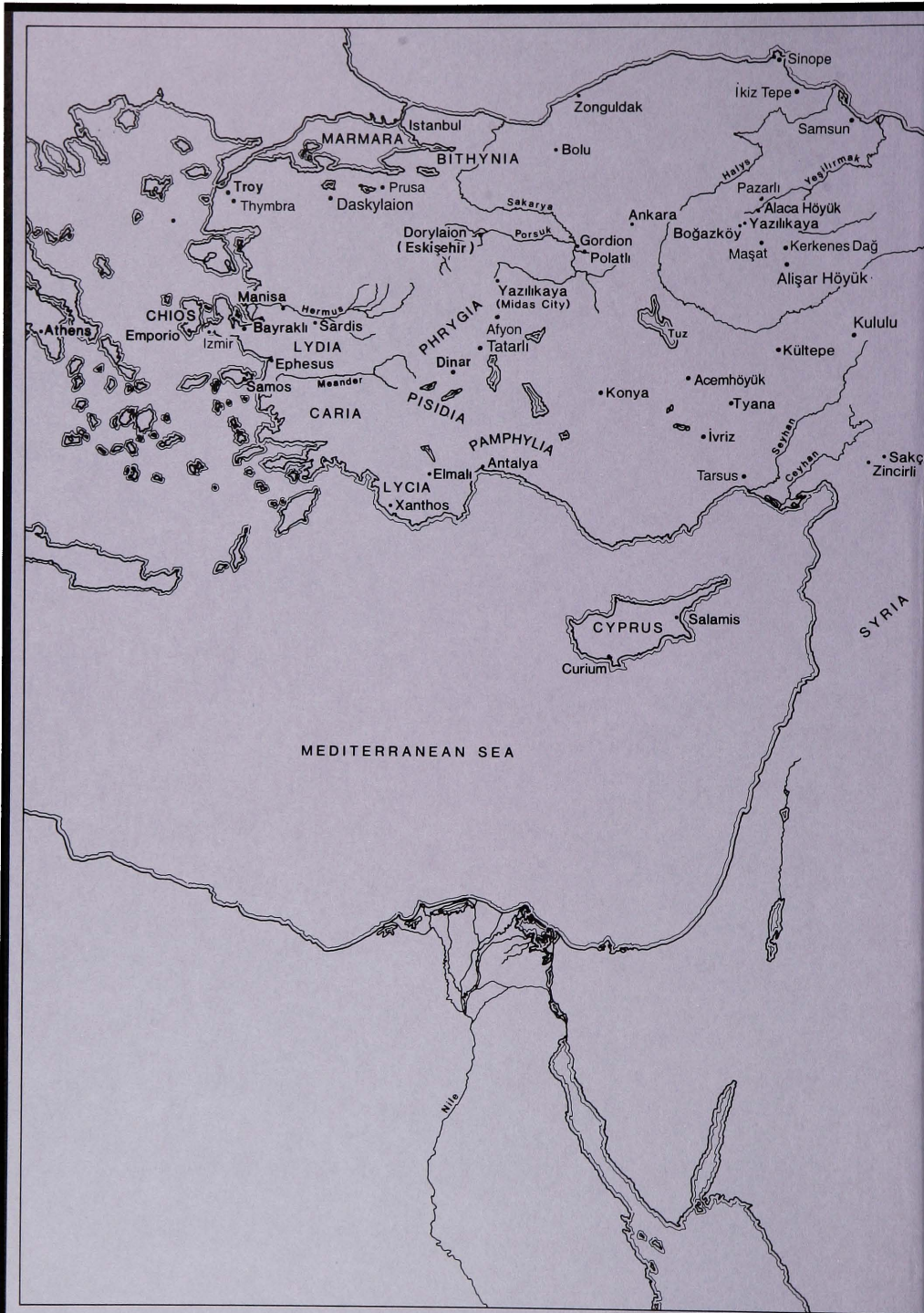
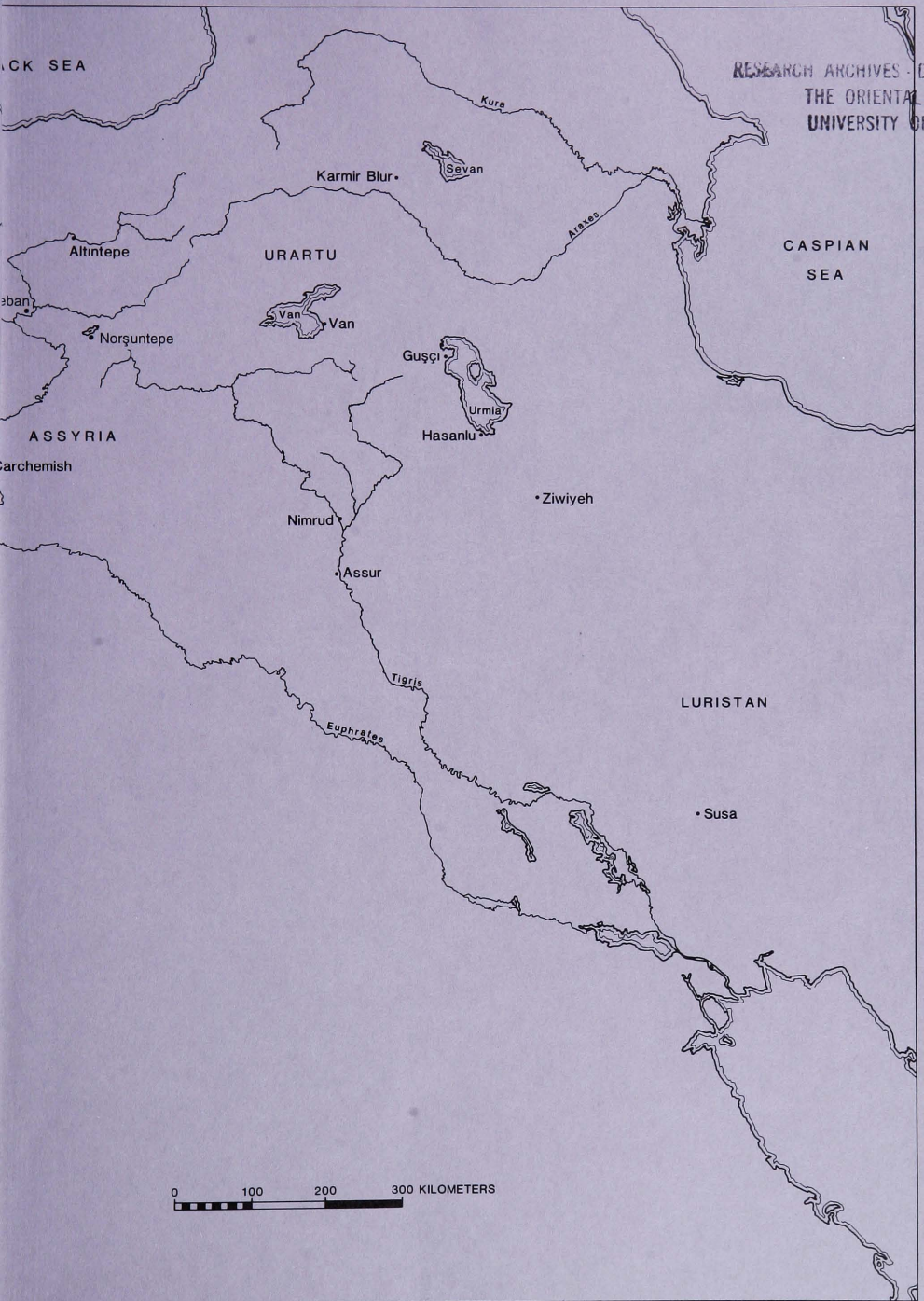


THE GORDION  
EXCAVATIONS, 1950-1973:  
FINAL REPORTS  
VOLUME II

THE LESSER PHRYGIAN TUMULI  
Part 1  
The Inhumations









THE LESSER PHRYGIAN TUMULI  
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The Inhumations

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*Frontispiece*

*TumJ 36. Dinos with bichrome decoration from Tumulus J*

Watercolor by Marian Welker

University Museum Monograph 88

THE GORDION EXCAVATIONS (1950–1973)  
FINAL REPORTS VOLUME II

G. K. Sams, Series Editor

THE LESSER PHRYGIAN TUMULI  
Part 1  
The Inhumations

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Ellen L. Kohler

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*THIS STUDY IS DEDICATED TO*

*Rodney S. Young  
and  
G. Roger Edwards*

*and to  
all the rest of the assembly of excavators  
of the lesser inhumation tumuli at Gordion*

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- Plate 69 G. **TumS1 78**. Gray sieve jug.
- Plate 69 H,I. **TumS1 79, 80**. Gray-ware vessel fragments.
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- AthMitt* *Mitteilungen des Deutschen Archäologischen Instituts: Athenische Abteilung*. Berlin: Gebr. Mann, 1876–.
- BaM* *Baghdader Mitteilungen*
- Barnett, *Assyrian Palace Reliefs* Barnett, R. D., *Assyrian Palace Reliefs and Their Influence on the Sculptures of Babylonia and Persia*. London: Batchworth Press Ltd., n.d.
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- BASOR* *Bulletin of the American Schools of Oriental Research*
- BASOR Suppl.* *Bulletin of the American Schools of Oriental Research, Supplement.*
- Belleten* *Belleten Türk Tarih Kurumu*. Ankara: TTK Basımevi, 1937–.
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- Blinkenberg, *Lindos I* Blinkenberg, Chr., *Les petits objets*. Lindos: Fouilles et recherches 1902–1914, I. Berlin: W. de Gruyter, 1931.
- BMFEA* *Bulletin of the Museum of Far Eastern Antiquities*. Stockholm.
- Boardman, *Greek Emporio* Boardman, J., *Excavations in Chios 1952–1955: Greek Emporio*. London: Thames & Hudson, 1967.
- Boardman and Hayes, *Tocra AD II* *Excavations at Tocra 1963–1965. The Archaic Deposits II and Later Deposits*. British School at Athens, Supplementary Vol. 10. London: Thames and Hudson, 1973
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- Plate 75 C. Tumulus S-2. Stone pack on southwest end of pit: line of reed matting.
- A. **TumS2 1.** Fragments of bronze bowl of banded-rim type.
- B. **TumS2 2.** Bronze swiveling ring handle.
- C. **TumS2 3, 4.** Fragments of petaled bronze bowls.
- D,E. **TumS2 5, 7.** Bronze studs.
- F. **TumS2 8.** L-headed nail.
- G. **TumS2 10.** Lydian base sherd.
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- D. **TumZ 12.** Fragment of petaled bronze bowl.
- E. **TumZ 13.** Fragment of reeded bronze bowl.
- F. **TumZ 14.** Molded socket from fibula tassel.
- G. **TumZ 15.** Bronze patching strip.
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# Abbreviations

## *Bibliographical*

AA	<i>Archäologischer Anzeiger</i>
AATA	<i>Art and Archaeology Technical Abstracts</i>
<i>Aegean and Near East</i>	Weinberg, S., ed. <i>The Aegean and the Near East: Studies Presented to Hetty Goldman on the Occasion of Her Seventy-fifth Birthday</i> . Locust Valley, N.Y.: J. J. Augustin, 1956.
AfO	<i>Archiv für Orientforschung</i>
AJA	<i>American Journal of Archaeology</i>
AJSLL	<i>American Journal of Semitic Languages and Literatures</i>
Akurgal, <i>Kunst Anat.</i>	Akurgal, E., <i>Die Kunst Anatoliens von Homer bis Alexander</i> . Berlin: W. de Gruyter, 1961.
Akurgal, <i>Kunst Heth.</i>	Akurgal, E. and M. Hirmer, <i>Die Kunst der Hethiter</i> . Munich: Hirmer, 1961.
Akurgal, <i>Phryg. Kunst</i>	Akurgal, E., <i>Phrygische Kunst</i> . Ankara: TTK Basimevi, 1955.
Akurgal, <i>Spätheth.</i>	Akurgal, E., <i>Späthethitische Bildkunst</i> . Ankara: Archäologisches Institut der Universität Ankara, 1949.
AnatSt	<i>Anatolian Studies</i> . London: British Institute of Archaeology, 1951–.
Anat . . . Near East	Emre, K. et al., eds. <i>Anatolia and the Ancient Near East: Studies in Honor of Tahsin Özgüç</i> . Ankara: TTK Basimevi, 1989.
Anderson, AGH	Anderson, J. K., <i>Ancient Greek Horsemanship</i> . Berkeley and Los Angeles: University of California Press, 1961.
Anderson, <i>Comm. Cem.</i>	Anderson, G., <i>The Common Cemetery at Gordion</i> . Ph.D. dissertation. Bryn Mawr College, 1980.
<i>Antalya Museum</i>	Özgen, E. and I., eds. <i>Antalya Museum</i> . Ankara: Turkish Ministry of Culture and Tourism, 1988.
AR	<i>Archaeological Reports</i> . Society for Promotion of Hellenic Studies.
ArchRev	<i>Archaeological Review</i>
<i>Art and Icon.</i>	Mellink, M. J. et al., eds., <i>Aspects of Art and Iconography: Anatolia and Its Neighbors. Studies in Honor of Nimet Özgüç</i> . Ankara: TTK Basimevi, 1993.

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- CSCAntiq* *University of California Studies in Classical Antiquity*
- Dark Ages and Nomads* Mellink, M. J., (ed.), *Dark Ages and Nomads c. 1000 B.C.: Studies in Iranian and Anatolian Archaeology*. Istanbul: Nederlands Historisch-Archaeologisch Instituut, 1964.
- DTCF Division of Languages, History, and Geography. University of Ankara.
- Dergi* *Ankara Üniversitesi Dil ve Tarih-Coğrafya Fakültesi Dergisi*.
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- TTK* Türk Tarih Kurumu (Turkish Historical Society)
- TTKK VIII* *Sekizinci Türk Tarih Kurumu Kongresi*. Ankara, 11–15 Oct., 1976. Ankara: TTK Basımevi, 1979.
- TTKY* Türk Tarih Kurumu Yayınları (TTK Publications)
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Woolley, <i>Ur Exc. IX</i>	Woolley, L., <i>Ur Excavations IX: The Neo-Babylonian and Persian Periods</i> . London: The Trustees of the British Museum, 1962.
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YbAPS	<i>Yearbook of the American Philosophical Society</i>
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## *Minor*

App.	Appendix (in footnotes)	cm.	centimeter
att.	attachment	CM	City Mound
avg.	average	conc.	concentric(ally) with other than circles
B	bronze (in field/catalogue number)		
BI	bone and ivory (in field/catalogue number)	crem.	cremation
BK	Büyükkale at Boğazköy (in dates)	ctr.	center
br.	bronze (in lists)	D.	diameter
C	center (in an illustration)	D. rim	diameter of rim
cc.	concentric circle(s) (in catalogue)	dec.	decorated, decoration
c-c	center-to-center	Dist.	distance
CC 1, 2, etc.	Clay-Cut Bldg. 1, 2, etc. on the City Mound	EPB I, etc.	Early Phrygian Building contexts
ch., chs.	chapter, chapters	esp.	especially
		est.	estimated
		ext.	exterior

Fig., Figs.	Figure, Figures in this volume	MS	"Museum Site" at Gordion
fig., figs.	figure, figures in other works	MT 1, 2	military trenches in Tumulus S-1
frag.	fragment	n., nn.	note, notes
G	glass (in field/catalogue number)	no., nos.	number, numbers
GD.	greatest diameter	OD.	outside diameter
gen.	generally	OL.	outside length
GH.	greatest height	omph.	omphalos
GOD.	greatest outside diameter	orig.	original (ly)
GPD.	greatest preserved diameter	OW.	outside width
GPH.	greatest preserved height	p., pp.	page, pages
GPL.	greatest preserved length	P	pottery (in field/catalogue number)
GPOD.	greatest preserved outside diameter	para.	paragraph
GPTh.	greatest preserved thickness	pc.	piece
GPW.	greatest preserved width	PH.	preserved height
GTh.	greatest thickness	Pl., Pls.	Plate, Plates in this volume
GW.	greatest width	pl., pls.	plate, plates in other works
h.	handle	PL.	preserved length
H.	height	PTH.	preserved thickness
H-h.	height to top of handle	PW.	preserved width
H-rim	height to top of rim	R	pin to wearer's right with reference to fibulae; at right in an illustration
hemisph.	hemispherical	reconstr.	reconstructed
I	inscription (in field/catalogue number)	refs.	references
ID.	inside diameter	rest.	restored
IL.	inside length	S	sculpture (in field/catalogue number)
ill., ills.	illustrated, illustration, illustrations	sec.	section, sectioned
ILS	Iron, lead, silver when not jewelry (in field/catalogue number)	sm.	smallest
int.	interior	sp. h.	spindle hole (in catalogue)
IW.	inside width	sq.	square
J	jewelry (in field/catalogue number)	ST	stone (in field/catalogue number)
K-I, etc.	Tumulus Körte I, etc.	StC	"stone complex"
L.	length	suppl.	supplement
L.	left (pin to wearer's left with reference to fibulae; at left in photographs)	T	terracotta (in field/catalogue number)
(L)	looted (in lists and tables)	TB 1, 2, etc.	Terrace Building 1, 2, etc., on the City Mound
lgst.	largest	Th.	thickness
m.	meter	UM	University Museum (in catalogue number)
Max. dim.	maximum dimension	uncat.	uncatalogued
MC	miscellaneous clay (in field/catalogue number)	W	wood (in field/catalogue number)
Meg. 1, etc.	Megaron 1, etc., on the City Mound	W.	width
min.	minimum	W.h.	width of handle
mm.	millimeter		

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# Acknowledgments

The campaigns which included work on the lesser tumuli containing inhumations were: 1950, 1951, 1955, 1956, 1965, and 1969; Rodney S. Young was the Field Director and G. Roger Edwards, Associate Field Director. During 1951 and 1955, which were double-length seasons, the latter parts of the campaigns, i.e., after the end of August, were led by G. Roger Edwards. These two persons lent unceasing inspiration to the staff, both Turkish and American, during all the Gordion years.

After the death of R. S. Young in 1974, a Publications Committee assigned authors for the final Gordion series; I am indebted to them for entrusting the lesser tumuli to me for research and publication.

To Turkey's Ministries of National Education, and the Ministries of the Prime Minister and of Culture, under whose aegis the Department of Antiquities and Museums has functioned, and to the successive Directors and Assistant Directors General of the Department, who have generously supported Gordion since the beginning, in 1950, the personnel of Gordion Excavations owe a great debt of gratitude. To the individual Government Representatives who assisted the excavation in every possible way during the years listed above, our sincerest but necessarily inadequate thanks. These were: Raci Temizer (1950–56), Çetin Anlağan (1965), and Nihal Koloğlu (1969).

By the "assembly of excavators" (which also included Young and Edwards, see below), mentioned on the dedication page, I was referring to the following Gordionites:

Canby, Jeanny Esther V. (Tumulus H, 1950)  
Cox, Dorothy Hannah (Tumulus J, 1950)  
Edwards, G. Roger (Tumuli KY and N, 1955)  
Gallagher, E. Robert (Tumuli C, G, J, 1950; S-1, S-2, S-3, 1951)  
Mellink, Machteld J. (Tumulus H, 1952)  
Sheftel, Phoebe Sherman (Tumulus Z, 1969)

Young, Rodney S., (Tumuli B, 1950; Q and S, 1956; X and Y, 1965)

E. B. Reed (1950), D. H. Cox (1951), J. S. Last assisted by Christophis Polycarpou (1955), J. S. Last (1956), and W. W. Cummer assisted by Terry Small (1969) were the architects on the site during the years with which we are concerned. For work done on Tumuli X and Y we rely upon Young's sketches. The basic work by these people has not been altered, but for consistency's sake some points of drawing style have been changed. The primary-secondary line of development is made clear in the list of art credits below.

My colleagues and friends with whom I have discussed various aspects of the manuscript have shown great generosity with their time and willingness to share their special expertise: Sevim Buluç described to me the Ankara tumuli, which Ekrem Akurgal and she have recently opened for the Middle East Technical University, Ankara; J. E. V. Canby shared her memories of the excavation of Tumulus H; Roger Edwards advised about the situations in Tumuli KY and N; Machteld Mellink counseled me on sticky points of stratigraphical interpretation in instances where the original excavators are deceased or unavailable; G. Kenneth Sams generously advised me concerning the Early Phrygian pottery found in the pre-Kimmerian inhumations; Gerald Schaus helped with some descriptions of the non-Gordion pottery from southwest Anatolia; I consulted Elizabeth Simpson on coffins and furniture; Frederick A. Winter shared his ideas about the Late Hellenistic pottery found in a later intrusion in one of the mantles.

The Turkish share of the Körte finds in the Archaeological Museums, Istanbul, was generously shown to me by N. Fıratlı; in the Charlottenburg Schloss in Berlin, Bert Käsar took time to introduce me to the Körtes' share.

Due to the lateness of the dating of the Celtic royal burials of the Late Hallstatt period, and their numer-

ous points of difference from the Gordion timber tombs, I have deemed it imprudent to try to bring material from this vast field into the discussion of comparanda for the inhumation tombs in this volume. I shall always be grateful, however, to Kurt Bittel, for inviting me to visit the site of Hochdorf near Stuttgart. There Jörg Biehl and Rotraut Wolf generously hosted me through the excavated site of the Hochdorf tumulus and Drs. Schroeder and Planck showed me the outstanding new finds. I am very grateful to all the above people who spent their valuable time in consultation with me.

Several individuals assisted me in my earlier organizing of the sources in the Gordion Archives Room in The University Museum. As a result they helped to render the earlier phases of my preparation (and that of many other authors) much easier than otherwise would have been the case. These were: Frances Bobbe, Mary E. Moser, Karen Vellucci. People who took over the burden of word processing the manuscript are: Karen Vellucci, Barbara Hayden, Antonia Montague, Elizabeth Ragan, etc. The roll of artists who have drawn the material for the figures is a long one (see

the separate list of art credits appended to these acknowledgments). Photographers whose work is printed in the plates, but who were not on the regular Gordion staff, are also listed separately. Those who planned and prepared the actual figures and plates for publication are: Anita Liebman and Georgianna Grentzenberg. To all these my sincere thanks for their technical abilities, their patience, and their insight.

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And most of all to the excavators, whom I hope I have not failed or embarrassed by my efforts to interpret and present their original labors, I owe everything.

### *Art Credits*

(Vessel profiles not included)

Akok, M.	Figure 2
Beetz, C.	Figures 21A,B, 45, 52H
(after D. H. Cox)	Figures 18A,B, 23
(after D. H. Cox and M. J. Mellink)	Figure 20A
(after W. W. Cummer)	Figures 63A,B–67
(after E. R. Gallagher)	Figures 11A, 16, 24A,B, 47A,B–50A,B, 56A,B–59A,B, 61A,B, 62A–C
(after E. L. Kohler)	Figures 70A,B, 71
(after E. L. Kohler/field notes)	Figures 25C, 27B, 37B–40, 43
(after J. S. Last)	Figures 28A,B, 29A,B, 33A,B–35A,B
(after E. B. Reed)	Figures 3A,B–7A,B, 10A,B, 11B, 13A,B–15A,B
(after R. S. Young)	Figures 41A,B, 44A,B
Brixhe, Cl.	Figure 72
Cox, D. H.	Figure 20B
Hayden, B.	Figures 12E, 27I
(after E. Simpson)	Figures 8A, 27C, 36E
(after R. S. Young)	Figure 9A
Kutkam, M.	Figures 26B,D, 32E

McClellan, J.	Figures 8B, 22A,D,E, 25E,F, 26J
Muscarella, G.	Figures 53, 54A–G, 55E, 72I, 73A–N
Patch, D. C.	Endpapers map
Roller, L.	Figures 12M, 22J
Schenck, H.	Figure 51
(after D. H. Cox)	Figure 19
Shaw, M.	Figure 27A
Shepard, Nancy	Figure 42A
Simpson, E.	Figures 8C,D, 9B–D, 17C, 25A,B,D, 26B,C, 30–32A,B, 52D,E
(after M. Akok)	Figure 1
Welker, M.	Frontispiece, Figures 26E–I, 27D

### *Photographic Credits*

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All the photographs were taken by staff members of the Gordion  
 Excavations except for those by guest photographers specially listed above.

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# Editor's Preface

*Gordion* volume I: *Three Great Early Tumuli* (1981) was a landmark publication in presenting to scholars the excavation, architecture, and contents of three remarkable burials dating to the Early Phrygian period. Now complementing that work is the present study by Ellen L. Kohler, which addresses the other inhumation burials in wooden tombs under tumuli, excavated between 1950 and 1969. The fifteen burials here considered, belonging to the eighth to sixth centuries B.C., comprise the matrix within which the three great early tumuli (and the Körte brothers' Tumulus III) stand out as exceptional. None of the tumuli here discussed by Dr. Kohler approaches the previously published ones in size or wealth of contents. Yet they were hardly the burials of paupers.

All told, approximately eighty tumuli have been identified in the vicinity of Gordion. Ranging in date from the eighth century down into Hellenistic times, if not later, they surely represent but a fraction of those denizens who died in the area over a span of roughly eight centuries. The occupants of these "lesser" tumuli, then, can with little difficulty be viewed as the "elite" of local society, be their station the result of birth or means, accomplishments or office. Their deaths would have occasioned the mustering together of a considerable work force, including earth haulers and their presumed beasts of burden, earth managers as the tumulus was laid out and grew with each successive load of dirt, lumberjacks and timber transporters, and carpenters. Potters and other artisans may also have been set to work on special items to accompany the deceased into the afterlife. If this level of activity is compared with the simple cist graves and modest offerings known from what Rodney Young called "the poor man's cemetery," the difference in attention and accommodations is readily apparent.

For each tumulus under consideration, Dr. Kohler provides a detailed account of the excavation, earth engineering, tomb architecture, and burial assemblage. Through correlation with materials from the great tumuli and the City Mound (Yassıhöyük), she is able to suggest a pre- or post-Kimmerian date for each burial and to offer a relative sequence for them all. Especially valuable for our understanding of wooden architecture in Anatolia are her accounts, both individual and summary, of the construction techniques used in the tombs—rare and welcome glimpses of ancient carpenters at work. Dr. Kohler also includes synthetic commentaries on several categories of gifts placed in the tombs. Other material offerings, as well as conclusions that pertain to the full range of the excavated tumuli, will await discussions in her sequel study of cremation burials under tumuli, a practice that begins to occur toward the end of the seventh century.

The present study is a major accomplishment in bringing together and marshalling a wide and diverse body of material, from fibulae to pottery, site preparation to centering poles. What it took several scholars to accomplish in *Gordion* I, Dr. Kohler has impressively achieved single-handedly. Her intimate knowledge of Gordion, where she has been a staff member since the inception of the American excavations, shines forth throughout the volume. With her study, the archaeology of Phrygia takes another important step forward.

For Dr. Kohler's research at Gordion and in Ankara, the University of Pennsylvania Museum and the Gordion Excavations are most grateful for the support and goodwill of the Turkish Ministries of Education, Tourism, and Culture, especially the General Directorate for Monuments and Museums (to give its current name) and the Directorate of the Museum of Anatolian Civilizations in Ankara.

C. Kenneth Sams  
Series Editor



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# Introduction

Volume II, Part 1, of the Gordion Excavations Final Reports has been written along the same general planning lines as Volume I, *Three Great Early Tumuli* by Rodney S. Young, who was field director of the Gordion excavations from 1950 to 1974. In Volume I he published the three largest pre-Kimmerian tumuli, P, MM, and W. In Volume II the responsibility will be to publish the rest of the pre-Kimmerian tumuli and all the post-Kimmerian Phrygian tumuli. These are in general smaller and poorer than the three great early ones. During the course of writing this report, however, it became apparent that these, complete, would constitute an impossibly thick volume, so the decision was made to divide Volume II into two parts: 1, *The Inhumations* and 2, *The Cremations*.

The fifteen lesser inhumation tumuli in the Pennsylvania series, which spread in date from the late eighth century to the third quarter of the sixth century B.C., are scattered over the Northeast Ridge (see p. 7 ff.) and over the South Ridge (see p. 113 ff.). Those on the Northeast Ridge are presented in alphabetical order for ease of reference. Those on the South Ridge have the order S-1, S-2, S-3, Z.

Each burial and its tumulus is analyzed in an excavation introduction which describes the Phrygian process. The introductions (except that for Tumulus S, which contains a simple earth burial) adhere generally to the same outline in approximately chronological order, from the background of the events, to the finishing of the mantle. Tumulus B, being the first of these excavated, and the first alphabetically, is considered introductory and is presented in greater detail than the rest.

The elements of an introduction applicable to an ideal situation are listed here; not all presentations can adhere.

1. The pre-excavational description and a brief excavation summary.
2. The geological situation under the tumulus.

3. Brief reference to the pre-tumulus remains, if any, of houses and burials. Details of these are reserved for a monograph planned to treat the houses and common burials on the site.

4. Detailed discussion of the phases of the Phrygian installation, which include: the pit, the under-floor preparation, the wooden chamber and its side pack, and contents installed in the chamber, then the roof, the stone cap and its contents, the mantle and its contents, including peripheral burials (see p. 4).

5. Chronology based on dating from *ad hoc* comparanda in the catalogues (no. 7, below).

6. Discussion of disturbance or looting, if any. This was not a problem in Volume I, but must be confronted in Volume II.

7. The catalogue of finds. As the main source for the catalogue there is the great bulk deriving from the field-catalogue books written at Gordion. In addition a group of sherds, a gift to The University Museum from the Turkish government in 1954, and assigned the registration numbers MU 54-40-1 ff., happens to contain a few from the lesser tumuli. These are included in the catalogues here. Several groups of uncatalogued pottery, mentioned in the introductions to the tumuli where appropriate, are illustrated by figures with detailed descriptive captions. These sherds remain in their proper context bags.

The discussional chapters which follow the presentation of the tumuli are concerned with constructional methods (XVII) and the nature of the gift assemblages (XVIII) with the thought that these too, still presented in catalogue order, should aid the chronological study. Then a sequential order for the inhumation tumuli (XIX) is attempted, based on all the above. See Table 4, p. 192.

Commentaries on selected forms of gift (XX) and their development, if any, into post-Kimmerian times are based on the chronological order suggested by the series as argued in the chapter on sequence (XIX).

The types of object discussed follow the order by material established in the catalogues.

Several subjects possibly suitable for discussion in Volume II, Part 1 are postponed to Part 2 because they are of so general a nature as to involve also the cremation tumuli, e.g., the use of "retaining borders" (see p. 5). Also some types of gifts, found sparingly in the inhumations but in greater numbers in the cremations—i.e., jewelry, East Greek and Lydian pottery, stone alabastra, etc.—will be postponed.

A summary and conclusions chapter (XXI) ends the discussonal part of the book. It is also based on Table 4, p. 192, but attempts to divide the tumuli into clusters according to characteristics. Which tumuli belonged to the belt-and-fibula wearers, and which did not? What were the connections of non-wearers in tumuli here designated as "under foreign influence"?

The lesser inhumations B through J and S-1 through S-3 were excavated for the most part in 1950 and 1951. Some others, however, came later. Tumulus KY was an individual project in 1955. N, Q, and S were related to the assault from 1955 to 1957 upon the "great" tumuli P and MM: N as a practice location for the drills, Q and S as being near to and possibly satellites of Tumulus P. Tumuli X and Y were part of the survey of five tumuli in the vicinity, with magnetometer and geohm, made in connection with electronic reconnaissance on the City Mound in 1965. They were dug to follow up the results of the instrument surveys. Tumulus Z came still later (1969) as an urgent but disappointing salvage operation.

Details concerning the campaigns, including names of excavators and dates, are given in the introductions to the individual tumuli.

There were several reasons why the Gordion excavators could not see traces left by ancient looters. Contrasts in the surface soil were not visible (except in KY) to give indications of disturbance, due to the filling in of small remaining basins by wind action and the natural accrual of a modern loam layer. Only actual deformations in the crowns of the tumuli could have furnished a warning, but even then excavators had to consider these in relation to local tales concerning the villagers' digging for earth for mudbricks, and the historical fact of the Battle of the Sakarya (see below, p. 122 n. 27) during which trenches were dug in the tops or sides of many of the tumuli. These were sometimes clearly visible on the flanks of the tumuli, but at times the back-dirt from the digging of these trenches must have filled hollows left in the crowns by ancient looting.

Datum zero for Gordion in 1900 was chosen by the Körtes to be a point at the water level of the Sakarya on the southwest side of the City Mound;<sup>1</sup> in 1950 Mahmut Akok in his general site survey (Fig. 1) reconstituted datum zero at a corresponding point for the Pennsylvania expedition. In Akok's Figure 1 altitudes are in 2.5-m. contour intervals. See the further detailed information about the physical site found in the extended caption to fig. 1 in Young, *Gordion I*.

A perusal of the trench plans for the "lesser" tumuli will show that there were many different methods of approach to excavating. The trenches in each are numbered in the order in which they were cut, revealing as one follows them the order in which features were encountered and exposed. The various *ad hoc* types of datum points used by excavators on the individual tumuli have, for the sake of consistency, been converted to become the highest point preserved upon a tumulus. In most cases martyrs were left under these highest points.

1. In Tumulus C trenching began at opposite points on the periphery, with cuts leading to center along opposite sides of one diametric line. Then widenings were made according to need. This method was best for exposing a complete section of the mantle: retaining borders (see p. 5), artificial layers against pre-tumulus features, etc. The method was basically used also on KY, but the cuts were not taken through the mound to the ancient surface.

2. A modified version of this method was tried in Tumulus G, in which digging proceeded from two points on the perimeter, one from slightly uphill and one slightly downhill and only 90° apart. The advantages of method 1 were retained and past experience was successfully utilized in the exploration for a burial predicted to be in one particular quadrant.

3. Tumuli B (D. 56 m.) and S-1 (D. 35.50) were at first cut from one point on the perimeter toward center and tracks for a Decaeville railway laid.<sup>2</sup> The center area was then enlarged until the burial emerged. In B a later trench from center toward periphery became necessary to bed a second railway. Tumulus S-2, without railway, is a smaller example of the one-point-toward-center approach.

4. In still others, H, J, N, Q, S, X, Y, areas were marked off, usually near center, and taken down from the top, then expanded, usually in pursuit of some clue, until the burial was found. This became a means of moving less earth, but since in most cases the cuts did not cross the perimeter, questions concerning

1. *Gordion*, pl. 1.

2. On account of their great preserved mass, the use of a railway

was considered advantageous in three of the lesser inhumation tumuli: B, S-1, and Z.

peripheral retaining borders sometimes remained unanswered. Some were exceptional in that the initial areas marked off had been predetermined by a program of drilling (N), or by instrument surveys (X and Y). Tumuli H and J began basically like the rest in this group, but wheelbarrow runs had to be cut through to the edges. Erosion along such a cut became the means of discovery of the chamber in J.

5. The excavator of Z (D. 60 m.) cut the first exploratory trench from the top to the perimeter to bed a railroad, then in her second trench followed downward the slippage marks under a recent sinkhole formed at the crown. Her two trenches converged on the tomb.

It should be noted here that the Gordion excavators sometimes observed looters' holes and sometimes "back-dirt" left by the Phrygians during their pit-digging, but in no case mentioned smaller piles or patches of back-dirt left by the looters. The latter concept, where expressed in the following text, is entirely my own interpretation and my responsibility.

The catalogue of objects which follows each introduction to a tumulus is in the main separated into find groups according to the order of their deposition by the tumulus builders; this order is discussed in the text of each introduction. Since the variety of materials in the lesser tumuli is greater than that in Young, *Gordion* I, the order, by material, followed there and repeated in this volume as furnishing the basic "assemblage list" (see pp. 185-186) must be expanded. For ease of locating objects within a find group, a general order has been adopted: metals (J for jewelry of precious metal or mixed materials; B for bronze; ILS for iron, lead, and silver when not jewelry).

Horse trappings and vehicular material, when they form a viable group, are exceptions. They are unified under those titles even when they are made of a variety of materials.

Within the metal groups, the order follows a rough ranking of the metals with reference to modern value: gold, electrum, silver, bronze, iron, lead, etc. Within each variety of metal, jewelry, vessels, belts, and fibulae precede weapons and implements.

Ivory and then bone constitute the BI category. G includes vitreous-glazed and paste objects followed by true glass. Pottery (P) adheres to a general order: imported before local, painted before plain; within these categories shape dictates order, closed vessels roughly progressing into open vessels (i.e., dinoi and jugs to bowls and plates). In each of these groups fine

comes before coarse. Pottery is followed by clay of miscellaneous use (MC: whorls, molds, etc.) other than terracotta (T) statuettes and related items. Stone sculpture (S) precedes other stone (ST) objects such as jewelry, vessels, and implements. Wood (W) appears in the next position, but with the exception of coffins, which are not inventoried among the contents, there is only one example—a theoretical fragment of furniture based on evidence of studs in Tumulus S-2.

Finally, when material is no longer of prime importance, there are the epigraphical categories: inscriptions, graffiti, and doodles (I and a few P).

A few advisory notes concerning some classes of finds follow:

#### METALS

No analytic testing of metals has taken place since that occasionally mentioned in the appendices of Volume I. Among the contents of the lesser tumuli several brassy-looking bowls are listed or alluded to, but no conclusions are attempted beyond analogies with the appearance of the brassy products discussed in Volume I.<sup>3</sup>

#### POTTERY

I have tried to apply to the pottery from the tumuli terminology which follows closely that of G. K. Sams, whose pre-Kimmerian pottery volume (*Gordion* IV) was in preparation at approximately the same time as my own. In the catalogue entries for painted pottery I refer to his design-names<sup>4</sup> where applicable. I am grateful to him for advice concerning the coordination of my material with that in his City Mound pre-Kimmerian contexts, which he has set forth in great detail. However, to explain certain allusions which I must make in this volume, I list the pertinent City Mound context groups with brief explanations:

*Early Phrygian Building Complex.* A fortification which had many phases of development<sup>5</sup> and was earlier than the great Phrygian Gate.

EPB I-IV are a series of contexts at the west (inner) end of the EPB Gate, paralleling the life of the building. Of these, two distinct contexts furnish, aside from residual Bronze Age pottery, parallels for pottery from the tumuli with wooden chambers: EPB IIb, a general layer after EPB I (Bldg. Floor 4) and before a cobbled floor (Bldg. Floor 2), in an area where there was no trace of Floor 3. This yielded only gray ware, but some light-fired wares from the area of the Polychrome House probably are to be associated. EPB IV: flooring

3. A. Steinberg in *Gordion* I, 286-289, esp. nn. 31-33. Also, herein, p. 199 and n. 13.

4. Sams, *Gordion* IV, figs. 62 ff and pp. 140 ff.

5. R. S. Young, *AJA* 70 (1966) 273-275, pl. 70, figs. 16, 17, pl. 71, fig. 18; Sams, *Gordion* IV, 8-10.

over the dismantled SW Room, up to a diagonal wall that overran the room.

EPB V was a great leveling fill burying the whole EPB complex and raising the general level. It did not, however, cover the already existing Meg. 10, and it ran under Meg. 9, which was part of the leveling program.

*Terrace Deposition.* A single renewal program which terraced the area southwest of the Palace Area. It covered the partially demolished Megs. 6–8, but not pre-existing Meg. 5. It covered Houses X and Y which stood against the rear wall of Meg. 2, and covered a demolished stretch of enclosure wall between pre-existing Megs. 2 and 3. The CC and TB series of structures were bedded in the Terrace, and Meg. 4 was constructed some time later on an extension of the main Terrace. See "Terrace Deposit" below in Glossary.

*Destruction Level.* The east half of the City Mound contains the excavated portions of the final Early Phrygian city (the city of Midas).<sup>6</sup> It was destroyed by the coming of the Kimmerians in ca. 700. The Persian-Phrygian Building was spared and available for use in the later periods; Megs. 9–12 at the northeast also escaped, but were left empty and abandoned before the Clay Deposit covered them. In the burned stratum were remains of buildings: floors, contents burned and broken by the collapse of the roofs,<sup>7</sup> walls sometimes preserved to several courses and occasionally masses of reeds from the roofs. Disturbance by later rummaging was observed in only a few instances.<sup>8</sup>

#### SKELETAL REMAINS

Statements concerning the sexing and aging of the few human skeletal remains available from these lesser tumuli are based on information kindly supplied by Professor Berna Alpogut, Department of Paleoanthropology, University of Ankara (Sihhiye/Ankara). The bones from each burial were originally boxed, ticketed, and delivered for study to Professor Muzaffer Şenyürek, then Chairman of Paleoanthropology at the University of Ankara. He died, however, before he could give his attention to the Gordion material. Professor Alpogut plans a monograph on all the human skeletal remains from Gordion.

The animal bones from the associated sacrifices, and whatever sporadically dispersed bones were saved from the mantles, are being studied by Sebastian Payne of Cambridge, England. His preliminary report on the horse burials in Tumulus KY forms an appendix to this volume (see pp. 237–244).

#### GLOSSARY

A few terms and usages, some with special application to this tumulus volume, should be explained:

*Clay Deposit.* When capitalized, Clay Deposit refers only to the large level-raising deposition of clay on the City Mound following the Kimmerian raids.

*Cribwork.* A framework consisting of layers of beams, logs, etc. minimally worked at the corners, built up one above another, each layer having its beams or logs at right angles to those of the layer immediately below. Horizontal spaces are left between the beams (see, e.g., Fig. 20B).

*Gorytus.* Term applied to a weapon case worn on the left hip by Scythians. Illustrated on classical Greek pottery as of irregular shape, to hold both a bow and a supply of arrows.

*Hardpan.* On the Northeast Ridge hardpan is a hard consistent clay usually light-colored (tan to whitish) when dry, and found under intermittent natural gravel deposits. On the South Ridge, in the few places where it has been encountered, it consists of clays accumulated in thinly deposited strata (laminations), often containing plates of selenite, which—after being broken up *in situ* by natural processes—give the clay a micaceous appearance.

*Joints* (in carpentry). Please refer to Fig. 70B and the discussion, p. 169 ff.

*Main Burial.* The burial for which the tumulus was erected. See Peripheral Burial and Secondary Burial below.

*Mantle.* Mantle refers to the covering deposit of clay or earth over a burial and its stone cap. Hitherto it has been referred to as "tumulus fill" or just "fill." "Mantle" is thus to be distinguished from pit fill, chamber fill (after roof-collapse or looting), and the habitation fills under the tumulus.

*Martyr.* A pier of earth left standing in an excavation to keep a record of measured levels and changes in strata.

*Peripheral Burial.* A smaller burial set into the support layers surrounding a "pit" or into the mantle, after the main burial was initiated and up to the time the mantle was completed.

*Pre-tumulus Burial.* Any burial placed in the ancient surface, predating the beginning of work upon the main Phrygian burial, but incidentally covered by the tumulus mantle. These belong to the common cemetery.

6. See Sams, *Gordion IV*, plan A, pl. H and p. 2 for a detailed plan and a summarizing description of the final Early Phrygian level.

7. See one early description of the burning: R. S. Young, *AJA* 60

(1956) 262, 263, pl. 93, fig. 2 (now CC 2).

8. Sams, *Gordion IV*, 3.

*Reconstruction.* The theoretical filling in of missing parts (on paper). No physical restoring was done upon the chambers of the lesser tumuli.

*Retaining Border.* Sometimes encountered as an initial ring, or partial ring of earth or clay laid on the circumference of a tumulus to retain the subsequent dumping of mantle earth between the ring and center.

*Secondary Burial.* Any burial inserted in the mantle after its completion. These belong to the common cemetery.

*Sill.* The general term *sill* or *sill beam*, in the carpentry of a house, has nothing to do with windowsill or doorsill (threshold); it refers to the first full-length set of beams laid down on the four sides of a structure on top of the foundation course (or courses). In the Gordion chambers, only "under-sill props" can be construed as foundation; the sills are the lowest wall beams in all cases.

*Support Layer.* An artificial earth deposit thrown in to raise the outdoor level around a house foundation or cellar. It accrues at the same time the cellar wall is being built (see pre-burial layers in Tumulus B, Fig. 4). A burial "pit," side pack, and support layer can rise together in the same manner (see Tumulus S-1, Fig. 49A).

*Terrace Deposit.* The contents of the earth laid down at the time of the Terrace Deposition (see EPB V above).

Discussions in the catalogue entries usually deal with comparanda only for that object or group. Neither time nor space permits a final and thorough study of every type of find from the tumuli. The best date-indicators, based on present knowledge, will be considered. The rest must remain in the contextual ambience, awaiting further study. Type-series of objects occurring in several burials are discussed in the general commentary chapter XX.

Objects which appear related to material in Part 1, but are to be published in Part 2, are mentioned in the text by their field-catalogue numbers; these can be traced in the Gordion Archives immediately, if necessary, or can later be changed to the final Part 2 catalogue numbers by the consultation of a conversion table of field numbers and final catalogue numbers to appear in the back of Part 2.

The chronology of the tumuli which has emerged is sometimes based on the inner evidence for development and change in the local objects, and sometimes based directly on imports. The individual sections on chronology are to be read for general information, but the supporting argument stands in the catalogue

under the object cited by its catalogue number, e.g., the **TumB**, **TumC** numbers, etc.

Since general conclusions on foreign relations involve also the cremations, which chronologically overlap in part the wooden chamber burials, it has been thought best to postpone the summation of such remarks to the end of Volume II, Part 2.

The excavators' original field notebooks and, in some instances, "end-of-season reports," in addition to the catalogue books of finds, form the sources for the material presented here, both the excavational story and the catalogued objects. I list the pertinent citations from Gordion excavation notebooks in an early footnote to each tumulus. In instances where a descriptive phrase or expression was best preserved in direct quotation from the sources, quotation marks are used in the text. The diary method of writing in the notebooks necessitated rewriting the material in a more summarizing fashion, and in a different order—the step-by-step sequence of the Phrygians' activities.

Line illustrations of outdoor subjects in most cases have had to be redrawn, as the original plans and sections usually included matters outside the scope of this book—for instance, the habitations and common cemetery features under the tumuli, as well as the post-tumulus insertions into the mantles. Some others were redrawn for the sake of consistency of presentation. Figures such as those from Tumulus G (Fig. 16A–C) incorporate corrections which I felt had to be made. These occurrences are explained in the pertinent parts of the text. Some figures were commissioned to be drawn in Philadelphia from field sketches, which were accompanied by extensive lists of measured points, and were checked against field photographs. One figure (21B) was developed to preserve information from an outdoor field photograph unworthy of publication.

I was not an excavator of the tumuli, but I was a constant observer of the excavations and was the conservator and cataloguer of the objects from all the tumuli except Tumulus P and "Tumulus MS 8" (see p. 196, n. 15). After I received the assignment to publish the lesser tumuli, I returned to the Museum of Anatolian Civilizations in Ankara and to the site in the summers of 1975, 1979, 1981, and 1982 to review the material. In 1982 I also examined the material deposited by the Körtes in Berlin. A few choice pieces from the German share are now exhibited in the Charlottenburg Museum and the remainder is stored in the "Schloss." The Turkish share of the Körte material is in the Archaeological Museums, Istanbul.



## Part I

# The Northeast Ridge

## Excavation and Catalogue

(Figs. 1, 2; Pls. 1–3)

The Northeast Ridge rises from the main floodplain of the Sakarya River on the west, and runs on a north-west-southeast line (see Fig. 1). The fairly steep-sided valley between it and the South Ridge is the channel for heavy spring and fall freshets which come rushing down, sometimes in flash-flood proportions, from the great hill to the east, on the north flank of which is the village of Çekirdeksiz.<sup>1</sup> Sometimes the stronger flows tend to sweep to the north around the foot of the Northeast Ridge, wetting the area below the 0.00-m. contour before draining into the Sakarya River.

As the Northeast Ridge descends from the higher land at the east, small promontories thrust outward and many end in natural knolls. Some of these gentle knobs became the sites of tumuli. The area generally west of Tumulus M and below the 17.50-m. contour line (to the extent probed by excavation) contained common graves, i.e., burials not covered by earth tumuli, dating from Early Bronze to Roman times

(excluding, evidently, Hellenistic). Stratified among these burials remains of houses of the Phrygian period were found, and the post-Kimmerian inhumation tumuli in the western group (e.g., B, C, H, J, and K-II) are situated over both cemetery and houses.

The tumuli themselves appear to have influenced the modern lie of the land. Earth has sometimes eroded from their sides, extending the minor point of land upon which they stand beyond its original natural confines. In other instances a depression may have been made by the removal of earth to begin a nearby mantle.<sup>2</sup>

From both western and eastern groups, the "lesser" excavated tumuli which contained inhumations are B, C, G, H, J, KY, N, Q, X, and Y with wooden chambers, and S with a simple unlined earth burial. These are presented in this chapter in alphabetical order for ease of reference.<sup>3</sup>

1. A. Körte in *Gordion*, 33, discusses this flooding of the Sakarya plain and refers to the hill at the east as "Tschilek-dagh."

2. Observe in Figs. 1 and 2 the swings of the 17.50-m. line south of Tumulus MM. However, the bulk of the mantle probably had to be brought from a distance.

3. Letters lacking in this list should be accounted for. P, MM, and W are the "three great early tumuli" published in Young, *Gordion* I. A, D, E, F, I, K, M, R, and U belong to cremations to be treated in Part 2 of Volume II. L is to be found on the plans (Figs. 1 and 2) on the north side, close to A, but it could not be excavated because of the presence of houses built on the site. O was given to a late stone chamber burial under a tumulus assigned to

Young as a rescue excavation in 1955. It is located west of the Sakarya River (R. S. Young, *AJA* 60 [1956] 250–252, pl. 81, figs. 3–5, pl. 82, figs. 6–9). The excavation of Locus "T" (see p. 99) resulted in the decision that it was not a tumulus. The letter V remains unassigned. Z was given to the fourth excavated tumulus on the South Ridge (see below, pp. 151–161).

Two other tumulus burials, across the river, have the pre-publication initials JI. I and II; and KH, named for nearby Kran Harman village, was a small looted cist published by R. S. Young in *Archaeology* 8 (1955) 191–197. These and Tumulus O (see above) will be treated or reviewed in volumes devoted to the Late Phrygian period at Gordion.





# Tumulus B

## Introduction

### PRE-EXCAVATIONAL DESCRIPTION (FIGS. 1-3A)

Tumulus B is on the western curve of the Northeast Ridge and just south of the village, its base lying between the 15- and the 17.50-m. contours. The covering earth (I) appeared intact, except where the locals had made a shallow cut into its east side for a distance of about 8 m. in search of clean earth for mudbricks.

The diameter was 56 m. as visible in March 1950; the height measured 4.25 m. above the level of the uphill (east) side and 5.16 m. above its downhill (west) side. The highest point became *ad hoc* datum zero. In this case the top was actually at the ancient planned center; however, the center of the actual mantle, when exposed by excavation, was seen to rise only 3.50 m. above the ancient pre-tumulus surface, which was the top of a widely extending burned layer (II) left by a fire which had destroyed a pre-tumulus house on the site. The burning slanted downward toward the north over an artificially deposited earth layer (III).

R. S. Young excavated the mound between 29 March and 29 April 1950 (Fig. 3B).<sup>1</sup>

### GEOLOGICAL SITUATION (FIGS. 4, 6A)

In trenches 3-10, probing under the burned layer (II) and the artificial layer (III) exposed a natural sand and gravel layer (IV), which represented the ancient

surface at -4.15 m. under the center of the mound. In places it was up to 1.30 m. thick (e.g., along the north side of trench 3) and thinned to *ca.* 0.45 m. as it extended south under the central part of the artificial earth lens (as exposed). It was made up chiefly of coarse sand with many walnut-sized pebbles and, more rarely, fist-sized stones. This gravel layer appeared above hardpan in a sporadic but fairly dense pattern spreading over the Northeast Ridge.

At -5.55 m. a hard clay layer (V) appeared with "traces of white and burning" on its uneven surface.<sup>2</sup> In trenches 4 (south edge), 5, and 10, deepened after the burial was dug, hardpan appeared at a level *ca.* 0.45 m. above the floor of the cellar.

### PRE-TUMULUS REMAINS OF HABITATION AND BURIALS (FIGS. 4-6A)

Layer IV contained intrusions consisting of small burials, deposits of garbage, and other traces of earlier human habitation.<sup>3</sup>

The thick layer of dark earth (III) had been the support for the upper part of a Phrygian house foundation or cellar (VIII) which had been built up in the typical Phrygian manner.<sup>4</sup> The taper of layer III is known from probes at the north edge only; the slant toward northeast, east, southeast, and south is unknown. The reserved pit for the cellar measured 5.50 m. long by 4.10 m. wide (batter was not mentioned),

1. R. S. Young, Gordion Notebook 1 (1950) 51-129; followed by 34-48. Preliminary published announcements: *Archaeology* 3 (1950) 199-201; *UMB* 16, no. 1 (May 1951) 13-15, pl. VI.

2. Mixed materials leached from the higher layers by rainwater?

3. This section remains a mere summary, as the pre-tumulus material will be treated in full detail in a monograph on the outlying Phrygian houses and common cemeteries.

4. The Phrygians were not discouraged in the face of great level-raising projects in preparation for erecting a building. On the

City Mound the Clay Deposit formed a terrace under Building A 80 m. long and 6 m. high (R. S. Young, *UMB* 17, no. 4 [1953] 16). Under the floors of the second stages of many buildings, e.g., the Hearth Building (Young, *AJA* 59 [1955] 4-6) and Building C (*ibid.*, 6-8) of the Middle Phrygian period (formerly "archaic" or "Persian"), the levels were raised by the addition of clean clay. The stone foundations of these buildings generally showed no foundation trenches, which indicates that they were being laid while the great support layer of the Clay Deposit was growing.

and was sunk through 0.45 m. of the natural gravel layer (IV) into 0.45 m. of hardpan (V) below. The floor was lined with *ca.* 0.10 m. of clean brown earth which bedded a pavement of dry-laid small stones from scarp to scarp under the four walls of the cellar. The cellar walls must originally have risen to the surface of layer III (i.e., to 1.80 m. above the paving) and retained the loose earth as it was deposited. Along the northeast side at the bottom of the pit, under the cellar wall, lay a single untrimmed log. It may have served as a buried leveling course like those used in other larger Phrygian buildings on the City Mound.<sup>5</sup>

Since the guide walls in the tumulus were not footed in the upper pre-tumulus support layer (III), it was possible for wall E-F (see below, p. 14) to pass over and near a pre-tumulus infant burial in layer III without disturbing the amphora which contained it (see Fig. 5 [K]). That amphora (P 16) closely resembles coarse amphoras used in other child burials nearby (e.g., P 290 and P 294 under Tumulus D) as well as those found in domestic rooms under the tumulus mantles (e.g., P 277 under J, P 343 under E).

The only catalogued finds in the support layers were an iron pitchfork with bent tines (ILS 21) and the burial amphora (P 16).

The length of the period of the cellar's use is unknown, but it ended in destruction of the house by a fire which torched the whole loamy surface of the supporting hillock (as far as excavated). This was observed in trenches 3-7, 9, and 10, i.e., around the excavated edges. The surfaces lay at *ca.* -3.50 m. in the east part of trench 3, at -3.80 in the west part, and at *ca.* -3 m. in the southwest corner of trench 4. This points up the fact that the surface around the house had become uneven before the fire.

Embedded in the layer of burned debris, 0.30 m. under its surface, was a single row of stones (Fig. 5[J]), carefully laid to run northeast-southwest. Its overall length was 1.45 m.; it must have been an architectural feature built against the northwest wall of the pre-tumulus house.

The general content of the burned layer was fairly uniform: ash, cinders, blackened earth with occasional sherds, some animal bones, and bits of iron.

## THE MAIN BURIAL (FIGS. 3B-7B; PLS. 4A-8)

### PREPARATION OF THE SITE

After trench 6, enlarged by 7 and 7A, was taken down, it was seen that the tumulus builders had chosen a site which would save labor. The ready-made pit in its artificially raised knoll perhaps lay partially open, facilitating the construction of both the chamber and the mantle. The pit even had dry walls around the four sides to a thickness of *ca.* 0.90 to 0.95 m., leaving *ca.* 3.54 x 2.20 m. of working room for the installation of the wooden chamber.

The side walls were stripped down along the scarps of the pit to a height about even with the top of the planned chamber wall (H. 1.16 m.). The stones removed were presumably reserved for reuse in the grave cover. The partial razing of the walls must have given more working room as the beams were lowered into the cellar space.

### THE CHAMBER (FIGS. 6A-7B; PLS. 4A-6B)

The chamber, confined as it was in an already walled space, became a bit skewed as a result of the irregular jointing used in the corners. Only on the south end did the end wall extend beyond the side walls. The resulting chinking space on the southwest side is apparent as a long thin triangle in Fig. 6B.

No wooden floor was found above the "paving of small flat stones" which had lined the floor of the cellar. In general all walls consisted of four beams untrimmed, or slightly trimmed on the interior only, the bottom beam resting directly upon the paving stones; each next upper beam rested directly upon a lower. The only tie system used was T-lap and cross-lap jointing (see Fig. 70B) chinked tightly into place on all four sides. The chinking stones were small, as if they came from some exposed area of the gravel layer (IV).

The inner dimensions of the chamber were: L. 2.88, W. 1.58, H. 1.16 m., and the average beam width *ca.* 0.25 m., which, given the dimensions of the pre-existing cellar, left *very* small spaces for chinking.

*The southeast end wall* Both ends of all timbers below the top beam must have been tied in some simple fashion to the side walls: in the south corner by lap-joints with no ends projecting. The top log was more elaborate, with a projecting end toward the southwest preserved (Fig. 6B).

5. See the general statement by R. S. Young, *Expedition 2*, no. 2 (Winter 1960) 4. See Vitruvius, *Architecture* II.i.68. See also R. D.

Barnett, *CAH* II, ch. XXX (3d ed. 1975), p. 429.

This end wall was exceptional in that there were incised marks on the interior face: † on the topmost beam, at the southwest end, cut clearly and visible after fitting; | on the same beam, at the northeast end, a plain vertical stroke cut in a rough surface which may have concealed additional *hastae*; † on the third beam down, at the northeast end. It is to be noted that all these letters (hardly proper carpenter's marks if visible after fitting) were used in the pre-Kimmerian inscriptions found in Tumulus MM.<sup>6</sup>

*The northwest end wall* The top beam was found cracked, pushed inward to a bow shape by the stones behind it. Below the top beam the northwest end of the chamber had to be cleared and the stones removed to prevent an intrusion of stones onto the half-cleaned floor. Removal of the stones took away the support for the side beams at the northwest end, necessitating the insertion of a brace seen in Pl. 5B. Below the brace the side beams had moved toward each other. Possibly this collapse below the top course occurred because the ends of the beams had rotted away completely. The side beams at their northwest ends showed no sure trace of slotting either vertically as for housed joints (see p. 172) below the top course, as in other chambers in this series, or horizontally for laps (as elsewhere in this chamber). The poor state of preservation would, in any case, prevent any firm conclusion. At the north corner, however, it could be seen that at least in the top course the long timbers of the side walls were allowed to project beyond the shorter beams of the northwest end wall.

The exceptional treatment of these chamber walls was no doubt due to the exigencies of the allotted space, which clearly caused this chamber to be worked upon from only the interior throughout the process.

## CONTENTS OF THE CHAMBER (FIGS. 7–9)

When the walls had been built up and chinked in place to the point where they were ready to receive the roof beams, the dead and their gifts were laid in the chamber.

6. Young, *Gordion I*, 130 (MM 68), 139 (MM 119), 173 (MM 362); Cl. Brixhe, *ibid.*, 273–276, fig. 134A,D,E. See below, pp. 173 and 235. These signs do not appear in L. Roller's collection of Anatolian mason's marks (*Nonverbal Graffiti*, 102–103, chart B). However, see her discussion, *ibid.*, 35 and n. 23, also 35–36 and n. 30.

7. See Young, *UMB* 16, no. 1 (May 1951) 15 and fig.

8. Kuniholm, *Dendrochronology*, 41, 44. See also R. W. Holm, *Enc. Brit.* s.v. "Cedar of Lebanon": "The cedar of Lebanon, *Cedrus libani*, . . . grows chiefly in groves which may include over a thousand individual trees, at elevations of about 6,000 ft. in the Mount Lebanon province of Lebanon, and on the higher slopes of the Taurus and Anti-Taurus mountains in Turkey. . . . [It is] a fairly rapid grower, reaches a height of from 60 to 100 ft. . . ."

## THE COFFIN AND ITS CONTENTS (FIG. 7A,B; PLS. 5, 6)

The entire southwest side of the chamber floor was occupied by a daislike platform of four low parallel rough logs.<sup>7</sup> On it lay a coffin hand-hewn from a section of *Cedrus libani*.<sup>8</sup> The cover was convex in section, carved from a single half-log which was roughly hollowed underneath to follow the top curve. The better-preserved southeast head end showed steep beveling from the top down to a flat, almost squared, slightly projecting flange.<sup>9</sup>

Down the center of the top a long irregular bar of lead,<sup>10</sup> with cross-arms as clamps (**Tumb 6**), filled in and held together what must have been a crack, already developed at the time of burial. The clamps were double with the verticals going through the cover via drilled holes, to hold horizontal crossbars on the interior. One large knot was neatly smoothed away on the surface. At the four corners and at the center of each end were remains of holes and iron nails which could have been used for dragging the coffin (see below, n. 15), and which in the end had no doubt fastened top and bottom to each other.

The southwest side of the coffin was the better preserved, sheltered as it was by the unbroken beams of the side wall; the northeast side showed large depressions where stones had fallen on it, and the northwest end was badly smashed. When found, its full original length could not be measured because the top was broken through near the northwest end and its tip was tilted upward. The lid, originally in one piece, came off in several sections, the southeast half in four pieces, the northwest end in two pieces which split apart along the line of the lead clamping.

The lower part of the coffin lay, also collapsed at an angle, beneath the lid. It showed, at both head and foot, further oblique breaks which had been mended with a series of lead clamps (included in **Tumb 6**). Both ends of the coffin were broken off the main trunk; the central section was smashed and rotted almost entirely away by the dissolution of the body. It

[wood] is reddish-brown, fragrant and light . . . [with] coarse grain, spongy texture and tendency to shrink."

For the presence of *Cedrus libani* on the Taurus mountains, see also Meiggs, *Trees and Timber*, 358, n. 118, 394–395.

9. The exterior measurements of the whole: Rest. L. 2.83, W. head 0.86, G.W. 0.96, W. foot 0.73, G.H. (at head) 0.61. Interior clearance: L. 2.38, G.H. (at head) 0.51 m.

10. When Peter Kuniholm cut, with official permission, the rotting remains of the coffin into dendrochronological samples (see Kuniholm, *Dendrochronology*, 41–42), the lead strips and cross-clamps were saved. They are here catalogued as **Tumb 6**. See under **Tumb 6** for further discussion of lead sealings.

At Boğazköy similar short bars of lead were found floating in fill (Boehmer, *Unterstadt* 38, nos. 3523, 3524, pl. XXIV) but impressions of wood grain were not mentioned.

was made of one piece of wood like the lid, and gave evidence that the container and lid were split from the same original section of tree trunk, hollowed and then fitted together again. No ledging was seen on the rim of the bed and no stepped flangeing on the resting surface of the lid, hence the need for nailing.

Along the southwest long side fragments remained of a thin, flat, narrow band of iron<sup>11</sup> which the excavator believed was used to seal the joint between coffin and lid.

Objects associated with the coffin itself were:

Uncat. Iron:	strips of thin band with nails (southwest side of chamber)
<b>TumB 6</b> Lead:	sealing strips (on lid and coffin bed).

A single large skeleton (Fig. 7B; Pls. 5B, 6A,B) lay inside the coffin extended on its back with its head to the southeast. The skull was displaced a little toward its right. The total length as it lay was 1.85 m. from the top of the fallen skull to the ends of its extended toes. The arms were along the sides; the right arm was badly disturbed, its radius lying beside the hip, and the humerus standing on end near the right shoulder. Some of the right ribs were found over the left ribs. These belonged to a female aged 40 to 45 with a high dolichocephalic skull and perfect teeth.<sup>12</sup>

There were no traces of clothing left.

Finds from inside the coffin were:

<b>TumB 1</b> Gold:	socket with paste inlay for suspension (close to side of skull)
<b>2</b> Pottery:	unpainted buff lekythos (southwest of skull)
<b>3</b>	gray burnished low-necked jar (near right foot)
<b>4,5</b>	black polished shoulder-handled amphoras (near left foot).

### FINDS FROM THE FLOOR OUTSIDE THE COFFIN (FIG. 7A, B)

Two items from between the coffin and the southwest wall were:

<b>TumB 7</b> Ivory:	pin or spindle with ram's head
<b>8</b>	disk or spindle whorl.

11. Not preserved for cataloguing. See discussion of iron bands under **TumC 1**, p. 29.

12. For this skeleton Young hazarded "male" (see below, n. 13). The skeletal material is now being studied by Prof. Berna Alpagut of the Paleoanthropology Department of Ankara University. She has courteously supplied the advance information found here.

Parallel to the coffin a second skeleton (Fig. 7A,B; Pl. 5B) lay exposed on its back along the northeast side of the grave, with its head to the southeast. Its height was 1.55 m. from the top of the crushed-in skull to just above the ankle. Its feet were jumbled and its body was also somewhat crushed and displaced. The left arm lay along the side, slightly bent at the elbow, the left hand under the pelvis, which had been split into two pieces. The finger bones were found in fair order under the displaced left half. The right arm stretched straight along the side in good order. The skeleton belonged to a female aged *ca.* 30 to 35 years. The skull was dolichocephalic and low, more robust than that in the coffin. The hips were gracile and the teeth again perfect.<sup>13</sup> Evidence for clothing was furnished by two small straight pins found "on the body" when the skeleton was cleaned.

There were a few finds from the northeast half of the chamber floor.

<b>TumB 9</b> Pottery:	gray low-necked jar (east corner near head of second skeleton)
<b>10</b>	gray low-necked jar (north corner near feet of second skeleton)
<b>11</b> Clay:	whorl (north corner near feet of second skeleton)
Uncat. Bronze:	two small straight pins (on second skeleton)

It is possible that, of the graffiti on the wall, the † above and at the head of the coffin is to be associated with the person inside, and that the † lower and at the head of the skeleton on the floor is to be associated with this second individual. This would leave the †, placed on a level fairly high above the uncovered skeleton, to be interpreted as a false start at incising the †. Could these letters not have been the initials of the deceased?<sup>14</sup>

### THE ROOF (FIG. 6A,B; PL. 4A)

After the bodies and the gifts had been put in place, a single roof was put on. It consisted of seven heavy "coniferous" timbers laid side by side on the long axis of the chamber. Beams 3-6 (numbered from southwest to northeast) had collapsed, letting in the cover-

13. Young, in *ILN* (3 Jan. 1953) 21 and fig. 3, believed that the second skeleton suggested "a wife or servant . . . killed to accompany the dead man." However, we now have new advice from Professor Alpagut. See also n. 12.

14. Cl. Brixhe, when consulted concerning the use of the incised letters as initials, replied, "Ce n'est pas impossible en soi." He discusses them in App. I, p. 235. See also L. Roller on single letters used as initials in *Nonverbal Graffiti*, 33-34.

ing stones and brown earth from above. The beams were broken in two places, close to the northwest end and again a little southwest of center, so that their middle sections were found below, on the floor. Still in position at the southeast, the seven ends measured from 0.24 x 0.30 to 0.17 x 0.15 m., with branches roughly trimmed off near the original trunk. Beams 1 and 7 were roughly squared and held between them nos. 2-6, which were smaller and left round. At the southeast end an intermediate horizontal timber, shorter than the end beams and asymmetrically beveled downward to its ends, overlay the highest beam of the southeast end wall. This slightly uneven piece intervened to adjust for the smaller ends of the unskewed logs. See below for details of the roof beams.

*Beam 1.* Squared timber, the longest preserved, measuring 0.25 x 0.20 and 3.90 m. in length. Southeast end rested on lapped end beam.

*Beam 2.* Round beam (untrimmed tree trunk) with smaller end at southeast beside "adjusting" beam. At northwest end largely rotted away, and cracked and sagged, but without clean and thorough break.

*Beams 3-6.* Round, untrimmed, with small roughly lopped stumps of branches. All of these were broken across by the weight of the stones, and apparently fairly near their northwest ends, which slanted down into the grave at a steep angle. Their southwest ends rested on the adjusting beam.

*Beam 7.* Along the northeast long side of the grave cover, a long roughly squared log extending the full length of the grave unbroken. Its southeast end rested on the lapped cross beams of the top wall course.

The wood of the roof, in a very soft spongy state and rather red-brown in color, flaked off easily and here and there powdered. The round logs still had traces of their bark in a few places. They resembled each other closely in appearance, and in type and amount of deterioration.

### THE STONE CAP (FIGS. 4-6A; PL. 7A)

The next step after the laying of the roof beams was the covering of the pit with large stones, some of them probably taken from the trimmed-down walls of the

cellar. Most of the stones in the cap were flattish, rough, white to greenish, friable limestone, and some were gypsum. The larger ones varied in size from 0.50 to 0.60 m. long and 0.30 to 0.40 m. wide, and up to 0.20 thick. In general they formed an oval whose center was located ca. 8 m. south of the point where the guide walls (see below) converged. Although found with a central sinking, the cap originally must have lain deep over the chamber, domed at the center and spreading in a rough circle out beyond the edges of the original cellar cutting to reach, and rest on top of, the burned layer (II). Around the edges it was still two stones thick, carefully slanting and overlapping.

The north edge of the cap lay ca. 2.20 m. below the surface slope of the mantle; at the south edge the stones were only 0.75 m. below. The long axis of the pile (290° WNW-ESE) was 7.80 m.; the short axis (20° NNE-SSW), 6.40 m.

From among the stones of the cover:

<b>TumB</b>	<b>12</b>	<b>Bronze:</b>	burned fragments of lebes-cauldron (southwest corner)
	<b>13</b>		bosses (12) (scattered over south side)
	<b>14</b>	<b>Iron:</b>	horizontal or bridge handle (south end)
	Uncat. <sup>15</sup>		two large tapering ferrules with triangular tabs (northeast side and south end)
	<b>15,16</b>	<b>Pottery:</b>	pair of unburned spouted jugs with painted animal panels (sherds scattered on north side; one fragment in fill of burial).

Also throughout the pile, scattered pieces of charred logs appeared, and small pieces of bronze and iron too fragmented for identification.

### THE SIGHTING LINE (FIG. 5)

When the burial was considered complete, someone standing on the center of the stone cap must have taken a sighting to the north, although we are not sure how this was done. Then perhaps the stone head idol (**TumB 17**) was set on the line to preserve the direc-

15. These have not been formally drawn or photographed. Fig. 9A is based upon Young's sketch, which appears in Gordion Notebook I, p. 95 (no measurements given). These resemble exactly the object (ILS 99) tentatively identified by me as a "hitch" found in the Tumulus E metal deposit (see Pl. 83A: GL. 0.132, GD. ferrule as pressed 0.081, Dist. opening between tabs 0.055 m.). Here the tubular sockets may have something to do with dragging timber or the coffin or large stones by some horse-and-travois or sledgelike device. No parts of a bier or vehicle

were recovered here as they were in Tumuli A and E. In E such a "hitch" may have functioned as part of the vehicle. In B, however, a heavy coffin and a second body had to be transported. Note the nail holes at both ends of the coffin. Also of interest here may be discussions of hauling methods used on the logs in Tumulus MM: Kuniholm, *Dendrochronology*, 60; Young, *Gordion I*, 86; Meiggs, *Trees and Timber*, 333. A large drag-slot on the original log may have been removed altogether.

tion,<sup>16</sup> and the stones marking the direction of the north-south guide wall (A-B), to be erected on this line, were laid across the grave cover (see the hatched stones and the dotted line in Fig. 5); the line continued over the burned level toward the planned center of the mound. The radius of the tumulus was determined at this stage.

### THE MANTLE AND ITS CONTENTS (FIGS. 4, 5, 9B-H; PLS. 11C-12N)

The rest of the guide walls followed, laid out on top of the layer of burned debris, always converging at the center of the mantle, where, as the mantle rose, they formed a sort of columnar stack of stones,<sup>17</sup> the lowest point of which was found at a level of -3.50 m. In the beginning the walls were probably thought of as laid out to the primary and secondary points of the compass, and with reference especially to the original sighting line, but as earth accumulated and 0.40- to 0.60-m. gaps were left between the actual sections of a single wall, these directions sometimes deviated slightly from what had been planned. In effect, however, this method kept the center always in sight and was an aid to the efficient and well-placed piling of the earth mantle. All guide walls in Tumulus B were built of limestone rubble.

The account of wall E-F below supplies the fullest description of wall-building technique, since it was the first encountered by the excavator and therefore received the most attention to detail. For the rest of the guide walls on the list, only individual facts of interest are provided.

*Wall A-B.*<sup>18</sup> See above, north-south sighting line. Wall B crossed directly over head idol (Tumb 17) and proceeded toward center of tumulus. Wall A that joined it from north was more tenuous.

*Wall A1-B1.* Lay just a few degrees off first north-south guide wall; encountered only high in mantle, probably representing later substitution for original line. Wall A1 showed as thin vertical line of gravel in north scarp of trench 3. Near top of mound it may have been purposely used to bisect

angle between C and I, to divide work more efficiently.

*Wall C-D.* Wall C moved inward from northeast at ca. 40° north of wall E and was met in straight line from southwest by wall D. C consisted of discontinuous line of thin slabs set on edge.

*Wall E-F.* Wall E began slightly above exterior ground level in trench 1. Continued as succession of several pierlike groups of stones pointing to center. In trench 2 it appeared at -1 m. to be of two courses roughly thrown together; continued into trench 3 as sections stepping up toward center. Traces persisted all the way up from burned level. Walls E and F were laid out in straight line, but slightly deviated from right angle with A-B.

*Wall G.* Ran from southeast, but did not continue beyond central nexus. Found only high in mantle, representing later division of labor perhaps necessitated by gradual drifting apart of walls E and H as mantle gained height. Angle between E and H appears greater than that between others.

*Wall H-I.* NNW-SSE. Both walls were laid out from burned level up to top in approximately consistent line and made good join at center.

The mantle, which rose with the guide walls for ca. 3.50 m. above the burned level at the center of the tumulus, was in all trenches of a consistent rather soft earth, containing occasional ashy patches and a fair sprinkling of animal bones. Young felt that no disturbances had appeared in the mantle except for the modern cut seen on the east side.

Findings scattered through the mantle are the following:

<b>Tumb 18-20</b>	Bronze:	imported fibulae
<b>21,22</b>		arrowheads
<b>23</b>		nail
<b>24-27</b>	Pottery:	bichrome ware
<b>28</b>		black-on-reserved-buff sherd
<b>29,30</b>		gray-ware sherds
<b>31,32</b>	Clay:	spindle whorls
<b>33-35</b>	Stone:	head idols
<b>36</b>		mold for small bronze spool.

The uncatalogued material from the mantle consisted of many Phrygian gray polished sherds and gray coarse wares. Also the bones of a lamb or kid were found deposited as if they had constituted the meal of a workman or two during the earthpiling operation.

16. The question whether the use of the head idol had ritual significance for the laying of the sighting line, or whether the user knew of its former religious symbolism, cannot be answered on the basis of present indications. It may have been merely a stone of convenient shape and color lying to hand, as it were, at the right moment, in the destruction debris of the house represented by the cellar. See also under Tumb 17. Please note also Tumb 33-35 found scattered in the mantle.

Young does not explain in what way the sighting line distinguished itself from the cap after he had removed guide wall B

(see below): by shape? by distinctive alignment? by contrasting color or material? The line was evidently clear to the architect also.

17. For a similar convergence resulting in a cylindrical stack of stones, see Tumulus E (Kohler, *Gordion* II, Pt. 2, "E, Guide Walls").

18. Guide walls in tumuli presented throughout this volume will be lettered beginning at the north and proceeding in a clockwise direction.

## CHRONOLOGY

The carpentry of the chamber is rather unusual in its combination of squared and unsquared beams, and its placement within the cellar walls of the pre-existing building. The burning of that building cannot be dated on intrinsic evidence; we know only that the installation of the chamber follows the fire by some interval.

Lead and iron fragments of the type found in Tumulus B have been noted in other tumuli containing coffins—both pre-Kimmerian and post-Kimmerian. Besides Tumulus B,<sup>19</sup> these are: K-IV,<sup>20</sup> K-I,<sup>21</sup> and K-II,<sup>22</sup> and, from our series, Tumuli C<sup>23</sup> and possibly S-1.<sup>24</sup> The bulk of evidence for the use of coffins with such sealings seems to fall within the period from the late eighth through the first half of the sixth centuries B.C.

The burial group (**TumB 1–11**) consists of gifts which, barring heirlooms, should date together.

The pottery from inside the coffin has tentative connections. **TumB 2**, not matching precisely enough in shape the lekythoi of Lydian type from Küçük Höyük, and being unpainted and thick-walled, could be dated pre-Küçük Höyük.

The local pottery of the post-Kimmerian period at Gordion needs still to be analyzed on the basis of the stratified examples from the City Mound and Küçük Höyük, but a simple development can be seen in shapes of jars and amphoras.

In Tumulus MM a separation was already beginning to show between flat-rimmed dinoid bronze cauldrons and others with short necks, some straight, some curved under everted short flaring or flattened rims. The ceramic dinoid jars found inside the large cauldrons displayed the same distinction, though to a lesser degree. The pottery amphoras of a size comparable to those of the B group (0.17–0.23 m.), on the other hand, had developed straight-sided necks and at least three levels of handle attachment at the neck, but none so far down the shoulder as those on the amphoras **TumB 4** and **5**.<sup>25</sup>

Pottery jars and amphoras in a post-Kimmerian series continuing this sort of development might be expected to show a slow increase in the height of the neck. Such a series based on height seems not to materialize. Changes occur rather in the width, the side-

curve of the neck, and the treatment of the rim. A few matches can at this point be made among the groups of tumuli, but a complete series embracing the jars and amphoras will have to be based on other data.<sup>26</sup>

What is more certain is that the amphoras **TumB 4** and **5** and **TumS1 75** resemble each other in spherical body, wide neck with concave sides, and everted rim flattened on top. The bases are flat, but in the B group stability has been added in the form of a slight concavity underneath. Such slight concavities are, however, also known from pre-Kimmerian levels, so the contrast is not necessarily an advance. The best parallel that can be cited now is that found in **TumS1 75**.

Dinoid vessels are absent.

**TumB 3, 9, and 10** from the burial are argued to be later than **TumH 5** in the sequence of low-necked jars (see pp. 218–220).

**TumB 12–16**, found scattered through the stone cap, form a group of burned and unburned post-Kimmerian gifts (except for the belt studs, **TumB 13**, which may be incidentally deposited). The combination of cauldron, possible lid-handle, and pair of post-Kimmerian painted jugs shows at least some conformity with a set of banqueting utensils (see p. 189); they are probably contemporary but cannot be relied upon to date the burial group closely. Both the cauldron attachment (**TumB 12**, from the cap) and the arrowhead (**TumB 21**, from the mantle) have close parallels from F and J, respectively. F will be seen (see p. 59) to date close to J (ca. 620–600 B.C.).

Tumulus B then stands after Tumulus H, and therefore also after S-1, and very close to J.

Date: ca. 630 B.C.

## WAS TUMULUS B LOOTED?

The author believes Tumulus B was not looted (Young insisted throughout that he could see no lines of intrusion coming down through the mantle). The guide walls and their central nexus, except for the outer east end of F, were still in place. The stratum of burned debris is consistent throughout. The stone cap appeared undisturbed except for a normal amount of subsidence in the center resulting from the cracking of the roof beams, all of which were recovered, though in part from the floor. Over the cap the stones of the

19. See under **TumB 6** and pp. 183–184.

20. G. Körte in *Gordion*, 99. Iron bands only were found in K–IV, but see p. 184.

21. *Ibid.*, 138 (K–I was a cremation).

22. *Ibid.*, 109.

23. See under **TumC 1** and **10**, and pp. 29 and 31.

24. See under **TumS1 72**, and p. 184.

25. Young, *Gordion* I, 175 (MM 372–374), pl. 80K–M. See also G. K. Sams, *ibid.*, 176, 256–257.

26. G. Kenneth Sams is analyzing the post-Kimmerian sequences of pottery as stratified on the City Mound. We await his results.

southern stretch of guide wall B still lay preserved in a straight line pointing to center, a situation which should mean that the cap had not been disturbed. Scattered objects found in the stone cap were burned (except for the pots **TumB 15** and **16**), which indicates that the metal objects were gifts given after the banqueting party or that burned fill had been mixed with the stones used for building the cap.

Within the chamber the skeleton in the coffin appeared basically undisturbed except for the standing humerus; legs were well disposed and feet in position. The gold pendant (**TumB 1**) could be considered still *in situ*, although it is so tiny that it could have been overlooked by looters if they entered. The broken pottery seemed in sensible arrangement, with the pair of belly-handled amphoras and one jar inside the coffin and two jars outside, their sherds unmixed so far as the excavator could judge. The coffin lid itself, broken at the center and tilted up at each end might

indicate only that it was already fairly rotten when the central stretches of the roof fell in.

The finding places of **TumB 7** (ivory pin or spindle) and **TumB 8** (disk or whorl) are odd. Such displacement could result from the disturbance by the final degeneration of the roof, or the activities of rodents, or an earthquake<sup>27</sup> while the interior space was still clear.

Almost all tumuli were tampered with at their center tops. Tumulus B happened to have a large conglomeration of stones at the center where the guide walls met, which may have appeared forbidding to looters. The burial chamber of B was also far enough off center to elude the treasure-hunter. This set of conditions offered a double protection. See below, p. 180 and Fig. 71(f). One or the other of these conditions was usually present in other unlooted lesser tumuli (see J and N,<sup>28</sup> and E, F, I, and M).<sup>29</sup>

## Catalogue

### IN GRAVE CHAMBER

#### **TumB 1-11**

(FIG. 7)

#### INSIDE COFFIN

#### **TumB 1-5**

#### **TumB 1 Gold: socket with paste inlay, for suspension**

J 27 Southwest of and close to skull

D. 0.017 Th. 0.008 D. hole 0.0015 m.

Pl. 8A,B

Section broken out of socket wall from around one suspension hole.

Cylindrical gold cup socket, thin-walled, short and wide, finely striated into ribbing around its circumference. Accented around top and bottom with applied plain wire. Pendant pierced diametrically near rim of "cup."

Setting convex, of milky light green paste with multiple fractures.

From its provenience, it is not absolutely clear whether the pendant was part of an earring, or had

dropped from a cord around the neck of the person in the coffin.

Although an exact example of striated gold sheet used as the cup for a setting seems not to appear among the Ephesus materials, the use of closely striated sheet pressed to many shapes does occur often: for bees' wings,<sup>30</sup> hawks' wings,<sup>31</sup> and a cylindrical bead.<sup>32</sup> These are assigned generally to the Basis and the West Area.

#### **TumB 2 Pottery: unpainted lekythos**

P 36 In coffin beside skull

H. 0.173 D. base 0.049 D. 0.159

D. rim 0.036 m.

Pl. 8C

Complete. Large deteriorated area on one side of body.

Ring foot with flat boss left in center of under-floor. Body slim piriform with slight angle at greatest diameter. Shoulder slightly carinated, narrow, short, meeting short conical neck at angle. Rim everted, plain. Short vertical loop handle from ridge at mid-neck to outer shoulder.

Clay gritty with large white bits. Undecorated. Fired rose-brown throughout.

27. An earthquake, which was once believed to have occurred during the late decades of the fifth century (see Young, *UMB* 17, no. 4 [1953] 17, 23; *idem*, *AJA* 59 [1955] 4-6, esp. 6), and has more recently been assigned by K. DeVries (*AJA* 94 [1990] 399-400) and F. Winter (*Imported B.G.*, 40-42, esp. n. 56) to the early decades of the fourth century, caused extensive rebuilding on the City Mound toward or at the end of the Middle Phrygian period. The contents of any uncollapsed burial chamber could

have been stirred at that time.

28. Below, pp. 57 and 86.

29. Kohler, *Gordion* II, Pt. 2.

30. Hogarth *et al.*, *Ephesus*, pl. III[5a].

31. *Ibid.*, pls. IV[21-23, 27]; VI[28].

32. *Ibid.*, pl. X[70].



**Tumb 2** has much narrower shoulders than those on the lekythoi from Küçük Höyük,<sup>33</sup> and the low boss under center floor does not occur on them. The fabric could be Lydian unpainted, earlier than the Küçük Höyük group (i.e., pre-546 B.C.), or else be imported from elsewhere and at present undatable.

**Tumb 3** Pottery: gray burnished low-necked jar  
P 39 In coffin, north corner  
H. 0.225 D. base ca. 0.095 D. 0.1915  
D. rim ca. 0.113 m.  
Pl. 8D

Mended. Complete. Deteriorated on lower body. Base wide, slightly concave. Body spherical (slightly narrowing to ovoid near base). Neck wide, concave in profile. Rim everted and flattened.

Clay gritty, horizontally burnished on lower body. Fired gray throughout, darker where burnished.

See below, **Tumb 9** and **10**.

**Tumb 4** Pottery: black polished shoulder-handled amphora  
P 37 In coffin, southwest side  
H. 0.1765 D. base 0.075 D. 0.159  
D. rim 0.107 m.  
Pl. 8E

Mended, complete.

Base flat, wide, slightly concave (0.001). Body almost spherical; neck short, wide, slightly concave on sides; rim everted and flattened. Handles are rolled loops from outer shoulder to greatest diameter.

Fabric heavy. Clay gritty, micaceous, slipped, stroke-burnished vertically on neck, horizontally on body. Fired gray-buff at core. Black on surfaces where burnished.

See after **Tumb 5**.

**Tumb 5** Pottery: black polished shoulder-handled amphora  
P 38 In coffin, southwest side  
H. 0.1785 D. base ca. 0.083 D. 0.1625  
D. rim ca. 0.11 m.  
Pl. 8F

Mended. Handles largely restored.

Shape and finishing closely similar to **Tumb 4**; probably meant to form pair with it.

**Tumb 4** and **5** are a pair of amphoras in body shape much like the jar **Tumb 3**; i.e., the mouths are wider in proportion than those of the pre-Kimmerian amphoras in the same size range. The closest pre-Kimmerian relationship is with the amphoras MM 372 and 373 in Tumulus MM,<sup>34</sup> although they have straight-

sided necks and the handles are attached higher.

Basically **Tumb 4** and **5** have bodies a little taller in proportion than indicated by the term "spherical." The neck profile has a gentle balanced vertical curve above a strong reverse curve at the shoulder. The handles stand out in a rounder curve and are set lower on the shoulder than the handles on **TumSI 75**, which is their closest relative.

The best outside parallel is from tumulus Anıttepe II in Ankara.<sup>35</sup>

## ON THE COFFIN

### Tumb 6

**Tumb 6** Lead: sealing strips  
ILS 775 On coffin bed and lid  
A PL. 0.35 L. cross-clamp 0.061 GW. clamp 0.061 Depth lead in crack 0.047 W. in crack 0.008 Dist. between clamps, c-c 0.155 m.  
B PL. (max. dim.) 0.28 L. half cross-clamp 0.035 Depth lead in crack 0.052 W. in crack 0.004-0.008 Dist. between clamps, c-c 0.155 m.  
C Max. dim. 0.22 L. clamp 0.063 Depth lead in crack 0.047 W. in crack 0.008 (top), 0.005 m. elsewhere  
D PL. 0.195 L. clamp (mended) 0.07 GW. clamp 0.023 Depth lead in crack 0.035-0.05 W. in crack, top 0.008 m.  
E GPL. longest pc. 0.135 m.  
F Various  
Pl. 8G-I

A broken at both ends of band. Thin edges crumbling. Clamp broken away in part. Straight piece from mending of long straight crack in lid or bottom of coffin. On cross-clamps are tie-bolts round in section (i.e., metal forced down holes drilled in wood). Evidence preserved of three cross-clamps which appear at both bottom and top of sealing strip, indicating that sealer was working from both bottom and top of lid or bed.

B broken at both ends of thin band. Half of complete clamp in place and slots in edges where other clamp was torn away. Constructed like A.

C preserves one complete top of cross-clamp and (now) curved lead band, wider at top, as if pressed into crack wider along top.

D band crumbled along unsmoothed edge. Clamp mended.

E bits of lead "rod" probably once running along check in wood that had not yet become full crack. Cross-clamps much thinner; some L-shaped, some F-shaped.

F smaller odds and ends of broken pieces from all parts

33. A typical lekythos from Küçük Höyük appears in Young, *Archaeology* 6 (1953) 165 (top).

34. Young, *Gordion I*, 175 and pl. 80K.L.

35. T. Özgüç and M. Akok, *Belleten* 11 (1947) 73, pl. 19, fig. 37; G. K. Sams in Young, *Gordion I*, 176, 257.

described above, i.e., bolts, bands, square rods, etc.

The long thin bands, as indicated by wood bits caught in the clamps and by impressions of wood in the lead itself, appeared to travel with the straight grain of the wood.

Lead as a sealing material for natural cracks in coffins (which perhaps suffered checking before use due to their having been carved from green wood) was fairly common at Gordion.

G. Körte found thin angled rods of lead in Tumuli K-I, a cremation,<sup>36</sup> and K-II, a wooden chamber,<sup>37</sup> each of which he believed to contain a wooden coffin ("Sarkophag").

