, S160 used the palace walls as its own although it is out of the confines of the palace block. Therefore, it is a part of, or at least the property of, the palace. By this same token, and by the fact that it extends into what would be the palace area if a continuation of the line of Street 12 is taken as the boundary, S397 in Stratum IV may be presumed to have belonged to an earlier period of the palace, and its contents would therefore pertain to that building.

It can hardly be believed that this room was not devoted in some way to religious observances. The unusual storage jar and the presence of these infants put it apart from rooms of the usual nature. Unfortunately, the presence of the dump prevented the completion of the outlines of this most important room.

STRATUM III

Group 12. S160, S166, S169, S168, S398, S397, S174. Presuming that Stratum II copies in general its preceding level, it can be used to show the features of Stratum III (Plan 11). By this means, S160 will be recognized as the entry-room of a group at the southeastern end of Street 12, and S166 would be in direct communication with it. The two rooms S169 and S168 are the inner and private rooms so often found in house groups. Very little was found in any of these rooms, S169 being the most prolific, with a bowl and several shouldered cups. In S168 was a fragment of typical green-glazed terra-cotta of the temple type.

It is impossible to say whether the three rooms S174, S397, and S398 belong with the rest of the group, or whether they are a remnant of another independent building. Their proximity to one another alone

classes them together. Since S174 had entry to S397 in the preceding level, it would be expected that there was some means of communication between the two here, and that it was over a high separating wall. From none of these rooms came any indication to show that they served here the same purpose that they did in the lower level.

Group 13. S191A, S191, S195B, S195A, S195, S195C. Again, owing to the erosion of centuries, we have but a fragment of a building. However, a close inspection of the remains shows that little of major importance has been lost. It is possible that the southwestern wall of S191A was in a line with the same wall of S195, and that the entry was from Street 13 at that point. The remains of the outside street wall beyond S191 are indicated only by the foundations, so it is possible that a door leading out to Street 13 existed here without being apparent now. It is clear that if S191A was not the entry-room, it was at least close to it. The slightness of the wall fronting Street 13 suggests that both S191A and S191 were open courts. S191 contained quantities of small household vessels and a single gold bead (Pl. 126, R) of the ribbed variety so often found in glass. S191A had two broken storage pots in place, slightly imbedded in the pavement, one in the western corner and the other in the eastern corner by the doorway to S191.

Leading from S191 is S195B, against the southwestern wall of which is a large oven. Its presence here is strong proof that this room was also at least partially uncovered, to allow for the passage of smoke.

To the southwest is the brick-paved room S195A, from which a baked-brick drain leads out across S191A into Street 13. This is undoubtedly the bathroom of the house. The remnants of the demolished end of this drain within S195A are such as would indicate a toilet against the southeastern wall, served by the drain just mentioned. Entering this room from S195 is a fragment of another brick drain of slightly earlier date, abandoned at the time of the installation of the one flowing from S195A.

S195 is the main room of the house, situated as usual at the back of the building, and, again, devoid of any great quantity of household pottery or objects. Through a doorway near its eastern corner, entry is provided to the small room S195C, which also communicates with S195B. The small size of this room and of its doorways suggests it as being of a private nature, either as a separate living room or as a storage room. The width of the doorways between S191A and S191, S191 and S195B, S195B and S195A, S195A and S195, is greater than that usually found in private houses, and suggests that doors, in the form of solid, swinging structures, never existed here at all. This would mean that

access to the main room of the house was through the bathroom. This rather extraordinary disregard of privacy is found in several instances at Nuzi.

Group 14. S317, S312, S305, S194, S308, S185, S186, S306. This is the only complete house group found in Stratum III of the Northeastern Section. The thick wall which separates it from S306 indicates that the latter belongs to an adjoining house. Its proximity is the only reason for including it in this group.

A brick threshold connects Street 13 with the entry-room, S317, near the western corner of which is a doorway into S312. From these two rooms came not only a small amount of domestic pottery, but two unglazed wall-nails, unfortunately not in place. Such decoration was used profusely in L20 of the palace, and within the courtyard I19-I21, but it is exceedingly rare in private houses.

Only the beginnings of the wall between S312 and S305 were found, but we can presume that a doorway existed which connected the two and made easy entry to S194. Not enough objects were found in any of these rooms to indicate the uses that they served.

From S312 another doorway leads to the second parallel line of rooms, with the point of entry at S185. Of particular note is the remnant of wall painting on the northwestern wall of the latter, in varying tones of gray, red, and black (Fig. 42). Although in bad condition

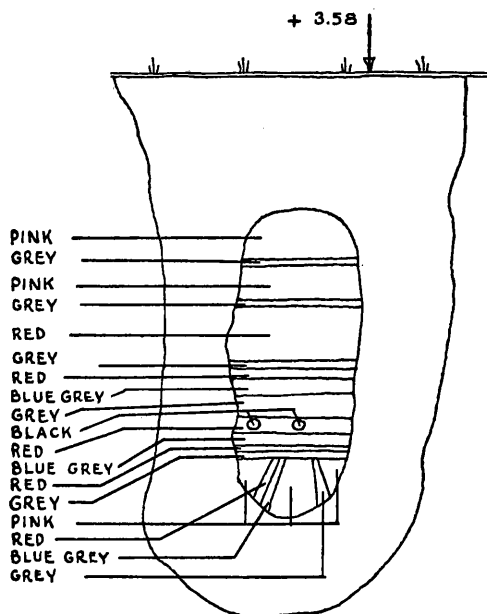


FIG. 42. S185, wall painting.

and visible only in a small area, it was possible to trace the remnants of a design made up of horizontal bands of pink and red separated by narrower bands of gray of varying intensity, terminating at the bottom in what appears to be the beginning of a more elaborate motif. It is the only example found *in situ* of a design varying from the usual, vertical, red and gray panels. Its highest traceable point is 139 cm. above the floor. It is certain that in many cases the vertical panel motif was surmounted by a more elaborate frieze, but here we have the beginning of a design which extends downwards at a point only 99 cm. above the

floor. Thus we must assume that it is not the upper part of the usual vertical panel motif, but an example of wall decoration unrelated to any other hitherto found in position.

This decoration gives the room a particular significance which its position in the house does not seem to justify. Another feature of note found on the floor was one of those rare, crude, and grotesque seal cylinders of unbaked clay (cf. Pl. 119, F, G, H), of which several specimens were found in this same general region.

The three rooms comprising the western half of the house contained no large quantities of household objects. That they were living quarters is probable, but the looting of this section must have been very thorough to have resulted in the removal of so many of the objects of the type found elsewhere in profusion. The ruined condition of the walls substantiates this possibility.

It will be noted that some time after its completion the doorway connecting S312 and S185 was permanently blocked. This shut off all communication between these two parallel rows of rooms, and, in a sense, made two house groups where one had formerly been. Such a division would necessitate an outside doorway which could only be in S308, and the demolished southeastern wall of the room indicates the weakening influence of a doorway at this point. Thus we have a dwelling of modest proportions being divided to make two units of even humbler type.

Group 15. X172, X187, X192, X162, X147, X181, X181A, X180, X196. Unfortunately, erosion has again left us but a portion of the building that constituted the complete house. It is particularly to be regretted, for in this case, even in its fragmentary condition, it equals in size any other group yet described, and in the average size of rooms, it is surpassed only by the palace. It seems without doubt that this was once a building of more than usual size and importance. The stepped outline of the wall facing Street 13 is an indication not to be ignored; this feature has been noted heretofore only on the external wall-faces of religious or governmental buildings. That being the case, one may surmise that this is a public building of one or the other class.

The various levels of the temple show that though great emphasis was placed on the cella, the remainder of the rooms had little architectural significance or size. Opposed to this is Group 15, in which the individual rooms are almost all given equal prominence. This would remove it from the temple class as known at Nuzi. Since this fragment resembles the palace in room size, it is not beyond belief that here in

Stratum III, between the city wall and the mound proper, we have a governmental building second in importance to the palace. Situated near one of the gates of the city (the only one found), it may have been here that the coming and going of strangers was regulated. It may be in the vanished portion of this building that the tablets were written bearing the statement "written at the gate of the city of Nuzi."

Entering from Street 13 over a brick threshold one comes into the large, unsymmetrical entry-room X172. This has all of the appearance of a waiting-room from which people were admitted to the inner rooms. Two doorways in its southwestern wall give entry to X187 and X192, which are themselves connected, and of large size even in their incomplete condition. The angle formed by the northeastern wall of X187, in its union with the northwestern wall, indicates that the direction of the walls was dictated by conditions to the south and southeast, rather than by Street 13. If this is so, it is reasonable to expect that the main entrance would have been close to those structures or boundaries important enough to control the design of the building. This doorway, then, from Street 13 would be a secondary one serving the rooms in its immediate vicinity. Again, in the southeastern wall of X172 and in the wall between X180 and X196, there is a similar divergence from an exact parallel or right angle with the line of Street 13, showing an adjustment to conditions on the east and southeast. The only thing that could have exerted such an influence in that direction would be the city wall, which, if it existed in the same position in Stratum III as it did in Stratum V, would be close enough and certainly important enough to have done so. That the wall facing Street 13 was not also forced to conform to these directions is proof that this street with its fronting buildings existed before the construction of this group. Thus, we have Street 13 as an artificial barrier not strong enough to make the plan conform to it, but strong enough to block the expansion and to alter the proportions of the individual rooms.

The three relatively small connected rooms X147, X181, and X181A are the only ones in the whole group of dwelling-house size and symmetry. The presence of several rough stone loom weights makes it appear that domestic, or at least commercial activities were not altogether lacking in this group. In X162 was another crude cylinder seal of unbaked clay (Pl. 119, G) similar to that from S185.

Even though this group was only a few centimeters under the ground, one would expect to find at least fragments of any large storage vessels contained there. But the absence of these and of any other types of domestic terra-cotta other than cups and shouldered cups, of which

there were quite a few, supports the theory that this was a building devoted to governmental usage, in this part at least, rather than to living or storage.

Conclusion. The buildings of Stratum III in this section present a considerably different appearance from those of the Southwestern Section. The private house groups are characterized by their meager dimensions, and that part between Street 13 and the city wall is dominated by a building entirely unsimilar to the dwelling type. Again we see the builders following an already existing slope down the side of the mound, for the difference between the northwesternmost and southeasternmost point is 2.59 m.

STRATUM II

Except for Groups 15 and 16, the Stratum II buildings of the Northeastern Section (Plan 13) seem to lack entirely that orderly arrangement and compactness so characteristic of the Southwestern Section; nor does the quality of the construction compare with that of the companion section. It is possible that this Northeastern Section, because of some distinction, social, climatic or otherwise, was a less desirable region than its neighboring sections and was tenanted by people mainly of inferior position and means. Consequently, the land being in lesser demand, the buildings might well be as large if not larger than those in more desirable regions, though greatly inferior in construction. It is not beyond reason to believe that one living group housed more than one family and that those several extraordinarily large houses were used jointly by groups of less prosperous families. It may even be that these were the quarters for the hangers-on of the government and served as barracks for their families and whatever live-stock or other property they may have possessed. Again, it may have been that on this less desirable land the boundaries that made up separate groups were not so rigorously maintained; as a result, the various buildings expanded to meet their needs wherever the opportunity offered, the original orderly house plan gradually becoming so altered as to be practically indiscernible. This appearance of disorder is in part explained by the wretched condition of the walls; in many cases a wall was sufficiently intact to give its line and major corners, but it was not always so well-preserved as to show a broken surface indicating a once existing and now demolished right-angled wall or door-jamb.

Group 15. S159, S142, S134, S150, S157; S158, S154, S148, S121, S107, S105, S106, S175. Since Group 15 faces the edge of the mound,

one would expect the entrance to have been in the region of S159, from a street bearing the same relation to its buildings that Street 2 does to the Southwestern Section. Little remains of this room. The brick orthostat and one paving brick determine its western corner, and a scrap of wall with only one good face gives the inner face of the wall which separates the missing portion of S150, or its adjoining room, from S159. One may surmise that S159 was the entry-room, with a doorway through its southwestern wall leading into S134—the large, central courtyard of the building.

S150, unfortunately, is but a fragment, but from it we have a copper chisel with socket, and many fragments of black burnished bowls (Pl. 91, O) with impressed designs on the lip and rim. The brick pavement of S134 forms a threshold for S157, in which was a fragment of a brick hearth as well as a cylinder seal of the Nuzi type, fragments of polychrome glass and scraps of copper. The same brick pavement also extends as a threshold, 5 cm. higher than the court level, into the big alcove which is S148, paving almost half of its area.

To the southeast is S158, in which there is a cruciform hearth of five brick fragments. A few beads and a copper arrow-head were the only objects. S154, in addition to an ordinary bowl and a few beads, produced one of the few copper armor plates found on the *tepa*, and two unique, heavy, cymbal-shaped copper objects (Pl. 126, X) of uncertain use.

S121 is paved with brick at its southeastern end, but except for two badly burned marble staff-heads and a flat, short, copper bar, tapered slightly at both ends (cf. Pl. 125, D), no indication was given of the purpose it once served. S107 was slightly more abundant in objects with three bowls (Pl. 87, E), fragments of two black burnished ware and indented bowls (Pl. 91, Q, R), a small vase (Pl. 75, F), several beads and a whetstone. This room marks the corner of the group, its second door leading northeast into S105, the principal room of the house as it now remains.

Near the northeastern end of S105, sufficiently out of the longitudinal line to give easy access to the door to S106, is a large hearth made of complete and broken half-size bricks, covered with a thin layer of lime cement. This is the only hearth found at Nuzi on which any attempt had been made to preserve the bricks from the disintegration resulting from constant contact with fire. Over this was a thin film of bitumen, which, as we have noted on other hearths, is proof of its ancient use as a fuel.²

² Deposits of bitumen at Eski Kifri nearby are mined and used today as a local source of fuel.

Under the pavement of this room were two infant burials, each covered with the customary baby-grave jar. Contrary to custom, however, the room contained an unusually large quantity of objects: common household pottery (Pl. 67, C; Pl. 73, B; Pl. 75, I, P; Pl. 76, Y), red and black burnished ware, animal figurines (Pl. 102, CC), a drain-pipe, an unglazed wall-nail, a wheel, stone and composition beads (Pl. 130, M; Pl. 131, D, J, K), grinding stones and mullers, a faience cylinder seal, bone pins and fragments of worked bone, large pierced stones and copper fragments, all mixed up together. Of special interest was a fragment of a storage pot (Pl. 117, A) bearing on it the Sumerian sign for wheat. None of the remaining fragments of the pot was found.

S106 yielded a few more examples of domestic pottery and beads. Though incomplete, the room probably had a doorway near its eastern corner, connecting it with S142 and the entrance, thus completing the circuit of rooms about the courtyard.

It is doubtful whether S175 actually belonged to this building. If it did, it could not have been a part of the original symmetrical plan and would naturally have to be classed as a later addition. It seems more likely, however, that it is a part of an adjoining building. The position of its brick pavement indicates a cross-wall, changing the original shape of the room as now seen into two separate ones, of which the southeasternmost was paved.

The similarity between this building and Group 3, Stratum II, of the Southwestern Section, is at once apparent. Both have the same characteristic feature—a large central room or court surrounded by smaller rooms. Considering the distinct possibility of Group 3 having been a chapel rather than a private house, and the similarity of its plan to that of the building now under consideration, it is of interest to consider the latter, for the moment, with that attribution in mind.

Group 15 preserves the features of Temple A by having its entry to the central room at the side rather than at the end, and by the projecting wall from the northeast which serves to make the northwestern end a more secluded part in which the holy objects could have been placed. From this projection a roof would extend over the end. However, the fact that it is paved in baked brick suggests that it was not roofed at all, but was, rather, an open court. This exposure does not correspond to the custom of temple procedure. The absence of part of the pavement shows looting in later times, but does not explain why no form of temple furniture was found over the undisturbed portion of the room.

In spite of the attractiveness of such a possibility, it seems more

likely that Group 15 was merely the home of a man whose wealth and position justified such an extensive and elaborate building. In general plan it resembles also the house of Shilwi-teshub (Plan 34), as to which there is no doubt of ownership and purpose.

The spaciousness and symmetry of the layout suggest wealth and importance, as do the objects found within. The quantity of copper, the staff-heads, the considerable quantities of beads and bone pins, and the frequent hearths point to a wealthy establishment. Lastly, the numerous fragments of red and black burnished ware bowls, which, because of their superior workmanship and relative scarcity must have been more valuable, indicate a dwelling on a scale above the usual.

Group 16. S144, S190, S143, S111, S140. Group 16 appears to have been a chapel rather than a private house. As evidence we have: the scarcity of ordinary domestic terra-cotta in all of the rooms except S111, the character of the objects found within this room, and the suitability of S140 as a sanctuary.

S144 is the principal room of the building about whose southwestern and northwestern sides S190, S143, S140 and S111 are placed. On its floor, slightly north of its center, is a four-brick hearth, and nearby, a circular oven of the usual type.⁸ On the floor was a colander, a bone pin, and the neck of a green-glazed vase of the temple type. Taking Stratum III as a guide, the missing southeastern wall must have been at the point where the walls now cease to be traceable. The projection of S154 into the line of the outside wall also suggests that this building did not extend much further to the southeast, but terminated with possibly two more subsidiary rooms on its southeastern border. If such were the case, entry would probably have been from the southwest through a passage above the Stratum III rooms S174 and S397.

S111, though it possessed no architectural features of note, contained objects such as might be expected only from a temple sanctuary. A considerable number of glass and stone beads (Pl. 130, E), and a glass amulet in the shape of a small Ishtar figurine were found on the pavement. Among them was the fine copper statuette of a deity (Pl. 101, G), similar to one of glazed terra-cotta from Temple A (Pl. 101, H); the tiny, terra-cotta head of a man (Pl. 102, B), pierced vertically and carefully modeled; also the large stone head of a ram (Pl. 112, A), highly conventionalized. Of special interest also is a copper-set, stone button (Pl. 126, V), of a type unique for this site. Mingled with these were two pags (Pl. 126, P), two plaques (Pl. 127, I), many nails, and

⁸ Two ovens were found in H11, Temple A.

fragments of a bracelet, all in copper. Most unusual were the many complete and fragmentary apron-shaped objects of sheet copper (Pl. 126, W, Z), more thoroughly discussed under the detailed description of objects. In terra-cotta were two bowls, a shouldered cup (Pl. 77, F), and fragments of many more of these two types, as well as two votive chariot wheels. In stone, besides those objects already mentioned, was a whetstone pierced for carrying, a drill-socket and two balance-weights.⁴

Had there been any other instances of separate rooms within private dwellings containing similar votive objects, this room could be explained as a private sanctuary within an ordinary dwelling; but since there were not, it would appear that this whole building was a chapel devoted to the worship of Ishtar and frequented by the people of the surrounding buildings.⁵

S140 also had within it many of the fragmentary copper apron-shaped objects such as were found in S111, as well as a copper nail and a large broken storage jar.⁶

The question arises as to whether S140 is merely an appendage to the cella S111 or whether it is itself the cella with S111 serving as an ante-room to it. A striking parallel to this arrangement is seen in the palace chapel, a similarity so great that it can hardly be disregarded. In both cases the hearth for the sacred fire was not, as in the main temple, in the innermost sanctum, but in the large central room or court, S144 and L8. At right angles to the line to the main room in both is a series of two rooms in which only the innermost, S140 and L6, has the complete isolation and seclusion demanded of a cella. Because of this remarkable similarity, that which is true of one building would of necessity hold in the other. Consequently, the strong probability of L6 having been the sanctum of the palace chapel would indicate almost beyond a doubt that S140 was the cella of Group 16. In that case the great mass of objects in S111 would in all probability be the material thrown out of the cella at the time the building was looted, an occurrence which would explain the utter confusion in which it was found. Objects more in the nature of offerings than cella furnishings may originally have been placed in S111, the closest point to the holy room accessible to the lay worshipper.

⁴ Another balance-weight was found in S143.

⁵ Or could this have been the temple of Nergal mentioned in the texts? See Appendix D, *Temples and Gates*.

⁶ A similar storage jar was found in G29, Temple A, the cella of the main Ishtar shrine.

Group 17. S108, S110, S113. Only the position near the present edge of the mound remains to show that the entry to this incomplete building must have been from that now vanished street bordering the *tepa*. As in Group 16 the finds from the remaining three rooms again suggest a chapel.

The first room of the group, S108, is partly paved with broken brick, implying that the outer portion of this room, at least, was open to the sky. Its five bowls (Pl. 89, Z), cup, and muller are typical domestic utensils, but the two glazed pots of the temple type are of greater interest, as are the numerous stone and composition beads.

The same brick paving extends to form a threshold for the doorway to S113. The walls of S113 were not intact to a height sufficient to show whether the projection from the northern corner was an integral part of the wall itself, or a platform against it. The latter is a distinct possibility and in that case the platform would correspond to the pedestal in the cella of Temple A, in front of which was the hearth. The principal object from the room is a terra-cotta offering stand (Pl. 113, A); its base is in the form of a house with a window in each of its four sides and triangular battlements along its roof. Emerging from the top is a tall chimney of the shape of the usual pot-stand, decorated, as is the body, with circular impressions made with a cut section of reed. Its striking similarity in style to that from the cella of Temple F (Pl. 61, A, B) cannot be disregarded. This similarity is made even more striking by the almost positive proof that the Temple F piece also had such a circular stand surmounting it. Although considerable difference in time separates these two objects, they undoubtedly both served the same purpose. It is also easy to see the relationship between this piece from S113 and these plainer though fundamentally similar ones from Temple G (Pl. 54, C, D). Also from here came a painted cup fragment, a pointed sheet-copper ferrule (Pl. 126, C), and several tablets in bad condition. Of particular significance are the glass eye beads, as well as quantities of the elliptical, fluted, and large cylindrical types (Pl. 131, C). Since these kinds of beads were reserved for religious usage and were found in quantity only in the temple, the evidence of the offering stand is corroborated—that this was indeed a building devoted to religious observances.

In the adjoining room, S110, the large quantity of terra-cotta and the large circular amulet and beads of glass remind one of S111 and P470 of Groups 16 and 3. Two large storage pots (Pl. 66, H; Pl. 68, D) were three-fourths buried below the pavement, one near the eastern corner against the southeastern wall, and the other near the northern corner

by the northeastern wall. The only other place in Nuzi in which this feature is seen is in P470 of Group 3. In addition to these two pots, there was another large storage pot and pot-stand (Pl. 93, C), cups (Pl. 76, O, P, R), a shouldered cup (Pl. 77, G), vases (Pl. 73, K; Pl. 75, C), bowls, black indented ware fragments (Pl. 91, V), small jar-shaped cups (Pl. 75, H), a hand mortar, and a bone pin.

One can imagine that to this room came those devout or intimidated people who had offerings for the chapel, leaving the vessels containing their gifts to accumulate within the room. The storage pots below the pavement may have been used for the collection of such an offering as grain, paid as tithes for the support of the chapel.

Group 18. S178, S178A, S164, S165, S161, S155, S156, S153, S123, S131, S126, S122, S319, S104. This building occupies much the same position in relation to the Northeastern Section as Group 9 does in the Southwestern Section. Its peculiar lack of orderly arrangement makes it different from any other group so far described. That this building has been altered during its use is evident from the threshold and door-socket in S104, which once gave entry at the point where we now find the cross-wall between S123 and S126. The whole aspect of the plan suggests haphazard alteration and growth to meet the increasing needs of the dwellers.

Another alteration may have taken place, which we will assume, for the sake of simplification, did happen. That a doorway once existed between S153 and N163 seems probable, judging from the clean face and corner of the northeastern wall of S153. The wall in which the other door-jamb should be was broken away, thus destroying the possibility of positively confirming the supposition. Because of this uncertainty, three possibilities present themselves: that there was a doorway and intercommunication; that there had been a doorway which was later closed; or, that one had never existed, the clean face of the northeastern wall of S153 being due either to an original lack of bonding with its right-angle continuation or to a ruined condition giving the appearance of an intact wall face where there was actually a broken surface. Because these last two theories are possible, and because the group is more intelligible with the northwestern rooms excluded, the latter have been classed separately as Group 18A.

The entry to Group 18 is through the L-shaped enclosure S164-S165. Although its wall fronting the street was not found, the field evidence points to an entry-way at the western corner of S164. The scrap of wall close to the northwestern wall of S164 probably served as a support

or protection to storage jars, its narrowness excluding it as a roof-bearing wall. It is probable that S164 was roofed, while S165 with its scrap-brick pavement was an open courtyard. The great quantity of household pottery within S164, including two large storage pots (Pl. 67, G), and a large hearth of broken brick at its southwestern end, gives it the appearance of at least a partially protected room. Underneath this hearth and extending to Street 12 are the remains of an earlier, abandoned, baked-brick drain. Along the northwestern wall of S164, running from its corner at S165 out through the door into Street 12, is another drain of baked brick which carried off the rain-water from S165.

The courtyard pavement forms a threshold for S178 in which were eight bowls (Pl. 86, Q) and a cup, rather an unusual quantity for such a small room. Though it is without any apparent doorway to S178A, so little remains of the separating wall that a doorway with a fairly high door-sill could well have existed between the two. The remnant of an abandoned drain under the pavement of the latter, flowing from S178 toward Street 12, indicates that both rooms belonged to the same unit. Together they appear to have been quarters for humble people, sheltered within the protecting walls of another's courtyard.

The large room S155 had two hearths (Pl. 17, A) belonging to two different levels of Stratum II. It is probable that this room served as the kitchen to the inner series of rooms, while the hearth in S164 served those lesser members of the household quartered in S178, S178A and S164. S153 is the main room of the house and is exceptionally large, even if one concedes the cross-wall separating it from S123. Southeast of this are S123, S126, S131 and S122, comprising the inner and most private rooms of the building.

It is problematical whether or not the area designated as S319 also once formed a part of this group. Since the wall of S126 is destroyed in this quarter, there is no chance of telling whether a doorway once connected the two. Regardless of whether or not there may have been a door, the drain (Fig. 43) flowing across S319 from the direction of S126 suggests the likelihood that this northeastern room belonged to the group, serving it as an outlet to the street at the outside of the mound. It has never been found before that the drainage of one group passed through rooms of another; and, in spite of the incompleteness of the S319 drain, there is little doubt that it originated in S126. That the drain is 13 cm. higher at its southern end than the pavement of the adjoining S126 is no proof that it belonged to a later stratum. At most it could have been no farther removed from the level of the

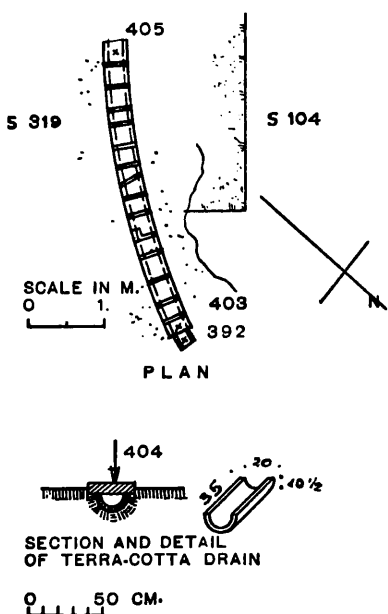


FIG. 43. S319, drain.

Stratum II plan than by one additional new pavement within that era.

The channel of the drain is composed of troughs of terra-cotta, semi-circular in section. These are laid end to end without overlap, and are covered by a single row of baked bricks. This unique type of construction—were it not for its proximity to the Stratum II level—would be enough to cast doubt on its authenticity as Nuzian.

The probability of S319 having been a part of Group 18 also links S104 to the same building, since the doorway indicated in the southeastern wall of the latter must have connected the two. This is further substantiated by the evidence of past communication between S104 and

the inner rooms of the group seen in the blocked doorway with brick threshold and large stone socket in the southwestern wall of S104 at a point opposite the cross-wall separating S123 and S126. Since this is obviously a recent alteration, it is probable that S104 was not being entirely cut off from the group, but was merely being given a new point of entry.

In spite of its peculiar arrangement, the objects from the group as a whole do not indicate a purpose different from that of the ordinary dwelling. Terra-cotta, stone, and copper objects of the customary type were found in fairly generous quantities throughout the whole building.

Group 18A. N163-N337, N343, N364, N316, S151, S307, S304. Little can be discovered of the plan of Group 18A as a whole. The opening through which one enters the immense room N163-N337 from the paved court N316 cannot be considered as a doorway in the usual sense of the word. However, a door-socket found on the northwestern side of this entry shows that here there must once have been a solid swinging door, but no evidence was found of the jamb and wall against which the door closed. Had the wall been razed and abandoned for the present arrangement, one would expect at least to find its foundations, even if it were only of moderate width. The small size of this socket is not in keeping with the width of the wall it serves, and it is possible that this broad entry-way was partly closed by a thin partition such as was found in K36 of the palace (Fig. 19; Pl. 24, B). Such a

screen might well have been demolished beyond all recognition in the destruction of the building.

The width of the main room is unprecedented for a private house, and it undoubtedly was also a courtyard serving the same purpose as the court of Group 9 in the Southwestern Section. A number of terracotta vessels of the ordinary type show that it was used by men as well as by flocks. N343 is a large alcove rather than a separate room and may well have served as a covered shelter for supplies as well as for man.

Opening from the southern corner of N316 is the narrow corridor S151. Although no door-jambs were found at its northwestern end it seems reasonable to expect the entry to have been at that point. In a series of four broad steps it descends 26 cm. to the level of its adjoining room S307. From this corridor came a pot-stand (Pl. 93, D), and sixty-five tablets scattered in confusion over the floor (Pl. 32, A). Since it served as a passageway to S307, it is likely that these objects were thrown out of that room during the looting of the building. Again, we have no door-jambs to mark the presence of a doorway between S151 and S307, but it is likely that the connection existed at the point where the wall is now missing. It is of interest to see here a room of lower level being preserved in use, with the inclined passage S151 connecting it to the more recent constructions outside.

Group 19. S152, S183, S133, S182, S137, S129, S128, S124, S112, S137B, S167, S130, S160, S166, S139-S138, S141, S132, S136. Group 19 is similar to Group 18 in its entry-rooms from Street 12 and in the inclusion within its outline of separate, independent units. It is, however, more orderly in arrangement and more understandable as a dwelling. It is of interest that the tablets found in its various rooms give with certainty the name of the owner or principal tenant in the time of Stratum II: Puhishenni, son of Mushapu, son of Purnazini.

The main entry is from Street 12 into S152, which in all probability was roofed over as was S164 of Group 18. The projecting fragment at the western end of the S183-S133 wall indicates that a cross-wall with the doorway at its southeastern end separated S152 and S133.

The scattered remnants of odd and scrap-brick paving within S133 indicate an open courtyard, and the baked-brick drain leading from it through S152 into Street 12 confirms the supposition. This arrangement is identical to that of the courtyard in Group 18. It is probable that this drain, rather than emptying onto the surface of the street, connected with the main drain flowing northwest below the pavement.

The remaining height of the wall in S133 was not sufficient to show whether the step in the outline of the southern corner was a legitimate strengthening member or a low, protruding platform. The small projections next to this were probably bins for the protection of storage pots. The large amount of terra-cotta vessels and household utensils as well as tablets show that this courtyard was in active domestic use at the time of its destruction.

S137 is the principal room of the house, about which, in more or less regular order, the other rooms are grouped. Unlike many such main rooms, it contains a four-brick hearth, and had a low, narrow wall crossing almost the full width of the room close by and parallel to the southwestern side. The narrow bin thus formed is almost identical with that in S124, which is conclusively shown to have served as a storage space (Fig. 44). Most interesting about this room is its difference in level from the courtyard S133. Though both were used at the same time, S137 is a meter lower than the courtyard. The pavement at the doorway was too disturbed to trace either steps or ramp between the two, but some such construction must have been in use, in conjunction with a raised door-sill, to prevent the rain from the courtyard flowing into this lower room. Its authenticity as a room used in Stratum II is established through its connection with S124, which rises with three steps into S128 and thence by a gradual slope into S129 and the court (Fig. 44). It seems obvious that S137 was a room of a lower level re-used in a later building.

Also communicating with the courtyard is the room S129 and through it the series of rooms surrounding S137. Although the doorway into S129 from the court was not intact, the continuation of the pavement from one into the other proves its past existence. A brick hearth was in the center of the room, and on the pavement were two large stone weights, a bowl, a glazed vase of the temple type, and several tablets in bad condition.

The group of rooms extending from S129 through to S137B is of particular interest, not only for the objects but because of the variations in elevation. Starting with S129 at the level of the courtyard, the series slopes downward, each successively deeper, until S137B is reached at more than a meter and a half below the courtyard level. Again it appears, as it did in room S307 of Group 18A, that here are rooms of a previous level which were retained intact at the time of a later rebuilding. Since the temple has shown us that the Nuzians had no compunction in leveling off the ruins of even a sacred room and building anew, using the old walls as foundations for the new ones, it could

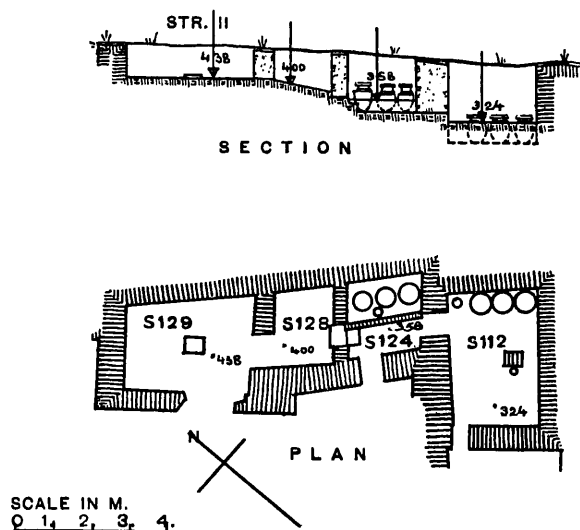


FIG. 44. S112, S124, S128, S129.

have been neither sentiment nor sanctity that caused the retention of these earlier rooms. The reason must have been a more practical one: that since these walls were undamaged, there was no need for the owner to go to the expense and labor of destroying them merely for the sake of rebuilding on a level with the newer rooms. It is likely that S128 is of the upper level and that its sloping pavement was

merely to give access to the three lower rooms beyond.

Coming from S129, one passes over the sloping pavement of S128 and down three steps into S124. This small room is one of the best examples of storerooms found at Nuzi. Occupying the northeastern half of the room were the fragments of three large storage pots resting in hollows scooped out of the mud floor and separated from the remainder of the room by a narrow wall rising to half of the height of the jars it protected. Scattered over the pavement of the room was a great quantity of other objects, including twelve bowls (Pl. 89, BB; Pl. 90, A), seven shouldered cups (Pl. 77, E, I, K, L, O), a small vase (Pl. 73, F), an unglazed wall-nail (Pl. 97, I), a crude stone vessel, beads, etc. Most important of the things found here was a spherical pot with a lingam spout rising from near its base (cf. Pl. 103, K), and an extraordinary offering table with images of birds perched around its edge (Pl. 113, B). These two objects, obviously for votive purposes, present strong evidence of religious rites carried on within the private houses in spite of the lack of special rooms devoted to such practices. The very fact that they were within the storeroom shows that they were not in continual use, but were brought out and put into service wherever and whenever occasion demanded.

Considering that an open passageway would have to be maintained in this room for entry into S137 and S112, there is little room for the storage of the small articles found here unless they were stacked in the western and southern corners, and the confusion in which they were found shows them as out of original position. It is possible that some

of them may be displaced material from S112, a room much better adapted to such storage. That there was such destructive displacement is illustrated by the fact that portions of the offering table of S124 were found within S112.

An abrupt step leads down to the second storeroom, S112, in the northern corner of which is a socket serving the door that isolated the room from S124. Again, along the northeastern wall are three large, badly smashed storage pots, buried almost to their rims. Near the southeastern wall is a free-standing pillar rising to the full height of the remaining walls. As an extra support for a weakened roof timber, this unique structure would be understandable, but since it is a repetition and continuation of an identical pillar originating on the pavement immediately below this one, it cannot be explained as a temporary measure. The room is too small to require an intermediate support for crossing rafters, and the plan does not indicate a curtain roof along either side of the room. With only the latter suggestion even faintly probable, the purpose of this structure must remain unexplained.

On the floor of this room was a large quantity of household pottery vessels, bowls and cups particularly (Pl. 76, Q, V; Pl. 77, J, R; Pl. 86, H, I; Pl. 89, M, S), as well as a faience cylinder seal (Pl. 118, E) done in the best Nuzi style. Most unusual of the finds from this room is the large mushroom-shaped boss of sheet copper (Pl. 127, E). This piece bears a resemblance to the ceremonial mace-heads used elsewhere to flank an altar, and may possibly have served a similar ritualistic purpose within this building. As in the case of the two ceremonial objects from S124, it is probable that it was not used here, but was stored in this room when not in service. Carbonized barley was found at the northeastern end of the room, but it could not be discovered whether it came from the large pots or from the smaller vessels nearby.

Among these objects, and mingled with fragments of small pots which apparently had contained them, was a large number of inscribed clay texts, one of which was the extraordinary tablet of "Zikarri the shepherd." Roughly egg-shaped and hollow, with a hole at its pointed end, it bears the inscription, "Stones of the sheep," followed by a list of animals given to "Zikarri the shepherd," presumably for grazing. At the end is the seal impression of a certain Puhishenni. Inside the tablet were forty-nine pebbles. The answer is obvious. Zikarri, being only a shepherd, was illiterate, and counting up to forty-nine was a task beyond his mental powers. To overcome this difficulty, a pebble was placed within the tablet for every sheep he herded, so that when it was necessary to check over his flock a pebble for each sheep showed

him that his charges were all accounted for. Further to substantiate this, another tablet was found in the same room, saying that "Puishenni, son of Mushapu," had given to "Zikarru, son of the shepherd Shalliya," a total of forty-nine sheep and goats. This, it will be noted, is the exact number of stones within Zikarru's or Zikarri's title of temporary possession. The lists of the animals as they are given on the two tablets are as follows:

Zikarru's tablet	Pubishenni's tablet
21 females	21 females
6 female <i>qalumu</i>	6 female <i>qalumu</i>
8 males, large	8 males, large
4 female (?) <i>qalumu</i>	4 male <i>qalumu</i>
6 goats	6 goats
(. .)	1 increase (?)
(. .) . . <i>li-u</i>	(3) <i>la-li-ù</i> , females.
<hr/>	<hr/>
Total not given	Total 49

Also on this pavement were remnants of Persian red deer antlers, probably stored here to be worked later into tools and pins.

Both this room and S124 were subjected to a very fierce fire at the time they were destroyed. The plaster and the exposed mud-brick surfaces were baked to a hard dull-pink color; the tablets were blackened by fire, and in many cases cracked from the suddenness of the great heat.

The second pavement of S112 is 60 cm. below the upper, and shows signs of a destructive fire as violent as that which destroyed the later building. The large quantity of potsherds and tablets found in the débris shows conclusively that the room served the same purpose in the earlier phase as it did in the later. The pillar had its origin on the lower pavement, and next to it, resting on the floor, was a small pile of burned sheep (?) bones covered by a large inverted bowl. The question immediately arises as to whether this unique occurrence is related to the similar disposals of infant bones, and whether this is an offering of some kind, just as the baby graves appear to have been. A single instance is not sufficient evidence on which to base a positive statement, but the manner of disposal and protection is of particular interest and suggestive of a related purpose.

S137B is the deepest of this series of lower level rooms, and is reached on the northeast by a single, abrupt step down from S112. On the southwest the contact with the upper level of newer buildings is

re-established by a flight of six steps leading up to the doorway of S167. This room contained only a few objects of the ordinary type; its one tablet probably came from S112 when that room was looted.

S167 has no distinguishing feature other than its function as an outlet to Street 12 through S130. It corresponds to the private entry-way seen in other buildings.

S130 apparently served as an entry-court to both the series of rooms just described and to S160 and S166. Though the latter apparently belong to this group, they are in a sense separated from it and may have served as quarters for dependents of the owner whom he sheltered within the confines of his own compound.

A similar group occupying a position of importance within the building is that composed of the four rooms S139, S141, S132 and S136. Perfectly suitable for independent use, it serves as another example of the custom of more than one family sharing a single entry-way and enclosure. The entrance to the first room of the series, S138-S139, is from the courtyard S152, which it evidently shared in common with the rest of Group 19. The southeastern half of the room is paved with scrap-brick, and from near its southern corner a drain of baked brick passes under the wall, turning northwest to join the main drain below the pavement of Street 12. This, as well as the improbability of having a courtyard within such a small group of rooms, suggests that the drain carried away the refuse of a bathroom rather than the rain-water from an open court. That the entry to the group is through the bathroom is surprising to us, but apparently was not so to the Nuzians (cf. Group 13, Stratum III; Group 20, Stratum II; and R96 of the palace). Evidently this room had to serve other purposes as well, for within it was a number of terra-cotta vessels and an inscribed clay tablet. A door through its southeastern wall leads to the small room S141, whose missing southeastern wall may have also had a door.

Also in communication with S139 was S132, yielding two bowls, an animal figurine, a rather well-worked stone dish, a muller, seven beads (Pl. 132, I) and a copper nail fragment. First in importance were the large numbers of tablets on the pavement. In here were remnants of Persian red deer horns such as came from S112.

S136 is the innermost and largest room of this separate group; it contained no objects other than a few tablets.

The predominance of the personal name Pulahali, rather than Puhishenni, in the texts from S132 shows that this was indeed a separate living unit, and one that was only slightly less important than the main building of Group 19 itself.

Group 20. S395A, S395, N393, N171, N358, N373, N392. Group 20 is smaller than the groups heretofore encountered in the Northeastern Section and more compact and orderly in its arrangement. It was apparently built after the entry to Group 18 had been established, since its outline was forced to conform to that of its neighbor.

The entry to this group is in doubt, but it was in all probability into S395A from Street 12. The main point of entry to the paved courtyard N393 is also uncertain. The point where the wall separating N393 and S395A is broken away seems a probable place for an entry-way, rather than through the bathroom N392 and the large room N373. N393 is paved with a regular brick pavement over most of its surface, the lack of paving in the other places being more likely due to later disturbance than to initial disregard. From the doorway into N373 a baked-brick drain curves away under the pavement to drain the rain-water falling in the courtyard into the open way of Street 12. Unlike the courtyards of Groups 18 and 19, it was almost barren of objects. N171, with a door-socket in its southern corner, leads directly from N393 and still has remnants of brick paving similar to that of the court. A shouldered and a footed cup (Pl. 76, X) alone remained to show its former use.

N358 is in size the most important room of the house, a fact that is further substantiated by its brick hearth. Its irregular shape gives the impression that on this side also the building conformed to the outline of previously erected adjacent structures. A number of objects of domestic use testify as to its purpose.

The long narrow room N373 was apparently the scene of considerable domestic activity. In it were the complete and fragmentary remnants of many terra-cotta vessels of the usual type, while in its eastern corner were two circular ovens.

N392 connects N375 and S395A. In it was a toilet, exceptionally well preserved and served by a baked-brick drain leading through the wall into Street 12. This originally connected with the now demolished main drain flowing below the street pavement. Even this room was not without a few objects of the household type.

Group 20A. N383, N383A, N386, N368, N359, N336, N318, N367, N385, N366. Since it is but a fragmentary collection of rooms, complete and otherwise, little can be said of the plan of Group 20A as a whole. It is situated on the slope of the northeast-southwest ravine cutting through the center of the mound, and the same erosion that formed this cut took away the major portion of the house.

Only a fragment of the wall separating N383 from Street 12 was found, but in conjunction with the other street walls it is sufficient to give the general size and shape of the room. A door-socket in the southern corner of N383 establishes the street entrance at this point, and another fragment of a wall on the northeast gives the division between N383 and N383A. Traces of a scrap-brick pavement were found against the southwestern wall, and leading from it a baked-brick drain pierces the street wall to carry away the rain-water from what must once have been an open court. A bowl, a storage pot (Pl. 64, C), six shouldered cups (Pl. 78, L), a blue faience cylinder seal, beads, and many lesser objects of terra-cotta and copper show this courtyard to have been as actively used as those of Groups 20 and 19.

The doorway in the northwestern wall of N383 is the only means by which communication could be had with N386, N368, and the series of three rooms connected with them. The position of the latter three helps to substantiate the belief that Group 20 was erected slightly later than and conforming to the outlines of Groups 19 and 20A.

On the pavement of N359, in the eastern corner, were two inverted infant jars of the usual type, stacked one above the other,⁷ each covering the skeleton of a single infant (Fig. 45). More toward the center

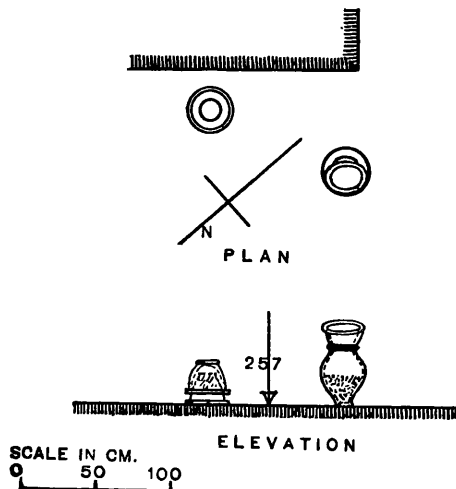


FIG. 45. N359, infant burials.

of the room was a unique vessel (Pl. 71, B), not unlike a footed, broad-mouthed pot in outline, without any bottom whatsoever. It was found standing upright on the floor, with the broad upper mouth covered with a bowl of common coarse ware. Within the vessel were the skeletons of five infants. Here, again, the skeletons and their containers were on the surface of the floor and not buried below it. Five skeletons in a jar of this size precludes the possibility of their having been inserted in any other than skeletal form.

A more complete discussion of the contents, the container, and the custom will be found in the chapter on "Burials." In addition to the burials, a few beads, cups and household vessels were found scattered over the floor. As with S397, Stratum IV, the burials give importance

⁷ Tiers of infant burials have been found elsewhere at Nuzi only in S397, Stratum IV.

to the group, and it is a cause for regret that its plan could not be recovered in entirety.

N336 is in direct line from N359, and presents no architectural features of note other than its oven and the three projections near its eastern corner, undoubtedly compartments for standing vases as seen in modern dwellings of Iraq.

Completing this series of three rooms is N318, from which came a number of cups and the fragment of an unusual fluted shouldered cup (Pl. 78, H).

It is unlikely that the three rooms, N367, N385, and N366 belong to Group 20A. They show nothing of importance, and their proximity alone is the reason for their inclusion here.

Conclusion. In reviewing the Stratum II buildings of the Northeastern Section, one notes four distinct characteristics not found in the companion Southwestern Section. First, the lack of a compact and orderly plan for the individual groups; second, the presence of large, paved courtyards in three of the groups; third, the inclusion of separate groups of rooms capable of independent existence within the confines of the main group; fourth, the inferior quality of the construction. All of these differences can be answered by the supposition stated before: that this was a less desirable location for private homes than the Southwestern Section. A glance at the plan of the palace shows the rooms becoming increasingly smaller as they approach the northeastern side of the royal household, with that whole portion fronting Street 12 definitely evolving as the service quarter. Contrariwise, on the southwestern side, the rooms remain large and important. Arguing from this same point, it is likely that the private dwellings fronting the most important end of the palace housed people of greater private wealth and position, while those fronting the service end of the palace were occupied by people of a humbler class. Thus, since the space was limited in the more desirable quarters, careful planning was necessary to use most effectively every obtainable bit of land. In the Northeastern Section the reverse was true. Land being less in demand, buildings arose in haphazard fashion, each tenant expanding wherever possible to meet his growing needs. Being people of lesser wealth, it was not beneath them to take advantage of the economy of sharing with others the use of a single compound; and, for the same reason, they were forced to build originally in a less substantial manner.

Since Group 19 uses the palace walls as its own, it would appear that it was government property. By that same argument it could be

said that all of the buildings touching, or in contact with others touching the walls of Group 19, were government property. If this is so, it is apparent that the tenants were given a relatively free hand in their reconstructions, and apparently so long as they paid their proper dues they were not greatly restrained.⁸

STRATUM I

No traces of walls belonging to Stratum I remained in the Northeastern Section. There were, however, in the upper parts of S142 and N171, portions of scrap-brick pavements, and in N171 there was a brick door-sill as well; none of this could have belonged to any but Stratum I. Thus we know that at the two opposite ends of this section buildings existed in the time of Stratum I. Whether they covered the whole area as in the Southwestern Section, or whether these were two isolated buildings, must remain a matter of conjecture.

STREETS

Street 13 is found only in Stratum III, since the upper layer where its Stratum II successor may have been was entirely washed away. Its excessive narrowness makes it evident that it did not serve a great number of buildings, and it is possible that, like Street 3, it had but one outlet: that is, to the outside street along the northeastern side of the mound, which itself has not resisted the weathering of centuries. Its width would not suffice for laden animals, and it is not convenient for even two pedestrians walking abreast. It showed no definite pavement, but rather the character of an area built up through the accumulation of refuse. As is usual, potsherds and stones were within it in considerable quantity, as well as several implements and fragments of copper.

Street 12 flanks the edge of the palace and serves as the insulation between this building and the private quarters of the Northeastern Section in exactly the same manner as Street 4 on the opposite side of the city. Its width is relatively constant and is certainly sufficient to meet the demands of the traffic to this large number of dwellings.

Street 12, in the true sense of the word, is not a thoroughfare, but terminates at its southeastern end in S160. The other end of Street 12 has been washed away, but it is likely that it continued its direction to join the transverse Street 5.

⁸Dr. Lacheman's suggestion that buildings once comprising part of the palace were sold to private individuals is of interest here. See Appendix D, *Palace*.

Throughout most of its length there was below its surface a baked-brick drain, fragments of which were found at frequent intervals in its passage down-hill from its inception opposite R170 of the palace. Though a drain is evident even further up-hill, coming from S139, it seems apparent that the main drain was instituted to take care of the palace refuse and that the S139 drain leading to it was built later, taking advantage of the existence of this main channel. The palace again uses this drain, sending out in two successive phases of Stratum II a connection from S59.

It cannot be determined exactly whether or not the bathroom drain from N392 used this main drain, but its emergence from the wall in a terra-cotta channel, rather than in a pipe or covered drain, makes it appear that it poured its refuse onto the street floor. None of the drains serving the courtyards S133, S165, N393, or N383 show signs of having connected with the main sub-pavement drain. They, too, probably discharged their contents directly on the surface of the street, just as in modern Arab villages.

In contrast with Street 2, very little complete pottery was found on the surface of the street. This, without doubt, is due to the large courtyards in the bordering groups, which made it possible to perform those domestic tasks within the building that in other regions could only be done in the open street. As before, the street had no fixed pavement, but grew with the accumulation of rubbish. As usual, this contained broken and discarded household objects in profusion.

Though the palace was not seriously investigated below the level of Stratum II, it is to be presumed that its position on Street 12 was much the same in Stratum III as it is seen here. Consequently, the street may be considered as being as much a fixture of Stratum III as it is of Stratum II.

POST-NUZI OCCUPATION

There are no signs whatsoever to indicate an occupation in the Northeastern Section after that of Stratum I, nor were there any Muhammadan graves. Since this region suffered greatly from erosion, any later habitations that may have existed have since been washed away.

CHAPTER IX

NUZI: CITY WALL AND RELATED BUILDINGS

STRATA VIII-III

It is clear that Nuzi could not have survived for even a short time without a stout city wall to protect it against the attacks known to have been made by bands of marauding Assyrians. Such a wall, being near the base of the mound, would suffer more from erosion than any of the buildings on the mound proper. Consequently, only in one spot has any remnant of this fortification survived—at the foot of the south-eastern slope, in Squares W and X (Plan 24).

Since this fragment is found immediately at the base of the mound, it is to be supposed that the wall flanked the other three sides, with gates on the southwest and northeast, in exactly the same manner as on the southeast. There is no visual evidence to show that the walled area included anything other than the mound, though two groups of important private houses are several hundred meters north and northeast of the city. If there were fortifications protecting these as well as the city, modern cultivation and weathering has destroyed all tangible evidence of their outlines.

The surviving portion of the city wall with its gateway is obviously much earlier in origin than the upper strata of the city, having its inception in what may be tentatively known as Stratum VIII. This, however, must be considered as an arbitrary disposition, for in such a limited area of excavation it is impossible to say whether each successively lower building between Stratum III of the Northeastern Section and the wall proper represents a new stratum. Retaining this stratification for the time being, we have Group 15, Stratum III, linked to Stratum IV in X19 (Plan 28), and from that to Strata V and VI in X18 and X17 (Plans 27 and 26), and through X12 and X13 to the wall itself in Stratum VII (Plan 24).

This unbroken sequence of levels is of particular importance, since it shows both the relation of the wall in its earliest phase to the uppermost levels of the *tepa*, and the number of rises that took place between them. The well in X5 of Stratum V (Plan 27) yielded objects indisputably of the Ga. Sur-Nuzi transition period (Pl. 69, D; Pl. 70, B), as did X3 (Pl. 75, E). The kiln of W3 also yielded a cup of the ear-

liest Nuzi type (Pl. 78, C). Since the kiln was destroyed by the addition to the main gateway in Stratum VII, we may assume that Strata V-VII belonged to the transition period, and that the main body of the wall was built certainly under Ga.Sur domination. In the light of the temple stratification, the tentative arrangement of levels given the City Wall Section seems justified. In the former there are seven buildings, beginning with Temple G—pure Ga.Sur—and ending with Temple A, which is contemporary with Stratum II of Nuzi. If each building were given a stratum number, starting with Temple A as Stratum II, the earliest—Temple G—would be Stratum VIII, a late Ga.Sur building of the same general period as the city wall, which has also been suggested as originating in Stratum VIII.

The most striking feature of this wall is its solidity and size, without which it would have been useless (Plan 24). Only in the palace are there walls which equal it even at its narrowest. It will be noted that the width is more than doubled on either side of the entry to give added strength to this vital spot, and shallow recesses and buttresses, such as are seen only on religious and state buildings, were added to the inner faces at these points.

It seems impossible to believe that a structure so carefully planned and built should have lacked symmetry on either side of the gate purely because of careless maintenance of direction. Such a variation could be for only two reasons: either the southwestern portion was so placed in order to avoid some already existing building, or else in order to amplify its protective powers. The first is less likely, since no walls were found nearby, except at W3, where they were built over regardlessly. It seems more probable that the southwestern half, being further out than its mate and having even an added projection outward near the gateway, made possible the presence of a curtain wall—also with its gate—giving added protection to the main gate at W11. If the line of this outermost projection is continued parallel to the main wall until it meets the similar projection growing out of the fragment of right-angle wall at X11, the result is a long narrow enclosure outside of the main gate itself. If the secondary gate was in the right-angle wall of X11, all entrants to the city could be scrutinized by the guardians on the wall-tops before their actual admittance to the city; similarly, in time of war, an added security would be given which the builders would hardly have overlooked. In order to make the inner face of the main gate symmetrical, the addition at W2 was made, bringing this face on a line with that of the northeastern half.

The face of the southwestern jamb of the main gateway was not

found, but it must have been close to the point where the wall now ends, making a gateway sufficiently wide to accommodate foot and animal traffic, and narrow enough to be efficiently protected. The débris between the two jambs consisted of a great quantity of potsherds imbedded in water-washed clay, suggesting that this gateway had been the outlet for the rain-water flowing off the southeastern half of the mound for centuries after the city of Nuzi ceased to exist. If the force of the stream was deflected from the northeastern jamb of the gate, it would account for the destruction of its companion. The question will at once be asked, how can the condition of a Ga.Sur structure be explained by events that followed Stratum II of Nuzi? The answer is this: though the mound within the confines of the wall steadily rose both from rebuilding and by silt washed down the slope and dammed by the wall itself, the plain outside the gate remained more or less the same in level. Consequently, the actual level of the gateway would have to be that of the fixed level of the outside plain. In the meantime, the steady rise of the inhabited area within the wall would result in making the street which served the gate increasingly steeper in slope, similar to the trench-like entry-roads seen on the modern mounds of Erbil and Kirkuk. The relatively constant level of the outside would force the gate floor to remain constant also, as a link between the outside and the gradual upward rise of the level within. So we have the level of the gateway remaining the same throughout its period of use from Late Ga.Sur through Stratum II of Nuzi. This at the same time would establish the plain level for Nuzi times.

If we accept the supposition that the technique of glazing was not known here in times earlier than the beginning of Stratum II, this alone could logically explain the presence of several fragments of glazed ware within and upon the floor of the gateway. Another piece, part of a glazed wall-nail found more than 2 m. below the surface at the end of the R96 drain (roughly northwest of the gate), gives further support to this belief. Thus we have what was first a simple surrounding city wall becoming in later times a retaining wall for the mound, and presumably being increased in height from time to time to keep pace with the upward growth of the city.¹ This supposition would explain the traces found outside the city wall of what appeared to have been heavy mud-brick buttresses built at irregular intervals against the section opposite W5, for if the wall was given the added burden of serving as a retaining wall, some such support would be necessary. This

¹ This would account for the houses built on the city wall, mentioned in the Nuzi texts.

would necessitate further heightening of the wall itself, to prevent the sloping buttresses from facilitating the entry of hostile forces. The buttresses were too fragmentary to be included on the plan and can only be considered as indications of what once probably existed.

The difference in level of more than a meter between the base of the main body of the wall and that of the abutments flanking the gateway need not necessarily mean that they were far from being contemporary. It is most probable that the main wall was laid with a deep foundation, in depth equal to the difference between these two levels, while the two additions to the line of the wall, being necessary mainly for added troop space above the gate and for the strength of their mass, needed no such elaborate foundation.

The wall itself is not a single homogeneous mass of bonded *libin*, but is at its narrowest a pair of heavy mud-brick walls built one against the other. The abutments flanking the inner faces of the gate appear to have been built as walls parallel to the original one, with the intervening space filled with earth.

It is improbable that the two rooms X13 and X15 were contemporary with the earliest period of the wall, for a difference of a meter exists between their level and that of the gate. It should be remembered, however, that the upward growth next to the wall was tremendously accelerated because of the obstruction of the wall itself to the silt-bearing rain-water, and should not be compared to the more normal growth found elsewhere. Consequently, it seems reasonable to believe that these rooms are separated from the wall only by the interval of a single stratum and comprise the Stratum VII additions to the city wall. Since they are definitely contemporary with the main wall, which at the gate is Stratum VIII, they serve also to prove that the city wall as seen on Plan 24 served both of these levels.

The city wall at the point adjoining X13 is just beyond the eastern corner of the mound and was untraceable beyond this point. However, the outward projection with which the wall disappears has the aspect and proper position of a corner bastion and can be seen again at its termination at X3 in Stratum VI (Plan 26). Considering the wall separating X1 and X3 in Stratum VI as the beginning of the northeastern face of the city wall and the right-angle wall in X3 as the beginning of a corner bastion on that side, the extent of the bastion from the corner would be almost equal in length in either direction.

In Stratum VI (Plan 26), one sees between X1 and X3 what may be considered the northeastern continuation of the city wall. In Stratum V (Plan 27) it is seen again in the same position, with what may be

even a further continuation in the wall separating X5 from X8-X10. Although the present condition of the latter is very bad, it seems likely that it was in reality a part of the city wall, and that a step changing the direction of the wall enabled the line to carry on from X3 through to X10. The projecting walls in X8 and X10 have the appearance of cross-walls of ordinary dwellings, and may have been the site of houses outside the protection of the city's enclosure. A few objects of household terra-cotta support this possibility.

Near the point in W5 where the wall ceases to be recognizable was a great quantity of potsherds having shapes and decorations typical of the Ga.Sur-Nuzi transition period. The frequency of incised decoration, and an increased use of indented raised rings circling the belly of the vessels, is typical of this ware as seen in the transition levels of L4 and the temple.

Objects of any kind were very scarce outside the wall. Of these only two need be mentioned. The first, found at a depth of 280 cm. below the surface opposite W5, is a concave cylinder seal of unbaked clay, crude in design, and similar—except for its shape—to those found in S185 and X162 (Pl. 119, G), Stratum III. The other came from the opposite end of the Stratum VII-VIII city wall—two fragments of a bowl of the same fine-grained, delicately turned, egg-shell ware that was found in L4 (Pl. 50, M, O). The definite association of this ware with Ga.Sur is another indication that the wall had its inception before the Hurrians gained supremacy at Yorgan Tēpa.

In W3 were the remnants of two kilns, abandoned and partly built over at the time the abutment was added southwest of the city gate. The single complete piece of pottery from the first was a shouldered cup (Pl. 78, C), so similar to that of Pavement IV of N120 (Pl. 78, B) that there is little doubt that the kiln functioned during the transition from Ga.Sur to Nuzi. The pottery near the wall also shows the slight increase in decorative detail inherited from Ga.Sur (Pl. 56, Q; Pl. 116, I, J).

Since the kilns were in the way of the city wall, they were broken into and built over with callous disregard for future archaeologists. Consequently, little remains to show their completed form. They apparently consisted of a group of two, each unrelated to the other.

All that remains of the first is the bottom of the fire-chamber: a pit, square in section, in the W1-W2 corner of the city wall (Fig. 46). Even in its incomplete state, it extends 142 cm. below the base of the adjacent city wall. Its walls are of mud-brick, baked red and brittle

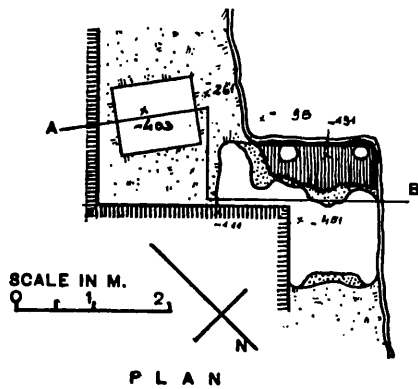


FIG. 46. W2, kilns.

as though from continuous fire at a relatively low temperature, and at the bottom was a heavy deposit of ashes of straw in which was the shouldered cup mentioned before, as well as fragments of others as fresh in appearance as though they had just been fired. These vessels had probably never been touched by man since they were put in to bake four thousand years ago. It is clear that the pit in which they were found was the fire-chamber and that they found their way to the lower

compartment by the collapse of the floor which separated it from the now missing, superimposed baking-chamber. The fire was obviously fed through an opening near the top of the lower chamber—since there was no opening found in the lower remaining portion—in much the same manner as that of modern kilns in this same region.

The second kiln, immediately northwest (Fig. 46, Plan 25), still retains a portion of both its upper and lower chambers. The latter reaches a depth of 3 m. below the floor of the upper chamber, and its walls slope slightly inward as they approach the top, probably terminating in a dome supporting the floor above it. Circular holes 15 to 20 cm. in diameter pierce the floor, allowing the heat to pass into the baking compartment. Only the western corner of this floor and parts of three holes remained of the upper chamber (Pl. 19, B), but its proximity to the first kiln limits its length to within a few centimeters of that shown in the reconstruction drawing (Plan 25). If its plan was square, as it seems reasonable to believe, the position of the holes found in the baking-chamber would demand that there be four rows of three holes each in the northwest-southeast direction, making in all twelve vents between the upper and the lower chamber. The construction was of mud-brick throughout, baked crisp and brittle, white in the upper compartment and vitrified in the lower chamber to globules of melted clay and sand. The intense fire required to melt this material is in contrast with the milder firing evidenced in the neighboring kiln.

Since pottery vessels were found in the first kiln, it is obvious that it was for the manufacture of such utensils. The second kiln contained no identifying material, but being identical in principle and construction to the straw-burning brick kilns in this vicinity today, it is highly probable that it was used for the manufacture of baked brick.

The purpose of uncovering the rooms immediately within the city wall was to establish a definite contact with buildings of a known stratum. For that reason, little stress was placed on uncovering the area as a whole. None of these rooms are of great significance and only two need be mentioned in particular.

The first of these is X1 of Strata V and VI (Plans 26 and 27), the peculiar shape of which is governed by the city wall which on the northeast serves as the inner wall of the room. Though it has no door, the presence of a jar-stand and the plastering of lime cement over the walls and floor of its Stratum V level shows definitely that it was used.

X5, Stratum V (Plan 27), is the other room of note and is of particular interest because of the well near its southern corner. So far as could be seen, it was a plain circular shaft, without any lining or superstructure. Lack of time, as well as the instability of the shaft, prevented it from being cleared beyond a depth of 2 m. Within its débris was a splendid painted vase (Pl. 70, B) of the transition period.

In establishing the relation between the city wall and Stratum III of the Northeastern Section, it can be seen that in Stratum VII (Plan 24) the northwestern wall of X15 is contemporary with the city wall through its contact with X13. In Stratum VI (Plan 26), this X15 wall is renewed in a slightly different position and continued to make X16, with X17 as its neighbor. The latter in Stratum V (Plan 27) abandons its door in the southwest, and by means of contemporary walls on the northwest is shown to be contemporary with X18. Immediately above the walls of X18 are those of X19, Stratum IV (Plan 28), which room immediately underlies the walls of X180, Group 15, Stratum III. Thus, we have a direct sequence of strata joining Stratum III of the Northeastern Section with the earliest phases of the city wall.

Although no visible remains of the city wall are found on the other three sides of the mound, it is probable that the wall circled the whole city in much the same way as in the portion just mentioned. In fact, it is probable that the general steepness of the three remaining sides is due to the double function of the city wall as a fortification and a retaining wall. The gradual slope on the southeast would be due in part to an original more gradual slope, but mainly to its exposure to the prevailing winds and storms.

The position and character of courtyard M94 of the palace is undoubtedly that of an entry-court. This, in turn, would imply a nearby city gate giving access to this main entry to the palace. As stated earlier, the two erosion channels flowing northeast and southwest from either end of Street 5 undoubtedly mark the course and, to a certain extent,

the level of Street 5 in its original full extent. Consequently, the termini of Street 5 would mark the positions of the gateways in these opposite faces of the city wall, the northeastern one giving direct access to the main palace entry at M94.

It seems probable that there was no gate in the wall on the northwestern side of the mound. There is no erosion channel to indicate a passage leading to such a structure; and, furthermore, the area fronting this edge of the mound has no thoroughfare of important size leading in this direction. Street 9 is more a narrow passage than a street in the proper sense and could have done little more than serve the houses fronting on the northwest.

STRATUM II

Directly southeast of L11 and near the line of the city wall is a small group of rooms extending down the slope of the mound (Plan 13). Their pavements were so close to the surface, and the difficulty of tracing their walls was so great, that the reward they offered did not seem adequate justification for working on this area at the expense of more important regions. However, the area was cleared as far as it was traceable on the west, south, and east, and it is doubtful whether it could have been traced much farther in a northerly direction than the point at which the work stopped.

Consequently, since there is no actual connection with any identified stratum, it is impossible to assign it dogmatically to Stratum II. However, considering the general downward slope of the mound at this point, and the fact that the Nuzians were at that time governed in their building by a similar slope, it seems likely that, although lower in level than the rest of Stratum II, it is of that period.

It seems highly unlikely that these rooms are a part of the palace structure. The construction and design is more like that of the private house. They show none of the symmetry, direction, wall thickness, or room size that characterizes the various portions of the palace, and their construction is mediocre in contrast with the care and attention given to these points in all parts of the main building. The large number of ovens is in direct opposition to the centralization of these fixtures seen in the palace. Moreover, the whole group is built directly on refuse earth characteristic of the type found in streets and dumps. Since the palace existed in its present general position in one state or another for a considerable period of time, it is reasonable to presume that the refuse pile is the waste of the nearby palace, and that these rooms were built at a relatively late date on this newly made land.

There are but few features of this group worthy of note which are not apparent on the plan. One is the trace of red wall painting on the northwestern wall of V428 between the western corner and the oven. This is an unusual combination—oven and decorated walls—and the only case in which the two are found together.

The alcove in V7 appears once to have been a doorway, closed up some time after construction. The jambs are protected with an orthostat of upright brick, and the floor is paved with a sill of the same material. Either the doorway led to a small room between V7 and V8, or else V8 was itself the result of an alteration necessitating the abandonment of this doorway. The fact that the walls of V2 are built over a previously existing brick pavement shows that another alteration occurred in the plan nearby.

V8 is interesting because of its unusual drainage feature (Pl. 13, B). A portion of the room is paved with odd-sized scrap-brick, sloping gradually toward a gap in the center of the paving. Below this is a pot, 52 cm. in depth and 32 cm. in diameter, into which liquid could flow from the surface of the floor. The bottom of the pot was broken away as though to provide a more efficient outlet for whatever waste might drain into it.

The area yielded no objects of distinction and none that would be out of keeping with private dwellings found elsewhere in the city.

CHAPTER X

NUZI: SUBURBAN DWELLINGS

The population of Nuzi, though concentrated largely in the area enclosed by the city wall (the mound), was not completely restricted to that region. An inspection of the topographical map of the vicinity (Plan 2) shows a series of lesser rises on several sides of the main mound at a considerable distance from the center of the city. Trial trenches and shafts to virgin soil revealed those on the south, southwest and west to have been entirely the result of Late Period habitation, and will be dealt with in detail in Appendix E. No indications were found to show that this region supported permanent habitation until long after the time of Nuzi.

The rise on the northeast, between the two roads to Tarkhalan (Plan 2), was not excavated, but surface finds of terra-cotta and inscribed tablet fragments show with certainty that its last period of occupancy was in Nuzi times.

The rises to the north of the mound were the places where the first excavations were carried on at Nuzi, yielding the remnants of four large private houses. The objects show them to have been of the Nuzi period, and simultaneous mention of the names of well-known individuals in the tablets both here and in the palace mark them as contemporary in their latest phase with Stratum II of the mound.

The amplitude of these dwellings and the abundance of material within them is proof that they belonged to individuals of considerable importance in the community. This is further substantiated by the great volume of business records found in the separate houses through which the personal names of the four separate owners could be definitely established as Tehip-tilla, Shurki-tilla, Shilwi-teshub, and Zigi.

HOUSE OF TEHIP-TILLA

The house of Tehip-tilla is the westernmost of the series, comprising the rooms T. T. 15 through 21 of Plan 30. Unfortunately, it was but partially excavated, and little can be distinguished of its original complete plan. That which remains is but an indication of what was once probably a building of considerable size.

T. T. 19 is the most important room in size and contained a number of terra-cotta storage jars and smaller vessels (Pl. 66, F; Pl. 75, U),

a large copper pike-head (Pl. 125, X), and several armor plates of varying sizes. Mingled with these was a moderate number of inscribed clay tablets. None of the other rooms, except T. T. 21, which contained one of the rare strainer bowls (Pl. 96, F), yielded any household objects of importance.

T. T. 15, as the building now remains, was the room of greatest interest. The floor was paved with odd-sized baked-brick (Plan 32), and near the northwestern end was a deep square terra-cotta basin (Pl. 82, E), sunken below the floor with its rim flush with the pavement (Pl. 24, A). No provision existed by which water could flow directly in or out of this tub, but close by, in the niche to the northeast, was the beginning of a baked-brick drain (Plan 32) flowing away through the house of Shurki-tilla to the outside. Thus, within convenient bailing distance was a drain into which the contents of the tub could have been emptied. That such pains should have been taken for the disposal of the tub's contents shows that it was in no sense a storage or semi-permanent reservoir, but that it, along with the brick pavement and drain, was part of a well-equipped bathroom. The slot-like opening of the drain is similar to those used for toilets elsewhere, and it is not improbable that there was once a similar fixture here whose usual brick platforms were displaced and scattered in antiquity.

Directly below the beginning of this drain was a remnant of an earlier one, made of open terra-cotta channels (Plan 32), showing a similar drainage plan in the preceding building.

The use of the room in its final stage was radically different. The brick pavement, the tub, and the drain were abandoned, and the whole room was filled with clay to establish a new floor unencumbered with sanitary fixtures. Its new function was that of a tablet storage room, and here were found nearly a thousand inscribed clay documents comprising the business records of five generations of a family, the best known of whom was Tehip-tilla.

It is clear that the building as first erected was not contiguous to the house of Shurki-tilla. The wall of the latter is built against it, blocking off the doorway which once led out from T. T. 15. Thus, the newcomer was obliged to continue under his own floors the drain he obstructed. The drain in the earlier phase led only slightly beyond the line of its owner's outside wall.

Since communication to all the rooms except T. T. 18 and T. T. 20 must have been through T. T. 17, it seems clear that the remainder of the house lay to the northeast and southeast of this room. Whether T. T. 18 and T. T. 20 belonged to the same building or to still another house in this suburb cannot be discovered without further excavation.

THE HOUSE OF SHURKI-TILLA

The outline of the uppermost level of the house of Shurki-tilla was traced as completely as its remains allowed. As a result, it has yielded a relatively complete ground plan of what may be considered a typical suburban dwelling of a well-to-do Nuzian (Plan 30).

Deeper excavations in the rooms Sh. T. 10, Sh. T. 14, and Sh. T. 15 showed remnants of at least two earlier buildings whose outlines were at variance with those of the uppermost level (Plan 31, Sections A-B, E-F, G-H, M-N). The objects from virgin soil up to the highest stratum were all in the typical Nuzi manner and speak of a comparatively rapid upgrowth within the latter phase of the Nuzi period.

The only outside entry actually found was that into Sh. T. 12, but it is probable that this was the secondary, or perhaps private, entrance and that the main one, according to the usual custom, was beyond the courtyard, Sh. T. 6. Such direct entry into the main room as would be afforded by Sh. T. 12 is not the general rule, whereas the interposition of the court between the main room and the principal entry agrees with the arrangement seen both in the palace and private houses on the mound.

The courtyard shows traces and remnants of a brick pavement over its whole surface. The walls are faced with bitumen-plastered brick, and in themselves are one of the rare instances in which a solid brick foundation was used (Plan 33, A).

Sh. T. 1 is the northernmost room of the house. It has no doorway to the interior of the building and but one to the outside, which was either blocked completely or provided with a door-sill of more than ordinary height. The position of the room at the corner (?) of the house, without communication with the group to which it belongs, is like that of similar rooms seen in many of the private houses of the mound. The room contained several terra-cotta vessels (Pl. 88, E), a stone tripod and grinding-stone, two copper armor plates and an arrow-head.

Adjacent to this room and communicating directly with the courtyard is Sh. T. 2, a room with no architectural features of note, but whose large number of copper implements of war suggests its once having been the household armory. Besides a pottery bowl and two whetstones, there were two copper nails, a sickle, two fragments of knives(?), three spear-heads, two arrow-heads (Pl. 125, FF) and ten unassociated armor plates (Pl. 126, E, F, G, H, K).

Further to the southeast is the group of three rooms opening through

Sh. T. 5 to the courtyard. The main feature of note is the drain disposing of the rain-water falling in the courtyard. Beginning with three sections of U-shaped terra-cotta channels, it changes to brick construction and flows on as an open drain through Sh. T. 5 and Sh. T. 4 to the outside. In the center of its course through Sh. T. 4 is a square depression approximately 15 cm. deeper than the floor of the drain. This is presumably a catch-basin for the accumulation of any refuse which might clog the passage under the final wall on its course outward.

The principal entrance to the main room is through the large antechamber Sh. T. 9. A secondary entrance through Sh. T. 8 had been discarded in the later history of the house by the blocking of the Sh. T. 8-10 doorway.

Sh. T. 10 is the central room, and by far the largest in the building. There can be little doubt that it served as the main living and reception room, just as similarly important enclosures did in other private houses. In it was a moderate amount of household terra-cotta (Pl. 92, E, J).

Sub-pavement excavation in the northern section of this room disclosed no structures other than the pavements of the two earlier buildings seen below Sh. T. 14 and Sh. T. 15. The upper of these two (Plan 31, Section M-N) was distinguished by a scrap-brick pavement, the lower by the customary packed clay floor and two circular ovens. Typical Nuzi pottery was found in quantity throughout the full depth of the pit (Pl. 74, G; Pl. 76, F, W; Pl. 78, A; Pl. 80, G; Pl. 89, F).

The remaining portion of the dwelling, that to the southwest, was built at a different time from that of the northeast, as is shown by the double wall separating Sh. T. 13-14 from Sh. T. 10. That it is the later seems probable from the fact that it completely blocked the doorway from T. T. 15. Had it been the first to be erected, it is unlikely that, with so much untenanted space to the northeast, the builder would have so crowded his neighbors.

Sub-pavement excavation in both Sh. T. 14 and Sh. T. 15 revealed two earlier levels (Plan 31, Sections A-B, E-F, G-H), as well as a generous amount of Nuzi terra-cotta, clear to virgin soil (Pl. 89, A).

The original outline of Sh. T. 15 included an outer doorway through its southeastern wall. This, in later times, was intentionally blocked. The room in its latest level yielded a number of ordinary objects, as well as a marble whorl-shaped staff-head and a small mace-head of the same material (cf. Pl. 121, K).

Sh. T. 16 is a typical storage room (Pl. 23, A). The raised platforms at the southern end are provided with the usual pot-hollows.

The unbroken surface of the remainder of the platform indicates that either pot-stands or footed jars obviated the necessity of further hollows.

Sh. T. 17 furnishes the second example within the same building of the rare practice of solid brick foundations (Plan 33, B). This unusual support extends under both the southwestern and southeastern walls. Below the pavement, with its brick covering flush with the floor, is the drain from T. T. 15, flowing northwest to empty outside the confines of the building (Plan 32).

Sh. T. 18 is brick-paved and obviously a bathroom. The remnants of a baked-brick construction on either side of the drain and against the northwestern wall indicate with relative positiveness that here was once a toilet of the customary design. Though it was greatly damaged, the position and quantity of the bricks and the accompanying opening into the T. T. 15 drain at this point substantiate such a supposition.

THE HOUSE OF SHILWI-TESHUB

Of all the buildings in or about the city of Nuzi, none but the palace surpasses in size the suburban villa of "Shilwi-teshub; son of the King" (Plan 34). Its extraordinary size, along with its large number of household objects, marks it as the dwelling of second importance in Nuzi. Its stores of inscribed tablets show its owner to have been a man whose wide commercial and public interests were in keeping with his high rank.

Even in its present state the building is not complete. It seems certain that the limit was reached on the southwest and that it was also reached on the northwest and southeast, exclusive of the outline of perhaps two additional unimportant rooms. However, the northeastern boundary of the building was not reached, and there is no certain way in which its position can be determined without further excavation. All that can be said is that it is probable that the northeastern wall of Room 55 is at the same time the outside wall. The lack of further communication in that direction in a building so well supplied with doorways, and its proximity to the outer wall of the house of Zigi (Rooms 42, 33, 35, etc.), point to such a supposition.

Though the plan even in its incompleteness shows one outer doorway (into Room 20), this opening cannot be considered as the principal entrance. It is too narrow to allow for the considerable traffic that the main entrance must have had, and it is too awkwardly situated to serve the great bulk of rooms with convenience. The only remaining section in which the outer doorway might have been located is in the unexcavated area on the east. It is probable that Room 52, with its

brick-paved floor, was the means of entry into this pretentious dwelling. The considerable quantity of household terra-cotta in Room 27 would argue against the probability of that room having been the much-used route to the outer door.

Room 52 not only marks the beginning of the brick pavement which extends through Room 29 into 15, but it is also the beginning of the baked-brick wall protection which in one form or another accompanies the full extent of the paving. Starting as regular facing brick it carries through the doorway and into Room 29, where it changes to an orthostat of upright brick (Plan 37, A). This type of protection continues on either side as far as the jambs to the Room 15 doorway. Strangely enough, facing brick rather than an orthostat is used at the northeastern end of the room, beginning on the northern wall in the corner opposite the Room 52 doorway and on the southern wall 150 cm. southwest of the same opening. This is one of the few examples in which both types of wall protection are used together.

Whether or not Rooms 52 and 29 were roofed is uncertain. Since no provision was made for the disposal of rain-water, it seems probable that they were not open to the sky.

Room 15,¹ on the other hand, was an open courtyard, at least in part. It extended, unprotected from above, as far northeast as Room 44, southeast to Room 29, northwest as far as its own brick paving, and further to the southeast as far as the beginning of the drain leading to the outside.

Toward the opening of this drain, the pavement slopes from the west, north and northeast. An abrupt step, 7 cm. high, takes care of the difference in level between the main, or open, part of Room 15 and that lower portion through which the drain passes. The fact that throughout its full course it is a covered brick channel (Plan 37, B) is sufficient proof that the room through which it passes was roofed. The end of the drain was destroyed in antiquity, but continued, in all probability, to the outside as a regulation brick channel.

Room 15 yielded a large number of objects, a few of which were not of the ordinary domestic type. From here came twenty-three bowls (Pl. 86, O), a plain and a gray-ware vase (Pl. 72, E; Pl. 75, L), three cups (Pl. 78, M), an animal figurine, two whetstones, and two stone weights. Among the less usual finds was a large fragment of decorated glass (Pl. 128, B; Pl. 129, B), and a limestone statuette of a frog (Pl. 103, J), whose simplicity and skillful execution is indicative of a real

¹ The term Room 15 applies to all of the remaining paved region as well as to the two unpaved portions on the northwest and southeast.

knowledge of the essentials of sculptural art. Also to be mentioned is a small flat disc of tablet clay on one side of which was the outline of a hand in low relief (probably of the Late Period), and a straight-sided terra-cotta offering stand whose three triangular windows and pierced bottom make it reminiscent of the offering stands from Temple G (cf. Pl. 54, C, D). These less usual objects, having distinct parallels with the temple furnishings, undoubtedly served in the household performance of religious duties.

In the broad entry-way of Room 44 was another fragment of decorated glass (Pl. 128, F) and a unique bone plaque incised with a conventionalized tree-of-life design (Pl. 127, R). These two quite probably belonged to the same collection of votive objects scattered over the floor of Room 15.

Room 45 yielded a collection of bowls and cups (Pl. 89, E; Pl. 90, F, H; Pl. 93, B) and other domestic utensils equal in quantity to that of Room 15. Still further on is the sequestered Room 55, devoid of special architectural features or objects.

At the northwestern end of Room 15 is a wide doorway leading to another group of rooms, and through Rooms 28 and 17 to the main court of the building, Room 7. This thoroughfare is the main route between the entry-way at Room 52 and the main court which, figuratively speaking, is the center of the building. A secondary, roundabout means of access is possible from Room 15 through Rooms 13, 11, 5, and 4.

The exceptionally large quantity of objects found in Rooms 28, 14A, 14B, and 10, as well as in that portion of Room 15 near Room 28, is indicative of the active part these rooms played in the routine of daily life.² The fact that Room 10 is the only one in the building having a hearth shows with some certainty that this was the kitchen. The stone mortars and many terra-cotta vessels here and in the adjoining rooms were but natural where food was prepared for so large a household.

Rooms 14A and 14B probably served as storage rooms, not only for the kitchen but for other purposes as well. A number of inscribed clay tablets were found on the floors; one was inside of a pot of splendid proportions and of a unique red ware (Pl. 68, C). The largest glazed vessel found at Nuzi (Pl. 68, K) was also here, as well as a

² Illustrations: Room 28: Pl. 76, C. Room 14: Pl. 68, C, K; Pl. 69, C; Pl. 72, A, F; Pl. 77, C; Pl. 87, R; Pl. 88, A; Pl. 89, G, H; Pl. 90, B; Pl. 92, T; Pl. 94, B; Pl. 122, A; Pl. 135, E. Room 10: Pl. 71, A, D; Pl. 74, A; Pl. 77, B, M; Pl. 79, N; Pl. 83, D; Pl. 85, C; Pl. 89, U; Pl. 92, U; Pl. 96, E.

gray-ware vase (Pl. 72, F) of unusual grace, and one of the rare fluted-lipped black burnished bowls (Pl. 92, T).

The objects of Room 10 were of a more practical type, though among them was another of the fluted-lipped burnished bowls (Pl. 92, U) and a fragment of a painted cup (Pl. 79, N). The room originally communicated with Rooms 28, 17, and 8, but in the later period of its use the doorways to the two latter rooms were blocked off by narrow walls of mud-brick, forming alcoves where once there had been through passage. In the niche formed by blocking the Room 8 doorway was a large storage pot resting in a hollow in the earth floor (Pl. 67, F).

It is of interest to note that the great courtyard, Room 7, was not open to the sky over its whole area. The broad jambs on the northeastern and southwestern walls and the heavy pillar between them mark the limit of the covered area extending outward from Room 4. Across the open court between the doorways of Rooms 17 and 22 runs a baked-brick walk, extending as far as the covered portion of the courtyard as a scrap-brick pavement.

Several analogies may be drawn between this courtyard and the arrangement of the court in the palace. Both serve primarily the main room of their respective buildings: L11 in the palace, Room 4 here. In both cases the main room is separated from the court by an ante-room—in the palace by L20, and here by the covered portion of the court. The latter may be compared with the portico in the palace court before the L20 doorway. Both have their main entrance not directly across the court from the main room, but to the right. The more direct entrance is of secondary importance in both, though each has direct access to the outside. One cannot but feel that these undeniable similarities are not the result of chance, but of definite architectural precepts governing buildings of like kind at Nuzi.

The objects from the court are a strange combination of domestic and decorative or ceremonial types. Two bowls (Pl. 89, I), a loom weight, and a pot-stand (Pl. 94, I), along with lesser, fragmentary pieces, represent the first group. Fragments of painted terra-cotta and decorated glass (Pl. 129, A), a marble ceremonial staff-head (Pl. 121, V), and a unique, green-glazed offering table (Pl. 115, A), from near the Room 4 doorway, comprise the second group. With these were numbers of copper nails and larger masses of the same material, too corroded to retain any understandable shape.

The first group of rooms, subsidiary to the court, is that to the northeast. A raised door-sill, 10 cm. high, separates the court from

Room 23, and another identical one is between the latter and Room 26. Both doorways are served by small stone sockets. Rooms 26 and 25 show in their irregularity the forced conformity of the house of Shilwiteshub to the earlier house of Zigi on the northeast. Similarly, the irregular outline of Room 32 might be taken as a further conformity to another earlier, and now demolished, building. Room 24 was once the entry-way to the room on the northwest. The intentional blocking of its doorway in the later period of the building made the roundabout way through the outside doorway of Room 20 the only possible route to this unnumbered room.

The principal interest of this group is in its objects. Several hundred inscribed clay business documents were found both in Rooms 23 and 26. Among them, from the latter room, was the only bit of inscrip-tional evidence by which the Nuzi culture may positively be dated—a letter (Pl. 118, I) from Saushshattar, King of Mitanni—definitely dat-ing the building as existing in the latter part of the 15th century before Christ. Since these two rooms contained no jars or pots, it is evident that the tablets were not stored in the usual manner. The considerable number of copper nails among the documents, particularly in Room 26, suggest that wooden boxes were, in this case, the containers for the tablets.

None of the group contained any appreciable quantity of ordinary terra-cotta. Of interest in Room 23 was a large limestone duck weight originally of ten *mina* value, but carefully chipped away on the breast until the value of seven *minas* had been reached. The new value was indicated by seven rough horizontal lines on the tail. A white marble staff-head and a single armor plate of unique design (Pl. 126, O) complete the major objects.

Room 26 contained a single white marble staff-head, as well as a muller (Pl. 122, E), and two whetstones. In copper there were many nails, a lance-head, several arrow-heads (Pl. 125, DD), and fragments of knives (?). This room yielded also a unique object, a bone spindle-staff in whose pierced shank was found the carbonized thread it last spun.⁸ Equally unique was an eye bead of multiple composition (cf. Pl. 119, K₉). The base and lower sides were in the form of a thin shallow copper cup. From this the main body of the bead, in green glass, rose in the usual mound-like shape. Into this upper surface was set a flat ring of sheet-gold in the same position as the circle of different-colored glass inlaid in the ordinary temple bead.

⁸ See Part II, Chapter III, *Bone*.

Returning to the courtyard, Room 21 is seen as the next subsidiary enclosure. This small doorless closet is the only one of a type seen more frequently in the private houses on the mound. The wall separating it from the court is not a blocked doorway, but is an integral part of the wall on either side. Because of its narrowness, an alcove is created on the courtyard side with a floor 27 cm. higher than that about it. There can be no doubt that this room was entered through an opening high up in the separating wall, just as were the other doorless rooms previously encountered.

In the center of the northwestern wall of the court is the entry to the second important subsidiary group. The doorway leads into Room 22, a large bare room, with a short covered brick and clay drain (Plan 32, B), passing through the doorway to empty its contents into the open court. It is hard to understand why the drainage should have been inward when the outside of the building was close by. It can only be assumed that the drain emptying in so central a spot carried some such unoffending burden as would result from the drippings of water jars.

To the southwest, a doorway leads into Room 20, an enclosure notable chiefly for its outside doorway. The narrowness of this passage strongly suggests that it was not the principal entrance to the house. The room contained a few objects of household use (Pl. 92, Y), also the only unglazed wall-nail (Pl. 97, G) found in this building.

Further to the southeast are the two small rooms, 18 and 19. Their slight northwestern walls are not of sufficient strength to have borne the weight of the roof. It is probable that they were later additions; as such, they may not have extended upward any further than was necessary to create the division desired.

Room 18 was used for storage. Many bowls (Pl. 86, D; Pl. 87, C, T; Pl. 92, BB), a cup, a strainer (Pl. 95, P), three large storage jars, and forty fluted glass beads, were found on the floor. Carefully hidden under one of the large storage jars was a corselet of twenty-six armor plates (Pl. 126, A, B), still relatively intact. It remains as the only specimen from Nuzi in which the proper relation of the plates to each other is preserved, and as such it is a piece of the utmost interest.⁴ Close by were two other armor plates of smaller size, and three further ones, unusually large, rectangular in outline (Pl. 126, L), and of a type radically different from the two kinds usually found. Whether or not the two long copper pins also found here had any connection with the armor cannot be ascertained. Knowing that Nuzi was destroyed by the hand of the enemy, one wonders whether the owner hid his coat

⁴ See Part II, Chapter III, *Metal*.

of mail at the sight of the foe in order that his travels might be faster and lighter.

Room 6 is the final subsidiary room to the courtyard and is entered from the roofed portion of the court over a door-sill of two steps, 10 and 15 cm. high. Within the room, by the doorway, is a socket, and in the débris was a copper door-post pivot similar to those found in M74 (cf. Pl. 124, B).

The final enclosure opening off the court is Room 4, the main room of the house, and the one for which the courtyard may be said to exist. It is the largest covered room in the building, and like the main room in both the palace and in many of the other private houses, it was comparatively free of objects.

Room 2 opens off the main room and is entered over one of the usual raised door-sills. The narrow-walled bin in the northern corner is its only distinguishing feature. Since only the stumps of these slight walls remained (Plan 35, Section A-B), it is impossible to tell the height to which they originally rose. Their very slightness would prohibit more than a meter elevation. The room contained a few scattered armor plates and several terra-cotta vessels, among which were four green-glazed bottles (Pl. 75, X), in miniature like those from Temple A.

Rooms 3 and 5 are both equally accessible to the main room and form a part of the series of connected rooms extending along the greater part of the southeastern wall of the house. Both are undistinguished architecturally, and yielded but a meager amount of ordinary objects.

The series terminates on the northeast in the narrow passage, Room 11-13, closed at the northeastern end by a door, as shown by the socket. Though obviously this was originally intended as a passageway, it became, in the last period of its use, a storeroom. The bin with its raised floor, in Room 11, held a considerable number of tablets, and nearby were nine bowls (Pl. 87, N; Pl. 89, B), four large pots, and a copper adze, besides other objects of lesser importance. Northeast, in Room 13, was an even larger number of bowls (Pl. 86, G; Pl. 87, S), vases (Pl. 73, J; Pl. 74, H), cups (Pl. 77, A), and other domestic pottery, as well as whetstones, hand mortars (Pl. 121, FF), and a large mortar and pestle. So large a quantity of objects would render this narrow space relatively useless as a passageway.

The connected series of rooms ends at the southwest in Room 1. Though no hint is given as to its final use, an examination of the level immediately preceding shows that formerly it was a bathroom. Against

the southeastern wall, near the southern corner, was a baked-brick toilet, and leading out from it was a remnant of the pavement of odd-sized bricks that evidently once covered the whole of this earlier room (Pl. 15, C; Plan 36). The Room 3 doorway and all the walls, except the northwestern one, were in the same position as shown on the main plan. The latter wall was 50 cm. further to the northwest than that of the latest period.

The final group of rooms to be considered is that opening off the main room into Room 9. In both the Room 4-9 and 8-9 doorways, curious additions in the form of mud-brick benches rise to a height of 35 and 14 cm. respectively, almost completely blocking the passages. It is difficult to imagine why these intentional obstructions were installed.

Room 9 was the richest in objects, with several bowls (Pl. 85, D), a cup, a cylinder seal, and a drain pipe, the latter evidently not in position, found in the doorway to Room 4. Room 8 was without any objects of note, and Room 12 yielded only two bowls (Pl. 87, J; Pl. 92, B), one of them of the burnished ware, tripod type.

In reviewing the house of Shilwi-teshub, one is struck by the absence of bathrooms and of drainage channels for anything other than rain or seepage-water. This is particularly incomprehensible when one considers that this is the building of second importance in the community. It is difficult to believe that a dwelling of this size and importance should be without those conveniences so well known to the builders, particularly when one sees them included in the earlier level in Room 1. In explanation, there are only three possibilities, none wholly satisfactory. First, that the building actually had no bathrooms or means of sewage disposal. This, in the light of what has just been said, seems unlikely. Second, that the building was so equipped, but that they were so completely demolished at the time of destruction, or later, as to be unrecognizable. This, again, is unlikely, since none but the most thorough looting of bricks could destroy the tell-tale channels through the walls. Third, that the conveniences in question were in those portions of the house that were unexcavated or unrecoverable. This, again, seems improbable. There are many reasons to believe that the house in its present plan is practically complete, and that Room 4 is the main room, the one about which, figuratively speaking, the household revolved. Consequently, it would be strange to have these necessary sanitary fixtures at the extremities of the house, far removed from the center of need. The practice in other buildings has not been so.

There were no architectural remains to tell of habitation in the Late Period. There were, however, a sufficient number of objects of that

period in the upper portion of the fill to show that on this same spot Late Period occupation of a sort did exist. The clay disc with the low relief outline of a hand from Room 15 is probably of this period. The pot in Room 14 (Pl. 135, E), with its two handles and characteristic hard, dark green glaze must have been buried to have been so close to the Nuzi pavement. Iron in Rooms 6, 7, 13, and 20 are further indications of this same culture. That only these few scattered objects remained indicates that the Late Period habitation was not for long, nor of any great importance in its time.

THE HOUSE OF ZIGI

The fourth and last private house (Plan 34) beyond the limits of the city mound is shown by its tablets to have belonged to a man bearing the name of Zigi. It is flanked on two sides by the house of Shilwi-teshub, which in its natural growth partly surrounded this earlier building. Its influence on the outline of the northern section of the house of Shilwi-teshub is not the only sign that it is the earlier of the two. The fact that it is a meter lower than the level of the contiguous rooms of its larger neighbor is sufficient proof that it is, indeed, the older (Plan 35, Section E-F; Plan 38). Since its demolition occurred at the same time as that of the house of Shilwi-teshub, we have here another illustration of how one building, either through rare chance or special care and repair, may last intact while others adjacent are being rebuilt and rising in level.

Again we are forced to base our conception of a building on an incomplete plan. How large the house originally was can in no way be told. However, the lack of communication to the northeast suggests strongly that the rooms here shown mark the limit of the building in that direction. This, in turn, would indicate that the house, in its complete form, was much smaller than the house of Shilwi-teshub.

Room 42 is the first room complete in its outline, and yielded a bowl, a large storage pot and jar (Pl. 66, C; Pl. 68, A), a fragment of a stone bowl, and a copper arrow-head. Room 54, which is entered through a broad doorway, indicated rather than existent, was too eroded to trace in complete outline.

The outline of Room 33 was preserved intact, and it is of interest primarily for the objects within it. Among the few ordinary terra-cotta vessels was an infant burial jar (Pl. 79, DD), a fine high cup painted in black and white spirals and triangles (Pl. 78, Q), two copper armor plates, a few inscribed tablets, and four stone duck weights of one and two *mina* values.

On the southwest is the opening into the small but productive Room 30. On its floors were bowls (Pl. 90, G), plain and shouldered cups (P. 76, K, M; Pl. 77, D), plain and gray-ware vases (Pl. 72, D, G; Pl. 73, A), drip bottles (Pl. 76, A), an animal figurine (Pl. 102, V), a strainer, two tablets, and a small green-glazed bottle like those from Shil. 2. With these were several bone pins, scraps of copper, two hundred and forty-six small stone beads, and nine shells pierced for stringing.

Room 46 is completely blocked off by a narrow wall across its entry. It should be noted that in this case the blocking wall was intact to a height of over 2 m. without any apparent sign of an opening in its upper reaches (Plan 35, Section E-F).

Near the eastern corner of Room 33 is the doorway down whose three steps one descends to Room 35 (Plan 38). A fragment of brick pavement extends from the northwestern wall, and in the southern corner is a tall, partially circular bin containing a heavy deposit of ashes of straw. The wall forming this bin is not of mud-brick, but of plastic mud and chopped straw built up in successive layers and held together only by its own adhesiveness. The whole room, and particularly that by the straw bin, showed signs of great fire at the time of the destruction. The room contained a storage jar, four bowls (Pl. 90, D), four plain and shouldered cups (Pl. 78, K), and two Ishtar figurines (Pl. 100, G).

Room 34 is the most unusual room to be found in any private house at Nuzi (Plan 38). In its southwestern and southeastern walls are four round-topped niches, each well above the floor, and all but one fronted by a step of *libin*. In the northeastern wall is another niche of larger size, extending upward from the floor to well above the height of the smaller ones. In it, resting on the floor, was a large storage jar.

A moderate amount of household terra-cotta (Pl. 66, G; Pl. 76, N; Pl. 79, W; Pl. 95, H), bone pins, and stone grinders and whetstones were found on the pavement, as well as a large collection of tablets. The main contents of the room, however, consisted of an astounding number of copper objects found in great confusion throughout the débris. The implements of war consisted of twenty-six arrow-heads of all sizes and shapes (Pl. 125, O, GG, JJ), two spear-heads (Pl. 125, N), two knives(?), five round-ended armor plates (cf. Pl. 126, E-H), and twenty-seven each of the type of armor plates shown in Pl. 126, D and J. Fragments and fused masses of the same two square-ended types indicate that at least as many more were originally in the room.

Those objects more properly classed as tools consisted of a scythe,

a punch, a hafted chisel (cf. Pl. 124, H), two hafted hooks (Pl. 125, K), three adzes, three pointed ferrules (cf. Pl. 126, C), and three needles.

Those less easily classified comprised two sun discs (Pl. 127, F), and two crescents (Pl. 127, G), probably used as standards; a bowl (Pl. 127, H) filled with carbonized barley, a cup, a ring, a sheet of metal pierced at the edges with small nails, three complete and many fragmentary nails, a solid spherical mass slightly larger than a golf ball, a tiny ram's head, fragments of wire, and several masses of copper too fused and corroded for identification.

The implements of war and the armor plate, sufficient to make a whole suit, are suggestive of the household armory. However, it will be noted that a great number of the copper objects have little or no use in combat. The terra-cotta has certainly no place in an armory. The fact that barley was found in the copper bowl and scattered over the floor, and that the walls and fused copper showed a fiercer fire than could be generated by the roofing, the shanks of the arrows and of the few hafted tools, show that the room was used as a storage for a variety of different things, few of which are in keeping with an arsenal. Thus, we must assume that Room 34 was no more than a general storage room containing foodstuffs, business documents, various unknown combustibles, and weapons, tools, and other copper objects.

It is probable that this room held the major portion of the owner's valued tools and weapons. That they were in such quantities does not necessarily mean that he was richer than his neighbors. It should be remembered that the greater portion of objects found at Nuzi are those considered worthless by the looters. Metal did not fall into that class. The probable explanation is that the same fire that fused the armor plates of Room 34 destroyed the structure before it could be pillaged, thus entombing in its ashes the entire contents. The numbers and kinds of objects coming from a house justifiably believed to have been smaller than that of Shilwi-teshub furnishes a rough standard by which we can gauge the lost contents of like nature in other private houses.

CHAPTER XI

NUZI: BURIALS

ADULT BURIAL

Exceedingly little is known of adult burial or disposition of the dead at Nuzi. Other than the infant interments, which as a special group will be treated separately, only one grave was found belonging positively to the Nuzi period. This is Grave No. 1 of the account of the L4 graves,¹ and is again described under the same number in Mr. Ehrich's account in Appendix E. Since its elevation is higher than the earliest Nuzi pavement (Plan 5, E), and since it is at variance with the burials of Ga. Sur, it may with some certainty be assigned to the Nuzi period. One more, Grave 4 of L4, though below the earliest Nuzi pavement (Plan 5, F), may also be of the same culture. The characteristic features of the two are the lack of objects and construction, and lack of signs of matting or wood. Both are plain, unfurnished burials. The skeleton of Grave 1 lies on its left side, facing southwest (Fig. 11). The legs are partly contracted, the right forearm is across the waist, and the left hand is apparently raised to the face. The skeleton is that of an adult. Grave No. 4 is also that of an adult (Fig. 8). The lower part of the body lies on its back, with the legs fully extended; the upper part of the body faces northeast, with the hands raised to the face. Thus we have but one or possibly two graves on which to base our conception of Nuzi burial. This is, of course, too little evidence on which to reconstruct the burial customs of the race, particularly since at best it represents only the earliest period of their occupancy of Yorgan Tapa. Since it is all we have, its importance is greatly magnified, and it suggests, though it does not prove, that Nuzi burials—if the custom existed at all in the later part of the period—were simple affairs without any accompanying furnishings, or any uniformity in body position or direction.

It is clear that in the latter part of the Nuzi period burial did not take place within the houses or on the untenanted surface of the mound. Consequently, if the custom of burial was practiced at all, the place of interment must have been somewhere in the limitless stretches of plain beyond the foot of the mound. Proceeding on the assumption that the burial place would be relatively near at hand, exploratory shafts were

¹ See Part I, Chapter II, *L4, Graves*.

sunk at strategic points beyond the mound out to a distance, in some cases, of half a mile. In none of these were any Nuzi burials found.

This gives rise to several possible conclusions: (1) that the burial ground was near the mound between those spots touched by our exploratory shafts; (2) that burial was not restricted to one spot, but to whatever place, other than the mound, that fancy, superstition or custom might dictate, and that in no case did one of our shafts happen to strike such a grave; (3) that the burial ground was far removed from the edge of the *tepa*; (4) that burial as such was not practiced, and that some other disposition was used, such as cremation or disintegration through exposure.

Of these suppositions there is some slight support for only the last, that being supplied by the practice of burial as seen in the infant interments. In several cases there were more complete infant skeletons within a jar than it could possibly have held had the bodies been placed there complete. In these cases, it is clear that the bodies had been allowed to decompose to a state where only the skeletons remained before they were put into the jars. If this was the case with the infants, it is possible that adults may have been treated in the same manner, their bones afterwards possibly being given some special care, or perhaps even disregarded as their bodies were. However, the presence in L4 of one grave within the Nuzi period, and possibly one other, suggests that burial was practiced, at least in the early days of Hurrian occupation at Yorgan Tēpa.

INFANT BURIAL¹

Each infant burial has been treated in detail under the architectural description of the room or building in which it occurs. Consequently, it is unnecessary to duplicate here that same description. It would be well, however, to consider the practice of infant burial as found in the private houses, and to determine, if possible, its purpose.

By far the most usual manner of disposition is that in which the bones are covered by a small, broad-mouthed jar placed upside-down over the remains (Pl. 29, E). Considering the frequency with which this type of jar was employed, it is likely that it was restricted exclusively to this use, and that those few jars not so used had as yet to fulfill the purpose for which they were made.

As said before, the customary position of the jar is inverted, covering the bones which rest on the earth below. There are, however, varia-

¹ The word *burial* is used here in its broader sense as the final disposition of the body, regardless of whether it be above or below the ground.

tions from this, in which the jar is upright, holding the bones within it. In most of these, the jar is covered with a large bowl or other vessel, as that in C2, Group 5, Stratum III, which had a covering of two bowls placed one over the other. Less frequently the upright jar is entirely uncovered.

The "infant burial jar," then, since it is used in the great majority of Nuzi infant burials, may be considered the accepted type for interments of this kind. There are, however, notable exceptions which will be listed in order.

The first to be considered is that found in P400, Group 16, Stratum III. This is a round-bellied pot, 49 cm. tall, with a mouth 14 cm. in diameter; in its base is a small, circular hole made before baking. Inside it were the bones of eleven infants. The jar was upright (Pl. 29, B) and was covered with a small bowl inverted over the mouth. It was directly under the wall, and was intentionally and carefully built over. Thus it was incorporated into the body of the wall as an integral part of the building in which it was found.

A second variation was in S397, Stratum IV: a broad-mouthed, small pot, with a hole piercing the bottom, and a deep groove around the top of the lip to receive the lip of the inverted plain bowl that served as a cover (Pl. 71, C). Both pot and cover are unique shapes for Nuzi, and though the cover did not fit exactly, they must have been made especially for the use to which they were ultimately put. The lip of the bowl was flat on top rather than round, and must have so varied from the usual profile in order to ensure a firm fit in the groove on the lip of the pot. The pot rested on the floor in an upright position and contained the bones of several infants.

The third type is the most unusual of all the terra-cotta vessels used for this purpose: that found on the pavement of N359, Group 20A, Stratum II. Its shape is that of a small, relatively slim pot, but with an opening at both ends, each with its own neck and lip (Pl. 71, B). The vessel rested on the pavement with the smaller opening down. An ordinary bowl in an upright position covered the upper opening, and inside were the skeletons of five infants.

Of the fourth variant there are three examples: two in G24 and one in G13, both of Group 28, Stratum II. The material is unbaked clay, and the vessels are flat-bottomed (Fig. 34; Pl. 29, C) and oval in plan. Two were surmounted by a lid of the same material, continuing the line of the sloping sides and terminating in a knob or handle. The third—one of the two examples in G24—was without a lid, and as a result had slightly higher sides. A large flat sherd was used as a cover. That

in G13, and one in G24, was placed under and partly within the wall of the room, becoming, as in P400, an integral part of the building. The other of G24 was buried below the pavement, and became similarly, though less obviously, incorporated into the structure of the house. Each held the skeleton of a single infant. The burial of G13 is unique in that it is the only infant burial found in Nuzi having any burial furniture connected with it. Outside and next to the clay container was a terra-cotta vase. It was in as close and intimate contact with the wall above it as was the clay urn, and, since both urn and vase were built over with great care, it is certain that the vase was also considered a part of the burial. Inside the urn, mixed with the bones, were a few composition beads. Since the urn was covered, it is impossible that the beads could have come there accidentally. This is the sole instance in which objects were placed in association with the body.

The only rule governing the location of the burial within the room is that which demanded that it be near or against one of the walls rather than toward the centre of the room, regardless of whether it be buried or exposed. The disposition of bodies under the very walls of the rooms in P400, G24, and G13 has already been mentioned. Most unusual of all is the location of that between P470 and P37, Group 3, Stratum II. In an earlier phase of the building, a doorway connected the two rooms. Later in the period it was blocked from both sides with narrow walls of *libin*. In the intervening space within this closed doorway an infant grave was found, consisting of a single skeleton covered by an infant burial jar (Pl. 29, E). Whether or not the remaining space was filled with earth at the same time could not be discerned. In the earth below the infant were fragments of human bones belonging to a youth approximately fourteen years old at the time of death.

There is even less uniformity in elevation than in position within the room. The number of individuals or groups found on the pavement is about equal to those buried directly below the pavement. Disregarding for the moment those burials below the walls, the underground interments were in no cases more deeply buried than would be necessary to bring the top of the jar or cover a few centimeters below the pavement. It seems clear, then, that it was not merely disposal of a dead body so much as it was a permanent installation within the house. Judging from the sub-pavement infant burials at other sites² and in other periods, it would appear that this type is the more common, and

² In particular, those of the Larsa period at Ur; see C. Leonard Woolley in *Antiquaries Journal*, vols. vii (p. 400 *et seq.*) and xi (p. 363).

that the super-pavement interments were a development in particular favor only at Nuzi.

The burials above the pavements were arranged in the same manner as the lower ones, but with the skeleton and the jar resting directly on the floor rather than at the bottom of a pit. It will be remembered that two of the four variants mentioned—S397 and N359—were also above pavement level. The position of the super-pavement burials of S397 is of particular interest. In this room were twenty-one jars containing infant bones (Fig. 41). All were above the pavement, and all but one—the variant previously mentioned—were of the usual type. Each jar contained the skeleton of one or two infants, and all but two were, or had been, in an inverted position. It is possible that even these two were originally inverted and that they fell down to their present position from the top of a stack of two or three jars. Lack of space could hardly have been the reason for the manner in which the jars were stacked one upon the other, in several instances to a height of two jars, and in one case to a height of three, since there was ample unoccupied floor space farther to the southwest. The impression given is that of separate groups of burials within the same room, distinct from one another. A similar and substantiating instance of two superimposed infant burial jars was observed in N359 near the double-ended burial jar mentioned earlier.

Just as there is no fixed rule as to the position of the jar in the room, so there is none as to the number of burials within a building, or to the type of private house in which they appear. A great majority of the buildings had none whatsoever, and in those in which they were present there was no uniformity of location or number. The most frequent custom was that of a single burial jar to a building, with several instances of three to a building, and the two unique instances of four (Group 16, Stratum III) and twenty-one (S397, Stratum IV). These numbers refer to burial jars only and not to the number of bodies contained.

It is impossible to establish any fixed type of room in which they occur, except within these broad limits: that the room is subsidiary to the main one of the group, and is never an entry-room, courtyard, or room devoted to groups of storage pots or jars. Buildings having more than one burial may have them either concentrated in one spot, as in P400, Stratum III, or each in a separate room, as in Group 3, Stratum II.

It is of distinct interest to note that none was found in any of the seven levels of the temple⁸ or in the palace building of Stratum II.

⁸ The opposite is found both at Ur and Ashur. In the former, the infant graves of the Larsa period were almost exclusively restricted to the chapels of private houses, and

However, the greatest number found in any one room was in S397, which, although of Stratum IV, seems definitely to have belonged to an earlier phase of the palace. It is possible that there were burials in the Stratum II palace, but since it was cleared only to that level, any sub-pavement burials of that same period would have remained hidden.

In one respect all the burials are alike—the age of the child at the time of death. An examination of the skeletons shows all of them to have been of infants probably newly born and certainly not older than two months.

It is apparent also that body position was not a matter of importance. In the positions of those skeletons complete enough to have remained even partially intact, there was a marked lack of uniformity. Although probably accidental, many were on their sides, with the head raised slightly toward the dome of the covering jar.

Although the infant burial jar covered as a general rule only one body, there were several instances in S397 in which the jar contained two bodies. Two of the variants mentioned earlier—the pot under the wall of P400, and the double-ended jar of N359—contained respectively eleven and five skeletons. The most casual glance at either of these two vessels shows that it would have been utterly impossible to force into them that number of bodies of even newly born children in the normal state at the time of death. It is perfectly obvious that the bodies were put into the vessel either in a dismembered condition or in skeletal form. The former is unlikely, for although the space in which they were crammed was too limited to allow for the tracing of the skeleton of each, it could be observed that in each case the heads were down and the leg and feet bones up, in the proper relation one would expect of a body or complete skeleton inserted head foremost. Moreover, on removal and examination, the bones showed no signs of ancient mutilation. It is clear, then, that in these two instances the bodies of the infants were allowed to waste away either through exposure or by some means unknown, and that they were not put into the jars until they had reached skeletal form. The same can be said of variant No. 2, which contained several skeletons, and of the regulation infant burial jars having more than one skeleton, for it is extremely doubtful whether two bodies could be placed inside one of these normal jars even if forced.

The question naturally arises, whether all the buried infants received

further restricted to a certain location within the room. At Ashur two were found buried below, and belonging to, the E level of the archaic Ishtar Temple. The latter were in upright pots with solid bottoms, and covered by inverted bowls.

similar treatment. It seems reasonable to believe that in all cases the remains were not put in their final positions until the flesh had entirely disappeared. Burial among most peoples is governed strictly by the traditions and customs in practice at the time, and any deviation is looked upon with distrust. Considering these customs, it is unlikely that in half the graves the body should be treated in one manner, and in the other half in an entirely different way. Also to be considered is the exposed condition of many of the graves. It has been seen that the exposed or super-pavement graves were by no means relegated to inaccessible or distant quarters of the houses. In all cases they were in rooms which were either themselves actively used or in rooms which were in direct communication with others that were. It is highly improbable that the occupants of the house would have tolerated the nuisance of one or more decomposing human bodies within their abode.

A final feature of importance should be considered. That is the direct contact in the great majority of cases between the skeleton and the earth below. It has been noted before that the customary position of the infant burial jar was upside-down, covering the body, leaving it in contact with the soil. The double-ended jar of N359 is apparently so made that this relationship of body with earth may be preserved. In the burial pots of P400 and S397 it will be noted that each is carefully pierced at the bottom, again maintaining the same principle. The clay urns of G24 and G13, being of the same material—in a purified form—as the earth on which they rested, were apparently considered as being accessible to the ground below them, for the bottoms were unpierced and intact. A more obscure contact with earth is seen in the upright burial of C2, in which the jar was carefully and intentionally lined with purified clay, 1 to 2 cm. thick. It seems apparent that in this case the clay lining constituted the necessary contact with the earth, and satisfied with a gesture a tradition which had formerly demanded more rigid observance. The clay lining was found only in this one upright burial, but it is possible that a handful of earth or some less permanent lining would have satisfied the demand as well. The purpose of this contact or passageway which was maintained between body and earth may have been to provide a means of descent to or contact with the gods of the underworld. Whether the upright burials without free passage downward were intended to restrict the spirit of the infant, or whether they were simply a more conventionalized form of the other type, is an open question.

From the foregoing facts, as well as from the impressions received from the more detailed account of each case as it occurs in the archi-

tectural description, it is necessary to see whether certain conclusions can be reached concerning the purpose of this custom.

The most striking characteristic is the uniformity of the age of the babies at the time of death. Could these graves, then, be used as a measure of the infant mortality at Nuzi? This hardly seems possible, for if they represented the number of normal child deaths, one would expect to find a more even distribution throughout the city. The majority of the houses have no infant graves at all, either in Stratum II or Stratum III. Moreover, the total number of skeletons found is vastly insufficient to account for the number of deaths there must have been in a city of this size. Again, had they represented normal deaths, one would expect some variation in the ages of the children.

All the points would seem to indicate that these children were killed intentionally to serve some religious purpose. The reason for these sacrifices is not absolutely clear, but it may be of help to recall two points concerning them. The first is their constant association with houses, being always near a wall and often being imbedded in the pavement or within a wall. The purpose for which these lives were sacrificed, therefore, definitely concerned the house as a building, or the family or group it housed, and the sacrifice may be taken to have been for the benefit or protection of both.

There is one notable exception to this case. On the northern slope of the neighboring prehistoric mound of Kudish Şaghîr, buried but little below the surface, were four Nuzi infant burials, already described in Chapter I. Each body was buried upright in an infant burial jar, one having a plain bowl for a cover, and a shouldered cup alongside it. Except for the beads found in the clay urn of G13 and the vase beside it, this is the only object other than the container which is definitely related to an infant burial. The four were at varying levels, giving the appearance not of a simultaneous interment of four children, but of four different burials, each made separately. The point to be noted in this case is that there was no Nuzi occupation on Kudish Şaghîr sufficiently substantial to have left either walls or sherds; these infant graves were not only not in a house, but were on a mound that was quite certainly untenanted in Nuzi times. What, then, could be their purpose? May they, perhaps, have been sacrifices placed here so that special benefits might fall on crops or other property in the immediate vicinity?

The second outstanding feature of these burials is the almost universal concern shown for contact of the remains with the soil. This may have been in order to facilitate the passage of the spirit to the next world, or its intermittent return to its earthy remains.

It is clear that a sacrifice containing more than one child in a jar does not mean that all were killed at the same time. It is obvious that a single householder such as that of P400 would not have had on hand within his house eleven new-born babes to offer all at once as a single magnificent sacrifice. The number must have accumulated over a considerable period of time, and must have been placed in position and dedicated only after the quota had at last been reached. Similarly, the great number of skeletons contained in the twenty-one jars of S397 must represent an accumulation which was continually added to throughout a long period of years. This gives further support to the belief that the bodies were not placed in position until they had been reduced to skeletons.

It is of distinct interest to note the antiquity and universality of infant sacrifice. Two such burials, as already stated, were found in the prehistoric strata of Yorgan Tapa, both belonging to Pavement X of L4. One rested in a complete jar buried upright below the pavement, the other in a fragment of a large bowl, also upright, directly under and partly within the wall on the north (Pl. 49, B). Neither was covered nor provided with a pierced-bottomed container to allow for the downward passage of the spirit. Both infants were new-born, and lay on their sides, with legs contracted and hands toward the face. Although in some details they differ from the Nuzi burials, they are essentially the same, and are the prototype of the later ones. Moreover, in Trench 2 of the prehistoric mound Kudish Şaghîr an infant burial was found identical in idea with those of Nuzi. The child lay on the pavement, and over it was a large crude bowl. This has all the essential elements of the typical Nuzi infant burial, and is the real ancestor of those that followed. The angle at which the bowl was found proves that the child was put here not as a skeleton, but as a complete body. Two other infant burials were found in the same trench, both placed in upright jars like that of Pavement X, L4, mentioned above.

In the next period, that of Ga.Sur, an infant burial was found against a wall in G50 immediately preceding the earliest temple. The bones were placed in a medium-sized, round-bellied, small-mouthed pot standing upright and covered by a large bowl. The vessel was too badly crushed to tell whether or not there was a lower outlet, but it was clear that the child was of the same age at the time of death as the children of the burials already described. Except for the shape of the container and the cover, both of which were typical of their period, this burial is identical with many found at Nuzi.

The custom was in practice long after the end of Nuzi. In F16, of

the Partho-Sassanid period, was a pot (Pl. 138, F), buried upright below the pavement, containing the skeleton of a single new-born babe. The base of the jar was unpierced, and the mouth was carefully covered with a fragment of brick.⁴

Any custom which remains in practice unchanged for thousands of years, despite the successive changes in race and culture, must have as its reason the satisfaction of some fundamental primitive human urge. It is possible that in the beginning it had to do with fertility and the constant miracle of the creation of new life, on the ground that from the dead new life may spring. However, by the time the Nuzi period was reached, the practice seems certainly unassociated with formal worship, for infant burials were notably absent in the temples and chapels of that period.

⁴ See also the contemporary interment illustrated in Pl. 35, E (Grave 82 in Mr. Erich's *Appendix E*).

PART II

OBJECTS

CHAPTER I

PREHISTORIC

TERRA-COTTA

A detailed description of the great majority of the prehistoric terra-cotta will be found in Appendix G—Level XII through X inclusive—and Appendix H. Only those classes that do not strictly come under the classification *pottery* are included in this chapter. The objects from Yorgan Tepa and Kudish Şaghîr, terra-cotta as well as other materials, are here treated together, rather than separately for each of the two sites.

Wall-nails. The considerable quantity of terra-cotta wall-nails from both Kudish Şaghîr and Yorgan Tepa suggests that they were objects of common use. The term "wall-nail," of course, must be used with reservation, since there is no proof that here they were so used. However, the absence of any other reasonable purpose, and their resemblance to the cones and nails of later date, makes it highly probable that they are the prototype of those that followed. In each example the absence of wear on the rounded heads precludes the possibility of their having been mullers. The shanks are curved (Pl. 39, U), a few are definitely hooked (Pl. 39, R), and in all cases the surfaces are rough and undecorated. If they were intended purely for the architectural adornment of buildings, it is strange that they were not decorated in the same technique expressed so well on the painted pottery. It is possible that they were originally inserted in the mud walls to simulate beam ends which the ancestors of these people, who presumably lived in a more timbered country, had come to regard as an integral part of domestic architecture.

Whorls, weights. Conspicuous among the finds are the ever-present spindle whorls (Pl. 39, Q), in both baked and unbaked clay; also the so-called loom-weights in the form of roughly rounded and pierced sherds (Pl. 39, P).

Wheels. No votive chariots were found, but a single wheel painted with a now faded brick-red pigment was found on the surface at Yorgan Tepa (Pl. 39, T). Although it cannot be definitely attributed to a known level, the style of painting places it with fair certainty among the al-'Ubaid objects.¹

¹ Cf., however, the somewhat similar specimens from Level I of Chagar Bazar (ca. 1900-1600 B. C.), in *Iraq*, vol. iii, pt. 1, fig. 6, no. 17, and vol. iv, pt. 2, fig. 10, no. 31.

Pot-lids. Two examples of pot-covers were found: the first, a roughly circular pat of terra-cotta (Pl. 39, Y) with a deep, finger-made depression in the center by which it is lifted; the second, a more finished product, with a pierced handle at the top, and sides of even thickness and slope (Pl. 39, CC). Unlike the first, it is water-smoothed.

Stands. Ring-stands (Pl. 39, X) were extremely common at Yorgan Tepa, and they are particularly suited for the rounded bases of cups, bowls and pots of the period. In all cases these were rough and made with little regard for uniform thickness.

Fragments of two regulation pot-stands (Pl. 39, BB) were found, and except for the lack of flare at the top and bottom they were identical in shape with those that followed in the later periods. They are carefully made of good, unsmoothed ware, and their small size precludes their having been used for any but the smaller bowls and vases. It is probably for this very reason that they were given the added height that the ring-stand lacks.

Figurines. No human figurines were found definitely associated with any of the prehistoric levels. There is, however, a single example (Pl. 101, A) among the surface finds so similar in ware and treatment to the incised prehistoric terra-cotta that the possibility of its having belonged to that period must be given serious consideration. Since, as a surface find, it was in association with quantities of Nuzi objects, it has been shown along with the Nuzi figurines, and its description will be found with those of that period.

Miscellaneous. Two objects of uncertain use came from Kudish, each apparently the foot of a stand, or very high-footed bowl. The base of the first (Pl. 39, S) is circular and slightly hollowed below. The second has three projecting toes to add stability to the object (Pl. 39, W). One is covered with a thick coating of bitumen and both are of exceedingly coarse, blackish ware.

UNBAKED CLAY

Counters. Second in quantity only to the stone knives among the complete prehistoric finds were the familiar biconoid unbaked clay pellets (Pl. 39, AA), so intimately associated with similar painted pottery cultures at other sites. They were found on the floors, intermixed with the terra-cotta, and evidently served a purpose almost as necessary and as much a part of the daily life as pottery and stone. They are made of clean, water-washed clay, and show only slight variation in size and shape.

The purpose of these objects is obscure. Though frequently referred to as sling pellets, this attribution is untenable when one considers the fragile texture of the pellet and the profusion of small stones of the same size to be found on the surface of the ground and in every dry water-course.

It has been suggested that they served their illiterate users as counters. It is certain that there must have been need for such articles, and the large quantities in which they were found in association with daily household objects makes the supposition seem likely. With a full realization of the uncertainty of any positive attribution of use, these pellets will be referred to tentatively as counters, in lieu of a better name.

It is of distinct interest to note the persistence of these objects in gradually diminishing quantities throughout the Ga. Sur levels up into Nuzi. Again, considering their fragile nature, it is unlikely that they would have survived as relics of an earlier culture. The implication is that they continued to be made and used long after their originators had disappeared.

Loom-stands. The second type of clay object is a large block, slightly hardened by fire, and having two projections or horns on the upper surface (Pl. 39, Z). Only one was found, made of partly purified clay, blackened by use; it is from Level X. Again, its purpose must remain conjectural, but the evidence pointing to a positive attribution is more certain than with the counters. There can be no doubt that this is the same as several almost identical specimens found in Nuzi (Pl. 118, A, B), and there is little possibility that such unusually shaped objects could have served different purposes regardless of the widely separated periods in which they were found. The remarkable similarity of the Nuzi objects to the clay loom-stands used by the Arabs today (Pl. 30, B) makes it seem highly probable that in both the prehistoric and Nuzi periods these were loom-stands and were used for the manufacture of cloth in a manner almost identical to that followed by the present-day Bedouins. There were no indications with any of these objects pointing toward a ritualistic use.

Animal figurines. These may be grouped in two classes: those symmetrically proportioned (Pl. 39, N), and those with a pronounced exaggeration of the length and strength of the neck (Pl. 39, O). Since there is no example showing a fusion of both characteristics, we must assume that the latter was an attempt to portray a particular type of animal characterized by the features which the modeller showed in

excess. Whether the unwarranted hump behind the base of the head can be taken as an indication that a humped ox is being portrayed cannot be told. The protuberances on both sides of the head are sufficiently pronounced to indicate horns.

None of the symmetrical figurines were any more complete than the one illustrated. They were found in both Kudish Şaghîr and Yorgan Tepa. The asymmetrical ones were more common, though they were found only at Yorgan Tepa. Both are invariably made of clean, unbaked clay.

STONE

Knives. Of the stone implements found in the prehistoric levels of Yorgan Tepa and Kudish Şaghîr, by far the majority are those with a cutting edge. Most common among this type are the knives flaked from a chert core. Those of obsidian are next in quantity and often retain a razor-like edge. For the most part, neither type is very carefully executed (Pl. 39, G). Approximately 40 per cent. showed evidence of more careful flaking, resulting in relatively straight, parallel edges and rounded ends (Pl. 39, H).

A variant from these is found in the chert or flint flake with intentionally made saw-toothed edges (Pl. 39, I). These flints belong to the second type just cited, although it is likely that in many cases the careless irregularity of edge in the first served the same purpose. The teeth are found on one edge only, and it is not improbable that the plain edge was set into a bone or wood handle and secured with bitumen. Recognizable examples of this type were relatively scarce. Also rare are those which have pointed ends and knife-blade shape (Pl. 39, J).

In all cases, the flakes are long and even, exposing a surface slightly convex in section on the flat, underside of the blade, and concave on each of the two or three upper planes.

Chert, flint and obsidian knives were found in large numbers intermixed with the débris and terra-cotta covering the floors. Their presence in smaller numbers even in the Nuzi strata of Yorgan Tepa may indicate that their manufacture survived to an appreciable extent into that late period.

Arrow-heads. Only one arrow-head, that of chalcedony, was found in the prehistoric levels (Pl. 39, B). The high degree of skill shown in its manufacture would dispel any doubt as to the ability of these people to work hard materials to any desired shape.

Celts, adzes. Several examples of small celts or scrapers of hornstone and porphyry were found at Yorgan Tapa. In each case the stone is highly polished, showing no sign of chipping. The two opposing sides descend at an abrupt angle to form the cutting edge which is straight across the end of the tool (Pl. 39, A), opposite the rounded butt. One variant of the same material was found with a pointed butt and sides which sloped more gradually to the cutting edge (Pl. 39, L).⁸

Two larger celts from Kudish Şaghîr (Pl. 39, C) are identical, except for a slight difference in size. Again, there is no sign of chipping or grooving for the attachment of a handle. The thickest point of the tool is just before the rather abrupt slope of the sides to the cutting edge. In the other direction the thickness gradually decreases to a butt which is angular in plan and round in section.

The implement shown in Pl. 39, D appears too carefully made to have been a mere hammer-stone. It is probable that the depression seen on its upper flat surface is the beginning of the hole that was to have pierced the tool, making it ready for hafting. The depression was made by a continuous tapping on one spot rather than by drilling.

The edge of the flat, pierced stone shown on Pl. 41, A is chipped in such a way as to form a rough but effective cutting edge on more than half of its circumference, the whole resulting in an adze or hoe. The hole is worked from both sides, with the greatest diameter at the edges and the smallest in the center of its course. It is not drilled, but is, rather, two connected depressions made in the same manner as in the implement previously described.

Hammer-stones. A few hammer-stones were found, all of small size, with depressions resulting from the continuous use of both surfaces (Pl. 39, E).

Bowls. Stone vessels of any kind were exceedingly rare both at Kudish Şaghîr and Yorgan Tapa. Only three scattered fragments were found to show that they were known and used. These were evidently bowls of moderate size with flaring sides and sharp lip. Too little remained to allow a reconstruction of the whole shape. These three fragments gave evidence of skillful manufacture and a familiarity with this phase of stone-working.

Decorative objects. The only specimen in this class is the conventionalized tail of a scorpion in white limestone (Pl. 39, F), a fragment broken away from the original complete object.

⁸ Although found in a Nuzi room, this is undoubtedly of the earlier culture.

BONE

Punches. Although scattered fragments of animal bones were found on the prehistoric floors, only one type of tool or worked bone came to light. These, from Pavements XA and XI of L4, were two complete bone punches and fragments of several others (Pl. 39, K). The bone, as far as can be told, is the shank of a sheep, with the rounded knuckle of the joint serving as the butt. Below the knuckle, half or more of the thickness of the original hollow bone is cut away, leaving a shaft semi-circular, or partly so, in section. The natural diminution of the diameter of the bone is increased toward the end to form a relatively blunt but recognizable point. The tip of a single sharp punch was cut to form a point like the nib of an unsplit goose-quill pen. Even including this, none is sharp-pointed enough to have been an effective instrument for piercing anything offering great resistance. Neither are they fine enough to account for the incisions found on the terra-cotta. It is more likely that they served in working cloth or leather.

CHAPTER II

GA. SUR

The objects of true Ga. Sur culture came almost exclusively from the two test pits L4 and N120, and from the two earliest levels of the temple, F and G. Since both of the pits fade gradually from Ga. Sur to Nuzi, and the temple was used after the advent of the Hurrians, it is impossible to draw a hard and fast distinction between the two classes. Consequently, the objects have been arranged on the plates, in so far as possible, into like groups in the following order:

1. Pure Ga. Sur (L4 Pavement VIII-III, and Temple G): Pl. 50 through Pl. 56.
2. Ga. Sur objects within the transition period, some showing Nuzi influence (L4 Pavement IIB-IIA, and Temple F): Pl. 57 through Pl. 62.
3. Nuzi objects within the transition period, some showing Ga. Sur influence (L4 Pavement IIB-IIA, and Temple F): Pl. 62 through Pl. 63, P.¹

The Ga. Sur terra-cotta may be placed with fair distinction in three separate groups: grave furniture, domestic utensils,² and cultural objects. The distinction between grave and domestic terra-cotta is perhaps the least clear of the three, but it is possible to distinguish within relatively close limits the dividing line between the two. The distinction between grave and purely cultural terra-cotta is quite clear—an unexpected differentiation when one considers the relationship between burial, life after death, and the religious beliefs of the people at that time. Almost as clear is the line between household and cultural pottery, although the latter, for home use, is frequently found in conjunction with the household objects of a more practical nature.

CULTUAL TERRA-COTTA

The objects of this class are distinguishable either by their location actually within the temple grounds, or by the tendency toward elaborate decoration, a feature never seen on the domestic Ga. Sur pottery.

¹ The following objects are incorrectly placed on the plates: Pl. 57, L and M; Pl. 76, B—change to "Nuzi objects within the transition period." Pl. 63, E, N, O, P; Pl. 68, E; and Pl. 117, N—change to "Ga. Sur objects within the transition period."

² The objects treated in this chapter are: the Cultural Terra-cotta, mostly from Temples G and F; Objects of Unbaked Clay; Beads and Jewelry; Seals and Seal Impressions; Objects of Stone; and Objects of Copper. The grave furniture and the domestic pottery is treated in Appendix G—Level IX-IIB—and in Appendix A.

Incised gray-ware vases. The justification for the above classification of decorated objects is well illustrated in the sherds of the incised gray-ware vases (Pl. 56, I-T, V, W). Many of them are surface finds, and none was found in either of the two test pits, N120 or L4. However, fragments were found in considerable quantity in the level below Temple G, and thus they are definitely linked both with the latter part of Ga.Sur and the temple. The ware is identical with the white-filled incised ware associated in southern Mesopotamia with the time of Gudea, and ranges in color from light to very dark gray. The clay is exceedingly fine-grained, and the surface is tool or pebble-burnished. The incisions are sharp and clean, with no ridges parallel to the cut. The greater portion of this ware appears to rely solely on the incisions for completion of the design, but two examples (Pl. 56, L, O) have a white substance in the incisions to bring out the design in sharp contrast to the dark clay body. The incisions are of two sorts: plain, sharp cuts, and stippling made with the point of the instrument. In all cases but one—Pl. 56, T—stippling is used to fill in the space between clean-cut lines, and it is particularly common around the rims of the relatively straight-lipped cups. The designs, as a whole, show a distinct tendency toward vertical panels surmounted by horizontal bands which, if the space permits, form the decoration below the rim of the vessel. Two fragments (Pl. 56, J, M) show the beginning of a naturalistic figure within the panel.

The sherds indicate two principal shapes. The first (Pl. 56, I, L) was in all probability similar to the Telloh vases of this ware and, with the exception of the four vertically pierced lugs on the shoulder, much like that seen in Pl. 51, AA of the same period. The second shape is more difficult to determine (Pl. 56, J, N, O, P, Q, R, S), but appears to have been an open cup, varying in size with each specimen. Its only certain feature is the lack of any appreciable shoulder or constriction at the neck. The side is often pierced diagonally (Pl. 56, J, N, S) to allow for the use of a string handle. The cord must have passed under the base of the vessel and out through a similar hole opposite the first, emerging, as it began, through and within the open mouth of the cup.

Three exceptions in this ware should be noted. The first, Pl. 56, T, diverges both in shape and in decoration. The bulge on the side of the sherd indicates that it was once part of a tripod bowl. The lines on the foot are irregularly incised, and on both sides the design is stippled with a seven-toothed rake—in the same manner as the prehistoric ware—and stamped with a half-reed to form crescent-shaped impressions. Since it is of different design and was found on the surface, it cannot

be positively placed in this group; only the similarity of the ware justifies its inclusion. The second and third, Pl. 56, V and W, are both of greater thickness than any of the other specimens, and are different in shape from any hitherto found. Pl. 56, V is the only one in which the herringbone design is used. Both in ware and in surface treatment they are true to type.

Zoomorphic vessels. Special note should be made of the bird-shaped vessels, one of which (Pl. 59, A) is made in the same burnished gray-ware described above. This fragmentary specimen was found in direct association with the gray incised sherds below Temple G, and, except for the quality of the ware and the infrequent appearance of indented circles made with a reed end, it is identical with its more complete companion (Pl. 59, E) from L4, Pavement IIB. The latter is of gray clay similar in color to the customary domestic ware,³ and is imperfectly tool-burnished over its whole surface. The feathers are indicated on the back and sides by incised, white-filled lines in palm frond pattern or by long, parallel, diagonal lines connected by series of short dashes. Sketchily made incisions show the legs and feet tucked up under the body. The feet are not webbed, and the six lines representing each foot are surely the result of the failure to connect the ends of each pair to form the usual three-toed claw. The incisions do not extend onto the neck or the flat tail. The eyes are shown by two applied pellets of clay well up on the head. A hole in the back and a spout through the bill makes this decorative piece a useful vessel.

Probably also zoomorphic is the fragmentary vessel—Pl. 59, H—from Temple G. The barrel-shaped body, with indented crescents made by a half-reed held at an angle, is reminiscent both of the bird vessel and the later zoomorphic jars. Three knobs extend from the bottom to form the feet of the object. The clay is of the usual gritty, buff variety, and the surface is rough.

Still another, tentatively placed in this class, is the incised, coarse, unburnished sherd shown in Pl. 59, F. The undecorated path down the peak of the curve marks the course of an applied ridge of terracotta now broken away, and is reminiscent of the manner in which the tails were added to the lion jars of the Nuzi period.

Occasional ram's-head spouts (Pl. 57, V, W) were found both in Nuzi and Ga.Sur. In Nuzi they appear only as sherds, unassociated with any complete vessel, and as such are probably remnants of the

³ Impregnation with bitumen during the conflagration of the building gives some of the fragments of this vessel a dark color which they did not originally have.

earlier period toward the end of which they first appear. Pl. 57, V illustrates the unusual position of the spout in relation to the base of the vessel. Pl. 57, W has more of an upward direction, and may have had the same relation to the pot as the spout of the later phallic vessel seen in Pl. 103, K. The first example shows that though these appurtenances were zoomorphic, the animal characteristics did not extend to the vessel itself. The animal depicted is always a ram, with the horns curving toward the front. The surface is given no special treatment, and only Pl. 57, W, with its parallel incised lines along the neck, makes any attempt to indicate the beast's shaggy coat.

Incised pots and fragments. Most impressive of the incised vessels, and most important of all the cultural objects, is the large storage pot from the cella G29 of Temple F (Pl. 58, A). Although the period of Temple F coincides with the rise to power of the incoming Hurrians, the northwestern temple still belonged to the people of Ga.Sur, and its objects may be taken as representative of their culture. The jar is of large size, of gritty, yellowish-buff clay, and without a burnished or wheel-finished surface. Eleven raised rope-pattern bands encircle it, with the concentration on the upper half of the vessel. In most cases, the twist of the rope pattern is in the opposite direction to the band immediately above or below it. The broad rim slopes outward from the peak of the lip in the characteristic Ga.Sur manner and is incised diagonally back and forth to form a diaper pattern around the circumference, while every other resulting triangle is stippled within its boundaries to form the female symbol.

The special importance of the pot is due to the graphic scene incised and molded about the shoulder, showing a wolf or dog, followed by a man, attacking a herd of horned animals. All the figures, save the attacking animal, are incised. This is modeled in low relief. In spite of the crudeness of the representations, it is clear that this animal is of a different type from the others. The short sturdy legs, the long heavy tail, the pointed nose, the lack of horns—all point to the representation of a wolf or dog. The fact that the human figure is followed by a similar animal, although smaller and incised rather than modelled, indicates a relation among the three, and suggests a hunting scene, with the two animals obeying the commands of the man. In all probability, the two animals—one in front and the other behind the human figure—are dogs.

The man is more sketchily indicated than any of the other figures, implying that he is merely part of a general decorative scheme, rather

than the principal character. He advances in the track of the attacking animal, his left hand holding an axe raised above his head, and his right hand on the hilt of a sword(?) carried across his waist.

The other animals are horned, and of three distinct types. The first, and most numerous, are those with large curving horns, seen in the first and fourth from the right, and in the fourth and fifth from the left. The length of tail varies in each, and the figures are too crudely drawn to allow for certain identification. The faint resemblance to buffalo is too uncertain to trust.

The second type is seen in the first, second (cow and calf?) and third from the left. The length of the tail destroys the similarity to the gazelle created by the short spike-like horns.

The third type, the third from the right, is the only one of its kind. Its branched antlers suggest the Persian red deer—whose antlers have been found in Nuzi dwellings—or some other animal of related breed.

Crescents have been added indiscriminately throughout the scene. All are made with the same half-reed. From their use and general position it is clear that they play no part in the pictorial representation, but are an added embellishment, at times conflicting with the figures. Thus, the second and fifth figures from the left are given details or markings which were not originally intended, and the third from the left is made to appear with the beard of a goat, although it is certain that this was not intended. Similarly, another crescent between the attacking dog and its prey adds a false and confusing bit of detail.

It is of interest to note that the one relief figure was done last, overlapping the imprint of the crescent before it, as well as the line of the horn of the victim.

Lower down on the vessel are the beginnings of another series of designs, abandoned either because of a false start, or in preference to the upper panel.

Despite the crudity of the work, there are signs of a certain degree of perception in graphic representation; such as, for instance, the difference in size between the attacking and the defending animals. The position of the attacked beast, moreover, with its head turned under and around so that its muzzle is actually seen over its shoulder, is exactly the action of an animal charging and tossing with its horns, and shows an amazing attempt at perspective and life-like portrayal.

The meaning of this scene is obscure. Being in the cella of a temple of Ishtar, the crescents are at once understandable. The rest is less clear. It is possible that it represents the prowess of Enkidu, and it is of interest that the artist—one of a pastoral race which probably had

not completely outgrown the hunting stage—gives prominence and accuracy not to the human figure but to the animals.

Other incised ware from the same temple is rare (Pl. 53, E), and confines itself purely to the familiar geometrical patterns. Pavement V of L4 yielded a sherd showing the eye and partial outline of a human head (Pl. 53, D). The design is incised, except for the iris, which is an applied, stippled pellet of clay.

Two final incised objects (Pl. 59, B, C), both found within rooms of the Nuzi period, undoubtedly belong to Ga. Sur. The first is somewhat reminiscent of the big pot of Temple F, though certainly inferior in its drawing. The design is made with sharp, clean knife-cuts, and the ware is hard and fine-grained. The design on the second, a fish(?), is more realistic in its incomplete state than either of the two former objects, though it should be remembered that portions of a design often present a more accomplished appearance than the complete original ever had. The design is made with a blunt-edged tool, the butt being used to pock the body of the fish. The sherd is of hard, smooth-surfaced, dull-red ware.

Decoration in relief. Infrequent examples of relief decoration are found in the ordinary habitation levels. The most important are a sun disc partly encircled by a crescent overlying lightly incised wavy lines, and two scorpions (Pl. 60, D, G) applied below the rims of jars.

Belonging to Temples F and G, both of which existed within the Ga. Sur period, were three fragments of terra-cotta relief of unusual nature (Pl. 59, D, G, I). The ware is of exceedingly coarse, porous, yellow-gray clay, the surface rough, and the figures crude. The sherds are of exceptional thickness and show no curve. It is not improbable that they were decorations to a square-sided, house-shaped offering stand like that found at Beisan. The first (Pl. 59, D) is undoubtedly the leg and foot of a man, and the slightly upturned toe is suggestive of the familiar Hittite shoe. The second (Pl. 59, G) portrays the head of an animal. In spite of the belief that the camel was still a stranger in the land, this head remains disquietingly like that familiar beast of burden. The third fragment (Pl. 59, I) is larger, but, unfortunately, still too fragmentary. The cloven hooves and shaggy coat of the foremost beast seem to indicate a goat, while the toes on the paw of the hindmost suggest a dog or lion. The similarity of these sherds to others found along the great trade route to the northwest, as well as the representation of a Hittite shoe, gives further support to the northwestern origin of these peoples as indicated in the inscriptions.⁴ Also,

⁴ See T. J. Meek, *Old Akkadian Texts from Nuzi*.

the early influence of the Aramaeans in this northwestern quarter may account for what appears to be a representation of a camel.

From the northwestern cella of Temple F came the important relief portrayal of a snake shown in Pl. 60, E₁, E₂. Like the sherds just described, this fragment is thick and shows no curve. The snake crawls up the side of the object with its head just reaching the roughly scalloped edge over which its forked tongue extends. The representation, because of its simplicity, is less crude than that of the animals. The ware is coarse and rough, and without any surface finish. It is again advisable to point out the house model from Beisan for comparison, although the scalloped edge seen here is difficult to account for in such an object. The snake is a common motif in association with Ishtar, and not at all out of place in this temple.

Two other representations of snakes came from the temple. The first (Pl. 60, B) came from the northwestern unit of Temple F, as did the specimen just described. The second (Pl. 60, C), though from a higher level, is quite probably of the same date. Both are on rounded vessels of dark, coarse gray ware, with the snake extending upwards. The first is seen in conjunction with the conventional horizontal incised rings, and is stippled on its back either for accentuation or to illustrate the natural markings. The second sherd is stippled over the entire surface. Whether these were portions of a vessel, as in Pl. 60, A, or whether they formed the upper, cylindrical top to a house-shaped offering stand, is impossible to say.

One final specimen, found on the surface (Pl. 60, A), shows the snake motif used on a jar, with the head actually extending over the lip toward the inside. Since this motif was never found in the Nuzi strata, it is highly likely that this fragment also dates from the Ga. Sur period.

Offering stands. Foremost among the offering stands is the large, house-shaped stand (Pl. 61, A, B) from G29, Temple F. Its ware is exceedingly coarse and non-cohesive, crumbling to pieces when broken. No special treatment has been given to smooth the surface over which the incised and stamped decoration is placed. The incisions were cut either with a sharp or round-edged tool, depending on the prominence desired for any particular design.

The construction and general appearance are sufficiently well shown in the illustrations, but there are details that need special description. The presence of so many architectural features proves that this object was intentionally made in the form of a house. The doors and windows, the battlements, the lines indicating structural features, as well as its similarity to undoubted house models from Ashur, Beisan, and Nuzi,

prove this beyond a doubt. However, it is not necessarily a copy of a house such as existed at that time, but rather an object made in a traditional house-like form handed down from more remote times. Even though the design was known to the potter as an actual building only through religious tradition, it was, nevertheless, a building in miniature, and would of necessity be shown with some structural features with which he was familiar. It is not a difficult task, in most cases, to distinguish those portions of modelling or design that are purely decorative from those that have an architectural significance.

Most important are the battlements at the junction of the first and second stories. This is a definite architectural feature, and as such is seen in the buildings of this land from the earliest times. They are, however, shown here as useless protuberances from the wall of the building, without any apparent purpose. It seems highly unlikely that such a necessary common feature would be applied merely for decoration, and the inference is that it represents a set-back in the vertical line of the house which it was impossible to indicate more realistically because of the lack of support below. Thus, the impression intended is that of a building rising upward in terraces of diminishing area, just as did the ziggurats of Babylonia. It should be remembered that the house models from Ashur have a decided set-back in vertical line on one side. With this possibility in mind, the battlements at the very base are understandable as those of the enclosure in which the whole building stood. They are clearly disassociated from the building as such and must have pertained to that which, though not a part of the structural unit, was definitely associated with it. This is more clearly shown when one considers the decorative motifs on the side of the model. The palm frond motif of both the short and long leaf type is a definite, conventionalized plant design; not the design of a plant converted into building material, but one living naturally and in leaf. Its inclusion here is certainly an attempt to illustrate the vegetation that surrounded the building. The vegetation or garden must of necessity rise from the soil about the house, and such a garden presupposes an enclosure or wall, which is represented by the lowest row of battlements.

It is of interest to note that these plant motifs do not continue higher than the story with which they originate, but start afresh with each successive tier.⁵ The inference to be drawn is that each successive story not only had its surrounding terrace, but that each terrace had its own garden as well. This is in keeping with the theory which has

⁵ The palm frond decoration is also included on the uppermost story, on the side not shown in the illustration.

been advanced that the ziggurat commonly had a garden on its uppermost terrace at least. It will be noted that, although there are no protruding battlements between the second and third story, the expected set-back in vertical line is just as strongly indicated by the fresh reappearance of the plant motif.

The horizontally cut vertical ridges seen on the lower story are less easily identified, but have a strong resemblance to the common palm trunk of the region. They are definitely a structural part of the house, and it is not impossible that a sheathing of palm logs as protection to the vital lower story is being shown. The stamped flowers and crosses, seen more clearly in Pl. 61, D, E,^{5a} are purely decorative and may possibly be an attempt to show in greater detail the vegetation of the gardens. It is even possible that the two flying V's seen on the second story represent a supreme attempt at naturalism, and that the bird motif, common since earliest times, is here used.

The straight horizontal and vertical lines of the two upper stories undoubtedly indicate structural details, although they are too indefinite to be easily identifiable.

The identification of the plants is less difficult, in that the palm frond seems certainly in most cases to be indicated. However, attention should be given to a fragment of another model (Pl. 61, D) in which the foliage is strikingly similar to that of a conifer, which is definitely a highland tree.

The shape of the complete object is a matter of conjecture, but there is reason to believe that it terminated in a circular top like that of the ordinary pot-stand, rather than in a flat roof like those of Ashur. The reasons are twofold. First, the complete house model found in the Nuzi levels (Pl. 113, A) had such a top. This object is similar in many respects to that of Ga. Sur, and it is quite likely that in its whole general shape and purpose it is a descendant of the house model just discussed. Second, three fragments of circular-walled objects (Pl. 60, F, J, L), with windows and decoration identical with those of the house, were found in conjunction with and nearby those of the model under consideration. In each case they are of thinner ware such as one would expect toward the top.

Several other fragments of house-shaped offering stands were found in addition to those of Pl. 61, D, E, already mentioned. Pl. 60, H, with its molded and stippled ridges bordering the corners and window openings, shows a treatment strikingly similar to that of the snake figures

^{5a} These two fragments, though not belonging to the model in question, resemble it in all comparable details of design and location.

(Pl. 60, B, C). Pl. 60, I is only tentatively placed in this class. Its thickness is considerably less than that of any other uncurved pieces found. The reed-impressed circles of Pl. 60, K should be compared with those on the Nuzi offering stand. The sun and moon symbols on this piece are unique. Pl. 60, M is also only tentatively placed here, but may well have been a panelled, undecorated portion of a similar stand.

More thoroughly conventionalized and simplified are the plain offering stands with triangular windows from Temple G (Pl. 54, C, D). Although as objects they are earlier than our house-shaped stand, it is quite probable that they represent a simplification of the traditional house-shaped type, down to the bare essentials necessary in serving their purpose. The base is invariably pierced, and on the bottoms in the majority of cases the inexplicable double triangle (Pl. 54, D₁) is incised. It is unlikely that these are potters' marks, for that practice has never been found elsewhere at Yorgan Tapa. More likely, the presence of this symbol distinguishes the object for a special use apart from that of others. The windows are always triangular and in the lower half of the object. The clay is of the usual type, and the surface unsmoothed and undecorated.

The question of whether they were braziers as well as offering stands cannot be answered with certainty. It can only be pointed out that, when placed on a smooth floor and topped by a bowl, the object is not so perfect in its draft vent and smoke outlet as appears at first glance. No evidence of such use could be found. Regardless of probable use, they are never found except in conjunction with the temple, and are undoubtedly votive objects.

A variant of the same type is seen in Pl. 61, C. Although its exact period cannot be determined, it is likely that it belonged to the time of Temple F. The level of a similar one from N120 substantiates this supposition. The same arrangement of pierced bottom and triangular(?) windows is used, with the addition of molded and incised horizontal rings on the exterior.

Another variant found in the earliest Nuzi level, but probably belonging to the end of Ga.Sur, is seen in Pl. 116, I. Although but a fragment, the opening for a window on its upper edge identifies it. It is of interest primarily for its ornate stamped design of circles and three-pointed stars.

From the cella of Temple G came a pierced-bottomed, high-footed bowl (Pl. 56, U). The hole in the base, as well as the location of the bowl, relates it to the offering stands, and in all probability it is a more

complete and developed example of a stand in which the base and the container have been united into one piece. The clay is finer-grained than usual; it is baked to a pale red, showing faint signs of wheel finish on its surface. This is the only one found of this type.

Miscellaneous vessels. The two presumably cultual vessels, Pl. 57, A, B, have been completely described in the architectural account, and need not be further detailed, except to say that they are the only ones of their kind. The clay is of the usual texture, although impregnation with bitumen present in the room at time of the conflagration gives them a false color.

Figurines. The number of votive figurines from Ga.Sur is surprisingly small. Only one was found definitely within the purely Ga.Sur strata. Considering the large numbers found at other sites in this same period, it is probable that the scarcity here is due to the limited area of excavation and not to an original absence. The figure mentioned (Pl. 55, C) is that of a god and goddess, seated side by side, with the right hand of one clasping the left hand of the other. The positions of the other two arms are indistinct. The male figure, on the left, has the horned headdress of divinity and a conspicuous spade beard. Both have long robes reaching to the ankles. The figurine is unfortunately too indistinct in detail to tell more of the features and dress pattern. The piece is in high relief, of yellow-gray clay, and cast from one mold.

Two other figurines (Pl. 57, L, M), found in the transition levels between Ga.Sur and Nuzi, bear too close a resemblance to the latter period to be classed as Ga.Sur. A third figurine from the same transition period (Pl. 63, D) is distinctly Nuzi, and is included here only to illustrate the passage from one culture to the other.

Model beds. Only a few examples of votive bed models were found. One from the end of the Ga.Sur period (Pl. 57, U) was executed in such detail that the manner in which the frame was made, the weave of the matting, and the manner of its attachment to the pole frame that rests on the four squat legs, were clearly distinguishable. Another (Pl. 57, T)—found on the surface—is a conventionalization of the same thing; it is a rectangular slab of baked clay 1 cm. thick, carelessly rough on the back, and stippled on the front to indicate the weave of the couch. Both are of relatively fine, light-gray clay.

Animal figurines. The animal figurines of Ga.Sur are less common than the number of votive chariots would lead one to believe, but they are found made of both baked and unbaked clay in sufficient numbers to give some idea of their nature.

Their chief characteristic is a correctness of proportion, in contrast to the crude figures which preceded and followed this period. This understanding and skill has already been well illustrated in the incised animals on the large pot of Temple F. One exceptionally large figurine (Pl. 56, A) illustrates the crudest of this class, with its characteristic short tail and long, barrel-shaped body. Pl. 56, B is illustrative of the best of this class. The long arched neck, the mane, the barrel body, and the ears are strikingly equine.⁶ Pl. 57, Y is the most graphic of all those found; the shaggy coat, the horns, the small pointed tail (Y₂) leave one in no doubt as to the accuracy with which the goat is depicted. On the whole, it shows as advanced a sense of proportion and modeling skill as any animal figurine found at Yorgan Tapa. The ware of each is yellow-gray and loosely knit together.

The terra-cotta mold (Pl. 56, G) for casting metal, animal-shaped figurines has already been described in detail under the account of its pavement in L4. It need only be added that the ware is exceedingly fine-grained and of a light tan color.

Chariots. Votive chariots were common in Ga.Sur, and have as their most salient feature the high dashboard (Pl. 57, I; Pl. 54, F, H, I), either square, concave or scalloped at the top. A stand of lesser height, the riding platform, is at the opposite end of the vehicle. The shaft, in the majority of cases, passes completely through the length of the object, and, except for one (Pl. 57, I), travels sufficiently close to the horizontal to allow for what would be thought a normal driving position. It is of interest that the axle, which passes completely through the width of the object, is placed either at the front or the rear of the chariot, and never in the center. The objects seldom show any care in manufacture. The surface is rough and carelessly modelled, and almost invariably the ware is friable and coarse yellow-gray in color.

Gaming pieces. A gaming piece of terra-cotta, made in the shape of a sheep's astragalus (Pl. 117, N), found in the levels of the transition period, may also have been a product of Ga. Sur peoples. Although temple beads in Nuzi were occasionally of this shape, this is the only object which reproduces the size as well as the shape of what must have been a very familiar object. Considering this familiarity, it is hard to understand why the people should have gone to the trouble of making one of terra-cotta. It is of interest that such bones are still used as

⁶ A discussion of the horse in Ga.Sur is included in the architectural description of the findings of this period.

gaming pieces in Iraq. Another probable gaming piece of the Ga.Sur period is described below under *Unbaked Clay*.

UNBAKED CLAY

Other than a continuance of the biconoid clay pellets or counters of the prehistoric type, few objects in this medium came to light. The unbaked animal figurines have already been noted. Mention should be made of the clay stand (Pl. 57, J), not unlike the loom-stands of the prehistoric and Nuzi levels. It lacks, however, the horned top that suits it to this purpose. What its original use was is a matter of doubt. Like those of the other periods, it has a deep depression on both sides to permit easy handling and removal from one spot to another. Since it cannot support any weight on its peaked top, and has little else to recommend it other than the weight of its mass, it probably served to hold some larger moveable object—such as a door—in a fixed position. There was no associated evidence to indicate that it served a ritualistic purpose.

A clay plummet from Ga.Sur (Pl. 55, E) is the only one found at Yorgan Tapa. A small hole remains at the peak to show where either a fine, copper pin, or the string itself, was embodied into the wet clay. Of the same shape (Pl. 55, D), but without the hole, and with a cross cut into the base, is another object, probably used as a gaming piece.

Inscribed clay tablets, among which was the map (Pl. 55, T, U), and a fragment of a house plan (Pl. 55, L), were common in Ga.Sur.⁷

BEADS AND JEWELRY

Whatever idea is to be formed of jewelry and personal adornment must be gleaned from the meagre finds of the Ga.Sur burials. Single instances of anklets, bracelets, and necklaces of beads were found in L4 and N120. The beads, for the most part, are roughly shaped spheres of stone, or of a black composition not unlike a mixture of clay and bitumen. Unlike those of Nuzi, they seem not to have been strung on wire. Infrequent examples of more ornate and finished beads are among these, such as the two stone beads of Pl. 55, G, J. Both are examples of accomplished workmanship, and belie the crudity of the black composition beads noted above. One of black composition (Pl. 55, H) was found in double lunate form. Two spherical gold beads (hollow),

⁷ Both map and plan have been described in detail in the architectural account. For an account of the texts, other than the brief summary given earlier, see Theophile J. Meek, *Old Akkadian Texts from Nuzi* (Harvard University Press, 1935).

3-4 mm. in diameter, were among the rough stone spheres of the necklace in Grave 5A of L4.

Earrings of three types were used. The first, plain hoops of copper wire 14 mm. in diameter, were found in the second grave of N120. The second, a hoop of silver wire, double this diameter, with a double lunate bead (cf. Pl. 55, H) of lapis lazuli, was found in the first grave of N120. The third, from Grave 5A of L4, was a thin sheet-gold lunate earring (Pl. 55, I), in shape not unlike those of earlier date from Ur.

Also from Grave 5A of L4 came the only example of hair ornament: a plain, straight copper pin of even diameter, 14 cm. long, with a large glass bead, 15 mm. in diameter, serving as a head. It is of interest to note that, as far as outward appearances show, the glass is identical with, and as perfect as, the beads made in Nuzi almost a thousand years later. It is, in fact, in much sounder condition than the majority of the Nuzi glass beads.

Although hardly to be classed as personal adornment, the two shells (Pl. 55, A) from Grave 7, which served as cosmetic containers, were intimately associated with such decoration. As far as can be seen, both contained pigments of the same color. The stain as seen today is a very dark green merging into black.

SEALS AND SEAL IMPRESSIONS

It is not intended that the seal cylinders and impressions found at Yorgan Tapa be discussed in detail in this volume. However, all the Ga.Sur cylinders (Pl. 62, B; Pl. 55, F, Q, R, S), as well as the three seal impressions (Pl. 55, M, N, O), have been included among the illustrations.

Pl. 55, P is of special interest: first, because of the copper pin on which it rolled; second, because it is the only shell seal found; and third, because it comes from a greater depth than any of the other Ga.Sur cylinders—the lowest burial of Grave 5. The pin on which it was found is of a common type, pierced well below the flattened head. It fits loosely inside the seal, and must have been wedged in with some perishable material. It is very unlikely that this was the invariable seal mounting, but rather an expedient of the moment.

Its impression (Pl. 55, F) is much like that of the seal from L4, Pavement III (Pl. 55, S), and we must assume that the latter is either an inheritor of the same tradition as the earlier, or else that it, too, is an early seal which survived into later times.

Pl. 55, M, the only cylinder seal impression found in Ga.Sur, depicts

a struggle between human-headed bulls and lion-headed men. The workmanship in this piece is clearly of the best. The impression is on a clay label or pot-sealing, on which is the beginning of an inscription referring to the quantity of material it protected.⁸

The two stamp seal impressions from Pavements VI and VIII of L4 (Pl. 55, N, O) are unique and of particular interest. Since they have already been discussed in the accounts of the pavements on which they were found, no more need be said here, other than to call attention again to their similarity to the symbols stamped on the house models of Temple F (Pl. 61, B, D).

The seal of Pl. 62, B was found in the transition period between Ga.Sur and Nuzi, and the influence of the latter period is distinctly noticeable in the attention given to anatomical proportion and detail, and to the even distribution of decorated and plain surfaces. The subject of the design is not common to Nuzi, and we must assume that it is of the earlier culture, of which examples from this site are necessarily few.

In Chapter II of Part I mention was made of a cache of twenty-nine primitive seals (Pl. 40, A-Y; Pl. 41, C-F) found in Test Pit G50 on a solid pavement 633 cm. below plain level and 200 cm. above virgin soil in that pit. It is tempting to equate this cache with Pavement X of L4, which is at about the same height above virgin soil in the latter pit, but the presence of cylinder seals among the hoard makes such a dating hazardous. Therefore, the dating must rest on typological grounds.⁹ Here we need only say that they certainly preceded the purely Akkadian phase of Ga.Sur.

The drawings of these seals are self-explanatory, and little need be said concerning the actual objects. They may be divided into two groups: stamp and cylinder seals. The former may be subdivided into plain button seals, and those in zoomorphic form. Of the zooform seals, three are in the shape of bulls couchant, in slightly varying sizes (Pl. 40, B, C, D), and a fourth in the form of a boar's head (Pl. 40, J). Each is horizontally pierced. The modelling is realistic and skillful, in contrast to the crudity of the design on the flat bottoms.

In the main, the button seals retain the characteristic round plan and the half-rounded section, with slight variation in occasional specimens. Only one (Pl. 40, X) differs greatly, having a square plan and rectangular section. The designs on the backs range from unintelligible groups or collections of drilled holes (Pl. 40, A, K, Y, etc.),

⁸ See T. J. Meek, *Old Akkadian Texts from Nuzi*.

⁹ See discussion in *Appendix A*.

through grotesque but recognizable animal figures in the same technique (Pl. 40, B, C, M, etc.), and culminate in animal figures of considerable realism, actually engraved rather than drilled (Pl. 40, F, R).

Considering both their crudeness and finish, the natural supposition would be that they represented respectively a lower and a higher cultural development, but it is not improbable that here we see an earlier phase of stone cutting used in conjunction with a more developed technique. Thus, Pl. 40, A and Y may be taken as an example of the earliest type, and Pl. 40, M as a more elaborate example of the same style. However, with Pl. 40, G we see the introduction of more lifelike and engraved figures, used in conjunction with the meaningless drilled holes. In Pl. 40, F and R the fully developed technique is seen without visual evidence of drilling or of the cruder patterns. Although here the larger spaces may have been made by drilling, all traces of such—if there were any—have been removed by their amalgamation into a single unified figure. The legs and horns of the figures could not possibly have been made by drilling, and were clearly done with an instrument having a sharp cutting edge.

In the cylinder seals the same combination of methods is seen in Pl. 41, E. The heads, breasts, and, in one case, the feet of the standing figures are drilled; the rest, engraved. The great wear given this seal, as shown by its condition, has obliterated much of the design. It is uncertain whether the accentuation of the breasts indicates female figures, for it may be that two holes drilled side by side were necessary merely for attaining the proper width of the chest. The three remaining cylinders (Pl. 41, C, D, F) are wholly engraved, but the animals, fishes, and frogs they portray are certainly no more accomplished than the stamp seals using the same technique. One has the impression that the engravers carved the figures to be seen only on the round of the cylinder, and not as a resulting impression on clay. The remaining objects making up the cache consist of marble beads—square, cylindrical, spherical and elliptical—as well as two doubly pierced shell beads and many small pierced shells.

The possibility that the spot where this cache was found was the workshop where the seals were made is eliminated by the great variation in the amount of wear seen in these objects. It is of interest that the seals were in direct contact with beads and with shells used as beads. This implies that they were strung in conjunction with the beads as the property of a single individual, and that they were used as ornaments or amulets rather than to authenticate documents or identify property.

STONE

Figurines. The so-called Cycladic figurines (Pl. 57, N-S, X), which are symbols rather than representations, are uncertain as to period. They are found from Ga.Sur through Nuzi in small numbers.¹⁰ However, their great conventionalization, or, if you prefer, their primitive character, is totally unlike that of the more detailed Nuzi figurines. This great difference, along with their rarity and their relative uniformity, leads to the conclusion that those found in Nuzi levels are holdovers from an earlier time, preserved because of their imperishable material, and because their significance was still understood.

Their first appearance is well within the Ga.Sur period (N120, Pavement VI), but here again they are totally unlike the highly developed, realistic copper statuette (Pl. 56, H), the terra-cotta figurine (Pl. 55, C), the animal figurines, the house model (Pl. 61, A, B), and a dozen other examples of Ga.Sur work. Also, they are quite as rare here as in Nuzi. Consequently, it seems equally unlikely that they are products of the Akkadian city Ga.Sur. Are they, then, prehistoric? The absence of such objects in the Tell Halaf and al-'Ubaid strata so far uncovered in Mesopotamia makes it seem improbable that they came in with either of these two cultures. It would seem reasonable, then, to attribute their inception to one of the intermediate levels preceding the Akkadian phase of Ga.Sur, discussed by Mr. Eliot in *Appendix A*.

The figurines range from the most simple types in which scallops on both sides of the flat white stone indicate waist, arms and neck (Pl. 57, P, Q, X), to those in which the face and legs are clearly indicated (Pl. 57, O). The head and face are shown on Pl. 57, N, S, and on Pl. 57, R the arms are more distinctly indicated than in any other. In this, the breasts are suggested by the bulge resulting from the groove across the waist. That these figures are female is clearly shown by one (now in the Iraq Museum) in which the breasts are shown as two raised circles just above the waist. The material is always a fine, white marble. The workmanship, so far as it goes, is perfect, with the surface polished to extreme smoothness.

The terra-cotta object shown in Pl. 56, F was found one level above virgin soil in N120, and in association with crude bowls (cf. Pl. 50, A, B). Since its crude simplicity is in keeping with that of the stone figurines, it may well have been an attempt to represent in clay that

¹⁰ The stone figurines illustrated on Pl. 57 include types of all those found, whether from the surface, Nuzi, or Ga.Sur. As related forms one should note Pl. 120, JJ and MM (the former from G50, Temple A), discussed under Part II, Chapter III, *Beads*.

which was more commonly done in stone. The plasticity of the medium would allow greater attention to detail—seen here in the neck—than would ever be possible in stone. It is also possible that the three related terra-cotta figurines, Pl. 101, B, D and E, are products of this same culture. Pl. 101, E, in particular, in its representation of head and face, shows a great similarity to the stone figurines. Because they were found either in Nuzi levels or on the surface in association with Nuzi objects, without any exact parallel in earlier levels, their more complete description has been included with that of the Nuzi figurines.

Miscellaneous. On the whole, stone objects were exceedingly scarce throughout the Ga.Sur levels. A drill-socket, circular in plan and oval in section (Pl. 56, E), was found on Pavement VIII of L4. A small Mosul marble toggle (Pl. 62, D) and a fragment of a plain gray limestone bowl were found between Pavements III and IIB of L4. The latter is of a familiar prehistoric shape, and is probably a surviving fragment from the earlier period. Another small bowl (Pl. 62, C) made of white limestone is from the time of transition. Its shape—if one may compare it with the pottery—is much more Ga.Sur than Nuzi.

Also from the transition period is a fragmentary open mold (Pl. 62, F) for casting chisels of two types. The first type is narrow and triangular in section, beveled to a sharp, flat edge at the end. The other is a broad, flat blade, with no bevel to sharpen the resulting blunt edges. The limestone channels have been blackened with a stain like that of liquid bitumen. It is not improbable that they were coated with bitumen before the metal was poured, to prevent adherence between the penetrating liquid copper and the porous stone structure. Since this object has no counterpart in either Nuzi or Ga.Sur, it cannot be definitely attributed to either.

COPPER

It has already been shown, under the description of jewelry, that gold and silver were known and used in Ga.Sur. Occasional pins and needles of lead show that that metal as well was not unknown. The most common metal, however, and one which was worked well and skillfully, was copper.

Weapons. Of the several daggers found, the most interesting is that from the lowest burial of Grave 5, L4 (Pl. 55, V). It differs from all the others in that the curve of its high center, when seen in section, does not continue uninterrupted to form the cutting edge, but flattens out several millimeters before reaching it, to form an edge of greater

and more enduring sharpness. It is interesting that the copper objects from this burial, the earliest implements from Ga. Sur, are the only ones to use this advantageous form. Those that followed achieved as fine an edge, but only by sacrificing the thickness and strength of the blade.

Pl. 55, X is an example of the latter technique. The blade is very thin, lacking the strength of the earlier type. As with the first-mentioned, it has a short tang by which it was secured to the handle. With such frail attachment, the weapon was clearly intended for stabs and thrusts, not for slashing blows. It is not until late in the period, probably through the influence of the incoming Hurrians, that the tangs become more extended and pierced for riveting to the handle (Pl. 62, E). In these cases, the tang is pierced, either at the end alone, or at both extremities. Copper rivets secured the handle to the blade. The blade itself in this latest type shows no change in shape, and only a slight increase in size.

Referring again to the lowest burial of Grave 5, L4, the unique sheet-copper hatchet (Pl. 55, W) should be noted. A long, flat strip of copper, rounded at one end, extends as the blade. The copper strip curves around the wooden(?) handle, and is bent back upon itself to form the other side of the socket. This loose end is secured just forward of the socket by a jagged triangle of metal folded down and over it from the upper edge of the blade. The object is clearly useless as a weapon, and could have been little more than a symbol of power.¹¹

The adze was known and used as a weapon or tool, but was rarely placed in the graves. Each was small (Pl. 56, C) and simply made, compared to those of Nuzi.

Pins. Copper pins with square shanks and simple or multiple round heads (Pl. 63, E, N, O) were not infrequently found. The objects are solid and heavy, and the piercing is invariably well below the head. Although similar pins were occasionally found in Nuzi, both complete and fragmentary, they are a definite Ga. Sur shape, and may be considered as survivals from the earlier period. The pin on which the shell cylinder seal (Pl. 55, P) is mounted is a variant, which in spite of its uniform circular section and diameter, is shown by the position of the eye and the accentuated head to be in keeping with the general type.

Buttons. The small, hollow, copper button(?) of Pavement VI, N120 (Pl. 56, D), is of unknown purpose. The metal is light and too

¹¹ Identical examples have been found in Cemetery "A" at Kish; see Ernest Mackay in *Field Museum of Anthropology, Memoirs*, vol. 1, nos. 1 (pl. xvii, B. 20) and 2 (pl. lxii, 2, 3). This possibility of Sumerian origin may help explain the peculiarities of the only two other objects from this grave (cylinder seal and dagger), discussed earlier.

corroded to show the manner of manufacture. There is no sign of a protuberance or hole by which it might have been attached to another object.

Ferrules. Pl. 62, G is the only one of its type, and doubtless served as a ferrule or head to a heavy staff. The sharp point, an integral part of the whole piece, served to hold the cap onto the butt of the staff.

Statuettes. The only votive object of copper found in Ga. Sur is the statuette (Pl. 56, H) from Temple G. The figure—now in the Iraq Museum—is too corroded to allow close examination of the original detail. The body is covered with a long, straight-lined robe extending to the feet, and both hands are raised and held slightly apart, palm to palm, before the chin. A distinct band or turban passes across the forehead, and on both sides of the face long tresses drop to the shoulders. The sex is not indicated in any other way than by the hair. The corrosion which covers the whole surface also obliterates all the details of the face, but a nose and eye sockets of prominence are distinguishable. The figure is solid throughout, and still retains a sound core of metal.

CHAPTER III

NUZI

The illustrations of objects from the Nuzi levels have been arranged on the plates according to material, and further subdivided into groups of like kind or shape.¹ The only deviation from this grouping is in the case of the terra-cotta cult objects which are shown and discussed under a separate heading in conjunction with related forms in other materials.² Cult objects of other materials, unrelated to the terra-cotta forms, are grouped and discussed according to material.

The domestic terra-cotta vessels have been arranged according to shape, except where a marked difference in size or material has demanded the creation of a separate category. The drawings and photographs form so complete a record of the principal objects that only the salient characteristics of each group will be mentioned here, together with a notation of the unusual variations from the accepted type.

TERRA-COTTA

Storage jars. The distinction between storage jars and pots³ is difficult to make, since the shapes often merge from one into the other. For the sake of convenience alone, all broad-mouthed vessels too large to be closed or protected by the customary pot-lid of Nuzi have been classified as jars. Thus, the shapes vary from the true type (Pl. 65, D), with vertical sides and no shoulder, through those having rounded sides (Pl. 65, C), to those more pot-like in shape, but which still have broad, open mouths (Pl. 67, A). No two examples were exactly alike, and it is clear that the Nuzi potter was not restricted rigidly to traditional shapes. On the whole, those of Pl. 65, B, D, with variations between the two, are the most common, and may be considered as typical of the class. They are usually round-bottomed, and rested in a hollow scooped out of the dirt floor. Infrequent examples of the straight-sided class had a ring base (Pl. 64, D; Pl. 66, C) to hold them in an upright position.

¹ Much additional and exceedingly valuable information on the Nuzi objects is supplied by the tablets. For a summary of this material, see Appendix D.

² Exceptions: Pl. 68, K; Pl. 75, X, Y; Pl. 80, E; Pl. 82, G; Pl. 92, Z; Pl. 116, A; and the glazed wall-nails.

³ The term jar is applied throughout to the deep, large vessels having no neck and little or no shoulder. Pots are those definitely constricted at the top, having a clearly defined shoulder and neck.

A rare type is that with a pierced bottom (Pl. 68, M). Partly filled with sand and gravel, it would serve as a more effective and rapid filter than those depending entirely on the porousness of a complete vessel.

The decoration in all cases is simple, consisting primarily of molded horizontal rings at irregular intervals around the upper two-thirds of the jar, with the concentration just below the rim (Pl. 65, B). Infrequently the rings are modelled to form a conventionalized rope pattern (Pl. 67, A). Incised lines are sparingly used, and are not uncommon at the very base (Pl. 65, C), presumably to form a grip by which the jar may cling more firmly to its hollow. The presence of the conspicuous, raised rings is not only in keeping with the size and bulk of the vessels, as decoration, but also serves as an external reinforcement against the great outward pressure of the contents.

The incised figure of a humped ox on one of the jars (Pl. 65, D) is of interest. The figure was made with a blunt-pointed instrument before the jar was baked, but after it had almost completely dried. The result is that the lines are partly creases in the clay and partly rough scratches. The drawing (Pl. 65, E) is particularly crude, and its significance is obscure. The fact that the vessel served a household use in a private dwelling, and that the drawing was made with so little care as to be upside-down, suggests the idle scratchings of some boy. It cannot be considered as decoration in the true sense.

The clay of the vessels is fine, without any solid adulterant. Chopped straw, or *tibin*, the usual *dégraissant*, gives the ware a very porous texture. The ware is baked to a light tan outer color, and to a greenish-yellow interior. The outer face is frequently wheel-finished.

*Pots.*⁴ The shape of storage pots at Nuzi show even greater variety than those of the jars. There are, however, certain characteristics which the majority of them possess. The well-defined neck is a feature that is always present. The flat, horizontal surface of the rim is another, and, though it is sometimes varied to a rounded lip (Pl. 68, L), the downward sloping, flat rim of Ga.Sur is never seen. The earlier rim is suggested in one example (Pl. 68, G), whose shape is reminiscent of the grace of the Ga.Sur pieces. It is probable that it dates from the transition period and that it survived in use into Nuzi times. The tendency toward having the point of greatest diameter toward, or even below, the center of total height, is another Nuzi characteristic, although this, too, is occasionally disregarded. Flat bases are the exception rather than the rule (Pl. 68, L), and but one example of a ring base was

⁴ Pl. 64, B is Partho-Sassanid, and is here misplaced.

found (Pl. 68, K). This pot was glazed in the familiar temple green glaze; and, since it may have been a votive object, it is not strange that it should vary in form as well as in decoration.

The decoration of the pots is more varied than that of the jars, but in the majority of cases it is done in the same manner. Molded, plain, and rope-pattern horizontal rings are freely used, though less common than the familiar incised and creased rings. These are generally about the upper half of the pot, with the concentration point at the base of the neck. A few have the same incised rings at the base, as seen in the jars. Incised wavy lines are found on occasional sherds around the shoulder, and, in one instance, around the lower body of the pot (Pl. 68, D). These are made with a round-pointed tool pressing the clay rather than cutting it. The incised cross near the base of Pl. 64, A cannot be considered as decoration, but as some special mark denoting ownership or use.

A single pot (Pl. 69, A) was found elaborately painted in the customary Nuzi technique, though the design is unusual in its combination of naturalism in the palmette around the neck, and the highly geometricalized scroll lower down. The colors are white on black, in the customary thick, non-adhesive, after-baking paint used by the Hurrians. This is the largest vessel found with any remnants of painted design, and it is certain that such decoration was not common in this type. The presence of the jar at the bottom of the well of R96 points to its use as a water container.

The ware, in all the pots but one, is the typical soft, fine clay, baked to a greenish-yellow in the interior, with chopped straw used as *dégraissant*, the fineness of the straw being dependent on the size of the vessel. The variant (Pl. 68, C) is of fine, brick-red clay, wheel-finished outside. This pot was used for the storage of tablets.

The practice of wheel-finishing, not seen on the largest pots, becomes increasingly popular as the vessels diminish in size. Seldom is it done with more care than is necessary to take off the initial irregularities and roughness of the newly thrown pot.

The smaller pots have the same characteristics of ware and finish, but do not follow the shapes of the larger type so closely. They are, for the most part, flat-bottomed (exceptions: Pl. 68, E, and Pl. 72, B), and, except for an incised line around the shoulder, are relatively free of decoration.

In sharp contradiction to this rule is the single painted pot or vase (Pl. 70, B) belonging to the transition period. The abrupt shoulder and the downward angle of the lip is typical of Ga. Sur, and the cross-

hatched triangles are essentially the same as the design incised about the lip of the storage pot found in G29, Temple F (Pl. 58). However, the paint itself is inseparably associated with the Hurrians, and is never seen here in the levels preceding their advent to Yorgan Tapa. We have, then, an interesting example in which a Ga.Sur potter applied a design of his own tradition to a shape equally his, in a medium adopted from the new-comers. The pigment is dull red and thick, and lies over the surface without becoming incorporated into the body of the clay.

Pl. 69, D is another pot of the same period, which, in the elaboration and fullness of its line, shows a strong Ga.Sur influence.

The well-pots (Pl. 69, B, C; Pl. 70, A; Pl. 71, A) are so called because of the large numbers of their type found at the bottoms of wells. It is clear that they served either to draw the water, or to carry it away from the well-head. Aside from an occasional incised line on the shoulder, they are undecorated. Not to be considered as decoration is the arrow symbol on Pl. 70, A. The black color is roughly applied and is incorporated into the body of the clay. Its appearance is not unlike that produced by hot, fluid bitumen. Several well-pots, marked either in this manner or with a similarly crude circle, came from the R96 well. The pots are of thin ware of the common yellow-gray color,⁵ without wheel-finish.

Of the remainder, Pl. 69, E, and Pl. 72, A are unique. Pl. 71, D is relatively common, and Pl. 72, B, C are rare in this size, though their shape is often seen in miniature among the small vases. Pl. 71, B, C, the latter with a bowl cover, are unique vessels and served as the containers for sacrificial infant burials. They are of the usual yellow-gray clay, and both are wheel-finished.

Vases. The gray-ware vases form a distinct class (Pl. 72, D-G, and Pl. 73, A-E), and are perhaps less like the other Nuzi pottery than any other separate group. They have certain definite characteristics which they all share more or less. All, without exception, are of an unusually fine, dark gray ware, in which fine sand is used as a *dégraissant*. In their essentials, all have the same shape. All have a tool-burnished surface, made by horizontal strokes on the body and vertical ones on the neck.⁶ All but two (Pl. 72, E, F) have a rounded button base, useless as a stand except when forced into a depression in the earth floor.

The occurrence of gray-ware vases at Nuzi is so comparatively rare,

⁵ The term "yellow-gray" used in describing the Nuzi and Late Period terra-cotta is synonymous with the "buff" in the description of the earlier wares.

⁶ The surface on a few is so deeply pitted and flaked away through the crystallization of natural salts that the manner of treatment cannot be detected.

and their treatment in shape, foot, and surface so unlike the usual pottery of Nuzi, that the impression given is that of an imported ware. Its use in bowls and tripod bowls is such as to strengthen this belief. Unlike the bowls, which were often elaborately decorated with impressed designs, the vases are without even the faintest decoration.

Another distinct class of vase is that represented by Pl. 73, G, I-K and Pl. 74, B, C, F, H. All have a certain uniformity of shape, very thin walls, and clay that is greenish in color and very soft, and all have as a *dégraissant* a slight amount of sand and finely chopped straw. The surface may or may not be wheel-smoothed. The type is a common one in the private houses. Pl. 73, F, G and Pl. 74, A, E, G are of the same class, varying somewhat in shape, decoration, and thickness of wall, but made of the same soft ware. Of these, Pl. 74, E is similar in line to the flat-based gray-ware vases, and may be copied from them. Pl. 73, L bears a faint resemblance to the type, through its similarity to the shape of Pl. 73, H, but it has no resemblance in quality of ware. It is of the usual hard, coarse clay, wheel-finished, and decorated with a geometrical pattern in the dull red, after-baking paint typical of the Hurrians. Its strict adherence to purely geometrical motifs is unlike the naturalism of the typical Nuzi designs, and suggests, as did the vase Pl. 70, B, a work of the transition period in which Ga.Sur designs were applied in Nuzi technique.

Another vase strongly reminiscent of Ga.Sur is Pl. 74, D. It is so totally foreign to the Nuzi manner, and so similar to the corrugated vase from L4 (Pl. 53, H), that one would be safe in identifying it as a Ga.Sur object which survived into Nuzi times.

Smaller vases, vials and bottles. Only the unusual features of these objects (Pl. 74-75) need be mentioned. The clay is fine-grained, ranging in color from tan to light brick-red, with an intermixture of minute quantities of sand and finely chopped straw.

Pl. 74, I, J are early Nuzi, and are two of the rare instances in which a slip is used, a buff covering over a body of dull red. Pl. 75, A, B, E are of the same period, but without a slip. Pl. 75, N is the only decorated example of this small class. The pigment is the usual black employed in the Nuzi painted ware. The two specimens with pierced bases (Pl. 75, M, R) are rare and undoubtedly served as funnels. Pl. 75, V is handmade throughout, and with its pierced lugs is suggestive of the late prehistoric. In all probability, it is a survival from that period. Pl. 75, X, Y—the latter from Temple A—are covered with the usual soft green glaze, and were objects for cult usage. As with all

the glazed objects, the ware is light gray, very porous, and extremely friable.

Drip bottles. These small vessels (Pl. 76, A, B) are rare, but were found in sufficient numbers to be identified as true Nuzi. The variant, Pl. 76, B, is of the transition period, as is Pl. 63, H. Although the latter is from an early period, it is identical with the fully developed Nuzi drip bottle (Pl. 76, A). All are wheel-made, though never wheel-finished or decorated in any way; it is clear that they were for some utilitarian purpose. The spout is placed well down on the body, which makes them useless as containers, while the arrangement whereby a very small amount of liquid could be made to drip evenly from the spout makes them suitable for the administration or mixing of medical preparations.

Cups. Plain, straight or concave-sided cups are characteristically Nuzi, and first appear in the transition period (Pl. 62, S-U, X, Y; Pl. 63, A). The major portion of these early examples are covered with a rather heavy, tool-burnished slip. In later Nuzi cups burnishing is uncommon and the slip is unknown.

In considering those of the fully developed Nuzi period, two of unusual shape should be noted. The first (Pl. 76, C) is of the same ware as the gray-ware vases, and is tool-burnished with prominent vertical strokes. The second (Pl. 76, D) is of the same shape, slightly elaborated, and shows a symmetry and finish that only a few of the larger ones possess. The plain cups are found with a variety of minor variations, the result of the whim or skill of the potter. Pl. 76, E, I-R, V represent the major variations, and all except Pl. 76, L, Q were found in large numbers. The first variant, Pl. 76, L, is strongly suggestive of the transition period.

The change from the plain to the footed cup is almost imperceptible, beginning with a diminution of the diameter at the base (Pl. 76, M), then the addition of a flat foot below this decreased diameter (Pl. 76, S), and evolving as the regular footed cups seen in Pl. 76, S-U, W-EE. It is of interest to note that with each decrease in size the attention to detail becomes greater. The foot is added, often on a stem of some elaborateness, incised lines appear, as well as a fullness and generosity of curved lines unlike the austerity of the larger plain cups. This, in indirect proportion to size, places the emphasis on the capacity of the cup, and shows with certainty that their function was to contain a smaller amount of liquid than the plain cups at first suggest. It is perfectly clear that they were intended for a drink more

potent than water. The term "liqueur glass," facetiously used in the field, may not be very far from the truth.

The plain and footed cups together are equal in numbers to the shouldered cups, and are exceeded in quantity only by the bowls. The clay is fine-grained, yellow-gray, with slight traces of sand, and only infrequent signs of very finely chopped straw. The surface, in the majority of cases, is wheel-finished.

Cups with convex sides (Pl. 76, F-H), though rare, present nothing new in the way of ware or finish.

Shouldered cups. In no phase of potting did the Nuzian show greater skill or talent than in the shouldered cups. In grace and delicacy of design, as well as in the mastery of turning, he reached here the peak of his ability.

The shape first appears in Temple G near the end of Ga.Sur. Whether or not it is Hurrian in origin cannot be stated, but it is significant that no examples were found in the earlier levels of L4 or N120. The few early pieces have heavy slips, such as are found only in the transition period. Because this form does not appear earlier than the known arrival of the Hurrians, it seems probable that the Hurrians brought it with them, and that the development to its final state is their own work. Here, in its earliest phase (Pl. 62, K, M), the shape bears but little resemblance in line to that of later times, but it shows those identifying features of small foot, bulbous lower body, shoulder, and high rim. Characteristic of the early cups is the hollowed foot, never seen in any of the later Nuzi shouldered cups. From this, the growth can be traced through two examples appearing toward the end of the transition period (Pl. 78, B, C), of which one still retains to some extent the hollow foot. Both have bulbous, squat bodies, but both are undeniably prototypes of the shouldered cup that was to evolve later.

The shoulder and high rim, and the extreme thinness of the ware, are characteristic. The clay is extremely fine-grained, somewhat soft, and of a light gray color, with infrequent examples in light tan. Except for occasional grains of sand, no *dégraissant* can be detected. The turning is done with great skill, the regularity of shape, surface, and thickness being perfect. Although only wheel-finished, that surface at times has a bloom like that of pebble-burnished ware.

The shapes within this class show a multitude of minor, and a few major, variations. No set pattern was followed, and the individual potter was free to express himself within definite limits in the angle and height of side and lip, the foot, and the turn of the shoulder.

However, in each case they remain relatively true to the type represented in Pl. 77, C, G, H. The major variants are seen on Pl. 78, E-J, O, of which each is a unique example. In ware and in workmanship they are the same as the others. The depressions seen on the side of both normal and variant are made on four sides of the body before the cup is baked. They are present in at least half of the examples, and helped to provide a firmer grasp on the wet and slippery sides of these porous vessels.

The size again varies in each, with the limits set by Pl. 77, D, K. Beyond these limits, two examples have come to light. One is a diminutive cup (Pl. 78, D), small enough to have been made for a child, and another, from the R96 well, 21.5 cm. high, is as amazingly large as the other is small.

Decoration is infrequent and always in the form of painted designs. These will be discussed in greater detail under the related group, "high cups".

That they were drinking cups is obvious, a fact proven beyond a doubt by the large numbers found in the R96 well. They were found throughout the city in large quantities, being equal in number to the plain cups, and exceeded only by the bowls.

A closely related form is seen in the rare specimens, Pl. 78, K-N. Aside from the abandonment of the foot and the flat base, they are identical with the main group in shape as well as in ware, turning and surface. The absence of the diminutive and unstable foot of the usual type makes this the most attractive of all the Nuzi shapes. It was never found decorated.

High cups. The high cup (Pl. 78, P-T) is a marked variant from the shouldered cup, having retained only the small foot and the shape of the lower body. In all the aspects of ware and workmanship it remains the same. It is of interest to note the painted decoration on the great majority of this type, as well as the unique instance of an incised design, the latter encircling the rim of a high cup from Temple A (Pl. 79, T). The accuracy of its interlacing semicircles lead one to believe that the Nuzians knew and used compasses. The molded design of Pl. 79, U is suggestive of a much later era; this is probably an intrusive sherd among the genuinely Nuzi types. Such special attention to a class of ware, as a whole, shows the esteem it enjoyed among the Nuzians.

*Painted designs.*⁷ Painted decoration is not limited exclusively to

⁷ For all the examples of painted ware, see Plates 69, 70, 73, 75, 77, 78, 79, 90, 103, 131, 132.

high and shouldered cups, but is found occasionally on shapes and wares of other types, as seen in Pl. 69, A; Pl. 70, B; Pl. 73, L, and Pl. 75, N. The flat-bottomed bowl, Pl. 90, N, the phallic pot, Pl. 103, K, a plain cup, Pl. 132, A, and a vase of delicate ware like an elongated version of Pl. 75, H, are also outside the cup class. Pl. 131, N; Pl. 132, B, C, and Pl. 79, H may be considered variants of high and shouldered cups. These, in conjunction with the high cups and the vast majority of painted sherds, show that painted decoration was used most often on the cups of this thin, delicate ware. It is quite possible that this was because of the extreme fineness of the clay and its resulting smooth surface, so perfect for the application of color.