In Tumulus B Young was fortunate to have encountered a fully preserved example of an extensive lead mending job on a coffin *in situ* in an unlooted chamber.

Fragments of lead were found associated with coffins also in Tumuli C<sup>38</sup> and S-1,<sup>39</sup> and in a possibly pre-tumulus context in Tumulus A.<sup>40</sup>

See pp. 183-184.

## ON FLOOR OF CHAMBER

### Tumb 7-11

#### Tumb 7 Ivory: pin or spindle with ram's head

BI 1 Between southeast end of coffin

and wall, a little above floor

L. 0.176 H. head 0.019 L. head 0.023

GW. head 0.0195 D. collar 0.0165

GD. pin 0.0075 m.

Pl. 9A-C

Complete except for small chips. All laminae interfaces now glued.

Ram's head, with down- and forward-curving horns, made separately and hollowed behind to fit over tenon at end of long rod, round in section.

Small square hole at inner end of hollow and also in end of tenon evidently held third piece as cross-peg. Shaft furnishes transitional collarlike member in shape of plain capital (based on lotus or palm type) decorated with two pairs of finely incised lines on neck and one pair on top of overhang. Two fine ridges set it off from shaft proper which then tapers slowly to long point blunt at tip.

Tumb 7 has been called a pin,<sup>41</sup> but because it has a

blunt end, it would need at least two large buttonholes in the pinned garment plus some means of fastening, like ridging or grooving on the shaft, or a hole under the head, for a tying or "toggling" system. It is probably a spindle.

In 1958 the author discussed<sup>42</sup> in connection with Tumb 7 the silver "pin" in Copenhagen, said to be from Mylasa,<sup>43</sup> not calling into question the thickness of the shaft and the bluntness of the end in combination with the lack of a toggling system. That pin has a very thick shaft (0.0066 m., if figured from the photographs at scale 3:4) compared to other straight pins illustrated by Jacobsthal. The proportions are very like those of Tumb 7, which was found accompanied by a whorl. Jacobsthal dates the Copenhagen pin "in the fifties of the sixth century."<sup>44</sup>

From Lindos, Blinkenberg published a similar short bone spindle.<sup>45</sup>

See also below, after Tumb 8.

#### Tumb 8 Ivory: disk or spindle whorl

BI 2 Between southeast end of coffin

and wall, a little above floor

D. 0.03 Th. 0.0045 D. hole 0.007 m.

Pl. 9D

Disk wide and thin, flat on one face, slightly convex on other. Edges sharp. Undecorated.

Tumb 7 and 8 together may make up a short thick spindle and thin whorl of the earlier (pre-Greek) Anatolian type, resembling in proportion a silver and gold set from the Copper Age at Alaca.<sup>46</sup>

Further evidence may come from a round "Stylus" of polished horn<sup>47</sup> found at Boğazköy in the burned layer which brought Unterstadt layer 4 to a close. This is dated to the eighteenth century B.C. It has a setback and a tenon for insertion into some kind of head, a D. of 0.007 (canonical for a spindle) and L. 0.18 m. which is comparable to the length of Tumb 7 minus the head. This would affirm the presence of this type of spindle in the Middle Bronze Age.

All spindles must have a "stop" of some kind at one end to keep them attached to the yarn which they store after each spin if the suspended-spindle method is used.<sup>48</sup> The ram's head<sup>49</sup> would be such a stop and

36. G. Körte in *Gordion*, 138.

37. *Ibid.*, 109.

38. See p. 183 and Tumb C 10.

39. See p. 184 and Tumb S1 72.

40. Cremation: Kohler, *Gordion* II, Pt. 2. An additional pre-tumulus example occurred in a pit grave in the common cemetery. See Anderson, *Comm. Cem.*, 87, 319, 383 (ILS 154, cat. no. 128, Burial 12).

41. Kohler, *Wood and Ivory*, 135-136.

42. *Ibid.*

43. Jacobsthal, *Pins*, 55, fig. 251 (L. 0.161 m.). National Museum inv. no. 3252.

44. *Ibid.*

45. *Lindos* I, 134, 135, no. 335 (L. 0.177, GW. 0.009 m.). No stratification.

46. Koşay, *Alaca 1937-1939*, 169, no. L. 8, and pl. 197[1] (Tomb L).

47. Boehmer, *Kleinfunde*, 197, no. 2045 (pl. LXXIII).

48. Forbes, *Technology* IV, s163; Singer *et al.*, *HT II*, 202.

49. Although the ram's head is made separately, it would be secured by the cross-peg while hanging and spinning.

the disk would fit at whatever point the spindle shaft reached a diameter of 0.007 m.

**TumB 9 Pottery: gray low-necked jar**  
 P 40 East corner of chamber, above  
 head of skeleton on floor  
 H. 0.212 D. base 0.09 D. 0.20  
 D. rim 0.108 m.  
 Pl. 9E

Mended, complete. Surface roughened from rot and burning.

Base slightly concave, body spherical with slight tendency toward ovoid above base. Neck short and wide. Rim plain flaring, slightly flattened on top. Lip plain.

Clay fairly fine, but bearing mica and occasional large brown and white bits. Wheel-burnished possibly without slipping. Fired gray throughout.

**TumB 10 Pottery: gray low-necked jar**  
 P 41 North corner of chamber, below  
 feet of skeleton on floor  
 H. 0.184 D. base 0.092 D. 0.172  
 D. rim 0.108 m.  
 Pl. 9F

Mended, complete.

Shape and treatment close to **TumB 9**; probably meant to form pair with it.

**TumB 9** and **10**, and the single jar, **TumB 3**, from inside the coffin, form a group whose body shape is exactly related to those of amphoras **TumB 4** and **5** above.

See discussion under **TumB 5**.

**TumB 11 Clay: spindle whorl**  
 MC 9 Floor, north corner near **TumB 10**  
 H. 0.02 D. 0.026 m.  
 Pl. 9G

Complete.

Truncated biconical with short shoulder.

Clay gritty, slightly micaceous. Polished. Fired gray at core, black where burnished.

### IN STONE CAP **TumB 12-16**

**TumB 12 Bronze: fragments of lebes-cauldron**  
 B 269 In stone cap, south side  
 Est. D. rim 0.28 W. rim 0.013 Th. lip 0.005  
 A PL. rim piece 0.193  
 B Max. dim. 0.15  
 C Max. dim. 0.14

D Th. plate 0.0035 Reconst. L. 0.09 m.

Fig. 8A; Pl. 10A

Three mended sections: A from rim, B and C from walls. Burned and then crushed between stones, but not intentionally folded. Rest are very small pieces except for separate twisted fragment of plate (D).

Lebes-cauldron has collar folded sharply outward to make squarish flattened heavy rim.

The fragment D, preserving a possible bit of rectangular handle plate with four corners cut squarely out, and a small vertical ring, may belong to section A or to several pieces of thicker wall, possibly representing a second vessel (no rim preserved). The ring is profiled with fine ridges between larger ridges at center and edges.

It is to be noted that handle plates where present on cauldrons in Tumulus MM appear rodlike, thick, or rounded in section, except for the plates, which received the bulls' heads, sirens, and demons of MM 1-3. Those were flat, cut to winglike shapes and incised (cf. also the situlae MM 45, 46).<sup>50</sup> Handle plates in the post-Kimmerian period (**TumJ 18, 19**; B 470<sup>51</sup> in Tumulus F) appear to be simple geometric forms cut out of bronze plate, with grooved decoration now tending to occur on the fixed rings. In technique the plate for **TumB 12** therefore appears closer to the material from F and J (ca. 620-600 B.C.).

See p. 59 and 198.

**TumB 13 Bronze: bosses (12)**  
 B 270 In stone cap, south side  
 A H. 0.014 D. 0.0355  
 B H. 0.01 D. 0.021  
 C H. 0.0095 D. 0.02  
 D H. 0.016 D. 0.015 m.  
 Pl. 10B

B and D complete; A and C mended. Four selected for cataloguing represent all sizes. Boss heads hemispherical, hollow, with evidence that stems were once present. B and C approximately match; thus three sizes are represented.

The three sizes of studs tentatively suggest that they come from a pre-Kimmerian studded leather belt<sup>52</sup> rather than furniture decoration.<sup>53</sup> There were so few studs present (12) that they may represent only a fragment of belt deteriorated before accidental deposition.

**TumB 14 Iron: horizontal or bridge handle**  
 ILS 85 In stone cap, southeast end  
 PL. band 0.056 W. band 0.019 m.  
 Fig. 8B; Pl. 10C

Complete. Ends now sprung to 90° angle.

Flat band, heavily ridged along edges, originally(?) applied

50. Young, *Gordion I*, 102-110, figs. 68, 69, pls. 50-57 (MM 1-3); *ibid.*, 110-112, figs. 71, 72, pls. 58, 59A-C (MM 4-13).

51. Kohler, *Gordion II*, Pt. 2.

52. Young, *Gordion I*, 148-153 and fig. 94.

53. *Ibid.*, 217-218 and fig. 129. The screen from Tumulus W, e.g., exhibits one consistent size of stud throughout the design.

as half-circle with flat ends extending outward. Through both ends nails were driven probably originally in same vertical(?) plane.

It would be appropriate as a handle for a flat cauldron lid (lost?). To judge from the length of the nails, it was probably applied to wood. The ridged detail would complement in a rough way the decoration on the ring attachment (*D*) on **TumB 12**.<sup>54</sup>

**TumB 15 Pottery: spouted jug with painted animal panel**

P 17 From sherds scattered in stone cap, northwest end  
H. 0.146 D. base 0.054 GD. 0.115  
W. trough 0.034 m.  
Fig. 8C; Pl. 10D,E

Parts of body and handle restored. Painting obscured by surface incrustation.

Base flat, body ellipsoidal curving into concave neck cut away and rolled to form raised trough spout. Rolled loop handle up from rim and down to greatest diameter.

Painted decoration on white matte ground coat in single-line black-framed panel which spreads in vertical S-curve from mid-neck to belly: figures in solid black with reserved details. On neck, deer attacked on either side by wolf or dog; on body, two standing horses facing some central animal now lost but for ear, tail, and foot. Thin red wash over remaining clay ground after panels completed but before burnishing.

Fabric fairly fine. Clay fine, containing silvery and golden mica, polished over all paint and wash. Fired light buff throughout.

See under **TumB 16**.

**TumB 16 Pottery: spouted jug with painted animal panel**

P 18 From sherds scattered in stone cap, northwest end  
Rest. H. 0.14 GD. 0.103 W. trough 0.033 m.  
Fig. 8D; Pl. 10F,G

Handle, parts of belly, and all of base restored. Surface lightly incrustated. One of pair with **TumB 15** in shape, except that trough is pinched together more tightly.

Design in panel: on neck, two indistinct animals, panther-like although tailless, facing across lozenge and stroke; on body, two horses facing figure again lost.

Painting, burnishing, and fired fabric as on **TumB 15**.

On **TumB 15** and **16**<sup>55</sup> the form of the spout, a lifted open trough, puts them in a proper Anatolian context, along with the larger-bodied plain jugs with trough spout found on the post-Kimmerian City Mound and in the cremations in Tumuli A and F.<sup>56</sup> There are also examples dating to the pre-tumulus habitation levels under Tumulus E.<sup>57</sup> Small examples (H. ca. 0.20 m.), still with pre-Kimmerian ellipsoidal bodies, came from Tumulus K-III. The basic shape can probably be considered local at this period, although ancestrally they may be related to the cutaway-necked jugs found in Early Iron Age Macedonian cemeteries such as Vergina, as discussed by G.K. Sams.<sup>58</sup>

The painting technique of black silhouette on a white ground coat makes these jugs distinctive. They approach the local bichrome technique, but lack the added red. On one sherd (see Pl. 83B, P 2168) from a post-Kimmerian layer on the City Mound, the true bichrome technique is used upon a goat with very similar legs. Sams<sup>59</sup> discusses pre-Kimmerian instances of silhouette figural painting (e.g., P 4001 from TB 8 steps) and believes there is no reason to think P 4001 came from the east. Local painters were familiar with Alişar IV style, since pottery from Alişar has been found in Gordion. The basic format and style of **TumB 15** and **16**, however, are post-Kimmerian in trend, but not yet closely datable.

## ON SIGHTING LINE **TumB 17**

**TumB 17 Stone: head idol**

S 2 Standing upright on burned level south of center, on line of guide wall B (see Figs. 4, 5)  
H. 0.34 W. base 0.218 GTh. 0.093  
D. bolster ends 0.037 m.  
Pl. 11A,B

Some large chips.

Flat front, back, sides, and bottom. Head disklike above plain rectangular body. On each shoulder, bolster with central vertical ridge. Small round sinkings in front and at sides of neck define neck and return to form relief ends of bolsters.

Poros limestone(?). Preserved original surfaces show chisel work.

54. G. Körte found in Tumulus K-III a flat lid which he associated with the cauldron, K-III 49 (see *Gordion*, 68-69, fig. 45), although in that case the lid was of bronze and the handle was of wood. J. McClellan also discusses **TumB 14** among her ring handles: *Iron*, 431, 442, no. 326 and pl. 58, where it is inadvertently captioned 325.

55. Other good views of **TumB 15** and **16** have been published: Temizer, *MAC*, 119, fig. 193.

56. Kohler, *Gordion* II, Pt. 2 (P 11, P 252); *idem* in *Young Symposium*, 75, fig. 7 (P 252).

57. E.g., P 255.

58. For K-III, see G. Körte in *Gordion*, 61, no. 14, fig. 27. Note that the handle is a roll not a strap. On ancestry, see Sams, *Gordion* IV, 65 and n. 38.

59. *Ibid.*, 163, no. 933.

Gunlög Anderson<sup>60</sup> has studied the head idols from the pre-tumulus common cemetery areas on the Northeast Ridge and believes that, in spite of the fact that the majority of their finding places are the mantles of tumuli, they probably were associated with domestic cult in the habitations on the Northeast Ridge.<sup>61</sup> See below, **Tumb 33–35**. One example (S 27) from just above the floor of Anderson's House X<sup>62</sup> and others from the habitation fills under cremation Tumuli D (S 10) and K (S 24)<sup>63</sup> support her conclusions. According to K. Bittel and others, these should be associated with several developed idols found at Gordion<sup>64</sup> and at Boğazköy,<sup>65</sup> which are widely believed to belong to the cult of Kybele.

### IN MANTLE **Tumb 18–36**

**Tumb 18**     **Bronze: imported fibula**  
B 4     Trench 5, south end; mantle directly over stone cap (north end)  
PL. 0.0334   PH. 0.025   GTh. arc 0.012 m.  
Fig. 9B; Pl. 11C

Lacks pin, spring, and hook proper.

Basically leech type with sharpened transverse planes around swollen transverse center. Ends of arc proper: three fine, sharp ridges. Catch-plate flat, rectangular, with elbow-like corner. Spring end thin, extended, round in section.

Direction of pin unknown, since face illustrated could be either front or back.

Blinkenberg's<sup>66</sup> group II, 14a (from Delphi) and 14b (possibly from Elatea) resemble **Tumb 18** closely, but the latter has a sharper angle at the center of the arc. Muscarella<sup>67</sup> thus placed **Tumb 18** in his "foreign" classification, "apparently an import from Greece."

Sapouna-Sakellarakis<sup>68</sup> illustrates, from the Athena Sanctuary at Ialysos (Rhodes), several examples which seem a simplified version of **Tumb 18**.

Caner<sup>69</sup> placed it alone in his type IV a, citing no similar examples from central or west Anatolia.<sup>70</sup>

Its exact parallel apparently has not yet been found, but the type may have come from somewhere in Greece to Gordion and to the sanctuaries cited above.

**Tumb 19**     **Bronze: imported fibula**  
B 29     Brown earth, no reference  
PL. 0.023   GTh. 0.011 m.  
Fig. 9C; Pl. 11D

Arc only preserved.

Thick leech with vertical elliptical section and ring ridges around ends. At spring end, extension on arc is round in section; at catch end, wider and slightly flattened.

Direction of pin unknown, since illustrated face could be either front or back.

**Tumb 19** belongs in Blinkenberg's<sup>71</sup> group IV ("from the Islands"), but the parallels are less than strict. Muscarella<sup>72</sup> followed Blinkenberg, calling it an "import from the Aegean area, perhaps one of the islands (Rhodes?)." He correctly cited its similarity to **Tumb 3**, which is pre-Kimmerian (see p. 39).

Kilian<sup>73</sup> discussed in his variant D I b a series of these leeches from Pherai in Thessaly, with closely related types in numbers sufficient to confirm a Thessalian origin. He dated them to the end of the eighth and early seventh centuries B.C.

Caner<sup>74</sup> because of the great thickness of the leech (greater than that on **Tumb 3**) placed it in his type II f, which includes only examples from the pre-Kimmerian burned buildings TB 3 and CC 2 on the City Mound.

**Tumb 19** is probably pre-Kimmerian.

**Tumb 20**     **Bronze: imported fibula**  
B 5     Trench 6, mantle directly over stone cap  
PL. 0.021   PH. 0.016 m.  
Fig. 9D; Pl. 11E

Arc only preserved.

Small leech with extensions crossed by three ridges each, center ridges wider. Catch and spring ends indistinguishable.

Direction of pin unknown, since illustrated face could be either front or back.

60. *Comm. Cem.*, 346–347.

61. See also **Tumb 33–35** below. Others are from the mantle of Tumulus E: S 5, S 6 (Kohler, *Gordion* II, Pt. 2). Such figures found in the Bronze Age Near East have been interpreted as door or gate guardians of houses, shrines, cities, etc.; see T. H. Carter, *Expedition* 12, no. 3 (1970) 22–40.

62. *Comm. Cem.*, 37–38, 346–347.

63. *Ibid.*, 347 and n. 42.

64. See under **Tumb C 26**, p. 34 and nn. 42 and 43.

65. See T. Beran, *MDOG* 93 (1962) 47–48, fig. 40 (H. 0.30 m.), found *in situ* on floor of north half of court of east Phrygian Gate (BK 1a), Boğazköy (= Boechmer, *Kleinfund*e, 209, no. 2148, pl.

LXXIX); developed type, K. Bittel, *Antike Plastik* II, no. 1 (1963) 7 and fig. 2 and refs.

66. *Fibules*, 71, figs. 51, 52.

67. *Phryg. Fib. Gordion*, 82.

68. *Fibeln . . . Inseln*, 108, nos. 1509–1512 (pl. 45).

69. *Fib. in Anat.* I, 40, no. 72 (pl. 5).

70. See *ibid.*, map on page facing pl. 82.

71. *Fibules*, 94, 95.

72. *Phryg. Fib. Gordion*, 82.

73. *Fib. Thess.*, 33–34, nos. 222–239 (pl. 6).

74. *Fib. in Anat.* I, 43, no. 94 (pl. 6).

Muscarella<sup>75</sup> considered **TumB 20** to be foreign to Gordion, influenced by examples found in the Aegean and Greece. Kilian<sup>76</sup> and Sapouna-Sakellarakis,<sup>77</sup> however, adduced no really good parallels from Thessaly and the Islands, respectively.

Caner<sup>78</sup> included **TumB 20** in his type V, of his Cypriote and Near Eastern fibulae. His type V included examples from the Destruction Level as well as from later levels on the City Mound, and from Kūçük Höyük. He cited parallels from Alişar, where, he believed, a modified version of the Near Eastern fibula with triangular arc was manufactured. He dated **TumB 20** "from the last quarter of the eighth century through the early seventh b.c."

**TumB 21**     **Bronze: arrowhead**  
 B 1     Trench 1B, brown earth  
 L. 0.034     W. 0.01 m.  
 Pl. 11F

One blade dulled near point. Socket broken across.

Two blades are short angular sides of head with lozenge-shaped section. Blades set off by two deep incisions on each side. Hollow conical socket. Barb issues from well back on cone.

At base of one blade, two large incised Xs; at base of other, raised lozenge.

The incision and lozenge are devices to anchor the string being used as wrapping. Compare **TumJ 6–10** (esp. **TumJ 10** and n. 23), which are Scythian arrowhead types from inside the burial in J.

**TumB 22**     **Bronze: arrowhead**  
 B 2     Trench 3, brown earth  
 PL. 0.03     PW. 0.011 m.  
 Pl. 11G

Socket broken; point looks blunted.

Thick central section, basically hollow conical, with two narrow blades and rhomboid outline. No string-anchoring devices preserved.

See general discussion after **TumJ 10** (pp. 61–62). This however is an additional Scythian variant.<sup>79</sup>

**TumB 23**     **Bronze: nail(?)**  
 B 43     Brown earth, no reference  
 PL. 0.034     D. head 0.006     D. shaft 0.003 m.  
 Pl. 11H

Point broken away. One side of head diseased.

Head solid, deep domical. Shaft straight and round in section.

**TumB 24**     **Pottery: fragmentary bichrome jar**  
 P 15     Trench 3, immediately south of  
           guide wall E, at -3.20 m. (brown earth)  
 PH. 0.231     D. base 0.122     D. base of neck  
           0.17     D. 0.263 m.  
 Pl. 11I

Body only preserved.

Base flat, body double-convex to wide ovoid.

Over cream-colored burnished ground coat, matte painted decoration: at greatest diameter, zone of spaced, upright bars between triple wheel-run lines; on shoulder, black thin-line narrow panels of vertical dotted chevron columns, and panels of black-line quincunxes (checkerboard no. 2) obliquely latticed in red.

Fabric medium-heavy; clay gritty with some very fine silvery mica and large white bits, slipped over all. Burnished over all painted areas and ground coat. Fired pink to gray.

Sams<sup>80</sup> places **TumB 24** in a general class of painted jars which occurred in Destruction Level and later contexts. In monochrome ware the form is found in the Destruction Level and in eighth- and seventh-century tumuli.

**TumB 25**     **Pottery: bichrome wall sherd**  
 P 5113     Mantle earth, unspecified  
 Max. dim. 0.054     Est. D. body ca. 0.25 m.  
 Pl. 11J

Small rectangular sherd from shoulder.

Bichrome vertical checkerboard, badly aligned with wheel marks. Red, reserved, red (one line) alternating with reserved, black, reserved, etc.

Heavy fabric of fairly fine but badly levigated clay. Fired creamy buff throughout. Polished over red but nowhere else.

**TumB 26**     **Pottery: bichrome pithos sherd**  
 P 5394     Mantle earth, unspecified  
 D. at band ca. 0.45     W. band 0.028 m.  
 Fig. 9E; Pl. 11K

Paint faded. Oblong sherd preserves bit of thick horizontal band with thin (shoulder?) wall above, and thicker (belly?) wall below it.

Painted decoration: on band, three-row square checkerboard between single lines; below band, square checkerboard with red squares framed in black alternating with reserved (white?). Red area above and below band.

Heavy fabric of fairly fine clay with small bits and pocks. Fired gray-buff at core, to red under surfaces. On interior (wiped), reddish buff; on exterior mottled orange and gray.

Presence of ground coat not certain.

75. *Phryg. Fib. Gordion*, 6, 82, pl. XVIII, fig. 92.

76. *Fib. Thess., passim*.

77. *Fibeln . . . Inseln, passim*.

78. *Fib. in Anat.* 1, 181, no. 1191 (pl. 68).

79. Meifūkova, *Scythian Weapons*, 28, fig. 1 (typology), group I (early Scythian), type 2, variant 2, left. See also example from pl. 6{3}2.

80. *Painted Pottery*, 92–93.

**Tumb 27 Pottery: bichrome pithos sherds**  
 P 5395 Mantle earth, unspecified  
 A Max. dim. 0.135  
 B Max. dim. 0.125 m.  
 Pl. 12A,B

A coarse pithos shoulder, mended.  
 Painted decoration in black line: panel of latticed lozenge checkerboard between two spaced vertical bands of red framed in black line. Below: separating reserved area, red band, and panel of lozenges compounded by latticing and/or plain black lozenges.  
 B from lower body has large red band framed in black.  
 Surfaces reddish, gray at core. Once burnished over all, except matte red bands. Clay coarse, sandy.

**Tumb 26 and 27** may be related to "large vessels" from the middle phase of Level II at Maşat. These have similar bands and shoulder profile, and polychrome decoration.<sup>81</sup>

**Tumb 28 Pottery: black-on-reserved-buff pithos sherd**  
 P 5112 Mantle earth, unspecified  
 GPH. ca. 0.12 Est. D. at band ca. 0.31 m.  
 Fig. 9F; Pl. 12C

Wall sherd only, including band.  
 Wall straight to slightly concave below heavy squarish band (at shoulder?). Above band, shoulder at low slope and of thinner fabric.  
 Painted decoration (from bottom): oblique checkerboard of thinly painted black lozenges on reserved background. On plastic band, closed band of vertical checkerboard of same technique. On top of band, solid black.  
 Fabric heavy with white bits in otherwise fairly fine clay. Silvery mica. Randomly burnished interior. Exterior well burnished under black paint. Core fired grayer than brownish buff surface.

**Tumb 29 Pottery: gray polished ridged rim**  
 P 5393 Mantle earth, unspecified  
 Max. dim. 0.077 m.  
 Fig. 9G; Pl. 12D

Small piece of ledged rim. Large chips on exterior.  
 Rim has wide flat ledge inside standing lip, which is smooth on inside and horizontally ridged four times on outside.  
 Fine clay with thorough burnish over all. Fired gray through core and gray-black on surfaces.

Cf. uncatalogued example from the mantle of Tumulus H,<sup>82</sup> which dates the type of storage vessel back to at least pre-650 B.C.

**Tumb 30 Pottery: coarse gray basin with rim bands and spoils**  
 P 5396 Mantle earth, unspecified  
 Est. D. rim 0.39–0.40  
 A Max. dim. 0.093 GPH. 0.061  
 B Max. dim. 0.085 GPH. 0.043 m.  
 Fig. 9H; Pl. 12E

Two rim sherds from large basin.  
 Outer edges of bowl rise in tight curve up to flat rim, beveled toward interior. Attached ca. 0.012 below rim on outside, ledgelike "rim bands" square in section ending, on A at right and on B at left, in vertical spoils whose upper ends lie flush with top of rim.  
 Clay coarse, with very little mica, probably slipped, mainly wiped but burnished a little over rim and down into interior. Fired dark gray through core, lighter gray on surfaces.

**Tumb 30** was made in imitation of bronze bowls with rim bands and spoils.<sup>83</sup> For a similar gray basin, cf. P 5254 from the habitation area under Tumulus E. Many imitations of bolsters and pendent rings, in both gray ware and red ware, occur at Gordion in the post-Kimmerian layers on the City Mound (e.g., P 3460, P 3487). See pp. 224–225.

**Tumb 31 Clay: spindle whorl**  
 MC 3 Trench 6, earth immediately over stone cover  
 H. 0.022 D. 0.033 D. hole 0.007 m.  
 Pl. 12F

Complete. Chipped; badly burned.  
 Truncated biconical. Flat top and bottom around spindle hole.  
 Clay coarse with a little silver mica. Fired gray throughout.

**Tumb 32 Clay: spindle whorl**  
 MC 1 Trench 6, earth immediately over stone cover  
 H. 0.022 D. 0.03 D. hole 0.007 m.  
 Pl. 12G

Complete. Burned on one side.  
 Shape and fabric as in **Tumb 31**.

**Tumb 33 Stone: head idol with face**  
 S 1 Trench 4, earth immediately over burned floor  
 H. 0.11 W. base 0.062 Th. 0.019 m.  
 Pl. 12H,I

Complete. Abrasions.  
 Thin slab of stone, flat back and front. Back roughened by water action (?), perhaps before carving. Front smooth

81. T. Özgüç, *Maşat II*, 132 (Mst 76/63; H. 0.48 m.), fig. 147, pl. 76|1a–d.

82. See p. 47 and fig. 22K. See also those from mantles over cremations: P 5242, P 5391 (Tumulus E), MU 54–40–39 (Tumulus

F), in Kohler, *Gordion II*, Pt. 2.

83. Pre-Kimmerian examples in bronze were found in Tumulus MM: Young, *Gordion I*, 125–130 (MM 55–69) and pls. 65–67.

except for minor flaws. Body rectangular; shoulders short, head squarish and slightly arched. Nose represented by long low vertical ridge between shallowly bored eyes. Small picked hole for mouth. Semi-oval chin (or beard) in relief below shoulder-line.

Hard limestone, off-white.

See another, but much larger, idol with primitive facial markings, from the BK I period at Boğazköy.<sup>84</sup> K. Bittel considered that marks of hair are present on **Tumb 33**.<sup>85</sup>

**Tumb 34**    **Stone: head idol**  
S 3            Trench 5, built into guide wall H  
H. 0.324    W. 0.222    GTh. 0.0935  
              Th. head 0.05 m.  
              Pl. 12J,K

Large chips around base. Roughened, and weathered to tan.

Flat front and back. Body rectangular. Head disklike and a little thinner than rest.

Poros limestone(?). Some chisel marks left on shoulders.

**Tumb 35**    **Stone: small head idol**  
S 4            Trench 7, in upper brown earth  
              over west part of stone cap  
H. 0.123    W. base 0.071    GTh. (at base)  
              0.04 m.  
              Pl. 12L,M

Some large chips.

Rectangular body, squarish head. Flat front and back. Roughly blocked out. Long strokes on sides with rough, slightly serrated (nicked?) chisel.

Local alabaster, from piece showing some harder, yellower, weathered portions.

**Tumb 33–35** are additional examples of domestic idols like that used on the sighting line from the burial toward the planned center of the tumulus. See discussion under **Tumb 17**.

**Tumb 36**    **Stone: fragment of mold for small bronze spool**  
ST 7            Trench 10, brown earth  
GPL. 0.036    GPW. 0.029    Th. 0.008 m.  
              Pl. 12N

One corner preserved.

Corner piece from half of small flat two-piece mold. Half a conical pour channel leads to bed for half a T-shaped object. Parts of two small holes drilled all the way through. Plain on back except for a channel that leads nowhere.

Sandstone? Stone gray, fine-grained, nonmicaceous.

The shape to be made seems close to that of separate small spools for riveting through the rim bands to the under-rim area of a ring-handled bowl. The domed end of the spool, which is the top, has been undercut so it can rest over the rim like those on MM 58, 59, 64, etc.<sup>86</sup> Since in Tumuli W (see TumW 24)<sup>87</sup> and P (see TumP 31–33)<sup>88</sup> bowls were still made of wood, employing bronze only for the ring handles (see pp. 203–204), the stone mold probably dates close to Tumulus MM (ca. 700 B.C.) or later (down to 630 B.C.).

**Tumb 36** may help to prove the *local* manufacture of the ring-handled bowls with rim bands.

Compare **Tumj 20**, below.

84. Boehmer, *Kleinfunde*, 209, no. 2147, pl. LXXIX.

85. R. S. Young, *UMB*, 16, no. 1 (1951) 16, fig. 2; Prayon, *Phryg. Plastik*, 107 and n. 429.

86. Young, *Gordion I*, 127 f.

87. *Ibid.*, 207.

88. *Ibid.*, 17.



# Tumulus C

## Introduction

### PRE-EXCAVATIONAL DESCRIPTION (FIGS. 1, 2, 10A; PL. 13A)

Tumulus C, based slightly above the 17.50-m. contour, had a low weathered profile with a depression at the top *ca.* 9 m. across and averaging *ca.* 0.30 m. deep. Although a probably deeper depression had refilled over the centuries almost to the top, it might have given every indication to the excavator of serious prior damage to the tumulus, were it not that the villagers had, four or five years prior to excavation, disturbed the top to get earth for mudbrick.

Tumulus C lies 38 m. northwest of Tumulus D and 69 m. southeast of Tumulus B (measured center to center). The modern surface on the north-northwest edge of the tumulus was 1 m. lower than the lowest point on the south-southeast edge; a surface line projected from the center of C through the center of D rises in a gentle ascent (see Fig. 10A, profile A-A). The deeper line of hardpan along section B-B' (Figs. 10C, 11A) in trenches 1A and 1B was found to be about level.

The height of the tumulus, 1.43 m. at center in the depression, was projected from the sloping line of the theoretically ancient surface in Fig. 10A. (That surface was not encountered as such in the heart of the tumulus.) The height at the edges of the depression then averaged *ca.* 1.73 m. and this point is taken here as datum zero for approximate measurements.<sup>1</sup> A theoretical original top for the tumulus is expressed in Fig. 10A as a dotted line projected in a curve above the depression. The line adds very conservatively only 0.70

m. at center.<sup>2</sup> Erosion by wind and rain had of course modified all original measurements downward, even before the ancient looting which must have caused a crater destined to be erased by the modern truncation.

Trenches 1A and 1B were laid out by E. R. Gallagher to follow the diameter (26.90 m. weathered). During excavation, the scarps of these trenches established an original diameter of 23.70 m.

Gallagher dug his initial set of trenches (1-14; see Fig. 10B) from 3 April to 3 May 1950,<sup>3</sup> keeping his trench floor at -2.23 m. Later he cut five cross-trenches 1.50 m. wide and 1.50 m. deep (below original trench floor) across the center of the tumulus in an effort to determine the position of a lower grave chamber, if any. The lower soil contained the following features.

### PRE-TUMULUS REMAINS OF HABITATION AND BURIALS (FIG. 11A,B)

Underneath the tumulus lay at least three features belonging to the pre-tumulus common cemetery: (1) a child's pithos burial (G) which lay with top below -2.23 m. in a patch of gravel,<sup>4</sup> and was perhaps unknown to the dwellers in "West House" (D); (2) "Stone Complex 4" (E), an inhumation thought by the excavator to be the main burial (see below), belonging, on the basis of its pottery, to the pre-Kimmerian period. It consisted of a double(?) stone enclosure which had lost its stone lining on the northeast. Since part of its contents was

1. No single point was originally taken as datum for all measurements. This excavation lacked a full system of depth surveying; measurements were taken down from the "surface" of the tumulus and then through a number of trench-lowerings not fully recorded.

2. Hearsay had it that the villagers had removed about one meter of mantle off the top and had found only a coarse pot filled with sheep bones.

3. Gordion Notebook 3 (1950) 1-40. For a brief preliminary announcement, cf. *AnalSt* 1 (1951) 11.

4. The gravel layer, encountered sporadically upon the Northeast Ridge, is mentioned in the Tumulus C account only here in trench 9 and in 5, 7, 11, etc., where it was said to bed the foundations of "West House." It does not appear on the drawn sections.

found in the earth above it, but not scattered into the mantle, its disturbance, perhaps caused by the people of "West House," occurred prior to the main burial; (3) "Stone Complex 3" (F), a poor cremation lying under the ancient surface (bottom at -1.53 m.) and possibly undisturbed. It contained an ivory plaque (BI 14, see Pl. 83C) of the Orientalizing period.

Domestic remains consisted of (1) "West House," which was burned and in ruins before the tumulus was built; (2) the stump of a post set in a small stone-lined hole (H); (3) a pile of stone and sherd debris (J) probably to be associated with a clearing of or final destruction of "West House."

#### THE MAIN BURIAL, "STONE COMPLEX 2" (FIGS. 10B, 11A,B; PLS. 13B, 14A)

In 1950 the excavator chose "Stone Complex 4"<sup>5</sup> as the best candidate for the "main burial," and R. S. Young followed that opinion in his brief annual report to the British Institute of Archaeology at Ankara;<sup>6</sup> the writer, however, believes that "Stone Complex 2" although completely churned up by looters was the site of the burial for which the tumulus was built.

#### THE PIT AND CHAMBER

At the time the Phrygians decided to put a chamber burial in this area, the burned remains of "West House" may still have been visible. During the interval after the fire, the house must have been cleaned out completely, as there were no finds on the floor and the pavement west of it showed disturbance. They avoided the house, then, in their placement, but used its walls and its pavement for sources of stone. They cut their pit through a general stratum of "gray earth" (II) which was the ashy layer resulting from the conflagration of "West House" now washed into the soil. Ashy earth appeared over the ancient surface in many peripheral areas and ran over "Stone Complexes 3 and 4," under "Stone Complex 1" (see below), but was cut through by "Stone Complex 2."

The pit,<sup>7</sup> carefully battered on the sides, measured at the bottom 2.20 m. north-south and 2.10 m. east-west.

Its floor was paved with flat stones *ca.* 0.35 x 0.35 m. across.

On floor level at the south end one sill beam (GPL. 1.20, H. 0.25, Th. 0.16 m.) remained in place. Ends of two side timbers did not yield full measurements of inside length. However, if the two theoretical wall thicknesses, totaling 0.32 m., plus two side stone packs, averaging 0.15 m. each (admittedly small, but possible as the batter increased these measurements at the pit's lip), are subtracted from the width of the pit (2.10 m.), 1.48 m. remains as interior clear width. If a like amount (0.62 m.) is subtracted from the length of the pit (2.20 m.), the theoretical inside length of the chamber is 1.58 m. This would rank as one of the smallest of the chambers at Gordion (see Table 2, p. 170).

Beams, which appeared to be about 0.10 m. in one preserved dimension, were found jumbled among the stone fill. The excavator felt that traces indicated that wall beams had been arranged alternately at the corners, but it was not certain whether intervals were left between the beams (as in Cox's "cribwork" theory concerning the walls of the Tumulus H burial).<sup>8</sup>

A peculiarity in the building of this chamber was the use of cakes of plaster to bind beam to beam (where these were evidently 0.02 m. apart) and beams to the stones of the side packs (some cakes showed impressions of wood grain on one side and impressions of stone surface on the other). The cake **TumC 14** from the second pile of looters' back-dirt (p. 28) showed lengthwise-cut wood grain on one side and the marks of a trowel on the other. See also uncatalogued examples of cakes (below).

The original height of the chamber is unknown, as is the nature of the roof.

#### CONTENTS OF THE CHAMBER

Under the stone and beam tumble inside the area of the chamber proper, an empty space on and over the floor was still measurable (PL. 0.65, W. 0.43 m., H. not given). This cavity, which lay in the northeast corner, suggests the presence of a log coffin, one end(?) of which had been left to rot *in situ*. The preserved length perhaps tells nothing, but the complete width would have been only about half that of the adult cof-

5. The group found in the stone enclosure, "Stone Complex 4," consisted of P 28 (a gray carinated bowl on a low stemmed base) and B 13 (a pair of bronze solid leech fibulae with non-Phrygian catches), all demonstrably pre-Kimmerian.

6. *AnatSt* 1 (1951) 11-12; *AnatSt* 2 (1952) 20, "the one sixth-century inhumation—that under C—lay probably in a cist, certainly not in a chamber."

7. The excavator, having cleared "StC-1" as a pile of stones (which it was), dug "StC-2" as if it also had been a pile of stones and in so doing removed the earth from outside the stone packing, which as a result showed in reverse the batter of the burial pit. The pack contained the ruined chamber and the disturbed contents of the burial itself.

8. See p. 45 and Fig. 20B.

fin in Tumulus B.<sup>9</sup>

Found resting on the floor of the coffin cavity, in addition to a few scraps of human bone, were:

<b>TumC</b>	<b>1</b>	Iron:	fragmentary thin bands
	<b>2</b>	Bone:	pierced knucklebones
	<b>5,6</b>	Pottery:	fragments of lydia
	<b>8</b>	Stone:	fragment of alabastron.

Further contents of the chamber, found completely disturbed in all strata of the fill of rotted beams and stone, were the following:

<b>TumC</b>	<b>3</b>	Pottery:	fragmentary animal-shaped vessel
	<b>4-6</b>		fragments of lydia (see <b>5</b> and <b>6</b> above)
	<b>7</b>		black-on-red bowl sherd
	<b>Uncat.</b>		plain gray- and red-ware sherds
	<b>8</b>	Stone:	fragment of alabastron (see above)
	<b>Uncat.</b>	Plaster:	several cakes for structural use (see <b>TumC 14</b> ).

Note the presence of a combination of knucklebones and the animal-shaped pot (a popular game and an object appealing to a child), a combination found elsewhere in Gordion only in Tumulus P, the "Child's Burial."<sup>10</sup> If Tumulus C were the burial place of a child, the small size of both the coffin and the chamber would be explained. The alabastra and lydia, which are usually considered to be perfume and ointment containers, respectively, suggest that the child was female.

### THE STONE CAP

The nature of the roof and the full extent of the stone cap are unknown. Perhaps to the west the cap ran up against the east wall of the burned house. The stones in two piles of looters' back-dirt (see below) must have accounted for most of the capping stones, the rest having been thrown back into the pit.

### FIRST PILE OF LOOTERS' BACK-DIRT, "STONE COMPLEX 1" (FIG. 11A,B [B])

North of the burial pit, and resting in the looters' mixed fill (V), was a large loose pile of stones (L. 2.50, W. 2.20, H. 1.30 m.) which must have been formed when the looters removed the stone cap and the roof of the chamber.<sup>11</sup>

The pile contained unburned wood mixed with clay showing beam impressions and a rich deposit containing:

<b>TumC</b>	<b>9</b>	Iron:	axhead
	<b>Uncat.</b>		nails from iron bands (see <b>TumC 1</b> , above)
	<b>10</b>	Lead:	clamps and sealings
	<b>4</b>	Pottery:	further fragments of lydion (see <b>4</b> above)
	<b>11,12</b>		lydion fragments
	<b>13</b>		buff barbotined sherd
	<b>14</b>	Plaster:	structural cake.

A large charred timber lay at top center, perhaps indicating that the looters were at the same time raking through debris spread about from the previously burned and gutted "West House."

Toward the west side of this looters' dump (in trench 4A) the stones and objects thinned out and were more loosely associated with the pile, probably as a result of aimless pitching. Here were a few pottery remains:

<b>TumC</b>	<b>15</b>	Pottery:	fragment of painted dinoid(?) amphora
	<b>16</b>		fragmentary plain black burnished bowl
	<b>17</b>		black polished saucer.

### SECOND PILE OF LOOTERS' BACK-DIRT FROM THE MAIN BURIAL "WALLING LOCATED 0.50 NORTH OF CENTER" (FIG. 11A,B [C]; PL. 14B)

A long pile of stones jumbled with broken beams lay at -2.33 (0.10 m. below trench 1A/1B level) northeast

9. See p. 11 and n. 9. The built coffin in Tumulus K-III measured 2 x 0.80 m. (*Gordion*, 43). In Tumulus S-1 the child's cist grave (see p. 120), which was made of mudbrick, had an outside measurement of 0.72 x 0.42 m. It is possible, then, that the preserved length (0.65 m.) of the hollow in C may be the actual length of a small child's coffin.

10. R. S. Young, *Archaeology* 9 (1956) 265-267; *ILN* (10 Nov. 1956) 797-799; *AJA* 61 (1957) 327-328; *Gordion* I, 1-77, esp. *TumP* 44, 49-50, and 62-63.

11. The writer takes full responsibility for the interpretation of "Stone Complex 1" and "walling" (see below) as looters' back-dirt. The field book did not express this concept. The theoretical extent of the circle of post-burial disturbance (see below, "mantle" and Fig. 11B) was also worked out by the author alone.

of the burial pit. It measured L. 3.20 x GW. 0.95 x H. 0.40 m. In plan it looks as if thrown out of the chamber itself.

Finds mixed in the pile were further fragments of:

<b>TumC</b>	<b>3</b>	Pottery:	fragment of animal-shaped vessel (see <b>3</b> above)
	<b>4</b>		part of banded lydion (see <b>4</b> above)
		Uncat. Plaster:	complete example of structural cake.

This uncatalogued piece of plaster still adhered to unburned timber on one face and to a stone on the other, demonstrating the use of these cakes as binders.

### THE MANTLE (FIG. 11)

The excavator, as he dug down into the mantle, reported the contents of each trench, but made no conscious distinction between what was outside and what was inside a circle of disturbance, since only the signs of the villagers' activities were visible on top. According to his trench plan, trenches 7, 11, 12, 13 certainly lay completely outside the disturbed area, and would then hold sporadic finds only from the original mantle. None apparently came from these trench locations, which means that the original mantle was fairly clean.

A 30-cm. stump of a vertical post (D. 0.20 m.) was found propped up in a stone-lined pit (Fig. 11A, B [H]). However, it was located in trench 4B, actually ca. 4 m. northeast of the center assumed by the excavator. Centering posts ("masts") at Gordion occurred only in pre-Kimmerian tumuli (P, W, K-III),<sup>12</sup> and were placed directly over the top of timber graves. The post in trench 4B must have belonged to a domestic context.

There was no evidence for guide walls in Tumulus C—perhaps because the whole excavated center had been looted, or because the mantle was so low, even originally, that this aid to a division of labor was not needed.

Thus the mantle in the disturbed center probably held mixed material from the looting of the major burial and from the burned house.

The disturbed refill (i.e., inside the projected circle) yielded:

Trench 1B	lenses of burnt material (probably concentrations of back-dirt from the level of burnt debris), scattered unburnt bones
Trench 2A Trench 3A	mixed bone, wood, ashes iron bar (not preservable), gray sherds
Trench 5	black polished ribbed ware.

One group of pieces, selected (in 1950 and in 1982) from unstratified context material from Tumulus C in Gordion storage, may be of some intrinsic interest:

<b>TumC</b>	<b>18</b>	Pottery:	black-on-red Lydian or West Anatolian pyxis fragment
	<b>19</b>		bichrome sherds
	<b>20</b>		fragments of large coarse red-glazed lydion
	<b>21</b>		black polished closed-vessel fragments
	<b>22</b>		black polished bowl rim sherd
	<b>23</b>		black polished bowl sherd
Uncat.			rims of black polished round-mouthed jugs (3) (Fig. 12L [a-c])
Uncat.			black polished ribbed jar (Fig. 12L [d]) <sup>13</sup>
	<b>24</b>	Stone:	alabastron
	<b>25</b>	Graffito:	black polished sherd: $\gamma$ ( <i>yod</i> ).

During the last days of digging, a stone sculpture was found in the excavator's dump, at the west end of trench 1A, which signified that it probably came from the habitation level in the west half of the pre-tumulus area:

<b>TumC</b>	<b>26</b>	Sculpture: Kybele and bull
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### CHRONOLOGY

The main burial in Tumulus C was a timber chamber built in the Phrygian tradition. It was a small chamber, but typical in its structure. Since its contents included evidence for a small coffin, a game (**TumC 2**) and a toy(?) (**TumC 3**), it is thought to be a child's grave.

12. Young, *Gordion I*, 2 (P), 193 (W); G. Körte in *Gordion*, 39 (K-III). See pp. 178-180 and Fig. 71.

13. Similar fine black polished rims and walls with fine vertical reeding occurred in the mantle of Tumulus B (context box B2).

The gifts in the ruined structure of the main burial in Tumulus C resemble in some ways the combination in Tumulus A,<sup>14</sup> and probably date close to it. On the basis of small dissimilarities, however, the lydia in C (**TumC 3-7, 11, 12, 20**) appear earlier than those in A (see arguments under **TumC 6**) and are probably all imported. The saucer (**TumC 17**) dates between H and A.

The date of Tumulus C probably falls *ca.* 540 B.C.

## LOOTING

The looting was probably the most thorough of all those with which we must deal in the lesser tumuli on the Northeast Ridge. However, from among the objects recovered none<sup>15</sup> leaps to the eye as securely dating later than the chamber, so we are without evidence for the date of the disaster.

## Catalogue

### IN DISTURBED MAIN BURIAL TumC 1-8

**TumC 1**     **Iron: fragmentary thin bands**  
 ILS 772     Scattered in coffin hollow  
 A D. nail head 0.025-0.03 (as rusted)     GPL.  
                  shaft 0.019     W. band 0.043  
 B W. 0.043     GPL. 0.172     G.Th. as swollen  
                  0.011  
 C Total PL. in addition to A and B 0.35  
 D GPL. lgst. pc. 0.09 m.  
 Pl. 15A

A four fragments of band like B and C, but pierced by nails with solid hemispherical heads and square shafts. These are located 0.012 m. from end (to edge of nail) where end is preserved.

B large sturdy length of band with no nail holes, stretching at least 0.172 m. between nails. Band has squared edges.

C many fragments of band, nonjoining pieces, but many more must have been lost.

D bits of nail shafts, square in section. One is broken at both ends with traces where band crossed shaft 0.06 m. from one end and 0.03 from the other. There are two other similar pieces.

E some accompanying nail fragments, smaller, round in section and possibly not to be associated with bands.

The iron bands in the **TumC 1** group were found in association with a theoretical coffin, the edges of which they must have aided in sealing.

Bands from the coffin found *in situ* in Tumulus B were not saved for cataloguing.<sup>16</sup>

Bands were also encountered in the vicinity of the

cremation in A, but they belonged to a pre-A burial, perhaps disturbed by the tumulus builders. Another was found in a poor cremation in the gravel layer under Tumulus B. Thus, coffins may have sometimes been used also in cremation rites.

G. Körte mentioned iron bands in K-II<sup>17</sup> and K-IV,<sup>18</sup> in both of which he believed there were sarcophagi, but he associated the iron strips with architecture because they were found along the walls.

**TumC 2**     **Bone: pierced knucklebones (6 plus 3 halves)**  
 B1 607     In coffin hollow  
 L. 0.026-0.029     W. 0.016-0.018 m.  
 Pl. 15B

Rotted.

Six knucklebones, all pierced through corresponding ends; three show wear (or purposeful smoothing) along lateral ridges.

Knucklebones were found here "in great quantity." Those catalogued were considered representative.

The ancient game of knucklebones was played in Bronze Age Gordion. They were found with nine Hittite burials published by M. J. Mellink<sup>19</sup> and with two additional Hittite burials from the "Museum Site."<sup>20</sup> They were also among the gifts in pre-Kimmerian Tumulus P,<sup>21</sup> and in Tumulus KY (below, **TumKY 20**). P. Sheftel<sup>22</sup> has listed non-grave proveniences for collections found at large on the City Mound.

The game is still played by children of many countries where animal herding provides a plentiful source;<sup>23</sup> the children of Yassihöyük still avidly collect

14. Kohler, *Gordion* II, Pt. 2.

15. Except the dubious case of the barbotined sherd **TumC 13** (see p. 32). It appears that further pottery analysis may be necessary before such a finely executed polished vessel is to be accepted as a late piece.

16. See p. 12 and n. 11; p. 83.

17. G. Körte in *Gordion*, 105, 109.

18. *Ibid.*, 99.

19. *Hitt. Cem.*, 43-44.

20. Gunter, *Gordion* III, 5-6, graves H 50, H 54.

21. Young, *Gordion* I, 30 (TumP 44).

22. *Ivory, Bone and Shell*, 329-349.

23. See summary of ancient evidence drawn up by C. H. Greenewald, Jr.: *CSCAntiq* 5 (1972) 138-139, 140 n. 47, para. 2.

them and play. Usages observed in modern Turkey have generally been described and discussed by P. G. Brewster<sup>24</sup> and M. Baran.<sup>25</sup>

**TumC 3 Pottery: fragmentary animal-shaped vessel (lion)**  
T 2 Fill of chamber; includes join from second pile of looters' back-dirt  
PH. as seated 0.11 W. across haunches 0.065 m.  
Pl. 15C,D

Mended. Preserves most of rear half, lacking right leg. Animal sitting with long tail curving up over proper right haunch (hollowed except for lower legs). Foot carefully formed, tooled to indicate four rounded toes.

Area on tail and proper right thigh blackened by fire.

Fabric heavy (Th. ca. 0.006 m.). Clay fine, bearing both silvery and golden mica, handmade, carefully burnished on all surfaces. Fired brownish buff to gray at core, orange-buff on surfaces.

**TumC 3** is a finely modeled piece, perhaps representing a lion or dog.

Irene Romano,<sup>26</sup> who has published the terracottas and plastic vessels from Gordion, identifies it as a lion or dog and also believes the black areas are marks either of burning or of paint, although the presence of burned material either in the main burial or in the second pile of looters' back-dirt cannot be generally confirmed. The fabric and the firing of this piece does not preclude it from being a locally made piece of the Lydian period.

A fragmentary animal's paw (P 2248) to similar scale, of red ware with polished surface, was found on the City Mound high in the Clay Deposit just southwest of Building I. P 2248 may also be a product of the Lydian period.

**TumC 4 Pottery: fragmentary glazed lydion**  
P 27 Fill of chamber; includes joins from first and second piles of looters' back-dirt  
H. 0.128 Est. D. 0.13 Max. dim. 2d pc. 0.092 m.  
Fig. 12A; Pl. 15E

Mended section (A) and nonjoining fragments (B). Profile preserved.

A narrow high flaring ring base. Wide ovoid body.

B wide flaring neck. Rim everted and flattened.

Thin brown glaze applied on wheel with wide brush. Color darker where brush applications overlap. Reserved under rim and under base.

Clay fine, slightly gritty, containing much coppery mica.

Smoothly wiped, probably not burnished, under glaze. Fired red-beige with gray streak at core where fabric is thickest.

All glazed lydion found in Tumulus C are considered by Greenewalt to be of types imported from Lydia and west Anatolia. See under **TumC 6**.

**TumC 5 Pottery: fragmentary glazed lydion**  
P 155 Scattered sherds from inside chamber and inside coffin hollow  
H. 0.12 Est. D. 0.12 Est. D. rim 0.102 D. foot 0.051 m.  
Not ill.

Disjoined parts of foot, body, and rim.

High tapering ring foot. Body ellipsoidal. Neck wide, slightly flaring. Rim everted and flattened.

Polished under light red thinly applied glaze.

Fabric heavy. Clay fine but gritty, with silvery and golden mica. Fired reddish brown.

See under **TumC 6**.

**TumC 6 Pottery: fragmentary red-glazed ribbed lydion**  
P 154 Part in high level in burial pit, part in coffin hollow  
D. 0.13 D. rim 0.102 m.  
Fig. 12B

Nonjoining sections and fragments from body, neck, and rim.

Body shallowly fluted horizontally, ellipsoidal, neck slightly flaring. Rim everted and flattened. Lip sharp. Shallow wheel-run fluting on shoulder and belly.

Glazed overall, to bottom of neck inside. Well smoothed but not burnished under glaze.

Fabric fairly fine. Clay somewhat gritty with silvery and golden mica. Fired red throughout.

Three main proveniences at Gordion for lydion of Greenewalt's "fat-bellied" class are the Tumulus A cremation, the Tumulus C burial, and the Küçük Höyük burned destruction level of 546 B.C.<sup>27</sup> If we arrange the fat-bellied lydion according to the relative heights of their bases, those from Tumulus C (**TumC 4-6**, and 12 below) and Küçük Höyük<sup>28</sup> are generally lower in proportion to body width, and Tumulus A<sup>29</sup> contains the highest in proportion. If we arrange them by body shape, the widest and most truly "wide-ovoid" again come from Tumulus C, whereas in Tumulus A the bodies appear a bit more double-convex and some tend to drop the shoulder even more in a trend toward biconical, which is typical of Greenewalt's trans-

24. *East and West* 11 (1960) 16.

25. *Expedition* 17, no. 1 (Fall 1974) 21-23, 26. Kohler, *Gordion* II, Pt. 2.

26. For **TumC 3**, see Romano, *Terracotta Figurines*, 7, no. 8 and pl. 3; for P 2248, see *ibid.*, 7, no. 9 and pl. 3.

27. R. S. Young, *Archaeology* 6 (1953) 159-166; *idem*, *UMB* 17, no. 4 (Dec. 1953) 26-29.

28. R. S. Young, *Archaeology* 6 (1953) 164, fig. 8 (above).

29. Kohler, *Gordion* II, Pt. 2: P 2, 4-7, 9, 12.

sitional and late shapes.<sup>30</sup> As to the necks, those from Küçük Höyük seem wider (in proportion) at their bases and flare to a lesser degree than those from A, which are narrower at their bases and flare sometimes in elegant curves under flattened rims.

Ribbed lydian correspond chronologically to fat-bellied lydian.<sup>31</sup>

The above arguments have convinced the author that the serial order goes Küçük Höyük (550?-546 B.C.), then Tumulus C, then Tumulus A, which on other grounds<sup>32</sup> is to be dated generally 540-525. This should allow a period for the most advanced lydian in Tumulus C of ca. 546-540.

**TumC 7 Pottery: black-on-red bowl sherd**

P 5477 In burial  
Max. dim. 0.075 m.  
Pl. 15F

Sherd, badly sheared at core, from low on wall of probably hemispherical bowl.

On interior, black paint in concentric lines, from center: two (preserved), space, one, space, three, space, one (preserved). Exterior covered with smeary red paint.

Heavy fabric of gritty clay, fired red throughout (so red background on interior may be reserved). A little fine silvery and golden mica. Burnished over all.

This is some type of Anatolian ware of the Lydian period. It falls outside G. Schaus's three main classes of "west Anatolian Black-on-Red," and needs further analysis.

See also **TumC 18**, and p. 216.

**TumC 8 Stone: fragment of alabastron**

ST 9 In coffin hollow  
PH. 0.136 GPW. 0.04 m.  
Pl. 15G

Section of wall from near base split vertically. Gray spots on exterior.

Stone is calcareous alabaster containing three wide transverse veins. Each vein begins with white line and in many small wavy patterns moves toward gray. Then another white line begins new vein.

Imported.

In **TumC 8** (as in **TumC 24**) the veining declares it to be of calcareous alabaster and an import to Gordion. See, also in Tumulus A, ST 1 and ST 2 which are of the calcareous variety, but differently patterned.<sup>33</sup>

The alabaster from local sources at Gordion is gypseous and tends to be softer and more easily flawed, more opaque, and unveined.

IN FIRST PILE OF LOOTERS' BACK-DIRT  
**TumC 9-14**

**TumC 9 Iron: axhead**

ILS 3 North side, depth -1.20 m.  
L. 0.153 GW. 0.086 Th. 0.019 L. tang 0.035 m.  
Pl. 15H

Complete but for break across one corner of leading edge. Point of tang possibly broken. Rusted, flaking to core.

Short tang, square in section and tapering toward outer end, projects from short sloping shoulders. Blade heavy; sides straight until they flare widely and suddenly to convex cutting edge.

**TumC 9** can be recognized as a domestic tool, a wood-splitter or wood-cutter, which was hafted at 90° to its handle by a tight binding method. The curving edge was an aid to working the blade back and forth to free it from deep in a log.

Similar examples have come from Boğazköy: an earlier one,<sup>34</sup> and another from the Phrygian-period BK IIa.<sup>35</sup>

**TumC 10 Lead: clamps and sealings**

ILS 769a,b  
A GPL. 0.046 GPW. 0.032 Avg. W. rod 0.008 Th. 0.006  
B PL. 0.057 W. 0.011 Th. 0.008 W. across seal 0.022 m.  
Pl. 15I,J

A lead, as running rod square in section, has been poured into F-shape, now broken off on four ends (everywhere except where right angle occurs).

B lead, square in section, forms rod, broken at both ends. Along one wider face, and extending straight out from it, is sheet of lead which had been poured down thinner crack, retaining impressions of wood—sheet running with longitudinal grain of wood.

The use of lead as sealing material along breaks, checks, or split-lines in coffins is amply attested in

30. Greenwalt, *Lydian Pottery*, 35-40.

31. *Ibid.*, 20.

32. For discussions of datable objects in Tumulus A, see Kohler, *Wood and Ivory*, 147-150 (BI 3, ivory statuette of kore and hare), 152-153 (BI 5a,b, ivory palmettes), 143 (T 1, molded unguentarium, kore with bird); *idem* in *Young Symposium*, 68, 86 fig. 28 (unguentarium). Date: ca. 540-525. Further on T 1, see Romano, *Terracotta Figurines*, 13-14, no. 27, and Kohler, *Gordion II*, Pt. 2.

33. For a discussion of calcareous alabaster, see Zouck, *Alabaster*, 7-9, 152, nos. 80-82; for the alabastra from Tumulus A, see Kohler, *Gordion II*, Pt. 2.

34. Bittel, Krauss, and Güterbock, *MDOG* 74 (1936) 24, fig. 18e.

35. Schirmer, *Boğ-Hatt*, VI, 52, no. 174, pl. 39; Boehmer, *Kleinfunde*, 138, no. 1257, pl. XLIV. See McClellan, *Iron*, 482, no. 370, and 496-499, "Flat axe with tang." She adduces evidence that the type continued into the fourth century B.C.

these lesser tumuli and the Körte tumuli at Gordion. See discussion under **TumB 6**, above, and pp. 183–184.

**TumC 11 Pottery: fragment of red-glazed lydion**  
P 5478  
PH. 0.052 Est. D. rim 0.09 m.  
Fig. 12C; Pl. 15K

Mended section preserves profile of rim to outer body.

Body has profile at shoulder as for ellipsoidal body; neck slightly flaring under rim which is wide, flat and very thin, trimmed to echinus at lip.

Red glaze thin but applied so as to cover area solidly over exterior and to top (only) of inside of neck. Polished probably, under glaze.

Clay fine but gritty, with silvery and golden mica. Fired reddish buff throughout (core plus all surfaces).

**TumC 12 Pottery: fragmentary glaze-banded lydion**  
P 43  
Rest. H. 0.128 D. base 0.044 D. 0.116 D.  
rim 0.102 m.  
Fig. 12D; Pl. 16A

Much mended and restored. Marks of burning.<sup>36</sup>

Narrow flaring high ring base. Body squat ovoid. Neck flares obliquely to everted flattened rim. Lip plain.

Glaze thinly applied with overlapping bands of wide brush on wheel. Reserved only on resting surface, under-base, and interior of neck.

Fabric sturdy. Clay gritty, with silvery and golden mica. Well smoothed under glaze, but not burnished. Fired pink to reddish buff. Glaze black to brown.

**TumC 13 Pottery: buff barbotined ware sherd**  
MU 5440-30 (See p. 1.)  
Bag C2  
Max. dim. 0.053 m.  
Fig. 12E; Pl. 16B

Broken all around, from shoulder of small wheelmade pot (jug?). Not burned.

Interior wet-smoothed. Exterior polished below section of barbotined decorative zone preserving three rows of nodules applied to wall, then worked with blunt implement; zone then polished along edges again to blend nodules into wall. Area left plain in barbotined zone may belong under vertical handle.

Fine ware of well-levigated micaceous clay. Fired buff throughout.

It is clear from the excavator's diary that **TumC 13** from context Bag C2 came from "Stone Complex 1." The presence of barbotining on fine buff polished ware presents a problem; no other examples are hitherto known at Gordion. G. Körte's sherd,<sup>37</sup> a stray, with similar modeling but with thin black (brown) glaze

inside and out, he considered to be "Hellenistic to Roman." P 1976 from a Hellenistic house on the City Mound had nubbly "pine cone relief" under orange-red glaze. Could **TumC 13** be a local attempt to simulate such late ware, made by a potter still specializing in the traditional fine polished products? It certainly appears earlier and more primitively decorated than the well-known Roman barbotined red wares of the first century B.C. to first century A.D.

Until other sixth-century or earlier examples are found for comparison, it might appear reasonable to assume that this sherd was swept into the first heap of looters' back-dirt from the surface at the time of the looting. However, until this piece has been thoroughly studied by a specialist, it should not be definitely claimed to give a date to the looting, or to be a late piece at all.

**TumC 14 Plaster: structural cake**  
MC 33 *In situ* on timber southwest side  
of StC-1  
L. 0.104 W. 0.091 Th. 0.021 m.  
Pl. 16C

Complete.

Flat, oval piece of coarse white lime plaster with impressions of wooden beam's longitudinal grain on one flat side. On other, flat as if laid by trowel when fairly dry, i.e., roughened a bit on surface as trowel passed. Resembles ground-up native alabaster.<sup>38</sup>

Such plaster cakes were used as a sealing agent between timbers and between timbers and stones in the chamber. See also pp. 26 and 173.

### LOOSELY ASSOCIATED WITH FIRST PILE OF LOOTERS' BACK-DIRT **TumC 15–17**

**TumC 15 Pottery: fragment of painted dinoid(?) amphora**  
P 25 West side of StC-1  
Max. dim. 0.184 Est. D. 0.24 m.  
Fig. 12F; Pl. 16D

Mended section preserves shoulder and part of one handle. Chipped, paint abraded.

Shoulder rounded. Handle raised horizontally, preserving stump of band bridging its top probably to rim.

Decoration in black matte paint over lightly burnished clay: shoulder zone framed below by seven fine freehand bands, above by three. Design between unclear. On bridge, beginning of X-row or X-in-square design.

36. One must ask how a lydion from the burial could show marks of burning. The house floors and their dating must still be analyzed, and the house fire dated. Lack of contents will make it difficult. It is possible that **TumC 12** received its black marks from

contact with burned domestic material in the looters' pile.

37. *Gordion*, 195, no. 84, fig. 191.

38. See discussion of native alabaster: Zouck, *Alabaster*, 9–14.



Clay gritty with fine silvery and coppery mica and large white inclusions. Fired reddish beige throughout.

**TumC 16 Pottery: fragmentary plain black burnished bowl**  
 P 24 West side of StC-1  
 H. 0.054 Est. D. rim 0.14 m.  
 Pl. 16E

One-third of bowl, mended, preserves profile.

Base flat. Walls curve obliquely below, are short and erect above greatest diameter. Rim slightly flaring. Lip plain.

Fabric heavy; clay fine but containing much silver-colored mica, large grits, and pocks. Burnished roughly, horizontally on exterior and halfway down interior. Fired black throughout.

See also **TumC 25**, an unstratified black polished bowl sherd with graffiti.

**TumC 17 Pottery: black polished saucer**  
 P 231 West side of StC-1  
 H. 0.033 D. 0.123 D. base 0.04 m.  
 Fig. 12G; Pl. 16F

About half is preserved, including profile. Surface deteriorated.

Base straight-sided ring, in some places double-beveled on exterior, slightly concave underneath. Walls flare in slight curve to plain direct rim.

Clay gritty, micaceous with large inclusions, sometimes leaving pocks. Burnished all over. Fired brownish at inner core, black on surfaces.

**TumC 17** is unburned, hence it is probably from the burial rather than "West House."

Its concave disk base and plain, direct, fairly thick rim may place it somewhere between the saucer (**TumH 6**) with similar rim but flat base in the Tumulus H burial group (650 B.C.) and the saucers in the Tumulus A burial, some of which have bases like **TumC 17** and some of which have more developed thin, slightly flaring, sometimes double-beveled ring bases, and everted and flattened rims (*ca.* 540-530 B.C.).<sup>39</sup>

## PROVENIENCE IN TUMULUS COMPLEX UNKNOWN **TumC 18-25**

**TumC 18 Pottery: Lydian(?) or southwest Anatolian(?) black-on-red pyxis fragment**  
 MU 54-40-120 Bag C2  
 Max. dim 0.079 Est. D. rim 0.30 m.  
 Fig. 12H; Pl. 16G

Upper body fragment from pyxis or jar. Wall almost vertical, articulated from short oblique shoulder. Mouth wide, collared by short erect rim, thickened and rounded on top.

Red-slipped and polished surface, decorated on exterior, below shoulder, with two horizontal black matte bands.

Coarse clay with miscellaneous large gritty black and white impurities. Fired red throughout. Remarkably nonmicaceous.

See under **TumC 7**.

**TumC 19 Pottery: bichrome sherd**  
 MU 54-40-93 Bag C2  
 Max. dim 0.118 m.  
 Pl. 16H

Wall fragment from large pot, preserving lower handle attachment ending in flat rectangle (for strap handle?). Walls thick.

Polished red slip on exterior, with zone of decoration: wide band of matte white, enclosed by bands of matte black ending in vertical line at edge of handle, and with fragment of pendent slanting line preserved below at break.

Clay buff, porous.

**TumC 20 Pottery: fragments of large coarse lydian**  
 P 5483a,b Bag C2  
 A D. body 0.13 GPH. *ca.* 0.07 D. base scar  
 0.035  
 B GPH. 0.033 Est. D. rim 0.11 m.  
 Pl. 16I

Mended from pieces previously warped by fire and incrustated after breakage. Surfaces flaked.

A most of lower one-third of wide ovoid body. Base lacking.

B neck and rim fragment. Neck slightly flaring; rim everted and slightly inward-sloping on top, thinning till lip very sharp. Top of rim deteriorated.

Bright reddish to reddish orange glaze applied on wheel over whole preserved body and down inside neck for 0.012 m.

Clay fired orange to pinkish orange. Silvery mica, dense, of small to medium size.

The fragments were perhaps carried into the area from burned structures or cremations nearby.

**TumC 21 Pottery: fragment of black polished closed vessel**  
 MU 54-40-48 Bag C2  
 Max. dim. 0.114 PH. 0.102 m.  
 Fig. 12I; Pl. 16J

Large sherd, broken all around, from side of vessel, preserved from lower wall up to base of neck. Handle scar on belly.

Body almost hemispherical, under sharp stepped ridge around base of very narrow neck. Vertical ribbon handle rose from mid-body where scar shows embellishment by short

39. See Kohler, *Gordian II*, Pt. 2: (for bases) P 5473d,e, (for rims) P 5105, P 5473a-c. C. H. Greenewalt mentions (*BASOR* Suppl. 25

[1988] 68) that when found with lydia, a "small plate or saucer might also have been associated with cosmetics."

sharp ridges extending to left, right, and down from lower attachment.

Coarse micaceous clay, polished over exterior. Fired gray through core, black where polished.

**TumC 22 Pottery: black polished bowl rim sherd**  
 MU 54-40-31 Bag C2  
 Max. dim. 0.055 Est. D. rim 0.12 m.  
 Fig. 12J; Pl. 16K

Small sherd from rim of small bowl, with plain rim, rounded sides. Hard gray clay. Black finely polished surface.

**TumC 23 Pottery: black polished bowl sherd**  
 MU 54-40-54 Bag C2  
 Max. dim. 0.09 Est. D. rim 0.235 m.  
 Fig. 12K; Pl. 17A

Fragment of rim and upper wall of slightly carinated bowl. Not burned.

Rim thickened and flattened on top.

Polished inside and out; coarse micaceous clay fired gray with darker streak at core, black on polished surfaces.

**TumC 24 Stone: alabastron (imported)**  
 ST 825a,b Bag C2  
 GPH. 0.062 GPW. ca. 0.03 m.  
 Pl. 17B

Section and one piece from upper body of slim alabastron. Lug below shoulder has vertical wedge-shaped pendent tab (W. at bottom 0.012 m.). Lathe-finished inside and out. More polished on exterior.

Calcareous alabaster. Wide areas of horizontal ripples between thin solid buff and white lines. Intervals at least 0.05 m.

The stone of **TumC 24** may be related to that of **TumC 8** (above), but the colors do not exactly match. The lug with a small area of raised plane below it is much like those on two calcareous alabastra given to the deceased female in Tumulus A.<sup>40</sup>

**TumC 25 Pottery: graffiti on black polished sherd**  
 MU 54-40-32  
 Max. dim. 0.078 Est. D. base 0.067 m.  
 Fig. 12M; Pl. 17C

Fragment from base of small bowl. Low ring base, enclosing slightly convex area, with sides rising at sharp angle. Thin walls.

Hard micaceous gray clay, finely black polished, especially exterior. Graffiti preserved in center of base:  $\gamma$  (*yod*). Orientation in doubt; leg of *yod* broken, so this may be merely zigzag doodle.

L. Roller<sup>41</sup> lists **TumC 25** (her 2B-14) in a large group of vessels with the owner's mark:  $\gamma$ . These come from Küçük Höyük, and the City Mound layers above the Clay Deposit, and date generally to the first half of the sixth century, with a few extending into the early second half. Many of them are on Lydian ware or local adaptations.

## IN TUMULUS DUMP **TumC 26**

**TumC 26 Stone relief: Kybele and bull**  
 S 9 From dump at west  
 PL. 0.147 H. 0.062 Th. 0.04 D. peg holes  
 ca. 0.004 m.  
 Pl. 17D

Rather more than half complete, with left panel completely gone (see below), part missing from central panel, and large gouge at top of right panel. Paint faded except in protected corners. Finished by chisel on observer's right end, top and bottom; all preserved edges slightly chamfered as if for insertion. Width of chisel used for chamfering: 0.004 m.

Central panel narrow rectangular, containing standing Kybele with long ringletted hair and arms extended out (palm forward) low at sides. Attired in high polos, sleeved long dress with belt. In her left hand, she holds object touching frame of panel. Right panel, long rectangular, contains bull walking right completely in profile. Eye lozenge-shaped. Tail twisted throughout two-thirds of its length.

Thin red wash applied to polos and garment of Kybele, object in her hand, dividing ridge and front surface of whole frame, horn, and alternating spirals on tail of bull.

All margins of panels are squared ridges. Two small round attachment holes near front plane on bottom, one directly under Kybele, other between front legs of bull.

Soft white poros limestone.

**TumC 26** joins a long series of reliefs in which Kybele stands frontally in a simple naiskos, but here it lacks the usual crowning gable.<sup>42</sup> It is fairly certain that another framed animal stood to Kybele's left but it could well have been other than a bull. Although undated by its finding place, except as being prior to the tumulus burial, it probably belongs to a cultic structure once extant in the area of the tumulus.<sup>43</sup>

40. See cremation Tumulus A: ST 1 and 2, in Kohler, *Gordion* II, Pt. 2.

41. *Nonverbal Graffiti*, 38 (2B 6-8, 10-14, 17) fig. 29; 40 (2B 41, 42) with vaguer dating, fig. 31. See also K. DeVries, *Source*, 55-56 and notes 19-23.

42. For a discussion of the sculptural treatment and the significance of this and other Kybeles, see M. J. Mellink in *Festschrift Bittel*, 356 and pl. 73[4]; Naumann, *Ikongraphie*, 87-88 (no. 27, not ill.); Prayon, *Phryg. Plastik*, 220, no. 184, pl. 9c, 44, n. 123, 170 (object in Kybele's left hand he believes to be a pomegranate).

43. See also H. Güterbock, *BaM* 7 (1974) 98 and pl. 13.

### III

# Tumulus G

## *Introduction*

### PRE-EXCAVATIONAL DESCRIPTION (FIGS. 1, 2, 13A; PL. 17E)

Tumulus G lies south of the village, on the west side of the Northeast Ridge, 92 m. south-southwest of Tumulus C and 84 m. southwest of Tumulus D. The strip just above the 15-m. contour line which contains G contains also B, F, and E.<sup>1</sup> The summit of G rises just above the 17.50-m. contour line. It was omitted from the Körtes' plan of the area published in 1904.

The tumulus is located on a low clay knoll or ground-rise with slopes at a gradient of *ca.* 10° toward center. The tumulus height of 2.23 m. was measured at center on an assumed diameter of 25.04 m., which was taken at the lowest peripheral point at which the tumulus still adhered to a round contour. A very slight depression in the crown could have been caused by post-tumulus activity.

### EXCAVATION (FIG. 13B)

The excavator, E. Robert Gallagher, dug from 15 April to 6 May 1950.<sup>2</sup>

Datum in Tumulus G was taken to be the highest point and center of the tumulus mantle as visible in 1950. A martyr was retained under the center. Distances were measured from the beginning line of each trench. Trenches 1 to 4 were exploratory; 3 to 6 embraced the pit and chamber. Trench 7 was cut deep to continue examining cuttings in clay found in trenches 1B, 2B, and 3.

### THE MAIN BURIAL (FIGS. 13B-16)

### PREPARATION OF THE SITE (FIG. 15A,B)

The ancient surface appeared to have been scraped away and hardpan lowered from -0.50 to -2.40 in trenches 2B and 3 (Fig. 15B) and to -2.80 m. in the area where the pit was to be cut. The exact size of the scraped surfaces was not recorded.

In trenches 2B and 3 a pile of fist-sized stones (stone pile 1: L. east-west 2.00, W. north-south 1.30 m.) rested on hardpan at -2.40 m. with its north edge 2.50 m. south of calculated center. This represented the residue from some tons of small stones which must have been drawn up on the ancient cleared surface to be used as sidepack and capping for the projected pit and burial. On top of the fist-sized stones in stone pile 1 lay a few very large stones, whose size corresponded more or less to that of the stones found in the cap and fallen into the east end of the chamber (see Pls. 18A, 19A). Many sherds of Hittite buff wares<sup>3</sup> and some Phrygian gray wares were mixed with the smaller stones.

### THE PIT (FIGS. 14, 15)

A pit, measuring at the bottom 4.00 east-west and 3.15 m. north-south, was dug for the chamber. An extension forming a bench in the original hard clay

1. F and E are cremation tumuli which will be discussed in Kohler, *Gordion II*, Pt. 2.

2. Gordion Notebook 3 (1950) 50-76; Young's preliminary announcement of the excavation of Tumulus G appeared in *UMB* 16, no. 1 (May 1951) 13-15 with ill. on pp. 11 and 12. Brief

mention also appeared in *AnatSt* 2 (1952) 20 and *ProcAPS* 107, no. 4 (Aug. 1963) 355, n. 20.

3. Ann Gunter suggests that the forms and the absence of red polished wares date the collection as latest Bronze Age Hittite.

layer was later(?) dug by the chamber builders on the east end. One reason for the bench may be that the great length of the roof beams (see below), when presented, required an adjustment in the size of the pit near the top.

### THE CHAMBER (FIGS. 14–16; PLS. 18–20)

During excavation the decayed state of the wood in the walls necessitated the use of a double prop between the sides, to prevent collapse while the contents of the chamber were being removed (Pl. 20A). There was no evidence of special preparation of the surface beneath the floor. Planks that ran north-south across the width to form the floor had thicknesses, measured at some of their preserved ends, of from 0.02 to 0.05 m (Pl. 20A). The planks as seen from the interior ran under all four walls of the chamber, and extended at a few points beyond the side walls for a distance measurable on the exterior as 0.48 m. Under the side walls a groove of full wall width, and about 0.01 m. deep, was rabbeted out of the floor to provide a secure setting for the side sills (Fig. 16 [b]). On the floor were traces of a chalky substance suggesting lime, perhaps indicating the original location of the skeleton.

The walls (Figs. 15, 16; PIs. 18A, 20A) were built of well-squared and finished timbers. The side walls consisted of two superimposed beams of total preserved length 3.10 and thickness 0.15 m. The lower timber had a height at its outer end of 0.30, and the upper, of 0.40 m. (total height, not considering the uneven floor planking, 0.70 m.). The end walls consisted of two beams with total preserved lengths of 2.33 and thicknesses of 0.13 and 0.15 with heights of 0.40 and 0.40 (total height 0.80 m.).<sup>4</sup> The upward extension of the end walls for 0.15 m. above the sides formed a level surface with the top of the lower roof, embraced the lower roof beams, and shared the support of the upper roof. See below, "The Roof."

The interior clear measurement was 2.40 x 1.37 m. Clear height was 0.70(?) m. (see n. 4).

Concerning the lapping methods used on this tomb chamber, the records are contradictory. The excavator drew<sup>5</sup> highly developed versions of the cross-laps at the corners as he saw them, with their L- and T-shaped

ends separately represented for clarity (Fig. 16 [a–c] is based on these). The architect, however, when adapting the drawing for the preliminary publication, stopped with a version of shortened horizontal ends and did not go on to supply the outer extensions, which were in the excavator's drawings and can actually be seen in Pl. 20B,C. The simplified version was published in 1951, and later, by R. S. Young.<sup>6</sup> This simpler system would have supplied locking in only one direction, the sides holding in the ends, but since the ends could not have held the sides in, as a whole the method would have been useless, and would necessitate either vertical pegging or stone packing. The excavator drew the beams of the lower wall course interlocked in all directions, and those of the upper course in one only, because the top end course has a mere L-hook over the top side course, not a cross-lapping. Therefore again the stone end packing was needed during the last half of the construction process.

### THE POT DEPOSIT IN THE STONE SIDE PACK (FIG. 15B; PLS. 21J–22D)

At some point before the stone fill was packed in, a separate group of pots was placed near the east outer end of the south chamber wall, between it and the south wall of the pit. The sherds of four vessels more or less in place were found in a "hollow in the stone packing," so low in it that they must originally have rested whole on the floor of the pit. A "pot deposit" between chamber and pit wall might not usually have been allowed in the carpenters' way during construction, but could, in the presence of cross-lapped corners in the bottom beams, have been installed after the lower half of the chamber was built.

The pot deposit consisted of:

<b>TumG</b>	<b>9</b>	Glass:	fragment of lobed sand-core bead (presence probably fortuitous)
	<b>10</b>	Pottery:	black-on-buff large round-mouthed jug
	<b>11,12</b>		gray-ware narrow-necked amphoras
	<b>13</b>		gray-ware narrow-necked storage jar.

4. Somewhere in the excavator's measurements is a 5-cm. error. It is difficult to know where to insert the difference—probably in the heights of the end beams (0.40 and 0.45 m.). The artist has made the adjustment in the area above the floor-planks.

5. Gordion Notebook 3 (1950) 74–75.

6. *UMB* 16, no. 1 (May 1951) 12; *Expedition* 2, no. 2 (1960) 5 and fig. 5.

*CONTENTS OF THE CHAMBER*  
(PLS. 21, 22)

Before the lower roof beams were put into place the deceased and his gifts had been disposed upon the floor.

The remains of human bone were encountered throughout the earth fill of the chamber, so that the original position of the body is obscure except for the "chalky substance" mentioned above. One crushed set of tibia and fibula was found at about center, with remains of cloth associated with it. The excavator interpreted the textile as possibly padding under the body. One piece of the pelvic girdle lay in the extreme southwest corner; broken bits of the ribs and phalanges were found at various depths. From the skull only one tooth, a fragmentary premolar, remained. Prof. Alpagut has made a preliminary statement that the skeletal fragments belong to a robust male aged 25-30.

Finds consisted of bronze fibulae, bronze vessels, and pottery. The fibulae, located in the northwest corner, or sifted out of the fill at the west end, if considered as located on or near the shoulders would indicate for the body an east-west orientation, with head at west, but the evidence is extremely tenuous. The body may also have lain at some distance from the north wall, as it was along the north side that the bronze and pottery vessels were found, albeit at differing heights in the fill.

Finds in the chamber:

<b>TumG</b>	<b>1,2</b>	Bronze:	fragmentary plain bowl rims
	<b>3,4</b>		fibulae, imported
	<b>5</b>		fibula, XII,7A
	<b>6</b>		tack
	<b>7</b>	Pottery:	black-on-buff round-mouthed jug with petaled body
	<b>8</b>		black on white ground coat jar

This thorough churning up of the fill in the chamber would suggest that, because of looting, we can never know the original arrangement of the body and gifts.

*THE ROOF*  
(FIGS. 14-16; PLS. 18A,B, 19B)

The roof, whose top was 2.80 m. below datum as mentioned above, was double, consisting of five lower beams stretching crosswise from north to south, and four upper beams stretching lengthwise from east to

west. After the looting only three of the upper roof beams remained in place. Both layers were found broken, with the lowest points of their breaks down toward the middle of the grave around an elliptical hole left by the looters, and their ends tipped up around the tops of the walls; some of the outer ends were rotted off, or else tipped downward again around the outside of the walls. Depressions in the edges of the burial pit showed original lengths and widths of beams. It could not be determined whether the south ends of the lower roof actually were long enough to cover the "pot deposit" (see above), or whether extra pieces of beam-ends were placed over it separately.

The five great cross beams of the lower roof measured on their ends in place 0.55 to 0.63 m. in width (not every one could be precisely measured), 0.15 m. in thickness; they had once been joined precisely, smoothed, and squared. The planks at each end of the roof were held in place by the upper projection of the end walls, the bottom beams of which cross-lapped with the side walls, but the upper beams of which were supported in place by the stone pack. The widest beam of the lower roof, at the west end, was taken by the excavator to give emphasis to the head end of the grave (see also Tumulus S-2, p. 143).

The four broad beams of the upper roof were originally laid to run east-west with partially measurable widths of 0.40 to 0.45 m. Their total original length of 4.10 m. is made credible on the basis of timber impressions found 0.50 beyond the west end of the grave and 0.60 beyond the east end. These planks were carefully squared and smoothed. In fact some large hollowings show removal of knots and/or rotten spots. There were two of these on the upper surface of the south edge beam and two on the inside (south) edge of the north beam. These upper roof beams had been shifted out of position by the looters, leaving a gap.

*THE STONE PACKING AND COVER*  
(FIGS. 14, 15; PL. 19A,B)

Fist-sized waterworn stones identical with those in stone pile 1 were used for packing around the sides between the chamber walls and the scarps of the pit. Among the stones were found fossil mollusks, many waterworn sherds of Hittite buff ware,<sup>7</sup> and Phrygian gray ware. The packs reached to the top of the hardpan ledges and then spread out over them to form an irregular mound reaching, as found, to only -2.70 m. (i.e., only 0.10 m. above the roof). Originally the cap

7. See p. 35, n. 3; the side pack and the residue of stones in stone pile 1 are associated by the strong similarity of the Hittite sherds

present in them.

must have extended higher.<sup>8</sup> The cap measured generally 4.70 x 4.10 m., with the chamber lying slightly off center under it toward the north. The irregularity was caused by the extra width needed to accommodate the "pot deposit." The high point, as found, peaked toward the north, toward stone pile 2, which represented the rest of the cap (see below, "Looting"). At least seven large boulders (0.40 x 0.50 x 0.20 m.), presumably once placed over the roof, were found in stone pile 2 and on the floor of the looted tomb.

Found in the stone cap, and indicating for certain a disturbance of the burial, were:

<b>TumG</b>	14	Pottery:	gray casserole fragments (2) (Hellenistic)
	15		gray bowl sherd, ledged (Hellenistic).

### THE MANTLE

Above the stone cap the mantle, ca. 0.50 m. thick on the average where piled over the original surface of hardpan, consisted of clean brown earth containing no stones and only very occasionally a coarse gray or reddish sherd. The mantle in general was of uneven depth because of the various surfaces cut previously into hardpan.

### CHRONOLOGY

The general circumstances of the tumulus alone are an argument for its early date: (1) no evidence for habitation was found under it; (2) the mantle earth was fairly clean, indicating that as yet houses and common burials were not extensive on the Northeast Ridge; (3) the stone pile found resting on the level of the lip of the pit was mixed with a great number of Hittite sherds. This situation is exceptional. Neighboring B, C, D, E, and F (see Fig. 1) were all post-Kimmerian, placed over definite habitation and common-cemetery remains, and had mantles containing objects.

Of the contents, bronze bowls **TumG 1** and **2** are so fragmentary as to be difficult to analyze; **TumG 3-5**, fibulae, have strong pre-Kimmerian parallels. Among the painted pottery, the design on the bottom of

**TumG 7** comes close to those painted on pots in Tumulus K-III; **TumG 8** with one-color decoration on a ground coat is best paralleled by pottery of the pre-Kimmerian levels on the City Mound, although shape parallels are with material from the eastern plateau. The pottery from the bottom of the stone pack outside the chamber (**TumG 10-13**) can all be demonstrated to be pre-Kimmerian, and where we can be specific, the best comparanda come from Tumulus P.

The comparanda for the carpentry of the chamber are with the chamber in Tumulus W: the trick of building the end walls up to embrace beams of the roof is employed in W and G and nowhere else among the excavated tumuli. In W the roof is single, as it is in K-IV; in G it is double, as in K-III and P, which may mean that G postdates Tumulus W<sup>9</sup> and stands close to K-III.

The general location of Tumulus G does not conform with that of the rest of the pre-Kimmerian tumuli, which are higher on the ridge and farther east. However nearby under Tumuli C<sup>10</sup> and D,<sup>11</sup> neighbors of G, are several poor burials which may date to the Early Phrygian period,<sup>12</sup> indicating that a part of the pre-Kimmerian common cemetery may have begun to cluster around Tumulus G.

Sams, on the strength of pottery parallels, has placed Tumulus G close in date to Tumuli K-III and P, around the time of the *initial* installation of the Phrygian Terrace southwest of the great paved court.<sup>13</sup>

In summary, it appears that Tumulus G stands close in date to Tumuli K-III and P.

### LOOTING

The looters trenched into the stone cap over the burial, then down through it, creating behind them "stone pile 2."

Stone pile 2 (L. 1.20, W. 1.10 m.), resting with its southwest edge over the stone cap itself and upon mantle soil that lay higher than the edges of the burial pit, was situated within a shovel's throw from the center of the chamber. The looters removed one roof beam and central sections of the others that possibly were already rotting because of the scanty earth (not clay) cover (Th. ca. 1.33 m.) over the stone cap. They left the ends of the roof beams wedged in place around the tops of the walls. They churned up the

8. The -2.70 is recorded as the point where the bottom of stone pile 2 lay on the cap. Other heights for the stone cap are not recorded.

9. For a discussion of the serial dating of the early group published in *Gordion I*, see below, pp. 191, nn. 2, 3, 4.

10. See Figs. 1 and 11B (E-G) and pp. 25-26.

11. Kohler, *Gordion II*, Pt. 2.

12. These still need final analysis; they will be included in the volume on the common cemetery.

13. *Gordion IV*, 17.

contents so that most of the remaining finds occurred high in the burial chamber along the north wall. Nothing of much value was left.

The author believes that at the time of the looting at least two third- to second-century B.C. sherds (**TumG**

**14, 15**) filtered down from the surface of the tumulus into the disturbed stone cap. These, however, do not necessarily date the looting, which may have occurred still later.

## Catalogue

### IN GRAVE CHAMBER **TumG 1-8**

**TumG 1**     **Bronze: fragmentary plain bowl rim**  
B 49a     North side near center  
Max. dim. 0.048    GPH. 0.013    Th. rim 0.001  
          m.  
Fig. 17A; Pl. 21A

Rim section mended from three fragments. Diameter cannot be determined due to flattening.

Wall thin with barely thickened, direct rim, beveled toward outside on top.