The small percentage of painted sherds identifiable as having belonged to shouldered cups, in contrast with the large percentage from high cups, makes it appear that decoration on the first type was the exception rather than the rule. But there is an element of uncertainty due to the action of the pigments after burial. Since they are laid over the surface and not united with it, it is possible for all the color to peel from the cup without leaving so much as a trace. It has frequently happened that a single tiny patch of color still adhering to a cup was all that remained of its ancient decoration. In many other cases, where the vessel had been handled long enough to have become dirty before its final burial, the design may be traced exactly, though no coloring remains, by the unsoiled outlines on the surface once protected by pigment. The designs of Pl. 75, N; Pl. 90, N, and many others, were recognizable only in this way. With such specimens it is only possible to identify the outline of the design and not the color, or the past existence of a second overlaid color.

The condition of the paint varies from that of the examples already mentioned to that of others in which it is still firmly bound to the clay. Perfectly preserved specimens came both from the bottoms of wells, where even today the soil is especially moist, and from the surface of the mound, which is subject to the action of damp winters and arid summers. Consequently, the reason for these different degrees of preservation must lie not merely in the conditions of burial, but also in the original quality and application of the pigments.

The pigment was applied as a heavy, after-baking coating in varying degrees of thickness. Although sometimes imperceptible to the touch, it is usually of a thickness sufficient to be easily recognized by feel as ridges, dots, or bands, etc., raised above the surface of the vessel.

The range of colors and combinations of color is extremely limited. Black is most common, sometimes used as plain bands around the body

of the vessel (Pl. 77, Q; Pl. 103, K), but most commonly as a base on which the design was overlaid in white. Only in rare instances is the design created by allowing the unpainted ware to show through between the lines of base color to take the place ordinarily filled by white (Pl. 79, A, S, BB).

Red, as a base color, is uncommon, and when used is treated like the black: either alone (Pl. 70, B; Pl. 79, G; Pl. 132, A), or as a foundation for white (Pl. 131, N; Pl. 132, C, D).

A third color, brown, is represented by but one example (Pl. 132, B). It forms the base color for an overlaid design of discolored white. The darker color of the lower band of brown seems due to the crystallization of natural salts, rather than to any original difference. Such crystallization deepened the color of glazed objects in the same way.

White is never found alone, and is the only overlaid color used in creating the intricacies of the design. White on black is the most common combination; then white on red; and, finally, the single example of white on brown. No other combinations are found.

The designs, as seen on the plates, are sufficiently clear to obviate the need of description. The marked tendency toward geometrical patterns is obvious, and the extreme conventionalization of all the designs points to a tradition long established and fully developed. Unlike many highly conventionalized designs, these were capable of splendid effects. Limited though it is, it would be difficult to imagine a combination of shape and design more pleasing than that of Pl. 78, S. The precision of the geometrical motif, and the restrained naturalism of the central figure, is in harmony with the lines of the cup.

The running scroll is the favorite motif (Pl. 78, W, etc.). The vertical scroll (Pl. 79, Z) is rare. The diaper pattern, either properly made (Pl. 79, J, N) or as a simple zigzag line on a red or black field (Pl. 79, B, C), is also common. Circles are a common motif, either alone (Pl. 78, T), surrounded by dots (Pl. 79, N), or as the junction points of the lines forming diamond patterns over the body of the cup (Pl. 78, P). The interwoven bands seen on the wall paintings and so often on the cylinder seals are rarely used (Pl. 132, C). The fish-scale pattern (Pl. 79, E, V) is rare.

More naturalistic though still highly conventionalized plant forms are frequently used in conjunction with geometrical motifs (Pl. 69, A; Pl. 78, S; Pl. 79, O, R). Animals are used in a number of designs, and are presented in a strange mixture of realism and conventionalization. The fish of Pl. 131, N is realistic to such a degree that it is hard to imagine it being created contemporaneously with the birds of Pl. 79,

H, I. The latter are unique at Nuzi, and are remarkably similar to the large numbers of sherds in the same technique from Tell Billa.⁸ The motifs of Pl. 79, D, F, G are each animalistic, although too little remains to allow even a partial reconstruction.

Painted terra-cotta in this medium and in these motifs at Yorgan Tapa is distinctly a Hurrian art. It is never found in Ga. Sur, and makes its earliest appearance in L4, at an elevation of plus 100 cm.—the beginning of the transition period—in a sherd with a vertical running scroll. This fully developed example shows that the art was not of local origin, but, as the designs suggest, was more ancient, and was brought in by the Hurrians. It is found again in Temple F in the latter part of the transition period, and in liberal quantities in the Nuzi levels above. The ware appears to be locally made rather than imported.

It is of distinct interest that many of the Middle and Late Minoan painted sherds bear a strong resemblance in design and technique to those of Nuzi, though the base color appears to have been applied in thinner solution and the pigments as a whole are more firmly bound to the body of the vessel. Though this is not the place to enter into a discussion of the origin either of the technique or designs, the identity of certain decorative motifs in the two wares shows a definite relationship between the culture of the Minoans and that of the Hurrians. It points again to the west as the source of one of the main streams of Hurrian culture.

Infant burial jars. It is uncertain whether or not all of the many infant burial jars (Pl. 79, CC-EE; Pl. 80, A, C, H) found in the private houses were intended exclusively as the containers for sacrificial infant burials. Since the great majority were put to this use, and since no other common household vessel was substituted for it, it is likely that those not actually so employed had merely not yet served their ultimate purpose.

The shape and size vary somewhat within restricted limits, but are never far from the shape and proportion best seen in Pl. 80, A. The most noticeable divergence from the type, and the only such one, is Pl. 79, CC, whose perfectly flat base and constricted upper body are at complete variance with the usual type. The pierced wall below the rim of Pl. 79, EE is another unique feature. Decoration, other than an occasional incised band about the upper body, is never found, and the surface is rough, rarely being even wheel-finished. It is evident that they were vessels intended for a distinct utilitarian purpose. The

⁸ *Bulletin, American Schools Oriental Research*, no. 41 (Feb. 1931), p. 23.

clay is of the usual nature: soft, coarse, very porous, and containing a copious amount of chopped straw as a *dégraissant*.

*Filter jars.*⁹ Of the same general shape as the infant burial jars are the filter jars of Pl. 81, F, and Pl. 82, A. The large size of the jars, the pierced round bottoms, and the broad, wavy line below the rim of the first example, takes them out of the infant burial jar class. The type is exceedingly rare at Nuzi, no others of this shape having been found. The surface is carefully wheel-finished, and the ware is characteristic of the larger vessels of this period.

Bowls. The category of bowls is the largest at Yorgan Tapa, and the one in which there is the greatest variation. In this class have been included all the shallow open containers, whether hemispherical or not. Because of the great variation in shape within the class, it must be subdivided into groups.

Triangular bowls. This is a very rare type, of which only three specimens were found (Pl. 80, F, G). Both of those illustrated are exceedingly crude and made by hand. The first is of very coarse, gritty, red ware; the second of unbaked clay. Like the crude bowls (Pl. 82, B, C), they were hastily made.

Divided bowls. This relatively rare type of vessel is divided to make two or more compartments. Those with a rectangular plan (Pl. 81, A, C) are the most common, and those of oval plan and rounded sides (Pl. 81, B) next in quantity. Both types are handmade, irregular, and with no ornamentation or surface finish. Pl. 81, D, a tiny vessel of unbaked clay in the same shape, probably served as a child's toy. Pl. 80, B, a regular wheel-turned bowl, with partitions dividing it into four sections, is unique. Another unique example is Pl. 81, E, two turned bowls of burnished gray-ware, joined where their rims meet, to form a double container. The stamped circles on the side are typical decorative motifs in this ware. Its dissimilarity to the Nuzi types supports the belief (p. 390 *ante*) that the gray-ware is an imported product.

Troughs and basins. The trough, Pl. 80, E, can only be tentatively placed here. It is equally probable that it was a section of a divided bowl. The decoration and the sockets at the corners give it an importance above the usual type; and, considering its location—P470, Stratum II—it is probable that it served a votive purpose. As such it should be compared with the divided vessel Pl. 113, B. The piece is made with

⁹ For other filter jars, see Pl. 68, M discussed above under *Storage jars*.

more than usual regularity, though the surface lacks any finish. Pl. 82, G is a related type; and, since it was found within Temple A, and is also decorated, it is possible that it, too, had the same use. It is unlikely that it was a divided bowl. Though handmade, the surface is finished with considerable care.

The oval type of basin shown in Pl. 82, D is rare. The rectangular one, Pl. 82, F, is unique, and the deep vat, Pl. 82, E, is one of three found at Nuzi. The latter was sunk below the floor of Room 15 in the house of Tehip-tilla, with its rim flush with the brick pavement. Close by, a drain led away to the outside. The room had the aspect of bathroom, which strongly suggests that the tub was especially made and placed for bathing.

All the troughs and basins are of the usual coarse, porous ware without surface finishing. The two rectangular specimens are excellent examples of the perfect work Nuzi potters could do even without the aid of the wheel, and belie the crudity seen in the two-part bowls and other unturned ware.

The very shallow circular basins (Pl. 79, FF; Pl. 80, D; Pl. 84, A), are uncommon types, and show no unusual characteristics of ware or finish. In each, the ware is exceedingly thick, and is clearly intended for hard usage. Neither is wheel-finished.

The deeper basins (Pl. 83, A-D) are more numerous than the shallow type, and seldom vary from the heavy, squat form seen in Pl. 83, C, D. They have, for the most part, unsmoothed surfaces. That a ring base is never used, but, rather, a broad, flat bottom with its whole surface in even contact with the floor, is suggestive of a great weight or strain demanded of these rough containers.

Plain bowls. This group is by far the most numerous of all the terra-cotta objects, and is found in such a variety of shapes and sizes that it is impossible to subdivide it into different groups. They have been arranged on the plates, in so far as is possible, on the basis of like treatment of rim. Even with regard to this most prominent portion, it is difficult to form more than two broad categories, one blending into the other, and both possessing an infinite number of variations. The first is that with a plain, rounded lip merging immediately into the true curve of the body (Pl. 85-87). The second is that in which the lip merges into a rim either vertical or slanting, separating it from the true form of the lower body (Pl. 88-89). Each of the significant variants is included in the illustrations, which obviates the need of detailed description.

The treatment of the base is subject to less difference. The high, solid foot of Pl. 86, K, J is unusual, and were the rims and bodies not so like those of the other bowls they would be classified as pot-lids. Pl. 87, Q, from the transition period, shows an interesting combination of ring base—a Nuzi feature—with the thin sides, delicate line, and finer-grained ware of the Ga.Sur bowls.

The large bowls of Pl. 84, B-E are of a class by themselves, and can be compared with the others only in ware and finish.

The ware of all the plain bowls is the familiar type, with chopped straw and, to a lesser extent, sand, used as the *dégraissant*. It is soft, very porous, and baked to colors ranging from a neutral darkish gray, through yellow-gray, to a light brick-red. The surface, except in a few cases, is wheel-finished. Quite as rare as those without finish are the few with tool-burnished surfaces (Pl. 86, C). In such cases, the clay is finer-grained, with less conspicuous signs of chopped straw.

Footed bowls. Exactly as with the cups, the progress from bowl to footed bowl moves by almost imperceptible stages. Beginning with a slight exaggeration of the ring base (Pl. 89, Q), the foot grows to its average height (Pl. 89, Y), and extends in one freakish example (Pl. 90, J) to unusual proportions. All have the lip separated from the true curve of the body by a slanting rim. The ware and finish is like that of the plain bowls.

Large footed bowls (Pl. 90, A, E) are infrequently found. Except in the foot, they have little in common with the shapes of the smaller ones. In finish and ware, the two are the same.

Pl. 90, F bears only a faint resemblance to the customary type. The foot, the turning, and the quality of the ware, in this specimen, are the same as in the shouldered cups.

Variants. Three bowls, with rim treatment or general shape so unlike the others, could not be placed in any of the three main groups just described. Each is unique. The first (Pl. 90, I) is unusual only in that it has a hollow lip, with an outlet at one point on the outside of the rim. The clay is broken away at this point in such a way as to show a continuation of the hole outward, in the form of a tube. Since the vessel is only partly complete at the rim, it is impossible to know the treatment on the side opposite this opening. However, since the channel continues beyond the natural limits of the vessel, it is clear that it served as a passageway for liquids; and, since it had an inlet, it must, of necessity, have had an outlet. One is reminded of the elaborate

fountain vessel found at Tepe Gawra in 1927, designed on much the same principle.^{9a}

Pl. 90, L is of interest because of its unusual molded lip. The flat bottom is also unusual, although not unknown, and the surface is wheel-finished to a great smoothness.

Pl. 90, N has already been noted in the discussion of painted designs, and need only be mentioned here because of its unique shape.

Pierced bottom bowls. The rarity of pierced bottom bowls (Pl. 90, M; Pl. 91, A) is in contrast to their frequency in Ga.Sur. Whereas those of the earlier period appear to have served as funnels, the function of those of Nuzi is obscure.

Pl. 90, O, pierced at opposite points at the junction of the rim and base, was found completely filled with sand, implying a process of separation of some mixture, by which the fluid flows off at the base of the vessel, and the solid remains on top. The position of the outlets is such that any escaping liquid could not have been easily collected if it had been wanted. Consequently, its method of operation is opposite to that of a water filter, and must have served much the same purpose as an extremely fine-meshed sieve.

Burnished gray-ware bowls. The most striking difference between these vessels and the plain bowls is the ware: a close-grained, hard material, in which sand rather than straw is used as the *dégraissant*. The color, in a great majority of cases, ranges from a light mouse color to a deep dull gray. In fact, this color is so characteristic that the class as a whole has been called gray-ware, in spite of the presence of a single specimen in a brilliant deep red, several in rich tan (Pl. 91, E, D), and rare examples ranging from light tan to rose.

The base also serves to distinguish these from the other bowls of the period. In only one case (Pl. 91, F) is there a ring base similar to those of the plain bowls. The characteristic base is flat (Pl. 91, G), or slightly hollowed (Pl. 91, H), or, in rarer cases, evenly hollowed (Pl. 91, D) in a curve the reverse of that on the inner surface of the bowl.

The shapes of the rims are, for the most part, identical with those of the plain bowls, though there is a tendency toward rim treatment not found elsewhere. The overhanging inner rim (Pl. 91, J, M), the creased outer rim (Pl. 91, H, I), and the broadly fluted rims (Pl. 91, S; Pl. 92, T, U), are never seen outside this class.

^{9a} E. A. Speiser, *Tepe Gawra*, pl. lxx, 138.

Still another radical divergence from the plain bowls is seen in the treatment of the surface. All are tool-burnished, the marks being plainly visible in many cases as short, horizontal, straight strokes. The interior is similarly treated, and occasional deeper striations are evidence of the difficulty of applying this type of finish to the inner curve. The result is striking. Always soft in effect, the surface takes on a gloss and polish that is unequalled in any other wares from Yorgan Tapa. This high polish tends to accentuate the natural color of the clay, and if very dark the surface takes on a rich, lustrous black (Pl. 92, T, U).

The final feature, seen almost exclusively in the burnished bowls, is the characteristic impressed, white-filled decoration (Pl. 91, N-R, T-W; Pl. 92, A-S). The location of the design is restricted to two regions: the flat top of the lip, and the outside of the more or less vertical rim below the lip. Bowls without this rim were never decorated.

The elements making up the designs are mainly three: circles, triangles, and straight lines. The latter are either joined to make a continuous zigzag line about the bowl (Pl. 91, P, etc.), adjacent pyramidal figures (Pl. 91, U), or, as in the case of a unique example, Pl. 91, O, a connected, unbalanced diamond pattern in the same position. Any one may be used alone or in combination with one or both of the other main decorative elements.

Two other decorative elements are dots (Pl. 92, Q) and vertical dashes (Pl. 92, K). The two examples illustrated are unique. Within the limitations set by the three elements, the potter was evidently free to express himself as he chose.

The circles are made with the end of a hollow reed pressed squarely down on the soft clay, leaving the center untouched. An exception is seen on the lip of Pl. 92, D, in which the circles are roughly made, shallow pits impressed with the point of a blunt tool.

The triangles are pressed with a solid, not a hollow-centered tool. They are never equilateral and their sharpness varies in each case.

The straight lines are also pressed, and not incised. The longer ones (Pl. 91, P, etc.) are deeper at one end than at the other, in consequence of the tool being held at an angle to the surface. The very short lines (Pl. 92, N) are made by the direct downward pressure of a tool the width of whose end is equal to the length of the line impressed. Two exceptions to this are seen in Pl. 92, H, P, of which the latter is a fragment of the body of a small pot. In both, the lines are made by drawing a point across the surface, rather than by straight downward pressure. Both are different from the typical examples of Nuzi. The design of the first (Pl. 92, H) is reminiscent of late Ga.Sur

and the transition period, and the shallow lines and shape of the second (Pl. 92, P) are totally unlike any other decorated gray-ware. It is quite probable that they mark an earlier phase in the development of this group.

The impressions on the normal gray-ware bowls average about a millimeter in depth, although many are less than half this, and one (Pl. 92, B) has stamped triangles 3 mm. deep.

It is difficult to tell whether all the decorations were white-filled or not. The majority retain no recognizable filling. Others have traces, and still more have it fully preserved and enhanced by an external incrustation of salts. The fact that many still retain traces of this substance points to its instability under certain conditions, and strongly suggests that it was originally used as a filler for all the designs.

Most pleasing of all the gray-ware vessels are the fluted-rim bowls (Pl. 92, T, U). The ware is very dark gray, and the surface is invariably burnished to a high degree, giving a soft, rich, black effect that is seen only on the best of this type. They are rare in both complete and fragmentary form.

The tripod bowl is the last group associated with this ware. Though not all are of the gray-ware, by far the majority are of this material. Pl. 93, A is of the typical plain bowl ware. Pl. 92, W is a finer-grained type of the same clay, but burnished on its surface evidently in imitation of the gray-ware finish. Pl. 92, Z is the finest example not in gray-ware. Like many other objects from Temple A, it is covered with an all-over coating of the familiar blue-green glaze. The few other examples not of gray-ware are universally crude and irregular. Two are made of unbaked clay; both are flat stands on short legs, one so tiny that it must have been a toy.

The gray-ware tripod bowls (Pl. 92, V, X, Y, AA, BB) are identical in finish and texture with the others of this material. The proportion of leg to body gives an impression of solidity of design that is particularly pleasing. The joint between leg and body is unexpectedly strong. Rarely is a leg found broken away from the turned body along the line of its original joining. The type is by no means common, but was sufficiently well known to have been copied in the poorer clays.

In the discussion of the gray-ware vases, it was suggested that the objects of this material were of foreign manufacture. Closer inspection of the various bowl groups makes this appear more certain. The difference in shape, design, ware and surface between the gray-ware as a whole and the bulk of Nuzi pottery is radical. However, many aspects of the usual Nuzi shapes appear in the gray-ware, and occa-

sional gray-ware traits appear in the common Nuzi vessels. This would tend to show that the gray-ware potters were neither very far distant from nor wholly unrelated to the Hurrians of Nuzi. It is also possible that the gray-ware characteristics seen in ordinary Nuzi vessels are a direct imitation of these obviously superior products. The tradition of burnished gray-ware was strong in Mesopotamia from the beginning of the Uruk period, and at Yorgan Tepe a few pieces were found in Ga. Sur levels.

Plates. Plates of the type illustrated on Pl. 93, B are uncommon; the few specimens discovered differ little from the one illustrated. The pitted surface is present in most examples. One was found without the overhang beyond the ring base. If the object was used as a griddle, as has been suggested in the case of similar examples from other sites, it will be seen that the holes—which in that case would be on the bottom—are too shallow to serve as heat conductors. They appear more as though intended to give a grip to some plastic material. It is tempting to call these potters' wheels, and it is not at all improbable that they were the actual tables on which the clay was turned, resting squarely on a revolving wooden platform and post. In this connection Pl. 116, AA and BB are of interest. Both are pierced and capable of being used directly as the platform, or, in the case of the larger, as the lower fly-wheel. The clay in all cases is of the usual coarse nature, and without any special surface finish.

Pot-stands. The pot-stands are of three different types—two closely related, and a third radically different. The first is the most common (Pl. 93, C-H; Pl. 94, A-J), and is found with great frequency throughout all the buildings. Pl. 93, E and Pl. 94, E are unique specimens, and represent the two extremes in height. Pl. 94, B may be considered more as a typical pot-stand. Unlike the stand from Ga. Sur (Pl. 54, A), decoration of any kind is rare, and is restricted either to a slight elaboration of the rim (Pl. 93, F), or to incised rings and conventionalized incised rope pattern, as in a single example (Pl. 94, F). The clay is the usual yellow-gray, and coarse in texture, while the surfaces both inside and out are given only the most casual wheel-finish. Although none of the three types was found in use, there can be little doubt as to their purpose.

The second type (Pl. 94, K-M) is characterized by its smaller size, its straight or only slightly concave exterior, and by the absence of an outward-sloping heavy rim. Although found occasionally in Stratum II, they were more common in the levels between Stratum II and the

transition period. The crenellated base (or top?) (Pl. 94, K) is typical of many found in the region of I19. In ware and in surface treatment they are identical with the others except for a tendency to a dull rose color.

In the description of rooms I19-I21 it was suggested that these were stands for crucibles, or, possibly, even for cooking vessels. The arguments need not be repeated here, except to add that the dull rose color is the natural result when yellow-gray ware is subjected to additional heavy firing after baking. This was found to be so by actual experiments made in the tablet-baking oven of the expedition. Moreover, the bases of Pl. 94, L and of several other stands are conspicuously stained with bitumen, a fuel capable of generating intense heat and known to have been used frequently on brick hearths.

The third type (Pl. 95, A, B) is radically divergent from the first two, and is rare in the later levels of Nuzi except in the most fragmentary form. Although never common, a sufficient number were found in the late transition and early Nuzi levels to justify their attribution to those times. It is at about this same period that they appear at Tepe Gawra (Level IV).¹⁰ However, identical specimens from the "A" Cemetery at Kish¹¹ show this form to be, in reality, an ancient one, which in our more northerly region enjoyed a brief vogue only around the time of the Third Dynasty of Ur. In form they resemble the common heavy flat-bottomed basin. Inside, at equidistant points, are solid or goose-necked buttresses which slope toward the center. The pot rests on these three sloping surfaces, and the seepage is collected in the container that is part of the stand. The clay is the customary coarse type for large objects, and the surface is without special finish of any kind.

Pot-lids. The most common pot-lid is that made of plastic unbaked clay, rounded on the inner face and pressed close around the rim of the vessel. Pl. 95, D, though probably dating from Parthian times, is typical of the form in this class. Pl. 95, C shows the inner face of a small clay lid, with the impression of the rim of the pot around the edge and the imprint of the straw matting which separated the lid from the contents of the pot.

Terra-cotta pot-lids (Pl. 95, E, F, H, K, L, N, O) are relatively rare, and vary in shape and treatment, ranging from those crudely made (Pl. 95, E) to those skillfully turned and decorated (Pl. 95, N). Of

¹⁰ E. A. Speiser, *Tepe Gawra*, pl. xxix, b.

¹¹ Ernest Mackay in *Field Museum of Anthropology, Memoirs*; vol. 1, no. 2, pl. lii, 25, 26.

all the Nuzi shapes, they seem the least restricted to a traditional form. They appear to have been made on order to satisfy a special need, and were not common objects of household use. None was found of a ware which differs from that of the plain bowls.

Strainers were exceedingly common throughout all the private quarters at Nuzi, being surpassed in numbers only by the bowls and cups. In contradistinction to the pot-lids, they show less divergence from a common form than any of the other terra-cotta objects. Pl. 95, J and P, and Pl. 96, E are the most common forms, from which there is a slight variation in size within restricted limits. The broad, shallow type (Pl. 96, D) is a common variant. Two unique specimens should be noted: a monumental one of the customary shape, 23 cm. in diameter and 11 cm. high, and the tiny specimen illustrated in Pl. 96, C.

The objects are wheel-made, and perforated from the outside before baking. No care was taken to smooth the resulting excessively rough inner surface (not visible on the drawings) to the same evenness as the outside. The clay is the typical yellow-gray, and only in rare instances is the outer face wheel-finished.

The fact that several strainers of the most common shape each had a handle at its apex (Pl. 95, G, I) means that these, at least, were pierced covers rather than strainers. Since they are identical in shape with the most common type of so-called strainer, it is only logical to say that both served the same purpose, and that those without handles rested in the same position, lacking only the convenience of a knob by which they could be removed. Perhaps the strongest argument against their use as strainers is the extreme roughness of the interior, caused by the holes pierced in the wet clay. The important surface of any effective strainer is the inner one. This, in preference to the outer, must be smooth and free of obstructions in order that the separated material may flow off properly, and the interior cleaned after use. Yet here the opposite is true. There can be little doubt that the main function of these objects was to serve as covers and not as strainers. Thus, the word strainer is a misnomer, retained only because of its universal use for objects of this type.

Strainer bowls. This is an exceedingly rare vessel (Pl. 96, F), and consists of a large bowl, a small portion of which is separated from the rest by a perforated wall. A pouring lip within the segregated area, and the strainer surface, are the only features distinguishing it from the usual large bowl. It is of interest to note that, in so far as was possible, the inner face of the dividing wall was free from the excessive roughness seen in the common strainers.

Pl. 96, A is a true strainer and a unique object. It is, in fact, an appliance whereby any large bowl, through the agency of this strainer, might be converted into a strainer bowl. The outer curve of its plan and section is similar to that of a large bowl, and by holding it tightly inside and against the rim of a bowl, with the pouring lip over and above that of the bowl, the plain vessel functions in exactly the same manner as the true strainer (Pl. 96, F). It is without a doubt the most ingenious of all the household appliances found at Yorgan Tepe, and though made for a commonplace use it remains as testimony to the inventiveness of the Nuzi craftsmen.

Another true strainer is the very large, flat-bottomed, oval vessel with perforated sides (Pl. 96, B). The vessel is roughly made, and without a smoothed surface. A large amount of carbonized barley found within it shows that it was used for washing grain.

Drainpipes. Baked brick was the favorite material for drainage channels, but drainpipes of terra-cotta were well known and widely used. They appear in a considerable variety of shapes and sizes, but, as one would expect, they remain uniform in any one continuous channel. The diameters of the various types are large or small, depending on the flow expected. The length also varies, but in no case does it exceed that of the potter's arm. It is of interest that the elbow-pipe was not known. Turns were made in the manner illustrated in Pl. 14, A. All have one necessary feature: a regular difference in size at opposite ends, allowing each succeeding pipe to fit around the end of that which preceded. The larger opening is accomplished either by a flaring increase in size or by a distinct collar around the rim (Pl. 97, C). The opposite smaller end has either a corresponding gradual diminution in diameter, or a flange by which it is abruptly decreased in size to allow a perfect fit with its mate. Strangely enough, the pipes are not without some slight decoration (Pl. 96, H, a unique example). They are without wheel-finish, and are of the usual porous yellow-gray clay.

The frequent presence of single pipes not in their proper use, found within the rooms of private houses, suggests that singly they may have had some secondary obscure purpose.

Open channels of terra-cotta were infrequently found. These are of uniform width throughout their full length. That illustrated on Pl. 96, I is apparently the head-piece or the beginning of such a drain, with the rounded end receiving the waste as it flowed from above.

Wall-nails, existing primarily to satisfy an architectural custom, developed in later times to be more decorative than architectural. It

is of interest that both types were used at Nuzi within the same period.

The first group (Pl. 97, D-K) is an undistinguished lot of objects composed of the two essential features: a shank, which is inserted in the mud-brick wall, and a broad flat head which appears as a circular terra-cotta plaque on the face of the wall. These undecorated nails fall into two main subdivisions: those whose shanks are short and stout (Pl. 97, D, E, G), and those whose shanks are long and pointed (Pl. 97, F, H). Pl. 97, H and K are variants of the latter group.

The heads are turned, and carefully and symmetrically made, each with a slightly convex face. The surface, strangely enough, is rarely wheel-finished or decorated in any manner. Again, for the benefit of those who call these common objects "mullers", let it be added that the faces never show any signs of wear. The shanks are handmade rather than turned; since they were hidden within the wall, no care was taken to make them symmetrical or smooth. The clay is yellow-gray, very porous and friable.

It is clear that these were used solely to satisfy an architectural tradition and not as objects of beauty in themselves. None were found actually in position in the walls, but there can be no doubt as to their purpose.

Pl. 97, J is the only undecorated wall-nail made in the characteristic shape of those which were glazed. Moreover, it is of gray-ware with a tool-burnished surface. Consequently, it may not be considered as a nail of the second group found by chance in an unfinished state. It is unique.

The second big group of wall-nails comprises those in which a knob protrudes outward from the wall, rising from a flange which is flush with the surface of the wall; and behind the flange the short shank extends into the wall. They were found only in the temple and in the palace chapel.

The three definite characteristics never absent are the short shank, the knob-head rising from a flange, and the green glaze over the visible portion. Although the heads are wheel-turned, the shanks are frequently only squeezed out to the proper length and cut off. The ends, in all except Pl. 98, D, are blunt, without any marked diminution of diameter toward a point. In fact, the opposite is more often seen—a slight bell-ing toward the end—presumably to hold it more firmly in the wall. The shanks are solid in the majority of cases, only occasional examples (Pl. 98, A) being hollow. Since they were hidden, they were never decorated, although accidental streaks of glaze down the sides are usually found.

Pl. 98, E and F are rare two-part nails, each with a hollow head designed to rest on a separate peg or shank.¹²

The visible portion is subject to as much variation in shape as the shank. In fact, except in the palace chapel, no two were found exactly alike. This diversity leads to the belief that each is an offering of a separate individual for the adornment of the temple. In most cases the nail preserves the principal features of the round knob rising from a flange of the same, or slightly greater, diameter. The flat head of Pl. 98, E, and the ornate head of Pl. 98, F are both unique.

In a few equally rare cases the flange is greatly enlarged to form a wall-plate (Pl. 98, G, H; Pl. 99, B). Whether of plain surface, or decorated with knobs or depressions, the nails form with their broad, glazed surfaces an impressive mass of color on the wall.

The use of two colors of glaze on a single object was found on only one piece (Pl. 98, A): a wall-nail of exceptional size, with the main body in green, and the face of the knob in yellow.

In all the decorated nails the ware is very coarse and friable, with a liberal amount of chopped straw in the body, and much more than the usual quantity of sand. The color is seldom yellow, and ranges from neutral gray to dark tan. The surface of the visible portion is always carefully wheel-finished before the glaze is added.

Wall-nails of this kind were found in position: the shank inserted into the wall up to the flange, and arranged in a horizontal line 178 cm. above the floor and 90 cm. apart (Fig. 21). Certainly they were purely decorative, although in Temple A they also served as the pegs from which strings of beads were festooned along the walls.

Wall-nails as such are certainly of very ancient origin. As has already been suggested, those from the painted pottery levels were probably used first to simulate beam ends and to carry over into mud construction the characteristics of the wooden buildings known to the forefathers of the prehistoric peoples of Mesopotamia. However, it is probable that even before the end of the prehistoric period these objects had lost their original significance and were retained purely as decorative adjuncts. Much later the increasingly powerful Sumerian rulers, blindly accepting these fixtures, inscribed on them memorials of their own greatness. Still later the inscriptions were abandoned, and the nails, as in Nuzi, reverted to their primary decorative function.

The terra-cotta socket (Pl. 99, A) is a unique piece, and one of

¹² Cf. *Délégation en Perse*, tome i, pl. iv. There is, indeed, a remarkable similarity between many of the ritualistic and domestic objects from their *Epoque élamite* and those of Nuzi.

the few objects on which white glaze was used. Its shorter, unglazed end was meant to be inserted in the wall up to the flange in exactly the same manner as the wall-nails. Bitumen on the inside shows the impression of the grain of a wooden pole that once passed through it. Its short shank would not have permitted it to bear any great weight, and it is clear that it served only as a decorative collar for the pole which, as shown by its impression on the bitumen, entered only a few millimeters farther into the body of the wall than the shank of the pottery collar. The clay is finer-grained than in the other glazed objects, containing considerable sand and only slight impressions of chopped straw.

Incised sherds of doubtful types. Many individual sherds bearing unusual decorations were found within the Nuzi levels. Since they are isolated specimens, it is not always possible to assign them definitely to the Nuzi period. Brief descriptions of some of these are here given.

Pl. 115, E. Coarse reddish ware vase; decoration roughly incised; unlike any other ware found at Yorgan Tapa.

Pl. 115, F. Coarse red ware; outer surface covered with black stain (accidental?); panels deeply incised, also circles punched with two sizes of tubes; incised lines white-filled. The design is unlike either Ga. Sur or Nuzi white-filled ware, but the vertical panels are more suggestive of an early than a late origin. If the black outer color is an intentional stain, it may have been an imitation of the more accomplished white-filled gray-ware of late Ga. Sur.

Pl. 115, G. Coarse gray-ware, pebble(?) burnished. Scroll and bird design lightly incised and stippled; not white-filled; found well below Temple A; probably dates from late Ga. Sur.

Pl. 115, H. Thick sherd of burnished fine-grained gray-ware; stamped with deep V's, Y's and X's. The latter have a raised spot at the junction of the crossing lines. The decoration, in its separate details, is like the stamped designs on the house model of Ga. Sur (Pl. 61, B). The two are probably contemporary.

Pl. 115, I. Corner battlement to a house model (cf. Pl. 113, A); fine-grained reddish ware; smoothed surface.

Pl. 115, J, K; Pl. 116, B, C, H, I, J, P. Sherds characteristic of the elaboration of decorative detail found throughout the early Nuzi occupation levels.

Pl. 116, D. Heavy sherd with tube-stamped circles, white-filled; of the common tan coarse ware. The beginning of a freer design at the bottom in high relief, and the snake-like motif at the top, suggest a relation to the late Ga. Sur decorated ware of Temple F.

Pl. 116, E. Shoulder of a pot with stamped crosses and circles; light reddish hand-smoothed ware; similar in feeling and design to sherds of the Late Period.

Pl. 116, F. Heavy yellow-tan ware; fine-grained, with very small straw marks; surface hand-smoothed. Both the ware and the comb-stippling mark this piece as belonging to prehistoric times.

Pl. 116, G. Typical Nuzi greenish-gray ware stamped with a crescent standard made by two strokes, one semi-circular, the other straight-edged. It probably signifies the dedication of the vessel to the god Sin, or a supplication to that deity to protect the contents of the vessel.

Pl. 116, M. Fragment of a flat-bottomed vase or bowl; gray-ware, slightly burnished. The lines are incised with a sharp tool rather than pressed with a blunt one. The ware is more characteristic of Ga.Sur than Nuzi, and its decoration should be compared with that of Pl. 92, H, and the late Ga.Sur pieces. The stippling is seldom found in Nuzi; when used to complete the female symbol it is typical of Ga.Sur. The lines are not white-filled.

Pl. 116, N. Found at the end of the transition period; undoubtedly Ga.Sur for the same reasons as given above; burnished gray-ware; broken from the top of a square terra-cotta box-shaped(?) object.

Pl. 117, A. Rim of a typical large Nuzi storage pot on which was incised, before baking, the Sumerian symbol for wheat, in archaic script.

Pl. 117, B. An unusual combination of decorative motifs. The carelessness of the wavy line, and the use of four motifs within so small an area is typical of the Late Period pottery. The ware is tan and coarse, of a type used in both Nuzi and later times. The surface is wheel-smoothed.

Handles on Nuzi pottery, lugs, and piercings for strings, are all extremely rare. They have never been found on even a semi-complete vessel, and it is not at all certain that more than a few of these incomplete specimens can be assigned to the Nuzi period.

Pl. 116, K is a strap handle in the form of two parallel cylindrical bands of terra-cotta with an impressed braid design on the top. It is coarse, yellow-gray ware and unsmoothed. Found in the fill of the well of Temples E and D, it cannot be later than the end of the latter building. In these periods it is unique.

Pl. 116, O, having been found in the Temple A well, is also established as not later than that building. A comparison with Pl. 41, M suggests that it is, in reality, a surviving sherd from the prehistoric period. Several were found in the Nuzi levels.

Pl. 116, Q is a heavy lug on the lip of a large, wheel-turned bowl, and is the only one of its kind found at Yorgan Tapa. The surface shows a definite attempt at tool burnishing, a feature characteristic of the gray-ware and of some of the ordinary vessels. The ware is a non-descript tan, of a type too common to be definitely attributed to any one period.

Pl. 116, L is the only true handle found that can definitely be ascribed to Nuzi times. It is of burnished ware in the relatively uncommon brown color. The texture and finish is identical with that of the more common gray-ware. It served as a handle to a shallow cup or bowl, from whose lip it springs.

Pl. 116, P is an unusual lug and is identified both by its decoration and location as belonging to the early Nuzi period. The ware is relatively fine-grained, tan in color, with a hand-smoothed surface.

Vertically pierced rims (Pl. 117, F), and, particularly, horizontally pierced sides (cf. Pl. 72, A; Pl. 79, EE), allowing for the use of a string handle, represent the types most common in Nuzi pottery.

Glazed bricks. Two glazed bricks (Pl. 116, A) were found together in G50 of Temple B. From the scarcity of this class of object, it may be assumed that these two were used singly for some special purpose, and not as building material or architectural decoration. Their white glaze covers only the upper, large surface and a small portion of the sides. The size is much smaller than any of the building bricks used in the city itself. They are notable for the extreme sandiness of the ware, and the complete absence of marks of chopped straw. The interior is baked to an excessively friable state and is brick-red in color. The outside unglazed surfaces are tan and hand-smoothed to a degree which belies the coarseness of the clay.

Spindle whorls. Hundreds of spindle whorls of unbaked and baked clay were found throughout the various levels of Yorgan Tapa, those of baked clay predominating. Pl. 116, S and T represent the two major types from which there is little variation in size or proportion. Identical whorls from the prehistoric levels show the lack of improvement in spinning methods over those of the earliest times. In fact, this primitive method is universally used in Iraq today, although the shape of the whorl has been altered. Pl. 116, X shows a whorl made from the base of a shouldered cup (cf. Pl. 77). Pl. 116, V is a popular, though less common, type, and in its increased diameter it shows a distinct advance over those of Pl. 116, S and T. Small whorls(?) of unbaked clay, with serrated edges (Pl. 116, W, Y), either singly or doubly

pierced, are occasionally found. Their use is uncertain, and they can be classified only tentatively as whorls.¹⁸ Pl. 116, Z, of baked clay, is an unusual specimen, also of uncertain use.

A single example of spindle was unearthed: a circular bone shaft approximately 7 mm. in diameter and of undetermined length. A longitudinal hole pierces the upper end, emerging on the side approximately 3 cm. below its origin at the top. Within this hole, through which the newly twisted yarn was originally threaded, the carbonized remains of the thread itself was found.

Weights. Most common in this class, and found in even greater numbers than the whorls, are those crude objects represented by Pl. 117, D. They are invariably made of a sherd with little lateral curve and of a medium thickness (8 to 13 mm.), broken around the edges to form a rough circle. Approximately in the center is a hole made by chipping from both sides. They are crude, made of cast-off material, and certainly were objects of a wholly practical nature. Their use is uncertain. They may have served as sinkers for nets, though their universal distribution throughout private houses suggests a more common purpose.

The weights or plummets, Pl. 117, C, E, G, are too often found in conjunction with Late Period remains to allow for their certain attribution as Nuzi.

Whether the uncommon pierced and unshaped sherds represented by Pl. 116, R were also used as weights cannot be stated with certainty. It is clear, however, that the holes in each case were made in a sherd already discarded and not in a complete vessel. In this respect they resemble the main group of weights. It seems certain that they were for a somewhat different purpose since they are often doubly pierced, are never circular, and have drilled, rather than chipped, holes.

Burnishers. Terra-cotta burnishers were infrequently found, and their concentration in certain groups of rooms suggests that they served a purpose not common to all households. This restricted distribution is indicative of a division of labor whereby certain products were prepared or manufactured by individuals who specialized in that kind of work.

Most common is the plain, rather thick sherd (Pl. 117, H), showing in its rounded edges and worn surface the signs of continual use. Pl. 117, J shows the second, most common group, all of which are made

¹⁸ Identical specimens in unbaked clay were found at Anau. See Pumpelly, *Explorations*, pl. 41, fig. 21.

especially for that purpose. The material is a coarse red terra-cotta, showing the striations of long use on material of rough texture. The objects are worn on both the flat sides as well as on the rounded edges. This group is particularly associated with the rooms of the palace southwest of and including M33, R49 and R50. Pl. 117, I is also especially made for its purpose. As a flat section of terra-cotta bent at an angle near the end, the long portion becomes the handle, with the much worn outer surface of the shorter portion serving as the working face.

Kiln stilts. Stilts (Pl. 117, S) were occasionally found, and vary but slightly from the example shown here. One tripod stilt, common at other sites, came to light in the Nuzi levels. Since their use was known, their relative rarity must be due to the fact that the major kiln sites have yet to be found.

Gaming pieces. Few objects can be more than tentatively placed in this class. Pl. 117, N, an imitation astragalus in terra-cotta belonging to the transition period, is undoubtedly a gaming piece. It is of interest that sheep's astragali are still used locally in various children's games. The flat, unpierced disc Pl. 116, U, shaped from a sherd, presumably belongs to this class, as does also the tiny, dome-shaped terra-cotta object of Pl. 117, O. In this same class is placed the stilt-shaped object, Pl. 117, W. The latter is made of burnished gray-ware, partly pierced, and decorated at one end and on the sides with very light incisions. It is probable that gaming pieces for the most part were not especially made, but, as is the case today, were either sheep's astragali, of which large numbers were found, or sherds and pebbles gathered at the time the game was proposed.

Door-swings. Such conveniences were found only in the main rooms of the most important residences, occurring most frequently in the palace (Figs. 16, 20). They vary but little, either in detail or size, from the specimen shown here (Pl. 123, E). Door-swings of Mosul marble were occasionally found in the palace, and except for an increase in depth and width—not in diameter—they remain the same as those in terra-cotta.

Miscellaneous. Pl. 117, K. Apparently a mould for casting metal spatulas of a shape not encountered in any of the metal objects. The channel is irregular in depth, suggesting a hastily made, makeshift object.

Pl. 117, L. A portion of a flat terra-cotta slab—20 to 26 mm. thick—with rounded edges. A row of holes 7 to 10 mm. deep is drilled in

the upper surface. Although it is from the transition period, identical objects were found in later levels made both of clay and stone (Pl. 123, B). The latter are often drilled on both sides. Probably a gaming board.

Pl. 117, M. A solid cylindrical terra-cotta object of uncertain length, having a blunt point at the center of the end; fine-grained tan clay.

Pl. 117, P. A crude handmade hollow object with flat bottom and thick walls. The drawing shows its full original height. Eight holes pierce what is left of the upper walls, sloping downward at a 45° angle to the inside. A horizontal hole, flush with the inner base, is at the bottom. Very coarse unsmoothed red ware.

Pl. 117, Q. An open channel, with a trowel-shaped, pierced end. Unsmoothed surface; the usual yellow-gray ware.

Pl. 117, R. Small rest or chock of gray-ware; carefully made; unburnished.

Pl. 117, T. A roughly modeled flat spool-shaped object, partly pierced; made of gray-ware; unburnished.

Pl. 117, U. A thin plaque with tube-indented circles on both sides and edges; light tan fine-grained ware; a surface find.

Pl. 117, V. A circular flat plaque of gray-ware (unburnished), with lightly indented tube-made circles over one face. A surface find.

CULTUAL TERRA-COTTA AND RELATED FORMS IN OTHER MATERIALS ¹⁴

Chariots. Votive chariots were common throughout Nuzi, and were found indiscriminately throughout the temple, palace and private houses. They are crudely made, and seldom is any great attention given to symmetry and finish. All except the unique specimen seen in Pl. 99, E show—when sufficiently complete—a dashboard of some height, a slightly raised seat or stand behind it, and piercings for the shaft and axle. The angle of the shaft varies from a sharp upward slope (Pl. 99, F, G), typical of the hunting chariots of the Assyrian reliefs, to a horizontal direction (Pl. 99, J, K), similar to that of the ox-carts on the reliefs of Tiglath-pileser. In the case of the latter, the hole frequently pierces not only the dash, but the stand behind it as well. The tendency toward a projecting tang or step behind the seat (Pl. 99, H, I, K) is a feature not seen in the earlier specimens.

The wheels, for the most part, are handmade (Pl. 98, I, J; Pl. 99,

¹⁴ Terra-cotta cult objects not included here are: Pl. 68, K; Pl. 75, X, Y; Pl. 80, E; Pl. 82, G; Pl. 92, Z; Pl. 116, A; and the glazed wall-nails. Cult objects of other materials, unrelated to the terra-cotta forms, are discussed separately according to material or type.

E, J), and pierced for mounting on the axle. Pl. 98, I is the only one not completely perforated. The occasional wheel-turned examples (Pl. 99, C, D) are far in the minority, and may actually have been devoted to an entirely different purpose. Certainly Pl. 99, D is far too large to have been used in any votive chariot uncovered at Nuzi.

The ware of both the chariot and the wheel is the ordinary coarse yellow-gray ware of Nuzi.

In connection with the chariots, an object of particular interest should be noted: namely, a miniature yoke of terra-cotta (Pl. 99, L). The object is identical in form with those used on ox-carts seen in the Assyrian reliefs of later date, and undoubtedly formed a part of the harness by which the animal figurines were attached to the shafts of the votive chariots. Bent twigs were presumably fitted into the empty sockets after passing around the necks of the animal figurines to complete the yoke, which is much like those seen today in the backward rural districts of Europe and America.

Figurines. Terra-cotta figurines were particularly common throughout Nuzi, and for the most part are representations of Ishtar. Considering the Mother Goddess figurines as a group, it is seen that all have points in common. All are in high relief rising from a flat back, though in some cases where the back is cut away (Pl. 99, P), the impression when seen from the front is that of a free-standing figure. The exceptions to this are: a yellow-glazed figurine (Pl. 99, R), rounded on its edges and smoothed, though not modelled in detail behind. It is the only Ishtar figurine treated in the round. The other consists of the feet and pedestal of a standing figure (Pl. 100, AA) too incomplete to be positively identified as a representation of Ishtar. Both are temple objects.

All are cast from moulds (cf. Pl. 100, H), and it is not uncommon to find several from the same mould. By far the most common is Pl. 100, C. Individual figurines from the same mould differ according to the clearness of the impression, the care before baking, the amount of retouching, the size of the back, and the amount of wear.

All are completely nude, except Pl. 100, B and T, both of which are unique specimens, though many have necklaces of single and multiple strands (Pl. 57, M; Pl. 100, D, F, H, O, P). All have the upraised hands clasping or encircling the breasts. Again, the one exception is Pl. 100, T, of which the only visible hand is covering the genitals. It is of interest to note that only in two specimens (Pl. 99, R; Pl. 100, D) are the genital regions accentuated. In the first it is denoted

by a black pigment, probably bitumen, and in the second by actual incision. Moreover, there is throughout a marked striving toward realism and an abandonment of the exaggerated female characteristics seen in earlier figurines. The accomplished naturalism of Pl. 99, O, P, Q is not often encountered, but the grotesqueness of the others seems due more to ineptness than to intentional distortion.

The hairdress is frequently not shown at all, and it is hard to say whether this is an omission of a detail difficult to execute, or an attempt to show a close-cropped head. Others show the hair as bands across the forehead (Pl. 100, M), locks drawn straight back from the hair line (Pl. 99, Q; Pl. 100, O), or as longer tresses over the ears (Pl. 100, J), sometimes hanging down to the shoulders (Pl. 100, K).

The ware is identical with that of the plain bowls, and the polish on the more exposed portions of some is probably due to long use and carrying, rather than to an intentional surface finish. The back is always rough and uneven.

Pl. 100, V, a surface find, is typical of a much earlier period, and certainly appears here as a survival from more ancient times.

Pl. 100, A, is of uncertain sex, and bears a very close resemblance to the glazed and the copper statuettes (Pl. 101, G, H). Each has the long, straight robe, the hands raised not to the breasts, but before them, in an attitude of prayer, and each has the same frontal head-band. It should be noted that the female physical characteristics are not accentuated. In spite of the usual restraint in this respect, they are never entirely disregarded, and their complete absence here seems to denote a male rather than a female figure. The object is clearly cast and is of exceptionally fine-grained gray clay of the shouldered-cup variety. It is perhaps the best specimen of a figurine unearthed at Nuzi. Two were found from the same mould.

Three grotesque figurines (Pl. 100, S) were found. Each is so unlike the traditional figurine of the Nuzi and the transition periods that one is tempted to classify them as foreign products. The breasts of these weird female figures are clearly shown, and the navel has been moved upward until it is almost between them. They show no discernible difference in ware from the customary figurines of Nuzi.

Of the rare, seemingly male figurines, those of the musician (Pl. 100, Q) are the best preserved. Three came to light—one from G29, Temple A—and though not from the same mould, each is much like the others. The man stands with knees apart, with his left hand holding the neck of a banjo-like musical instrument, while his right hand is against the sounding-box. None of the anatomical details are as clear

as those of the instrument, and it seems evident that the production of music and not the man himself is the important feature of the figurine.

Pl. 100, Y is a unique figurine. It is particularly unclear and without interest except for the action it portrays. Pl. 100, U, a surface find of an unusually deep red sandy ware, is reminiscent of the Assyrian figurines, and is presumably of much later origin than those above. Pl. 100, R also has a foreign appearance, although the association of gods on lions' backs, with its Hittite suggestion and its connection with the objects of Temple A, does not necessarily make it out of place in this period. The very low relief, as well as the cream-colored sandy clay, is unlike that of the typical Nuzi figures.

Free-standing male figures are rare, and each, except for Pl. 100, X and Z, of which two each were found, is unique. Pl. 100, W and Pl. 101, C (shown in profile) are both from the transition period. The latter, with its very black clay and peaked head-dress, is surprisingly like those from several Central European prehistoric sites. Pl. 100, Z (shown from the rear) shows a man walking, with both arms outstretched before him. In its incomplete form it gives a feeling of action that the original piece probably lacked. Pl. 100, BB is a seated figure, with both(?) arms curved around to the chest.

No figurines were found in the prehistoric strata of Yorgan Tēpa or Kudish Ṣaghīr with which to compare the surface find Pl. 101, A, but its primitive appearance suggests a very early origin. The quality of the ware and the sharply incised lines converging to a herringbone pattern below the chest are typical of the wares characterizing the prehistoric strata of this site. There is, moreover, a striking similarity in feeling between this object and those grotesque figurines from the al-'Ubaid II levels of Ur.¹⁵

Pl. 101, B, D and E show a strong feeling of likeness to the stone, Cycladic type of figurine first found at Yorgan Tēpa in the Ga.Sur levels and at other sites in Northern Persia, Asia Minor and the Aegean. Although the connection cannot be definitely established here, the treatment of the arms, the reduction of the head to a mere protuberance, and, in Pl. 101, E, the clay pinched to a ridge on the head, forming a nose and thus a face, is identical in principle to the treatment seen on the stone figurines. There is no reason for believing the two classes to be contemporary in manufacture, but it is not improbable that these figures are the local copies of those more accomplished, more ancient stone, Cycladic figurines.

Another primitive figurine is the unique specimen shown in Pl.

¹⁵ C. Leonard Woolley in *Antiquaries Journal*, vol. x, no. 4, pl. xlvi.

101, F. A flat slab of unbaked clay, broken away at the base, it has near the top three protuberances, indicating the face and breasts of a female figure. The elementary fashion in which the piece is executed would suggest an early date. This, however, is belied by its fragile material and by its location within a room of the Nuzi period. One wonders whether we have here a survival of the artistic convention seen on the Early Dynastic pot-handles of Kish and southern Babylonia.

Statuettes, or free-standing human figures of a type more pretentious than those described under figurines, were exceedingly uncommon, and each, if for no other reason, should be given special attention.

Of the seven pieces included in this group, four are so alike in their essentials that they may be safely considered as portrayals of the same deity, even though they differ in size, material, and minor details. Because of this likeness, each will be discussed in relation to its companions rather than individually.

Pl. 101, G is the largest and the most perfectly preserved of the four. The material is copper, which, though badly corroded, still retains the major details of modelling. A short, stout tang, by which the figure was once attached to a stand, projects downward from the feet.

Pl. 102, C is the second copper figure, a replica in miniature of the attitude and means for attachment seen in the one just mentioned. The modelling of the face, however, does not equal that of the larger one. The prominent, sharp nose, the highly arched sharp ridges marking the eyebrows, and the slits of eyes, as well as the protruding ears, appear more as the products of a less competent craftsman, perhaps cramped by the small size of the figure, than as an intentional portrayal of these distorted facial characteristics.

The third figure,¹⁶ Pl. 102, D, is also of copper. Unlike the two preceding specimens, the body, in the lower part, is hollow. A stone accidentally(?) wedged in the opening at the bottom prohibits a measurement of the depth of the cavity, but, to judge by the balance, it probably extends less than half the length of the body. Obscured though the modelling is by corrosion, it is evident that it does not approach the quality of either of the two preceding specimens. The disregard of correct proportions seen in the large head and squat body is, in itself, demonstrative of an absence of that sculptural sense found in the best pieces of the period.

The final statuette of this related group is Pl. 101, H. Unlike the

¹⁶ The figure, now in the Iraq Museum, had not been cleaned at the time of writing. Consequently, many of its details remain in obscurity.

three related specimens, the material is terra-cotta, covered with a thick coating of blue-green glaze which partly obscures the finer details of the modelling. The stand on which the feet are faintly shown is of a piece with the body, and is covered both above and below with the same glaze. The inclusion of the base, possible because of the plasticity of the material, should not be taken as a divergence from the type, but as an indication of the shape of base used on the bronze figures. The crown of the head is broken away, but there is no reason to believe that it rose higher than that of Pl. 101, G. The modelling of this figure is far superior to any of the other three. It has neither the bovine complacency of Pl. 101, G, the sharp-edged distortion of Pl. 102, C, nor the disproportionate figure of Pl. 102, D. It shows again the superior skill of the Nuzi artist in the medium of terra-cotta.

A comparison of the four statuettes shows so marked a similarity that there can be no question that all are representations of the same deity. It may also be safely assumed that the figurine Pl. 100, A, previously described, portrays the same subject. Each is a tall, erect figure without any female characteristics. Consequently, in spite of the presence of Pl. 101, H in the cella of the Ishtar temple, the same arguments cited as to Pl. 100, A are applicable here to show the figures as male rather than female.

Each has its hands in the same attitude, not covering or encircling the breasts, but raised, with fingertips together, in the modern attitude of prayer. Each has a rounded band above the brow encircling the forehead, and each shows, more or less distinctly, the knot of hair done up at the back of the neck, so conspicuously seen in Pl. 101, H. All but the latter have a necklace.

The dress is discernible only on Pl. 101, G, H. An outer garment or coat encircles the body, with its two vertical edges meeting or overlapping in front as far down as the hips. Here it divides in somewhat the manner of a modern cutaway coat, extending to the ankles (Pl. 101, G, H; cf. Pl. 101, I). Beneath this is a panelled or flounced(?) skirt (cf. Pl. 100, A), also reaching to the ankles.

Pl. 101, H was found in the cella of the Ishtar group, and Pl. 102, C in Street 8, among other displaced temple furnishings, just outside the doorway to the same building. The third, Pl. 101, G, was found in the chapel S111; only the fourth, Pl. 102, D, was unassociated with a building devoted to cult use.

There is no doubt that these figures were inspired by a much earlier prototype. The similarity between Pl. 101, G and the copper statuette from the archaic Ishtar temple at Ashur cannot be laid to accident. A

comparison between the Ga.Sur statuette from Temple G (Pl. 56, H) and those of Nuzi shows a similar likeness.

The most important statuette of the Nuzi period is the small standing bone figure (Pl. 101, I) found in the cella of the Ishtar group of Temple A. Its most conspicuous difference from the type just discussed is in the additional tang which protrudes from the top, showing that the figure was secured at both ends, and suggesting that it was in itself a decoration or appendage to a still more important object. A tall, conical hat cleft up the front and having about it the curling horns of divinity, covers the hair, coming down as far as the large protruding ears. Whether or not the upper portion of the body is supposed to be covered is uncertain; but it is probable that it was, for one recognizes, below the waist, skirts resembling those of a cutaway coat extending to the ankles in back and leaving the body unprotected in front. The coat is secured around the waist by a scarf wound three times around the body, employing a twist in front much like that used by the Turkomans of Kirkuk today. From under the scarf on the reverse, a band extends from the right side, across the back, and over the left shoulder. It does not reappear on the front of the figure, but it is presumable that it should have crossed the chest and rejoined the belt as it did behind. If so, the omission must have been because of the possible interference with the detail that was to be on the front. Just above the right ankle are three plain anklets and below them is the bare foot on which the toes are clearly shown. The left foot is shod in a shoe with an upturned toe.

Both elbows are equally bent to bring the hands against the lower chest. In the left hand, the figure holds an object or symbol the meaning of which is unfortunately obscure. In the right hand is a battle-axe whose handle is bulbous and digitated at the upper end, and whose head springs slightly downward from the bulb as an axe of the characteristic Hittite type, remarkably similar to that of the Warrior Gate at Boghaz Keui.

A close inspection of the anatomy of this figure reveals strange contradictions, suggesting a representation of a sexless deity in human form.

The carving and modelling is unsurpassed by anything yet found at Nuzi. Except for a slight exaggeration of the size of the head, the proportions are good, and the face, the anatomy, and the lesser details, are done with the mastery of an artist.

The question arises as to whether or not this statuette is of local manufacture. That the Nuzians could work bone skillfully is shown

by the gazelle-headed pins (Pl. 127, U) from the R96 well, but the rarity of such objects indicates that the art was little exercised. There are even stronger indications that the statuette was of foreign manufacture. The absence of the panelled skirt below the open coat is divergent from the custom as seen in the typical Nuzi figures, and is found elsewhere only in the Ishtar figurine, Pl. 100, B. The conical hat, the prominent nose and protruding ears, the battle-axe and the turned-up toe of the one shoe point definitely to a Hittite origin.

Could it have been a copy of a Hittite prototype? This also seems unlikely, for had it been a local copy, it is certain that the craftsman would unconsciously have incorporated into it more of the feeling seen in the genuine Nuzi pieces just described. The only possible conclusion is that it is an imported object used and venerated in the temple of Nuzi. It serves thus as another link in the chain connecting the Hurrians with the northeast and the Mediterranean.

Also of bone is the flat female figure (Pl. 102, A) carved on both sides in low relief. The head, the hands and the legs below the knees, unfortunately, are missing. The figure, completely nude, except for a belt, is standing with both hands raised to the breasts. It is exaggeratedly female in outline, and there is little doubt that it is a representation of Ishtar. The bone is skillfully worked and highly polished. Again there is the probability that we have to deal with an object of foreign, and perhaps earlier, manufacture. It has no parallel at Nuzi, either in its own material, in copper, or in terra-cotta, and it is identical with two figurines in the Semitic Museum of Harvard reputed to have come from Bismya. The figure was found in the refuse of Street 4, unassociated with any other cult objects.

The tiny head, Pl. 102, B, is the last of the statuettes. The material is a fine-grained gray terra-cotta, similar to that of the shouldered cups. The piece is pierced from top to bottom with a large circular hole through which a pin presumably attached it to the body. That no remnant of the body was found suggests that it, too, was of a perishable material as was the main statue of the Ishtar group of Temple A. The modelling is decidedly inferior to the better Nuzi work in terra-cotta. The eyes were impressed with the end of a reed, and the eyebrows incised in a manner reminiscent of the Sumerian statues. Neither contained traces of inlay and it is probable that the method was used only because of its simplicity of execution. The piece came from the chapel S111, in association with the large copper statuette Pl. 101, G, and the limestone ram's head Pl. 112, A. That it was an object of a votive nature is beyond question.

Statues. No statues of the Nuzi period were found, but sufficient evidence in the form of attachable anatomical details came to light to show that they were known and used. Of what material the statues were made cannot be ascertained. No fragments of stone statues were found anywhere in Nuzi, and if they did exist, it is strange that the looters who destroyed the temples of Stratum II showed so little regard for their booty that they would allow the detachable portions of the statues they carried away to be lost. In view of this apparent disregard, it is strange that they did not smash the complete figures on the spot, thus leaving some evidence by which to judge their original character. As a matter of fact, exactly that may have happened, for it seems highly probable that the figures were made not of stone, but of clay—a material in which the Nuzians worked with great skill—into which the important anatomical features were incorporated in a more striking and less perishable material.¹⁷

Five eyes, so used, came to light, of which the most important (Pl. 102, F) is more than life-size. The socket is of black slate, into which the white of the eye—made in shell—fits perfectly. The surface of the latter is pierced with a double cone-shaped hole to hold the iris of green glass. Bitumen cemented the shell to the socket. The whole is perfectly made and correlated, and adapted both to the vertical and horizontal curve of the face.

Pl. 102, H and J are much less pretentious, being merely thin eye-shaped bone objects pierced to represent the iris. Pl. 102, G is flat, and of a deep red stone, triangular in shape, and slightly hollowed in the center to represent the iris. Pl. 102, I (seen in profile), with its sharp-pointed rear, is particularly adapted to insertion into plastic material and equally unsuitable for use in stone. Its face, unlike Pl. 102, G, is naturalistically rounded to represent the curve of the eye, and deeply hollowed for the iris. Whether these hollows were inlaid with another material, as was the shell of Pl. 102, F, is unknown.

The features next in prominence on the Ishtar statue of Temple A would be the breasts. One (Pl. 102, E) was found in the cella, partly complete. The material is terra-cotta of the usual ware, covered on the outside with a coating of green glaze. The walls are thin, and the object so extremely light that it could stay in place without putting too much strain on the fragile unbaked clay of the statue. It is not improbable that Pl. 117, X was another less realistically modelled representation of the same thing.

¹⁷ For further discussion of this subject, see Part I, Chapter IV, *Temple A*.

Animal figurines are extremely common throughout all the buildings of Nuzi, and are found in both baked and unbaked clay in a variety of forms. The ram is one of the most common (Pl. 102, P), and is easily distinguished by its heavy, forward-curving horns. Many of the less distinct figures are probably attempts at a representation of the same animal. Pl. 102, M is presumably a ram, with the clay pinched to a ridge to form the face below the remnants of the heavy protruding horns. The goat is another common figure, distinguishable by the rearward slant of its horns. In this class, three are of special interest: the first (Pl. 102, Q), because it is the only one showing the ears as well as the horns; the second (Pl. 102, O), because the delicacy of its modeling creates some doubt as to whether it is a gazelle or a goat; and the third (Pl. 102, S), because of its unusual, finished appearance, its typical upraised pointed tail, its hind feet, and the applied pellets for eyes. Since this last unique object is from Temple A, it is not surprising that it is more finished than the others.

The humped ox is frequently represented, though in smaller numbers than the ram and goat. Of the two illustrated, Pl. 102, K, N, the latter is of interest for the detail in which the bushy-ended tail is shown.

Many of the animal figurines bear a strong resemblance to horses (Pl. 102, T, U, Y). The long, thin, curved neck with its ridge showing the mane, the upstanding ears (Pl. 102, T), and the long, downward-hanging head (Pl. 102, T, Y) are typically equine.

Others from the surface (Pl. 102, W), and one from Kudish Şaghîr in the form of a spout (Pl. 102, X), are clearly camels, and certainly belong to an era much later than Nuzi.

Two unique mounted animal figurines should be noted. The first (Pl. 103, C), an animal with a bird(?) perched on its back, shows on its concave base the bitumen that attached it to the rim of a vessel. It was probably part of an offering stand, and should be compared with the birds attached to the rim of Pl. 113, B. The second (Pl. 103, D) is an animal on which a man sits astride, with knees bent and feet curled well up beneath him. Unfortunately, the incompleteness of this interesting and unique figurine does not permit identification of the animal, but the genitals of the rider are distinctly shown, leaving no doubt as to his sex. The characteristic, upturned toe of the Hittite type of shoe is of interest as another of the many links between the Hurrians and the people of the northeastern Mediterranean coast.

The animal figurines of unbaked clay (Pl. 102, K, L, M, O, Q) are found in as many forms as the baked figurines, and are made of purified clay only slightly less clean than that of the tablets. The baked

figurines are of the typical Nuzi ware, and only in rare cases are they given any surface smoothing (Pl. 102, S, U). Whether baked or not, there is—as with the Ishtar figurines—a distinct striving toward realism, a realism that is often achieved.

Pl. 103, F is a unique object, the side of a small pot from which extends at right angles the head, legs and fore-body of a crouching bull. No other terra-cotta was found so decorated.

Pl. 103, G is a mask of a bull made of bitumen, and may once have been the core to a figurine of gold or silver. It is fragmentary, but the eyes and the shape of the head indicate that the complete object was fashioned with great anatomical accuracy.

Pl. 103, H is one of three identical duck or swan-shaped terra-cotta vessels. The base is flat, the neck is exceedingly thin, and the tail is square across the end. The object is hollow, and pierced through the back with a small circular hole. All but the specimen illustrated have a second and smaller piercing through the breast, by which they take on the essential characteristics of a drip bottle, though they lack a spout at the lower opening. What purpose this variant served it is impossible to tell. It is of the usual Nuzi ware, similar to that of the plain bowls.

Pl. 103, I, from early Nuzi, is the only copper animal figurine found. The species is uncertain. It is unaccountably pierced well toward the rear in such a way that it could not have been suspended in any other position than head downward.

Pl. 103, J is a limestone frog, done with the utmost skill. In its extreme conventionalization and simplicity it shows a true knowledge of the essence of sculptural representation.

A small number of animal figurines, either solid or of vessel form, were provided with holes or axles onto which wheels of the chariot type could be fitted. They are rare objects, and each type is included in the illustrations.

Pl. 103, A is a longitudinal section of a large hollow animal figurine, with a short tail, and both rear legs combined into a single solid projection across its full width. This is pierced to receive the axle on which the wheels rotate. The front legs were presumably added and handled in the same manner. The large hole in the back shows that it was a container of a sort, as well as an animal figurine. The body is a turned cylindrical vessel to which the legs were added before baking. It is without wheel-finish, and is of the usual coarse yellow-gray ware.

It is probable that the head was similar to that of a ram as seen in Pl. 102, Z, AA, BB. Each of these is pierced through the head or chest,

obviously for the insertion of a shaft like those on the chariots. They are solid and do not serve as spouts. Pl. 102, V, a unique example, is pierced through the nose, and was drawn by a cord rather than by a shaft.

Pl. 103, E is a unique vessel, a tiny horizontal container with feet of the same type as those just described, and surmounted by an animal head of uncertain species. It is primarily a container, and in its form, as well as its association with Temple A, it should be compared with the lion jars (Pl. 103-107). The hole piercing the head is undoubtedly for a shaft by which the figurine could be drawn along on its diminutive wheels. Like the figure previously described, the back is pierced, though the purpose of this piercing is uncertain when one considers the size and position of the main opening. The main body is a wheel-turned vial to which the legs and head were added separately. The ware is of the usual yellow-gray, and is without surface smoothing.

Pl. 103, B is a crudely modelled terra-cotta bird with both wings extended and tail upturned. Unlike the others, it is not hollow, and had but one set of wheels on which to teeter along. The presence of holes for shafts at both ends is of interest, and suggests that such votive figures on certain occasions were used in tandem as well as singly. Its head was presumably like the clay bird head of Pl. 102, CC. The latter is pierced through the breast at a point corresponding to the forward shaft socket just discussed, and the eye is made by an applied pellet of clay, a method seen only on one other animal figurine (Pl. 102, S). Both body and head are unique.

Phallic pots. Phallic symbols are extremely rare at Nuzi, and are restricted to six objects, four of them being identical pots, all but one of which came from the palace (Pl. 103, K).¹⁸ The other two are lingam spouts, one being half the size, and the other twice the size of Pl. 103, K. Both were surface finds and separated from the bodies of their respective pots. It seems reasonable to presume that they were spouts to vessels of the type illustrated here.

The shape of the pot is unique. Two bands of the typical black Nuzi pigment encircle the upper portion, while the area about the base of the spout is similarly colored in simulation of the genital hair

¹⁸ Since Pl. 103, K was one of the few objects not drawn in the field, it was particularly unfortunate that the spout was lost during shipment to America. The drawing was made, using the smaller, surface-found lingam as a model enlarged to the proper diameter. The angle of the spout is shown on the body of the jar, while its height is reconstructed from the memory of those who examined it in the field. If the drawing varies at all from the original, the divergence cannot be more than a few millimeters.

area. Moreover, the end of the lingam still retains traces of the red pigment that once covered the whole head. The spout is well joined to the main turned body and is placed none too accurately over a hole, of a diameter equal to that of the outlet of the lingam, punched in the wall of the pot. The vessel is wheel-finished and the ware is the customary yellow-gray.

Zoomorphic jars. The zoomorphic jars form one of the most conspicuous groups of temple objects. Except for fragments in H53, in H64 and in the street outside H64, they were found nowhere but in the Ishtar section of Temple A. They have been discussed at length in the description of that building, and since the drawings and photographs represent the major types, though not each variation, little more need be said concerning them.

Although no two are alike, each is in essence a turned jar on which has been added or incised the characteristic features of a lion. The jar in most cases has a slightly round base, which, in effect, becomes the rear of the animal. Those with flat bases (Pl. 103, L; Pl. 107, A) are uncommon, and those with a marked increase in diameter from bottom to top (Pl. 105, C) are rare. It is of distinct interest that, except for Pl. 103, L, the size of the jar or body is relatively constant. Even the body of Pl. 107, A, with its realistic head, large enough to justify a body many times the usual size, does not vary from the accepted dimensions even though the natural animal proportions have been grossly violated. It is probable that the large and supremely realistic example Pl. 107, B was attached to a jar or body no larger than the others.

In most cases, all the legs are represented, though they are in every example ridiculously short.¹⁹ Only where the front legs have been reduced to a flipper-like symbol of the real thing (Pl. 105, C) are the rear ones completely disregarded. Wherever sufficient care is taken, the toes forming the lion's paw are definitely depicted, either by incised lines (Pl. 103, L; Pl. 104, A; Pl. 105, B, C), or by actual modelling (Pl. 105, A). Pl. 107, C shows a rare form in which the figure is couchant with the forelegs extended beneath the front end of the body.

The tail is not infrequently omitted, although the majority of cases show it in some abbreviated form, usually curling up over the back (Pl. 104, A, B), or, in rarer cases, extending straight down or outward (Pl. 103, A; Pl. 105, A).

The natural shoulder of the jar is, in many cases, used without

¹⁹ Pl. 104, A, Pl. 105, B originally had hind legs, the marks showing their union with the body being still perfectly clear.

alteration as the shoulder of the beast (Pl. 104, etc.). Others have added material to create the bulk so characteristic of a lion's fore-quarters (Pl. 103, L; Pl. 105, C). This is particularly well illustrated in the fragment Pl. 107, A, in which the turned jar and the applied modelling above it can both be seen.

In each case, the nose and nostrils are indicated, although the degree of accentuation and naturalism varies in each. The ears are included in all but one example (Pl. 104, A). The eyes are always shown, and in a variety of forms. The applied discs of clay on Pl. 106, B are rare, the usual eye being either plain incised, or modelled and incised. The relation of the eye to the ear is shown in such a variety of distortions that, were it not for the lion statues of glazed terra-cotta and the one truly realistic zoomorphic jar (Pl. 107, B), one would be led to the belief that the makers were representing an animal more legendary than real.

All those in which the lower jaw is intact show either a lolling tongue or the break where the applied member was once joined. Similarly, all show the four prominent canine teeth. The mouth of the lion is in all cases the round opening of the jar, which in every example but one (Pl. 103, L) has segments cut away on both sides to represent the gaping jaws (Pl. 104, A, etc.).

The final touch of realism, seen in a limited number, is a small circular hole piercing the rear below the base of the tail (cf. Pl. 108, B).

The thick growth of the mane and the hair on the face is shown, in the majority of cases, by incised lines simulating the shaggy coat of the lion. The row of rather ornate, incised curls around the neck of Pl. 105, C is a unique feature, showing unexpected attention to detail in a figure otherwise conventionalized. Impressed half-circles around the ruff of the neck (Pl. 107, C) are uncommon, while impressed full-circles (Pl. 105, B) occur in but a single specimen and form the only example of decoration not in any way naturalistic.

The ware is the rather fine-grained Nuzi variety of the well-pot type, and the surface, in most cases, is wheel and hand-smoothed.

The fact that no two zoomorphic jars are alike suggests that they were made by separate individuals, and not on order from a single potter. Consequently, they remain not only as a record of temple furnishings, but as a measure of the demands and devotion to the cult of Ishtar. What their purpose was, is uncertain, but it seems highly unlikely that they were containers, except in an abstract sense. They were probably, in themselves, pious offerings of an animal form particularly acceptable to and intimately associated with the goddess Ishtar.

Considering the accurate realism of both Pl. 107, B and the glazed lion statues, the crudity of these figures cannot be explained by the makers' ignorance of leonine appearance. It seems likely that the distortions and unrealities are due not only to ineptness, but also to the blind acceptance of a type old in the history of the Hurrians and simplified and conventionalized through many centuries of use.

Sculpture in terra-cotta. The primary difference between this class and the zoomorphic jars is that, whereas the latter is essentially an embellished, wheel-turned vessel, the former is a real attempt at sculptural representation without the aid of a mechanically made foundation. Unrestricted to a cylindrical core, the sculptor could express himself to the limit of his ability. Thus, although there is little difference in the feeling between the two lion statues of Pl. 107, D, Pl. 108, A and the better zoomorphic jars, the results were accomplished by radically different means.

The two lion figures just mentioned are couchant—a pose seen in only one zoomorphic jar—and are affixed to a flat base which serves both a practical and an aesthetic purpose. Pl. 107, D appears still to retain the conventionalizations of the zoomorphic jar in conjunction with the sculptural method of representation. Pl. 108, A is considerably more finished, and shows in some of its details considerable sculptural sense.

The ware in both cases is dull red, and of the texture and type already seen in the pots. The surfaces of both, Pl. 108, A, in particular, are smoothed with the wet hand, before baking.

Most amazing of all the temple sculpture is the grotesque statue seen on Pl. 109, A. The couchant body of a lion is surmounted by a rearing head of an animal that could have existed nowhere but in the imagination of man. The teeth, the extended tongue, and the nose are certainly like those on the lion jars, but the great gaping mouth, the heavy brows, and the lolling ears (Pl. 109, B) are beyond identification. The figure is undoubtedly a combination of a lion and the mythical beast so frequently depicted in one manner or another by the early peoples of Mesopotamia.

The figure is crouching in a natural position, with fore-paws extended before him. The tail curls up realistically over the back (cf. Pl. 108, B), with its tasseled end, shown by incised lines, falling to the left. It is probable that the rear was identical with that of the companion piece, Pl. 108, B.

Three parallel incised lines, approximately 5 mm. apart, extend

from the back of the head to the base of the tail. From the outermost of these, a continuous fringe of parallel diagonal lines, 4-5 cm. long and 0.5-1 cm. apart, hangs down and rearward on either flank. The effect is of a mane extending the full length of the animal's back. A ridge of terra-cotta, incised at close intervals, connects the tip of the right ear to that of the left, and a similar but continuous band begins by the base of the left ear and twice encircles the neck to represent the ruff. The back of the head and the face are covered with groups of incised lines, indicating a shaggy head and muzzle. Longer incised lines mark the tail, legs and chest, and probably serve the dual purpose of indicating hair growth and accentuating the raised outlines of muscles and limbs.

Also from G50, Temple A, is the hind portion of an identical figure, of interest principally for the incised, conventionalized tree-of-life pattern, between the base and the tail, similar to that seen in the wall paintings of L15B (Pl. 128, H; Pl. 129, D). It is the only feature seen on any of the animal jars or statues that is purely decorative rather than anatomical. A hole is pierced directly below the base of the tail, and, incidentally, directly above the tree-of-life design. One wonders whether there can be any significance in the relation of the two.

The base of each figure is a separate platform onto which the body was insecurely attached before baking. The ware is yellow-gray, coarse, poorly baked, and very friable.

These figures are a strange combination of skillful sculptural rendering and the crude conventionalization of the zoomorphic jars. The skill with which the head and hindquarters are modelled belies any lack of ability; rather, one may suppose that the artist was held to the use of an ancient and stylized form as the model for these objects.

Their use is difficult to ascertain, but fragments of at least three, identical in their comparable parts, remove them from the class of individual offerings. They are undoubtedly statues and not containers, though all have open mouths leading to a hollow interior. Certainly, these grotesque figures, as well as the other crude sculptures in terra-cotta, were intimately associated with the ritual surrounding the cult of Ishtar.

The artistic ability of the Nuzians reached its peak in the glazed terra-cotta statuary. Its artistic value and aesthetic appeal, as well as its possible use and position in G29 of Temple A, has been treated in the description of that building, and need not be repeated here.

Foremost among these is the green-glazed terra-cotta lion of Pl. 110, A, an assembled object of five separately made parts. The body

and head is the first, being of one piece, with the small open mouth leading to a hollow interior. Unlike the zoomorphic jars and the grotesque lion figures, there is no secondary outlet below the tail. The modelling shows an intelligent conventionalization and simplicity possible only to a master of artistic expression in this medium. The heavy coating of green glaze covering the body and the open mouth is evenly distributed over the whole surface, without runs or smears.

The front legs form the second part. Although made to stimulate separate limbs, they are, in fact, of the same terra-cotta throughout their full length. The bottom of each paw is not flat, but roughly dome-shaped, fitting into a corresponding hollow in the base. All of the surfaces are covered with the same glaze as the body.

The third and fourth parts are the two hind-legs, separately made and placed one beside the other, with the rounded under-part of each paw resting in a hollow in the flat base. The glaze is identical with that of the body.

The fifth part is the base, a plain rectangular platform slightly hollowed along the center and undecorated, except where the glaze has accidentally flowed from the legs, or dripped from the body.

The only adhesive used in joining these separate parts is the glaze itself. By it alone the front legs—dipped all over in glaze—were held in place both above and below. The two hind-legs were similarly cemented to the base and body as well as to each other. Not until the body—also with an all-over coating of glaze—was set in its final position (the hindquarters not exactly centered over their legs), was the assembled object placed in the kiln. The vitrification of the glaze firmly cemented the sections together, and the excess which oozed from the joints served to make an unbroken surface between the separate parts which were lost when the object was broken up in the destruction of the temple.

This lion is one of two, identical in their remaining parts, except that in one the tail curves over the back to the left, and in the other to the right. The head of the companion piece is missing, but it is presumable that it matches the other as do its body, legs, base, and glaze.

The glaze²⁰ is the same blue-green as that of the wall-nails, and loses much of its intensity when exposed to the air. It is of interest that the glaze between the joints is considerably lighter in color and harder than the exposed portions, owing probably to the lack of oxygen during baking.

²⁰ The condition, treatment and analysis of the glaze on this object is discussed in detail in Appendix B.

The ware of the glazed portions is light yellow-gray, very coarse, sandy, and friable. The base, which was unprotected during firing, is tan in color and more homogeneous in texture.

The only aesthetic flaw in this otherwise perfect piece is the lack of symmetry between the assembled parts. Each is perfect by itself, but it is clear that the artist was not capable of visualizing the assembled result. The modelling in the individual pieces, and the handling of the glaze denote a skill developed through long knowledge of the process. If the absence of glaze below Stratum II is interpreted as a proof that this technique was not known until late, such skillful handling of a new mode of embellishment means that it was not a local development, but was introduced from the outside in a fully developed state.

A second glazed and standing lion figure (Pl. 111, A) was found, smaller and cruder than that just described. The legs are of a piece with the body, and, in contradistinction to the lion figure just described, the front legs are not joined to each other even by the glaze. The hind-legs, in so far as could be told, were modelled together from one core of clay. The main portion of the body is solid and becomes hollow only below the point at which the present break of the neck is seen. A remnant of the tail is still discernible, extending straight downward. Fragments of a flat, rectangular base were found, on which the figure rested. Its top and sides are fully glazed, and the lion was attached to it not by a cementing glaze, but by a genuine, though imperfect, joint in the clay.

Its typical green Nuzi glaze is in extremely bad condition, literally being lifted clear of the body by the crystallization of natural salts. The ware is very coarse, a dull brick-red in color, and friable, and shows, as do all the other glazed objects, *dégraissants* of sand and straw. The terra-cotta body was not smoothed before glazing, and some—though not all—of the irregularity of the glazed surface is due to the carelessness with which the modelling was done. Both its small size and the amateurish modelling mark it as a temple object of secondary importance. Fragments of another apparently identical figure show that this, too, was one of a pair.

This object brings up one point of significance concerning both the lion statues and the zoomorphic jars. In spite of the fact that in this example the body is solid, the hollow neck shows that the mouth was not only open, but that an effort was made to give the impression of a hollow body. This would indicate that the other lions, with their open mouths and hollow bodies, were not so represented because in

this form they would be more striking or easier to make, but because the cult required it. Yet, in this last figure the essential feature is not a fact, but a fake. The figure is not hollow, but merely made to look as though it were. Its ability to hold or give forth a substance held within it is only symbolized, and not made possible. Thus, we may assume that whatever was imbibed or given out through the open mouth and held within the body was in the nature of an abstract idea rather than a concrete substance. Since the zoomorphic jars appear to be only less sophisticated and more conventionalized forms of these lions, the same conclusion would apply to them as well.

Equal in artistic importance to the large standing glazed lion is the couchant figure of Pl. 111, B. Less stylized and perhaps more vigorous than the companion standing lion, it lacks only suavity of line and perfection of modelling to make it superior. Aside from its artistic merits, it is of interest from the point of view of its construction and finish. The crouching position seen in the unglazed statues and in a very few zoomorphic jars is again used with remarkable realism. The correct anatomical proportions of the whole piece are in contrast with those of the large, standing lion (Pl. 110, A), in which the whole lacks the perfection of the individual pieces.

Many of the conventionalizations of the large, standing figure are repeated here. The tail is shown in more or less the same manner, and the ridge along the neck to the top of the head is identical. The ruff, running from ear to ear, passes under the muzzle, not as a plain ridge, but as a row of projecting knobs to simulate more graphically the tufts of hair.

The figure is shown with an open mouth, giving access to the hollow body. The latter has no base whatsoever, its interior being open to the ground below. This destroys the argument that the figures served as containers, while the careful retention of open mouth and throat still points to the theory advanced in the discussion of Pl. 111, A.

The few remaining fragments of a companion piece make possible a complete reconstruction of the fore-legs and paws which extended straight before the body. The space between is connected by a flat area of terra-cotta 15 to 20 mm. in thickness. This is presumably to strengthen the projecting limbs rather than to simulate a base like those previously described.

The thickness of the walls of the body increases gradually from 9 mm. (just above the slightly enlarged base) to 42 mm. at the peak of the back. The ware is the same as that of the large standing lion, and was carefully smoothed before the color was applied.

The decoration is a combination of the comparatively rare yellow glaze and a unique type of red paint. The latter, found only on these two figures, is the only true, before-baking paint used at Nuzi. Although it does not sink noticeably into the clay, it is truly a part of it, and not merely an applied, non-penetrating mixture as used on other wares throughout the city. In fact, in those few places where the diagonal streaks of glaze flowing from the ruff are broken away, there is revealed a foundation of red color applied there before the application of glaze. The color is a brilliant, deep red, losing much of its intensity on exposure to the air. It covers the main part of the body, the legs, the lower portion of the chest, and the area between the front legs.

The glaze used on the remaining areas is the uncommon yellow glaze. Structurally it is the same as the green, and in this piece is in varying stages of good and bad preservation. It covers the entire head and neck, the upper chest, the fore-shoulders, the tail, and the paws. The great broad streaks of glaze from the shoulder to the rear-quarters cannot be regarded as accidental when one considers the skill shown in the handling of glaze on other objects and on other parts of this same piece. Although each streak is the natural course of a fluid trickle of glaze, each was certainly intentionally permitted, possibly to achieve a certain decorative scheme in the mind of the artist. This is not so improbable as it might at first appear, for it is clear that the two colors are primarily decorative, and only secondarily realistic. For instance, the difference in color or intensity between the long and short coat of a lion is noticeable, but not to such a degree as to justify the color of one being represented as a brilliant, deep red, and the other as bright yellow. Moreover, the use of the yellow around the neck and shoulders would suggest that it represented the long hair of these portions, as it certainly did, but neither the paws, the tail (except the tuft at the end), nor the face, which are similarly colored, are covered with long hair in real life. Thus, we may assume that the glaze was used purely to accentuate certain features of importance, which, in the case of the ruff, is a heavy coat, but which, in the others, has nothing to do with hair growth. Consequently, the two colors become purely decorative, used at will wherever desired, to enhance the appearance of the complete object.

Fragments of another identical lion show that this, too, was one of a pair. It is of interest that their only discernible point of difference is found in the direction of the curve of the tail over the back, one to the right and the other to the left. The same difference is noted in the pair of large, standing lion figures.

The green-glazed boar's head (Pl. 112, B) from G29, Temple A, is equal and perhaps superior in artistic importance to any sculpture found at Nuzi. Aside from this, several structural features should be noted. The head itself is hollow for half its length, beginning at the neck which is affixed to a flat, circular ring of terra-cotta not unlike the flange of a wall-nail. As with the standing large lion, all that holds these two separate portions together is the glaze covering the whole object. No attention is paid to the evenness of the glaze on the back of the ring, and it is clear that it was not to be seen. Consequently, considering this and the similarity of its base to the flanges on the wall-nails, it is highly probable that the head was fixed to the wall, resting on a peg inserted into the hollow portion of the head. Thus attached it would protrude at an angle similar to that observed in real life. Considering its general shape and structure, it is inconceivable that it was used in any other fashion.

The head is made in two perfectly symmetrical sections, each cemented to the other by the glaze which covers the whole of the outer surface. The perfection with which the two fit together to form a beautifully proportioned whole is suggestive of the use of a mould in making the two identical sections, and is certainly in contradiction to the lack of symmetry among the separate portions of the large standing lion.

The jaws are horizontally pierced at the point where the tusks should emerge, and it is clear that the latter would have had to bend abruptly upward to be at a natural angle. What these were composed of is uncertain, if, indeed, they existed as such. However, fragments of blue frit of the proper diameter and terminal sharpness were found nearby, and may have been parts of the original tusks.

The eyes, unlike those of the lion's, are shown by small deep depressions in the clay. The resulting appearance is remarkably realistic, and more than anything else points to a mastery of sculptural understanding. The sockets are carefully glazed throughout, and were certainly intended to be seen as they are rather than inlaid.

The nostrils and mouth are clearly indicated, as are also the bristles which form the mane. The deeply incised lines about the muzzle are softened by the covering glaze and form a graphic conventionalization of the wrinkles on the nose and of the curl of the lip about the tusk. The piece is without doubt the most naturalistic of all the Nuzi sculpture, yet it combines the conventionalization and the simplicity that is the charm of the lion figures.

The glaze is the typical green of Nuzi, though its state of preser-

vation²¹ varies greatly in the different fragments. The ware is the same as that of the other glazed objects.

What its ultimate purpose was is uncertain. The association of the boar with the cult of Ishtar is not unknown, and it is not improbable that this was strictly a decorative piece made in an animal form acceptable to the goddess. No other fragments were found to show that more than one existed.

Presumably identical in use and mounting is the fragmentary glazed head of a sheep (Pl. 110, C), in the same material. If there had once been a body as well as a head, it is exceedingly strange that no fragments of it were found. In this temple, little that was smashed on the spot was carried away, and the complete absence of fragments that might be identified as the body leads to the belief that this figure did not include more than the head, and that it was used in the same manner as that of the boar. Too little remains to tell much of its original condition, but that which is left is modelled with the same skill seen in the other examples in this medium.

Unlike the boar, it is one solid piece throughout. The hollow interior by which it was attached to a peg and to the wall must have been well toward the back of the head and neck. The deep, semi-circular depressions on both sides of the nose above the nostrils are unglazed, and were apparently intended for a decorative inlay. The glaze is the usual green, and the ware is characteristic of the type. The object is the only one of its kind found.

The small, glazed bird (Pl. 110, B) can claim no great artistic distinction. Its stout base shows that it was broken away either from a stand (cf. Pl. 101, H), or from the rim of a vessel. In view of the latter possibility, which is the more likely, it should be compared with the bird decorations on the votive vessel, Pl. 113, B. Its chief claim to distinction is the rarely encountered white glaze with which it is covered. The fragment of another shows that at least two existed.

Sculpture in stone. This category is represented by a single and not too distinguished example, a ram's head (Pl. 112, A) in white limestone. Other than the typical curve of the sheep's nose, and the forward-curving horns, there is little to show that any special animal form was intended. No effort was made to show either the eyes, ears, nostrils, or mouth. The rear is that of a plain, naturally rounded boulder, showing that the piece as a whole existed singly, without a body of the same material and with no form of attachment to a body of a more perishable substance.

²¹ The photograph (Pl. 112, B) was taken before the surface was completely cleaned.

In spite of its crude appearance, the work is not unskillful. It is of interest because of the extreme simplification and elimination of detail which reduces it to a mere symbol of a recognizable animal form. Both its location and its relation to the sheep's head of Temple A show that it was a votive object.

Also to be considered, although it does not strictly belong to this group, is the limestone frog (Pl. 103, J) previously mentioned among the animal figurines. Its accomplished stylization is evidence of considerable ability in working in this medium. The prevalence of the frog among the zooform beads of the Ishtar unit of Temple A associates this with the same cult. The small stone object, shaped and fluted on both sides, in simulation of a living shell-fish (Pl. 121, H), is a surface find. Since it has no parallel, it can only tentatively be ascribed to Nuzi.

Sculpture in metal. The major examples in this class, the statuettes (Pl. 101, G; Pl. 102, C, D) and the offering stand (Pl. 114, E) have been dealt with separately under those headings. One need only mention again the rather crude animal figurine (Pl. 103, I), and two tiny rams' heads, broken away from their bodies and too disintegrated to allow more than bare identification.

Offering stands. The offering stands within the Nuzi period show a direct and continuous growth from those of Ga. Sur, and in many respects they retain the same general features. In all but the house-shaped stands, they show a marked increase in height and complexity.

Pl. 115, D, from the late transition period, is the base of a stand identical with those of Ga. Sur (Pl. 54, C, D), and shows a persistence of the type well into the period of Hurrian occupation. Pl. 114, F, from the same level, is the first of the early Nuzi type, and shows the elaboration of detail inherited from the earlier period. Since the shape was never found in Ga. Sur and was common in varying forms in early and middle Nuzi (Pl. 114, D; Pl. 115, B, C), it may be assumed that it is more a Nuzi than a Ga. Sur type. Unfortunately, none was found complete, and it is uncertain whether the cylindrical or the bulbous end was the true base. The direction of the triangular windows is of no help in this matter since on the same piece they are sometimes found pointing in both directions (Pl. 115, C).

Pl. 115, B is one of two with a pierced partition separating the two sections, suggesting that they were used as braziers as well as stands. They are of interest not only as the only ones of the middle Nuzi type having but one series of windows, but because these open-

ings are the only oval ones found in the earlier period of Nuzi. Pl. 115, C, with its decoration of indented raised bands, is strikingly similar to the bases of two offering stands found within the transition period (Pl. 61, C; Pl. 62, A) which also show the beginnings of triangular openings. It is quite probable that the latter are the answer to the position of the later stands. Certainly they are bases, and certainly they are closely related in type to Pl. 115, C. In view of this relationship, it is apparent that the open cylindrical end of the middle Nuzi examples can only be the top.

These bases of the transition period are thus shown to be of Hurrian manufacture and a direct development from the simpler Ga.Sur form of Pl. 54, C, D.

The comparatively large number of these stands found is not indicative of a newly introduced custom, and it may be taken for granted that their use dates back long before the arrival of the Hurrians at Yorgan Tepe. Whether the similarity to those of the earlier culture means an adaptation by the incoming Nuzians of Ga.Sur objects serving the same purpose, or whether it points to the equally acceptable possibility of a common origin for both, is an unsolved problem.

They are, without doubt, votive objects—stands on which bowls were placed containing offerings to the temple. Except in N120 they were found exclusively within the temple area. Other than in variation of outline and the indented bands about the body, they are without decoration. All are wheel-smoothed, and of a clay like that of the pots. Owing to excessive firing, Pl. 114, D was reduced to a green color and to the extremely friable texture seen in terra-cotta when subjected to great heat.

No terra-cotta stands of this type were found in late Nuzi. Their complete absence from the relatively intact Temple A cannot be pure accident, and points strongly to their gradual disappearance.

The two related and unique Stratum II pieces in unbaked clay and in copper (Pl. 114, B and E) show great simplification from the earlier Nuzi type. Both are completely open at top and bottom; both gradually decrease in diameter as they approach the top; both are pierced over a relatively large area of their sides; and both have a larger opening in the base to serve as a draft vent when the object was used as a brazier. Moreover, both have the same solid proportions, which, in conjunction with the other similarities, mark them as being for the same purpose, though of radically different materials.

The stand of unbaked clay (Pl. 114, B) was found in Temple A, and is of interest not only because of its unusual material, but because of the use of circular rather than triangular openings.

The copper stand (Pl. 114, E) came from one of the rooms constituting the palace chapel. It is the largest and most pretentious copper object found in Nuzi. The three couchant lions on the rim, each with its tail curved over the back and down the left side, are reminiscent of the terra-cotta lion statues. Although badly corroded, they still preserve an appearance of sound modelling, and give the piece a distinction not equalled in any other.

Unfortunately, the piece is not complete. On top of the rim, midway between each two lions, is a space 4 cm. long, showing clearly as a break. What was attached at these points is uncertain. It is unlikely that they mark the joints where additional figurines were attached, for the least corroded of the remaining lions shows attachment only at the front and back, with no contact with the rim in between, while these breaks show an attachment to the rim for the full 4 cm. Moreover, if they were figurines like the remaining ones, it is unlikely that every other one would have broken off with such regularity. It seems certain that whatever was originally here extended to some height, making possible the leverage by which a break could be made so close to the rim. That all are identically broken suggests that each was connected to the other, perhaps as a solidly attached bowl above the portion that now remains.

The piece appears not to have been cast, and the irregularities of the openings are, no doubt, due to the difficulty of working the material. It will be noted here that upward and downward-pointing triangular openings are used alternately on the same piece. The object is in good condition, considering the thinness of its walls (2.5 mm.); only the surmounting lions have suffered materially from corrosion.