**TumG 2**     **Bronze: fragmentary plain bowl rim**  
B 49b     North side near center  
Max. dim. lgst. piece 0.042    Est. D. 0.12    Th.  
          rim 0.0015 m.  
Fig. 17B; Pl. 21B

One rim section and several small accompanying wall fragments.

Wall curves as for approximately hemispherical plain bowl. Rim is a little thicker than that of **TumG 1**, flattened on top, and beveled toward exterior.

**TumG 3**     **Bronze: imported fibula**  
B 17     West end of chamber  
H. 0.02    GPL. 0.0275    GTh. arc 0.012 m.  
Pl. 21C

Lacks pin and catch.

Arc is small leech set off, by ridge at each end, from long cylindrical extensions, one to triply wound spring, other to missing catch.

Pin to wearer's left.

Muscarella,<sup>14</sup> on the basis of the affinities of the painted pottery in this tomb group, called **TumG 3** pre-Kimmerian and, according to parallels, "foreign." Sapouna-Sakellarakis<sup>15</sup> listed several close parallels in her type IV b, especially from Skyros (protogeometric to archaic). Caner<sup>16</sup> placed it in his type IV d, along

with others cited from Ephesos, Thymbra, and Gordion (several from the Destruction Level on the City Mound, and one from a pre-tumulus context under Tumulus C).

**TumG 4**     **Bronze: imported fibula**  
B 11     Northeast corner of chamber  
H. 0.013    PL. 0.0135    Th. arc 0.006 m.  
Pl. 21D

Lacks spring and end of catch.

Small leech at center of arc, set off by two finely incised lines between end of leech and flattened elbow extension which goes to catch.

Pin to wearer's left.

Blinkenberg<sup>17</sup> cited close parallels in his type IV 3a, 8c, and 16a,b. Muscarella<sup>18</sup> discussed the Blinkenberg examples, adding Ephesos and Perachora to the list of proveniences. He believed the type to be imported from the Aegean area, perhaps from one of the islands (Rhodes?). Sapouna-Sakellarakis<sup>19</sup> listed in her type IV c a striking parallel with a thickened extension along the side of its catch-plate, and incised lines at the ends of the arc, from Lindos. Type IV c dates generally "from the end of Geometric." Caner<sup>20</sup> placed it in his type IV d (see under **TumG 3**).

**TumG 5**     **Bronze: fibula (XII,7A)**  
B 34     Northwest corner of chamber  
H. 0.036    GL. 0.046    GTh. arc 0.013 m.  
Pl. 21E

Complete.

Flattened bandlike arc with, at each end, low barely articulated bead and reel setting off conical extension to triply wound spring, and on other end, wide flat slightly horned hook.

Muscarella<sup>21</sup> placed **TumG 5** in the variant XII,7A which he distinguished from Blinkenberg's XII,7 gen-

14. *Phryg. Fib. Gordion*, 82, pl. XVI, no. 89; also referred to in *Anat. . . . Near East*, 336-337.

15. *Fibeln . . . Inseln*, 69-73, pls. 19-23.

16. *Fib. in Anat. I*, 42, no. 89 (pl. 6).

17. *Fibules*, 92, 96, and 105.

18. *Phryg. Fib. Gordion*, 82, pl. XVI, fig. 88; *idem, Anat. . . . Near East*, 336-337.

19. *Fibeln . . . Inseln*, 76, no. 847 (pl. 26).

20. *Fib. in Anat. I*, 42, no. 88 (pl. 16).

21. *Phryg. Fib. Gordion*, 4, pl. V, fig. 26.

erally and believed to be earlier. Caner<sup>22</sup> puts it in his type A I,2 which contains many parallels from Gordion (pre-Kimmerian buildings TB 8, CC 1, CC 2; Tumuli W, K-III, K-IV, Q, S, and the mantle of Tumulus J). This is an indicative grouping which strengthens the pre-Kimmerian date for Tumulus G.

**TumG 6**      **Bronze: tack**  
B 15      Chamber, no further provenience  
L. pin 0.009    D. head 0.013 m.  
Pl. 21F

Part of head broken away.  
Head flat and round, pin off center, thick near head and tapering to sharp point.

**TumG 7**      **Pottery: black-on-buff round-mouthed jug with petaled body**  
P 45      Center of north side  
H. rim 0.074    D. 0.106    D. base 0.048    D. rim  
0.097-0.098 m.  
Fig. 17C; Pl. 21G,H

Mended, with gaps.

Base flat, body wide ellipsoidal with 16 vertical lobelike petals; neck wide flaring to plain thin rim. Ribbon handle from rim to top of arch, where small transverse bolster is applied. Handle then continues oval in section from bolster to greatest diameter of body.

Painted decoration in fine matte brown-black lines over lustrous burnish; under base, cross formed by four hatched long rectangles enclosed in circle of zigzag bordered by lines (see Fig. 17C). On body, each petal outlined by line of dots-between-lines. Two lines at base of neck, and on neck frieze of Sams's zigzag row 5. On upper (ribbon) handle double X-in-square; over bolster parallel strokes; on lower handle transverse bands generally unclear.

Fabric eggshell-thin. Clay fine with a little mica, fired creamy buff throughout.

Sams<sup>23</sup> discussed parallels to **TumG 7** at Gordion and eastern plateau sites.

Sherd P 3176, having vertical lobelike petals with similar painted designs but burnished over the paint in the manner of brown-on-buff wares, came from a pre-Kimmerian context, the leveling fill between Megs. 9 and 10. Another, P 1849 from the TB 4 burned floor, has similarly decorated petaling. **TumY 5** (see below)

22. *Fib. in Anat.*, 1, 7-8, 53, no. 159 (pl. 11).

23. *Painted Pottery*, 275-276, 568-570, no. 178; *idem*, *Gordion IV*, 52, 57 and pl. 61; 214, no. 167; 282, no. 876. Cf. also Bittel, *Grundzüge*, fig. 40, upper zone: "altpfrygische" from Alişar.

24. Sams, *Painted Pottery*, 473, no. 91 (not ill.); *idem*, *Gordion IV*, 301, no. 1034, pl. 165.

25. G. Körte in *Gordion*, 56-57 no. 6, 58 no. 10, 59 no. 11.

26. R. S. Young, *AJA* 60 (1956) pl. 94, fig. 49 (from the Destruction Level in CC 2 on the City Mound); Sams, *Painted Pottery*, 415, no. 40; *idem*, *Gordion IV*, 295, no. 982, pl. 143.

27. Özgüç, T., *Kültepe Vicinity*, pl. XV[1,6]. See also *idem*, *Maşat II*, 124 and pl. 63, no. 8.

is a similar black polished cup of comparable size and proportions, but without the petaling. Painted decoration of any kind under the bases of pottery is rare on the City Mound, occurring on one vessel (P 2244)<sup>24</sup> from the Destruction Level. Several sieve-spouted jugs from Tumulus K-III,<sup>25</sup> with loop handles and heavy overbalancing trough spouts, have painted bases. Were decorated bases thought appropriate for jugs which were made for suspension when not in use?

A parallel for the *design* on the base occurs on the shoulder of a jar, P 1183 (see Pl. 83D).<sup>26</sup> Examples with similar decoration, although without, or possibly without, petaling, were found at Kültepe and Maşat.<sup>27</sup> Similar petaling and decoration are found on a jug from Alişar IV,<sup>28</sup> and there is a cup from the Yunus Cemetery at Carchemish which has closely related handles and neck (but not body); Akurgal dates it "end of the eighth century B.C."<sup>29</sup>

All these parallels are pre-Kimmerian.

**TumG 8**      **Pottery: black on white ground coat, jar**  
P 141      Southwest corner  
H. 0.217    D. 0.23    Rest. D. base 0.08    Rest. D.  
rim 0.122 m.  
Pl. 21I

Mended; many large gaps. Badly worn. Painted decoration must be read, where at all possible, in negative. Plastered to complete.

Base flat, body wide ovoid with thick roll applied at greatest diameter. Shoulder curves directly into wide cylindrical neck with everted and flattened rim.

Lower body and interior of neck covered by streaky brown burnished paint or wash. On roll and up to rim, thick white ground coat. Above roll, zones of crosshatched and solid triangles set off by horizontal black lines in sets of three. On roll, excavator saw faint dark cabling lines which have since disappeared.

Clay coarse, gritty, with large light and dark inclusions and a little silvery mica. No evidence for burnishing over ground coat or over paint. Fired reddish buff throughout fabric.

The use of a single color of decoration on a white ground coat is fairly common at Gordion, but the plastic roll around the belly is not. It is known on Iron Age sites farther east<sup>30</sup> and points to an origin outside Gordion.

28. Schmidt, *Alişar 1928 and 1929 I*, 242, pl. XXXIII A, sherds 199, 774, and 799; see related cross motif on base of 774 (fig. 442). See also von der Osten, *Alişar 1930-32 II*, 351-352, 360, 386 (cat.) fig. 410, and pl. VIII[e] 1346f. For related handle types, see sherds on fig. 442[1-3,5,7].

29. L. Woolley, *LivAnn* 26 (1939) pl. XIIc, from Yunus grave YC 50; Akurgal, *Kunst. Anat.*, 78 and fig. 49, p. 82; *idem* in *Florilegium Anat.*, 19, 28 fig. 41.

30. *Gordion IV*, 38, 97. See Schmidt, *Alişar 1928 and 1929 I*, 256, fig. 335, showing large (H. 0.42 m.) jars with rolls at points where at Gordion one would usually find flat bands; see also pl. XXXVIII[193]. See pottery from Kululu near Kültepe in T. Özgüç, *Kültepe . . . Vicinity*, pl. XXXI[4,7] and fig. 142.



## POT DEPOSIT IN STONE PACK

## TumG 9-13

**TumG 9**      **Glass: fragmentary sand-core bead, lobed**  
 G 383      Hollow in stone packing  
 Est. D. 0.035 m.  
 Pl. 21J

Ca. one-quarter of bead preserved.

Estimated number of lobes, 14. Generally globular.

Opaque dark blue wavy line around circumference. Marvered, i.e., applied before lobing.

Glass clear with light blue-green tint.

**TumG 10**      **Pottery: black-on-buff large round-mouthed jug**  
 P 49<sup>31</sup>      Hollow in stone packing  
 H. 0.205 D. 0.208 D. base 0.112 D. rim 0.18 m.  
 Fig. 17D; Pl. 22A

Mended, with gaps. Colors of fabric uneven.

Base low, spreading, with uneven and vaguely stepped profile (Fig. 17D), slightly concave underneath. Body wide ovoid, neck wide and vertical with direct plain rim. Rolled vertical loop handle from rim to outer shoulder, with low lengthwise ridge, creating vaguely triangular section.

Painted decoration in matte black over thin buff wash streaked by burnishing: on shoulder, above two horizontal lines, zone of contiguous crosshatched triangles (Sams's 1D), bridged near their tops by wavy line; on neck, panels of (1) oblique checkerboard (Sams's 3), with one dot in each reserved lozenge, (2) latticed checkerboard (Sams's 2), dotted as in (1), (3) laddered X-in-lozenge panel (Sams's 2) with dotted reserves. Around rim outside, wavy line.

Clay fine, with mica and some large white inclusions, well smoothed, burnished over wash. Fired creamy to reddish buff throughout.

A parallel for both shape and decoration from the Destruction Level on the City Mound is cited by Sams.<sup>32</sup> For shape only there are several painted examples,<sup>33</sup> and many examples in monochrome wares.

**TumG 11**      **Pottery: gray-ware narrow-necked amphora**  
 P 179      Hollow in stone packing  
 H. 0.565 D. 0.43 D. base 0.155 D. rim 0.205 m.  
 Pl. 22B

Mended, small gaps. Slip peeling.

Base flat, body sharp ovoid merging directly into narrow cylindrical neck with blunt ridge at its base and another at

height of upper handle attachments. Flaring rim with interior ridges leaving ledge in two deeply sloping degrees. Band handles from mid-neck to upper body, with fine vertical central ridge left by two vertical thumb-pulls; sharp lateral knobs on each side of upper and lower attachments.

Heavy fabric. Clay coarse, gritty with silvery mica and white inclusions, slipped. Fired gray at core, darker on surface with some buff blushes on slip.

See under **TumG 12** and **13**.

**TumG 12**      **Pottery: fragmentary gray narrow-necked amphora**  
 P 249      Hollow in stone packing  
 GPH. 0.30 D. base 0.155 D. rim 0.16/17 m.  
 Fig. 17E; Pl. 22C

Most fragments present, but unmendable except for neck-to-shoulder section. One handle scar preserved on mended section. Interior rotted.

Base flat with rounded profile set off from wall. Shoulders slope obliquely and directly into neck. Rim flaring, gently beveled on interior. Lip plain.

Clay coarse with much large mica. Heavily slipped inside. Some burnishing over thick slip on exterior. Fired gray throughout.

**TumG 11** and **12** are listed by Sams.<sup>34</sup> See also under **TumG 13**.

**TumG 13**      **Pottery: gray-ware narrow-necked storage jar**  
 P 180      Hollow in stone packing  
 H. 0.425 D. 0.385 D. base 0.13 D. rim 0.171 m.  
 Fig. 17F; Pl. 22D

Mended, small gaps.

Base flat. Body ellipsoidal/ovoid. Neck narrow, ridged once at its base and once midway to rim, which is everted, flattened on top and underneath, and ledged inside.

Clay gritty with large light and dark inclusions and mica. Slipped, fired dark gray through core, mottled gray and black on surfaces.

The local gray polished vessels **TumG 11**, **12** (amphoras) and **13** (storage jar) are well paralleled among the pottery from Tumulus P.<sup>35</sup> That pre-Kimmerian group contained ledged rims,<sup>36</sup> ridges on necks and at bases of necks,<sup>37</sup> sharp ridges down the centers of vertical handles,<sup>38</sup> lateral knobs at attachments,<sup>39</sup> etc.

See p. 222.

31. Young, UMB 16, no. 4 (May 1951) 16, pl. VII, fig. 1. E. Akurgal cites **TumG 10** (*Phyrg. Kunst*, [130] no. 1) as a basis for dating the tumulus (erroneously referred to as "I") to 725-690 B.C. Sams, *Gordion IV*, 52, pl. 61.

32. *Painted Pottery*, 275-276, 567-568, no. 177 (there termed Black-on-Red). Cf. his no. 126 (P 2360) from Meg. 3. See also *Gordion IV*, 283, no. 879, pl. 110.

33. E.g., Sams, *Painted Pottery*, 484, no. 99 (P 2604) from TB 2; *idem*, *Gordion IV*, 256, no. 634, pl. 58.

34. *Ibid.*, 80.

35. G. K. Sams, in *Gordion I*, 49; M. J. Mellink, *ibid.*, 270. See also Sams, *Gordion IV*, 80, 97. He dates Tumulus P between the installation of the Terrace and the Destruction.

36. Young, *Gordion I*, 43, fig. 21.

37. *Ibid.*

38. See *ibid.*, 43 ff. (TumP 88, 95, 97, 99, 100, 104).

39. *Ibid.*, 44 ff. (TumP 93, 96).

IN STONE CAP  
**TumG 14, 15**

**TumG 14 Pottery: gray burnished casserole sherds (2) (Hellenistic)**  
 P 5490a,b  
 A Max. dim. 0.069 GPH. 0.041 Est. D. rim 0.25  
 B Max. dim. 0.083 GPH. 0.052 m.  
 Fig. 17G; Pl. 22E

A and B sherds from rim to wall; A broken at left across plastic ring attachment.

Wall below, roundly curved; side walls vertical with two large horizontal contiguous ridges, upper one being larger. Rim wide and flat with plain horizontal lip. Below rim hangs plastic copy of swiveling ring attachment in its bolster. At bottom ring is worked into wall between two belly ridges.

Gritty coarse clay with black inclusions. Very little silvery mica. Carelessly burnished (i.e., not in overhung areas). Fired brownish gray through core, mottled black with buff blush on top and exterior. Breaks do not look burned.

There is a class of heavy gray-ware casseroles (e.g., P 4125–P 4128) from the Hellenistic layers at Gordion, which in general shape would include **TumG 14**. **TumG 14**, however, has no ledging and adds plastic rolls as decoration, and so may be a slightly superior domestic item whose buff blush shows it had originally uneven firing, or that it had been near fire during its use.

These casseroles are still being studied,<sup>40</sup> but should

date to the late third and early second centuries B.C.

Dating this casserole which was intrusive in Tumulus G (casseroles are unknown as gifts in Gordion graves) does not necessarily date the looting. It was merely an item carried down at that time into the stone cap.

**TumG 15 Pottery: Gray bowl sherd, ledged**  
 P 5491  
 GPH. ca. 0.055 Max. dim. 0.07 m.  
 Fig. 17H; Pl. 22F

Narrow sherd yielding rim and wall profile.

Bowl deep, with walls in consistent shallow curve up to concavely flaring rim whose lip is standing ridge with short curved ledge inside. At 0.01 m. below exterior ridge, slight wheel indentation. Well wheel-burnished inside and out.

Coarse clay, shearing, with a few inclusions and pocks. Silvery mica. Fired consistent gray throughout, with buff blush on part of exterior.

**TumG 15** according to its shape seems to fall into a class of Hellenistic "fine-ware casseroles" (e.g., P 4121–4124), all from Hellenistic layers on the City Mound. The parallel pottery, however, is of fabric buff on the surface and occasionally gray at the core. The gray example, **TumG 15**, may be a similar item which has a mere buff blush from being over the fire less often than **TumG 14**.

This class of ware is still under study, but should date to the late third and early second centuries B.C.

See **TumG 14** and n. 40.

40. Frederick A. Winter has studied the Hellenistic pottery from Gordion. I am grateful to him for his advice concerning **TumG 14** and **15**.

# Tumulus H

## Introduction

### PRE-EXCAVATIONAL DESCRIPTION (FIGS. 1, 18A; PL. 23A)

On one of the promontories extending southwest from the main mass of the Northeast Ridge, Tumuli H on the east slope and I on the west slope loom as if twinned. The vista from the top of H sweeps around from Tumuli J and K on the ridge and Kuş Tepe on the banks of the Sakarya, past the City Mound, Küçük Höyük, and the South Ridge to the village of Çekirdeksiz.

The local villagers, hunting for stone, had scraped earth away to a depth of 0.40 at top and to 0.30 m. down the southwest side of the tumulus. They may have removed the guide walls on the west side.

The diameter of the tumulus was *ca.* 19.30 m. The mean total height was 2.40 m. above the sloping surface at its edges. These edges lay between the 5-m. and 7.50-m. contours above Gordion datum. After excavation the added mantle was shown to be 1.40–1.80 m. thick over uneven burned debris. The southwest, south, and southeast slopes continued down the side of the ridge, which indicates that perhaps part of the south side of the original tumulus along with the guide walls it may have contained had eroded away. This would also imply that the preserved peak of the tumulus lay farther up the ridge than the original one. (See also Tumulus J, p. 55.)

### PRE-TUMULUS REMAINS OF HABITATION AND BURIALS (FIG. 19)

As on the other edges of Tumulus H, the northeast edge of the mantle was hard to distinguish. However, material under the mantle of Tumulus H and belonging to the common cemetery was located in the gravel layer, and consisted of a cluster of inhumations which contained the "oldest core" of the cemetery.<sup>1</sup> These were Mellink's Hittite graves H 21 to 23 and 25 to 30.<sup>2</sup>

Other features lying at a higher level, but still under the mantle, consisted of possibly two houses (Anderson's Houses I and II) with at least two building periods and ending in a conflagration (Fig. 19). The south wall of House I lay just north of the Tumulus H burial. Associated with the houses was a child's intramural earth grave (Anderson's no. 80).<sup>3</sup>

One more burial, included in Anderson's earlier Phrygian group, was a simple extended inhumation (burial 66), lying just above the gravel layer near the west side of House I. This Anderson dated to the time of the destruction of House Ic.<sup>4</sup>

### EXCAVATION (FIG. 18B)

In 1951 Rodney Young in an attack of whimsy asked Jeanny Esther Vorys (later, Canby) to plan the excavation of Tumulus H by laying out an equilateral triangle (trenches 1–3) well centered over the peak where a martyr was left for measuring down from datum. Miss Vorys from 16 April to *ca.* 15 May cut trenches 1–15 in

1. Mellink, *Hitt. Cem.*, 3, see pl. 1. The projected extent of Tumulus H indicated on Mellink's pl. 2 must be mentally applied on her pl. 1.

2. *Ibid.*, 5–7.

3. *Ibid.*, pl. 2; Anderson, *Comm. Cem.*, 11–23, fig. 3 (House I), 24 (House II). For grave 80, see *ibid.*, 69, 120.

4. *Ibid.*, 68 ff. ("burial" 66), 115, 307, and 312.

what may be considered the area within the tumulus edges.<sup>5</sup> Of these, trenches 1-3, 6, 7, 9, and 10 exposed fragments of the common cemetery and pre-tumulus houses (Fig. 18B).

In the area where trenches 2, 3, 5, 8, and 11 met, floating and scattered bits of rotted wood among the stones presaged a badly preserved chamber, which indeed was found in flimsy remains. Burnt indrifting from the destruction level above it to the north, where a house wall lay nearby (see above), appeared in the north end on the floor.<sup>6</sup> Skeletal remains, the floorboards, the roof supports, and even the walls were seen in only small shreds of evidence. Pottery must supply the bulk of the dating material.

In 1952 during the continuation of excavations in the common cemetery, M. J. Mellink opened a trench (here called 16) south of the south end of the burial pit. She found evidence for further house cuttings, domestic fill under the burned layer, and a partial support layer for the burial pit (see below, "Preparation . . .").

No deposits in Tumulus H other than the pit and its support layers, the chamber, and the preserved guide walls converging toward the stone cover, are considered here to belong to the main Phrygian burial.

#### UNDERLYING LAYERS (FIG. 17)

In the section (Fig. 17) hardpan (VII) appears as a fairly regular gently convex layer, while the depth of sand and gravel (VI) over it varies. This gravel and its bedding formed a natural knoll which had been used as a site for houses.

A thick layer of domestic debris remaining from the earlier Phrygian habitation complex varied from 0.50 m. thick at the uphill edges of the tumulus to an irregular 1 m. under the center. On the south slope (see above, trench 16),<sup>7</sup> the house cut had removed the gravel layer and descended deep into hardpan. Before the general destruction the cut had been refilled with house debris 2 m. thick (V) and then in the destruction all had been covered with the general layer of ashes (IV).

#### THE MAIN BURIAL (FIGS. 18-23; PLS. 23B-26B) PREPARATION OF THE SITE AND EXCAVATION OF THE PIT (FIG. 20A)

The Phrygian tomb builders, taking advantage of the natural height of the knoll, first cleaned the site through debris down into hardpan. They then laid out a rectangle, with the north end higher than the south end. On the south they trimmed hardpan carefully as they approached the back of the deep cut on the downhill side. They cut to within 0.30 m. of the rear wall of the house, left the 0.30 m. as balk, and scraped some of the ashes away toward the south. Since the working level thus created was lower on the south end than it had been on the north, it was necessary to start a support layer (III) against the southern wall pack when the pack and chamber together reached the height of the natural surface. Level with the top of the finished stone pack they spread a layer of yellow clay to seal the finished support layer.

The stones of the side pack were of the architectural poros variety, from *ca.* 0.30 to 0.40 m. across, probably taken from exposed walls nearby.

#### THE CHAMBER (FIGS. 18B-21A; PLS. 23B-25B)

Because of the weight of the fallen stones on the floor and the rotten state of the whole wooden chamber, many parts could not be measured. The floor-planks were laid east-west directly upon hardpan; this was indicated only by powdery marks on the hardpan which sometimes showed that the planks were about 0.15-0.18 m. wide.

The walls had sturdy squared sills resting on the floor. The east side, at the north end, had a pair of stacked wooden beams totaling 0.28 high, 0.15 thick, with a preserved length of 2.50 m., above them a gap of 0.30, wood 0.24 high, a gap of 0.40, wood for 0.20, to a total height of 1.42 m. Where the east side met the north and south ends, beams had carefully made interior corners and seemed to be squared at least on the upper and interior faces.

5. Gordion Notebook 9 (1951) 32-71.

6. Directions used in the description of the chamber have been

simplified here to "north and south ends," "east and west sides."

7. Excavated by M. J. Mellink: Gordion Notebook 26 (1951) 163.

The south end wall, next to the loose earth of the support layer, was fragmentary all the way down from the top, but there was evidence that the broken end of a heavy beam still leaned obliquely against it.

The west side wall was based on three stacked beams with a total height of 0.40 m. The north end of the bottom beam "entered the corner above the level of the corresponding beam on the north wall," and the bottom beams of both side walls went on past the front faces of the triple beam on the floor at the north end (see below). The exact nature of the cuttings in the corners where the compound sills met is not further explained. At 0.20 m. above the triple beam, thin planks each *ca.* 0.10 m. high and 0.08 thick, their interiors dressed and exteriors left slightly rounded, have a solid vertical stretch of *ca.* 0.45 m. Above that there were only fragments of wood for 0.20 and then nothing. Outside the west side an extra beam lay buried in the stone pack behind the 0.08 x 0.10-m. planks.

The north end wall, which was most damaged by seepage from the burnt habitation layer, was represented by only a few fragments of wood near the top, but at the floor a 0.40-m.-high triple set of beams formed a sill similar to those of the other walls.

The type of corner joining visible in parts of two lower corners was very simple: the side beams were left whole under end beams whose undersides were horizontally sawn away to an L-shape (Fig. 20B). This cribwork method, if used throughout, would have left gaps between the wall beams and thus allowed movement from the ends if under pressure. Three lengthwise beams (see Fig. 20B), i.e., the top beams of the side walls, and the central one found broken and leaning obliquely against the south wall, were thought by the architect, D. H. Cox, to have been rabbeted out under their ends, shallowly but well enough to brace the *top* end beams against movement toward the interior. In the absence of some sort of simultaneous bracing or paneling on the interior of the chamber, this cribwork construction required equal pressure from all four sides during every step of the beam laying, and therefore the fill of "largish stones" had to be carefully laid into the sides of the pit as the walls rose.

It is difficult to believe that the four walls differed from each other in style. An interpretation of the crib-

work framing of the chamber is shown in Fig. 20B, but it may not be correct. The beams appear in reality wide, smooth, and solidly stacked (see Pl. 24B). A system of solid walls appears therefore more likely.

It is not entirely clear how the rest of the corners were made, or whether thinner beams above the solid compound sills were laid on their sides (as in Fig. 20B) or on their edges. Whether the gifts were inserted before or after the central bracing beam (Fig. 20B) was put in place is also unknown.

The interior clearance was approximately 1.45 m. from highest preserved wood of wall to wooden floor. Clear floor space measured approximately 2.45 north-south x 1.80 m. east-west.

### CONTENTS OF THE CHAMBER (FIG. 21A; PL. 27A-H)

At a distance of 0.65 m. from the north wall and 0.65 from the east wall were traces of a sort of platform-bier or pallet, consisting of an unknown number of preserved planks *ca.* 0.08 m. wide, laid in a north-south direction and resting directly on the floor (there was no evidence for feet or frame). The size (Pl. 0.95, originally probably longer, and Th. 0.02-0.03 m.) would have been barely adequate for the transport of the body.<sup>8</sup>

The skeleton, extremely fragile and fragmentary, consisted of only a few broken pieces *in situ* on the pallet: the pelvis and the beginning of the upper leg bones, which, however, were sufficient to indicate a youth. A few fragments of skull were discovered along the north wall during the clearing of the tomb. These lay, along with three teeth and crumbs of two bronze fibulae, in a thick deposit of dissolved blue paste beads(?).<sup>9</sup> In the pelvic area was a perfectly spherical stone which is probably a gallstone (see *TumH* 7).

The west half of the floor was generally clear, perhaps to permit the arrangement of the corpse and placing of the gifts. It is also possible that gifts of a perishable nature once lay there. The only gifts recoverable were of pottery, lying in or near the corners of the chamber:<sup>10</sup>

8. Tenuous evidence for platforms for transportation of remains to a burial site comes, in other instances at Gordion, from cremations. Collections of iron "ring handles with ferrules" found in the burial deposits of Tumuli E and F (Kohler, in *Young Symposium*, 66, figs. 5, 12, 13) seem to have provided means of lifting the platforms on which bodies or ashes and gifts were carried. Here in Tumulus H no such handles were found.

9. In other interments mats or textiles were sometimes preserved under bodies when placed on the floor of a tomb: in

Tumulus W, textiles (see DeVries in Young, *Gordion* I, 197); in Tumulus S-1, reed matting (see below, p. 183).

9. Unfortunately this mass of dissolved blue paste does not appear in the field catalogue, and the fibulae were too deteriorated to be saved for cataloguing.

10. See preliminary reports by R. S. Young on the pottery in Tumulus H: *ILN* (3 Jan. 1953) 22 fig. 7; *UMB* 17, no. 4 (Dec. 1953) 32 and fig. 26.

<b>TumH</b>	<b>2</b>	Pottery:	East Greek Bird bowl (upside down in southwest corner)
	<b>3</b>		red polished trefoil jug (south-east corner)
	<b>4</b>		black polished round-mouthed cup (southeast corner)
	<b>5</b>		black semi-polished jar with incised decoration (north wall near east corner)
	<b>6</b>		black polished saucer (east half of north wall).

Metal was almost absent. One sturdy L-headed iron nail was found preserved; it had rusted off at the point where it had once entered the wall, and may originally have held a gift hung upon it (indeed, the Bird bowl came from nearby). Note here again the two fibulae mentioned above.

<b>TumH</b>	<b>1</b>	Iron:	L-headed nail (fallen into south west corner)
		Uncat. Bronze:	fibulae (2) (in blue paste mass, north end).

After the deposit of the gifts came the closure of the chamber.

### THE ROOF (FIG. 20B)

Only one fragmentary end of a central bracing beam was preserved, resting obliquely against the south wall. Some thinner planklike fragments (Th. 0.04–0.05 m.) floated in the stone fill. These Cox believed were evidence for the use of thinner planking on the roof proper (see Fig. 20B). Since planks, even though spanning only the shorter dimension, could not by themselves have held for long the weight of the stones capping the roof, the central lengthwise beam, which had been rabbeted underneath, was restored as bridging the center from end to end, increasing the end heights at their centers to equal the theoretical side heights, and supporting the roof planks from beneath. The widths of the roof planks and the length of their overhang could not be measured. The roof planks may thus have been free to shift while the cap was being laid.

This manner of roof closure would leave small gaps over the end walls between the bracing beam and the heightened side walls. This may appear odd, but gaps occur also in Tumulus Z although there they were over the side walls, as the extra support beams (actually, tie beams) there lay crosswise (see pp. 153 and Fig. 66).

### THE STONE CAP

The stones of the cap were, like those of the side packing, rough and 0.30–0.40 m. across. The cap, preserved on its edges to a thickness of 0.80 m., had sunk down at the center into the pit and disturbed the pallet and body. The stones of the cap were more loosely packed in the center than on the sides, and contained pieces of rotted unburned wood. Also, adhering to the undersides of some of the center stones were the white "ashlike" remains of reeds or grasses<sup>11</sup> once laid on the top of the chamber roof.

Among the pottery from the stones of the collapsed cap was one mendable Hittite bowl:

<b>TumH</b>	<b>8</b>	Pottery:	Hittite conical bowl.
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The layer of yellow clay noted by Mellink over the support layer on the south was not specifically recorded as continuing on the upper slope.

### THE MANTLE AND GUIDE WALLS (FIGS. 18B, 20A, 21B)

Remains of three guide walls were found converging from the north (A), north-northeast (B), and north-east (C) upon the north edge of the stone fill over the burial. They lay above all levels of habitation and cemetery.

These walls were usually only one large or two small stones in width. They were laid irregularly in the sense that there was no coursing, and strata of earth sometimes intervened between parts of the lines as laid, which would mean that not all of a line was at all times in sight as the mantle accrued (see especially wall C below). In each case there was nothing but loose earth underneath the walls, indicating that earth had been strewn over some of the destroyed underlying house levels before the laying out of the guides, and that no trenching was done to foot them. Walls B and C lay across an area of robbed house walls which may have been still in sight emerging from their debris, and have been a source of stones for both burial pack and guide walls.

*Wall A.* Total L. ca. 9 m. Began 4.70 m. from east end at north edge of trench 1, then crossed 7 and 3. Top lay at 0.30 m. under surface for most of its distance, sloping up toward south, as if it had been continually renewed well up into mantle.

*Wall B.* PL. 2.23 m. Appeared only in trench 10, with top at -1.45 m. Incline of top surface increased 0.30 m. from

11. The botanical remains were too rotted to show whether they

had been woven into a mat. See p. 175.

lower (north) end to upper (south) end. Appears to have been part of early planning, then abandoned.

*Wall C.* Long uneven wall of single stone's width, ending at corner of burial with lower stones at depth -2.30 m. in trench 5. Height 1.40 m. where it crossed trenches 4 and 10 and ran ca. 0.50 m. under modern surface. (Fig. 21B shows composition where it crossed trench 4.)

Other walls had no doubt been built to converge from the northwest, but they may have lain in the area disturbed by the villagers. Guides from the southwest, south, and southeast, if they ever existed, seem to have been eroded or washed away down the slope along with the tumulus mantle. A great amount of washed-down earth was excavated at the southeast end of trench 4. The tumulus may, however, as in Tumulus E,<sup>12</sup> have begun over the burial, being first piled according to a set of guide walls, and then greatly enlarged toward the north, but here in H, without the use of further guides.

The tumulus throughout consisted of brown earth mixed with small stones, with no consistent clay component. There were occasional pockets and lenses of dark ashy earth, especially in lower strata. The mantle attained a thickness near the center of a little over a meter (1.40 in trench 6, 1.70 m. in trench 7) and thinned to ca. 0.40–0.30 m. deep around the uphill edges (at radius 9.65). As mentioned above, beyond this on the whole south side is a great deal of washed-down. In the west half where the villagers had disturbed it, the earth showed an admixture of yellowish sand, but under their cut, the soils resembled the rest of the mantle.

A list of the sporadic finds, for which provenience in the mantle is unspecified unless the trench is indicated, includes the following:

<b>TumH</b>	<b>9</b>	<b>Bronze:</b>	Hittite pin (trench 2–3, south corner)
	<b>10</b>		pinhead or bead(?) (at top of stone cap)
	<b>11</b>	<b>Iron:</b>	arrowhead (trench 8A–8B)
	<b>12</b>		spearhead (trench 4)
	<b>13</b>		small spatula (trench 10)
	<b>14</b>	<b>Bone:</b>	awl (trench 2–3, south corner)
	<b>15</b>	<b>Glass:</b>	spherical bead (trench 9)
	<b>16</b>	<b>Pottery:</b>	Black-on-Red sherd
	<b>17</b>		painted sherd of Alişar type
	<b>18</b>		bichrome narrow-necked trefoil jug (trench 7)
	<b>19</b>		bichrome sherd (trench 6)

12. See Kohler, *Gordion* II, Pt. 2, Tumulus E guide walls.

13. Black polished, thin ware for size of pot. Lugged rim, erect lip with four ridges on exterior. D. rim 0.27 m. Compare survivals of the tall ridged rim in other tumulus mantles: **TumB 29** (see p. 23); in Kohler, *Gordion* II, Pt. 2: P 5242, P 5391 (cremation Tu-

<b>20</b>		matte-black-on-orange polished sherd
<b>21</b>		fragments of banded feeding bottle
<b>22</b>		brown-on-orange sherds
<b>23</b>		black polished reeded sherd
<b>24</b>		small gray narrow-necked spout-coarse jug (southwest side)
<b>25</b>		coarse one-handed utility pot
<b>26</b>		medium-coarse polished trefoil jug
<b>27</b>		coarse trefoil jug
<b>28</b>		coarse bowl
<b>29</b>		coarse wide-mouthed amphora (trench 4)
<b>30</b>	Stone:	unfinished bead (trench 1)
<b>31</b>		spindle whorl
<b>32</b>		chipped stones (2)
<b>33</b>		small flint scraper
<b>34</b>	Pottery:	doodle on black polished bowl sherd.

These, together with the following fragmentary sporadic finds, uncatalogued but worthy of mention, seem to present an array of domestic small finds and parts of common burials:

<b>Iron:</b>	fragments (trenches 1, 2), a few rods (trench 9)
<b>Pottery:</b>	finer wares, including gray, black, and red polished, tall ridged rim (Fig. 22K), <sup>13</sup> high flaring base (Fig. 22L), <sup>14</sup> coarse wares, showing burning
<b>Stone:</b>	amber-colored flints (trench 2), fragments of grinding stones
<b>Animal bones:</b>	scattered through trenches. Concentration of bones from at least three sheep (-0.90 m. in trench 1, west of guide wall A)
<b>Human skeletal remains:</b>	scattered human bones, arms, legs, skulls.

## CHRONOLOGY

Elements of building style in the chamber associate Tumulus H with the earlier tumuli. The absence of gravel for leveling and drainage in the bottom of the pit, i.e., the plank floor lying directly on hardpan, resembles the treatment in pre-Kimmerian Tumulus G. The use of a wall nail (**TumH 1**) is shared with Tumuli MM, S-1, S-2, and Z. Evidence for spaces left open under the roof planks again pairs H and Z.<sup>15</sup>

mulu E); P 5488 and MU 54-40-39 (cremation Tumulus F).

14. Gray ware, wiped finish. Burned? Flaring high ring base. Thin floor, closed shape. D. base 0.065 m. Cf. **TumJ 42-46**.

15. See p. 153 for presence of gaps under the roof planks in Tumulus Z; see below, n. 18 for use of wall nails in Tumulus Z.

The East Greek Bird bowl (**TumH 2**) belongs to a much-studied, often-published type. Specifically it should fall between 660 and 650 B.C. (see below); on the assumption of a small lag it should date the tumulus to approximately 655–645 B.C.

Evidence from the low-necked jar sequence appears to place H between N and B: **TumN 8** looks still slightly ellipsoidal; **TumH 5** begins to look ovoid in the lower half; **TumB 3, 9, and 10** have narrower necks and shoulders on ovoid bodies.

## WAS TUMULUS H LOOTED?

Arguments both for and against looting are tenuous

and hard to support. Erosion had possibly displaced the highest point, where ancient looting usually began, toward the north and away from the chamber. There is an absence of definite evidence for lenses or piles of looters' back-dirt in the cap, the mantle, etc. The considerable disturbance in the tomb could have been caused by the collapse of the roof, made excessively rotten by the thinness of the cover on the eroding slope and the fact that the mantle was of earth not clay. It must then follow that the possible loss of guide walls on the south and southeast can also be accounted for by erosion.

Such a small array of gifts (note *one* wall nail for one special gift) is paralleled in other unlooted wooden chambers of seventh-century date (B and N).

## Catalogue

### IN GRAVE CHAMBER

#### **TumH 1–7** (FIG. 21A)

#### **TumH 1**

##### **Iron: L-headed nail**

ILS 48 Fallen from west wall near south end

PL. 0.06 H. head 0.02 GTh. ca. 0.01 m.

Fig. 22A; Pl. 27A

Rusted off across shaft.

Shaft tapering and square in section. Head formed by thick part of shaft being turned by clenching to 90° at a distance of 0.02 m. from the end, which is straight-cut.

**TumH 1** was placed by J. McClellan on the basis of size in the class of "carpentry nails"<sup>16</sup> with right-angled heads formed by the hammering aside of a straight-cut head or else by the hammering aside and then the cutting of the head. **TumH 1** was employed by itself—no other nails were recorded in or near the burial—in contrast to the similar but slightly larger iron "spikes" which were used in great numbers in the chamber walls of Tumuli MM<sup>17</sup> and Z.<sup>18</sup>

#### **TumH 2**

##### **Pottery: East Greek Bird bowl**

P 286 Upside down in southwest corner

H. 0.045 D. base 0.036 D. 0.132 D. rim

0.128 W. across handles 0.153 m.

#### Pl. 27B–D

Minor chips only.

Low spreading ring foot with wide resting surface. Walls flare up to plain thin slightly incurved rim. Two horizontal handles attached just under rim.

Black matte paint: five hollow rays up from foot to handle zone in which on each side at center is bird with cross-hatched body, solid neck, and reserved eye, walking right flanked by crosshatched double-outlined lozenges. Pendant from line on rim: left, small crosshatched triangle; right, dotted semicircle. In right field: small circle. Handles and interior solid black.

Clay very fine with self-slip. Fired creamy buff throughout.

The space inside the handles was more than sufficient to allow the bowl to hang on the iron nail **TumH 1**, even when rusted, but whether it ever did is speculation except for the fact that it was the only vessel in the group found upside down and **TumH 1** was found in the same corner.

Young (1953) dated **TumH 2** "around 650"; Akurgal (1955), "640–630."<sup>19</sup>

According to details of its style of decoration, it appears to fall in Coldstream's "stage 2,"<sup>20</sup> the criteria for which are: (a) central panel more than twice the width of the side panels; (b) eye reserved on bird (early in group and down to 650); (c) bird's body still drop-shaped, with upper and lower lines meeting at tip of tail; (d) filling ornament consisting of one pendent

16. *Iron*, 515 (no. 388), 533–534 and pl. 29.

17. Young, *Gordion I*, 100, pl. 40B.

18. See pp. 157, 160 (**TumZ 5–7, 16–18**), and Pl. 80E,F.

19. See Young, *UMB 17*, no. 4 (Dec. 1953) 32; Akurgal in 1955 discussed **TumH 2** as a "subgeometrische Vogelschale des mit-

leren Typus" belonging to the third quarter of the seventh century (*Phryg. Kunst*, 50 and n. 203a), or 640–630 B.C. (*ibid.*, 130, no. 7). Other good variant views of **TumH 2–4, 6** were published by Young in *UMB 17*, no. 4 (Dec. 1953) 33, fig. 26 = *ILN* (3 Jan. 1953) 22, fig. 7 = *Rayonnement*, 484, pl. 122[3].

20. Coldstream, *GCP*, 229, 300. See extensive bibliography.



triangle (at left), arc and circle (at right); (e) rays on lower body hollow (late in group).

Within the dates generally suggested for the stage 2 bowls (675–640) **TumH 2** might, then, be early in the “voided ray group” because the bird’s eye is still reserved (i.e., ca. 660–650).

The fact that the figured zone is closed at the bottom by only a single line places the cup in a rare class. **TumH 2** is very close to Oxford 1928:313, dated by Cook 675–650.<sup>21</sup> Cellarka, a site in the Salamis cemetery, yielded a close parallel, dated to Cypro-Archaic II.<sup>22</sup>

**TumH 3** Pottery: red polished wide-mouthed trefoil jug  
P 292 Southeast corner  
H-h. 0.117 D. base 0.046 D. 0.104 m.  
Pl. 27E

Mended, small gaps.

Disk base, ellipsoidal body with five shallow flutes around belly zone. Neck wide with open flaring trefoil rim. Thin band handle, carefully squared on sides, in high loop from rim to outer shoulder.

Clay fine, slipped to inside neck, carefully polished and fired light red throughout.

**TumH 4** Pottery: black polished round-mouthed cup  
P 280 Southeast corner, above stones on floor  
H. 0.082 D. base 0.040 D. 0.081 D. rim 0.068 m.  
Pl. 27F

Mended, small gaps.

Thin ring foot, slightly flaring. Body ellipsoidal with belly zone set off below and above by single wheel-run grooves. Wide short flaring neck with direct plain rim. High loop handle, flat ribbon in section, from rim to body, carefully squared on sides and across bottom at lower body groove.

Fine fabric; clay fine. Slipped outside and inside to base of neck. Excellent burnish. Fired black throughout.

**TumH 5** Pottery: black semi-polished(?) jar with incised decoration  
P 316 North wall, east corner  
H. 0.185 D. base ca. 0.09 D. 0.194 D. rim (rest.) 0.117 m.  
Fig. 22B; Pl. 27G

Half of neck broken away. Body chipped and very abraded.

Base flat, body spherical, slightly narrowing in lower half toward ovoid; neck short, flaring into plain everted rim, flattened slightly on top.

Burnish preserved on upper half of body to inside rim; on shoulder, outlined zone of incised pendent triangles filled with simple hatching. Only grooving of this zone’s boundaries is indicated in Fig. 22B. Lower half of body wheel-finished.

Clay coarse, micaceous, with white inclusions, fired gray where wheel-finished, and black where burnished.

Incised decoration on polished jars of this type is rare. **TumH 5** has a neck profile closest to those of the jars in Tumulus B (3, 9, 10). However, the body of **TumH 5** appears to be a little wider than those of **TumB 3, 9, and 10**. This may date H between Tumuli MM<sup>23</sup> and B.

**TumH 6** Pottery: black polished saucer  
P 284 North wall, east half  
H. 0.028 D. base ca. 0.05 D. 0.12 m.  
Fig. 22C; Pl. 27H

Mended, a few chips. Slip peeling.

Flat base, flaring walls. Plain direct rim.

Gritty clay, covered with thick creamy slip, over which thorough stroke-burnish. Fired black throughout.

See **TumC 17** for a discussion of the series of black saucers from the lesser tumuli: **TumH 6, TumC 17, and P 5105, P 5473a–e** (Tumulus A).<sup>24</sup> The date sequence falls in that order. **TumH 34** should join the series, but its provenience is not clear enough.

**TumH 7** Gallstone  
ST 80 In pelvis of skeleton; originally catalogued as “slingstone”  
D. 0.0185 m.  
Pl. 27I

Intact.

Plain spherical stone with surface in some places slightly rough, in others smooth.

Yellow-brown in color.

Found as it was in the pelvic cavity of the skeleton, it is, from its size and coloring, likely to be a gallstone. When single, gallstones are usually spherical; clustered ones are “faceted.”<sup>25</sup>

**TumH 7** was “probably a gallstone. If the stone had simply remained in the gall bladder, it was not the cause of death. If, however, the gall bladder became inflamed and the stone passed through the wall into the intestine, it could have caused a lethal blockage. The location of the stone, as found, ‘in the pelvic area’ makes it impossible to say which situation was the fact.”

An example of faceted red-brown gallstones in an archaeological context was identified by J. Lawrence Angel. The stones came from Grave Sigma in the second circle of shaft graves at Mycenae. They lay between the lowest ribs and pelvic brim on the right side. For Grave Sigma, G. Mylonas, “Ο ταφικός κύριος Β τῶν Μυκηναίων (A). Athens, 1973), 226; for the skeletal report, J. Lawrence Angel, *ibid.*, 383, pl. 249 [Sigma 131].

21. Cook, *GPP*, 116, pl. 29D.

22. Karageorghis, *ENS* II, 57, pl. CCXXIII, T. 29.2; *SalRDC*, pl. 84.

23. The amphoras MM 372–374 have spherical bodies and flat bases but the necks are narrower and straighter. MM contained no necked jars as such, only dinoi.

24. Kohler, *Gordium* II, Pt. 2. See also below, p. 33.

25. See S. S. Lichtman, *Diseases of the Liver, Gallbladder and Bile Ducts* (3d ed.) II (Philadelphia: Lea and Febiger, 1953), 1191–1193.

The archaeological evidence via photographs was reviewed by Roger D. Soloway, M.D., now Director, Gastroenterology, University of Texas Medical Branch, Galveston, TX, who said

## IN STONE CAP TumH 8

**TumH 8 Pottery: Hittite conical bowl**  
P 300 Scattered sherds in sunken stone cap  
H. 0.057 D. 0.131 m.  
Pl. 27J

Mended, a few gaps.

Base is blunt point. Body, slightly curving cone with direct plain thin rim.

Ware very fine. Clay gritty, with some silvery mica, some wheel pocks and drag marks from dark brown bits. Fired orange buff throughout.

The conical bowl was a common Hittite domestic item.<sup>26</sup> **TumH 8** was thrown in with the stones of the cap, which were presumably gathered from Phrygian house walls and disturbed cemetery proveniences (Hittite and later) nearby.

## IN MANTLE TumH 9–33

**TumH 9 Bronze: Hittite pin**  
B 131 Trenches 2 and 3 in south corner of triangle  
PL. 0.043 W. head 0.007 m.  
Pl. 28A

Complete, but twisted.

Thin shaft round in section, sharpened at end. Head is square block rising on top into low pyramid. Spiral incision (6 turns) on shaft just below head.

From the Hittite cemetery at Gordion there is a parallel, which Mellink dated Middle Anatolian II–III.<sup>27</sup>

**TumH 10 Bronze: pinhead or bead(?)**  
B 2020 Mantle, intruding into top of stone cap  
Total PL. 0.053 D. where least swollen 0.006  
D. end ridges 0.007 m.  
Pl. 28B

Three pieces now disjoined. Spots of disease.

Once probably long bead made by coiling bronze wire tightly round central thin rod, and then stringing coil on bronze wire. Wire inside still apparent and protruding

beyond one end. Ridges spiral accurately.

This may instead be the head of a very fragile straight pin.

**TumH 11 Iron: arrowhead**  
ILS 35 Trench 8A or 8B  
L. 0.094 GPW. 0.013 GPL. head 0.073 L.  
tang ca. 0.02 m.  
Pl. 28C

Mended. Point slightly shortened and turned.

Short tang round in section, for entering hollow shaft. Blade square in section near point, rounded in section toward tang.

McClellan placed **TumH 11** in her type I, pyramidal, which is very numerous and most popular from the sixth to the fourth centuries B.C., and in her subtype IB,<sup>28</sup> which included also two others from the mantle of Tumulus D (ILS 32A,B).<sup>29</sup> The contents of the mantle of D date to the Lydian period and earlier.

**TumH 12 Iron: spearhead**  
ILS 31 Trench 3  
L. 0.141 W. 0.037 m.  
Fig. 22D; Pl. 28D

Complete; mended at base of blade.

Socket conical and hollow, continuing as midrib to point. Two flat, thin, tapering blades form "willow leaf."

McClellan<sup>30</sup> cites **TumH 12** as a type common in bronze in the Bronze Age, and later in iron. Her no. 60 (ILS 615),<sup>31</sup> from a structure of the fifth century B.C., is the only close parallel (and it is badly damaged) from Gordion. McClellan also cites parallels from Boğazköy<sup>32</sup> and from Europe in the Hallstatt period.<sup>33</sup>

**TumH 13 Iron: small spatula**  
ILS 25 Trench 10  
L. blade 0.072 GPW. blade 0.092 L. handle  
0.08 W. handle 0.045 m.  
Fig. 22E; Pl. 28E

Mended. Edge bent.

Short, wide, sturdy flat blade, hafted by having half its length cut into wings which were hammered round into split cylinder for receiving handle (not offset).

**TumH 13** had a worn blade which may indicate its use as a chopper. McClellan,<sup>34</sup> in a discussion of spatulas, cites a parallel from Boğazköy.<sup>35</sup>

26. Mellink, *Hitt. Cem.*, 17, 28–29, pls. 16b, 30b.

27. *Ibid.*, 33, burial H 25 (inhumation), B 215b, pin type 5c, pls. 18o and 19p.

28. McClellan, *Iron*, 6 no. 2, 20, 23.

29. Kohler, *Gordion II*, Pt. 2.

30. *Iron*, 52 no. 58, 62, and pls. 2 and 42.

31. *Ibid.*, 52.

32. Bittel and Güterbock, *Boğazköy I*, 53, pl. 10[7]; Boehmer, *Kleinfunde*, 144, no. 1286 (BK II, pl. XLV).

33. Petrie, *Tools and Weapons*, pl. 37[12,14,34].

34. *Iron*, 394 no. 267, 397 and pl. 20.

35. Boehmer, *Kleinfunde*, 147, no. 1334 (pl. XLVII), smaller (total L. 0.095 m.) but made by the same method, and found in a BK I context.

- TumH 14 Bone: awl**  
 BI 89 Trenches 2 and 3 in south corner  
 of triangle  
 L. 0.105 CW. 0.027 m.  
 Pl. 28F  
 Intact, but point dulled from use.  
 Animal's leg bone with joint as natural head, tapered until  
 sharp enough for punching.

This crude but effective implement is easily sharpened, and easily replaceable. At Gordion examples spread from the seventh to the third centuries.<sup>36</sup> Similar awls come from Alişar<sup>37</sup> and Boğazköy.<sup>38</sup>

- TumH 15 Glass: spherical bead**  
 G 38 Trench 9  
 D. 0.0125 W. 0.01 m.  
 Pl. 28G

Cracked; mended, thoroughly iridesced. String hole too deteriorated to measure.

Spherical, plain, with generally wide string hole.

Glass crumbly, milky-colored on surface; probably once blue.

- TumH 16 Pottery: Black-on-Red sherd (imported)**  
 P 5193 Context bag: "Tumulus H fill"  
 Max. dim. 0.13 GPH. 0.025 D. base 0.073 m.  
 Fig. 22F; Pl. 28H

Large sherd preserving central floor and bits of outer floor of flat plate.

Base ring flat, ring 0.022 m. wide.

Decoration in matte black on matte red-orange. Central medallion: Maltese cross filled with dots and inscribed in circle. On floor, lines in groups of four, three, and three preserved. Exterior left reserved.

Gray ware of fine clay, medium thickness, fired gray-buff on reserved surfaces. Hardly any mica.

See p. 216.

- TumH 17 Pottery: painted sherd of Alişar type (imported)**  
 P 5195 Context bag: "Tumulus H fill"  
 Max. dim. 0.053 m.  
 Pl. 28I

Triangular sherd from concave neck under flaring rim.

On heavy creamy ground coat, in fading black matte paint, tree with single central trunk and two oblique lines rising each side as branches from which hang full rows of black strokes. One band preserved under rim.

Coarse clay with bits and pocks on interior where merely wiped. Exterior not burnished. Fired orange on both surfaces, a little browner through core.

This sherd with a tree of Alişar IV style was found as a residual in the mantle of Tumulus H, and is to be compared with P 3953, which has a tree of a less schematic style and which was found on the sloping floor of the Early Phrygian Building. P 5564 has a closely similar tree but was found as a residual(?) in the clay platform under Building A, which gives it a *terminus ante quem* even later than the date of Tumulus H.<sup>39</sup>

- TumH 18 Pottery: bichrome narrow-necked trefoil jug**  
 P 269 Trench 7 at -1.70 m. (bottom of mantle)  
 H.-rim 0.215 H.-h. 0.217 D. base 0.063 GD.  
 0.167 W. trefoil 0.072 m.  
 Pl. 28J

Whole; crack in neck and hole in wall. No marks of burning.

Base flat but irregular; body ellipsoidal. Smooth transition to narrow neck. Rim flared, with pinched-in trefoil. Sturdy band handle attached at rim and upper body.

Upper half of body covered with creamy ground coat, on which two zones of alternating crosshatched squares (checkerboard 2) with small linear butterflies in reserved squares: upper zone in matte dark red and black; lower all black. Bands above and below zones. Hatching on top of arch of handle. On neck and exterior rim four spaced horizontal lines. Below painted zone, four black lines below one matte red.

Clay fine, unslipped, with occasional silvery mica and white bits. Burnished over paint and overall. Fired reddish buff at core, creamy to reddish buff on surfaces.

Although it was found in the bottom of the mantle, it probably, being whole and unburned, belonged to some cemetery area nearby. Alternatively, it may have been in use at the time of the mantle-raising.

Sams remarks that the particular variety of hatched checkerboard is unique; the sparing use of red, however, is paralleled in pre-Kimmerian bichrome styles,<sup>40</sup> as is also the lack of ground coat on the neck. For the latter, a parallel is furnished by another flat-based jug from Meg. 3.<sup>41</sup>

- TumH 19 Pottery: bichrome sherd**  
 P 258 Trench 6, bottom of mantle  
 Max. dim. 0.06 m.  
 Pl. 29A

Broken piece from shoulder of closed vessel.

Over matte creamy white ground, painted matte decoration: top zone, doubled-zigzag row with triangular fields in brown-red outlined in black; second zone, either triangle row, or top half of lozenge row in black.

36. Sheftel, *Ivory, Bone and Shell*, 223, awl no. 2, 227 and pl. 36c.

37. Von der Osten, *Alişar 1930-32* III, 101, 106 and fig. 102.

38. Boehmer, *Kleinfund*, 191, nos. 1979, 1980 (no provenience).

39. For P 3953, see Sams, *Gordion IV*, 214, no. 171, pl. 161; for P 5564, see *ibid.*, 308, no. 1084, pl. 133.

40. *Painted Pottery*, 573-575, no. 181 and pl. 24; *idem*, *Gordion IV*, 38. See also Anderson, *Comm. Cem.*, 159-160, no. 4.

41. *Painted Pottery*, 475-476, no. 93 (P 2295), and pl. 15; *idem*, *Gordion IV*, 265, no. 722, pl. 76.

Fabric heavy. Clay fine, micaceous, fired gray at core, orange near and on surfaces.

Its finding place at the very bottom of the mantle in trench 6 probably indicates its association with the house floors in this area.

**TumH 20 Pottery: matte-black-on-orange polished sherd**  
P 5194 Context bag: "Tumulus H fill"  
Max. dim. 0.042 m.  
Pl. 29B

Small shoulder sherd from closed shape. Shoulder fairly flat.

On orange polished background, matte black decoration: between three lines at base of neck and three on mid?-shoulder, radiating columns of dots enclosed in lines (one with double row of dots, one with single).

Medium ware of fine clay, fired orange throughout. Mica apparently absent.

**TumH 21 Pottery: fragments of banded feeding bottle**  
P 5196 Context bag: "Tumulus H fill"  
A GPH. 0.035 D. rim 0.049  
B Est. D. body 0.07 m.  
Pl. 29C

A preserves small neck with thin flaring rim, and base of vertical oblong band handle ascending off rim.

B preserves part of globular belly with tiny pierced tube spout.

Fine banding in glossy red paint: one on belly under tube, drop over end of tube, horizontal band above tube; decoration in zone above unclear; band around neck and over rim; cross-strokes on exterior handle.

Fine ware, wiped. Fired creamy buff throughout.

Several good parallels for banded feeding bottles, although of slightly varying wares, occur among small children's graves in the common cemetery, especially trial trench 7 (TT 7), southwest of and slightly down slope from Tumulus H.<sup>42</sup>

**TumH 22 Pottery: brown-on-orange sherds**  
P 5197 Context bag: "Tumulus H fill"  
A Max. dim. 0.06 D. body 0.11  
B Max. dim. 0.023 m.  
Pl. 29D

A from outer shoulder, B from upper shoulder, of small closed shape.

Dark brown paint in bands and lines: around belly (A), two bands, ladder, zone of standing crosshatched triangles in heavy band frames (close to Sams's zigzag row 3). On upper shoulder (B): interlocking running S-meander (in reserved areas), between horizontal ladders.

Medium fabric of fine clay with a little very fine mica. Burnished over paint. Fired light gray through core and interior surface. Orange on exterior.

**TumH 23 Pottery: black polished reeded sherd**  
P 5198 Context bag: "Tumulus H fill"  
Max. dim. 0.04 Est. D. belly 0.10 m.  
Pl. 29E

Small sherd of finely vertically reeded black polished closed vessel, perhaps sieve-spouted cup.

Medium fabric of fine clay, fired gray throughout, black where polished. Some very fine mica.

**TumH 24 Pottery: small gray narrow-necked spouted jug**  
P 312 Mantle, southwest side  
PH. 0.108 D. 0.082 m.  
Pl. 29F

Completed in plaster. Handle now restored.

Disk base, spherical body, short cylindrical neck. Mouth formed by cutting away rim and pinching in over top to form closed trough spout. Vertical handle from rim to low on body.

Clay fine, carrying mica and some large white bits, stroke-burnished with no great care, and fired gray at core, black on surfaces. Pocked.

**TumH 25 Pottery: coarse one-handed utility pot**  
P 295 Mended from scattered sherds  
PH. 0.215 H.-h. 0.25 Rest. D. base ca. 0.09  
D. 0.22 GD. rim 0.19 m.  
Pl. 29G

Mended, with large gaps.

Flat base, spherical body, wide short neck with flaring rim. Wide heavy band handle, raised slightly from rim, and down to upper body.

Clay coarse, with mica and white bits, fired gray-brown at core, gray to black on surface. Marks of burning.

**TumH 26 Pottery: medium-coarse polished trefoil jug**  
MU 54-40-47  
Max. dim. 0.09 m.  
Fig. 22G; Pl. 29H

Fragment from rim and shoulder of small jug, with rounded sides, slightly incurving neck, and small, slightly flaring plain direct rim.

Hard, slightly micaceous fabric, brownish at core, black polished on exterior.

**TumH 27 Pottery: coarse trefoil jug**  
MU 54-40-73  
Max. dim. 0.096 m.  
Fig. 22H; Pl. 29I

Mended from four fragments. Fragment from neck and shoulder of large trefoil jug with beginning of spout. Narrow neck, rounded slightly outturned rim; slight ridge divides neck from shoulder.

Coarse micaceous household ware, slightly polished and fired grayish throughout. Reddish stain(?) over interior surface.

42. See P 996, P 997, P 1000 (Anderson, *Comm. Cem.*, 108,

272-274, nos. 90-92).

**TumH 26** and **27** do not coincide with the two jug types found in burials—narrow-necked trefoil (common) and wide-mouthed trefoil (rare)—but are instead probably common jugs of slightly larger size which came from the habitation area nearby.

**TumH 28** **Pottery: coarse bowl**  
 MU 54-40-66  
 Max. dim. 0.115 Est. D. rim *ca.* 0.17 m.  
 Fig. 221; Pl. 30A

Fragment of deep round bowl, with flat base from which sides rise steeply on outside and form continuous curve on inside. Plain rounded rim, with one rounded, flat-topped projecting lug preserved.

Coarse buff micaceous household ware; surface fairly well smoothed.

**TumH 29** **Pottery: coarse wide-mouthed amphora**  
 P 377 Trench 4  
 H. 0.22 D. rim 0.20 m.  
 Pl. 30B

Mended, preserving *ca.* half of pot vertically.

Base flat, body wide ovoid merging into short wide neck with plain slightly flaring rim. Two heavy vertical handles from rim to center body. Long finger hollow under lower attachment of each.

Coarse brown fabric with large white inclusions. Handles well burnished, rest hand-smoothed. Fired mottled brown and black on surface.

**TumH 30** **Stone: unfinished bead**  
 ST 69 Trench 1, patch of ashy earth in  
 mantle  
 L. 0.0295 GW. 0.009 D. hole 0.0015 L. hole  
 0.024 m.  
 Pl. 30C

Intact.

Cylinder, rounded slightly at each end, in one of which is small drilled hole, well centered and extending for 0.024 m.

Hard gray stone, either clouded (throughout) or stained black in areas on surface.

Stone beads of this general shape were found in Hittite levels at Alişar (c 728, d 2366)<sup>43</sup> and in later levels at Boğazköy (BK I).<sup>44</sup>

**TumH 31** **Stone: spindle whorl**  
 ST 71 Trench 7  
 H. 0.0195 GD. 0.025 D. hole 0.007 m.  
 Pl. 30D

Chipped.

Cylindrical whorl, rounded on edges. One deep groove around mid-circumference.

Very hard, glossy black, opaque.

**TumH 32** **Stone: chipped stones (2)**  
 ST 68  
 A Max. dim 0.041  
 B Max. dim 0.04 m.  
 Pl. 30E

In general triangular and flat, with secondary pressure-flaking on one edge.

Hard brown translucent stone: flint(?).

**TumH 33** **Stone: small flint scraper**  
 ST 72 Trench 9  
 L. 0.026 W. 0.013 m.  
 Pl. 30F

Apparently intact.

Small flake with semicircular cutting edge sharpened by fine secondary pressure-flaking. Circular depression used for thumbhold, or flake could have been hafted.

Flint, clear with light tan clouded areas and some red flecks.

## PROVENIENCE DOUBTFUL

### TumH 34

**TumH 34** **Pottery: doodle on black polished bowl sherd**  
 MU 54-40-53 Provenience in Tumulus H  
 not clear  
 H. 0.043 D. base 0.059 Est. D. 0.17 m.  
 Fig. 221; Pl. 30G

Fragment of small saucerlike bowl.

Rounded sides, plain rim, low thin slightly flaring ring base with convex under-floor.

Coarse micaceous red clay. Surfaces black polished.

Lightly incised doodle on lower wall: parallel lines standing on or pendent from single line.

Similar doodles, which L. Roller considers owner's marks, were used on a coarse lid (P 1478) from the City Mound, found in a provenience above the Clay Deposit.<sup>45</sup>

43. Ann L. Perkins in Von der Osten, *Alişar 1930-32* III, 345-346, fig. 268.

44. Boehmer, *Kleinfunde*, 223, no. 2302 (pl. XCIII).

45. For P 1478, see Roller, *Nonverbal Graffiti*, 29 (2A-177), fig. 23.



# Tumulus J

## Introduction

### PRE-EXCAVATIONAL DESCRIPTION (FIGS. 1, 2, 23; PL. 31A)

Tumulus J<sup>1</sup> is located close to its (later) companion, Tumulus K, on a low-lying western spur (Fig. 2). Its west edge runs just above the 10-m. contour line. Its highest point in 1951 lay at point L (Fig. 23).

After the discovery of the tomb well to the west of the crown, it became evident that the west side of the tumulus had eroded down the steep bank, and that an earlier crown had been shifted to point L. A conjectural original diameter should probably stretch from the uphill circumference visible in 1951 (the solid line in the circle in Fig. 23) westward to include the tomb and would thus measure *ca.* 22 m. This diameter was used in the plan.

### EXCAVATION (FIGS. 23, 24)

The first excavator of Tumulus J, 2 to 11 April 1951, was Dorothy Hannah Cox, who opened a 5 x 5-m. square (trench 1) for the most part to the west of the highest point of the mantle. She utilized this highest point, L, as datum, leaving a martyr; L was found to be *ca.* 1.20 m. above pre-tumulus surface. Trenches 1, 4, and 7 were exploratory. There were untidy circles and piles of stones near the surface in trench 1, indicating disturbance. Trenches 2, 3, 5, and 6 enlarged areas of habitation. Trenches 1A, 3A, and 3B were dug basically for wheelbarrow runs. Work temporarily ceased after trenches 1-7 had missed a main grave.

However, later in the season, enticed by a find of three sherds of a fine dinos with geometric decoration

(**TumJ 36**) on the western slope of the tumulus, E. Robert Gallagher reopened the excavation and dug from 24 July to 2 August 1951.

For the new investigation he established a second datum, i.e., the top of the fourth course of the stone socle of the new expedition house, which had been begun during the interim partially over the excavated parts of Tumulus J. Levels from that time on were measured down from the new datum (see Fig. 24A).

He enlarged old trench 1 along its western side (trench 8). During the process of clearing trench 8 down to hardpan he came on a collection of pottery which he called the "West Slope Deposit" (see below).

An outcropping of fist-sized stones along the west scarp of trench 8, combined with another outcropping in the crumbling northwest scarp of the earlier trench 1A, led the excavator to open out trench 9 to the west, down the slope. This exposed the stone cap of the main burial.

### PRE-TUMULUS REMAINS OF HABITATIONS AND BURIALS (FIG. 23)

The natural layer of gravel found elsewhere on the Northeast Ridge here spread through trench 1 from *ca.* -1.25 to -2.45 m. and showed disturbance. Sherds in the gravel were coarse gray, many burned. Bedded on continued gravel in trenches 2 and 3 were a wall, floor, and hearth which formed remains of a "Southeast House." In trenches 4-6 "Northwest House" was dug, complete with pits and patches of paving.

One child's burial was found in trench 1 gravel (Fig. 23[D]).

1. Gordion Notebook 14 (1951) 1-14 (Cox); Gordion Notebook 23 (1951) 25-92 (Gallagher). Preliminary announcement: R. S.

Young, *UMB* 17, no. 4 (Dec. 1953) 34-35 ("warrior's grave").

## THE MAIN BURIAL (FIGS. 23-25; PLS. 31B-34B)

From among the many features explored in the Tumulus J area, it appears to this author that only the chamber, the stone pack and cap with their contents, and the "West Slope Deposit" are related to the burial for which the tumulus was built.

## THE PIT, CHAMBER, AND SIDE PACK (FIGS. 23-24B; PLS. 31B-33C)

The floor of the main grave was covered with stones from the cap mixed with the stone side pack which had partially slipped into the chamber upon the collapse of the roof. Rotted to bits and bereft of the top of its west end, the chamber lay sunk into the eroded slope of the ridge.

The mantle cover (I) over the west side of the pit had thinned to almost zero (0.20 m.); rainwater had soaked the timbers on the west side, rotting them away. The roof had disappeared and the stone cap had fallen into the chamber.

The pit dug by the Phrygians to contain the chamber was almost square, let down through the natural gravel layer (II) and 1.95 m. into hardpan (III). It measured 4.25 m. east-west and 4.08 m. north-south. On the unevenly flattened bottom of the pit a stratum of coarse gravel *ca.* 0.04 m. in thickness was laid to line the floor.

Only the most fragmentary remains of the chamber proper were recovered.

The floor was 1.90 m. below the surface of hardpan (-3.64 m.) and consisted of north-south planking, passing beneath all four walls. It was so decomposed and split that joints were indistinguishable, widths undetectable. The thickness as finally compressed was 0.025 m.; the original thickness is unknown, but restored in Fig. 24A as 0.04 m.

The cross-lapping of the south end of the west sill beam was achieved by reducing it to a neck over which the sill beam of the south wall was obviously passed, but the lap could not be measured.

Only patches of wall were still standing. The beams were all carefully finished on their four surfaces. The north and south walls were preserved to level -0.45 at their east ends, but were too crumbled to allow accurate beam counts: one showed a possible original vertical measurement of 0.15 and a thickness of 0.10, and another 0.20 x 0.09 m. In the northeast corner the projection of the uppermost preserved north wall beam beyond the east wall was 0.32 m., suggesting housed joints in the upper wall beams. On the evidence of other chambers (G, KY, S-2) the projections beyond the joints need not be uniform in length.

East and west walls also were represented by only meager remains. Beams in the east wall stood to full(?) height of 1.45 m. (-2.19), while in the west wall they had been in part carried down, with only a scrap preserved *in situ* to a height of 1.03 (-2.61) in the northwest corner. In the southwest corner two timbers fallen from the south end of the west wall and lodged on the floor yielded a width of 0.195 and a thickness of 0.04 m. A sample of layered brown material adhering to the walls in a limited and unspecified area was analyzed and found to be most likely bark or wood.<sup>2</sup>

After the wall remains were cleaned to the foot all around, the interior clear measurements of the chamber were found to be 2.65 north-south x 2.54 east-west and the (probably complete) height of the walls 1.45 m.

Necklike cuttings were observable in several wall beams, but the exact measurements were impossible to obtain. The beam-laps in Fig. 24A,B are restored.

The stone side pack, which was filled in as the wooden walls of the chamber were put in place, had varying widths implying that the chamber was not well centered in its pit. Among the stones many examples of rectangular finished faces appeared (Pl. 34B), suggesting that the tomb builders had robbed the walls of nearby buildings in the habitation area.

2. Chemical sample 51-Chem-3, "Tumulus J. Particles from [unspecified place on] chamber wall: one large and several smaller pieces, dark brown, flat, and seemingly formed of several layers of material, plus some powder.

The material looked somewhat like parchment but appeared crystalline under the microscope. It burned without flame, giving off smoky, somewhat aromatic vapors which smelled like burning wood. One sample was burned completely to a white ash which comprised 23.7 percent of the sample by weight. This is quite high, and explains why the material did not burn with flame; the mineral content was high enough to fireproof it in part. The ash contained iron, aluminum, calcium, magnesium, and probably silicon or a silicate. The metals were most likely present in the ash as oxides, but it does not follow

that they were in that condition in the sample before it was burned. Actually sulphate was found in the specimen, but no carbonate or chloride. The calcium, therefore, may have been present as sulphate, the magnesium and aluminum as silicate, and the iron as oxide or silicate. The organic matter in the specimen does not contain nitrogen and is therefore not a protein material, which eliminates most animal products such as wool felt, skin or leather. It would seem most likely that the material was wood or bark, possibly part of a panel, or material used for its aromatic qualities. The inorganic constituents may have been intrusive or could have come from pigments or even plaster" (A. E. Parkinson, University Museum Chemist, "Analysis of Specimens from Gordion," submitted 31 Oct. 1952, p. 3).



### CONTENTS OF THE CHAMBER

(FIGS. 24B–26A; PLS. 32B,C, 33A,B, 35A–36G)

The skeleton and pottery had been smashed by the fall of the cap, but the bronzes on the floor were in good arrangement. Perhaps they had been protected by a layer of earth which had sifted in earlier. Bronze vessels had corroded away to fragments, but solid bronze implements and weapons were left in fair shape. The iron objects, though rusted to bits, had retained their shapes and were at least measurable *in situ*. The whole group seemed free from later disturbance. The space on the floor of the tomb was rather evenly utilized except apparently for a thin strip from east to west across the center.

The skeleton, scattered slightly beyond its original natural extent, lay in the north half along with a littering carpet of coarse sherds. The cranial pieces lay at the east, the arms to the sides. The extremities were spread slightly wide, and there were some displacements: the pelvic bone, the right humerus. Mandibular parts lay beneath a mixed heap of bones containing vertebrae, ribs, and the right humerus. The centrally located small bones adhered in a confused sticky and pulpy mass to the floor planking. Due to decay, the bones in general were beyond adequate recovery. The only complete, and therefore accurately measurable, bone was the right femur (L. 0.47 m.). Upon preliminary examination, Prof. Alpagut concludes that the skeleton belongs to an adult male with robust femur and chin. Aging however is impossible.

The final cleaning of the skeleton revealed evidence for neither clothing nor personal adornment of any kind.

Gifts suitable to a male warrior were carefully arranged over the south half of the floor; they are listed here by material:

<b>TumJ</b>	<b>1</b>	<b>Bronze:</b>	fragments of trefoil jug
	<b>2</b>		petaled omphalos bowl
	<b>3</b>		fragments of ribbed omphalos bowl
<b>4AB</b>			pair of knives
<b>5–10</b>			arrowheads
<b>11</b>			fragments of small band clamps
<b>12</b>			tweezers on ring
<b>13</b>			ear spoon
<b>14</b>	<b>Iron:</b>		spearhead
<b>15</b>			large arrowhead
<b>16</b>			double ax

It is possible that the empty area between the gifts and the skeleton once contained other perishable materials than the wooden ax handle, such as arrow shafts, leather quivers(?) (see under **TumJ** 5, 10, 11, and 16), and a bow(?).

One gift, a serpentine whetstone located between **TumJ** 4AB and **TumJ** 14, was lost before it could be catalogued.<sup>3</sup>

Reference above to a "carpet of coarse sherds" under the body is quite literal. An explanation could be that the body was originally on some light bench under which the row of pots had been placed. Then the collapse let the bench and body down to rest on the broken pottery. The clearance under the bench had to have been at least 0.43(?) m. to accommodate **TumJ** 17 (H. 0.41). Such a circumstance could have caused the spreading of the limbs and the displacement of the central bones of the body.

The sherds found with the skeleton yielded a collection of eight dark-fired jars, of which one, a large storage jar, was catalogued (**TumJ** 17); partial profiles of these have been drawn. Their position with reference to the skeleton is given:

<b>TumJ</b>	<b>17</b>	<b>Pottery:</b>	Necked storage jar (at left side pelvic region).
	<b>Uncat.</b> <sup>4</sup>		Sherds from necks and rims of necked jars (Fig. 25G): A at feet, B at right shin, C,D at left knee and thigh, E at pelvic region, F at neck and clavicles, G, location unknown.

### THE ROOF

The ends of two fallen roof planks lay high along the south wall of the chamber, showing only that the roof was single and the beams ran north and south. They were so disintegrated that their measurements are offered with reservation: W. 0.40, Th. 0.04 m. The rest of the roof planks left only reddish powder and stains among the stones of the sunken cap. The total number of planks, at the excavator's best estimate, was seven.

At 0.95 m. below the pit lip along the east end was a concentration of pinkish feathery grasses lying among the stones of the packing behind the wall (Pl. 34B), and also overlying and adhering to the upper surfaces of the recoverable roof timbers on the south side. It

3. Excavator's description in the field: L. 0.141; W. 0.009–0.007; Th. 0.005–0.004 m. Condition perfect, showing evidence of use on two faces.

4. Further details of description are in the caption to the figure mentioned.

appears then that a covering of reeds was laid over the roof and the side packing before the pile of stones was deposited and carried upward to form the cap.

*THE STONE CAP*  
(FIG. 26B-J; PLS. 34A,B, 36I-38D)

The stones which continued the side fill upward to cover the chamber proper were first encountered in the west side of trench 8. When the mantle in trench 9 was removed, the extent of the cap was defined by traces extending to 5.75 east-west x 6.50 m. north-south and was thus considered to be oriented north-south. The edges of the pile thus overran the edges of the pit proper. The western edge of the tumulus must have been carried down by surface erosion, as the top of the stone cap, having itself been partially eroded away, lay at a slant and only 0.20 m. beneath the 1951 surface.

The stones employed in the cap varied from fist-sized to a maximum of 0.50 x 0.70 m. Incidentally, the sizes of the largest stones correspond to those in the stone "circles" in the mantle (trench 1), which lay at two levels in the mantle and not on the ancient surface. This could mean that the stone source for the cap and that for the stone "circles" were the same—namely the walls of pre-tumulus structures, especially the long wall in trench 2.

At the southeast corner of the cap, however, an extension *ca.* 1 m. wide seems to project along the ancient surface for 1.10 m. beyond the south edge of the general rectangle. Under these stones was nothing; they were possibly simply residue.

In an area among the stones over the eastern third of the grave was a considerable collection of bronze objects, plus a little iron and pottery. The bronze objects were well scattered, bent, and some even folded before deposition. The weight of the stones crushed them further:

<b>TumJ</b>	18	Bronze:	fragments of a small cauldron with iron ring handle
	19		ring handle and attachment for cauldron
	20		attachments for bowl with swiveling ring handles and banded rim
	21		fragmentary arc from belt handle
	22-29		relief appliqués
	30	Iron:	ladle(?) handle (found adhering to wall fragments of TumJ 20).

*THE WEST SLOPE DEPOSIT*  
(FIG. 27A-H; PLS. 38E-40M)

Sherds from the lower mantle on the west side of trench 1 were later found to join some of those from the deposit of broken pottery in trench 8. The deposit thus began over the cluster of finds in the east side of the stone covering of the burial, in trench 9, and became a sort of upper continuation, with no boundary lines, during the buildup of the mantle.

It is significant that the deposits in the cap and in the mantle over it were of fragmentary and burned pieces. The discoloration of the polished pottery affirms this. The gifts in the burial (and the domestic debris in the house in the northwest corner) were not burned. No ashy area was noted in the cap or the mantle, as excavated, to signal a pyre, so any burning connected with the pottery deposit may have taken place at a distance (outside the area of the growing tumulus).

The collection of items in the deposit was, with few exceptions (parts of a horse's bridle, **TumJ** 31, 32), suitable to the preparation and consumption of a funereal banquet, and the sickle (**TumJ** 33) was appropriate for the cutting of the reeds laid over the roof.

The objects were of bronze, iron, pottery, and stone:

<b>TumJ</b>	31	Bronze:	fragment of horse-bit(?)
	32	Iron:	rings (2 1/2)
	33		sickle
	34	Pottery:	black-on-red conical bottle (among stones fallen into chamber)
	35		East Greek bowl with black painted decoration
	36		bichrome dinos with plastic decoration
	37,38		polished jug fragments
	39,40		polished jug or jar
	41		polished footed jug or jar with lugged rim and pre-firing patterned incision
	42,43		polished fragments of footed vessel
	44,45		polished body fragments
	46		polished foot fragment
	47,48		polished fragments of omphalos bowls
	49		polished fragment of petaled omphalos bowl
	50,51		polished tripod plates
	52,53	Stone:	tripod mortars.

*THE MANTLE*

The mantle lay for the most part over a casual scattering of stones and sherds. Except for the deposit on the west slope over the burial, the material—consisting of gravel and loam—was surprisingly clean. It was uni-

formly soft, containing a few mainly coarse gray sherds. However, from the northwest and northeast sections came a few items of bronze, clay, and stone:

<b>Tumj</b>	<b>54</b>	Bronze:	earring
	<b>55-57</b>		fibulae: XII,13 (all associated with bits of textiles)
	<b>58,59</b>	Pottery:	bichrome sherds
	<b>60</b>	Clay:	mold(?)
	<b>61</b>	Stone:	flint implement.

To these may be added a piece of hemp,<sup>5</sup> a sporadic find in trench 7, and a gray polished handle fragment (**Tumj 62**) from earth removed from the mantle by the excavation for the foundations of the expedition house. A fragmentary inscription on stone (**Tumj 63**) was found on the surface of the mantle in an unexcavated portion of the tumulus.

Minor disturbance may be indicated by the irregular circles of large and small stones mentioned above as lying near the surface in the east half of trench 1.

## CHRONOLOGY

The combination of objects found in Tumulus J is in many ways exceptional at Gordion: the absence of fibulae in the burial is unusual (matched only in undisturbed Tumulus KY and cremation Tumuli F, M, and E), weapons and hunting implements, on the other hand, are unknown in the other tumulus burials hitherto excavated at Gordion. The general arrangement in the burial resembles that of the Ankara warriors' graves, Fidanlık, and Anittepe I,<sup>6</sup> which contained no imports and have been difficult to date.

There are several clearly pre-Kimmerian Phrygian items in the Tumulus J burial: **Tumj 1**, the jug fragments, and **3**, the ribbed bowl. **Tumj 2** and **20** are basically pre-Kimmerian, but show modifications pointing to a slightly later date. **Tumj 12**, the tweezers, has a parallel in the mantle of Tumulus M, which covered a

cremation Lydian in date. **Tumj 13**, the ear spoon, has a parallel in the mantle of Tumulus K, the cremation in which dates possibly down to 600 B.C.

The general complexion of the burial assemblage approaches that with the horse burial at Norşuntepe (see below, p. 188).

Material in the stone cap shows that stronger connections exist, however, with Tumulus F, especially with reference to **Tumj 18** and **19**, small fragmentary bronze cauldrons with crescentic attachments. Also **Tumj 20**, a bowl, and **22-29**, the belts, show purposeful folding before deposit. One other example of this procedure occurred in Tumulus E.<sup>7</sup>

Another connection between Tumulus J and Tumulus K is to be seen in the fact that parallels for both **Tumj 34** and P 260 in Tumulus K were found together in a cremation at Kameiros (p. 68, n. 68).

Physical provenience assures that the West Slope Deposit should be contemporaneous with the deposition of the mantle, and therefore with the burial. **Tumj 35** dates with the earliest material in Deposit I at Tocra (620-500). Another indicative piece is the painted dinos, **Tumj 36**, which belongs after 625 B.C. The black-on-red imported conical bottle, **Tumj 34**, were it real Cypriote, would fall late in J. Birmingham's Middle Iron Age II (pre-600 B.C.; see p. 68 and nn. 65-67), but as a variant perhaps made in west or southwest Anatolia, Cypriote dating may not be strictly applicable to it. The plain wares in the deposit, **Tumj 17** and the uncatalogued jars listed on p. 57, form a group with necks and rims close to the group of banqueting jars thrown on the surface of the cremation in Tumulus F.<sup>8</sup>

A fibula from the mantle (**Tumj 55**) has good parallels in Tumuli S-I and N.

The date of this exceptional warrior's burial in Tumulus J probably falls between 625 and 600 B.C., and very likely close to that of Tumulus F (625-620 B.C.).<sup>9</sup>

Date: 620-600 B.C.

5. Textile sample 51-Text-3, A: "Tumulus J fill."

Warp (6) (Z) hemp, gray-green 0.018 m.

Weft (10) (Z) hemp, gray-green 0.016 m. (possibly dyed with indigo)

"This textile is cloth woven. . . The Z-spinning which appears in the sixth-century and later fragments is Asiatic in origin. It is very interesting to find it in Phrygia this early for it continues in the Byzantine and Turkish fabrics down to the present day. Either a vertical or a horizontal loom may have been used. . ." (Bellinger, "Textile Fragments," 1-2). See also Bellinger's further remarks on hemp in Tumulus MM at Gordion: *BullNBC* 46, nos. 1 and 2 (1962) 8 and pl. 8. Richard Ellis discusses terminology (in Young, *Gordion* I, 294-296) and analyzes the "veg-

etable" yarn (Yarn A in Fabric F) found on the two situlae from Tumulus MM (*ibid.*, 304 and pls. 63B, 100E).

6. Fidanlık: Hâmit Zübeyr (Kosay), *TTAED* 1 (1933) esp. 17 and figs. 13-17; Anittepe I: T. Özgüç, *Belleter* 11, no. 41 (1947) 59-69 (German tr.) and fig. 5.

7. See p. 207, n. 86, and Kohler, *Gordion* II, Pt. 2.

8. Compare rims, necks, and shoulders of jars in Fig. 25G with P 334 from Tumulus F (Kohler in *Young Symposium*, 74, fig. 6); *idem*, *Gordion* II, Pt. 2.

9. Kohler in *Young Symposium*, 66 and fig. 8 (p. 75). See also *idem*, *Gordion* II, Pt. 2.

## Catalogue

### IN GRAVE CHAMBER

#### TumJ 1-17 (FIG. 24B)

**TumJ 1**      **Bronze: fragments of wide-mouthed trefoil jug**  
B 406      South side  
PH. handle 0.125 W. handle 0.025 m.  
Pl. 35A

Rim piece and handle mended and bent. Many crumpled fragments of body.

Trefoil rim, slightly thickened at plain flaring lip. Point of tearing at bottom of rim section, although without folding or finishing, probably indicates junction with separate shoulder. Handle was looped flat vertical band of hollow double construction, one strip forming the inner face and exterior of sides, and another the outer face and interior of sides. Strips clamped at top, front one inside and back one outside the rim, fastened by two rivets with stud heads on interior. At lower attachment two more studs held both thicknesses of handle flattened against wall.

Although heavily damaged by the fall of stones, the fragments of **TumJ 1** show the common pre-Kimmerian technique of handle construction found on both large and small bronze trefoil jugs in Tumulus MM.<sup>10</sup>

As to proportions of rim and neck, however, the correlations are closer to those of the painted pottery in the burned stratum on the City Mound, e.g., P 2537 and P 2538 from TB 2.<sup>11</sup>

**TumJ 2**      **Bronze: petaled omphalos bowl**  
B 271      South side  
PH. 0.042 D. ca. 0.172 m.  
Fig. 25A; Pls. 33A, 35B,C

Crushed. Floor probably flattened; omphalos dented on top. Joins open where mended.

Omphalos on center floor set off by one ridge which occurs on interior only. Walls flare up in flattened hemisphere to plain erect rim. Petals unspined, in relief: fourteen base petals multiplying to fifty-six points at 0.01 m. under lip. Engraving, if any, not visible due to corrosion.

At least one of the petaled bowls in Tumulus MM comes close to **TumJ 2**: MM 103,<sup>12</sup> with one round ridge, the same number of unspined petals, about the same general size, and patched.

For summary of techniques used, see pp. 204-205.

**TumJ 3**      **Bronze: fragments of ribbed omphalos bowl**  
B 391      South side, west end, upside down  
PH. ca. 0.048 Max. dim. across rim as bent  
0.175 Pres. circumf. ca. 0.33 (incomplete)  
Max. dim. floor piece 0.105 PH. omphalos  
as broken 0.022 D. at outside of blunt  
ridge 0.0775 Th. cast fabric 0.001-0.0015  
m.

Fig. 25B; Pls. 33B, 35D

Preserved: A mended section of rim, B disjoined floor with broken omphalos; many wall fragments, and thin sheet fragments from omphalos.

Bottom flat and heavy. Omphalos hollow, stepped and stilted, mushroom-shaped, surrounded by four sharp concentric ridges and outer, blunter, ridge upon platform. Omphalos probably hammered above step and stilt, as wall of omphalos gradually thins toward its top. Interior wall of bowl curves through at least seven (preserved) horizontal flutings to erect rim thick and rounded at lip. Walls plainly curved on exterior, indicating that they had been cast.

Tumulus MM contained several cast ribbed bowls, e.g., MM 127-129<sup>13</sup> with omphaloi unstepped, unstilted. The stepped and stilted omphaloi occurred rather on petaled bowls, e.g., MM 71-73.<sup>14</sup> The exact combination of elements seen in **TumJ 3** is unusual.

**TumJ 4**      **Bronze: pair of knives<sup>15</sup>**  
B 272a,b      South side  
A L. 0.28 GW. 0.023 Th. through rivets  
0.009  
B L. 0.29 GW. 0.023 Th. through rivets  
0.008-0.010 m.  
Pl. 35E,F

Blade broken and mended on A; handle broken and mended on B; some rivets lost. Hard green patina preserved.

Long thin slightly curving blades sharpened on concave edges, continuing into straight thin handles set off at joint and butt by small rectangular cross-bands added on both faces. Between bands, finger-grip edges are decorated by sets of eight small scallops, each with rivet showing on both faces for securing pairs of half-handle plates of bone, ivory, or wood.

The shape of the blades on **TumJ 4AB** is basically early, a throwback to pre-Kimmerian knives with convex backs, concave cutting edges with slight setbacks not covered by the ultimate end of separate handle half-plates (i.e., setbacks not shielded *in* the handle). Many parallels for the shape of the blade were found

10. R. S. Young provided a detailed discussion of the technique: *Gordion I*, 116 and pl. 61 (MM 26-44), 225.

11. Formerly TB-E room. See Young, *AJA* 66 (1962) 166, pl. 48.

12. Young, *Gordion I*, 137 (bowl not ill.).

13. *Ibid.*, 142, fig. 91B-D and pl. 71D-F.

14. *Ibid.*, 132, fig. 86A-C and pl. 68B-D.

15. Young, *UMB* 17, no. 4 (Dec. 1953) 34 and fig. 27.

in iron in the burned buildings on the City Mound,<sup>16</sup> but none has an unshielded setback.

From various earlier sites there are related types in bronze: e.g., Boğazköy (BK IVc and IVb).<sup>17</sup>

All these appear not to fit into the classes of "one-edged bronze knives in the Aegean" as defined by N. K. Sandars.<sup>18</sup>

Relationships in general shape, though not in details of ornamental style, are rather to be found in areas of Eurasia: An-angy, Minusinsk, Seima, etc.<sup>19</sup> At these sites and at later Scythian centers, pairs of knives are not to be considered weapons, but rather hunter's implements for flaying and meat-cutting.<sup>20</sup>

The preserved patina (practically unknown at Gordion) may indicate importation. Chemical analysis is needed.

**TumJ 5** **Bronze: arrowhead, flat leaf-shaped**  
B 320a,b South side, east end, slightly  
above floor  
L. 0.046 GPW. 0.0115 m.  
Pl. 35G

Edges of blade nicked by corrosion. Barb shortened in cleaning.

Single thin long cone, modified by filing to small lozenge in cross-section, runs from haft to point; two narrow thin flat blades have greatest width at about their center length. Barb from base of one blade extended out and back even with proximal end.

Leaf-shaped arrowheads of the type of **TumJ 5** are common at Gordion, comprising about half the total number found piercing the Lydian walls or gathered from the Lydian floors of the fort on Küçük Höyük (546 B.C.);<sup>21</sup> the other common type from that site had a three-bladed triangular or leaf-shaped head.<sup>22</sup> This latter type is absent in Tumulus J.

**TumJ 6** **Bronze: arrowhead, lozenge section**  
B 388a South side  
L. 0.038 W. 0.012 m.  
Fig. 25C; Pl. 35H

16. McClellan, *Iron*, 176 (knives of her type IB), 191. See K. DeVries in *Young Symposium*, 39 for mention of iron knives of this blade-shape in CC 3, where evidence of meat-processing was observed.

17. Bohmer, *Kleinfunde*, 79, no. 258 (pl. XV).

18. *PPS 21* (1955) 174-197.

19. See general presentation in Jettmar, *Steppes*, 70 ff. and figs. 36-38. Examples from the Minusinsk region have a haft with serrate design along the lower edge (for a more secure hold?): Carter, *Symbol*, 77, pl. 9c, 96, pl. 20b.

20. Consult A. I. Melnikova, *Scythian Weapons*, a survey of weapons from many Scythian sites. Knives are not considered weapons.

The position in which our knives were found *in situ* (see Pl. 32C) was suggestive of two-handed cutting, as in the fine-chopping of meat. This theory, however, appears not to agree with the

Stump of barb preserved.

Willow-leaf-shaped in outline only, with longitudinal hollows along spine which modify solid lozenge-shaped cross-section.

**TumJ 7** **Bronze: arrowhead, lozenge section**  
B 388b South side  
L. 0.036 W. 0.0095 m.  
Fig. 25C; Pl. 35I

Barb preserved.

Leaf-shaped in outline only, with longitudinal hollows as on **TumJ 6** in proximal half of head.

**TumJ 8** **Bronze: arrowhead, lozenge section**  
B 388c South side  
L. 0.0335 W. 0.0085 m.  
Fig. 25C; Pl. 35J

Barb preserved.

Leaf-shaped in outline with hollows in proximal half only and very small hole in one blade near point.

**TumJ 9** **Bronze: arrowhead, lozenge section**  
B 388d South side  
L. 0.03 W. 0.0105 m.  
Fig. 25C; Pl. 35K

Stump of barb preserved.

Single long straight-sided cone from haft to point, hollowed at base. Two blades are thick at center and sharpened along leaf-shaped edges to give whole point lozenge-shaped section. Head solid back to pair of capes overhanging socket, with small sharpened stepped-back areas at proximal end of head on each side.

**TumJ 10** **Bronze: arrowhead, lozenge section**  
B 388e South side  
L. 0.0285 W. 0.01 m.  
Fig. 25C; Pl. 35L

Like **TumJ 7**. Head is shorter leaf with smaller lengthwise hollows modifying lozenge section. No barb.

Five arrowheads, **TumJ 6-10**, were preserved out of an original group of seven. These were found together, all pointing southeast (see Fig. 24B), and are closely related, being lozenge-shaped in section throughout

statement by T. Sulimirski (*CHI II*, 153) that among the earlier Steppe Scythians, "... hunting was not for the provision of meat; it was practiced chiefly for sport and pastime." Perhaps at Gordion circumstances were altered.

21. Simple two-bladed, socketed, leaf-shaped arrowheads were found in pre-Scythian (late eighth- to early seventh-century) contexts in the Caucasus and the north coast of the Black Sea (see Melnikova, *Scythian Weapons*, 10 and pl. 1[51-24]). These continue in the "first Scythian chronological group" (late seventh- to early sixth-century contexts). See *ibid.*, 28, fig. 1 (typology) and pl. 6(A2, Π9).

22. These are basically of McLeod's "Iranian" type. See W. E. McLeod, *AJA* 64 (1960) 370, ill. 1b: "... of Iranian provenience (both Scythian and Persian), . . . current throughout the Near East from the seventh century . . ." See his extensive bibliography (*ibid.*, 371, n. 3) for this type with three-bladed leaf shape.

their double-bladed heads, and having conical sockets. The blades are variously gouged or stepped back in the proximal part of the head. Single barbs (except in the case of **Tumj 10**) are rooted at sides of cones and bend back to end flush with proximal ends of sockets. All blades show deft filing to achieve a fine double bevel on the edges and a central ridging which extends to an exterior modification of the conical sockets. Details of the heads differ.

Shafts for these arrowheads, if present, must have lain together in the space found empty northwest of the heads. These would have been of perishable materials such as reed or ash. The heads were so bunched as to suggest that they once lay in a quiver.

These lozenge-sectioned types, exceptionally shaped (for Gordion), are also two-bladed, and so fall in Melnikova's Scythian group 1. She places examples similar to those from Tumulus J in her type 2, variants 2, 3, and 4.<sup>23</sup>

**Tumj 11**     **Bronze: fragments of small band clamps**  
 B 399     East end, crushed into floor  
 Type A L. 0.031    W. band 0.008    Th. shaft  
                   0.0015  
 Type B L. 0.026    W. band unknown    Th.  
                   shaft 0.002+ m.  
 Pl. 36A

Five rivets preserved; one type A, two type B, two fragmentary. They differ only in their measurements.

Rivets square in section, with parts of small bands they bound together still adhering at right angles to their ends. Rivet heads barely flattened.

Such tiny band clamps, lying huddled ca. 0.40 m. from the arrowhead **Tumj 5**, which lies with its point to the north, suggest the fastening for a belt or shoulder-strap on a second quiver which has been lost to us. For first quiver, see under **Tumj 10**.

**Tumj 12**     **Bronze: tweezers on ring**  
 B 367     South side  
 L. 0.07    GW. 0.0115    D. ring 0.018 m.  
 Fig. 25D; Pl. 36B

Mended, complete.

Long flaring tweezers with straight spatulate tips. At top "legs" are folded to form loop for suspension with four fine grooves over arch. Lashed around it just below arch, to keep

spring closed, is flat ring formed by band grooved four times, to create bead and double reel. Ends of circular band close flush at one side. Through loop at top was thrust small rod, round in section, closed to form suspension ring.

Several different basic types of tweezers have been found at Gordion. **Tumj 12**—with its central cast part small and light, wrapped round by a cylindrical keeper without rivet or suspended pick, and with widening legs—can be associated with only one other example (B 446) known to me of the same type, from the mantle of Tumulus M.<sup>24</sup> The contents of the mantle of Tumulus M date before ca. 546 B.C. This can help with the dating of Tumulus J in only an indirect way, but there are clear differences here from the earlier, Kimmerian type.<sup>25</sup>

**Tumj 13**     **Bronze: ear spoon**  
 B 401     South side  
 L. 0.053    GW. 0.005 m.  
 Pl. 36C

Mended, complete.

Tiny rod of bronze, round in section. At one end, round spoon-shaped bowl; in center, decorative molding of three raised rings; at other end, one raised ring and hole pierced transversely for suspension.

Bronze ear spoons resembling **Tumj 13** were found at Boğazköy. They are absent in period BK II, but fairly similar types (i.e., with small amounts of molded decoration but none at center of stem) occur in period BK I.<sup>26</sup>

A bone example (BI 85) from Tumulus K also has molding on the stem.<sup>27</sup>

**Tumj 14**     **Iron: spearhead**  
 ILS 86     South side  
 Total L. *in situ* 0.395  
 A (blade section) PL. 0.268    GW. 0.048  
 B (socket section) PL. 0.145    GW. 0.032 m.  
 Fig. 25E; Pl. 36D

Blade and socket comprise two mended, nonjoining sections. Central portion lacking. Rusted and laminated.

Blade narrow lanceolate with thick midrib; roughly lozenge-shaped in cross-section. Socket long hollow cone.

McClellan<sup>28</sup> discusses thrusting versus throwing weapons and considers that the leaf-shaped blade of **Tumj 14** makes it a spear (i.e., for thrusting). Although

23. Melnikova, *Scythian Weapons*, 28, fig. 1, which is accompanied by text-*pl.* V. Actual examples are very close to **Tumj 6** (pl. 6 [Д 2]) and **Tumj 7** and 8 (pl. 6[B1]). **Tumj 9** is related to group I, type 6, variants 2 and 3 (*ibid.*, 28, fig. 1, and finds on pl. 6 [Д 24,25]). See bibliographies, 86–88.

24. Kohler, *Gordion II*, Pt. 2. The dating of Tumulus M at this time awaits further refining.

25. Contrast the heavier central parts on **Tumky 17**, Pl. 45J.

26. Boehmer, *Kleinfunde*, 128–129, nos. 1153–1157 and 1158A (BK I).

27. Kohler, *Gordion II*, Pt. 2. See BI 85 from probably undisturbed part of mantle (dating to 600 B.C. or earlier). BI 85 is illustrated in Sheftel, *Ivory, Bone and Shell*, 285, spoon no. 10, pl. 44a.

28. *Iron*, 59–60.

**TumJ 14**<sup>29</sup> is larger than the other iron spearheads from Gordion, it is comparable in length with iron spearheads of the period from Greece and the Near East.<sup>30</sup>

The width at the base of the blade of **TumJ 14** cannot be ascertained, but it appears in general similar to Snodgrass's type E, which he considers European in origin.<sup>31</sup> The type appears also in Scythian graves in the Caucasus.<sup>32</sup>

**TumJ 15**     **Iron: large arrowhead**  
 ILS 124       South side  
 PL. point 0.051   GW. 0.014   L. pin: exposed  
           0.016, inside socket 0.017 m.  
 Pl. 36E

Two pieces. Point split by oxidation. Small bit of wooden shaft remains on exposed tang.

Arrowhead has hollow cylindrical socket which continues as conical head. Near point, head appears to have flattened to lozenge section and then come quickly to point. Separate short iron tang fits inside socket of arrowhead, and also continues into wooden arrow shaft.<sup>33</sup>

**TumJ 16**     **Iron: double ax**  
 ILS 87        South side  
 Section A PL. 0.148   GPW. 0.0435  
 Section B PL. 0.071   GPW. 0.033 m.  
 PD. inside socket 0.017 m.  
 Fig. 25F; Pl. 36F,G

Many oxidized fragments mended into two nonjoining sections; many additional chips. One long, narrow piece extends to sharpened convex end; second piece includes shaft-hole and is broken off across blade close to hole.

When **TumJ 16** was found, traces of the full double ax (not ax-adze) blade could be measured. Fragments of its wooden handle were still visible inside the shaft-hole and running for a short distance on the floor (PL. *in situ* 0.325 m.). Note in Fig. 24B the position of the group of arrowheads near one end of the ax. The ax handle and arrow shafts would have lain parallel to each other; there is no doubt but that we are dealing with a *weapon*.

H. Erkanal published three second-millennium double axes of bronze from Kültepe (Karum Kaneş II),<sup>34</sup> Tarsus (LB I),<sup>35</sup> and Emirdağ,<sup>36</sup> which are close except for their smaller size and a fine marginal ridge across the top of each face. These probably are not ancestral

to **TumJ 16**.

Herodotos<sup>37</sup> considered the ax to be a weapon of the Scythians, Amazons, and barbarians of the Black Sea region, and Xenophon<sup>38</sup> observed that battle axes were still being used by some peoples living in Armenia and Colchis.

Direct Iron Age parallels in iron are not yet forthcoming from Anatolia; the soldier in Tumulus J may have learned to use the ax as a weapon somewhere in the East before he came to Gordion.

**TumJ 17**     **Pottery: black-ware narrow-necked storage jar**  
 P 595        Mainly from left side pelvic region  
 H. 0.41   D. base ca. 0.14   D. 0.40   D. rim 0.17  
           m.

Fig. 26A; Pl. 36H

Mended, with small gaps.

Base flat, body wide ovoid. Neck short, slightly concave under rolled-out thickened rim, ledged inside.

Clay coarse, gritty, hand-smoothed; fired gray-buff at core, and black on surface.

**TumJ 17** belongs in a line continuing from TumV 64, **TumG 13**, and TumP 105. See p. 222.

Other storage pots found with the skeleton, but uncatalogued, are illustrated on Fig. 25G. See p. 57 and n. 4.

## IN STONE CAP **TumJ 18–30**

**TumJ 18**     **Bronze: fragments of a small cauldron with iron ring handle**  
 B 402        East end of cap, found crumpled  
           and wrapped around **TumJ 20**.  
 Est. D. 0.24   PL. lgst. pc. 0.103   W. rim 0.013  
           H. handle plate at center 0.02   W. handle  
           plate 0.058   D. bronze ring 0.018   W. iron  
           ring 0.10   Th. iron ring 0.0085 m.  
 Fig. 26B; Pl. 36I

Rim fragments curled; iron ring broken and rusted in lifting position. Horizontal rim broken away at point where attachment is preserved.

Rim appears to be horizontally everted collar on small cauldron. Rim separately made and applied by being rolled and hammered to fit inside primary pot lip, which is slightly

29. *Ibid.*, 52, no. 57, pls. 2, 42.

30. *Ibid.*, 61–62.

31. Snodgrass, *AAG*, 96–97; *idem*, *EGAW*, 121–122.

32. Melfikova, *Scythian Weapons*, pls. 2[1–4], 14[1–4]; also Potratz, *Skythen*, 193 and pl. 3 (examples from Hungary in the National Museum, Budapest).

33. McClellan, *Iron*, 6, no. 1, pl. 41.

34. Erkanal, *Äxte*, 21, no. 66 = T. Özgüç, *Belleten* 19 (1955) 79.

35. Erkanal, *Äxte*, 21, no. 67 = H. Goldman, *AJA* 41 (1937) 271, fig. 19; *idem*, *Tarsus II*, 289, no. 27, fig. 425.

36. Erkanal, *Äxte*, 21, no. 68 (see pl. 9A) – Bittel in *Festschrift Eilers*, 418 and fig. 2, which shows no ridge on upper margin.

37. VII.64.

38. *Anabasis* IV.iv.16–17, V.iv.13.

thickened and flattened on top. Crescentic plate attachment, placed under rim and secured by two rivets located out toward points, holds vertical ring, square in section, from which "hangs" iron carrying ring, round in section.

**TumJ 19**     **Bronze: ring handle and attachment for small cauldron**

B 403     East end of cap  
H. att. 0.028   W. att. 0.07   D. fixed ring 0.022  
OD. free ring 0.064  
Fig. 26C; Pl. 36j

Complete.

Crescentic plain flat attachment with rivet hole near each point. Rivet heads flat-convex. Curve of attachment would fit deep bowl with dinoid rim. At center of attachment vertical ring, square in section, and grooved once near each edge, supports free-swinging bronze suspension ring, round in section, with ends meeting not quite flush.

Small cauldrons **TumJ 18** and **19** have crescent-shaped handle attachments instead of the neat T-attachments of the pre-Kimmerian groups (TumP 3–5 and MM 4–9).<sup>39</sup> Such crescent attachments on small cauldrons appear elsewhere at Gordion in Tumulus F (B 470),<sup>40</sup> which is datable ca. 630–620 B.C. from a Corinthian alabastron in the cremation deposit. B 470, like **TumJ 19**, had a grooved vertical bronze ring, but the swiveling ring was of iron.

**TumJ 20**     **Bronze: fragments of bowl with swiveling ring handles and banded rim**

B 405     Found folded, inside **TumJ 18** and associated with **TumJ 30**.  
Est. D. rim extrapolated from band measurements 0.31   Th. rim 0.0025   L. rim bands (cord) 0.143   H. spools 0.025   H. bolster 0.037   W. bolster 0.033 m.  
Fig. 26D; Pl. 37A

Many flat folded sheets preserved from wall of open bowl. Knob and tops of ridges on bolster burst from corrosion.

General curve of bowl wall unknown. Rim appears to be slightly flaring, a little thicker than wall, plain, rounded over top; made by hammering sheet of wall back double toward inside. Rivet holes appear under rim down 0.011 from lip and ca. 0.11 m. apart.

Bolster attachment has three deep thin plain vertical moldings, central ridge supporting very plain decorative knob trimmed in back to rest on rim. Holes in ends of bolster (D. 0.0035 m.) to take swiveling ring handle. Triangular cutouts, between handle holes and wall of bowl, to accommodate

sharpened ends of rim bands. Two cast rim bands (preserved out of four) curved to hug bowl wall, are solid, arched in section, and extend in both directions to spools, which are fastened transversely by rivets and have tops which fit over rim, supplying small, plain decorative studs.

Young<sup>41</sup> cited **TumJ 20** on his list of known parallels to bronze bowls with rim bands in Tumulus MM, especially MM 55–62 (four spools).<sup>42</sup> Of these, MM 62 seems closest as to slight flare of lip, shape of bolster, and number of decorative studs.

Most examples from MM have spools riveted to the wall of the bowl with tops flush with the rim on its exterior. The trick of cutting out the backs of spools to allow the tops to rest over the rim is evidently a step between the techniques in MM, where in a few cases the spools left an unstudded "button" partially resting on the rim (e.g., MM 59), and that used for B 325 and 326 in Tumulus A.<sup>43</sup> In the latter case the back of the spool was cut half away vertically to adjust for a highly developed knob resting on the rim.

Tumulus F (B 468)<sup>44</sup> furnishes a late seventh-century parallel for a bowl of this type found neatly folded in a burial (cremation).

**TumJ 21**     **Bronze: fragmentary handle from belt**

B 398     East end of cap  
PL. 0.035   GPW. 0.024   GPTh. 0.014   Th. arc 0.005 m.  
Pl. 37B

All corner edges exploded by bronze disease. Scar of attachment point at back not entirely clear.

Basic arc of handle round in section. Molded decoration at end of arc (listed from inner break): thin sharpened small rectangular plate, wide groove, thick rectangular block, thin reel-like ridge set off by narrow grooves, then large end block which may have small beveled plane as extension. Outer end of arc is plain, flat.

The alternation of cubes with reels along the arc of **TumJ 21** is unique on belt handles at Gordion, but occurs on a fibula from the mantle of Tumulus E (B 127).<sup>45</sup> The closest examples of actual handles of this type are **TumS1 18** and **19**, which are decorated, however, with groups of bead and reel.

Such handles usually accompany solid belts (see **TumS1 11, 12**, p. 126),<sup>46</sup> so **TumJ 21** may be fortuitous here.

39. For TumP 3–5: Young, *Gordion* I, 11–12; for MM 4–9: *ibid.*, 110–111. For a general discussion of small cauldrons with T-shaped attachments: Knudsen, *Phryg. Met. and Pot.*, 287, and Young, *Gordion* I, 223–224.

40. Kohler, *Gordion* II, Pt. 2; see Knudsen, *Phryg. Met. and Pot.*, 287–288.

41. *Gordion* I, 229, 233.

42. *Ibid.*, 125–128.

43. Kohler, *Gordion* II, Pt. 2.

44. *Ibid.*

45. *Ibid.*

46. See also Caner, *Fib. in Anat.* I, 193–198 and pls. 77–81.



The group of appliquéés (**TumJ 22–29**) which follow was huddled together in a pocket in the top of the east end of the stone cap (Pl. 34B). All were cut from thin bronze sheet with repoussé designs in their centers and sewing holes around their margins. Front faces have been distinguished from backs by determining that their sewing holes lie in sunken margins and were punched from the front. All designs are to be read as raised, the fields sunken.

**TumJ 22 Bronze: appliqué band of rectangular dotted-H panels**

B 392 East end of cap  
GPL. lgst. pc. 0.09 H. panel 0.083 H. H  
proper 0.035 W. H proper 0.043 m.  
Fig. 26E; Pl. 37C

Mended section and fragments (23).

Repoussé plaque design with parts of at least four rectangular spaces in a row framed by three raised lines, within which raised Hs with dots in their curved bays. In addition three-line raised dividers are shared with neighboring rectangles. Sewing holes occur at intervals of 0.005–0.006 m. on flat narrow margin outside raised lines.

**TumJ 23 Bronze: appliqué plaques, plain rectangular H panels**

B 393 East end of cap  
L. plaque 0.121 W. plaque 0.116 H. H 0.052  
W. H 0.057 m.  
Fig. 26F; Pl. 37D

Six corner fragments indicating at least four individual plaques. Probably not a band.

Repoussé design in each: inside frame of three raised lines, raised Hs with plain bays deeper than a semicircle. Each panel has sewing holes on all four sides spaced unevenly at 0.003–0.004 m.

**TumJ 24 Bronze: appliqué band of side-laid rectangular H panels**

B 394 East end of cap  
H. band 0.11 PL. band at least 0.58 H. H  
0.024 W. H 0.046 m.  
Pl. 37E

Fragments give evidence for nine rectangular panels in band (or in group of two by four).

Repoussé design in each is very short, wide H with semicircular bays, in rectangular panel framed with two raised ridges. Neighboring panels share one ridge, and whole assembly is edged with punched sewing holes unevenly spaced at 0.003–0.004 m. apart (c-c).

Lack of enough joins to strips with sewing holes prevents a satisfactory solution for the shape of the band.

**TumJ 25 Bronze: appliqué fragments of square dotted-H panels**

B 395a East end of cap  
Panels 0.017 x 0.017 W. channels 0.008 D.  
bosses 0.004 Max. dim. lgst. pc. 0.068 m.  
Fig. 26G; Pl. 37F

No edges preserved, so number of panels in band or compound panel unknown. Many pressed together to many thicknesses; some interfolded with fragments of **TumJ 26**.

Repoussé design: lattice of square spaces, separated by crossing rows of raised dots (six per side); in each inner rectangle, raised small H with dots in spaces.

One piece preserves wire, square in section (i.e., cut from sheet), running through three sewing holes and completing one stitch.

These H-panels, when arranged in vertical rows of six Hs and seven channels, give a width of 0.17 m. for a theoretical belt, leaving room only for an edging of sewing holes.<sup>47</sup>

**TumJ 26 Bronze: appliqué fragments of square rosette panels**

B 395b East end of cap  
Panels 0.026 x 0.026 W. channels 0.008 D.  
bosses 0.004 Max. dim. lgst. pc. 0.055 m.  
Fig. 26H

No edges preserved, so number of panels in band or compound panel unknown. Pieces are folded over and also interfolded with **TumJ 25**, but **TumJ 25** and **26** do not appear on same piece.

Repoussé design: checkerboard of square spaces separated by crossing rows of raised bosses (seven per side). In each panel, rosette of eight petals sharing outlining ridges and central circular ridge around boss; one raised boss in each corner field.

With the use of five rosettes alternating with six dividing channels, the addition of an edging of sewing holes would put the width just beyond 0.17 m. In Tumulus F similar rosettes<sup>48</sup> are found pressed into gold sheet and cut into round sequins for sewing on other material. See other parallels with Tumulus F (pp. 63–64, etc.). The thematic material, rosettes in squares, is shown by R. M. Boehmer<sup>49</sup> to be Assyrian in character, rather than Phrygian.

47. A width of 0.18–0.20 m. is to be considered a common range for the softer, more pliable leather backs of belts, i.e., of the type made of decorative bosses tacked or sewn to leather. MM 170–179 (Young, *Gordion* I, 147–154) are examples of this type. These in J, being of solid bronze sheet from edge to edge applied to leather, were sensibly a little narrower.

Sheets of similar embossed undotted H-panels were found, out-

side the chamber also, in S. Buluç's Bestepiler tumulus (Mellink, *AJA* 94 [1990] 140 and fig. 16).

48. R. S. Young, *UMB* 17, no. 4 (Dec. 1953) 32, 33 (fig. 24); see Kohler, *Gordion* II, Pt. 2, J 46, 47 (sequins).

49. *AA* (1973) 163, citing A. L. Oppenheim, *JNES* 8 (1949) 175 f., 186.

**TumJ 27 Bronze: appliqué fragments, straight edging of raised bosses between lines**

B 400 East end of cap  
D. bosses 0.0075 Dist. sewing holes c-c 0.005  
D. sewing holes 0.0015 m.  
Pl. 38A

Three edge pieces plus one from interior.

Sewing holes large, close to edge and close together. Border: repoussé pattern of bosses between narrow ridges. Inside piece has three ridges beside bosses, which may be extension of design on other three fragments, or may be different.

**TumJ 28 Bronze: fragmentary round appliqué raised cross-in-circle**

B 396 East end of cap  
D. 0.073 D. inner circle 0.018 Dist. sewing holes c-c 0.004–0.005 D. sewing holes 0.001 m.  
Fig. 26I; Pl. 38B

Two preserved; one in good condition.

Repoussé design: four flat sunken circles tangent to sunken framing band form raised Maltese cross with curved ends. Whole frame formed by said sunken band, then raised band, then sunken edge band for sewing holes.

Although these plaques are to be sewn individually to a background, each employs the same design (four circles inscribed in a circle) found on a diapered plaque from Ankara now in the Istanbul Archaeological Museums.<sup>50</sup> Firatlı believed that the circles could be extended, if three zones high, to exactly 0.17 m., which, again on the analogy of the belts in Tumuluz MM,<sup>51</sup> he considered to be a standard belt width.

The design also occurred on a bronze appliqué from the Heraion at Samos,<sup>52</sup> and upon a more remotely related example from Büyükkale at Boğazköy.<sup>53</sup>

**TumJ 29 Bronze: fragments of large concentric ridges near straight edging**

B 397 East end of cap  
Est. D. circles 0.17 m.  
Pl. 38C

50. N. Firatlı, *Belleten* 23 (1959) 206–211. The plaque fragments came from an unknown tumulus encountered during the enlargement of the Gazi Orman Çiftliği in 1938.

51. See n. 54.

52. G. Kopcke, *AthMitt* 83 (1968) 292, no. 116, and pl. 124[1]. This is more highly embellished than TumJ 28, but Kopcke calls attention to a very simple Achaemenian version (pl. 124[2]) from a relief in the Apadana in Persepolis. On pp. 303–304, Kopcke assigns his no. 116 "vielleicht" to a group dated in the second half of the eighth century B.C.

53. H. Otto in *MDOG* 78 (May 1940) 49 and fig. 9[2] (BK II); Bochlau *et al.*, *Lar. am H.* III, pl. 10.

54. Young, *Gordion* I, 147–153 (MM 170–178): leather belts 0.17–0.20 m. wide with designs of studded squares. Slightly larger

Four fragments from plaque or plaques with repoussé concentric-circle decoration. Sewing holes, on straight edge, 0.004 apart, set in 0.008 m.

Preserved design: straight edge plus two spaced thin raised ridges in concentric circles. Central design, if any, unknown.

These fragments appear to be related to the design on the disks from Tumuluz MM.<sup>54</sup>

The fact that the groups of fragments (TumJ 22–28) can be assembled into strips approaching 0.17 m., close to the width of the belts in Tumuluz MM, means that it is probable that a roll or folded mass of several belts was deposited in the stone cap of Tumuluz J as a gift to the warrior in the grave.

The plaques come with designs of several sizes, but perhaps not more than one design was used for a single panel. On the sculpture at İvriz<sup>55</sup> usually cited in connection with these belts, no mixture of designs can be seen. The smaller squares of Hs and rosettes make a more delicate all-over diapering than do the larger squares in the MM belts, and those on the sculpture from İvriz.

There is of course the possibility that the patterns combine into decoration for some sort of cuirass or other garment,<sup>56</sup> although the areas of any one design have not been preserved beyond the width of a belt. On the other hand, no bronze end-plaques and no loose tacks with hollow hemispherical heads, which usually occur with the disk-and-flap belts of MM type, came to light in Tumuluz J. We have, then, plaques cut from sheet with a combination of large concentric circles and the old pre-Kimmerian designs in squares framed by rows of studs (see n. 47), here all sewn to a background; the studding, however, is in repoussé and the fastening is some device other than an end-plaque.

If these do form a belt, it is not of the type with overlapping scales seen on the Scythians of the fifth to third centuries in Iran. A. Mancevic<sup>57</sup> discusses Scythian belts as having magical powers because from them were suspended the sword in its scabbard, the gorytus with bow and arrows, the cup, and the sharp-ening stone.

disks (D. 0.18–0.21) covered one end and "end plaques" the other.

55. Akurgal, *Kunst. Anat.*, 61, fig. 38; *idem*, *Kunst. Heth.*, pl. 140 and color pl. XXIV.

56. See the various examples of oriental and Phrygian "Kassettenmuster," both lozenges and squares, on sculptural representations beginning in the eighth century and found as late as certain Ephesus ivories which Boehmer dates to the mid-seventh century (R. M. Boehmer, *AA* [1973] 152–172, and figs. 16–23). These generally may be forerunners for the use of sewn-on bronze plaques like TumJ 22–28, especially the single panels, perhaps to be used on Phrygian "Prunkgewänder" of oriental type. The further possibility exists that these may belong to some equestrian accoutrement.

57. *Sovetskaya Arkheologiya* 7 (1941) 30 [French summary].

- TumJ 30 Iron: ladle(?) handle**  
 ILS 123 Crushed and dispersed among stones, one piece touching **TumJ 20**  
 PL. 0.147 GW. 0.042 m.  
 Fig. 26j; Pl. 38D
- Basal attachment preserved. Broken at upper, bent, end. Evidence was once on back showing association with bronze. Needs more cleaning.
- Profiled band handle has on both edges thickenings which leave flat area down center. Two crosspieces, one at attachment and another 0.09 m. from it, near curving end.

No other iron ladle handles have been identified at Gordion. The tripartite longitudinal division and the placement of the front bolster at top near the bend of the handle best parallel **TumS1 2** and **3**, but also to a lesser extent MM 47 and 48 and K-IV 4.<sup>58</sup> The handles from P, K-III, and Fidanlık are different. Whether the cup in this case was of iron or of bronze is not clear, but it would have been difficult to form a circular hollow on an anvil. There are several instances in pre-Kimmerian and early post-Kimmerian Gordion of iron used as an attachment on other types of bronze objects.<sup>59</sup>

McClellan<sup>60</sup> sees in addition a possibility that **TumJ 30** may be a horizontally placed handle for a shallow vessel, perhaps of frying-pan type.

## WEST SLOPE DEPOSIT **TumJ 31-53**

- TumJ 31 Bronze: fragment of horse-bit(?)**  
 B 422  
 GPL. 0.093 D. ring 0.057 PL. rod 0.036 m.  
 Pl. 38E
- Broken across bar of bit.  
 Ring round in section. From one point on circumference springs straight rod, square in section.  
 Ring and rod cast in one piece.
- If this part is the rein-ring, the bit could have either a one- or a two-piece bar. If it is one of the central rings of a two-piece bar, the other central ring would have been put through this ring and bent to close.

- TumJ 32 Iron: rings (2-1/2)**  
 ILS 96  
 A OD. 0.043 Th. 0.014  
 B OD. 0.042 Th. 0.013  
 C OD. 0.049 Th. 0.012 m.  
 Pl. 38F
- A and B complete; C broken open and slightly pulled out. Plain rings, round in section, formed by bending of rods; meeting points not evident on complete examples.

These, together with **TumJ 31**, may be fragments from a horse's bridle.

- TumJ 33 Iron: sickle**  
 ILS 98  
 L. straight across blade 0.19 GPL. tang ca. 0.05 m.  
 Fig. 27A; Pl. 38G
- Flat curved blade sharpened on inner, concave edge. At wider proximal end of blade, thick short tang. Distal end tapers to point.

J. McClellan treats this single example of an "angular sickle with turned up tang" as a specialized reaping implement, with handle of Bronze Age type;<sup>61</sup> the blade, however, is of common Iron Age type, as at Phrygian Alishar (in bronze).<sup>62</sup>

- TumJ 34 Pottery: black-on-red conical bottle or jug**  
 P 578 Scattered in stone and earth fill of chamber  
 H. 0.137 D. base 0.045 GD. 0.053 D. rim 0.032 m.  
 Fig. 27B; Pl. 38H
- Mended. Marks of burning on lower body. Breaks removed evidence for handle, if any.  
 Base flat, beveled around bottom of slim conical body. Shallow finger-width depression around neck below plain short flaring rim.  
 Matte black paint in wheel-run bands: two around base, three at center height, two below upper neck ridge.  
 Heavy fabric, clay slightly gritty, containing silvery and golden mica. Vertically stroke-burnished over paint. Fired reddish buff to brown throughout.

**TumJ 34** appears thicker at the shoulder and more plainly decorated than do the similar jugs of Cypriote Black-on-Red II (IV) ware.<sup>63</sup> Related forms in White

58. For **TumS1 2** and **3**, see below, Pl. 64C-E; for MM 47 and 48, see Young, *Gordion I*, 123, pl. 64A,B; for K-IV 4, see G. Körte in *Gordion*, 101, fig. 74.

59. See TumP 2, collar on cauldron (Young, *Gordion I*, 11, pl. 7B); ring handle, ILS 753 (*ibid.*, 28, fig. 17). See McClellan, *ibid.*, 29 and n. 49.

60. *Iron*, 430 no. 323, and 440.

61. *Ibid.*, 323-324 (no. 234), 327, 341, citing Deshayes, *Outils*, nos. 2618, 2814.

62. Osten, von der, *Alishar 1930-32 II*, 442, fig. 495[e 1580].

63. SCE IV:2, 69 and fig. XXXVIII(11)4A, 12)4B).

Painted IV ware show similar necks and bases, but not both on any one vessel. Cypriote Black-on-Red II (IV) dates to Cypro-Archaic I (A: 700–650; B: 650–570)<sup>64</sup> and somewhat later.

J. Birmingham<sup>65</sup> collected from the West Asian mainland and from Cyprus examples made in the Black-on-Red technique which she placed in her Middle Iron Age group (900–600 B.C.).<sup>66</sup> Her class iiiiB, “Black-on-Red miniature neck-ridged conical flasks,” occurs on both mainland and Cyprus; she offers a list of proveniences, and a corrective suggestion for the dating of her flask form iiiiB in her Middle Iron II (725–600).<sup>67</sup>

One very close parallel for **Tumj 34** occurred in an “area of cremation” (X) in the Papatilures Cemetery at Kameiros.<sup>68</sup> The handleless bottle (X:2, H. 0.15 m.) was accompanied by an alabastron of pottery coated with vitreous glaze similar to the example in Tumulus K (P 260, dated ca. 600 B.C.). This juxtaposition should serve to bring the dates for Tumuli J and K fairly close together.

A “local brown-banded” handleless version of similar shape, found in Tarsus, is called a “long alabastron” by G. M. A. Hanfmann.<sup>69</sup> The size is similar to ours.

**Tumj 34**, with burnishing over the black paint, and slight modification of neck shape, is difficult to place in the regular Cypriote sequence. The southwest Anatolian variants on West Asian and Cypriote shapes, done in Black-on-Red technique, have yet to be clearly determined (see pp. 216–217).

**Tumj 35 Pottery: fragments of East Greek bowl with black painted decoration**

P 591

GPH. ca. 0.08 Est. D. rim 0.13 Max. dim.

lgst. pc. 0.07 m.

Fig. 27C; Pl. 39A

Mended section from wall/rim and from floor/wall. Paint peeling in spots. Burned.

Slope of wall almost hemispherical; rim slightly inverted with plain thin lip. Thin horizontal handle just under rim.

Black painted decoration: on exterior, five (visible) bands, each a wide line between narrow lines; on interior, all over walls but for one narrow reserved band; near center floor, thin bands with dots between them; and at center, band of framed dots. Exact center design unknown.

64. *Ibid.*, 451.

65. *AJA* 67 (1963) 32–36.

66. *Ibid.*, 35, 36, pls. 1 and 2.

67. *Ibid.*, 39, 40.

68. *Cl. Rh.*, 42–43 and fig. 43.

69. In Goldman *et al.*, *Tarsus* III, 134 (from main floor of site Xb, dated ca. 650–615 B.C. by accompanying imports), 248, no. 1086, fig. 84. This falls in Hanfmann’s “Late Iron Age” (see also *idem* in *Aegean and Near East*, 166).

70a. Boardman, *Troia AD II*, 5 (Deposit I, dated 620–590), 20–24. **Tumj 34** relates to the earliest types of bowl: interiors black with

Clay fine, fired pale buff throughout. Very little mica (silvery).

K. DeVries kindly informs me that **Tumj 35** is an East Greek bowl, perhaps Ephesian, of the late seventh and early sixth centuries.<sup>70a</sup>

**Tumj 36 Pottery: fragmentary bichrome dinos with plastic decoration**

P 636<sup>70b</sup>

In depression in stone cap, and

scattered through deposit

Est. GD. 0.48 Est. ID. rim 0.28 H.-rim 0.235

m.

Frontispiece; Fig. 27D; Pl. 39B

Mended in two nonjoining sections. Lower interior wall worn.

Base flat, body ellipsoidal, rim everted, thickened and flattened on top. Relief decoration: three lizards on shoulder each with head and two front feet resting on rim, looking inward. Bodies swing toward left and tails curve upward.

Painted decoration: three partially preserved geometric panels on shoulder, over wide unframed panels of creamy ground coat. (1) Three squarish geometric human figures with arms raised, drawn in red-brown matte bands outlined in darker brown, with checkerboard panels on upper and lower parts of body. Hatched bird at right separates these from fourth figure with arms outstretched toward large eight-stringed lyre standing on “floor”; to right of lyre another bird stands right. (2) X-panels in hatched frames. (3) Panel of lozenge rows (Sams’s no. 2). Relief animals with outspread legs and tail have details in dark brown latticed panel (Sams’s no. 3) with lighter brown crosshatching. Best-preserved lizard has crosshatched chevrons and, on right shoulder, tiny linear quadruped: horse?

Upper two-thirds of plain lower walls covered in thin light brown wash which fired redder on one side.

Clay gritty with silvery mica, inclusions and pocks. Fired gray-brown throughout(?). Brown-washed areas—including areas on figures—stroke-burnished, rest not.

G. K. Sams<sup>71</sup> classified **Tumj 36** as “bichrome on ground coat—panel style” and cited several painted pieces related to it: (1) for the plastic decoration, P 272 from a house floor under Tumulus K;<sup>72</sup> (2) for a similar shape with related painted decoration and plastic lions, a dinos from Boğazköy (period BK I);<sup>73</sup> (3) for the lyre, a dinos fragment from Bayraklı, which

sparse reserving of lines and small tondos, exteriors decorated with triple lines.

70b. Young, *UMB* 17, no. 4 (Dec. 1953) 34–35, and fig. 28; Prayon, *Phryg. Plastik*, 216, nos. 136–137, pl. 28.

71. *Painted Pottery*, 575–577; see also *idem* in *Gordion* I, 255, n. 152, where he considers **Tumj 36** akin to the “balloon-shaped variety” of dinos represented by TumP 82. See *idem*, *Gordion* IV, 96, n. 157.

72. Houses under Tumulus K must date before 600 B.C., which is the approximate date of the main burial (a cremation). See Kohler, *Gordion* II, Pt. 2.

73. *MDOG* 78 (May 1940) 50, fig. 10[5], 61–62.

Akurgal<sup>74</sup> dated to the first quarter of the seventh century, and which Coldstream<sup>75</sup> dated to the second quarter of the seventh century. Sams<sup>76</sup> dates the dinos **TumJ 36** not earlier than the last quarter of the seventh century, and considers it Phrygian in origin.

- TumJ 37 Pottery: polished jug fragment**  
P 580  
D. base 0.05 D. 0.11 H.-rim 0.077 GPH.-h. 0.102 m.  
Pl. 39C  
Lacks neck and top of handle.  
Base flat, body ellipsoidal with three horizontal stepped grooves on shoulder. One vertical looped ribbon handle, well flattened on edges, attached at greatest diameter and finished squarely below.  
Hard wheel- and stroke-burnishing all over.  
Fine micaceous clay; fired gray at core, mottled streaky buff and gray on surfaces.
- TumJ 38 Pottery: polished jug fragment**  
P 585  
PH. 0.052 D. base 0.037 Est. D. ca. 0.082 m.  
Pl. 39D  
Only base and part of body, and stump of handle.  
Disk base slightly concave underneath, sharply set off from ellipsoidal body. Two horizontal grooves on shoulder. Vertical handle up from center body.  
Hard all-over burnishing.  
Fine micaceous clay, fired gray at core, mottled streaky buff and black on surface.
- TumJ 39 Pottery: polished jug or jar**  
P 594  
PH. 0.061 D. base 0.04 Est. D. 0.092 m.  
Pl. 39E  
Base, and section of body to shoulder.  
Base and body shaped like **TumJ 38**. Two horizontal flutes on shoulder.  
Hard streaky burnish over all.  
Clay fine, micaceous, with some large inclusions. Fired gray at core, mottled streaky rose-buff to black on surface.
- TumJ 40 Pottery: polished jug or jar**  
P 584  
PH. 0.047 m.  
Not ill.  
Half of base and bit of wall.  
Base thin disk set off from body by fine groove. Body evidently closed, spherical(?).  
Hard burnished.  
Clay fine, micaceous, fired gray at core and black on surface.

- TumJ 41 Pottery: fragmentary polished footed jug or jar with lugged rim and pre-firing patterned incision**  
P 581a,b  
Est. H. 0.10 Est. D. rim 0.06 m.  
Pl. 39F  
Disjoined sections of rim and body.  
Ring base high, hollow, and flaring, with very thin resting surface. Body ellipsoidal, neck wide, well set off from shoulder. Rim thin, everted, with ridge on top, and one (preserved) bolsterlike projecting lug.  
Decoration on shoulder incised before firing: zones of crosshatched and plain, double-outlined lozenges.  
Hard burnish on exterior, and on interior of neck.  
Fabric fine. Clay fine, micaceous, fired gray at core and mottled streaky buff and brown on surfaces.
- TumJ 42 Pottery: fragment of polished footed vessel**  
P 582  
GPH. 0.065 D. base 0.05 D. 0.095 m.  
Pl. 39G  
Lower body and foot of closed vessel.  
Shape and ware as for **TumJ 41**.  
One narrow wheel-run groove at greatest diameter.
- TumJ 43 Pottery: fragment of gray polished footed vessel**  
P 583  
GPH. 0.075 D. base 0.054 D. 0.099 m.  
Pl. 39H  
Irregular body section and foot of closed vessel.  
Shape and ware as for **TumJ 41**. Fine silvery mica.  
Decorative wheel-run grooves, one on lower body, three on shoulder, cut away into sharp flutes.
- TumJ 44 Pottery: body fragments with patterned incision**  
P 593a,b  
A Max. dim. 0.085  
B Max. dim. 0.04 m.  
Pl. 40A  
Mended section from lower body and sherd from belly of closed vessel.  
Body ellipsoidal. Burnish is irregular over thin smeary red wash; around body is zone of spaced panels of close-set vertical incisions enclosed below by heavy wheel-run groove.  
Clay fine with occasional silvery mica, fired mottled buff and gray.
- TumJ 45 Pottery: body fragment**  
P 590  
Max. dims. 0.053 and 0.058 m.  
Not ill.

74. Akurgal, *Kunst Anat.*, 14–15, fig. 3.  
75. *G.P.*, 297.

76. *Painted Pottery*, 577.

Two small sherds from small closed vessel.  
Body apparently ellipsoidal to ovoid with at least two light horizontal facets on shoulder.  
Well burnished.  
Clay fine with a little fine silvery mica. Fired buff at core, mottled buff-brown on surface.

**TumJ 46 Pottery: foot fragment**  
P 592  
GPH. 0.023 D. foot 0.05 m.  
Fig. 27E; Pl. 40B

Foot only.  
High, flaring as in **TumJ 41–45**, but resting surface more rolled outward.  
Ware as for **TumJ 41**. Surface streaky reddish buff and gray.

The thin flaring bases of **TumJ 41–46** resemble closely the similar uncatalogued example (Fig. 22L) from the mantle of Tumulus H, and are also related to **TumZ 20** (below). All show fine black polishing (when not burned) and grooving, fluting, or faceting on the bodies. The slightly different angles of the flaring resting surfaces may mean that the type lasts some time: from pre-650 for the mantle of H and the disturbed but probably unified group in Z (below, **TumZ 20**) to this pot deposit over J contemporary with the burial (fourth quarter of seventh century).

**TumJ 47 Pottery: fragment of polished omphalos bowl**  
P 586b  
Max. dim. 0.055 m.  
Pl. 40C

Sherd from part of omphalos and floor.  
Profile of omphalos unknown, surrounded by two shallow wheel-run grooves and direct, plain curve of bowl wall. Floor around omphalos plain underneath.  
Hard burnish, over slip(?).  
Clay fine with very little mica, but some large (brown-black) bits. Fired buff at core and black on surface.

**TumJ 48 Pottery: fragment of polished omphalos bowl**  
P 586a  
Max. dim. 0.075 H. omph. from floor 0.007  
D. omph. 0.043 m.  
Pl. 40D, E

Sherd from omphalos and bit of surrounding floor.  
Omphalos low hemispherical, surrounded by one low ridge on floor; hollow under omphalos surrounded by three wheel-run shallow grooves.  
Hard burnish over all.  
Thick fabric. Clay fine with very little silvery mica. Fired dull buff at core, black on surfaces.

**TumJ 49 Pottery: petaled (omphalos) bowl**  
P 589  
Max. dims. 0.05 and 0.036 Est. D. rim 0.13 m.  
Fig. 27F; Pl. 40F,G

Two small sherds (one rim and wall, and one lower wall) from bowl.  
*Ca.* hemispherical with direct, plain rim. Interior smoothly scooped out to imitate gadrooning of omphalos bowl with at least two tiers of petals. Hard burnish over all.  
Clay fine with some fine mica. Fired buff at core, mottled orange to black on surfaces.

Ann Knudsen, after an exhaustive analysis of petaled phialai in bronze (her type II-C) did not discuss pottery parallels for them, but thought the type confined strictly to metal.<sup>77</sup> Pottery examples of all her type II vessels (phialai) are evidently very rare.

**TumJ 50 Pottery: tripod plate**  
P 587  
H. 0.042 Est. D. 0.165 W. ext. leg 0.012 m.  
Fig. 27G; Pl. 40H

*Ca.* one-third of rim and one leg. Surfaces unworn.  
Leg short and squarish, tapering outward to narrow resting surface. Inner floor flat to barely concave. Rim raised, everted, on exterior set off from floor by sharp carination.  
Hard stroke-burnish over all.  
Clay fine, micaceous. Fired gray at core, black on outside with buff blushes on exterior.

**TumJ 51 Pottery: tripod plate**  
P 588  
H. 0.032 Est. D. 0.15 GW. ext. leg 0.02 m.  
Fig. 27H; Pl. 40I

Small rim section and one foot only. Surfaces unworn.  
Short squarish leg curving slightly outward. Floor flat concave, rim curving up gently then rising in modified carination almost vertically to flattened lip.  
Hard burnish inside and out.  
Clay fine, micaceous, with a few white inclusions. Fired gray at core and mottled buff-black on surfaces.

**TumJ 52 Stone: tripod mortar**  
ST 150  
H. 0.055 D. 0.155 m.  
Pl. 40J,K

*Ca.* two-thirds preserved.  
Legs with rectangular faces on exterior, rounded supports behind. Four low flat ridges run from leg to leg forming triangle under floor. Bowl rounded below, flat above, with wide plain rim flattened on top.  
Gray andesite, porous, but upper surfaces well smoothed. Gouge marks of finish still exposed underneath. Blackened by smoke.

77. Knudsen, *Phryg. Met. and Pot.*, 171–180, esp. 178.

This vessel is simple in section, like two from the BK II period at Boğazköy,<sup>78</sup> but with carefully added detail as also seen on **TumJ 53**; this may be a specialty at Gordion. The type is to be distinguished from those with taller thinner legs which seem to appear in Boğazköy in period BK III.<sup>79</sup>

**TumJ 53**      **Stone: tripod mortar**  
ST 149  
H. 0.045   D. 0.157   Outer W. legs 0.029 m.  
Pl. 40L,M

Half of mortar with two legs preserved. Chips from rim. Fine (unused) condition except for some areas roughened by ground water.

Legs low, wedge-shaped in radial section; exterior has square face, outlined above and below by relief fasciae. Squarish ridge forms resting surface. Curved ridge touches inner end of all legs on under-floor. Floor flat above and below. Raised rim flares out obliquely on top and exterior.

Stone gray-brown, fine sandstone with some crystalline particles. Very smooth finish.

## IN MANTLE **TumJ 54–61**

**TumJ 54**      **Bronze: earring**  
B 145      Above "Northwest House"  
L. 0.021   W. 0.018   G.Th. wire 0.002 m.  
Pl. 40N

Pulled open a little.

Circllet of bronze wire, round in section and tapering to sharp points.

**TumJ 55**      **Bronze: fibula (XII,13)**  
B 135      Trench 7  
H. 0.041   L. 0.05 m.  
Pl. 41A

Lacks spring and pin.

Arc is squarish semicircle, round in section, with molded decoration: at ends bead between channeled reels; at center bead between channeled reels. Hook very large, long, straight, horned, and grooved lengthwise.

Pin to wearer's right.

Blinkenberg<sup>80</sup> discussed type XII,13 generally and Muscarella<sup>81</sup> would put **TumJ 55** in that group.

Caner<sup>82</sup> placed **TumJ 55** in his variant H II,1 (bead framed by channeled reels at center arc). Close parallels come from Gordion: the City Mound immediately above the Clay Deposit, the Tumulus S-1 burial (**TumS1 42**), and the Tumulus N burial (**TumN 6**).

A sample of textile, which proved to be wool, was taken from this fibula.<sup>83</sup>

**TumJ 56**      **Bronze: fibula (XII,13)**  
B 136      Trench 7  
H. 0.038   L. 0.0485 m.  
Pl. 41B

Lacks only pin.

Arc, spring, and catch as in **TumJ 55**. Molded decoration, same at ends (bead between channeled reels) but differs at center of arc: narrower bead between double channeled reels.

Pin to wearer's left.

For classifications by Blinkenberg and Muscarella, see nn. 80 and 81.

Caner<sup>84</sup> placed **TumJ 56** in his variant H II,2. Close comparanda come from Tumulus K-IV<sup>85</sup> and the City Mound above the Clay Deposit.

A scrap of textile was also found associated with **TumJ 56**. It too is wool.<sup>86</sup>

**TumJ 57**      **Bronze: fibula (XII,13)**  
B 273      Trench 7  
H. 0.047   L. 0.057 m.  
Pl. 41C

Mended; lacks spring and pin.

Resembles **TumJ 55** and **56** except for molded decoration on arc: double bluntish beads between single channeled reels both at ends and in center. Plain in back. Hook small, flat, lightly incised, with heavy flat horns.

Pin to wearer's left.

For classifications by Blinkenberg and Muscarella, see references and comparanda under **TumJ 55**.

Caner's list under his variant H II,3 contains **TumJ 57**,<sup>87</sup> along with other examples from various post-Clay Deposit proveniences on the City Mound.

Attached to **TumJ 57** was a piece of textile closely

78. Boehmer, *Kleinfunde*, 214, no. 2183, BK I (650–500 B.C.), pl. LXXXIII. Cf. also Boehmer, *Unterstadt*, 54, nos. 3706 and 3707, pl. XXXII.

79. *Ibid.*, 54, no. 3714, pl. 32.

80. *Fibules*, 219 ff.

81. *Phryg. Fib. Gordion*, 21–24.

82. *Fib. in Anat. I*, 12, 117, no. 699 (pl. 46).

83. Textile sample 51-Text-1, attached to fibula **TumJ 55**:

Warp (12) (Z) wool, golden-tan 0.015 m.

Weft (8) (Z) wool, golden-tan 0.011 m.

(Bellingr, "Textile Fragments," 1). See above, p. 59, n. 5 for Z-spinning and further references.

84. *Fib. in Anat. I*, 12, 119, no. 721A (pl. 47).

85. G. Körte in *Gordion*, 103, no. 16, fig. 81.

86. Textile sample 51-Text-2, attached to fibula **TumJ 56**:

Warp (?) (Z) wool, golden-tan 0.008 m.

Weft (8) (Z) wool, golden-tan 0.007 m.

(Bellingr, "Textile Fragments," 1). See also above, p. 59, n. 5.

87. *Fib. in Anat. I*, 120, no. 724 (pl. 47).

resembling the golden-tan wool from **TumJ 55** and **56**. It was not specifically given analytical attention.

The fibulae **TumJ 55-57** all came from trench 7 in the mantle and all had similar textile attached; they seem very alike except in details of the combinations of their moldings and their measurements. They may have come from common burials in the vicinity. Their date appears to spread from pre-Kimmerian into the early post-Clay Deposit periods and so is not explicitly helpful to the dating of Tumulus J.

**TumJ 58 Pottery: bichrome sherd**  
P 5406 Near surface of mantle (trench unrecorded)  
Max. dim. 0.10 Est. D. belly *ca.* 0.36 m.  
Pl. 41D

Sherd from shoulder (Th. 0.007) to belly (Th. 0.009 m.) of large closed shape (jar?).

Wall basically red polished underneath zone of creamy ground coat, on which triangles, type 3A, in outlined frame. Some solid black, some with added red centers which overlap black outlines of triangles. Above, pendent crosshatched triangle in similar zone.

Interior merely wiped. Exterior polished over all paint. Coarse clay with mica and white bits. Fired brown through core and interior surface.

**TumJ 59 Pottery: bichrome sherds (3)**  
P 5407a-c Near surface of mantle  
(trench unrecorded)  
A GPH. 0.18  
B GPH. 0.09 Max. dim. 0.11 Est. D. belly 0.31  
C Max. dim. 0.09 W. at mid-H. band 0.03 m.  
Pl. 41E

A mended section from neck and body, with lower handle scar; B mended section from mid-body; C handle.

Body somewhat globular merging gently with concave neck. Handle vertical band, flattened oval in section.

Painted decoration: on A, pres. area of red polished lower body, then, over creamy ground coat, two pairs of black lines, band of black spaced squares, at right of handle three vertical lines to neck, and at right, panel of black crosshatching, spaced squares, three horizontal black lines at base of neck. On B, above spaced-square band, red latticed hourglass panel with black half-circles in fields; red dots in half-circles; above hourglass, spaced squares and three black lines. On C, over base coat, red line down center and black line along both edges.

Coarse gritty clay with a little mica, fired gray through most of core and showing splitting and shearing. Undersurfaces and surfaces red, and surfaces polished where reserved. Bichrome design on base coat perhaps never polished.

**TumJ 60 Clay: mold(?)**  
MC 43 Provenience in mantle unrecorded  
L. 0.042 GPW. 0.03  
Pl. 41F

Broken along one side.

Part of brick-shaped piece of terracotta. Two holes pierce it: one in corner, one at center of one side. Third hole goes almost through.

No evidence for shape of object to be produced.

**TumJ 61 Stone: implement**  
ST 63 Trench 7  
Max. dim. 0.092 m.  
Pl. 41G

Broken near one end.

Flake of flint or chert with four long planes, reduced to two at ends. Along the flaring end, pressure-flaking produced cutting edge. Pointed end perhaps used as punch.

Color: light solid tan.

## DISTURBED AREA IN TUMULUS TumJ 62

**TumJ 62 Pottery: gray polished handle fragment**  
MU 54-40-42 Southeast quadrant: construction trench for expedition house  
L. 0.042 GPW. 0.03 GPTh. 0.04 m.  
Fig. 27I; Pl. 41H.

Handle complete, with fragment of attached rim and wall.

Walls of bowl oblique to rounded shoulder under erect short rim, rounded on interior. Handle is horizontal arch pared to octagonal in section and attached to vessel with small turned-out tabs at ends.

Thin fabric of fine micaceous clay, burnished hard (leaving careless stroke lines) and fired tan-gray throughout with darker gray on surface in burnish strokes.

This is possibly a gray Phrygian piece that has been burned. The paring of the handles to long facets recalls, however, a technique used in the Bronze Age.<sup>88</sup>

## SURFACE OF TUMULUS TumJ 63

**TumJ 63 Stone: fragment of inscription**  
I 77 Surface of unexcavated mantle, exposed by weather  
PH. 0.1615 PW. 0.134 GPTh. 0.0425 m.  
Fig. 72; Pl. 41I

Part of one line of letters with wide space (0.12 m.) between inscription and finished top edge. Written line broken obliquely upward toward right.

Beige-white porous limestone.

Letters rather carelessly incised retrograde: . . . ]ħābāš[.

See Cl. Brixhe, *App. A*, p. 235 and Fig. 72.

88. See Mellink, *Hitt. Com.*, 26 (P 298), pls. 14f, 28f (handle and spout).



# Tumulus KY

## *Introduction*

### PRE-EXCAVATIONAL DESCRIPTION (FIGS. 1, 2, 28A; PLS. 42A, 46F)

"Tumulus" KY is a small flat-topped mound ("Küçük Yassıhöyük"), the basic geological nature of which is little understood. It lies close to the MM, K-III, and P group of tumuli. Its north, east, and west sides are steep, its south side is more gradual in slope. The surveyed height on the contour map (as drawn at the end of the season) is *ca.* 4.50 m. above an arbitrary datum point established by the surveyor at its outermost northern edge, at the level of the north curb of the "Royal Road" (see Figs. 28A,B and n. 5). For consistency of presentation, however, the depths of excavation are here given in meters below the surface of the mound. The greatest diameter across the top at the 4.50-m. height (=datum zero) is *ca.* 60 m.

The villagers had dug several small cuttings at the edges around the top<sup>2</sup> as they searched for stone and stone chips, always in demand for wall construction, but these minor quarryings in no way affected the archaeological results.

G. Roger Edwards, who was in charge of the excavation of Tumulus KY, dug from 31 August to 9 September 1955.<sup>3</sup>

### EXCAVATION (FIGS. 28B-29B; PLS. 42B-44B, 46F)

Trenches 1-4 were dug beginning at the top edges of the slopes and continuing in 10-m. strips (A, B, etc.) toward center. These encountered generally, under soft brown loamy earth *ca.* 0.30 to 0.50 m. thick (I), a

solid layer of chips of soft white limestone (II). In trench 1C the chips gave way to round fist-sized boulders at 4.80 m. north of center, where the stone cap over the burial lay on hard brown earth (III) at the edge of the burial pit.

In trench 3C the limestone layer ended *ca.* 8.10 m. west of center, and at 7.40 m. west of center at 0.75 to 1 m. deep the layer of round fist-sized stones again appeared. In trenches 1C and 4C the excavator came on the pit at -1.80 m., then cut the 10 x 10-m. trench 5 (A plus B) as an enlargement to encompass the main burial (see below). Over the cap lay no stone chips but only a covering of earth (I) flush with the rest of the surface.

### PERIPHERAL FEATURES (FIG. 28B)

At their outer ends only trenches 2A and 4A showed areas where the brown earth (I) and the layer of limestone chips (II) had been disturbed and mixed. In trench 2A, at the bottom of the disturbance, were two intrusive common burials: Burial X, a stone cist at -0.20 m.; Burial Y, a simple inhumation slightly north of Burial X, and at -1.15 m. These must be dated later than the chips layer, but not necessarily after the main burial. Their dates will depend on inner evidence.<sup>4</sup> In trench 4A a similar-appearing disturbance was found at the edge of the plateaulike surface, but containing nothing and perhaps caused by the villagers' activities mentioned above.

Later in the excavation season the north trench (1) was extended in the direction of Tumulus N, and by

1. Preliminary report: R. S. Young, *AJA* 60 (1956) 266, pl. 95, fig. 55, pl. 96, figs. 56-58.

2. The villagers' cuttings are visible in the pre-excavational air photograph published in Bradford, *Ancient Landscapes*, fig. 22,

facing p. 71. Note also the anomaly in ground cover and earth color near the center.

3. See Gordion Notebook 43 (1955) 76-98.

4. These will be published as part of the cemeteries of the common people.

chance crossed the remains of a stone-paved road (Fig. 28B) which was first described as the "Royal Road" in a preliminary report by R. S. Young.<sup>5</sup>

### THE MAIN BURIAL (FIGS. 29A,B, 30; PL. 43A)

The surface of the "hard earth" layer (III) seen in trenches 1 to 4 at ca. -1.25 and -1.40 m. may be the surface of the first artificial layer of a tumulus (see pp. 75, 76). The composition and thickness of a natural layer (IV) under that first layer, and over hardpan (V), is unclear. Whether hardpan lay to any height at the sides of the pit is therefore unknown.

### THE PIT, CHAMBER, AND SIDE PACK (FIGS. 29A,B, 30; PL. 43A)

The burial project began as a cut through the artificial layer (III) and into the ancient surface earth (IV). The pit was roughly rectangular, measuring 4.95 m. on the north, 4.80 m. on the south, 4.30 on the west, and 4.90 on the east. This space contained a lining or pack of pebbles and boulders around the sides, installed as the wooden chamber rose. At some level not established by the excavator artificial earth lay above the natural soil along the sides behind the stone pack.

The bottom of the pit was lined with 0.32 m. of pebbles which aided drainage; no specific remains of a wooden floor were preserved. On this stone fill lay one or two of the lowest beams of the chamber and the fallen stone cap, etc. Treatment of the sills could not be observed. The simple housed joints in the corners, where visible slots confirmed how the end walls entered the side walls, enabled the four walls, as they rose, to withstand the pressure from the boulders being simultaneously packed around the outside and in turn the stones kept the four walls firmly in place.

It appears that from the beginning the plan was that the chamber should be set off center to west in the pit.

The wall beams were preserved in a few fragments, especially on the east end and south side. On the north even the line of the wall was hard to define. Greatest preserved lengths of beams are: east, 1.90 m. for the highest preserved beam in the chamber (the

others underneath having been reduced to powder); north, 2.70 m.; west, 1.70 m. High in the south wall was a slotted beam sturdier than the rest, 3.60 m. long and 0.20 m. thick (see Fig. 29B). The distance between its two preserved slots was 2.32 m., and the slots themselves, each being 0.22 m. wide, yielded the only evidence for the thickness of the east and west walls. The inner clearance was ca. 2.32 m. east-west and approximately 1.85 north-south.

### THE HORSE BURIAL (FIG. 29A,B; PLS. 43B, 44A,B)

During the building of the chamber, at a moment when the exceptionally wide stone pack on the east end was still at 0.90 m. above the bottom of the pit (see Fig. 29A at A), before deposition of the body and the gifts inside the chamber, and possibly even before the east wall had been built to its full planned height, a pause in the activities seems to have occurred while two bridled horses were sacrificed and buried along the east side and in the southeast corner of the pit. They lay directly on the stone pack, head to head with their backs to the east and south walls of the pit. Their bones were less than completely preserved, but in good arrangement.

They were adorned with nose pieces identical in design; their bits were a pair also, but they crumbled to dust when touched, with the exception of very small fragments.

**TumKY 23,24** Bronze: horses' nose pieces  
25 Iron: bit fragments

Appendix B by Sebastian Payne offers a special study of the equid skeletal material. See pp. 237-244. See also discussion of a possible correlation with the Noršuntepe horse burials (p. 243 and n. 11).

### CONTENTS OF THE CHAMBER (FIG. 30)

As mentioned above, since there is no evidence for a wooden floor, the body lay directly upon the stone layer and was oriented east-west on about the center

5. For a preliminary report of the discoveries by G. R. Edwards between Tumuli KY and N: R. S. Young, *AJA* 60 (1956) 266. For Young's piece of the road east of Tumulus MM: *idem*, *AJA* 61 (1957) 319 and pl. 87, fig. 1. In 1974 a project carried out by John L. Miller extended the plan of the road to projected Sakarya crossings and for a short distance on the west side of the river. See Hanfmann in *Young Symposium*, 101 and 116 (fig. 11).

For S. F. Starr's reconnaissance of the road east and west from Gordion: *BASOR* 166 (Apr. 1962) 40 f.; *YbAPS* (1962) 629-632; *ILN* (23 Nov. 1963) 859-861, esp. fig. 3; *Archaeology* 16 (1963) 162-169. For discussions of trade along the road: J. M. Birmingham, *AnatSt* 11 (1961) 185-195; R. S. Young, *ProcAPS* 107, no. 4 (Aug. 1963) 349-364. See also G.M.A. Hanfmann in *Young Symposium*, 101-102 and nn. 16, 17.

line between north and south, and slightly toward the eastern half, with the head to the east. Only a part of the skull survived: the mandible with the teeth still in place.

Two storage amphoras, smashed by the stones of the fallen cap, lay along the north wall, one in the northwest corner and the other just east of it.

**TumKY 21,22** Pottery: gray polished amphoras

Further gifts were found on several different levels<sup>6</sup> among the stones which had fallen to the floor of the pit. Those at about normal floor level were:

<b>TumKY</b>	1	Bronze:	plaque, large disk with boss
	2-6		plaques, disk with boss
	7,8		plaques, plain disk
	9		plaque, crescent with boss
	15,16		toggles
	18		knucklebone
	20	Bone:	knucklebones (20).

Small white beadlike seeds from this level were identified as *Amaranthaceae* or *Chenopodiaceae*.<sup>7</sup>

Another group of gifts lay on a level slightly lower and were clustered near and under **TumKY 2**:

<b>TumKY 10,11</b>	Bronze:	plaques, crescent
	12	plaque, semicircular strip
	13	plaque, "tongue"
	14	plaque, straight strip
Uncat.	Iron:	fragments of knife(?).

On a level above both groups, two items:

<b>TumKY</b>	17	Bronze:	tweezers
	19		knucklebone.

### THE ROOF

Individual roof planks, or measurable fragments of them, could not be distinguished from the fallen-in and rotted wall beams, which were but crumbling pieces.

### THE STONE CAP (FIG. 29A; PL. 42B)

Many heavy boulders were found going down through the center below the smaller stones used in the general cap over the burial. These latter fist-sized stones lay in a rough solid circle over and beyond the edges of the pit to a diameter of 9 m. The cap ascended at the sides over the slope of the earth at the edges of the pit.

The important point to observe here, however, is that the stones of the cap were not mixed with the chips of the limestone layer (II) and were not covered by them.

No objects were found in the cap.

### THE "MANTLE"

The original hard earth plus the artificially added layer came up to the top of the pit all around. The layer of limestone chips then was *ca.* 0.90 to 1.10 m. thick at a level *above* the top of the pit but swept back from its sides.

Since the pit was dug after the chips layer was pulled aside, the final stage of the project was the burial itself, to be covered by only its own stone cap and the thin 0.30-0.50-m. top layer of earth, which was applied very evenly over the cap and the whole platform.

An upper conical mantle for a tumulus, if ever contemplated, was never completed.<sup>8</sup> Whatever the plan had been, the result of the abandonment was utter disaster for the preservation of the wooden chamber: roof, lower walls, floor, and contents. Directly over the burial there was no protective clay cap, as in MM, to seal out the seeping water, which in KY caused the rotting of all perishable material.

### CHRONOLOGY

Like its close pre-Kimmerian neighbors, MM, K-III, and P, Tumulus KY was located well away from the common cemetery and habitation zones on the outer Northeast Ridge. It is exceptional in that it consists of a thick squarish layer of artificially deposited earth over the ancient surface. The purpose of this deposi-

6. In the introduction the objects in the chamber are divided by their levels to keep the groups according to their detailed proveniences, which may have meaning since we believe Tumulus KY was not looted. In the catalogue, however, the objects are listed together in the established order: bronze, bone, pottery, etc., and the chamber burial group is treated as a separate unit followed by the horse-burial group.

7. Sample 1955-Bot-9. Identification by G. A. Wiebe, United States Department of Agriculture, Research Service, Crops Research Division, Beltsville, Maryland (letter, 27 Feb. 1967).

8. J. S. Last, the architect in 1955, estimated from the size of the base that, had a tumulus been completed here, it would have reached a height of 25 to 30 m., about half that of Tumulus MM.

tion is not clear. It could be either the beginning of a planned tumulus abandoned after the deposition of layer III (Fig. 29A), or else the raising of an area above wet land to prepare a place for the stone-cutting work evidenced by the layer of chips near the surface. In any case the inconsequence of the collection of sherds which came from the layer of artificial earth prevents dating by that means.

R. S. Young in his preliminary report<sup>9</sup> wrote: "The tomb probably dates from the seventh century" without giving his reasons. He may have believed that the horse burial was an expression of a practice which appeared only after the 700 B.C. destruction on the City Mound.<sup>10</sup> It is possible that the burial in Tumulus KY does date exactly to the period of the Kimmerian raids. The drawback is that the length of that period (i.e., did the raiders sweep through Gordion more than once?), and the exact date, are unknown except for the *favoured* literary advice: 696 B.C.<sup>11</sup>

Since the materials (**TumKY 1-14**) for a belt or other accouterment were an arrangement of individual plaques sewn to a background, they have no exact parallels at Gordion, and may be non-Phrygian. Decoration by sewn-on plaques, a device for letting one's wealth accompany one during migration, is a nomadic trait.<sup>12</sup> The other burial containing gifts of belts(?) with sewn-on plaques was Tumulus J (see **TumJ 22-29**). J also may have belonged to a later non-Phrygian person (see pp. 188, 234).

The presence of tweezers (**TumJ 12**, **TumKY 17**) and the absence of fibulae from J and KY (both of them unlooted) are further evidence of resemblance and of non-Phrygian connections.

The dating of the main burial in KY must rely on the local pottery and the bronze tweezers. The amphoras (**TumKY 21** and **22**) are demonstrably pre-Kimmerian in closely resembling pottery in Tumulus P<sup>13</sup>; the decoration on **TumKY 21** is found on pottery from Tumulus K-III and various Terrace Buildings in the Destruction Deposit on the City Mound. The tweezers (**TumKY**

**17**) are also best paralleled in an example from burned debris in a Terrace Building.

If we turn for confirmation to the trappings (**TumKY 23** and **24**) in the associated horse burial, we find parallels for both form and decoration in Tumuli P and K-III. Perhaps the horse burial, which certainly distinguishes KY from all the excavated pre-Kimmerian burials at Gordion, may be thought of as a custom imported by the Kimmerians. The nose pieces **TumKY 23** and **24** may date within the active period of a bronze workshop which made the belt **TumP 35**.

The question of how a Kimmerian (or perhaps some other nomadic guest or mercenary of the Kimmerian period) came to be honored with a Phrygian wooden chamber burial, and with some locally made Phrygian gifts including, expectedly, his pottery, but unexpectedly his horse trappings, is a difficult one. His belt(?) with toggles and his tweezers were apparently his own, as these types are so far unknown in Gordion prior to the Destruction Level on the City Mound. Kimmerians were known to be both enemies of, and mercenaries in behalf of, the Assyrians<sup>14</sup> and now, perhaps, we have evidence that some of them may have been friends(?) or mercenaries(?) to the Phrygians.

The layer of stone chips may have derived from stone-dressing activities during the building of the limestone retaining wall around the Tumulus MM burial area.<sup>15</sup>

## LOOTING

In spite of the anomaly in plant growth at the center of KY, which was apparent probably from the date of the burial,<sup>16</sup> it appears that the double installation was never looted, as the generally consistent line of the plaques on the floor and the good skeletal arrangement of the horses indicates. Preservation was probably due to the squarish base and truncated profile of KY, which did not resemble those of a proper tumulus.

only the roof to be built over the chamber after the body and gifts had been placed inside. The length of time between the final preparation of the stone wall (which was buried as it was rising) and the actual death and burial of King Midas is unknown. Also the length of time between the finishing and leveling off of the layer of chips on the top of KY and the digging of the pit for the burial of the person in KY is unknown.

If a relationship is acknowledged between the chips layer and Midas's stone wall, (visual comparison makes them both off-white limestone) then Midas and the Kimmerian(?) in KY could have burial dates close together, the former after a long and lavish ceremony (rich banqueting material inside the chamber) followed by the building of a great tumulus, the latter's ceremony short (no banqueting materials in either chamber or cap), poorer, followed by no tumulus at all except for a shallow leveling layer of earth.

16. See above, p. 73, n. 2.

9. See p. 73, n. 1.

10. R. S. Young in *Dark Ages and Nomads*, 55-56; M. J. Mellink interpreted the evidence the same way in Young, *Gordion I*, 268.

11. Eusebios. See A. Körte in *Gordion*, 20.

12. M. J. Mellink in *Dark Ages and Nomads*, 68, 69; E. Kohler, *ibid.*, 58, following Minns, *Northern Nomads*, 4 ff.

13. In *Gordion I*, 267, 269-272, Mellink stated that Tumulus P must have preceded MM, the tomb of Midas, although P could also be dated close to the coming of the Kimmerians. See also DeVries, *ibid.*, 198, Sams, *Gordion IV*, 80.

14. See R. Ghirshman in *Dark Ages and Nomads*, 4.

15. R. S. Young (*Gordion I*, 88-89, 94) theorized that a huge outer ramped-up clay deposit, the stone wall, the center log wall, the stone packs, and the timber chamber walls probably rose together to the height of the eaves of the MM chamber, leaving

## Catalogue

### IN MAIN BURIAL

#### TumKY 1-22

(FIG. 30)

Bronze plaques for sewing onto a background, **TumKY 1-14**, and toggles **15** and **16** were spread in a fairly attenuated but consistent curving line along the west end of the burial chamber.

#### **TumKY 1 Bronze: large disk with raised center**

B 619

Orig. D. 0.19 D. inside circle of sewing holes 0.064 m.

Fig. 31A; Pl. 45A,B

Lacking some bits out of edge and almost whole depressed area containing outer sewing holes. Folded back near center.

Large thin round disk with small central repoussé boss, around which, 0.032 m. out from center, circular row of sewing holes set off both inside and out by line of fine repoussé dots. Around outer margin, similar depressed area for sewing holes set off on interior edge by fine repoussé dots.

#### **TumKY 2 Bronze: disk with raised center**

B 622

Orig. D. 0.096 m.

Not ill.

Diseased, bent up across center. Has lost about half of margin for sewing holes.

Thin round disk with central small repoussé boss. Around margin of disk, narrow depressed area contains line of sewing holes and is marked off along inside border by line of fine repoussé dots.

#### **TumKY 3 Bronze: disk with raised center**

B 617

GPD. 0.085 Orig. D. ca. 0.092 D. central boss 0.012 m.

Fig. 31B

Fragile, diseased, torn. Lacking over half of depressed marginal area and some pieces of flat central disk.

Like **TumKY 2**.

#### **TumKY 4 Bronze: disk with raised center**

B 621

Orig. D. 0.086 m.

Pl. 45C

Mended at ancient breaks. Diseased and curled and about one-third gone.

Small thin round bronze disk with small central repoussé boss. Around edge of disk, depressed marginal area containing close-set sewing holes and set off from plain area by row of repoussé dots.

#### **TumKY 5 Bronze: disk with raised center**

B 614

D. 0.053 D. boss 0.007 W. marginal depression 0.004 Dist. sewing holes c-c 0.0035

GTh. through boss 0.004 m.

Fig. 31C

Mended about margin. Small bit lost out of margin.

Flat round plaque hammered over form, with small central repoussé round boss. Around edge, depressed margin containing close-set elongated sewing holes and on inner edge of depressed area, line of fine repoussé dots.

#### **TumKY 6 Bronze: disk with raised center**

B 616

GPD. 0.049 Orig. D. 0.053 m.

Not ill.

Fragile, diseased, corroded. Whole depressed margin for sewing holes torn away except for short piece now glued on.

Round plaque like **TumKY 2**.

The plaques **TumKY 2-6** resemble **TumKY 1** except for measurements.

#### **TumKY 7 Bronze: plain disk**

B 618

GPD. 0.066 Est. orig. D. 0.068 m.

Fig. 31D.

Mended from several pieces with gaps. Lacking almost all its depressed margin.

Flat round plaque with no central boss. Around edge of plaque, depressed area containing sewing holes and set off from main plaque by row of tiny repoussé dots on its inner margin.

#### **TumKY 8 Bronze: plain disk**

B 630

D. 0.058 m.

Fig. 31E; Pl. 45D

Diseased. Gaps along almost all edges.

Like **TumKY 7**.

#### **TumKY 9 Bronze: crescent**

B 613

Max. dim. 0.141 GPW. 0.042 D. boss 0.012 m.

Pl. 45E

Mended, diseased, very fragile, with both points broken away. Still somewhat incrustated.

Flat thin sheet of bronze cut into crescent pattern. In center, small repoussé round boss. Around all edges for width of 0.004 m., depressed area in which 0.003 from edge is row of sewing holes, of thin rectangular shape, punched at distances 0.0035 c-c, set off from central area by line of repoussé dots.

**TumKY 10 Bronze: crescent**

B 625

Max. dim. as bent 0.115 GPW. 0.037 m.

Not ill.

Edges roughened at ancient breaks, curled; tips missing.

Flat sheet of bronze cut into crescent. At center of widest portion, repoussé round boss; all around edges, row of low carelessly hammered-up dots inside depressed margin full of close-set elongated sewing holes.

**TumKY 11 Bronze: crescent**

B 628

GPL. tip to tip 0.133 GPW. 0.032 m.

Fig. 31F; Pl. 45F

Mended from anciently broken fragments. All sewing holes rotted away. Boss damaged.

Thin sheet of bronze cut into crescent shape. At center, round small repoussé swelling. Once had on all edges narrow depressed margin containing narrow sewing holes.

**TumKY 12 Bronze: semicircular strip**

B 624

Preserved OD. 0.093 GPW. strip 0.02 m.

Fig. 31G; Pl. 45G

In one piece but lacking almost all its sewing-hole margin. With patina and incrustation.

Thin sheet of bronze cut into semicircular strip with squared-off ends. All around it was once depressed margin for single row of sewing holes.

**TumKY 13 Bronze: "tongue"**

B 627

GPL. 0.083 GPW. 0.075 Orig. W. "tongue" 0.06 m.

Fig. 31H; Pl. 45H

Mended, much of sewing-hole margin missing; broken off across "extension."

Generally tongue-shaped piece of bronze sheet with widening on one side. From this continues narrow extension of unknown length and shape. All unbroken edges show that they once had depressed sewing-hole margin with line of repoussé dots inside.

**TumKY 14 Bronze: straight strip**

B 626

GPL. as bent 0.095 W. 0.035 m.

Fig. 31I

Bent into double curve; edges roughened at ancient break; broken off at both ends.

Straight narrow strip of bronze sheet with depressed margin along long edges for sewing holes, inside which is line of raised dots.

**TumKY 15 Bronze: toggle**

B 615

L. 0.025 GD. 0.0175 Sm. D. 0.007 m.

Fig. 31J; Pl. 45I, R

Complete; corroded.

Solid short cylinder with two domical knoblike ends and two ridges around stem between two knobs.

**TumKY 16 Bronze: toggle**

B 620

L. 0.023 GD. 0.012 Sm. D. 0.0085 m.

Fig. 31K; Pl. 45I, L

Complete; corroded.

Except for measurements, makes pair with **TumKY 15**.

Solid short cylinder with two domical knoblike ends of seemingly unequal sizes. Two raised ridges around stem between two knobs.

As dating material **TumKY 15** and **16** are not helpful; such toggles of bronze, bone, and limestone were known as aids to tied closures in the Near East and Iran from the Bronze Age down to Achaemenian times, and beyond. These occur on straps around chariots, on belts to suspend scabbards and bowcases, and on horses' throat lashes, collars, etc.

Sheftel<sup>17</sup> lists many examples of bone toggles at Gordion, all from the Clay Deposit or above on the City Mound, and all of shapes which are slightly different from **TumKY 15** and **16**. She calls attention, however, to a pair in stone (ST 73),<sup>18</sup> much closer to ours, from the burned house debris under Tumulus H. The dating of this provenience awaits analysis but must date before 650.<sup>19</sup> **TumKY 15** and **16** and ST 73 may be the earliest examples from Gordion, and this may mean that the usage entered Gordion close to the time of the Kimmerian Destruction.

To judge from the manner in which **TumKY 1-16** were spread across the ankles or perhaps below the feet of the skeleton, we are dealing, as evidenced in Tumuli MM<sup>20</sup> and P,<sup>21</sup> with a separate gift—one in addition to whatever the person was wearing at the time of burial. Note that the belt MM 180 closes with a *fixed* toggling mechanism.

The length upon the ground (*ca.* 1.75 m.) and the order in which they lay (see Fig. 30: the largest disk, folded as found, a crescent, two toggles, a line of smaller plaques variously graduated in size and shape till ending in another crescent) indicate to the author a wide beltlike object. Sewing holes around each plaque imply that it was basically of leather or heavy cloth.

the skeleton's feet.

21. *Ibid.*, 9, fig. 5 facing p. 7. The child may have been wearing TumP 34; TumP 35 and 36 (pp. 19, 20; figs. 10, 11) were additional belts as gifts.

17. *Ivory, Bone and Shell*, 394-396.

18. *Ibid.*, 398.

19. See p. 43.

20. Young, *Gordion* I, 101, 154 (MM 180). Found on the bed at

The fact that the central disk (**TumKY 1**) was the only disk found folded back upon itself may mean that the belt was laid in the burial with the disk standing vertically and the rest proceeding away toward the ends in an upper and lower line to the mid-back. The position of the two toggles (**TumKY 15** and **16**) near the central disk and crescent suggests the location of the fastening mechanism.

The diameter of the large disk (0.19 m.) places it within the width range of other Phrygian pre-Kimmerian belts;<sup>22</sup> it is the use of separately sewn-on variously shaped plaques and the length of the area it covered on the ground (*ca.* 1.75 m.) which differentiate it from other early belts excavated at Gordion.<sup>23</sup>

**TumKY 17 Bronze: tweezers**  
B 629 Among plaques **TumKY 1-14**  
L. 0.069 W. blade 0.01 GPD. ring 0.015 m.  
Fig. 32A; Pl. 45J

Complete. Suspension ring pulled open.

Long thin band, forming two "legs," semicircular in cast section at top loop above where riveted; hammered thin, and flared out to form wide tweezer blades at distal end. Heads of iron rivet are flat and spreading. Above rivet, cast bronze band grooved six times vertically. Through loop, oval suspension ring tapering to thin points probably overlapping at end of oval.

The one-piece pair of tweezers was originally cast as a thin rod (flat on one side, convex on the other) with three heavy rectangles in its center, then the legs were flattened and shaped by hammering.

**TumKY 17** closely resembles examples from the Destruction Level on the City Mound, the closest parallel being B 1336 from TB 2. Another example came from a non-City Mound provenience: B 420 from a burned habitation level under Tumulus H. **TumKY 17** would be consistent with the dating of the burial in Tumulus KY at the time of the Kimmerian Destruction.

See also the discussion of the tweezers **TumJ 12** on p. 62. It is to be noted that tweezers are an exceptional kind of gift in the tumulus burials excavated so far at Gordion, occurring besides here only in Tumulus J, which is thought to have contained a "foreigner," possibly a Scythian (see p. 188).

**TumKY 18 Bronze: knucklebone**  
B 632 South side, high in chamber fill  
L. 0.025 GPW. 0.016 GPTh. 0.0155 m.  
Fig. 32B; Pl. 45K

Intact. One or two disease scars.

Fully formed knucklebone probably cast from mold of natural one, with all ridges and depressions well emphasized. Pierced through thinnest point for stringing.

**TumKY 19 Bronze: knucklebone**  
B 631 From near head end of lost skeleton  
L. 0.025 GPW. 0.0155 GPTh. 0.0145 m.  
Fig. 32B; Pl. 45L

Intact. Some rough spots from disease.

Fully formed knucklebone probably cast from mold of natural one, with all lateral ridges and depressions emphasized. Pierced for stringing.

Sheftel<sup>24</sup> mentions astragals weighted with metal as perhaps used in one version of a game along with bone astragals. Perhaps metal copies such as **TumKY 18** and **19** were also used for a special purpose: to "shoot" at one's opponents' pieces or, in whatever way they were used, perhaps they scored more highly than ordinary bone. One other bronze astragal (B 603) was found unstratified on the City Mound at Gordion.

**TumKY 20 Bone: pierced knucklebones (20)**  
BI 262 From body area of lost skeleton  
Max. dims. 0.04-0.027 m.  
Not ill.

Corners missing here and there. Some marrows rotted.

Twenty plain knucklebones catalogued, although there were originally enough additional unmendable fragments to account for perhaps ten more. All, with one exception, pierced through thin end at about center. Other pierced sidewise through lobe. Colors range from bone white to bright green (from contact with bronze in nearby earth).

These have been identified by Sebastian Payne as astragals, "*Ovis* and cf. *Ovis*."

Although they show contamination with bronze, the fact that they were found in a tight heap probably precludes their having been strung on bronze wire.

Many such collections have been found at Gordion. They were listed by P. Sheftel<sup>25</sup> as occurring in all periods from Hittite (in pithos burials)<sup>26</sup> to Phrygian (BI 405 in a common burial) on the Northeast Ridge. See also TumP 44 (in the Child's Burial)<sup>27</sup> and **TumC 2** (above, pp. 29-30 and esp. nn. 23-25).

22. See above under **TumJ 25**, p. 65 and n. 17.

23. Note that there are no central holes for attachment by studs or pins—only sewing holes.

24. *Ivory, Bone and Shell*, 347 and n. 14.

25. *Ibid.*, 329-339.

26. Gunter, *Gordion* III, 45, 82 (nos. 503, 504).

27. Young, *Gordion* I, 30 and fig. 5 facing p. 7; K. DeVries (*Young Symposium*, 38) emphasizes the bronze rings and believes that perhaps these were not gaming pieces.

**TumKY 21 Pottery: gray-ware narrow-necked amphora with stamped decoration**

P 1350 Sherds along north wall  
H. 0.345 D. 0.302 D. base 0.130 D. rim  
0.135 m.

Fig. 32C; Pl. 46A

Mended, with a few small gaps in body. Burnish left only in patches.

Flat base but unevenly done. Body wide and capacious ovoid narrowing at top to slightly concave neck with low horizontal wheelmade ridge at mid-height. At base of neck, low raised band of deeply impressed triangle-zigzag stamping. Rim flares outward, beveled under on exterior. Two thick and short vertical band handles, from below stamped band on neck to high on body. Finger impression at base of each handle.

Heavy ware of gritty gray clay, once well burnished on exterior.

The type of stamped band on this gray-ware amphora is to be found on many examples of pottery from the burned level on the City Mound. One excellent example is seen on pithos sherds from Meg. 4 (P 3083). Another was on a low cylindrical pot-stand (P 1195),<sup>28</sup> which has in addition large cutouts on the same alternating triangular theme; it came from CC 2. Also from under Tumulus E, below the floor of the "bakery" which contained a milling bench with grinding stones (of the pre-Kimmerian type<sup>29</sup> found in the Terrace Buildings TB 3 to 7 and CC 2 and 3)<sup>30</sup> came a black polished handle (P 349), rectangular in section, decorated with identical stamped work filled with white plasterlike material.<sup>31</sup>

A side-spouted sieve jug, K-III 16,<sup>32</sup> has a band of the same type of stamped triangles over the bridge on the spout, and a handle with triangles and squares cut completely *à jour*. Sams cautions me, however, that the motif continues into post-Kimmerian times.<sup>33</sup>

See also the discussion after TumKY 22 below.

**TumKY 22 Pottery: large gray narrow-necked amphora with patterned incision**

P 1367 In northwest corner  
H. 0.415 D. 0.343 D. base 0.135 Rest. D.  
rim 0.13 m.

Fig. 32D; Pl. 46B

28. Young in his preliminary report for the 1963 season (*AJA* 68 [1964] 286) dated Meg. 4 stratigraphically as slightly later than Meg. 3. Both were burned in the Kimmerian Destruction. For Sams on P 1195, see *Gordion* IV, 80, 281, no. 869.

29. Young, *ILN* (3 Jan. 1955) 20 and *UMB* 17, no. 4 (Winter 1953) 31.

30. For CC 2, see R. S. Young, *AJA* 60 (1956) 262, "the kitchen," and pl. 93, fig. 44; *idem*, *AJA* 68 (1964) 285-286 and pl. 86, fig. 17. See also DeVries in *Young Symposium*, 39 and fig. 10, p. 49; Buluç, *Ank. Frig Nehr.*, pl. 21 (Büyük Tümülüs, inv. no. 1).

31. P 349 will be published in the final volume on the Phrygian houses and common cemetery on the Northeast Ridge.

Large gaps in body and neck, but profile preserved.