The house-shaped offering stand (Pl. 113, A) is of particular interest as a survival from the early type of Ga.Sur (Pl. 61, B). Like the development of all Nuzi objects of earlier origin, there is a strong tendency toward simplification and an increase in the prominence of the practical features. Thus, in this case, we see an object that is primarily an offering stand in contrast with that of Ga.Sur which is primarily a house model. Continuing the contrast, the house portion is reduced from at least three stories to one story; the circular stand is given great prominence in contrast to that supposedly surmounting the Ga.Sur object; and the decoration is geometrical rather than realistic. It is too far-fetched and too much at variance with the custom found in use to suppose that the impressed circles represent wall-nails.

In spite of the simplification, this object retains features which are essentially architectural. The battlements along the edge of the roof

can hardly be called a retention of an early feature seen in the Ga.Sur model so much as an inclusion of an architectural form common to both periods. The top of each of the four corner battlements is vertically pierced to a depth of 5 mm., for the insertion of some object now gone. An identical practice is seen in the votive(?) vessel Pl. 80, E.

Another feature essentially architectural is seen in the rafters, two of which project on each of the four sides at both upper corners of the wall. It is uncertain whether the three notched, moulded strips that rise vertically about each corner are simulations of a structural feature for the protection of the corners of a fragile, mud-brick prototype, or whether they are purely decorative.

Like those of the Ga.Sur model, each opening is separated from the base by a high sill, and is essentially a window rather than a door. In this respect it is clear that the potter was following a traditional model. The actual excavated dwellings showed no such preponderance of high door-sills, and no windows whatsoever.

The top is wheel-turned, and was attached to the modelled lower portion before baking. The decoration is punched with a hollow tube or reed. The surface is but roughly smoothed, and the ware is of the ordinary coarse yellow-gray. It is the only object of its kind from the Nuzi levels, and although it was not found in the temple, it was undoubtedly for votive use.*

That class of objects more correctly called "offering tables" than "stands" is represented by three distinct types, each of which is unique. The first is a two-part trough (Pl. 113, B) with crudely modelled birds perched around the rim. The pillars that rise at each corner broaden out at the top into small, shallow bowls, and, apparently, were containers like the two main compartments of the vessel. The object is crudely made of the usual ware, without special surface smoothing, and is of interest primarily because of its unique character. Like the Nuzi house model, it was not temple furniture, but a votive object used within a private house. It should be compared with Pl. 80, E, whose vertically pierced corners form a link between the house model and the bird-decorated trough. Similarly, the use of animal forms about the rim relates it to the copper stand (Pl. 114, E), and the conspicuous presence of birds among the animal forms seen in the beads of the Ishtar section of Temple A relates this votive object to that cult.

The second type (Pl. 115, A) lacks the central and main containers of the first example. The base is a circular ring open to the ground below. From this, at equidistant points, high-footed, shallow bowls

rise, the rim of each united to the next not only by the green glaze that covers the whole piece, but by an actual joint in the clay. One higher bowl, and the breaks of others, remains to show that from the junction point of the rims of the contiguous bowls of the lower tier, others arose to make a second series of identical superimposed containers. Moreover, the one remaining bowl of the upper series is broken at the rim in such a way as to show that a third tier existed even above this. It is a piece unique in conception at Nuzi. Its location in a private house, its glaze, its unusual character, and its relation to Pl. 113, B, show it to have been a votive object used within the home. The glaze is the same as that of the wall-nails, and the ware is similar to that of the glazed objects of the temple.

The third type is in the form of a stag (Pl. 114, A), from the back of which rises a high-footed, shallow container not unlike those of Pl. 113, B. The figurine is crudely made and undecorated. The many branches of its one remaining antler are probably simulations of those of the Persian red deer, whose horns have been found in the houses of Nuzi. The container and the animal form relate the piece to Pl. 113, B; Pl. 114, E and Pl. 115, A. It, too, was a votive object used in a private house.

It is of distinct interest that whereas the offering stands, with but few exceptions, are restricted to the temple, all the offering tables come from private houses. The implication is that only the stand was a permanent fixture of the temple, and that he who brought an offering also contributed the bowl which the stand was indented to hold. For use within his own dwelling, the householder could conveniently combine both stand and container in one object.

The pillar-shaped offering table(?) (Pl. 114, C) is of doubtful authenticity. Although found in the street directly outside the north-eastern door of Temple A, its general form and its proximity to an intrusive Late Period grave casts a doubt on its classification as Nuzi. The shallow container on the top is stained black as though from continuous burning of an oily substance. If really Nuzi, it is unique both in shape and in use.

*The character of the glaze.*²² The glaze found most frequently on objects connected with the cult is, for the most part, a friable substance bluish-green in color. The term "green glaze" used throughout the text applies not to the original color, but to the present color of the vast majority of specimens. Occasional spots protected by an early

²² For further information, see Appendix B.

surface encrustation of salts show the original color as blue rather than green. Many of the large glass beads, which to all appearances are green, retain a core of sound blue glass. A few of the fragments of glass vessels are exceptionally well preserved, and the blue of Pl. 128, A may be taken as the most reliable example of this original color, both for glaze and glass. The change in glaze from blue to green is the first step in the process of disintegration. The second step is an irregular fading to a dull, neutral gray, and the third is the gradual change to white, distinguishable from the genuine white glaze by its granular texture and its lack of brilliance and cohesion.

Since the blue glaze and glass, except in a few rare instances, is found today only in the green and the greenish-gray stages, it will be referred to as green glaze and glass rather than by the original lost color.

As pointed out earlier, in the discussion of Temple A, it is probable that glaze was restricted solely to temple objects or vessels devoted to cult use. It is a copper glaze, of a bluish-green color when first uncovered, which quickly fades in intensity in the deteriorated portions when exposed to light and air. It is applied directly over the wheel-finished or hand-smoothed surface, without a slip of more silicious material separating it from the already sandy body. The glaze does not penetrate the terra-cotta, but its adhesion even now is good, except where crystallization of salts has peeled it away. Long burial has decidedly different effects upon different portions. Some remain sound and glossy, others peel away, leaving the clay bare. In the majority of specimens, although a green color is retained, the glaze has become soft and friable, crumbling away unless it is first thoroughly treated with a fixative.

Two other less common colors were used in Nuzi glazes. The first is yellow, which in application, wear and weathering, is the same as the green. The second is rare—a thick, white glaze with a comparatively dull finish, and of excellent lasting quality.

No glaze was found earlier than the time of Temple B, and we may assume from its complete absence previous to this time that it was an art of late introduction.

CLAY

Considering the insecurity of unbaked clay and the relative ease with which it may be turned into terra-cotta, it is not surprising that it is seldom used for objects of daily use. Other than as a building material, its only extensive use is for inscribed tablets (Pl. 32, A; Pl. 118, I), for which, because of its plasticity, it is ideal. The tablets

were never baked, except where the fire which destroyed the building accidentally changed them to terra-cotta. They were often stored in pots, and in other instances their association with copper nails suggests that they may also have been stored in wooden boxes. The frequent presence of tablets disassociated from either pots or boxes shows that they were often denied even this protection.

The clay from which they are made is highly purified, and is without any visible quantity of sand. Experiments show that a very liquid mixture of common clay and water placed in a porous Nuzi jar will yield a top layer of clay of this quality, after the water has seeped away or evaporated. However, it is unlikely that such measures were resorted to, except in midsummer. After a rain-storm every dried-up puddle produces similar clay, just as pure, which, after exposure to a day or two of sunlight, cracks away in a clean layer from the coarser clay below. Such purified clay has considerably more tensile strength than that containing sand or humus.

Next in frequency are the clay pot-sealings by which the contents of a vessel could be identified by an imprint of the owner's seal, and, if necessary, by a notation of the material and quantity stored. The frequent impressions of cords and twigs on the back of these sealings imply that they sealed the binding which held the cover, rather than the cover itself. The clay is of the same quality as that of the tablets.

In less purified clay there are a considerable number of pot-lids (Pl. 95, C, D), spindle whorls, and rare occurrences of crude basins, small tripod plates, and tiny clay containers (toys?).

Cooking stands (Pl. 118, C) were found in only two instances: one in Temple C, and the other—a pair, side by side (Fig. 32), with ashes between—in the very early Nuzi levels of I10. Being of unpurified clay they are necessarily very fragile, and it cannot be determined whether their scarcity is due to initial absence, or to destruction by the falling walls and roofs of the destroyed buildings.

Loom-stands (Pl. 118, A, B) are somewhat more common, although less than a dozen were found altogether. The characteristic feature consists of the two projecting horns at the top, forming a saddle in which the cross-bar rested. Deeply pressed holes on the side (Pl. 118, A) gave a grip by which it could be moved, instead of being shifted by its fragile horns. As stated in greater detail in the description of similar objects from the prehistoric period (Pl. 39, Z), the attribution "loom-stand" arises from their similarity to loom-stands used in the present-day, primitive Arab looms (Pl. 30, B). There were no indications to show that these served a ritualistic purpose. The Nuzi stands

are roughly modelled, and the partial purification of the clay accounts for their preservation.

CYLINDER SEALS AND SEAL IMPRESSIONS

The number of seals and seal impressions of the Nuzi period is so great, ranging through so large a variety of form and design, that they must necessarily be excluded from this account. It is hoped that the future will see the publication of a work exclusively devoted to this most interesting phase of Nuzi art.

However, typical examples of the three major types are illustrated in the plates. By far the most common are those which have become known as typically Nuzi, shown in Pl. 118, D, E, G, H, and Pl. 119, C. They are characterized by a prevalence of animal forms in which studied naturalism in the individual figures is sacrificed in order to allow for the most graceful and pleasing arrangement of the whole. They show a marked aversion to blank spaces between the principal figures, while horizontal lines, in most cases, frame the top and bottom of the design. Although sometimes in stone, they occur most frequently in white or blue frit.

The second, much less common type (Pl. 119, D, E), is one in which the familiar animal forms give way to human figures done with an attempt at realism, and is totally unlike the first group. Those few found in seal form are invariably made of stone. They are so different in feeling from the true Nuzi seals that one cannot help believing that they are the products of a people of different racial antecedents from the rank and file of Nuzi dwellers.

It is of interest to compare these with the seal impression of Saush-shattar, King of Mitanni (Pl. 118, I). Although a comparison between the seals of common individuals and that of a king is perhaps unfair, it will be noted that the latter has none of the gentle, imaginative grace of the true Nuzi seal, but rather that it corresponds closely in its graphic realism to the second group. Consequently, one is tempted to link this group more with the governing Mitannians than with the native Hurrians.

Pl. 119, A, although found well within the Nuzi period, is undoubtedly of earlier origin, and should be compared to the seals of Ga.Sur and similar cultures.

Pl. 119, B is a seal impression from early Nuzi, and appears as an interesting combination of Ga.Sur and Nuzi traditions. The attacking lions are surprisingly similar in feeling to those of Pl. 119, A, while the lesser animal forms already show the features characteristic of the

later Nuzi seals. The human mask is a feature not found repeated anywhere else in either period at Yorgan Tapa.

The third class is so completely unlike either of the other two that it is difficult to see any relation between them. Sometimes in stone (Pl. 119, F, H), but usually in sun-dried clay (Pl. 119, G), they are always incredibly crude, and often almost unintelligible. However, foreign as they are, they show certain elements of design in common with those of Nuzi. The sun and moon symbols, and the figure on a lion's back (Pl. 119, G), as well as the tree-of-life (Pl. 119, H), are all decorative motifs known and used in the more sophisticated work. The hunting scene (Pl. 119, F) is the most graphic of all, and gives the impression that here at least a scene was being portrayed with which the maker was certainly more intimately acquainted than the commercial and agricultural people of Nuzi could have been. Undoubtedly, these are the seals of a people infinitely more primitive than the Hurrians, though they held in common with them certain religious motifs and beliefs. The hunting scene gives the impression that they were essentially hunters. Such a life in the flat land about Nuzi, arid even then when not irrigated, would have been impossible. Successful hunting demands cover either of vegetation or if irregular terrain. Since there is no reason to believe that the surrounding country was much more wooded than it is now, this would limit the hunters to the Kurdish hills northeast and southeast of Nuzi. It is not at all impossible that the makers of these crude seals came from this perpetually backward region.²⁸ It is worthy of note that no hunting scenes are depicted on any of the seals or impressions of the first two groups.

The primitive seals are relatively rare at Nuzi, indicating that their owners made up only a small part of the population of the city.

BEADS AND AMULETS

Beads were common throughout all the Nuzi buildings, and were found in vast numbers in Temple A. Those from the temple are known to have been used as architectural, rather than personal, adornment. Their various possible uses in temple decoration have been discussed in the description of Temple A, and need not be repeated here. It need only be added that there is no possible way of telling to what extent beads were used as mosaics set in the soft *libin* (Pl. 119, K₁), for the majority of those found actually in place were pierced exactly as though they had been intended for stringing.

²⁸ Cf. *Délégation en Perse*, tome vii, figs. 61, 64, 65, and pl. xxii, no. 4.

The vast majority of beads were of a composite material falling into the following classes:²⁴

1. *Green glass.*²⁵ The most common of all; usually in very bad condition; powdery on top and preserving its glass-like texture only in the interior of the larger pieces. The color in the better preserved specimens is the same as that of the green glazes, and is more like the glass of the Aegean of slightly later date than that of Egypt. The color is due to the presence of copper. Owing to its present almost universal green or greenish-gray color, it is referred to as green glass. The original color, however, was a deep blue, like that of Pl. 128, A. In the few specimens in which a sound core of glass still remains, this color is perfectly preserved. In cases where the texture has been well preserved, but where the color has faded even more, it is often very difficult to tell green glass from white, except where a break reveals some color in the interior.

2. *Yellow glass.*²⁶ Uncommon as whole beads, except in the very small specimens of spherical shape. It is widely used as an overlaying color for decorating beads of green glass. It is usually in very bad condition, and preserves none of its glass-like appearance even at the core. It is of the same color as the yellow glaze, and the color is due, probably, to ferric oxide.

3. *White glass.* Common in the smaller zoof orm beads; its preservation, in most cases, is good. The deterioration showing in its soft, chalk-like texture resembles more the granular corrosion of the yellow glass than the flaking of the green. It is identical in appearance and texture with the white glaze. Not infrequently it is used as a base over which a thin, even coating of green glass is placed. In such cases, the greater strength of the white is obtained, while only the desired green color is apparent. This is particularly common in the large fluted and plain spherical shapes.

4. *Frit.*²⁷ Fully as common as the white glass, it is found particularly in flat and smaller zoof orm beads. Its almost exclusive use in the very flat forms (Pl. 120, D, H, T) suggests a greater tensile strength than the glass. The color is gray-blue, and the texture is slightly less chalky than that of the white glass.

²⁴ The identification of all these materials except black glass is due to the kindness of Horace C. Beck, Esq., whose microscopic examination of specimen types has been of great value.

²⁵ Its stages of disintegration are identical with those of the glazes.

²⁶ See Footnote 25.

²⁷ For a detailed analysis, see below under *Glass and Frit Staff and Mace-Heads*.

5. *Black Glass*. Rare in whole beads, except in the very small fluted spherical varieties (Pl. 120, W) and in the animal beads (Pl. 120, BBB, CCC). The color is a deep gray verging into black, and the texture is slightly more granular than the white glass. The degree of preservation is, on the whole, slightly better.

6. *Red frit(?)*. Very rare. Found only in the knobbed beads (Pl. 120, Q), and the plaque Pl. 121, B. The condition is good; and, though friable, it is more granular than chalky.

To illustrate each of the bead variants would make this work unnecessarily voluminous. Consequently, only the major types are shown. These will be described briefly along with a notation of the chief variants not illustrated.

Pl. 119, K₄₋₅. Plan and section of an eye bead used as a mosaic in K₁, and representing Nos. 1, 2, and 8 in K₂. A green body, with white inlaid circle; common type.

Pl. 119, K₆. Green barrel bead with spiral of inlaid white; very common shape; relatively common decoration. No. 5 on K₂.

Pl. 119, K₇₋₈. Plan and section; most realistic of all the eye beads. Green body on which the white rims and iris (shown in black) and green pupil are modelled in low relief; very rare. Nos. 4 and 6 on K₂.

Pl. 119, K₉₋₁₀. Plan and section; eye bead; green body with white ring on surface; unpierced, and because of this, rare. Nos. 3 and 7 on K₂.

Pl. 119, L. Eye bead; green body; two white rings on surface; uncommon.

Pl. 119, M. Double eye bead; green body; white ring inlaid on each section; relatively uncommon.

Pl. 119, N. Eye bead; square plan with rounded surface; green body with white inlaid ring; rare.

Pl. 119, O. Eye bead; green body; white ring well down toward the base; a common variant.

Pl. 119, Q. Large eye bead, pierced at four points vertically through the edge; green body with white inlay over the whole center; because of the piercing it is very rare.

Pl. 119, R. Large eye bead; green body with white inlaid ring. The ridge at the back allows the piercing to be farther toward the base and less conspicuous than would otherwise have been possible in so thin an object. Rare, because of its size and piercing.

Eye beads range in diameter from 12 to 55 mm.; the shapes and sizes of Pl. 119, K₄₋₅ and O are the most common. Infrequent speci-

mens of green glass beads identical in shape with the average eye bead, but lacking inlay or relief to indicate the eye structure, may be considered as more conventionalized forms of the same type.

A unique specimen was found in the house of Shilwi-teshub: a large eye bead (cf. Pl. 119, K₉) of multiple composition in which the base and lower sides were in the form of a thin, shallow copper cup. From this the main body of the bead, in green glass, rose in the usual mound-like shape. Into this upper surface was set a flat ring of sheet-gold in the same position as the circle of different-colored glass inlaid in the ordinary eye bead.

Pl. 119, P. Disc bead with modelled design; probably a conventionalized sun disc; green glass; unique.

Pl. 119, S. Mosaic bead; unpierced; white glass with trace of an over-coating of green; unique.

Pl. 119, T. Polished brick-red stone bead; unique in this material. Two of the same shape with both arms complete were found in white glass.

Pl. 119, U. A variant of the preceding type; white glass; unique.

Pl. 119, V. Mosaic bead; unpierced; green glass; unique.

Pl. 120, A. Rectangular bead; section roughly square; common in both white and green glass.

Pl. 120, B. Cylindrical bead of very common shape, but unprecedented both in size and in the grooves at the ends; white glass, with traces of an over-coating of green.

Pl. 120, C. Barrel bead; an exceedingly common type ranging in length from 7 to 33 mm. The proportions vary in each case, with the example illustrated as the average; found in green, yellow, and white glass, frit, and stone. The larger specimens are mostly of green glass, the smaller being preponderantly white, with a minority of yellow. The frit specimens are of medium length, and tend toward greater length in proportion to their diameter. The green glass specimens are frequently decorated with spirals, dots or loops of white or yellow inlaid glass. The shape gradually merges into the equally common plain cylindrical, in which the same distribution of sizes and proportions is found.

Pl. 120, D. Flat, parallelogram-shaped bead of blue frit; unique. This shape, though uncommon, is found also in green, yellow, and white glass without the modelled hubs. Those of green glass frequently have hubs not in relief, but of inlaid yellow glass (Pl. 120, J).

Pl. 120, E. Ribbed, barrel-shaped bead; green glass body, with chevron design in inlaid white; incomplete; rare.

Pl. 120, F. Flat, spherical bead; inlaid stripes of black on white; sound condition; probably intrusive; unique.

Pl. 120, G. Hubbed, spherical bead; body of green glass; hubs of yellow glass. Yellow hubs are also found on smaller spheres of white. Hubs frequently occur on spherical and bi-conoid, ribbed glass and frit beads in the same material as that of the main body. One similar example was found in black glass. Hubbed beads vary in diameter from 4 to 18 mm. The specimen here illustrated is unusually large; 8 mm. may be considered the average diameter. They are uncommon.

Pl. 120, H. Disc bead; most frequent in blue frit and less common in white glass; one example in the rare red frit; never found in green or yellow glass, except in much thicker variants resembling unmarked eye beads. The bead is thickest along the center ridge through which the hole passes, and tapers to a very thin edge at opposite points on the perimeter.

Pl. 120, I. Rectangular bead edged with rope design; three piercings; white glass; unique.

Pl. 120, J. Type described under Pl. 120, D; green glass body with yellow hubs. It is uncertain whether the irregular dark striations are intentional or whether they are the effect of decomposition, showing the kneaded state of the original paste. The same is seen in Pl. 120, M, and is visible only on much-faded green glass.

Pl. 120, K. White limestone bead; barrel-shaped; ringed and pitted to simulate the design seen on some of the inlaid glass beads (cf. Pl. 130, L); unique.

Pl. 120, L. Green glass bead; parallelogrammatic plan; triangular section; lightly incised design; an uncommon shape seen in both green and white glass; design is unique.

Pl. 120, M, N. Spherical beads; the most common of all the types at Nuzi; found in the greatest quantity in green glass, then in yellow glass, frit, white glass, and stone. The diameters vary from 3 to 22 mm., although both limits are unusual. The most common sizes are those between 8 and 11 mm. Few of the examples are true spheres.

The vast majority are plain, but many of those in green glass are decorated. Single or multiple bands of white are most common, the separate bands sometimes merging, and showing signs of having been hastily done. Another common motif is that of from two to four dots of yellow—usually solid color, but sometimes as hollow circles—placed consecutively on the upper and lower half of the bead. Much less common is the zigzag line in yellow around the body of the sphere.

Pl. 120, O, P. Saddle-backed beads; occasionally found in green

glass, and usually in white; a deep depression in the center on one side exposes the piercing, and gives the effect from that angle of two beads together; rare.

Pl. 120, Q. A knobbed bead; very small and not varying in size; invariably made of the rare red frit; uncommon.

Pl. 120, R. A fragment of green glass; pierced; made by winding a ribbon of plastic glass around a central stake. It is difficult to tell whether this is its final form, or whether it is all that is left of a bead which outwardly was of conventional shape.

Pl. 120, S. A multiple bead simulating six separate strands; doubly pierced; green glass; one of two found.

Pl. 120, T. Rectangular; flat; oval in section; found occasionally in white glass, but most often in frit; uncommon.

Pl. 120, U. Marble; fluted, spherical bead; unique; possibly intrusive.

Pl. 120, V. Rectangular, ribbed bead, with twisted rope pattern on each rib; green glass; common shape; unique application of design.

Pl. 120, W. Triple, ribbed bead; black glass; found only in this material in double and triple form; rare.

Pl. 120, X. Stone; surface find; probably prehistoric.

Pl. 120, Y. Pendant in plant-bud form; white glass; unique.

Pl. 120, Z. Pendant; white glass; rare.

Pl. 120, AA. Hubbed cylindrical bead; yellow glass; decoration of circular indentations between horizontal incised lines; of uncommon shape and rare decoration.

Pl. 120, BB. Faceted bead; white glass; unique.

Pl. 120, CC. Hubbed spherical bead; white glass; sides pierced by three holes above and below the center line; lines are incised; unique.

Pl. 120, DD. Large ribbed bead; green glass; unique.

Pl. 120, EE. Marble pendant sphere; unique piercing for the Nuzi period.

Pl. 120, FF. Pendant; blue frit; base incised with a cross. Two or three others roughly similar in shape and of green glass were found. One is of particular interest in that the eye, instead of being a part of the material of the bead, is of copper, and was set into the top while the paste was still soft.

Pl. 120, GG. Astragalus bead; three examples found; one each of white glass, yellow glass, and blue frit.

Pl. 120, HH. Arrow-head pendant; green glass; unique.

Pl. 120, II, KK. Female symbol pendant; green glass; only four

found—all in the Ishtar section of Temple A. KK is pierced near the top for suspension.

Pl. 120, JJ, MM. White limestone pendants; unique. The remarkable similarity between Pl. 120, MM and the Cycladic stone figurines (Pl. 57, X, etc.) suggests that these two pendants are but variants of those figures.

Pl. 120, L. Body of couchant lion (?); white glass; unpierced; unique.

Pl. 120, NN, OO, XX. The three principal forms of decorated sun-disc pendants; only found in green glass. Although varying somewhat in the representation of the separate details, they never stray from the three main features—the sun in the center, the eight radiating rays, and the dots between each ray. The decoration is invariably in raised relief. The partial piercing of OO is an unusual feature. As a group, they are relatively uncommon. Compare with the simplified form, Pl. 120, WW.

Pl. 120, QQ. Stone; surface find; probably prehistoric; unique.

Pl. 120, RR. Human head; green glass; unique. One other in the same material in fragmentary form was more naturalistic in its execution. In this same class should be noted the green glass Ishtar figurines from G29 and G50 of Temple A, similar, though in miniature, to the terra-cotta figurines of the type shown in Pl. 99, R. Unfortunately, none was sufficiently complete or well preserved to allow for more than identification of the general type.

Pl. 120, SS. Bird bead; found in green glass, white glass, and amethyst. Those of the first two materials often have the eyes inlaid in yellow glass; rare. The presence of the bird among the animal forms in the Ishtar section of Temple A is of interest, and gives an added significance to the bird-decorated votive vessel of Pl. 113, B.

Pl. 120, TT, UU, VV. Fly beads; found in equal numbers in both blue frit and white glass; seldom in yellow glass; never in green glass, except in a squat, even more conventionalized form than Pl. 131, E. The most common of the zooform beads, they are found in a variety of forms, of which the most extreme are seen in TT and VV. The similarity of the latter to the crescent would not allow their inclusion in the fly bead class were it not for a complete series showing their gradual development from the most realistic type seen in UU. Commonest of this class is that type so conventionalized (Pl. 131, E) that the wing division and the incised or accentuated head have entirely disappeared. Decoration seldom goes beyond the demarcation of the head seen in UU. Rare cases show two double incised lines passing diagonally over the back, crossing each other in the center.

Pl. 120, WW. Plain sun-disc pendant, a conventionalized form of the more elaborate type seen in Pl. 120, NN, etc. Found only in green glass; common.

Pl. 120, YY. Ram's-head pendant; only found in white glass; modelled in high relief and in conventionalized form. The base is incised with two parallel lines to differentiate the horns from the body. Between this, a long V pointing beyond the nose simulates the line of the lower jawbone, and is often conventionalized to a long X within the same area. Uncommon.

Pl. 120, ZZ. Animal bead of doubtful species. Its general shape and coat is not unlike those of the small hedgehog found in the region today. The surface is shown either as rough and knobbed, or, in the cruder cases, by a grid of deeply incised lines over the whole back. Found only in white glass, and in blue frit (infrequent); no great variation in size; uncommon.

Pl. 120, AAA. Frog bead; next to the flies in popularity among zoo-form types; found in blue frit and in white glass, with the former predominating. Pl. 120, AAA is done with a realism not found in any others, except the single stone example, Pl. 131, G. The majority vary little from Pl. 131, F. The length varies from 5 to 9 mm.; common.

Pl. 120, BBB. Lioness pendant; found only in black glass; uncommon.

Pl. 120, CCC. Bull's(?) head pendant; found only in black glass; uncommon.

Pl. 120, DDD. Horse's(?) head pendant; white glass; unique.

Pl. 121, B. Plaque of red frit inlaid with design in blue frit; pierced at both sides through the edge; compare piercing with that of Pl. 119, Q, and Pl. 121, C. Unique in its combination of materials. The design should be compared with that of Pl. 119, P.

Pl. 121, C. Marble plaque; pierced at the edges in the same manner as Pl. 121, B; unique.

Pl. 121, D. Large, flat, rectangular marble bead(?); highly polished; unique.

Pl. 121, E. Pink stone; edges serrated by incisions extending to the edge of either face; unique.

Pl. 121, F. Flat, shell bead; large hole; relatively uncommon.

Pl. 121, G. Shell plaque in flower design; pierced only in the center; back undecorated; compare design with Pl. 121, B; Pl. 119, P and Pl. 120, NN, OO, XX; unique.

Pl. 121, I. Mosaic bead; unpierced; polished diorite; incised pattern on face; reverse rough; unique.

Pl. 121, J. Mosaic bead(?); black slate; oval in section; use uncertain; unique.

Pl. 130, E. Flat, rectangular ribbed bead of blue frit; found in large numbers in green glass; smaller quantities in blue frit, and only occasionally in white glass. The number of ribs ranges from three to seven, with four by far the most common. All are doubly pierced except those with three ribs, which have triple piercing. This differentiation shows that the variant was the converging point of three separate strings of beads, rather than the usual two. The distribution of size is fairly equal between the two limits of 9 and 26 mm. in over-all measurement; common.

Pl. 130, F. Same as above in green glass.

Pl. 130, G. Cylindrical bead with circular ribs around the body, giving the impression of a continuous string of small, partly spherical beads; green glass; rare.

Pl. 130, H. Barrel bead of abnormal thickness; green glass body; yellow glass inlaid at ends; uncommon.

Pl. 130, I. Fluted spherical bead; blue frit; found most commonly in plain and green-coated white glass; less commonly in blue frit, occasionally in yellow glass, and rarely in black. The sizes range from 3 to 16 mm. in hole length, with the example shown here the most common. Those varying from this size are apt to be smaller than Pl. 130, I. As in the plain spherical bead, the length of the hole tends to be less than its right-angle diameter. A common type.

Pl. 130, J. Fluted spherical bead with hubs; yellow glass; an uncommon variant of the preceding type. Found in the smaller sizes of the preceding type, in white and yellow glass and blue frit; uncommon.

Pl. 130, K. Yellow glass bead; octagonal section; unique.

Pl. 130, L. Cylindrical bead; green glass body decorated with inlaid lines and dots of white and yellow glass; an unusually elaborate decoration. The shape is the most common of all except the spherical, and the one in which there is the least uniformity of proportion and size. The following six specimens picked at random show the great variation in both size and proportion.

	Length	Diameter
White Glass	5 mm.	25 mm.
Blue Frit	15 mm.	3 mm.
Yellow Glass	2 mm.	5 mm.
White Glass	17 mm.	7.5 mm.
Blue Frit	53 mm.	9 mm.
Green-covered White Glass (Pl. 120, B) ..	39 mm.	23 mm.

However, it is safe to say that Pl. 130, L is the most usual proportion and the most general common size. The majority are of green glass; next in quantity comes blue frit and white glass; and last, yellow glass and stone. Green glass beads are occasionally decorated as in Pl. 130, L; Pl. 130, O; Pl. 131, C, or with yellow tips (cf. Pl. 130, H). It is not uncommon to find the same carelessly made circular lines of white inlay about the cylinder as seen in the spherical beads. These lines, sometimes separate, often merging, and seldom ending where they begin, have the appearance of having been hastily applied with a crude brush.

Pl. 130, M. Fluted bead. White glass, green coated; a variant of Pl. 130, I; often found with hubs (cf. Pl. 130, J); found in blue frit, white glass, and, rarely, in yellow glass; uncommon.

Pl. 130, O. Green glass body faded to gray, with dark striations; inlaid with a spiral of yellow glass; a common shape; uncommon decoration.

Pl. 131, C. Cylindrical bead. Yellow inlay on green glass body; rare decoration; common shape.

Pl. 131, D. Flat lapis lazuli ornament; unpierced; use uncertain; unique.

Pl. 131, E. Blue frit fly bead; conventionalized; see description under Pl. 120, TT, UU, VV.

Pl. 131, F. Blue frit frog bead; see description under Pl. 120, AAA.

Pl. 131, G. Stone frog bead; unique.

Pl. 131, H. Gray-veined stone pendant; pierced longitudinally at the top; one of two found.

Pl. 131, I. Mottled brown stone bead; rectangular plan, oval section; uncommon in stone; identical to a shape seen in the composite materials (Pl. 120, T).

Pl. 131, J. Alabaster bead; uncommon shape.

Pl. 131, K. Translucent blue material; probably intrusive from a much later period.

Pl. 131, M. Dark green, veined stone bead; common shape and material.

Pl. 132, E. Deep red stone; veined yellow; common shape.

Pl. 132, F. Rough sphere of carnelian; common shape; less common material.

Pl. 132, G. Tan stone; white-veined; high polish; common shape.

Pl. 132, H. Carnelian sphere; exceptional regularity.

Pl. 132, I. Carnelian sphere; usual irregularity.

The vast majority of beads were so completely displaced that it is difficult to work out any positive or complete plan of their original stringing order. However, isolated groups and occasional compound beads help somewhat to clarify the situation.

The prevalence with which the large cylindrical glass beads were found unassociated with any great quantity of other types leads to the belief that they were used alone without spacers of a different shape. This belief was verified by the discovery of a relatively complete string (Pl. 31, B) in H33 of Temple A, which, except for two plain sun discs and a stone cylinder seal, was composed entirely of these beads.²⁸ Whether or not the two plain and one fluted spherical beads found nearby also belonged to the string is uncertain. It is quite possible, and probable, that they did not. At any rate, it is certain that spacers were not used between the bulk of the large cylinders.

A second type used without spacers is the eye bead. A single string of five (Pl. 30, C) was found, which, though somewhat disturbed, may be considered as being in its proper order. In this instance the central large eye bead is directly flanked on either side by two smaller beads of the same type.

A third type similarly used is the tiny white cylindrical bead. Its average dimensions are: length 1.5 mm., diameter 3 mm. Frequent groups of from two to eleven of this kind have been found together, in position. This same grouping is further indicated by the long cylindrical beads of the same diameter, ringed with circular incisions at 1.5 to 2 mm. intervals, to simulate a series of tiny beads. The same order for the small spherical beads is suggested in several of the compound beads (see the two outer rows of Pl. 120, S, and Pl. 130, G).

There is ample evidence to show that large and medium size spheres were used with spacers of smaller diameter. This is indicated by the construction of the hubbed beads (Pl. 120, G; Pl. 130, J; etc.), which are, in reality, a grouping into one unit of what originally had been three separate beads. This is more graphically shown by beads in position. In Pl. 30, D, reading from left to right, are the remains of two small cylinders, two spheres, one long cylinder, and two spheres.

A large number of examples were found in which the tiny spacer was still in place, wedged into the hole of its larger spherical companion. The spacers were, for the most part, also spheres, although occasionally cylinders of very small diameter were used. The majority are made of blue frit, with occasional ones in white and yellow glass, and one of the rare red frit. It is of interest that in none of these exam-

²⁸ See account of Temple A for further discussions and conclusions.

ples is there a spacer on either side of the main sphere. This implies the order already seen in Pl. 30, D, in which the spheres are in groups of two or more, with one or two spacers between each group. A related arrangement is seen in Fig. 40.

Except for the sun discs found with the cylinders of Pl. 31, B, there is no indication of how the zooform and more elaborate types were grouped.

The majority of beads were undoubtedly strung on thread or string. However, numerous examples remain to show that beads in other cases were strung on copper wire, square in section. This is found particularly in the cylindrical beads, small in diameter for their length and made of green glass, decorated with an inlay of yellow. This suggests that the more elaborate forms were strung in conjunction with the beads whose greater weight would demand stronger support.

Little remains to show the manner in which the beads were made. They were certainly formed of a material originally plastic and easily modelled, as shown in the modelling of the various zooform beads and pendants. Several of the partly decomposed large cylinders flaked away to a core like that of Pl. 120, R. The process of manufacture here is clear. A ribbon of plastic material is wound and shaped around a solid core which is afterwards withdrawn to make the hole. A few small, cylindrical beads in exceptionally good preservation show a clear, longitudinal joint where a thick sheet or ribbon of the original paste had been wound once around a core to make the complete object. The piercings in all the beads are of relatively uniform diameters throughout the greater part of their length. They show a tendency toward increased diameter only near the edges, and in the spheres they bell outward to merge evenly with the circular contour of the exterior.

PLAQUES

Two examples of plaques were found in the Ishtar section of Temple A. The first (Pl. 131, A) is a rectangular limestone blank, overlaid on the upper face with a thin coating of green glass into which is inlaid a design and border of yellow glass. The design, as such, is unfamiliar among the Nuzi decorated objects. It is, however, quite certainly a double-ended and highly conventionalized tree-of-life design of the type best seen on the wall paintings of L15B (Pl. 128, H; Pl. 129, D).

The second (Pl. 131, B) is of green glass inlaid with white overlaying a circular terra-cotta blank. The design in its separate elements has been found on the Nuzi beads, and may be considered as typical

of the period. Both plaques were found with the temple beads, but since they are unpierced they could not have been used in the same way. The undecorated backs show that they were to be seen from one side only, and it is likely that they were set into the soft clay walls in much the same manner as the mosaic beads.

GLASS VESSELS

The quantity of decorated glass vessels, limited though it is in comparison with the terra-cotta, is sufficient to show that such objects were by no means a rarity in Nuzi. Those fragments in the best state of preservation came from the great court and the rooms northwest of it in the palace. The temple was equally rich, but being closer to the surface the disintegration of its glass was much more advanced. Its occurrence in private houses was rare, and restricted to those of pretentious size and arrangement. Its quantity, distribution, and likeness of material and detail to the glass beads and plaques of the temple leave no doubt that it was of local manufacture.

Two causes contribute to the lack of complete information concerning the Nuzi glass. The first is, that its original fragility seemed to have been too great a temptation for the looters of the Stratum II city to resist. It was impossible, even by piecing together the sound fragments, to get one complete shape. One would expect these objects to be broken by the collapse of the ruined walls and roofs, but one would also expect to find the fragments of any one piece lying together. Since this was not so in a single case, it must be assumed that the glass was wilfully destroyed and scattered by the looters. The second contributing cause is the excessively poor condition of the fragments. Most of them were so fragile that they broke of their own weight, and many of them were too decayed to be of value even after a long and painstaking treatment with preservatives.

Four definite shapes are indicated. The first is a high straight-sided cup, its remaining parts not unlike the "high cups" of terra-cotta (cf. Pl. 78, P-S). This type (Pl. 128, C; Pl. 129, C; Pl. 130, C, N) is usually found with a moulded rim (Pl. 128, C, etc.). The plain rim (Pl. 129, C) was found in only two examples. In none of these was there any hint as to the lower body.

The second shape (Pl. 128, D) is suggestive of the small open-mouthed vases (cf. Pl. 75, B), and has the same rim as that of the preceding type. Pl. 128, A, associated with and presumably belonging to the same piece, is a base, and shows just the beginning of a foot. Another fragment of the same find shows that this foot is but a rounded

protrusion similar in a modified form to the bases of the gray-ware vases (cf. Pl. 73, E). This is the only one in which the base is even suggested.

The third shape, Pl. 129, A, is the most common. The remaining specimens all indicate a small bottle of the type seen in glaze (cf. Pl. 75, X).

The fourth shape appears to vary from the third only in the broad, vertical corrugations over its surface (Pl. 128, F). These vary in width from 5 to 9 mm., and, in one case, merge into the plain, flat surface of the upper part of the fragment. Thus, it is possible that it was a form used in conjunction with elements of the three preceding types.

Pl. 130, A is a unique shape—a hollow cylinder with no bottom and a heavy, moulded rim about the base. This would unhesitatingly be called the rim of a cup were it not for the directions of the looped design. In all fragments in which the shape is sufficiently clear to show which is the top, the loops always hang downward. This rule is so universal that it must be applied here, even though it changes what might have been a straight-sided cup into a unique object of unknown use.

The number of original colors is more limited than a casual investigation of the specimens would suggest, for the different conditions of burial have had a great and confusing effect on different specimens. This is particularly well illustrated in Pl. 130, N, in which the green glass body of the cup is, in spots, a deep blue. An examination of many specimens of glass and glaze shows that the green so commonly seen in the glass vessels, as well as in beads and glazed objects, is, in fact, a deteriorated form of an original blue. A few specimens in a perfect state of preservation show this admirably (Pl. 128, A). Others in a less perfect condition show the beginning of the change from blue to green (Pl. 129, B), and the majority show it in an advanced state of decomposition in which the color ranges from a clear bluish-green to a dull, lifeless white.

The other colors, in the order of their frequency, are: white, yellow, orange, and black. They are, with but one exception, used entirely for the overlying decoration on the blue-green body, and they are found in an infinite number of minor variations. The black ranges from light gray to a deep true black. Yellow varies from the brilliant color of Pl. 128, A to a light tan, and orange is found ranging from its truest color in Pl. 128, A to a brick-red (Pl. 130, A). Only white remains constant. So far as can be told, no true green was originally used.²⁹

²⁹ Further cleaning and examination of the object shown on Pl. 128, D shows the uppermost scalloped band to be a yellow similar to that of Pl. 128, B, and not the green shown here.

The only example in which the body is not blue-green is one with a base of yellow glass inlaid with a yellow of greater intensity and with orange (Pl. 129, A).

The design in the great majority of cases is of simple or compound scallops of inlaid glass, taking the form of separate bands of alternating colors; or compound bands of two to three colors springing from the same point and hanging downward in three distinct folds. The same motif is sometimes found on vessels with corrugated surfaces, but, as a general rule, the variant seen in Pl. 128, F is preferred. Conversely, the design of Pl. 128, F is occasionally found on vessels with non-corrugated exteriors. It is probable that such instances mark those objects whose surfaces were in part corrugated and in part smooth.

The zigzag design is a formalization of the scallops, and as such it is unique. Pl. 129, C is also unique, and even more foreign to the customary glass designs. In its resemblance to the geometrical patterns on the painted cups, it appears as the one genuine expression of the native craftsmen who heretofore had been faithfully copying a design which to them was alien.

The relative freedom of design seen in Pl. 128, A is unique, and in its association with Pl. 128, D, of which it probably was the base, we have an unusual combination of formal and informal motifs. The former is the only piece which gives any hint as to the design as a whole, but since it is an isolated specimen it cannot be taken as a certain guide to the whole group. It seems more likely that, just as with Pl. 129, C, it is an exceptional example of native artistic expression, and that the majority expressed the more formal tradition throughout the whole of their areas. A unique example, both in mode of decoration and glass, is seen in a single tiny fragment in which the triangular pattern is in the form of impressed lines on a body of yellowish-white glass of remarkably good preservation.

Although the glass as a whole is undoubtedly of local manufacture, the dissimilarity of the designs to those more typical of Nuzi marks it as foreign in conception. It resembles closely the glass of approximately the same date found in Egypt.

GLASS AND FRIT STAFF- AND MACE-HEADS

Staff-heads are limited to two dissimilar specimens. The first (Pl. 121, A) is a large, thick disc of green glass overlaid with black, and pierced through the center. Around the edge of the upper surface are six globs of yellow glass, and on the reverse are three equidistant, small protrusions well in from the edge. The size of the piercing is

too small even to receive a ceremonial wand; the piece could only have been attached to the staff by a metal nail.

The second (Pl. 130, B) is of green glass faded to a dull gray, inlaid with alternating yellow and eye bead knobs. It is, in reality, a more finished version of the preceding type. Having a short shank and a socket, rather than a hole through it, there is no doubt as to its use. The socket, although larger than the preceding one, is so small that it could only have served a light staff or wand.

Pl. 121, P is one of three glass mace-heads from Temple A. A large chip which had broken away from the main blue-green glass body was found cemented back into place with bitumen.

The fragments of two other blue-green glass mace-heads were found in Temple A. They appear to have been of the same general shape as Pl. 121, Y, though of smaller diameter at the base (33 mm.) and flaring outward more sharply to form the bulbous top. The remains of yellow inlay in a design similar to that of Pl. 128, F can still be traced on the surface of one, as well as a yellow band at the base of the shank.

A single blue frit mace-head of the same general shape and size is of interest in that it was cast(?) in two identical halves. The one remaining half gives no clue as to how the two were held together. It was pierced with a hole of normal size, and although found in a private house it was undoubtedly devoted to religious or ceremonial purposes.

Mr. R. J. Gettens of Harvard University, in the following analysis of the material from which this piece was made, not only sheds light on this object, but on all the other objects of the same material.

"Two distinct types of the blue material from this same specimen were examined. The first was fairly deep blue in color and homogeneous in structure. The second type appeared to be made up of small blue particles disseminated in a white crystalline matrix.

"The blue particles are birefringent and strongly dichroic. The refractive index is 1.63-1.64. The blue material is not soluble in dilute acids. It is slightly soluble in aqua regia. Positive tests for copper and calcium were obtained. The evidence obtained shows it to be a copper calcium silicate. This material has all the chemical and physical properties of the ancient pigment known as Egyptian Blue or frit, supposed to have been made artificially and used by the Egyptians over a period of many centuries."⁸⁰

⁸⁰ Laurie, McLintock and Miles, *Proc. Royal Soc.*, 89, 418-29 (1914).

FAIENCE

Two fragmentary vessels alone compose this group. The first, a bowl of delicate and unusual shape (Pl. 119, J), is made of a kneaded mixture of red and white material in which there are traces of yellow. The resulting effect (probably originally sought), with its irregular, meandering striations, is of a richly colored and closely veined stone. Quoting Horace C. Beck, Esq., who kindly examined a specimen of this material, and for whom Sir Herbert Jackson made a further spectroscopic examination, we find that:

"The section shows that the material was parti-colored. This, in the uncolored form, is practically identical with the material which in Egypt is called 'faience.' It is there made by mixing a finely ground quartz sand with a small amount (about 20%) of lime, and then partially fusing it. The outer surface portions of the quartz grains dissolve in the lime which cements it together. A spectroscopic examination shows that the Nuzi examples most certainly have a flux of lime.

"On examination, it is evident that this bowl contains red, yellow, and white patches in it, and possibly black, although the last may be accidental. The coloring matter of the red is iron in the form of ferric oxide in great numbers of comparatively large particles which are totally opaque to transmitted light. The yellow coloring matter is the same as that used in the yellow glass beads of Mesopotamia and Egypt. It is probably due to ferric oxide, but the exact way in which it is introduced is not yet known.

"Both these colors are in the vitreous portion of the material.

"In Egypt, faience is generally white, the color being added in the form of a glaze, but faience which is red throughout is found at Tell el-Amarna, having a structure very much like that of the Nuzi bowl."

The second example of a faience vessel from Nuzi is a large fragment of a vase (Pl. 119, I), again of delicate line and unusual shape. The body is a kneaded mixture of equal proportions of white, red, and yellow material, identical with those of the first specimen, with the addition of occasional spots of deep blue like that of the well-preserved Nuzi glass.

The rarity of faience at Nuzi, and the difference in shape between these two specimens and the terra-cotta vessels of like kind, make it certain that they are imported pieces. Both were found within the palace, where one might well expect to find rare and unusual objects.

STONE

When considering the vast amount of material found in the Nuzi levels, one is struck by the relative scarcity of stone objects. With an inexhaustible supply of stone in the hills ten miles to the east, the scarcity cannot be laid to a lack of material. Evidently these practical-minded Nuzians preferred the more fragile terra-cotta—in the manufacture of which they were masters—to a material whose advantages were offset by its great weight and the difficulty of working it. Consequently, there are few objects of stone other than those whose use specially demands its strength, surface or weight.

Vessels. Most common among the stone vessels are the tripods (Pl. 122, A-D). The material is usually basalt, roughly worked and without any exterior finish. They are exceedingly heavy and were made for hard wear. The even texture of the inner surfaces shows them to have been used as mortars, and one example was found with a large stone pestle (cf. Pl. 122, E) still resting in it. It is probable that the bowl-like interior is the result of use rather than of original manufacture; in that case, Pl. 122, C is new and unused. The latter is more in the nature of a stand of which the rim is raised slightly above the level of the interior. The slight elevation of the rim served as a guide to the ever-grinding pestle, and was sufficient to hold the material that was to be pulverized.

Pl. 121, EE is a high-footed tripod, with rungs connecting the bases of the feet to a center point below the bowl. It is unique for Nuzi, although it is known elsewhere both in Mesopotamia and Palestine.

Pl. 121, GG is the only one of its kind. It is of the same interior shape as the tripods, and certainly served the same purpose.

Pl. 121, DD is a flat, triangular vessel of Mosul marble; although of a shape occasionally found in terra-cotta, it is the only one of this shape made of stone.

· Small hand mortars (Pl. 121, FF) were relatively common in the private houses. The outside is frequently unworked if the natural shape of the stone is convenient to hold in the hand. The hollow at the top is polished to excessive smoothness; and, in one case, the small pebble—worn to a perfect sphere—with which the grinding was done was found in place in the socket.

Of those objects made with some attention to finish and appearance, Pl. 121, CC is the most important. A tall, beautifully made cup of highly polished black steatite, it is the finest example of this type of work found at Yorgan Tapa. The slight pit in the center of the

base suggests that the cup was turned in a lathe to produce the fine evenness of the outside curve.

Pl. 121, BB is a cup of coarser steatite, and has none of the finish of line or surface seen in the first. It is of importance mainly because it is the only other stone cup from Nuzi. Neither of the two cups has any drill marks in the interior.

Pl. 121, X, a small bowl of marble with an extraordinarily broad lip, is well and regularly made, but lacks the delicacy of Pl. 121, CC. It is the only true stone bowl found at Nuzi.

Pl. 121, R is of dark limestone, and shows on its interior the long striations, not quite polished out, made when it was hollowed. It, too, is unique.

Since these last four are the only stone vessels serving a purpose for which (presumably) terra-cotta would have done as well, it is of interest to note that not one bears any resemblance to the terra-cotta forms of Nuzi. It is inconceivable that artisans steeped in a tradition of definite pottery shapes should evolve entirely different ones for their only works in stone. Naturally, the medium alters the result, but one would expect at least a basic similarity between the ingrained pottery shapes and those of the stone vessels made by the same people. Since this is lacking, the conclusion is that these, like the faience objects, are imported pieces.

Slick stones. The stone chosen for this purpose is always of fine texture, capable of wearing to a highly polished working surface. The two major types are the sugar-loaf shape, only the rounded base of which was used in burnishing, and that with a triangular cross-section (Pl. 122, G), in which all three faces show equal signs of wear. Pl. 122, F was similarly used on its narrow edge, and was evidently intended for more delicate work. The smooth, polished surfaces suggest that these stones were used in working non-abrasive materials. They were probably used in the preparation of hides, just as similar stones are used today among primitive peoples. They were common implements in Nuzi households.

Whetstones. These are the most common of the stone implements. They are usually pierced (Pl. 122, K) for carrying, and in such cases are always smaller at that end. Pl. 122, J is an unusual variant grooved at the end for a thong. Also common are those unpierced specimens of equal width and thickness throughout. The stones were used on both sides, and occasional pieces are so worn with use that they have become roughly rectangular in section. Pl. 122, M is unique, and shows signs of having been used both as a whetstone and as a bobbin.

Hammer-stones. This is the second most common type of stone implement at Nuzi. The examples vary, according to the amount of wear, from natural stones to those which, through great use, have been worn to round-cornered cubes (Pl. 122, H).

Drill-sockets are relatively common, and are often difficult to distinguish from hand mortars. The socket is conical, with a rounded apex. The stone itself is never loaf-shaped, but either round or oval in section so that it may be easily held. Pl. 122, L was the largest example found.

Door-sockets. In none of the stone objects is there as much variation as there is in door-sockets. It is apparent that the degree of care expended on any one specimen may be considered only as a measure of the wealth of the owner, and not as an indication of the size of the door to be supported. Elaborate sockets were found in the palace serving doorways no larger than those less pretentiously equipped in private houses.

The usual socket in the private houses was a whole or incomplete brick, slightly hollowed to receive the foot of the door-post. Stone sockets in the private houses were rare, and were, with one exception (Pl. 123, D), large stones with an unworked exterior and an evenly hollowed or conical depression. Only in a few of the palace door-sockets was exterior symmetry demanded in an object destined to be hidden from sight during its period of use (Fig. 28). Plan 20 illustrates a door-socket of unique size and treatment, serving the doorway to the audience chamber of the palace. None of the sockets was inscribed.⁸¹

Weights. Pl. 124, A is a unique example of a weight, grooved around the center for a rope. The regularity of its shape is accidental rather than intentional. A few other equally heavy weights were found in the form of unshaped stones, pierced at one end.

The common type is Pl. 123, A, a doughnut-shaped, circular object pierced in the center by a hole bored from both sides, with the smallest diameter in the center of the passage. An equally common, related type is similar, except for the absence of the perfectly circular perimeter. Neither type differs much in size from the incomplete specimen shown here. The type of piercing, and the absence of wear within the hole, remove these objects from the class of door-sockets.

Balance-weights fall into two major groups. The first is the duck-shaped weight (Pl. 122, N, O, P, W), which though relatively un-

⁸¹ For further notes on door-sockets, see Part I, Chapter III.

common is found in sufficient numbers to show its general use. Pl. 122, N is one of the only two on which any attempt was made to indicate more than the bare outline. Few were complete; consequently, those for which an accurate weight can be given are rare. In almost every case the material is either white or gray limestone.

The second group comprises the unornamented types. The most common are flat, and roughly rectangular, with either rounded or square ends (Pl. 122, S, U). Next is the familiar cylindrical shape (Pl. 122, V), decreasing in diameter toward each end, and often slightly flattened on one side.

Two other types have been tentatively classed as weights. One is the group of flat, marble discs of widely varying diameter and thickness. The other is the unique flat double-ended object of Pl. 122, T, made of limestone and highly polished. The majority are of limestone of various colors; magnetite, jasper, and even terra-cotta (one example) ones occur sparsely.

The following tabulation reveals certain features of interest:⁸²

	Actual Weight	Description
1.	<u>0.60</u> grams	Marble disc.
2.	1.95 "	Magnetite cylinder.
3.	<u>2.15</u> "	Marble disc.
4.	2.20* "	Marble rectangle.
5.	2.47* "	Marble cylinder.
6.	3.93 "	Marble rectangle.
7.	4.10 "	Shale rectangle; round ends.
8.	4.12 "	Shale cylinder.
9.	4.67 "	Marble rectangle.
10.	4.85 "	Limestone rectangle; black, mottled with white.
11.	5.03 "	Marble cylinder.
12.	5.27 "	Magnetite cylinder.
13.	5.43 "	Jasper cylinder.
14.	6.10* "	Shale rectangle; uneven width.
15.	6.22* "	Terra-cotta cylinder.
16.	6.51 "	Shale rectangle; round ends.
17.	6.62 "	Shale rectangle; (Pl. 122, U).
18.	6.76 "	Limestone cylinder.
19.	7.03 "	Marble cylinder.
20.	7.49 "	Marble rectangle.
21.	<u>7.70</u> "	Marble cylinder; like an unpierced, blank seal.
22.	7.89 "	Marble cylinder.

⁸² The underlined figures designate those objects about which there is considerable uncertainty as to their original use as balance-weights. Those marked with an asterisk are less doubtful, but must still be considered as tentative because of their variation from the customary shape or material.

NUZI: OBJECTS

	Actual Weight	Description
23.	8.07*	" Limestone; flat, double-pointed; (Pl. 122, T).
24.	9.30	" Limestone rectangle; pink, mottled with white.
25.	10.16	" Marble rectangle.
26.	10.80	" Limestone cylinder; black, mottled with white.
27.	<u>11.65</u>	" Marble disc.
28.	15.55*	" Limestone object; like Pl. 122, T.
29.	16.22	" Magnetite cylinder.
30.	16.36	" Marble duck weight.
31.	<u>17.27</u>	" Shale rectangle; irregular outline.
32.	17.45	" Marble rectangle.
33.	18.81	" Limestone rectangle; black, mottled with white.
34.	22.62	" Marble cylinder.
35.	22.94	" Limestone rectangle; black, mottled with white.
36.	24.42	" Limestone cylinder.
37.	78.15	" Magnetite cylinder (Pl. 122, V).
38.	159.50	" Marble duck weight (Pl. 122, O).
39.	480.00	" Limestone duck weight; slightly chipped.
40.	492.50	" Marble duck weight.
41.	976.00	" Marble duck weight (Pl. 122, P); 2 marks on tail.
42.	3,401.97	" Limestone duck weight; badly chipped; 7 marks on tail.
43.	10,047.06	" Limestone duck weight; 2 marks on neck.

A comparison of the actual weights of these objects shows the greatest uniformity to be among the duck weights. The two marks on the tail of No. 41 (Pl. 122, P) show it to be twice the value of a given unit, and half its weight is 488.00 grams, exactly that of the mina of the light standard. Consequently, it is a two-mina weight, and Nos. 39 and 40 are of one mina each. Correspondingly, the smallest duck weight, No. 30, is one-thirtieth of this weight, and would correspond to two shekels. The largest weight, No. 43, corresponds to slightly over twenty minas, or, if No. 30 is taken for the basis of figuring, 1,228 shekels. Thus, the two marks on the neck in this case indicate roughly two units of ten minas each. This is paralleled by an exceedingly large duck weight with six marks on the neck. The object (now in the Iraq Museum) is fully three times the size of No. 43, and, although its exact weight is not known, it undoubtedly is six units of ten minas each, or, one talent.

Unfortunately, the position of the marking cannot be taken as a constant guide to the unit value. Although the marks of the three examples incised on or near the tail indicate one mina for each mark, those on one of the three examples marked on the neck do not repre-

sent ten-mina units. This is a relatively small weight, badly chipped, and originally two minas in value. The position of the two incisions blasts the hope that this alone would serve as a sure guide to the unit value.

No. 42 is an interesting example. The under part of the breast is so badly chipped away that it would appear to be useless as a balance-weight in its present state, yet its total weight in grams corresponds almost exactly to seven minas, agreeing with the seven roughly cut marks—obviously a later addition—between the bill and the tail. It is clear that it was originally a weight of perhaps ten minas, and was carefully chipped away until the desired value of seven units had been achieved.

Among the cylinders and rectangles there is much less uniformity. Again taking the smallest duck weight (No. 30) as a standard, the heaviest cylinder—No. 37 (Pl. 122, V)—is shown to amount to slightly less than ten shekels. Correspondingly, the smallest cylinder (No. 2) would amount to approximately one-quarter of a shekel. However, the amount of error is considerable if our conclusions are based entirely on No. 30. Using the imperishable magnetite cylinder No. 2 as a standard for checking No. 37 of the same material, we find that the latter is correct at ten shekels to within 0.15 grams. Correspondingly, No. 6 is within 0.03 grams of being correct for half a shekel. Beyond this, the attribution of value is uncertain. Whether reckoned in quarters of a shekel as indicated by No. 2, in sixths, or in tenths, all that can be said is that the values starting with No. 6 (half a shekel) and going up to and including one shekel (No. 22) are evenly and generously represented. There is another concentration around the two-shekel value with few in between, and another around the three-shekel value.

It is doubtful whether all this lack of uniformity within groups can be laid to error. It is not impossible that, as in the Near East today, the weight value of the same unit varied according to the material being weighed.

Toggles are uncommon objects (Pl. 122, R), and were found principally in the private houses. They are invariably made of marble, carefully and evenly executed, and grooved about the center for the attachment of a cord. Their lengths range evenly between 17 and 50 mm. Their scarcity and variation in size suggest that they were not common articles of wear and that they supported objects of greatly varying sizes. It is presumable that they served exactly as the modern Japanese *nutsuki*, which, attached to the end of the cord holding the small carrying case,

is passed under the belt from below. The bulk of the toggle prevents the light load from pulling it back through the tight sash or belt.

Mace-heads. Efficient though these objects may be as weapons, it is certain that their use in Nuzi was primarily ceremonial. Their infrequency in private houses, and their relatively large numbers in the temple, in both stone and glass, is ample proof of this. They are pierced throughout their length in all but one case (Pl. 121, Y).³³ There is no strict uniformity in size and shape, though only one (Pl. 121, T) strays from the usual circular plan. Its irregular shape is governed by the unaltered contour of the original stone. The surfaces, in all cases, are smoothly finished, and often highly polished.

Axes. The fact that one of the only two examples in this class came from the temple and that the other was found in a private house (S124) in association with cult objects, definitely suggests a votive use for both. The first, a double-headed, blunt-edged axe (Pl. 121, Z), has been described at length in the account of Temple A, and is of great significance in its similarity to the Hittite double axe. The material is rhyolite lava, and the surface is well polished. The other (Pl. 121, AA), more a hammer than an axe, is less elaborate and less highly finished. Its flatness gives it an adze-like appearance which the blunt point belies. The material is porphyry, and the surface is casually polished. Both are pierced with cleanly drilled holes, those of the first being parallel to the edge, while those of the second are at right angles to it.

Staff-heads. The restriction of these objects to private houses suggests that they were decorative forms of a practical instrument rather than ceremonial. They are invariably of Mosul marble, a translucent, soapy, white stone useful as decoration, but impractical where great weight or stress is expected. Consequently, they were admirably suited for staff-heads and relatively ineffective as weapons. Pl. 121, Q and V are the most common types,³⁴ and were found in relative abundance. Pl. 121, K, with its solid top and horizontal piercing, allowing the use of a cotter-pin, is an unusual type. Pl. 121, W, similarly pierced, is unique in its small size and conical top.

Whorl-shaped staff-heads are common, and are found both deco-

³³ Pl. 121, P, with a similar socket, is of glass.

³⁴ The wide distribution of this shape throughout the Near East is shown by unpublished specimens, like that of Pl. 121, Q, at Beisan in buildings dating from Thutmose III and Amenhotep III. Later such ornaments were used surmounting the yokes of the harness found in the tomb of Tutankhamon.

rated (Pl. 121, L) and plain, with the latter predominating. Although no larger than the largest whorls, their uniformity in size, the use of Mosul marble (found only in ornamental objects) and their decoration place them beyond the class of ordinary spindle whorls. As with the glass staff-heads, the piercing is too small to allow for use on anything other than a very thin staff or wand.

Miscellaneous. The strange object seen in Pl. 122, Q is of a type found occasionally in private houses. Its use is unknown. They are, as a general rule, flat on the bottom, and slightly rounded on top, and their thickness varies from 8 to 10 mm. They are carefully made of gray limestone, with unpolished surfaces.

A few spheres of stone (Pl. 123, C) have been found. The surfaces are polished, and they cannot be distinguished from the marbles made and used today by the native children.

Door-guides similar to the terra-cotta specimens (Pl. 123, E) were infrequently found in the palace. They are of Mosul marble, and were used only in rooms of importance, usually in conjunction with a stone door-socket of symmetrical shape and important size (Plan 20).

Pl. 123, B is unique in stone. The terra-cotta object of Pl. 117, L, though drilled only from one side, is the only other object from Nuzi that resembles it. The object consists of a flat slab of Mosul marble 22 to 25 mm. thick, 106 mm. wide, and of undetermined length. On both sides, four parallel rows of holes have been drilled, the outer rows joining on both sides at the apex of the rounded end, and the inner rows presumably doing the same. The interest of the piece lies primarily in the drilled holes. These vary in depth from 0.5 to 12 mm. and occasionally join with the opposite hole to pierce the slab. This occurs at irregular intervals and is probably accidental rather than intentional. The two inner rows of holes are so far from corresponding in position with those of the reverse that there could have been no intention of their joining to make through piercings all around. It is also of interest that the holes on the reverse average 2 mm. greater in diameter than those on the side shown. The edges of the slab are flat, and show deep diagonal striations as though the object had been sawed out of a larger block. The upper and lower surfaces are both well polished.

As an object of decorative value it is too crude and unintelligible to be in keeping with the usual high standard of Nuzi. It is possible that it was a gaming board in which each hole represented a space or a stop just as the squares do on the more developed types.

METAL

The metals found in the Nuzi levels are: iron, silver, gold, lead, copper and bronze. Iron, known positively to be of the period, was found in but two instances—the double grip in the handle of a copper dagger (Pl. 125, KK) and a small spherical bead from Temple A. Its rarity alone would place it in the class of precious metals. The rarity of silver is probably not due to an original dearth, but to its unstable nature, which greatly minimizes the chance of finding in recognizable form the small bits left by the looters of the city. It was found in use only in the silver-covered nail-heads of the palace (Pl. 123, I).

Gold was well known, as is evidenced by the scraps left behind by the ravagers of the city. It is found occasionally in decorative objects and jewelry, and in scraps of thin sheets from Temple A, such as would be used for sheathing an object of wood or bitumen.

Lead is relatively rare in comparison with bronze and copper, and is found only in needles and long headless pins.

Copper and bronze were the two most common metals, and were found in a variety of forms and in considerable quantity. Tests of specimen pieces have shown a slight preponderance of copper over bronze, and since it was impossible to test each piece, all have been referred to herein under the single name of copper. Suffice it to say that this metal in both forms was used in all cases where its properties of strength, pliability and toughness were needed. Nearly all of the copper objects are in an advanced state of corrosion, and in but few of the thinner pieces is there any sound metal remaining. On exposure to the air all were threatened with "bronze disease."⁸⁵ Fortunately, the complete change to the oxide, even in the frailer pieces, does not always mean the loss of shape and prominent detail.

The quantity of metal remaining on the site is no true indication of what was originally there. Even the baser metal objects were of value in antiquity, and would be as avidly carried away by the looters as gold and silver. Those things which remain can only serve to show inadequately the proportions of metal objects in relation to each other.⁸⁶

Door-post pivots. Copper stains on the hollow surfaces of bowl-shaped sockets show that in some cases the foot of the door-post was metal-sheathed to prevent undue wear on the wood. None of these

⁸⁵ See R. J. Gettens, "Mineralization, Electrolytic Treatment, and Radiographic Examination of Copper and Bronze Objects from Nuzi," in *Technical Studies*, vol. 1, no. 3.

⁸⁶ For the many metal objects mentioned in the texts, see Appendix D.

sheathings was found, but it is presumable that they were made of thin sheet-copper attached to the wood with short nails. Scraps of copper suggesting this form were not uncommon.

Three true pivots were found, all alike (Pl. 124, B). The cone-shaped base was suited to the socket of that same shape, and the six spikes by which its three flanges and hollow interior were fastened to the wood are still discernible.

From the great rarity of pivots or door-post sheathings in recognizable form it may be taken that such extra protection was rare and was indulged in only by persons of wealth.

Chisels in two forms were frequently found. The first is represented by Pl. 124, H, a tool with the cutting edge across the end, and the butt broadened and folded around to make a cone-shaped socket for a wooden handle. A hole in one or both sides of the socket allows for the insertion of a cotter-pin.

The second type (Pl. 125, B-D) is double-ended, 1.5 to 3 mm. thick, and more frequently found with a blunt than a sharp edge. Those with square ends (Pl. 125, D) are uncommon. In no case is there any sign of hammering at either end. Consequently, it seems certain that they were used on material of soft texture. The frequency of the blunt, rounded ends makes it seem probable that they served as modelling tools in working plastic material. They may have been associated with the shaping of wheel-turned pottery.

Knives are exceedingly rare, and none was found that could be unhesitatingly identified as such. However, it is incredible that people with a knowledge of tools and craftsmanship should have lacked plain knives to aid them in their work. Many fragments were found that may have been portions of knives. One variant from the type that would be expected is seen in Pl. 124, F. It is not unlike the modern draw-knife and was undoubtedly used in the same way. It is probable that the two tangs fitted into sockets in wooden handles of a more substantial size. It is an advanced type of tool and is unique at Nuzi.

Sickles were the most common of the large tools, and were evenly distributed throughout the palace, temple, and private houses. Pl. 124, E is the most common type, although the blade was often considerably wider (cf. Pl. 125, D). The drawn-out blunt tip is characteristic. Those with serrated edges (Pl. 123, J; Pl. 124, C) are uncommon, and both specimens illustrated here are from a cache found in one of the earlier phases of the temple. Pl. 124, D is from the same cache, and

its dedicatory inscription definitely relates it and its associated bronze objects to cult usage.⁸⁷

Adzes (Pl. 125, A, E) were well known in Nuzi, judging from their perfect execution, but they were, nevertheless, rare objects. This rarity is probably due to the thoroughness of the looters. Whether they were used as weapons as well as agricultural implements is uncertain. The bluntness of the edges excludes the majority from the class of wood-working tools.

The length of the working edge varies from 20 to 50 mm., though the general size and form of the tool remains nearly constant. Those with broader, curving edges start with a shank as seen in Pl. 125, E and flare outward rapidly toward the end to give the added width. Only those with a broader cutting edge than shown on the plates make any pretensions to sharpness.

Axes. No true axes were found, and it is presumable that they did not exist. The miniature axe of Pl. 124, G is only an axe in form, and certainly not for use. What its function was is a matter of doubt.

Pins and needles. The distinction between pins and needles is often impossible to make, for although the objects shown in Pl. 125, T, U could not have been needles, those of Pl. 125, R and S might have been either. Fragments of what may have been plain needles were found in very large numbers, but, being of small original diameter, their advanced stage of disintegration makes it impossible to tell whether they were nails whose heads had been lost, or needles whose eyes are missing. In spite of this uncertainty, the identifiable needles were represented in generous numbers throughout the excavations. Pl. 125, R, S are from the same temple cache as Pl. 124, D, and are early types of the usual Nuzi objects. The rolled top of Pl. 125, R, along with that of an identical companion, is unique. The customary type is similar to Pl. 125, S and about two-thirds that length, though rare examples are found as large as this, and equally rare ones half that size. The diameter is subject to the same variation and ranges from slightly less than 1 mm. up to 5 mm.

Pins with decorated heads are exceedingly rare. Pl. 125, T and an identical companion are from the same early temple cache as Pl. 124, D, and are the only ones of their type. Pl. 125, U is from a private house. Considering the rarity of this type in Nuzi and the relative

⁸⁷ Quoting Dr. T. J. Meek: "The sickle is inscribed with the god name d_{u_4} -za, which is apparently to be interpreted as the goddess Dilbat or Ishtar; see *Annual of the American Schools*, XIII, 11."

frequency of those with decorated heads and similar piercing in Ga. Sur, it seems probable that the few specimens found are survivals from the earlier culture.

Nails were found throughout the excavations, and are evidence of an extensive work in wood, of which no identifiable traces remain today. As mentioned earlier, the quantity of nails is difficult to calculate, since in their usual fragmentary state it is often impossible to tell whether a given fragment is part of a nail or of a different object of the same general diameter. Recognizable forms were common and were found usually in the types represented by the exceptionally well-preserved specimens, Pl. 123, H, K.

The double-shanked nail (Pl. 123, F) is one of two found in Nuzi. The shank, at first solid, divides in two below the head, and is seen here with its protruding ends clinched back at the point where it emerged from the plank it pierced. The head is unnecessarily large and was probably intended to protrude in the same manner as the door-studding nails.

Pl. 123, G is of a type found only in one room. They are the studding nails found in the charcoal of the fallen door of L11, the audience chamber of the palace. Less than half these nails were cleverly faked to give the appearance of silver bosses over the surface of the door. A thin, circular sheet of silver was placed over the head of each so treated (Pl. 123, I₂) and carefully crimped around the under edge (Pl. 123, I), making the copper nail-head to all outward appearances a solid silver boss. The head of a much smaller and more dome-shaped nail from Shil. 7 was similarly covered with sheet-gold.⁸⁸

Also intended primarily for decoration is the flower-shaped head of Pl. 123, L, found in the débris of one of the lesser palace rooms. Although the design is distinctly a flower, it probably evolved from the sun disc, and should be compared with similar motifs seen in Pl. 121, B, G. The object is unique.

Punches. Not to be confused with the plain nails are the stout copper punches occasionally found in the débris. The diameters range from 6 to 9 mm. below the head, and the length from 70 to 95 mm. The butt is flattened from hammering, and the shank, roughly square in section, tapers evenly to a dull point.

Arrow-heads were exceedingly common throughout the private

⁸⁸ That this technique goes back at least to Sumerian times is shown by the gold-covered nails of Abu Shahrain. See J. E. Taylor in *J. R. A. S.*, vol. xv (1855), p. 407, n. 2.

houses. From this fact alone, one may gather that the bow and arrow was the principal weapon of offense and defense. Unfortunately, all of the weapon, except the copper head, was made of perishable material, so that little can be told of those parts now gone. However, there is little reason to believe that either the bow or the arrow shaft was much different from those shown so graphically in the Assyrian reliefs of later date.

The major types of arrow-heads are fully illustrated and need no additional explanation. It need only be pointed out that both the size and shape are inconstant. It is of interest that the arrow-heads found in the cella of Temple A (G29) are exceedingly small. Two are tiny (Pl. 125, Y, Z), and even the largest (Pl. 125, BB) is much smaller than is customary. Consequently, one may reasonably assign these to a ceremonial use along with those few others of the same size.

Spear-heads are rare objects, but their scarcity is, no doubt, due largely to looting. Of the two found, each is unique. Pl. 125, M is in essence an enlarged arrow-head without the support of a central longitudinal ridge. The thickness of the blade is only 2 mm., and it could hardly have been as reliable a weapon as the second spear-head or the pikes. Pl. 125, N³⁹ is the other example, and is of interest not only because of its stout, narrow blade—only 20 mm. wide—with a broad, high longitudinal ridge on either side and a rounded point, but because of the long hollow butt into which the shaft was hafted and secured with a cotter-pin through the hole at the base. It is a weapon of great strength and weight, and certainly would have been most effective in the hands of a capable warrior.

Pikes. Three pikes, representing two distinct types, were also found. The first, Pl. 125, L, is of interest because of its narrow shaft between a bulbous base and head, its short tang, and the pyramidal shape of the head. One was found in the cella of Temple A (G29) and another in the palace chapel, but unlike the ceremonial arrow-heads each was an effective weapon. Though probably ceremonial, they had not yet been reduced to the purely symbolic form seen in the tiny arrow-heads. The tang is a bit too short for real security, but no shorter than that of the vicious pike seen in Pl. 125, X. The latter is square-sectioned throughout its full length, exceedingly heavy, and, except for the insecurity of its short tang—a glaring fault in so heavy a weapon—it is one that any ancient soldier might have hesitated to oppose.

³⁹ The illustration shows the blade on edge and gives a false idea of its real width.

Hooks. It is uncertain whether or not the copper hooks (Pl. 125, J, K), found occasionally in the private houses, were weapons. Considering the angle of the point and their light weight, it seems more probable that they were used in some more peaceful pursuit. The butts are hollow to receive the wooden handle, and pierced for the insertion of a cotter-pin.

Swords or daggers are represented by but a single example (Pl. 125, KK). The drawing is sufficiently clear to obviate the need of detailed description. It need only be pointed out again that the grip is made of two iron plates, flat on the bottom and rounded on top, set into depressions of the same outline on both sides of the solid copper handle, and secured together by an iron rivet passing through holes in the three separate pieces. This is one of two indisputable examples of iron in Nuzi, and its use in this handle is certainly a continuance of the custom, seen elsewhere in Mesopotamia, of decorating the hilt with precious metals. Iron was certainly known even in earlier times, but its treatment here shows that it was still so rare as to be considered precious. The sword is a splendid weapon, and can leave no doubt as to the quality and effectiveness of the military accoutrements of the Nuzians. It is certain that this same high quality is responsible for the almost complete disappearance of similar weapons after the city was captured and looted.

*Armor.*⁴⁰ The inscribed tablets from the palace refer frequently to three broad groups of bronze armor: armor for chariots, for horses, and for men. Of the first, no identifiable remnants have come to light by which to judge its general character. It can only be presumed that it was not a flexible coating of individual plates, as was the armor for men. It is more likely that it was in the form of large sheets or plaques more or less permanently affixed to the chariot.

The character of the armor for horses is also obscure, although it is possible that the three large rectangular plates—Pl. 126, L—were for that purpose. These three, the only ones of their kind found, were too large and heavy to be suitable for anything other than a beast of burden. It is also possible and probable that the greater portion of the armor for horses was made up of plates identical with those used for men, with plates of the type previously mentioned giving greater protection at the chest. An adaptation of this kind would present no difficulty other than a variation in the separate groups making up the complete unit.

⁴⁰ See particularly the valuable information from the Nuzi texts; Appendix D, *Armor*.

The armor for men was made up of separate bronze plates, so united as to form a flexible and efficient body covering. A considerable number of these plates have survived, and from them it is possible to visualize with some certainty the manner in which they were used.

Two distinct types were encountered, both in approximately equal quantities. The first is rectangular and has at the end of the long edge a protruding, slightly flattened segment of a circle, springing from either the right or the left-hand corner (Pl. 126, D, J). These plates are not pierced, and vary from 1 to 2 mm. in thickness. A ridge extends part way down the back of each, with a corresponding groove down the reverse, and is in every case not in the center, but well toward the long edge from which the knob protrudes. In so far as can be seen, these plates have identical flat edges and a slight longitudinal curve resulting in a barely discernible convex exterior. There is only the most minute divergence from the size illustrated, and no variation in the proportions.

This type of plate could only have hung vertically. It was secured by passing a cord across the end, under the knob, and into a stout fabric or leather base—then out again to encircle the end of the next overlapping plate which was secured in the same way. Being sewn onto a base in this manner, the binding threads would be covered in all except the uppermost row. The ingenuity needed to develop this system should have been sufficient to evolve some form of protection from this one vulnerable spot.

The second type is best exemplified by the plates making up the corselet from Room 18 of the House of Shilwi-teshub (Pl. 126, A, B). Each has a centrally placed ridge down the back—with a corresponding groove on the reverse—extending about three-quarters of its length (Pl. 126, A, etc.). In most cases it is possible to detect the long edge of the plate raised slightly on one side and lowered on the other (Pl. 126, A₃). Although this does not occur universally on the same side, it is constant for a certain type of piercing: the depressed edge being that on which there are no piercings near the rounded end. This would allow a proper overlap and a close fit when the plates were laced together. Laced in a horizontal position, the holes on the long side near the rounded end would, in each case, be covered by those of the next upper plate. The raised ridge in the center would serve both as a strengthening agent and as a means for making the fit of the overlapping plates more perfect.

Except for those of the corselet, the greatest number of plates were of small size (Pl. 126, F, G, H, K). These were undoubtedly designed

for such parts of the body as required greater flexibility, or for rounded surfaces in need of protection. These plates of smaller size range from 51 to 64 mm. in length (in nineteen pieces), from 25 to 36 mm. in width, and from 1 to 2 mm. in thickness. The next size, of which two specimens exist (Pl. 126, E), is 101x45x2 mm., and next—the size used throughout the corselet—is 118x63x2 mm. (Pl. 126, A, B). Since the plates of Pl. 126, B are all of the same size, it can be assumed that such uniformity was required for any one given portion of armor. Consequently, the great variation within the smallest group would lead one to believe that such protective coats were not unusual among the Nuzians. Although the total number of plates found was not particularly large, the uniformity of distribution would also point to this conclusion.

The only variant within this type of plate was a unique example with non-parallel sides and a pointed end (Pl. 126, O). It is impossible to say whether whole sections of armor were made up of this kind of plate. More likely it served to protect or accentuate some particular portion of the body.

It should be noted in passing that the sides of the separate rounded plates are not uniformly parallel, but often narrower by 1 to 3 mm. (in this last case by 6.5 mm.) at their square end than they are at the broadest point just before they begin to round. This might be taken as an indication that the plates hung vertically. However, since so many considerations argue against this supposition, it would be more reasonable to believe that the narrowing—and the general shape—is all that remains to show that these plates are a horizontal adaptation of an earlier vertical type of armor plating.

The system of piercing is fairly constant, being that illustrated in Pl. 126, F, G, and its opposite, Pl. 126, A, E, K, O. Variants of this type of piercing, such as in Pl. 126, H, may have been used for securing the ends of the plate rows.

Experiments with facsimile plates show that the lacing could have been done in at least two different ways. The first is by binding together a single vertical row of overlapping horizontal plates, lacing through the set of holes closest to the edge at the square end, and through the two holes near the opposite edge at the other end. By following this method, a continuous, firmly bound yet flexible line of plates is produced. The lacing serving one row of holes is completely and continuously protected, and in the other is exposed to the extent of about 6 mm. on each plate as it comes up from underneath—through the hole nearest the edge—and goes below again through the next higher hole.

The two holes at the round end, and the one at the center of the square end, have no evident purpose, if this obvious method of lacing is used, other than to serve as a means by which the next vertical row of plates is attached to the first. This system is certainly the one used on the corselet (Pl. 126, B) found in the House of Shilwi-teshub.

If two or more vertical rows of horizontal plates are united to make a complete suit, the lacing just mentioned as exposed will be covered, and it will be found that the only one then exposed is that which ties the toe of one plate to the toe or heel of the next. Since this serves only to fasten one group to the next, it is the one which could best afford to be unprotected.

Another possible lacing order is that of double rows of identical plates placed back to belly, laced tightly to and interlocking with an identical lower pair. This would give protection of quadruple strength though of unwieldy bulk; it would account for the large numbers of oppositely pierced plates, and for the excessively large number of plates mentioned in the Nuzi texts as necessary to make up a single suit. This system was used in the three large rectangular plates (Pl. 126, L) mentioned earlier under armor for horses.

Since copper wire was known, one would think that it would have been used at least for those lacings which were exposed, but no traces of it were found. No doubt its lack of flexibility led to the use of the more vulnerable cord or thong.

The usual position of the round-ended armor plates depicted on Assyrian reliefs is with the rounded end downward, but they were certainly not so used here. The curve along the length would permit a close adherence to the natural curves of the body only when the plate was in a horizontal position. Moreover, had the plates been used vertically, the holes which are universally found at the rounded end would have been purposeless.

The corselet from the House of Shilwi-teshub (Pl. 126, B) consists of two rows of overlapping plates (Pl. 126, A) with the rounded ends of one row toward those of the other. Each row was quite obviously a vertical series of horizontal plates, though owing to a break in the lacing at the square end of the lower row that series of plates had spread out into the unnatural position shown in the illustration. Since the rational position for a plate would be with the protruding center ridge on the outside, it can be seen that one of these two rows is lying with the inside surface upward, while the other is in what would seem to be the natural position. This makes it unlikely that the corselet is here arranged as it was actually once used. Indeed, it shows that the

two rows were not attached to each other, for had they been, one could not have turned over without similarly reversing the row to which it was attached. Consequently, we must assume that these were either two separate strips of plates not to be laced together until each had been put on individually, or else that they were parts of a suit that had been abandoned before it was completely assembled. Of the two possibilities, the latter seems more likely. It is indeed strange, if the corselet was ready for use, that it should have been hidden under a jar at the time the city was in need of defense.

When this suit was first unearthed it was thought to have been in itself a complete unit serving to protect the chest and upper abdomen. Recently deciphered Nuzi tablets show that this group of plates could have been little more than the beginning of what to the Hurrian warrior was a complete suit of plate armor. These inscriptions list "armor (*sariam*) of bronze" composed of many hundreds of large and small *kursimetu*. There can be little doubt that the *kursimetu* are the separate plates, and that the two sizes refer to those major groups noted in the study of the individual specimens.

One tablet⁴¹ from R87 of the palace lists four suits of armor, each composed of two sizes of plates in the following numbers: 400 large and 280 small; 435 large and 312 small; 500 large and 360 small; 595 large and 440 small. Thus in these four the total of plates for an individual suit ranges from 680 to 1,035—numbers vastly exceeding that found in the corselet from the House of Shilwi-teshub. In fact, if these suits were comprised of a single thickness of overlapping plates, the largest would present an area equivalent to that necessary for a loose-fitting cloak extending from the neck to the knees of a man over twelve feet tall. The absurdity of this forces one to the only possible conclusion: that the suits in these instances were made up of double thicknesses of plates placed in the manner seen in the three large rectangular plates (Pl. 126, L), and laced according to the second of the two possible systems mentioned earlier. Since the unit from the House of Shilwi-teshub was certainly laced according to the first of these two systems, we have here a verification for the ancient use of both methods of lacing proposed earlier in the description of the armor.

It is of interest that in each case the number of large plates is slightly less than three-fifths of the total. This suggests a constant method in assembling the plates in spite of the variation in the size of the completed suit. The large number of plates listed for a single suit is proof of the completeness with which the body was protected, though little

⁴¹ S. M. No. 2087.

more can be said of the general appearance of the completely assembled suit. It seems probable that it had much the same form as the Assyrian armor: a jacket covering the torso and upper arms, extending as a skirt well down toward the knees.

Another type of armor mentioned in the texts is the *kurpisu*, composed, in four examples, of 109, 190, 190, and 242 plates. It is of interest that in some cases it is spoken of as composed of bronze plates, and in others as "covered" with bronze plates. This shows with some certainty that the *kurpisu* consisted of a foundation garment or covering to which the plates were attached. It may even be taken to suggest that in certain cases, or perhaps in more ancient times, it was used alone as a protection in conflict, without the covering of metal plates. If that is so, it is reasonable to presume that the foundation garment was of leather, though it must certainly have been distinct from the "leather armor" for men and horses definitely mentioned in the texts. It is significant that in mentioning the plates comprising or covering the *kurpisu* no reference is ever made to the size. This can only mean that all of the plates used were of the same dimensions. It will be remembered that the rectangular armor plates (Pl. 126, D, J) discussed earlier were, in every case, of one size. Moreover, it has been shown that this type could only have been used when sewn onto a stout fabric or leather base. Undoubtedly the rectangular plates were those used in making up the completed *kurpisu*. By the same tokens we may assume with some certainty that the rectangular plates were restricted solely to this type of armament.

The manner in which the *kurpisu* is mentioned in the texts suggests that it was not a substitute for the more complete suit, but rather that it was an addition—perhaps the skirt—to the already staggering load of body armor. No identifiable remnants were found of the helmets or shields mentioned in the texts.

Staff-heads and ferrules. Staff-heads of copper are exceedingly rare. The only example (Pl. 126, I) came from the region of G78 only slightly above the level of Temple F. If, indeed, it belonged to Temple F, it should be classed as belonging to the transition period, and may actually have been a hang-over from Ga.Sur rather than Nuzi. The object is made of two sheets of copper, the first covering the flat top of the staff and the upper part of the handle, and the second overlapping it to form the lower handle. The two sheets were held together and secured to the staff by two short copper nails placed at roughly opposite sides on the overlap.

Pointed ferrules (Pl. 126, C) were relatively common, and may also have served as an emergency means of defense. As with the sockets of the hafted chisels, they are made of a flat sheet of copper, folded into a cone to fit the pointed end of the stick. One or two holes at the open end show that copper pins secured them to the wood.

Vessels in recognizable form were rare. Cups and bowls were the only kinds encountered, and of these only one was sufficiently unmutated to be drawn (Pl. 127, H). Its similarity to the shape of the common terra-cotta bowl is evident, although the medium has necessarily changed the treatment of the lip and foot. The bowl was imbedded in carbonized barley, and may have served as a standard of measure.

Decoration and personal ornament. Most striking among the decorative objects are the offering stands and the statuettes already described under those headings. Next in importance are the sun discs and crescents decorated in repoussé. The two illustrated in Pl. 127, B, C, and two identical mates, came from the same cache of early temple bronzes as Pl. 124, D. They may be considered as examples of the best early Nuzi work. As symbols of the sun and moon they have a distinct religious significance, and their presence within the temple—in association with the dedicatory inscription on Pl. 124, D—is further, but unnecessary proof. The six groups of rays radiating from the central sun of Pl. 127, B mark the difference from the accepted representation in the glass and copper discs of later Nuzi, on each of which there are invariably eight single rays. The tang at the base of each served to hold it in a fixed position, and suggests that the objects were used as religious standards, as portrayed on the cylinder seals (Pl. 119, D).

The smaller disc and crescent (Pl. 127, F, G), and two identical mates, are from Stratum II. Much smaller and less elaborate, they are what one would expect to find in the private quarters in which they were used. Both are of thin sheet-copper, decorated with low repoussé work. The disc has a rather indefinite bulge to indicate a central sun, and from it radiate the usual eight rays seen in the glass discs. The crescent is simple, and is decorated only by the slight, outward bulge of the area between the flat edges.

The simple gold sun disc (Pl. 127, J) is the only disc of the middle or late Nuzi period in which there are more than eight rays or lines radiating from the central sun. The design is simple and closely related to those in which the sun pattern is elaborated more and more toward the flower design. The second and only other gold disc is decorated solely with a rudimentary bulge in the center. Neither disc has a tang, and each was clearly an object seen and used alone.

Pl. 127, I is one of several found in the chapel S111 in close association with other votive objects. The circular boss in the center suggests a simplified sun disc, and the piercing at the corners allows it to be attached to the object it decorated.

The pendant from Temple A (Pl. 126, T) is clearly the same motif, and is entirely in keeping with the temple practices of decoration and design.

The large object shown in Pl. 127, E is unique, and of unknown use. Its presence in a private house, in close association with objects of votive intent, as well as its vague likeness to the ceremonial mace-heads, places it with some certainty in the votive class. Four holes at equidistant points pierce the flat base, and serve as a means by which it can be fastened into its proper position. It is without seams or joints and was apparently made of a single piece of copper stretched and hammered to the desired shape.

Objects of personal adornment are rarer than at first appears. The rectangular pendant, Pl. 126, Q, would appear as such were it not from Temple A, where the probability of its having been strung in conjunction with the decorative beads places it in the class of temple decoration. The pendant itself is undecorated and unique. Equally unique is the limestone, button-like object set in copper (Pl. 126, V), found in the chapel S111. This association of stone and metal is unparalleled at Nuzi, as is the manner in which the back is pierced for attachment. It must have had some function other than that of pure decoration.

The button (?), Pl. 126, M, was found in the center of the L6-L10 wall of the palace, in conjunction with the tool, Pl. 125, B. This peculiar location was certainly not accidental, and the objects must have been, in a sense, dedicatory, just as were the beads in the walls of G29, Temple A. Both the shape and the method of attachment are unique.

The bracelet, Pl. 126, N, is from the early Nuzi temple cache, and, except for its mate, it is the only one found in the entire city. Both were undoubtedly for personal wear, but their association with the inscribed sickle (Pl. 124, D), and with the discs and crescents (Pl. 127, B, C), restricts them to temple use. They are entirely without decoration. Their ovoid shape is due merely to having been squeezed together in order to pass through the neck of the pot in which they were hidden.

Uncertainty as to personal use exists also in regard to the lunate object seen in Pl. 126, S. Ordinarily it would be classified as an earring, but again, its association with plain and ornate beads and pendants in G50 of Temple A makes it appear as another example of temple adornment. The core is copper, around which has been wrapped

gold foil to give the appearance of solid gold. This treatment on so tiny an object is illustrative of the scarcity and value of the precious metal.

The gold bead, Pl. 126, R, is the only metal object whose possible attribution as personal adornment is not nullified by its location. It was found in a private house, and may well have been dissociated from cult use. The only other gold bead was found just outside the Temple A doorway: a small flat band of gold studded on the outside with tiny globes of the same metal.

The close relationship between objects for temple decoration and those which elsewhere might be classified as personal adornment suggests that either the Nuzians were unbelievably restrained in respect to jewelry, or else that when used personally it served a dual function as personal adornment and as a bond between the individual and the cult he observed.

Miscellaneous. The copper bell, Pl. 126, Y, with its clapper in the form of a small metal ball, is part of the early temple cache, and for this reason it is connected with the cult. Since the pins and bracelets of this same cache were definitely intended to be worn, it is not improbable that this, too, formed part of the regalia of the temple priest. It is unique.

The small apron-shaped plates (Pl. 126, W, Z), 0.5 to 1 mm. thick, were found only in the chapel S111, and again, may have been connected with religious practices. The measurements of those recognizable as such are given below.⁴²

	Width		Height		Width		Height
1.	82 mm.	x	36 mm.	11.	27 mm.	x	17 mm.
2.	49 mm.	x	25 mm.	12.	27 mm.	x	17 mm.
3.	35 mm.	x	18 mm.	13.	24 mm.	x	29 mm.
4.	34 mm.	x	23 mm.	14.	23 mm.	x	30 mm.
5.	18 mm.	x	33 mm.	15.	20 mm.	x	10 mm.
6.	32 mm.	x	24 mm.	16.	16 mm.	x	21 mm.
7.	32 mm.	x	19 mm.	17.	————	x	48 mm.
8.	31 mm.	x	17 mm.	18.	————	x	37 mm.
9.	30 mm.	x	30 mm.	19.	————	x	30 mm.
10.	30 mm.	x	17 mm.	20.	————	x	28 mm.

Many other fragments of the same thickness too incomplete to identify suggest that at least double the number of the recognizable specimens once existed. In none was there any metallic copper left,

⁴² The measurements of the width, though taken at the top, do not include the two projections. The latter are never greater than those of Pl. 126, W.

but a few were solid enough to allow partial cleaning. Seven of the eight specimens cleaned showed traceable remnants of an incised geometrical design of the following nature:

No. 1. (Pl. 126, Z). Roughly parallel vertical lines 6-11 mm. apart; traces of two horizontal lines 7 mm. apart near the top, the whole making a gridiron pattern.

No. 5. At least one vertical line extending the full height in the center. Two parallel horizontal lines, one at the base, the other 4 mm. above it, both running the full width.

No. 8. Four horizontal lines the full width, evenly spaced between top and bottom; a suggestion of an inverted V cutting them from above.

No. 10. Traces of horizontal and vertical lines in cross-hatch design.

No. 13. Four horizontal lines evenly spaced between top and bottom. No vertical lines visible.

No. 16. Four vertical lines, roughly parallel, evenly spaced across the width. One horizontal line across the top.

No. 17. Traces of at least three vertical lines 8-9 mm. apart.

The horizontal line at the top is always below the lower edges of the two projections, while that at the base is at the very edge. This suggests that the projections and the upper strip between them were out of sight when in use. The design is found only on one side, except in rare cases where the horizontal line at the base is repeated on the reverse. It should be remembered that the cleaning could never be completed, and could only be carried to the point where disintegration was imminent. Consequently, the revealed designs are, of necessity, incomplete, and can only be considered as indications of what once existed over the whole surface.

Only in one instance is there any variation from the usual apron shape. This is No. 5, a long, narrow plate without the projections at the top, and pierced with two holes (2 mm. in diameter), each 11 mm. from the top and 3 mm. from either side. A flat copper wire bent in a loop 8 mm. in diameter protrudes from the left-hand hole with the two ends clinched back on the opposite, undecorated face to hold it in place. It is clearly a means by which the piece could be suspended.

The other plates with their projections are reminiscent of the single projections on the armor plates (Pl. 126, D, J), and are equally suited to suspension if mounted in the same way. Unfortunately, their purpose is uncertain, but it seems highly probable that they were attached to a stout fabric base forming a flexible decorative metal surface.

Two spoons (Pl. 126, U) were found: one in a private house, and the other in Temple A. The mode of design is not seen elsewhere in Nuzi, and is remarkable for its restraint and its pleasing geometrical effect. Too small for food, and too large for an ear spoon, its purpose must remain obscure.

Related to these are the spatulas, identical in shape and size to that shown in Pl. 141, L. Usually flat-bladed, they are occasionally slightly spoon-shaped, though less so than Pl. 126, U. They vary but little from the size illustrated and were relatively common in the dwellings. A single example with a sharpened straight edge across the end shows its use as a diminutive, long-handled chisel.

Copper pegs (Pl. 126, P) were found sparingly throughout the houses and in the chapel S111. Although their use is not certain, they have the appearance of keys or cotter-pins, and each was probably secured against loss by a string through its pierced handle.

Also restricted to Temple A are the small, pierced, copper discs (Pl. 127, D), found there in moderate numbers. The hemispherical shape of these thin, repoussé objects gives them the appearance of tiny bosses to be attached to a wooden object by a nail through the central hole. Their irregularity suggests that they were for casual or distant decoration rather than for fine detail. The suggestion that they served as washers in securing the ends of rivets cannot be considered seriously, for the metal was even originally too thin to have had any effective holding power.

The cymbal-shaped object, Pl. 126, X, is one of a pair from a private house. Both in shape, size and piercing they are similar to the castanet-like cymbals used in Mesopotamia today. It seems not unlikely that they were originally for this purpose. Only in their greater thickness do they differ from the modern type.⁴⁸

Other copper objects, not illustrated, are: rings, 10 to 20 mm. in diameter; flat discs of the same diameter, undecorated and unpierced; and sections of tubing, 4 to 7 mm. in diameter.

Conclusion. It is unfortunate that so great a part of the copper was found in an almost complete state of disintegration, for it makes it practically impossible to identify many pieces that originally were easily recognizable objects. Tempting though it may be to conjecture as to what these fragments once were, the description has been limited to those either complete enough to permit illustration, or common

⁴⁸ The drawing shows them as they are today, uncleaned. Removal of the accretion formed by oxidation would reveal a much thinner section.

enough to be understood from the collected fragments of many specimens.

BONE

Though bone is a commonly worked material, and found in large quantities throughout the excavations, the kinds of objects made from it are surprisingly limited. So far as can be observed, ivory was not used.

Pins. Bone pins are found, complete and fragmentary, in large numbers throughout all the buildings. It is probable that some were needles, but the large number with decoration beyond the eye (Pl. 127, T, U, X, Y, Z, BB) could not have been. Moreover, common as the practice of sewing must have been, pins of both types were found in far greater quantities than would have been needed for needlework alone. Consequently, it is probable that the great majority of these objects served a like purpose. Their ornamentation suggests that they were a part of the make-up of personal attire, secured against loss by a string through the eye. Those frequent examples of short length could hardly have been hairpins, though the larger ones may have been so used. It is more probable that the majority were used in place of buttons.

Their length is distributed evenly between the two limits of 30 and 147 mm. The majority are round. A small minority are square-sectioned, with smooth, slightly rounded edges. The bone is always highly polished and well finished, and it is exceedingly unusual to find one in which the even contour from point to eye has been disregarded.

Decoration is found in a relatively small minority and usually is in the form of incised rings above the eye (Pl. 127, X, Y). Those with bulbs at the end are rare (Pl. 127, BB), as are those with light cross-hatched incisions in a band around the shank above the eye. The clenched fist of Pl. 127, Z is a unique example of splendid workmanship. It is excelled only by the magnificent example of carving seen in the gazelle's head of Pl. 127, U. Its small and only companion (Pl. 127, T) has suffered from decay, but even originally could hardly have equalled the excellence of the larger head.

Occasional variants are found in the large-eyed thick pegs (Pl. 127, S), which, owing to their breadth, show in section the curve of the original bone. Their size and shape show that they were not clothing pins, and it seems probable that they were cotter-pins made to serve some special and uncommon use.

The unpierced peg with square section, spherical head, and short,

circular shank is unique (Pl. 127, Q). It was found among the beads in Temple A.

*Inlay.*⁴⁴ Except in rare and isolated cases, all the bone inlay came from M78 and M79 of the palace. These two rooms yielded several hundred complete and fragmentary pieces in a variety of shapes. What the original decorated object was is unknown, but a single rectangle of bone still in place in a piece of charcoal that had once been a flat plank, showed the object to have been of wood. Judging from the quantity of inlay, it was a piece of some size and certainly one of importance.

The thickness of the plaques never goes beyond the limits of 3 and 4 mm. They are highly polished on the upper face, and the reverse and edges show marked diagonal striations as though cut with a saw. The color gradation from gray to black is due to the intensity of the fire that destroyed the room, though a few fragments, evidently protected from the heat, have the dark brown color of old, polished bone.

Considering them as two-dimensional, they are found as squares, rectangles, triangles, diamonds, parallelograms, and ovoids. The squares vary but slightly from the width seen in Pl. 127, K, except for the occasional appearances of a much smaller type, 7 mm. square. Rectangles are rare and always of the size seen in Pl. 127, L. Triangles are as common as the squares and are invariably pierced through the center (Pl. 127, M). Like the squares, they are of unvarying size, except for an infrequent smaller type, also pierced, measuring 8 mm. on each side. The diamonds and the parallelograms together form the most common group. The former remain fairly uniform, with a length and width of 19 and 6.5 mm., while the latter occur in a variety of lengths and widths ranging from the stocky example, Pl. 127, N, to those 23 mm. from point to point, and 4 mm. wide. The ovoids were found in incomplete condition, the largest fragment 37 mm. long. If the curved edges on this most complete piece continued on their same even course, as is indicated by related fragments, they would have resulted in a truly egg-shaped outline, approximately 40 mm. long and 23 mm. at the point of greatest width. None of the latter was pierced. Fragments of other pieces fully as large had straight sides and pierced edges. The coffin shape, Pl. 127, O, is unique.

Of particular interest is Pl. 127, P, an unpierced triangular plaque, held in a copper frame. The rim was flush with the upper surface (it is shown here in reverse) and was the only one so treated.

⁴⁴ For the various kinds of inlaid furniture mentioned in the texts, see Appendix D, *Furniture*.

The plaque Pl. 127, R, with a conventionalized tree-of-life design engraved on its surface, was probably also used as inlay. It was found in the house of Shilwi-teshub, unassociated with any other examples. It is the only one bearing any decoration.

Miscellaneous. Several specimens similar to Pl. 127, DD were found in the private houses. The grooves on the otherwise unworked fragment of bone appear to be the result of wear rather than cutting. Such objects may have been connected with the manufacture or waxing of thread, and the channels the result of constant friction as with the cobbler's bench of today.

Two examples of Pl. 127, EE were brought to light from the private houses; they are shank bones sawed off at right angles below the joint.⁴⁵ Because of the difficulty of attachment, it seems unlikely that they were sword-hilts. Similar pieces are used in games throughout modern Iraq, and it is probable that the Nuzi specimens were similarly used.

The whorl-like object, Pl. 127, FF, is the most elaborate of five specimens. Three are perfectly plain, rounded on top, and, as usual, flat on the bottom and pierced through the center. Their average diameter is 25 mm. Though perfect button-shapes, their scarcity rules them out of this class. Similarly, their lack of weight would make them inefficient as whorls, the object they most resemble. The attention given to decoration in two cases is reminiscent of the decorated pins, and it seems likely that they formed a part of the personal ornamentation of well-to-do individuals.

Many astragali of goat and sheep were found throughout the houses, dissociated from other unworked bone. It is presumable that these were used as gaming pieces, much as they are used by the children of Iraq today.

OSTRICH EGG-SHELL

It is certain that cups made of ostrich eggs were used at Nuzi, but none were found in even approximate completeness. Fragments, singly or in groups, were common, and undecorated, except for a high polish on the exterior.

SHELL

Except for the beads and plaques (Pl. 121, F, G), already described, worked shell was exceedingly rare. Pl. 127, CC and a fragment of a similar piece are the only other specimens. The design is that of a vine with trifoliate leaves fringing the edge of a marine pearl oyster shell.

⁴⁵ The hollow in the cut face is the result of the natural decay of the marrow.

The tiny pits making the design are drilled. The drawing is decidedly naturalistic and is in sharp contrast to the formality with which plants are shown elsewhere in Nuzi.

An examination of the unworked shells found throughout the various levels of the mound reveal the following specimens:⁴⁶

- Helix cavata* Mouss. Local land snail. Early Ga.Sur.
Hohenwartiana hohenwarti Rossm. Local land snail. Nuzi. G29, Temple A.
Murex brandaris Linn. Mediterranean. Nuzi. Common in Temple A.
Murex trunculus Linn. Mediterranean. Nuzi. Common in Temple A.
Triton sp. Uncertain whether Indo-Pacific or Mediterranean. Nuzi. One specimen.
Oliva inflata Lam. Indo-Pacific. Prehistoric levels and Nuzi. Common in Temple A.
Cypraea ocellata Linn. Indo-Pacific. Nuzi. Common in Temple A.
Cypraea lurida Linn. Mediterranean. Nuzi. Common in Temple A.
Cypraea moneta Linn. Indo-Pacific. Nuzi.
Melania sp. Fresh-water snail. Probably local. Early Nuzi.
Unio sp. Fresh-water clam. Probably local. Nuzi and Ga.Sur.
Pinctada sp. Probably margaritifera (Pl. 127, CC). Marine pearl oyster. Indo-Pacific; probably from the Persian Gulf. Nuzi.

These identifiable specimens represent but a small number of the types present throughout the various levels. The loss of the characteristic color in the remaining majority makes their positive identification impossible.

Shells of local origin were to be expected, and even those Indo-Pacific types, illustrative of an extensive trade with the Persian Gulf ports, are not out of the ordinary. However, those that could have come only from the Mediterranean are of extreme interest, not only as definite proof of a considerable trade with that coast, but because, being restricted exclusively to the temple, they are another example of cult practices and objects originating in the west.

The shells in most cases were pierced for stringing; and, where used in the temple, their original brilliant coloring must have been even more decorative than the glass beads and pendants they interspersed.

⁴⁶ Identification made by Prof. W. J. Clench, Curator of Mollusks, Museum of Comparative Zoölogy, Harvard University.

WOODEN VESSELS, BASKETRY, AND MATTING

Any wooden objects would of necessity have perished either in the conflagration or during the millennia following the destruction of the city. Consequently, it is difficult to tell whether wood was commonly used for purposes apart from construction. Only one example remains to show its use in the daily life of the Nuzians. Its preservation is due entirely to the coating of bitumen inside and out which held the crumbling charcoal in some semblance of its original shape. The vessel (Pl. 133, C) is a broad-bottomed vase or cup found among the furnishings of Temple A. The grooves at the base, both inside and out, as well as its thin walls and the regularity of its line, are certain proofs that the vessel was turned on some sort of a lathe.

In the same building was a trough-like vessel (?) similarly covered with bitumen and painted red on the inside. It is described in detail in the account of G29, Temple A. Throughout the excavations, charcoal was found in large quantities, but in few cases could anything be identified other than the undressed poles used as rafters.

Basketry is represented by a single specimen (Pl. 133, B), found in G29, Temple A. It, too, owes its preservation to a bitumen coating both inside and out. The bottom was fairly well preserved (Pl. 133, A), and gives a good idea of the weave in use.⁴⁷

The impressions of straw matting were found in sufficient numbers to show a wide general use, but none was large or clear enough to give the weave. Pl. 95, C shows that matting was used as the inner cover to a pot and that over it the soft clay pot-lid was pressed into place. This being the only pot-lid so marked, the practice could hardly have been a common one. The best example of the weave is found in the clay bed model (Pl. 57, U), from the transition period. Though this is presumably a Ga.Sur object, it is probable that the weave used at the end of one period would survive into that which followed.

SPECIAL MARKS DENOTING MAKER, OWNERSHIP, OR USE

Marks that might be taken to indicate maker, ownership, or special use are exceedingly rare, except in so far as the various decorative motifs and peculiar forms of the objects devoted to cult use show their dedication to that purpose. Aside from these, the inscription on the copper sickle, Pl. 124, D, is the only clearly established mark of special use, though the wheat symbol on the large pot fragment, Pl. 117, A,

⁴⁷ Baskets made of pear, plane and several unidentifiable kinds of wood are mentioned in the texts. See Appendix D, *Furniture*.

seems to indicate fairly clearly the use to which the pot was put. The incised cross found on a single pot, Pl. 64, A, may be an owner's mark. More certain are the well-pot (Pl. 70, A) and pot-stand, on both of which are crudely painted arrow symbols. The former was found at the bottom of the R96 well and the latter in R84 next to the well. It is probable that they belonged together and that both were restricted to the use of one person or group within the palace. In the same well were other pots with similarly rough-painted circles presumably denoting another owner or use.

Both baked and mud-brick were without makers' marks, and only on one was there a dedicatory inscription. The two deep holes on the under sides of the mud-bricks of G29 of Temple A, and L20 are quite certainly for a firmer bond between mortar and brick, and not to denote any special use or maker.

WALL PAINTING

Each wall painting (Pl. 128, E, H, G; Pl. 129, D; Plan 23) has been described in detail in the account of the building in which it appears. Consequently, little more need be said concerning them. Their color range is extremely limited, and, except for a slight tendency toward blue seen in some of the specimens of gray pigment, the colors are restricted to those here analyzed by Mr. R. J. Gettens:

- (a) *Red pigment.*
Physical appearance and a positive test for iron show that the pigment is *red ochre*.
- (b) *Black pigment.*
Physical appearance and the fact that the black particles glow and burn in a hot flame indicate that the pigment is *carbon black*.
- (c) *White underpainting of the colored surface.*
Physical appearance and recrystallization of the substance in water show that it is *gypsum*. The material here seems fairly pure and it may have been applied much as plaster of Paris is applied today.
- (d) *Gray priming beneath the gypsum underpainting.*
The priming material appears to be mainly gypsum. Microscopically, there is nothing to indicate that the gray is the result of an intentional mixture of white and black pigments. The gray tone seems to be caused by natural impurities in the gypsum.

It is of interest to note the extreme formality and conventionalization of all the designs, and the tendency toward geometrical patterns both in the detail and in the arrangement into vertical and horizontal panels. The designs as seen on Pl. 128, H; Pl. 129, D are a strange mixture of native and foreign motifs. The interlacing ribbon motif is a common one, and is seen in both the wall painting of F24 (Plan 23), on painted pottery (Pl. 132, C), and in the cylinder seals. The variations of the tree-of-life pattern are seen on the seals, the rear of the grotesque lion figure (Pl. 108, B), on the painted pot from the R96 well (Pl. 69, A), and on the bone and glass plaques (Pl. 127, R; Pl. 131, A). A parallel to the geometrical detail is suggested by the bone inlay from M78 and M79 (Pl. 127, K-P), and is found in less elaborate form in the painted Nuzi terra-cotta. The figures have no parallels whatsoever at Nuzi. The bulls' heads are remarkably similar to those of a wall painting⁴⁸ from the palace of Amenhotep III in Thebes. The similarity of subject might well be accidental, but the likeness of the conventionalized rendering suggests a close connection between the two examples. Similarly, the heads of Hathor could only have come through such a foreign contact. It is clear in these two major remnants of Nuzi wall painting that the local artists were following a prototype originating far to the westward within the Egyptian sphere of influence.

ANIMAL REMAINS

An identification of the animal remains⁴⁹ shows the following species to be represented:

Ostrich. Represented throughout Nuzi by numerous fragments of egg shell.

Domestic dog. Large breed, similar to those of the Mohthic period at Homolka, Bohemia. Uncommon.

Pig (Sus scrofa). Common.

Horse. Late Ga. Sur and Nuzi. Uncommon.

Small fox. Probably *Vulpes vulpes palaestina*. Rare.

Cow. Bos taurus. Rare.

Cat. Probably domestic (*Felis domestica*). The same size as the domestic cat and slightly smaller than the wild European cat. Rare.

Mole rat (Spalax). Probably late.

⁴⁸ Metropolitan Museum of Art, New York.

⁴⁹ Through the courtesy of Dr. G. M. Allen, Curator of Mammals, Museum of Comparative Zoölogy, Harvard University.

Gerbil (*Meriones sp?*). Unique.

Domestic goat (*Capra hircus*). Common. Ga.Sur and Nuzi.

Domestic sheep (*Ovis aries*). Of the ordinary breed. Uncommon.

Sheep. Of the primitive breed known as turbary sheep supposed to be derived from the wild urial and brought into Europe in early times—as in the lake dwellings, Bohemia, etc. Uncommon.

Red deer (*Cervus maral*). The Persian red deer. Two sets of antlers.

Elephant. Represented by a single leg bone from C35 (Pl. 28, C). Many astragali of goat, a few of sheep, and one of pig. Presumably used as gaming pieces as the first two types are today.

CEREALS, NUTS AND FRUITS⁵⁰

A considerable quantity of vegetable products was found in carbonized form in the palace and the private houses. An identification⁵¹ shows the following represented:

Barley. The most common of all vegetable products found at Nuzi. It is frequently found in large heaps on the floors and occasionally in storage pots. Seen in its carbonized form, it is difficult to say, in every case, whether the cereal is barley or wheat. Barley can be positively identified in many cases, and it seems probable that all of the samples were the same.

Small flat circular pats of carbonized bread (Pl. 33, F), averaging 60 and 6 mm. in diameter and thickness, and presumably of barley flour, were found in the palace.

Chick peas (*Cicer arietinum*). Found in smaller quantities than barley, but generously distributed throughout the private houses.

It is of interest that the chick pea from the transition period (the only vegetable product from Ga.Sur) is considerably smaller than that of Nuzi.

Dates. Date stones in small numbers were found evenly distributed among the private houses.

Pomegranates. In spite of their extreme perishability, two were found sufficiently well preserved to permit identification.

⁵⁰ See also Appendix D, *Grain and Orchards, Gardens, Forests*.

⁵¹ Through the courtesy of F. Tracy Hubbard, Agassiz Museum, and Alfred Rehder, Curator of the Herbarium, Harvard University.

Coffee(?). A single carbonized seed was found apparently belonging to the coffee family. It is unlike any variety known, and can only tentatively be identified as such.

Acorns. Large heaps of acorns were found both in the palace and in the private dwellings. The individual specimens bear a strong resemblance to both *Quercus Haas* and *Quercus infectoria*. Though positive identification cannot be made without either the cups, leaves, or a wood section, a comparison of types favors *Quercus Haas* as the probable species.

WOODS⁵²

Numerous specimens of charcoal from Nuzi were examined microscopically⁵³ in an attempt to identify the woods from which they were derived. Many were in such poor condition as to make it extremely difficult to secure good sections. However, we may feel sure of the following conclusions:

The bulk of the charcoal was derived from poplar (*Populus*). The charcoal adhering to the copper door-studding nails from the main room of the palace, L11, is coniferous, probably cedar of Lebanon. Other bits are identified as oak and palm, though it is impossible to name the genus and species. The specimen from the adze found in Grave 5 of L4, the only Ga.Sur specimen examined, appears to have originally been boxwood (*Boxus*).

Thus we have added to the evidence presented by fruits, seeds, nuts, acorns, etc., further information by which the flora of earlier times may be understood.

⁵² See also Appendix D, *Orchards, Gardens, Forests*.

⁵³ Through the courtesy of Prof. I. W. Bailey, The Bussey Institution, Harvard University.

CHAPTER IV

LATE PERIOD

Since the majority of late objects are discussed by Mr. Ehrich in his account of the soundings and graves,¹ they need not be gone into here in great detail. The remnants of this culture later than Nuzi are meager, and must be used more as a proof of later habitation than as a comprehensive picture of Late Period craftsmanship. The objects serve only to show the major characteristics of certain types.

The term Late Period has been chosen in designating this culture because of the intermixture of Parthian, Sassanian, and Colonial Roman seen in its objects and customs. Though the Parthian predominates and the Roman is far in the minority, it is probable that its people were a mixed race dominated primarily by people of Parthian extraction or allegiance. However, the presence of certain basic Babylonian pottery forms and decorative units suggest that certainly the core of the stock was native. Thus, the change from one culture to another would be, in their case, political, rather than racial.

OBJECTS OF DOUBTFUL PERIOD

The two small spouted bottles, Pl. 133, F and G, were found too close to the Late Period level to be unhesitatingly called Nuzi. Both the finish and shape are late rather than early, and only the form, with the spout springing from well down on the side, is suggestive of the Nuzi drip bottles (cf. Pl. 76, A, B). To which period they belong must remain uncertain, though their difference from the usual Nuzi form and the subtle differences of line suggest that they are Late Period adaptations of a shape well known and used in Nuzi.

The small flask, Pl. 133, D, was found on an undoubted Nuzi pavement, but it has no parallels and bears no resemblance to other pieces of that time. Considering the prevalence of handles on Parthian ware, and the habit of the later inhabitants of re-using earlier buildings, it seems probable that this is an object of the Late Period. It is hand-modelled with an irregular outline and rough surface.

The large limestone plaque, Pl. 133, E, was found in association with the jar Pl. 136, C, and is also presumably of the Late Period. However, the similarity of the sun-disc pattern to that so common in

¹ See Appendix E.

Nuzi is striking and differs only in having ten rays diverging from the central sun instead of eight. The knob at the top is of distinct interest. In the glass sun discs found in Stratum II of Nuzi, the knob was an appendage added only so that it might be pierced and the piece hung as a pendant. Here, the knob is accepted as a part of the legitimate outline though it no longer serves its original purpose in any way.

The object is made of a single limestone slab, and is decorated only on one side. Whether it is a Nuzi object used again in later times, or whether it is a genuine later adaptation of an earlier motif, must remain in doubt. However, the divergence from the accepted number of rays and the blind acceptance of the knob strongly suggest the latter possibility.

The copper spoon or spatula, Pl. 141, L, found in a Late Period grave, is unique for that period. Similar spatulas were common in the Nuzi period, and it is probable that this specimen is in reality a Nuzi object used by the later inhabitants.

TERRA-COTTA ^{1a}

Two features characterizing the products of the later potters are in particular contrast with those of Nuzi. The first is the use of sand instead of straw as a *dégraissant*, resulting in a smoother turned surface. The second is the almost universal use of a wash of a lighter-colored clay applied over the finished vessel. The latter fills any irregularities that may have remained on the body, and produces a slick, finished appearance. The clay or ware of the body, though occasionally greenish-gray, is more commonly found ranging from light tan to russet.

Handles, a feature seldom seen in Nuzi, were commonly used in both single and double form. In several instances they were added for the sake of symmetry alone and not because of any legitimate need.

In much of this pottery there is a strong tendency toward decoration, both in those for household use and in those intended for burials. This is achieved mainly by incised, horizontal, vertical, and wavy lines, and in occasional pieces by an application of a thick green glaze. Perfectly preserved in many cases, the latter takes on a pale green iridescent surface after long exposure. Stamped designs are common, either in flower shapes or in cartouches within which are animal figures and occasionally crosses. Less frequent is a mode of decoration consisting of solid circular spots and bands of black color (bitumen).

^{1a} See also Pl. 64, B, a Late Period vessel illustrated by mistake among the Nuzi terra-cotta.

There is about this ware a certain precision not found in the earlier pieces. The incised decoration is accurately cut, the edges of the lip are frequently sharp, and the general appearance in the better pieces is that of a craft concerned as much with accuracy of detail as with general form.

Pl. 134, A. Large pot of tan clay covered with a light wash. The single stout handle is unusual (cf. Pl. 134, E), and is evidently intended for a rope connecting two such pots strung over the back of an animal.

Pl. 134, B. Large pot of common shape with zigzag rather than wavy-line incision. The neck is unusual and suggests the use of a cover fitting over and around it. An identical pot was found with a plain baked brick used as a cover. Tan clay and light wash.

Pl. 134, F. One of four exceptionally large pots. The ware, a deep, rich brown, has no wash or slip, and is polished on the outside. (See Pl. 31, A).

Pl. 135, A and B. Grave furniture; undecorated, and of dark tan, very sandy ware covered with a light wash. One other was found not associated with a burial, having two wavy lines incised around the shoulder.

Pl. 135, C, D, and G. All but the last were used as grave furniture. No others of this type were found. The tan clay is covered with a thick green glaze over the upper four-fifths of the vials. The handles are unnecessary appendages and could only have been added to give a more finished appearance.

Pl. 135, E. A common shape. A thick green translucent glaze, in remarkably good condition, covers the upper two-thirds of the vase and extends well down into the inside.

Pl. 136, A. A particularly graceful variant of a common shape. The double handles are of two parallel rounded bands joined together. The whole outer surface, including the base, is covered with green glaze.

Pl. 136, C. A unique combination of decoration and shape. The band around the lip and the three rows of dots below it are of bitumen (cf. Pl. 136, D). The series of female symbols making a diaper pattern around the shoulder is a design found at Yorgan Tapa in both Ga.Sur and Nuzi. Such elaborate stamped cartouches are uncommon at Yorgan Tapa, but are typical of the period (cf. Pl. 137, A and B, from Yorgan Tapa, and Pl. 137, E and H, from neighboring mounds).

Pl. 136, F. An unusually large single-handled flask. A rare type. The handle is made in the same way as those of Pl. 136, A. The ware is light tan covered with a light yellowish wash.

Pl. 136, G. Fragment of a strap-handle with the same motif as that

seen on Pl. 135, F. Stamped circles are uncommon in this period (cf. Pl. 139, A; Pl. 141, A).

Pl. 136, I. A beautiful specimen of green-glazed ware. The glaze covers all but the very base, and runs well into the interior. The indentations at opposite points in the inner face of the rim form two pouring-lips, and are unique.

Pl. 137, A. A unique piece both in shape, handles, and combination of decorative motifs. It was found near, but not definitely associated with, the Late Period cemetery. The irregular, zigzag, moulded bands, terminating in circular pits, are unique. The lower body is roughened intentionally by long grooves and ridges made by drawing the fingers over the wet clay. The upper body is smooth, has a light wash, and is stamped at wide intervals with a band of cartouches depicting a flying bird (cf. those from Yorgan Tapa, Pl. 136, C; Pl. 137, B, and those from neighboring mounds, Pl. 137, E and H).

Pl. 138, A. This is the only true jar found. The vertically incised lines connecting the horizontal incisions are unusual. The handles are too small to be of much use and were apparently added for the sake of decoration. Both the ware and the wash are of the usual type.

Pl. 138, C. A vase of the usual ware and wash, used as burial furniture in conjunction with Pl. 135, D; Pl. 140, J; and Pl. 141, I.

Pl. 138, E and N. Two vases of like and uncommon shape. The first (E) is covered all over, base included, with green glaze. The second is a burial piece of dark russet color without any over-coating of wash.

Pl. 138, F. A pot of tan ware covered with a white wash. It was found buried below the pavement and contained the skeleton of a newly-born child. A half-brick served as its cover. It is particularly notable for the sharpness and accuracy of its neck, lip, and incised rings.

Pl. 138, M. A vase having the same ware, wash, and sharpness of detail as Pl. 138, F. This shape without the usual accompanying handles is uncommon.

Pl. 139, B. A plain bowl without a ring base, glazed inside and out. Unique. Another example of approximately this same shape, though unglazed, came from Tomb I, Sounding 1 (Pl. 38, C). The latter is a beautiful example of turning, and almost of egg-shell thinness. With a lip diameter of 127 mm., it diminishes rapidly and evenly to an almost pointed base, with a total depth of 70 mm. It is of buff ware without any over-coating of white wash.²

² It seems improbable that bowls were not as popular a form of utensil as in Nuzi, and their scarcity can only be laid to an accidental absence. It should be remembered

Pl. 139, D. A bowl with ring base, covered inside and out with green glaze.

Pl. 139, C. Bowl of yellow-gray ware without any wash. It is hand-modelled, irregular in outline, and crude in appearance. Such crudeness is unique in the Late Period.

Pl. 139, E-M. This is the most common of the Late Period vessels found on the *tepa*. The ware varies from tan to buff, and is always covered with the usual light wash. Several, Pl. 139, G particularly, are exceedingly fine in proportion and general design.

Pl. 139, N; Pl. 140, A. Lamps of a type commonly found throughout this culture. In each case the entire object is black from impregnation with oil and the wick bowl is heavily encrusted (Pl. 140, A, in particular) with carbon. The type is identical with one whose use is suspected, but not proven, in Nuzi times.

Pl. 139, O. A lamp of advanced type. The piece is more Roman in appearance, and was found in the débris filling a late storage pit in conjunction with other objects undoubtedly of the Late Period.

Pl. 140, C. An object of the customary ware and wash, and of uncertain use. The hole through the side at the base, the row around the body, and the even diminution of diameter to the open mouth is reminiscent of the offering stands of Ga. Sur and Nuzi. In each separate detail, it has exact parallels to the stands of both of the earlier periods. The general outline and the flat base are strikingly similar to those of Ga. Sur (Pl. 54, C, D), while the circular holes and the single entry-way near the base are found in the clay stand of Nuzi (Pl. 114, B). It seems highly probable that this is the descendant of the two earlier types and that it served much the same purpose.

Pl. 140, B and E. Spindle whorls were relatively rare and in most cases could not be distinguished from those of the Nuzi, Ga. Sur, and prehistoric levels. The two illustrated specimens bear more distinguishing characteristics: the first with its incised thumb-nail decoration, and the second with its attached iron hook. Both are unique.

Pl. 140, D. A spouted pitcher still showing the lower joint of a handle. Its impregnation with a black substance leads one to believe that it served as a lamp.

Pl. 140, F. The only pot-stand found. It differs from the Nuzi type only in its wash and in the added decoration around the lip and body.

Pl. 140, G. No human or animal figures were found that could be

that the remnants of this later culture were extremely meager and that the pavements to which these objects belonged, when found at all, were never more than half a meter under the present surface of the mound.

positively identified as of this culture. The plaque illustrated here is a surface find and certainly does not belong to any of the cultures preceding the Late Period at Yorgan Tapa. Since there were no finds indicating a habitation in even later times, it is presumable that this object is a product of the Late Period. The ware is fine-grained, yellow, and without wash.

Pl. 140, H. A compound jar consisting of three separate containers grouped about a central stem or handle. The object is made of the usual ware and is covered with a light wash. Unique.

Pl. 140, I. A vessel, presumably of this period, of unknown use and unique shape. Hard brown ware with no wash.

Pl. 141, A. A fragment of a large jar found in an intrusive pit in the temple. The ware is yellow-gray. Both straw and sand have been used as *dégraissant*, and the surface is covered with the customary light wash of the Late Period. No other piece of this kind has been found in the vicinity with which this may be compared, but it can, with fair certainty, be ascribed to the Late Period. The wash and the mode of impressing the design with stamps is typical of the ware just described. The use of animal forms has been shown as a common practice, and the sun disc of the less conventionalized type has a parallel in the limestone disc of Pl. 133, E. The whole appearance of the original is, in spirit, strikingly similar to the other pieces of the Late Period.

A single row of stamped circles extends along the inner edge of the lip, while at the center point of the fragment, six more, in rows of three, extend down to the outer edge. The simple sun discs are made with a single stamp. The flower design, the descendant of the sun disc, is made with a stamp for one petal impressed at regular intervals around a central impressed circle. The zigzag line is made by a single triangular stamp impressed consecutively upright and inverted in a row around the body. The animal figures and the crosses at the bottom are also made from a single stamp for each type.

The sherd was a part of a very large open-mouthed jar of a size hitherto not encountered in the Late Period. The abandonment of the cartouche in association with the animals, and the elaboration of the whole design suggests that it dates from the latter part of the period at the time when the older conventionalization and restrictions were being cast aside.

GLASS

All of the complete, or even partially complete, examples of glass found in the Late Period were used as burial furniture, but there is no reason to believe that it was restricted solely to this use. The reason

for their survival in the graves is due solely to the superior construction and protection of the tombs. The Late Period habitation areas southwest of the mound yielded a considerable number of fragments of glass. This implies that these people, so skilled in its manufacture, used glass in this world as much as they expected to in the next. The colors are in varying shades of green and a rich, slightly reddish black. The former is by far the most common.

Pl. 140, K. Tear bottle. Green glass. One of several.

Pl. 140, J and M. Glass vials of essentially the same shape, except for the handles and base. The former is of green glass and the latter of the unusual black glass. Both are relatively common shapes, patterned after those of terra-cotta.

Pl. 140, N, O, and P. Green glass bowls, each unique. The latter two are splendid examples of accomplished design and craftsmanship.

STONE

Objects of stone are exceedingly rare. However, it is apparent that a thorough investigation of an intact house site would yield a larger proportion of stone than is indicated here. Other than the plain, unworked stones used as weights in association with the copper scale pans (Pl. 142, F), and a few unpretentious beads, the stone objects are limited to two pieces. The first is the possible Late Period sun disc (Pl. 133, E) already described. The second is the crystal bead (Pl. 141, P) from the cemetery.

METAL

In this period iron makes its first appearance at Yorgan Tepa as a metal of common use. Copper⁸ is still the most common metal, with gold, silver, and lead present in limited quantities.

Copper.

Pl. 141, B. A flattened cone, intentionally so shaped. Probably a ferrule.

Pl. 141, E. An amulet found on the surface. The period is in doubt, but from the workmanship, it seems more Late Period than Nuzi. The design is made of twisted wires laid onto a thin, solid disc. The knobs at both sides are pierced. Unique.

⁸None of the copper objects of this period were analyzed. Consequently, it cannot be said with certainty whether they are copper or bronze. The term "copper" is used for the sake of convenience and uniformity.

Pl. 141, F. Bracelet. One of two found in a Late Period grave.

Pl. 141, H. One of two identical bracelets found in a grave. It is made of a single loop of heavy wire, the ends of which are made fast by being twisted around the shank at different points.

Pl. 141, I. Presumably a finger-ring, found in a Late Period grave. Made of a partial hoop of heavy wire completed by wire of finer gauge. Unique.

Pl. 141, Q. Tab with a pierced knob and three rivets in place. It was, obviously, attached to an object of more perishable material. Probably a belt or harness buckle.

Pl. 141, V. Finger-ring made of a stout circular band, flattened at the top. The piece is badly corroded and any design it may have had is now gone. Unique.

Pl. 142, C. Large ornamental brooch with an axle and catch for the pin that is now gone. Except for the tiny pits on the surface, the design completely pierces the metal. It is the only pin of this type; the object, as well as the motif, is unique.

Pl. 142, F. Scale pan. One of a pair found together in association with a group of unworked stones used as weights. Each pan is pierced at four equidistant points on the rim. The pair is unique.

Iron.

Pl. 141, C. One of several similar scattered objects. Its thickness suggests that it was used where great strength was needed. It is presumable that the two round tongues were driven into drilled holes in the object of which it was a part, and held it in that way rather than by passing on either side of a narrow shank.

Pl. 141, J. Other than Pl. 141, U, this is the only arrow-head found in the Late Period. It is of interest that the shape is identical with that common in Nuzi times.

Pl. 141, N. Large iron spatula probably used as a weapon. Found in a Late Period grave. Unique.

Pl. 142, E. A pair of shears with a loop or spring handle. Found lying in a flat terra-cotta basin in which was a long knitting needle (Pl. 141, M).

Gold.

Pl. 141, G. An ear or nose ring with two irregular pearl drops. Though found close to Grave 43, it is too like the Islamic type to be unquestionably assigned to the Late Period. Unique.

Pl. 142, B. Thin sheet-gold eye and mouth coverings for the dead,

found in Tomb III of the cemetery. (Shown in situ in Pl. 38, E.) Both are pierced at the two ends to allow them to be fixed in position by a string passing behind the head. They are the only two examples found.

Silver.

Pl. 142, D. One of three silver tetradrachms struck by Vologases III in the early part of his reign (152 A. D.); intrusive finds in Stratum II of Nuzi. Two others of the same period, but of smaller denomination, were found on the surface of the area surrounding the mound.

Lead.

Pl. 141, S. A fragment of an ornamental, open-work circlet decorated with conventionalized birds and a disc between bands of rope design. The lines indicating the feathers are incised, and the small ornamental circles are lightly stamped on the face of the disc. Again one can recognize the sun disc of earlier times, though it is now changed greatly from the form so frequently found in Nuzi. The object is unique.

BONE AND HORN

Again the quantity of objects is so limited that it cannot be used as a proper criterion of the types or proportion of bone objects in the Late Period.

Pl. 141, D. Whorl-like object of bone, strikingly similar to those of Nuzi (Pl. 127, FF). The same reasons that made the Nuzi objects unsuitable as whorls apply here, and it seems more likely that they were used on the person, perhaps as the heads of copper pins. Several were found.

Pl. 141, K. Bone arrow-nock incised with bands and circles. Bone is unexcelled for this purpose, and it is of interest that they should have used at this early date that material so prized for the same purpose by archers of today. The size of the nock presupposes an arrow of extraordinary thickness and weight, and would have demanded a bow of exceptional weight and cast to handle it. It was found in a grave (Pl. 37, B) from which came no other archer's gear, and which in itself was much too short to have held an unbroken shaft of full length. Unique.

Pl. 141, M. A bone knitting needle, unpierced and pointed at both ends. Found with the iron shears (Pl. 142, E). Unique.

Pl. 141, T. A bone pin of a type found both in graves and on house

floors. The pin is unpierced, and the decoration, though unimaginative, shows considerable skill in working bone.

Pl. 141, U. A horn arrow-head. This object was found well above a Stratum II Nuzi pavement and was not in association with any other Late Period object. However, its excellent preservation excludes it from being Nuzi, and it is presumable that it is a product of the Late Period peoples, the next occupants of the mound. The high polish given the completed piece has not taken out the deep striations made in grinding the edges. The tang is broken off, and at the break are traces of a hole through which a pin once passed securing the head to the shaft.

APPENDICES

APPENDIX A

CHRONOLOGY¹

BY

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In Pit N120 of Yorgan Tapa no levels were found earlier than Ga.Sur. In Pit G50 the seal cache and other few objects found near the bottom cannot be correlated stratigraphically with the levels of other pits. For this reason consideration of the chronology must be based chiefly on Pit L4 of Yorgan Tapa (see Plan 5, B), with some reference, for the early levels, to the trenches of Kudish Şaghîr. Pit L4 extends from the north-eastern to the southwestern walls of Room L4 of the Nuzi Palace (Plan 13), shown in black at the top of Plan 5, B.

LEVELS XII-XA OF PIT L4, AND KUDISH

Since the levels exposed at Kudish do not lie under one another, they cannot be correlated specifically with those of Pit L4 of Yorgan. Four principal types of pottery, however, are found both at Kudish and in Levels XII-XA of L4 (see Appendices G and H). At neither site do these types arrange themselves in any sequence, but remain mingled throughout. Of the four principal types (Knobbed, Incised, Painted, and Undecorated), only the Painted can be correlated satisfactorily with the pottery of other sites. The Knobbed Ware seems to have no true analogues; what few can be found

¹ In the Preface to Volume II, the whole span of occupation of Yorgan Tapa is divided into four periods: Prehistoric, Akkadian, Hurrian, and Partho-Sassanid. Later study of the material resulted in the less controversial division by Dr. Starr, which appears in the text of Volume I: Prehistoric (XII-XA), Late Prehistoric (X), Ga.Sur (IX-III), Intermediate (III-IIA), Hurrian (Nuzi Strata IV-I), and Partho-Sassanid (intrusive in Nuzi Stratum I and above).

In this Appendix the groupings are slightly changed; therefore, to avoid confusion, the Roman numerals alone are used. The levels are grouped as follows: XII-XA, X, IX-VII, VI-III, III-IIB, IIB-IIA, and Nuzi. A tentative correlation of these groups with other sites is given at the end of the Appendix.

The term "Level" as used in Appendices A, G, and H, in reference to Pits L4 and N120, is synonymous with "Pavement" used in the description of these same areas in Part I, Chapters I and II.

On account of the necessity of frequent reference to reports of other sites, the following abbreviations have been adopted:

- AASOR: *Annual of the American Schools of Oriental Research.*
AITA: *Die Archaischen Ishtar-Tempel in Assur* (WVDOG 39), W. Andrae.
AM: *Anthropology Memoirs*, Field Museum of Chicago, Vol. I, 1, 2.
ASIA: "Closing the Gap at Tepe Gawra," *Asia* (Sept. 1938), E. A. Speiser.
BASOR: *Bulletin of the American Schools of Oriental Research.*
FTG: *Fouilles du Tepe Giyan*, Contenau and Ghirshman.
IRAQ: *Iraq*, British School of Archaeology in Iraq.
LAAA: *Liverpool University Annals of Archaeology and Anthropology.*
MDP: *Memoires, Delegation en Perse*, De Morgan, De Mecquenem, et al.
MJ: *Museum Journal*, Univ. of Pennsylvania, Vol. XXIII, 3 (Billa).
OIC: *Oriental Institute Communications*, Univ. of Chicago.
SS: *Early History of Assyria*, Sidney Smith.
THA: *Tell Halaf*, Baron Max von Oppenheim.
XK: *Excavations at Kish*, Langdon and Watelin.
XTG: *Excavations at Tepe Gawra*, E. A. Speiser.
XUR: *Ur Excavations*, C. L. Woolley.

are not double-mouthed, and the double-mouthed of other sites are not knobbed. Frankfort, in *OIC* 17, p. 18, shows an Early Dynastic pot of crude make from Tell Asmar, with knobs much like ours, but the knobs are in horizontal rows, and the same is true of the pots from Mohenjo-daro, of different form, shown by the same author in *OIC* 16,² p. 51. In *IRAQ* IV, 1, Fig. 4, Simone Corbiau shows a round knobbed pot from Susa, and a knobbed handled pitcher from Crete, but these are not of our *genre*. The vessels just mentioned are all single-mouthed. In *IRAQ* II, 1, p. 71 and Fig. 41, 18, from Arpachiyah in al-'Ubaid levels, is shown a double-mouthed vessel, which Mal-lowan compares with similar "spectacle vases" from Ur and al-'Ubaid; and in Gawra VIII (*XTG*, Pl. XXVII, 7b and Pl. LXIII, 38, 39) were found a double-mouthed and a triple-mouthed jar. None of these vessels, however, is knobbed.

Incised ware of one kind or another is known at many sites, but it is difficult to synchronize with ours. Nineveh 1 has a simple incised ware at the bottom levels, but this would probably antedate ours. Nineveh 4 shows incised herringbone, hatched, and wavy-line, but this level is certainly later than ours. Assur G and F (*AITA*, Taf. 21-24 and 26) have indented and wavy combed decoration; Gawra VI-V have incised; but these levels are Early Dynastic to Sargonid. The ware that most tantalizingly resembles ours is from Tell Beit Mirsim (*AASOR* XII, Fig. 2 and Pl. 3, 5, and 7) and from Bethel (*BASOR* 60, p. 7). This Palestinian ware, however, is Middle Bronze I, 21st to 19th centuries.

The Undecorated Ware of Kudish and L4 Levels XII-XA shows the same forms as the Painted Ware; and these forms are of elementary types, the round-bottomed globular pot with everted neck, the slightly bell-shaped bowl, and less commonly, the hemispherical bowl. These forms, and the comparative rarity of ring base or foot, and of spouts and handles, tell us merely that the ware belongs to an early ceramic phase.

The typical Painted Ware of Yorgan and Kudish is elementary in decoration: bands, maeanders, and combinations of the two, sparingly used; in olive, brown, or reddish-brown paint, but never polychrome. Despite its simplicity, one does not find just this repertoire, in quantity, elsewhere except at Arpachiyah (*IRAQ* II, 1, Figs. 26, 27); but some examples occur at Nineveh, al-'Ubaid, and in Warka XVII-XVIII. The painted bowls of Gawra XVII-XIX, Figs. 8, 9, 11, in *ASIA*, Sept. 1938, are our forms, and show some of our motifs.

The type of decoration which we have called the "broad style" at Yorgan and Kudish (Pl. 48, N), and which has the neck often solidly painted (Pl. 43, D) and uses pendent solid triangles and half-moons, usually on the inside rim, is found at Arpachiyah (*IRAQ* II, Fig. 36) in al-'Ubaid levels. This style has echoes at al-'Ubaid. At Arpachiyah it seems to be associated with squat round-bottomed pots with hatchings and chevrons, sometimes with four lugs, resembling vessels of al-'Ubaid and of Susa I necropole (*MDP* XIII); but the latter are absent at Yorgan and Kudish.

The most satisfactory correlations, however, at our sites are afforded by the varied miscellany of "Rare" or "Unique" painted sherds described in Appendices G and H. The Halafian "egg-and-dot" and the Samarra "twig" or "feather" (for the latter, cf. our Pl. 47, KK, and *Ausgrabungen von Samarra*, V, Pl. XVIII) occur at both Yorgan and Kudish. Compare our polychrome sherd of Pl. 47, HH with those shown in color in *THA*, Pl. I and II; and several sherds shown in our Pl. 47 and 48 with those of Nineveh 2 (*LAAA* XX), Arpachiyah (*IRAQ* II, Pl. XXII and others), Carchemish (*IRAQ* I, Pl. XIX), and Gawra (*BASOR* 66, Fig. 11). It seems possible that the small group of little vessels at our sites, of fine smooth fabric, pink or apricot in color, is identical with the apricot and cream-slipped Halaf ware of Nineveh 2c. The hatched

² Nevertheless, the Yorgan-Kudish knobbed ware is more like that of Asmar than of any other site. The possibility of some relationship between the two, on the basis of likeness alone, is certainly more convincing than that proposed by Frankfort for Asmar and Mohenjo-daro. (R. F. S. S.)

lozenge (our Pl. 47, DD, EE, GG) or leaf (Pl. 48, R) is found in Halaf ware. Our designs of Pl. 48, W, X, Y, and CC can be found in Nineveh 2 and among unpublished sherds of Gawra XII and XIII at the University Museum, Philadelphia, where also may be seen the very distinctive pattern of our Pl. 48, E, G, I. For the latter, see also *XUR* I, Pl. XV, from al-'Ubaid. Pls. XVII-XIX in *XUR* I also repay examination.

LEVEL X OF PIT L4

There are some signs that the culture of Levels XII-XA penetrated into higher levels: a few painted sherds are found in X and IX; a single piece of Knobbed Ware was found in IX (Pl. 42, P), and a large complete bowl, undecorated, like that shown in Pl. 42, I, was found in X, *in situ* (Pl. 49, A, far right). With this bowl (also resting upright in hollows in the pavement) in Level X were found three large U-shaped jars, empty, of a type used for infant burials. One complete U-jar, and some fragments of others, was found in L4 levels XII-XA, as well as at Kudish. The form is roundish-bottomed without foot; quantities of them, containing infant bones, were found in al-'Ubaid levels at Gawra. The Gawra ones, however, seem generally (though not always) to have been painted in geometric designs (two at Gawra have "landscape" designs), while our jars are all undecorated. Our jars are shown in Pl. 49, A and C, and the Gawra type in *BASOR* 64, p. 5, *BASOR* 62, p. 9, and *XTG*, Pl. XXVI, c.

On the other hand, with the large bowl and the three U-jars were found four other vessels of a new type, three of which are shown in Pl. 41, Q and 43, A and B. These are coarse and crudely incised, showing none of the decorative feeling of the incised of the lower levels, and obviously of different paste and workmanship. The fourth was of the same general form, but undecorated. In Level VI, presumably out of place, was found a half of a handled pot (Pl. 49, D), with crude incised decoration like that of the three above-mentioned.

Besides these vessels, in Level X, was a similarly incised pot (Pl. 41, R) with two stumps of what was apparently a bridge handle; and a round-bodied high-handled cup (Pl. 41, O), with remains of a red slip. Four sherds of red-slipped ware were also found. The form of this cup, and the use of red slip, suggest the Uruk period, of which there are further signs higher up.

ARCHITECTURAL EVIDENCE OF LEVEL X, AND AT KUDISH

At Level XA of Pit L4 the walls are of packed mud or *terre pisée*, but at Level X the walls are of rectangular mud-brick. At Kudish appears the same transition: in Trench 2 of Kudish, which is near the summit of the mound, was found a circular room, the walls of which were of rectangular mud-brick resting on earlier walls of *pisée*. Furthermore, at Kudish, all the walls uncovered in the trenches lower down on the southern slope were of *pisée*, including those of a somewhat similar but smaller circular room in Trench 9A (see Plan 44). This suggests strongly the advent of new influences, perhaps of new peoples.

The date of the transition from *pisée* to rectangular brick varies at different sites. At Gawra, *libin* were used as early as Level XV, but in some levels apparently *pisée* has also been found. At Arpachiyah the Halaf levels (X-VI) had *pisée* and the al-'Ubaid levels (V-I) had rectangular brick (some plano-convex were found in I); but since Mallowan gives dimensions for some of his *pisée*, it would appear that the term is somewhat uncertain in meaning. At Chagar Bazar *pisée* was used exclusively in the lowest three levels, which are Halaf, and persisted along with brick up to Level 6, which yielded some Halaf ware. *Pisée* or packed earth was used in the lowest strata at Giyan and Sialk, Hissar and Shah Tepe. At some of these sites *pisée* was used with stone foundations. This evidence would seem to show that *pisée* was a feature of Halaf times, though not necessarily peculiar to that culture.

The circular rooms of Kudish inevitably suggest the *tholoi* of Arpachiyah, which seem to antedate al-'Ubaid times. These *tholoi* had galleries, and, according to Mal-lowan, enough of the inspring walls were remaining to show that they were domed (IRAQ II, 1, p. 27). The circular rooms of Kudish, Dr. Starr thinks, could not have been domed because the walls (unlike those of Arpachiyah, which were very thick) could not have supported the thrust of domes. The *tholoi* were 4 to 9 or 10 m. in internal diameter and were of *pisée* on stone foundations; the circular rooms of Kudish were, respectively, about 2 and 3 m. in diameter, and were first of *pisée* and later of mud-brick. To both these examples of circular construction may be related the "Round House" of Gawra XII-XI (BASOR 62, p. 11), though that structure is on a much larger scale; and two *tholoi*, of Gawra XVII and XX, like those of Arpachiyah (BASOR 71, pp. 22, 23, and ASIA, Fig. 15).

INFANT BURIALS

In Level XA (but buried from X), at Yorgan, was found an infant burial in a U-jar like those just described. In Level X itself, encased in a wall, was found another infant burial resting on a large sherd (Pl. 49, B).

At Kudish, in Trench 2, two U-jars containing infant bones were found upright on the trench floor. A third such jar was found partly sunk in the floor of the upper level, immediately outside the circular room of Trench 2; it contained no bones but was filled with packed earth to the level of the floor. Next to it, seemingly *in situ*, was the small undecorated vessel illustrated in Pl. 43, R. Within the circular room, at the same level, an infant's bones lay on the floor, carefully covered with an inverted crude bowl of the same general type as those found in Yorgan levels IX, VIII, VII, and V.³

Besides these burials, there were found at Kudish, just below the surface, four Nuzian U-jars not unlike the others in shape, but slightly belled and with foot, of the type shown in Pl. 80, A. Three of these jars contained infant bones.

No infant burials were found in our Levels IX-III, but many were found in the city of Nuzi. Following are some of the principal ones:

- Stratum II, Room N359.* Pl. 71, B and Fig. 45. Jar with mouth at each end; covered with an upright bowl; contained five infants.
Same room, two inverted jars, U-type, stacked one above the other, each containing one infant.
- Stratum II, G24.* Pl. 29, C and Fig. 34. Tureen-like oval vessel of unbaked clay, with knobbed lid; contained one infant. Just below pavement.
Same room, similar vessel but more circular, with sherd for cover; contained one infant.
Under end of a wall.
- Stratum II, G13.* Tureen-like vessel with knobbed lid, like the above; contained one infant. Under a wall. Glass beads in vessel; small pot by it.
Same room, two U-jars, empty.
- Stratum II, P37-P470.* Pl. 29, E. Inverted U-jar, containing one infant, resting on earth containing fragments of bones of 14-year-old child. Both walled into an abandoned doorway.
- Stratum III, C2.* Upright U-jar, covered with two ordinary bowls; jar lined with clean clay 2 cm. thick; one infant, placed feet down.
- Stratum III, P400.* Pl. 29, B. Globoid pot, small round hole in bottom, made before baking. Covered with small inverted bowl. Contained eleven infants. Under wall, built over.
Same room, three U-jars (Pl. 79, CC), each covering one infant.
- Stratum IV, S397.* Pl. 71, C. Ovoid jar, covered with specially made bowl. Hole in bottom. Contained several infants. Note that jar and cover are of same form as infant burial of Assur E (AITA, Abb. 88).

³ This bowl may best be compared with Pl. 49, E, found below the seal cache in G50, and the L4 specimen illustrated in Pl. 50, B. (R. F. S. S.)

Same room, twenty-one U-jars, each containing bones of one or more infants. All but two jars inverted over body. In two instances jars were stacked in piles of three.
Temple G, G50. Round-bellied, small-mouthed pot of medium size, covered by a large bowl, containing one infant. Attributed to Ga. Sur.

The outstanding fact about the Nuzi burials is their diversity. Some of them were collective burials; some jars were upright, some were inverted, some were stacked; some had a lid or cover, some not. One jar had a mouth at each end; two jars had a hole in the bottom; one jar had a layer of earth in the bottom. The form of the urn was various (see Pl. 29, B, C, E; 71, B, C; 79, CC, DD, EE; 80, A, C, H). Of these burials four or five appear certainly to be "foundation burials," that is, built over by a wall, and possibly sacrificial. An inverted bowl in Stratum II, S112, covered animal, not human remains.

At Assur (*AITA*, Abb. 88) was found an infant burial, attributed to E level; it was in a jar with cover, of almost identical form with the ovoid jar of Nuzi Stratum IV, Room S397. The bones rested on a layer of sifted earth (cf. the Nuzi burial of Stratum III, Room C2). A similar infant burial at Assur was also attributed to E, though found 40 cm. below G level (*AITA*, pp. 110-111).

In Nineveh 3 were four or five jar burials of infants, all in very squat roundish-bottomed vessels without neck; two of these vessels were black-burnished, two drab-burnished. In one were numerous beads (*LAAA XX*, pp. 163 and 179 and Pl. LI, 12).

At Arpachiyah there was but one urn burial found; it was at 1.3 m. depth, in the al-'Ubaid cemetery, and was in a jar of the same form as the Nineveh 3 burials; the jar contained a saucer as well as the bones (*IRAQ II*, p. 39, G22).

In Gawra VIII, encased in a wall of the Western Temple, was an infant burial between two plates. Under the floor of the Eastern Temple, in the same stratum, was another infant burial in a jar covered with and surrounded by bricks. The other infant burials seem to have been ordinary interments (*XTG*, pp. 25, 140-143).

In late al-'Ubaid levels at Gawra about two hundred burials are reported (*BASOR* 65, p. 5), the great majority of which were of infants and young children, mostly in urns, and seldom with any objects. The jars, as already stated, were of U-type like those of Kudish and Yorgan X, but usually had painted decoration.

At Tepe Giyan, in the uppermost stratum (Couche I, which shows unmistakable Hurrian influences), there was but one infant burial in a vessel, and that was a large jar with handle and spout. In Couche V of Giyan (Susa I and Musyan) were three infant burials, one of which was in a U-jar painted in black with bands and triangles (*FTG* 120). At Tepe Sialk infant burials in jars were found in Couches I and II, some in jars, some under walls.

Infant burials, of diverse types, thus appear to cover a wide territory and long range of time. So far, they appear not to have been found earlier than al-'Ubaid times, but this negative evidence may be at any moment disproven by new discoveries, perhaps at Gawra. Apart from their pottery, infant burials are not of great help in dating.

Summing up our Levels XII-XA, we find a preponderance in the painted ware of what is known as al-'Ubaid (or Obeid), though its closest relationships here are less with that site, or with Gawra, than with Arpachiyah and Nineveh. At Gawra the al-'Ubaid period was apparently a long one (Levels XIX-XII), with Halaf and Samarra ware persisting almost to the end of it. On that evidence we may be warranted in correlating our XII-XA with Gawra XIV-XII.

The U-jars of our Level X (as well as those from Kudish) appear to be related to the U-jars of the Gawra XII burials. We should like to find in Gawra XI and XIA something corresponding to the crude incised ware of our X, showing the same transition; but this level at Gawra is still ambiguous. Nor does Nineveh 3 answer the question. Possibly an unidentified northern culture (as Mallowan suggests) is to be accounted for in this period.

LEVELS IX-VII

In Levels IX-VII we find relatively few objects, and those mostly crude and not very distinctive in character. The most important of these are, from VIII or IX, a globular pot of buff ware with ribbon handle (Pl. 51, L); from just below VIII, a small copper animal figure, the earliest copper in Yorgan; from VIII, a small pot (Pl. 51, J), and a stamp seal impression (Pl. 55, O) comparable with one from Level VI (Pl. 55, N); and from VII, a carinated round-bottomed bowl (Pl. 50, L) and a fragment of a shallow dish which must when whole have been about 25 cm. in diameter and which has a semi-split spout (Pl. 50, H). Equally important are eight crude bowls (Pl. 50, A, B), five of which were from IX, two from VIII, and one from VII. Finally, a curved tubular spout of smooth buff ware, from VII, which is not illustrated.

The handles and spouts show that we are well out of the earlier period; similar high loop handles appear at Warka in Levels IX to VI, and in Nineveh 4 (Uruk-J. N.) levels. The carinated round-bottomed bowl is found "just above Susa I" levels at Susa, but this form is more exactly dated at Gawra, where it appears to be restricted solely to Gawra VIII (*XTG*, p. 42 and Pl. LXIII, 28-32). Similar spouts, and also the high loop handles, appear in these Susa levels, which, though much disturbed, show some Uruk types.

The crude bowls are of a type well known under that rather indefinite appellation, by which is meant a handmade, usually rather unsymmetrical bowl of coarse buff or reddish clay with straw *dégraissant*, flat-bottomed without foot, with straight diverging sides, sometimes with a rounded rim, sometimes with a flat or grooved rim, sometimes with a beveled rim slanting outwards. In some examples the outside, around the base, has the look of having been whittled; yet occasionally the inside is well smoothed, apparently on the wheel, which cannot be said to be impossible, since these bowls are often associated with wheel-made wares. Often they are very badly baked; at Nineveh many of them crumbled when picked up.

At Nineveh these bowls were found in great quantities, usually inverted, in a slope between the Nabu and Ishtar temples (*LAAA XVIII*, p. 81, and for map, *IRAQ I*, p. 97). Many were found lying in or near high vaulted tombs, and were attributed by Campbell Thompson to the period of the Royal Cemetery of Ur (*LAAA XIX*, p. 80). The greater part of those from Nineveh, however, seem to have come from Nineveh 4. They were found at Ur in the "waster" stratum, and they are the *Glockentöpfe* of Uruk levels at Warka. At Abu Shahrein they were found in graves, always with a conical goblet of crude form (*Archaeologia*, Vol. LXX, or 2d Ser., Vol. XX, 1920, pp. 111-113, Fig. 3, Nos. 3, 4, and Fig. 4, Nos. 8, 10, all of reddish clay). These goblets appear to be the same as the calices of Early Dynastic I at Tell Asmar (*OIC 20*, Figs. 5 and 6); the same goblets, and possibly the bowls, were found at Fara. The crude bowls appear to be the same as the *écuelles grossières* of Susa "intermediate" levels. Their range appears to be greatest, however, at Gawra, where they are found as low as Gawra XII and (in much diminished quantity) in the upper levels to IV (i. e., as late as the Third Dynasty of Ur).

The most definite correlation to be obtained from the above is with Gawra VIII, on the evidence of the carinated round-bottomed bowl; and this, with the other evidence, seems to place our Levels IX-VII in Uruk and early Jemdet Nasr times. The deposits hardly seem sufficient to cover both those periods, but it may have been a sparse settlement. It certainly appears too sparse and poor to represent the town of Ga. Sur as we know it from the tablets of the later levels. It might be proper to note, however, that since Levels VIII and VII contained the most graves, the area outside of the graves was necessarily diminished.

THE CONSTRUCTIONS OF LEVELS X-VII

In Level VIII, but attributed to IX, were two horizontal ovens. In VII was a peculiar oval oven. But in Levels VI, V, and IV were vertical circular ovens of a type which persisted into Nuzi times. The fact that ovens appear continuously in a succession of levels at this spot might be taken to indicate that the settlement was continuous from prehistoric to historic times; on the other hand, the changes in the type of oven suggest either changes in, or mixtures of, population. At least, the standardization of oven type which begins in Level VI is one piece of evidence suggesting a fresh and powerful new influence.

LEVELS VI-III

The culture of which the first evidences occur in Level VI not only appears much more advanced than that of the preceding levels, but it appears to be continuous to the end of Level III at least. For this reason these four levels are grouped together, as more certainly belonging to the city of Ga. Sur than the preceding three. The evidence will be considered under four heads: Ritual Objects, Pottery, Graves, and Texts.

RITUAL OBJECTS (VI-III)

These consist principally of fragments of clay votive chariots, the first of which (a chassis and two wheels) occurs in Level VI (Pl. 54, H). Other similar fragments were found in Levels IV, III, IIB and IIA, and in the city of Nuzi (Pl. 99, E-J). The type seems essentially the same in all these levels; it is evident, without going further, that clay chariots have a long time-range. This is shown also at Gawra, where they are found in all levels from Gawra VIII (Jemdet Nasr) to Gawra III and II (Hurrian). Fara shows them in Jemdet Nasr levels. At Kish they were found in quantity overlying Cemetery A (pre-Sargonid) (*AM* I, pp. 209-211 and Pl. XLIV). An especially interesting example from Kish (*XK* I, Pl. VII, No. 2), from a trench in the western (Uhaimir) district, is unfortunately undated; it shows a figure in relief on the dashboard which looks extremely like the Minoan snake-goddess. At Assur the chariots were found in Assur E (Third Dynasty of Ur) and D (Isin-Larsa), but, singularly, not in Assur G (Lagash), though they were found in levels at Tello which are supposedly of the Lagash period. Clay chariots were found at Tell Halaf, according to the account (*THA*, p. 214), in "the Painted Pottery layer," but since no evidence is adduced, this early dating may be viewed skeptically.

An ornamental brazier or pot-stand was found in Level V (Pl. 54, A), which may or may not be for ritual use, but such objects are commonly found in temples; two from Temple G are shown in Pl. 54, C and D, obviously for the same purpose. The latter have triangular vents, whereas the one of Level V has two round holes, unskillfully bored after baking; it also has incised and raised decoration, which resembles that of some of the large jars of Temple G of Assur; the form, too, is that of the *Herdständer* of Assur and of Fara (*AITA*, Abb. 22, 24, 25, 26), and of the "Square Abu Temple" of Tell Asmar (*OIC* 20, Pl. I). An example from Gawra VI (*XTG*, Pl. LXXIV, 202) suggests both that of Level V and the Nuzi ones. These few instances alone indicate how difficult it is to date any given example of these objects typologically. This is true in general of ritual objects, because of the conservative force of religious tradition.

POTTERY (VI-III)

Under "Pottery" in this connection is intended of course that without ritual associations, and also only that which is found outside of graves, and therefore more likely to be in its proper stratigraphical position. From Level VI we have an example of a

type of vessel which Dr. Starr says was common in Ga. Sur levels: a tall, graceful jar with high, sharply carinated shoulder and a well-developed hollow foot (Pl. 53, A). This is almost identical in form with the *Schultervase* of Assur D (Isin-Larsa), which was also found in the graves attributed by Andrae to Assur E (Third Ur). It seems to be affiliated to Type 155 of the Sargonid graves at Ur (*XUR* II, Pl. 261), and with a jar of Gawra VI (*XTG*, Pl. LXX, 143), which is late Early Dynastic; and cf. *OIC*, 20, Pl. II, 7, from the Early Dynastic Abu temple of Tell Asmar. Another interesting vessel is that of Pl. 53, H, from our Level VI; this rather suggests the *Rippentöpfe* of Assur and Fara (*AITA*, Abb. 15, 16), Tell Asmar (*OIC*, 19, p. 18), and Type 31 of Ur, (*XUR* II, Pl. 252). In a general way, it is suggestive of some from higher levels: Pl. 50, G from above Level III, and Pls. 74, D and 92, T, U from Nuzi. Also from our Level VI are two cups (not illustrated, but cf. Pl. 51, F, which, unlike them, is decorated) with round bottoms, low carination, and inward-slanting sides. This type of cup is seen in Gawra V and IV (*XTG*, Pl. LXXI, 151 and Pl. LXXIII, 184, 186) and in Billa VI (*MJ*, Pl. LII, 11). It may possibly have some relationship to the carinated round-bottomed bowl (Pl. 50, L) of our Level VII and Gawra VIII.

Our Level V shows two crude bowls, already discussed; the pot-stand just mentioned under Ritual Objects; a curved tubular spout like that of VII; and a bowl or large hemispherical cup of brick-red clay with what appears to be a cream slip,⁴ which is rather reminiscent of our Levels XII-XA (Pl. 50, K), but should be compared also with Pl. 50, I, from Grave 5e. A well-turned small pot-lid, hard and smooth, with a knob (Pl. 54, B), is of the same form as one of Gawra VI with serpents in relief (*XTG*, Pl. LXXV, 208); and a cylindrical vase with foot and neck (Pl. 51, AA) seems related to the *Schultervase* type. An important fragment from Level V is the foot of a red-ware vase of a type also found in the graves, which is almost a miniature of the *Schultervase* (cf. Pl. 52, A, B).

Of especial interest in Level V is the first occurrence of ware with string-cut base. These vessels are usually small or have small bases, and the bases are marked by a series of paracentric curves caused by this method of removing a vessel from the wheel. The strange thing about them is that though apparently the wheel was used, most of the vessels are seemingly hand-modeled, crude and unsymmetrical, and noticeably thick and heavy for their size; and this is still stranger when it is observed that a few examples of string-cut ware (such as some saucers found in Grave 5e, Pl. 50, J) are well turned, apparently on a fast wheel. Examples of this ware, string-cut but ill-modeled, are a small bottle from IV (Pl. 51, G), another example of which occurs in V; and two cups from III (cf. Pl. 51, B, C, from graves). From our IIB come those shown in Pl. 51, I and 57, E.

Small hand-modeled, string-cut vessels like these appear to have been very common in Cemetery A at Kish, of pre-Sargonid dating. One was found in almost every grave, usually in front of the face, with the hand near it, as if the dead person were drinking from it. Mackay designates them "Type K" and illustrates the string-marks (*AM* I, pp. 33 and 151, Pls. XV and LIII).

Level IV is rather disappointing in pottery. From III may be noted the "cocktail-shaker" spouted pot (Pl. 52, D); three cylinder seals (Pl. 55, R, S); a figurine, possibly of a horse (Pl. 56, B); and a terra-cotta mold for amulets (Pl. 56, G). The last-mentioned object is of interest: first, because it shows what looks like a well-modeled horse; and second, because it bears a strong resemblance to four amulet molds of stone from Assur G (*AITA*, Taf. 29, p., and 55 ab). The figures in the Assur molds are far more archaic, but the technique of casting is the same.

⁴ See analysis by Mr. Gettens in Appendix H.

GRAVES

The following abbreviated table gives the graves in order of depth:

<i>Level</i>	<i>Pavmt. Depth</i>	<i>Grave No.</i>	<i>Grave Depth</i>	<i>Pottery and Weapons</i>	
Stratum II	3.44	}		No graves; only infant burials.	
" III	3.04				
Pavement IIA	2.17				
" IIB	1.60	1	1.64	No objects.	
Intermediate Stratum	}	2	.74	Round pot.	
No Pavements		0.00	3	— .07	Two round pots.
" III		— .69	4	— .68	Copper fragments (accidental?).
" IV	— 1.31	5A	— 1.31	Pl. 50, O; red-ware vase; copper pin; gold ornaments.	
" V	— 1.96	5a 6	— 1.58 — 1.96	Pl. 53, C, containing a cup; Pl. 52, I. Pl. 51, K; Pl. 51, A.	
" VI	— 2.31		No graves.		
" VII	— 2.55	7 9 5b 8 10	— 2.35 — 2.39 — 2.44 — 2.55 — 2.55	Pl. 51, E; Pl. 52, H; and a bowl. Pl. 52, F; Pl. 51, C; two red-ware vases. One pot. Red-ware vase. Red-ware vase.	
" VIII	— 3.35	5c 5d 5e 5f 11	— 2.74 — 2.59-89 — 3.05-29 — 3.22 — 3.26	Adze, Pl. 56, C; toilet tools; red-ware vase; three bowls. Chisel; shouldered vase; two bowls; cup; Pl. 50, Q. Pl. 50, I, J; Pl. 51, B, D, H; Pl. 52, A (red ware); Pl. 53, G. No copper objects. Dagger, Pl. 55, V; seal, Pl. 55, F; axe, Pl. 55, W. No pottery. No objects.	
" IX	— 4.17		No graves.		
" X	— 4.57	12	— 4.57	Infant burial, on sherd, in wall.	
" XA	— 5.00	13	— 5.00	Infant burial in U-jar (from X).	
" XI	— 6.00		No graves.		
" XII	— 6.45		No graves.		

Burials 4, 5c were extended; 5d, 5b, 5a, and 9, position unrecognizable; all the others were with legs contracted; but 7 and 8 had hands crossed at the waist, not raised to the face.

Six graves are collectively designated by Dr. Starr as Grave 5. For convenience here they have been numbered—in order of depth—5a, 5b, 5c, 5d, 5e, and 5f.

Between Levels IX and III, in Pit L4, were thirteen graves. The lowest of these, No. 11, very probably belongs to Level VII; at any rate, it contained no objects, and thus would appear to be of a different culture from the graves above it. The next four graves (5f, 5e, 5d, and 5c) are the most richly furnished of all the nineteen graves of Pit L4; so they can hardly have come from Level VII, which is but 24 cm. in depth, and, as we have seen, very poor in objects. And since a meter is about the minimum depth possible for a respectable grave, it seems more likely that they came from V and perhaps the upper levels of VI.

Grave 5f contained a copper dagger, a copper axe, and a cylinder seal, but no pottery. The dagger (Pl. 55, V) can hardly be earlier than Early Dynastic; examples virtually identical are shown from Gawra VI in *XTG*, Pl. XLVIII, 11, and from Kish in *XK I*, Pl. XIX, 1; and from the late Early Dynastic copper hoard of Asmar (*OIC*, 17, Figs. 32, 53). The axe (Pl. 55, W) is of a wrought copper type, usually flimsy and unserviceable, of which a large number were found at Ur in Sargonid graves (*XUR II*, p. 307 and Pl. 225), and in Cemetery A at Kish (*AM I*, p. 38 and Pl. III, XVII, XXXIX). The seal (Pl. 55, F, P) may be compared with certain of the Akkadian ones from Tell Asmar (*OIC*, 16, Figs. 27, 28) and with those of Gawra VI (*XTG*, Pl. LX). Grave 5c contained an adze of copper (Pl. 56, C), of a common Sumerian type which had a long vogue (cf. *XTG*, Pl. XLVIII, 9 and XLIX, 5; *XK I*, Pl. XX, 4; *XK IV*, Pl. XXXIII, 5; *XUR II*, Pl. 229; and *AITA*, Taf. 60).

No copper of any importance was found in any graves higher than 5c; and it might be noted here, incidentally, that outside of the graves very little copper was found below Nuzi levels other than the badly corroded animal figure found under VIII pavement.

Certain types of pottery, however, appear to tie the graves, 5e to 5A (see table) more or less to one another and to the Ga.Sur culture. The *Schultervase*, as we have called it, was found in Level VI and in Graves 5d, 7, and 5a; its foreign analogues have already been noted. The type of vessel shown in our Pl. 52, A and B, which is usually, though not always, of red ware, seems related to the *Schultervase*, though smaller; this occurs in Graves 5e, 5c, 10, 8, 9, and 5A, and its occurrence in Level V has already been noted. In Grave 5e (which contained an unusual amount of pottery) were found also three string-cut saucers, wheel-turned (Pl. 50, J), and two string-cut cups (Pl. 51, B).

While it is impossible to assign specific graves absolutely to specific levels, it appears nevertheless that these twelve graves (5f-5A) belong to Levels VI-III. These four levels would appear to be contemporaneous with Gawra VI-IV, which would bracket them between Early Dynastic times and the Third Dynasty of Ur.

In considering the objects found in Levels VIII to III, outside of the graves, it would seem wise to take account of the effect of the digging of these graves; this must have been disturbing, and might account for the apparently late survival of some pieces of pottery which typologically look earlier than the levels in which they were found.

TEXTS ⁵ (V-III)

The evidence of the texts, happily, is more definite. These tablets, numbering over two hundred, were found in Levels V, IV and III, by far the greatest number coming from IV.⁶ They are written in Old Akkadian, and some Sumerian ideograms are used. Dr. Meek and Dr. Pfeiffer appear to agree in placing them at or not before the time of Sargon (Sharrukin, or Sharrukin-ilubani of the Weld-Blundell prism), but probably before Shargali-sharri, the last Sargonid prior to the period of "Who was king? Who was not king?" In short, Ga.Sur was a Sargonid city.

Seven of the Ga.Sur tablets mention trade relations with Assur, and an inscription found at Assur states that Ititi, son of Iakubala, dedicated to Ishtar some object "out of the booty of Ga.Sag," that being a variant of the name Ga.Sur. The name Ititi also occurs in several of the Ga.Sur tablets, though probably not indicating this individual.

⁵ T. J. Meek, *Excavations at Nuzi, Vol. III: Old Akkadian, Sumerian and Cappadocian Texts from Nuzi* (Harvard University Press, 1935).

⁶ One tablet was found in Level VII, obviously intrusive.

This inscription of Ititi from Assur is on a fragment of a square alabaster plaque (*AITA*, Abb. 38 and Taf. 64, a, b). Andrae states that it was found in the temple region, but seems doubtful that it is of his G period. Sidney Smith (*SS*, p. 138) seems disposed to assign it to Assur E, possibly because of its physical resemblance to another such plaque found at Assur (also unstratified) of Zariku, vassal of Bur-Sin, who built a temple at Assur which Andrae assumes to be his Temple E (*AITA*, Abb. 78 and Taf. 64, c). Dr. Pfeiffer, however, says that the Ititi plaque, which is in Akkadian, is undoubtedly earlier than the Zariku one, though many of its characters are the same. Comparison of the two plaques with the Ga.Sur tablets is not very satisfactory because the character of writing on stone necessarily differs from that of writing on clay; furthermore, inscriptions on stone were sometimes written in a deliberately archaic style.

Since the Ititi plaque is in Akkadian, it ought to be of Sargonid date; but when we examine Assur F, the stratum which (if Assur G is Lagash and Assur E is Third Ur) ought to be Sargonid, we find it to have been a poor village with flimsy, straggling houses (though some at least had stone foundations, which is not the case in Assur G and E), and no sign of a temple or any monumental architecture. A drain, and some curious baked clay vats or troughs, seem to be the only other constructions. This does not seem like the sort of settlement to have produced a document like the inscription of Ititi.

The inscription does not tell us that Ititi was governor of Assur, but it implies the existence of a temple of Ishtar, and it hardly seems likely that this plaque was carried to Assur from some other city. In any case, it tells us that Ga.Sur was sacked; and it is tempting to see in this the end of the town of Ga.Sur, and in Ititi perhaps a vassal of Ur, preceding Zariku. Tell Asmar, which has documented for us the history of Eshnunna from Shulgi to Hammurabi, throws little light on the fall of the Sargonids; the Akkadian palace, which underlies bricks of Shulgi, is separated from them by a meter of ashes and rubbish, which Frankfort attributes to Gutian destruction; the Akkadian houses at Asmar, also under bricks of Shulgi, show tablets and a seal of Shudurul (Gimi-durul or Sudur-kib of the W-B prism), last of the weakling Sargonids. But if Ga.Sur stood during the Third Dynasty of Ur, it seems probable that it was subject to Ur, for that empire appears to have been not only far-flung but well consolidated politically.

THE INTERMEDIATE STRATUM, III-IIB

Two meters or so of rubbish, without occupation floors, separate our Level III from IIB, which is at 1.6 m. above plain level (see Plan 5, B). It is tempting again to see in this stratum the disturbed remains of Ga.Sur. It yields objects, though relatively few for its thickness, and these include some that look Nuzian, some that appear to be of Ga.Sur, and also some that are strange. A deeply corrugated, heavy-bottomed jar (Pl. 50, G), found at 25 cm. above zero, suggests the *Rippentöpfe* of our Level VI (Pl. 53, H); on the other hand it suggests the vessels from Nuzi levels shown in Pls. 74, D and 92, T, U. A hemispheroid small bowl of burnished gray-ware, also found at 25 cm. above zero (Pl. 62, I), seems anomalous. A "tongue relief" Ishtar figurine (Pl. 57, M) seems Nuzian, as does a large ovoid jar (Pl. 63, B) found *in situ* about 25 cm. above zero. The carinated round-bottomed cup (Pl. 51, F), from 86 cm. above zero, seems, on the other hand, to resemble the two, not illustrated, found in Level VI; and a fine eggshell-thin bowl (Pl. 50, M), found at zero, is comparable with the one shown in Pl. 50, O, from Grave 5A.

From zero comes the wide-mouthed, tall-necked, ovoid-bodied jar of Pl. 52, G, which is comparable with Pl. 52, F from Grave 9. It is interesting, though hardly helpful in dating, to compare this with examples from other sites. Gawra VI shows this form in *XTG*, Pl. LXIX, 130 and Pl. XXVIIa, 3). The Assur E grave of *AITA*,

Taf. 60 shows four like this. At Nineveh an example is designated merely "Assyrian" (*LAAA* XX, Pl. LXXIV, 17). It occurs apparently in the Kapara period of Tell Halaf (*THA*, Pl. LV). It should be compared with Types 43-47, Pl. 253, from the Sargonid cemetery at Ur. The form thus appears to have a life span from Early Dynastic times at least to the First Dynasty of Babylon. Moreover, it appears (though the assumption is dangerous) to develop into the button-base shouldered cup of Hurrian type (cf. *BASOR* 67, Fig. 6, p. 6, and *THA*, Pl. LV, 4, 5).

LEVELS IIB AND IIA

The walls of the small group of rooms in IIA appear to follow in the main the plan of the walls of IIB below them. In both levels there appears to have been a severe conflagration, and in both levels the character of occupancy seems to have been the same; it looks like the shop of a metallurgist or alchemist. Crucibles, droppers, measuring vessels are found, and with them, singularly, are ritual objects such as clay chariots, "tongue" figurines, and a small votive clay bed.

The clay chariots may be Nuzian or Ga.Sur; the figurines are Nuzian; the clay bed is found in Assur D of Isin-Larsa date (*AITA*, Taf. 62) and in Gawra VI (*XTG*, Pl. XXXV, b). Furthermore, two of the small vessels from IIB (Pl. 51, I, of which there are two specimens, and Pl. 57, E) have the string-cut base which occurs in similar small vessels of our Levels V-III. These must be linked, however, with the dropper (Pl. 63, H) and the small vial (Pl. 62, P), although the latter are round-bottomed, because of similarity of paste, size, workmanship and close association. The dropper (Pl. 63, H) should be compared with Pl. 76, A and B, from Nuzi levels.

THE QUESTION OF GA.SUR SURVIVAL ⁷

Dr. Starr is inclined to believe that continuous occupation of the site, from Level III into Levels IIB-A and to Nuzian times, is evidenced by these and other objects. In this connection it is proper to mention the tall terra-cotta votive houses of Nuzi's Temple F, which bear such an astonishing resemblance to the *Tonhäuschen* of Temple G of Assur. The undoubted affinities of the offering stands of our temples to those of Early Dynastic times have been commented on. There are also, from our temples, large ovoid jars, some with raised and indented bands, and wavy-line decoration, strongly suggestive of the *Wassergefässe* of Temple G of Assur. Other vessels of Nuzi bear the serpent, incised or in relief, as found at Assur and in Gawra VII, VI, and IV. Also note the offering stands or braziers of Nuzi's Temple A (Pl. 94, K), which with their "pie-crust" lower rims resemble some from Assur G (*AITA*, Abb. 27); and the "goose-neck" cooking stands of early Nuzi (Pl. 95, A, B) which, as Dr. Starr shows in Chapter III, Part II, occur in Gawra IV and Kish Cemetery A, and also in Nineveh V (*LAAA*, XX, Pl. LXII, 7).

What such instances really show is that tradition and natural conservatism were so potent, not only in the case of ritual objects but in weapons and household effects, that certain forms persisted for millennia. Such forms, of course, have a very limited value for dating. Furthermore, it is not possible to isolate the Ga.Sur culture from the Akkadian culture of which it is part and parcel. One cannot assume that the Nuzians were influenced by this culture only through the avenue of the provincial city of Ga.Sur.

Dr. Starr suggests that a considerable and perhaps at first dominant element of the population of the city of Nuzi was composed of the Ga.Sur people, and that the earliest temple, G (Plan 6), was built by them. He bases his argument on a certain architectural difference between the plan of Temple G and that of the second temple which was built

⁷ For divergent conclusions, see in Part I, Chapter II, and especially Chapter IV, by Dr. Starr.

immediately adjoining it in the F period (Plan 7). But let us note first the resemblances. Both buildings are of exactly the same *Langraum* type, a type peculiar to Assur, and found there in H, G, E, and D levels, and again as late as Shalmaneser III in the eighth century B. C. This type of cult room has the shrine or cult statue at one end of the room and the entrance at the other end, not in the wall opposite the statue, but in the long wall at the corner, so that the person entering must turn left to face the cult statue (see Plans 6 and 7). Both our temples, also, have a small narthex or vestibule formed by two buttresses outside the entrance; and both temples (unlike those of Assur) have buttresses around the outside walls. The only essential difference is that in the new temple of F the buttresses are heavier than those of G, and that buttresses are used at the corners, forming, as it were, square bastions. Such buttressed corners are not uncommon and have an obvious structural purpose. They may be seen in the "Single-Shrine Temple" of Tell Asmar, which is of late Early Dynastic into Sargonid times, and which, it may be noted, is *Langraum* and basically of the Assur type (*OIC*, 17, Fig. 36).

Just below the pavement of Temple G court (G50) was found an infant burial in a jar. This level is not positively identified with IIB, but Dr. Starr assigns it to Ga. Sur. Since, however, no infant burials were found in any lower Ga. Sur levels, the question may be fairly raised, whether this burial does not link this level, and Temple G above it, to the Nuzi period.

CONCLUSIONS

Our Levels XII-X have already been summed up at the end of that section. Our Levels IX-VIII have been assigned to Uruk times, and VII to late Uruk or early Jemdet Nasr; but these three levels are poor, and suggest that occupancy was intermittent.

Levels VI to III inclusive, together with the twelve graves, 5f to 5A inclusive, present, as has been shown, an appearance of homogeneity, which offers some reason for considering this whole period Sargonid. It is true that in Level VI Early Dynastic resemblances appear; but so also do Sargonid and Third Ur resemblances. What special character, if any, Sargonid pottery and weapons may have had, is by no means yet clear; even Tell Asmar, with its ample Sargonid remains, helps us but little. The few vessels designated Sargonid in *OIC* 17, Fig. 15, have little in common with ours; and this may be said also of most of the Early Dynastic pottery of Tell Asmar and Khafaje, fully illustrated in *OIC*. The difference must be due to northern as against southern influences.

Since we are certain, from the texts, that our V-III are Sargonid, it is quite possible that VI is also. But if it is pre-Sargonid, it is at any rate Akkadian, and there does not appear to have been any break in occupancy between VI and V. At Tell Asmar occupancy was similarly undisturbed by the change from Early Dynastic to Sargonid, there being no signs of warlike destruction.

Level III, on the evidence of its tablets, does not carry us beyond the decline and fall of the Dynasty of Agade, which at Tell Asmar (Frankfort surmises) may have been followed by Gutian pillage. A tablet of the Third Dynasty of Ur was found in or above the two-meter rubbish deposit of our III-IIB, and some Cappadocian tablets in IIA; but this is inadequate material with which to reconstruct the Third Ur and Larsa periods which are so abundantly evidenced at Tell Asmar. It may be noted here incidentally, that Dr. Starr, in Chapter VII of Part I, has stated that effects of prior weathering and erosion were noticed at Nuzi during excavation, which could only have occurred at the end of Ga. Sur, and which indicate a long period of abandonment. Since this phenomenon was not manifest in any of the Temple levels, it would seem that it must lie lower.

It is conceivable, however, that some part of the First Dynasty of Babylon may be represented in our Nuzi levels, since new evidence coming in from Khafaje seems to

show that the Hurrian invasion had begun in that era. On Mound B, identified as the "Fort of Samsu-ilana" were found shouldered cups (*BASOR* 67, p. 6, Fig. 6) and a Hurrian cylinder seal (*BASOR* 68, p. 12, Fig. 5, and cf. our Pls. 118, D, E, G, H and 119, C); also a terra-cotta plaque with a figure of a "lute-player," very like our Pl. 100, Q, which is from the surface, but is virtually duplicated by plaques from G29 of Temple A and C9 of Stratum V.

But despite this, the gap is still too wide to bridge. Nor does it seem likely that our site would have been given the new name of Nuzi if the city had still contained a large element of the old population.

TABULATION

The levels of Pit L4 at Yorgan, partly because of the disturbance occasioned by the graves, partly because of the absence of important buildings, do not lend themselves easily to level-by-level comparison with other sites. The following table is offered with some hesitancy, and with the reservation that it is merely tentative, especially as to Tepe Gawra, the definitive stratigraphy of whose lower levels has not yet been published.

<i>Yorgan</i>	<i>Tepe Gawra</i>	<i>Tell Asmar</i>	<i>Period</i>	<i>Date</i>
Strata I-IV	I-III		Hurrian	1475 ⁸ -(?)
IIA and IIB	"		"	
2 m. deposits between IIB and III	}	Buildings, texts	First Babylonian	1740-2030
		" "	Isin-Larsa	1950-2170
		1 m. of ashes	Third Ur	2170-2277
III-V	V	Buildings	Dyn. of Agade	2332-2528
VI(?)	VI	Three temples	Early Dynastic	2528-3000(?)
VII(?)	VII-VIIIA	Earliest shrine	Jemdet Nasr	
VIII-IX	VIIIB-C-X		Uruk	
X (transition)	XI-XIA		(?)	
XA-XII	XII-XIV		al-'Ubad	
	XV-XIX		"	
	XX-(?)		Halaf	

Strata I, II, and III are known to lie above Pit L4, Level IIA. Whether Stratum IV, uncovered at a different point, or some stratum below Stratum IV, is identical with Level IIA of the pit is not certainly known.

Yorgan VI and VII are queried because of the possibility that the former may be Sargonid and the latter Uruk.

The dates for the periods are those of Sydney Smith (*SS*, Tables).

NOTE ON PIT N120

This pit was dug in Room N120, at the extreme northeastern end of the Palace complex, and is described in Chapter II of Part I. No levels lower than Ga.Sur were found. Level VIII rests on virgin soil, and Levels VIII-V are purely Ga.Sur. In these levels were found two graves, of the same general character as those of the Ga.Sur levels of L4. In Level V, some Nuzian forms of pottery begin to appear, and Levels III-I are pure Nuzian. Objects and pottery from these eight levels duplicate more or less those of corresponding levels of Pit L4.

Dr. Starr has correlated Level V of N120 with Level III of L4, and Level III of N120 (Nuzian) with Level IIA of L4. Level V of N120 showed signs of intense fire. Without insisting too much on a matter which is not well evidenced, it might never-

⁸ The Saushshattar letter of Stratum II dates only that level at 1475 B. C. Stratum I would of necessity have been later. (R. F. S. S.)

theless be allowable to observe that Level V of N120 appears to coincide more or less with, and is about the same thickness as, the rubbish level III-IIB of L4; furthermore, it appears to have contained the same sort of mixture of Ga.Sur and Nuzian objects as III-IIB of L4. The signs of fire suggest sudden destruction, and the mixture of objects may have been the result of a leveling of the ruins by new occupants. Such a conclusion, of course, is purely conjectural.

NOTE ON PIT G50

This pit was simply the continuation, for three or four meters to virgin soil, of a shaft sunk in antiquity from the center of the courtyard G50 of Temple A (Plan 13). It has been described fully at the end of Chapter II, Part I, and under the Temple A section of Chapter IV, Part I. Nevertheless, its character seems so peculiar that some recapitulation is permissible.

In the first place, it seems to have been of unnecessarily large diameter for a well—158 to 160 cm. Secondly, it was constricted at the top so that the mouth was probably of only half this diameter. What sort of curbing or construction there had been about the mouth could not be determined. The constricted neck was lined with *libin*, the rest of the shaft was unprotected. Inside, four vertical rows of footholds were cut, allowing two workmen to ascend and descend at the same time.

The fact that the mouth of the shaft had been finished with a lining of *libin* would seem to indicate that this was not an unfinished well. The fact that the shaft was over 9 m. deep, from Temple A court level, seems to eliminate the idea that it was a storage pit (which might be suggested by the fact that nearby was a beehive pit, shallower and wider, for grain storage). The suggestion made by Dr. Starr, that it was used for libations, has possibilities, though the diameter of the shaft seems needlessly great for this purpose.

The shaft ended at 5.48 m. below plain level, and was filled to the top with a large quantity of ritual objects thrown in by the looters of Temple A, with which was considerable earth. Digging further, the excavators came upon a solid clay pavement at 6.33 m. below plain level. That the 85 cm. of matter immediately above the pavement could not have come from above, or have been the result of a cave-in of the sides, seems to have been carefully established by the excavators at the time.

On this pavement lay a cache of twenty-five stamp and four cylinder seals (Pls. 40, 41), with which were stone beads, shells, and a quartz fragment, all covered by a thin layer of sand and sherds.

Both the stamp and the cylinder seals are primitive in cutting; but the stamp seals show a distinctive drill technique. Stamp seals of exactly this character were found in some quantity at Susa; some of the Susa specimens are almost identical with certain of ours, especially as to the cat-like creatures (which De Morgan calls jackals). Theriomorphic backs are also common at Susa: bull, boar, lion. Some of the painted pottery of Susa I and Musyan shows a frog-like motif suggestive of that on our cylinder of Pl. 41, F.

These stamp seals are not found in Susa I necropole, but in other Susa I levels, or from "just above Susa I" (i. e., levels which seem greatly disturbed, but undoubtedly contain some Uruk forms). But some were found at the base of the Temple of In-susinak, which is Third Ur (*MDP*, VII, pp. 53 and 92). In one instance stamp seals like these were part of a foundation deposit of the temple which included many cylinder seals of much later date, thus proving the stamp seals to have been antiquarian treasures. To compare these seals with ours, see *MDP*, VII, Pl. XXI, 1, 3, 4, 5, and Figs. 90-99; also *MDP*, VIII, Figs. 1-7.

The association of stamp with cylinder seals in our cache raises a presumption that they date of the transition period between the stamp and the seal. In Gawra VII, which

is assigned to late Jemdet Nasr, stamp and cylinder seals occur together, and this is true of no other level at Gawra. At Warka stamp seals occur (with cylinders) as late as IV, and a cylinder seal impression as early as VI; this shows an overlap, but would seem to place the transition in the latter part of the Uruk period. It is possible that the transition took place later at Gawra, and that the "brocade" style of cylinders seen in Gawra VII came in there full-blown. Our cylinders appear more primitive, and with our stamps, appear to point to an early Uruk date. The level in which they were found may be later than that, since below the pavement was found the crude bowl of Pl. 49, E.

APPENDIX B

CHEMICAL AND MICROSCOPIC EXAMINATION OF THE GREEN GLAZE ON OBJECTS FOUND AT NUZI¹

BY

RUTHERFORD J. GETTENS

General observations. Many of the terra-cotta objects from Nuzi were covered with a bluish green glaze. They included a variety of objects such as animal figures and decorative wall-nails. The most notable of the several pieces examined were those of two glazed terra-cotta lions (Pl. 110, A) which were used in the temple sanctuary. These lions had evidently been constructed from several pieces, each glazed separately—such as the body, the legs, the base, etc. The separately glazed pieces had then been assembled to make the complete figure. It was evident that the joining had been done by the fusion of the glaze at the joints.

This glaze had been put upon a very coarse body of a light, natural clay color which may indicate that it was not fired at any considerable degree of temperature. The thickness of the glaze varied greatly. In general, it was about 1/16 in. in thickness over the entire body, but in places it was as much as 3/8 in. in thickness, particularly around the joints. Its general color was a bluish green. However, the color was very spotty and uneven, varying from a grayish white in certain areas to a deep greenish blue in others.

In certain places the glaze appeared to have become much devitrified with age. In many areas it was soft and friable, but in others it still retained its original glassy appearance. The more friable portion seemed to be mixed with a quantity of crystalline salts, either disintegration products of the glaze itself or salts derived from the surrounding soil in which it was buried.

Microscopic examination. A chip of the glaze, showing it in cross-section, was examined microscopically. It was observed here that the joint between the body and the glaze was very well defined. There seemed to be little or no infiltration of the glaze into the body; neither was there any sign of cleavage between the glaze and the body. The glaze itself was full of blow-holes and did not appear to be very homogeneous. Certain areas were clear and transparent, others were slightly opalescent, and still others showed a mottled, blue appearance.

From a small fragment of the glaze, it was possible to prepare a thin "rock section" which allowed the specimen to be viewed by transmitted light. Examination in this way showed that most of the glaze was still in a vitreous state. This undisintegrated glaze did not show birefracton under crossed nicols. Here and there were small globules of impurities which had not been properly incorporated at the time of the firing of the glaze. Under crossed nicols these small globules showed pseudo interference figures. This phenomenon is explained as being due to small crystals radiating from the center of the globule so that some of them are always in the four positions of extinction at the same time. This shows the presence of some unfused, crystalline impurity in the glaze. Around each of these globules concentric circles in the glaze could be observed. The green coloring matter could be seen rather imperfectly diffused throughout the glaze. In places it

¹ For further information on early glaze, see the excellent article under Ceramic Glazes, *Encyclopedia Britannica*, 11th ed.

seemed to be concentrated along small fissures. This rock section also showed that no "slip" had been applied to the body before the application of the glaze. However, at the junction of the body and the glaze were observed some fibrous zones in the glaze which appeared to run roughly parallel to the joint. The material in these zones seemed to be slightly birefracting; it may be the inclusion of some foreign material. Just why these fibrous zones had settled at this point is difficult to explain.

A determination of the refractive index of the glaze gave a value, 1.46-1.47. Particular care was taken to make the determination on fragments which showed no birefractation and which showed only vitreous fracture. This refractive index is low. It indicates that there are no heavy metal constituents present and that it is very likely an alkali glaze.

Chemical examination. 1. A fairly large portion of the glaze was washed with distilled water. On evaporation of the water a salt residue was obtained which on chemical examination showed the presence of chloride, sulphate, and sodium ions. This indicated the presence of both sodium sulphate and sodium chloride. These two salts probably formed the main components of the salty incrustation which had settled upon the glaze. These salts most likely found their origin in the disintegration of the glaze itself or they had crystallized from the saline waters of the soil in which the objects had been buried.

2. On treatment of a few fragments of the glaze with concentrated sulphuric acid, a slight effervescence was observed which indicated the presence of a carbonate. The subsequent formation of characteristic needle-like crystals of calcium sulphate showed the presence of calcium. Some calcite was observed in the microscopic examination of the untreated material.