Base flat, body ovoid with sloping shoulders. Neck narrow, concave above squarish ridge, about ladle width with ledged rim which has been flattened on top and beveled under on exterior. Two short vertical band handles from center shoulder to lower shoulder with deep finger impressions at lower attachments.

Lightly incised on shoulder with wide tool: three stacked horizontal zones, each filled with incised slightly angular wavy line. Under handles, two bands stop and one continues.

Clay fine with silvery mica, white bits, and clots, wheel- and hand-smoothed. Fired clear bluish gray throughout, with surface scars and pocks.

Sams<sup>34</sup> considers **TumKY 21** and **22** to be a small-necked, ellipsoidal, and shoulder-handled variety of amphora which was characteristic of Tumuli K-III and P. The narrow-necked types were common also on the burned floors of the Kimmerian Destruction.

**TumKY 21**, for a shoulder-handled amphora, has a comparatively slightly taller neck and taller, more ovoid body than the examples in Tumulus P. Comparisons with the amphoras of Tumulus K-III, neighboring it on the east, are especially close. The closest parallel to **TumKY 22** is probably K-III "Gefäss 2":<sup>35</sup> same height (0.42 m.), same profile, same placement of handles,<sup>36</sup> same tall narrow neck.

**TumKY 21** and **22** are therefore closely associated with Tumulus K-III.

## IN HORSE BURIAL TumKY 23-25

**TumKY 23 Bronze: horse's nose piece**

B 634a On nose of north horse  
Bent L. 0.157 W. 0.112 L. link closed 0.008  
m.

Fig. 32E; Pls. 44A, B, 46C

Cracked at bottom, curled slightly but in one piece. Still slightly incrustated. Accompanied by three links, all opened.

Basically elliptical in shape with long axis vertical. Small suspension hole at center top to take links; if piece was not lashed through center to lost noseband, it must have swung freely. Central section cut *à jour* with bays and inlets forming

32. G. Körte in *Gordion*, 62, fig. 28, and pl. 4. See Sams, *Gordion* IV, 67.

33. E.g., Blegen, *Troy* IV, 264, fig. 291.1 (sherd VIII, 156, upper sanctuary). For stamped pottery: Sams, *Gordion* IV 123 ff.; *idem*, *Source* 7:3-4 (1988) 13-14.

34. G. K. Sams in Young, *Gordion* I, 257; *idem*, *Gordion* IV, 80 ff.; for incised wavy lines: *ibid.*, 115.

35. G. Körte in *Gordion*, 54, fig. 17.

36. In Berlin I checked the handle scars on K-III 2, which is illustrated by G. Körte (*ibid.*). They are very clear and their position confirms handles resembling those of **TumKY 21** and **22**.



two framed rosettes barely engaged on their inner edges to axis (i.e., for distance 0.03 m.). Rosettes have six convex-sided petals each. Nine repoussé round studlike bosses situated: one each on four promontories, three down central axis, and one as center of each rosette. Fine incised decoration added: around top and bottom crescentic elements, band of small compass-drawn guilloche; around upper and lower bosses on central axis, around frames of rosettes, and on one of triple semicircles in end crescents, lozenge rows with punctate backgrounds (or in reverse); on other two bands in semicircles, rows of dotted outlined triangles; on each petal, triple compass-drawn concentric circle with central dot. Finest linework used to outline all bands, bosses, and edges.

Links are simple ovals with tapering ends meeting in a smooth overlap at sides.

**TumKY 24 Bronze: horse's nose piece**

B 634b On nose of south horse

L. 0.160 W. 0.112 m.

Not ill.

Broken and mended at top. Too fragile and diseased to clean. Accompanied by five links, all opened.

Identical to **TumKY 23** in shape and decoration. Varies minutely only in measurements.

Links as on **TumKY 23**.

These bronze nose pieces are of heavy bronze sheet, not requiring the stiffening or protection of a sewn-on background of cloth or leather. They are yellowish in color than most bronzes from Gordion and were thought, on first sight, to be "gold-washed." In this respect, although not yet analyzed chemically, they might perhaps be grouped with the number of brassy yellow examples from Tumuli P and MM.<sup>37</sup> Four of these last were tested and found to contain higher-than-usual traces of zinc.<sup>38</sup>

Source material for many elements of the decoration on the nose pieces, **TumKY 23** and **24**, lies within the common artistic repertory of the Gordion craftsmen of the pre-Kimmerian period.

The rosettes with six petals measured out and incised by compass occur in wood in Tumulus MM as inlaid rosettes under the central medallions on the "screens," especially MM 378<sup>39</sup> and paired on the "rear

leg prop" of the "pagoda table," MM 388.<sup>40</sup> Also see the wooden disk, TumP 138,<sup>41</sup> and box, TumP 139.<sup>42</sup> The petals on the two latter were incised by means of the same trick, that of advancing the compass point for radial distances around the circumference, used on **TumKY 23** and **24**.

In pottery there is a painted rosette on a sherd (P 3327) from one of a series of brown-on-buff thick-walled giang vessels.<sup>43</sup> The rosette has the same thin curving-edged petals. In bronze the rosettes are exactly reproduced on belt TumP 35,<sup>44</sup> including even the detail of the sketchy multiple lines forming the circumferences of the circles.

The areas on the nose pieces filled with bands of zigzags forming triangles alternately plain and filled with finely dotted texturing is to be found on the belt TumP 35<sup>45</sup> and on the wooden disk, TumP 138;<sup>46</sup> the compass-drawn guilloches in slightly grosser technique are border designs on the belt TumP 34<sup>47</sup> and on the wooden bowl, TumP 137.<sup>48</sup>

For the general preference for lunate ends, and bays cut in from the sides, see the shape of the handles on the bronze bowl, no. 55, in Tumulus K-III.<sup>49</sup> These also were cut out of bronze sheet.

It is not necessary to go outside Gordion in search of parallels for **TumKY 23** and **24**. The workshop which produced the belt TumP 35 could well have made the nose pieces **TumKY 23** and **24**. A later example of an elliptical nose piece (B 556) cut from bronze sheet with intricate bays on the long sides was found in a small metal cache containing iron scale armor (ILS 186) in a disturbed area on the City Mound above the Clay Deposit.

**TumKY 25 Iron: fragments of horse-bit**

ILS 200 In mouth of one horse

A (cheek piece) GPL. 0.041 GPW. 0.03

GPTh. 0.011 (swollen) Th. at end 0.005

B (mouthpiece) GPL. 0.035 GPD. 0.012 m.

Pl. 46D

Laminated and fragile.

A is one small flat handlike fragment of a cheek piece, broken on one end; at the other, a thin rectangular frame inset

37. See TumP 6, 7, 21, 22 (Young, *Gordion I*, 12, 13, 16); MM 169, 226, 254, 335 (*ibid.*, 147, 164, 166, 171).

38. Analyses: *ibid.*, 289–290, 287, 288.

39. Young, *ibid.*, 177–178 (MM 378), fig. 104, pl. 44A. See p. 179, n. 112 on compass work. See recent research by E. Simpson on function of "screens": Simpson and Payton, *Archaeology* (Nov./Dec. 1986) 40, 46; see E. Simpson, *Expedition* 25, pt. 4 (1983) 18 fig. 14; *idem*, et al., *Wooden Furn.*, 12–13; *idem*, "Symbols" in *RAI XXXIV*, forthcoming, and "Phyrgian Furniture from Gordion" in *Furniture of Western Asia*. Mainz: von Zabern, forthcoming.

40. Young, *Gordion I*, 185 (MM 388), fig. 111], pl. 83B.

41. *Ibid.*, 59 and fig. 28.

42. *Ibid.*, 60 and fig. 29.

43. Cf. Sams, *Gordion IV*, 305, nos. 1065–67, fig. 45, pl. 129.

44. Young, *Gordion I*, 19–20 and fig. 10.

45. *Ibid.*

46. *Ibid.*, 59, fig. 28.

47. *Ibid.*, 19 and fig. 9D.E.

48. *Ibid.*, 59 and fig. 27B.

49. G. Körte in *Gordion*, 71, no. 55, and fig. 49.

from the long edges of the cheek piece. *B* is a short length of round rod from the central bar (single? or two-piece?) of the mouthpiece.

For analysis of patterns of wear on the horses' teeth, etc., see below, Sebastian Payne, App. B, p. 238.

IN STONE CAP FALLEN INTO CHAMBER  
**TumKY 26**

**TumKY 26 Pottery: painted sherd**

P 1342

Max. dim. 0.028 Est. D. ca. 0.11 m.

Pl. 46E

From shoulder of small closed shape. Over wheel-burnish, in matte dark brown paint: four fine horizontal lines, met by four vertical lines.

Creamy buff hard thin burnished fabric from fine clay containing fine white inclusions and silvery mica.

# Tumulus N

## Introduction

### PRE-EXCAVATIONAL DESCRIPTION (FIG. 33A; PL. 1)

Tumulus N, located north of KY, west of Tumulus MM, and northwest of Tumulus K-III, was comparatively small and lay on a knoll pear-shaped in plan with the sharper curve toward the west where the ridge thins to run into a narrow saddle. Part of the tumulus circle, originally larger, may have eroded down the northwest and southwest slopes. The north-south diameter of Tumulus N may be termed approximately 17 to 18 m.

Its height was only 2.99 m. above the surveyor's datum, a low fixed point on the south side corresponding to the top of the curb on a level stretch of the road which ran between Tumuli N and KY (see above, pp. 73-74, n. 5, and Fig. 28B). This point is near Akok's altitude of +17.50 m. (Fig. 2). To be consistent the author presents the *ad hoc* levels as from datum zero at the top of the tumulus.

### DRILLING PROGRAM (FIG. 33B; PL. 47A)

The project for the excavation of the Great Tumulus (MM) was forming in Rodney Young's mind in 1955.<sup>1</sup> That year Tumulus N was, because of its small size,<sup>2</sup> chosen as an experimental site for the training of a Turkish team in the use of a drill (a Hawthorne DB)<sup>3</sup> to locate a burial within a tumulus.<sup>4</sup> Such a device was

considered only in that it might lead to a more efficient plan for the subsequent attack upon Tumulus MM, which was then to be dug by conventional methods. As it turned out, the drilling was a success on Tumulus P later in 1955,<sup>5</sup> and the drill was applied to the flanks of Tumulus MM also, in 1955 and 1956.<sup>6</sup>

G. Roger Edwards on 20 August asked the surveyor, J. S. Last, to lay out upon Tumulus N initial lines for drill holes at 2.50-m. intervals in four radii (Fig. 33B). The first twelve holes were located in this way in order to extract a clue to the quadrants which should be gridded in detail. The results nowhere clearly indicated the location of a stone pile as cap over a chamber, and the gridding of the whole area in 2.50 x 2.50-m. squares followed. Not all the points on the grid were actually drilled, but the northeast and southeast quadrants were completed and the northwest and southwest were done in part. Sixty-five holes were drilled in all.

Only two holes gave results of positive analytical value for the excavation which followed:

*Hole 22.* From -1.04 m. on the slope. Stopped by stones at -2.67 m. (southwest quadrant, on line between trenches 3 and 4)

*Hole 42.* Pieces of burned wood from -1.99 to -2.24 m. (southeast quadrant, center of trench 2B).

Most of the others struck hardpan at between -2.66 and -2.99 m. The hardpan level encountered by the drilling was uneven, yet analyzable as forming a natural knoll under the tumulus.

1. *AJA* 60 (1956) 264; *idem*, *Gordion* I, 81.

2. Its low height promised fast drilling and easy excavation of test areas. Of the still unexcavated tumuli it was the closest to the main source of water in the village; this was important as the constant supply needed had to be hauled in drums.

3. The Hawthorne DB was a portable rotary rig of the wash-boring type, designed for light earth exploration (to stop at hard

pan, rock, or even loose stone). It was manufactured by the Exploration Equipment Company of Houston, Texas. See Young, *AJA* 60 (1956) 265; *idem*, *Gordion* I, 81 n. 8.

4. Young, *AJA* 60 (1956) 265.

5. Young, *AJA* 61 (1957) 325; *idem*, *Gordion* I, 1-2, 3 fig. 2.

6. Young, *AJA* 60 (1956) 265; *idem*, *AJA* 62 (1958) 147; *idem*, *Gordion* I, 81-83.

## EXCAVATION (FIGS. 33B-35B; PLS. 46F, 47B-49B)

From 21 August to 1 September the trenches drawn in Fig. 33B were dug.<sup>7</sup> A pier around the center point of the tumulus was left as a martyr. Generally, ca. 1.00 m. down from the surface, hard earth—the pre-tumulus layer above hardpan—appeared, containing occasional Phrygian sherds, bronze fragments, and animal bones. The eastern part of trench 2 (2B) was left at the -2.49-m. level to serve as a shoveling platform. The rest of the trench was taken to hardpan at ca. -2.69 m.

In trench 3, under drill hole 22 (see above), the stone cap over the burial was found.

### THE PRE-TUMULUS SITUATION

Varying amounts of very hard earth showing above hardpan in a number of locations define the ancient surface. This seems not to have been removed or greatly disturbed by the Phrygians as they prepared the area for their burial. No evidence for standing house walls or other pre-tumulus structures appeared in the excavated areas; therefore no general clean-up process was necessary. The burned wood in trench 2A (drill hole 42) and burned traces spreading across trench 1 between 7.10 and 8.30 m. west of center could simply have been left there by the tumulus builders.

### THE MAIN BURIAL

#### *THE PIT, CHAMBER, AND SIDE PACK* (FIGS. 34A-35B; PLS. 47B-49B)

The Phrygians cut their pit (L. 3.60 E-W, W. 2.70 N-S at the lip) through the hard ancient surface and then down into hardpan, for a total depth of 2 m. The sides of the pit sloped gently so that its floor was slightly smaller (L. 3.40 m, W. 2.65 m.). The bare hardpan floor of the pit appeared to be the floor of the chamber, with no intervening gravel lining or plank flooring.<sup>8</sup>

The chamber walls were found standing, although the north wall bulged noticeably. The builders used a combination of squared beams and well-trimmed logs which varied greatly in size. A special sill course was laid directly on the hardpan with end beams crossing under the side beams in locking cross-lap joints whose use does not occur again higher in the walls. The side beams above this leveling course were built up in a simple stack containing small grooves for housing tongues protruding from the end beams. These ear-like tongues, full height in each beam, extended out flush with the interior faces of the end beams, necessitating the cutting of only one shoulder at each end. These tongues and their housings ran to the top, directly under the roof beams. The architectural drawings (Figs. 34A-35B) illustrate the methods employed.<sup>9</sup> The side beams, above the very tall sill beams, if they were to hold the end beams in place, had in turn to be backed at all points by the stone fill placed simultaneously between the sides of the chamber and the pit walls. The method allowed the heights of the beams to vary greatly throughout, causing uneven alternation of joints which lent strength; measurements are available only from J. S. Last's scale drawings. The plan (Fig. 34B) shows only the sill course; the longitudinal section taken through the center of the end walls (Fig. 34A) includes a view of the interior north wall beyond. The east end beams are consistently thinner than those on the west.

The inside dimensions of the chamber were 1.90 x 1.05 m. The clear interior height of the chamber could be derived only from the exterior height, 1.50 m., minus a restored 0.12 m. for the roof planks (see "roof" below), which yields a reconstructed inside height of 1.38 m. In square meters of floor area it ranks as the smallest of all those that could be measured (see Table 2, p. 170), even smaller than Tumulus C, which is thought to have contained the coffin of a child.

As the chamber walls rose, the side and end spaces in the pit were filled with round egg- and fist-sized stones, "pebbles" of various kinds, mixed with roughly broken limestone.

7. G. R. Edwards, *Gordion Notebook 43* (1955) 56-69.

8. There have been several instances of "missing floors." In all cases the earth cover was thin and the planks may once have lain within the hardpan sides of a pit where water from above could gather and stand. Since the architect's drawing allows no vertical measurement for the thickness of floor-planks, the floor, if there

was one, may have been laid flush against the bottom of the four sill beams.

9. The author sees no evidence for the use of "upright wooden posts" which R. S. Young mentions in his preliminary report of the 1955 campaign (*AJA* 60 [1956] 265 and pl. 95, fig. 54). Posts are not mentioned by the excavator, and are not shown in J. S. Last's original drawings.

From the side packs came:

<b>TumN</b>	<b>12</b>	Pottery:	bronze-pouring crucible fragment
		Uncat.	"heavy sherds of good fabric."

### CONTENTS OF THE CHAMBER (FIG. 35B)

The body and a few gifts lay under a thin layer of splinters from the walls and roof, and about 0.10 m. of earth and small stones which had sifted in before the roof beams broke. Gifts appeared to have been placed directly on the hardpan floor (see n. 8). The skeleton was represented only by a displaced bone fragment, the upper end of a femur, and by patches of a white granular limy substance on the hardpan, indicating complete disintegration of the remnant. If one considers the small size of the chamber, the bones may have been those of an adolescent.

About 0.10 m. above the floor, eight fibulae were found along the north wall, with arcs placed toward the west end, pins on the east, in a row as if to fasten a garment.<sup>10</sup> Impressions of textile were visible in the thick patina of some.

<b>TumN</b>	<b>2</b>	Bronze:	pair of fibulae (XII,11)
	<b>3</b>		fibula (XII,11)
	<b>4</b>		pair of fibulae (XII,13) (clear textile impressions on A)
	<b>5-7</b>		fibulae (XII,13)

Other finds on the floor were containers:

<b>TumN</b>	<b>1</b>	Bronze:	fragments of plain bowl (center of west half)
	<b>8</b>	Pottery:	gray-ware necked jar (center of east end).

### THE ROOF (FIG. 34A; PL. 48A,B)

The broken-off ends of roof beams were still visible, held in place along the top of the north side wall, and one was lying *in situ* along the top of the east wall. Some long pieces lay flat and parallel over the floor.

The beams were merely squared planks laid cross-

wise and supported by both end beams and side beams, so that they as well as the four side walls needed to be held in position by the stone packing. The number of planks and their measurements were not recorded, but the height of the top of the roof as measured by the one plank found lying on top of the east wall was given as 0.50 m. below the lip of the pit, and the restored thickness of the roof planks as drawn by the architect was *ca.* 0.12 m.

### THE STONE CAP

The stones of the cap as found were sunk to a saucer shape and contained almost completely within the chamber except for slight remnants on top of the side packs, which still stood to a greater height than the walls of the chamber (see Pl. 47B). The cap consisted of a mixture of the small round stones matching those in the side packs, but with the addition of larger chunks of limestone. From this stone and earth deposit above the level of the collapsed roof came:

<b>TumN</b>	<b>9,10</b>	Bronze:	fragments of two plain bowls
	<b>11</b>	Pottery:	fragments of blue-green glazed bowl.

### THE MANTLE

For the most part the mantle consisted of firm light brown earth, and was comparatively pure—"seven sherds on August 21," on some other days, none. It furnished satisfactory contrast to the "extremely hard" earth of the ancient surface below—and yet more to the hardness of hardpan. The burned area, 0.25 m. thick at drill hole 42, and also seen consisting of a thin floor spreading across the west end of trench 1 (see above), may have indicated the site of a large cooking fire at *ca.* 0.66 above hardpan. Cf. the burning marks on **TumN** 8, which are rarely found on gifts in a chamber burial.

Sherds from the mantle were a mixture of coarse and fine wares (wide-necked amphora, pithos, bowl, round-mouthed jug, etc.), including one from the shoulder of a closed black polished vessel:

Uncat.	Pottery:	black polished ribbed sherd (Fig. 36F).
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10. If these may be considered undisturbed, it would indicate that the head of the deceased lay toward the east. Muscarella

(*Phryg. Fib. Gordon*, 54) does not accept pairing of fibulae here, due to their arrangement in a row.

This combination of contents, which included also chunks of plaster and a few animal bones,<sup>11</sup> appeared to be a sparse domestic group, which yet affirms some inhabitation at the source of the earth used in the mantle.

## CHRONOLOGY

R. S. Young<sup>12</sup> dated Tumulus N to the "seventh century" on grounds of fibula type. This was quoted by Muscarella.<sup>13</sup>

For the fibulae **TumN 3, 4, and 6**, the strong comparanda come from Tumulus S-1, and from the Clay Deposit and above on the City Mound.

**TumN 8**, being a necked jar in the smaller size range (H. under 0.26 m.) and in fabric of semi-coarse reddish brown clay under a polish fired black on its surfaces, may be related to the general class of pottery represented by dinoi in Tumulus P (**TumP 79-87 bis**)

and in MM (MM 360-370). The closest parallel for the general form of body and neck is **TumH 5**, and another close example is from Tumulus Z. As a result of the discussion under **TumN 8**, the jar is seen to date close to both H and Z, closer to Z. **TumN 11** may place N before the fire on the west side of the ridge.

Date: second quarter of the seventh century B.C.

## LOOTING

The excavator averred that he could see no evidence of disturbance above the roof. It is probably true that the location of the chamber away from center, in this instance toward the southwest, saved it from looting.<sup>14</sup>

The thinness of the mantle over the burial, and the thin planks in the roof, permitted damp into the area soon after installation. It may be that there were never any further bronzes in the group, but that the bulk of the gifts was of perishable materials.

## Catalogue

### ON FLOOR OF BURIAL CHAMBER

#### **TumN 1-8** (FIG. 35B)

**TumN 1**     **Bronze: fragments of plain bowl**  
B 623  
Est. D. 0.16    GPH. 0.032  
Fig. 36A; Pl. 49C

Two mended rim pieces and a few fragments from wall. Too fragile to clean.

Curve of wall approximately hemispherical. Thin bronze is rolled at rim toward outside but how smoothed or attached against wall cannot be seen. No evidence for fluting or omphalos.

**TumN 2**     **Bronze: pair of fibulae (XII,11)**  
B 639a,b  
A H. 0.040    L. 0.044  
B H. 0.040    L. 0.044 m.  
Pl. 50A

These form pair, but were not *used* as pair.

Arcs semicircular, round in section. At ends are decorations consisting of single rectangular block between single flattish beads. Simple swelling at central point of arc. Spring-plate is plain disk from which separately made pin issued. Hook has short horns and two light vertical grooves. Backs flattened.

A pin to left; B pin to right.

Blinkenberg<sup>15</sup> under his type XII,11 furnished parallels from Bursa and Ephesos; Muscarella<sup>16</sup> added an example from Siphnos. But all these have pronounced swellings on the arc. Muscarella observed that fibulae of type XII,11 had not occurred in well-dated eighth-century tombs except for MM, but that they were in use by the seventh century.

Caner<sup>17</sup> under his variant E II,2 cited closer parallels: from Gordion, Tumulus S-1 (**TumS1 31**) and from the City Mound above the Clay Deposit (B 1345, B 1890); from Boğazköy (BK I). These have swellings on the arc

11. Sebastian Payne has identified the animal bones found in the mantle:

*Equus*     distal radius, fused, two fragments probably from same bone, fairly small, possibly *E. asinus*, eroded  
*Sus*        proximal ulna, broken  
*Bos*        radial carpal  
*Ovis/Capra* distal tibia, fused, probably *Ovis*, Bd 28.7+.

12. *AJA* 60 (1956) 266.

13. *Phryg. Fib. Gordion*, 5.

14. Other examples of such safe locations are found in Tumuli B, D, F, I, J, and M. This author considers that KY, E, and A remained unlooted for other reasons. Tumuli A, D, E, F, I, and M in the cited lists were cremations which will be discussed in Vol. II, Pt. 2. For B, J, and KY, see above, and pp. 180-181, with Fig. 71(b,f,g), below.

15. *Fibules*, 218 ff.

16. *Phryg. Fib. Gordion*, 5, 21.

17. *Fib. in Anat.* I, 11, 100, nos. 570A and 570B (pl. 41).

more like **TumN 2**'s. They are dated by Caner generally to the seventh century B.C.

**TumN 3**     **Bronze: fibula (XII,11)**  
B 642  
H. 0.038 L. 0.045 m.  
Not ill.

Pin missing.

Semicircular arc, round in section. Central part has only one very simple swelling. Ends have tiny sharp reel between large flat square blocks. Spring-plate is added plain disk. Hook has short horns and two vertical grooves.

Pin to left.

**TumN 3** belongs in Blinkenberg's type XII,11.<sup>18</sup> Muscarella<sup>19</sup> believed type XII,11 to be closely related to XII,13 and "in use by the seventh century."

Caner<sup>20</sup> restricted his type G I to those with arcs round or oval in section and with transverse single ridges at the center. Examples occur on the City Mound above the Clay Deposit, but there are no exact parallels for **TumN 3**, with single reel between blocks at the ends.

**TumN 4**     **Bronze: pair of fibulae (XII,13)**  
B 638a,b  
A H. 0.039 L. 0.046  
B H. 0.039 L. 0.046 m.  
Pl. 50B

Both lack only pin. Form pair, but *not used* as pair.

Arcs semicircular, round in section, except where decorated at center and ends with pairs of large rectangular blocks separated by single sharp reel, oval in section. Spring-plate has extra round platform of two sharpened ridges; hook is long and thin with two fine deep vertical grooves. Horns flat, not extending beyond blocks. Backs flat.

A shows impression of fine plain-weave cloth in its patina.

A pin to left; B pin to right.

Blinkenberg<sup>21</sup> furnished general parallels for **TumN 4** in his type XII,13. Muscarella followed Blinkenberg<sup>22</sup> and discussed pairing.<sup>23</sup>

Caner<sup>24</sup> created a separate variant, G IV,4, for the pair of fibulae, **TumN 4**, as he found no exact parallels to date for the single reel between blocks at both center and ends of the arc. Caner believed general resemblances placed the pair in the "first half of the seventh century."

**TumN 5**     **Bronze: fibula (XII,13)**  
B 641  
H. 0.044 L. 0.046 m.  
Pl. 50C

Pin missing.

Semicircular arc, round in section throughout. Central and end moldings consist of single rounded bead between channeled reels. Hook is long, slim, short-horned and grooved twice vertically. Spring-plate is single added reel.

Pin to left.

See **TumN 6** below, which it strongly resembles. Its corroded state prevents exact matching of the beads and channeled reels in the moldings.

The author cannot identify **TumN 5** in Caner's catalogue.

**TumN 6**     **Bronze: fibula (XII,13)**  
B 640  
H. 0.041 L. 0.045 m.  
Pl. 50D

Lacks only pin.

Arc semicircular, round in section throughout. Central molding consists of narrow bead between channeled reels. Ends have channeled reels alternating with single narrow beads. Hook long, slim, with short horns and grooved twice vertically. No spring-plate added.

Pin to right.

Blinkenberg<sup>25</sup> placed all arcs round in section with moldings at center and ends in his type XII,13; Muscarella<sup>26</sup> followed him.

Caner's<sup>27</sup> variant H II,1 contained this fibula and others from Blinkenberg's list of XII,13 which are roughly restricted to single ridge or bead enclosed by single, channeled reels at the center (the ends vary). His parallels come from the City Mound just above the Clay Deposit, the Tumulus S-I burial (**TumS1 42**), and the mantle of Tumulus J (**TumJ 55**).

**TumN 7**     **Bronze: fibula fragment (XII,13)**  
B 643  
H. 0.039 L. 0.045 m.  
Pl. 50E

One end squashed. Mended. Too fragile to clean.

Semicircular arc, round in section throughout. Central molding consists of wide bead between single thin reels. Ends have smaller single beads between fine double reels. Slim, straight, short-horned hook shallowly grooved. Spring-plate unidentifiable.

Pin to left.

18. *Fibules*, 218.

19. *Phryg. Fib. Gordion*, 21 and pl. VIII, fig. 44.

20. *Fib. in Anat. I*, 11, 106-107, 108, no. 623 (pl. 43).

21. *Fibules*, 219.

22. *Phryg. Fib. Gordion*, 5, 22.

23. *Ibid.*, 54.

24. *Fib. in Anat. I*, 11, 111, nos. 650A and 650B (pl. 44).

25. *Fibules*, 219 ff.

26. *Phryg. Fib. Gordion*, 21.

27. *Fib. in Anat. I*, 11, 117, no. 705A (pl. 46).

Blinkenberg<sup>28</sup> and Muscarella<sup>29</sup> discuss type XII,13 in general.

Caner<sup>30</sup> distinguishes (within the type XII,13 of Blinkenberg and Muscarella) a small group (variant H II,6) with sharp reels between sets of "blocks"<sup>31</sup> at the ends and usually also at the center of the arc. The close companions of **TumN 7** (if beads are interpreted as blocks) would come from Tumulus MM (MM 336)<sup>32</sup> and from the City Mound above the Clay Deposit, and would therefore date from the late eighth to the early seventh centuries.

I am inclined to consider the "blocks" as "beads," and would put **TumN 7** in a group closer to the general type of **TumN 6** (q.v.).

**TumN 8**      **Pottery: gray-ware necked jar**  
P 1339      Floor, center along east side  
H. 0.191    D. base 0.085    D. 0.208    D. neck  
                 0.135 m.  
                 Pl. 50F

Mended. Gaps in body and neck. Surface very rotted. Marks of burning.

Low ring base, flat-concave underneath. Body wide spherical. Neck wide, short, curving out to flaring short plain rim, flattened on top.

Coarse gritty clay with large inclusions and mica. Fired dark brown-rose at core, gray near surface, black where once roughly burnished.

The globular jar **TumH 5** is a close parallel to **TumN 8** in shape as well as in size, except that **TumH 5** has a narrower neck. Other closed pots with **TumN 8**'s wider neck are present in Tumulus Z (e.g., uncat. examples, Figs. 68F[j], 69A[g]). It is probable then that **TumN 8** can date a little before **TumH 5**, but not much, if one observes the like curve of neck, body, etc. It is the width of the mouth that makes the distinction here. **TumN 8**, **TumH 5**, and those from Z are probably descended from the type of necked dinoslike jar seen in Tumulus MM, especially MM 365.<sup>33</sup> See p. 219.

The marks of burning must mean that the jar was once used for cooking. Can the cooking have occurred in association with the mass of ashes encountered at ca. ancient ground level in trench 1 and the west half of trench 2A, around drill hole 42? See p. 83.

## IN STONE FILLING OF BURIAL CHAMBER ABOVE COLLAPSED ROOF **TumN 9-11**

The author assumes that the objects found above the fallen roof beams in the chamber were once situated in the stone cap, perhaps brought there fortuitously, perhaps deposited contemporaneously.

**TumN 9**      **Bronze: fragments of plain bowl**  
B 636  
Max. dim. 0.081    Est. D. 0.10 m.  
                 Fig. 36B; Pl. 50G

Mended rim section and extra crumbs from plain bronze bowl. Too fragile to clean.

Deep bowl shape, slight thickening at rim. Like **TumN 1**, but rim thinner, with no evidence of folding and hammering process.

**TumN 10**      **Bronze: fragments of plain bowl**  
B 637  
Max. dim. 0.047    Est. D. rim 0.12 m.  
                 Fig. 36C; Pl. 50H

Small mended rim fragment and other crumbs from plain deep bowl. Too fragile to clean.

Rim is thickened, direct on interior, slightly everted on exterior, and flattened on top; gradual downward curve into very thin walls.

**TumN 11**      **Pottery: fragment of bowl with vitreous glaze**  
G 198  
Max. dim. rim fragment 0.049    GPH. 0.028  
                 Est. D. rim 0.13    Th. rim 0.014 m.  
                 Fig. 36D; Pl. 50I

Preserves small rim fragment from bowl.

Rim so thickened and flattened as to appear both inturned and outturned, above short deep carination.

Gritty whitish buff clay covered with thin vitreous glaze except over some rough spots in clay core where glaze has chipped and worn away. Glaze thicker in hollow under rim; all shades of blue and green overlain by darker sheen in many places, but colors have faded in some areas to yellowish since exposure above ground.

The closest parallel to **TumN 11** is a fragment of a green-glazed bowl (G 2, Pl. 83E) with similar rim profile and, in addition, proof of flat base, found in a pit sealed by a burned house floor under the mantle of Tumulus D.<sup>34</sup>

28. *Fibules*, 219 ff.

29. *Phryg. Fib. Gordion*, 21-24.

30. *Fib. in Anat. I*, 11, 124, no. 764C (pl. 49).

31. Corrosion on **TumN 7**, especially as seen on the ends of the fibula in the photograph, obscures the determination of beads versus blocks.

32. Young, *Gordion I*, 171 and n. 106.

33. G. K. Sams in Young, *Gordion I*, 254-255, and cf. pl. 80D-J; *idem*, *Gordion IV*, 91, 93.

34. A publication is projected on the houses on the Northeast Ridge.



A dating of **TumN 11**, then, may depend on the study of that floor, but it must be theoretically earlier than the fire which devastated the habitation area under D, and evidence of which is seen to run under the mantle of Tumulus H. The burial in H is dated by **TumH 2** (q.v. above) to 650–645 B.C. Tumulus N, then, may predate Tumulus H.

### IN STONE SIDE PACK **TumN 12**

**TumN 12**     **Pottery: bronze-pouring crucible fragment**  
P 1336  
Max. dim. 0.065     Max. dim. bronze fragment  
0.04 m.     W. across spout *ca.* 0.03 m.  
Fig. 36E; Pl. 50J  
Preserves spout fragment with fitting, but not adhering,  
piece of bronze. (Coating of bubbly bronze lines walls).

Deep bowl, probably half-oval in section, with merely pulled-out bit of wall to serve as spout.

Fabric hard, heavy; clay coarse, slightly micaceous, fired gray-brown. Whitish on exterior, thoroughly burned on interior.

Young mentioned the piece as evidence for early bronzeworking at Gordion.<sup>35</sup>

**TumN 12** is a spout fragment from one of those very simple and efficient crucible types which, with tongs, was used for pouring molten metal throughout the periods of use of both open and closed molds. Examples were found at Hittite Alişar,<sup>36</sup> and at Tel Zeror in the Late Bronze Age to Early Iron Age.<sup>37</sup> Each of these had lifting knobs. Possible evidence for a knob on **TumN 12** was broken away.

Bronze Age objects have occasionally appeared in the stone packs of the timber graves. See **TumH 8**, and Tumulus G, p. 37.

35. *AJA* 60 (1956) 265–266.

36. Schmidt, *Alişar 1928 and 1929 I*, 119, fig. 144, pl. XV (b 2541) = R. Oğuz, *TTAED* 1 (1933) 45 and 47 fig. 35.

37. R. F. Tylecote in Wertime and Muhly, *Coming*, 200, fig. 7.7, B1 (LBA-EIA).



# Tumulus Q

## Introduction

### PRE-EXCAVATIONAL DESCRIPTION (FIG. 37A; PLS. 1, 2)

Tumulus Q<sup>1</sup> is one of three small burial mounds located inside the triangle formed by Tumuli P, K-III, and K-IV. Q is the westernmost, and about equidistant (edge to edge) from K-III and K-IV. It rises to only 1 m. above the general modern surface in that area; its diameter is about 20 m., measured at modern ground level. There was a wide but shallow depression (D. 2.5 m.) in the top just west of the center—a fault of the type caused by the collapse of a wooden chamber roof, but which upon excavation was understood to have been caused by looters.

### EXCAVATION (FIG. 37B; PL. 51A,B)

R. S. Young excavated on 27 April and 4–5 May 1956. He mentioned no datum, so the author places datum at the highest point of the mound.<sup>2</sup> The excavator ran his opening trench (trench 1: L. 15, W. 3 m.) over the center from north-northeast to south-southwest. As it crossed the crown, it revealed an area (IV) of disturbed stone fill mixed with earth and sand, an indication of prior disturbance.

Out at the ends of trench 1 sand and gravel (II) over hardpan (III) had run directly under mantle earth (I) at -1.60 m., but near the center, around the sides of the stone rectangle, hardpan appeared at -1.30 under a stratum undescribed, but probably sand and gravel,

which means that the burial complex had been placed on a slight knoll.

Trench 2 (L. 4.50 east-west, W. 3 m. north-south) extended the excavation to include the outlines of the stone cap.

No architect's drawings or excavator's sketches exist for Tumulus Q. Figures 37 and 38 are made up from measurements given in the field book.

### THE MAIN BURIAL

#### THE PIT, CHAMBER, AND SIDE PACK (FIGS. 37B, 38; PL. 51A,B)

The Phrygians excavated a rectangular pit measuring ca. 4.50 x 3 m. through II, the ancient surface layer, (probably) of clean sand mixed with small stones, to a depth of ca. -1.30 m. below datum, where hardpan began. At the bottom of the pit (ca. 1.05 m. into hardpan = -2.35 m.) strewn sand with gravel placed upon it formed the only preserved floor; the walls, as far as can be told, were bedded directly upon this. The southeast corner of the chamber was still in place but all the timber was so rotten that the pack of small stones on the exterior immediately pushed the sides in as the interior was emptied. The north side of the chamber was even less well preserved, but at its east end the north ends of two cover beams showed. At the west ends of these walls, the south wall was preserved to a much lower height, and the north wall had been broken off completely. The west wall had disappeared entirely but for a few scraps of its sill.

1. R. S. Young published a very brief announcement: *AJA* 61 (1957) 325.

2. In Gordion Notebook 43 (1956) 185–186, 190–193, the given depths are unclear, some being measured down from "surface," Tumulus surface, or ancient ground surface? The writer has pre-

served Young's measurements for the thicknesses of the strata mentioned, and added to them a mantle of ca. 1 m. at center. This appears justified by the appearance of the trench scarps in the photographs (Pl. 51A,B).

The interior measurements of the chamber were 2.90 x 1.50 m. The numbers of the wall beams could not be distinguished, but the excavator described the timbers as "small" and their total height, where they supported the roof, as 0.90 m. at the better-preserved east end of the chamber. As the beams rose they were backed by a pure fill of small stones of gravel type. The side walls extended beyond the end walls (Pl. 51A) but no joints could be analyzed in the corners due to the deterioration of the beams. Theoretically this situation would call for housed joints.

### CONTENTS OF THE CHAMBER

The skeleton lay against the north wall of the tomb as if pushed or rolled there. The lower leg bones and a toe bone or two remained in the east end in a natural position. West of these some bits of pelvis and three vertebrae lay in a curving line.

The only objects remaining in the looters' refill were found arranged in an east-west line along the north side of the chamber:

<b>Tum Q</b>	1,2	Bronze:	fibulae (XII,4) (not a pair)
	3		fibula (XII,13).

Their position above the lower vertebrae suggests their use on a coatlike garment or a shroud rather than on a robe requiring fastening at the shoulders.

No other finds remained except for a few undiagnostic fragments of gray pottery from high in the chamber (not kept, as they could have come in with the refill).

### THE ROOF AND STONE CAP (FIG. 38)

At a depth of -1.90 m. the southern ends of four beams over the south wall of the grave and the northern ends of two over the north wall remained in place, but broken off at their outer edge. The evidence allows for a single roof of cross-laid (i.e., north-south) beams. Four could be counted in the eastern half, but the total number of roof beams remains unknown. Their thickness in the general depth computations was taken as *ca.* 0.10 m.

After the stone side packs were completed and the roof was laid, the cap of small clean stones continued up slightly but did not extend much beyond the sides of the excavated pit. Many were probably lost, shoveled completely out by the looters.

### THE MANTLE

The mantle consisted of soft brown earth with an exceptionally low sherd content, and was different from everything below it. At the outer ends of trench I it lay immediately above the sand and gravel surface layer, showing no special preparation of the ancient surface except that at the edges of the pit no sand and gravel layer was described, only hardpan. A lack of archaeological finds both in the upper layers of the ancient surface and in the mantle of the tumulus indicates that Tumulus Q lay outside the zone of habitation found farther west on the Northeast Ridge.

### CHRONOLOGY

DeVries<sup>3</sup> stated that in his opinion the fibulae from Tumulus Q seemed intermediate between those in Tumulus W and those in K-III. To this we may add a close association with Tumulus Y based on its fibulae (see under **Tum Q 3**). However, on grounds of painted pottery, Y must be dated later, i.e., to the Destruction Level on the City Mound (see p. 109).

### LOOTING

The looters evidently entered the tomb through the end wall and roof at the west, directly under the depression in the mantle which Young first noted. They did a thorough job on this small tumulus, probably removing the beams from both the western half of the roof and the west end wall. They perhaps opened out a fair area at the top, as the mix they used for refill came from all levels, besides the stone cap. Since this tumulus was relatively small and easy of access, they did not feel the need to save labor by entering and leaving through some small hole.

A date for the looting is lacking due to the absence of later finds in the refill.

3. In Young, *Gordion I*, 199 n. 18.

## Catalogue

### IN CHAMBER TumQ 1-3

**TumQ 1**      **Bronze: fibula (XII,4)**  
B 706  
H. 0.043 L. 0.045 m.  
Pl. 51C

Mended. Lacks spring and pin. Badly corroded.

Arc semicircular; flat rectangular in section. Molded decoration at ends of arc; three blunt ridges, rectangular (one looks definitely blockish) to oval in section, central one in each set slightly sharper than others. Hook long flat type with sharp shallow grooves and short horns. Spring inserted into end of cylindrical extension on arc.

Pin to wearer's left.

**TumQ 2**      **Bronze: fibula (XII,4)**  
B 707  
PH. 0.04 L. 0.045 m.  
Pl. 51D

Lacks spring and pin. Badly corroded.

Arc semicircular; flat rectangular in section. Molded decoration only at ends of arc: five very thin blocks, central one slightly smaller than rest (i.e., reduced to *ca.* same size as arc itself). Hook is narrow type with two lengthwise grooves and minimal horns. On account of heavy corrosion, the author leaves open the question of whether the pin was cast as one, or inserted.

Pin to wearer's right (?; photograph may have been taken from back).

**TumQ 1 and 2** are so badly corroded that the section of the arc is now difficult to judge. Muscarella<sup>4</sup>

treated **TumQ 1 and 2** as a pair of type XII,4, believing the arcs had one rounded face and therefore D-shaped sections. Muscarella associated with them, as XII,4s, six fibulae from K-III and two from the mantle of Tumulus E.<sup>5</sup>

In all parts except the section of the arc, XII,4 resembles the simplest of the flat-arc types (XII,7) and, if the pins were cast with the arc, Muscarella's type XII,7A. Caner<sup>6</sup> interpreted the arcs of **TumQ 1 and 2** as flat in section, placing them in Muscarella's XII,7A and in his own variant A I,2. The proveniences in burials for this variant are: Tumuli W,<sup>7</sup> K-III,<sup>8</sup> K-IV,<sup>9</sup> S (**TumS 2**) and G (**TumG 5**).

**TumQ 3**      **Bronze: fibula (XII,13)**  
B 705  
H. 0.06 L. 0.062 m.  
Pl. 51E

Lacking pin only. Corrosion now obscures all sharp edges.

Arc heavy semicircular; round in section. Molded decoration: single large plain blocks at center and ends of arc. Catch: long narrow hook, with deep grooves outlining margins, and flaring to incipient horns. Cylindrical extension between block and heavy triple spring.

Pin to wearer's right.

**TumQ 3** belongs basically to Blinkenberg's<sup>10</sup> and Muscarella's<sup>11</sup> type XII,13, a wide-ranging class, but here the use of blocks is restrictive.

Caner,<sup>12</sup> by classifying **TumQ 3** in his variant C I,1, associated it with Tumuli W<sup>13</sup> and Y (**TumY 3**).

4. Phryg. *Fib. Gordion*, 15, 54. Muscarella examined the Tumulus Q group in 1957, soon after their discovery; Caner (see n. 6) studied them when they were in a more advanced state of decay, or perhaps judged from a photograph only. I choose to follow Muscarella. See also *idem*, *BibO* 43, pts. 1 and 2, (1986) 198.

5. Phryg. *Fib. Gordion*, 78.

6. *Fib. in Anat. I*, 57, no. 188b and c (pl. 13).

7. Young, *Gordion I*, 209 (TumW 29-33), 210-211 (TumW 35-55), pl. 91D-O.

8. G. Körte in *Gordion*, 77-78, nos. 8-31, figs. 64, 65.

9. *Ibid.*, 102, nos. 6-15, figs. 79, 80.

10. *Fibules*, 219-222.

11. Phryg. *Fib. Gordion*, 7 ("late eighth or later").

12. *Fib. in Anat. I*, 87, no. 482B (pl. 37).

13. Young, *Gordion I*, 212 (TumW 56-60), 246-247 and pl. 92C-F.



# Tumulus S

## Introduction

### PRE-EXCAVATIONAL DESCRIPTION

Barely visible above the modern ground level, Tumulus S<sup>1</sup> lies east of Q in a line between K-IV and P, being about equidistant from the two latter. Tumulus S was so low and spreading that it was difficult to determine its center or the line of its periphery. No specific diameter was mentioned in the field notes. Its measured height above the modern surface was *ca.* 0.50 m.; after excavation the height, still to be thought of as eroded, was corrected to *ca.* 0.75 m. above clean sand and gravel (III), but this included a little modern loam over the top even though the area appeared sparsely covered with natural vegetation.

### EXCAVATION (FIG. 39A,B)

Young, on 28 April 1956, began with a 6 x 6-m. square (trench 1) centered over the approximate peak of the tumulus and cleared it consistently down to the ancient surface (III). Contrasting earth indicated a rectangular pit or hole (A) along the south scarp and continuing under it. Trenches 2 and 3 extended the cut toward the south.

### THE MAIN BURIAL: A SIMPLE INTERMENT (PL. 52A,B)

Here ancient surface (III) consisted of a grayish sand and gravel mix, which might have precluded the

digging of a deep pit, as the sides would not have held unless they were kept damp or wet at the time of the digging. Young's report implies that he did not probe to the bottom of the gravelly layer. The Phrygians, in this case, dug a shallow pit (L. 2.65 east-west, W. 1.35 north-south, depth 0.45 m.) whose sides were slightly irregular vertically. There is no definite evidence for the fitting of special flooring or lining before deposition of the body and gifts.

The skeletal remains, scraps of bones including a "piece of skull, . . . but with it some vertebrae," indicate that a single individual was interred here, with the head probably to the east.

The gifts, recovered in greatly deteriorated condition, were:

<b>TumS</b>	<b>1</b>	Bronze:	studded open-work belt plaque
		Uncat.	stud tacks <sup>2</sup> (scattered through grave) Pl. 52D
<b>TumS</b>	<b>2</b>		fibula (XII,7A)
		Uncat.	pin only of second fibula
		Uncat. Pottery:	"fragments of black polished" vessels. <sup>3</sup>

This sparse lot was accompanied by a few chips of wood and traces of cloth. There were no traces whatever of burning.

The fragmentary objects recovered are evidence for a studded leather belt and at least two fibulae, either on the clothing of the dead or separately placed in the burial. This combination of objects suggests that the interred person was male.

1. R. S. Young, *Gordion* Notebook 43 (1956) 188-189; for a very brief published announcement, see *AJA* 61 (1957) 325.

2. Hollow hemispherical stud heads. Five distinct sizes, the smallest of which correspond to those on plaque **TumS 1**. The varying

sizes of studs suggest use on a disk of the type in Tumulus W (Young, *Gordion* I, 208, fig. 126).

3. No context bag from Tumulus S was mentioned in the field notebook, and none could be found in the depots.

## THE MANTLE

The pit was filled with reddish brown earth (II) up to a level even with the top of the sand-gravel layer, but the red earth was not mixed into the mantle, i.e., there was no evidence that the mantle had been breached.<sup>4</sup> The mantle of earth (I) as preserved (its color not mentioned except that it contrasted clearly with the red earth in the grave) still stood in 1956 to 0.75 m. above ancient surface.

Nothing worthy of note was found in it.

## CHRONOLOGY

The serious deterioration of this burial's contents, including the skeleton, could be completely due to the lack of protection by chamber, clay cap, and buildup of mantle. It was exposed to water seepage from the moment of interment.

This is the only example of this simple kind of interment under a tumulus known so far at Gordion, but since the gifts were of the usual sort, there may have been some Early Phrygian tradition for such a custom.

Under one tumulus (Tepe IV) at Kerkenes Dağı<sup>5</sup> was a slightly trapezoidal cist, 0.80 m. deep, which contained a bronze bowl (K 80) with a repoussé petaled wall and a pinned-in button for an omphalos; bichrome

painted potsherds (K 115) were in its mantle. These contents appear to date to the seventh century.

An approximate dating close to Tumuli W and K-III, and before K-IV, can be conjectured from the type of the fibula, **TumS 2**. The presence of a studded end-plate, **TumS 1**, points to a bronze and leather belt similar to those in Tumuli W, K-III, and MM. The design of the cut-out work, however, evokes very close comparisons with wooden inlay in Tumulus P.

Its closest neighbors topographically were Tumuli Q, P, and K-IV, also pre-Kimmerian. No habitation level was found under the tumulus and the mantle was clear of domestic and funerary contents.

Date: close to Tumuli K-III and P: probably after P but before K-IV.

## LOOTING

Non-disturbance of the mantle-earth here precludes ancient looting. The skeletal grouping and the scattering of the stud-tacks point, however, to some kind of tampering during the interval between the clearing away of the mantle on April 28 and the digging of the cist on May 7, 1956.

The finds-group with which we are dealing here may be incomplete.

# Catalogue

## IN INTERMENT TumS 1,2

**TumS 1**      **Bronze: studded open-work belt plaque**  
B 709  
PL. 0.135    W. 0.047    Est. orig. min. L. ca. 0.15  
D. studs 0.009 m.  
Pl. 52C

Mended. One end broken away. Bent.

Long flat rectangular open-work plaque with narrow margin around row of cut-out lozenges (or reserved Xs) at each side joining reserved disks. Hollow hemispherical stud tacks

added: at corners of plaque, at center of side margins, and one in each disk forming row in center.

The overall design and execution is simple, more like the bronze fragments left in Tumuli W<sup>6</sup> and K-III<sup>7</sup> than like the finer bronze cut-out work in Tumulus MM.<sup>8</sup> One inlaid wooden strip<sup>9</sup> from the furniture in Tumulus P comes very close in its mental approach to the use of the surface area on a like-sized piece.

This single plaque, taken with the uncatalogued assortment of tack heads (p. 95, n. 2; Pl. 52D) which accompanied it, forms a set to be interpreted as a belt of the studded leather type found in Tumuli W,<sup>10</sup> K-III,<sup>11</sup> and MM.<sup>12</sup>

4. The excavator, however, because of the displacement of the vertebrae, felt that the burial had been disturbed.

5. E. F. Schmidt, *AJSLL* 45 (1929) 252-253, 254 fig. 47, 258 fig. 52. Contents: sherds in mantle 266 (K 115a-c), 267 fig. 63; bronze petaled bowl at edge of cist (K 80), 272-273 figs. 73, 74. Only four tumuli were explored.

6. Young, *Gordion* I, 208 (TumW 26; not ill.).

7. G. Körte in *Gordion*, 48 and fig. 7.

8. Young, *Gordion* I, 147-154, esp. 150 fig. 95A-E.

9. *Ibid.*, 76 (TumP 164: L. 0.16, W. 0.047 m.).

10. *Ibid.*, 108, fig. 126, pl. 91A; Kohler, *ibid.*, 236.

11. G. Körte in *Gordion*, 48, figs. 7 and 8; Kohler in *Gordion* I, 236-237.

12. Young, *ibid.*, 147-154, figs. 94-97, pls. 73E-K, 74A-L; Kohler, *ibid.*, 237.



**TumS 2**      **Bronze: fibula (XII,7A)**  
 B 708  
 H. 0.047 L. 0.057 m.  
 Pl. 52E

Lacks only portion of pin.

Arc semicircular, and flat rectangular in section. Molded decoration: pair of blocks at each end with intervening reel modified to oval in section. Extension oval in section provides bedding for separate spring and pin. Hook long and narrow, grooved along vertical margins. Short horns.

**TumS 2** falls in Muscarella's type XII,7A,<sup>13</sup> which he placed generally in the late eighth or early seventh

century. K. DeVries in his discussion of the chronology of Tumulus W<sup>14</sup> placed the single preserved fibula from Tumulus S "within the range of those from Tumulus W to K-IV."

Caner<sup>15</sup> placed it in his variant A I,2 along with a wide group of examples. Within the group, however, the author would select, as being closest to **TumS 2**, examples from Tumuli W,<sup>16</sup> K-III,<sup>17</sup> and one from the habitation level under Tumulus J (B 139).<sup>18</sup> Examples from K-IV have gone beyond **TumS 2** and developed a further peculiarity: a channeled-reel molding on the spring-plate.

13. *Phryg. Fib. Gordion*, 4, 11.

14. *Gordion* I, 199, n. 18.

15. *Fib. in Anat.* I, 13, no. 184D (pl. 13).

16. Young, *Gordion* I, 209–211 *passim* and pl. 91F,G,J-O; see also Caner, *Fib. in Anat.* I, 55, nos. 162–172 (pl. 11).

17. G. Körte, *Gordion*, 78, no. 25, fig. 64.

18. Caner, *Fib. in Anat.* I, 57, no. 184C (pl. 13).



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## Locus "T"

### PL. 53A

On 23 April 1956, Young examined the small round eminence<sup>1</sup> on the tongue of land contained in a loop of the 17.50-m. contour line appearing in Fig. 2 to be near Tumulus MM on the southeast. His trench (L. 20, W. 2 m.) ran approximately north-south across the tongue. Where it crossed the highest point, he

expanded it an additional 2 m.<sup>2</sup>

The soil of the mound was of broken clay, white on the south, brown on the north, containing the very occasional sherd, but no indications of disturbance.

Young dug to 1.50 m. below the general level of the foot of the mound and found nothing. Virgin soil here was hard clay.

He termed it "probably not a tumulus."

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1. Gordion Notebook 43 (1956) 182-184. R. S. Young published a brief line concerning Locus "T", *AJA* 61 (1957) 324-325.

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2. The trenches were never sketched or pointed in on any plan.



# Tumulus X

## Introduction

### PRE-EXCAVATIONAL DESCRIPTION (FIG. 40A; PLS. 53A, 55A)

Situated about 100 m. southeast of Locus "T" and about 150 m. southeast of Tumulus MM (edge to edge), X is the smallest (D. 35 m.) and westernmost of a group of three tumuli north of the village route to Polath. It is situated on a ridge so that it appears more impressive when viewed from the northwest, as the slope is continuous on the north and west from the top of the tumulus to the bottom of the ridge. It shows its true height (3.50 m. above the surface of the ridge) only when it is viewed from the south and east.

Before beginning, the excavator, R. S. Young,<sup>1</sup> measured a shallow depression (Fig. 40A,B[A]) in its top as ca. 3 m. north-south and 2.50 m. east-west. He observed that this could indicate either "modern trenching to rob a tomb . . . or . . . subsidence resulting from the collapse of a tomb beneath."

### MASCA INSTRUMENT SURVEY

During the 1965 campaign Elizabeth Ralph, then Associate Director of MASCA, having been unsuccessful at Gordion with the proton magnetometer surveys<sup>2</sup>

due to the high magnetic intensity of the soils, turned to resistivity surveying by means of a geohm<sup>3</sup> in an attempt to pinpoint the location of a burial. In the case of Tumulus X Miss Ralph laid out for excavation a 4 x 4-m. square (dashed lines in Fig. 40B) over both magnetic and resistivity anomalies.<sup>4</sup> Young adhered to this in his excavation. The square was placed just southeast of the center of the tumulus, and included the southern half of the depression in the top.

### EXCAVATION (FIGS. 40B-41B; PL. 53B)

Young excavated Tumulus X from 16 to 28 April 1965.<sup>5</sup> He established his datum as the highest point on the tumulus and began to dig trench 1. In his first meter of excavation he found that the depression in the top (A) had once been somewhat deeper than its visible depth of 0.40 m. had shown; it had partially refilled with darker-looking earth silting in from the sides. In trench 1 firm white hardpan was encountered at -3.90 m. Here he found no signs of earlier excavation or a burial.

Trench 2 was only partially contiguous along the west edge of trench 1. Here, at -3.15 m., a few frag-

1. Gordion Notebook 96 (1965) 145-163, esp. 146.

2. A presentation of the scientific principles involved in magnetic location, and the use of the proton magnetometer as a tool, may be found in M. J. Aitken, *Physics and Archaeology* (New York: Interscience Publishers, 1961), 7-41 (esp. 25-31, "pit anomalies"). Miss Ralph used an Elsec proton magnetometer made by the Littlemore Scientific and Engineering Company, Oxford, England.

3. For a brief presentation of the principles of resistivity surveying, see *ibid.*, 60-77, "resistivity surveying"; see also E. K. Ralph in F. Rainey and C. Lerici, *Search for Sybaris*, UMM 29 (Rome: Lerici Editori, 1967), 54, "conductivity." The geohm used was produced by the Gossen Company, Erlangen, Germany. For an illustration

of the geohm in use at Gordion, see E. K. Ralph, *Expedition 11*, no. 2 (Winter 1969) 14 and fig. 17.

4. In early April there was enough moisture in the ground so that good contact could be made with the geohm rods. Tumulus X (= Ralph's Tumulus II) had been atypical of the areas under magnetic survey in that it had a definite anti-magnetic area just southeast of center. This determined the location of a 4 x 4-m. area for excavation. The geohm also signaled a peak area of 19 ohms at a depth of 3 to 4 m. located under the identical 4 x 4-m. square, but unfortunately, the area over the actual tomb was not tested with resistivity profiles. See also Tumulus Y (Ralph's Tumulus I), p. 107 and n. 1.

5. See brief preliminary report: R. S. Young, *AJA* 70 (1966) 267.

ments of broken timbers appeared lying in varying horizontal and oblique directions. The rough edges of a burial pit (B) emerged.

Since the rectangular burial fitted obliquely into trench 2, a small wedge-shaped third trench was necessary.

At the northeast corner of trench 3 the excavator came on a refilled pitlike entryway (C) into the burial from just under the surface loam (I). It contained sand, gravel, and reddish earth hardly to be distinguished from the mixed fill of the burial proper (Fig. 41A [VI]). This was discouraging evidence of previous entry, the more so since no sign in this area had been visible on the modern surface.

### THE MAIN BURIAL (FIGS. 41A,B; PL. 53B)

#### THE PIT, CHAMBER, AND SIDE PACK (FIG. 41A; PL. 53B)

The natural stratification through this part of the ridge consists of a white hardpan (V) beginning at ca. -3.90 m., over which lies a gravel stratum (IV) of varying thickness.

A rectangular pit (L. 4, W. 3 m.) with corners approaching the major points of the compass was dug through 0.50 m. of sterile earth (III), the uneven layer of natural gravel (IV), then 1.50 m. into hardpan (V). The bottom of the pit was level clay. The level at the top of the pit must have been cleared back for a distance at the top of the gravel layer, as the Phrygians roofing the chamber left extra beams (locus 1) over the roof and extending beyond the pit on that level.

The pit size (4 x 3 m.) is all that remains of use for deriving a theoretical size of the interior of the chamber. In his field book<sup>6</sup> the excavator, contemplating the complete absence of evidence for wooden walls, played with the idea of a roof supported directly on stone walls lining the pit. This theory he repudiated, however, by omitting it from his published preliminary statement.<sup>7</sup>

The total absence of wooden walls on the four sides of the chamber, with no hollows in the stone debris as clues, and the absence of a wooden floor, under roof beams that were at least partially preserved, deserves some comment. It is this author's theory that the pit was occasionally filled with varying amounts of standing water held for lengths of time by the unbreached floor and walls of hardpan. Rainwater could have come down the chimney of sandy refill (Figs. 40B, 41A,B) in every storm after the looting and before the

collapse of the roof. After the collapse the water destroyed also the beam-ends which had fallen into the pit.

The only measurement recoverable is the height: 1.25 m. from pit floor to the undersurface of the lower roof beams, measured at locus 2. If there was once a wooden floor, and there probably was, its theoretical thickness should be subtracted.

This author assumes the presence of a normal wooden chamber, probably of the type of Tumulus Y or of KY.

### CONTENTS OF THE CHAMBER

Due to the disturbance and the generally decayed condition of the chamber, there were no traces of a skeleton, either on the floor or in the fill.

Two items were concentrated in one area, under the roof beams of the south corner and along the south end of the southeast "wall":

<b>TumX</b>	1	Bronze:	nails (5)
	2	Pottery:	black-on-tan side-spouted sieve jug.

Since the nails are here considered to be coffin nails, the painted cup may once have been inside or near a coffin, located in the south corner.

The rest were assembled from sherds distributed generally through the fill of the chamber:

<b>TumX</b>	3	Pottery:	black polished wide-mouthed trefoil jug
	4,5		black polished footed dinoi
	6		gray polished storage amphora.

Whatever else, of more fragile material, may have been left by the looters probably perished in the occasional standing water discussed above.

### THE ROOF (FIG. 41A,B; PL. 53B)

Timbers from the roof—juniper, rotten and flaked—were encountered in only a few places, loci 1–5, as follows:

*Locus 1.* Ends of three timbers outside the grave pit at a high level, sloping to southwest toward the pit, and broken off at its edge.

*Locus 2.* Two timbers extending along the northeast side of the pit at 0.40 m. below its lip, broken off at their northwest ends. These lay side by side, but tipped slightly toward

6. Gordion Notebook 96, p. 161.

7. *AJA* 70 (1966) 267.

southeast after walls rotted away from under them and side packs sank inward.

*Locus 3.* One timber extending from the west corner along the northwest end of the pit to nearly half its length and there broken off. This lies at a slightly higher level than the two beams at locus 2, and the wood runs at a right angle to them.

*Loci 4 and 5.* Would seem to belong to the same roof layer as 2. At 4 there were three beams, a gap, a fourth, a gap, and a fragment, all belonging to the lower roof.

A reconstruction based on the above data would consist of: (A) a lower layer of roof timbers evidently laid lengthwise (northwest-southeast) with ends resting on the conjectural end walls and on the conjectural stone side pack behind them. See loci 2, 4, and 5. Those at 4 and 5 were originally level with each other, but those at 4 had shifted with the collapse; (B) an upper roof, at locus 3, laid crosswise (northeast-southwest) to enter and be supported by the conjectural stone side packs.<sup>8</sup> In addition, at height 1.60 m. above the floor a set of three longer beams (locus 1) lay together on edge across the width, their outer ends bedded on the top of the natural gravel layer (IV).

### THE STONE CAP (PL. 53B)

Over the upper roof beam at locus 3 the stone fill was continued into a cap consisting of round water-worn stones about the size of oranges. There is little evidence that the cap extended much beyond the edges of the pit.

### THE MANTLE

The mantle appeared everywhere to begin directly above an ancient surface line (the top of layer III) which could be traced continuously around the scarps of the three trenches. Also near the west corner of trench 2-3, resting on the surface line, were the triangular outlines of a pile of reddish clay/earth, indicating the back-dirt from the original excavation of the pit.

The mantle began over the roof and the extra cross-timbers, and continued up as sherd-free reddish brown earth and walnut-sized blue gravel, thoroughly mixed in part and irregularly layered in part. The grav-

el resembled that from the natural layer on the ridge. This composition continued throughout except in the top depression (A), which had resulted.

There were no signs of a mast or of guide walls in the mantle, probably due to the small height of the tumulus, at least as compared with its neighbors: K-III (mast),<sup>9</sup> P (mast),<sup>10</sup> MM (mast?).<sup>11</sup>

### CHRONOLOGY

Grouped geographically with Tumuli MM, P, Y, and K-III, Tumulus X becomes a fine candidate for a pre-Kimmerian date even before a review of the evidence from its contents.

The coffin nails (**TumX 1**) are closely associated with those on the "built coffin" found in Tumulus K-III.

**TumX 2**, according to Sams, may belong to a production group of sieve jugs found in the Destruction Level. **TumX 3**, the wide-mouthed trefoil jug, belongs in a long sequence, from K-III to H, and cannot narrow the date for X. **TumX 4** and **5**, the black polished footed dinoi, resemble two good painted examples (P 31, P 32) and a gray-ware example (P 5115) from a common grave under the mantle of Tumulus D.<sup>12</sup> This grave was neighboring to G, but only loosely dated by the *terminus ante quem* furnished by the mantle of Tumulus D (third quarter of the sixth century). The distinct raised feet on the dinoi, **TumX 4** and **5**, Sams believes could be a sign of advancement over those in K-III and P. **TumX 6**, the storage amphora with a very peculiar rim, resembles one found in Tumulus W and another in CC 2<sup>13</sup> and, therefore, may have parallels too widely dated to allow of dating X.

Date: Destruction Level on the City Mound.

### LOOTING

The depression in the top was in the end defined by the excavator as the result of the collapse as the roof beams rotted. He felt that the mantle slowly sifted into the chamber and was compensated for by a resulting depression at the top, but the author feels the depression was not well enough centered over the burial. The only traceable disturbance leading to the chamber was by way of the looters' pit. This is the only instance where, after a looting, the walls rotted *completely* away, allowing all four side packs to slide inward.

8. Young in his preliminary announcement inadvertently stated, contrary to his own notes and sketches, that the lower roof lay crosswise and the upper roof lay lengthwise. See above, n. 5.

9. C. Körte in *Gordion*, 39.

10. Young, *Gordion* I, 2, 4, 80.

11. *Ibid.*, 80.

12. Kohler, *Gordion* II, Pt. 2.

13. For CC 2 room, see p. *AJA* 60 (1956) 262-264; Sams, *Gordion* IV, 2.

## Catalogue

### IN DISTURBED FILL OF PIT

#### TumX 1-6

**TumX 1**     **Bronze: nails (5)**  
 B 1500     Scattered in south corner  
 PLS. 0.026-0.027   D. heads 0.011-0.013   Th.  
                          shaft 0.0035 m.  
 Pl. 54A

Good condition, except all show evidence of bending or breaking at ca. 0.022 m. from head. One, not cleaned, shows that grain of preserved wood runs across shaft.

Heads solid hemispherical; shafts square in section, showing oblique file marks.

These nails are not the fragile tacks used for decoration on the "screen" in Tumulus W<sup>14</sup> and the "stool" in Tumulus P,<sup>15</sup> but rather carpenter's nails like those used actually to hold together the thicknesses of overlapping wooden plaques on the "Sarkophag" found in the west corner of Tumulus K-III.<sup>16</sup> I follow Körte's interpretation here. The task of the nails was heavier, in that after having been driven through three laps of wooden plaque from the exterior, the stems were bent aside to tighten all as if by clamping; the turned shafts would not be visible if the coffin were lined with textiles as Körte believed, or after closure. The use of such carpenter's nails upon a coffin has been predicated also in Tumulus C (**TumC 1**).<sup>17</sup>

Nails of this type were not used in Gordion furniture, which was fastened by tenons, pegs, and (probably) glue.<sup>18</sup> The author accepts **TumX 1** as the remains of a coffin once located under the roof beams at loci 4 and 5 (Fig. 41B). The shape and decoration(?) of the coffin are unknown.

**TumX 2**     **Pottery: black-on-tan side-spouted sieve jug**  
 P 3136     From sherds scattered in south  
                  corner and along south half of southeast  
                  wall  
 PH.-h. 0.098   D. 0.10   D. rim 0.083   L. spout  
                  from rim 0.055 m.  
 Fig. 42A; Pl. 54B-E

Lacks base and lower half of body. Surface deteriorated.

Body low spherical to ellipsoidal, rounding above into concave neck with direct flaring rim and plain very sharp lip. Rolled vertical loop handle from rim to high on body. Small double knob on elbow of handle imitates bolster. Deep unbridged trough spout squared on end attaches ca. 60° to left of handle, where wall is finely sieved.

Painted decoration in fine black brush lines: shoulder zone, row of triangles (Sams type 1B); neck zone, complex lozenge row (with Xs and lozenges both ladderred); line on rim; running under spout from edge to edge, parallel vertical lines. Two lines at upper handle attachment.

Fabric very fine. Clay fine, micaceous, polished over paint, fired bright tan on surfaces, browner at core.

Beer-drinking at Gordion in general (and sieve jugs in a funerary context) have been discussed by G. K. Sams.<sup>19</sup> **TumX 2** is a fairly rare version of the sieve-spouted jug, Sams's type 1, here with unbridged trough which is rather short, straight-sided, and attached flush with the rim.

Tumuli P and K-III contained examples of this shape, TumP 73, 74<sup>20</sup> and K-III 20.<sup>21</sup> Several painted examples, although with different kinds of trough attachment, came from Tumuli W (TumW 61)<sup>22</sup> and K-III (6-10).<sup>23</sup> Elements of the painted style seen on **TumX 2** are, according to Sams, related to his Polychrome House style, and can be found on vessels dating from the fill of the Terrace Deposit through the Destruction Level on the City Mound.<sup>24</sup> The placement of **TumX 2** in the chronological series W, K-III, P, should probably fall close to K-III and P, possibly even after P.

**TumX 3**     **Pottery: black polished wide-mouthed trefoil jug**  
 P 3137     From sherds scattered through  
                  chamber fill  
 Rest. H.-rim 0.093   D. 0.112   W. trefoil 0.055  
                  m.  
 Pl. 54F

Disjoined mended rim and shoulder sections plastered together. Lacks base, and handle except for lower handle scar. Rim mistakenly plastered as too tall and too flaring.

Body on good evidence sharpened ellipsoidal. Neck short

14. Young, *Gordion I*, 217-218, fig. 129 and pl. 94G (TumW 80).

15. *Ibid.*, 73-74, fig. 42 and pl. 32A-C (TumP 157).

16. G. Körte in *Gordion*, 43-45 and fig. 6 (esp. 6c). I examined the fragments of the "Sarkophag" and their bronze nails in the Berlin Museum. The combined thickness of the plaques is 0.023 m.

17. In Tumulus C, however, they were of iron, with solid hemispherical heads and square shafts for holding iron bands to seal the edges of a plain coffin. See above, **TumC 1**.

18. Young, *Expedition 16*, no. 3 (Spring 1974) 2-13.

19. *Archaeology* 30 (1977) 108-115; *idem* in Young, *Gordion I*, 251-254. See also K. DeVries in *Young Symposium*, 37-38; Sams, *Gordion IV*, 67, 69, fig. 30, pl. 100.

20. Young, *Gordion I*, 40, pl. 20A,B.

21. G. Körte in *Gordion*, 63 and fig. 32, pl. 4.

22. Young, *Gordion I*, 212, pl. 92G-I.

23. G. Körte in *Gordion*, 56-59, figs. 21-23, pls. 2, 3.

24. Sams, *Painted Pottery*, 275, 570-571. *Gordion IV*, 67, fig. 30, pl. 100.



and concave with low ridge at its base. Rim flares into trefoil. Handle most probably round in section.

Fabric thin. Clay fine, with mica and white bits, polished (now dull). Fired black throughout.

The wide-mouthed low-bodied trefoil jug is less widely distributed in Gordion than is, for instance, the small trefoil jug with narrow neck. Many examples of the type of **TumX 3** occur, however, in Destruction Level contexts on the City Mound, especially the Terrace Gateway pottery depot, Meg. 3, and several Terrace Buildings. One was found in K-III (K-III 25)<sup>25</sup> and one in neighboring Tumulus Y (**TumY 4**). This pattern of occurrence strengthens the pre-Kimmerian date of Tumulus X and brings it and Y close to the Destruction Level in date.

**TumX 4**      **Pottery: black polished footed dinos**  
P 3133      Scattered sherds  
H. 0.275 D. base 0.092 D. 0.318 D. rim  
0.197 m.  
Fig. 42B; Pl. 54G

Mended, complete.

Small spreading foot on short concave-sided stem. Small depression underneath, leaving wide resting surface. Body ellipsoidal. Mouth wide, above finger-width neck. Rim rolled out and beveled on top toward both inside and outside.

Fabric medium. Clay fine, clean, micaceous. Given micaceous slip and polished over all. Fired black with a few buff streaks on surface.

See under **TumX 5**.

**TumX 5**      **Pottery: black polished footed dinos**  
P 3134      Scattered sherds  
H. 0.268–0.278 D. base 0.085 D. 0.318 D.  
rim 0.175–0.18 m.  
Pl. 54H

Mended, complete.

Resembles **TumX 4** in general, except that neck is even less evident and rim is well flattened on top, with standing ridge around outer margin forming ledge. Two wheel-run grooves (accidental?) on body just below greatest diameter.

Fabric and clay same as in **TumX 4**, but fired gray at core, blackest on surface where polished hardest.

**TumX 4** and **5** are so close in size and type that they should be considered a pair. Two dinoi, K-III 47 flat-based, K-III 48 ring-based, were funerary gifts in

Tumulus K-III.<sup>26</sup> In Tumulus W there was a pair in bronze (TumW 3,4) with flattened bases.<sup>27</sup> The latter were possibly prototypical of the pottery examples both in K-III and here.<sup>28</sup> Tumulus P contained ten with flat, disk, and ring bases under ellipsoidal bodies.<sup>29</sup>

The difference is that **TumX 4** and **5** are footed and therefore more rare. Tumulus Y contained one (**TumY 7**). Three painted examples (P 31, P 32, P 5115) were found in a disturbed pre-Kimmerian common grave under Tumulus D. There are a few further examples from the Destruction Level on the City Mound, e.g., P 2856 (CC 1), P 2311 (Meg. 3). Short-stemmed spreading feet of this type under both small and heavy forms are to be considered a fad dating before and at the time of the Destruction on the City Mound.<sup>30</sup>

**TumX 6**      **Pottery: gray polished amphora**  
P 3135      From sherds scattered through-  
out pit fill  
PH. 0.322 Rest. D. 0.346 D. rim 0.141 m.  
Fig. 42C; Pl. 54I

Several mended sections joined by plastering. Lacks base and lower body.

Body either ovoid or globular, with steep shoulders curving directly into short cylindrical neck decorated by fine ridge at mid-height. Rim everted, slightly ledged; on exterior, rim profile concave between low ridges. Two short sturdy arched vertical handles attached below neck ridge and high on shoulder. Low ridge down center of band, and finger depression at its base.

Fabric heavy. Clay fine to gritty, clean, slipped and polished. Fired brownish at core, mottled dark and light gray on surfaces.

Among the Phrygians generally storage amphoras were in wide use as funerary gifts.<sup>31</sup> **TumX 6**, with the upper ends of vertical handles attached at the angle between neck and shoulder, resembles two from Tumulus W (TumW 67 and 69).<sup>32</sup> The ledging at rim and ridging at neck are common characteristics, but the lip profile is individualizing. The only other good example known to the author was found in CC 2 on the City Mound.<sup>33</sup> The handle with central ridge is duplicated on, e.g., TumP 95 and 97.<sup>34</sup>

Dating is then calculable by some unknown length of time before the Kimmerian fire, i.e., the useful life of a large storage pot.

25. G. Körte in *Gordion*, 65, fig. 37. See Sams, *Gordion* IV, 61, 62.

26. G. Körte, *ibid.*, 67, nos. 47, 48 (ring-handled), fig. 43. Cf. Sams's discussion of dinoi in Young, *Gordion* I, 254–255 and *Gordion* IV, 91, 93.

27. Young, *Gordion* I, 201, pl. 88B,C.

28. Sams, *Gordion* IV, 93.

29. Young, *Gordion* I, 41–43.

30. Cf. Sams, *Gordion* IV, 293–294, nos. 967, 968 (pl. 139).

31. For distribution, see G. K. Sams in Young, *Gordion* I, 255; Sams, *Gordion* IV, 80.

32. Sams in Young, *Gordion* I, 256. See also 214 (amphoras not ill.).

33. *Gordion* Notebook 111 (Greenewalt), 75, pot with field no. 33, from burned debris.

34. Young, *Gordion* I, 44, 45, and fig. 21F (p. 43).



# Tumulus Y

## *Introduction*

### PRE-EXCAVATIONAL DESCRIPTION (FIGS. 1, 43A; PL. 53A)

Y is a small tumulus lying about 50 m. east-southeast of Tumulus X. Its top, smoothly rounded, rose to a height of about 7.50 m. measured above its outer visible edges; its diameter was 60 m. The incline of the ground line around its base was not recorded. It showed no signs of digging or disturbance before excavation began except for a rarely encountered scattering of large stones over the top, which can be seen in Pl. 53A. The excavator in the end believed that it had been looted.

### MASCA INSTRUMENT SURVEY (FIG. 43B)

In the first week of April 1965, after a magnetometer survey proved too indecisive (see also "Survey" of Tumulus X, p. 101), Elizabeth Ralph conducted a geomagnetic survey<sup>1</sup> over the tumulus, which showed anomalies in the west and southwest sectors close to center, and extending slightly north of the peak. She staked out the most promising area as measuring 6 m. east-west and 10 m. north-south; the center of the mound was included, at a point 3 m. south of her north boundary, and 1 m. west of her east boundary.

### EXCAVATION (FIG. 43B; PLS. 55A,B, 56A,B)

Tumulus Y was dug by Rodney S. Young during the period 26 April to 16 May.<sup>2</sup>

He chose for his trench 1 the southwest quarter of Ralph's predesignated 6 x 10-m. area. Measuring down from the highest point on the tumulus as datum, he went through the mantle (II) to a depth of -5 m., where a layer of sterile gravel (III) lay over white clay (hardpan, IV) whose surface was at -5.20 m. Both gravel and hardpan were natural and undisturbed. In the northeast corner of trench 1 at the level of the top of the gravel the southwest ends of two wooden roof timbers appeared, running northeast-southwest and belonging to the burial, which lay in the north half of the original area laid out by Miss Ralph.

Trench 2 was northeast of trench 1, its south half overlapping the latter. The mantle extended down in places to gravel at -5 m. and in others to hardpan at -5.20 m., but in the north end of the trench hardpan had been cut into for a burial pit. Trench 3 was measured to embrace the rest of the pit, then trenches 2 and 3 were taken down together. The triangular trench 4 completed the project.

1. The magnetic survey of Tumulus Y (Ralph's Tumulus I) showed a large magnetic region (low magnetometer readings) in the south portion of the tumulus and an anti-magnetic region (high magnetometer readings) in the northern half. The question at the time of this first tumulus survey by Miss Ralph was whether the strong magnetic region south of the center was a reaction from the tomb or whether it reflected only the great mass of earth to the north. In Tumulus Y the magnetic region

was too broad and poorly defined to point definitely to a tomb. A resistivity survey followed and an area of high resistance (maximum 36 ohms) was found at a depth of approximately 7 m., located within the 6 x 10-m. rectangle which she recommended for excavation. See large dashed rectangle in Fig. 43B.

2. Gordion Notebook 112 (1965) 113-127. See preliminary report: Young, *AJA* 70 (1966) 267-268, pl. 69, fig. 1.

## THE MAIN BURIAL

### THE PIT, CHAMBER, AND SIDE PACK (FIG. 44A,B; PL. 56A,B)

Datum was 5.20 m. above hardpan at the center, and 7.50 m. at the edges; it appears that again a natural knoll, 2.30 m. high, was chosen as a location for the burial. Since no discernible thickness of earth appeared at the sides of the pit below the lip, either the loam had been denuded there, or the Phrygians must have cleared the area to the gravel level (-5.00 m.) and then dug out a rectangular hole. Its corners extended to the major points of the compass. The northwest and southeast ends of the pit measured 4 m. and the northeast and southwest sides 4.50 m.

Within the pit fine white gravel was laid as a leveling supportive stratum, good also for drainage(?), under the floor, which appeared to be formed of broken clodlike bits of white hardpan.

It appeared as if the walls of the chamber had been placed directly on the prepared hardpan floor.

*Southwest side wall.* Found bulging inward from outside pressure; consisted of wooden planklike beams placed on edge, 0.14 m. thick when found, thicker than the end walls in order to accommodate jointing slots in the inner faces. At its southeast end the slots were neatly superposed, forming a housing 0.05 deep, 0.12 m. wide, to receive the ends of all the planks of the southeast end wall. The ends of the southwest wall continued beyond the inserted plank ends for 0.40-0.50 m. At the northwest end similar slots were found to be only 0.035 wide across their back line. Distance between slots (measured at backs of slots): 2.65 m. The maximum outside length of the beams was *ca.* 3.80 m. The wall (H. 1.05 m.) consisted of four beams (from bottom: 0.15, 0.20, 0.35, and 0.35 m.). The joints between the beams were so well fitted as to be hard to detect.

*Southeast end wall.* Its east end was almost directly under the center of the tumulus. Also bulging inward, it was made of thinner planks found still fitting into slots in the southwest side wall. The thickness of the southwest wall, as shrunken and dried, appeared to be 0.08 m. The slots, however, where they had not been partially closed by warpage, remained at a width of 0.12, which should give the original thickness of the end wall prior to its shrinkage. Measured between the faces of the northeast and southwest walls, the exposed length of the end wall was 1.40 m. The complete length of the end planks used was, then, 1.50 m.

*Northeast side wall.* Only a scrap of the lowest beam remained, found *in situ* but tipped over onto the floor, with PL. *ca.* 0.80 and a definite height of 0.30 m.

*Northwest end wall.* Existed only as scraps still housed in

their slots. The thinnest wall of all, to judge from the preserved width of the slots in the northwest ends of the side walls: 0.035 m.<sup>3</sup> Its original position was traceable where the hardpan surface broke off even with the inner edges of the slots.

The derivable clear measurements of the chamber, taken at floor level, were: L. 2.65 m., distance between the inside edges of the slots in the southwest side wall; W. 1.40 m., between the faces of the northeast and southwest walls. The clear height was 1.05 m. (see above, height of southwest side wall).

Since simple housed joints were used at the corners, it was necessary that the stone pack be supplied behind the wall planks as they were being placed. In this case the material used outside was "fairly fine" white gravel, contrasting with the churned-up gravel and earth mix inside, which had been yellowed by the dust of the rotted juniper walls. The process of packing probably continued until eaves' height (1.05 m.) was reached.

## CONTENTS OF THE CHAMBER

Skeletal material from high in the mixed chamber fill consisted of a femur and a knucklebone.

Scattered scraps of bronze and black pottery, for the most part from the northwest end of the chamber, yielded the following:

<b>TumY</b>	<b>1</b> Bronze:	leech fibula (imported)
	<b>2</b>	fibula (XII,2)
	<b>3</b>	fibula (XII,13)
	<b>4</b> Pottery:	gray polished wide-mouthed trefoil jug
	<b>5</b>	black polished round-mouthed jug
	<b>6</b>	gray polished dinos
	<b>7</b>	gray polished footed dinos
	<b>8</b>	gray burnished narrow-necked amphora.

## THE ROOF

### (FIGS. 44A-45A; PL. 56A,B)

The original deposit was sealed in by a single set of roof beams found in short lengths beginning at *ca.* 0.40 m. below the lip of the pit, partially resting on the southwest side wall and crossing the width of the grave,

3. Since this thickness is extremely small, one must at least consider the possibility that the slot took only the tongues of thicker beams, as in the case of the end walls of Tumulus N (see p. 84 and Fig. 35A), but in that case something of the heavier timbers

should have been left. An explanation of the absence of the end wall, whether thick or thin, might be that the looters entered the chamber from the northwest, tearing out the wall as they came.

i.e. running southwest-northeast. Only a few were preserved, about five contiguous timber ends measuring 0.12 to 0.15 m. in thickness. Since these were not preserved near the end walls and the end walls for the most part were lacking, it is not known whether they lay contained within the extended height of the end walls, as in Tumuli G and W, or loose and unbraced on top of four walls of equal height, as in N.

### THE STONE CAP

The stones of the cap were not found *in situ*. See below under "Looting."

### THE MANTLE

After the closure of the roof and the placing of the cap, the builders added a topping of brown, sometimes pinkish, earth, not clayey in nature, but containing scatterings of gravel. The location on a knoll gave a distinct advantage to the laborers.

### CHRONOLOGY

The thin slotting for the northwest end wall *may* point to a relationship with Tumulus N (see p. 84).

Among the contents, the "foreign" leech fibula (**TumY 1**), due to its poor preservation, offers no diagnostic aid to dating. On **TumY 2**, of type XII,2, a primitive hook is preserved. **TumY 3**, type XII,13, is early within the type, having blocks on the arc and a flat-backed hook (see examples in W and Q). All three can be matched with fibulae of pre-Kimmerian date, and are earlier than those with the developed deeply grooved hooks seen on the great number in Tumulus MM. If one argued from fibulae alone, Y should proba-

bly stand near K-III and P, whose fibulae have *in general* similar long slim hooks and blocks on the arcs.

A good parallel for **TumY 4**, a wide-mouthed pottery trefoil jug, comes from Tumulus X (**TumX 3**). **TumY 5** is a round-mouthed jug akin to the petaled type in Tumulus G (**TumG 7**). **TumY 5**, however, is a fine-ware, local, thoroughly reduced copy of one like **TumG 7**, which was also of fine ware, painted, and probably imported.

However, the dinoi (**TumY 6,7**) and the narrow-necked amphora (**TumY 8**) all have parallels in the Destruction Level. In spite of the heirloom nature of the fibulae, the larger pottery brings the date of Tumulus Y down close to, or even to the time of, the Kimmerian Destruction.

### LOOTING

In this case the excavator could see no narrowly cut entryway through the mantle into the burial. But he took as evidence of looting the finds lying high in the burial fill and the missing northwest wall. The author, using hindsight, believes that the wide scattering of large stones over the surface (cf. Pl. 53A) should have signaled disturbance, as they probably came originally from the extruded cap over the grave. It may be that the mixed nature of the earth and gravel through the whole excavated mantle disguised the disturbed layers. If the looters' hole was large, it may even have left evidence for its edges outside the trenches as cut. It is possible that the destroyed north corner of the chamber lay under the immediate entryway (see n. 3). At any rate the looters left no chronological evidence to date their coming.

Later the loose mix over the burial let rainwater in to rot the roof beams and walls. Water held in by the hardpan sides of the pit may have destroyed the remains of a normal wooden floor.<sup>4</sup>

4. However, if floor beams had rotted in place, perhaps the clay at the bottom of the pit would not have been so white. See above, p. 108.

## Catalogue

### IN DISTURBED FILL OF PIT

#### TumY 1–8

**TumY 1**     **Bronze: fibula (imported)**  
 B 1513  
 PH. 0.013   PL. 0.02 m.  
 Pl. 57A

Arc only.

Arc tiny, semicircular, round in section but swelling at center to wide transverse bulge. One end flattens out to form beginning of "elbow" below hook. Other end remains extremely thin but round in section, leading to spring.

Direction of pin unknown.

The details of the ends of this leech fibula are unsatisfactory for analysis. It belongs somewhere in Blinkenberg's group IV.<sup>5</sup> Muscarella<sup>6</sup> described it merely as a leech and called it "foreign."

It did not appear in Caner, *Fib. in Anat. I*. Vaguely I should like to associate it with some type like Sapouna-Sakellarakis, no. 881, or 885 and 885A,<sup>7</sup> all of which were found on Rhodes, and are dated "toward the end of the Geometric period."

See also under **TumG 3** and **4** (p. 39).

**TumY 2**     **Bronze: fibula (XII,2)**  
 B 1512  
 PH. 0.025   PL. 0.034 m.  
 Pl. 57B

Lacks pin and tip of hook.

Arc semicircular, round in section. Entire arc is coarsely ridged transversely (in mold), not spirally and not in true rings as ends of ridges do not meet in back. Hook small, flat along margins. Necklike extension at other end thins and then is turned twice into spring.

Cast as one piece.

Pin to wearer's left.

Blinkenberg<sup>8</sup> established his type XII,2 to include arcs round in section with moldings at ends only. Muscarella<sup>9</sup> discussed the XII,2s and dated them "seventh century, perhaps earlier." One pair from Tumulus S-1 is very finely milled transversely around the arc (**TumS1 22**).

Caner,<sup>10</sup> emphasizing the spacing of the fine ridges (rather than milling) on the arc of **TumY 2**, rejected the association with **TumS1 22** (which ends in bead

and reel) and reserved his variant N I,1 for this example and one other, of unknown provenience in a private collection in Germany.<sup>11</sup> He dated his restricted type to the second half of the eighth century on the basis of its earlier, more primitive hook.

**TumY 3**     **Bronze: fibula (XII,13)**  
 B 1511  
 H. 0.029   L. 0.037   W. blocks 0.006   Th.  
 blocks 0.004 m.  
 Pl. 57C

Lacks only pin and tip of hook.

Arc semicircular, flat oval in section. At ends and center single flat blocks. At spring end necklike extension to double coil (preserved). Back of hook flat, triangular.

Looks cast completely as one piece.

Pin to wearer's left.

See Muscarella's discussion of XII,13 fibulae.<sup>12</sup>

Caner<sup>13</sup> placed **TumY 3** in his variant C I,1, which is a separate classification of Phrygian fibulae within Blinkenberg's and Muscarella's XII,13. It has an arc with three slim blocks, and hooks flared rather than horned. Variant C I,1 includes close parallels from Tumulus W (TumW 56–60)<sup>14</sup> and Tumulus Q (**TumQ 3**).

**TumY 4**     **Pottery: gray polished wide-mouthed trefoil jug**  
 P 3159     Scattered sherds  
 H.-h. 0.15   D. base 0.055   D. 0.142   W. trefoil  
 0.10 m.  
 Pl. 57D

Mended; surface deteriorated.

Base flat; body ellipsoidal double-convex. Neck short, colored by short but well-flaring trefoil rim, with plain lip. Vertical handle, oval in section, sharpened to ridge over arch at top, rising from back of trefoil and descending to greatest diameter.

Walls thin; clay fine with some mica and white bits; burnished. Fired mottled buff to gray throughout.

This variety of low jug has wide pre-Kimmerian connections. See above under **TumX 3**, which it closely resembles.

The body proportions are generally related to those of type 2 sieve jugs. Both shapes occur in EPB V for the first time in the City Mound contexts.<sup>15</sup>

See p. 222 on the use of the wide-mouthed trefoil jug as a dipper.

5. *Fibules*, 87–106.