3. A bit of the glaze was ground in an agate mortar and then placed in a platinum spoon and heated over a Bunsen flame. At first, when held high in the oxidizing portion of the flame, the particles of glaze appeared to fuse slightly but did not appear to melt. The sample retained its green color—in fact, the green color deepened slightly. When, however, the platinum spoon was lowered into the reducing portion of the flame the sample immediately turned reddish brown and remained that way on cooling. When observed microscopically, these particles were deep red in color and somewhat transparent. This change in color is said to be characteristic of copper glasses. It is the result of the reduction of green cupric compounds to red cuprous oxide.

4. A small portion was treated with aqua regia and evaporated to dryness. From the residue a positive test for copper was obtained by means of the triple nitrite reaction. The presence of copper no doubt explains the blue-green color of the glaze.

5. A portion of the glaze was fused on a platinum spoon with sodium carbonate. A test applied to the soluble portion of the melt by means of potassium ferrocyanide confirmed the presence of copper and also showed the presence of a considerable amount of iron. It is very likely that the iron was derived from the impurities found in the raw materials from which the glaze was made.

6. A spectrogram of the glaze was made by Professor G. P. Baxter, of the Harvard Chemical Laboratories, to find out whether or not lead or tin was an essential constituent. The spectrogram showed conclusively that neither of these two elements was present. It likewise showed the absence of boron, an element which might be suspected in such a glaze. The spectrogram did show, however, the presence of a considerable amount of silicon and it confirmed the presence of copper.

Conclusion. From the observations and tests above, it appears that this Nuzi glaze may be characterized as a soda and lime silicate glass which derives its color from the presence of copper. It is an "alkaline" glaze rather than a "faience," as this latter term is defined by Emil Hannover in his book, *Pottery and Porcelain* (New York: Charles Scribner's Sons, 1935), Vol. I, pp. 49-52. (Hannover defines "true faience" as "a glaze or enamel rendered opaque by an admixture of tin oxide," and "semi-

faience" as a lead or other transparent glaze applied over an undercoating of fine clay slip.)





The Nuzi glaze described above seems to correspond rather closely to descriptions of the early Egyptian glaze which is said to be a vitreous copper glaze coated over a highly siliceous body. (See A. Lucas, *Ancient Egyptian Materials and Industries* [London: Edward Arnold & Co., 1934], 2d ed., pp. 105-107.)

Unfortunately, neither chemical nor optical examination throws very much light upon the raw materials used in the preparation of the glaze nor upon the method of applying it.

November 1, 1931.





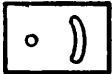




APPENDIX C

NUZI AND LATE PERIOD BAKED BRICKS

<i>No.</i>	<i>Size (in cm.)</i>	<i>Location</i>	<i>Remarks</i>
1	26x26x6, 29x29x6	Shil. 1; T. T.	Pavements, wall-facings, drains, etc.
2	15x29x6, 16x29x6	Shil. 1.	Drain.
3	 42 40x6 34	Shil. 1; T. T.; R81.	
4	32.5x32.5x6.5-7.0	T. T. 4; Sh. T. 10; L9; L7.	Some polished on one side.
5	40x40x7	T. T. 4; Sh. T. 10.	Paving.
6	13.5x26x6	Shil. 1.	
7	34x34x5.5-6.0	Shil. 1.	Paving.
8	25x9x6	Shil. 1, 2.	Wall-facing.
9	 33 18x7 25	Shil. 11, 13.	
10	36x16x8	T. T. 2, 9.	Foundation.
11	36x36x8-7	T. T. 2.	Foundation.
12	25x30x6.5	T. T.	Coarse clay, poorly baked.
13	33x33x11	T. T. 20; Shil. 14.	Coarse clay, poorly baked.
14	 28 28x5.5 18.5	T. T. 10.	Paving.
15	5x19x6	Sh. T. 6, 5.	Wall-facing.
16	34x34x6, 34x67x8	Sh. T. 17, 18.	Drains.
17	17x36x7-9	L6; L11.	
18	25.5x25.5x6, 24x24x5.5	L7; R46; Shil.	
19	14.5x15x11	L7.	
20	16.5x34x12	L7.	
21	38x7x12	Shil.	
22	 34 19x6.5 24	Shil. 3, 4.	
23	48x48x4	L22.	
24	34x34x8-9	L4, Pavement IIB.	Paving.

NUZI AND LATE PERIOD BAKED BRICKS

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No.	Size (in cm.)	Location	Remarks
25	29x29x6.5	P37; M94.	
26	 28 18-19x6.5 25	L3.	
27	6x7x25	R46.	
28	 36 15x13 16	S59; R46.	
29	22x22x4.5	R81.	
30	8x14.5x64	R87.	
31	22x48x5	R84.	Sides and face very smooth.
32	24x52x8	L10.	
33	 37 20x6 22	R51.	Well-facing and paving.
34	28x15x7	L15A; L15B.	
35	 19 16x5 8.5	P407 (St. 2).	
36	 28x28x6.5	B7, above Stratum I.	Late Period; poorly baked; thumb smears on one face.
37	26x53x8	N. W. Ridge.	
38	 33 25x6 24	S105.	
39	50x50x6.5	H40.	Late Period threshold.
40	68x8x14	M100.	Wall-facing.
41	 21 17x7.5 27	U387, Tomb.	Late Period.
42	18x21x6.5	U387, Tomb.	Late Period.
43	 18 16x6.5 23	U387, Tomb.	Late Period.
44	 41 52x7.5 35	Yorgan Tepa.	

APPENDIX D

EPIGRAPHIC EVIDENCES OF THE MATERIAL CULTURE OF THE NUZIAN¹

BY

ERNEST R. LACHEMAN, Ph. D.

Cities.

The excavations brought to light about four thousand cuneiform tablets, one thousand in the house of Tehip-Tilla and three thousand in Yorgan Tapa. Their decipherment and translation have furnished the most valuable information on the yet very little known Hurrian civilization. They supplement and corroborate the data supplied by the archaeological findings. The seal impressions on many of these documents are an important source for the study of the Hurrian art and religion.

Most of the tablets were written in Nuzi² and surrounding villages, and in Arrapha. The conclusion of Gadd³ that the "City of the Gods" was Arrapha is further proved by a document recording deliveries of grain for the queens of Nuzi and of the City of the Gods or Arrapha, because in the items for the second of these queens, she is alternately called "queen of the city of the Gods" and "queen of the city of Arrapha."⁴ Arrapha (modern Kirkuk) must have been the capital of the land of the same name, since the "land of Arrapha" is mentioned several times. Of course the words "land" and "city" had a flexible meaning. Thus we have the "city of the palace,"⁵ the "city of the merchants," and the cities of some prominent Nuzi men, as the "city of Akkulenni," the "city of Unapshe," etc. In all these cases, the word "city" means "a part of the city," a "quarter."

Palace.

The word "palace" had also a large meaning. It usually refers to the buildings of the king. But we find the "palace" deeded in testaments by people who are not mentioned as kings. Thus a *bit êkallu rabû* (the large palace) is willed by Arhaduya to his son Puhî-Shenni.⁶ The daughter of Ninuari, [†]Yamashtum, gives the *bit êkallu* and the

¹ Abbreviations:

- AASOR: *Annals of the American Schools of Oriental Research.*
Bez.: Bezold, *Babylonisch-assyrisches Glossar*, Heidelberg 1926.
C. T.: *Cuneiform Texts of the British Museum*, London.
Deimel: Deimel, A. *Sumerisches Lexikon*, Rome 1928-1933.
HSS: *Harvard Semitic Series.*
JEN.: *Joint Expedition with the Iraq Museum at Nuzi.* Texts copied by Edward Chiera.
JENu.: Unpublished texts from the Joint Expedition at Nuzi.
R. A.: *Revue d'Assyriologie.*
SMN: Harvard Semitic Museum, Nuzi Tablet Numbers.
TCL: *Textes cunéiformes du Louvre*, vol. IX. (Contenau, G., *Contrats et Lettres d'Assyrie et de Babylonie.* 1926.)
Z. A.: *Zeitschrift für Assyriologie.*

² Because the first published documents from Kirkuk and Yorgan Tapa mentioned the name of the city in the genitive (*Nu-zi*), the city is now referred to as Nuzi, although we should use the nominative form *Nuzu* (*Nu-zu*, *Nu-û-zu*, *Nu-zu-û*).

³ R. A. XXIII (1926), pp. 52, 64 f. and 85. AASOR XVI, 8: 14.

⁴ SMN 1060.

⁵ *âl êkallim* (the gods of) SMN 1020. For an almost similar use of *êkallu*, cf. *Altorientalische Bibliothek*, I Bd. (Die Inschriften der Altassyrischen Könige, p. 152, n. 4 and 153, n. 6).

⁶ *bit êkallu rabû ina ki-te-ir-ri* (as a gift?) SMN 2676.

courtyard (*tarbašu*)⁷ to her son ẖutiya. Shukriya, son of ẖuya, gives two houses called *libburšū*, the *bitutu* . . . *gendu êkallu* and other houses to his son Tehip-Tilla. A "*bit êkallu* of the gods, with its new and its old *appanu*⁸ and starting from the threshold of the old palace as far as the walls of their slaughter-house (*huršina*), leaving their street free of access, all the court yard, the stable and the horse stable" were willed by the woman Bêlat-Qaḥi-Ili to her son Tai-Šenni. A *bit êkallu*, located in the *kutlu* (the rear?)⁹ was sold by Durar-Teshup to a woman and her father (SMN 3558). Therefore it seems very likely that the word "palace" had a larger meaning than that of "dwelling place of the king" and included as well buildings inhabited by people working for the king, and parts of the old palace which former kings had probably sold to individuals.

Temples
and gates.

As further evidence that the "City of the Gods"¹⁰ was not the temple area of Nuzi (or group of temples) is the fact that there was a palace in the City of the Gods as well as in Nuzi, and that each had its king and queen (SMN 1060, etc.). Moreover the name for temple is the "house of the god." SMN 2684 is a list of the gatekeepers of three gates in Nuzi and of three temples. The names of the gates are given (the great gate, the gate of Tiššae and the gate of Zizzae) but not those of the temples. However, the name of the chief gatekeeper, Akap-Shenni is the same found in a fragment stating that as decurion "he was watching(?) in the temple of *Ištar-Nu-z[u-ḥé]*" and in the temple of Tešup of Ḥalap (*Ḥal-pa-ḥi*)" (SMN 2730). Another tablet, SMN 3512, from room F 24 is a list of five men, of whom the "commander of five is Ḥaniyu, the priest of [*Ištar*] in the gate of (the temple) of *Ištar-Nu-zu-ḥé*." An unusual document is the contract (SMN 1500) by which Zilip-Kiaše, the wife of Zigi gives to another woman a young female slave to take up the duty of *kisalluḥutu* at the service of *Ištar-Ninuawa*. She has to go "in the city of the god in the house of the god" on the first and the fifteenth days of each month and bring there water and oil. The *kisallu* was the temple courtyard. Thus there was a temple of *Ištar* of Nineveh and whether *Ištar* of Nuzi was the same aspect of that deity as *Ištar* of Nineveh seems quite possible. *Ištar* of Nineveh has an important place in the "oil rations for the gods" (AASOR XVI 46-50) as consort of Tešup, both gods of the cities Aqaš, Azuḥinni, Ḥilmanni, Ulamme and Tilla. There was also in Nuzi as well as in the "City of the Gods" a gate of Nergal, therefore a temple of Nergal. Thus the three temples referred to in SMN 2684 are those of Tešup (of Ḥalap), of *Ištar* (of Nineveh or of Nuzi), and of Nergal. The gate of Tešup is mentioned in SMN 2015. There was a gate of *Ištar-Tešmetu* in Zizza.

Deities.

Two school tablets, probably copied by the pupils from the "Fourth tablet of the *ḤAR.RA = Ḥubullu* series" list the ships or arks of the Babylonian gods, used during the festival of Nisan, on the tenth day, to carry the statues of the main gods from the *Esagila* to the *akitu*-house, in Babylon, where the New Year's sacrifice was performed. It is very likely that the custom was adapted to the Nuzian religious ritual. However it is interesting to note that the names of the gods are slightly changed. They are Til-Enlil, Bêl, Ea, the river-god (*nâru*), and Marduk. This is the only place where the name of the god Marduk occurs, and it is never used as the theophoric element in personal names. The river-god in Babylon was the Euphrates, which is too far from Nuzi to play there an important rôle.

Temple
offerings.

In Hebrew the word *ḥêkal* means "temple," and in Nuzi we have a good transition between the Akkadian meaning of *êkallu* (palace) and Hebrew *ḥêkal* in the fact that one document records the offering of wheat for the "queen (SAL.LUGAL) in the temples of the gods."¹¹ This means either that the queen was living in the temple area which

⁷ Bez. 253a: Viehhof, Hof.

⁸ Cf. AASOR XVI, 1: 1.

⁹ Cf. JENu 440: 11: 2 *bitku-up-pa-um 1 ku-ut-lu 1 kirû*. From *kutallu* (Bez. 152b)?

¹⁰ As maintained by Koschaker, *Neue Keilschriftliche Rechtsurkunden aus der El Amarna Zeit*, 10, n. 4 and Oppenheim, *Archiv Orientalni*, 1936, p. 292, n. 3.

¹¹ SMN 3185: 7-8.

was part of the temple itself, or that the offering of wheat was brought to the temples for the queen (SMN 3185). The third possibility is that in this case the *bītārimēš ilānimeš* was the same as the Hittite *bīt hilāni*.¹² An offering of flour for the temples is also recorded, as well as wheat for the royal gods (*ilānimeš šarri-na*), millet for Ištar-Bêlit-Mâti, lead for the gods of the "city of the palace" (*âl êkallim*).

Offerings were presented on tables: "Total 28 tables (in) the chapel (*bīt pá-pá-hi*) were placed" (SMN 506). The "24 *parakku* which Unap-Tešup received from Ḥašip-Tilla" (SMN 2344) are the small shrines such as were found in Nuzi and in Assur. It is possible that the *bīt êkallu ša ilāni* referred to above is also some shrine. Family gods were the symbol of property and in several wills it is stated that the father leaves his "idols and demons" (*ilāni ū ešemmi*) to his eldest son. Thus when a son breaks his filial relationship "before the statue of Shamash," his father cuts him off from the inheritance of the "household gods and demons." (The *ešemma* is really the spirit of the ancestor.) These *ilāni* were figurines representing the gods, and have been found during the excavations in Nuzi.

Gates.

The gates of Nuzi were: the great gate, the Tiššae gate and the Zizzae gate. One tablet was "written at the door of the palace gate Tiššae," therefore the Tiššae gate was not a city gate but a palace gate. The Zizzae gate was likely the gate leading to the suburb Zizzae. There was also a "southern gate" (*abullu šupālu*, and its Hurrian equivalent *a-šar du-ri-we*), the Šarae gate (cf. the canal name *sa-ra-e*), and the gate of the city of the scribes. Nuzi was not only a walled city, but had its forts (*ḥalšu*) and its bulwarks (*kerḫu*).^{12a}

Streets.

Few names of streets are preserved. There was a "street of the 'bird-men'" (HSS V 55: 9). In the "city of the god" there was a by-street (?) (*zi-za-a-ri*) (Gadd 31: 12). The queen had houses in the "street of Nupari in the middle of the city" (cf. the *nupari* house).¹³ An enclosed plot reached "unto the street of Elhip-Šarri."

Houses.

Houses were built with mud-bricks (*libittu*), burnt bricks (*agurru*), and reeds. Pitch (*kuḫru*) which was used in this region, is mentioned only in an uncertain passage. Beams (*guššuru*), boards (*tappu*) and cross-beams (*parisātu*) were used in the construction of more elaborate houses; the door (*daltu*) with its door-post (*sikkatu*), its lock (*sikkūru*) and its socket (*saqqu*) are well known.^{13a} Houses as well as fields were the subject of many real estate transactions and as such were well described and measured. The standard measures were the cubit (*ammātu*) and the homer (*imêr*). A bronze measure of a cubit in length was kept at the palace gate (*ammatu ša erî ina bâb êkallim*). The "foot" (*šêpu*) was next to the cubit and the homer was equivalent to 8000 square feet.¹⁴ There were "two-story houses," called "house which rides over" (*bīt rukbu*) with a balustrade (*amru*)¹⁵ (SMN 2210 and 2237). A storage house (*bīt kariti*) had a *bīt rukbu* over it (JEN 386: 9, 16). A servant's house¹⁶ had also a *bīt rukbu* (HSS V 72: 13), "its door shall be free to the street," i. e. he has a right of way to the street. In another case it is stated that the owner "shall use the old gate as a passage-way" (HSS V 73: 43-44). "Built houses," i. e. improved property, were common. One tablet is a list of 22 houses given one each to male and female servants of the palace. Another similar

¹² Cf. Z. A. III (1888), p. 93.

^{12a} Cf. Meissner, Studien zur Assyrischen Lexikographie, III, 51 (Mitteilungen der Altorientalischen Gesellschaft, Bd. XI, Heft 1/2).

¹³ Bez. 203a translates *nuparu* by *Gemüt*, "feeling," and might be the public house (?). Cf. AASOR XVI 3: 40.

^{13a} Other parts of the door were the *ḥargallu* of bronze, with their strap (*qinzišunu*) the *šu-ku-e* of copper.

¹⁴ HSS V 81: 8 which I collated has to be read *1 ma-at 2o šêpê šî-id-du*. But cf. R. A. 1938, pp. 33-35.

¹⁵ I owe this translation to the suggestion of Dr. I. Feigin of Chicago.

¹⁶ Not the "chariot shed" as translated by Speiser (AASOR X 21: 13) but probably a Semitic word with the common Hurrian ending *-ušḫe*.

tablet is a list of 8 houses received by the servants of Ғišmi-Tešup, and of "2 pairs" of houses received by two couples. A school tablet (SMN 2623) is a copy of the titles of house superintendents. Among the known titles are "the superintendent of the implement (*nakamtu*) house or arsenal; the superintendent of the *nadītu* (priestess) house;¹⁷ the superintendent of the *GUL.BAR* house;¹⁸ the superintendent of the meat house; the superintendent of the weaver's house; the superintendent of the tax house;¹⁹ the superintendent of the house of the 20;²⁰ the superintendent of the ox house; . . . the superintendent of the temples;²¹ the superintendent of the *NAM.DUMU*. [*A.NI*] house." Other buildings mentioned are: the jail (*killu* or *uṣūrtu*); the harem (*edūlu*); the sheep pen (*petqu*); the tablets' house; the storehouse for grain, straw, etc.;²² the treasure house (*anzaru*); another storehouse or slaughter-house (*bīt ḥuriṣāti*);²³ the granary and threshing floor (*magrattu*); the stables;²⁴ the bakery (*bīt tinūri*); the house of the servants (*bīt ṣubāre*);²⁵ the house of the corvée men (*bīt ālik ilki*); the house of the chariot riders; the house of the *aššabē* (another kind of corvée men); the house of the *nakuššu* men; the house of the women singers; the house of the *ubāru*;²⁶ the house of the companions (*bīt tap-pa-aḥ-ḥé*);^{26a} various houses with Hurrian appellations: *a-ad-na-an-nu*²⁷ *ar-pa-ni*, *ḥa-ku-ub-ba-tum*, *ma-ri-in-ni-na*, *qa-wi-ri*; *ú-ur-ḥi-ni-wa*; *ti-bi-iš-ši-ia*;²⁸ *gu-ur-ti*; *li-ib-bu-ur-šu*.²⁹ The *bīt nupāri* might be a public house. There certainly was a schoolhouse, as can be attested by the presence of school tablets from room P 313. The *kutlu* house might be a courthouse.³⁰ The *urḥiniwa* house had a porch or vestibule (*kisallu*).

Water
supply.

Wells were an important part of the watering system and were found either next to houses or in orchards. A good well was built of baked bricks (*agurra rašip*).³¹ Canals (*atappu*, *eqū*), brooks (*nablu*) and a river (*irru* or *iarru*) were the main supplies of water. A river was running through Nuzi, though its name is not recorded.³² A field located in the district of Tēhip-Tilla is exchanged for a field "on the other side of the river, the mouth (or, the spring?) of which is in the village of Zizza (*ina ebertain nāri šu-ú a-aḥ a-šar āl Zizza*)."³³ Another field is placed on the edge of the river (*ina šapat ia-ar-ru*).³⁴ There was a dam on the road to the village Kipri,³⁵ probably to retain the water to fill the canals. In a lawsuit, the messenger of the palace speaks of the "bridge

¹⁷ Written: *bīt na-di-tum GI.BAR*.

¹⁹ *E.GUN.NA*.

¹⁸ Or *tarbašu* (Deimel 285), *KISIM*.

²⁰ *E.NEŠ*.

²¹ *ŠĀ.TAM.E.DINGIR.E.[NE]*. Cf. Syria XIII (1932), p. 234, No 9. Ob. Col. I, line 5.

²² *bīt kariti*.

²³ This word has a plural ending *-ati* similar to the Hurrian plural *-na* in the word *ḥuriṣina*, leaving a root *ḥuriṣ-* from the verb *ḥarāṣu*, "to cut."

²⁴ The *bīt urū* is the horse stable (Bez. 63a). Speiser takes "*qubbātu* as a cognate of *qabū* stable (AASOR X 21, 17). There is a noun *quppu* (pl. *quppāti*) "container, little box, coffer" (Bez. 245a). The *bītāti quppāti* are houses in the form of a box, for storage, made of bricks (HSS V 97: 9; SMN 52; 387; 526, etc.).

²⁵ HSS IX 109: 23; Deimel 278(?).

²⁶ The *ubāru* was an important official in Nuzi and also in the land of Assur, Hanigalbat and Mari. (Cf. AASOR XVI 7: 50; 83: 4).

^{26a} Cf. Meissner, op. cit. No. 66: *tab/pḥu* "ein grosses Gefaess."

²⁷ There was a title of profession called *adnannuḥlu*.

²⁸ Hardly derived from *tibnu* "straw" as does Gordon, *Orientalia* 1936, p. 319.

²⁹ Cf. JEN 239: 11 *1 bitu a-du lib-bi ur-ši-šu*. Cf. *Altorientalische Bibliothek*. Vol. I. p. 150. No. 13, line 5: *li-bur*. The gate which is called "May my outer wall live old."

³⁰ Cf. note 9.

³¹ JEN 160: 11.

³² The modern river Khtasahr flows about four miles east of Yorgan Tēpa. Whether it was nearer Nuzi in ancient times cannot be proved.

³³ JEN 270: 8.

³⁴ Cf. *i-na li-it ir-ra-ki-bi* SMN 3561: 3.

³⁵ JEN 480: 11; SMN 970: 3.

which was broken." We know of a bridge over the Niraššu canal, the most important of the canals.³⁶ It went through the village of Kipri, and along the road to the village of Tarkulli. It is also called the "Niraššu canal of the palace," and the "Niraššu canal of the city Anzuqalli." But one document deals with "a field north of the road to the village Ḥabati, on the edge of the Šarāi canal; that field, measuring 1 *imêr* 2 *awihari*, 4 *awihari*, is cut in two by the canal of the city Anzuqalli." Thus these two canals ran through the same city and probably followed a parallel course. The Sarae³⁷ canal was also in the neighborhood of the road from Nuzi to Tarkulli. An unnamed canal followed the road to the village Matqa.^{37a} Mention is made of the Qarane canal³⁸ and the canal of the city Šumahḥe.³⁹ A lawsuit arose concerning an order which the king had given to Tarmi-Tilla to divert⁴⁰ the waters of the Qalalu canals, the waters of which "ran to the city Tarkulli." Landlords had their own secondary canals, named after them: the canals of Puḥi-Senni, Teḥip-Tilla, Ennamati, Ḥišmi-Tešup, Akipta-Šenni, Taḥirišti, etc. In an exchange between the two sons of Teḥip-Tilla, Ennamati gives to his brother "all his inheritance share of houses (starting) from the houses of Naniya at the wharf. . . ." Thus it would seem that the canals were also used for navigation and transportation. An orchard was located at the exit of the canal's gate,⁴¹ and a divorce document was written after the proclamation (or behind the pit?) at the exit of the canal's gate. These gates were probably used for the diversion of water into the secondary canals. Fishermen (*ba'êru*) were known in Nuzi; a long inventory lists "fish nets." Along the canals' banks (*arammu*)⁴² grew the reeds (*qanu*) used to build houses and to make arrows. The opening and closing of canals was strictly regulated by a man called the *kugallu*. There are many documents concerning the opening and closing of the canals. In a document of "sale adoption" the object of the transaction is a field "at the edge of the canal, the gates of which he shall open; its ditches of water reach the edge (of the canal)."⁴³

Fields.

Nuzi was mainly an agricultural community, and tilling the fields was its principal occupation. The country around the city was uncultivated steppe (*šêru*, *EDIN.NA*), and the peasants had to till it and water it⁴⁴ to develop it into productive land. There were fields "in the steppe." Tilling was done by hand, with a hoe (*marru*) or with the help of the donkey and the plough (*epinnu*, *awiharu*, *ḥarwahḥu*). The standard measure of surface, the *imêru*, was very likely the surface of land which a donkey (*imêru*) could plough in one day, i. e. 8000 square feet. The *awiharu*, *epinnu*, was one-tenth of the *imêru*.⁴⁵ The amount of grain which a donkey could carry was also called the *imêru* and was the standard measure of volume and weight. It was divided in 10 *sātu* of either 8 or 10 *qa* (see below).

In many mortgage documents, and rarely in "sale adoptions," there is a clause to the effect that when the field has to be returned to its owner, if it has just been plowed under, the owner may not take it back immediately, but shall wait till the next season.

³⁶ Written also *ni-ri-iš-ši*, *ni-ri-eš-ši*, *ni-ra-aš-ši*, *ni-ir-ri-eš-ši*, which excludes the possibility of reading *irri ešši* "the new river."

³⁷ Written also: *sa-ra-e*, *sa-a-ra*, *za-ra-a*.

^{37a} The town Matqa was the place from which Gudea obtained pitch (R. A. 1926, p. 65). Kirkuk is today the center of the so-called Mosul oil fields.

³⁸ There was a town called *Ka-ra-na-a* and *Qa-ra-na*.

³⁹ SMN 433: 4.

⁴⁰ JEN 370: 4 ff.

⁴¹ *ina ašê bâb eqi*.

⁴² "he will mould 300 bricks on the bank of . . ." (R. A. XXIII 65: 7-8).

⁴³ JEN 98: 5-7.

⁴⁴ The waterers (*amêlu šaqû*) were taking water from the canals with buckets and pouring it into gardens and fields. A "watered field" was worth more than an unwatered field.

⁴⁵ The Sumerian sign *APIN* is the equivalent of both *awiharu* and *epinnu*; both forms are found spelled out. Never more than 9 *awihari* are mentioned, therefore it is right to conclude (with Koschaker, op. cit. p. 14) that it is a tenth of the *imêr*. It was divided in *kumânu* and *ḥararnu*.

The aim of this clause is to oblige the temporary owner of the field to till it immediately after the harvest, and not wait till the time of the mortgage expires. This precaution is necessary where dry farming is in use, otherwise the soil would go wild again.

The business documents give a fairly accurate description of the estates with which they were concerned. Surveyors were employed to measure fields, orchards, and houses. Their location was indicated in relation to other properties, such as north, south, above (east?) or below (west?),⁴⁶ or on the edge of, certain tracts of land. The area and sometimes the circumference are indicated. Boundary stones (*kudurru*)⁴⁷ and walls (*igâru*) marked the limits between fields. Several fields together constituted a lot (*ašlu*) or a district (*dimtu*) or canton (*ugâru*). Tells (*tillu*, pl. *tilâni*) were also cultivated, and were named after the owners: the tell of Ninuari, of Paya, etc. There were fields in the paddocks (*mašaltu*), in the "middle of the city," in the bulwark (*ina libbi âli ina kerhi*: SMN 2085).⁴⁸ Several Hurrian words are used to indicate the location of fields.

Grain.

The harvest usually took place in the month Ĥiyâru.⁴⁹ A sickle (*ḥaššinu*) was used to cut off first the ears, then the stems, and the grain was thrashed on the thrashing floor (*mašganu*). The normal produce of a field was 10 *imêrs* of grain and 10 bundles⁵⁰ of straw per *imêr* of field.⁵¹ Barley was the most common cereal, with wheat (*kibtu*), emmer (*kunšu*), sesame (*šamaššammu*), poppy (*irru*) and flax (*pillu*) following in that order. Other grains mentioned include those with Hurrian appellatives, like *abḥuldu*, *aiwa*, *duknatku*,⁵² *nirši*,⁵³ *zigallu*. There were different kinds of barley, all designated by Hurrian adjectives: *galpurḥe*, *galteniwa*,⁵⁴ *zarae*, *ḥurae*, *tabrie*,⁵⁵ *šildu/ta*, *šuharam-pašḥa*.^{56a} It is difficult to establish what is meant by "barley of the copper" (*še'u ša siparri*), "barley of the bronze" (*še'u ša erî*), "barley of, or for, the waters" (*še'u ša, ana mē*), *še'u ša zu-up-pu-û*, *še'u ka-ru-û*, *še'u (ana) an-za-an-na/u-(am)*. Hulled barley was called *ḥašlatu*.⁵⁶

Barley and the other cereals were used for a great variety of purposes. It was the

⁴⁶ So suggested by Gadd, R. A. XXIII, p. 87.

⁴⁷ *Kudûru* are mentioned several times as *unûtu* (implements) made of wood and were therefore not boundary stones, but pickets.

⁴⁸ For the meaning of "field in the middle of the city" cf. *Orientalia* 1935 (IV), p. 175 ff.

⁴⁹ The month of May. Nuzi being at a higher altitude, near the eastern mountains, had a colder climate, and the harvest was later.

⁵⁰ The word used to indicate the measure of straw is *ša-bi-ir-ru*, which also occurs in lists of garments.

⁵¹ This is the standard measure accepted by the judges when they imposed fines on people who had kept their fields longer than the mortgage period, or had not surrendered their fields immediately after selling them. But other documents indicate a lesser amount: "100 *imêr* of barley from 20 *imêr* of field, of the city Nuzi, at 5 *imêr* each; as produce (? *ki-ma ta-ku-ûš-ri-šu*) of one *imêr* of field; 43 *imêr* of barley from 10 *imêr* of choice (*tabriû*) fields, of the city Nuzi, of one *imêr* of field, 4 *imêr* 30 *qa* each; 45 *imêr* of barley from 30 *imêr* of seed field (*eqlu zêru*), at one *imêr* 50 *qa* of barley for each *imêr* of field, of the city Anzugalli; 37 *imêr* 20 *qa* of barley from 7 *imêr* of seed field, at 5 *imêr* of barley per each *imêr* of field; 130 *imêr* of *ga-a-ti* from 6 *imêr* of field at 21 *imêr* 70 *qa* of barley per each (*imêr* of field) from the town Akip-Apuwa; 65 *imêr* *ga-a-tum* from 7 *imêr* of field at 9 *imêr* 30 *qa* (sic!) per each (*imêr* of field), of the city Pakkušše; 87 *imêr* of barley from 11 *imêr* of field at 7 *imêr* 30 *qa* of barley each, of the city Apzahullušše; total 568 *imêr* 50 *qa* of barley as food for 365 women, etc." Production of wheat varied from 1 1/2 *imêr* to 5 *imêr* per *imêr* of field; emmer from 3.2 to 8.5 *imêr* per *imêr* of field.

⁵² "2 *imêr duk-na-ak-tum a-na* . . . (SMN 119)"; "5 *imêr duk-na-at-ku* (sic!) (SMN 950: 1)."

⁵³ "3 *imêr ni-ir-š[i]*" for the same women as in SMN 119. "5 *imêr ni-ir-wa* . . ." for the same man as SMN 950 (SMN 585).

⁵⁴ *galpurḥe* et *galteniwa* are also used for emmer and wheat. For *galteniwa*, cf. the word *gelte* "well-being" of the Tušratta letter. Our *q/galteniwa* might be the equivalent of *damqu*.

⁵⁵ *tabriû* is also used for fields and pastures. Bez. 93a, "fat, luxuriant."

^{56a} Cf. AASOR XVI 35: 4 and 54: 16.

⁵⁶ Also *bi-ši-il-tu*.

main form of currency⁵⁷ and as such used to pay workers. It was the most common food. It was ground into flour (*qêmu*)⁵⁸ and bread (*akâlu*) was made with it. A movable millstone with its wagon (*NA₄.ĤAR qa-du na-ar-ga-bi-šu*) is mentioned in several inventories. Barley was used to make beer (*ana balâli*: for brewing): barley, "beerbreads" (*bappiru*) and malt (*buqlu*) were the materials used; there is no mention of yeast, unless the barley described as *sà-am-mi-in-ni* (or, 4 *imêr sà-am-mi-in-[ni]*) usually translated "rotten barley,"⁵⁹ is a kind of fermented barley which acted like yeast. Barley was made into groats (*ana za-an-ni/u*) and mush (*ana pa-ap-pa-si*),⁶⁰ and mixed with other grains (*bi-il-lu*).⁶¹ Barley as well as wheat and emmer, and especially fine flour, were presented as sacrifices of libation (*niqû, meḥḥu, mashatu, širi'annu*) to the gods.⁶² The taxes for the support of the king and his household were paid in grain.⁶³ Various other uses of grain are described with Hurrian words, such as: *a-na a-g/qa-ri-na*,^{63a} *a-na bi-ir-ḥa, a-na ku-šu-up-pâr-ra* (or: *ku-šu-up-ḥa*) *kîma na-ta-ku-uš-ḥu, a-na q/ga-a-a-ti, a-na šu-ul-ḥa, kîma wa-ri-wa, ana wa(šâ)-aš-ši-wa, ana zu-be-ir-ra*^{meš},⁶⁴ *ana šî-in-du-un-ni*.⁶⁵ A special kind of wheat was called *šinahilu*, a term also used to describe sheep, garments, chairs, etc.

Orchards,
gardens,
forests.

Due to the abundance of Hurrian words used in lists of produce from gardens and orchards, as well as in inventories of objects in wood and metals, it is often difficult not only to establish the identity of the thing itself, but also to find out whether it is an object or the material with which this object is made. For instance, when one reads: 4 *šimeddu narkabâtu ša ḥa-al-tar-ri*, 4 teams of wagons of *ḥaltarri*, one may be almost sure to say that *ḥaltari* is the Hurrian name of a tree or wood. But when the two words separated by the preposition "of" are preceded by the determinative for trees and wooden objects, it is practically impossible to determine whether one is part of the other, or if the second is the kind of wood with which the first one is made.

The orchards or gardens (*kirû*), and the forests (*qallu*)⁶⁶ of Nuzi and its surrounding towns supplied the vegetables, spices, fruits and trees used in Nuzi. Peas (*ḥallâru*) were the most common vegetable. One small tablet is a receipt of "46 *qa* of caraway seeds (*kamûnu*), 34 *qa* of coriander (*kusibirrâtu*) of the city Ziziwa which Ariḥḥaya has

⁵⁷ To buy salt (*a-na ta-ab-ti* Bez. 130a) or for jars (Bez. 289a). 1 *imêr* 50 *qa* of barley to buy a table. A female slave and her son are sold for 2 *imêr* 40 *qa*. 19 *imêr* of barley are bought for one shekel of gold, etc.

⁵⁸ *qêmu* was a very fine flour; ordinary barley flour was called *arsânu*. The *NA₄.ĤAR* can hardly be the *semêru* "ring," as a jewel, in view of the context "with its grinding stone" or "with its riding equipment." *Mundâtu* (x *imêr mu-un-du/tum* from different cities) is usually considered as a participial form of the verb *têmu* "to grind" and would be some kind of flour, and not from the verb *madâdu* "to measure," "measured grain." Bez. 167a.

⁵⁹ Bez. 215a; C. T. XIV, 30, 22.

⁶⁰ Bez. 224b.

⁶¹ This could also be read *pillu*, one of the names for flax.

⁶² The difference between these various types of sacrifices cannot be established from the contexts because these are simple enumerations of items of grain. When the grain is given "for the gods for the new (day)" [*ana ilâni ana eš-ši <ûmi>*] it refers to the festival of the first day of the month.

⁶³ *Sukunnu* (Bez. 273a "Income tax") is different from our *šuku-na/ni/nu*. In view of the Hurrian plural *-na(-a)* I take this word as a Sumerian loanword from *ŠUKU* (*kurummatu*) which also occurs in our texts as *ŠUKU.MEŠ*.

^{63a} for the mother(?).

⁶⁴ *a-na zu-be-ir-ra*^{meš} *a-na šîšemeš*.

⁶⁵ This expression follows *ana šukû-na*: barley (or wheat or emmer) *a-na šu-ku-nu*(*meš*) *a-na šî-in-du-un-ni*; 3 *imêr* 70 *qa* of barley for the horses of the king's feet (*ša šêpê šarri*) for 3 days *a-na šî-in-du-un-ni*. Leaving aside the ending *-unni* we have left the root *šîni-* similar to the name for the numeral two in Hurrian (AASOR XVI, 132 f.).

⁶⁶ Also *GIŠ.TIR.qišî*. After a list of trees and wooden object a document ends this way: "these are the produce (*eškaru*) of the city Nuzi and the guards (*maššar*) of the forest brought them in the month Šehali of Tešup."

brought. 1 accacia (*sà-mi-tu*₄) of Zibbi-Iluni, 50 *kasû* trees⁶⁷ remain behind them." Another tablet is the receipt of "50 *qa* of fennel (*ši-me-ru-meš*), 30 *qa* of coriander, 20 *qa* of safran (? *a-ša-ap-pu-ri*),⁶⁸ 3 *qa* of caraway seeds (*kamûnu*),⁶⁹ 5 *qa* of *ni-ni-ú*,⁷⁰ 1 *imêr* 10 *qa* of *qa-zu-e*; these are the *ri-i-ku ša a-zi-bu* of the city Zizza." A long tablet records the produce of different gardens: "30 *qa* of *ka-zu-ú*, *x qa* of fennel, 4 *qa* of *ka-zi-nu* . . . , 2 *qa* of coriander *ku-uš-pa-e*, 10 *qa* of seed; these are the produce [of the garden from] the middle of the city [. . .]." The same are recorded for two other gardens, then "14 *qa* [of *ka-zu-ú*, *x qa*] of fennel, 2 *qa* of *ka-[zi-nu, x]qa* of coriander, 2 *qa* of coriander, 10 *qa* of *ak-ra-tum*, 4 *qa* of choice seed; these are the produce of the garden of Sennaya." The same grains are recorded for the gardens of Akuleni and of the city Turzannu; the gardens of the city Zizza have in addition to the same products *ni-ni-ú* plants. In other paragraphs of the same documents are mentioned weights by talents of *a-du-ul-te* plants. A record of fruits includes "7 1/2 *qa* of *na-ak-[. . .]*, 8 1/2 *qa-a* of *hu-[ti]*, 5 *qa-a* of *ha-lu-li* for the . . . of the town Apenaš, 10 *qa* of *ha-lu-li* for the house of Elhip-Šarri, 3 *qa* of *ha-lu-li*, 5 *qa-a* of ripe dates (*ú-ḫi-nu-ú*) for Ewaraqali," etc. Figs (*ditu*) were also raised in Nuzi. The wood of pear trees (*kameššaru*) was used to make baskets and other objects, therefore the pear must have been known as a fruit. Six thousand pomegranates (*nurmu*) were sold for 20 minas of lead (SMN 565). There are two receipts of *sablu* (lolium?) plants, delivered in small quantities (from 4 to 34 *qa*) to men and women of the palace. Garments were made of flax (*kitu*).

The exploitation of orchards and forests for their woods is well illustrated by a document about "the trees from the orchard of the town Tašeniwa. . . , 12 *šašûku* trees from the edge of the *masae*, in the upper part of the forest (*qa-a-li-i*),⁷¹ 30 *šašûku* trees (located) north of the forest as far as the lower part of the *ku-ut-li*," etc. There was a "forest of the palace," and a forest belonging to Gili[ya].

The following are the known names of trees: myrtle wood (*asu*), tamarisk (*benu, tarpi'u*), juniper (*daprânu*), plane (*dulbu*), cedar (*erinnu*), accacia (*sametu*), mullein (*bušennu*), cypress (*šurminu*), medlar (*šalluru*), micocoulier (*šulmu*),⁷² pear tree (*kameššaru*), almond tree (*šikittu*), fir (*ašûḫu*).

The Nuzians knew many more trees, but their identification is rendered difficult by their Hurrian names: ^{72a} *gal-ma-ar, a-ri-ip-še, du-mu-ni, e-li-ma-ḫi (e-lam-ma-ḫi)*,⁷³ *ḫa-ar-bu, ḫu-ta-ra-tu, il-bi-i-tu, ka-ra-te, ku-ni-ra, ku-ni-iš-ḫu-ú, ma-áš-gi-[x], me-la-ar, pa-ḫa-ar-ḫu-lu-ú, šir/muš-ru, qa-na-ru-[x], ša-šá-a'-[x], ši-ig-gi-(an)-nu-(ú), ši-it-mu, ta-as-ga-ri-in-na/i, ta-as-ga-al-ḫi, ú-ta-ti-ti, zi-ir-be-ti*. Doubtful names of trees are: *šašuku, šak(k)ullu, GIŠ.KU*,⁷⁴ *KI(?) .NUN.NA*,⁷⁵ *GIŠ.ŠA, ša-ak-ku, ši-ki-šu, ši-in-ni-bi-ra*.⁷⁶

⁶⁷ Bezold, op. cit. 145b: *Cassia (Tora)*. SMN 1546: 5 has 10 *qa ša-mu-ut-ti* (Bez. 278a).

⁶⁸ Ibid. 21b: *azupiru, Safran (?)*.

⁶⁹ Ibid. 142b, (*römischer*) *Kümmel*.

⁷⁰ Ibid. 200a, *e. Gartengewächs, e. Umbellifere*.

⁷¹ For *qallu*; often in Nuzi the doubling of the middle or final consonant is indicated by a long vowel.

⁷² Bez. 237b: *Keltbaum*, a mistake for *Celtis australis*, micocoulier (Meissner, *Assyriologische Studien*, p. 39 in *Mitteilungen der Vorderasiatischen Gesellschaft*, XVIII, 1913).

^{72a} When the thing preceded by the determinative of wood is measured by weight, we may be certain that this is lumber: "20 talents of *šši-ki-it-tum*, 4 talents of *ḫi-ši-ia*, 4 talents of *šza-ta-a-ru*, 8 talents of *šbu-ši-en-nu-ú*, 20 talents of *šil-bi-i-tum*, the iškaru of Hutia which was received"; "4 talents of long *ši-it-mu*"; "2 talents 15 minas of cedar for oil"; "6 talents of *šam-pa-an-nu*."

⁷³ Either "wood from Elam" or Bez. 37a *elammâku*, a tree. *-ḫ-* and *-k-* interchange in Nuzi.

⁷⁴ *urkarînu*. Boxwood, Deimel 536: 74.

⁷⁵ The first sign could possibly be read *SIG* or *TAG*.

⁷⁶ This is probably to be divided in *šinni bira*, since we have also *šinni gi-la-mu* (for this wood see Bezold, op. cit. 98a: *Bearbeitungsart von Leder und Silber*). *Sinnu* is ivory; *bira* might be a form of *piru*, elephant.

Furniture.

Wood was used to make household and temple furniture, tools, etc. Many long inventories of temple and private household goods have been found. Couches (*eršu*) were made of *urkarrinu* wood, of *elammaḫu* wood, etc.; sometimes they were counted by pairs (*tapālu*): "3 pairs of couches of [x] wood, one pair of couches [x x x]" (SMN 1241); "2 couches of the king; [x] couches of *urkarinu* wood of the *ubarūti*; 7 very small couches; 9 *taku* of wood, not paired, of *šašūku* wood; 1 chair; 1 board (*pidnu*) of *urkarinu* wood of the king; . . . 1 couch of *urkarinu* wood, inlaid with silver; 1 couch of *urkarinu* wood; 1 couch *zikulitu*; 3 pairs of couches *ša bu-ra-ki še-i-du*; 1 couch of hair; 7 boards of couches" (SMN 863); "12 couches *šinābilu*," 2 couches of hair" (SMN 859); "30 pairs of couches *uzzulikaru*" (SMN 1425); "33 couches *šinābilu ša pi-ti-il-ta še-i-du*." Couches were ornamented with cloth: "13 *mar-ta-du* of couches. . . 3 colored clothes of couches" (SMN 431); "one pair of [*mar*]-*ta-du* for the front of the couch" (SMN 1437); "2 minas of blue purple (*takiltu*) dye, of red purple (*kināḫḫu*) dye and of *šurāḫa* dye for the *martadu* of couches" (SMN 1150); "21 linen clothes for couches" (SMN 1422). Along with couches were boxes: "5 large boxes for couches" (SMN 1422).

Offering tables (*paššūru*) were made of boxwood, and inlaid with ivory, of *šulmu* wood, of *tasgarinnu* wood: "1 table of wood. . . ; 1 table of boxwood, inlaid with silver; 1 table of boxwood its feet inlaid with silver; 200 *ta-ni-wu-ú* of *TAG.NUN.NA* wood; 8 tables *ma-ag-ra-su-úmeš*. . . ; 6 tables of *šakkulli* wood; one table its feet *nu-ur-wu-ú*; 5 tables their feet of *šulmu* wood and inlaid with ivory; 3 tables their feet of *šakkulli* wood; 2 tables their feet *ša pu-tu-ut-ti*. . . ; 1 table of boxwood *ni-it-ḫu-ú*. . . . ; 5 small tables *ša ti-[ik-la-ti]*; 2 tables for meat *ša du-pa-lu-tummeš*; 4 tables for the *ubāru* men; 30 [+ x] tables *uzzuligarū*; ^{77b} 2 *urunzanū ša tu-[x x x]*; total 90 tables" (SMN 1422). "10 tables inlaid with ivory and *tasgarinnu* wood; 55 *susulqannu* of *šakkulli* wood, of *tasgalḫi* wood and of plane; 4 *susulqannu ru-mu-tum*; 16 *susulqannu šinābilu*; 20 tables the feet of which have the shape of bulls; 2 large *urunzannu*; 10 tables *tar-zu-ú-tum* which have no corner; 2 tables *ša ma-ag-ra-at-ti* ⁷⁸ inlaid with ivory and *tasgarinna* wood" (SMN 859). "10 tables; 2 *arrunzannu*; 8 *kuddurū*; 5 large *sussūlu*; ⁷⁹ 2 *arrunzannu* of the gods. . . ; 6 tables *du-ur-mi* ⁸⁰. . . ; 1 table *ša KAS* of boxwood; one table of the queen" (SMN 863).

Such tables were placed in the temples. SMN 506 is a list of tables for men of different professions: "1 table for the scribe. . . ; one table for the baker. . . for the singer. . . for Akip-Šarri. . . for the lady of Šamaš (*SAL.DINGIR.UTU*. . .), etc." "2 tables and 6 *GAR.MEŠ GIŠ.KU.KU* for the king (*a-na pa-ni šarri*); 8 ditto and 6 ditto for the *mār mārī*" (SMN 2224). "1 *GIŠ.KU.KU* for the Habiru. . . ; 1 table for the Queen" (SMN 3415). "2 tables; 3 *GIŠ.KU.KU* for the king. . . for the *mār mārê*. . . for the prince. . . for the *ubāru*. . . for the *urqanuḫlu*, etc." (SMN 949).

The *pidnu* was a board attached to a bed or a chair: "30 boards of boxwood, 75 boards of *šulmu* and *šakuli* wood" (listed between chairs and couches). . . "1 board of boxwood belonging to the king. . . 7 boards of tables" (SMN 863). "[x boards] of boxwood of the couches and of the *ar-qa-be-na*" ^{80a} (SMN 1428).

⁷⁷ This might be a numeral, meaning "second," "secondary," here "of secondary quality." Cf. *subātu terciennu*, a garment of second quality.

^{77b} *uzzuligarū* is sometimes the opposite of *eššu* (new) and perhaps the Hurrian equivalent of *laberu* (old). Cf. the women's title *ú-zu-li-gi-ri, uz-zu-li-qa-ru-ú*, etc.

⁷⁸ Of the *granāṣ*(?); however we had above: *ma-ag-ra-su-ú*.

⁷⁹ *sussūlu* is a basket, but since we have also the spelling *zu-uz-zu-ul-ku, zu-uz-zu-ul-qa(ga)-an-nu*, this seems to be a different object; note also that it is listed among "tables."

⁸⁰ Cf. SMN 1060: 1 *imēr* 50 *qa* of barley *a-na KU.ZI.DA.MEŠ a-na du-ur-mu* of the queen; SMN 896: 30 *qa* of wheat *a-na du-ur-mi* of *Ištar*.

^{80a} Cf. ZA N. F. IX, p. 240, line 171 and the month-name *arkapinnu*.

Chairs (*kussu*) were numerous: "120 large chairs *zi-ku-li-it-tum*; 40 *is-at-mu-ú* inlaid with *tazgarinni* wood; 79 *is-at-mu-ú* of *šakkulli* wood; 7 *is-at-mu-ú tar-zu-ú-tum*; 46 very small chairs *uzzuliqaratu*" (SMN 859). "31 chairs of *šakkulli* wood [*ša bu*]-*ra-ki še-e-du*; 17 chairs of *šakkuli* wood which were not *š[e-e-d]u*; 31 chairs *šaššuki ša buraki še-i-du*; 20 very small (*TUR.TUR*) chairs of *šaššuki* wood *ša bu-ra-qa še-i-du*; 135 chairs *zikulittu* of *šaššuki* wood; 1 chair *i-bi-ri*; 10 chairs *ša i-bi-ri ša ša-šu-ki* . . .; 1 chair *ša ši-in-ni gi-la-mu* with its box" (SMN 863). "130 chairs *zi-ku-li-i[t-tu]*" (SMN 1439). "32 new chairs of *šakkulli* wood; 130 large chairs *zi<ku>li-it-tu-ú^{me8}*; 11 chairs *ša ši-iq-la-ti*; 42 chairs . . .; 35 old chairs; total 250 chairs. 1 chair of wood; 1 box inlaid with gold; 1 chair inlaid with ivory and silver, with its box; 1 chair of wood . . .; 1 seat colored and *ta-am-qa-ar-ḥu*; ⁸¹ x chairs *zi-ku-li i-na du-ma-a-du*; x chairs *ša mu-ra-ki-ma*" (SMN 1250). "8 chairs of leather" (TCL 1:6).

The "box" (*quppu*) was a part of the chair but is also listed separately: "40 boxes inlaid with ivory; 79 boxes inlaid with *šakkulu* wood" (SMN 1422). The seat (*nušabu*) was usually made of cloth, dyed: "[x chairs] their head of *ni*; [x chairs of *kunira*]-*ni-it-ḥu-šu* wood, the *marīadu* and the seat red purple (*kinahḥu*) and purple (*tabarru*); [x chairs] . . . of *ni-ra-ni-it-ḥé* wood inlaid with gold, their edge (*lišān-šunu*) of . . . their head, the seat in the lower part of the *duḥšīwa* (a garment) . . .; one seat of purple (*tabarru*)" (SMN 1443). "50 seats *ba-aš-lu-tum*; 42 light seats *qa-an-na-tu ši-na-mar-da-tu*, old; 8 [+x] seats; 110 light colored seats *qa-an-na-tu ši-na-mar-da-tu*; 7 light colored seats *qa-an-na-tu*; 8 light colored seats *ša ti-ik-la-ti*; total 182 seats" (SMN 1422). "13 *mar-da-tu* of seat" (*ibid.*). "2 minas of blue purple, of red purple and of *šurathā* to make 4 seats" (SMN 1150). "x seats of *tabarru* . . .; 1 white seat . . .; 28 seats *mar-ta-du*" (SMN 1422). "1 chair of *šakkūlli* wood; 1 seat *ša duḥ-ši-wa* of boxwood and *šulmu* wood" (SMN 1434).

Baskets (*sussūlu*) were made of plane, pear, *zi-ir-be-ti* wood and *GIS.TI.TI* wood. Another container, the *bursītu* ⁸² was made of *šakkuli*, *elimahī* and *šulmi* wood. An object, the name of which is usually preceded by the determinative for wood, is the *nipītu*, perhaps a wooden key. The *arrunzannu* (*urrunzannu*) of the gods, listed above among tables, is probably some kind of altar.

Other items of furniture with Hurrian names are: the *at-mu-ú* (listed above among chairs); the *aš-ḥa-ú-uš-šu-ḥu* (var. *a-ša-uš-ḥé*), very likely a measure: 2 mixing vats of four *a-ša-uš-ḥé* (TCL 1:15). "15 *is-ḥa-ar-wa-ra-aḥ-ḥu*, 27 *is-ku-du-ra-tum*, 5 *is-ḥa-ar-wa-ra-ḥu-zu*, 21 *is-qa-an-nu* (a kind of jug), the contribution (*iškaru*) of Ḥamanna" (SMN 101). "28 *is-ḥa-ar-wa-ra-ḥu-ú rabūti*; 30 *is-ḥa-ar-wa-ra-ḥu-ú-za-tu šibruti* *ū* 65 *is-ku-tu-ra-a-tum rabūti*; total 123 implements" (SMN 106). *is-za-ar-ra-am-du*, *is-ḥi-ir-we-e*, *is-a-ri-ip-še*, *is-ḥa-zi-it-tum*, *is-bi-zi-in-ni*, *is-ḥé-te-en-nu*, *is-ku-šu-ḥa-an-nu*, *is-ḥu-li-na*, *is-zi-ru-wa-la*, *is-tal* (*ta-al*)-*la-am-šúk-ru*, *is-a-ḥu-du-ḥu-ú*, *is-ta-ru-al-li-in-nu-ú*, *is-za-aḥ-ḥa-ru-ú*, *is-kaḥ-pu-ú*; most of these are farm implements. Other things which could be either pieces of furniture or tools are: *is-ma-at-qa-nu*, *is-qa-an-ta-ru-ú* ⁸³ (4 *qa-an-ta-ri-e*, their beaks inlaid with silver, their bottom [*išissu*] of copper [SMN 917; 1422]). *is-ša-an-nu-ru* (also a container), *ta-aḥ-pu-uš-ḥu* of boxwood, *is-wa-ru-ḥu-du*, *is-ta-ku* (also of metal), ⁸⁴ *is-ti-ri-nu-tum*.

⁸¹ TCL 1:1-3 has to be emended into *ta-am-qa-ar-ḥu* and *tam-qa-ar-ḥu*.

⁸² Bez. 93b: *e. Gefäss* (aus Gold, Silber oder Stein).

⁸³ Cf. *kandūru* (Sumerian loanword): Bez. 143b. *e. Kuligefäss*.

⁸⁴ Most always followed by the adjective: *la at-ḥu* "not paired," which is not part of the word itself. It is perhaps a Sumerian loanword from *TAK* (seat); cf. *taktaku* (a reduplication of *TAK*?).

*Chariots
and
wagons.*

Chariots (*narkabtu*) were used in the army for transport and as tanks.⁸⁵ There were *rubuḫtu*.⁸⁷ There was a chariot of the country (*narkabtu ša šēri*), the mountain (?) chariot (*narkabtu ša šādu-ni*), the *narkabtu ša ḫaltarri*, the chariot *šu-du* with its shoe (its brake),⁸⁸ and the swift chariot (JEN 494: 7). In a list of armaments made of precious metal borrowed from the arsenal, there is an item for a chariot inlaid with gold.⁸⁹ The chariots used as tanks were covered with coats of mail (*sariam*) and shields (*arītu*). Parts of the wagon were the beam (*parisatu*, *pursitu*) made of *šakkūlu* wood and *elimahu* wood, and the eye (*i-na-šu-nu*) of the wheel (HSS VI:1).⁹⁰

Wagons (*šumbu*) were recorded in long lists as the contribution of cities; these may be the rolls of the towns from which came military help to repel the enemies. Parts of the wagon often mentioned are the *ambannu*, the *al-qa-an-ni-wa*, the *ma-ša-an-tum* (one pair), *zi-i-zu* (one pair),⁹¹ *bu-bu-tum*, *ši-ir-na*, *bu-ra-ku*, *ta-ak-ta-ku*.⁹² Cloth was also used for wagons: 12 pairs of *in-za-nu* for the chariots (SMN 795); 2 *iš-ku-uš-ḫu-ra* of wagon (weighing) 2 *na-ri-i* of wool (SMN 288); 8 goat-skins for the *eškarīti*-wagons. Whip (*ildabḫu*) and yoke (*nīru*) were auxiliary equipment of chariots and wagons.

The staff (*ḫaṭṭu*) was the protection of shepherds. Two school tablets are copies of lists of hoes (*marru*) and ships (*elippu*) and their parts. A watering trough (*maškānu*) made of wood, a wooden chain (*kursu*) were among other farm implements found in the tablets.

Metals.

Copper (*erū*), bronze (*siparru*)⁹³ and lead were known by the Nuzians and used as currency beside gold and silver. Iron is never mentioned.⁹⁴ Bronze and copper were used in the manufacture of household furniture and utensils, while lead, very often mentioned in loan documents, entered into the composition of bronze⁹⁵ and was the metal dedicated to the gods. These metals came to the market as ingots: "78 'bricks' . . . (*ši-il-ta libnatu^{tum}*) of bronze" (SMN 421); "1 bar (? *katinnu*) of bronze weighing one mina" (AASOR XVI 97). These metals had first gone through various processes of purification: washing (*mesū*), cooking (*bašlu*), refining (*šarpu*), and pressing (*ḫamušu*). There was a kind of copper called *bi-la-ḫa-ū*. Bronze was also described as polished (? *ši-la-an-nu*). *Ḫu-mu-un-na-aš-wa* might be a base metal with a Hurrian name.

Vats.

Mixing vats, or washing tubs (*nemsitu*) were used to make beer and were made of bronze or copper: "3 mixing vats of 7 minas 30 shekels of bronze (2 1/2 minas each); 1 mixing vat weighing 4 minas of bronze; 1 mixing vat of 3 minas 40 shekels of bronze; 2 mixing vats of bronze with their cups; 1 mixing vat measuring 115 cubits in circumference; 1 mixing vat of a capacity of four *a-ša-uš-ḫé*; 1 mixing vat *ša ra-am-mu-uké*; 1 tub for washing (*ša ra-ma-a-a-ki*)."

⁸⁵ A list of garments (SMN 523) state that they were "taken out of the arsenal at the time the chariots made battle in the towns Šilliyawa, . . . (and) Lubti." A chariot had a fighting equipment (*na-aq-ba-la-šu*, from *qabālu*).

two-wheeled (*magarru*) chariots (*še-ša-du*)⁸⁶ and four-wheelers or wagons (*dumnadu*,

⁸⁶ Cf. AASOR XVI 82: 2 *šiqlipī še-šim-te-na*. This is apparently the plural of *še-ša-du*, an adjectival form. Cf. "1 pair of wheels *še-ša-tum ša ḫal-wa-at-ri*" (SMN 2120).

⁸⁷ SMN 2209 and 1177; cf. AASOR XVI, p. 135.

⁸⁸ Not *šu-du-a-ti* (as Cross, op. cit. p. 56) but *šu-du a-ti ša še-ni*.

⁸⁹ Cf. *narkabtu ša bi-ir-ta-wa ša al-qa-an-ni-wa-šu ub-ḫu-zu* (SMN 2064).

⁹⁰ The hub?.

⁹¹ It is hardly possible to take this *ḫ* as a spelling of the word *šisu* (horse).

⁹² Cf. note 84.

⁹³ *Siparru* may be connected with the Greek word *kupros* 'copper,' but is usually taken as meaning bronze.

⁹⁴ Cf. 1 *taku*, not paired *ša pār-li-e* (SMN 859), hardly a mistake for *parzillu* 'iron.'

⁹⁵ "4 talents 8 minas of pressed copper, with its lead . . . 2 talents 16 minas of pressed copper (and) 21 minas 20 shekels of lead for the gods of the city of the palace" (SMN 1021); "1 talent 45 minas of copper with the lead" (SMN 866).

Cups and
measures.

Cups (*kāsu*) were made of copper, bronze and refined gold. A list of 30 cups brought from Nuzi to the City of the Gods by two major-domos (*šakīn bīti*) includes cups of gold and of refined silver with the edges covered with gold (SMN 589). The cup was also a measure of oil corresponding to the *qa* (about one liter), and it seems probable that at least in Nuzi the *qa* was an abbreviation of *qa-sú* the word for cup: "3 *qa* of oil for Ipšawa, [1 *qa*]-*sú* (for) Urhi-[x x], [1 *qa*]-*sú* (for) Ennabi, 1 *tallu* of oil for Dubbiya, Puhi-Šeni has sent and given them. Total 1 *tallu* and 5 *qa* of oil from the oil which Qarrate received from . . ." (SMN 3571); "1 *tallu* of oil . . . , 1 *qa* of oil for the garments, 3 *qa-sú* of oil for the women who brought beer from the land of Akkad, 3 *qa-sú* for the horses . . ." (SMN 198). The *tallu*⁹⁶ was a measure of 10 *qa*: "6 *DUK*_{talli} of 10 *qa*, 5 *DUK*_{ku-uk-ku-bu} of 4 *qa*, [x] *DUK*_{ku-uk-ku-bu} of 2 *qa*" (SMN 763); the next higher measure of oil was the *imēr*, probably the equivalent of 10 *talli*, because never more than 9 *talli* are mentioned: "1 *imēr* 9 *talli* 4 *qa* of oil" (SMN 712); a receipt of oil delivered to some women indicates a total of "9 *DUK.TAL.MEŠ*" (SMN 2659). The *kukkubu* was a pitcher⁹⁷ of 2 and 4 *qa* capacity. "1 *kukkubu* of bronze for the kettle"; "1 black *kukubu* . . . , 2 new *kukubu* of bronze, 1 *kukubu* of copper for the kettle" (SMN 1422; 859; 2061). The *tallu* and *kukkubu* were also used to measure an alcoholic beverage called *šikāru*. The *sūtu* (*GIŠ.BAR*) was the grain measure of 10 *qa*, made either of bronze, copper, or wood. In one inventory the *sūtu* (decaliter?) is listed among the wooden utensils; a receipt of wheat and emmer specifies that they were measured "with the *sūtu* of copper." There was also a *sūtu* of 50 *qa*, one of 8 *qa* and one of 4 *qa*. In a loan document, a man receives 1 shekel of gold; at the harvest he shall return 10 *imērs* of barley, "the barley shall be measured with the measure (*sūtu*) of 8 *qa*." Some documents indicate two measures: a receipt of grain for the queen has a total of 50 *imērs* of seed barley which is measured with the measure of 10 *qa*, while the emmer and the wheat are measured with the measure of 8 *qa*. There was also the "measure of the *šuku-na*," "the measure of the seed," "the measure of loan" (*i-na GIŠ.BAR.MEŠ*⁹⁸ *ša HAR.RA*).⁹⁸

Other liquid measures of capacity were the *DUK*_{pu-zu} of 2 *qa* of oil (SMN 643), the *ša-ku-ut* of 1 *tallu* of oil (SMN 1422), the *kannu*.⁹⁹ "2 pairs of *kannu* not paired (*la aḥu*)," the *be-nu-uš-ḥu* of bronze and silver, the *ta-aḥ-ḥu-uš-ḥu* of wood or bronze, the *ḥi-d/tu-uḥ-ḥu* (a part of the *benišḥu*) of copper and bronze, the *aš-ḥu-uš-ḥu* of bronze (TCL 1: 15), the *e-ri-bu* of bronze, the *ḥu-ur-ḥu-uš-ḥu* of bronze, *a-ga-a-nu*,¹⁰⁰ the *uš-bu/i*, a measure of oil for the gods.

The standard length measure was the *ammātu* of copper which was placed at the gate of the City of the Gods.

Miscellaneous
vessels, etc.

The *narmāku* was a vase for libation: "1 *ḥu-ub-ba-at-ru ša na-ar-ma-ki* of bronze" (SMN 863). The *itkuru* was a wooden container for oil (SMN 570; 435). The *ruqqu*¹⁰¹ was very likely a feeding trough for animals: "1 *URUDURU*_{ru-uk-ku} of oxen, delivered in the land of Akkad; 3 *URUDURU*_{ru-uk-ku} of oxen, remaining with the smiths"; "5 *ru-ug-gi-du* of oxen, of copper; 1 *ru-uk-ku*[. . .]; 7 *ru-ug-gi-du* of sheep"; "1 *ru-uk-ku* of sheep, with legs (*ša še-pá i-šu-ú*), or for feeding (*ša ipri i-šu-ú*); 1 small *ru-uk-ku*

⁹⁶ Cf. 1 *ú-ut-ta-al-lu* of bronze (SMN 1422) and *ša-ku-ut tallu šammi* (ibid.).

⁹⁷ Cf. Bez. 140a *Kanne . . . ein Hohlmass für Öl*. "1 *tallu* of 10 *qa* of mixed beverage (*bi-il-lu*); 1 *tallu* of *šikāru* drink for <the month> Impurtanni; 2 *ku-uk-ku-bu* of 4 *qa a-ta-ku-ru*; 1 *tallu* of *šikāru* beverage *i-na GIŠ.ŠAR(?) a-na zu-uk-ki*; 1 *ku-uk-ku-bu* of 4 *qa a-ta-ku-ru*" (SMN 887).

⁹⁸ Sometimes *GIŠ.BAR* indicates not a measure, but probably income or food: "20 *qa* of flour *a-na GIŠ.BAR* of the queen" (SMN 3198); "total 7 young female slaves *GIŠ.BAR* 4 *qa še'ātu*¹ *il-[qu]*" (SMN 594).

⁹⁹ Cf. Bez. 144b: *kannu: e. Gefäss, Behälter*. In SMN 1422 it is listed at the end of the paragraph of tables.

¹⁰⁰ Bez. 15b: *agānu, agannu* Becken, 'basin': "*a-qa-nu qa-du qa-an-ni-šu-nu*" (SMN 1422).

¹⁰¹ Bez. 258a translates *ruqqu* by Metallknopf, which does not fit these contexts.

with legs"; "one pair of *ru-uk-ku* of 30 minas of bronze"; "2 *ru-uk-ku* *ša sa-bi-ti*, 2 *ru-uk-ku* *ša pu-ḥa-ti*." In a tablet which mentions these feeding troughs, are listed "1 kettle of bronze, 1 *HU* of bronze, 2 *za-ab-ḥa-ru* of copper, for hides, 1 *ta-ku la at-ḥu* of bronze, 2 *ka-ap-pa-ar-nu*¹⁰² of bronze for water." "A pot for oxen" (1. *URUDU pisan*) weighed 1 talent 41 minas, "3 pots (*URUDU. pisan*) for sheep" weighed 1 talent 11 minas: "a pot (*ṣeqaru*)¹⁰³ for sheep" weighed 3 minas 40 shekels. Another kind of feeding trough for sheep and cattle was the *ú-ru-ú* and the *NAG. MES*.¹⁰⁴ The *ku-ú-lu* was a vessel employed by the *kugallu* (in charge of irrigation): "of 1 *kugallu* the *ku-ú-li* of bronze, 1 *ni-za-ar-ru*, cut, is missing" (SMN 917). The *še-qa-ru-ú*¹⁰⁵ and the *qa-la-ak-ku*¹⁰⁶ were also some kind of household utensil.

Braziers (*kinūnu*) of bronze were a necessity in the rather cold winters of Nuzi.

Chains (*kursu*, *ṣerṣerātu*) of copper and bronze were used for many purposes. A man was thrown "in chains" as punishment. Cattle were tied with chains. One chain weighed 27 minas 30 shekels, another 8 minas 50 shekels, a third one 5 minas 12 shekels.

Tools.

There were many tools of metal: the axe (*qalpu*), the pick (*ubānu*), the peg (*sikkātu*), the mattock (*allū*) the *zaggu*:¹⁰⁷ the son of the king gives to the blacksmith 21 minas of bronze to make 31 *za-ag-gi-e*; 30 minas of bronze are needed to make some *za-aq-qa*. The *nigallu* was a kind of sickle used for the harvest: "3 minas 25 shekels of copper . . . to make sickles"; "30 sickles for the harvest." It was heavier than the *ḥašinnu*. Both were also used as implements of war.

A very common object is the *ta-ku la at-ḥu/ḥé*, made either of bronze, copper, silver, *bar-li-e*, *šaššuku* wood or boxwood. It is listed both among tables and chairs, and among pots made of metal: "4 *ta-ku la at-ḥu-ú* of the wall (*ša i-qa-ri*)," "9 *ta-ku la at-ḥu ku-lu-lu-du*," "4 *ta-ku la at-ḥu* *ša ṣurkarinni* *ša kaspi* *ú qaqqad-zu-nu* *ša kaspi* [*ša*] *li-it*," "6 *ta-ku la at-ḥu* *ša ta-ni-wa* *ša iṣi*," "3 *ta-ku-la at-ḥu-ú*¹⁰¹ *ša še-[ir]-še-ra bá-aš-šu*." Other unidentified objects of metal are: the *a-ba-ru-ub*, the *KAM*, the *mu-ki-il-lu* *ša erš* (a pot?), the *pu-ku-ut-tum* (one pair),¹⁰⁸ the *na-mu-a* (weighing 6 minas 40 shekels of bronze), and the *zu-lum-ra* (weighing 2 minas of bronze); the *ni-za-ar-ru*, the *ša.BIL*, the *še-mi-zi-ir-ra-ta* (weighing 2 minas 30 shekels of bronze), the *šu-um-qa* (*la at-ḥu*) of bronze, the *ú-úš-šu-uh-ḥu* of bronze, the *be-ri-ip-ru-úš-ḥu* of bronze.

Armor.

One of the most interesting groups of tablets was found in room N 120. It comprises lists of soldiers, who went (or went not) to battle, and with inventories of military equipment, either before or after battles. It is the more interesting because the other documents from this room were the business documents of the famous woman Tulpunnaya who in activity and shrewdness excelled even Tehip-Tilla.

The army was divided like the Roman army into "left and right (wings)." The troops consisted of infantry (those who had no horses: *ša ššê la iṣū*), charioteers (*rakib narkabāti*) and cavalry. The protective equipment of the soldier consisted of a coat of mail (*ṣariam*) such as was found in the excavations at Nuzi. It covered chariots and horses as well as men, and was made of bronze and leather scales (*kursimetu*)¹⁰⁹ sewed

¹⁰² Cf. Bez. 147b: *kapru*, *kaparu* Schale (für Speisen) 'bowl.'

¹⁰³ Bez. 132b.

¹⁰⁴ Deimel 35 with the meaning *šāqū* 'to drink.'

¹⁰⁵ Bez. 273b. Probably a jug for strong liquor.

¹⁰⁶ Ibid. 244a: *qalqallū*, *e. kleiner Kochtopf*.

¹⁰⁷ Ibid. 112a: *Gebrauchsgegenstand. zaggu* cf. *saqqu*¹⁰⁸ of the door-socket.

¹⁰⁸ Ibid. 225: *Distel* (thistle?).

¹⁰⁹ This is in all probability a Hurrian word. If Semitic, it could be derived from the verb *qarāṣu* 'to cut off,' with the meaning 'cut off pieces,' or from *kur* and *šimdu*? In JEN 391 we have a legal suit which deals probably with the fact that oxen had been stolen, and their hides made into *ku-ur <zi> mi-āu* (*ku-ur-zi-ir-ta*). It is wrong to take *gursipu* of the el-Amarna tablet as a matathesis of *gurpisu*. *Gursipu* is the singular of *kursimtu*, a part of the *kurpisu* (cf. AASOR XVI 65: 35, p. 114).

on a leather garment: ¹¹⁰ [x +] 179 great scales of copper for the side, [x +] 200 small scales of copper for the side, and 256 leather scales were given to Aḫi-Ilīka, and he shall make a coat of mail." Bēl-Aḫi received from the palace one coat of mail that fits the body ¹¹¹ made of 400 large scales, 280 very small (*TUR.TUR*) scales, the sides and decorations (?) ¹¹² of which are of copper; one *kurpisu* of copper made of 190 scales; one coat of mail for the *tarkumāzu*. Ununiaḫi received from the palace one coat of mail (*ṣariam*) of copper, for the side of the body, made of 598 large scales, and 544 small scales, the sides and the *KAB* of which are of copper; one coat of mail (*ṣariam*) for horses he received, their *kurpisu* covered (*te-gi-pu*) with copper. Ununiaḫi also received from the palace a coat of mail and a *kurpisu* made of 190 scales, one shield, a leathern coat of mail for horses and a *ka-qa-ni-aš-šu* covered with copper" (SMN 2087). "400 scales of the side, 500 [scales of] the side, 200 [scales] of the *kurpisu*, 1200 scales of copper Ninki-Tešup has received; . . . [x] scales of the side, 180 scales of the side, 100 [+ x] scales of the *kurpisu*, 720 scales of copper Hanaya has received." "2 pairs of armor of the land Hanigalbat, 2 pairs of armor of the land of Arrapha, belonging to the governor (*emanī*) of the land *Mi-še-en-ni*" (SMN 3156).

The coat of mail was made of several layers (*kalku*) of metal (3, 4 and 7) around the circumference.

The coats of mail were numbered by pairs, *ištennūtu* being used for one pair, and *tapālu* for two or more. Since chariots were drawn by two horses, the horses' coats of mail were counted in "teams": "5 teams (*ṣi-mi-id-dī*) of horses' coats of mail." The word "pair" was also used for horses' armor. The *kurpisu* was a part of the coat of mail, and like it made up of a large number of scales (*kursimētu*): "1 pair of coats of mail of bronze, together with their *kurpisu*, their *mi-li-šu-nu*, all of them of bronze; one pair of leathern coats of mail, their *kurpisu* and *milišunu* of bronze"; "[x] leathern coats of mail of the body, and its *kurpisu* of bronze; [x coats of mail] for horses (*mi-iš-la*) of leather; x *paraššannu ša mi-li-[wa ša] maškē*, its *tu-ti-wa* of bronze, its *kurpisu* of bronze," etc. (SMN 2697). Horsehair was also used to make the *kurpisu*: "12 minas of horsehair for . . . for 1 *kurpisu*" (SMN 1665). One *kurpisu* weighed 3 minas 40 shekels (SMN 1556). Leather was a material employed for its manufacture: "7 goat skins for 3 *kurpisu*" (SMN 713).

The *kurpisu* was also part of the *paraššannu*,¹¹³ the riding equipment: "1 pair of *paraššannu* with the *kurpisu*" (SMN 3398); "one pair of horses' *paraššannu* and their *kurpisu* of bronze" (SMN 616). There was a *kurpisu* of the head: "500 scales (*gur-zi-ma-te^{pl}*) of a triple (*ša 3-ti*) *kurpisu*" (SMN 790) of the head. I am thus inclined to think that the *kurpisu* was the head part of the protective armor.

The shield (*aštu*) was the protection of the infantryman, especially the Bowman.

Weapons.

The offensive weapon was mainly the bow and arrow (*qaštu* and *qanū*). There are several inventories of bows in which they are listed as *la-ab-ku*, *la-bi-ik* and "no good" (*la damqu*).¹¹⁴ The bow was usually made of wood, but also with parts of bronze:

¹¹⁰ The coat of mail might be made entirely of leather and the word thus preceded by the ideogram for leather.

¹¹¹ *IM.MEŠ*: *zumru* 'body.' The word 'pair' used to number coats of mail also indicated that the parts of the armor were in pairs, one for the front, one for the back; one for the right, one for the left; there was also armor for the breast: *ša GAB*.

¹¹² The word *d/tu-ti-wa* seems either to indicate a decoration, and might be a Hurrianized form of the word *duittu*, or a garment, because it is found in inventories of garments: "one pair of bleached *du-ti-wa*; one pair of *du-ti-wa-na^{pl} ta-ḫa-ab-ša* for horses" (SMN 692). They were made of wool.

¹¹³ Cf. the Hebrew *paraš* 'chariot rider, warrior.' The *paraššannu* was made of horsehair: "22 minas of horsehair for 2 pairs of *paraššannu*, for 2 pairs of reins, and for 2 straps (*ib-lu-ū*)" (SMN 1645).

¹¹⁴ CT 19, 17. 19: *labāku* (*DU.UR*) is given as equivalent of *a-ša-al*, *na-ra-bu* 'to wash' (in ritual sense).

"1 bow, the side ([a]-*hi*) of bronze." The quiver (*qanû*) was made of leather, and could hold as many as 30 arrows (5 *mašakiš-pa-tu* = 5 *qanêmeš*); "Total 7 leathern quivers, 178 arrows placed in them." The arrow (*qanû*) was originally made of reed, as its Semitic name indicates, but later of bronze and copper: "2 arrows (*GI.MEŠ*) *a-bi-el-lu*¹¹⁵ of copper." The arrow is also described as *ši-la-an-nu*,¹¹⁶ *hi-il-lu*.^{116a}

Many loan documents pertaining to reeds contain such phrases as the following: "x reeds to make *šukûdu*,"¹¹⁷ e. g.: "2000 reeds *a-na šu-ku-du-ta e-pè-ši*" (SMN 100); "32,000 [reeds] *šu-ú-li a-na šu-ku-te e-ši*" (SMN 206). The word *šukûdu* is sometimes preceded by the ideogram for wood: "2000 *GI.GIŠ.šu-ku-tum* of the palace" (SMN 1172), or only by the ideogram *GI*: "50 *GI.šu-ku-tum* . . . 1000 *GI.šu-ku-tum* . . . 10,000 *GI.MEŠ*¹¹⁸ *šu-ku-te* of the palace" (SMN 60; 71; 48). The *šukûdu* can either be an arrow or a lance. Another word for arrow is *hu-ur-hu-tu-tum* (HSS V 44). It is quite possible that the ideogram *GI.KAK.Û.TAG.GA*, *GI.KAK.TAG.GA*, *KAK.TAG.GA*, *KAK.Û.TAG.GA* stands for *šukûdu*; compare SMN 206 (above) with the following phrase: "2000 reeds *šu-ú-li ša KAK.TAG.GA*" (SMN 74); it also interchanges with *qanû* (arrow): "6 quivers, 225 *GI.KAK.Û.TAG.GA* of bronze placed in the quiver" (SMN 616); "5 leathern quivers, 30 arrows (*GI.MEŠ^{nu}*) placed in each" (SMN 195). This leaves no doubt that this is the ideogram for arrow.¹²⁰ They were made of bronze or copper, as well as reed: "10 minas of copper for *KAK.TAG.GA* for the *gelduhlu*" (SMN 908); "886 *GI.KAK.Û.TAG.GA* of copper" (SMN 917); "1 *KAK.Û.TAG.GA* of bronze inlaid with *šakku* wood" (SMN 854). But wool and leather were also used (?): "[x] minas of wool for 1 *KUŠ.TAG.GA*" (SMN 397). "7 *qa-nu-ú* of copper with their *qa-an-ni-šu-nu*" (SMN 1432).

Other weapons were: the spear (*patru*): "One long spear of bronze, *ša ša-al-li-wa-na*" (SMN 616); "2 spears (weighing) 40 shekels of gold" (SMN 2658); "1 spear (weighing) 50 shekels of bronze" (SMN 2703). The word *kakku* (*KAK*) was a general term for weapon and also for some kind of spear: "[x] sickles [of bronze] of 1 mina each, 3 *kakki* of bronze of 2 minas each, 3 *be-ri-ip-ru* [of bronze] of 30 shekels each" (SMN 930). The sign *ZAG*, sometimes *riksu*, is of doubtful meaning, though Gadd translated it "Armband." All these armaments were not used for war, but some, especially those made of precious metal, were probably used for processions, at the time of religious festivals: "One quiver covered with three coats (*ša 3-ši-šu*) of gold; 2 quivers inlaid with silver, one of which had no *il-mu*; 4 quivers, not inlaid; total 7 quivers, in which were 178 arrows; one whip *ša i-ši-i za-[at]-ru-uš-ši*, its hollow (*irtašu*)¹²¹ inlaid with gold, and its *zu-nu-uk-ra* of silver; 1 whip *pa-aš-pa-šu za-at-ru-uš-ši*, inlaid with gold; 2 whips *pa-aš-pa-šu*, 1 whip *bi-ša-ka-ri*, these not inlaid, 2 copper vats, with their cups, these Kiltu took in. 1 chariot inlaid with gold, one pair of reins *še-ri-bu*, one pair of *du-ti-wa bá-aš-lu qa-zi-ir-šu*; one quiver inlaid with gold, in which were 30

¹¹⁵ Bez. 10a: 'dry.'

¹¹⁶ Ibid. 261b: *šêlu* 'shining' (said of swords).

^{116a} In view of this adjective I doubt that *šina-hîlu* (AASOR XVI, 133 ff.) means simply "second, secondary quality." Like *šina-mardatu*, *šina-hîlu* has a more accurate meaning not yet established for the second element of the adjective.

¹¹⁷ Bez. 269a. Cf. Deimel 230. 75.

¹¹⁸ The value of 10,000 for *NU.BI* is established by a loan document (JENu 276) according to which 1 *NU.BI* of reeds are loaned, and after the harvest 1 *NU.BI* ù 5 *li-mi* he shall return. Since in all Nuzi documents the interest is 50 per cent, the 5000 represent the interest.

¹¹⁹ The determinative *GI* is here followed by the plural sign as was usual in Nuzi, proving once more that the determinative was pronounced.

¹²⁰ Other writings are: *šu-ku-tum*, *šu-ku-te*, *šu-ku-du*, thus showing two plurals, *šukûde* and *šukûdu*, and the abstract *šukudûtu*(?). Cf. SMN 863: 10 *šu-um-qa* [la a]t-hu where we have probably a phonetic spelling of the ideogram to be read thus *ŠUM.GA* (and not *TAG.GA*).

¹²¹ Literally: 'its breast.'

arrows, 1 whip *i-ši-ú* inlaid with gold: these were taken out of the arsenal and returned" (SMN 800).

Jewelry.

Very little jewelry was listed in the inventories of individual belongings. The ring (*ḪAR*) and the leg-ring (*ḪAR.GIR*) are the most common: "One ring (*ḪAR*) of silver, (weighing) 2 sheqels"; "4 leg-rings of silver, belonging to the *ú-zu-li-gi-ri* women, 1 mina 10 shekels in weight." "7 minas 5 shekels of copper, belonging to the palace, to make a ring (*a-na e-pè-ši a-na si-mi-ri*)."

Another piece of jewelry was the *ḫu-ul-lu*: "160 *ḫu-ul-lu* of gold"; probably another kind of ring.¹²² The *a-ta-an-nu*, and the *qa-kab-tum* were also gold, while the *zi-(iz)-zi-(in)-nu* was silver jewelry numbered in pairs.¹²³

Precious stones were used to inlay expensive furniture of the royal house and the temple. Unfortunately no name is completely preserved in the inventories: "[x] hundreds *ḫa-bu-li* stones; 1 *na-aq-qa-tum* of stone belonging to Šukriya (or: 1 *naqqatu* of the sealed document of Šukriya)." A firestone (*šurru*) is mentioned in a record about horses.

Garments.

The inventories of garments are very numerous and indicate that weaving was a very important industry in Nuzi. Lists of slaves employed as weavers record more members of that profession than of any other. A "real adoption" document gives as the purpose of the adoption the intention of teaching the adopted son the trade of weaving.

After due process, the fiber of the flax (*kiú*) was made into linen thread, which when woven, gave the finest cloth for garments. The queen Ammenaya received a linen cloth for her table. 2 shirts, 21 garments, 13 tablecloths and 1 *mar-da-tu* made of linen are listed in a large temple inventory. The rarity of such occurrence leads one to believe that flax was imported in Nuzi, because most garments were made of wool. Raising of sheep and goats was an important source of revenue for the farmers. The wool was either plucked or sheared. Spinning and spinners are not mentioned in the business documents, but it is quite possible that many of the Hurrian terms in inventories of household furniture refer to these activities. Whether bleaching and dyeing was done before or after weaving cannot be ascertained. Many garments are described as "cooked (*ba-aš-lu*)," i. e. bleached. The profession of bleacher, "*ašlaku*," was well known.¹²⁴ Dyes of several colors distinguished the garments: purple-blue (*takiltu*),¹²⁵ light purple-blue (*tabarru*), blue (*uknātu*).¹²⁶ Wool and garments described as *kinahḫe*, *šuhulḫu*, *šurathu*, *šurmana*, *tamkarḫu*,¹²⁷ *teḫušru*, indicated a certain process of dyeing or manufacturing. Scarlet (*tultu*) was also known, and probably the red (? : *šinnutu*).

The best known garments were the *naḫlapdu* (shirt), the *ḫullannu* (another kind of shirt), the *kusitu* (turban?), the *martadu*,¹²⁸ the *sissiktu* (veil), the *qannu* (hemmed garment), the *mesiru* (cover or blanket?), the *midru* (head cover), the *TUM.LAL* (a garment for the lower part of the body?), the loin cloth (*ša burkê*), a linen shirt (*sadinnu*), the *parsiku* (binding?), the *qaballu* (cloth for the middle of the body), the *sianatu*, and an infinite variety of garments with Hurrian appellatives. Sheep, goat and cow hides (*mašku*) were used for the manufacture of strong garments.

[This paper aims primarily at a general outline of the epigraphic results of the excavations. Most of the material comes from unpublished texts. Therefore, as few

¹²² The large number indicates a small object, perhaps an earring, such as was found in Nuzi.

¹²³ Beads?

¹²⁴ In a list of garments the first paragraph ends thus: "These (garments) were given to Pai-Teshup not to be bleached (*a-na aš-la-ka-t[um] la ip-šu*)."

¹²⁵ See Lutz, H. F., *Textiles and Costumes Among the Ancient People of the Ancient Near East*, pp. 86-87.

¹²⁶ See E. A. Speiser, *Language* 12. 121.

¹²⁷ Probably from *tamkâru*, the merchant, commercial wool, of a special type. There was a garment called from the name of the country *Murkulinaš* (also *ša ku-li-na-aš*).

¹²⁸ This word indicates a garment and also part of a garment. It is used as either noun or adjective.

quotations as possible have been given. Doubtful readings have been omitted, as well as broken passages. The intention was to be as complete as possible, but in those cases where Hurrian or difficult words would have required too long an explanation, the difficulty was avoided by intended omission. As this paper goes to press, the publication of two important works has just been made: "One Hundred New Selected Nuzi Texts," by R. H. Pfeiffer and E. A. Speiser, in *Annual of the American Schools of Oriental Research*, Vol. XVI, and "Movable Property in the Nuzi Documents," by D. Cross, a study based primarily on published texts, but which has only a temporary value in view of the SMN material. E. R. L.]

APPENDIX E

THE LATER CULTURES AT YORGAN TEPA

BY

ROBERT W. EHRICH

LATE PERIOD CEMETERY ON YORGAN TEPA

Distribution. In the season of 1929-1930, a cemetery overlying the occupation levels of Nuzi was found. The graves occurred at various depths from the surface, ranging from 25 cm. to 2 m. A good part of this irregularity is probably owing to the differential erosion which is taking place upon the surface of the *tepa*, although some variation in the original interments is suggested by the range of 1.75 m. in absolute level for the seven graves (Nos. 18, 19, 51, 64, 65, 68, 69) occurring close together in Square G. Not only do the graves lie above the Nuzi pavements, but they also occur in the walls and pavements of Nuzi buildings which have been broken through from above in the process of burial.

The cemetery on the *tepa* seems to have had a rather limited distribution. Of the one hundred and three graves found,¹ ninety-three lay in the two contiguous 50 m. squares of F and G (Plan 39). Four more in the southwestern portion of Square H are in the line of its northeastern extent. Of the four near the Square B-G line, Nos. 20 and 22 are an integral part of the graveyard, while Nos. 3 and 13 also belong, but are some distance from the main groups of burials. Grave No. 28, on the other hand, occurs roughly 75 m. farther to the northeast, and must, therefore, be considered independently. In other words, the graves occur in an area 100 m. long and 50 m. wide, with a core showing a relatively high degree of concentration which thins out in all directions toward the edges.²

Although, as a whole, the cemetery exhibits no general plan, certain small groups of graves exhibit a rough order among themselves (Plan 39). Beginning with Grave 4 and comprising Nos. 4, 37, 38, 25, 24, 30, 39, 40, and, possibly, 53, a line extends in a northeasterly direction from the southwestern corner to the heart of concentration. Nos. 23, 29, 37, 9, 57, 58, and 59 appear to be similarly aligned. The similarity in type of six close-grouped burials in three pairs (Nos. 18, 19, 50, 64, 65, 68, 69) suggests organization, in spite of some degree of irregularity. One more series exhibits some order; this includes Graves 85, 88, 34, 35, 76, with, possibly, 27 and 73 included. This last group shows a double alignment from southeast to northwest and southwest to northeast. Other examples of related burials are limited to eight, scattered in four pairs in different parts of the cemetery (Graves 6 and 7, 48 and 49, 72 and 78, 94 and 95).

Orientation. In general the orientation of the graves is fairly uniform. Some eighty-seven lie in a northwest-southeast line, while all but nine of the others vary slightly to a more definitely east-west or north-south direction. The nine, however, run from northeast to southwest at right angles to the majority. Of the eighty-seven burials mentioned, forty-two lie with their heads to the northwest and forty-five to the southeast, suggesting that the position of the head was of no importance. The northeast, however, seems to

¹ Although the graves are numbered from 1 to 105, No. 1 belongs to an early Nuzi pavement in L11 and No. 10 is much more recent than the cemetery. Both, then, must be disregarded in this discussion.

² The fact that this same region was also the most actively used portion of the mound in the Late Period suggests that the inhabitants buried their dead below the floors of their dwellings. R. F. S. S.

have had considerable significance, for in sixty-eight cases the bodies are facing in that direction. This will be more strongly emphasized below in a discussion of grave types.

Simple interments. Graves with no attendant construction are by far the commonest. Of this type seventy-two were found, of which forty-nine contained no furniture whatsoever. The body usually lay on its back in an extended position, although frequently it lay upon its right side, also extended (Pl. 34, A, B), or, more rarely, in a slightly contracted position (Pl. 34, D). In only a few cases did the body lie on its left side. Strongly contracted skeletons were quite rare—only four cases (Graves 6, 7, 104, 105) having been found (Pl. 34, C). In one case (No. 22) the body lay face downward.

The position of the arms varied. Most commonly the right arm, though occasionally the left, was folded at right angles across the body. If the skeleton was on its back, the other arm usually lay extended by the side, slightly crooked, with the hand resting on the pelvic brim, or folded with the hand on the breast; if on its side, the uppermost arm was folded while the under arm was bent so that the hand rested near the head. Occasionally, both arms were folded across the body; and, more rarely, both arms were extended by the side, sometimes with both hands resting on the pelvic brim.

The furniture of these graves consists, for the most part, of paste, glass, stone, carnelian, and shell beads; bronze earrings, bracelets and anklets; iron bracelets and anklets; bronze and iron pins, and an occasional erratic form like the bone button and spatulate iron object (Pl. 141, N), found in Grave No. 30, and the lead ornament (Pl. 141, S), on the throat of Grave No. 48. In two cases (Graves No. 41 and 43) glass vessels were found associated. This indicates a relationship between the simple interments and those with a more or less elaborate construction treated below.

Graves with mud-brick screens. Associated with 17 graves, a peculiar type of construction was found. Parallel to the body, and extending most of its length, two or three mud-bricks 45 to 50 cm. square and 8 to 10 cm. thick were stood on edge forming a screen (Pl. 34, E, F, G). In every instance, the orientation had a northwest-southeast direction, with the head sometimes to the northwest and sometimes to the southeast. With three exceptions, however, the bodies faced the northeast; two faced upwards, the other down. The screens also were to the northeast of the burials.

In Grave No. 25, the original excavation for the grave seems to have been too narrow. The grave cuts across the top of a wall and is, therefore, traceable. Its total width is 34 cm. The skeleton is cramped in its position. No room was allowed for the erection of a screen at body level; so, consequently, it was put in against the northeastern wall of the grave above the skeleton and partly overlying it (Pl. 34, F).

In Grave 22, one of the upright blocks is of baked brick, while in Grave 23 two mud-bricks lay over the body, their position and the attitudes of the skeletons suggesting that they are of the same type as those of the graves with no construction. No furniture of any description was found in this series. If, however, we subtract the seventeen graves of this type from the total number, and also from the number which face the northeast, we still have fifty-three of the eighty-seven remaining which face northeast. Adding to this the fact that graves with the screen occur in the suggested, although not definitely established, alignments (Nos. 25, 52, 37, 58, 59) and that in the postulated pairing, two graves with screens (Nos. 6 and 22) are paired with simple graves (Nos. 7 and 20), it seems fair to assume that this group was laid down at the same time and by the same people responsible for the graves with no construction. The graves of this series are Nos. 6, 18, 19, 22, 23, 25, 36, 52, 58, 59, 65, 68, 89, 74, 81, 94, 95.

Vaulted mud-brick graves. Of this type there is on the *tepa* only one incontestable example (No. 13). Two others (Nos. 8 and 89), however, show strong traces of a probably similar construction, while one more (No. 5) may be considered as related to this group. Although well scattered, each has a rough northeast-southwest orientation which brings it into sharp contrast with the prevailing trend (Plan 39).

Grave No. 13 (Pl. 35, C) is the most completely preserved. Its construction seems for the most part to be of flat-lying mud-brick. Two rows of these form the floor of the tomb, while the walls are formed of bricks of the same material lying on edge. Toward the top the latter crowd inward in a curve which is closed by an added mud-brick; the whole producing a corbelled vault. Some shifting seems to have taken place during the original construction, for a small area is made up of flat-lying mud-bricks, as though to strengthen a weak place. When uncovered, the chamber of the tomb was still intact and hollow. The oval chamber was 1.60 m. long, 75 cm. wide, and 73 cm. high.

The body lay on its right side facing west. A larger water jar (Pl. 135, B) was back of the knee, and a poorly glazed blue flask (Pl. 135, C) was by the feet (Pl. 36, B).

Grave No. 8 lay on an upper pavement 54 cm. from the surface. Obviously, any traces of a superstructure would have been eroded away. Completely surrounding the body, however, was a series of flat-lying, unbaked bricks, leaving an oval space 1.60 m. long and 0.60 m. wide in which the skeleton lay. Part of this remaining structure was broken away by Grave No. 9, a simple interment which lay superimposed upon and at right angles to Grave 8, with the pelvis resting upon the older skeleton's chest (Pl. 35, A).

At the foot of No. 8 lay a water jar. An inverted glass bowl lay in fragments over the head (Pl. 140, N), and a silver coin lay over the neck. The body lay on its back.

In Grave 89, the skeleton also lay in an oval chamber surrounded by flat-lying mud-bricks extending 0.75 m. outward from the lining of the vault. The mud-brick walls sloped slightly inwards toward the top, but were traceable only to a height of 54 cm. Above the body were fragments of broken mud-brick. The floor was of beaten clay—not of mud-brick.