6. *Phryg. Fib. Gordion*, 82; *idem, Anat. . . . Near East*, 336–337.

7. *Fibeln . . . Inseln*, 78–79, pl. 27.

8. *Fibules*, 210–211.

9. *Phryg. Fib. Gordion*, 14.

10. *Fib. in Anat. I*, 160, no. 1109 (pl. 62).

11. *Ibid.*, pl. 62, no. 1110.

12. *Phryg. Fib. Gordion*, 22.

13. *Fib. in Anat. I*, 87, no. 482 (pl. 37).

14. Young, *Gordion I*, 212, 246–247 and pl. 92C-F. See also DeVries, *ibid.*, 198.

15. See p. 4, "EPB V"; also Sams, *Gordion IV*, 61 ff.

**TumY 5** Pottery: black polished round-mouthed jug  
 P 3160 Scattered sherds  
 H-bolster 0.097 D. base 0.041 D. 0.108 D.  
 rim 0.10 m.  
 Pl. 57E

Mended.

Base small, flat, but slightly set off from wall above it. Body wide low ovoid, curving gently into short flaring collar with plain fine rim. High vertical loop handle, pressed to triangular in section, up from lip and down to greatest diameter. Resting across top of arch is tiny bolster ending in two flat knobs.

Very fine fabric, well burnished, and fired black throughout.

**TumY 5** appears to be a simpler example, in gray ware, of the petaled and painted round-mouthed jug, **TumG 7**. The size, proportions, and generally curved shape are the same. Differences such as the flat base, here set off from the wall, occur on other shapes among the Tumulus G burial group.

Tumulus G appears to have some eastern affinities (see **TumG 7** and **8**); perhaps the petaling of **TumG 7** comes from the eastern plateau, and the simplification of the body of **TumY 5** may be a local adaptation. An intermediate form of lobing, possibly derived from petaling, occurs in Tumulus K-III,<sup>16</sup> but the pot form is stiffer.

**TumY 6** Pottery: gray (mottled) polished dinos  
 P 3161 Scattered sherds  
 Rest. H. 0.19–0.20 Rest. D. base 0.125 D.  
 0.272 D. rim 0.168 m.  
 Fig. 46A; Pl. 57F

Mended, with large gaps.

Base flat; body ellipsoidal with shoulder curving into short neck below mouth collared by flaring rim, flattened on top, bordered by ridge around exterior. Ridge in effect defines flat inner ledge for lid.

Clay fine, well polished. Fired mottled buff to gray.

**TumY 6**, with its flat base and very short, still curved, neck under a flaring rim, is to be placed close to the small flat-based pottery cauldrons of Tumulus K-III, but even closer to the broad-bodied dinos with ledged collar from Tumulus P (TumP 80).<sup>17</sup> Compare also P 2857 from the Destruction Level on the City Mound.<sup>18</sup>

**TumY 7** Pottery: gray polished footed dinos  
 P 3162 Scattered sherds

H. 0.245 D. base 0.102 D. 0.287 D. rim 0.14 m.  
 Fig. 46B; Pl. 57G

Mended, with gaps. Pot not well centered over base.

Base ring flares widely and is concave in two degrees underneath. Body is ellipsoidal/spherical, rounding directly into hole mouth collared by small flaring rim, round on outside, lightly ledged on inside.

Fabric sturdy. Clay basically fine, but inclusions and flaws present. Well burnished and fired gray-black throughout.

**TumY 7** appears closely related to the footed dinos **TumX 4** and **5**, but on **TumY 7** the spreading ring base is wider and lower, close to the proper ring base seen on TumP 81. Bases on the dinos found in Tumulus P tend generally to be flat or rings, but those from the City Mound show a great variety of raised foot forms. There are parallels for **TumY 7** dating as late as the Destruction Level.<sup>19</sup>

**TumY 8** Pottery: gray burnished narrow-necked amphora  
 P 3163 Scattered sherds  
 PH. 0.375 D. 0.352 D. rim 0.15 m.  
 Fig. 46C; Pl. 57H

Lacks approximately bottom third of body. Surface rotting.

Body tall ovoid with sloping shoulders. Neck narrow, above ridge at base. Another ridge at center height. Rim flares slightly; erect ridge on top exterior, ledge on interior. Two sturdy strap handles from lower neck ridges, arching to center shoulder. Finger groove pulled down center back of each handle ending in deep depression at base.

Clay gritty and micaceous with some burnish preserved. Fired mottled light gray on surfaces, reddish at core.

This amphora shares elements with **TumX 6**: upper handle attachments low on neck, with handle falling to middle of slanting shoulders;<sup>20</sup> wheel-ridge at mid-neck; attention given to handles via thumb-made grooves on their backs (**TumX 6** had two pulls forming a ridge in center; **TumY 8** had one central pull, forming a depression).

The neck of **TumY 8** rises, however, more in the manner of TumW 65<sup>21</sup> and is still more closely related to the sloping neck of TumW 66.<sup>22</sup> However, its general profile would also blend into the series of amphora necks from Tumulus P.<sup>23</sup>

Sams cites parallels for **TumY 8** from the Destruction Level.<sup>24</sup>

16. G. Körte in *Gordion*, 62, no. 18, figs. 30 and 31, *R*. For **TumY 5** see Sams, *Gordion* IV, 52, 57, pl. 61.

17. Young, *Gordion* I, 42, pl. 20f.

18. For **TumY 6**, see Sams, *Gordion* IV, 91, 95; for P 2857, *ibid.*, 293, no. 96f, fig. 49, pl. 138.

19. Young, *Gordion* I, 42, pl. 20j (TumP 81); for **TumY 7**, see Sams, *Gordion* IV, 91.

20. Sams discussed this intermediate position of amphora handles, *Gordion* I, 256; see also *idem*, *Gordion* IV, 80, 83.

21. Young, *Gordion* I, 214, pl. 93D.

22. *Ibid.*, not ill.

23. *Ibid.*, 43, fig. 21.

24. Sams, *Gordion* IV, 83, 284, nos. 890, 891.





## Part 2

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# The South Ridge

## Excavation and Catalogue

(Fig. 1; Pls. 2B, 58A,B)

The South Ridge (see Fig. 1) is a large section of higher land projecting up from the floodplain of the Sakarya, and, on the east, facing uplands on the north flank of which the village of Çekirdeksiz is set.

The group of Tumuli S-1, S-2, S-3, and Z, not to be confused in the photographs with a series of naturally formed hillocks on the edge of the ridge (Pl. 58A), are situated on eroded spurs extending from the ridge at different levels in a westerly direction into the plain.

S-1 lies at a slightly lower level than the others, on a plateau along the side of a north spur. S-2, S-3, and Z are grouped on top of a parallel spur farther south.

Since pre-tumulus habitation and cemetery remains have not yet emerged anywhere during the digging of the South Ridge, all burial features contemporary with the tumuli, or subsequently buried in their mantles, are included in the introductions and catalogues in the South Ridge chapters.



# Tumulus S-1

## *Introduction*

### PRE-EXCAVATIONAL DESCRIPTION (FIGS. 1, 47A; PL. 58A,B)

Of the tumuli on the South Ridge, S-1 was the first to be investigated.<sup>1</sup> Its diameter was 35.50 m., its height 5.22 m. above hardpan at the center; of intermediate size, it yet commanded a deep and wide vista from its position on an eroded spur which reached westward from the northern part of the main ridge. Its base lay above the 25-m. contour line.

Two military trenches dating from the Battle of the Sakarya<sup>2</sup> had been cut across the tumulus; the first chronologically, MT 1, a small one, cut on the east slope, was refilled either before or during the use of the second and larger one. MT 2, on the west slope, faced out upon the approaches through the Porsuk Valley and the flats north of the Beylikköprü railroad bridge. A cap of dump (layer I) resulting from this trenching activity lay over the crown of the ancient tumulus, filling a former crater which might, if left exposed, have afforded the excavator immediate evidence of the ancient looting of the tumulus.

### EXCAVATION (FIGS. 47B-50A; PLS. 59A-64A)

E. Robert Gallagher dug from 17 April to 13 May 1951. The arbitrary datum has been placed at the highest point of the tumulus.<sup>3</sup>

In trench 1 were immediately revealed cremations 1, 2, and 4, and a cist grave (see below), also MT 2 and

the edge of the stone cap of the main burial. Trenches 2A and 2B yielded a profile of the mantle taken down to hardpan on the southwest slope (Fig. 50A). Enlargements 3 to 6 were needed to finish the excavation of the main burial and MT 1 (Fig. 47B). The final excavated central rectangle measured *ca.* 12 x 12 m. In trench 5A was found the "platform" on the southeast; in 5B, cremation 3, and in trenches 6A and 6B the rest of MT 1 and the portion of "platform" under it.

### THE MAIN BURIAL

#### PREPARATION, "PIT," SUPPORT LAYERS, AND CHAMBER (FIGS. 48A-49B; PLS. 59A-60A)

The stratification of the four main layers of the tumulus above hardpan is clarified in Figs. 49A and 50A. The evidence shows that hardpan formed a fairly flat shelf in this area, not cut into anciently. The tumulus builders evidently cleared hardpan (they left no intervening loam) in preparation for the building of the chamber and the concurrent dumping of a compact waterproof clay (layer IV) around it. In the peripheral ends of trenches 1A and 2B telltale signs were present in layer IV of a retaining border (IVA) which appeared to predefine the circumference of the tumulus. Lines of intermediate dumping (IVB) were plainly visible within it, beginning at the border and advancing toward the center (Pl. 59A). Within the newly deposited clay near the surface of IV a peripher-

1. E. R. Gallagher, *Gordian Notebook 16* (1951) 85-170, and 19 (1951) 1-23. Young's brief announcement of the excavation of Tumulus S-1 appeared in *UMB* 17, no. 4 (Dec. 1953) 35. He referred to it as the "third of the wooden chamber tombs" dug in 1951, but entertained the possibility that it had been either purposely or accidentally set on fire at the time of the *installation*.

2. See below, "Military Trenches" and n. 27.

3. The excavator placed the zero datum point for all levels at an arbitrary 3.59 m. below the crown of the tumulus. The author has moved datum to the highest point and converted altitudes for the sake of consistency.

al mudbrick cist grave containing no gifts was carefully set and not far from it a small cremation (no. 1).<sup>4</sup>

A rough leveling off of level IV (Fig. 49A) marks the end of the first stage of construction, during which the walls of the chamber were built and the stones of the side packs and clay layer IV rose around the sides. The pit and chamber were oriented approximately north-west-southeast. A lining of puddled clay 0.11 m. thick (from *ca.* level -5.20 to -5.31 m.) appeared to hold a rough scattering of large stones which may have supported the floor in the central area. Only under the end walls were these stones arranged in lines to form rough socles, which seem to have risen high enough to support the end sills directly in their central areas where the end props did not reach.

Thin planks formed under-sill props along the full length of the sides, with evidence for crossing end props under them at the corners. The end props were short, but extended out from the ends of the stone socles, as was confirmed by a shallow impression in the northeast scarp of the "pit," lower than the floor-planks and in line with the stone socle under the northwest end wall. The impression measured W. 0.27, Th. 0.045 m. with its ultimate end at a distance of 0.18 beyond the side walls. This partial evidence draws a picture of under-sill propping, complete under the sides and having only end pieces under the end walls. The excavator estimated the bedding of the under-sill props to lie at -5.16 m.

The top of the floor, at *ca.* -5.03, consisted in most places of a mass of pulverized char, but the approximate measurements of one of the five to seven dressed cross-planks could be taken: L. 3.60, W. *ca.* 0.50, Th. 0.03-0.05 m. These floor-planks had been shallowly rabbeted near both ends, and then turned over so that their rabbets fitted tightly over the two low side props, whose measurements were, on the northeast side, L. 4.90 and (as above with the end props) W. 0.27, Th. 0.045. Because of the rabbeting, the floor level should have been raised only *ca.* 0.02+ m. above the top of the props.<sup>5</sup> Thus the floorboards were laid crosswise and flush against the end sills.

Supported by the flooring and the props, and *possibly* cross-lapping at the corners, the side sills crossed and extended beyond the end sills. The rest of the side beams rose at the same time as the end beams, and both were supported on the exterior by the stone pack and, behind that, the clay of layer IV, which together kept the necessary pressure on the simple housed joints at the corners of the walls (above the sills). Of

the centers of the end walls no physical traces remained in place, except for the crude stone socles described above.

There is no doubt, however, that the chamber had once been completed, for a sufficient number of dressed timbers lay fallen.<sup>6</sup> They were evidenced by short sections, their ends found crushed among the stones. At the four corners, a few fragmentary ends of side beams showed their beam slots. The closest possible measurements taken from the scraps of walls judged to have remained *in situ* just above the props and floor indicate an inner width of 2.80 m. for the chamber. The inner length was roughly deduced to be 3.65 m. from measurements taken between the inner edges of the two stone end socles.

The four walls of the chamber and the northeast and southwest stretches of stone lining had largely collapsed into the chamber, a process which had in places stripped the sides away to the scarps of clay layer IV. As a result, the vertical measurements of the individual wall beams remain unknown, as does the nature of their staggered (or unstaggered) levels in the corners.

The thorough destruction of the chamber and its contents was caused by a fire which occurred during the later looting of the tumulus (see below, "Looting"). The fire burned the floors and walls, and reddened and cracked the stones which fell into the pit from the sides. The upper side timbers in only a few cases were left as occasional lines of charcoal and powdery black soot. Only one great beam could be outlined for most of its length as it lay under the collapse of stones from the pack behind the southeast wall.

#### CONTENTS OF THE CHAMBER (1): ON THE FLOOR

The finds, mainly of bronze and pottery, were spread in loose clusters through the chamber from the level of the floor deposits upward, throughout the collapsed beams and fallen stone pack.

At the southeast end, low in the char of the fallen wood, was a large concentration of crushed pottery and fibulae. A cluster of fibulae lay isolated and *in situ* under the southeast end of a beam fallen from the southwest wall, but the rest in that area were scattered.

Here also only sparse fragments of the skeleton were found scattered on the floor. A whitish pink deposit on the floor may have been remains of a mat upon

4. See below, pp. 120-121 for cist, and all cremations.

5. Inconsistencies in the measurements of levels below the top of the chamber floor could not be resolved due to the charred state of the wood and the roughness of the stones in the socles.

6. Wood sample 51-Bot-23: "Fragments of burned wall beams." Analysis: possibly *Pinus peuke* (E. S. Barghoorn, The Biological Laboratories, Harvard University, in letter to R. S. Young dated 26 February 1954).

which the body or the body in its coffin (see below) once lay. Indications are then that the mat and body were churned up along with the contents of the chamber and the skeleton scattered up into the mantle (see below, "Finds from the Mantle").

Along the southwest side many fibulae lay beneath the central stretch of the southwest wall, pressed as it were into the burned floor-planks. Against the north-west end the wall timbers lay crushed on the floor. There were fewer groups of burned gifts here, but in the char and fill were sherds of crushed and burned pottery and many fibulae.

From the center of the room, at the bottom of the refill, came bits of bronze wrapped in textiles,<sup>7</sup> and the rim band and spool from a ring-handled bowl.

One piece of lead clamp, resembling those found on log coffins (see Tumuli B<sup>8</sup> and C<sup>9</sup>), lay at floor level. This is very slim yet telling evidence for the presence of a coffin in Tumulus S-1 prior to the looting and fire.

And out of the sieve which strained the last earth taken from the bottom of the chamber came a bronze bolster and more fibulae.

A summary of the material from the chamber floor follows:

<b>TumS1</b>	<b>4</b>	<b>Bronze:</b>	bolster from ladle
	<b>5</b>		frag. of rim band from ring-handled bowl
	<b>6</b>		bowl fragment, ribbed
	<b>22</b>		fibula (XII,2)
	<b>23-25</b>		fibulae (XII,2A)
	<b>29-32</b>		fibulae (XII,11)
	<b>37,38,42-45</b>		fibulae (XII,13)
	<b>46,48-61,63-</b>		fibulae (XII,14)
	<b>68,70,71</b>		
	<b>Uncat.</b>		chip with traces of textile
	<b>72</b>	<b>Lead:</b>	clamp fragment.

For finds from the disturbed contents of the upper chamber fill and sunken cap, see below under "Contents of the Chamber (2)."

## THE ROOF

The stratigraphical change at the top of layer IV (at -3.82 m.) must indicate an intermission in the burial procedures. It appears to be a convenient level from which to lower the gifts into the chamber, and upon which to assemble the beams for the construction of the roof.

The excavator believed that the height of the roof was indicated by a traceable burned-out niche where the ends of the side beams had extended into the stone pack at the north corner (Pl. 60A). The niche rose to -2.92, giving a "clear interior height of 2.11 m." This appears to be an impossibly tall clearance.<sup>10</sup> The writer cannot accept the figure 2.11 m., but also cannot offer any suggestion. One would, from statistics (see Table 2, p. 170), expect a height of ca. 1.50, at most 1.70 m.; this also comes close to the thickness of clay layer IV (see Fig. 49A).

Rodney Young believed the chamber had never been roofed.<sup>11</sup> Although the roof beams had been pulled out completely (i.e., in this case burned out completely or removed by the looters), evidence that they had once been in place was afforded by the edges of the 2-cm. layer of pinkish reeds and grasses<sup>12</sup> usually placed on top of a chamber roof. Layers and patches of reeds appeared between the disturbed stones themselves (Pl. 60B), but also, more importantly, ringing the lip of the pit.

## PLATFORM AREA ON THE NORTHEAST SIDE OF THE PIT (FIG. 49B; PL. 60C)

Sandy clay (layer III) was laid over the preliminary working floor which topped clay layer IV. On the surface of layer III, at -2.87 m., another working floor appeared which sloped away from the edge of the pit downward toward the northeast and east into trenches 6A and 6B, disappearing into scarps at level -3.43 m. It had been hard-packed by the passage of many feet around the edges of the grave pit and was well leveled further out (see Fig. 49B[G]). It was carpeted with

7. Textile sample 51-Text-4: "chip of bronze still bearing traces of cloth, from center of grave"

Warp (no count) (S) fur  
Weft (no count) (S) fur  
(Bellinger, "Textile Fragments," 1).

8. See **TumB 6** and pp. 183-184.

9. See **TumC 10** and pp. 183-184.

10. Even if one assumed that the side walls extended higher than the ends of the chamber, in order to hold in roof beams (only

end walls are so far known to have done so at Gordion; see pp. 46, 175), another 0.10 to 0.20 m. could be subtracted from the 2.11 (= e.g., ca. 1.90 m. clearance). This would still be exceptional. See Table 2, p. 170. This is the inside height of the chamber in Tumulus K-III, which was larger than S-1 in every way (weathered D. ca. 120, H. above hardpan 23.05 m., etc.).

11. R. S. Young, *UMB* 17, no. 4 (Dec. 1953) 35.

12. For reeds on the roofs of other chambers, see below, pp. 175-176.

reeds which showed also profuse lines of scoring by wheels(?) or sledges (Pl. 60C) and lines of iron rust from tools. The marks probably are the result of the Phrygian activities connected with hauling materials to the edge of the pit.<sup>13</sup> It was on the surface of this layer that the first set of guide walls began (Fig. 49B and "Guide Walls" below).

*CONTENTS OF THE CHAMBER (2):  
FROM THE DISTURBED UPPER FILL OF THE  
CHAMBER MIXED WITH THE CAP*

The process of placing the upper stone packing proceeded along with the amassing of layer III. The stones of the cap were large flattish slabs of friable stone of limestone type falling in a size range between 0.10 x 0.10 and 0.50 x 0.50 m. All those that were found fallen on top of the burned wall beams were also burned.

A long thin pile of stones was left at the southwest lip of the pit as if the stones between it and the pit edge had been disturbed. The looters left *in situ* not enough stones altogether to have constituted a cover, but see below under "Tumulus" and "Cremation 4." The top of the pile, as found, at the northwest reached only to -2.02 m.; and the level of the central point of the burial, taken under the beginning of the mantle, was -3.23, where a few fragmentary ends of burned beams and numerous large iron nails had first shown among the stones. These were wall nails of the type used for the suspension of gifts. Throughout the fallen stone pack were layers of pinkish feathery remains of reed matting. Those stones lying well back from the edge showed no burning. The overall length of the stone covering, taken from northwest to southeast, was 10.05 m.

The west and southwest sectors of the disturbed fill in the tomb were sterile. From the southeast end came crushed pottery, bronze fibulae, parts of belts, and scattered human skeletal remains. From the sunken center came more fragments of bronze bowls and belts, broken pottery vessels, and wisps of textiles.

Summary of finds from among the upper ruins of the burned chamber and in the stone cap:

<b>TumS1</b>	1	Bronze:	bail fragment from small cauldron
	2,3		ladle handle fragments
	7-9		petaled bowl fragments
	10		plain omphalos bowl fragments
	11,12		solid belt fragments
	13-17		open-work belt strap fragments and hinges
	18,19		belt handles of fibula type
	20		studs
	21		patching strips
	26-28		fibulae (XII,9β)
	33-36,39-41		fibulae (XII,13)
	47,62,69		fibulae (XII,14)
	Uncat.		disk from bronze and leather belt ( <i>in situ</i> , Pl. 61A) <sup>14</sup>
	73	Pottery:	small gray-ware cup
	74		gray-ware jar
	75		gray-ware amphora.

A group of uncatalogued sherds, many of which show smoothing and wiping rather than burnishing, came from various levels in the chamber fill:<sup>15</sup>

<b>TumS1</b>	Pottery:	mottled rims of jars, plain flared (Fig. 54I[a-d]);
		mottled rims of jars, trimmed to square at lip (Fig. 54I[e]);
		mottled rims of jars, everted and flattened or obliquely trimmed on interior (Fig. 54I[f]);
		bases (33) flat (D. 0.065-0.105 m.) from mottled gray jars (Fig. 54I[j]);
		bases (6) flat and set-off flat, from heavier closed vessels (Fig. 54I[k]);
		rim of carinated bowl (Fig. 54I[l]).

The group mentioned below—uncatalogued iron and burned pottery, some with golden mica in a thick slip—came from the northeast edge of the burial pit and from the stone cap:<sup>16</sup>

13. The excavator, in his 1951 end-of-season summary, p. 7, remarked: "A marked causeway 2.20 m. in width, passing beneath the SE wall [scarp] of our cut and presumably proceeding to the foot of the mound, must mark the main line of ascent and the route of the funeral procession." There are no details of this causeway in the field book.

14. The bronze disk seen in Pl. 61A could not be saved. It was tentatively identified in 1951 by the excavator as a bowl, but it lies too flat and lacks the separations inevitable in a torn and flattened bowl. It resembles closely the thin hammered belt disks recognized for the first time in 1957 (MM 170A-178A; Young, *Gordion* I, 148-153, fig. 94, pls. 73E-74E) with flat interior and exterior edges and a central group of concentric ridges. Its hol-

low center was for the exposure of studded design located on its leather backer. This disk from S-1, taken together with loose studs of three appropriate sizes, gathered and discussed under **TumS1 89**, provides evidence for a bronze and studded-leather belt of the pre-Kimmerian type.

15. The uncatalogued fragmentary pottery from the chamber fill is stored in context bags S1-III and IV. In the count of bases, only sherds larger than half a base were considered.

16. The uncatalogued iron and pottery grouped here can be found in context bag S1-I. For evidence that gifts were sometimes deposited in stone caps over the burials, see unlooted Tumulus B and J (above, pp. 13, 58).

<b>TumS1</b>	Iron:	wall nails (type of <b>TumZ 16</b> and see p. 174)
	Pottery:	numerous dinoi and low-necked jars (Fig. 55A[a-l]); bases, flat and disk, from jars (Fig. 55A[m-q]). No count taken. black polished bowl with petaled body and plain rim (Fig. 55A[r]); gray bowls with plain rim (Fig. 55A[s,t]); gray bowl with carinated rim (Fig. 55A[u]).

0.38 to 0.59 in width or height and 0.07 m. thick, comparable in shape and size to those in primary guide walls A-D.

Whether the center of the tumulus had originally been planned to be at the center of the cap as indicated by walls A-D, or it was to be at its 1951 location over the north corner of the burial, if we consider the great amount of ancient and modern disturbance over the crown of this tumulus, it is surprising that the evidence for so much consistency was preserved.

The excavator described the mantle (layer II) as consisting of "clay/earth," which the writer interprets to mean a mixture or blend of these two soils. To -3.25 m. the mantle, outside the area of the disturbed burial, was recorded as "sterile." Over the burial, however, the disturbance caused an extruded mix of stones from the cap<sup>17</sup> and of burial gifts in patches of back-dirt from the looting (see "Looting" and "Military Trenches" below).

### THE MANTLE AND GUIDE WALLS (FIG. 49B[E-J]; PLS. 61B, 62A)

Further evidence that the chamber and its stone cap were once complete is furnished by the presence of guide walls A-D on top of layer III (ca. -2.87 m. at lip of "pit"). In this instance they were laid approximately to the cardinal points of the compass, from the center of the burial without reference to the corners or the center points of the chamber's sides:

*Wall A. North.* Northern line mentioned by excavator, but not clear on plans.

*Wall B. East.* Three tall slabs in alignment parallel to another preserved north of them. No measurements.

*Wall C. South.* Two parallel lines of smaller stones. No measurements.

*Wall D. West.* Two parallel lines 0.70 m. apart, built of stones 0.40 x 0.40 m. and 0.40 x 0.50 m., standing up edge to edge. North line possibly disturbed by MT 2. Three similar slabs rested nearby upon stone cap.

These short guides A-D appear to represent plans for the division of labor in the short run—merely the building of the stone cap which, before the looting, may have almost covered the guides. But they may have also been the means, on the surface of layer III, of establishing markers situated farther out for aiding the continual location of center as the mantle rose.

Wall E (below) is one bit of evidence that such an earlier master plan existed for the finished tumulus, since it was bedded on a slant, well down in the second support layer (III), and pointed directly to the final center of the mantle, which was over the north corner of the burial:

*Wall E. West-east.* Located in mouth of trench 2. Recovered fragment rose from -3.91 to -3.73 with upper end cut off 5.44 m. west of measured center. Slabs standing upright measured

### FINDS FROM THE MANTLE (OR POSSIBLY FROM THE DISTURBED CHAMBER)

A few objects were recovered from the central part of the mantle. These were further fragments of mottled buff and gray dinoi and low-necked jars, showing burning; several uncatalogued, resembling **TumS1 79, 80**, may have had a thin coat of slip-paint which burned to a cloudy, mottled brown surface. A painted sherd with geometric design had washed back into trench MT 2 (**TumS1 77**) and a gray sieve jug was found in part in the stone cap and in part high above the west corner of the chamber (**TumS1 78**).

<b>TumS1</b>	<b>76</b>	Bronze:	hemispherical stud
	<b>77</b>	Pottery:	painted sherd
	<b>78</b>		side-spouted sieve jug
	<b>79,80</b>		gray-ware vessel fragments
	<b>81</b>		gray open-mouthed amphora sherd
		Uncat.	rims of jars bases of jars (10). D. 0.065–0.085 m. many wall sherds of mottled fabric. GD. 0.18 m. and above.

In cuts 5A and 5B, at -3.43 m. in clay/earth were scattered more bones of a human: bits of skull, a lower jaw containing teeth, a scapula, and other loose teeth, all probably from the main burial.

Throughout the mantle sporadic clusterings of charcoal are probably to be interpreted as the remains of

17. See under Cremation 4 below.

back-dirt left by the curious who may later have churned up the charcoal in the pit and further decimated the contents.

### PERIPHERAL FEATURES IN THE SUPPORT LAYERS

#### MUDBRICK CIST GRAVE IN LAYER IV (FIGS. 49A,B, 50B; PL. 62B)

In trench 1B in the layer of compacted clay (IV), at depth -4.14 m., a cist of rust-red mudbricks appeared, oriented northwest-southeast, consisting of single end-blocks (L. 0.42, W. 0.185, Th. 0.08 m.) and two side-blocks (L. 0.56, W. 0.18, Th. 0.08 m.),<sup>18</sup> which gave an overall outside dimension of 0.72 x 0.42 and an interior clearance of 0.54 x 0.22 x 0.18 m. The cover was similar, but it was crushed beyond the possibility of measurement. In the cist were the remains of a tiny child, much disintegrated and crushed by the fragments of the lid which had been forced down into the cist by the weight of the overlying earth.

The skeleton, lacking grave offerings, lay extended on its back, head to the southeast. Several fragments of the skull and unerupted teeth remained, along with the pelvis and lower long bones. The fragments of teeth recovered (four incisors, four canines, four bicuspids, four premolars) gave indication that the child was approximately two to three months old.

#### CREMATION 1 IN SURFACE OF LAYER IV (FIG. 49A,B; PL. 59A)

Shallowly set just under the surface of compacted clay, partially in the northeast scarp of trench 1B at -3.82 m., a small cremation,<sup>19</sup> 1.05 m. in diameter, was situated as if installed during the building of the tumulus, predating the addition of layer III. It contained the charred remains of bones and wood, fused and melted fragments of bronze, and the arc of a fibula, under the crushed side wall (only) of a large coarse gray-ware vessel with mottled and rotted thin paint, the finish resembling that of **TumS1 80**.

This collection, fragmentary in the extreme, must form a peripheral cremation deposit.

**TumS1 82** Bronze: fibula (XII,14)

The cist grave and cremation 1 were installed during the very earliest phase of the preparation of the tumulus—the laying and smoothing over of layer IV. The date of these two peripheral burials must come very close to the time of the completion of the walls of the main chamber and the installation of the gifts, but before the accrual of layer III and the finishing of the stone cap.

Sherds of the mottled ware were found in cremation 1 and in the mantle (see **TumS1 79, 80**); more were scattered through layer III.

#### CREMATION 2 IN SURFACE OF LAYER III (FIGS. 49A,B, 50A; PLS. 62A, 63A)

A small gray amphora (**TumS1 84**)<sup>20</sup> was found in the southwest scarp of trench 1B in the angle with 2A, in the surface of the sandy clay layer III (-3.49 m.). It lay 0.50 north and 4.87 m. west of center, obliquely set in a northeast-southwest orientation, opening toward the northeast, and was covered by the broken base-section, **TumS1 85**. This also contained the charred remains of an adult whose bones had been selected and cleaned after their cremation. The vessel itself and the makeshift covering were not burned; it contained, in addition to small scraps of textile wrapping,<sup>21</sup> one twisted burned fibula (**TumS1 83**).

Its relationship to guide wall E is not clear.

**TumS1 83** Bronze: fibula (XII,9β)  
**84** Pottery: gray neck-handled amphora  
**85** coarse buff vessel fragment

### PERIPHERAL FEATURES IN THE MANTLE

#### CREMATION 3 IN LAYER II (FIG. 49A,B; PL. 63B)

A whitish gray jug (**TumS1 86**)<sup>22</sup> lay crushed on its side in the clay/earth of layer II in trench 5B at level -1.09 m., above the top of the stone pile near the north corner of the main burial pit. The jug was oriented east-west with open end toward the west. Its handle

18. It appears that a full-sized mudbrick was used on each side, and that a full brick minus 0.14 m. off the length was used for each end.

19. Excavator's "fire basin."

20. Excavator's "Cremation 2."

21. Textile sample 51-Text-5: "Cremation ERG 2"

Warp (25) (S) fur (angora rabbit?)

Weft (16) (S) fur (angora rabbit?)

The S-spun fur from Tumulus S-1, which may be angora rabbit, is a much finer fiber than any current among the Graeco-Roman textiles from Egypt, but the spinning is "Egyptian" (BELLINGER, "Textile Fragments," 1-2).

22. Excavator's "Cremation 3."



and rim had been broken away before deposition. It was found to contain the charred remains of bones, carefully cleaned and selected, as in cremation 2. Prof. Alpagut has supplied information that the bones belong to a juvenile 10 to 15 years old.

No grave offerings accompanied it.

**TumS1 86** Pottery: large gray coarse jug

#### CREMATION 4, IN LAYER II OR IN LOOTERS' MIX (FIG. 49A,B; PL. 64A)

At depth -0.58 just 0.50 m. northwest of the center of the tumulus, a small gray jug (**TumS1 88**),<sup>23</sup> from which both spout and handle had been previously broken, was found sitting up immediately beside a loose jumble of fist- to head-sized stones which extended down to -3.41 m. At -2.49 m. some appeared to lie on the surface of the disturbed sandy clay layer (III). These were stones originally from the cap, the central portion of which had been thrown up as back-dirt and perhaps later rolled or was thrown back into the crater. Consequently the cremation may no longer have been in its original position, or it may have just escaped the disturbance.

**TumS1 88** contained, according to Prof. Alpagut, the burned bones of a youth 15 to 20 years old. To judge from the absence of ash or char in the vessel, the bones had been carefully cleaned and selected after burning.

The bones were accompanied by one small fibula, complete but broken.

**TumS1 87** Bronze: fibula (XII,2)  
**88** Pottery: gray burnished narrow-necked jug

### CHRONOLOGY

In a fairly large number of bronze objects from the Tumulus S-1 group, no visible differences are found between them and objects found in pre-Kimmerian tumuli—especially Tumuli P and MM. **TumS1 2-5, 7AB, 8AB, 9** in this category are bronze vessels: ladles, a ring-handled bowl, petaled omphalos bowls. The uncatalogued belt disk is pre-Kimmerian in type. Of the fibulae the XII,2s, 2As, 11s, 13s and 14s found in S-1 could be pre-Kimmerian. This is a substantial body of late eighth-century material which must represent heirlooms in this group. In fact the very profusion of

these fibulae as gifts to the dead, in addition to those on the body, has its parallel only in Tumulus MM.

Certain bronze objects, however, show marked later tendencies. Greater use of casting and less of the pre-Kimmerian handwork are evident, in **TumS1 1**, and among the fibulae in the XII,2s and 9Bs.

The solid belts fall in the line of descent from the belts of Tumulus P, but show advances in the strap ends **TumS1 13-15**, the blocklike bases of the strap handles **TumS1 18** and **19**, and the tendencies to plainer, merely striated decoration in the main sections (**TumS1 11, 12**). All the S-1 examples show a line of development in the direction of those copied in Chios, worn, and then deposited in the layer dated 630-600 B.C. (see pp. 208-210).

The pottery **TumS1 78-81** have spherical bodies, and therefore are connected with Tumulus MM or later examples. The uncatalogued rims in Figs. 54I, 55A illustrate advances beyond those of MM dinoi; the neck profiles are higher, more concavely curved, and show treatment of the rims such as flattening, vertically cut lips, and decorative under-rim treatments (especially Fig. 55A[c-e]).

**TumS1 75**, an amphora, closely resembles **TumB 4** and **5**, but details of neck shape and handle placement put the S-1 amphora earlier than the examples from B (see p. 220).

The sloppily applied paint on **TumS1 79** and **80**(?) and on many of the profiled examples (Fig. 54I[a-i]) may have developed from the amphora "of uncertain finish," **TumP 94**,<sup>24</sup> which is so exceptional in the Tumulus P collection as to suggest importation (possibly from another Phrygian center).<sup>25</sup>

Parallels for belts and fibulae, when cited as stratified on the City Mound at Gordion, are concentrated in the period of the cellars found dug into clay, and are sometimes from under the cellars. **TumS1 13, 18, 30, 45**, and **71** have strong associations with South Cellar examples. The material in the clay *under* the cellars may date as late as a brief period after the passing of the Kimmerians. The exact interval has yet to be defined by the authors of the City Mound volumes.

A summary of the above discussion, in spite of the heavy representation of bronzes of pre-Kimmerian type in the burial, would seem to place Tumulus S-1 later than MM, close to Z.

Of the peripheral features found in layers IV to II in the tumulus, all are safely sealed as installations contemporary with the main burial except possibly cremation 4 near the surface of the mantle. However, the shape of the vessel (**TumS2 88**) and its contents make cremation 4, too, contemporary.

23. Excavator's "Cremation 1."

24. Young, *Gordion* I, 44.

25. See G. K. Sams, *ibid.*, 47.

## LOOTING OF THE MAIN BURIAL

It is in a way unfortunate that the capping dump from the military trenches (Fig. 49A) obscured pre-excavational traces of earlier entry.<sup>26</sup>

The roof had been removed entirely. Everything in the chamber and a majority of the pieces found loose in the mantle (layer II) had been burned. Since there is no outside evidence for a common cemetery or houses in the vicinity, the material in the mantle, found generally in the center, not around the excavated edges of the mound, signals entry into the chamber from the top. One stone pile at -2.49, 0.68 m. thick, but unassociated with the cap, and well-scattered shovelfuls of burned material, along with bones and pottery, represent patches of back-dirt created by looters after the fire.

Many more stones originally removed from the cap during the entry into the tomb must lie as back-dirt at intervals in the mantle to the north and northeast, but the excavator kept his digging to such an economical minimum that those parts of the mantle were never investigated.

A profusion of burned bronzes was also found shoveled out on the northeast side of the pit (Fig. 49B[F]).

Let us also list the occurrences of scattered human bone:

Trenches 4 and 5A:	mandible with two right molars (southwest side of "stone pile")
Trench 5A:	teeth (one molar, one bicuspid) and three fragments of long bones (in stone pack)
Trenches 5A and 5B:	fragment of skull, lower jaw, scapula of young person (northeast scarp of 5A at -3.43 m. in patch of burned material in clay/earth).

A lack of reduplication in the bones found indicates that we are probably dealing with one body—that once

buried in the chamber below.

The disturbance had spread, then, from a wide area under the refilled crater left in the top of layer II, to an area over the tomb sufficiently large for the removal of all the roof beams and for the thorough churning up of the tomb's contents. The looters had to dig through an estimated 1.50–2.00 m. of clay/earth in order to encounter the top of the stone pile as originally laid. They were favored by the fact that the tomb was under the center and was reserved in artificial layers III and IV and not sunk into hardpan, as in some other instances. The east-west width of the looters' hole at the top of layer III may be indicated by the distance between the inner ends of the east and west guide walls at the points where they were left undisturbed (Fig. 49B).

The looters were able to remove an unknown amount of burial gifts before the fire in the chamber put an end to their operation. They themselves may have raked through it after it cooled, or the tumulus may have been abandoned for a while. If so, a second group of interested parties, showing curiosity concerning what lay in the burned wood and stone fill, may have cast up patches of char and burned bronzes, etc., along the slopes of the still open crater. This could even have been done by children.

The date of the looting is not clear from inner evidence.

Wind and time refilled the shallow crater up to the slightly cupped shape it held under the last cap of earth (layer I), put there by the diggers of military trenches 1 and 2, which follow.

## THE MILITARY TRENCHES (FIGS. 47B, 49A; PL. 58B)

Two military trenches<sup>27</sup> were excavated into the top of layer II, the clay/earth layer.

an eastward direction south of Dua Tepe (the great hill south and west of Çekirdeksiz) and up the railroad line to Polatlı and beyond; the south flanks of the Greek army pushed the Turks back almost to Haymana, taking the heights as they advanced. Here both sides halted from utter exhaustion and lack of ammunition. When the Turks were resupplied and regrouped, the Greeks were pushed slowly back via the same route, over the Gordion site again, and following the Porsuk Valley they fell back upon Eskişehir, Afyon, and Izmir.

The modern war monument commemorating the Battle of the Sakarya stands on a height overlooking Polatlı. Consult Lord Kinross, *Atatürk: A Biography of Mustafa Kemal, Father of Modern Turkey* (New York: Morrow, 1963), esp. ch. 35, "The Battle of the Sakarya," pp. 314–323; see also V.D. Volkan and N. Itzkowitz, *The Immortal Atatürk* (Chicago: Univ. of Chicago, 1984) 179–181.

Note: The village of Pebi, indicated in the Körtes' plan of Gordion in 1900 (Gordion, pl. 1; see also xii, fig.), was destroyed by shelling during the Battle of the Sakarya and was never rebuilt. The ruined site is now referred to as Eski Pebi (see Fig. 51).

26. As a result, the excavator never considered looting as a possible cause for the fire in the chamber. He believed that the fire occurred at the time of the installation. Cf. p. 115, n. 1.

27. The military trenches or installations in the tumuli (herein S-1, S-3; in Young, *Gordion* I, 2, P and 191, W; in Kohler, *Gordion* II, Pt. 2, I and K) should be interpreted as front lines in the Kemalîst final defense against the invading Greeks at the Battle of the Sakarya in 1921. The Greeks were advancing from Eskişehir toward Ankara and keeping in general along and parallel to the railroad line in the Porsuk Valley. The battalions of the Turks were deployed in a long north-south line which went through Gordion, and were dug in on several heights just east of Gordion and of the bend in the Sakarya (see Fig. 51). After ten days' march from Eskişehir the Greeks in the Gordion area crossed at Beylikköprü bridge, and threw another bridge across the Sakarya farther north near the mouth of the Porsuk. The Battle of the Sakarya raged from 23 August to 13 September 1921, without letup. The Turkish right flank (Gordion and north) mainly held. But the Greeks concentrated on pushing back the left flank of the Turkish lines and finally pursued it in

The first, MT 1, was a large pit, approximately 1.50 x 3.00, dug from -1.27 to -2.68 m. in trenches 5B and 6A.<sup>28</sup> It is to be noted that the matting on the north-eastern platform edging the main burial pit ran undisturbed directly under MT 1, which was located above the east guide wall over the stone fill. The nature of the items excavated from the refill of the military pit (**TumS1 89–100**) was merely reduplicative of the group from the disturbed fill in and around the burial pit, which means that the soldiers of 1921 employed soft earth from the central disturbance to refill this pit, which may have been a slit trench made during their period of use of MT 2.

The following, found interspersed with char and earth throughout the depth of MT 1, were catalogued:

<b>TumS1 89</b>	<b>Bronze:</b>	small studs ( <i>ca.</i> 74)
<b>90–93</b>		fibulae (XII,9β)
<b>94–99</b>		fibulae (XII,13)
<b>100</b>		fibula (XII,14).

The fibulae, which were more incrustated and patinated than those found in the main deposit, appeared to be mixed with small bits of burned and rotted textile, none of which could be saved.

The main(?) military trench, MT 2, first encountered by the excavator in trench 1B, then in trench 2 and the west end of 3, continued into 4. At its very south end, at the bottom (-2.67 m.), the excavator believed it had scooped out *ca.* 1.75 m. along the outer west edge of the stone "cap" (Fig. 49A). It disturbed the earlier west guide wall (D) (Fig. 49B) along its northern edge, but did not remove it completely. The rest of the edge of the stone cap at the lip of the pit on that side seemed in fair order, so it appears that the soldiers of 1921 did not disturb the main burial. They dug through mantle clay/earth (II), stopping at or just above the sandy clay, and touching the stone cap. They dumped their back-dirt (layer I) on top of the center of the tumulus behind them, evidently preferring to keep clear their view of the Porsuk Valley and the floodplain.

In 1951 the excavator of Tumulus S-1 found the dump (layer I) blown back across the top of MT 1. MT 2 yielded only one sherd (**TumS1 77**), which possibly had drifted down into it with the clay/earth of layer II. On the west flank of the tumulus the refill formed a flattened ledge, which signaled a post-tumulus cutting (Fig. 47A; Pl. 58B).

## Catalogue

### IN CHAMBER AND ITS STONE FILL **TumS1 1–75**

As explained on p. 115, n. 1, the peculiar circumstances in this case (the ancient looting, the damage by fire to the chamber and its contents, and the collapse of the stone-filled sides of the burial) permit us, we believe, to consider as a single group all parts of the main burial complex which were found immediately under the disturbed center of the clay/earth tumulus mantle (layer II). This group is sometimes generally referred to as "packing" and should include the finds from among the thin lines of stones remaining along the edges of the burial pit.

<b>TumS1 1</b>	<b>Bronze: fragment of bail from small cauldron</b>
B 206	Center of packing
PL. 0.058	GPD. ring 0.01 GPTH. rod 0.0065 m.
PL. 64B	

Ring attachment broken open and other end broken.

Rod basically round in section but vaguely faceted lengthwise eight times. At end which connects with fixed ring of vessel is cast ring, and next to it is row of five variously molded transverse ridges alternating with four distinct narrow grooves.

**TumS1 1** appears to be cast in imitation of the pre-Kimmerian bails. Those were of wire neatly twisted back round itself after having entered a fixed ring on the rim of, e.g., small cauldrons TumW 3,<sup>29</sup> MM 12, 13,<sup>30</sup> and situlae MM 45, 46.<sup>31</sup> Cast ends on a bail like **TumS1 1** would necessitate the adjusting of the attachment ring on the rim (which perhaps had to be hammered shut after insertion through the bail end). Or an alternative would involve small intervening rings hammered shut as on MM 10 and 11.<sup>32</sup> No cauldron bodies were found, however, in Tumulus S-1. The finishing of the moldings on the bail shows the same

28. The excavator called this the "Northeast Charred Deposit" and felt that the fire had prevented the final bestowal of gifts by the Phrygians at the time of the original installation and that this group, perhaps consisting of garments at least partially burned, had been collected and deposited separately in the top of layer II after the finishing of the mantle.

29. Young, *Gordion* I, 201, pl. 88B,C.

30. *Ibid.*, 112–113, fig. 72, pl. 59A-C.

31. *Ibid.*, 121–122, fig. 79, pls. 62C, 63A,C,E.

32. *Ibid.*, 110–111, pl. 58J,K.

method as that sometimes used on fibula moldings. **TumS1 1** bears a close relationship to the fibula **TumS1 42** (see below) which shows squarish spaces between moldings, perhaps achieved by the filing and cleaning of the fibula after its emergence from the mold.<sup>33</sup>

**TumS1 2** **Bronze: handle fragment from ladle**  
B 195 Center of packing  
PH. arch to lower break 0.10 W. bolsters  
0.018 m.  
Pl. 64C,D

Mended. Preserved from near outer end to near cup attachment.

Handle begins at outer end as thin rod, rises to groove behind outer bolster, then broadens at arch to wide strap outlined by grooves, narrows to go under inner bolster and becomes flat straight-sided band with two grooves down center.

The grooved band of **TumS1 2** appears to be a derivative of, or indeed very close to, the stems on ladles MM 47 and 48,<sup>34</sup> which were associated with the small cauldrons in MM. G. Körte also found in Tumulus K-IV a ladle of similar design<sup>35</sup> inside a small cauldron.

**TumS1 3** **Bronze: fragment of ladle handle**  
B 194 Center of packing  
PH. 0.056 Ws. handle 0.007, 0.005 Ths. handle 0.0045, 0.0025 W. bolster 0.016 m.  
Pl. 64E

Broken across upper arch and below bolster on stem.

Handle over arch is narrow strap with two lengthwise grooves. Between arch and main stem is crossing bolster, small, cylindrical, and molded in reels. Outer stretch of handle continues as slightly wider strap with two lengthwise grooves. Inner surface flat.

The handle on **TumS1 3** resembles **2** but is thicker, perhaps cast. The transverse decoration on the bolster is more detailed than that on **TumS1 1** or any parallels mentioned above. The casting, final grooving, and filing are related to fibula making.<sup>36</sup>

**TumS1 4** **Bronze: bolster from ladle handle**  
B 222 Chamber floor  
H. 0.007 W. 0.033 W. groove 0.008 Depth  
groove 0.002 m.  
Pl. 64F

Complete. Detached from handle of ladle.

Rod convex in section on outer curve, flat on inner, concave curve. Ends beveled off obliquely. Rectangular sinking in concave surface to receive crossing handle. Round flat rivet head preserved at point of crossing.

**TumS1 2-4** are evidence for three separate ladles which are usually considered to be evidence for the presence of at least an equal number of small cauldrons, as ladles have so often been found inside them.<sup>37</sup> **TumS1 1** probably represents one such cauldron.

**TumS1 5** **Bronze: fragment of rim band from ring-handled bowl**  
B 205 Center of room, bottom of stone  
refill  
PL. 0.07 Th. 0.0055 Est. D. 0.36 m.  
Pl. 64G

Mended. Possibly flattened out somewhat from original curve of rim.

Fragment of solid cast rim band. Convex on outside of curve, concave on inside.

This very small bronze band implies the former presence here of a ring-handled bowl of the type discussed above under **TumJ 20**, but it cannot place the bowl in any chronological series.

**TumS1 6** **Bronze: fragment of ribbed bowl**  
B 157 Chamber floor  
Max. dim. 0.051 W. rib 0.006 m.  
Fig. 52A; Pl. 64H

Mended from three fragments. Now too flattened to yield estimated diameter.

Section from very thin wall of large horizontally fluted bronze bowl. Each flute shallow but finely ridged. One pair of flutes modified into band.

Surface smooth on interior, hence cast.

The ribbing on **TumS1 6** is much narrower than that on the cast ribbed omphalos bowls from Tumuli W,<sup>38</sup> P,<sup>39</sup> and MM,<sup>40</sup> and on **TumJ 3**.<sup>41</sup> All these parallels show the ribbing on the interior, whereas the angle of **TumS1 6** fixes its ribbing on the exterior, as also seen on fragments from tumulus Anıttepe I at Ankara.<sup>42</sup>

Copies in pottery of such carefully executed horizontal ribbing, whether in fluting or reeding, or upon open or closed vessels, are found only after the Kimmerian Destruction: K-II 45,<sup>43</sup> **TumH 3**,<sup>44</sup> **TumZ**

33. Muscarella touched on the finishing process: *Phryg. Fib. Gordion*, 50-51. Cf. also *ibid.*, pl. XI, fig. 57 for similar technique of finish.

34. Young, *Gordion I*, 123, pl. 64A,B.

35. *Gordion*, 101, bronze no. 4, fig. 74.

36. See above, n. 33.

37. See Young, *Gordion I*, 227-229.

38. *Ibid.*, 205 (TumW 11), fig. 123, pl. 89C.

39. *Ibid.*, 15 (TumP 12), pl. 9D,E.

40. *Ibid.*, 141-143 (MM 125-130), fig. 91B-D, pl. 71B-G.

41. Below, Fig. 25B, Pl. 35D.

42. T. Özgüç, *Belleten* 11 (1947) 66, fig. 19.

43. G. Körte in *Gordion*, 121, fig. 102.

44. See above, and Pl. 27D.

20,<sup>45</sup> uncatalogued sherd from Tumulus N's mantle,<sup>46</sup> and P 5251 in the cremation Tumulus I.<sup>47</sup> See also examples from the City Mound above the Clay Deposit.<sup>48</sup>

**TumS1 7** **Bronze: fragments of two petaled bowls**  
 B 191a,b Center of packing  
 A Max. dim. lgst. pc. 0.041 Th. rim 0.004  
 B Max. dim. lgst. pc. 0.0265 Th. rim 0.0035 m.  
 Fig. 52B,C; Pl. 65A

Mended sections from many fragments. Bases lacking.

Walls approximately hemispherical. Repoussé petals or tongues on A are long, beginning thin like reeding and spreading toward rim (not dividing into tiers as in lotus-petaled bowls, cf. **TumS1 8**); on A rim direct, plain, thickened, flattened on top. On B walls show beginning of usual tiering of petals; rim direct, plain, thickened, rounded over top.

See under **TumS1 9**.

**TumS1 8** **Bronze: fragments of two petaled bowls**  
 B 190 Among stones  
 A Max. dim. 0.07 Th. rim 0.0027  
 B Max. dim. ca. 0.064 Th. rim ca. 0.005 m.  
 Fig. 52D,E; Pl. 65B

Three cleaned rim fragments and numerous others too fragile to clean. Parts of at least two bowls. Bases lacking.

Walls approximately hemispherical, hammered repoussé to pattern of presumably tiered lotus petals accented by outlining incision on interior. On A, thinner rim rounded over top; sharper petal tips to 0.005 m. below lip. On B, thicker rim, slightly flattened on top; blunter petal tips to 0.007 m. below lip.

See under **TumS1 9**.

**TumS1 9** **Bronze: fragments of petaled bowl**  
 B 200 Among stones  
 Est. D. rim 0.18 GPH. 0.044 Th. rim 0.004 m.  
 Fig. 52F; Pl. 65C

One cleaned rim fragment.

Parts of two tiers of petals below plain erect, slightly thickened rim. Like **TumS1 8** except that tips of petals under rim

are deepened by heavy scoring on exterior and outlined by sharp incision on interior.

At least five distinct repoussé-hammered petaled bowls (including one untiered in arrangement, **TumS1 7A**) are represented in the group **TumS1 7-9**. The tiered types appear in both Kimmerian and post-Kimmerian proveniences at Gordion: MM,<sup>49</sup> J,<sup>50</sup> S-2,<sup>51</sup> and Z.<sup>52</sup>

The untiered petaled type is akin to **TumZ 13**, although there the petals low on the body are as thin as reeding. **TumZ 13** was hammered repoussé, which allies it with petaled rather than ribbed bowls (for the ribbed group see above, **TumS1 6**). It appears significant that only a few bronze vessels<sup>53</sup> show vertical narrow or wide reeding previous to the Kimmerian invasion. The treatment on pottery showing the *disciplined* vertical reeding of the good metal examples occurs only after the Destruction. Fine gray- and black-ware examples come from the layers above the Clay Deposit on the City Mound, and extend into the fourth century B.C.<sup>54</sup>

**TumS1 10** **Bronze: fragments of plain omphalos bowl**  
 B 201 In stone packing  
 D. base pc. 0.066 Est. D. rim 0.14 Max. dim.  
 lgst. rim pc. 0.095 OD. ridges 0.06 m.  
 Fig. 52G; Pl. 65D

Only floor from around omphalos preserved, with nonjoining fragments of rim and wall.

Floor plain underneath; on top three sharp concentric ridges around base of missing omphalos. Rim plain, flaring, and very thin.

No examples with so thin a rim were found in Tumulus W,<sup>55</sup> MM,<sup>56</sup> or P.<sup>57</sup> Rims on plain omphalos bowls appear to have been fairly thick in pre-Kimmerian times, as are the rims on petaled omphalos bowls and plain bowls. The rest of **TumS1 10** appears normal for the type; the only difference from those cited above is in the rim, but perhaps until all the bronze vessels from the pre-Kimmerian tumuli are drawn in profile, one should not draw conclusions.

45. See below, p. 160 and Pl. 68E.

46. See above, p. 85 and Fig. 36F.

47. Kohler, *Gordion II*, Pt. 2.

48. E.g., P 2546, see R. S. Young, *AJA* 66 (1962) 154-155, pl. 41, fig. 1b; P 2805, see Young, *AJA* 68 (1964) 282-283, pl. 84, fig. 12; and G. K. Sams, *Archaeology* 30 (1977) 114 and ill. top left.

49. See Young, *Gordion I*, 131-141 (MM 70-123), fig. 86, pls. 68-70.

50. **TumJ 2**. See above, p. 60.

51. **TumS2 3, 4**. See below, p. 144-145.

52. **TumZ 12**. See below, p. 159, Fig. 68B.

53. I consider the gray-ware sieve jug TumP 78 (Young, *Gordion I*, pl. 20G,H) to show undisciplined reeding on pottery, and the bronze sieve jug MM 15 (*ibid.*, pl. 59F) disciplined reeding on metal. Cf. G. K. Sams, *Archaeology* 30 (1977) 112-113, and ill. p. 113 top right.

54. E.g., P 1092, accompanied by solid belt fragments B 677 (below, p. 209).

55. Young, *Gordion I*, 205-206 (TumW 13-16, no profiles drawn), pl. 90A-D.

56. *Ibid.*, 143-147 (MM 131-167), figs. 91E-J, 92A,B, pls. 72, 73A,B.

57. *Ibid.*, 15-17 (TumP 13-28, no profiles drawn), pls. 9F,G and 10A-H.

**TumS1 11 Bronze: fragments of solid belt with striated decoration**  
 B 203 Southeast edge of grave packing  
 PL. lgst. pc. 0.03 GPW. 0.04 W. incised band  
 0.006 Th. 0.0005 m.  
 Pl. 65E

Many small fragments of thin sheet bronze. Belt width unreconstructible.

Flat across whole width. Sewing holes, about 0.009–0.01 m. apart, run along *ca.* 0.001 in from all preserved edges. In *ca.* 0.0025 from edge begins band of 16 very finely incised parallel lines as marginal decoration. Rest plain.

We may have pieces of both upper and lower edges. See under **TumS1 12**.

**TumS1 12 Bronze: fragments of solid belt with striated decoration**  
 B 204 Center of grave packing  
 PW. lgst. pc. 0.033 W. incised band 0.009  
 Th. band 0.0005 m.  
 Pl. 65F

Many small fragments, all nonjoining.

Resembles **TumS1 11**, except that band of incised decoration is wider (28 incisions) and sewing holes finer and only 0.004 m. apart.

Fragments of a solid belt with decoration identical with that of **TumS1 11** and **12** were found in an unstratified context in the Phrygian lower city at Boğazköy.<sup>58</sup> On Boehmer's no. 2561a-e all striated bands were of W. 0.011 m., which is wider than our 0.006 (**TumS1 11**) and 0.009 m. (**TumS1 12**). This would tend to show that upper and lower bands were of equal width on one belt and that we have evidence here for at least two Gordion belts probably of different widths. The Boğazköy pieces were accompanied by a handle arc of type XII,14<sup>59</sup> and by an open-work strap with catch-holes in it.<sup>60</sup>

Other examples with identical striated edging bands are listed and illustrated by Caner. Two from the "district of Afyon"<sup>61</sup> preserved their full widths (0.066 and 0.0655 m.). These also came complete with handle arc, strap, and hook. On the Afyon example a late development (as compared with TumP 34–36 in Tumulus P)<sup>62</sup> is evident: the bays which began as cord slits behind the hook are here degenerated into two incised (striated) circles on the body of the belt under the handle arc. The lapsed time for this development would have

to correspond to that between the Tumulus P belt handles (fibulae XII,7s) and the handles on **TumS1 18** and **19** (see below) which are XII,14As.

Caner published also a small fragment of striated belt from a closed tumulus group found in the "district of Midas City"; A. Bammer more recently presented two from Ephesus, and M. Akkaya published one from the tumulus (Dipsiz) near Kaynarca.<sup>63</sup>

**TumS1 13 Bronze: fragments of open-work belt strap with hinge<sup>64</sup>**  
 B 177 Southeast end of grave packing  
 PL. lgst. pc. 0.037 W. 0.046 PH. post 0.039 m.  
 Pl. 65G

Several sections, preserving measurable width, and hinge post. Outer end missing.

Cylindrical post, for fitting at top and bottom into short hollow cylindrical hinge cups originally attached to main belt. Post is profiled by fine transverse bead-and-reel ridging. Along post (only) two rivets fasten thin area of strap which is "shouldered" next to hinge and cut in open-work lattice design of finely punched round holes in areas contained in rectangular frames. Rectangles occur above and below row of round holes (evidence for four preserved) to receive hook. Margin plain, being merely part of internal rectangular partitioning.

See under **TumS1 15**.

**TumS1 14 Bronze: fragment of open-work belt strap with hinge**  
 B 176a Center of stone packing  
 H. hinges and post 0.06 GPL. 0.021 m.  
 Fig. 52H; Pl. 65H

Hinge post of belt strap with one hinge cup from main belt attached and one loose. Post profiled by transverse grooving. Attached to post is small portion of strap decorated with fine latticed open-work within small square frames.

One latticed strap fragment very similar to both **TumS1 13** and **14**, and having a rounded end and four circles in each frame, comes from just above the Clay Deposit on the Gordion City Mound.<sup>65</sup>

See under **TumS1 15**.

**TumS1 15 Bronze: fragments of open-work belt strap with hinge**  
 B 175a,c In central grave packing  
 H. post 0.039 m.  
 Pl. 65I

58. Boehmer, *Unterstadt*, 7, 8, pls. V[2561a-e] and VI[2566].

59. *Ibid.*, 8, pl. V[2563].

60. *Ibid.*, 8, pl. V[2562].

61. *Fib. in Anat.* I, 198–199, G 22a,b (pls. 80–81). Purchased by the Istanbul Museum from a dealer.

62. Young, *Gordion* I, 17–20, figs. 9–11, pls. 11–12D; for development, see E. Kohler, *ibid.*, 238–239.

63. Caner, *Fib. in Anat.* I, 189–193, esp. no. 1173A,m (pl. 82); Bammer, *JÖAI* 61 (1991/92) Beiblatt, cols. 36–43, figs. 27–32; M. Akkaya (Niğde Museum) in *Cappadocæ*, 26 no. 8. pl. 3, figs. 10, 11.

64. My terminology as applied to belt parts follows John Boardman's as closely as I feel it possible. See his descriptions in *Anatolia* 6 (1961) 179–189, and in *Greek Emporia*, 214–221 in which he changes a few terms.

65. B 1510, from trench M5-E, South Cellar.

Hinge post only, lacking pins at top and bottom.

Two fragments of open-work decoration from strap: narrow margin with adjoining open-work circles, *ca.* four each in small framed squares, and fragment from center containing series of three (preserved) crescentic catch-holes.

These three straps (**TumS1 13–15**), preserved with their hinge posts, filled the same role as the tonguelike attachments consisting only of combinations of open circles found on the Tumulus P belts.<sup>66</sup> These from S-1 have progressed in design to become compartmented like the end-plaques from studded belts in Tumulus MM,<sup>67</sup> and the end-to-end belt plaques of MM 180.<sup>68</sup> Here, in addition, a series of catch-holes, either round or crescentic, was made to run down the center, and the outer ends (none preserved here) could have become rounded like examples from Emporio.<sup>69</sup>

The closest parallel to **TumS1 15** is a belt strap from tumulus Anittepe I at Ankara.<sup>70</sup> Another similar fragment was recovered in tumulus METU II.<sup>71</sup>

Another, fairly similar but unhelpful for dating, came from an unstratified context in Boğazköy.<sup>72</sup> It has a very thin hinge post and more fragile strap, with a metal reinforcement backing the catch-hole where the hook presumably entered. This example accompanied the belt with striated margins cited above after **TumS1 12**,<sup>73</sup> and the handle Boğ. 2563<sup>74</sup> which appears to be of type XII,14.

A strap from Samos,<sup>75</sup> with punching on the margins, and fragile through the center like the Boğazköy example, shows how the strap was attached to its (missing) hinge post.

**TumS1 16** **Bronze: hinge from belt strap**  
B 176b Center grave packing  
GPH. lgst. pc. post *ca.* 0.018 m.  
Pl. 65j  
Fragments of hinge post for strap.

**TumS1 17** **Bronze: fragment of hinge**  
B 175b In grave packing  
GPH. post 0.039 m.  
Not ill.

Fragment of post for another hinged strap. Bent; cross-grooving obscured.

**TumS1 18** **Bronze: belt handle of fibula type (XII,14A)**  
B 355a Center of stone packing  
H. 0.058 W. 0.043 D. bead 0.0115 W. end-blocks 0.014 m.  
Fig. 52i; Pl. 66A

Arc complete. A bit of belt sheet attached to one rivet in back.

Heavy arc, round in section, decorated by pairs of milled beads set between single reels, placed at center and in quarters of arc. At ends milled beads alternate with single reels (omitted next to terminals). In intervals on arc, sharp single reels. Heavy ends have thin extra blocks, finished as three flatish plain beads, alternating with single reels, on front face and continuing as finely cut ridging on flat end-faces. The back of the arc is left partially plain but not flattened. Behind each terminal molding, rivet for attachment to belt.

According to Muscarella<sup>76</sup> **TumS1 18** is related to a fibula of type XII,14A, because it has nine moldings on its arc instead of the canonical five.

Boardman<sup>77</sup> associated such belt handles with those on Ionian belts and discussed Ionian relationships with earlier Phrygian metalwork. Ridged rectangular end-blocks did not occur on belts from Tumulus P,<sup>78</sup> but belong to Emporio type C, which Boardman associated with the Bayraklı type, occurring there only on arcs with five moldings (XII,14). It is probable that the Emporio examples nos. 290 and 291 in the period HS (Harbor Sanctuary) IV (630–600) had already degenerated from copies with the more neatly treated Phrygian block-terminals of the type found on **TumS1 18** and 19.

From the Samian Heraion Jantzen<sup>79</sup> published several similar belt parts which he considered votive. These had square terminals at the end of the arcs, that on Samos B593 exactly resembling those on **TumS1 18** and 19. Boehmer<sup>80</sup> has published several examples from Boğazköy. These are very close to those from Gordion, but unfortunately are without stratification. Caner<sup>81</sup> added an example with finely ridged blocks acquired in Batak and now in the Afyon Museum, of

66. See p. 208, n. 101. Note that the straps on the P belts are riveted directly to the belts without a hinge mechanism.

67. Young, *Gordion I*, pl. 74F-L.

68. *Ibid.*, pl. 74G.

69. J. Boardman, *Anatolia 6* (1961) 179–189; *Greek Emporio*, 214–221. See also below, n. 72.

70. T. Özgüç, *Belleten* 11 (1947) 68, figs. 23–26.

71. S. Buluç, *Ank. Frig Nokr.*, 62, pl. 14, fig. 3.

72. Boehmer, *Unterstadt*, 8, no. 2562 (pl. V).

73. See n. 58.

74. Boehmer, *Unterstadt*, 8, pl. V.

75. Jantzen, *Samos VIII*, 50, no. 1289, pl. 47. From the Heraion.

76. *Phryg. Fib. Gordion*, 25–26, pl. XVI(77,78).

77. *Anatolia 6* (1961) 183; *Greek Emporio*, 214–221, nos. 290, 291, fig. 142(290,291). R. S. Young discussed the function of the parts of such belts and westward trade in belts, *ProcAPS* 107, no. 4 (1963) 360. See also P. Amandry, *Anatolica 7* (1968) 87.

78. Young, *Gordion I*, 17–20 (MM 34–36), figs. 9–11, pls. 11–12D.

79. *Samos VIII*, 50, nos. B 606, 616, 593, pl. 45.

80. *Kleinfunde*, 70–73, esp. 72, no. 180, pl. X (a XII,14A type from near the King's Gate); *Unterstadt*, 7, 8, pls. V(2563), VI(2564,2565) (three from the lower city).

81. *Fib. in Anat. I*, 195, no. G 2 (pl. 77).

significance as being situated on the trade route from Gordion to Izmir and the Greek islands.

Caner believed the decoration on **TumS1 18**<sup>82</sup> restricted it to his fibula type J III.<sup>83</sup> Examples (B 1685, 1147) were found at Gordion under the floor of the South Cellar, and in a pit, respectively, both of which were sunk into the Clay Deposit on the City Mound;<sup>84</sup> others were found in the mantles of later Tumuli D (B 221) and E (B 441).<sup>85</sup> Other XII,14A handles occurred sporadically in the upper levels of the City Mound.

All type 14As from Gordion appear to be post-Kimmerian. Of these Muscarella believed **TumS1 18** and **19** to be the earliest dated examples from the site.<sup>86</sup> By style they can be placed earlier than B 1685 (see above).

See below, **TumS1 19** and the general discussion which follows it.

**TumS1 19** **Bronze: belt handle of fibula type (XII,14A)**  
B 355b Center of stone packing  
End A: PL. 0.040 End B: PL. 0.0435 Th.  
reels 0.0115 m.  
Pl. 66B

Two end pieces from broken arc with end-blocks and riveting preserved. These resemble those of **TumS1 18** except that moldings consist of sets of three beads (outer ones in each set milled) alternating with thin reels.

These fragments<sup>87</sup> are from a larger and heavier belt handle than **TumS1 18**, and are probably also related to the XII,14A fibulae.

See discussion under **TumS1 18**.

This paltry collection of fragments (**TumS1 11–19**), since it contains five strap hinges of the type consisting of a post which ends in pins to fit into cuplike knobs fastened to the main belt, furnishes evidence for at least five belts. The decoration of at least two belts consisted of striated edging bands. Two could have had handles of the XII,14A fibula type; any three could have had straps with fine open-work decoration, two with round, one with crescentic catch-holes. No hooks from the handle ends of the belts survived which could furnish important clues to the style of the usually decorated area under the handles.

This type of belt was derived from the variety found in Tumulus P, but on the post-Kimmerian examples the straps show modifications in workmanship possibly taken from the end-plaques of the disk belts from

Tumulus MM. Similar examples of straps, handles, and whole belts at Gordion came from proveniences stratified in, sunk into, or lying just above the Clay Deposit. Dating appears to be aided by the serial scheme of dating for the derivative types found in Emporio.

Certifiably earlier examples of block-terminals on belt handles have not been found at Gordion. If greatly degenerated copies of these blocks survived in Emporio in period HS IV (630–600), this must serve to set the date of **TumS1 18** and **19** well back of that date.

See also discussion of belts of this type on p. 209 below.

**TumS1 20** **Bronze: two fragmentary studs**  
B 210 Center of stones  
H. 0.012 D. 0.02 m.  
Not ill.

Fragmentary.

Hemispherical hollow caps with stems attached in interior center. At greatest diameter, flat washerlike disk almost closes cap.

**TumS1 21** **Bronze: patching strips (2)**  
B 192 Center of stone piece  
A L. 0.048 W. 0.038  
B L. 0.036 W. 0.03 m.  
Pl. 66C

A, thin rectangular strip with nine holes around edges where attached to thin deteriorated second piece.

B, same, but preserving two rivets.

See **TumZ 15**, p. 160 and n. 48.

**TumS1 22** **Bronze: fibulae (XII,2) (2)**  
B 256a,b Grave chamber  
A H. 0.021 L. 0.034  
B H. 0.025 L. 0.031 m.  
Fig. 53A

A lacks pin. B complete with pin. Possibly a pair.

Arc semicircular, round in section. Arc finely and precisely milled transversely; at ends large bead between single reels. Hook small, horned, and deeply grooved twice down back. Horns comparatively long, flat. Pin made separately and inserted in spring-plate (enlargement of single reel at that end of arc).

A, pin to wearer's right; B, to left.

**TumS1 22** belongs in Blinkenberg's<sup>88</sup> and Muscarella's<sup>89</sup> type XII,2.

82. *Ibid.*, 195, no. G 1, pl. 77 with drawings of ends of terminals.

83. *Ibid.*, 147–149, nos. 1026, 1027.

84. The earliest possible date for the lowest level of the South Cellar is still under study.

85. Tumuli D and E are cremations of approximately the middle and end respectively of the sixth century B.C. See Kohler, *Gordion*

II, Pt. 2.

86. See above, n. 76.

87. Caner, *Fib. in Anat.*, I, 195, no. G 4 (pl. 77).

88. *Fibules*, 210.

89. *Phryg. Fib. Gordion*, 14, pl. I, fig. 2.



Caner<sup>90</sup> formed a group (N II,1) for **TumS1 22**, carefully restricting it to close parallels from the City Mound; they came only from above the Clay Deposit.

**TumS1 23 Bronze: fibulae (XII,2A) (4)**  
 B 356a-d Northwest end of chamber  
 A H. 0.021 L. 0.03  
 B H. 0.021 L. 0.03  
 C H. 0.028 L. 0.025  
 D PH. 0.016 L. 0.023 m.  
 Pl. 66D

A, C complete with pin. B lacks pin. D lacks pin and hook end of arc.

Arc semicircular and basically round in section, faceted coarsely lengthwise, three times on outside of arc and once inside. On front, three narrow deep flutes. At ends, bead between single reels. One reel serves as spring-plate.

A, B, pin to wearer's right. C, D, pin to wearer's left.

See below under **TumS1 25**.

**TumS1 24 Bronze: fibula (XII,2A)**  
 B 253 Northwest end of chamber  
 H. 0.019 L. 0.027 m.  
 Fig. 53B

Complete with pin (now lost).

Same as **TumS1 23**.

Pin to wearer's right.

See Muscarella<sup>91</sup> and below, **TumS1 25**.

**TumS1 25 Bronze: fibula (XII,2A)**  
 B 356e Northwest end of chamber  
 Max. dim. arc pc. 0.019 Max. dim. spring end pc. 0.019 m.  
 Not ill.

Fragments only.

Arc and spring ends disjoined.

Same as **TumS1 23**.

Direction of pin unknown.

Caner<sup>92</sup> places **TumS1 23–25** together under his variant D V,3, along with several examples from above the Clay Deposit on the City Mound (none from below), also from Boğazköy, associated with an urned cremation of the time of BK IIA<sup>93</sup> and some unstratified. See also B 23 (mantle of D) and B 28 (mantle of E), both of which Muscarella<sup>94</sup> placed in type XII,2B, a class

with faceted rather than fluted arc. In general types XII,2A and 2B at Gordion date from pre-Kimmerian down to the sixth century B.C.<sup>95</sup>

Another example of XII,2 came from cremation 4 (**TumS1 87**).

**TumS1 26 Bronze: fibula (XII,9β) (2)**  
 B 349a,b Northeast side of stone packing  
 A H. 0.035 L. 0.038  
 B H. 0.031 L. 0.041 m.  
 Not ill.

A lacks pin and several studs. Broken at center arc. B lacks pin and two studs.

Arc semicircular and flat-rectangular in section, with single sharp reel between single blocks at ends. Catch is large flaring hook with flattened horns. Decorative solid studs of four sizes added: six (largest) contiguous on arc, one (next smaller) set into spring, three (still smaller) on each block and three on spine of hook, and two (smallest) set into horns.

Both with pin to wearer's right.

See Muscarella<sup>96</sup> who discussed type XII,9, dating it late eighth, early seventh century B.C.

Boehmer<sup>97</sup> in 1972 clearly distinguished hollow and solid studs on the arcs of type XII,9, creating a subtype 9β for those with solid-cast studs riveted to the arc. His examples range from period BK IIA to Ia at Boğazköy.

Caner<sup>98</sup> following Boehmer's classification, placed **TumS1 26A** (in Caner B appears to be missing) in a group under variant A IV,4 (later copies, as it were, of his variant A IV,1, the hollow-studded group, e.g., MM 235–284).<sup>99</sup> The later series came from several dated contexts, including Karaburun Tumulus IV<sup>100</sup> and the Boğazköy series cited above.

Such solid studs show massive use of the casting technique applied to studs, and are a step away from hollow studding which required more delicate handwork to fasten stud cap to pin.

See below, other Tumulus S-1 examples in this group: **TumS1 27, 28; TumS1 83** (crem. 2) and **90–93** (MT 1).

**TumS1 27 Bronze: fibula (XII,9β)**  
 B 252 Northwest end of stone packing  
 H. 0.03 L. 0.04 m.  
 Fig. 53C; Pl. 66E

Lacks pin and one stud from arc.

90. *Fib. in Anat. I*, 161, nos. 1113, 1114 (pl. 62). Caner grouped all his fibulae from Tumulus S-1, whether from the burial or from "Northwest Deposit" (= military trench 1), in one run of numbers. Since the ultimate origin of the fibulae in MT 1 was the burial, no harm resulted.

91. *Phryg. Fib. Gordion*, 14–15 and pl. II, fig. 7.

92. *Fib. in Anat. I*, 96, nos. 534–539 (pl. 40).

93. Boehmer, *Unterstadt*, 4, no. 2521 (pl. III).

94. *Phryg. Fib. Gordion*, 14–15.

95. *Ibid.*

96. *Ibid.*, 19 and pl. VI, fig. 32 (upper row, left).

97. *Kleinfunde*, 56–58, nos. 98, 99, 101, 102 (pl. VI); *Unterstadt*, 5, nos. 2530–2536 (pls. III–IV).

98. *Fib. in Anat. I*, 80, no. 410A (pl. 33).

99. Young, *Gordion I*, 165–166, pl. 78A–L.

100. M. J. Mellink, *AJA* 76 (1972) 262, pl. 56, fig. 8.

Like **TumS1 26**.

Pin to wearer's right.

R. S. Young<sup>101</sup> illustrated **TumS1 27** in an early preliminary report. Caner<sup>102</sup> placed **TumS1 27** in a large group under variant A IV,4.

See **TumS1 26**.

**TumS1 28 Bronze: fibula (XII,9β)**

B 350 Center of stone packing

H. 0.027 L. 0.032 m.

Fig. 53D

Lacks pin and part of hook. Studs gone from horn and spring.

Basically resembles **TumS1 26**, except that there are *five* studs spaced slightly apart on arc, and *two* each on end-blocks and back of hook, one in spring and each horn. Hook small, flat, with mere incised line down each side. Neck between block and spring-platform. Spring definitely inserted into hole in arc.

Pin to wearer's right.

Caner's<sup>103</sup> variant A IV,4. See discussion under **TumS1 26**.

For examples of other XII,9βs in this tumulus, see **TumS1 83** (crem. 2); 90–93 (MT 1).

**TumS1 29 Bronze: fibula (XII,11)**

B 353 Northwest end of chamber

H. 0.03 L. 0.0345 m.

Not ill.

Half-arc to hook only.

Arc thick, semicircular, basically round in section with lengthwise facets so fine as to be virtually invisible, broken where they rise in central swelling. Decoration at ends, bead between triple reels. Hook flared, deeply grooved, with short flat horns.

Pin to wearer's right.

Blinkenberg<sup>104</sup> listed his type XII,11 as from Prusa and Ephesos. Muscarella<sup>105</sup> noted that the Gordion examples have less pronounced swellings in the arc than Blinkenberg's examples.

Caner<sup>106</sup> placed **TumS1 29** in a small group called type C II, which also contained K-I 39,<sup>107</sup> and an example from Boğazköy dated to the period BK I.<sup>108</sup>

**TumS1 30 Bronze: fibula (XII,11)**

B 352 Chamber

PH. 0.022 (counting spring) L. 0.032 m.

Fig. 53E; Pl. 66F

Lacks spring, pin, and back of hook.

Arc like **TumS1 29**, except that ends have single thin bead between pairs of reels; faceted eight times. Added spring-platform. Plain down center back of end complexes. Grooves meet badly on back.

Pin to wearer's left.

Muscarella<sup>109</sup> illustrates **TumS1 30** as a representative of type XII,11.

Caner<sup>110</sup> in his class D II draws **TumS1 30** into close association with Tumulus MM (MM 285–317),<sup>111</sup> and also with an example (B 1674) from the South Cellar, which was dug into the post-Kimmerian Clay Deposit on the City Mound.<sup>112</sup>

**TumS1 31 Bronze: fibula (XII,11)**

B 363a Chamber

PH. 0.022 L. 0.024 m.

Fig. 53F

Lacks spring, pin, and part of hook.

Arc is flattened semicircle, faceted seven times, rising to slight bulge at center. Hook flaring, grooved, with short flattened horns. At ends of arc, finely milled bead between single reels.

Pin to wearer's left.

Muscarella<sup>113</sup> illustrated his type XII,11 also with **TumS1 31**.

Caner<sup>114</sup> considered **TumS1 31** in his variant E II,2, which embraces an example from above the Clay Deposit on the City Mound at Gordion (B 1890), the pair **TumN 2**, and one from Boğazköy (BK I period).<sup>115</sup>

**TumS1 32 Bronze: fibula (XII,11)**

B 363b Chamber

H. 0.017 L. 0.024 m.

Pl. 66G

Lacks only pin.

Arc faceted four major times. Edges flattened in front only, to make two additional thin linear facets. At ends of arc single round bead between single sharp reels, all flat on back.

Pin to wearer's left.

101. *UMB* 17, no. 4 (1953) 36, fig. 29.

102. *Fib. in Anat.* I, 80, no. 410 (pl. 33).

103. *Ibid.*, 81, no. 431 (pl. 34).

104. *Fibules*, 218.

105. *Phryg. Fib. Gordion*, 21.

106. *Fib. in Anat.* I, 88, no. 484 (pl. 37).

107. G. Körte in *Gordion*, 137–138, no. 39 and fig. 124.

108. Boehmer, *Kleinfunde*, 54, no. 82 (pl. V).

109. *Phryg. Fib. Gordion*, pl. VIII, fig. 45.

110. *Fib. in Anat.* I, 92, no. 517 (pl. 40).

111. Young, *Gordion* I, 167–169, 246, and pl. 79A-F.

112. *Fib. in Anat.* I, 92, no. 518 (pl. 40).

113. *Phryg. Fib. Gordion*, 21, pl. VIII, fig. 46.

114. *Fib. in Anat.* I, 100, no. 569 (pl. 41).

115. Boehmer, *Kleinfunde*, 59, no. 104 (pl. VII).

Not illustrated in Muscarella or Caner.

**TumS1 29–32** are listed here as type XII,11, following R. S. Young's general usage<sup>116</sup> rather than Muscarella's distinction<sup>117</sup> between two XII,11s and two 13As in Tumulus S-1.

**TumS1 29–32** are the only examples of XII,11 from Tumulus S-1.

**TumS1 33** **Bronze: fibula (XII,13)**  
B 346a Center of stone packing  
H. 0.025 L. 0.031 m.  
Pl. 66H

Lacks pin; one reel chipped. Stud lost from spring.

Arc semicircular and round in section. At center and ends of arc, bead (sometimes round, sometimes beveled to slightly biconical) between single sharp reels. Hook wide, deeply grooved, with flattened horns. Spring double, originally reinforced through its center by tack with hemispherical head.<sup>118</sup>

Pin to wearer's right.

**TumS1 34** **Bronze: fibulae (XII,13) (10)**  
B 346b-k Center of stone packing  
A H. 0.023 L. 0.029  
B H. 0.021 L. 0.028 m.  
C/f Measurements close to A, B  
Pl. 66I

A lacks spring and pin. Arc roughened. B-f largely complete but for pins.

Like **TumS1 33**, except that hooks are narrower and less deeply grooved.

Five pins to wearer's left; five to right.

From the large group of similar fibulae found at Gordion subsumed under type XII,13, Muscarella<sup>119</sup> chose B 346a-k (**TumS1 33** and **34**) as representative.

**TumS1 35** **Bronze: fibula (XII,13)**  
B 356f Center of stone packing  
H. 0.022 L. 0.031 m.  
Not ill.

Lacks pin only. Hook very small.

Pin to wearer's left.

**TumS1 36** **Bronze: fibula (XII,13)**  
B 356g Northwest end of chamber  
H. 0.021 L. 0.029 m.  
Not ill.

Lacks pin only.

Pin to wearer's right.

**TumS1 37** **Bronze: fibulae (XII,13) (6)**  
B 347a-e,h Northwest end of chamber  
Hs. 0.024–0.027 Ls. 0.031–0.036 m.  
Not ill.

Lack pins. Several arcs broken.

Five arcs like **TumS1 33**; one fragmentary.

Two pins to wearer's left; one pin to right; three indeterminate.

**TumS1 37–41** are related. See discussion after **TumS1 41**.

**TumS1 38** **Bronze: fibulae (XII,13) (12)**  
B 348a-l Southeast end of chamber  
Avg. H. ca. 0.022 Avg. L. ca. 0.03 m.  
Not ill.

All lack pins.

One like **TumS1 33** with large hook; ten like **TumS1 34** with narrow hook. One fragmentary; direction of hook unknown.

Three pins to wearer's left; eight pins to right; one unknown.

**TumS1 39** **Bronze: fibulae (XII,13) (2)**  
B 330a,b Northeast edge of stone packing  
A PH. 0.205 L. 0.0285  
B PH. 0.019 L. 0.032 m.  
Pl. 66j

A preserves arc and hook. B has only arc.

A like **TumS1 34** (slim hook). Other hook indeterminate. Both have front and back equally well cut.

One pin to wearer's left; other unknown.

**TumS1 40** **Bronze: fibulae (XII,13) (2)**  
B 251a,b Center of stone packing  
A H. 0.022 L. 0.03  
B H. 0.025 L. 0.03 m.  
Fig. 53G

Both lack pins only.

A pair, resembling **TumS1 34** (slim hook).

**TumS1 41** **Bronze: fibula (XII,13)**  
B 250 Northeast edge of stone packing  
H. 0.022 L. 0.028 m.  
Pl. 66K

Complete.

Resembles **TumS1 34** (slim hook).

Pin to wearer's right.

**TumS1 33, 34, 37–41** were mentioned in Caner's type H 1.<sup>120</sup> He listed comparable material from the City Mound: in the Clay Deposit layer immediately under cellars, in cellar fills, and sporadically in other post-Kimmerian contexts. Many other comparanda are from Ephesos outside the Basis and a gold example is from within the Basis. A bronze one comes also from

116. Young, *Gordion* I, 241, n. 100.

117. Phryg. *Fib. Gordion*, 24, 78, app. A.

118. See Muscarella, *ibid.*, pl. IX, fig. 49, upper left: pho-

tographed with pin still intact in spring.

119. *Ibid.*, fig. 49.

120. *Fib. in Anat.* I, 113–116, nos. 651–653, 662–666 (pls. 44, 45).

the cremation in Karaburun Tumulus IV,<sup>121</sup> and a silver example comes from the Tumulus I cremation at Gordion (ILS 16).<sup>122</sup> Further parallels are reported from Boğazköy, unstratified.<sup>123</sup>

**TumS1 42** Bronze: fibula (XII,13)  
B 345 Southeast end of chamber  
H. 0.04 L. 0.033 m.  
Fig. 53H; Pl. 66L

Pin and spring missing. Hook chipped.

Arc semicircular, smooth, and round in section. End decorations are large longitudinally milled beads, set off by pairs of straight, thin reels. Central decoration same except bead thinner. Spring-plate is thick hemisphere with radiating incised lines. Hook long, grooved, with short horns. Arc plain in back.

Pin to wearer's left.

Muscarella<sup>124</sup> chose **TumS1 42** to illustrate a type XII,13 with milled beads.

Caner<sup>125</sup> placed **TumS1 42** in his variant H II,1, which also contains examples from the City Mound between the bottom of the Clay Deposit and the lowest floor of Building P, for instance. Others came from the mantle of Tumulus J (**TumJ 55**) and the burial in Tumulus N (**TumN 6**). Caner also astutely called attention to the similarity between the fine milling on the beads of **TumS1 42** and that on several in Tumulus MM,<sup>126</sup> even though the latter are type XII,11.

**TumS1 43** Bronze: fibula (XII,13)  
B 362 Southeast end of chamber  
H. 0.026 L. 0.031 m.  
Fig. 53I; Pl. 66M

Lacks pin.

Arc semicircular, round in section. At center and ends, single cylinderlike beads between single reels. Beads and complete arc similarly milled, transversely. Hook deeply grooved and flaring, with short flat horns.

Pin to wearer's left.

Muscarella<sup>127</sup> and Caner<sup>128</sup> illustrated **TumS1 43**. See discussion below, under **TumS1 45**.

**TumS1 44** Bronze: fibula (XII,13)  
B 360 Southeast end of chamber  
H. 0.023 L. 0.031 m.  
Fig. 53J; Pl. 67A

121. M. J. Mellink, *AJA* 76 (1972) 262, pl. 56, fig. 8.

122. Kohler, *Gordion* II, Pt. 2.

123. *Kleinfunde*, 61, nos. 117, 118 (pl. VII).

124. *Phryg. Fib. Gordion*, 5, 22, pl. X, fig. 50.

125. *Fib. in Anat. I*, 117, no. 710 (pl. 47).

126. Young, *Gordion* I, 167–168 (MM 285–308), pl. 79A-F.

127. *Phryg. Fib. Gordion*, pl. X, fig. 52.

128. *Fib. in Anat. I*, 163, no. 1124 (pl. 62).

Lacks pin. Chipped under hook at end.

Arc semicircular and round in section, finely milled transversely between end and center decorations of wide cylinders, milled in same manner. Hook large, flaring, deeply grooved, with short horns.

Pin to wearer's left.

See Caner,<sup>129</sup> and below, under **TumS1 45**.

**TumS1 45** Bronze: fibulae (XII,13) (4)  
B 255a-d Chamber  
A H. 0.018 L. 0.029  
B H. 0.018 L. 0.027  
C H. 0.019 L. 0.029  
D PH. 0.016 PW. 0.016 m.  
Fig. 53K; Pl. 67B

A and C complete. B mended. D half-arc with stump of hook. Arc semicircular and round in section, milled transversely throughout. At ends, bead with single reels, and at center, small cylinder with five to six transverse millings. Hook small.

A and B probably a pair. C and D have pin to wearer's left.

See Muscarella.<sup>130</sup>

Caner<sup>131</sup> placed **TumS1 43–45** together in his variant N II,2 along with like examples from the City Mound, several from the South Cellar and the Clay Deposit under it, and an electrum example from Ephesos<sup>132</sup> in the Basis fill.

For other examples of XII,13 fibulae from Tumulus S-1, see **TumS1 94–99** (MT 1).

**TumS1 46** Bronze: fibula (XII,14)  
B 335 Chamber  
H. 0.031 L. 0.041 m.  
Fig. 53L; Pl. 67C

Pin now lost.

Arc semicircular and round in section. At center and ends plain beads between single thin reels. In quarters, single thin reels. All decoration modified in back. Hook flaring with short flat horns.

Pin to wearer's right.

See Muscarella.<sup>133</sup> **TumS1 46** is included by Caner<sup>134</sup> in variant J I,1, which is a group from the Clay Deposit and immediately above on the City Mound, from Boğazköy BK I, and from the mantle of Tumulus E (B 6).<sup>135</sup>

129. *Ibid.*, 163, no. 1123 (pl. 62).

130. *Phryg. Fib. Gordion*, 22–23, pl. X, fig. 53.

131. *Fib. in Anat. I*, 163, nos. 1126–1129 (pl. 62).

132. Hogarth et al., *Ephesus*, 98, pl. 5(5) = Muscarella, *Phryg. Fib. Gordion*, 22–23, pl. I, fig. 5.

133. *Ibid.*, 24–25 (type XII,14 in general) and pl. XII, fig. 67.

134. *Fib. in Anat. I*, 128, no. 818 (pl. 51).