The body lay on its right side, slightly contracted, facing west. By the left shoulder lay a glazed green pitcher in which was an iron ladle. In the crook of the left arm lay a light-blue glass tear-bottle. The right arm was bent, with the hand resting on the pelvis. Inside the elbow was another glass vessel—a round-bellied flask with a constricted neck (Pl. 35, B).

From their various points of similarity, it seems clear that the three graves treated above are of the same type. Grave No. 5, although not of an identical construction, should be treated with the same group. The body lay in a rectangular space 1.91 m. long, 0.62 m. wide, on a pebble flooring which was walled on each side by a row of standing mud-brick. At the foot stood two upright baked bricks extending the width of the grave. No other traces of construction were observable.

The body lay on its left side in a slightly contracted position. By the left knee was a large water jar (Pl. 135, A), and next to it lay a green glass bowl with a ribbed surface (Pl. 140, O). By the head lay a small, round-bellied red glass flask with a flaring mouth, constricted neck, and a very small opening at the throat (Pl. 34, H; Pl. 140, M).

Aside from the construction, which is of itself suggestive, the orientation, attitude, and furniture of Grave No. 5 indicate a strong relationship with the others described.

Baked-brick graves with pitched roof. Under this head come three graves, Nos. 15, 99, 105. Of these, No. 15 is by far the most important, for it serves as a link between the tombs found in Sounding 1 at the base of the *tepa* and the cemetery on the top.

The characteristic structure of these three is extremely interesting. The body lies in a rectangular chamber formed by flat-lying bricks in three courses. In Graves 15 and 105, these are baked, and in No. 99 the bottom row is of mud-brick; the second is a layer of purified clay—equivalent to a brick in thickness—and only the top row is of baked brick. In each case the top row is set off from the lining of the tomb. With their edges abutting against this offset course and resting upon the second, a row of baked bricks from 35 cm. to 45 cm. square leaned from each side to afford mutual support in forming a pitched roof (Pl. 36, A; Pl. 37, A, B, C).

Grave No. 15 lay with a north-south orientation. Inside of the chamber, with its rim just below the level of the bottom course, was an open pottery coffin, flat-bottomed and rounded at the ends. It was 140 cm. long, 58 cm. wide, and 29 cm. deep. The thickness of the coffin walls was 1 cm. on the sides and 1.5 cm. at the bottom. The outside dimensions of the whole tomb were: length, 2.15 m.; width, 1.15 m. Its roof was formed by six pairs of bricks.

By the head of the coffin, but inside the chamber, stood a large water jar with a decorated cylindrical neck (Pl. 136, F). The body lay on its back facing southeast, with both knees drawn up and resting upon the edges of the coffin. The right arm lay extended by the side, while the left was folded across the body. Inside the left arm, resting on the breast, was a pale, bluish-green glass bowl (Pl. 140, P). Below the feet were two iron finger or toe rings fused together (Pl. 37, A).

The construction relates this grave to Nos. 99 and 105, while the orientation and the presence of the water jar and glass bowl suggests affinities with the group treated under "Vaulted mud-brick graves."

Graves 99 and 105, on the other hand, had nothing so elaborate. The orientation of both was in the northwest-southeast line.

Grave No. 99 (Pl. 37, C) was that of an adult. The body lay on its right side in a fairly strongly contracted position with its head to the southeast and facing northeast. The flooring was of packed clay, and the roofing was four bricks long. One of these bricks had fallen inward, partly breaking up and disarranging the skeleton. Although the fallen brick was left lying upon the body, the opening thus left had been closed by a mud-brick. The grave contained no furniture at all; and, since this type suggests a burial of importance, it is probable that it was robbed at the time its baked-brick cover was first disturbed.

Grave No. 105 (Pl. 37, B), on the other hand, was only half as long as No. 99; its cover consisting of two pairs of bricks. The chamber contained a child's skeleton which, resting on a floor built up of sand, lay on its left side with its head to the northwest, facing northeast. Its ends were closed by irregular fragments of flat-lying baked bricks piled up close against them. Within it, a small glass rod, a piece of carved bone, possibly an arrow nock (Pl. 141, K), and beads which formed necklaces, arm, wrist, finger, and ankle bands, were found in situ.

It seems obvious that these three graves form a group linked to the preceding by the medium of Grave No. 15, and by the glass in No. 105.

Mud-brick graves with pitched roof. Two further burials act as important links between the groups. The skeleton of No. 26 (Pl. 36, C) lies in a construction of sun-dried brick. Flanking it on either side and running the length of the grave is a considerable mass of mud-brick 50 cm. wide and 22 cm. high. Inside this structure flat mud-bricks lean toward each other in a pattern similar to the baked-brick tombs. These slabs, however, do not quite meet, and the opening thus left is covered in the manner of the corbel-vaulted tombs.

Although Grave No. 28 was badly damaged before it was reported, the skull remained in position. In connection with it and plainly visible in the earth above were traces of a mud-brick pitched roof construction, seemingly a parallel to the structure of the baked-brick pitched roof graves and related to that of Grave No. 26. In the tabular summary and in the attendant discussion, it is so treated (Table I).

Unclassified graves. Grave No. 32 (Pl. 35, D) shows no traces of construction. It lies, however, in the north-south orientation common to the vaulted tombs and Grave No. 15. The body lay in a contracted position on its right side, with its head to the south and faced east. By the knee stood a small vase (Pl. 138, N), and by the hand rested a plate glazed a light blue. A glass tear-bottle (Pl. 140, K) was back of the heel,

while a bone pin and a bronze socket were found lying over the ankles. A crude bone point, and beads by the feet, wrists and neck, completed the furniture. The orientation and the presence of glass and the glazed pottery strongly suggest an affiliation with the vaulted burials.

Sacrificial infant burials. That the custom of sacrificial infant burials persisted in the Late Period is evidenced by two reliable specimens: Grave No. 82, and an unnumbered interment in F16. Because they correspond in all their essential details to the many burials of this type seen in the Nuzi levels and to the scattered specimens in Ga. Sur and prehistoric strata, these two Late Period specimens may safely be assigned to this class. Each contains a skeleton of a new-born babe; each skeleton rests within a terracotta pot, and each pot is carefully covered to protect the contents within it. That of F16 was buried below the floor of the house of its origination, and the elevation of Grave 82 suggests that it, too, may have been similarly located. The pot of F16 is shown in Pl. 138, F, and was covered with a single brick. That of Grave No. 82 was a deeper pot (Pl. 35, E), with an abruptly constricted neck, and was covered with an inverted deep, plain bowl.

Graves Nos. 55 and 100, being Nuzi, are included here, more through accident than intent. Each is discussed in detail by Mr. Starr under the description of the separate rooms in which they were found, and under the heading "Nuzi Burials."

Summary. It seems evident from the foregoing discussion that, in spite of the lack of a definite order and of considerable diversity of grave types, a sufficient number of factors are found linking the various types of burials together so that they can be considered as belonging to a single group of people. The superposition of Grave No. 9 upon Grave No. 8, as well as the rather close crowding of some of the burials over G14, would seem to indicate the utilization of this site as a burial ground over a period of time sufficient to allow for the forgetfulness of the grave locations.

Table I. Table I is designed to show more clearly the relationships between the different types of graves found upon the *tepa*. The vertical left-hand column lists the classes of graves, while the horizontal row at the top is the key to a variety of factors which, by their representation among the graves of the different groups, associate one type with another.

The series of figures in each space represents the actual numbers of graves of that specific group which show that factor listed at the head of the column. The figure in italics is merely a simplified summing-up of the contents of each square into a frequency of occurrence.

This analysis, therefore, is divisible into two parts: a discussion of the factors involved, or vertical interpretation, and a discussion of grave types, or horizontal interpretation.

It can be seen that there is no great correlation between grave type and sex, for a relatively even distribution is apparent. Great weight, however, should not be placed upon this observation, for a sex classification made in the field and based upon fragmentary skeletons (such as Graves No. 5, 89 in the vault group) can be regarded only as tentative.

Between contraction and extension of the burials there is no great distinction. The simpler forms show a slight preponderance in favor of extended burials, while those graves which have some form of construction generally show a greater degree of contraction, obviously to decrease the size of the structure.

When we come to orientation, however, we have a factor of considerable importance. An overwhelming majority of the total number of burials lie in the northwest-southeast line (Plan 39). At which end of the grave the head lies seems unimportant, for here, again, the distribution is rather evenly divided. Only in the vault group is a different

TABLE I

N.	CLASS	♂	♀	?	CHILDREN	CON-TRACTED	EXTENDED	HEAD TO S. E.	HEAD TO N. W.	HEAD TO N. E.	HEAD TO S. W.	OTHER	N. E.
72	Simple Graves	2,3,4,9,12,14,20,27,31,32,33,34,39,46,49,50,56,66,70,71,86,90,92,93	7,21,40,41,42,43,45,48,51,53,54,61,63,64,73,76,77,85,91,97	75,84,101,103	11,16,17,24,29,30,35,37,44,47,57,60,62,72,78,79,80,83,87,88,96,98,102,104	3,4,7,11,12,16,20,24,30,35,38,39,40,44,50,54,61,62,64,70,78,101,97,104	2,9,14,17,21,27,29,31,33,34,41,42,43,45,46,48,49,51,53,56,57,66,71,72,73,76,77,79,80,83,84,85,86,88,90,92,96,103	4,7,9,14,21,29,39,43,44,47,50,51,53,54,57,60,61,63,64,70,71,72,73,76,78,83,85,88,91,96,97,98,101,102,103	2,3,11,17,24,27,31,33,34,35,37,38,40,41,42,46,56,62,66,75,77,79,80,84,86,87,90,92,93,104	20	45	3,30,48,49	4,11,14,16,24,25,27,29,30,33,35,37,38,39,41,42,43,44,46,47,50,53,54,57,60,61,62,64,66,70,71,72,73,76,78,83,84,85,86,87,88,90,92,93,97,101,102,103,104
		24	20	4	24	24	38	35	30	1	1	4	49
17	Graves with Screen. Upright Block of <i>Libin</i>	23,25,52,58,65,68,74,94	6,19,22,36,59,69,95	81	18	6,18,23,68,69,74	19,22,25,36,52,58,59,65,81,94,95	6,18,19,22,36,69,74,94,95	23,25,52,58,59,65,68,81				6,18,19,25,52,58,59,65,68,69,74,81,94,95
		8	7	1	1	6	11	9	8	0	0	0	14
4	Graves with Vault Construction of Brick or <i>Libin</i>	5,8,13	89			5,13,89	8			5,8,13,89			
		3	1	0	0	3	1	0	0	4	0	0	0
3	Graves of Baked-Brick Construction with Pitched Roof	15,99			105	15,99,105		99	105	15			99,105
		2	0	0	1	3	0	1	1	1	0	0	2
2	Graves of <i>Libin</i> Construction with Pitched Roof		28		26		26		26,28				28
		0	1	0	1	0	1	0	2	0	0	0	1
1	Graves Un-classified	32				32					32		
		1	0	0	0	1	0	0	0	0	1	0	0
2	Infant Jar Burials (No. 67, Nuzi)				67,82	67,82							67,82
		0	0	0	2	2	0	0	0	0	0	2	0
2	Infant Burials in Covered Clay Basins (Nuzi)				55,100	100	55?		100		55		100
		0	0	0	2	1	1	0	1	0	1	0	1
103	Totals	38	29	5	31	40	52	45	42	6	3	6	67

TABLE I—Continued

UP	OTHER	LEFT SIDE	BACK	RIGHT SIDE	NO FURNITURE	GLAZED POTTERY	PLAIN POTTERY	GLASS	COINS	BEADS	BRONZE	IRON	BONE-WORK	OTHER
2,21,31, 34,48,56, 63,77,91, 98	3,9,12, 17,20,40, 45,49,51, 79,80	7,11,20,24, 25,27,35,37, 38,39,40,46, 79,80,93,97, 104	2,9,14,17, 21,29,31,33, 34,41,42,43, 48,49,51,53, 56,63,66,71, 73,75,76,77, 84,86,90,91, 92,96,98, 103	3,4,12,30, 44,45,47,50, 54,57,60,61, 62,64,70,72, 78,83,85, 101	2,4,7,9,12, 16,21,27,29, 31,33,34,35, 38,39,41,42, 43,46,47,49, 53,54,56,57, 61,62,63,64, 66,70,71,73, 78,79,84,85, 86,90,91,92, 93,97,98,75, 77,104	87	20	40,43		3,11,24, 37,44,45, 51,60,72, 83,102	3,17,24, 30,45,50, 76	3,14,24, 30,80,88, 96	11,30,88	48, Lead Plaques
10	11	17	32	21	48	1	1	2	0	11	7	7	3	1
23,36	22 (Down)	6,25,68	19,23,36,52, 58,59,65,69, 81,94,95	18,74	6,19,22,23, 25,36,52,58, 59,65,68,69, 74,94,95 (Children) 18,81									
2	1	3	11	2	17	0	0	0	0	0	0	0	0	0
8	5,13,89	5	8,13	89		13,89	5,8,13	5,8,89	8,13		8	89		
1	3	1	2	1	0	2	3	3	2	0	1	1	0	0
	15	105	15	99	99		15	15,105		105	105	15	105	
0	1	1	1	1	1	0	1	2	0	1	1	1	1	0
	26	28		26	26,28									
0	1	1	0	1	2	0	0	0	0	0	0	0	0	0
	32			32		32	32	32		32	32		32	
0	1	0	0	1	0	1	1	1	0	1	1	0	1	0
	67,82		67,82		67,82		67,82							
0	2	0	2	0	2	0	2	0	0	0	0	0	0	0
	55	100	55?		55,100									
0	1	1	1	0	2	0	0	0	0	0	0	0	0	0
13	21	24	49	27	72	4	8	8	2	13	10	9	5	1

orientation line strongly exhibited, for here all four graves lie in the northeast-southwest line—at right angles to the majority. One case (No. 15) of the pitched roof group is also in this line. The two occurrences in the simple burial group can probably be considered as accidental. The few examples listed under "Other" are variants of the other two categories and strike a roughly north-south or east-west arrangement.

The direction in which the body faced seems also to have had a special meaning. The northeast shows a very marked preponderance of the cases which could be recorded, and almost half of the remainder are lying on their backs, facing upward. The vault group is, again, unanimously dissentient. This, however, is only to be expected, for the orientation of these graves is such that for them to face the northeast would be an impossibility. The general role of the northeast in this connection is difficult to imagine. Although one can suggest that Parthia, the seat of the Parthian Empire, which did extend this far west, lay in that direction, it is hazardous to draw therefrom anything like a conclusion.

The placing of the body, again, seems to have made little difference. Of the recordable cases, the highest frequency falls among those which lay upon their backs. Among those which lay upon their sides, neither the right nor left seems unduly favored. This latter factor has relatively a higher frequency among the simple graves than among the others. Even so, there is a clear-cut dominance of bodies which rest upon their backs.

With regard to grave furniture as indicative factors, certain results are striking. With the majority of burials, nothing whatsoever was found. The entire class of graves with mud-brick screens falls into this category and is, consequently, eliminated from any further discussion of factors *per se*. A logical assumption that the more complicated the grave structure, the richer and more varied the furniture, seems for the most part applicable. Grave No. 32 seems the outstanding exception, but later on in this analysis it is shown that this burial really belongs with the vault group.

Of the different classes of furniture, only a few, as explained in the conclusions, are valid for interrelationship purposes. The glazed pottery (Pl. 135, C, D, G); the plain pottery jars; the presence of glass and of iron (Pl. 141, N), are the only elements which could distinguish these graves from those of earlier levels. These, in other words, can be considered as relatively datable criteria. The type of glaze is different from that found in the Nuzi levels, as are the attendant forms.

The type of glassware is also different from the earlier in manufacture, treatment, and form, and shows certain Roman affinities (Pl. 140, J, K, M, N, O, P). Iron is present in very minute quantities in the Nuzi levels, but no use as definite or extensive as that indicated by its presence in these graves is indicated. There is also a relationship in the forms of the plain pottery (Pl. 135, A; Pl. 136, F; Pl. 138, N), which distinguishes it from that of Nuzi and the earlier levels.

It remains now to discuss the correlations between the grave types. Since there is no trace of furniture in any of the burials of the mud-brick screen class, this group can be related only through general factors. Since all seventeen lie in the northwest-southeast line, nine with their heads to the southeast and eight to the northwest, with fourteen facing the northeast, two facing upward, and one facing downward, a distinct parallel to the simple graves seems pretty well established. The distribution of those lying upon the back or side also seems suggestive, as does a comparison of the proportion of contracted to extended burials. Consequently, the simple graves (Pl. 34, A, B, C, D), and those with the mud-brick screens (Pl. 34, E, F, G), seem to exhibit enough characters in common to be considered as belonging together.

Of the other classes, it seems wiser to tie together those with a fairly elaborate structure before pointing out their relationships with the simpler groups.

No. 32 (Pl. 35, D) was designated as unclassified, for it presents a *mélange* of factors which are important. In the first place, although it has no apparent construction,

it lies in the northeast-southwest line, at right angles to the majority of the burials, but in accordance with the entire "vault" group. In this connection, it should also be noted that No. 15 of the baked-brick pitched roof class also has this orientation. Other significant factors held in common are the presence of glazed pottery in No. 32 and in Nos. 13 and 89 of the vault group (Pl. 35, B, C; Pl. 135, C), the plain pots and vases found in No. 32, in No. 15 of the baked-brick pitched roof class, and Nos. 5, 8, and 13, of the vault group (Pl. 135, A, B; Pl. 136, F; Pl. 138, N); the glass tear-bottles found in No. 32; the glass bowl found in No. 15, and the rod in No. 105 of the baked-brick pitched roof group; the glass flask and tear-bottle found in Nos. 5 and 89 (Pl. 140, M), and the glass bowls in Nos. 5 and 13 of the vault group (Pl. 140, O), and the presence of two badly decomposed iron toe or finger rings in No. 15 of the baked-brick pitched roof group and the iron ladle of No. 89.

On the basis of this series of elements it seems safe to assume that the vault graves show a relationship both with the baked-brick pitched roof graves and with No. 32 (the unclassified burial).

The next step is to point out the structural affinities of the baked-brick pitched roof class with those of similar construction, but of mud-brick rather than baked brick. The fundamental idea is so obvious that nothing more than a passing comment is needed. It should, however, be noted that No. 15 alone of the two groups is oriented in the northeast-southwest line, the four others (Nos. 79, 105, 26, 28) conforming to the prevailing mode.

Thus, we have simplified our main classification into two large groups—the simpler graves, and those of a more elaborate nature. The sacrificial infant burials must be temporarily disregarded.

It is highly suggestive to find that four of the five burials with pitched roofs lie in the dominant northwest-southeast line and that three of them face to the northeast. More important, however, is it to find in one of the simple graves—No. 87—an example of late glazed pottery analogous to that of Grave 13, and to those found in other years (Pl. 135, C, D, G), as well as two occurrences of glassware and flasks (unfortunately too badly demolished to be figured) in Nos. 40, 43, and the presence of iron in seven instances. The single case of plain pottery shows nothing significant in the relationship of form.

These criteria, though seemingly scanty, do seem sufficient to relate the two large groups to each other.

Of the remaining four burials, No. 82 (Pl. 35, E) can be definitely established as post-Nuzi. This was an infant burial resting well above the pavement. The jar itself is of a late type and presents certain similarities to that found in No. 15. The other three belong to the Nuzi period.

To sum up, then, with the exception of the infant burials, the entire series found on Yorgan Tapa in the season of 1929-30 can be safely treated as a cemetery unit and can be brought as such into a discussion of the late factors found upon the *tepa* and also those found upon the surfaces and in soundings in the low mounds to the south and west of the *tepa*.

SOUNDINGS IN THE VICINITY OF YORGAN TEPA

To the west and south of Yorgan Tapa are a series of low mounds upon the surfaces of which occur fragments of glass similar to that found in the graves on the *tepa* and late-appearing pottery not at all of the Nuzi style. Early in the season of 1929-30 it was decided to run a series of soundings to see what occupation these later levels might indicate and to determine whether or not the city level of Nuzi extended in that direction.

At the time this work was to be started, however, the Nuzi temple was discovered,

and for the following six weeks the entire staff was concentrated upon the *tepa*. Not until near the close of the season was it possible to attack these mounds.

Since the time was short and the area to be tested considerable, trenches were dug at key points suggested by the local topography (Plan 2). Where it seemed advisable, shafts were sunk to virgin soil. This form of procedure has, of course, serious disadvantages, for only a small area can be uncovered at a time, and the chances of finding significant material are thereby obviously decreased. The difficulty of widening a deep trench or shaft in order to obtain a better sampling from lower strata is evident; indeed it is often impossible. To sound a large territory rapidly, however, such trenching is the logical approach.

In this instance both the advantages and weaknesses of this method are well illustrated. The material found upon the upper pavements shows the relationship of those pavements one to another in all of the different soundings, as well as correlating them with the material found upon the surfaces of the low mounds, on the surface and upper pavements of the *tepa*, and in the cemetery graves which have already been discussed (see also Tables II and III).

In the lower strata, on the other hand, no evidence is forthcoming beyond a series of indeterminate pottery. Apparently—on the basis of the bottoms, rims, and handles—it is non-Nuzi in character, and an occasional sherd, in Mr. Starr's opinion, is suggestive of the Ga. Sur or pre-Nuzi ware. Nothing more definite than this, however, can be established.

No trace whatever of Nuzi material appeared in any of the soundings. It would seem, then, that the city of Nuzi contemporaneous with the palace level did not extend to the south or west of Yorgan Tapa. The deeper deposits in this area probably belong to an earlier period of occupation, and the upper levels can safely be assigned to the third century A. D., some seventeen hundred years after the date of Stratum II of Nuzi.

A series of thirteen trenches and shafts was opened. With one exception they will be described in their numerical order which progresses from south to southwest. The exception is Sounding 7, which is treated immediately after Sounding 2, since it is situated in the same mound as Nos. 1 and 2 and is closely related to them.

Sounding 1. In a small mound to the south of Yorgan Tapa two trenches or soundings were run at right angles to each other, meeting at the center (Plan 41). From this point Sounding 1 ran westward. The trench was originally 1.50 m. wide and 20 m. long. Pavement I lay some 65 cm. below the surface. Upon it were found fragments of glassware similar to that found on the *tepa* and sherds of coarse pottery crudely decorated by sweeping finger furrows curving away from a central stem; also a sherd with a heavy, horizontally placed handle—sloping slightly upward from the shoulder (Pl. 134, E). Compare this with the jar from B4 shown in Pl. 134, A, and a sherd with a wavy incised decoration, Pl. 137, G.

Along the south wall near its juncture with Sounding 2 stood a circular clay baking oven of the type seen so commonly in Ga. Sur, Nuzi, and even modern times.

At a distance of 4.65 m. from the northwest end of the trench was an oval hole 1.20 m. by 0.74 m. and 1.36 m. deep. At the bottom two parallel rows of trapezoidal bricks laid end to end, with their parallel edges alternating, extended north and south—leaving a strip 28 cm. wide between them floored with packed clay 2 cm. thick (Pl. 33, E). A tunnel 55 cm. high, now completely filled, seemed to follow the course of the bricks. The whole structure suggests an underground drain. The bricks are of importance, for their finger-tip markings suggest Roman influence.

At the northwest end it was decided to go deeper—below the first pavements. At a further depth of 51 cm. (1.16 m. below the surface and with an absolute level of 3.85 m. below the zero point for the excavations on the *tepa*) a second pavement was uncovered. On this lay the skeleton of a child with its head to the northwest and its feet to the

southeast. At its head stood a small jar somewhat similar to that found with Grave 32 on the *tepa*. A bronze bracelet encircled each wrist (Pl. 141, H), and a crystal bead (Pl. 141, P) lay at the throat.

Above the surface of Pavement II, a structure of baked brick appeared. Upon investigation this proved to be the top of a brick-arched doorway set into a wall running in a northeast-southwest line. Pavement II cut through the top of the wall, planing it down so that its top was considerably below that of the arch. This pavement was extended over the whole west end area and yielded a few fragments of glass.

At a depth of 96 cm. below Pavement II lay Pavement III, forming the bottom of the chamber at the base of the wall. Resting upon Pavement III and lying at irregular distances from one another in a line parallel to the wall was a series of tombs each with a northwest-southeast orientation (Plan 41).

Tombs I and II (Pl. 37, D; Pl. 38, A, B, C) were of similar construction. In each case an open pottery coffin rested directly upon the pavement. That of Tomb I was very similar to that found in Grave 15 on the *tepa*. It was, however, flatter at the ends though rounded at the corners. That of Tomb II was decorated by bands of thumb-indented plastique which ran vertically at the corners, cut diagonally across the ends, and followed the rim about its whole circumference (Plan 42).

Both coffins were closed by covers which were laid on in two pieces, one half over each end. That of Tomb I, which was flat and undecorated, had a sudden swelling above the head. The cover of No. II displayed a marked lateral arch and sloped at the ends. This was also decorated by thumb-indented plastique bands. In this case, moreover, the two halves of the cover were sealed to each other and to the coffin by a coating of cement (Pl. 38, B).

Resting upon Pavement III, packed against each coffin and completely surrounding it, stood a clay sleeve some 9 cm. thick. In the case of Tomb I this rose to a height of 59 cm. or 14 cm. above the rim of the coffin; in Tomb II it was 76 cm. high or 26 cm. above the coffin rim. Above the coffin covers and inside of these sleeves, rising to within 2 or 3 cm. of their tops, was a mass of clay, obviously run in to seal the coffins (Pl. 38, A, B).

In Tomb I the body lay in a contracted position on its left side, facing southwest, with its head toward the southeast. At its feet lay two vessels, one a jar similar to those found in Graves 32 and the grave on Pavement II of Sounding 1, and the other a fine-ware bowl with round bottom and evenly sloping sides (Pl. 38, C). Scattered on the pavement about Tomb I were a number of poorly baked clay spindle whorls. One of these was resting upon the top of the tomb, thereby suggesting a ceremonial purpose.

In Tomb II the bones were too far decomposed to ascertain any position beyond the fact that the head was toward the northwest. No furniture was found.

Tomb III was 16 cm. southeast of the clay sleeve of Tomb II (Pl. 37, D). This was a rectangular structure of slightly trapezoidal baked bricks with their long sides slightly arched (Plan 42). The width of the interior was equivalent to the length of two bricks—41 cm.—while the length was equivalent to the width of six rows of the same bricks or 96 cm. This flooring really extended one brick further in each direction, the fringe thus provided serving as the base for the tomb walls which rose 36 cm. in four courses of flat laid bricks, one directly above the other. A fifth course, however, was offset some 6 cm. outward from the edge of the wall. Abutting against the upper edges of this course, and with their lower edges resting upon the exposed portion of Course 4, was a row of ten bricks standing vertically with their curved edges uppermost supporting each other in the center (Pl. 38, E). At the southeast end two flat-lying bricks on each side closed the top. The upper surface of these bricks was then heavily coated with 8 mm. of cement which smoothed out the irregularities of construction and completed the arched effect of the construction. The inside of the vault was also well

smearred with cement. The ends of the tomb were not so carefully constructed; the straight inner edges of the bricks were carefully laid to form a smooth surface, but the exterior was made up of fragments of brick and rubble.

Resting upon the offset course stood a sleeve of clay which at the ends descended to Pavement III. This rose to a height of some 23 cm. above Course No. 5 and attained a maximum thickness of 9.5 cm. Above the cement coating a layer of clay mortar was run in, filling the area within the sleeve to within 4.5 cm. of its top.

Inside the tomb the bones had moldered almost completely away. The size of the vault, however, indicates a child's grave, as did one bone fragment. At the northwest end lay two gold objects, very flat and thin, and perforated at the ends. These seem to have been eye and mouth coverings (Pl. 142, B). One dark blue glass bead was also found.

The structure of this tomb is important in that it bears a relationship to the baked-brick graves with the pitched roofs found upon the *tepa* (Nos. 15, 99, 105). The walls of baked brick with the offset top course supporting leaning blocks which in turn support each other above the center, display a unity of principle too strong to be ignored merely because of the difference in the orientation of the axes of the bricks, or the height of the walls.

Tomb III not only acts as a link with the *tepa* cemetery, confirming the evidence of the coffins of Tombs I and II, but it also links up with Tombs I and II in its use of cement, the clay sleeve, and the clay sealing above the top of the grave. Furthermore, a considerable number of unbaked clay spindle whorls were found scattered on Pavement III at its southeast end while a few lay on the northwest and northeast, bringing it into even closer relationship to Tomb I.

Higher and with part of its flooring resting on the clay sleeve of Tomb III stood the remains of Tomb IV (Pl. 37, D). The walls were made by reddish baked brick laid in courses, which at the top were vaulted inward in a true arch (Plan 42). The greater part of the structure was missing. The floor of the interior was six bricks long and four wide. Upon this were found two iron pins, a few scattered potsherds, and some fragments of glass. From its position this tomb seems to be later. Pavement II appears to have been slightly disturbed by its foundations.

Two more coffin burials were found, Nos. V and VI, each with a cover and clay sleeve. The first was in line with Tombs I, II, and III, while the other lay to the north of Tomb III in line with its longitudinal axis and oriented in the same manner. Lack of time prevented a complete inspection as well as any further extension of this area.

It seems obvious that this was a burial spot of influential people. Inasmuch as the tombs on Pavement III relate to the more elaborate grave types on the *tepa*, and since the child burial on Pavement II is really related to the simpler types, and inasmuch as Grave No. 9, a simple grave, is superimposed upon No. 8, a more elaborate one, it might be postulated that the more elaborate graves on the *tepa* and those on Pavement III in Sounding 1 are considerably older than the simpler graves. The evidence, however, is insufficient, and this can be regarded merely as a possibility.

Sounding 2 (Plan 41) extended as a trench to a length of 18.50 m. A single pavement was struck running at a depth below the irregular surface of from 60 to 85 cm.

Above this pavement fragments of glass and potsherds with stamped decoration were found (Pl. 137, B). Their significance will be discussed below.

At the northern end of the trench for a distance of 3 m. a depth of 1.30 m. was reached (45 cm. below the pavement). This sub-pavement soil was extremely hard and sterile.

Sounding 7. Some 10 m. to the south of Soundings 1 and 2, and tapping the deeper parts of the knoll, a shaft was opened 2.75 m. long and 1.75 m. wide (Plan 2). In the south corner of the rectangle with its rim only 15 cm. below the surface stood a large

storage jar (Pl. 137, A), with stamped decoration. This rested upon Pavement I, 58 cm. below the surface.

In the greater part of the shaft Pavements I and II were broken through to allow for the placing of a tomb at a depth of 2.15 m. from the surface. Pavement II lay at a depth of 1.33 m. The tomb, then, is obviously later than the inception of either pavement. Only the base of it remained. In type it seems related to Tomb IV in Sounding 1 (Pl. 37, D). The floor is rectangular, eight bricks in length, and four bricks in width. The bricks, reddish in color, are trapezoidal and arranged with their long axes extending laterally. No traces of bones have remained; two sherds (Pl. 135, H; Pl. 141, R), and a few fragments of unidentifiable bronze and iron articles (Pl. 141, B, C, V), were all that could positively be ascribed to this structure.

Below the tomb, 2.50 m. below the surface, lay Pavement III. Pavement IV was 3.61 m. below the surface. Indeterminate potsherds resembling the materials from Pavements III, IV and V of Sounding 3 were found both on Pavements III and IV.

Below Pavement IV, between the depths of 4.13 and 4.53 m., were a few sherds of very crude, heavy ware, badly stained and encrusted by exposure. Below this deposit and extending to the bottom of the pit—4.87 m. from the surface—nothing appeared, except layers of sterile waterlaid clay. From Pavement I, then, came stamped pottery; and, in association with the tomb (also Pavement I), iron. From Pavements III and IV, traceable only in the walls of the shaft, came sherds, presumably, though not positively, belonging to the same culture. Thus, all but the lowest deposit of sherds appear to be related to the later cultures.

Sounding 3. In the neighboring field (Plan 2), to the south, a trench 3.50 m. long and 0.75 m. wide was sunk to a depth of 0.95 m. It yielded fragments of indeterminate pottery of a non-Nuzi type, but nothing of significance.

Sounding 4. To the southwest of Soundings 1 and 2 a trench 1 m. wide and 4.75 m. long was sunk (Plan 2). Three indefinite floor levels lay at depths of 0.88, 1.20, and 1.52 m. from the surface. Their fragments of pottery were seemingly non-Nuzi in type. There was nothing sufficiently characteristic to serve as chronological criteria.

Sounding 5 (Plan No. 43) was well to the west of Sounding 4 (Plan 2), and extended northwest for a distance of 15.65 m. Altogether, three walls were located, and three pavements lying 0.51, 1.10, and 2.11 m. below the surface.

In the northern extension a conical storage construction (Plan 43) of baked brick was found. The top was flush with Pavement I (the top pavement), and, obviously, was contemporaneous with it. The construction was of carefully fitted bricks caulked with pebbles where the jointing was poor. The interior was carefully arranged to present a smooth surface.

At the western end of the trench the edge of another large storage pit was found, the upper remaining rim lying at a depth of 1.61 m. below the surface. Lack of time precluded its complete excavation.

From Pavement I came fragments of pottery with a wavy incised decoration (Pl. 137, D), pottery with heavy cross-hatched rims (Pl. 137, F), and a few sherds with sweeping finger furrowings curving away from a vertical line (Pl. 141, O; Pl. 142, A). This latter type is very similar to that found on Pavement I of Sounding 1.

On and above Pavement II were fragments of glass similar to those from Soundings 1 and 2 and the graves on the *tepa*. Late potsherds (Pl. 136, B), some with a blue and green glaze, were also found. The glaze is of the harder non-Nuzi type found in the graves on the *tepa*.

From Pavement III came fragments of glass, a scrap of iron, fragments of glazed pottery similar to that of Pavement II, finger-furrowed potsherds similar to those of Pavement I, and a fragment of the mouth of a flask, the rim of which was pinched to form three spouts in clover-leaf arrangement (cf. Pl. 139, J, from Sounding 10).

All three pavements were undisturbed. A shaft driven to a depth of 2.74 m. below Pavement III yielded near the top a few sherds of a coarse ware, possibly fragments of a storage jar once set into the ground. Below this, however, the deposit was of closely packed water-laid clay—a little vascular and granular toward the top, but rapidly assuming a finer texture. Aside from the few sherds mentioned, the deposit was sterile, and probably represents virgin soil.

Sounding 6. On the northwestern side of the same mound tapped by Sounding 5 another trench was started (Plan 2).

On the second pavement a large pottery furnace 2.10 m. by 1.30 m. was found. At the southeastern end of the trench a shaft was sunk to a depth of 5.42 m. from the surface. On Pavement III a small hearth was found excavated in the floor and lined with clay. A rectangular brick showing traces of fire lay in the hearth (Pl. 33, G). On Pavement IV a fragment of baked-brick floor was exposed. Pavement VII, the deepest, was of water-laid sand, and may never have been a habitation level in the true sense of the word. Immediately above it were some very crude, worn sherds. Below the sand the shaft was continued 0.91 m. into a deposit of sterile water-laid clay, undoubtedly representing virgin soil.

A consideration of the material shows that on and above Pavement I were fragments of glass, and sherds of finger-furrowed pottery similar to that already described. Associated with the oven on Pavement II was the clover-leaf mouth of a flask (cf. Pl. 139, J), similar to that described from Sounding 5. It was badly crumpled while still fresh and probably was baked by accident.

From the lower levels nothing of significance appeared. Sherds of pottery unlike that found in the soundings or in the graves occurred (Pl. 138, D, H, I, J; Pl. 139, C). At the same time, this material does not resemble the characteristic wares of the Nuzi period. Since the evidence for these lower strata is negative, it is hazardous to venture an opinion. The most that can be said is that these pavements probably belong to some period of non-Nuzi occupation.

The depths of the pavements from the surface are:

Pavement	I—0.95 m.
"	II—1.55 "
"	III—2.17 "
"	IV—2.73 "
"	V—3.55 "
"	VI—3.97 "
"	VII—4.51 "
Bottom of pit	—5.42 "

Sounding 8. Inside the large, horseshoe-shaped mound to the south of the *tepa* a trench running southwest was opened in order to tap that section (Plan 2), starting well down on the slope and driving directly toward the summit. Two pavements were disclosed with absolute levels of minus 4.48 and minus 4.76 m. Along Pavement I ran a drain of baked brick. Broken through Pavement II from above was a tomb of baked brick, rectangular in plan and vaulted with a true arch (Pl. 38, F). Lack of time prevented the complete excavation of the structure but the presence of burial furniture in the form of a jar similar to the open-mouthed vessels found with Grave No. 32, and its similarity to the burial on Pavement II, Sounding 1, suggest a relationship. The construction, moreover, is very similar to that of Tomb IV, Sounding 1, and the tomb in Sounding 7. It is obvious, since Pavement I is broken away above and around it, that the interment is not earlier than Pavement I.

From Pavement II came fragments of glazed pottery of the late type found on Pavements II and III of Sounding 5.

Sounding 9. A little farther to the west on the back of the horseshoe mound a short trench 6.75 m. long was opened (Plan 2). Two pavements were found. Pavement I had a level of minus 3.63 m. in relation to the zero point of the *tepa* and was 54 m. below the surface. Pavement II lay 1.10 m. below the surface. Below Pavement II potsherds were found but no third floor appeared. At 2.11 m. below the surface hard-packed water-laid clay, slightly vascular at the top and finer below, indicated virgin soil. A small shaft a little over 1 m. square was driven to a depth of 4.18 m. from the surface.

From Pavement I came several potsherds with a coarse appliqué decoration similar to those found on the surfaces of the mounds nearby. On Pavement II were fragments of glazed pottery of the type already referred to under the material from Soundings 5 and 8.

Sounding 10. From the road running northwest of the *tepa* a trench was run into the far end of the big double horseshoe mound (Plan 2). Two pavements were found, both broken to admit a burial. The grave lay in a southeast-northwest orientation with its head to the southwest and facing northeast. The floor seemed lined with sun-dried brick, but no actual structure could be determined. Its absolute level was minus 3.79 m.

From Pavement I, absolute level minus 2.39 m., came fragments of glazed pottery similar to that found in Soundings 5, 8, and 9, and the clover-leaf mouth of a flask like those of Soundings 5 and 6 (Pl. 139, J).

On Pavement II were fragments of glassware, already discussed.

Sounding 11. On the backbone of the horseshoe ridge between Soundings 9 and 10 a shaft 3 m. square was sunk (Plan 2). Four pavements were ascertained at the absolute levels minus 1.51 m., minus 2.59 m., minus 3.15 m., and minus 4.48 m. (1.89 m., 2.97 m., 3.53 m., and 4.86 m. below the surface).

From Pavement II came heavy potsherds with heavily stamped circles (Pl. 139, A), ware similar to that found on the surface of the neighboring mounds. From Pavement III came fragments of glazed ware (Pl. 139, D). The deposit above Pavement IV was relatively sterile. A few sherds were found which, beyond suggesting non-Nuzi ware, indicated nothing definite.

Sounding 12. South of the horseshoe mound, the road running northwest of the *tepa* touches two smaller mounds, both of which were sounded (Plan 2). A short trench into the northerly one—that nearest the *tepa*—revealed three pavements.

From Pavement II came sherds with heavy appliqué design (like that from Sounding 9, Pavement I), fragments of glass, and a piece of iron.

Pavement III yielded sherds stamped with figures of rams in combination with a cross and a sun (Pl. 136, E, H; cf. Pl. 136, C, F; Pl. 137, B, E, H), fragments of glass, two fragments of iron, and a spindle whorl like those found in Sounding 1, Pavement III, and Sounding 7, Pavement III.

Sounding 13. In the southernmost mound (Plan 2) four pavements were found with absolute levels of minus 2.65 m., minus 3.25 m., minus 4.00 m., minus 4.36 m. The upper two were practically sterile. On Pavement III, however, two scraps of iron and one of glass (Pl. 140, L) appeared.

Summary. It has already been shown that the glassware and glazed pottery found in the soundings is very similar to that found in the graves of the *tepa*. Iron, we know, is not a common characteristic of the Nuzi period, but is found in eight graves which overlie the Nuzi level. In view of its consistent association with glass and glazed ware in the soundings, it is safe to assume that it is a late factor.

When we examine the distribution of these factors we find that in no case do any occur below a third pavement.

Other factors found on the surface of the *tepa* and on post-Nuzi pavements, as well as on the surfaces of the surrounding mounds, are also found here associated with the three already mentioned. Similarly, they never occur below a third pavement. These include stamped and appliqué decorated pottery, pottery with sweeping finger furrowing, flasks with clover-leaf mouths, and painted pottery of a late type.

Table II is designed to show the relationship between the different pavements in the different soundings, and summarizes in diagrammatic form the occurrence of index criteria upon those pavements.

The horizontal rows indicate the different pavements, each in stratigraphic sequence for its own particular sounding denoted by the vertical column. Written in each square are those occurrences of criteria which are described and explained in the text as being significant factors in dating the pavements, as well as forming elements of a complex, any one of which postulates the associated culture of which it is a part, for that level upon which such a criterion may be represented. The figures in italics represent an arithmetical summing-up of the number of different index criteria found on each pavement of each sounding.

The simple hatching at the base of columns 3, 4, 10, 12, and 13 indicates that in these soundings excavations were carried only to the depth indicated by the last pavement figured, while the cross-hatchings at the base of the other columns indicate that in these cases virgin soil was reached. The differences in diagrammatic level are caused by the differences in the number of pavements between the surface and virgin soil. Differences in actual level and the thickness of deposit between the pavements are not indicated. The absolute levels are given in the description of the soundings.

A glance at the table, then, shows the following:

Soundings 1, 2, 5, 8, 9, although carried down to virgin soil, in no instance had more than three pavements superimposed, one above the other, and each pavement yielded some indication of belonging to the late culture complex described in the text.

Soundings 6, 7, 11, also carried to virgin soil, showed pavements below those definitely assignable to the late complex. These yielded an indeterminate pottery apparently non-Nuzi in character and faintly reminiscent of the Ga. Sur ware.

Soundings 10, 12, 13 are in accord with the above description, with the reservation that conclusive evidence of virgin soil was not obtained; these three areas may have had deeper levels which were not reached by the excavations.

Soundings 3 and 4 both gave indeterminate results. The pavements charted for No. 4 were not very clear. These seem to have been in a region which, during the later periods at least, was uninhabited.

On Pavement I in both Soundings 11 and 13 nothing significant was found. Both of these, however, are underlain by pavements bearing factors which tie them into the later complex already described. This would indicate that these two top pavements either belong also to the late complex or to an even later period.

The general relationship of the pavements bearing the late complex of factors is, however, clearly shown, not only in regard to their inter-sounding connection, but also in their overlying of the earlier strata.

We find, then, that the upper pavements are, judging by the presence of one or more of the later factors, generally demonstrable as late. These elements also can, for the most part, be accepted as part of a culture complex to which certain characters found in the *tepa* cemetery definitely belong. It has been established that the graves on the *tepa* form, roughly speaking, a unit. A correlation of any factor found in the sounding complex with any grave on the *tepa* would, therefore, establish the relationship between the two, and further indicate that the cemetery was the burial ground of the people who occupied the low mounds at the base of the *tepa*.

Table III is designed primarily to show the relationships between the complex of late factors found in the upper levels of the soundings with those found in the graves on the *tepa*.

Table I illustrates how the graves on the *tepa* form a single cemetery unit. Table II presents in diagrammatic form the inter-relations of the later pavements of the soundings. If, then, one index factor can be shown as binding the *tepa* cemetery to the later culture of the soundings, both groups can be assigned to the same culture and period. Since coins of actual dating value were found upon the upper and later pavements of the *tepa* as well as in Grave 8, a horizontal column has been added to indicate the factors found upon these pavements, and to show that these, too, belong to the same period and culture as the graves and the soundings. A further horizontal column represents the surface finds of the *tepa* and the low mounds. This has no great significance, to be sure, but it does suggest that no occupation after that represented by the late complex took place either upon Yorgan Tapa or the surrounding mounds.

The vertical columns in this table indicate the factors or index criteria. The horizontal rows indicate the surface finds, both of the *tepa* and the surrounding mounds; the upper pavements on the *tepa*; the *tepa* graves, and the pavements of the soundings. The pavement levels form the body of the table. The numbers in the squares refer to the number of the sounding in which the particular factor represented by that square is found upon that pavement. The figures in italics are a simplified summing-up of the number of soundings in which a particular index factor occurs at a given level.

To correspond with this frequency figure on the sounding pavements, the frequencies of the same factors have been taken from Table I and placed in the row for the *tepa* graves. The presence of these factors, especially the glazed ware, glassware, and iron, as well as the wave-incised pottery, exhibits too marked a similarity to be ignored, for these elements are too striking and individualistic to occur under such conditions, as parts of separate entities. We have, then, the welding of the cemetery complex and the late sounding complex into a larger culture unit.

For the upper pavements of the *tepa* and for the surface material, correspondence in an even greater number of factors is demonstrated. These, too, are bound into the later occupational culture complex which is found upon Yorgan Tapa and about its base.

Table IV. In Tables I, II, and III it has not been shown that the tombs and graves in the soundings, and the cemetery on the *tepa*, belong, roughly speaking, to the same complex. Although perhaps not quite so obvious at first glance as the other charts, Table IV is designed to bring out the relationship between these two groups.

The vertical column at the left lists the series of elements which might be of value in tying together the two groups. The Roman numerals in the second column indicate the number of each tomb in Sounding 1 in which that factor is found, while the Arabic numbers preceded by the letters Sg. indicate that the grave found in that sounding also exhibits this trait. The numbers in the last column indicate the numbers of the *tepa* burials which correspond to the sounding tombs in their use of a given factor.

The interpretation of this table must, unfortunately, be based upon a series of indications which, although oblique, eventually become quite clear.

The first step is, quite naturally, to prove that the different tombs in the soundings belong together in a group. To begin with, Nos. I-VI, and those of Sgs. 7, 8, are all oriented in a southeast-northwest line, the prevalent strike of the graves on the *tepa*. Besides resting on the pavement of what seems a large burial chamber, in an alignment, Tombs I, II, V, VI have in common coffins, coffin covers, clay sleeves, and clay mortar fill inside the sleeves and above the coffin covers (Pl. 37, D; Pl. 38, A, B).

Tomb III is in alignment with this group. Although it has no coffin, but rather a vault constructed of bricks, it has, nevertheless, the same clay sleeve and top fill as the

TABLE IV

	<i>Tombs and Sg. Graves</i>	<i>Tepa Graves</i>	
Orientation SE-NW line	I, II, III, IV, V, VI, Sg. 7, Sg. 8	See Table I	
Coffins	I, II, V, VI	No. 15	
Coffin covers	I, II, V, VI		
Constructed bottoms	III, IV, Sg. 7, Sg. 8	15 99(?) 105	5 8(?) 13 89
Top course offset	III	15, 99, 105, 26(?), 28(?)	
Principle of covering slabs resting against offset course and supporting each other in the middle	III	26, 28, 15, 99, 105	
Purified clay sleeve	I, II, III, V, VI		
Fill, above grave between sleeves	I, II, III, V, VI		
Cement	II, III, IV, Sg. 7		
Vault	IV, Sg. 8	13 (corbel)	
Trapezoidal bricks with rounded tops	III, IV, Sg. 7, Sg. 8		
Bronze	Sg. 7	3, 8, 17, 24, 30, 32, 45, 50, 76, 105	
Iron	Sg. 7	3, 14, 15, 24, 30, 80, 88, 89, 96	
Plain pottery	I, Sg. 8	5, 8, 13, 15, 20, 32	
Glass	IV	5, 8, 15, 32, 40, 43, 105	

tombs with coffins (Pl. 37, D). It has, moreover, traits which it shares with others of the group. For instance, both III and II, and also IV and Sg. 7 (Pl. 38, D), show the use of cement in construction. As a matter of fact, it is specious to mention II in this connection, for here cement is used only to bind together the broken halves of the coffin cover, while in the others it is a question of structural principle, holding the bricks together (Pl. 38, B). Again, trapezoidal bricks with their long edges slightly rounded are used in the structure of Tombs III, IV, Sg. 7, and Sg. 8 (Pl. 38, D, E, F). Furthermore, the base of Tombs III, IV, Sg. 7, and Sg. 8 are built on somewhat the same plan—flat-laid bricks in the form of a rectangle, the edges of which serve as a base for walls.

No. IV and Sounding 8 have an identical structure of arched vaulting. Sounding 7 may also have been of this type; but the upper part of the construction was so demolished that no trace of the vault remained. It seems, then, that a sufficient number of factors in the sounding tombs are present to allow them to be treated as a group.

Of these, certain elements already cited, and others not yet mentioned, can be derived for comparison with certain graves of the *tepa* cemetery.

As has already been noted, the orientation of all the tombs corresponds to that of the majority of the *tepa* graves. Further links can be seen in the coffin of Grave 15 (Pl. 37, A). Although a bit longer and narrower than I, II, V, VI (Pl. 38, A, B, C), there is sufficient variation shown in the coffins in the tombs to render this slight difference negligible. Fundamentally, all have approximately the same structure—a long bathtub shape with a flat bottom and vertical sides. True, the tomb coffins have flattened ends with rounded corners, while No. 15 has frankly rounded ends; but, in view of the small number concerned, this variation seems to have little significance.

The constructed bottoms already discussed, in relation to III, IV, and Sounding 8, may have certain parallels on the *tepa*. The coursing and rectangular construction at the base of the baked-brick pitched roof graves is suggestive—especially since we find prepared floors in Nos. 99 and 105. No. 15 utilizes a coffin inside the structure. Nos. 5 (Pl. 34, H), 13 (Pl. 36, B), and 89 (Pl. 35, B) of the so-called "vault" group also exhibit prepared floors and a definite construction around the sides. These graves, though placed with a question mark on the diagram, are, none the less, highly suggestive.

Less noticeable, perhaps, but probably even more significant, are some of the minor structural features. As described in the text, the top course of bricks in Tomb III is set back from the inner wall of the chamber. Against this course and resting on the one beneath, a series of covering bricks leans over the chamber to lock against another series similarly supported on the other side—and thereby a roof is formed (Pl. 38, E). In III the bricks are on edge, their flat surfaces lying in a vertical plane. Of the *tepa* graves, Nos. 15, 99, and 105 (Pl. 36, A; Pl. 37, A, B, C) duplicate this architectural principle. All three have the offset top course, against which rests the roofing slabs which mutually support each other over the center of the chamber. In Nos. 26 (Pl. 36, C) and 28, it was impossible to get a clear view of the basal construction, but the roofing technique was the same. In this *tepa* series, however, is a slight difference which cannot be regarded as serious. The orientation of the bricks is reversed. Here, the edges lie in a vertical plane while the flat surfaces furnish the roofing surface. Architecturally, however, the principles remain the same.

A further, though rather weak, analogy may be seen between the arched vaulting of IV (Pl. 37, D) and Sounding 8 (Pl. 38, F) and the corbelling of No. 13 (Pl. 35, C). This comparison is inconclusive and can only be considered as a suggestion.

Grave furniture has some significance in this connection. In Sounding 7 bronze and, particularly, iron appeared (Pl. 141, B, C). The latter can be fairly regarded as significant, for, as previously pointed out, iron as a common factor did not appear until late. Plain pottery, in this particular instance, is also of some significance, for the small vase in the coffin of Tomb I is quite similar to that found in Grave No. 32 (Pl. 35, D; Pl. 138, N).

In Tomb IV fragments of glass (seemingly accidental) also occurred. These scraps, however, had been treated to a gilt surface, a practice known to the Romans. Since the forms of glassware found on the *tepa* can also be related in this direction, we are not surprised to find the body of the glass from Tomb IV similar to that from the *tepa*.

To sum up: it seems that a sufficient number of factors held in common bind the tombs found in the soundings into a single unit, while some of these factors, with some others, tie the sounding tombs into the later complex which now includes the *tepa* cemetery; the later pavements on the *tepa*; the surface material found on Yorgan Tepa, and the surrounding mounds; and, as just demonstrated, the sounding tombs.

CONCLUSIONS³

A further question now arises. Who were these later people who lived at the base of Yorgan Tepa?

In his preliminary report for the preceding season's work, Professor Pfeiffer⁴ mentions that at that time the only remains of a post-Nuzi occupation on the *tepa* were traces of a Parthian building in which five coins of about 152 A. D. (Vologases III) and stamped pottery were found.

The silver coin from Grave No. 8, however, was also decipherable. This is definitely Sassanian and bears the stamp of Shapur I, whose dates are given as 241-272 A. D. The coins range in date from the latter part of the second century A. D. to the latter part of the third, and in their historical setting from the late Parthian to the early Sassanian periods. The quantity and distribution of the graves and culture débris found on and about Yorgan Tepa argue for the probability of such a duration of occupation.

A few coins which have been found together, however, furnish by themselves relatively slender evidence for dating, beyond setting the oldest possible limits. Other elements must, therefore, be considered.

The stamped pottery is perhaps the most outstanding evidence. Sarre and Herzfeld⁵ report from Takrit an abundance of potsherds bearing stamped designs. The form of the stamp is sometimes angular, but usually round, as in the material here presented.

Characteristically, the Takrit stamps bear the Sassanid peacock griffon—to which the bird stamp on the jar from Sounding 7 (Pl. 137, A) may be related⁶—the ram, and a lamb in a circle with an equal-armed cross over its back. Sometimes a scorpion is figured from Takrit with a cross between its legs. From Kouyunjik⁷ the stampings seem a bit cruder in execution, but the underlying technique and conception is the same. Here a stag is figured with the equal-armed cross over its back. At Samarra⁸ this pottery is found only in small isolated ruins and does not seem to belong culturally to the region.

³ Since the above was written, *Excavations at Tel Umar, Iraq*, University of Michigan Press, Ann Arbor, Michigan, 1933, has been published. The writer would like to call attention to the chapter "The Tombs Found at Seleucia" by S. Yeivin. This is of particular importance in its description of glass and pottery found in the graves of Level I, the given dates of which are 118-230 A. D. Also of comparative significance are the descriptions of the graves with "Saddle-roof" covers and the description and photographs of the plain clay coffins of the same period.

⁴ Professor Robert H. Pfeiffer in *Bulletin of the American Schools of Oriental Research*, No. 34, p. 4.

⁵ Sarre and Herzfeld, *Archäologische Reise im Euphrat- und Tigris Gebiet*. Berlin, 1911-1920, Vol. I, p. 225 ff.

⁶ A jar similar to the bird-stamped specimen of Sounding 7 is on exhibit in the Metropolitan Museum of Art in New York. This is labelled as Sassanian and as coming from Mesopotamia.

⁷ Sarre and Herzfeld, *ibid.*, p. 227. A. H. Layard, *Nineveh and Babylon, 2nd Expedition, 1853*. Putnam, New York, p. 591.

⁸ Friedrich Sarre, *Samarra*, Vol. II, Berlin, p. 8.

Figures of the ram, steinbock, stag, antelope, buffalo, lamb, bustard, and the Sassanid griffon with the peacock's tail are reported. Sarre⁹ argues that the Christian pottery bears the cross and so, therefore, this Samarra material is equivalent to late Sassanid or Early Islamic. In the *Archäologische Reise*¹⁰ we find the following: "Es ist ganz auffällig dass es gerade die christlichen und sasanidaisch-zoroastrischen Motive sind, die in diesen Stempeln zu Tage treten, wiewohl doch diese Keramik der Fundorten Samarra, Baghdad, Niliyyah nach nur in die frühislamische Zeit gehören kann. Wir müssen schliessen, dass es die christliche, aramaische Bevölkerung des Landes war, von deren Hand das Töpferei-Handwerk betrieben wurde."

Other sites where this material is found are Nimrud, Nineveh, Kushaf, Samarra, Baghdad, Ctesiphon. This ware he calls Late Antique or Early Islamic.

It seems, on the whole, that the question of the cross is overemphasized. Hastings¹¹ in his discussion of non-Christian crosses ends with "but everywhere it may be said to have been used above all to represent radiation and space. Thus, we find that the equilateral cross was adopted by the Chaldo-Assyrians as representative of the sky and its god Anu." He also mentions the development of the equilateral cross worn by the Assyrian kings, which was produced by pairing the rays of the eight-rayed sun disk.¹²

When one finds the cross linked with the scorpion, the ram, the goat, and perhaps with others of the series, one wonders whether this use might not have been based originally upon and developed from a zodiacal symbolism, rather than as direct Christian influence.

That Christianity extended into this region at this time is pretty well established. Hastings¹³ states that the kingdom of Edessa was Christianized early in the first century. A fourth-century tradition, based upon an earlier one, has Judas Thomas, the Apostle, send Addai eastward to the region of Mesopotamia. Following Mshiha Zkha he considers that Christians were probably in Assyria in the second century, for Tatian, in his letter *To the Greeks*, says he was born there.

Perhaps the most convincing evidence of Christianity in the region of Atlis comes from the dialogue of Bardesanes, born 154 A. D.¹⁴ "Neither do the Christians in Parthia marry more than one wife, being Parthians, nor do those in Media expose their dead to the dogs, nor do those in Persia marry their own daughters, being Persians, nor do those in Bactria have divorce."

All this, of course, still leaves the question open for discussion. Christianity was known in the region at the time of and probably a little earlier than the period in which the earlier coins were struck. At the same time, the presence of the cross in the pottery stampings does not necessarily imply a Christian usage.

Another interesting trait is reported from Kushaf,¹⁵ where, in association with stamped pottery, sherds with the sweeping finger-furrowed design—found in the soundings near Yorgan Tapa (Pl. 141, O; Pl. 142, A)—occur with a slightly different technique.

In reference to glazed pottery, Sarre and Herzfeld¹⁶ speak of "so-called Parthian" ware which they describe as thick-walled vessels with a thick, green-blue glaze which

⁹ Sarre, *ibid.*, p. 10.

¹⁰ Sarre and Herzfeld, *ibid.*, p. 226.

¹¹ James Hastings, *Encyclopedia of Religion and Ethics*, 1908, Scribners, New York, Vol. IV, p. 324.

¹² As an illustration from the soundings, see Pl. 136, E, H. In E notice the cross, and in H the sun disk above the animals' backs. Pl. 137, E, stamped figures and crosses from neighboring mounds.

¹³ *Ibid.*, Vol. XII, pp. 169, 170.

¹⁴ A. Harnack, *Die Mission und Ausbreitung des Christentums, in den ersten drei Jahrhunderten*. Leipzig, 1902, p. 442, footnote 4.

¹⁵ Sarre, Herzfeld, *Ibid.*, Vol. IV, p. 9.

¹⁶ *Ibid.*, 4-6.

cracks and comes off the sherds quite easily. Some of the glazed fragments found near the surface on Yorgan Tapa display this characteristic. This type of glazing persists, becoming thinner and clearer in early Mohammedan times. The earlier phases they call Partho-Sassanid. The later types show a combination of incision and plastique decoration with glazing. This does not appear in the material under discussion. Pl. CXLII, No. 16, figures a flask from Hillah which resembles those from Graves 13 and 88. Figures 2A, 2B, and 3 also resemble the material from the graves.

That the Yorgan Tapa burials are not true Parthian in type is certain. The coffins were of the open type and no slipper types occurred. Pillet's¹⁷ brief description of the Parthian graves at Tell Amran and on the left bank of the Euphrates below Babylon furnishes no clues. Dieulafoy¹⁸ figures and describes Parthian coffins which also bear no similarity to the material in hand.

Unquestionably the culture of the region during this period was made up of various factors. That Roman influence was present is attested by the glassware. Kisa¹⁹ mentions Caesar and Ptolemaic glass found by Layard at Nineveh, Kouyunjik, and Babylon. He suggests the preliminary introduction of glass into Persia by Alexander, with a later influx probably brought in by Roman gentry from Syria.

The most striking similarities and relationships are found in the provincial Roman cemeteries along the Rhine. These belong to the first four centuries A. D. Near Köln graves with pots near the head, glass bottles, plates, tear-bottles, coins, and ornaments occur. From the description of the glassware, it seems more elaborate than the Mesopotamian material. Occasional ribbing (cf. Pl. 140, O, P) and gold and yellow paint (one fragment found associated with Tomb IV, Sounding 1) are mentioned.

In his Fig. 51, Kisa²⁰ shows an incinerary flat grave of the first century A. D. The urn, bowl, pitcher, cup, and flask are closely packed therein, but the significant detail lies in the covering which is formed by two large tile slabs leaning against each other to form a pitched roof. Although the grave lacks a cist construction, a certain degree of parallelism with Graves 15, 99 and 105 is obvious (Pl. 36, A; Pl. 37, A, B, C).

Even more important is the cemetery of Luxemburg Strasse where a transition from incinerary graves to coffin burials is effected by means of an intermediate stage of stone cist burials. When the cists and coffins were too small, the jar was placed outside at the feet. Grave 15 also has the jar outside—but at the head. Graves 5, 13, Pavement II, Sounding 1, and Tomb I, Sounding 1, lay with their jars at the foot. The German offerings were, of course, more typically Roman. With the Christianizing of that region, the richness of the offerings declined, though some still persisted.

Tear-bottles, according to Kisa,²¹ are typically Roman, as are glass handles made up by fusing a bent glass rod to the lip and body of a vessel and rolling the upper free segment backwards in decoration. Examples of tear-bottles (Pl. 140, K) are found in the Yorgan Tapa cemetery as well as the glass handle on the pitcher from Grave 41 (also see Pl. 140, J).

Ribbing of glassware (Pl. 140, O, P) was known in Rome in the first century A. D., but did not reach the Rhine until the third century. Kisa, however, reports a wide and rapid diffusion for this character.

The coffin, cist, and roofed incinerary graves, then, as well as the similarities in glassware, are highly suggestive of a strong Roman influence.

Lamm,²² in writing on the Samarra glassware figures, describes a few fragments which seem comparable to the glassware of Yorgan Tapa. He concludes that this glass

¹⁷ Maurice Pillet, *L'Expédition Scientifique et Artistique de Mésopotamie et de Médie, 1851-1855*. Paris, 1922, pp. 71, 72.

¹⁸ Marcel Dieulafoy, *L'Art antique de la Perse*, Paris, 1889, Vol. V, pp. 35-36.

¹⁹ Anton Kisa, *Das Glas im Altertume*, pp. 101-105.

²⁰ *Ibid.*

²¹ *Ibid.*, p. 316.

²² C. J. Lamm, *Samarra*, Vol. IV.

is pre-Fatimid; and, like all Early Islamic pottery, is bound up with "Late Antique."

It seems, then, that the evidence points to continuous occupation throughout the latter half of the second and the major part of the third centuries A. D. by the people of the later culture found at Yorgan Tapa. The five coins referred to by Pfeiffer and that in Grave 8 undoubtedly afford the best evidence. Contemporaneous Roman factors found along the Rhine, bearing a striking similarity to those of the region under discussion, furnish strong support. The other factors, such as glazed and stamped pottery ware, show Parthian and Sassanian-Zoroastrian survivals which lasted from the Late Antique through the Early Islamic periods.

In his chapter discussing the later material from Yorgan Tapa, Mr. Starr calls attention to the persistence of basic Babylonian forms and designs in the common ceramics. Since pottery is usually one of the most conservative elements in a culture, the implication is that a relatively static population, dating back at least as far as Babylonian times, came successively under the influence of a series of nations and empires. It is from the survival of traits acquired from the cultures characteristic of these political groups that the complex of late elements is formed.

At Yorgan Tapa, then, we are dealing with a people of the third century A. D., probably transitional from Parthian to Sassanian in period, who may or may not have been Christians, and whose culture seems Sassanian based upon a Babylonian tradition which had already been much modified by Zoroastrian and Parthian contacts, and which was also strongly colored by contemporaneous Roman influences.

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APPENDIX F

LATE CEMETERY CRANIA

BY

ROBERT W. EHRICH

The cemetery overlying the Nuzi level on Yorgan Tapa has been described in Appendix E, in which the graves have been roughly dated as Third Century A. D. Although the skeletal material was, for the most part, in poor condition, it was found possible to preserve some twenty-seven crania or parts thereof. These, as well as the records of their measurement and observation, are now stored in the bone laboratory of the Peabody Museum of Harvard University and will be made available to anyone wishing to examine them further. Their catalogue numbers run from N/97 to N/125. N/108 and N/113, however, consist merely of scattered foot and animal bones and are not discussed in this paper.

While the present skeletal material from Mesopotamia is not great in quantity, several small series from different periods have been studied. These include the Fourth Dynasty Graves of Kish and the Kish Neo-Babylonian W-Graves published by Buxton, and more extensively by Buxton and Rice; the pre-Flood Y-Graves from Kish, partially described by T. K. Penniman; the Early Fourth Millennium skulls from al-'Ubaid and those from the Third Dynasty of Ur published by Sir Arthur Keith; and the few specimens from near Babylon, considered by Layard to be Seleucid or Parthian in date, which were measured by Dr. E. T. Hamy.

In general it can be said that these groups present a striking picture of the uniformity and stability of a racial type which existed in a relatively large area over a very considerable period of time. The Yorgan Tapa series is no exception, and coincides with the results obtained by Keith and by Buxton and Rice.

There are, of course, certain differences which need to be mentioned, but, as at Kish and Ur, the skulls from Yorgan Tapa are dominantly of the large, muscular and evenly arched dolichocephalic type which Buxton and Rice call Eurafrican, and which Deniker classifies as Atlanto-Mediterranean. In the studies of the Kish and Ur crania attention has been called to the fundamental likeness between the material of the two sites in their various periods, and between the skulls of Mesopotamia and those from Predynastic Upper Egypt which have been published by Morant and Fouquet. Buxton goes even farther afield and cites certain comparisons with Risley's material from Northern India. Both observers, furthermore, consider the modern Arab inhabitants of Mesopotamia and the Bedouin in general to belong to the same general strain, although somewhat modified, a conclusion which is further substantiated by a series of observations on a limited number of Arabs living near Yorgan Tapa and which, though it is later to be published separately, has already been cited as comparative data by both Coon and Shanklin.

In addition to Seligman's paper *Physical Characters of the Arabs*, which Keith mentions, attention should be called to the same author's study *Some Aspects of the Hamitic Problem in the Anglo-Egyptian Sudan*. The measurements of Verneau on thirty-eight Touareg nobles are also of interest in regard to the North African ramifications and survivals of this type. With the foreign, modern, and local relationships of the published series already fairly clearly indicated, however, an elaborate general discussion would here be futile and out of place.

Keith at Ur and al-'Ubaid sees no brachycephalic elements and he believes that the diversity of head-form found by Buxton at Kish may well be the result of individual variation in a fundamentally homogeneous type. Buxton, on the other hand, definitely notes three types as present: Eurafrican, Mediterranean, and Armenoid. The Mediterranean skulls he describes as being fairly easy to distinguish from the Eurafrican, primarily by their more rounded contours and weaker musculature.

While at first glance the Yorgan Tapa series shows no obvious brachycephaly, the series does divide readily into what seem to be rather clear-cut Mediterranean and Eurafrican types. A closer examination, however, leads inevitably to the conclusion that, in this series at least, the skulls provisionally classified as Mediterranean undoubtedly represent the females of a Eurafrican series.

Although there is no frank brachycephaly apparent, the swelling of the parietal regions in Nos. N/98, 102, 106, 110, 117, 125 does suggest the possibility of some slight modification due to a broader-headed element, which by this time had been absorbed by the local population. The series is, however, overwhelmingly Eurafrican in general type, and there is no trace of the proto-Nordic strain which Buxton recognizes at Nineveh, but which he does not find at Kish.¹

METHOD OF PRESENTATION

The metric data and indices are presented in the usual tabular form, with a mean for the measurement appended below. Figures which are at all doubtful are indicated by a question-mark and are not calculated in the mean.² The number of measurements possible for any given dimension is so few as to render any more elaborate statistical treatment invalid, and even seriously to affect the value of the mean itself.

Below the mean have been added comparative data drawn entirely from published sources, and when indices and means were not given the author has taken the liberty of computing them from the raw data and including them.³ In each instance the number of occurrences has been noted and is represented by the small figure in italics. For the most part these series are also very small, and it must be kept in mind that many of the variations between the groups are, for this reason, more apparent than real.

The data thus listed are taken from archaeological skeletal material found in the Mesopotamian area. Since the Y-Graves from Kish are unsatisfactorily published, and since only a portion of them have been studied, they have not been utilized. The measurements of the isolated mandibles from the A- and W-Graves of Kish, which Buxton lists, have also been excluded, for there was no estimation made as to their probable sex and it is therefore impossible to group them even tentatively. While a complete determination of sex for the two series is impossible on the basis of mandibular measurements alone, it can be said that the presence of at least a few females is strongly suggested. This indication of a mixed group rules out the jaws as comparative material. The modern Arab skulls described by Hamy and offered by him in comparison with his Seleucid-Parthian material have been omitted, for they show more modification than any of the series here represented.

¹ Lebzelter, in his discussion of eleven modern skulls from Persia, records this proto-Nordic strain as present as well as the occurrence of the Eurafrican type.

² Exceptions have been made in the calculation of the cranial module, where one doubtful measurement was permitted and the result marked with an interrogation point.

³ In the working of the comparative data the same principle was applied, unless there were no unquestioned measurements, such as in Buxton's observations of the Kish A-Graves where the basion-bregma height was involved. In such contingencies the questioned data were used and indicated accordingly.

Morphological. In the study of crania many impressions, such as that of physical type, age, sex, etc., are arrived at by a consideration of characters not capable of measurement. Careful observation of these characters contributes materially to our gross knowledge of racial, sexual, individual, and pathological variation, and helps to define the appearance of any given skull or group of skulls.

Instead of attempting to give a separate verbal description of each individual skull, the raw data of the observations have been coded and arranged in tabular form in order to facilitate the comparison of any given observation throughout the group by reading the designated column vertically, and to aid in a definitive picture of any single skull by reading horizontally along the given line.

The standard of comparison is the skull of a North European middle-aged male. In the scheme here followed 0 = absent; 1 = traces, very small, very poor, very few, etc.; 2 = small, sub-medium, poor, few, etc.; 3 = medium, fair, several; 4 = large, many, good, pronounced; 5 = very large, very many, excellent, very pronounced. In combinations of number and size the number is expressed by the figure, and the size by the qualitative equivalents: 0 = abs.; 1 = Ssm.; 2 = Sm.; 3 = +; 4 = ++; 5 = ++++. Two small foramina, for instance, would be described as 2 Sm.⁴

It should be kept firmly in mind, however, that this treatment must necessarily be more subjective than that of purely objective measurement. These figures are not exact constants, but are the expression of a personal judgment and, as such, they are more open to challenge than any series of precise metrical data. It would be extremely misleading to attempt to ascertain mean numerical values for these observations and from these means to draw conclusions. It is, on the other hand, far easier and more satisfactory to examine a table of figures than a series of verbal descriptions.

CRANIAL CHARACTERS

Male skulls. Metric. In view of the small size of the groups cited for comparison in the tables, a detailed analysis of each measurement individually and the exact position of the Yorgan Tapa series would be of small value. The material is presented in the table and only a few specific comments are necessary.

In length, breadth, and cephalic index the Yorgan Tapa crania come very close to the measurements of the Kish A-Graves, but in the measurements of height they approximate more nearly Keith's series from Ur and are considerably higher than the other groups. Heights, both basion-bregma and auricular, usually tend to show considerable individual as well as serial variation. With such small numbers of observations, therefore, it is not surprising to find considerable diversity in the basion-bregma heights, particularly since, in his A-Graves, Buxton listed every instance as questionable. The length-height indices are fairly uniform, but the relative narrowness combined with the greater height of the Yorgan Tapa crania brings the variable breadth-height index closer to the high value of the Ur series. For the auricular height it is interesting to note that Buxton's figures for Kish are considerably higher than those of Keith and those of the Yorgan Tapa series, although his basion-bregma readings are lower. The auricular height-length index follows the same trend, but with an almost exact coincidence between the indices for Yorgan Tapa and for Ur.

In absolute breadth the minimum frontal diameter of the entire group is narrow, but the Yorgan Tapa series is near the broader end of the list and close to the al-'Ubaid skulls. In the fronto-parietal index, however, which indicates the proportion of the forehead to the breadth of the skull, there is a virtual identity between the Yorgan Tapa

⁴ This method of coding and recording morphological data is the one practiced by Professor E. A. Hooton in the Division of Anthropology at Harvard University.

and the Kish A-Graves. In this regard it is interesting to note that there are nine of these indices recorded for each of the two series.

Since the crania under discussion were extremely fragile and usually already damaged, it was deemed unwise to attempt to take the cranial capacities by measurement, and since the calculation of them by formula can only be considered as valid when a large number are under consideration, an approximation of size for all the series was reached by working out the cranial module, which is the mean of the maximum length, breadth, and basion-bregma height. Here again the resemblance is closer to Keith's figures than to Buxton's. The maximum circumference again coincides closely with the Kish A-Graves and with Hamy's Parthians. The nasion-opisthion and transverse arcs run higher than in Buxton's crania, and I have not been able to find them given by Keith. The mean diameter of the foramen magnum is not low.

In general it would seem that in the mensurable characters of the male skulls the Yorgan Tapa crania are closer to the Kish A-Graves and the Ur groups than to the al-'Ubaid, Kish W, and Hamy's Parthian series.

Female skulls. Metric. In length, breadth, and cephalic index the Yorgan Tapa crania again find their closest parallel with the Kish A-Graves, the al-'Ubaid series varying solely by reason of its greater breadth. For the basion-bregma height, however, Buxton's figures are high, and the closest parallel would seem to be the three females from al-'Ubaid. Owing to the greater breadth of the al-'Ubaid crania, and the greater height of the Ur and Kish skulls, the Yorgan Tapa group is closer to the Ur skull in its length-height index and to Hamy's Parthian in breadth-height proportion.

The minimum frontal is uniformly low in all groups and, although there is an exact duplication between the Ur and the Yorgan Tapa skulls, the range of the groups is so slight as to be negligible. Again, however, the fronto-parietal proportion is significantly similar to the Kish A-Graves. The auricular height is definitely low, and the cranial module is somewhat less than the comparative material with the exception of Hamy's single skull. Conversely, the maximum circumference is somewhat higher than in the Kish A-Graves, as is the transverse arc. The sagittal arc, on the other hand, is considerably less.

Sex differences. It will be noticed that the cephalic index of the female skulls runs some three points higher than that of the males, which is more than the normal expectation of sex difference. With one skull of each sex showing an index of 79, and with only three females involved as against nine males, this difference is not necessarily significant.

The length and breadth reductions of 11 and 6 mm. respectively are not surprising and show parallels in the comparative groups. The reduction of the basion-bregma height by more than 10 mm. is somewhat greater than that found in the other series, Buxton's two females registering 8 mm. higher. The height-length index, however, shows a sexual difference of less than one point, suggesting that the female reduction is not abnormal. The breadth-height index, while exhibiting a three-point difference, is seriously affected by the relatively greater maximum breadth of the females, which has already made itself felt in the cephalic index.

The thickness of the parietal bones is the same for both sexes and indicates a rather heavy bone structure. Thicknesses of 7 mm. are not infrequent. The minimum frontal diameter again shows a sexual diminution in absolute measurement which is invalidated by the closeness of the means for the fronto-parietal index. Practically the same can be said in regard to the auricular height and the auricular height-length index, for although the latter exhibits almost a two-point difference in proportion, there are only three in the female group for this index, and both Keith's Ur crania and Buxton's A-Grave single female reading show a like sexual difference.

The cranial module shows a marked decrease in the gross size of the female skulls. This coincides with the reduction of all the measurements involved and is closely paralleled by the Ur example. The smaller size of the females also appears in the lesser lengths of the sagittal and transverse arcs and in the smaller size of the head circumference.

As stated above, on the basis of these measurements there is no reason to suppose any but a sexual difference between the two groups, with a broadening element possibly, but not necessarily, making itself felt. There is nothing to indicate the presence of a clear-cut Mediterranean type. In general we are dealing with such insufficient data that comparisons of difference between these and the comparative series have little or no meaning. It is the fundamental likeness throughout which is striking.

FACIAL CHARACTERS

Male skulls. Metric. If the state of preservation of the cranial portions of the skulls under discussion was such as to present an insufficient number of data for each measurement, the damaged condition of the facial portions affords evidence which is even scantier and less satisfactory.

In gross measurement the facial length is slightly less than in the al-'Ubaid series and considerably below that of Ur. There has been no correction made for tooth wear, nor for alveolar absorption. No. N/125, for instance, is essentially short-faced, but its length has been further reduced by these factors. The bizygomatic diameter falls closest to Hamy's three Parthians and is intermediate between Keith's two groups. The facial and upper facial indices as well as the bizygomatic diameter show a fair relative and absolute breadth falling nearest the Ur skulls. This substantiates the morphological observations on the size and lateral extension of the malars, discussed below and apparent in the tables of observations. The upper facial height of the Yorgan Tapa series assumes an intermediate position among the groups cited, and is well above the low figure given for al-'Ubaid. In the cranio-facial proportion of width these skulls are again most like those of Ur.

That they are distinctly orthognathous is well attested by the lowness of the gnathic index, which is again duplicated at Ur. There is, however, a certain degree of alveolar prognathism present; it is shown in the morphological observations. This consists merely in the splaying outward of the alveolar border, causing a forward projection of the teeth. Structurally it does not seem to affect the antero-posterior proportions of the face.

The nasal aperture is somewhat shorter than in the other groups and it is relatively narrow, falling closer to Hamy's Parthians than to any of the others. For such a variable index, however, there is surprisingly little difference shown by the various series.

The size of the orbits is apparently smaller in the Yorgan Tapa skulls than it is in the Ur series. The orbital width has been measured from dacryon. In a comparison of the orbital indices, the Yorgan Tapa skulls take an intermediate position with a value indicating a good height proportional to breadth, without approaching the figures present when the orbits of a series are dominantly round or square.

It is interesting to note that the interorbital and biorbital breadths, as well as the biorbital index, run low. When this is considered in relation to the relatively high bizygomatic breadth one gains the impression of an essentially narrow face combined with heavy and laterally projecting malars. This is in complete accord with the general appearance of the face, and is further demonstrated by the morphological observations.

The palate is large and well formed.

Female skulls. Metric. The mensurable data for the female crania are even more scanty than for the male. The bizygomatic diameter seems greatly reduced from the male readings and again seems most like that of the Ur skulls. The total facial height

is somewhat greater than the Ur specimen and markedly longer than those of al-'Ubaid. The Yorgan Tapa crania also show a greater upper face height, approached most closely by Ur. The upper face index, however, suggests a greater uniformity in proportion with Buxton's single A-Grave example, which is definitely smaller in gross size. For such scattered and small constants, however, it is again the likeness rather than the difference which is surprising. The cranio-facial index, however, is rather high and, as in the males, indicates a good breadth to the forehead as related to the width of the skull.

The gnathic index is again low, confirming the orthognathism of the males.

The height of the nasal aperture coincides closely with that of Buxton's A-Grave measurement and with Keith's three skulls from al-'Ubaid. The greater width found by Buxton, however, gives a closer approximation between al-'Ubaid and Yorgan Tapa in the nasal index, and a great divergence in the Kish skull.

The orbits of the female skulls show a similar height and less width than do those of the males. In proportion their indices run considerably higher. The Ur and al-'Ubaid crania show lower and broader orbits. The interorbital and biorbital diameters and the interorbital index are again lower in the Yorgan Tapa skulls than in the series with which they are compared, with the exception of Hamy's single Parthian example.

Sex differences. In addition to their slightly smaller facial size, as exhibited in their absolute measurements, the female skulls show certain slight differences in their indices of proportion. These, for the most part, are probably caused by insufficient numbers in the groups. Thus the two-point difference in the upper facial index is rendered insignificant by the fact that only one female is represented. The two-and-one-half-point difference in the gnathic index suggests a very slightly greater degree of prognathism among the feminine portion of a very orthognathous population. The transverse index of the nasal bones suggests a straighter-sided and less flaring female nose. There are, however, only two examples represented among the males. The orbits are relatively higher in the female group, and the palatal index is higher, indicating a greater relative breadth.

Mandibles. The jaws from Yorgan Tapa are considerably shorter than those from the Kish A-Graves and correspond with the single measurement obtainable in the Ur series. The condylo-symphysial length is approximately the same for the females as for the males. There are, however, only two recorded for the females. The bicondylar width, which was obtainable on only two of the Yorgan Tapa mandibles, is considerably greater than the width of three of the A-Grave jaws. In the height of the symphysis the male mandibles are closest to the Kish A-Grave specimens, while the females fall between the Ur and al-'Ubaid samples. In bigonial diameter the males hold an intermediate position in a very limited range. The single example falls below the Ur and al-'Ubaid readings. The figure for eight of the Kish A-Grave males runs distinctly lower than that for the other groups and indicates a narrower jaw. Otherwise there is little difference among the series.

The height of the ascending ramus again falls below the Kish A-Graves and is closer to the Neo-Babylonian, while the height of the Yorgan Tapa females is very low. The minimum breadth of the ascending ramus is rather heavier than in the Kish series, the means for both the females and males giving higher readings.

Compared with the other groups, then, the jaws of the Yorgan Tapa series would seem to be of normal massivity, relatively short, possibly quite broad, with a low, broad ramus and rather a wide angle between the ramus and the body of the jaw. This last character is commonly found in conjunction with long faces and with long skull bases.

Comment. In general it can be said for the measurements of the face as well as for those of the skull that there is a surprising similarity, not only between the females and males of the Yorgan Tapa series, but throughout the crania in all the series cited.

While the relationship of these skulls to the other groups varies with each character, it is interesting to observe that in the greatest number of factors the closest correspondence is with the Neo-Babylonian group from Ur and with the A-Graves of the Fourth Dynasty at Kish. Although Hamy's Parthians are nearest the Yorgan Tapa series in date, they are not the closest in physical type.

MORPHOLOGICAL OBSERVATIONS

Head form. The trend in the male skulls is toward a somewhat pentagonoid shape produced by a swollen parietal region superimposed on a long ovoid or ellipsoid form. The excessive length combined with the broadened parietals seems to be a disharmonic factor which is, to some extent, compensated by a moderate flattening of the lambdoid region. The rather more ovoid female crania also show this flattening.

The male skulls in particular exhibit a certain degree of scaphocephaly, the sagittal line rising to a crest and the parietals flattening somewhat on the top, particularly in the area anterior to the eminences. This flattening often grades into or is associated with a post-coronoid depression which, in this series, is most often broad and shallow. The females, on the other hand, usually have slightly more rounded contours and are slightly less scaphoid.

Seen from the side, the crania are long and evenly arched, or somewhat flat-topped, with either a rounded, slightly projecting occiput, or one which falls rather steeply away before curving under. The highest point frequently occurs at about one-third of the distance from bregma to lambda. The face is distinctly orthognathous.

In rear view the skulls are broad and well built at the base and rise vertically to the parietals, which arch angularly to the scaphocephaly mentioned above.

The face is moderately narrow beneath a normally broad skull. The wide lateral extension of the malars, however, gives a false impression of massivity and makes for a rhomboidal facial shape.

Frontal region. The supraorbital ridges are median in type, strongly developed in the males and quite weak in the females. The latter statement is valid also for the size of glabella, though in the females it is relatively more prominent than the brow ridges. The male forehead is usually normal in height, breadth, and slope, but in the females it seems relatively narrow. Worthy of special mention is the extremely primitive frontal bone of N/112 (Fig. 1). The supraorbitals and glabella are very strongly developed and project in a torus. The forehead is of medium breadth, but it is extremely low and sloping. Its other characters are more in the usual range, and it has a large and well-formed cranial vault.

The frontal bosses are, for the most part, fairly well developed and there is usually at least a trace of a median crest. Among the males the metopic suture is represented with great frequency by a trace above nasion, while in the female group it is less common. There are two instances of the suture remaining almost completely open, a character which is rather striking in such a limited series. The constriction behind the orbits is somewhat more pronounced than might be expected among the males, and runs to normal in the female group.

Parietal region. With the exception of a few instances where the parietal region shows the possible traces of a broad-headed influence by the somewhat swollen appearance of the eminences, the general breadth of the parietal area is rather low. As remarked above, there is usually some degree of scaphocephaly, which is marked by the elevation along the median sagittal line. A post-coronoid depression is common and although the parietal bosses vary from small to large they are usually not pronounced. Parietal foramina are frequently absent, and range from small to large. They are com-

monly two to three in number, and the five recorded for N/111 is unusual. There is no essential difference between the males and females in regard to the parietal area, though the males show a considerably greater degree of asymmetry and the females may be slightly less developed.

Temporal region. In the forward part of the temporal area there is no great degree of fullness and the skulls seem rather ill-filled than otherwise. The rear portion of the temporal where it joins with the occiput is fuller, the crania are broad and square to the occipital basal view. The temporal crests are larger and more developed in the males than in the females and exhibit a considerable development of musculature. The same can be said for the supra-mastoid crista and the mastoids. The sphenoidal depression also tends to be greater in the males.

Occipital region. The posterior curve of the occiput is well rounded in most cases, but occasionally it falls steeply away, the curve breaking slightly at the occipital torus, which is sometimes sufficiently marked to affect seriously the normal rounded contour. The highest, superior, and inferior lines which indicate the attachment of the nuchal muscles, while frequently weak, show a marked superiority in the male skulls and are usually well developed. Inion is small in both sexes and with two exceptions the occipital torus, when represented at all, is small or limited to a trace. Nos. N/107 and N/125 exhibit a very strong muscular development in both the temporal and occipital areas.

There is usually some degree of flattening at lambda, and so no true occipital flattening is present. A complete occipital transverse suture is present in one instance, and is partially indicated in two others.

It is interesting to note that there is no sexual difference in the observations just cited, with the exception of those factors in the temporal and occipital areas which are directly affected by muscular development.

Although the sutures are not, as a rule, very complicated, small Wormian bones occur frequently in the lambdoid sutures. No. N/111 has an Inca bone which is formed by the complete transverse occipital suture already mentioned.

Basal region. The form of pterion is most often H among the males, with an occasional K form. The median occipital fossa varies considerably, but in several cases there is a large, flat triangle which is often raised rather than depressed. This is essentially a primitive character and is not a true fossa. The condyles are, as a rule, normally elevated from the base of the skull although in some cases they are low. The anterior border of the foramen magnum is usually somewhat everted, resulting in a pronounced elevation of basion in relation to the surface of the basilar process of the occipital and the rim of the foramen magnum, but in two of the females this eversion is represented by merely a trace. The character itself is worthy of mention, for the degree to which basion is elevated affects the measurement of the basion-bregma height.

In size and number the various foramina are not unusual, and the logical assumption is that the cranial blood supply was normal. The styloid processes are well developed, with a tendency among the females to be somewhat more slender. This sex difference, indicative of lesser muscularity, is further seen on the surface of the basilar process where the pharyngeal fossa and tubercle are better developed among the males than among the females.

The glenoid fossa is deep in both sexes, and the post-glenoid process is often pronounced. The tympanic plate, although sometimes thin, is usually normal in thickness and the shape of the auditory meatus is predominantly oval with an occasional exception, which is round.

The depression of the petrous parts of the skull is frequently very marked and

corresponds to a pronounced elevation of the basilar process of the occipital bone. This high relief of the skull base is indicative of a well developed brain.

The pterygoid basal foramina are present in varying degrees and the pterygoid fossa, so far as can be determined from the rather damaged evidence, is usually surprisingly well marked in the males and somewhat less so in the females. The lateral extension of the pterygoid plates, particularly the external ones, is suggestive of a strong masticatory apparatus and corroborates the evidence of the temporal crests and the strength of the zygomatic arches. It is interesting to note that the pterygoid attachments at the mandibular gonial angles, while somewhat weak in the females, confirms the other evidence for strong jaw muscles among the males.

Facial. As already indicated in the discussion of the metric characters, the orbits tend to be high relative to their breadth. Their form is affected by the marked lateral extension and angularity of the malar bones and they are consequently more often rhomboidal than square. Oblong, round, and elliptical forms are infrequent, and there is usually a considerable external downward inclination of the horizontal diameter. The articulation of the lacrimal and ethmoidal bones is normal, and the infraorbital suture is frequently represented in its facial and orbital aspects to some degree on at least one side. In several cases, however, it is completely absent.

The suborbital fossae are characteristically shallow, and in the majority of instances where a greater depth occurs there is a definite correlation with a marked absorption of the alveolar borders following the loss of teeth.

The malars are normal in size, those of the females being considerably lower than the males in their vertical height and width. In both sexes the anterior projection is normal, while the lateral projection is very pronounced. The marginal processes indicative of muscular development are marked in the males and less so, but more variable, in the females. In both sexes the zygomata are heavy and strong with a marked vertical and lateral bowing in the males and again with a more variable and somewhat less degree among the females.

The depression at nasion is very slight among the female skulls and is moderate among the males. Both the root and bridge exhibit a good height and breadth with no marked characters. In the few cases where it is at all indicated, the nasal profile is apparently concavo-convex and suggests the moderately aquiline type found frequently among the modern Bedouin. With such scanty evidence it is difficult to draw conclusions, but in the few instances where the nasalia were preserved an unusual broadening at the lower borders, which might be indicative of the heavy Armenoid beak, is lacking.

The nasal aperture is quite high, except when the whole face is short, and it has a moderate breadth. The nasal sills are well developed and in three cases there are strong inner marginal crista. The nasal spine is normally large in both sexes, and subnasal grooves are frequently represented by a light trace.

The total degree of prognathism is very slight. There is an occasional trace of puffiness in the mid-facial section, but the whole face does not project markedly forward. The alveolar borders of the maxilla do frequently splay forward to a moderate extent, but exact observation of this factor is sometimes rendered difficult by the amount of absorption of the borders subsequent to loss of teeth, nor are these borders invariably in a perfect state of preservation.

The palate is commonly parabolic in shape, although it is sometimes elliptical. It is usually high and large with a moderate to strong development of the palatine spicules. The size of the palatine torus is moderate and it is usually in the form of a ridge. The direction taken by the transverse suture is most frequently transverse, but a posterior course is far from uncommon, and in one example it runs forward. The post-nasal spine is well indicated in the males but is less prominent among the females.

The mandible is not particularly large, although in the male there is frequently considerable depth to the body, and the ramus tends to be broad. The female jaw runs somewhat lighter. The chin is more often median in type with some bilateral ones occurring among the males. It usually has a good forward prominence and though lighter in the female jaws it has a relatively greater jut. The degree of alveolar prognathism in the mandible corresponds roughly to that of the maxilla and the genial tubercles are large but normal. The only indication of any strong degree of muscularity in the mandible is seen in the development of the mylo-hyoid ridge. The pterygoid muscle attachments at gonion, as stated above, are only moderately rugged while the gonial angles show a marked eversion in the male jaws and are relatively flat and unverted in the females.

The teeth are usually good in quality, but excessively worn. This was also found to be true of Kish, Ur and 'Ubaid skulls. Caries are present, though not in an unusual degree, and abscesses, while occurring frequently, are numerous and large in only two cases. There are some indications of pyorrhea, and shovel incisors are occasionally present. The degree of overbite is usually moderate rather than great, but edge-to-edge occlusion sometimes occurs. Some crowding may take place in the incisor region, but its presence is sporadic and it is usually slight.

Pathological. The observable pathology in the skulls of this series is not marked and is of little significance. In three instances a slight button osteoma is present, in N/97 and 118 it occurs on the right side of the frontal bone, and in N/111 it is on the right parietal. On the sagittal line just above lambda in N/121 is a swelling which may be the result of another osteoma.

It is interesting to note that in each case where a definite osteoma is present further pathology is suggested. In N/97 the bone tissues of the parietal bone is unusually spongy in character. The frontal bone of N/111 exhibits two scars which may well represent pus channels, and in N/118 there are arthritic flanges along the inferior occipital line, pus channels behind the left mastoid, a perforation behind the right mastoid, and there is a slight thickening of the left tympanic plate.

The tympanic plate also shows some pathological irregularity. Besides the thickening noted in N/118, there is a slight exostosis on the left side in N/106 and an apparent hyperostosis in N/124. In N/123 the tympanic plate and the whole ear region is pitted, and there are dehiscences at the base of the sphenoid bone as well.

Abscesses of the teeth are indicated in Table VI. Special attention, however, should be called to N/112, in which not only are the abscesses of the teeth unusually marked, but also three pits occur on the inner surface of the right parietal. The possibility of a correlated infection is worth suggesting. In N/119 marked abscesses occurring in the lower jaw have lowered the molar region so markedly that the mandible gives a false impression of lightness.

In relation to the teeth it should also be mentioned that in N/110 the tartar accretion on both the inner and outer surfaces is so heavy that it forms definite plate-like shelves. This is the most marked of all the cases in which tartar is present, and in this instance the alveolar borders show considerable reduction and thickening, which is apparently indicative of pyorrhea.

Summary. In conclusion there is little that need be said. A comparison of skulls from different archaeological sites and dating from various periods shows an indubitable stability and uniformity of the Eurafican physical type as the basic factor in the population of Mesopotamia. It can be said with a considerable degree of certainty that this type was paramount from at least as early as the Early Fourth Millennium at al-'Ubaid and lasted in a relatively unmodified condition until at least as late as Parthian times. It is still dominant in the region, but at present it does not seem quite so pure.

The metric characters of the crania from Yorgan Tapa identify this series with the less modified representatives of the Eurafrian stock. The morphological tables and analysis confirm the rather more general descriptions of the skulls of the series selected for comparison and, it is hoped, contribute a slightly more definitive picture of the specific characters of a group of crania which are Eurafrian in type.

June, 1937.