135. Kohler, *Gordion* II, Pt. 2.

- TumS1 47 Bronze: fibula (XII,14)**  
 B 351a Center of stone packing  
 PH. 0.0295 PL. 0.0305 m.  
 Pl. 67D  
 Lacks pin, spring end of arc, and part of catch.  
 At center and end biconical bead between single reels. In quarters, single reels. Hook small. Both faces fully worked.  
 Pin to wearer's left.
- TumS1 48 Bronze: fibula (XII,14)**  
 B 347f Northwest end of chamber  
 PH. 0.023 L. 0.032 m.  
 Not ill.  
 Lacks pin and hook.  
 At ends, bead between single reels; in quarters, single reels.
- TumS1 49 Bronze: fibula (XII,14)**  
 B 364a Chamber  
 PH. 0.023 L. 0.033 m.  
 Not ill.  
 Resembles **TumS1 46**.  
 Hook small type.  
 Pin to wearer's right.
- TumS1 50 Bronze: fibula (XII,14)**  
 B 364b Chamber  
 Max. dim. 0.033 m.  
 Not ill.  
 Part of arc and hook preserved.  
 Resembles **TumS1 46** except that, in quarters, there are pairs of channeled reels. Hook small.  
 Pin indeterminate.
- TumS1 51 Bronze: fibulae (XII,14) (2)**  
 B 361a,b Chamber  
 A PH. 0.021 L. 0.038  
 B Max. dim. 0.028 m.  
 Pl. 67E  
 A lacks pin, part of hook, and one horn. B, half of arc and stump of hook preserved.  
 Arc is slightly flattened semicircle, round in section. At ends, single beads between pairs of thin reels. In center and in quarters, bead between single reels. Decoration modified on back. Hook narrow, deeply grooved, with long flat horns.  
 Pin to wearer's left on both.
- TumS1 51** is included in Caner's<sup>136</sup> variant J II,1 along with close comparanda from the Clay Deposit and above on the City Mound, the habitation level under Tumulus H, the mantle of Tumulus E, and Boğazköy, periods BK II and I.
- TumS1 52 Bronze: fibula (XII,14)**  
 B 347g Northwest end of chamber  
 H. 0.024 L. 0.032 m.  
 Not ill.  
 Lacks pin and hook.  
 At ends, bead between triple reels; in quarters, single reel.
- TumS1 53 Bronze: fibula (XII,14)**  
 B 342a Southeast end of chamber  
 H. 0.036 L. 0.049 m.  
 Fig. 53M; Pl. 67F  
 Lacks only pin and part of hook.  
 Arc semicircular and round in section. Ends have milled beads between pairs of reels. Center same but more closely set. In quarters, single reels. Hook thin, straight, and shallowly grooved, with short horns.  
 Pin to wearer's left.
- Caner<sup>137</sup> placed **TumS1 53** with his variant J I,2. See **TumS1 54**.
- TumS1 54 Bronze: fibula (XII,14)**  
 B 342b Southeast end of chamber  
 H. 0.036 PL. 0.044 m.  
 Pl. 67G  
 Three-quarters of arc with full hook.  
 Like **TumS1 53**. Hook longer but not flaring much.  
 Pin to wearer's right.
- Caner's<sup>138</sup> grouping in J I,2 clarified the fact that **TumS1 53** and **54** are paralleled by pins from Tumulus MM.<sup>139</sup> Other parallels were found in the Clay Deposit on the City Mound, and in the mantles of later tumuli. In Boğazköy they occurred during the period BK IIa.  
 See also **TumS1 64–66** and **82**.
- TumS1 55 Bronze: fibula (XII,14)**  
 B 344 Southeast end of chamber  
 H. 0.033 L. 0.043 m.  
 Not ill.  
 Complete, mended.  
 Arc semicircular and round in section. Ends decorated with two thin milled beads alternating with single reels. At center one milled bead between pairs of reels. In quarters, single reels. Hook grooved, with short horns. Spring-plate has radiating incised lines.  
 Direction of pin unknown.
- TumS1 56 Bronze: fibula (XII,14)**  
 B 343 Southeast end of chamber  
 H. 0.042 L. 0.05 m.  
 Fig. 53N; Pl. 67H  
 Complete, mended.

136. *Fib. in Anat.* I, 143, nos. 985 (pl. 57) and 986 (pl. 58).

137. *Ibid.*, 130, no. 843 (pl. 52).

138. *Ibid.*, 130, no. 829 (pl. 52).

139. Young, *Gardion* I, 170 (MM 318 ff.), pl. 79G-J. Refer also to the finely milled beads and channeled reels on XII,11s in MM (pl. 79A-F).

Resembles **TumS1 55** except that central decoration resembles ends. Hook is very large and flaring with short horns.

Pin to wearer's right.

**TumS1 57** **Bronze: fibulae (XII,14) (2)**  
 B 340a,b Southeast end of chamber  
 A H. 0.0335 L. 0.041  
 B Max. dim. 0.036 m.  
 Fig. 54A; Pl. 671

A lacks only pin. B preserves three-quarters of arc only, to stump of spring.

Arc semicircular and round in section. At ends two milled beads with pair of reels between them and one reel at each side. At center one milled bead between channeled reels. In quarters, single reels. On A hook is large, flaring, deeply grooved type with long stepped horns. Hook on B unknown. Pin to wearer's right.

Caner<sup>140</sup> placed **TumS1 57A** in his variant J I,4, along with examples from Tumuli K-IV and MM. The only other provenienced examples come from a pit in the Clay Deposit on the City Mound, and habitation fill under Tumulus E.

**TumS1 58** **Bronze: pair of fibulae (XII,14)**  
 B 338a,b Chamber  
 A H. 0.035 L. 0.047  
 B H. 0.034 L. 0.044 m.  
 Pl. 68A

Both lack only pin.

Arc semicircular and round in section. At ends, three milled beads alternating with single reels; at center two milled beads separated by single reel, double reel at edges. In quarters, single reels. Hook large, grooved, and horns stepped.

A, pin to wearer's left. B, to right.

Caner<sup>141</sup> grouped **TumS1 58A** and **B** in his variant J I,5b, which included only MM and S-1 examples.

**TumS1 59** **Bronze: fibula (XII,14)**  
 B 366  
 PH. 0.032 PL. 0.043 m.  
 Not ill.

Lacks pin and hook, also spring end of arc.

Arc semicircular and round in section. At ends, three beads alternating with and set off by pairs of thin reels. At center, three thin beads. In quarters, beads between blunt reels.

Direction of pin unknown.

**TumS1 60** **Bronze: fibula (XII,14)**  
 B 249 Chamber  
 H. 0.03 L. 0.042 m.  
 Fig. 54B; Pl. 68B

Lacks only pin.

At ends, three beads alternating with single thin reels. At center, two beads alternating with single reels. In quarters, single sharp reels. Hook flaring, grooved, with long stepped horns.

Pin to wearer's left.

See Caner<sup>142</sup> and **TumS1 58** above.

**TumS1 61** **Bronze: pair of fibulae (XII,14)**  
 B 339a,b Southeast end of chamber  
 A H. 0.0345 L. 0.042  
 B H. 0.0335 L. 0.0415 m.  
 Pl. 68C

A only three-quarters of arc and part of hook preserved. B complete but for spring and pin.

Arc semicircular and round in section. At ends, three thin milled beads alternating with thin single reels. At center, one milled bead between pairs of sharp reels. In quarters, one sharp reel. Hook large, flared, deeply grooved, with flat horns.

A, pin to wearer's right. B, pin to wearer's left.

Caner<sup>143</sup> included **TumS1 61B** in his variant J I,4. See under **TumS1 57**.

**TumS1 62** **Bronze: fibula (XII,14)**  
 B 351b Center of stone packing  
 H. 0.028 L. 0.025 m.  
 Pl. 68D

Hook and half its arc preserved.

Arc thin, semicircular, and round in section. At ends and center, rectangular blocks set off by sharp pairs of reels trimmed to oval in section. In quarters, single reels. Hook small, short with short flat horn.

Pin to wearer's left.

Caner<sup>144</sup> put **TumS1 62** in his variant J I,1 along with many from the earlier layers above the Clay Deposit on the City Mound. Some from Bogazköy occurred in the period BK I.

**TumS1 63** **Bronze: fibula (XII,14)**  
 B 341 Southeast end of grave chamber  
 H. 0.0415 L. 0.05 m.  
 Not ill.  
 Lacks pin. Roughened.

140. *Fib. in Anat. I*, 136, no. 910 (pl. 55).

141. *Ibid.*, 138, nos. 927 and 926 respectively (pl. 55).

142. *Ibid.*, 138, no. 925 (pl. 55).

143. *Ibid.*, 136, no. 919 (pl. 55).

144. *Ibid.*, 126, no. 783B (pl. 50).

At end, two thin milled beads alternating with pairs of thin reels. Same at center, but cut to even less depth. Each swelling resembles barely ridged cylinder. In quarters, single reels. Hook small, thin, with short flat horns. Plain in back.

Pin to wearer's right.

Caner<sup>145</sup> placed this under his variant J I,4. See under **TumS1 57**.

**TumS1 64** **Bronze: fibula (XII,14)**  
B 337c Chamber  
H. 0.036 Max. dim. 0.039 m.  
Pl. 68E

Lacks pins; tips of horns lost.

At ends and center, single thin bead between triple fine reels. In quarters, thick single reels.

Pin to wearer's right.

See under **TumS1 66**.

**TumS1 65** **Bronze: fibulae (XII,14) (2)**  
B 337b,e Chamber  
A H. 0.032 L. 0.039  
B Max. dim. 0.041 m.  
Fig. 54C

A complete but for pin. Arc mended. B half-arc.

At ends of arc, bead between triple thin reels (except reels merely double under spring-platform). At center, thin bead between double fine reels. In quarters, large thick single reels. Hook deeply grooved with plain spine; horns short, flat.

Decoration modified in back.

A, pin to wearer's left. B, pin to right.

See under **TumS1 66**.

**TumS1 66** **Bronze: fibula (XII,14)**  
B 337d Chamber  
H. 0.031 L. 0.045 m.  
Not ill.

Lacks pin and one horn; spring end of arc swollen and slightly split.

At ends of arc, plain bead between quadruple thin reels, except under spring-platform only two thin reels. At center, plain bead between triple reels. In quarters, thin plain bead. Hook heavy, deeply grooved, with flat horns and plain spine.

Pin to wearer's right.

Caner<sup>146</sup> grouped **TumS1 64–66** in his variant J I,2. See also **TumS1 54** and **82**.

**TumS1 67** **Bronze: fibula (XII,14)**  
B 254a Chamber

H. 0.025 L. 0.032 m.  
Not ill.

Pin missing.

Semicircular arc, round in section. At center and ends of arc, blocks set off by two thin square reels; in quarters, single blunt disks. Hook flaring, with short horns.

**TumS1 68** **Bronze: fibula (XII,14)**  
B 254b Chamber  
H. 0.027 L. 0.032 m.  
Fig. 54D; Pl. 68F

Lacks pin; one horn lost, arc mended.

Arc semicircular, round in section. At center and ends, blocks set off by thin square reels. In quarters, circumferentially milled beads between single thin reels. Hook flaring, deeply grooved, with flat horns. Tiny spherical-headed pin goes through spring.

Pin to wearer's left.

**TumS1 68** stands alone in Caner's<sup>147</sup> variant J II,5. No exact parallels are at present known.

**TumS1 69** **Bronze: fibula (XII,14)**  
B 354 Center of stone packing  
H. 0.025 L. 0.032 m.  
Fig. 54E; Pl. 68G

Lacks pin and part of hook.

At center and ends, blocks between very thin milled single beads, and single reel below end groups, single reel each side of central group. In quarters, single reels. Hook small with short flat horns. Back plain and flat as basically cast.

Pin to wearer's right.

Muscarella<sup>148</sup> illustrated **TumS1 69** as a variant of type XII,14. Caner<sup>149</sup> included this in his variant J I,8, its only companion being from Boğazköy, period BK II.

**TumS1 70** **Bronze: fibulae (XII,14) (2)**  
B 359a,b Chamber  
A H. 0.0185 L. 0.0275  
B Max. dim. 0.022 m.  
Fig. 54F; Pl. 68H

A lacks pin and most of hook; on B half of arc preserved with base of hook.

At ends, thin beads between channeled reels. At center and in quarters, double sets of triple reels. Hook small with flat horns.

Pin to wearer's right on both.

Caner<sup>150</sup> placed **TumS1 70** in his variant J II,2, which includes close parallels from above the Clay Deposit on the City Mound and from urned cremations at Boğazköy dating to BK IIa.

145. *Ibid.*, 136, no. 914 (pl. 55).

146. *Ibid.*, 130–131, nos. 844 (pl. 52) and 852–854 (pl. 53).

147. *Ibid.*, 147, no. 1020 (pl. 59).

148. *Phryg. Fib. Gordion*, 524, pl. XIII, fig. 68.

149. *Fib. in Anat. I*, 141, no. 958 (pl. 57).

150. *Ibid.*, 145, no. 1010A,B (pl. 58).

**TumS1 71 Bronze: fibula (XII,14)**  
 B 365 Southeast end of chamber floor  
 H. 0.023 L. 0.0375 m.  
 Fig. 54G; Pl. 68I

Arc approaches semicircular but has hanging "gothic" point at center. At ends, bead between single reels; at center, single sharp reel (emphasizing angle); in quarters, sets of three beads. Hook wide, flaring, deeply grooved and having stepped horns.

Pin to wearer's left.

The fibulae with "gothic" arc, whether or not accentuated at the point by a molding, have been considered in Blinkenberg's type XII,14.

See Muscarella<sup>151</sup> on **TumS1 71** and on "gothics" in general.

Caner<sup>152</sup> associated **TumS1 71**, in spite of the accent at its point, in a separate group (M I,1) with others having "gothic" centers on the arc. These come from the South Cellar and the Clay Deposit on the City Mound (and from upper layers), from the mantle of Tumulus K (B 374), and from the BK I period at Boğazköy.<sup>153</sup>

For other XII,14s from Tumulus S-1, see **TumS1 82** (crem. 1) and **100** (MT 1).

**TumS1 72 Lead: fragmentary clamp**  
 ILS 81 Chamber floor  
 PL. 0.035 Th. 0.009 m.  
 Pl. 69A

One short end broken away.

Remainder L-shaped, square in section.

See pp. 17–18, nn. 36–40, and pp. 183–184 concerning lead clamps signaling the presence of a wooden coffin.

**TumS1 73 Pottery: small gray-ware cup**  
 P 407 Center of sunken cap  
 PH.-h. 0.117 D. 0.132 Est. D. rim 0.11 D.  
 base 0.088 m.  
 Pl. 69B

Profile preserved in two sections, plastered. Marks of burning.

Base flat, body spherical, neck mere constriction below short plain flaring rim with deeply sloping ledge inside. Wheel-run double groove on shoulder. Handle is vertical band out from rim and down to low on body.

Fabric thin. Clay gritty, partially slipped, hand-smoothed on wheel. Fired gray-brown throughout.

Perhaps to be considered a drinking cup or dipper in connection with the numbers of food containers,

151. *Phryg. Fib. Gordion*, 24, pl. XIII, fig. 71.

152. *Fib. in Anat. I*, 158, no. 1104 (pl. 62).

153. For Tumulus K, see Kohler, *Gordion II*, Pt. 2. Cremation of ca. 600 B.C. For Boğazköy, see Boehmer, *Kleinfunde*, 62, no. 120

i.e., dinoi and jars, associated with this burial (see Figs. 54I, 55A).<sup>154</sup>

**TumS1 74 Pottery: gray-ware low-necked jar**  
 P 408 Center of sunken cap  
 H. 0.205 D. 0.217 D. rim 0.125 D. base 0.09 m.  
 Pl. 69C

Clay surface rotted. Gaps in body.

Base flat, body spherical, neck finger-width constriction below plain flaring rim, well smoothed to squarish vertical on outer lip, very lightly ledged on inside.

Clay gritty, with gravel temper. Perhaps once polished. Fired brown to black throughout. Large pocks.

**TumS1 74** has lost the early ellipsoidal body seen in Tumuli W (in bronze) and P (in bronze and pottery) and displays instead the neck curve and belly width of examples in Tumulus MM (see esp. MM 365),<sup>155</sup> but with slightly more pulled-up shoulders. Fair parallels occur in Tumulus B (**TumB 9** and **10**).

However, uncatalogued dinos rims from Tumulus S-1 show advancement in added treatment of the top, the outer lip, and the undersurfaces of the rim (see Fig. 55A).

See similar argument under the amphora **TumS1 75**.

**TumS1 75 Pottery: gray-ware amphora**  
 P 409 Center of sunken cap  
 H. 0.19 D. 0.187 D. rim 0.122 D. base 0.077 m.  
 Pl. 69D

Mended. Large gaps in body, but profile secure.

Base flat, body ca. spherical but tapered up at shoulder toward flaring rim, convex on exterior. Sloping ledge on interior. Two vertical loop handles, oval in section, from high to low on shoulder.

Clay gritty, given thin micaceous slip. Hand-smoothed? Fired mottled beige and gray throughout. Colors changed by fire after breakage.

**TumS1 75**, in the category of "small amphoras," appears closely related to the pair **TumB 4** and **5** from inside the coffin in Tumulus B. It is possible that **TumS1 75** was also once inside a coffin (see **TumS1 72**).

In comparing the form, however, one puts **TumB 4** and **5** very close to **TumS1 75**, but observes that the upper attachments of the handles on **TumS1 75** are fastened a little closer to the base of the neck, more in the manner of the large pre-Kimmerian amphoras, e.g., in Tumulus P.<sup>156</sup>

(pl. VII). To the foregoing examples add one from Tumulus D at Bayındır (Elmalı), *Antalya Museum*, 42, no. 46 (center).

154. Sams, *Gordion IV*, 71, n. 64.

155. Young, *Gordion I*, 174, pl. 80H; Sams, *Gordion IV*, 91, 94.

156. Cf. Young, *Gordion I*, 44–45, *TumP 95–98*, pl. 21E-G.



In the case of both **TumS1 74** and **75**, their general body proportions show wider belly and shorter neck with deeper curve when compared with **TumB 4** and **5**. The writer therefore suggests that the above discussion results in the sequence: P, S-1, B.

### IN TUMULUS MANTLE **TumS1 76-81**

**TumS1 76**    **Bronze: hemispherical stud**  
B 189    Earth over grave  
H. head 0.0075    D. 0.016    W. across ext. 0.006 m.  
Pl. 69E

One side extension lost; other broken off short.  
Small hollow hemispherical head with two side extensions of unknown length.

Probably to be associated with the many smaller studs of this type found in MT 1. See **TumS1 89A**.

**TumS1 77**    **Pottery: painted sherd**  
P 309    Earth refill of MT 2  
Max. dim. 0.04 m.  
Pl. 69F

Triangular sherd from wall of closed vessel, possibly spherical-bodied.

Glossy cream-colored base coat over which in matte purple-brown: wide horizontal band, narrow barred band, and tall zigzag row.

Clay gritty, slightly micaceous, fired buff throughout.

**TumS1 78**    **Pottery: gray side-spouted sieve jug**  
P 374    West side of stone cap and in mantle  
PH. rim 0.076    D. 0.127    L. trough spout 0.05 m.  
Pl. 69G

Two mended sections preserve profile to lower body.

Base flat, body ellipsoidal, neck mere constriction beneath flaring short plain rim. Slightly raised tube spout with cut-away outer lip pulled out all around to slight flare. Spout is worked into wall around six sieve holes at ca. 30° to left of handle. Handle looped vertical band, oval in section, from rim to center body.

Clay fairly fine, full of fine silvery mica, given thin self-slip, hand-smoothed. Fired gray throughout.

**TumS1 79**    **Pottery: fragment of gray-ware open-mouthed vessel**  
MU 54-40-78    Bag TumS1-I: northeast edge of grave "pit"

Max. dim. 0.106    Est. D. rim 0.11 m.

Fig. 55B; Pl. 69H

Surfaces and breaks abraded. Not burnt.

Rim and shoulder fragment from small jar. Shoulders slope steeply under collaring short flared rim, which is rounded, thickened, and unledged on interior. Fine formational ridge remains at base of neck.

Thin matte brown paint(?) on exterior and over rim.

Clay coarse, with silvery and golden mica, fired light grayish buff throughout.

**TumS1 80**    **Pottery: gray-ware vessel fragment**  
MU 54-40-77    Northeast edge of grave "pit"  
Max. dim. 0.09 m.  
Fig. 55C; Pl. 69I

Base sherd of heavy closed vessel. Base flat, wall oblique. Brownish rotted slip(?) or thin matte slip-paint(?) over exterior.

Coarse clay, wiped only, fired light grayish buff throughout. Silvery and golden mica.

Sherds **TumS1 79** and **80** are possibly from the same pot. The sloppy slip-paint finishes are found also on the sherds from bag TumS1-IV. Some of these are seen in Fig. 54I(a-i). The slip-paint was applied in a scrubby fashion, certainly not yet to be termed "marbling," which began in the first quarter of the sixth century on Lydian pottery.<sup>157</sup> One possible forebear may be TumP 94, the painted exception among the black polished group from Tumulus P. The painter or painters must have been trying to imitate some surface effect found elsewhere, but it is not clear what that was. The excavator termed the general surface color of these numerous jars in Tumulus S-1 "purplish," "molasses-colored," and "mottled," demonstrating some difficulty in the describing.

**TumS1 81**    **Pottery: gray open-mouthed amphora sherd**  
P 5108    Southeast edge of grave pit  
GPH. 0.17    Est. D. rim ca. 0.40    Th. 0.012 m.  
Fig. 55D; Pl. 69J

Large sherd preserves handle with attachments and neck/shoulder profile. Worn.

Shoulder slopes steeply and merges gently with slightly concave neck. Two preserved fine wheel-run ridges spaced on neck. Handle is wide band attaching high on shoulder and descending close to body. Finger depression at bottom.

Clay gritty with temper of coarse sand. Some silvery mica. Probably originally hand-smoothed over slip.

**TumS1 81** belongs to a large group of plain, fairly undistinguished storage amphoras used for a long period on the City Mound. See p. 221.

157. See Greenewalt, *Lydian Pottery*, 120-183; *CSCAntiq* 1 (1968) 150.

## CREMATION 1, IN SURFACE OF LAYER IV

### TumS1 82

**TumS1 82**    **Bronze: fibula (XII,14)**  
 B 337a    Trench 1B, north side  
 H. 0.045    L. 0.034 m.  
 Pl. 69K

Complete but for pin. Burned and much too fragile to be cleaned.

Arc semicircular, and round in section. Central and end swellings: bead between sets of two or three reels. In quarters single thin reels. Hook slim.

Pin to wearer's right.

See mentions under **TumS1 54** and **66** of Caner's variant J I,2. **TumS1 82** is related in type to B 337b,e (cf. **TumS1 65**), but is not separately distinguished in Caner's catalogue.

For other examples, generally of XII,14, see **TumS1 46-71** (above) and **100** (MT 1).

## CREMATION 2, IN SURFACE OF LAYER III

### TumS1 83-85

**TumS1 83**    **Bronze: fibula (XII,9ß)**  
 B 358    Inside **TumS1 84**  
 PH. 0.043    PL. 0.054 m.  
 Pl. 69L

Burned and twisted. Lacks one end of arc, pin, and catch. Solid(?) studs lost.

Arc semicircular, flat-rectangular in section. Four large and small holes survive where studs were formerly attached. At preserved end, blocks, same width as arc, with two studs each, separated by fine triple reel. Spring reinforced by small iron pin.

Direction of pin hard to determine, but probably to left.

Although the holes for the attachment of the studs are here distorted, their basic size would appear to accommodate rivets of solid studs rather than the thin pins of hollow studs. Boehmer's type 9ß<sup>158</sup> was dated BK IIa to Ia.

See discussion under **TumS1 26-28**; also **TumS1 90-93** (MT 1).

**TumS1 84**    **Pottery: gray neck-handled amphora**  
 P 375    Container for cremation

H. 0.23    D. 0.225    D. rim 0.167    D. base ca.  
 0.09    D. hole 0.005 m.  
 Pl. 69M

Mended; gap in rim. Unburned.

Flattened base with hole in center; wide ovoid body, sharp neck ridge, short wide neck. Rim flares outward, then upward, leaving sharp ledge inside for lid. Two vertical strap handles from upper neck to upper body. Finger depression at one (only) lower attachment.

Clay coarse with mica and white inclusions, given thin slip with added mica, hand-smoothed. Fired gray throughout.

**TumS1 84** belongs in the category of amphoras like those in MM (MM 372-377)<sup>159</sup> and resembling, except for handle placement, also those in B (**TumB 4, 5**).

**TumS1 85**    **Pottery: coarse buff body fragment**  
 P 414    Formed cover for **TumS1 84**  
 PH. 0.19    GPD. 0.282 m.  
 Pl. 70A

Base and part of body only, mended. Unburned.

Base flat, lower body begins as for spherical shape.

Clay coarse with large white inclusions and a few pocks. Smoothed in some areas. Fired buff-brown at core, mottled buff and black on surfaces.

## CREMATION 3 IN LAYER II

### TumS1 86

**TumS1 86**    **Pottery: large gray coarse jug**  
 P 281    Trench 5B, at -1.09 m.  
 PH. 0.265    D. 0.228    D. base ca. 0.085    GPD.  
                   neck 0.09 m.  
 Pl. 70B

Mended. Broken across neck near its base. Lacks handle. Abraded.

Base flattened (pot rocks), body keg-shaped, slightly pulled up at shoulder; neck narrow. Thin wide strap handle, up from high on body, has deep finger depression under stump of its lower attachment.

Fabric very heavy, split into layers. Exterior hand-smoothed on wheel which left long drag marks. Cord marks around greatest diameter, partially smoothed away. Clay fine with silvery mica and some white inclusions. Fired light gray through core, whitish over part of surface.

**TumS1 86** is, to date, unique at Gordion; the keg shape is not a profile attested for jugs in the Destruction Level.

158. See p. 129 and n. 97.

159. Young, *Gordion I*, 175, pl. 80K-M "small amphoras"; Sams, *ibid.*, 256; herein see p. 220. According to Sams, *Gordion IV*, 77,

**TumS1 84** and the MM examples cited now fall in his category "large amphora."

## CREMATION 4, IN SURFACE OF LAYER II

### TumS1 87, 88

**TumS1 87** **Bronze: fibula (XII,2)**  
B 336 In **TumS1 88**  
H. 0.032 L. 0.032 m.  
Fig. 55E; Pl. 70C

Mended; catch and pin are twisted.

Arc semicircular, round in section. At ends, three irregular sharply filed blocks. Hook very long, grooved. Corners at base of hook sharp, but not elongated to horns.

Pin to wearer's right.

Muscarella followed Blinkenberg's classification in placing this simple arc, round in section, in type XII,2.<sup>160</sup> It is fairly rare at Gordion.

Boehmer<sup>161</sup> cited three from Boğazköy, unstratified. Caner considered B 336 to have an arc D-shaped in section and so placed it in category XII,4.<sup>162</sup> The writer, however, follows Muscarella.

Other examples of XII,2 with end-block (although also with oval section on arc) come from the Tumulus Y burial (**TumY 2**) and the mantle of D (B 26).<sup>163</sup>

**TumS1 87** seems very old-fashioned for the time of its deposition.

See above, also **TumS1 22–25**.

**TumS1 88** **Pottery: gray burnished narrow-necked jug**  
P 267 Trench I, at -0.58 m.  
PH. 0.213 D. 0.219 D. base 0.085 m.  
Pl. 70D

Mended. Neck and handle lacking; gaps in body. Worn. Unburned.

Base flat, body a little wider than spherical, rounding in to short narrow concave neck. Preserved neck allows no impression of flare to trefoil. Finger depression below stump of lower handle attachment.

Clay gritty with mica and white bits. Stroke-burnished irregularly, and fired gray throughout, darker on surface.

**TumS1 88** is very similar to the heavy ellipsoidal pre-Kimmerian jugs found in megara on the City Mound,<sup>164</sup> but perhaps shows body proportions slightly modified toward the post-Kimmerian spherical shapes.

## MILITARY TRENCH I

### TumS1 89–100

**TumS1 89** **Bronze: small studs (74)**  
B 126

160. *Phryg. Fib. Gordion*, 5, 14, pl. I[3].

161. *Unterstadt*, 4, nos. 2519–2520A (pl. III).

162. *Fib. in Anat.* I, 85, no. 468 (pl. 36).

163. Kohler, *Gordion* II, Pt. 2.

H. 0.004 Ds. 0.006 and 0.01 L. one pin to bend 0.006, and to point 0.008 (end broken) m.  
Pl. 70E

Burned, fused; some lack their staplelike stems and pins for attachment.

A plain hollow hemispherical heads with two short pointed flat extensions from edges for folding inward after setting into leather or cloth.

B as above, but attachment was by means of plain straight pinlike shaft at center underneath to be bent aside in one direction.

Studs of these sizes, forms, and degrees of fragility are best known at Gordion for being set into belts of the disk and studded-leather type as in Tumulus MM (see e.g., MM 170).<sup>165</sup> The author suggests that **TumS1 89A** and **B** may once have accompanied the uncatagued disk seen on Pl. 61A (see p. 118 and n. 14).

Both types of attachment—by central pin and by side extensions—could appear on the same belt.<sup>166</sup> Possibly to be included in this belt group is **TumS1 76**, a stud found in mantle earth over the grave.

**TumS1 90** **Bronze: fibula (XII,9f)**  
B 349c(1)  
Max. dim. 0.036 m.  
Pl. 70F

Spring end of arc survives. Solid studs on arc probably eight(?); on ends, one sharp reel between single blocks, three studs on each block.

Pin to wearer's right.

**TumS1 91** **Bronze: fibula (XII,9f)**  
B 349d(1)  
Max. dim. 0.032 m.  
Pl. 70G

Fragment from end of arc. One stud lost. Hook complete but folded and pushed aside in back.

One squarish bead between single blocks. Number of solid studs on arc cannot be determined, two on each block.

Pin to wearer's right.

**TumS1 92** **Bronze: fibula (XII,9f)**  
B 349d(2)  
Max. dim. 0.031 m.  
Pl. 70H

Fragment from spring end of arc. Two studs lost off arc.

Two reels between single blocks. Number of solid studs on arc cannot be determined, but stud size is larger than that on **TumS1 91**.

Pin to wearer's right.

164. See Young, *Gordion* I, pl. 96E.

165. *Ibid.*, 147–149, fig. 94A-F.

166. *Ibid.*, esp. 149, fig. 94E,F.

**TumS1 93** Bronze: fibula (XII,9β)  
B 349c(2)  
Max. dim. 0.026 m.  
Pl. 70f

Spring end of arc survives.

Double reel between blocks. Probably six solid studs on arc, two on each block. Stud size is smaller than that on **TumS1 90**.

Pin to wearer's left.

**TumS1 90-93** are badly preserved bits of type XII,9β fibulae from MT 1, but they were catalogued in the field together with **TumS1 26A,B** as B 349. The writer does not believe these go together so surely as to imply exactly two complete fibulae.

Muscarella<sup>167</sup> and Caner<sup>168</sup> illustrated the fragments.

For other XII, 9βs in Tumulus S-1, see **TumS1 26-28** and **83**; discussion under **TumS1 26**.

**TumS1 94** Bronze: fibulae (XII,13) (6 and fragments)  
B 333a-f  
A-F Hs. ca. 0.021-0.022 L. 0.028 m.  
Not ill.

Two complete; three lack pins; one lacks hook and pin.

One (B) like **TumS1 33** with larger hook (pin to left); four like **TumS1 39** with smaller hooks (two pins to right, one to left, one unknown). Hook type unknown on F.

**TumS1 95** Bronze: fibulae (XII,13) (10)  
B 332a-j  
A H. 0.02 L. 0.034  
B-J H. ca. 0.02 L. ca. 0.034 m.  
Not ill.

A cleaned. Rest retain patina and incrustation.

Nine examples close to **TumS1 39**, with narrower type of hook. One with large hook. Three have pins to wearer's left, six pins to right, one (A) indeterminate.

**TumS1 96** Bronze: fibulae (XII,13) (3)  
B 331a-c  
A H. 0.02 L. 0.031 m.  
B,C Close to measurements of A  
Not ill.

A and B lack spring and pin. C crumpled as if crushed while molten; pin missing except for pieces retained in hook.

Resembling **TumS1 39**, type with narrower hook.

Two pins to wearer's left, one to right.

**TumS1 97** Bronze: fibulae (XII,13) (9 and fragments)  
B 334a-i  
A H. 0.024 L. 0.031 m.  
B-I Close to measurements of A  
Not ill.

One close to **TumS1 33** with flaring hook. Eight close to **TumS1 39** with narrower hook. Fragments for approx. 16 more.

Six pins to wearer's right, two to left. One plus fragments indeterminate.

**TumS1 98** Bronze: fibula (XII,13)  
B 331d  
Measurements not taken  
Not ill.

Fragment from central arc.

Like **TumS1 39**.

Direction of pin unknown.

**TumS1 99** Bronze: fibula fragments (XII,13) (6)  
B 332k-p  
Measurements not taken  
Not ill.

Fragments, each greater than half an arc. Patinated and encrusted.

Like **TumS1 39**.

This large group of type XII,13 (**TumS1 94-99**), although separated from the main S-1 burial by the activities of the diggers of the military trench, no doubt come from the burial collection. They are part of Caner's<sup>169</sup> type H I.

See herein text after **TumS1 41** for a discussion of the material to be associated with this variety of Blinkenberg's XII,13.

For other XII,13s from Tumulus S-1, see **TumS1 33-45** above.

**TumS1 100** Bronze: fibula (XII,14)  
B 357  
H. 0.031 L. 0.039 m.  
Pl. 70j

Mended, roughened. Lacks pin and spring end of arc.

Arc has plain spherical beads at ends, center, and in quarters. End beads roughly incised to supply reels at each side. Large grooved hook with horns. Spine plain. Plain in back but not flat.

Pin to wearer's left.

Caner's<sup>170</sup> variant K I,2 includes, in addition to **TumS1 100**, others from the Clay Deposit and above on the City Mound, and from unstratified and later proveniences elsewhere.

For other examples of XII,14 fibulae, generally, from Tumulus S-1, see also **TumS1 46-71** and **82**.

167. Phryg. *Fib. Gordion*, pl. VI, fig. 32, lower row.

168. *Fib. in Anat.* I, 81, no. 430A,B (pl. 34). See general statement herein, n. 97, p. 129.

169. *Fib. in Anat.* I, 113-116, nos. 654-661 (pl. 44).

170. *Ibid.*, 153, no. 1070 (pl. 60).

# Tumulus S-2

## *Introduction*

### PRE-EXCAVATIONAL DESCRIPTION (FIG. 56A; PL. 70K)

The second of the southern group to be examined lies 600 m. uphill southeast of Tumulus S-1 and above the 45-m. contour line, near Tumulus Z. Because it was being consistently plowed away in 1950 and 1951 and was in danger of destruction, it was excavated to salvage the grave deposit.

### EXCAVATION (FIGS. 56B-59A; PLS. 71-74)

E. Robert Gallagher dug Tumulus S-2 from 12 May to 25 May 1951.<sup>1</sup> He established his datum at the top, i.e., the center of the visible circumference of the tumulus (D. 32 m.; see Fig. 56A). From the evidence for truncation he believed that this measurement included both washdown (layer II) and "plow-down" (layer I) on the sides and that the ancient diameter would later be discovered to be substantially less. The "true" diameter was 21.40 m. (see below, and Fig. 56).<sup>2</sup> Its preserved height above ancient surface was 1.79 m.

The tumulus was entered via trench 1 from the northwest toward center (L., on visible radius, 16 m.). Near the center, the southwest scarp of trench 1 revealed the edge of the burial pit. To define the nature and general orientation of the pit, Gallagher opened trenches 2, 3B, and 4. In trenches 3A and 6 he pursued the nature of the circular layer VIA and cleaned out the looters' pit (shown as a broken-line circle in Fig. 56B).

### PRE-TUMULUS SITUATION

In Fig. 57A,B Gallagher indicated the pre-tumulus situation as consisting of undisturbed solid strata of laminated clay (VI) at -2.45 m. at center, running below a thin layer of clay and selenite (V) which was designated "hardpan." Above that a thick layer of sandy clay (IV) hard enough to be considered natural, rising at center to -1.79 m., appeared to furnish the ancient earth surface upon which the Phrygian operation was carried out.

Because there were no ancient burials or habitation features in this area, no smoothing or other preparation was necessary. Only a hardened working floor on the surface of layer IV was found stretching from trench 1 toward the southeast (Pl. 71B) and along the northeast end of the pit.

### THE MAIN BURIAL (FIGS. 56A, 58; PLS. 71B-74)

#### *THE PIT* (FIGS. 56B, 58; PL. 72B)

Defined in trenches 2, 3B, and 4, the pit itself was very large (6.18 NE-SW x 5.02 m. NW-SE) and was cut through sandy clay (IV) deep into laminated clay (VI).

The back-dirt from the Phrygian excavation of the lower clays formed a large "circular" pile, layers IVA, VA, and VIA, surrounding the pit and resting upon the working floor over IV (Figs. 57, 58A, 59). It was hard and well compacted and fell off sharply toward

1. Gordion Notebook 19 (1951) 27-73. In the sections (Figs. 57, 58A, 59A) drawn from the scarps of the trenches in Tumulus S-1, a single series of Roman numerals has been used. A Roman numeral with an A (VA, VIA, etc.) indicates back-dirt thrown up from layers V, VI, etc. by the original Phrygian pit-diggers. The terms III,1, III,2, etc., refer to primary, secondary, etc. depositions of mantle.

2. Gallagher's diameter of 21.40 m. represents the doubled measurement from center to locus "b" on Fig. 57A. Layers III,1 and III,3 he considered to be plain mantle disturbed by pre-modern plowing. The author agrees that 21.40 m. is the diameter, but believes that III,1 is a retaining border and III,3 is the fill between it and the advancing mantle (see text under "mantle").

the lips of the pit. Through its northern quadrant ran a passage (Fig. 57A) possibly made for or worn by the pulling in of timbers and stones.

The smooth area of stone-hard laminated clay exposed at the bottom of the pit (level -4.70 m.) served as the floor of both pit and chamber without benefit of added treatment. This heavy clay (VI) created around the pit impermeable scarps which probably retained rainwater in the bottom from time to time after the looting.

### THE CHAMBER AND STONE PACKING (FIGS. 58, 59B; PLS. 72B-74)

The interior clear measurements of the chamber were: L. 3.10, W. 2.75, H. 1.10 m.

The walls on all sides were built of five superposed beams, varying only slightly in measurements (H. ca. 0.22, W. 0.15 m.). Evidence for each wall was only partial, but the individual walls yielded the following information concerning measurements and joinery:

*Northwest side.* Five beams present but sagging, with L. 4.84 m., which included extensions of 0.72 m. beyond each end wall (Pl. 74A). Vertical slotting in interior faces at both ends of all beams: W. of slots 0.15, depth of slots 0.08 m.

*Southeast side.* As above, but evidence for extensions lacking. Evidence for slotting also vague at south corner.

*Northeast end.* Simple untenoned ends of sill course enter their slots in side sills. Ends of upper beams lacking.

*Southwest end.* Most beams had rotted away, but length of 2.91 m. could be established (2.75 inner clearance + 0.16 m. in slots). Iron band fragments (**TumS2 9**) found in both south and west corners of chamber were believed by excavator to have helped support these end beams in their stacked position by "reducing the strain on the joints."<sup>3</sup>

This method of building (see Fig. 59B), without staggering the settings of the beams at the corners, rendered each four-sided course of beams liable to horizontal slippage, and necessitated the simultaneous use of stone packing between the walls and the sides of the pit. Even a heavy one-sided application of the stone could have caused shifting.

The writer believes that the function of the iron bands (**TumS2 9**) was to seal the sides and/or ends of a coffin which theoretically lay along the southwest end of the chamber, where the skeletal fragments were found:

**TumS2 9** Iron: band fragments

As in other tumuli (MM, H, S-1, Z, etc.) the use of iron nails for the suspension of gifts was attested by scattered remains on the floor:

**TumS2 8** Iron: L-headed nails (4).

### THE GIFTS

As a result of the ancient disturbance of the chamber, little in the way of gifts remained. The objects from inside the chamber and those from the looters' refill have been treated as one group.

The gifts which remained were confined to the edges of the chamber, or strewn upward through the refill, except for **TumS2 1**.

<b>TumS2 1</b>	Bronze:	fragments of bowl of banded-rim type (center of chamber)
<b>2</b>		swiveling ring handle (east corner)
<b>3,4</b>		fragments of petaled bowls (east corner)
<b>5</b>		studs (3) (southwest end)
<b>6</b>		studs (2) (northeast end)
<b>7</b>		studs (13) (chamber, and north corner of stone pack)
<b>10</b>	Pottery:	Lydian base sherd (provenience in burial unknown)
<b>11</b>		gray-ware dinos (northeast end)
<b>12</b>		fragments of coarse dinos (east corner)
<b>13</b>		fragments of coarse dinos (south corner)
<b>14</b>		coarse low-necked jar (north-east end)

The human skeletal remains, which were found collected in the west corner, were minimal: four fragments of bones of unspecified sex and age.

### THE ROOF (FIGS. 58B, 59B; PLS. 72B, 73A)

Six fragmentary cross-timbers measured 0.12-0.13 m. in vertical thickness and had a length (northwest-southeast) which overhung the exterior of the chamber by 0.68 m. (evidence in west corner only). These

3. Here Gallagher was following G. Körte (*Gordion*, 99), who in 1900 believed that such bands found in Tumulus K-IV had been

employed to strengthen the walls.

hung down into the central area but rested on the side walls, which rose to the same height as the end walls. Since the roof beams were not held together by the end walls, they were subject to shifting. The measurement across their widths, from northeast to southwest, was 3.12 m. (as spread slightly, 3.18), which left barely 0.02 for a closing lap over the inner edges of the end walls. The five northeasternmost beams each measured ca. 0.50 m. across. The sixth (southwesternmost) had a width of 0.62 m. and, being the widest, was taken by the excavator to indicate the "head" end of the burial, as had such a beam (W. 0.63 m.) in the lower roof of Tumulus G. In S-2 this was also the end where the iron bands for a theoretical coffin were found.

The Phrygians used a thick mat of pinkish (as found) feathery grasses across the top of the roof before the stone covering continued upward.<sup>4</sup> It was observed at level -3.27 m. hanging vertically among the stones of the refill, and another patch of such material lay in the undisturbed stone pack on the southeast side of the pit at a height of 1.74 above the floor of the chamber (level -2.96 m.). This latter is to be interpreted as evidence for a second layer of waterproofing reeds or grasses among the stones of the cap.

#### THE STONE CAP (FIG. 58; PLS. 72A, 74C)

The stone cap was first encountered in the southwest scarp of trench 1. If it was the original plan of the Phrygians that the stone pack be confined to the pit itself, it may have been because the top of the roof of the burial lay at such a low level within the pit excavated for it, that the mere top half of the pit, once filled with stone, constituted a sufficient substitute for the usual domical cap. Surely no evidence for an extended stone cap was found in the undisturbed areas at the northwest, southwest (trench 5), and southeast lips of the pit. A scattering of large stones (B in Fig. 58A,B) brought up on the ancient pre-cap surface, at 1.90-2.76 m. northeast of center but up against the exterior of the pile of VIA earth, may be an unused remnant of the stone side pack and cap material. Stones scattered upward through refill may be from the robbed cap.

#### THE MANTLE (FIGS. 57, 59A; PL. 71A,B)

Undisturbed mantle, consisting of gravel/clay, was best seen in the scarps of trench 1. It had been deposited in three operations.<sup>5</sup> Triangular layers (III,1) exposed both at the outer end of trench 1 (Fig. 57A) and in the southeast scarp of the excavator's final cut (Fig. 59A) are evidence for a small retaining border, outlining at least the downhill side of the tumulus (the uphill side was not excavated). The mantle proper (III,2) appeared to consist of layers deposited from the rising center outward toward the retaining border. Layer III,3 represents the final fill which blends the whole into a single profile.

The completed mantle must have had a surface of loam on it before the looters' hole (VII) left dump and possibly a small crater on top. A small stratum of natural erosion (II) was observed over III,1. However, the original tops of all these layers were removed from sectional views when the tumulus was truncated by plowing (I).

No sporadic finds from the mantle, except for a few animal bones,<sup>6</sup> were mentioned by the excavator.

#### CHRONOLOGY

The chamber in its form and amenities most resembles H, S-1, and Z. Iron spikes (see **TumS2 8**) for suspension of gifts occur, outside S-2 itself, only in those three tumuli and in MM. Those three, post-MM chambers, also had ends of end walls housed in slots in the side walls.

The chamber may have contained a coffin, as did B, C, K-IV, and S-1.

If one reviews the contents of Tumulus S-2, one finds that **TumS2 1-3, 5-7, 11-13** appear to be older, dating close to MM; they must be heirlooms.

**TumS2 4**, the petaled bowl, has a post-destruction angle of rim. Fragmentary **TumS2 10** appears to be from some type of Lydian lekythos(?).

Evidence from the advanced low-necked jar form, **TumS2 14**, appears to place Tumulus S-2 between B and M: **TumB 3, 9**, and **10** are still fairly broad-shouldered ovoid with incurving sides on the necks. **TumS2**

4. See p. 175.

5. See above, p. 141, n. 2, also below, pp. 181-182.

6. S. Payne has identified the few animal bones from the mantle: *Equus* upper cheek-tooth, *E. asinus*

*Sus*  
*Bos*  
*?Bos*  
*Ovis/Capra*

distal radius, unfused shaft  
upper molar, broken, in wear  
*?astragalus* fragment, in very poor condition  
humerus shaft fragment.

14 is less broad of body with slightly straighter-sided neck, and P 285—from the undisturbed mantle of M and therefore pre-M—is still narrower ovoid in body with straight-sided neck. This and **TumS2 10** bring S-2 down perhaps to an early point in the Lydian occupation of Gordion. See reasons for dating of Tumulus M prior to or during the incursions of 546 B.C.?

Dating: 580–545?

## LOOTING

In this tumulus the looters' hole was observed by the excavator to be dug down from the top of layer III,2 in

the southwest scarp of his trench 1, before the pit and its chamber were found. The hole showed in trench 2, in the southeast scarp of which a scattered oblique line of large stones appeared as if thrown up from the burial pit. It appeared in 3A and 3B and overlapped the northeast edge of the grave pit. The looters evidently removed the centers from the roof beams at that end, leaving the beam-ends over the side walls. In the loose fill of the chamber (layer VII) the contents were thoroughly churned. Contents in which the looters were uninterested (bones, small bronzes, and pottery) had been thrown toward the sides of the chamber, leaving the central floor swept clean of grave deposit, then later littered with stones and debris.

## Catalogue

### IN BURIAL CHAMBER AND REFILL OF LOOTERS' PIT

#### **TumS2 1–14**

**TumS2 1**     **Bronze: fragments of bowl of banded-rim type**  
B 258            Center of chamber  
Est. D. 0.21   Th. rim 0.003   GPH. 0.035 m.  
Fig. 60A; Pl. 75A

Many nonjoining rim and base fragments preserved. No rivet holes preserved.

Base unknown; body probably plain, and close to hemispherical at upper wall. Rim erect, merely thickened a little and slightly flattened on top, with no evidence for folding over and hammering.

Such cast examples of bowls with banded rims abounded in the pre-Kimmerian Tumulus MM, including a few close parallels to the thickened and flattened rim and angle of wall of **TumS2 1**. The best is MM 69 (D. rim 0.25 m.).<sup>8</sup> Even the banded-rim bowl **TumJ 20** (above) is perhaps later than **TumS2 1** since it is thinner-walled and has a folded and hammered rim. Without preserved rivet holes one cannot speculate about bolsters, but **TumS2 2**, below, supplies a swiveling ring handle of the associated type.

There are also plain bowls of this size with similar lip in MM, but their walls are consistently thinner.

**TumS2 2**     **Bronze: swiveling ring handle**  
B 219            East corner of chamber  
W. 0.095   H. 0.07 m.  
Pl. 75B

Mended on one end. Roughened by corrosion. End of tips possibly missing.

Large elliptical ring of bronze, open on long side, with two ends tapering toward points. Round in section.

**TumS2 2** resembles many of the lighter-weight tapered-tip examples from the banded-rim bowls of Tumulus MM. MM 69 again supplies a parallel example.<sup>9</sup> The plain ring handle probably in general preceded the molded handles of the type seen in Tumulus Z (**TumZ 1** and **10**).

The author suggests that the decorative system of these handles, moving from plain to heavily molded, may follow, with some lag, the sequence of fibula moldings and of molded belt handles (see **TumS1 18, 19**, above). This would make **TumS2 2** either an heirloom, earlier than **TumZ 1** and possibly earlier than **TumS1 18** and **19**, or a late survival of the plain type.

**TumS2 3**     **Bronze: fragments of petaled bowl**  
B 243a            East corner of chamber  
Est. D. ca. 0.15   Th. rim 0.0032 m.  
Fig. 60B; Pl. 75C

Many fragments nonjoining. Total number of petals irrecoverable.

Bowl walls at top appear close to hemispherical, molded with lotus-petal pattern, incised outline over petal points on interior; exterior plain. Rim direct, slightly thickened, and flattened on top.

Heavy, probably basically cast, although interior walls follow petals in repoussé fashion, as if hammered.

7. E. Kohler in *Young Symposium*, 67.

8. Young, *Gordion I*, 130, fig. 85, pl. 67E,G.

9. *Ibid.*, and pp. 232, 233.



**TumS2 4** **Bronze: fragments of petaled bowl**  
 B 243b East corner of chamber  
 Max. dim. lgst. pc. 0.03 Th. rim 0.0032 m.  
 Fig. 60C, Pl. 75C

Differs from **TumS2 3** only in distance of tops of petals from rim (*ca.* 0.01 m.), and (slightly) in angle of rim to wall.

The profiles of **TumS2 3,4** have their angle of lip slightly different from that on the series of petaled bowls in Tumulus MM.<sup>10</sup> The rim on **TumJ 2** comes closer, but its crushed state should give us pause.

**TumS2 5** **Bronze: studs (3)**  
 B 180 Southwest end of chamber  
 Ds. 0.01 Hs. 0.0055 D. stems avg. 0.0015 m.  
 Pl. 75D

Two have stems extending below caps.

Hollow hemispherical-headed tacks with thick stem through central axis.

**TumS2 6** **Bronze: studs (2)**  
 B 159 Northeast end of chamber  
 A D. 0.008 H. 0.005  
 B D. 0.008 H. 0.0045 m.  
 Not. ill.

A is corroded around edges.

Like **TumS2 5**.

**TumS2 7** **Bronze: studs (13)**  
 B 178 Scattered through chamber and north corner stone pack  
 Ds. 0.015 L. most complete one 0.021 m.  
 Pl. 75E

Thirteen hollow hemispherical studs preserved; five with lost shafts, seven with short shafts, and one with long shaft (possibly complete). One shows wood into which it was driven up to rim of boss.

All resemble **TumS2 5**.

Studs of the type of **TumS2 5-7** with sturdy straight central pins are probably from wooden furniture, as evidence for wood on one pin shows. Absent here are the fine stems pushed aside, or extended tabs pushed together from the stud rim, as seen in use on studded leather belts.<sup>11</sup> Here we must have had a piece of studded wooden furniture, like those in Tumuli W and P<sup>12</sup> (no studding occurred on the wooden furniture in MM). Much wood and many additional studs may have been lost in Tumulus S-2. Even a small example of such a piece of furniture, perhaps surviving the Kim-

merian invasion, would have been an important heirloom.

**TumS2 8** **Iron: L-headed nails (4)**  
 ILS 770 Grave chamber  
 A PL. 0.09 H. at end 0.03 Tapering square section 0.003-0.013  
 B PLs. 0.045-0.072 m.  
 Pl. 75F

A sharpened point broken off. Thick-shafted nail, whose head is bent up to a 90° angle.

B broken shafts from three similar nails (no heads preserved).

All square in section.

Evidence of plain L-headed iron nails serving to suspend gifts from wooden chamber walls was found only here and in Tumuli MM,<sup>13</sup> Z,<sup>14</sup> and H<sup>15</sup> (i.e., from the time of the Kimmerian invasion to *ca.* 650 B.C.). Other scattered examples from the City Mound came from layers just above the Clay Deposit and from Hellenistic pits.

**TumS2 9** **Iron: band fragments**  
 ILS 771 Grave chamber, south and west corners  
 A best band: PL. 0.132 W. 0.05 Th. 0.018  
 D. head of nail 0.018  
 B others: PLs. 0.02-0.09 Ws. 0.0238 where slightly rusted, to 0.045 where swollen with rust  
 A and B PL. 0.93  
 C nail shafts: PLs. 0.022-0.055 m.  
 Pl. 75H

A best-preserved stretch of iron band, broken on one end, flat, well squared on other. At 0.033 in from finished end, heavy-headed iron nail, probably originally having hemispherical head. Narrow shaft (broken off) below is square in section.

B other smaller fragments of bands. Widths and thicknesses vary according to degree of swelling and lamination from rust. Five more pieces contain nail heads (one 0.023 from end). One head is close to edge at mid-length of band fragment.

C various broken-off shafts from nails square in section and tapering.

Nowhere is there positive proof that these bands form a double clamp. As in Tumulus S-1, although no recognizable part of a coffin survived here, we note

10. Compare profiles: *ibid.*, 132, fig. 86, 135, fig. 87A,B. There the profiles follow the petals without representing the wall between them, but the difference from **TumS2 3,4** is clear.

11. Cf. *ibid.*, 147-154; see esp. 149, fig. 94.

12. *ibid.*, TumW 80, "screen," 217-218, fig. 129, pl. 94C, TumP

157, "stool panel," 72-73, fig. 42, pl. 32A-C.

13. *ibid.*, 100 and n. 26, 148, n. 79. Nails not catalogued.

14. See **TumZ 5-7**.

15. See **TumH 1**.

that iron bands have occurred in other tumuli with coffins: Tumuli B (above, p. 12), C (pp. 26–27), and K-IV.<sup>16</sup>

See pp. 183–184.

**TumS2 10 Pottery: Lydian base sherd**  
P 5489 Context bag; grave chamber  
Max. dim. 0.05 GPH. 0.017 D. base 0.032  
Rest. D. base 0.08 m.  
Fig. 60D; Pl. 75G

Small sherd preserves half of base ring and a bit of adjoining lower wall, from closed form.

Possibly lekythos. Base ring low and slightly flaring; under-floor convex inside ring. Walls rise obliquely.

Smearly thin glaze over whole exterior body; one wheel-run band under base. Wheel-burnished, fired now rosy brown through core, mottled same to black on surfaces.

A sherd painted and fired in this manner ought to be Lydian. The small ring base and angle of lower body make it possibly a lekythos, but its chronological position within the body of Lydian pottery cannot yet be precisely fixed.

**TumS2 11 Pottery: gray-ware dinos**  
P 370 North corner of chamber  
Rest. H. 0.16 D. 0.213 D. rim 0.165–0.17 m.  
Fig. 60E; Pl. 75I

Lacks base and much of lower body. Surfaces chipped and abraded.

Base unknown; body slightly pulled-up spherical, opening to wide mouth with narrow flaring rim, flattened on top and beveled toward interior. Lip sharp.

Thorough wheel-burnish on exterior.

Fabric thin-walled. Clay fine, slightly micaceous, fired gray-beige at core, mottled beige and black on surfaces.

G. K. Sams terms such a pulled-up spherical body "balloonlike spherical."<sup>17</sup> **TumS2 11** most resembles the dinos TumP 82,<sup>18</sup> and other parallel shapes are found in a few painted dinoi from the Destruction Level. It also appears still close in shape to the "small cauldrons" in bronze found in MM.<sup>19</sup>

**TumS2 12 Pottery: fragments of coarse dinos**  
P 371 East corner of chamber  
Max. dim. lgst. sherd 0.185 Est. D. 0.248 Est.  
D. rim 0.21 m.  
Fig. 60F

Sherds; rotting and flaking.

Base flat, body *ca.* spherical, opening to wide mouth with short flaring rim, flattened on top.

Some rough burnishing.

Clay coarse with huge white inclusions. Fired dark brown throughout.

**TumS2 13 Pottery: fragments of coarse dinos**  
P 372 South corner of chamber  
A rim section: Max. dim. 0.18  
B body section: Max. dim. 0.105 m.  
Fig. 60G

Many disjointed parts. Surface rotted.

Base flat, body spherical, short incurved neck below flaring rim.

Horizontal burnish on exterior.

Clay coarse, fired gray-brown at core, dark gray where burnished.

In **TumS2 12** and **13** the necks have developed a bit beyond those on proper dinoid ancestors found in **TumS2 11** and its relatives.<sup>20</sup> There are a few bronze "small cauldrons" from MM which have similar very short necks below short flaring rims,<sup>21</sup> and the pottery shapes in MM which are related in rim and neck, but also in body, are exemplified by dinoi MM 360, 361, and 367.<sup>22</sup>

**TumS2 14 Pottery: coarse low-necked jar**  
P 369 Northeast end of chamber  
H. 0.212 Rest. D. base 0.08 D. 0.19 D. rim  
*ca.* 0.103 m.  
Pl. 75J

Lacks most of rim and base except for small edge.

Base flat, body spherical, but slightly "ovoid" in lower half. Small neck ridge under short neck which flares at top to short everted rim lightly ledged inside.

Surface roughly burnished over all.

Clay coarse, slightly micaceous with white inclusions, fired partially gray at core, mottled beige and black on surfaces.

This jar must be associated with post-Kimmerian parallels—the slightly less ovoid jars, **TumB 3, 9, and 10**—and also with a slightly slimmer ovoid jar (P 285) from the mantle of Tumulus M (see Pl. 83J).<sup>23</sup> In form, **TumS2 14** falls between these two types, with body closer to those in B.

16. G. Körte, *Gordion*, 100. The coffins in C and K-IV are also inferred by the writer.

17. Sams in *Gordion* I, 255.

18. Young, *ibid.*, 42. Herein, see ill. of TumP 82 on Pl. 83F.

19. E.g., MM 4–6; Young, *Gordion* I, 110, 111, pl. 58A,B,D,G.

20. See n. 18.

21. E.g., MM 11; Young, *Gordion* I, 112, pl. 58K.

22. *Ibid.*, 173, 174, pl. 80D,E,I.

23. Kohler, *Gordion* II, Pt. 2.

# Tumulus S-3

## Introduction

### PRE-EXCAVATIONAL DESCRIPTION (FIGS. 1, 61A; PL. 76A)

Tumulus S-3 is well centered on a sloping promontory between contours 35 and 37.5 m., and lies about 10 m. lower than S-2 and 170 m. to its west. On a diameter assumed before excavation to measure 14 m., S-3 rose 1.24 m. above the bottom of its northwest slope. There was evidence that it had been cut into by an earlier trench running northwest-southeast.

### EXCAVATION (FIGS. 61B, 62A-C; PL. 76B)

E. Robert Gallagher excavated on 26 and 27 May 1951, beginning his diametric trench 1 (W. 2 m.) to follow and clean the earlier cut.<sup>1</sup> All linear measurements in this trench were taken from the northwest end, and he established his datum at the highest point surviving on the northeast edge of the earlier trenching, actually 0.40 m. below the highest point, which lay nearby to the northeast. Measurements of level are given at depths below his datum.

Gallagher dug to -1.85 (0.61 m. below the modern surface on the northwest edge of the tumulus), into a layer of clay filled with closely scattered plates of selenite (II).<sup>2</sup> Almost immediately the side outlines of the ancient looters' trench became apparent. The refill was a thorough mix of stones, skeletal material including the skull, loam, chunks of dug clay with sporadic plates of selenite, numerous fragments of wood, and a few sherds.

Trenches 2A and 2B were opened up to form a cen-

tral 8 x 10-m. rectangle, the outer parts of which added nothing. The greatest width of the looters' pit was only 3.20 m. The outlines of the Phrygian pit were found to have been blurred although it was clear that it was located northwest of mantle-center. The grave was utterly destroyed. The looters appear to have expended some effort on the refilling process.

Unfortunately, photographs taken during the excavation process were spoiled. Pl. 76B represents the post-excavation status.

### THE MAIN BURIAL (FIG. 62C)

The evidence tells us only that Tumulus S-3 was once a timber grave built in a pit dug through a layer of selenite in clay (II) down to greenish laminated clay (III) at least to depth -1.77 and beginning *ca.* 1.12 m. northwest of calculated center. The northwest-southeast dimension of the pit (as left by the looters) was *ca.* 2.25 m. at its bottom; the width was at least 2 m., but these measurements cannot be considered accurate for the original installation.

Certain pieces of wood floating in the looters' mix suggested to the excavator the former presence of a coffin, but the absence of all iron bands, lead sealing fragments, and nails makes this suspect.

The only traces left of the original gifts, found in the looters' earth, were:

<b>TumS3</b>	<b>1</b> Amber:	biconical bead
	<b>2</b> Pottery:	three sherds of small banded vessel.

1. Gordion Notebook 19 (1951) 74-84.

2. A sample of the crystalline material from layer II was kindly identified as selenite by Prof. B. Castens-Seidel of the Department of Geology, Bryn Mawr College. She assured me that plates

of selenite can occur thickly but unevenly distributed in such contexts naturally, and that layer II need not be interpreted as an artificially deposited support layer against the original pit. See also Zouck, *Alabaster*, 9-14.

The stone pack had once been formed of pieces of gypsum; it probably had not extended to a cap beyond the pit, as it was not mentioned by the excavator at the time he widened his trench to include 2A and 2B. The earth used by the Phrygians for the mantle (I) was a soft sandy loam, which, outside the bounds of the looters' pit, was found to be completely sterile, yielding no sherds or other human traces. The small size of the pit, and the necessarily smaller size of the chamber inside it, may indicate a child's burial.

## CHRONOLOGY

The appalling state of Tumulus S-3 leaves us with little evidence for dating.

The greatest mass of the amber imports (see **TumS3 1**) found at Gordion fall in fifth- to third-century layers, but a few are found in sixth-century contexts, e.g., Tumulus K-II (ca. 550–540 B.C.).

The pot **TumS3 2**, if genuinely Cypriote, would date according to the Sjöqvist system ca. 700–600, but since it is more probably south or west Anatolian ware, it could date later than 600.

Date: perhaps in the first half of the sixth century?

## LOOTING

Tumulus S-3 was known, from the moment the excavator began, to have been looted. See above, "Pre-excavational Description" and "Excavation."

## Catalogue

### IN DISTURBED FILL OF PIT

#### **TumS3 1, 2**

#### **TumS3 1 Amber: biconical bead**

J 66

W. 0.0115 D. 0.0215 D. string hole ca. 0.004 m.

Fig. 62D; Pl. 76C

Intact, but cracking on surface.

Sharp slightly truncated biconical profile with small string hole.

Color: tawny brown.

G. Körte<sup>3</sup> mentioned two shaped but unpierced pieces of amber from Tumulus K-II, a timber grave, dated by him ca. 600–550, now thought by this writer to be close to 546 B.C. (see p. 195 and n. 13). One piece was in the grave and the other in the vicinity of the stone packing. K-II contained also fine polished fluted vessels of the post-Destruction type (see p. 225). See also under **TumZ 20**.

A dozen or so additional amber objects have been

found in the Pennsylvania excavations at Gordion. Of these none came from pre-Kimmerian proveniences.<sup>4</sup> All but two or three are beads or whorls of plain spherical, ellipsoidal, or thick biconical shapes from above the Clay Deposit on the City Mound, or from Lydian- and Persian-period deposits in the tumuli (see J 28 in cremation Tumulus D) and the common cemetery (i.e., sixth to fourth centuries B.C.), and a few were found in upper layers: third- and second-century contexts on the City Mound.

Boğazköy offers nothing helpful; only two examples of amber were published by Boehmer,<sup>5</sup> one being a parallel for other beads at Gordion, but not for **TumS3 1**. A whorl of similar form in serpentine came from surface fill.<sup>6</sup>

Schmidt<sup>7</sup> mentioned unprovenienced amber from Troy.

Iron Age Tarsus yielded one specimen of amber, a spherical bead dating to Middle Iron.<sup>8</sup> Two beads looking vaguely flat and biconical occur among a large group of beads from Ephesos, but those are said to be of the "red, Sicilian" variety of amber.<sup>9</sup> A connection can be made with Chios.<sup>10</sup>

3. *Gordion*, 128, nos. 62, 63 and fig. 114.

4. T. Malinovsky declares amber to be extremely flammable (*Archaeology* 27 [1974] 197). Perhaps, if present in the Destruction Level, it could have been consumed without trace in the Kimmerian fire. However, no amber has come from pre-Kimmerian tombs.

5. *Kleinfunde*, 232, nos. 2459, 2460 (pl. XCVIII).

6. Boehmer, *Unterstadt*, 61, no. 3827 (pl. XXXVII).

7. *Schlösser. Samml.*, 244, nos. 6117, 6118 from uncertain contexts.

8. H. Goldman in *Tarsus III*, 398, 400 (not ill.).

9. D. G. Hogarth in *Ephesus*, 213–216, esp. 216, pl. xlviit[26] (unspecified provenience). See Strong, *Amber*, 41–43, type *k*, pl. II, 4. But see Boardman, *Antiquity* 41 (1967) 68. D. E. Strong warns against the use of color as an indication of provenience (*Amber*, 1–2). C. W. Beck (ed.) in *AATA* 6, no. 3 (1967) 203–272 provides wide-ranging bibliography on recent attempts to analyze ambers chemically and spectrographically; *idem*, *AJA* 99 (1995) 125–127.

10. An amber group from Kato Phaná in Chios (W. Lamb, *BSA* 35 [1934–35] 154) was compared to the K-II material by C. Roebuck (*Ionian Trade*, 48).

A north-south trade route brought amber to Macedonia mainly in the eighth to sixth centuries B.C., and generally, it is "in the later eighth and especially in the seventh century that amber was most popular in Iron Age Greece."<sup>11</sup> However, an association of Tumulus S-3 with K-II may be indicative of an extension of those dates at Gordion.

**TumS3 2 Pottery: sherds of small banded vessel (imported)**

P 519 Scattered through looters' trench  
D. base 0.031 m.  
Fig. 62E; Pl. 76D

Three nonjoining sherds preserve base and bits of side walls to upper body.

Base flat, slightly set off from walls which curve in to form possibly jar or jug. Vessel definitely closed, as coarse narrow

wheel-ridges remain on interior.

On belly (or low on shoulder) is wheel-run band of reddish paint, thinned in part, edged below by narrow black band.

Fabric thick; clay fine with occasional fine mica. Finished by wiping on wheel, which left on exterior fine drag marks from occasional inclusions. Fired creamy to orange-buff.

The sherds, **TumS3 2**, make up the body of a closed vessel with bichrome banding fitting best into the Cypriote Bichrome III group on Cyprus. Possible shapes adhering to this lower body profile are neck-ringed jug,<sup>12</sup> small-necked trefoil jug,<sup>13</sup> and feeding bottle.<sup>14</sup> The fabric, however, appears not to be Cypriote. It may belong instead to a still unclassified southwest Anatolian ware.

A possible date range: 600 to 550 B.C.

11. Strong, *Amber*, 22-23 with references.

12. *SCE IV*, pt. 2, fig. XXII|12, type 5b.

13. *Ibid.*, fig. XXIII|1, type 10.

14. *Ibid.*, fig. XXIII|9, type 18.



# Tumulus Z

## Introduction

### PRE-EXCAVATIONAL DESCRIPTION (FIGS. 1, 63A; PLS. 77A, 78A)

Of the four large tumuli situated on the brow of the South Ridge above the 35-m. contour line, the one inadvertently termed Z instead of S-4<sup>1</sup> is the southernmost and lies near the top level (above +45 m.). Its height as determined by excavation is 9.33 m. above hardpan, and its greatest diameter *ca.* 60 m. northwest-southeast. Its southwest slope is slightly steeper than the others and shows signs of erosion.

In April of 1969 the villagers observed and reported a new sunken area (4 x 4.50 m. in extent and 3.50 m. deep) located 3 m. northwest of the peak (Pl. 78A). The excavation staff from experience interpreted this to be the result of the recent collapse of the roof of a wooden tomb chamber. Since the location of a chamber under the tumulus was now revealed, it became necessary to dig the tomb as a salvage operation.

### EXCAVATION (FIGS. 63B-67; PLS. 77A, 78B-79B)

Phoebe Sherman (later Sheftel) excavated from 27 June to 16 August 1969.<sup>2</sup> Having established her datum at the top of the east scarp of the newly discovered hole, she opened trench 1 from the west side of the sunken area toward the northwest edge of the mound and down to -7.30 m., a level suitable for bedding Decauville tracks. At its inner end the stone cap over the burial, and space under the dome of the clay cap, was discovered. In the northeast scarp was evi-

dence for a retaining border. The railroad cut after scarp-slippage and resulting widenings measured 2.50 m. across at the bottom.

Trench 2 was then begun at the top of the tumulus, at first with the edges of the sunken area extended *ca.* 1.50 m. on all sides. Since the bottom of the hole had appeared in the scarp of trench 1 to be wider than the top, the excavator's extension at the top was planned to allow for this greater width plus some battering of the scarp in the descent. During the descent vertical fault lines appeared which were subsequently interpreted as the sides of the original looters' shaft. When the point was reached at which the earth could be shoveled downward into the railroad wagons running in trench 1, trench 2 had become vaguely rounded (6.50 east-west, 6.30 m. north-south). On the southeast side of trench 2 was a vertical stack of stones herein referred to as the "tower." The fault lines ran back under the scarp at -7.30 m. and below, exposing more stones from the top of the edges of the cap still adhering to the hard clay inter-cap, which continued even during excavation to stand and form the unsupported edges of what was once a dome.<sup>3</sup> In the northwest side of trench 2 the pattern of the inner faces of the rings of various clay and earth dumps forming the retaining border continued. At -9 m. the collapsed earth in the sunken shaft began to yield scattered stones once belonging to the cap; at -9.50 to -10 m. posts and tumbled beams showed among the rubble.

Trenches 3 and 4 (Fig. 63B) were taken only far enough to measure the east, south, and west limits of the stone tower. In trench 4 a north-south line of stones (evidently not a guide wall) was found resting on the ancient surface. Trench 5 was sterile.

1. Or not so inadvertently; R. S. Young, planning that this should be the last tumulus in his campaigns, put his mark of finality upon it.

2. Gordion Notebook 132 (1969) 70-113.

3. The clay domes held while the stone caps were being with-

drawn from underneath them in Tumuli W (DeVries in Young, *Gordion I*, 193), P (Young, *ibid.*, 2-3), and MM (*ibid.*, 86). These were the "great" pre-Kimmerian tumuli, with weathered base-diameters of 300 (MM), 150 (W), and 70 m. (P); Z, at 60 m., ranks close to Tumulus P.

## THE MAIN BURIAL

THE PIT  
(FIGS. 63B, 64[B])

The Phrygians dug a rectangular pit into hardpan, measuring an estimated 8.10 m. northwest-southeast and 3.05 m. deep (lip 9.33, pit floor 12.38 m. below datum). The northeast-southwest width could not be measured.

To prepare for the chamber (as restored, see below), the first activity inside the finished pit must have been the digging of eight post holes (depth unknown), four on each side, 1.30 m. apart, measured edge to edge. Into these went eight heavy posts (D. 0.30) (the southernmost pair inferred) making up an outer, cage-like, support frame for the chamber. Then the lining of the floor of the pit with *ca.* 0.25 m. of small stones provided a drainage and leveling stratum for the wall construction.

Short blocks of wood (H. 0.23) were set under the end walls at 90° to the side walls to bed the corners.

THE CHAMBER  
(FIGS. 65–67; PLS. 78B–79B)

The side walls had been so badly displaced that crosswise horizontal props were installed to prevent further cave-ins (Pl. 79A).

The excavator thought that in general the walls were constructed of logs left unsmoothed, but "planed" down on their inside faces, whereas the recording draftsman saw the frequent rounded edges as due to rot, and drew the beams as squared.<sup>4</sup>

*Southwest side.* H. 1.90 (top at -10.94 m.). Consisted of seven beams (Hs. 0.25–0.35) with housing-slots 0.26 wide on their interior faces to receive unmodified beam-ends of end wall, which entered side beams for 0.12 m. On interior face of the top beams, traces of iron wall nails showed they were set 0.15 m. down from top and at 0.25-m. intervals (cf. **TumZ** 6, 7, 16, 17).

A large plaque-like set of planks (Th. 0.09 m.) was found standing obliquely against the southwest wall, with evidence it was once secured to it by a dowel of lighter-colored wood (H. 0.15, W. 0.06) set into a socket in the wall (H. 0.17, W. 0.10, Depth 0.05 m.).<sup>5</sup> The excavator thought of it as a section of extra veneer once put against the wall. The exact orig-

inal location of the wall socket and the overall preserved measurements of the "plaque" were not recorded.

*Northwest end.* Th. 0.26 m., derived from widths of inner surfaces of slots in southwest wall; PH. 0.70 above hardpan of pit floor. Since all slots lined up vertically and went through entire height of each side beam, heights of all end beams, which were simple and untongued, were not constrained to equal heights of side courses, but could vary.

*Northeast side.* PH. *ca.* 1.47 (top at -10.33 m.). Showed row of iron nails for suspension of tomb gifts; one L-shaped nail (**TumZ** 5) still held, secured by rust, the ring handle (**TumZ** 2) of lost bowl.

*Southeast end.* Not exposed, due to overhanging scarp and threats of collapse.

Catalogued objects definitely associated with the construction of the chamber are:

<b>TumZ</b>	4	Bronze:	nail with washer (under fallen roof beam)
	5	Iron:	L-shaped nail (adhering to northeast wall and holding <b>TumZ</b> 2)
	6		L-shaped nail ( <i>in situ</i> , southwest wall)
	7		L-shaped nail (point broken, base of southwest wall).

Areas O and P on Fig. 65B show where fragmentary floor-planks (Th. 0.12–0.13 m.) were found resting crosswise between the side walls. They fitted up against the walls but nowhere ran under them.

## THE GIFTS FROM THE CHAMBER

Very little evidence for gifts was found actually inside the collapsed chamber. However, adhering to, or at the foot of, the northeast wall were:

<b>TumZ</b>	1	Bronze:	ring handle, molded
	2		ring handle, large, plain (on iron nail, <b>TumZ</b> 5)
	3		ring handle, small, plain.

**TumZ** 1–3 are evidence that at least three bronze bowls with swiveling ring handles and rim bands had been present, hanging from nails in the northeast wall. No further scraps of these bowls, or of anything else, indeed, appeared inside the chamber. It could hardly have been more thoroughly looted.

No skeletal material survived.

4. Doubts on the same subject arose during the excavation of Tumulus H (see above, pp. 44–45).

5. Differences in dimensions are accounted for by the disparate shrinkages of the wood.



*THE TIE BEAMS AND THE ROOF*  
(FIGS. 65-67; PL. 79)

The first to appear in the -9.50 to -10-m. mix of rubble and beams, the four great cross beams of the "cage" might technically be termed "tie beams." Their northeast ends in some instances entered the scarp and it would have been dangerous to free them; their total lengths are therefore unknown but one was exposed to at least 5.80 m. Their central sections had been broken and carried down in the collapse.

*Tie beam J-M.* At northwest end, centered directly over end wall. H. 0.33, W. 0.30 m.

*Tie beam K-D-N.* PH. 0.28, W. 0.38 m.

*Tie beam L-X.* Not actually recovered at its northeast end.

*Tie beam Q-Y.* At southeast end of chamber; inferred only.

In the undersurfaces of the ends which projected beyond the side walls were rectangular capping mortises which fitted over the erect tenons on the vertical support posts (Figs. 65-67).<sup>6</sup> The tenon in the west corner measured, e.g., L. 0.10, W. 0.04, H. 0.135 m.

The total clear width of the chamber measured at floor level was 3.75 m. The inside length was exposed by excavation for only 2.30 m.; however (see Fig. 66), based on the evidence for tie beams and the fact that a fourth set of vertical posts (with their tie beams) must have locked the southeast ends of the side walls against the southeast end wall, the overall interior length can be plausibly computed as:  $(3 \times 1.30) + (2 \times 0.30) + ca. 0.05$  m. (for observed overhang of inner edges of wider tie beams over narrower chamber end walls?) = 4.55(?) m.

*Beam E*, the ends of which are not preserved, lay crosswise, broken on the floor (Fig. 65A,B). It exhibits on both of its side faces nail holes and stubs of nails resembling those on the interior wall faces, which means that it exposed its side faces inside the chamber for the suspension of gifts. If beam E once lay parallel to the four tie beams and rested with its ends on the side walls, it would in no way interfere with the tie-beam and roofing systems, but its nails would not align with those in the top side beams. No obvious method of fastening it is apparent: no slots in the top of the side walls and

no shaping preserved in it. If beam E crossed the center of the tomb between cross beams K-D-N and L-X, it would have resulted in general symmetry, and if the original height of E was equal to that of the tie beams, it would have simply rested upon the two side walls, and been held down, possibly evenly tightly in position, by the roof beams, as suggested in Fig. 66A.

The roof is represented by the wide-appearing lengthwise squared beam (A) and two groups of beams (B and C) seen on Figs. 65A-66B and Pl. 79B. These rested on the four tie beams (and possibly the display beam E), necessarily leaving open space over the side walls between the crossing beams.<sup>7</sup> The roof beams had no means of being braced from the sides and had shifted as their broken portions dropped into the chamber (Fig. 65B). Beam A—wider and thicker than the others and holding the central position—together with the smaller beams arranged on each side provided the means of both cover for the chamber and distribution of the weight of the stone cap above.

In Figs. 66B, 67, beginning with the southwestern cluster:

*B 1-7.* Squared and of approximately equal size (B 5-7 restored).

*A.* At center (GPW. 0.60 m.).

*C 1-7.* As B 1-7 above (C 4-6 restored).

Young sent a sample from this series to be identified and to be analyzed dendrochronologically.<sup>8</sup> Immediately over this set of roof beams (fallen to -10.69/11.07 in Fig. 65B, but restored at ca. -9.65 in Figs. 66A,B, 67), the Phrygians laid a thick reed mat, preserved as white and powdery (Pl. 79A), which may have stretched over the stone packs on the sides as well. A streak of matting showed also in the northeast scarp at level -8.90 m., well up in the stone cap in a part of the rubble described by the excavator as undisturbed. The differences in level between the two proveniences would imply an almost bowl-like area to be covered by the matting, or else that mats were laid down on two separate occasions (see p. 175 below).

When the roof beams were cleaned, no metal was found, only sherds (uncatalogued) directly over them:

6. Another example of a true mortise and tenon for vertical fastening is used in the setting of supporting columns in Meg. 3 on the City Mound. R. S. Young: *AJA* 64 (1960) 238, pl. 60, fig. 18; *AJA* 66 (1962) 161, pl. 42, fig. 14; *Expedition* 4, no. 4 (Summer 1962) fig. on p. 8.

7. This phenomenon was seen also over the end walls of Tumulus H; see p. 46.

8. P-TU-GOR-35. See Kuniholm, *Dendrochronology*, 43; the sample was shared with the University of Arizona (acq. A-269). Identification: "conifer." The dendrochronological dating was not significant for absolute chronological dating.

<b>TumZ</b>	Pottery: <sup>9</sup>	gray-polished dinos rims (Fig. 68F[a-h]) grey-polished jar rims and necks (Fig. 68F[i,j]) coarse ring base (Fig. 68F[k])
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rims (Fig. 69A[j,k])  
coarse storage vessel, globular (Fig. 69A[l])  
base fragments of closed vessels (Fig. 69A[n-p]).

### THE STONE PACK AND THE CAP (FIG. 65B)

The rubble, then, had already been packed into the four side spaces and around the eight vertical posts probably contemporaneously with the raising of the walls. The stone cap, consisting of white "poros" mixed with occasional hard dark blue/black stones, stood highest and least disturbed at -8 m. on the north and northwest sides of trench 2. The rest slanted down toward center, as many stones had fallen into the chamber, creating a jumble with the rotted, broken roof beams. Finds associated with this mixture (ca. -8 to -9.50 m.) are:

<b>TumZ</b>	8	Bronze:	sieve-spouted bowl
	9		fragments of rim bands with spools
	10		pair of ring handles with molded decoration
	11		fragments of plain ring handles
	12,13		fragments of petaled bowls
	14		molded socket from fibula tassel
	15		patching strip
	Uncat.		small stud heads
	16,17	Iron:	nails with forged-on cubes
	18		nail (bent)
	19	Pottery:	black-on-reddish-buff dinos (scattered sherds)
	20		black polished round-mouthed fluted jug
	Uncat. <sup>10</sup>		gray to black polished dinos and jar rims (Fig. 69A[a-i]) gray polished fragments of closed shape, fluted walls (Fig. 69A[m]) fragments of vessels with ledged

9. Selected sherds from context bag Z2 "from cleaning of fallen roof beams." See further details in caption to Fig. 68F. The minute gradations from dinos rims to jar rims cause some difficulty with nomenclature. The author designates as "jar" a vessel whose opening is smaller in proportion to body than are the dinoid openings. A "jar" also has a stretch between rim and shoulder which can arbitrarily be termed "neck."

10. Selected sherds from context bag Z1, "Trench 2, from top of rubble to top of tomb roof." See details in caption to Fig. 69A.

The side packs of the pit, although visible behind the side walls, could not be excavated for reasons of safety.

### THE STONE "TOWER" (FIGS. 63B, 64)

Resting directly on the stone cap at the southeast end of the chamber was a 5 x 5-m. "tower" of stones. It extended upward with an outer face which appeared partially "fallen away"<sup>11</sup> showing in the southeast scarp of trench 2. It rose section by section resembling dry walling, but with varying widths, as if its exact size at any particular level did not matter. A wider section whenever it rose above a narrow section was somehow supported by hard clay against its uneven north face. This clay was sometimes referred to as a "clay tower." Loose gravelly mantle, preserved *in situ*, supported the vertical south and west faces of the "stone tower." The filling inside the faces consisted of irregular rubble.

The "stone tower" must have been intended originally as a heavy central marker in lieu of a wooden mast,<sup>12</sup> kept always in sight as the tumulus rose. At any rate the final center of the mantle is close to the east side of the stone tower. Various types of earth dump against its sides may mean that teams were working in toward it from different directions.

One single line of stones running due south for 7.75 m. led away from the center of the south face at ground level, as a sort of planning mechanism leading away from or to the southeast end of the burial pit and establishing directions and divisions of work upon the tumulus in its incipient stage. It is entirely possible that other such lines led away from the "tower," but evidence is lacking due to the constraints upon excavation.

These sherds showed much chipping and weathering.

11. The only opportunity for the face of the "tower" to fall away would have been while the looters' shaft, which followed it downwards, was open.

12. The tumuli employing wooden masts are all pre-Kimmerian. See Tumuli W (Young, *Gordion* 1, 80; DeVries, *ibid.*, 196), K-III (C. Körte in *Gordion*, 39; Young, *Gordion* 1, 80), P (*ibid.*, 2, 4, 80), and (possibly) MM (*ibid.*, 80); also herein, pp. 178, 180 and Fig. 71(a).

THE MANTLE  
(FIG. 64)

As seen in the northwest scarp of trench 1, a series of conical dumps upon ancient ground level marked the periphery of the area designated for the tumulus. This must have happened after the stone cap was finished; at least an early dump covered a pile of stones, probably a remnant of those which had been drawn up to the edge of the area of operations but later were not needed. A distinct dump of earth, mentioned by the excavator as taken out of the burial pit and presumably piled at the pit's edge, does not seem to appear on the drawn section of the northwest quadrant of the mantle.

Successive dumps shown in section in the scarp beginning over the abandoned stones and running in order are: brown clay, gray clay, brown gravelly clay, white clay, white gravelly clay, gray gravelly clay. Since a gravel layer is known to overlie basal clay (hardpan) in many locations at Gordion, it is possible that, as material for the mantle was dug up, gravelly clays and pure clays of whatever color might be deposited in close proximity. Above that, the peaks of the dumps followed the slanting modern surface, indicating that a great gap in the middle kept shrinking as the inner sides of the retaining border came together. Stones were visible which had run down the central incline and come to rest against the clay tower.

Meanwhile, the stone cap over the chamber was being covered with clay to a thickness sufficient that, when the rubble was later withdrawn from below it, the clay cap held by itself.

The upper central part of the mantle, then, was made up of layers of clay mixed steadily with more earth and stones laid against the clay and stone towers, until they reached the planned top, where the dumps leveled off to horizontal.

Scattered in the mantle, i.e., from the fill of trench 1, was:

**TumZ 21** Pottery: fragments of buff bowl.

Other finds, uncatalogued, from trench 2 down to -8 m. (top of stone cap), or from trench 1, are:

**TumZ** Pottery:<sup>13</sup> fine black polished round-mouthed jug, rim fragments (Fig. 69B[a])  
fine black polished fluted jug, body fragments (Fig. 69B[b,c])  
dinos rim fragment (Fig. 69B[d])  
bowl fragments (Fig. 69B[e-g])  
base fragment (Fig. 69B[h]).

## CHRONOLOGY

One must seek a reason for the extra eight-post caging (unique so far at Gordion) employed on the chamber in Tumulus Z. Barrow 5 at Pazyryk<sup>14</sup> comes to mind, where the spaces between the double chamber walls and the sides of the pit were left empty for the addition of a wagon and other large gifts. Such a contrivance, there of six posts, was needed to contain the wall complex of unsquared logs and the set of logs placed as ceiling. It also helped to distribute the weight of the large floating logs in a mantle which was of stone upon a little earth (merely that dug out of the pit). Barrows 1 to 4 also had cages of this type, fitted more in the manner of Tumulus Z, as there was no extra room in their pits.<sup>15</sup> Barrow 3 clearly showed the three horizontal cross-logs resting on six uprights whose tops had merely been hollowed to a cradling curve (no evidence for mortising).<sup>16</sup> One can only speculate concerning the reason why this method was used here in Tumulus Z, since it was used in addition to the customary Phrygian stone packing and the usual housed end walls in the chamber, and was not used to clamp in the roof beams; i.e., the caging system was functional at Pazyryk, but nonfunctional at Gordion.

In Barrow 2 at Pazyryk the wall logs were dressed to a careful vertical face on the interior only and evidently a bit on top and bottom, but not at all on the outside (with this compare also Tumuli B and H).<sup>17</sup> Z and H are related also in that they are the only two leaving open reserved areas under the roof beams.

The use of reed matting in Z (as elsewhere over the chambers in Gordion) may have a function equivalent to that of the thin birch bark covering over all the Pazyryk chambers; cf. esp. Barrow 5.<sup>18</sup> It may be significant, also, that from Barrows 1-4 a line of stones lay on

13. Sherds from trench 1 (pure mantle) and from top of trench 2 down to top of rubble at -8 m. (a mix of mantle and looters' back-dirt) were stored together in context bag Z3. See further details in the caption to Fig. 69B.

14. Rudenko, *Frozen Tombs* (Barrow 5), 15, fig. 3, 20, fig. 6, 38, fig. 15, 43, fig. 17, pls. 25, 26, 28, 29. Rudenko, on the basis of <sup>14</sup>C (avg. 430 B.C. ± 50), dendrochronology (48-year spread), and the presence of silk among the gifts, would date Barrow 5 as the lat-

est (*ibid.*, xxxvi). Barrows 1 and 2, the earliest, must date 48 years before 5 (*ibid.*, xxxvi).

15. *Ibid.*, xxxvi. See Barrow 2 (*ibid.*, pl. 10).

16. *Ibid.*, pl. 17.

17. See *ibid.*, pls. 34-36. For the state of preparation of the beams in Tumulus B, see herein, p. 10; for H, see pp. 44-45.

18. *Frozen Tombs*, pl. 33.

the surface leading due east. From the "tower" in Z such a line led south; the east section was not probed.

The cage, the wall trim, the matting, and the directional line of stones may be evidence for a building method out of some northern and nomadic past held in common with the fifth-century Altai, but applied here in a hybridizing local context by one section or clan of the tumulus builders at Gordion.

With reference to the dating of the contents of Tumulus Z, several finds from the burial find parallels in Tumulus MM. These are **TumZ 2** and **3** (plain ring handles), **5-7** (plain L-headed nails), and, from the mixed rubble and beams over the tomb, **8** (a bronze sieve-spouted bowl), **11** (plain ring handle), and **14** (molded socket belonging to a double-pinned fibula tassel). They seem to show no advances beyond the designs and techniques found in the MM group, and so, except for the L-headed wall nails, should be considered heirlooms in the present group of gifts.

Possibly post-Kimmerian are **TumZ 9** (fragments of rim bands and spoils from a bronze bowl) and, from the mantle, **TumZ 21** (a fragmentary buff bowl with intumed rim) because they show minute differences, possibly advances, from the material in MM and the Kimmerian destruction layer respectively.

The remaining lot from the burial, **TumZ 1** and **4** (ring handles with molded decoration) and, from the mix in the stone cap, **TumZ 12** (bronze petaled bowl), **13** (bronze reeded bowl), **16, 17** (iron wall nails with forged-on cubes), **TumZ 19** (painted dinos), and **20** (fluted jug), show definite parallels with objects from post-Kimmerian proveniences: the Tumulus N burial, S-1, and a house floor somewhat previous to the Tumulus H group. **TumZ 1** and **10** can be argued to be associated with fibula designs not hitherto seen before Tumuli N and S-1. **TumZ 12** and **13** show changes from pre-Kimmerian times which are also evident in N and S-1. **TumZ 16** and **17** have no known

parallels earlier than those in Tumulus S-1.