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TABLE I—MALE SKULLS; CRANIAL MEASUREMENTS AND INDICES

Number	Maximum Length	Maximum Breadth	Cephalic Index	Basion-Bregma Height	Height-Length Index	Height-Breadth Index	Parietal Thickness	Minimum Frontal Di.	Fronto-Parietal Index	Auricular Height	Auricular Ht.-L. Index	Cranial Module	Maximum Circumference	Arc: Nasion-Opisthion	Arc: Transverse	Mean Di. Foramen Magnum
Formulae	A	B	$\frac{B}{A}$	C	$\frac{C}{A}$	$\frac{C}{B}$	D	E	$\frac{E}{B}$	C ¹	$\frac{C^1}{A}$	A+B+C				
N/97	183 [?]	6	93	...	...	...	3	...	...	...	...
N/98	...	...	...	...	...	...	5	...	...	...	...	...	...	...	...	...
N/100	...	...	...	...	...	...	5	85	...	...	...	...	...	...	...	...
N/103	192	130	68	...	...	...	6	95	73	123	64	...	520	...	319	...
N/106	174	137	79	...	...	...	7	...	...	120??	69?	...	...	380	340?	...
N/107	...	...	...	...	...	...	7	...	...	...	...	...	...	...	...	...
N/110	...	...	...	...	...	...	5.5	105	...	...	...	...	...	...	...	...
N/111	187	129	69	133	71	103	6.5	93	72	116	62	150	512	380	300	31
N/112	195	143	73	141	72	99	6	92	64	116	59	160	525	375	312	38
N/115	185 [?]	133 [?]	72 [?]	5	91 [?]	68 [?]
N/117	...	...	...	...	...	...	5.5	105	...	...	...	...	...	...	...	...
N/118	194	140	72	142	73	101	5.5	101	72	118.5	61	159	529	395	325	33
N/121	197	136	69	141	72	104	7	100	74	115.5	59	158	540	400	314	32.5
N/123	194	133	69	152	78	114	4.5	103	77	121	62	160	530	...	324	...
N/124	190	134	71	...	...	...	5	97	72	116??	61	...	507	...	...	...
N/125	194	145	75	138	71	95	5	97	67	118	61	159	537	394?	323	...
Means	190.78	136.33	71.67	141.17	72.83	102.67	5.72	96.45	71.37	118.28	61.13	157.67	525	386	316.71	33.63
Al-'Ubaid	6	6	6	4	4	4	7	7	7	5	4	...	...	...	...	...
Ur	3	3	3	2	2	3	3	3	3	3	2	...	...	...	...	...
Kish A-Graves	189.5	137.44	71.54	132.7	72.11	96.68	...	94.69	71.22	123.5	65.44	151.1	525.38	376.1	302.5	...
Kish W-Graves	4	5	4	1	1	1	...	4	4	2	2	1	4	2	2	...
Parthians	191	138.2	72.7	122	67.7	96	...	92.25	66.3	122.5	67.65	143	537.25	381.5	298	...
Parthians	3	2	2	2	2	2	...	3	2	...	...	1	2	2	2	...
Parthians	188	139.5	73.5	132	69.7	95.3	...	94.3	67.5	...	...	154.3	525	373	...	32.33

TABLE II—FEMALE SKULLS; CRANIAL MEASUREMENTS AND INDICES

Number	Maximum Length	Maximum Breadth	Cephalic Index	Basion-Bregma Height	Height-Length Index	Height-Breadth Index	Parietal Thickness	Minimum Frontal Di.	Fronto-Parietal Index	Auricular Height	Auricular Ht.-L. Index	Cranial Module	Maximum Circumference	Arc: Nasion-Opisthion	Arc: Transverse	Mean Di. Foramen Magnum
Formulae	A	B	$\frac{B}{A}$	C	$\frac{C}{A}$	$\frac{C}{B}$	D	E	$\frac{E}{B}$	C ¹	$\frac{C^1}{A}$	A+B+C				
N/101	...	...	...	133	...	...	7	...	...	111	...	...	...	...	303	...
N/102	174	138	79	131	75	95	6	95	69	112	64	148	500	365	312	32
N/104	...	...	...	...	...	...	4.5	...	...	...	...	...	...	...	...	...
N/105	186	...	...	139	75	...	7	...	...	114??	61?	...	...	...	...	...
N/114	181	134	74	132	73	99	6.5	93	69	113	62	149	506	377?	303	...
N/116	...	129?	...	...	...	...	4.5	...	...	...	...	...	...	...	...	...
N/119	...	134	...	...	...	...	6	...	...	118??	...	...	...	...	307	...
N/120	...	120	...	122	...	102	4.5	95	79	102	...	...	...	...	280?	32
N/122	177	126	71	128	72	102	5.5	89	71	112	63	144	...	365	292	...
Means	179.5	130.4	74.7	130.83	73.75	99.5	5.72	93	72	110	63	147	503	365	303.4	32
Al-'Ubaid	3	3	3	3	2	3	...	2	4	3	3	3	...	...	...	...
Ur	3	3	3	1	1	1	...	3	3	3	3	1	...	...	...	...
Kish A-Graves	183	132	72.2	136	72.2	103	...	93	70.7	116.6	63.8	151.7	...	...	...	...
Parthians	3	3	3	2	2	2	...	4	3	1	1	2	2	1	1	...
Parthians	1	1	1	1	1	1	...	1	1	...	...	...	494	380	285	...
Parthians	171	136	79.5	130	76	98.4	...	94	69.12	...	...	145.7	487	...	288	31.5

TABLE III—MALE SKULLS; FACIAL

Formulae	Number	Maximum Bizygomatic Di.	Menton- Nasion Ht.	G F	Facial Index	Prosthion- Nasion Ht.	H F	Upper Facial Index	F B	Cranio-Facial Index	Basion-Nasion	Basion-Prosthion	J I	Gnathic Index	Nasal Height	K	L	Nasal Breadth	L K	Nasal Index
N/97	..	..	113	..	..	66	..	..	..	..	..	..	..	..	47	..	24	..	..	51
N/103	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
N/111	122	..	118	..	97	72	59	..	95	..	98	94	96	..	51	..	23.5	..	..	46
N/112	..	..	117?	..	..	74?	..	..	..	..	112	95	85	..	58	..	27	..	..	47
N/115	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
N/118	134	..	112	..	84?	72	54	..	96	..	107	96	90	..	53	..	27.5	..	..	52
N/121	..	..	..	..	..	75	..	..	..	..	107	91	85	..	55	..	..	..	..	..
N/123	132	..	..	..	..	80	61	..	99	..	112	101	90	..	56	..	21	..	..	38
N/124	..	..	127	..	..	76	..	..	..	..	..	..	..	..	54.5	..	23.5	..	..	43
N/125	..	..	..	..	..	71	..	..	..	..	106	102	96	..	51	..	..	..	..	..
Means		129.3	117.5		97	74.33	58		96.7		107	96.5	90.37		53.2		24.42			46.17
Al-'Ubaid	5	6	5	5	5	4	5	5 ?	5 ?	5	6	6	5	6	6	6	5	5	5	5
	127.6	118.1	92.4	72	56.3	92.4	105.7	104	99.6	54	25.7	47.7								
Ur	3	2	2	3	3	3	3 ?	3 ?	3	3	3	3	3	3	3	3	3	3	3	3
	132.3	128	99.5	76.6	58	98	107.6	97	90.2	54.6	26.6	47.8								
Kish A-Graves	7	..	..	3 ?	..	..	6	..	..	2	1	2	..	..	54	24.0	44.4	..	..	..
	?125.3	..	..	75.33	..	..	106.16	..	..	1	1	1	..	..	49?	25.6	51?	..	..	..
Kish W-Graves	..	..	..	..	..	..	94.3	..	..	2	2	2	..	..	54	24.3	46.3	..	..	..
	2	..	..	2	2	1	104.5	..	..	2	2	2	..	..	54	24.3	46.3	..	..	..
Parthians	130	..	..	73.5	56.5	90	104.5	101.5	97	54	24.3	46.3	..	..	..	..	..	..	..	..

TABLE IV—FEMALE SKULLS; FACIAL

N/101	..	..	..	69?	..	..	104	93	89	53	26.5	50
N/102	..	115	..	69?	..	..	94	89?	95?	53	22	42
N/105	..	116	..	64	..	..	100	93	93	45.5	23	51
N/114	..	..	..	73	..	..	99	93	94	52	23	44
N/119	..	..	..	69?	..	..	..	..	..	50	21	42
N/120	121	..	..	..	..	101	..	100	..	..	22.5	..
N/122	118	..	..	66	56	94	95	90	95	48	23	48
Means		119.5	115.5	..	67.67	56	97.5	98.4	93.8	92.75	50.25	23	46.17
Al-'Ubaid	3	4	3	3	3	3	3	2	1	3	4	4	
	122.6	104	85.3	64	52.3	87.7	95	93	97.8	49	23.4	48.9	
Ur	1	1	1	1	1	1	1	1	1	1	4	1	
	120	111	92	65	54	91	97	90	97.9	46	24.2	52	
Kish A-Graves	?	..	..	1	1?	..	..	..	..	1	1	1
	110	..	..	62	56.4	..	..	..	..	49.5	30.5	61.6
Parthians	1	..	..	..	..	1	..	1	..	1	1	1
	127	..	..	..	..	93.4	..	90	..	52	23	44.2

MEASUREMENTS AND INDICES

Nasalia: Upper Breadth	Nasalia: Lower Breadth	Nasalia: Transverse Index	Orbital Height		Orbital Breadth from Dacryon		Orbital Index		Interorbital Breadth	Biorbital Breadth	Interorbital Index	Palate: External Length	Palate: External Width	Palate: External Index
			R.	L.	R.	L.	R.	L.						
P	Q	P	M	M ¹	N	N ¹	M	M ¹	R	S	R	T	U	U
9	16	56	..	..	..	..	..	..	22	..	..	..	..	..
..	..	..	..	36	..	36?	..	100?	20.5	..	..	..	..	..
10	16	..	32	33	39	38	82	87	20.5	92	22	56	61	109
12?	..	63	34	34	42	41.5	81	82	20.5	99	21	54	64	119
..	..	..	33.5?	..	38?	..	88?	..	..	..	..	56	68?	121?
18	..	..	30	31	39	38	77	82	24	97	25	54.5	54	99
nasal bones gone			..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	34	34	39	..	87	..	26	..	..	55	68	124
13	15?	67?	33	33	36	38	92	87	24	94	26	58	61.5	106
..	..	..	35	33	39	39	90	85	21	97	22	58	66	114
..	..	..	..	33.5	..	39	..	86	..	..	..	60	..	..
13.6	16	59.5	33	33.44	39.0	38.9	84.83	84.83	22.3	95.8	23.2	56.44	62.42	111.83
..	..	..	33.25	..	38.96	..	84.83	..	..	..	..	..	..	..
..	..	..	4	..	3	..	3	..	5	6	5	6	..	..
..	..	..	33.6	..	40	..	82.5	..	25	96.5	25.8	51.8	..	..
..	..	..	3	..	3	..	3	..	3	3	3	..	..	..
..	..	..	36	..	40	..	90	..	25.6	99.6	25.7	..	..	..
..	..	..	8	..	5	..	8?	..	..	..	..	..	..	..
..	..	..	33.9	..	43.4	..	81.55	..	..	..	..	..	..	..
..	..	..	..	..	2	..	..	..	..	..	..	..	..	..
..	..	..	..	..	41.5	..	..	..	..	..	..	..	..	..
2	2	2	2	..	2	..	2	..	2	3	2	2	..	..
13	16.5	78.5	36	..	38	..	94.7	..	24	102.3	24	57.5	..	..

MEASUREMENTS AND INDICES

14	20	70	..	32	..	..	..	..	20	..	..	55	56	102
12	..	..	35	36	35	36	100	100	23	92	25	49	61	124
..	..	..	29.5	..	..	..	..	..	..	..	..	54	62	115
13	23	57	36	36	39	..	92	..	21	..	..	53?	56?	106?
11.5	16.5	70	..	33	..	41.5	..	80	16	..	..	47?	..	..
..	14	..	33?	..	35.5?	34?	93?	..	..	92	..	57	64	112
12	17	71	32	31.5	35.5	36	90	88	18	86	..	48	56	117
12.5	18.1	67	33.13	33.7	36.5	37.8	94	89.3	19.6	90	21	52.6	59.8	115
..	..	..	33.44	..	37.2	..	91.7	..	..	..	..	..	..	..
..	..	..	3	..	3	..	3	..	5	3	3	(?)	(?)	..
..	..	..	31.6	..	37	..	86.3	..	24.8	91.3	26	51.8	64.7	..
..	..	..	1	..	1	..	1	..	1	3	1	..	..	..
..	..	..	31	..	39	..	79.5	..	25	91.6	26	..	..	..
..	..	..	1	..	1	..	1	..	..	..	..	..	..	..
..	..	..	34.4	..	37	..	91.9	..	..	..	..	..	..	..
1	1	1	1	..	1	..	1	..	1	1	1	1	..	..
12	16	75	36	..	36	..	100	..	23	99	23	56	..	..

TABLE V—MALE AND FEMALE MANDIBLES; MEASUREMENTS AND INDICES

		Number	Condylo-Symphysial. L	Bicondylar Width	Mandibular Index	Height of Symphysis	Bigonial Diameter	Zygo-Gonial Index	Height of Ramus. (Cond.)	Minimum Ramus Breadth	Mean Angle Lower Jaw	
Formulae		V	W	$\frac{V}{W}$	X	Y	$\frac{Y}{W}$					
MALES	N/97	..	..	..	30	..	..	..	30?	..	..
	N/98	107	..	..	32	94	..	50	40.5	..	120°
	N/103	92	..	..	29	97	..	59	33	..	113°
	N/107	..	..	..	38	..	..	..	39	..	110°?
	N/110	91?	..	..	29	98	..	57	31	..	115°
	N/111	100	..	..	33	98	80	64	33	..	124°
	N/112	98	119	82	35.5	97	..	69	32	..	111°	
	N/115	112	128	88	34	104	..	64	35	..	122°	
	N/117	113?	..	..	34.5	..	..	..	40	..	105°?
	N/118	..	..	..	..	..	..	..	30	..	..
	N/123	62	34	..	114°?
	N/124	113	35.5	56.5	33	..	118°
Means		103.67	123.5	85	33.05	98	80	60.19	34.6	117.57°		
Al-'Ubaid		..	..	..	35.7	98.6	..	..	..	..	..
Ur		..	..	..	34.5	..	..	..	..	..	..
Kish A-Graves		107.6	116.7	..	32.8	92.4	..	66.4	32.5	..	..
Kish W-Graves		102	116.3	..	30.1	97	..	62.8	33.4	..	..
FEMALES	N/102	108	..	..	31	..	..	54	32	..	116°
	N/105	100	..	..	31	87	..	59	33	..	117°
	N/116	..	..	..	..	..	..	57	31.5	..	118°
	N/119	111?	..	..	..	..	..	49	30	..	130°?
	N/120	..	..	..	34	..	..	..	..	..	..
Means		104	..	..	32	87	..	54.75	31.63	117°	
Al-'Ubaid		..	..	..	37.2	93	..	..	..	..	..
Ur		..	..	..	33	94	..	..	..	..	..
Kish A-Graves		..	..	..	27	..	..	63.5	28.8	..	..

TABLE VI—MALE AND FEMALE
CRA

	Number of Skull	Age	Form of Head	FRONTAL REGION										PARIETAL REGION						TEMPORAL REGION					OCCIPITAL REGION								
				Supra-Orbital Ridges		Forehead				Median Crest	Metopism	Post Orbital Constriction	Breadth	Sagittal Elevation	Post-Coronoid Depression	Foramina		Fullness	Crests	Supra Mastoid Crista	Mastoids	Sphenoid Depression	Curve	Curved Lines			Inion	Torus	Lambdoid Flattening	Transverse Suture			
				Type	Size	Glabella	Height	Breadth	Slope							Bosses	Number							Size	Number	Size					Highest	Superior	Inferior
MALES	N/97	Very Young Adult	Sphen.	Med.	3	4	3	3	3	3	0	0	3	2	..	0	2	..	..	2	3	3	2	2?	3	3	3	3	..	1	2?	0
	N/98	Old Early Middle	...	..	..	..	3?	..	4?	..	..	..	..	3	3	1	4	..	..	2	4	..	..	..	3	3	3	3	4	2	2?	0?
	N/100	Middle	...	Med.	2	4	3	3	3	4	0	0	2	2?	0	..	3?	2	3	..	2?	..	..	..	3	1	2	1	1	0	0?	0
	N/103	Middle	Ovoid	Med.	4	4	4	3	3	1	1	0	3	2½	4	1	R3 L3	..	..	2	3	3	4	2	4	1	2	3	1	2	3?	0
	N/106	Middle Early Middle	Sphen.	Med.	3	4	2	2	4	3	1	0	4	3	..	..	R4	3?	2	2	3	3	3	2?	3	1	2½	2	1	1	3	0
	N/107	Middle	...	..	..	..	..	..	..	..	..	..	..	2	..	1?	2	..	..	2	3	4	4	3	4	4	4	4?	4	5	..	0
	N/109	....	...	Med.	2	2	2	3	4?	4	0?	0	3?	..	..	..	..	..	..	..	..	2	2	..	..	..	..	..	..	..	..	..
	N/110	Adult?	...	..	..	..	..	..	..	..	..	..	..	2	4	2	3	0?	0?	2?	1	..	..	..	..	..	..	..	..	..	2	..
	N/111	Early Middle	Ovoid	Med.	2	3	3	3	3	3	1	1	3	2	3	1	2	5	1	2	4	4	3	4	3	2	3	3	1	2	2	5	
	N/112	Early Middle	Sphen.	Med.	5	5	1	3	5	2	1	1	4	3	3½	3	2	0	0	3	4	5	4	3	3	2	2	3	1	½	1	1	
	N/115	Young Adult	Ovoid	..	2?	..	2	3	4	2	Warp 4?	0	0	4	3	0	2	2	0?	0?	3?	3	3	4	..	3	1	1	..	1	0	3	0
	N/117	Late Middle	Pent.	Med.	2	3	2	4	2	1	4	2?	4	1	3	4	2	3	1	3	3	3	3	0
	N/118	Middle Late	Pent.	Med.	4	4	4	3	2	3	1	1	3	3	2	3	R4 L2	2	4	2	3	2	4	3	2	1	3	3	3	2	3	0	..
	N/121	Middle Late	Pent.	Med.	3½	3½	4	3	2	2	1	1	3½	3	2	3	R4 L1	0	0	2	2	2	4	3½	3	1	2	1	3	2	2	0	..
	N/123	Middle	Ellipse	Div.	4	3	3	3	3	1	2	1	2	2	3	1	R3 L1	2	3	2	4	4	R4 L3	3	3	2	2	1?	2	0	2	2	
N/124	Middle	Pent.	Med.	3	4	3	3	3	2	0	0	2	3	3?	0	3	3?	3	2	3	3	3	3	3	2	3	..	1	0	1	0		
N/125	Old	Pent.	Med.	3	4	3	3	3	2	1	0	3	4	3	0	4	3	1	3	3	3	4	2	2	3	4	3	1	4	3	0		
FEMALES	N/99	Early Old	...	..	..	..	2?	2	3?	3	1	..	3	3?	..	..	3?	2	1	2?	..	2	2	..	3	2½	3	3	2	2	0	
	N/101	Old Young Adult	Ovoid	Med.	2	3	3	2	3	1	0	0	3	3	3	1	2½	2?	1?	2	2	2	2	2	..	..	..	..	..	..	..	..
	N/102	Young Adult	Pent.	Med.	1	1	3	3	2	3	0	0	2	3	1	2	3½	2	2	3	2	2	2	3	3	2	2	2	1	1	2	0	
	N/104	Young Adult	Ovoid	..	..	..	2	2	4	2	2	0	..	2	2	2?	2	0	0	2?	2	3	2½	..	3	1	2	2	1	1	3	0
	N/105	Middle Early	Ovoid	Med.	1	2	2	2	3	3	1	0	4	2	3	0	3	..	..	2	2	2½	2	3	3	2	3	2	..	½	2	0
	N/114	Middle Young Adult	Pent.	Med.	1	1	3	3	3	3	1	1	3½	3	3	1	3	0	0	3	2	2	2	2	2	2	1	2	1	2	1	0	
	N/116	Adult	Ovoid	..	..	..	2	3?	4	2	1	..	2?	2	2?	2	2	..	..	..	2	2?	2	..	3	..	..	..	..	3?	..	..
	N/119	Early Middle	Sphen.?	Med.	2	3	..	2	..	..	..	..	..	3	3	..	3	1-1 2-1-3	2	3	3	4	3	3	3	2	3	3	1	2	1	0
N/120	Young Adult	Ovoid?	..	..	..	3	2	2?	..	..	5	2	2	1	2	1½	0	0	2	2	2	2	2	3	1	2	2	1	0	2	0	
N/122	Young Adult	Pent.	Med.	2	3	3	2	3	2	2	0	3	2½	3	2	2	0	0	2	2	1	2	3	3	1	1	2	1	0	0	0		

TABLE VI—Continued—MALE AND FEMALE FAC

	Number of Skull	ORBITS								MALARS						NASAL BONES											
		Shape	Inclination	Lacrimal Ethmoidal Articulation				Suborbital Fossa	Size	Lateral Projection	Anterior Projection	Marginal Processes	Zygomata: Weight	Zygomata: Vertical Bowing	Zygomata: Lateral Bowing	Nasion Depression	Root Height	Root Breadth	Bridge Height	Bridge Breadth	Profile	Aperture					
				R		L																Sills	Spine	Sub-Nasal Grooves			
				Facial	Orbital	Height	Breadth																				
MALES	N/97	....	..	3	..	2 ²	..	3	2	3 ²	3 ²	3 ²	..	..	..	3	3	3	3	3	Concavo-Convex	3	3	4	4	1
	N/98	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	..	..	..	..	..
	N/100	Square	2	..	..	2	..	..	2 [†]	2	4	3	1	..	..	1	..	..	..	..	....	3 ²	2 ²	2	..	0
	N/103	Square	1 up	..	..	..	..	..	..	3	3	2	1	3	3	2	3	..	2	..	....	..	..	..	..	..
	N/106	....	..	..	..	..	..	..	..	..	..	..	..	..	..	2 ²	..	..	..	..	....	..	..	..	..	..
	N/107	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	..	..	..	..	..
	N/109	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	..	..	..	..	..
	N/110	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	..	..	..	..	..
	N/111	Oblong	3	3	0	0	0	0	1	3	4	3	3	3	2	2	2	3	2	3	3	Concavo-Convex	3	3	3	3	0
	N/112	Rhomb.	2	..	2	2	..	..	1½	2	3	3	3	4	3	3	2	..	..	..	Concavo-Convex?	3	3	2	2	1
	N/115	....	3	..	2	..	..	..	1	3	4	3	3	..	..	..	..	..	..	..	....	3	3	4	3	0
	N/117	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	..	..	..	..	..
	N/118	L. Rhomb. R. Ellipse	L3 R4	3	0	0	0	0	3½ [†]	3	4	3	2	4	3	3	3	2	4	3	4	Concave?	3 ²	4	*1	..	1
	N/121	Rhomb.	3	..	0	..	..	..	3	3	4	3	3	4	3	2	3	2	4	..	....	3 ²	4 ²	*2	3	0
	N/123	Rhomb.	3	3	0	2	0	0	3	4	4	3	3	4	4	3	2	2	3	3 ²	3	Concavo-Convex?	4	2	3	3 ²	1
	N/124	Rhomb.	3	3	0	2	0	2	1	3	4	4	3	4	3	3	2	..	..	..	....	3	2	3	..	1
	N/125	Rhomb.	2	3	2	0	3	0	3 [†]	3	4	3	3	3	2½	4	3	4	3	..	....	..	2	2	3	1
FEMALES	N/99	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	..	..	..	..	..
	N/101	Oblong	4	2	0	0	0	0	4 [†]	0	3	3	3	3	Concavo-Convex	3	3	3	3	0	
	N/102	Round	2	2	0	0	0	0	2	2	3	3	4	3	3	3	0	3 ²	3	..	2	2 ²	2½	3
	N/104	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	..	..	..	..	..
	N/105	Ellipse	2	..	2	3	3	3	1	3	3	3	3	2	3½	2½	2	..	..	..	....	..	3	3	3	1
	N/114	Rhomb.	3	3	2	..	2	..	2 ² †	2	4	2	2	3	1	3	1	2	3	3	3	Concavo-Convex	3	3	2	3	1
	N/116	....	4 ²	2	2	..	3	..	2	2	2½	2½	2	2	2	2	..	..	..	..	....	..	..	..	..	..
	N/119	Square	2	3	1	1	2	2	4 [†]	2	3½	4	3	4 ²	2	3	3	3	3	3	2	3	3	0
	N/120	Square	2	3	3	0	2	0	1	2	4	3	1	2	1	2	..	2 ²	3 ²	3 ²	3 ²	2	3	3	3	1
	N/122	Rhomb.	3	3	3	3	3	3	2	2	3	3	2	3	3	3	2	2	3	3	3	Concavo-Convex	3	3	*3	3	0

* Nasal Bones; Sills; inner marginal crista developed.

** Occipital Bone; Median Occipital Fossa; large primitive triangle, sometimes raised, not a true fossa.

SKULLS; MORPHOLOGICAL OBSERVATIONS
IAL

Prognathism		Alveolar		PALATE					MANDIBLE							TEETH													
				Shape	Height	Torus		Transverse Suture Direction	Post Nasal Spine	Menton Prominence		Anterior Projection	Alveolar Prognathism	Genial Tubercles	Mylo-Hyoid Ridge	Gonial Angles		Wear	Quality	Caries	Abscesses	Pyorrhea	Shovel Incisors	Molar Cusps	Bite	Crowding			
Absorption	Preservation	Size	Shape			Size	Type			Eversion	Inversion																		
..	4	2?	0	4	Parabola	4	..	....	Transv.	..	2	Bi-Lat.	3	1	3	3	..	..	1	4	0	0	0	2	4	5	Over 4	0
..	..	..	..	..	....	..	..	....	....	..	3	Med.	3	2	2	4	3	3	4	3	3	0	0	0	..	5	Edge to	0
..	..	..	3	..	....	2	..	....	....	..	..	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	4	2	....	..	..	....	....	..	2	Med.	3	2	2	3	..	1	3	4	..	..	..	..	4	....	..	..
..	
..	..	..	..	..	....	..	..	....	....	..	4	Bi-Lat.	3	3	3	4	4	4	4	3	..	..	..	..	..	5	Edge to	1
..	
..	..	..	4	2	....	..	..	....	....	..	3	Med.	3	1	3	2	3	3	4	3	3	0	1?	0	..	5	Edge to	3
0	2	1	0	3	Elliptical?	3	2	Ridge	Post.	3	4	Med.	3	3	2	4	3	3	3	3	1?	2	0	0	5	Over 2	0	0	
1	3?	2	4	1	Parabola?	2	1	Ridge	Post..	3	2	Bi-Lat.	4	3	2	2	3	3	4	3	..	5††	..	..	5	Over 3	0	0
..	4	..	0	4	Parabola	2	..	....	Transv.	..	3	Med.	4	0	3	3	2	3	1	4	2	0	0	1	4+5	Over 2	2	2
..	..	..	..	..	....	..	..	....	....	..	4	Med.	3	..	3	3	..	1?	..	..	..	..	..	..	..	..	..	..
0	1	½	3	2	Parabola?	3	3	Ridge	Transv.	4?	3	Med.	3	1	..	3	..	2	4	3	..	4†	5	Over 2
0	0	0	0	1	Parabola	4	2	Mound	Post.	3	..	....	..	..	..	..	..	..	3	3	..	0	0	..	..	..	..	1
1	1	1	3	2	Parabola	3	2	Ridge	Ant.	..	3?	....	..	..	..	4	2	3	3½	4	1	0	0	0	4	....	0	0
1	4	2½	0	3	Elliptical	4	1	Ridge	Transv.	4	4	Bi-Lat.	3	4	3	4	..	3	3	4	1	0	2	2	4	5	Over 1	0	0
1	3	2	5	0	3	2	Ridge	Transv.	2?	3	Over ?	0	0
..	..	..	5	0	....	2	3	Mound	Post.	2	3?	Bi-Lat.??	1	3?	3	3?	..	..	4?	..	..	3?	0?	..	..	..	..	..
3	1	2	4	1	2	0	Transv.	3	4	3	5	Edge to
1	3	2?	2	3	Parabola	3	..	....	Transv.	..	3	Med.	3	2	..	3	2	2	1	4	No. 3	0	3?	2†	4	....	1	1
..
1	2	2	3	2	Parabola	3	4	Mound	Post.	2	2	Med.	3	2	2	2	2	1	4	3	4	2†	1	..	4	Over 2	0	0	
0	2	1	2	2	Parabola	3	2	Ridge	Transv.	4	2	..	2	0	SM. 1	..	4	Over 2	0	0
..	4	2	2	Ridge	Transv.	..	2	4	2	0††	3	3	5
0	2?	1?	4	0	Parabola??	3	2	Ridge	Post.	4?	2	Med.	4	3?	..	4	0	1	4	3?	..	3?	0?	Over 3
2	3	2	0	4	Elliptical	4	3	Mound	Transv.	2	3	Med.	4	2	..	3	2	0	2	5	3	0	0	0	4-5	Over 2	0	0	
1	2	1	0	4	Parabola	3	1	Ridge	Transv.	2	..	....	..	..	..	..	..	2	3	2	SM. 1	0	0	..	5	Over 2	0	0

† Facial; Orbits; Suborbital Fossa; enlargement probably due to the absorption of the maxillary alveolar border subsequent to loss of teeth.
†† Mandible; Gonial Angles; Eversion; some inversion.



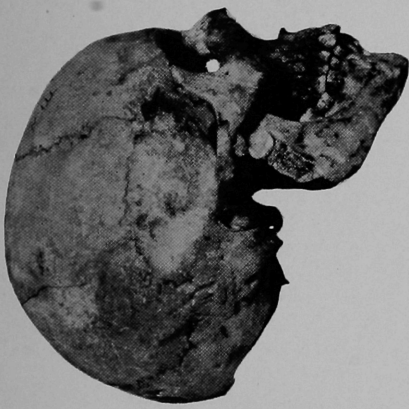
N/111



N/112



N/112



N/111



N/112



N/114



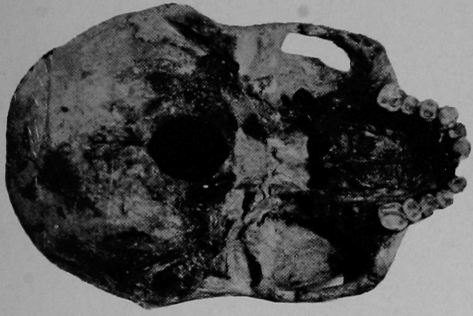
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N/112



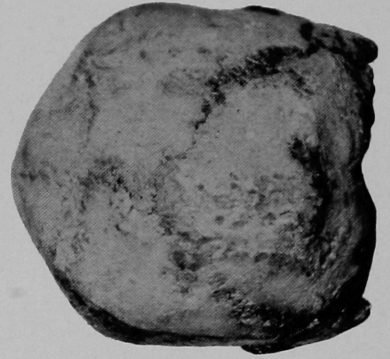
N/114



N/111



N/112



N/114

FIG. 1.



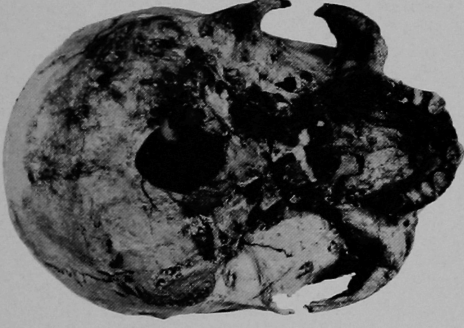
N/118



N/118



N/118



N/118



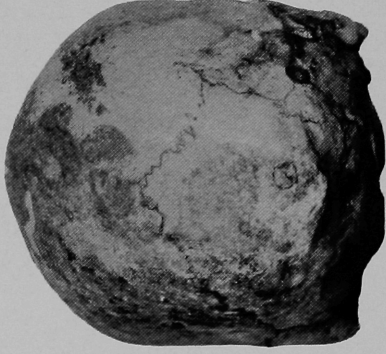
N/121



N/121



N/121



N/121



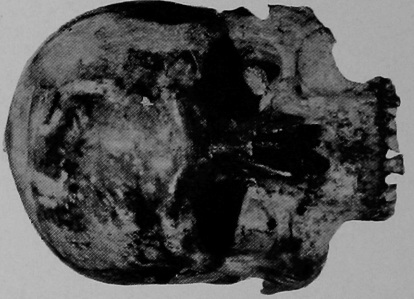
N/122



N/122



N/122



N/123



N/125



N/125

FIG. 2.

APPENDIX G

THE POTTERY FROM PIT L4 OF YORGAN TEPA (PREHISTORIC AND GA. SUR LEVELS)

BY
RUTH SEARS CHUTE

LEVELS XII-XA

The description of the pottery in this Appendix (with the exception of that from the graves) is based wholly on those pieces from Pit L4 of Yorgan Tapa which are now in the possession of Harvard University. The pottery from Levels XII through XA will be described together because of its similarity.¹ Two sherds from Level XI fitted two from XA. Level XI was the most productive, comparatively few sherds being found in Level XII.

The pottery has been divided into the following classes: Painted, Undecorated, Knobbed, and Incised. In certain cases these classes will be subdivided in the description. The same type of clay or clays was used for the majority of sherds in all classes. Much of the pottery was identical with that found at Kudish Saghîr. Illustrations in the plates of Kudish sherds are sometimes used as examples of Yorgan types. There are very few whole vessels, and a description of complete shapes is often impossible, as rims and bases cannot be united. Where no statement is made it is to be assumed that the vessels were not made on the fast wheel. Temper is often described as small occlusions. Without an analysis a positive identification can rarely be made. In these sherds, unless otherwise described, the small occlusions appear to be sand. "Wet-smoothed surface" refers to clay that has been smoothed with water before baking.

PAINTED WARE

I. Typical Painted Ware.

Surface.

The surface of the majority of sherds has been wet-smoothed. The amount of smoothing varies somewhat, but none are highly burnished. A white or greenish-white wash is common, but as this may wear off it is often difficult to recognize its former presence. Baking, under certain conditions, lightened the surface clay. The color depends largely on the baking. It may be light brick, pinkish-buff, buff, drab, greenish-buff, or occasionally really green. The pinkish sherds are often unevenly fired and have lighter spots. When a pile of sherds is seen it roughly divides into pinkish-buff and greenish-buff. The baking and the thickness of the paint are important factors in its color, which may be black, many variations of brown (purple-brown, red-brown, light brown, dark brown), or olive-green. The color of the clay background has much to do in determining the apparent color.

Paste.

Color. Depends largely on the baking, but is usually either pinkish-buff or greenish-buff. Sherds with a green core which becomes yellowish and then

¹ The term "Level," as used in Appendices A, G, and H, in reference to Pits L4 and N120, is synonymous with "Pavement" in the description of these same areas in Part I, Chapters I and II.

pinkish toward the exterior are found. There are also pink cores with green outer margins. Light brick-colored sherds, drab sherds, and occasionally one with a gray core and greenish or pinkish exterior are present.

Temper. Chopped straw identified by the hollows from which it was burned out is the most common temper. Some sherds are filled with it. Others have very little, or no distinguishable temper. Small occlusions occur, but are comparatively rare and are more apt to be in sherds with the less common designs.

Texture. Medium or better.

Baking. Medium, but varies in both directions. Good baking is not dependent on the thickness of the sherds.

Thickness. Averages about 1 cm., thickest 2 cm. Occasionally a sherd is as thin as 0.5 cm.

Construction.

Many of the sherds are handmade but a few have wheel-marks, and the evenness of others suggests at least the use of the slow wheel.

Shapes.

Bowls. There are various types, depending on the curve of the wall. Some slope abruptly down, as in Pl. 42, C and D.² Others are curved, as in Pl. 42, J. The exterior surface is the principal one decorated. The rims are more often flat and either parallel to the floor or beveled inwards. Some are grooved and some have a little lip on the inner edge, as in Pl. 42, O. Occasionally they are just rounded, or they may be thinned first and then rounded. Sometimes there is a slight swelling of the sides below the rim, and sometimes the rim is rolled out. The more flaring types are generally decorated on their interior surfaces. The rim is usually tapered slightly and rounded off, but may be almost knife-like in its thinness. Flat rims do occur either horizontal to the floor or perpendicular to the pot wall. Some have little lips on the inner edge (Pl. 42, M, O). One sherd from Level XA has a lip on both inner and outer edges. A type of which there is no complete profile has a distinct shoulder or incurving rim (Pl. 42, H, K, L). Sometimes this angle is very sharp, at other times rounded. The rim is flat, rounded, or thinned. Certain sherds with vertical designs suggest the beaker (Pl. 48, X), but only fragments occur.

Jars, bottles, pots. A survey of what is known of such vessels is given in Pl. 43, A-G, I-P, R-V and Pl. 47, B, F, G, H, K, Q. Variations in the height and angle of the neck, the type of rim, or the curve of the shoulders provide a large assortment of shapes. Few complete profiles have been found. Judging from the number of carinated sherds, an angular body curve like Pl. 43, C, as well as more gently rounded ones like Pl. 43, E, must have been common. The tallest neck is 4 cm., probably from a bottle like Pl. 43, D. Neck rims are thinned and rounded. Exceptional ones are flattened and bevelled inwards as in Pl. 43, L, or grooved. A common type of pot, illustrated in Pl. 47, Q, has a broad, thick, flat, horizontal everted rim. Other everted rims are small and thin (Pl. 47, B). Suspension holes were sometimes put through the inner edge of the pot (Pl. 43, K), or through the rim (Pl. 47, G).

Lugs. Level XI has two sherds with horizontally pierced conical lugs (Pl. 41, M).

² Some of the illustrated shapes and designs referred to in this section are of pottery found at Kudish Şaghîr, but are typical of wares of Yorgan Tepa.

Handles. The stump of an oval handle from Level XII (Pl. 41, N) is the only handle. There is also a sherd with a rough spot at the rim where a handle may have started.

Designs.

The commonest designs are horizontal lines, single or multiple (Pl. 47, A, B, C, E, F), and wavy horizontal lines (Pl. 47, G-L, Q, S, U, V). Chevrons (Pl. 48, D, G) and lightning patterns (Pl. 48, E, I) occur several times. Other designs are illustrated in Pl. 47, R, AA, BB and Pl. 48, H, K, M, N, W, X, Z, AA, BB, EE, FF, GG, LL-OO. A single horizontal line around the body is very common (Pl. 43, D, DD, EE). Possibly the forepart of an animal is shown on a sherd from Level XI, but it is too faint to be positively identified.

On bowls, when the principal decorated surface is the exterior, the interior is rarely decorated except for a band at the rim. The rim may be painted either completely, partly, or with dots, or left unpainted. On the exterior, a wavy line enclosed between two horizontal lines is by far the commonest design; next is a single horizontal line at the rim; and less frequently, two or three horizontal lines. When the principal decorated surface is the interior, the exterior is often undecorated, but a single line at the rim is common. Wavy lines, or two or three horizontal lines, are used on occasion. Flat rims are usually painted. In the interior there is almost always a band at the rim. Some combination of a broad band and scallops occurs several times (Pl. 48, N), also lines oblique from the rim (Pl. 48, M); there is one example of a wavy line oblique from the rim. In all cases where the design on bowls with distinct shoulders can be distinguished, the exterior surface of the neck is decorated with groups of vertical or oblique lines (Pl. 42, H, K, L). Usually there is a line around the bowl just below or at the angle of the shoulder.

Jars, bottles, and pots are commonly treated as follows. The exterior of flaring necks like Pl. 43, D may be either painted or unpainted, and the interior may have a band at the rim. A single line, or several parallel horizontal lines, below the junction of the neck and shoulder is frequent, but one or more wavy lines, nearly always between two horizontal lines, is also common. When the neck is turned back, as in Pl. 43, S, the upper surface may be decorated with scallops, triangles, or short lines pendant from the rim. Parallel lines (Pl. 47, A), and wavy lines (Pl. 47, K and Q) are found below everted rims.

II. Special Groups of Painted Ware.

(a) *Finer ware.*

There are a few miscellaneous, buff-colored sherds painted in dark paint distinguished by their superiority to the typical painted ware in one or more respects. Two sherds from Level XII are like the Thin Ware from Kudish, one with triangles pendant from the rim, and the other with narrow wavy lines below a broader band at the rim. Two sherds with "lightning" design are of very thin fine ware and have a translucent smooth surface. Cross-hatching and dots of various sizes are used as designs on other sherds (Pl. 48, HH).

(b) *Tan or orange-tan paint group.*

A group of sherds with designs painted in tan or orange-tan is very distinctive, although small.

Surface.

An orange-tan paint is used on a buff or pinkish-buff ground. A single sherd from Level XI has a cream slip. Two sherds have a yellow-buff burnished surface.

*Paste.**Color:* buff or pinkish-buff.*Baking:* good.*Temper:* indistinguishable.*Texture:* medium to fine.*Shape.*

The only shape surely recognized is a bowl with a flat rim and one with a rounded rim, but there are sherds from large vessels.

Designs.

These are frequently smaller and more carefully made than in the typical painted ware. Hatching, cross-hatching (Pl. 48, II), chevrons, "chain" design, "linked eyes," horizontal, straight, and wavy lines are among the designs used. One flat rim has dots on it.

(c) *Orange-red paint group.**Surface.*

The characteristic feature of this group, which consists of a few small sherds, is the brilliant orange-red paint used as decoration. Both surface and paste are pink or pinkish-buff. The surface is unusually well smoothed in some instances. Two sherds have a cream slip (Pl. 48, C).

*Paste.**Color:* pinkish-buff.*Temper:* usually indistinguishable, rarely sand as in Pl. 48, C.*Texture:* medium fine.*Baking:* good.*Shape.*

Three rim sherds observed are presumably fragments of bowls. One is sharp-edged, and the other two are flat and bevelled inwards. A sherd with a single line, Level XII-XI, may be part of the wall of a fairly large pot.

Design.

The same three rim sherds all have bands of paint at the rim on both the interior and the exterior, but one of the sherds is so small that the exterior band could be part of a broad design. The following designs are found each on one sherd: concentric ovals (Pl. 48, B), intersecting wavy lines, angular wavy line, vertical lines, group of horizontal wavy lines, "three-fingered hand" (Pl. 48, C). More than one horizontal straight line is found on two sherds.

Distribution.

There are no sherds of this group found in Level XII; one in Level XII-XI; five in Level XI; and three in Level XA.³

(d) *Dark purplish paint group.*

With the exception of one small vessel (Pl. 43, J), no sherd has been found large enough to prove that it came from an all-over painted pot, and was not just part of a painted band. The original paint was dark and thick. It has now nearly rubbed off and leaves a thin brown or purplish color underneath, much lighter than the original. A few small sherds of similar type come from Levels XI and XA. One appears to be from an unusually tall neck,

³ The distribution figures given here and elsewhere in this appendix refer only to the collection in the possession of the Semitic Museum at Harvard.

7 cm. in height, and two are carinated. One heavy sherd, part of a flat base, from Level XI is notable because it is burnished and of fine brick-red clay. Another unusual sherd from Level XII is plum-colored and slightly burnished. It is more carefully made than usual, of fine texture and well baked.

(e) *Brownish paint group.*

A few brownish sherds come from Levels XI and XA, but again it is impossible to tell whether the whole pot is painted in this manner. Only one burnished sherd was found.

(f) *Red slipped or painted ware.*

Surface.

This is slipped or painted either inside, outside, or on both its sides with orange-red or purplish-red slip or paint which is frequently almost worn off.

Paste.

Color: red.

Baking: medium or less. Several examples have a gray core.

Temper: chopped straw or small occlusions.

Texture: coarse or medium. One bowl from Level XI has almost fine texture.

Shape.

Not a single base was found. One spout, one sherd probably from a neck, one thinned rim from a bowl, and one flat rim bevelled inwards were the only clues to shape.

Distribution.

No sherds were found in Level XII, one in Levels XII-XI, nine in Level XI, and three in Level XA.

(g) *Inlaid painted ware.*

Surface.

Greenish-buff or green in color. Shallow bands are cut out and then filled in with blackish paint. Much of this paint has come off but some of what remains is very thick. It is possible that the purpose of this method was to make the surface smooth, for otherwise the thick paint would stand out in ridges. The paste is greenish-buff, in one instance gray, and the baking, temper, texture, shape, and designs are like the typical painted ware. The work is crude.

(h) *Incised and painted ware.*

Any combinations of incised line and painted designs is exceedingly rare. No more than two sherds were found in any one level (Pl. 46, B). Pl. 46, A is unusual in that the wavy white lines are scratched into the broad black band and the natural clay surface shows through. This is the nearest to a reserve slip decoration found. There is nothing unusual about the designs or the paste of these sherds with the exception of a hard greenish sherd from Level XII like the Kudish Thin Ware, which has a background of many delicate almost indistinguishable oblique incised lines and a painted design consisting of two oblique lines crossing each other at a slight angle above a horizontal line.

(i) *Polychrome ware.*

There is only one instance of two strikingly different colored paints used

on the same sherd. This sherd from Level XI has one red and one black band. It is pinkish-buff and better baked and with finer texture than the average typical ware.

Two sherds have color differences, but less noticeable. One of these, also from Level XI, is illustrated in Pl. 47, HH. The greater part of the design is in black, but there is a pale brown wavy line. The other, from Level XA, is from the Tan Paint group. It has part of the design in purplish-brown paint. It is quite possible that in the former case the pale brown paint is nothing but dilute black. In the latter case, however, there seems to be a real difference in the paint.

UNDECORATED WARE

This group undoubtedly includes many sherds from the undecorated parts of decorated vessels. By far the greatest number of sherds are like the typical painted ware without the paint. This will be called Typical Undecorated Ware. There are also gray, orange-buff, and dull red undecorated sherds.

I. Typical Undecorated Ware.

Surface.

Rough, smoothed, and a few well-smoothed sherds comprise this class. The color may be light brick, sometimes with a reddish tone, pinkish-buff, greenish-buff, greenish, or drab. An occasional sherd has a white wash.

Paste.

Color: light brick, pinkish-buff, greenish-buff, greenish, drab.

Baking: medium or poor.

Texture: coarse or medium.

Temper: chopped straw and rarely small occlusions.

Thickness: ranges between 0.25-2.5 cm. The rough ware averages perhaps a little thicker, but rough ware 0.5 cm. and smoothed ware 2 cm. thick is found.

Construction.

Many sherds are handmade, others made on a slow wheel, and at least one on a fast wheel.

Shapes.

Bowls. The great majority of bowls have flaring, slightly concave sides. The typical rim is thinned or rounded, but flattened rims parallel to the floor also occur, and there is one sherd from Level XA whose flat rim is almost perpendicular to the pot wall as in Pl. 42, A. There is only one sherd with a flaring convex curve.

There are a few instances of bowls with sides that start sloping abruptly downward from the rim. The rims may be flat or round. Three thick, coarse sherds of this sort from Level XI have the rim rolled out slightly.

Bottles, jars, pots. The same types occur as in the Typical Painted Ware. The tallest bottle neck here is 6 cm. Three necks from Level XI have flat rims rather than the customary thinned and rounded ones. A freak neck, also from Level XI, has a groove near the rim on the inner surface, and another on the outer surface slightly further from the rim with a lip or ridge beneath it.

Double-mouthed vases. These are very fragmentary, and none are large enough to be definitely classed with the Undecorated Ware. Many are known to be Knobbed.

Dishes with low sides. These are all of coarse ware. They have flat bases and low vertical sides ranging from 2 to 5 cm. in height.

Bases. There are many flat bases. One very heavy sherd has a ledge extending 2.5 cm. from the flat base and one unusually crude sherd has a strip of clay roughly added, as if for a ring base.

Handles. Only three certain handles, and one possible handle, were found. The latter, from Level XII-XI, was a conical object broken at the broad end. The others were round in cross-section, one straight, and two curved. The stump of the handle of a dipper, stained with bitumen, comes from Level XII (Pl. 41, J).

Lugs. Lugs are also scarce. A small sherd in Level XI has a perforated knob set below an everted rim. Pl. 41, L illustrates a round, shouldered little vessel which originally must have had four pierced lugs.

Spouts. Two spouts were found, one from Level XI and one from Level XA.

Pot-lids. Two types of pot-lids are illustrated, the only two specimens found. Pl. 39, Y illustrates one with a finger grip, and Pl. 39, CC is a lug handle perforated for suspension. It is possible that the latter is part of a pot wall rather than a lid. The former is from Level XA and the latter from Level XII-XI.

Ring-stands. Ring-stands were found at all levels (Pl. 39, X). Two fragments of rings from Level XI of fine greenish ware, about 1 cm. high, have knife-like upper edges and flat bases. They also may have been used as ring-stands.

II. Special Groups of Undecorated Ware.

(a) *Undecorated finer ware.*

Three sherds from Level XI are finer than the rest; surface and paste pinkish-buff, baking good, texture fine.

(b) *Undecorated gray ware.*

Surface.

The surface is smooth and distinct traces of burnishing remain on most of the sherds. They are gray, brown-gray, or mottled brown and gray. Several have been burned.

Paste.

Color: the paste is gray but tends to become brown in the baking.

The inner surface of some sherds is brown while the outer is gray.

Baking: poor or medium.

Texture: coarse, rarely medium.

Temper: small occlusions.

Shape.

Pots with flaring necks 1 to 2.5 cm. high are the general rule. The only base represented is a thick sherd from a flat base. There is one fragment of a cylindrical handle from Level XA.

Distribution.

The sherds, few in number, were distributed as follows: Level XII, one; Level XII-XI, three; Level XI, nine; Level XA, five.

(c) *Undecorated burnished orange-buff ware.*

Two orange sherds come from Level XI. They are both burnished, but differ in other respects. One is a flat, rim sherd with a slight exterior lip. It has a gray core, medium texture, and small occlusions. The other is a carinated sherd, orange throughout, of fine texture and well baked.

(d) *Undecorated dull-red ware.*

A few dull red sherds appear to have had an original burnish, although it has worn off almost beyond recognition. They are of medium to coarse ware.

KNOBBED WARE

Surface.

The natural clay surface is covered with round or oval knobs, 2 to 5 cm. in diameter, which have been appliquéd on. With the exception of one sherd with a light greenish slip, the only treatment is a certain amount of wet-smoothing. The color is buff, frequently with a greenish or a pinkish tinge.

Paste.

Color: pinkish-buff, greenish-buff, or drab.

Thickness: averages about 1 cm. but ranges from less than 1 to 1.5 cm.

Baking: medium or less.

Temper: chopped straw.

Texture: medium to coarse.

Construction.

Handmade.

Shape.

The globular double-mouthed vase (cf. Pl. 42, P, which, however, is from Level VIII-IX) is the only shape recognized. With the exception of this pot the sherds are small.

Distribution.

The number of sherds found in each level was as follows: Level XII, five; Level XII-XI, three; Level XI, sixteen; Level XA, twelve.

Unusual sherds.

The following variations from the normal occur. A sherd from Level XI has two knobs so close together that a ridge is formed. One from XII has striations radiating from the knob. The sherd is so small that it is impossible to tell whether this is added decoration or a carelessly finished surface. A long knob shaped like a gable roof comes from Level XI. There is a brick-colored sherd crudely made, with a gray core, also from Level XI, from the surface of which the knob is peeling off. On a sherd from Level XA there are two small knobs placed very close together. This sherd is very different from the rest of the knobbed ware. The exterior is smoked, the interior dull brick, and the paste is filled with coarse sand, even including a small white pebble. It is probable that these knobs were small lugs.

INCISED WARE

There are two classes of Incised Ware, one incised with a tool and the other with the finger-nail or end of the finger.

I. Tool-Incised.

Surface.

The surface is smoothed and decorated with incised lines. Occasionally it is slipped. There is a wide range of color: drab-gray or brown, pinkish or greenish-buff, brick color, green. A unique sherd comes from Level XII-XI. It is burnished red ware. The paste is brick-red, the texture and the baking are medium, and it is filled with a fine temper and incised with one row of short diagonal lines.

Paste.

Color: drab, pinkish-buff, greenish-buff, green.

Baking: medium, varies in both directions.

Temper: chopped straw, rarely small occlusions.

Texture: medium, varies in both directions.

Construction.

Most of the sherds are handmade, but a wheel is undoubtedly used on some.

Shapes.

Pots. Pots with flaring necks 1 to 4 cm. high are the commonest. Two examples occur in which the neck is turned back approximately parallel to the floor, but the rest flare up at varying angles (Pl. 44, B, M; Pl. 46, D).

Bowls. Rare. A flaring carinated one comes from Level XI, and one with a rounded, slightly rolled-out rim with sides sloping abruptly down comes from Level XA. Also from Level XA comes the sherd with thinned rim and interior decoration illustrated in Pl. 46, G.

No bases have been identified, the majority of vessels probably having round bottoms. One sherd looks like part of a round-bottomed beaker. The sherd is carinated. Below the carination is probably the beginning of the round bottom, and above it the wall flares out and has the unusual decoration of three single horizontal lines widely spaced.

Distribution.

These sherds are common in all levels.

Designs.

A few sherds are covered with crude aimless striations, but most have planned designs. The two commonest are (1) those made with a comb, and (2) herringbones.

The combed designs may be either horizontal lines encircling the pot (Pl. 44, B, C, etc.) or groups of short lines, oblique, horizontal, or rarely vertical (Pl. 44, C, G, H, M), or wavy parallel lines encircling the pot. Herringbones encircling the pot are illustrated on Pl. 46, D, E, F. Parallel lines and herringbones are often combined (Pl. 46, F). The incisions vary in depth. The parallel lines are usually shallow, but the herringbones are often deep and coarse. As a rule the workmanship is careless. Because of the usual shape of the vessel the designs were on the exterior, but the sherd in Pl. 46, G shows that interior decoration was used on occasion when the shape of the vessel was adapted for it.

Unusual sherds.

Other designs are as follows: festoons, Pl. 44, F; angular waves; groups of parallel lines at right angles to each other, Pl. 45, A.

Small punctate impressions occur occasionally (Pl. 44, J; Pl. 45, P). The

sherd illustrated in Pl. 44, L has been impressed at intervals with the point of a tool.

Pl. 44, P is the only sherd of its type found at Yorgan. Very fine-textured drab clay is covered with a black wash and deeply incised.

Pl. 44, Q is also unique. The ridges have been flattened and the valleys smoothed.

Another sherd not illustrated but similar in idea to Pl. 44, O has tiny wavy lines incised in the valleys perpendicular to the ridges.

Two sherds from Level XI differ completely from the rest of the incised ware (Pl. 45, E, F). They are of coarse reddish-brown clay on the exterior with a gray inner surface. They are filled with a fine white temper. There is a slight groove at the base of the neck and the incisions are coarse and oblique.

II. Finger-Indented (Pl. 45, H-O, Q).

Surface.

The surface is somewhat smooth and indented with rows of finger-nail or more rarely, finger-tip impressions. Some sherds have striations as if a brush had been used on the surface. A whitish slip is found on a sherd from Level XI. As a whole these sherds present a drab appearance, although there are light-colored ones with the buff tones characteristic of Yorgan pottery.

Paste.

Color: drab, pinkish or greenish-buff, and rarely, brown with a gray core.

Baking: medium, sometimes better.

Temper: chiefly chopped straw.

Texture: coarse to medium.

Thickness: average about 1 cm.

Construction.

Handmade.

Shape.

Pots and jars with short upright or everted necks (1 cm. or less) (Pl. 45, J) have rims which are usually thinned. Some have no neck (Pl. 45, M). There was one carinated sherd. No bases were identified. If the decoration was confined to the upper part of the pot, as is quite likely, the bases would be included in the Undecorated Ware and would pass without recognition of their proper category; many were probably round bottoms.

Decoration.

The indentation normally starts at or just below the junction of the neck or rim and body, but there are two sherds on which it starts as much as 2 cm. below. On the carinated sherd mentioned above, the indentations were on but one side of the carination. Several other sherds, partly indented, strengthen the suggestion that the decoration was confined to the upper part of the vessel.

Distribution.

The following sherds were found in each level: Level XII, two; Level XII-XI, two; Level XI, thirty-one; Level XA, three.

LEVEL X

The pottery from each level is described separately beginning with Level X, which is notable for marking the sudden, almost complete disappearance of the typical painted, incised, and knobbed decoration of the preceding levels. There were two infant burials,

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one buried below the floor with the base of the jar resting on Level XA and the other underneath the eastern end of the wall which ran diagonally across the northwest end of the pavement (Pl. 49, B).

PAINTED WARE

Typical Painted Ware of Levels XII-XA: a few sherds.

Tan Paint on buff ware as seen in Levels XII-XA: one sherd.

RED SLIPPED WARE

There is one sherd like the Red Slipped Ware of the deeper levels, but the most interesting find is the cup illustrated in Pl. 41, O. Its paste is reddish-buff with a lighter core; temper, straw and small occlusions; texture, medium; baking, medium.

INCISED WARE

A decrease in the amount of incised decoration used on each pot accompanies the decrease in painted decoration, with the exception of the all-over incised pot described immediately below.

1. Globular pot with neck (Pl. 43, A), black surface; gritty dark gray paste, unevenly raked over the whole surface with broad, sweeping strokes.

2. Large pot (Pl. 41, Q), flat bottom, incised on upper half with two groups of extraordinarily even horizontal lines around the body and short diagonal lines above and between them.

3. Pot with neck (Pl. 43, B), reddish-buff; two rows of carelessly incised short lines around the shoulder; flattened base; unusually thick walls.

4. Spouted pitcher with bridge handle (Pl. 41, R), buff; coarse ware; herringbone incision at the base of the neck.⁴

UNDECORATED WARE

The paste of nearly all the Undecorated Ware remains unchanged from that of the Typical Painted Ware of Levels XII-XA. Bowls like Pl. 42, I, vases like Pl. 43, U, and a pot like Pl. 43, E with a shorter neck are found. There are also high-sided buff jars (Pl. 49, A and C), with flat lips and flat bases, made of coarse, gritty clay. These have slightly straighter sides than were found in the preceding levels.

REDDISH-BUFF BURNISHED WARE

Three thin sherds of a highly burnished reddish-buff ware; paste, reddish-buff, filled with small white particles; texture, medium; baking, medium; wheel-made.

LEVEL IX

The outstanding finds in Level IX are the crude bowls. The other sherds continue the traditions of the deeper levels.

PAINTED WARE

Typical Painted Ware as seen in Levels XII-XA: a few sherds.

Orange-red Painted Ware as seen in Levels XII-XA: one sherd.

KNOBBED WARE

Two double-mouthed fragments (Pl. 42, P).

⁴The original level of this vessel is uncertain. However, it could not have been deeper than Level X or higher than Level IX. (R. F. S. S.)

INCISED WARE

Two sherds, thinner than average, one unusually fine-grained sherd, and one cross-hatched reddish-buff sherd are otherwise representative of the typical Incised Ware of Levels XII-XA.

UNDECORATED WARE

Gray ware.

One small pot (Pl. 50, P), identical with the gray ware of the preceding levels.

*Crude bowls.**Surface.*

The surface is generally slightly and carelessly smoothed. The lower exterior part may have rough aimless striations or coarse raked lines. Sometimes the bases appear to have been cut out of a lump of clay. The color is pinkish-buff or buff.

Paste.

Color: pinkish-buff or buff.

Temper: much straw.

Texture: coarse.

Baking: poor to medium.

Thickness: may vary greatly with each bowl; for example, one has a flat rim 1.5 cm. while the base is 0.4 cm. thick, but the average thickness is 1 cm.

Construction.

Handmade.

Shape.

The bowls have flattish bases and rounded or thinned rims (cf. Pl. 50, B from Level VII), or flat rims bevelled outward (cf. Pl. 50, A from Level VIII), or flat, slightly grooved horizontal ones.

LEVEL VIII

Very little material came from this level, but it marks the beginning of the conquest of wheel-made over handmade ware. Sherds made on the fast wheel had been found occasionally before, but they now become increasingly important.

PAINTED WARE

Typical Painted Ware as seen in Levels XII-XA: two sherds.

KNOBBED WARE

One fragment from a double-mouthed vase.

INCISED WARE

One slate-gray rim sherd (Pl. 49, F), burnished; filled with small occlusions; texture, medium; baking, hard; cross-hatched design placed on either side of a small horizontally pierced lug.

UNDECORATED WARE

Two crude bowls similar to those in Level IX.

One handmade cup with handle (Pl. 51, L), crude buff ware with straw temper like the crude bowls of Level IX, found 30 cm. below the floor.

Wheel-made vase of S-profile, carinated, roundish bottom (Pl. 51, J), and several wheel-made sherds (Pl. 50, C, D, E, F).

LEVEL VII

PAINTED WARE

Three sherds like the typical Painted Ware of Levels XII-XA.

RED SLIPPED WARE

One burnished sherd: paste, reddish-buff; texture, fine; baking, good.

UNDECORATED WARE

Handmade.

1. One crude bowl and many fragments.
2. Carinated bowl with half-open spout (Pl. 50, H), the only one found: buff ware like that of the typical Undecorated Ware of Levels XII-XA; found between Level VI and VII.

Wheel-made.

1. Carinated bowl (Pl. 50, L): buff; paste like that of the crude bowls, but because it was made on the wheel, the surface is smooth and hard, although covered with holes left by the straw temper.
2. Small pot with short neck, slightly rolled rim, broad shoulders, and flat base: surface and paste, reddish-buff; texture, fine; baking, good.

Spouts.

One buff spout, slightly curved.

LEVEL VI

INCISED WARE

1. One reddish-buff sherd: paste, reddish-buff with gray core; temper, straw; texture, medium coarse; baking, good; design, cross-hatching in coarse lines.

2. Bowl with handle (Pl. 49, D): surface, drab gray; paste, drab, gritty; baking, medium; texture, medium coarse; covered with finely spaced raked incisions. The incision is similar to that on the pot from Level X shown in Pl. 43, A.

KNOBBED WARE

One sherd.

UNDECORATED WARE

Handmade.

1. Globular pot, slightly carinated, with spout (Pl. 52, C): surface, reddish-buff, smoothed, covered with holes left by the straw temper; paste, reddish-buff with lighter core; texture, medium; baking, medium.
2. Green sherd: rough gritty surface; paste, greenish with gray core; temper, straw and occlusions; texture, coarse; baking, fair.

Wheel-made.

1. Two cups with rounded bottoms and straight sides. The sides of one slant somewhat inward and the rim is slightly everted. The other has horizontal corrugations on the inside. The exterior is carefully smoothed, but shows traces of the corrugations. The first is buff, and the other reddish-buff. Their texture is fine and the baking good.
2. Tall vase with deep horizontal corrugations around the body (Pl. 53, H).
3. Tall vase (Pl. 53, A).

LEVEL V

PAINTED WARE

Pale reddish-buff sherd, surface smoothed and decorated with a dull black paint that rubs off very easily and has practically disappeared, inner surface covered with reddish-buff slip of same color as paste; temper, small occlusions; texture, medium; baking, medium.

RED SLIPPED WARE

Burnished sherd with moulded band incised in a rope pattern: paste, reddish-buff with lighter core; texture, very fine; baking, very good; probably wheel-made.

CREAM SLIPPED WARE

Bowl with round bottom and a slight bulge below the somewhat flattened rim (Pl. 50, K): surface covered with cream slip that is flaking off, showing the pinkish-red paste; temper, many small occlusions; texture, medium; baking, good; faint careless raked lines on the exterior bottom half.

INCISED WARE

1. Green sherd, like that described under Undecorated Ware, Level VI, incised with groups of raked lines which meet each other at a slight angle.
2. Brown sherd with incised eye design (Pl. 53, D); the center of the eye is a knob with incised dots: paste, brown; temper, small occlusions; texture, medium; baking, good; probably handmade.
3. Cylindrical handle with rope pattern incised on one surface: surface and paste, drab; temper, small occlusions; texture, medium fine; baking, good.
4. Pot-stand (Pl. 54, A), reddish-buff with incised arcs and wavy lines: paste, reddish-buff with lighter center; temper, small white and dark particles; texture, medium fine; baking, good.

UNDECORATED WARE

*Buff.**Handmade.*

1. Two crude bowls and many fragments.
2. Carinated pot with remains of a handle (Pl. 51, M): surface, reddish-buff, smoothed, covered with scars left by the straw temper; paste, light reddish-buff with gray core; texture and baking, medium.

Wheel-made.

1. Small jar with string-cut base, rim missing but otherwise similar to Pl. 51, G: surface, buff, well smoothed; paste, buff; temper, small occlusions; texture, medium fine; baking, good.

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2. Vase (Pl. 51, AA): surface and paste, buff, gritty; temper, fairly coarse sand; texture and baking, medium; found between Level V and VI.

Red.

Small wheel-made base exactly like the bases of the Red Ware vases found in the graves (see section on Grave Pottery): surface and paste, gritty orange-red; texture, medium; baking, good.

Miscellaneous.

1. Pot-lid with flat knob handle (Pl. 54, B), medium fine buff clay, wheel-made.

2. Spout, drab, medium fine clay, well baked.

3. Animal head lug, buff; paste, buff; temper, straw and small occlusions; texture, medium; baking, good.

REDDISH-BUFF BURNISHED WARE

Sherd with burnished stripes, otherwise like the Reddish-Buff Burnished Ware of Level X.

LEVEL IV

RED SLIPPED WARE

Orange-red sherd with vertically pierced lug, probably burnished: paste, brownish-buff; temper, small occlusions; texture, medium; baking, medium; construction, wheel-made.

UNDECORATED WARE

Gray.

Fragment of unusual-shaped gray vessel (Pl. 50, N): surface, drab gray, very smooth, probably originally burnished; paste, drab; texture, fine; baking, good; wheel-made(?).

Buff.

Pinkish-buff sherd, the interior of which is covered with bitumen bearing impressions of wheat or barley: temper, straw and small white particles; texture, medium; baking, good; construction, wheel-made(?).

Small jar (Pl. 51, G), similar to the one described in Level V.

LEVEL III

This level produced a considerable number of vessels in ware and shape like the wheel-turned buff vessels described in Levels VI, V, and IV. A tall pot is illustrated in Pl. 52, D, a vase in Pl. 52, E. A bell-shaped cup and a straight-sided cup with a slightly everted rim have string-cut bases, which are common at this time. Their inner surfaces are pointed at the bottom.

An unusual sherd is small, pinkish-buff, very fine-textured, and as smooth as silk.

A ram's-head spout of the same ware as the wheel-made pots just described is very like those illustrated in Pl. 57, V and W.

LEVEL III-IIB

This level consists of about 2 m. of deposits, lying between the floor of Level IIB and the topmost of the three floors of Level III.

PAINTED WARE

Two sherds are painted in dark purple. The outer surface of one has a whitish slip, the interior is corrugated: paste, drab brown; temper, small occlusions; texture, fine; baking, good; probably wheel-made; reserve design of curvilinear lines is left in the whitish slip by the purple background. The surface of the other is brown and unslipped: paste, brownish; texture, medium fine; baking, good; construction, wheel-made(?); design, bands and angular waves in dark purple paint.

SLIPPED WARE

Wheel-made.

Vase (Pl. 52, G), tall neck, round shoulders and pointed base, reddish-buff slip over reddish paste on the outside; on the inside are remains of a thick white slip.

Bowl (Pl. 50, M), eggshell ware, fine polished cream slip with pink tinges over buff paste. Another bowl from Grave 5A (Pl. 50, O), and a few sherds from the City Wall Section, are the only examples of this ware, which is by far the finest in the collection.

INCISED WARE

Cup (Pl. 51, F), buff with reddish parts, straight sides slanting in towards the top, round bottom, three incised lines around the body: temper, small occlusions; texture, medium; baking, good; wheel-made except for handmade bottom.

Bowl with fairly straight sides, string-cut base, incised line below rim, corrugations on upper interior: surface and paste, greenish; texture, medium fine; baking, medium.

UNDECORATED WARE

Gray.

1. Bowl (Pl. 62, I), dark gray, burnished, fine-grained.
2. Storage jar (Pl. 63, B), dark gray, burnished, decorated with three raised rings of rope design.
3. Pot with neck or rim missing. The body of this unusual pot is somewhat like Pl. 50, N, but with a smooth upper curve. The mouth is small.

*Buff.**Handmade.*

Vial (Pl. 57, G): surface and paste, buff; temper, occlusions; texture, medium; baking, good.

Wheel-made.

Squat jar with round shoulders, short neck, and flat base: buff; temper, small occlusions; texture, medium; baking, good.

Pedestaled bowl (Pl. 50, G) with moulded rings around the base: surface and paste, greenish-buff; temper, small occlusions and straw; texture, fairly coarse; baking, medium.

GRAVE POTTERY

The pottery here described is from the graves of Pit L4 of Yorgan Tapa, numbered by Mr. Starr 1-13 (Part I, Chapter II). The six burials collectively designated by him as Grave 5 are referred to here, in order of depth, 5a,⁵ 5b, 5c, 5d, 5e, and 5f, as in

⁵ Not to be confused with the separate interment, Grave 5A.

THE POTTERY FROM PIT L4 OF YORGAN TEPA 607

Appendix A. These graves were so disturbed that the pottery cannot be assigned stratigraphically to the period in which it belongs, with the exception of the two infant burials of Level X. Typologically it falls in the period of Level VI through Levels III-IIB inclusive.

All the vessels are wheel-made. The majority are greenish-buff to deep reddish-buff in color and are undecorated. Incised horizontal lines encircling the vessel are found on two pots. The surface is smoothed but has a slightly gritty feeling. Sometimes careless unintentional lines have not been removed. The paste is greenish-buff to reddish-buff; temper, small occlusions which are sometimes white; texture, medium to fine; baking, medium to good; thickness, depends on the size of the vessels but is quite thin compared to the height.

BUFF WARE

1. Bowls with flat bases, sometimes string-cut; rims sometimes inverted; often lop-sided. Three from Grave 5c; two from Grave 5d; three from Grave 5e (Pl. 50, J); one from Grave 7.
2. Tall, shouldered vases with broad mouths and ring bases. Two from Grave 5a (Pl. 53, C; Pl. 52, I); one from Grave 5d; one from Grave 5e (Pl. 53, G), a unique variant; one from Grave 7 (Pl. 52, H).
3. Cups with round bottoms or string-cut bases. One from Grave 5a; one from Grave 5d; four from Grave 5e, one of which is illustrated in Pl. 50, I and one in Pl. 51, B; one from Grave 6 (Pl. 51, A); one from Grave 7 (Pl. 51, E); one from Grave 9 (Pl. 51, C).
4. Large basin (Pl. 50, Q) from Grave 5d.
5. Pots.
 - (a) Plain.
One from Grave 2 (Pl. 62, Q); one from Grave 5b.
 - (b) Incised.
 - (1) Round-sided pot from Grave 3, flat base, short neck, flat horizontal rim, low flat ridge around the neck, three incised lines around the shoulder.
 - (2) Round-shouldered pot from Grave 3, round bottom, an incised ring delimiting a hypothetical base, two incised rings around the shoulder.
6. Carinated bottle (Pl. 51, D) from Grave 5e.
7. Chalice (Pl. 51, H) from Grave 5e.

GRAY WARE

The following Gray Ware vessels were found:

1. Vase with almost pointed base and flaring neck (Pl. 52, F) from Grave 9.
2. Pot (Pl. 51, K) from Grave 6, poorly baked.

RED WARE

With the exception of one base in Level V, no vases or ware of this kind were found in the habitation levels (Pl. 52, A, from Grave 5e). The surface is well smoothed: paste, reddish; texture, fine; baking, good. One from Grave 5A; one from Grave 5c; two from Grave 5e; one from Grave 8; two from Grave 9; one from Grave 10.

SLIPPED WARE

One eggshell bowl (Pl. 50, O) from Grave 5A.

APPENDIX H

THE POTTERY FROM KUDISH ŞAGHİR¹

BY

H. W. ELIOT

Twenty-one trenches were dug in the mound of Kudish Şaghîr, seventeen of which were productive. These trenches, as will be seen in Plan 44, formed a line running roughly north and south across the mound, and are numbered in the order in which they were dug. None was dug to virgin soil. The most prolific trenches were Nos. 7, 6, 2, 3, 19, and 16; particularly the last two, which furnished possibly half of the total number of sherds gathered.

Four principal classes of ware were found: Knobbed, Incised, Painted, and Undecorated. All four of these classes were found in most of the trenches. Each of these classes, excepting the Knobbed, must be sub-divided into two classes, which will be designated "Common" and "Uncommon."² The Common sub-class is always much the larger of the two, and is homogeneous in character though displaying variety in design and form. The Uncommon sherds are miscellaneous, but not all unique; of some there are as many as a dozen examples, and others may be assorted into small groups. The natural inference is, that the Common wares are of native make, and the Uncommon imported; but this is not always possible of proof.

The great variety of wares found seems rather extraordinary in so early a culture. The Common wares, furthermore, show that this culture possessed an individual character, for it is difficult to find any close analogues at other sites except in the Uncommon.

KNOBBED WARE

This ware might almost be called Kudish ware (or Yorgan ware), since nothing exactly like it seems to be known from other sites. The surface shows no slip, but is not unpleasantly rough, and was probably wet-smoothed. The color of the clay is that natural to the site, as is the case in most of the Kudish ware, except as it may be affected by baking; it is a very light buff, which, especially when dirty, is easily mistaken for gray (but can be easily distinguished by comparing it with actual "gray-ware"); but occasionally it has a faint pinkish tone. It is straw-tempered; the ware is rather coarse, and soft enough to be easily scratched; it is usually about a centimeter in thickness. It is handmade, the knobs are applied and the joint smoothed.

The form is invariably globular, or nearly so, with double mouth. Mouths are large enough to insert hand or fist, and have a short, generally straight neck or collar an inch or so high, with rounded edge. It seems a fair conjecture that all the ware was double-mouthed, though only two knobbed sherds were large enough to show both mouths. The mouths are close enough together for the user to have carried the jar by grasping the bridge between the two mouths. If we may judge from the only fragment large enough to show (that from Levels IX-VIII of Yorgan Tapa, Pl. 42, P), the knobs were applied over the whole surface. Sometimes the knobs are close together, sometimes far

¹ This account, of course, deals only with the collection in the possession of the Semitic Museum of Harvard.

² The terms Typical and Untypical might be somewhat misleading. The Knobbed Ware, for instance, is small in numbers, but it is certainly typical.

apart; sometimes they are round, sometimes elliptical. The example shown in Pl. 42, P has an elongated knob between the two mouths, but this is not always the case. Some sherds showing double mouth, but no knobs, were found; but these sherds were too small to warrant the belief that there were double-mouthed vessels without knobs.

INCISED WARE

The surface of the Incised Ware appears to have been wet-smoothed with the hand; it is even in texture and less rough than the Knobbed Ware. On some of the sherds, however, is what looks like a cream slip, often unevenly applied.⁸ No painting was found on any Incised Ware at Kudish (though some painted-incised occurred at Yorgan). The ware is typically very light buff, occasionally pinkish or reddish, probably as a result of baking. The paste is straw-tempered, of varying degrees of coarseness. The ware is usually about a centimeter in thickness, and the vessels are as a rule large but of portable size. The most nearly complete specimen, shown in Pl. 46, D, is about 41 cm. in diameter.

The vessels (though no complete ones were recovered) appear very symmetrical, which suggests the use of the slow wheel (a disc on a pivot, capable of being turned but not spun). The most common shape is the globular pot (Pl. 46, D), with a short, much everted neck, or a longer, usually slightly everted one. None of the sherds is large enough to tell us whether the bottom was round or slightly flat. Some large, shallow, roundish-bottomed bowls or platters are found; these, naturally, are incised on the inside (Pl. 44, A). Some sherds, apparently of smaller bowls, show carination.

The Incised Ware which is classed as Common is always of two kinds, Herringbone and Combed, and these constitute the great majority. The Uncommon ware is of six kinds: Deep-combed, Criss-cross, Naturalistic, Indented, Stamped, and a class into which is relegated miscellaneous black, brown or gray ware.

Herringbone. The characteristic Herringbone technique is shown in Pl. 44, A and Pl. 46, D. The incisions seem to have been made with a blade before baking, and show little or no "burr." This pattern shows little variation, and is seldom used in combination with other patterns.

Combed. The Combed technique, on the other hand, shows greater variety and ingenuity than the Herringbone type. The tool used must have been toothed or serrated, since the combed lines, which are usually rather fine, are accurately parallel, and are always the same in number on any one given vessel; and this is true of the dashes and dots made with the same instrument, except when they happen to be carelessly executed. There are four kinds of combing: 1. continuous combing encircling the vessel; 2. intermittent combing, in dashes of greater or less length; 3. maeanders and festoons, often delicate and graceful; 4. punching with the tool, making rows of dots. These elements are also found in combination with one another, and less often with the herringbone. All these types are illustrated in Plates 44 and 46.

Deep-combed. While this is classed as Uncommon, because of the few examples found (not over a dozen), it is probably related to the Combed Ware just described. The difference is that in the Deep-combed the tool makes, instead of lines, furrows of V-section, and of remarkable evenness. Surely the wheel must have been used, and some sort of prop for the hand while the wheel was being turned. Sometimes the upper edges of the ridges are decorated with a row of fine diagonal lines (Pl. 44, O). Sometimes the ridges are rounded and the gullies U- rather than V-shaped (cf. Pl. 44, Q). The grooving appears—as well as can be judged from the few and small sherds—to have encircled

⁸ On this point, see Mr. Getten's analysis, p. 611, under Undecorated Ware.

the vessel and to have covered the upper half if not the whole. The vessels appear to have been cups or small bowls; the rims are dull knife-edged (or perhaps one might say "celt-edged") or bulbous-rounded. The paste seems more finely sifted than that of the Common Incised, and is of a light clean buff, almost white, well smoothed.

Criss-cross. This name has been chosen as descriptive of a pattern which is found on only two or three sherds. Two are shown in Pl. 45, B and C. B is the bottom of a roundish-bottomed bowl of 0.5 to 1 cm. thickness, of brick-red ware, hard and well baked. The incisions are on the inside, and besides intersecting, they seem to radiate. The outside of this particular sherd has the appearance of a cream slip. The example shown in Pl. 45, C is of gray paste, incised on the outside; it is very crudely modeled on the inside.

Naturalistic. This is a beautiful type of ware, of which only two sherds were found; one is from Trench 5, near the top of the mound, and the other from Trench 7, on the northernmost edge of the mound. But for a slight difference in color, they might almost be from the same vessel. One is pinkish, the other light buff. Both are roundish-bottomed dishes with rounded edge, and are incised on the inside, apparently with a dull-pointed stick which leaves a slight burr; the burr is very fresh, as if the vessels had never been used. The design is a spray of vegetation, done with surprising freedom for so geometrically minded a people. These are not illustrated.

Indented. Of this ware there are but four sherds from Kudish (at Yorgan they are more numerous). One of our examples (cf. Pl. 45, M from Yorgan) is finger-indented (with the whole finger, not the nail); the others are similar except that the indentations appear to have been made with the end of a pointed or wedge-shaped stick (cf. Pl. 45, I from Yorgan). One of the latter type is from a small globular pot. The finger-indented sherd is grayish; the wedge-indented are pinkish-buff and of finer and harder fabric.

Stamped. Stamped decoration occurs on very few sherds, principally on those of a certain type of large storage jars which are worthy of attention, and whose striking feature is a double rim. This type of rim can best be visualized by reference to Pl. 45, D.⁴ Whether the buttress connecting the two rims at points was an invariable feature, or whether this type of jar always bore some stamped decoration, is uncertain, for some of the sherds found show neither the buttress nor the stamping. The stamping consists merely of a row or rows of impressions such as might be made with the butt of a lead pencil. The clay is light buff or pinkish, the latter having in at least one instance the appearance of a cream slip. Whether the vessels were cylindrical with flat bottom, or perhaps somewhat U-shaped, is a matter of conjecture.

The other examples of stamping found are on sherds of smaller vessels. One from Trench 20, of reddish ware, has a row of round punched impressions on a ridge. Two other reddish sherds (from Trench 20 and from Trench 6, Pavement III) have what appears to be a more complex design which is obscure. None of these is illustrated.

Brown, black, gray. Some of these incised specimens may be merely rejected vessels, perhaps fire-blackened by accident. But one fragment deserves close attention (Pl. 41, I). This has a brown slip or coat of paint, and is incised with two maeanders, each composed of four incised lines, crossing and re-crossing; it should be noted that the lines are not perfectly parallel. Dr. Starr's suggestion that it is the neck of a three-handled vase seems quite tenable, but its presence at Kudish is a mystery.

⁴ The rim diameter of the vessel from which this sherd came can be estimated as having measured 62 cm. This and its companions, then, represent by far the largest vessels found in the prehistoric strata of either Kudish or Yorgan. (R. F. S. S.)

UNDECORATED WARE

This class of ware, at Kudish, is much the largest in numbers of the four classes, even allowing for the probability that it includes many sherds of Incised or Painted which happened not to bear any decoration. It also includes a goodly number of Uncommon examples, some of which are slipped.

The ware for the most part is symmetrical and well made; some examples appear clearly handmade, others have what look very much like wheelmarks and suggest a wheel with some momentum. The paste is predominantly light buff, but in a small minority it is reddish to brick-red; in the thicker reddish ware is sometimes seen a coarse gray core. It is either wet-smoothed, or slipped with a very thin solution of the same clay, finely pulverized.

Mention has already been made of a seeming cream slip which appears on quite a number of pieces; this occurs most commonly on Undecorated Ware, especially that which is of reddish or pinkish paste. Mr. R. J. Gettens, after examination of some specimens, has kindly offered the following opinion:

"In all the pieces examined there is no distinct line of demarcation between the light surface and the reddish body, but a gradual change from buff to light red. The body material of one specimen is coarse and contains many small pebbles and impurities which are also found at the buff surface. The body material of another specimen is finer, and this is also true of the surface. On still another fragment it was observed that the exposed edges of the old fractures are light in color like the surface, but the new fractures show the body material as it originally was. Therefore it is believed that the specimens do not have a slip, but the lighter color of the surfaces is caused by weathering or action of soil waters."

Common undecorated.

This ware may be divided into three sub-classes on the basis of its thickness; we have designated these, for convenience: Thin (0.2 to 0.5 cm.); Medium Thick (1 cm., more or less); and Extra Thick (1.5 to 2.5 cm.). Occasionally it is hard to draw the line; but the distinctions are not purely arbitrary, since certain forms are peculiar to each thickness.

1. Thin.

Paste.

Fine, hard, smooth, well fired; usually light buff, but sometimes greenish.

Forms.

a. *Cups and small bowls*, with more or less divergent sides, usually slightly everted or inverted (generally the former, and slightly belled); knife-edge rims; round or roundish or slightly flattened bottom; no foot, no handle, no spout. (Pl. 43, Z, AA, BB, CC.)

b. *Globular pots or bottles*, with divergent neck or collar, usually slightly everted, or shorter and more sharply everted; knife-edge rim; round or roundish bottom; no foot, no handle, no spout. (Pl. 43, E, F, G, I, L, M, N, P, Y.)

2. Medium Thick.

Paste.

Coarser than in the Thin Ware, straw-tempered, usually light buff, but sometimes reddish and sometimes with the appearance of cream slip noted *ante*.

Forms.

a. *Small cups*, few in number.

b. *Bowls* of the same form as those of the Thin Ware, but larger, thicker, and characterized by a variety of rims: "celt-edge," or rounded edge, or flat,

or flat with a longitudinal groove. When flat, or grooved, the face of the flat edge may slant either inward or outward, and usually it has a slight lip or serif at one edge or the other, or both. There are also found in this ware large bowls of a shallower type than usually found in the Thin Ware. (Pl. 42, I, which has grooved rim.)

c. *Globular pots* identical in form with those of the Thin Ware, but with rims finished in the same manner as just described in the case of the bowls (b).

3. Extra Thick.

Paste.

Coarse, straw-tempered, usually light buff; sometimes very coarse, with gray or blackish core.

Forms.

a. The typical *globular pot*, a magnified version of that seen in the Thin and Medium Thick.

b. A *large platter* or trencher, circular, with vertical sides about 10 cm. high, and flat-bottomed.

The Extra Thick constitutes less than 1.5% of the total number of sherds of Common Undecorated, but it is classed with the Common because of the fact that the typical globular pot is found in this heavy ware.

Perforation. Thin and Medium Thick Undecorated vessels were in some cases perforated, for suspension, with four holes (if one may judge from the fragments). Sometimes this perforation was through the walls, sometimes vertically through the lip or serif of the rim (Pl. 43, R has two perforations of each kind). Sometimes the perforations were placed so low that the vessel could not have been filled more than half full of liquid.

Uncommon undecorated.

Double-rim. Mentioned above, and only mentioned here because of the possibility that the undecorated sherds of this ware may not belong with the Stamped Ware, *ante*. Not classed with the Common, not only because of their scarcity but because they have no resemblance (except in paste) to any of the Common Undecorated.

Spouts. Only one sherd was found with the remnant of a spout, from Trench 16. The sherd shows the typical globular pot form, with a short everted rim, and hence it might in a sense be proper to include it with the Common Undecorated. Three or four other spouts, broken off from their pots, were found at Kudish; one of these spouts was intentionally plugged up before baking.

Handles. Several handles were found. The one shown in Pl. 41, G₂ is of ribbon-form, grooved longitudinally on the back; it would appear to have belonged to a roundish cup or pot. The one shown in Pl. 41, K affords no clue as to the vessel. A fragment of handle from Trench 6 is of reddish clay and is oval in section; another from Trench 7 is round in section.

Lugs. Only one lug was found, of rather coarse blackish paste, perforated; and another lug, not completely perforated.

Ledge handle? The sherd shown in Pl. 41, P in profile is of coarse reddish, somewhat blackened ware. At first glance it might be taken for an unusual piece of knobbed ware, since the projection is rather elliptical in shape; but the form of the vessel is quite different from that of the knobbed ware. Possibly the flat portion, which in the profile

illustration is shown at the top, is really the bottom; however, the form of the handle suggests that the position shown is the proper one.

Ring base. Only one ring base was found, of a fairly large vessel of thickish ware, pink in color. It is of course impossible to tell whether this was from an Undecorated or Decorated vessel, but it seems probable that it is intrusive. It is from Trench 5.⁵

Offering stand (?). A vessel from Trench 6 seems equally out of place at Kudish. It is a large shallow dish, broken, of coarse reddish paste with gray core, and with it, and apparently fitting it, a fragment of what seems to have been its pedestal. Dish and pedestal seem to have been molded separately, scratched with oblique incisions where they were to be joined, and presumably cemented with mud mortar before baking. (The offering stands of Cemetery A at Kish were so made in two pieces; and cf. Pl. 56, U, from Temple G of Nuzi.)

Double-mouth? The possibility that any double-mouthed jars were made without knobs seems, on logical grounds, negligible. Three sherds showing double-mouth, but too fragmentary to show any knobs, were found.

Infant burial jars. The infant burial jars found at Kudish have been described in the text and in Appendix A. A rim sherd from Trench 6 of Kudish is possibly from a jar of this type.

Black, gray, brown, plum-colored, green-slipped, red-slipped. Some fifty or sixty sherds are here grouped together, having in common little beside the fact that none is of the usual buff or reddish color of clay.

1. *Black.* Several sherds (rims) of typical globular pots, of coarse paste which seems to have black ingredients; the surface, inside and out, is blackened and reddened by fire. A few extremely coarse sherds appear bituminous.

2. *Gray.* Four sherds (from Trenches 16 and 7) are of a distinctive, even gray color, and of stone-hard, well-fired, straw-tempered ware which appears to contain black as well as gray ingredients. The four are identical in paste and color, all are more or less hemispherical in form, and all have a roundish rim with flattish bulbous projection outside or inside. (This same form, it must be noted, is found in the buff Common Ware.)

3. *Brown.* Three sherds (from Trenches 5 and 6) are rims of smallish globular pots of typical form, with short necks; another such rim, from the circular room of Trench 2, has a neck 4 cm. high. All of these are of a distinctive light brown color; one appears slipped, and some show burnishing. Another rim sherd of a globular pot with short neck is of black paste with brown slip outside (Trench 6). The most distinctive specimen is a rim sherd of a globular pot (Trench 2) of a rich, deep tobacco-brown, highly burnished. It is noticeable that all these brown sherds are from small or medium-sized globular pots.

4. *Plum-color.* There are perhaps a dozen sherds of a fine, thin, hard ware of light brown paste (Trenches 5, 7, 16) which have on the outside a slip (or paint) of matt surface, so dark that it is hard to determine the color, which sometimes looks a dark plum-color and sometimes like a very dark brown. One sherd is gray inside, and another is a much lighter brown inside than outside. Some of these sherds could almost be called black. One sherd is deep plum-colored on the outside with elusive suggestions

⁵ An undoubted ring base is on the small cup from Trench 16, now in the Iraq Museum. The profile is like that of Pl. 43, BB, the ware almost paper-thin and greenish in color. The exterior is decorated with horizontal bands of chevrons (cf. Pl. 43, C) in lustrous blue-black paint. (R. F. S. S.)

of green underneath; inside it has chocolate-brown slip or paint, streakily applied. Another shows this plum-color-and-green on both sides.

5. *Green*. A large sherd of the neck and shoulder of a heavy globular pot with high neck is of gray paste covered with what looks like a bright green slip or wash rather thinly applied on a rough surface. Possibly this is an effect of baking. Another small sherd is very different (Trench 16); it is very coarse, the paste is nearly black, the slip is light green, and flakes easily; it may be a very poor attempt at enamel.

6. *Red slip*. Last, but by no means least important, are a dozen or so sherds showing a red slip, more or less worn off; in some cases the slip seems burnished. The paste is red or reddish. The best specimens are from Trenches 4, 5, and 6. The sherds are all too small to give any clue to the forms.

These six varieties of ware, with the exception of the Plum-color and the Red Slip, from which the forms cannot be determined, all appear from their forms to be variations upon the Common Ware. They would seem to indicate experimentation on the part of the native potters.

PAINTED WARE

The classification of the Painted Ware presents a more complex problem than that of other wares, for besides differences in thickness, form, and color of paste, there are differences in color of paint and a much greater variety of design. There are also various combinations of all these characteristics, most of which are of aesthetic rather than cultural significance.

With very few exceptions, the Common Painted Ware is essentially the same in form and fabric as the Common Undecorated; in a word, it is the same ware with paint on it. For the forms, therefore, the reader is referred to the section on Undecorated Ware.

In color of paint the ware falls into two fairly distinct classes, apparently representing the use of two different pigments:

1. Green to olive to olive-drab (rarely, almost black).
2. Brown to russet to orange-red.

The first of these pigments is seen most often on the Thin Ware, perhaps for artistic reasons, since the Thin Ware frequently is of greenish cast, which may be the result of high firing. The second class of colors is oftenest found on the Thick Ware, which has a tendency to pinkish color of clay. Both colors sometimes run to two tones, darker where the paint is thick and lighter where it is thin. Occasionally this almost gives the effect of polychromy, but actually, polychromy is never used.

Four types of pattern occur regularly:

1. Bands (Pl. 47, A, B, C, E, F; Pl. 48, O, S).
2. Maeanders (Pl. 47, G, H, I, K, U).
3. Festoons (Pl. 47, J, L, O, Q, S).
4. Hatchings (Pl. 47, Y, CC, II).

Bands are the most common, especially in the larger vessels. Next most common are the maeanders and festoons, between which it is often hard to distinguish. Hatchings are rather less common, especially on the thicker vessels. (Hatched patterns, it might be noted, are not found at Yorgan, and virtually no Thin Ware of the Common type.) These elements of design are used freely in combination with one another. They are also used indifferently as regards color of paint.

Uncommon painted.

The miscellany of sherds which we have classed as Uncommon represents about 17% of the Painted Ware as a whole. It will be divided here into three sub-groups,

the third of which is a composite group which might profitably be subdivided further into several minute groups, and even single unique sherds which are of considerable interest. Since the foreign relationships of these sherds are discussed in Appendix A, they will be only slightly touched upon here.

"*Broad style.*" This group consists of about a dozen sherds and two whole pots. The decoration, olive-brown paint, sometimes rather dark, is always broad in treatment: wide bands, solid "half-moons" and triangles, often on the inside of the vessel. The type of pot, shown in Pl. 43, D, seems characteristically to have a taller neck than the typical globular pot, and the neck is solidly painted. Besides this pot form, there occurs a rather shallow carinated bowl of the type shown in Pl. 42, H₁₋₂, K₁₋₂, L₁₋₂. Another form, apparently a deep bowl, may be illustrated by Pl. 48, N, from Yorgan. Pl. 42, D has two large solid triangles (not shown) inside. The fabric of this ware seems somewhat rougher than that of the Thin Common Ware.

Small pinkish ware. The specimens in this group have the following characteristics in common: they are small, some of them suggesting use for cosmetics, etc.; the paste is very fine and smooth, well baked, and of an even pink or apricot color; probably a thin slip was used; and the paint tends to a brighter, more nearly vermilion color than any of the paint seen on the Common Painted Ware. Furthermore, the forms, in so far as they can be determined, seem to be different.

A rim sherd of this type from the "circular room" of Trench 2, Pavement II, appears lightly burnished, has a dull knife-edge with a red-painted band about a centimeter wide, below which is a thinner band and a row of parallel zigzags; this appears to be from a small cup or bowl. Another such rim, from Trench 8, has a band and festoons in red paint, carefully applied. Another sherd of this ware is the foot of a small bowl or cup; this is one of the three only examples of a foot found either at Kudish or at Yorgan in prehistoric levels (the ring base mentioned under Undecorated was one, and another was a thin cup of greenish ware painted in blue-black paint which was reserved by the Iraq Museum). The foot is flat, not concave, on the bottom, and around the base is a red band a centimeter or so wide. Two more sherds are from small bowls or cups: one from Trench 2 has a hatched lozenge, "feathers," and a row of "eyes" formed by two intersecting maeanders (cf. Pl. 48, A for this figure); the other, from Trench 20, has rows of large and small dots (Pl. 48, JJ₁₋₂). The last-mentioned design, of course, is a typically Halafian one, as are also some of the others.

Rare or unique sherds. The word "rare" here is relative, meaning not over three or four sherds. The reader will be able to pick out many Halafian and al-'Ubaid patterns on Pl. 47 and 48. On Pl. 47, Nos. T, Y, Z, CC, DD, EE, FF, GG, II, JJ and KK are from Kudish; on Pl. 48, A, F, J, L, O, P, Q, R, U, V, Y, CC, JJ, KK are from Kudish. The up-and-down triangle (Pl. 47, Z), the double-axe (Pl. 43, DD), the vertical zigzag (Pl. 47, X) will be recognized as al-'Ubaid, and the hatched or laddered lozenge (which is also used at Halaf); and there are several other Halaf motifs. The chevron is rare at Kudish, but it appears on a fine whole example from Trench 16 (Pl. 43, C).

Spouts. Only one spout was found in painted ware; both the form of the vessel and the color of paint are distinctly untypical. This is shown on Pl. 41, H. The rim is a narrow, flat, right-angled one, turned inward; the ware is gray-green and is painted with zigzags and daubs in bluish-green and a lighter tone of the same. The spout is tubular.