The object in the Z group with the shortest theoretical life span before burial in the grave is the painted pottery dinos **TumZ 19**, which has very close associations with material from the house floor exhibiting parallels with the Tumulus H group but dating before H. Z is thus earlier than H (650).

Date suitable for Tumulus Z: ca. 670 B.C.

## LOOTING

If we begin to reconstruct the looting from the evidence of the hole in the roof beams at the southeast end of the chamber and the complete absence of finds on the floor, we have to believe that the looters entered while the roof was still intact, took what was on the floor, and snatched the vessels off their hooks leaving us a few handles, probably the ones with thinner ends entering their attachment bolsters.<sup>19</sup>

Only one means of entrance through the mantle presents itself—that via the comparatively softer earth of the sunken shaft which became trench 2. Neither the "clay tower" nor the "stone tower" afforded evidence of having been dug away and replaced. The vertical faults in the mantle earth on the sides of trench 2, the eroded northwest edge of the stone "tower," the descent exactly to the hole in the roof, the presence of more abundant broken pottery in the east end of the stone cap, and the general fact that finds were concentrated in trench 2—all these factors lead to an assumption that trench 2 was a reclearing of the robbers' original entry route.

The four fault lines (see Fig. 64[a,a]) were formed in the interfaces between undisturbed and disturbed earth, so the interior, disturbed area slipped downward in the final roof-collapse of 1969.

## Catalogue

### IN CHAMBER, BELOW COLLAPSED ROOF **TumZ 1-7**

**TumZ 1**     **Bronze: ring handle with molded decoration**  
B 1859     Along northeast wall, ca. center  
GH. 0.04   GW. 0.061   GTh. 0.011 m.  
Pl. 80A

Tip of one end broken; ends perhaps pulled out slightly.  
Oval pendent handle, round in section. Two ends are

thinned to enter sides of bolster at bowl rim. Sharply molded decoration: at center, bead between close sets of three reels; at either side, thinner bead between channeled reels.

Such handles with added molded decoration would appear, as in the case of the belt handles from Tumulus S-1,<sup>20</sup> to be under the influence of fibula decoration, but here slightly simplified, and the end-moldings are left out. **TumZ 1** is related to a XII,14 type, close to **TumS1 70**, with groups of channeled reels in

<sup>19</sup> top of the northeast wall.

<sup>20</sup> **TumS1 18, 19**, related to fibulae of XII,14A type.

<sup>19</sup> Of special note here **TumZ 2** and **5**, a bronze ring handle still hanging on its iron hook, which was found adhering near the

the quarters. **TumZ 1** belongs generally to Caner's variants J II,1 and J II,2<sup>21</sup> although the exact combination of reel-channeling escapes us. These variants are dated through the seventh century and sporadically in the sixth.

The Boğazköy parallel for **TumS1 70** is to be found in the period BK II (see p. 135, n. 150).

Examples showing a still further development, longitudinal decoration, are to be found later, in Tumulus A (B 267 and B 268).<sup>22</sup>

As in the case of the belt handles,<sup>23</sup> these handles must have traveled on their bronze bowls to the Ionian Coast and beyond, as they and versions with further modifications are seen in the great late seventh- and sixth-century sanctuaries of Lindos,<sup>24</sup> the Argive Heraeum,<sup>25</sup> Olympia,<sup>26</sup> etc.

**TumZ 2** **Bronze: plain ring handle**  
B 1846a Adhering to iron nail (**TumZ 5**)  
near top of northeast wall  
GH. 0.082 GW. 0.098 Th. 0.008 L. gap 0.03 m.  
Pl. 80B

Complete, but ends probably pulled slightly apart.

Elliptical pendent handle, round in section. Ends squared off and straightened slightly to enter sides of bolster at rim of bowl. Ring slightly thicker at center, thinner at ends.

Dimensions prevent its being paired with **TumZ 3**.

**TumZ 3** **Bronze: plain ring handle**  
B 1847 Adhering (without its nail) to  
northeast wall near its top, at level of fallen  
upper roof beams  
GH. 0.068 GW. 0.087 GTh. 0.009 m.  
Pl. 80C

Complete, but ends probably pulled slightly apart.

Shape exactly like **TumZ 2**, but its size prevents pairing with the latter.

Plain ring handles to swing from bowls with rim bands began, in W<sup>27</sup> and P,<sup>28</sup> as sturdy, circular, round in section, and barely tapering toward their ends which entered bolsters fastened outside the rims of *wooden* bowls. In MM<sup>29</sup> these ring types were included at the beginning of a long series progressing towards the greatly tapering and elliptical examples, all preserved in the bolsters of bronze bowls. **TumZ 2** and **3**

are evidence for two more swinging ring-handled bowls in the tomb. Their shape is not developed beyond that of the MM types.

See also **TumZ 11**, with which **TumZ 3** can possibly be paired.

**TumZ 4** **Bronze: nail with disk-washer**  
B 1858 Under southernmost lengthwise  
roof beam  
L. 0.035 GW. 0.003 D. washer 0.018 m.  
Pl. 80D

Shaft mended. Otherwise complete.

Nail with small square head and thin shaft continuing square in section for ca. 0.01 m., then hammered thin and flat and ending in round tongue-like point.

Collar-like washer is loose and made separately, hammered very thin and cut to circle with tiny square hole in center.

A suggested use, if one considers its collar and its find-spot, might be that of a fastener for the reed matting over the large lengthwise roof beams. As the reeds rotted and gaps grew between the beams, it could have dropped underneath.

I know no other examples, from the inhumations, of a nail with washer.

**TumZ 5** **Iron: L-headed nail**  
B 1846b Adhering near top of northeast  
wall, at level of fallen roof beams. Held  
**TumZ 2**.  
PL. 0.105 H. at end 0.022 GTh. 0.012 m.  
Pl. 80E

Point slightly rusted away.

Square in section, tapering toward flat narrow chisel-like point. Head formed by bending thick end of shaft to right angle and finishing off squarely.

Found with complete bronze ring handle, **TumZ 2**, rusted to it.

**TumZ 6** **Iron: L-headed nail**  
ILS 597a *In situ* in southwest wall  
L. 0.162 Outer L. hook 0.026 Th.  
0.014–0.012 m.  
Pl. 80F lower

Complete.

Resembles **TumZ 5**.

21. *Fib. in Anat. I*, 142–146, pls. 57, 58.

22. Kohler, *Gordion II*, Pt. 2.

23. J. Boardman, *Anatolia 6* (1961) 184–186; E. Kohler in *Gordion I*, 238, 239 and nn. 92, 93.

24. Blinkenberg, *Lindos I*, 219, nos. 715, 724, 726 (pl. 30).

25. H. F. DeCou in C. Waldstein, *Argive Heraeum* (Boston and

New York: Houghton Mifflin, 1905), 292, nos. 2165–2168, 2170, 2179 (pl. CXXII).

26. A. Furtwängler, *Ol. IV*, 132, 133 and figs. 833, 836, pl. L(829).

27. Young, *Gordion I*, 207 (TumW 24).

28. *Ibid.*, 17 (TumP 31–33), 60–61 (TumP 145–147).

29. *Ibid.*, 126–130 (MM 55–69), pls. 65C–67G.

**TumZ 7**     **Iron: L-headed nail**  
 ILS 597b     Base of southwest wall  
 Pl. 0.145     Outer L. hook 0.03   GTh. 0.015 m.  
 Pl. 80F upper  
 Broken off near point.  
 Resembles **TumZ 5**.

The exact distance to which **TumZ 5–7** protruded from the wall is not evident on their shafts. However, they belong no doubt to the rusted stumps of nails still *in situ* on the top northeast and southwest wall beams and on beam E (Figs. 66A,B, 67). Other tumuli using plain L-headed nails like **TumZ 5–7** are MM,<sup>30</sup> H,<sup>31</sup> and S-2.<sup>32</sup>

See also **TumZ 16, 17**, which are variants on the plain L-headed nail.

All L-shaped nails are discussed by McClellan<sup>33</sup> under her two subdivisions, “carpentry nails” and “spikes” according to whether they taper on all four faces or on only two respectively, and according to their lengths. But perhaps all these nails used for suspension of gifts, although usually rusted off at the point where they entered the wall, were originally of about the same size.

#### IN MIXED RUBBLE AND BEAMS OVER CHAMBER **TumZ 8–20**

**TumZ 8**     **Bronze: sieve-spouted bowl**  
 B 1851  
 GPH. ca. 0.05   Est. D. rim 0.31–0.33   Th. rim  
 0.004   Th. lower wall 0.001   L. spout 0.06  
 W. across spout att. at wall 0.06 m.  
 Figs. 68A; Pl. 80G,H

Mended section preserves half of spout split lengthwise, all of sieved section, and part of rim and upper wall of bowl. No evidence for handle.

Bowl has on interior a curve shallower than “hemispherical.” Walls very thin up to rim thickened and flattened on top. Trough spout, slightly raised, mounted flush with rim by means of thin everted flat collar fitted to wall of bowl and fastened to it with six neat flattened rivets. Wall inside trough sieved with nine holes ca. 0.004 m. in diameter.

Brassy area between trough and wall evidence of solder?

The Tumulus MM group contained one sieve-spout-evidenced bowl.<sup>34</sup> Its spout was also attached around a group

of sieve holes in the bowl wall, but **TumZ 8** has no strengthening bar across the spout section at rim, and its spout is longer in proportion to the bowl.

Sieve-spouted bronze bowls are evidently rare.

**TumZ 9**     **Bronze: fragments of rim bands with spools  
 (from two bowls)**  
 B 1856a-c  
 A Max. dim. 0.082   D. 0.0065  
 B Max. dim. 0.036   H. bolster 0.02  
 C Max. dim. 0.02   H. bolster 0.018 m.  
 Pl. 81A

A heavy rod, round in section, curved to wall of bowl ca. 0.22 m. in diameter. Square chamfered nick out of inside curve, to accommodate something (crossing vertical spool?). Bowl with at least eight spools is indicated.

B and C smaller fragments of rim bands, deep convex on outside curve, flat on inside curve. B with crossing spool near center, indicating use on bowl with at least eight spools. C smaller fragment with end-spool (one flat end lost). Spools on both have flattened ends at top and bottom. At center of each crossing, rivet to wall. At top and bottom of spool on B and on top of spool on C, thin dowels to hold added decoration (hollow hemispherical studs?).

**TumZ 9A**, round in section, appears unique and at present undatable. Only the wooden bowls TumP 145–147<sup>35</sup> had rim bands round in section and they were carved in one piece with their walls. Bands on the MM bowls were of bronze and half-round in section,<sup>36</sup> or flattened on inner and outer faces with sometimes arched top.<sup>37</sup> **TumJ 20**'s rim band is of the latter type; that of **TumS1 5** is crescent in section with convex face to the exterior.

The author has no data supporting other occurrences of an interior nick as on **9A** to secure a spool hugged *inside* the rim bands of a bowl, although in the absence of such data the possibility still exists, as not every spool-crossing has yet been cleaned sufficiently for minute examination.

**TumZ 9B** and **C**, however, come from a different bowl and are of commoner type, having a deep half-round section as on many bowls in Tumulus MM.<sup>38</sup> The studded decoration implied by the exposed stubs of pins or their holes in the tops of spools can also be duplicated in the bowls from Tumulus P<sup>39</sup> and in many from MM.<sup>40</sup> Pinholes in bottoms of spools are not mentioned in the publication of MM. See, however, B 325 and 326 in Tumulus A (late sixth century),<sup>41</sup> with spools and bolster extensively patterned (plastically) at

30. *Ibid.*, 100 (uncat.), n. 26, pl. 40B.

31. See **TumH 1**, p. 48.

32. See **TumS2 8**, p. 145.

33. *Iron*, 515, 520, 531, 536, 544 (nos. 388, 389).

34. Young, *Gordion I*, 124 (MM 50), pl. 64D.

35. *Ibid.*, 60–61 (TumP 145, 146), fig. 30 and pl. 27E-H.

36. *Ibid.*, 126–130 (MM 57, 58, 61–65, 67–69).

37. *Ibid.*, (MM 55, 56, 59, 60, 66).

38. See nn. 36, 37 above.

39. Young, *Gordion I*, 60 (TumP 145), fig. 30, pl. 27E.F.

40. See nn. 36, 37.

41. Kohler, *Gordion II*, Pt. 2.

both top and bottom, implying an intensive intermediate development of top and bottom decoration.

An intermediate developmental position between MM and A is implied for **TumZ 9B** and **C**, but closer to MM.

**TumZ 10**     **Bronze: pair of ring handles with molded decoration**

B 1860a,b     Fallen from scarp near east corner of chamber  
A GH. 0.040   GW. 0.057   GTh. 0.012  
B Max. dim. 0.04 m.  
Pl. 81B

A complete but for tip of one end which is broken off. *B* preserves one end through first reel.

Pair(?) of oval pendent handles, round in section. Ends are tapered to enter holes in ends of bolster. Molded decoration: at center, bead between close sets of three reels. On either side of center, single blunt reel.

**TumZ 10**, like **TumZ 1**, represents a pair of handles separated from yet another rim-banded bowl. Again the related fibula type is a variant of Blinkenberg type XII,14 fairly closely approximated in **TumS1 53**, **54** (bead between double reels at center, and single reel in the quarters) and MM 185<sup>42</sup> (double-pinned fibula with arc decorated by bead between channeled reels, etc.). Since these handles seem to be associated with fibula arcs, we can say that **TumZ 10** is probably later than MM, and possibly close to S-1.

**TumZ 11**     **Bronze: fragments of plain ring handle**

B 1855a,b  
A Max. dim. 0.06   GPh. 0.008  
B Max. dim. 0.032   GPh. 0.0075 m.  
Pl. 81C

A a little less than half a ring; *B* a little less than a quarter. Both broken at both ends.

Round in section, preserving curve and tapering shape of oval pendent handle.

In type and size **TumZ 11** comes closer to **TumZ 3** than to **TumZ 2** and may form a pair with the former. See **TumZ 3**.

**TumZ 12**     **Bronze: fragment of petaled bowl**

B 1843  
Max. dim. 0.043   PH. 0.022   Est. D. rim  
0.18–0.19 m.  
Fig. 68B; Pl. 81D

Fragment of rim preserving tips of three petals.

Rim solid, slightly thickened and rounded over top. Petal tips are in relief on exterior, emphasized by pressure-groov-

ing below rim, and appear identical. On interior tips are outlined by gentle ridges on rim above petals proper, ridges emphasized by pressure-incision.

Rim looks cast. Perhaps plain cast bowl, into which lotus petals were hammered.

All the details of treatment on **TumZ 12** can be found on the "normal" petaled bowls from Tumulus MM.<sup>43</sup> These exhibited all combinations of plain petals, or ridging and outlining incisions, either inside or out or both.<sup>44</sup> One difference is, however, the absence on **TumZ 12** of the slight outturning of the rim above the petals.<sup>45</sup> With this simplification **TumZ 12** resembles, rather, **TumJ 2**, **TumN 1**, and **TumS1 7**, **8** (see Figs. 25A, 36A, 52B-F), but here there is no evidence for the folding over and hammering of the rim as seen in **TumN 1**. But **TumJ 2** may be later since it appears to have lost the repoussé outlining and incision on its petal tips.

**TumZ 13**     **Bronze: fragment of reeded bowl**

B 1844  
Max. dim. 0.06   GPW. one reed 0.0035 m.  
Fig. 68C; Pl. 81E

Some areas roughened by corrosion on exterior. Cleaned well.

Wall fragment, broken on all edges. Curve appears *ca.* hemispherical. Reeded on both faces so that cross-section of wall at break is regularized wavy line. Reeds begin close and small at base and widen radially.

Walls fairly thick (0.002) at base of reeds, thinner (0.001) where rippled by reeding. Bowl possibly first cast plain and then reeded by hammering.

**TumZ 13** resembles in technique the untiered petaled bowl **TumS1 7A**. See discussion under **TumS1 9**.<sup>46</sup>

**TumZ 14**     **Bronze: molded socket from fibula tassel**

B 2016     Mixed rubble over chamber  
D. 0.012   GPH. 0.01   D. hole round end  
0.0035   D. hollow end 0.0075 m.  
Pl. 81F

Short hollow cylindrical tube, with fine string hole in domical top above two horizontal ridges finely milled lengthwise. Collar around hollowed lower half encloses large hole.

**TumZ 14** is an example of those sockets found in Tumulus MM (MM 183) which were employed on tassels for double-pinned fibulae. There they enclosed groups of pendants (MM 182), which were wired through the top hole of the socket to the half-spool behind the arc.<sup>47</sup>

42. Young, *Gordion I*, 157, figs. 98A-C, 99, pl. 76A-C.

43. *Ibid.*, 140, fig. 90A.

44. *Ibid.*, 131–140 (MM 70–130).

45. As seen generally, *ibid.*, fig. 86, p. 132.

46. See above, p. 125.

47. Young, *Gordion I*, 155, and n. 83. Cf. also 159, fig. 99.

This socket from such a tassel may once have belonged to a lost double-pinned fibula in the Tumulus Z burial group, or, being so small, could have come into the stone cap with mantle earth.

**TumZ 15 Bronze: patching strip**  
 B 1854 Resting on upper roof beams  
 GPL. 0.057 GPW. 0.034 D. nail holes *ca.*  
 0.0025 m.  
 Pl. 81G

Small rectangular fragment with no curve to it, cut on sides and one end, possibly broken off at other end. Crinkled square is marked off by irregularly placed rivet holes, six of which contain flat rivet heads.

Patches made from hammered sheet have many parallels at Gordion, e.g., **TumS1 21**. The Phrygians did not hesitate to place visible patches in any position on any metal container.<sup>48</sup> Their patching of wooden objects was more professional.<sup>49</sup>

**TumZ 16 Iron: L-headed nail**  
 ILS 598 Resting on upper roof beam  
 PL. 0.135 W. outer end 0.12 x 0.12 L.  
 branch 0.012 m.  
 Pl. 82A

Complete except perhaps for tip of shaft which has rusted away.

Heavy spike, square in section, cut off squarely at head end, tapering to narrow rectangle near point. At 0.012 back from head, forged-on cube forms an extension at right angles.

**TumZ 17 Iron: L-headed nail**  
 ILS 601 Mixed rubble and wood over  
 chamber  
 PL. 0.09 W. outer end 0.11 x 0.11 L. branch  
 0.012 m.  
 Not ill.  
 Broken across shaft.  
 Same as **TumZ 16**.

**TumZ 16** and **17**, two from *ca.* seven recovered, are a variant on the L-headed nails, **TumZ 5-7**. The hooks are made not by clenching but by forging on a cube a short distance back from the outer end. These types must have served equally well for the safe suspension of vessels and other gifts.

Other examples are known from Tumulus S-1 (see p. 119, uncat.) and ILS 583 and 588, which are sporadic from strata above the Clay Deposit on the City Mound.

**TumZ 18 Iron: bent nail**  
 ILS 602  
 GD. shaft *ca.* 0.009 Max. dim. 0.07 m.  
 Pl. 82B

Mended, bent, laminated.

Small nail, bent almost to 90° at about center of shaft. Shaft tapering, round in section. Head formed by hammering and flattening of shaft.

**TumZ 19 Pottery: black-on-reddish-buff dinos**  
 P 3935 Scattered sherds  
 Rest. GPH. 0.135 Rest. D. rim 0.14 m.  
 Fig. 68D; Pl. 82C

Disjoined sherds and mended sections plastered. Lower body missing. Rim rotted and largely restored.

Body *ca.* spherical-ellipsoidal, opening directly into wide mouth collared by small everted rim, rounded over top.

Black to brown painted decoration: wide band around belly; wide shoulder zone in fine lines, outlined above and below by three lines, contains panels of (*L* to *R*) (1) oblique checkerboard filled with dots irregularly disposed, (2) narrow reserved panel, (3) crosshatching, (4) repeat (2), (5) repeat (1), etc.

Clay gritty, micaceous, with tendency to laminate; well slipped, then painted, then burnished over all. Fired red-buff throughout except for thin gray streak at core.

P 745 (Pl. 83G), a round-mouthed jug from a Phrygian house floor on the Northeast Ridge,<sup>50</sup> is an excellent parallel for the fabric and the painted design of **TumZ 19**. The only variation found on P 745 consists of widely spaced ladder-like strokes across the "reserved panels." Furthermore P 745 was accompanied by P 744, a faceted jug closely resembling **TumH 4**, i.e., of the same ware and proportions, which affirms that the floor of Anderson's House VII, and **TumZ 19**, are post-Kimmerian. It also places these earlier than the Tumulus H burial (650 B.C.), since the latter was installed at some time *after* the houses were burned (see p. 44).

**TumZ 20 Pottery: black polished round-mouthed fluted jug**  
 P 3936 Scattered sherds over upper roof  
 beam  
 GPH. body 0.074 D. base 0.056 D. 0.091  
 W. h. 0.026 Th. h. 0.006 m.  
 Fig. 68E; Pl. 82D

Plastered to hold only body, base, and lower half of handle.

Base tall, hollow, narrow at center under floor, spreading out flatly around bottom. Body ellipsoidal, shallowly fluted

48. *Ibid.*, index, s.v. "repairs to bronze vessels." Add pp. 137, 139.

49. *Ibid.*, 96: expert plugging of holes in Tumulus MM chamber walls.

50. See Anderson, *Comm. Cem.*, 33 (House VII), 185, pot no. 23; Sams, *Painted Pottery*, 572, no. 180 (pl. 24).



horizontally below groove on shoulder. Handle is flat wide strap cut squarely on sides and across bottom.

Fabric fine. Clay fine, clean, slightly micaceous, well slipped and polished. Fired light brown through core, good black on all surfaces.

Other examples of fine black polished fluted bodies in Tumulus Z came from the mantle (trench 1) and looters' back-dirt mixed with mantle (trench 2) above the chamber roof.<sup>51</sup> In the Tumulus H burial the fluting occurred on a red polished jug (**TumH 3**). Also in the mantle of Tumulus C fine rims and a fluted jar body appeared.<sup>52</sup> Tumulus H's mantle<sup>53</sup> and the West Slope Deposit in Tumulus J (**TumJ 42, 43, 46**)<sup>54</sup> offer close parallels for the high flaring base of **TumZ 20**.

G. Körte published polished fluted wares from the burial in Tumulus K-II.<sup>55</sup>

At various levels in the pre-fire habitation layers under some cremation tumuli, fluted fine wares were found: under K,<sup>56</sup> M,<sup>57</sup> and E.<sup>58</sup>

All closely fluted bodies in pottery found on the City Mound occur after the Destruction. From the examples cited above coming from proveniences associated with tumuli, the spread of polished fluted jugs and of high spreading ring feet on polished closed shapes has been seen to stretch from the date of the burial in H (*ca.* 650) through that of the West Slope Deposit in Tumulus J (625–620 B.C.). Other pieces cited from mantles and habitations associated with tumuli are merely to be dated earlier than the burials in those tumuli. We are left, then, with a fairly sure dating spread from 670(?) to 625/620. **TumZ 20**, since Z may for other reasons (see pp. 156, 194) be dated before

Tumulus H, may be an early example of the fluted form.

## IN MANTLE

### **TumZ 21**

**TumZ 21** Pottery: fragmentary buff bowl  
P 3854 Trench 1, scattered sherds  
H. 0.081 Est. GD. 0.31 m.  
Fig. 69C; Pl. 82E

Restored to half a bowl.

Base flattened but not well enough for accurate measurement. Walls shallower than hemisphere with plain slightly inturred rim. Sharp wheel-run groove on outside 0.03 below rim.

Fabric thick, of fairly fine clay, slipped and wiped (no burnishing). Fired dull buff throughout.

**TumZ 21**, one of the few objects in Tumulus Z demonstrably to come from pure mantle earth, has fair parallels on the City Mound, e.g. P 2213, P 2217 (Pl. 83H), P 2227,<sup>59</sup> from Kimmerian Destruction debris in TB 4. These are red or buff at core—thought to be so from the effects of their second firing. Their original color is not certain (although probably gray). Their rims are erect on the exterior and slightly concave on the interior, and the groove below each rim is higher and shallower than that on **TumZ 21**. The strongly incurved rim, the sharper wheel-run groove, and the unburnished finish on **TumZ 21** may signal post-Destruction developments in the class of large flat-based gray or buff bowls.

51. See p. 155 and Fig. 69B(b,c) (uncat.).

52. See above, p. 28 and Fig. 12L(d). Mantle contents date *ca.* pre-540.

53. See above, p. 47 and Fig. 22L (uncat.). Mantle contents date pre-650.

54. See above, pp. 69, 70. Date *ca.* 620–600 B.C.

55. *Gordion*, 121, no. 44, fig. 102, left. See below, p. 195, n. 13.

56. Kohler, *Gordion* II, Pt. 2. Yields date pre-600.

57. *Ibid.* Yields date pre-546.

58. *Ibid.* Yields date pre-*ca.* 500(?). See p. 207, n. 86.

59. Sams *Gordion* IV, 242, for P 2227 see under no. 481.



Part 3

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# Commentary



# Construction Methods

A summary of the various methods of preparation for a tumulus burial, the stonework, the carpentry of the chambers, and then the ways of assembling the mantles, should precede the comments concerning sequential chronology. This chapter is an attempt to study principles and find inter-tumulus relationships which are independent of a consideration of dating by contents. Resultant groupings cannot dictate chronology, but they may be of interest and peripherally supportive of conventional dating.

## PITS AND THEIR LININGS

### ORIENTATION (TABLE 1; FIG. 70A)

After a site was chosen for a burial which was to receive a wooden chamber, how was the pit planned directionally? This question necessitates a study of the orientations.<sup>1</sup>

Based on available evidence set forth by G. Körte in *Gordion* and that found herein, in plans of the burials and in sections of text entitled "The Pit" in each description of a tumulus, the listing found in the left

column of Table 1 was drawn up. Table 1 should be used in connection with Fig. 70A. That listing shows a very wide spread among the axial directions of the pits and therefore of the chambers inside them. Where pits lay on even slight slopes, every possible compass direction is indicated with reference to the slopes they penetrated, and with very few exceptions (J,<sup>2</sup> Q, K-II, K-IV),<sup>3</sup> one end of the pit faced up slope. Therefore we can come to no conclusion favoring ritualistic usage as the reason for setting the direction of the pits. In the great majority of cases pits simply headed into slopes.

This indicates that the builders of burial chambers were probably also the builders of Phrygian houses, which in these centuries, if scattered in an unwallled area on a hillside, had the rear ends of their square or rectangular shapes partially cut into the slope.<sup>4</sup> It appears that the old habits formed by local architectural methods alone determined the directional layout of the burial pits. Even "pits" accompanied by support layers (e.g., in S-1) appear to show the same preference.

We observe three exceptions: (1) in the case where a pit was dug into a large previously flat or flattened surface (KY) the builder was free to choose; (2) the case of Tumulus N is ambiguous—the main slope up the

1. Some of the directions of slope have had to be derived by the writer from an interpretation of the contour map (Fig. 1).

2. The pit of J can technically be said to lie with its end uphill, but the chamber is almost square.

3. In this chapter frequent listings or groupings of tumuli in the text are necessary. The order of the naming of these tumuli will be alphabetical, first the University of Pennsylvania tumuli on the Northeast Ridge (B to Y, including the "great tumuli" of Vol. I), then the K-numbered tumuli of the earlier, German, excavations, then the Pennsylvania tumuli on the South Ridge in the order S-1, S-2, S-3, and Z. Tumuli on other sites follow if important to the discussion. Often it will seem that my use of lists in the discussonal text is inordinate. However, their purpose, especially in the commentaries, is to enable the reader to move ahead without having to refresh his memory by referring to object numbers in

the catalogues of this volume and Vol. I.

4. At Boğazköy (L/18 = Nordwesthang) the Phrygian buildings termed "Grubenhäuser" in layer 4 lay deep in their own strata, with single-faced carefully laid rubble walls lining their cellars. These, built as clay fill was being massed behind the walls, were dated to "earlier Phrygian" (BK II). See Schirmer, *Boğ.-Hatt.* VI, 15; also P. Neve, *MDOG* 95 (1964) 39. Also in K/15 Phrygian buildings were set in as clay was packed against the "Hittite Postern Wall" (latest BK II, a little later than L/18 group above). See Schirmer, *Boğ.-Hatt.* VI, 18; P. Neve and T. Beran, *MDOG* 93 (1962) 6.

G. Anderson concluded that the houses in the Tumulus H-I common cemetery at Gordion faced downhill, i.e., generally toward the northwest, west, and south. See Anderson, *Comm. Cem.*, 7-12.

TABLE 1  
ORIENTATIONS OF PITS AND SKELETONS

Orientation	Tumulus	Relation of pit	Direction of head
1. WNW-ESE	G	Up slope ESE (end)	Unknown
2. NW-SE	B	Up slope SE (end)	Both, SE
	X	Up slope SE (end)	Unknown
	Y	Up slope SE (end)	Unknown
	K-IV	Up slope N (corner)	Unknown
	Z	Up slope gen. E (corner)	Unknown
3. NNW-SSE	C	Up slope SSE (end)	Unknown
	S-1	Standing on slope; up to SE (end)	Unknown
4. N-S	MM	Up slope S (end)	E
5. SSW-NNE	H	Up slope NNE (end)	NNE
	S-2	Up slope SE? (side)	Unknown
6. SW-NE	K-III	Up slope SE (end)	SW
7. ENE-WSW	KY	Platform, no slope	ENE
	K-II	Up slope NNE (corner?)	?
8. E-W	J	Up slope E (end)	E
	N	Up slope gen. W (end)	E
	P	Up slope E (end)	Unknown
	Q	Up slope possibly NE (corner?)	W
	S	Shallow: Up slope possibly W (side?)	Unknown
	W	Up slope NE (corner)	W
9. Unknown	S-3	Up slope gen. E (?)	Unknown

incline across the saddle points west, but the main direction into its own remnant(?) knoll is northeast; (3) J, a nearly square chamber in a squarish pit, cannot be classified.

Attention should be called to the exceptional *form* of the pit for Tumulus G (p. 36 and Fig. 15A). It had a benched end (to accommodate the uncommonly long overhang of the top roof beams?).

#### *PITS INTO SURFACE VERSUS THOSE RESERVED IN SUPPORT LAYERS*

The majority of the wooden chambers at Gordion were built in pits dug in a simple manner into the ancient surface. The individual locations caused the Phrygians to have to deal with several combinations of strata from surface to bottom. The tumuli whose pits were dug through stable earth and/or clay are: C (ashy earth, brown earth, clay); N, Q from which sand and gravel had been scraped back, and K-III (clean earth, clay); G, P, Z (one kind of clay throughout); S-2, S-3 (two or three clays of different composition). Such geological situations lent themselves to efficient if not easy digging, and, if on the level or only a slight incline, would have allowed the pit to hold up. Even so, significant preventive battering of the sides was observed in C, G, N, and K-II.<sup>5</sup> Young believed that W (although the nature of the pit sides was not visible to him) lay in a pit into clay, as did Tumulus P.<sup>6</sup>

A second set of conditions included an intervening stratum of sand and gravel between surface earth and clay: in Tumulus B the house-builders initially pierced sand/gravel and clay before adding their support layer. In J, out on the west area of the Northeast Ridge, the gravel appeared pure and compacted above the clay on the sides of the pit; at the east, the pits for X and Y pierced a loose sand/gravel layer before encountering clay, and the shallow pit for S lay only in sand and gravel.

The pit in B had the advantage of sturdy prior wall emplacements. However, the sand and gravel layers exposed around the pit scarps of J, Q, X, and Y appear to have caused instability and allowed seepage, contributing to the eventual ruination of these chambers.

Tumulus KY exhibits exceptional circumstances in that we have evidence of a wide and level artificial layer added over natural earth. It was into this artificial

layer, after it had been used as a stone-trimming area or else evenly covered with chips from a stone-trimming area nearby, that the KY pit was sunk in the usual manner (as in C, G, N, etc., above).

In one case (H) the pit, which had been cut through burned debris, gravel, and then clay, was on such a steep incline that the south rim of the pit was lower than the north. A support layer of added earth was necessary to build up the south end to the point where the stone cap should rest, and this looser earth was then sealed against seepage (and perhaps movement downhill) by an application of yellow clay. The general situation in Tumulus J may have been similar, but the incline at the west below the J burial was never probed.

By the second general method of making a pit for a burial the total complex was built up from the original ancient surface. Beginning on all sides of a reserved area, earth was heaped into a support layer against the side pack and chamber as they rose inside that area. This avoided footing trenches under the sills and saved the labor of cutting a pit into pre-existing (usually hard) earth. The use of this method was observed in MM,<sup>7</sup> and on the City Mound for supporting the rubble beds under walls, especially during the great Clay Deposit operation of the seventh century. Among the lesser tumuli S-1 also had two complete, distinct, superposed artificial layers surrounding its chamber and side pack.

In at least three instances (KY, S-2, and Z) the excavators were able to observe piles of the original soil dug out of the pits and lying near the edge, which indicates that here was no use of the support-layer method, but a pit dug into a pre-existing ancient surface.

The chambers in Tumuli B and K-II appear to have been assembled inside already existing cellar walls. In the case of B the cellar itself had been built inside a support layer (see Fig. 4A [III]). G. Körte, in his section on Tumulus K-II, described the stone pack around the wooden chamber as being coursed, and laced with vertical and horizontal wooden beams, but mentioned no artificially laid earth supporting it.<sup>8</sup> In the lesser Pennsylvania tumuli crossing beams have not appeared in the stone side packs of burials situated in their own originally dug pits, but they did appear in the retaining walls of the large cellars, e.g., the North Cellar and South Cellar, which, according to the excavators, were *dug into* the Clay Deposit of the post-Kimmerian City Mound.<sup>9</sup>

5. G. Körte in *Gordion*, 105. However, the earth of the pit sides was not specifically described.

6. R. S. Young, *Gordion Notebook* 78 (1959) 112.

7. Tumulus MM is the supreme example of the support-layer method. Young's tunnel followed the surface of hardpan to the

center, where the chamber stood upon the hardpan. See Young, *Gordion* I, 83 and fig. 51.

8. G. Körte in *Gordion*, 106.

9. R. S. Young, *AJA* 70 (1966) 268-269, pl. 69, fig. 2.

This very brief review of methods of preparing a pit seems to point no further than to the fact that the geological or sometimes previously manmade circumstances necessitated several different approaches. It also emphasizes that in most cases local builders probably were in charge of the pit-making and that when they found pre-existing features helpful to their projects (a knoll or a satisfactory set of abandoned cellar walls) they took every advantage.

### UNDER-FLOOR LININGS

Did Phrygians know that wood rots away when in contact with earth and its alternating dampness and dryness? In most situations they lined the bottoms of their pits with stone or gravel of some type—was this not for drainage as well as for leveling under the sills?

Some of the "stones" used for under-floor linings were broken pieces of limestone or sandstone like the material used for pre-Kimmerian walls and foundations on the City Mound, and for walls of house complexes on the Northeast Ridge:

- |    |       |  |
|----|-------|--|
| 1. | B     | Paving stones <i>in situ</i> (they continued under the pre-existing walls) |
|    | C     | Paving stones reset  |
|    | K-III | "kleine Steine" [not Kies or Kiesel] <sup>10</sup>                         |
|    | K-IV  | "kleine Steine"  |
|    | S-1   | Large stones in puddled clay   |
|    | Z     | Small "rubble"   |

Tumuli B and C are easily understood, as being respectively in and near abandoned houses. K-III and IV, the only pre-Kimmerian tumuli in this group, were not near prior habitation material and so are exceptional in ignoring the nearby gravel layers as a source (see also MM, P, below); perhaps they used instead construction stone from the pre-Kimmerian building project on the City Mound. Post-Kimmerian Tumuli S-1 and Z are not near habitations (to our knowledge) but could have made use of material from contemporary limestone quarries.

A second class of material for under-floor lining could be termed "pebbles," or "gravel," both of which by definition imply "waterworn." R. S. Young also (correctly) used the word "rubble" occasionally for waterworn material. For the latter the sources closest to hand were the layers and lenses of gravel scattered upon the Northeast Ridge. These are the result of old

salt-lake sedimentation in this area and so may be considered waterworn and water-deposited. A source in the Sakarya bed<sup>11</sup> may not then be necessary for this relatively fine stone material:

- |    |       |  |
|----|-------|--|
| 2. | J     | "Coarse gravel"                            |
|    | KY    | "Pebbles"                                  |
|    | MM, P | Rubble . . . "waterworn"                   |
|    | Q     | Sand and gravel                            |
|    | W     | "Rubble" <sup>12</sup>                     |
|    | Y     | Fine white gravel over clods of hard clay. |

It is to be observed that the pits of J, Q, and Y had been cut through a layer of sand and gravel (see above). The material removed may simply have been reserved for use in the bottom of the pits.

The third group of pit floors exhibited nothing at all between the bottom clay and the floor-planks (where present):

- |    |             |                           |
|----|-------------|---------------------------|
| 3. | G, H, N, X, | No under-floor treatment. |
|    | K-II, S-2   |                           |

Pits for G, N, and S-2 were cut through pure clay; perhaps the builders in those instances did not realize that clay at the bottom and for a distance up the sides would catch and retain water. The pit in H went through gravel mixed with burned material which had percolated down from above; perhaps it was deemed unsuitable to make a floor support. Tumulus X was cut through a clean gravel layer the stones in which it did not reuse; this is hard to explain. K-II, if we are correct in the interpretation concerning its being situated inside cellar walls (see below under "Side Packs"), would have been at about the 5-m. contour level, as were the houses near and under Tumulus H. Perhaps both H and K-II were thought not to be in need of drainage at pit-floor level, as they were well above the level of the seasonal floods that rushed past them from the uplands of Çekirdeksiz to the east. They were still safer from flood if the level of sedimentation around the foot of the Northeast Ridge was lower in the seventh and sixth centuries B.C.

### SIDE PACKS

The side packs usually consisted of stones larger than those used for the under-flooring, but again they consisted of (1) broken constructional limestone

10. The term "Steine" is unexplained in the text, but see G. Körte, in *Gordion*, 41, fig. 5 (K-III) and 100, fig. 72 (K-IV), in which the stones resemble constructional rubble.

11. See Young, *Gordion* I, 4 (P), 86 (MM).

12. The exact nature of the rubble under the floor here remained unprobed.



sometimes called "poros," and "rubble," and (2) water-worn material:

1.	C	Stones matching those of nearby house walls
	H	Wall stones measuring 0.04 to 0.30 m., fairly carefully laid
	J	Wall stones, some with dressed faces
	W	Large rubble stacked so as not to cause lateral pressure
	K-II	"Steine sind mit Sorgfalt, mauerartig, geschichtet; . . . Stangenhölzer der Länge nach in gewissen Abständen zwischen die Steinschichten gelegt . . ."
	K-III	"kleine Steine" (nature not mentioned)
	K-IV	"aus unbehaucenen Steinen unregelmässiger Form"
	S-1	Constructional "rubble"
	S-2	Large and small constructional "rubble"
	Z	Constructional "rubble," with occasional "hard dark stones."

In K-II the "large unworked coursed stones, inter-coursed with small logs" sound like prior cellar walls, but no mention was made of the use of secondary chinking like that which was plainly visible in Tumulus B.<sup>13</sup> Again K-III and K-IV on the Northeast Ridge and S-1, S-2, and Z on the South Ridge were, to our knowledge, nowhere near habitational building material; probably the stone was taken from a nearby quarry. The builders of C, H, and J took theirs from the recently abandoned houses near which they located their pits. It is to be noted that the packs of H and W, although not built in cellars, yet were laid carefully so as to provide support, but not to exert lateral pressure.

Other side packs consisted of:

2.	B	Small gravel for chinking stones inside proper cellar walls
	G	Fist-sized waterworn stones containing fossil mollusks and water-worn Hitite sherds
	MM, P	Fist- to watermelon-sized "rubble" . . . "brought from river bed?"
	KY	Pebbles and boulders
	N	Egg- and fist-sized pebbles mixed with roughly broken limestone
	Q	Pure small gravel

13. G. Körte in *Gordion*, 106. For use of chinking see under Tumulus B (above, p. 10 and Figs. 4[IX], 6A,B).

14. If the 0.30 m. of earth over the layers of stone chips did not merely accumulate (see p. 75).

15. See DeVries in Young, *Gordion* I, 194. A third (central) prop was hypothesized by Young. Tumuli MM and P were not probed to this extent; however, no central prop was found in S-1 or Z.

X	Fairly large "stones"
Y	Fairly fine white gravel.

This whole second group, all pre-Kimmerian and Kimmerian except Tumulus B, which used gravel only for chinking, and N, which used a mix, appears to be taking advantage of the gravel layers on the Northeast Ridge.

#### CARPENTRY OF THE CHAMBERS (TABLE 2; FIG. 70B)

The value of a section on carpentry will necessarily be limited to and dependent completely upon what could be recorded by the excavators. To speak summarily, in the case of the lesser timber tombs at Gordion some lacked a sealing layer of clay over the stone cap, or had thin earth mantles (H, J, KY,<sup>14</sup> N), so that those chambers were subjected to severe damage. Others were demonstrably entered at a date later than their installation with the result that parts are missing or suffered advanced rotting; in some of these cases at least part of the evidence necessary to our total argument had been severely tampered with (C, G, Q, X, Y, S-1, S-2, Z) or had disappeared completely (S-3).

A chamber in its most complete form, although not a single one (except MM) has been left to us in an intact situation, would ideally consist of (A) under-sill props, (B) a floor, (C) sill and upper walls, (D) a roof.

These elements of construction are treated separately in an attempt to analyze the methods used by the Phrygian joiner, as well as to celebrate his accomplishments with wood.

#### PROPPING UNDER THE SILLS

The use of propping under the sills was observed only in Tumuli W,<sup>15</sup> S-1,<sup>16</sup> and Z,<sup>17</sup> whose pits (W, unknown; S-1, L. 6.25; Z, L. 8.10 m.) and chambers<sup>18</sup> were among the largest. It appears that propping, which accompanies the erection of Phrygian house walls (even those with stone socles),<sup>19</sup> was thought to be appropriate where there was sufficient working room and the chambers were of a size resembling that of the houses on the Northeast Ridge.<sup>20</sup> In the case of

16. See p. 116 above.

17. See p. 152 above.

18. See Table 2.

19. See p. 10 and n. 5.

20. The cellar walls surrounding the chamber in Tumulus B had OL. 5.50 m.

TABLE 2  
DATA ON THE WOODEN CHAMBERS

Chambers Ranked According to Interior Clear Measurements (area of floor in square meters).							
Tumulus	L	W	Sq. m. floor	H	Wall Linings	Nails for Suspension	Roof
MM	6.20	5.15	31.93	3.86	no	yes	gabled under ridge
Z	(4.55)	3.75	(17.06)	?	yes?	yes	single, over caging
P	4.57	3.48	15.90	1.54	textiles?	pegs	double
W	4.62	3.30	15.24	1.54-1.57	?	no	single, held
K-III	3.70	3.10	11.47	1.90	?	?	double
S-1	3.65	2.80	10.22	(1.60)	no evid.	yes	?
K-IV	3.70	2.50	9.25	1.70	?	?	single
S-2	3.10	2.75	8.53	1.10	no evid.	yes	single
K-II	3.30	2.25	7.43	1.10-1.80	?	?	double, pegged
J	2.70	2.45	6.62	1.45	no	no	single
B	2.88	1.58	4.55	1.16	no	no	single
H	2.45	1.80	4.41	1.45	no	yes	single
Q	2.90	1.50	4.35	0.90	no evid.	no evid.	single
KY	2.32	1.85	4.29	?	no evid.	no	?
Y	2.65	1.40	3.71	1.05	no evid.	no evid.	single
G	2.40	1.37	3.28	0.70	no evid.	no	double, lower held
C	(1.58)	(1.48)	(2.34)	?	no evid.	no evid.	?
N	1.90	1.95	2.00	(1.38)	no evid.	no	single
X	?	?	?	?	no evid.	no evid.	double
S-3	?	?	?	?	?	no evid.	?

( ) Measurements are theoretical.

? Evidence, present or lacking, not mentioned by excavator.

Tumulus B,<sup>21</sup> which was contained within a previously abandoned cellar, a tree trunk was found laid lengthwise under one of the house walls. Surrounding the pit in K-II stood a normal wood-laced stone house wall.<sup>22</sup> Logs laid flat in either direction were often found under, or as part of, pre-Kimmerian megaron foundations<sup>23</sup> and also post-Kimmerian buildings<sup>24</sup> on the City Mound. Young believed that such bedding beams were put there by the Phrygians to distribute the weight to be borne.<sup>25</sup>

In the post-Kimmerian Tumulus S-1 the under-sill props were finished measurable planks: two pairs, short and aligned with the end walls, crossing under a pair which ran under the full length of the side walls. In Tumulus Z only short blocks laid crosswise under the ends of the side walls were observed as props.

## FLOORS

In a few cases the unlined "hardpan" of the pit floor may have served as chamber floor (N?, X?, S-2, S-3<sup>26</sup>); in other cases it appeared that the stones lining the bottom of the pit served as floor (B,<sup>27</sup> C, KY), or else evidence for added wood was absent due to complete rot (C?, KY?, Q?, Y), and in still other cases a wooden floor lay directly on hardpan (G, H, K-II) without benefit of the degree of drainage furnished by a layer of stones underneath.

Those exhibiting both stone lining and plank flooring were J, MM, P (double-floored), W, K-III, K-IV, S-1, and Z. The planking ranged in thickness, where measurable, from 0.30 (MM) through 0.12–0.13 (Z) to ca. 0.02–0.06 m. (G, J, W, S-1, and doubled to 0.12 in P).

In MM, P (lower), and W the flooring ran lengthwise, and, being very long, exhibited as did the side beams a wealth of available lumber. In G, H, S-1, and Z the planking ran crosswise, showing perhaps a more parsimonious approach to the expenditure on flooring; J's, although it ran lengthwise, belongs in size with this second group. Widths, whether crosswise or lengthwise, ranged from ca. 0.12–0.18 (G, H, J) through ca. 0.50 in S-1 to 0.70 in P, and up to 0.80 m. in MM. Floorboards could run under the sills (G, H, J, W, S-1), or up against the sills, stopping on all sides (MM, P upper, Z). Gallagher observed in G special

shallow grooving near the ends of the floorboards to retain the crossing sills and, in S-1, rabbeting under the ends of the floorboards to fit over the under-sill props. This would place these two in a special category. In G, whose floor went under a sill which was without benefit of stone under-flooring, it might have been considered a measure for sealing out moisture; the floor in S-1, going over the side props and up against the end walls, might be considered less tight at the end walls, but S-1 had benefit of other moisture-proofing from stones as under-floor drainage.

Since the excavators usually measured the chambers at floor level to arrive at clear interior sizes, those measurements are used in Table 2 to rank the tumuli by size based on the square meters of chamber floor.

## SILLS AND WALLS

Walls were begun with the laying of the sill, which at Gordion supported, engaged, or rested upon the floor (see above).

Especially with the use of housed joints which needed support (but with the use of cross-lapped sills also, since the end-wall beams above them were usually merely housed), the laying of the sill was the signal for a number of processes to begin:

1. *If the pit was to be reserved in a support layer* (MM,<sup>28</sup> S-1), the support layer, as it began around the edges of the "pit," was held back by the simultaneous laying of the stones around the outside of the sill and walls; all three would rise together, and such a process would allow room for the carpenters to handle their heavy timbers from both inside and outside their chamber walls. The picture conjured up of the gathering of all materials at once (timber for the chamber, stone for the pack, and earth for the support layer) would be one of chaos unless there were carefully channeled and supervised routes for each to its destination. The accumulation of freshly poured earth, let alone clay or puddled clay, would provide almost impossible footing for horses or men carrying or dragging heavy materials. Excavations of Gordion tumuli have not determined what the local solution was to this problem. Only one working platform was noted, that in S-1; it occurred at the level of the lip of the "pit." That plat-

21. See p. 10.

22. C. Körte, *Gordion*, 106–107.

23. R. S. Young: *AJA* 72 (1968) pl. 75, fig. 29 (early enclosure wall); *AJA* 68 (1964) pl. 87, fig. 23 and pl. 89, fig. 27 (Northeast Building = Meg. 9).

24. R. S. Young, *ILN* (17 Sept. 1955) 479, fig. 2.

25. R. S. Young, *Expedition* 2, no. 2 (Winter 1960) 4–5, and fig. 2.

26. For a definition of "hardpan" at Gordion, see p. 4. The use of queries in these listings indicates that through robbing or through rot we are left with ambivalent evidence on the point so signaled.

27. In the case of B the pit flooring consisted of the original paving stones of the cellar, fairly carefully laid.

28. Young, *Gordion* 1, 89, 94, 98 n. 21.

form, formed after two distinct support layers were finished, had probably been used for the dragging up of roof timbers, and stone for the cap. The reeds covering the platform were crossed by wheel marks (Pl. 60C).<sup>29</sup> Indeed the reeds themselves may have facilitated traction.

2. *If the pit was partially dug in hardpan and partially reserved above in a support layer (H), the stone pack had to begin immediately between chamber and pit scarp and accompany the erection of walls to the top of hardpan. The pack would then be ready to continue upward and hold back the looser support layer when it was begun.*

3. *If the pit was sunk completely in natural or predeposited "earth" (C, J, KY, N, Q, X, Y), the stone fill had to begin immediately between sill and pit sides to buttress back the earth if it was loose (Q, X, Y) and to support the rising chamber walls.*

4. *If pre-existing cellar foundations formed the pit (B, K-II?),<sup>30</sup> chinking stones, used only in the case of B, had to be deposited along the sides at pit bottom and rise with the chamber walls. This situation, where the slot left for the chinking was exceedingly narrow, gives the best proof that under normal conditions the carpenters could handle and place all their timbers while standing inside the chamber. In B they attempted the true cross-lapping (Figs. 6B, 7A,B, 70B[d]) of top and bottom courses only at one corner, and elsewhere abandoned it (for lack of room?) so that the chamber and its chinking finally lay asymmetrically within the pre-allotted space. The other corners of B were endlapped (Fig. 70B[b]) at top and bottom.*

### CROSS-LAPPED JOINTS (FIG. 70B[d])

Sometimes wall courses, including the sill, were treated specially, with the use of cross-lapped joints in

most corners (G, J?, P?). These came closest to having a proper cross-lapping system. According to the excavators, however, in G all but the top end courses were locked in by a lap (see Fig. 16); in J cross-lapping cannot be proved above the sill; in P the sill and topmost courses were seen as lapped<sup>31</sup> but the central courses remained unproved.<sup>32</sup> These structures, whether under conditions 1, 2, 3, or 4 above, if ideally cross-lapped, would not have needed the accompanying stone pack to stabilize them as they rose. Since it was necessary *in fact*, however, a simultaneously deposited pack was more efficient, and provided a stronger combination against stresses, than one poured later down the four remaining spaces.

Accompanying pack would also have been a distinct advantage in situations where the wall extended above shoulder height, since it would enable the carpenters to continue upward, laying wall timbers in position from outside while standing on the gravel pack. Up to shoulder height they could probably work from both inside and outside, or from either alone, but no instance yields evidence that they built up the walls to any great height ahead of a concomitant stone pack.<sup>33</sup>

### PRECUTTING

Possible evidence for precutting may show in any of the group employing simple housed joints at the corners (H, J,<sup>34</sup> KY, P on middle beams (?), Y, S-2, Z). All end beams had only to be measured and cut to one given length; the side beams could be of freely varying lengths and heights as long as their slots were a constant distance apart and of the given widths of the beams of the end walls. Evidence for a deposit of trimmings was found only over the roof of Tumulus W.<sup>35</sup> However, in general the precutting must have been done at a distance from the burial itself, as no bed of chips, or trimmed-out pieces from lapped joints, or

29. On Kükük Höyük, during the sixth century, clay for a large operation was evidently drawn up by wagons and sledges. A wheel (E. Kohler in *Young Symposium*, 69, and fig. 32), clear wheel ruts, fragments of shaped wooden sledge runners, and an untidy pile of rope were found abandoned on top of the sloping clay layers (siege mound?) laid against the outer face of the mud-brick rampart.

30. See above, p. 167 and n. 8.

31. Young, *Gordion* I, 6, fig. 4D.

32. *Ibid.*, 4.

33. The chamber walls of Tumulus K-III (H. 1.90 m.), which are the tallest next to those of Tumulus MM, probably could not have been easily built up by a Phrygian from the inside without help from someone standing on a growing stone pack on the exterior. A possible exception is seen in Tumulus G, a very low chamber (H. 0.70 m.) which could be built handily from inside; in addition, the Southwest Deposit standing outside the walls may have discouraged the use of an initial concomitant pack.

34. The jointing of the corners above the cross-lapped sill was not clear in Tumulus J, but housed joints are probable.

35. R. S. Young, *Gordion Notebook* 84 (1959) 1: "After taking out the rubble we clean the wooden mass. This proves to be not the roof itself but a layer of wooden bits—shavings or trimmings—about 10 cm. thick. The pieces are thin and not very big and lie with the grain running in every direction. These may well be the trimmings from the roof timbers themselves, put over the roof after the timbers were in place to prevent gravel and dust from the rockpile from sifting into the tomb between the roof beams."

The writer wishes to add that the bits probably did not come from the trimming of the first mast, which was made to stand immediately over the roof, because Tumulus P, which had a similar mast, had no such layer of shavings over its upper roof. It is reasonable that the chips in W stood instead in a relationship with the usual (later) reeds and matting.

chopped-off ends were noted by excavators in stone fills or on working floors at the lips of pits, where they were exposed.

Regarding Tumulus H, Dorothy Cox believed that a peculiar open cribwork method was used, with alternating end-laps (Fig. 20B) of varying depths at the corners and with ends extending beyond the laps.<sup>36</sup> If true, it would have called for a simultaneous packing of extra-large stones carefully placed so as not to push the walls inward.

Indeed, it occurs to one that the trouble H (if cribwork) must have caused the builders may have given rise to the experiment in Tumulus C involving the use of cakes of plaster to help fix the horizontal positions of such slender (possibly) alternately spaced beams, where contacts were tenuous or where the beams were left with their natural taper.

The real question is whether precutting of timbers is to be considered an advance in the thinking of the carpenters, or whether the individualized, *almost* ideally lock-cornered Tumulus G, with its L- and T-headed cross-lap joints on beams of varying heights, is to be considered the highest achievement.

B, in a way, was also individualizing, possibly with precut beams (if one believes with the excavator that they were given carpenter's marks).<sup>37</sup> According to Young, however, lapping was used at only the southeast end and there only once on the sill and once (possibly twice) on the top courses. The intervening wall beams were stacked without proper lapping; therefore why were carpenter's marks necessary?<sup>38</sup>

Some less-than-ideal situation must have obtained in the walls of the chamber in C. Perhaps they were of scrub lumber, retaining their taper and leaving gaps which needed filling with the special cake-shaped applications of plaster between beams and between beams and stone. We can only infer here; there is no certainty. It should be noted, however, that pisé has been used where needed to stabilize wooden beams in house structures as early as the Chalcolithic period and as late as modern times in the parts of Anatolia which were and still are forested: the Pontic shore and Lycia.<sup>39</sup>

Tumulus N, whose end beams had both their ends cut back to tongues with single shoulder (Fig. 35A), is the only example of a special modification applied to beam-ends before their insertion into simple housings in the side walls. Heights of all horizontal beams were then free to vary completely, so that a "prefab" factory situation could obtain for every course above the sills, which alone were individually cut for cross-lapping.

Another nicety in the planning of the end walls appeared in Tumulus W,<sup>40</sup> where they rose above the side walls high enough to embrace the timbers of the single roof, and in Tumulus G, where the extended height of the end walls leveled up with the top of the first roof to clamp it in place and actually to extend the bearing surface under the second roof. Tumulus P, on the other hand, had a double roof,<sup>41</sup> both layers of which remained free to shift. The clamping, where employed, must have given added resistance to shifting during the deposition of the capping stones, some of which were very large and heavy. See further under "Roofing Systems," below.

#### FIXTURES IN THE CHAMBERS (LININGS, WALL NAILS)

Perhaps due to the inferior preservation of the walls in all the lesser tumuli, almost no evidence survives for special treatment of the surfaces, or for panels which could be construed as individualized backgrounds for decoration or gifts.

One exception occurred in Tumulus J. The excavator observed and saved for analysis a sample of layered brown material adhering to one of the wall beams. A. E. Parkinson<sup>42</sup> considered it to be a very fine covering or paneling of wood, and found calcium (probably as a sulfate) when the sample was tested. This substance could mark the presence, in minute amount, of plaster-like matter based on gypseous alabaster, which occurs naturally at Gordion.<sup>43</sup>

Another example of paneling was noted by the excavator in the chamber of Tumulus Z.<sup>44</sup> It appeared to have been set vertically and attached to a wall beam by

36. For D. H. Cox's theory see p. 45 and Fig. 20B. The author, however, places Tumulus H in the group with normally cut wall beams and housed joints.

37. See above, pp. 11, 12, and Cl. Brixhe, App. A, p. 235.

38. These letters, placed symmetrically, and to be visible, may have referred to the persons buried beneath each (see p. 12).

39. See Vitruvius, *Architecture*, II.1.4 (the Colchians); see also H. Alkim's discussion of this usage in the Chalcolithic to Early Hittite periods in the district of Samsun (esp. Kiztepe: H. Alkim in *Festschrift Bittel*, 14 and figs. 3 and 4). More wooden houses employing pisé for reinforcement of beams were excavated by M.

J. Mellink in Karatas-Semayuk: *Archaeology* 22 (1969) 295; *AJA* 73 (1969) 329; *AJA* 77 (1973) 294; J. Warner, *AJA* 83 (1979) 139, pl. 17, figs. 3, 4. The method persists to modern times (Alkim, *op. cit.*, 15) in north Anatolia, and in west and south Anatolia (Warner, *op. cit.*, 139 and nn. 19, 20). See also J. Yakar and J. L. Garzon, *Expedition* 18, no. 2 (1976) 43-47.

40. DeVries in Young, *Gordion* I, 194.

41. Young, *ibid.*, 4, 6, fig. 4; Mellink, *ibid.*, 263-264.

42. See p. 56, n. 2.

43. Zouck, *Alabaster*, 9-14.

44. See p. 152.

a rectangular wooden dowel which entered both the back of the panel and a similarly shaped hole in a wall beam. This, like the extra cross beam (E) in the same chamber, may have provided a special display area for a gift or gifts lost in the looting. There was no evidence here for the presence of paint or plaster.

In K-III no evidence was found for suspension of gifts. However, neat rows of wooden pegs had been driven into the four walls of Tumulus P. A similar device was restricted to the walls of the south half, only, of MM, where iron L-headed nails formed by clenching were used instead of pegs. These would at least stay in the walls and not pop out of place as with the opposing shrinkage of wooden pegs and their holes. The iron nails stayed until rusted through at the wall surface, after which their exposed L-shaped shafts fell to the floor along with the gifts once suspended from them.

Among the lesser tumuli only a few continued to employ iron wall nails: two (H and S-2) used the simpler L-headed nail of the MM type, and one (S-1) used a new version made by forging a cube on the main rod a bit back from the end. In Tumulus Z both types were found.

If in iron technology the forging on of a cube is to be considered an advance beyond the simple clenching method, three theoretically chronological categories can be formed:

1. Wooden pegs	P	Pegs at 0.25 m. below roof in all four walls. Ca. 0.22 apart. Evidence present that these held textiles. Uncat. <sup>45</sup>
2. L-headed nails	MM	Rows of nails around south half of room; for suspension of vessels with handles and of studded belts. Uncat. <sup>46</sup>
	H	One nail ( <b>TumH 1</b> ) fallen into southwest corner.
	S-2	Four ( <b>TumS2 8</b> ) scattered through disturbed chamber.
	Z	<b>TumZ 5-7</b> . <b>TumZ 6</b> <i>in situ</i> , southwest wall.
3. Nails with forged-on cubes	S-1	Nails from disturbed burned chamber and stone cap. Uncat. (See above, p. 119).
	Z	<b>TumZ 16, 17</b> . Two catalogued out of seven from area of mixed rubble and roof beams.

45. Young, *Gordion I*, 7 and n. 11.

46. *Ibid.*, 100 and n. 26.

47. *Ibid.*, 99-100.

48. This cutting in timber construction corresponds in function to the angled rafter sockets which are found in the inner top edges of stone side cornice blocks, e.g., those in archaic Greek temples of the type of Selinus C and others (Hodge, *WGR*, 77-79 and figs. 18, 19).

## ROOFING SYSTEMS (TABLE 2)

Roofs are found to have been gabled, flat double, and flat single. Some roofs were so rotted (KY) or robbed away (C, S-1) as to leave no evidence at all.

Only one gabled tomb roof has been found at Gordion (MM).<sup>47</sup> One would expect the gabled type to be preferred in cases where extraordinary weight was to be borne. In MM it formed an unbeatable combination, with the log rafts floating in two directions at two levels over the ridge-beam to share the load and make it more uniform along the ridge. By trial and error during their earlier history the Phrygians, having lived in gabled megara, must have learned to apply this advanced principle of carpentry also to under-earth situations. In MM the ridge-beam was set level upon a flattened surface on the top gable beams. On each side of the squared ridgepole the next neighboring beams were adjusted by being trimmed to truncated wedges. The other beams on the slopes formed an assemblage of well-squared timbers, aligned to the angles of the gable, supported from below and held in position by triangular downsets cut across each lowest gable beam near the outer ends.<sup>48</sup> The meeting line of the bottom beam and the interior face of the side walls was exact and tight.

One Phrygian chamber under a tumulus, that at Tatarlı,<sup>49</sup> has been published as having a segmentally arched barrel-vaulted roof. This writer, however, believes that the vaulting, if actual, must belong to the date of reuse by the Romans. Certainly no evidence for the Phrygian use of vaulting has been found at Gordion.<sup>50</sup>

Five examples of double-laid flat roofs have been excavated at Gordion (G, P, X, K-II, and K-III). Among these the most massive timbers were employed in Tumulus P: bottom (12 crosswise) GL. 7.00, W. 0.40-0.50, Th. 0.25 m.; top (11 lengthwise) GL. 7.00, W. 0.40-0.60, Th. 0.35-0.40 m. The next-greatest timbers were employed in K-III: bottom (12 crosswise) W. 0.40-0.48 (avg. 0.425), Th. 0.30 m.; top (11 lengthwise) W. 0.35-0.41, Th. 0.30 m.

In Tumulus X (Fig. 41A,B) the fragmentary remains showed the lower roof lying lengthwise and the upper crosswise. Three additional beams were grouped

49. Uçankuş in *TTKK VIII*, 305-323, esp. 306-308, ills. on pp. 183-197.

50. At first glance the section drawn across the chamber in Tumulus B (Fig. 6A) gives the impression of a slightly vaulted roof, but the visual curve is the result of the central unfinished logs having their thinner ends lifted to rest upon a small trapezoidal beam which was inserted at the center top of the southeast wall to adjust toward a flatter roof.

across the top of the upper roof—but their measurements could not be taken.

G. Körte<sup>51</sup> described the roof of K-II as double with cross-roof pegged to longitudinal roof, but the manner of pegging was not explained. Young,<sup>52</sup> referring to the Pennsylvania group, has mentioned that roof beams were never pegged.

Tumuli G and W<sup>53</sup> contained the only chambers which enjoyed the advantage of end walls heightened to hold together cross-beams of a roof. This usage was a definite highlight in the history of Phrygian construction (see above under "Walls").

It appears then that the problem of lateral shifting was attacked in G, W, K-II, and K-III, and the rest had roofs which (according to our evidence) were free to shift except for their great weight and the fact that they were supported at the ends by a stone pack. The walls of W were not proven to have been sturdily lapped,<sup>54</sup> so theoretically there may have been small advantage from the bracing of its roof between its end walls, and the stone pack after all may have become the functional bracing method.

In the case of several tumuli additional beams lay above the finished double roofs. In P an extra lengthwise timber lay at center upon and parallel with the upper roof. These timbers, purposefully stacked to help take the load, occurred also in MM, where two were added exactly over the ridgepole and other singles lay parallel on the slopes.<sup>55</sup> In Tumulus X the broken outer ends of three beams, lying on edge and bedded in the stone pack as if having once crossed the upper roof, were found as they had been placed, probably for a similar purpose. An association is seen here between P and X.

By far the commonest roof employed at Gordion was the flat single type (B, J, N, Q, W, Y, K-IV, S-2, Z). Of these, B and Z had theirs laid lengthwise, and the rest had theirs laid crosswise. In C, H, KY, and S-1 the roof beams themselves had vanished completely—in C and S-1 as the result of looting, in H and KY, the effect of rot from shallow protection.

Although the roof of H had disappeared except for fragments floating in the collapsed cap, there is evidence that it had received exceptional treatment in the form of an additional central support beam. The beam was laid lengthwise to rest upon the centers of the top end beams and was rabbeted on its lower face

at each end to brace the end walls apart. Since either a cribwork or a solid system here might have resulted in sides that were higher than the ends, the added central beam brought the central level up even with the tops of the side walls to furnish in essence a third parallel bearing surface under the single crosswise (as restored) roof.

The chamber in Z also had a central beam added—crosswise at the center of the chamber. It may have braced the side walls (although no direct evidence was seen) as well as provided, by means of its rows of nails, additional areas for the presentation of gifts. In the case of Z the principals (field director, architect, and excavator) argued as to whether crosswise roof beams were ever added to form a ceiling between the four crosswise tie beams which connected the posts of the "cage."<sup>56</sup> Young believed that the lengthwise beams, found as if they had once lain on top of the tie beams, constituted the only roof.

Tumuli H and Z, then, contain the only two chambers excavated which, due to the peculiar construction under their roofs, had open spaces left at intervals around the tops of their walls: H at the ends, Z at the sides.

#### USE OF REEDS OVER ROOF

To prevent immediate penetration into H by earth, sand, and small stones, the builders used larger-than-usual stones (max. dims. 0.30 to 0.40 m.) in the upper side pack and the lower cap. The situation may have been similar in Z, but the stones were not measured. A layer of reeds was added over the roofs of these two; in Z it was still clinging to the tops of the beams after their collapse into the chamber.

Evidence for reeds was found also in several other instances, e.g., over the roofs (whether preserved or not) of J, S-1, and S-2. In S-1 and Z they appeared to have been woven into mats. On the City Mound several of the pre-Kimmerian buildings (Meg. 1 and CC 2, for instance) were found to have deposits of burned reeds in the debris over their floors and reed impressions often showed on one face of the fragments of clay pack fallen from roofs.<sup>57</sup>

In S-1 the mats were laid to extend out over the working platform at the lip of the pit. If such a large

51. *Gordion*, 105.

52. *Expedition 2*, no. 2 (Winter 1960) 6. But see also S. Buluç, *Ank. Frig Nehr.*, fig. 4[2] (pegging in tumulus METU II); Uçankuş, *TTKK VIII*, 193, fig. 21 (Tatarlı).

53. DeVries in Young, *Gordion I*, 195, fig. 115A, 196.

54. *Ibid.*, 196; Buluç, *Ank. Frig Nehr.*, fig. 4[1]. The top wall beams appear to be housed vertically into the undersurface of the

beams of the first roof. I know of no other instance of this.

55. Young, *Gordion I*, 90-91, figs. 55-57.

56. See p. 153 for details and comparanda.

57. See Young's report on the first megaron he excavated: *AJA* 60 (1956) 262-263; see also his general discussion of Phrygian megaron roof construction in *Expedition 2*, no. 2 (Winter 1960) 7.

flat prepared area can be linked with the great number of food containers found in S-1, we may have evidence here for another reason for the matting: preparation and spreading of the funereal meal (see below, p. 190).

### CUTTING AND FINISHING TECHNIQUES

One might ask why juniper was used instead of oak for these chambers. Juniper and pine are recorded as common on hills some miles to the north of Gordion, and oak grows there too, albeit in degraded, scrub form.<sup>58</sup> These species have overlapping distributions. Perhaps the Phrygians had learned from experience that oak rotted more slowly above ground than juniper and pine, but that the latter two, being pitch-bearing, were also more resistant to worms, mold, and water below ground. Oak is harder to fell and to cut, whereas the soft woods yielded to the Phrygians' tools more readily during the felling (by ax) and the trimming, squaring, and rabbeting (by adze). Iron examples of these tools, plus adze-axes, all capable of use on heavy timbers, but evidently not on oak, have been found in numbers in the Early Phrygian, and Middle Phrygian (Lydian and Persian) periods at Gordion.<sup>59</sup>

An example of a saw (ILS 700) comes from the City Mound,<sup>60</sup> however, no certain saw marks were mentioned by the excavators of the lesser tumuli.

The remaining evidence concerning the techniques used in the cutting and finishing of beams is scanty indeed. Young was able to make a few observations only in the best-preserved tombs, viz., the three great tumuli: MM, P, and W. The interior walls of MM appeared finished with an adze and then sanded;<sup>61</sup> knotholes had been cut out and replaced with carefully fitted plugs.<sup>62</sup> In W the beams had been smoothed

and so well fitted together that the joints were not always apparent.<sup>63</sup>

G. Körte observed in K-III only that the surfaces of the interior walls were smoothed (*geglättet*).<sup>64</sup>

In the lesser tumuli, which for reasons of their smaller size had in several cases been looted and left open, or due to their shallower earthen mantles had been invaded by damp rot, such observations of techniques were almost impossible. Very few were recorded.

In many post-Kimmerian chambers the wall timbers were trimmed to flat faces on tops, interiors, and bottoms with the exteriors left rounded, as in B, where the central roof logs were left trimmed only roughly of their branches and not at all of their natural taper.<sup>65</sup> According to the excavator's notes, the wall beams of H were smoothed only on top and inside, while some bottoms were left rounded except at laps, and all exteriors were left untrimmed, probably originally with their bark adhering. The architect, however, drew the beams as dressed. By contrast the chamber in pre-Kimmerian Tumulus G, which surpassed the rest of the lesser tumuli in so many ways, was made of beams carefully squared on all faces. Knots dressed away on the sides of its roof beams allowed a close fit.

If one looks for evidence of chamfering as a decorative finish in carpentry, one finds it used only in the whittled shaping of the edges and inserted ends of the pegs in the walls of Tumulus P;<sup>66</sup> it is recorded nowhere in chamber construction.

Wooden clamping was used, in tumulus architecture, only in MM.<sup>67</sup>

It is to be stated in praise of the carpenters that in only two instances were *ad hoc* devices found necessary to remedy unsatisfactory situations: the adjusting block placed above the top wall beams at the southeast end of Tumulus B to compensate for the thinner ends of untrimmed logs, and the plaster cakes in Tumulus C

58. In answer to the writer's inquiries in 1980 concerning gold jewelry in the shape of acorns, found in Tumulus A (*UMB* 16, no. 4 [1950] 17 and fig. 3; *Archaeology* 3 [1950] 199; *Young Symposium*, 164, fig. 4), Gordon Hillman of the Institute of Archaeology, University of London, kindly replied: "... there are many species of oak native to western Anatolia and several of them would have grown . . . near Gordion [in Phrygian times]. Even though Gordion is now in the steppe vegetation zone, less intensive felling and grazing in the 7th century B.C. would have allowed the forest edge to extend at least over the higher hills around the city, with the oak zone perhaps within sight down the valley to the north. Together with the oak, we could expect to encounter some well-developed trees of *Juniperus excelsa* and *J. foetidissima*."

59. R. S. Young, *Expedition* 2, no. 2 (Winter 1960) 4 and figs. 1 and 2; McClellan, *Iron*, 480-490 (axes), 319-322 (adzes), 310 (ax-adze).

60. R. S. Young (*Expedition* 2, no. 2 [Winter 1960] 3) mentions the saw in only the most general way: "trees were . . . cut to suit-

able lengths with saws." ILS 700 comes from a cellar fill in the layers following the Clay Deposit on the City Mound. See McClellan, *Iron*, 593.

61. R. S. Young, *Dergi* 8, pt. 1 (1955) 6; *idem*, *AJA* 62 (1958) 148.

62. R. S. Young, *ibid.*; *idem*, *Gordion* I, 96. For plugs at Tatarlı, see *TTKK VIII*, 189, fig. 12, 190, fig. 13.

63. Young, *Gordion* I, 196.

64. *Gordion*, 41.

65. Unsquared logs still having taper had been laid in alternating directions to keep an approximate common level in the great log middle wall around Tumulus MM (see esp. Young, *Gordion* I, 92, fig. 59), but the principle was not applied (forgotten?) on the roof of B, resulting in a problem solved by a small shaped support to even up the beams (Fig. 6A).

66. Young, *Gordion* I, 7. The many examples from fine pre-Kimmerian furniture-making do not concern us here.

67. *Ibid.*, 99 and figs. 64 and 65.



which must have been employed to keep beams from slipping.

### STONE CAPS

In this section the consideration of finds sometimes deposited in the caps will be postponed until we discuss assemblage patterns found in the burials and over the burials (see below, p. 185 ff.). Here we continue to be interested in the nature of the stones and how they were assembled and piled, i.e., only in construction methods.

Over each timber burial an attempt was made to place a stone cap of some kind. These often differed in material from that of their own side packs, and were usually of larger, heavier pieces. The idea may have developed, and been carried over, from the open-air cairns raised above burials to mark them and to discourage marauding animals. The people of Pazyryk built their tumuli proper completely of stone.<sup>68</sup> However, the Phrygian custom contributed to the concept "cap" a whole new dimension (see esp. Tumulus MM).<sup>69</sup> In the "great" tumuli the caps extended beyond the pit edges: in MM, beyond and above the pit confines marked by the stone wall; in P and W, beyond the chamber edges into the excavational scarps. Among the lesser tumuli:

B, G, H, J, KY, K-IV, S-1, S-2	Caps were larger than length of pits
Q	Cap originally confined within pit
N, K-III, Z	Extent of cap unknown due to exigencies of excavation
K-II	Diameter of cap not mentioned by excavator
C, X, Y, S-3	Size of cap unknown because dispersed by looters.

As to the material of the caps, again in the first group of tumuli to be considered, only building stone was employed:<sup>70</sup>

B, H	Large flattish pieces of building
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stone, fallen into center floor, and slanting and overlapping around edges of cap with small constructional stone filling in centers

Wall and paving stones

Large and small broken building stones

Flat paving-like stones piled on roof, constructional rubble above

Large flattish slabs of limestone

Large flat and near-ashlar limestone

Large flattish and rectangular building stones (soft poros and occasional hard, black stones).

J  
K-II  
K-IV  
S-1  
S-2  
Z

In a second group we see a mixture of materials:

G, P	Limestone near-ashlars over roof, then small waterworn material
MM	Mixture of limestone rubble and fist-sized waterworn material
N	Large chunks of limestone over roof, waterworn above
W	Large near-ashlars over roof, and mixed with fist-sized waterworn above.

In a third group, waterworn stones only:

KY	Boulders over roof, fist-sized waterworn above
Q	Small clean stones, waterworn
K-III	"kleine (etwa faustgrösse) Steine" [appear waterworn]. <sup>71</sup>

In the rest, the evidence is insecure:

C	Probably wall stones, but dispersed into looters' piles
X	Waterworn "orange-sized" scattered up through mantle; no cap in place
Y	Large boulders lay on top of tumulus; cap not in place
S-3	Cap dispersed; no certain identification of material.

68. At Pazyryk, when the burial pit was dug, the resulting back-earth was retained on the surface around the sides. The chamber was built and roofed with unsquared logs, then the upper part of the pit was filled with rafts of logs held up by a pre-installed "cage" (as seen in Tumulus Z; see p. 155, nn. 14-16). Above the logs and the pit lip the retained earth was respread. Over the whole the tumulus itself consisted of stones. See Rudenko, *Frozen Tombs*, 18. See also the excavation of tumuli at Bayındır on the Elmalı plain. Tumulus D contained evidence for a wooden chamber covered only with a pile of rubble (*Antalya Museum*, 32) and accompanied by postholes in its pit (personal communication from I. Özgen).

69. Young, *Gordian I*, 85-86.

70. It may be of interest to record here that Anatolians of the E.B.A. II at Alaca did not hesitate to tear out nearby walls and use the stones for the outlines of their inhumations, which they installed among abandoned habitations. Sometimes they left behind untidy remnant stone piles (Koşay, *Alaca 1937-1939*, 115 and plans VII-IX). The Phrygian builders of Tumuli C, H, and J demonstrably used similar sources and show a similar mind-set concerning choice of site among earlier abandoned buildings.

71. G. Körte, *Gordian*, 41, fig. 5.

Stones were in some instances drawn up on the ancient surface to locations near the burial; remnant piles were noted by the excavators under the mantles of C?,<sup>72</sup> G,<sup>73</sup> S-2,<sup>74</sup> and Z.<sup>75</sup> Such observations were made in tumuli with lower mantles, where the excavator could clean an area back from the edges of the pit to expose the ancient surface. The pile in larger Z guided to appear in the scarp. Since no proper guides were found in the mantle of C, G, S-2, or Z (see Fig. 71[b,d,g]), we can reasonably believe that in those four the remnants either came from or were intended for side packing and caps.

Often very large stones were found fallen directly on the floors of the chambers, as if they had originally been set immediately over the roof beams. Such a usage occurs over both single roofs and double roofs. In the first case it would help prevent shifting while the final dumps of stones were being placed on top. Over double roofs it might have the same function if the roofs were not held or fastened in any way.

B, G, H, J, KY, N, P, W, K-II, <sup>76</sup> K-IV, <sup>77</sup> S-1, S-2	Evidence for larger, sometimes ash-lar-like, stones directly over roof
Q	Stones of homogeneous size
MM, K-III, Z	Excavators did not discuss distinct location of large stones, if any
C, Y, S-3	Evidence obscured by looters.

In G, W, and K-II, in spite of constructional advantages at roof level, large stones were placed as if still needed on their roofs. In the chamber walls of G and W there were weaknesses caused by incomplete cross-lapping, but these would have been corrected by the stone side packs already set in place before the cap was applied. Perhaps the Phrygian builders were again pursuing some contemporary rule of aboveground construction for weighting roofs, especially those of other than the mud-and-thatch variety which has been theoretically restored upon pre-Kimmerian buildings on the City Mound. The greater of the post-Kimmerian megara had tiled roofs, on top of which the use of stones as weights would have been justified if one considers the seasonal high winds at Gordion.<sup>78</sup>

However, it may be that the builders were not associating the timber tombs with houses above ground to

such an extent, in which case the writer sees no reason for the extra-large, usually flat stones directly over the roofs except as a preventive against "shifting beams" as discussed above.

## MANTLES (TABLE 3; FIG. 71)

Leaving for now whatever evidence there is for ritual connected with the final closing of a tomb, since it involves the gifts, let us consider the next constructional step, which is the planning of the earth mantles. In Fig. 71 data are schematically represented concerning the many different manners in which this was carried out at Gordion.

Excavation sometimes revealed the steps taken by the builders of the earth mantles which were placed over the stone caps. These steps were: (1) the planning of the relationship between the burial and the center of the future tumulus; (2) occasionally, masts and clay layers directly over the stone caps; (3) occasional retaining borders; (4) occasional guide walls; and (5) the topping-off process.

Mantles of the pre-Kimmerian and Kimmerian periods (Fig. 71[a,b]) appear to be of two types: masted and nonmasted; these form two categories with direct relationship to the heights of the tumuli. In Fig. 71(a), the masted tumuli (MM?<sup>79</sup> P, W, K-III) had weathered mantles to heights 53, 12, 22, and 23.05 m. respectively. These evidently needed a device to keep the mantles, during their piling, centered over their burials. Masting consisted of a succession of young tree boles (H. often 5-6 m., W. of stump *ca.* 0.10-0.20 m.), the first one set immediately upon the wooden roof and propped by the stones of the cap, a second propped directly over the first, in the clay of the intermediate cap or the earth of the mantle, with a third, etc., as necessary, proceeding with negligible offsetting directly to the top of the mound.

When mantles are found to be off center at top, the displacement of the center can have been caused by any of several things: prevailing winds and rains from west, southwest, and south,<sup>80</sup> with resulting uneven erosion, or in some instances trenching during the

72. A pile of stone lay south of West House, torn from its walls. See Fig. 11(J).

73. Stone pile 1: see above, p. 35 and Figs. 14(B), 15(B).

74. Stone pile B: see above, p. 143 and Figs. 56B(B), 58A(B), 58B(B).

75. Stones, exposed in the scarps of trench 1, lay piled *under* the first deposition of the "retaining deposit." See above, p. 155, Fig. 64(D), and below, p. 182.

76. G. Körte, *Gordion*, 107.

77. *Ibid.*, 99.

78. The houses of Yashhöyük with roofs of modern (fastened) tiles regularly lose many tiles in the strong winds generated on the plateau.

79. R. S. Young believed (*Gordion* I, 80) that Tumulus MM resembled P, W, and K-III in being masted, although the physical evidence of the mast-hole was not observable over the tomb complex before the concrete roof (*ibid.*, 94-95) prevented investigation.

80. Excavators have noted that the west, southwest, and south winds were sometimes strong enough to raise fierce dust-storms in the trenches, necessitating cessation of work. These winds can last up to three days without stopping.

TABLE 3  
DATA ON MANTLES

Ranked according to diameters in meters					
Tum	Weathered D. (m.)	Weathered H. (m.)	Mast?	Clay inter-cap?	Compo. Mantle
MM	300	53	yes?	yes	E,St
W	150	22	yes	yes	C
K-III	120	23.05	yes	yes	C,E,St
P	70	12	yes	yes	C
Z (L)	60	9.33	stone "tower"	yes	E,St
Y (L)	60	7.50	no	no	E,St
KY	60	4.50	no	no	unfin?
B	56	3.50	no	no	E
K-II (L)	(ca.) 52	"5 zu 15-16"	no	no	E
K-IV	(ca.) 40	"5 zu 15-16"	no	no	?
S-1 (L)	35.50	5.22	no	no	E,St
X (L)	35	3.50	no	no	E,St
S-2 (L)	32	1.79	no	no	E
C (L)	26.90	1.43	no	no	E
G (L)	25.04	2.23	no	no	E
J	22	(ca.) 1.20	no	no	E,St
Q (L)	20	1.00	no	no	E
H	19.30	2.40	no	no	E
N	17-18 (N-S)	2.99	no	no	E
S-3 (L)	14	1.24	no	no	E
S (L)	?	0.50	no	no	E

? Information not given by excavator

(L) Disturbed by looting

C Clay

E Earth

St Stones

Battle of the Sakarya (1921).<sup>81</sup> Tumuli P and W showed both of these; the top of MM was not probed.<sup>82</sup> The effects of modern plowing should also be considered (see S-2, Fig. 57A[IA]).

In each case in the masted group at least a corner of a chamber remained under the modern center or very close to it. No trickery was needed here; the safety of the burials lay in the great mass of earth over them and in the hardness of the clay caps, which indeed sometimes extended upward to form mantles completely of clay (P, W).

In Fig. 71(b) the nonmasted pre-Kimmerian and Kimmerian group (G, KY, Q, S, X, Y, and K-IV) are shown; they are all of low (weathered) height (2.23, 4.50, 1, 0.50, 3.50, 7.50, and "5 zu 15/16 m." respectively). Even under their low mantles this whole group (except for G and possibly K-IV) showed no planning for deception; almost all were near center. As a consequence they were easily entered by looters, who had only to dig shafts at or very near the center or else to follow the clue of a hollow appearing over a collapsed tomb roof. Perhaps Tumulus G is an example of one collapsed before looting leaving a crater above it, as the central pieces of roof were found on the floor under the looters' mix. It is otherwise difficult to see how G, so far from center, was found and despoiled. KY, which although centered remained safe, probably did so for the good reason that the final mound bore no resemblance to a normal tumulus and hence probably never seemed attractive. It is important to note that in KY the center was placed not over the human burial, but over the accompanying animal sacrifice; this practice was observed also in Tumulus E.

If we consider Fig. 71(c-g), in which the post-Kimmerian tumuli are schematically presented according to their approaches to mantle-building, some very important general differences from pre-Kimmerian and Kimmerian burials can immediately be seen: (1) one survival of the mast theme built in stone, with accompanying clay inter-cap (Z, Fig. 71[d]), otherwise a general absence of both masts and clay inter-cap; (2) the use of sighting toward the north to locate whatever device the builders were about to employ (B, H, S-1; Fig. 71[c,e,f]), and perhaps a secondary use of north, not in a relationship between the burial and the center (Z). There is also a residual group (Tumuli C, J, N, K-II, S-2, S-3; Fig. 71[g]) continuing the pre-Kimmerian tradition which allowed, under low mantles, simple locations near center. J and N were exceptions here, just as were pre-Kimmerian K-IV and G (Fig. 71[b]).

Tumulus Z (Fig. 71[d]) used an exceptional plan, but perhaps it comes closer than other post-Kimmerian tumuli to the pre-Kimmerian method for tall tumuli, namely masting. To this date at Gordion no other independent "tower" of rubble has been found standing in lieu of a central mast, but the method is appropriate to Z's considerable height (9.33 m.), next after that of P in the Gordion group (see Table 3). In Z the centering again touches down on the tomb itself. Leading either from or to the center, one directional planning line of stones was uncovered, running directly north-south on ancient ground-level. It did not, however, continue as a guide wall up into the mantle. There may well have been other lines, but the economical approach to this fairly deep excavation prevented pursuit of them. The only initial Phrygian attempt to deceive might lie in the fact that the burial was definitely sited *northwest* of the "tower." It may be significant that in Tumulus S-3, its much smaller neighbor, the pit again lies in this unusual direction from center.

The B and H types of layout (Fig. 71[e, f]) employed stratagems for keeping all four corners of the burial well *south* of center.

During the excavation of Tumulus B it appeared that some post-Kimmerian Phrygians showed a concern about sighting toward the north from one corner of the burial pit or of the stone pack. Perhaps they selected the head idol (**TumB 17**) as something linear, which by its whiteness made a contrast to the burned ground upon which it was placed, to mark the surface on the line directly north from the north corner. Then they must have determined the approximate diameter of the mantle by laying easily visible markers on the ground at the center and at the points where the outermost ends of the guide walls should eventually be. These were set basically to the cardinal points and almost exactly to the secondary directions too. The actual walls began with the first dumps at center and grew as they were needed upward and in alignment with the outer markers while the mantle grew.

The Tumulus H method showed a new cleverness in that a smaller tumulus, inside which we have at least partial evidence for a set of guide walls, was initiated immediately over the burial, and then a secondary larger mantle without guides was built over that, with a new center fairly far to the north, possibly sighted from the center of the stone cap (Figs. 18B, 71[e]). Unfortunately erosion has destroyed the proper outlines of the whole south edge.

81. See above, pp. 122 ff. and n. 27.

82. See, however, Young, *Gordion* I, 82, fig. 50, and outlines of the

southwest edge of the top of MM; see also the profile, *ibid.*, frontispiece and view in pl. 34A.

The location of the burials in B and H probably permitted them to remain unlooted—and B perhaps for a second good reason, namely that a discouragingly thick core of stones was formed at the center of the tumulus where the guide walls met.<sup>83</sup>

The scheme for a double set of guide walls in the mantle of Tumulus S-1 (Fig. 71[c]) did not work out well: the center of the burial was the center of the first set of directional markers, and one corner, again a northern corner, served as the center for the second set, as if centering the mantle over one corner of the tomb was still the guiding principle (as in the pre-Kimmerian and Kimmerian group; Fig. 71[a,b]). However, as in Tumulus H, the outlines of an inner tumulus were not noted by the excavator. Therefore, since the standing double rows of stones were never extended beyond the outer fringes of the stone cap, they may have functioned as guides for the amassing of the cap only, and the corner-under-center method was then used for a set of simple upper guides and one general mantle.

A plausible developmental order, following the analysis of basic burial location in post-Kimmerian tumuli and their use of attempts to deceive marauders, appears to be (Fig. 71):

Z	“Stone tower,” single mantle, closest to pre-Kimmerian tradition
B	One set of guide walls in one mantle, burial offset
H	One set of guide walls, over burial, mantle offset
S-1	Two sets of guide walls, single mantle(?), no offsetting.

B and H offer us by this evidence no clue to their interrelationship, but Z and S-1 appear to be developmentally before and after, respectively, the B and H group. See, however, the position of S-1 in the series, based on contents (p. 192, Table 4).

It should be especially emphasized that only four of the tumuli with wooden chambers excavated by the University of Pennsylvania project have shown the builders' propensity for sighting on north. These are: B, H, S-1, and Z. Of these the first three added the use of guide walls; Z used a mere directional line of stones, whereas the use of guide walls in addition to the “tower” has not been proved. One other example, Tumulus Makridi II in Ankara, had guide walls, but a relationship with north was not mentioned by the early

publishers.<sup>84</sup>

It should be noted that at Pazyryk, in Barrows 1–4 lines of upright stones were set running due east from the mounds.<sup>85</sup>

Systems of guide walls occurred also in tumuli over cremations. Final remarks on guide walls should be postponed until the cremations can be included.

The rest of the post-Kimmerian burials (Fig. 71[g]), under generally lower mantles, are clustered (except for J and N) near the centers of their mantles, with no physical evidence for sightings, no centering markers, and no guides whatever. They appear merely to continue the pre-Kimmerian and Kimmerian nonmasted method illustrated by those in the group in Fig. 71(b) (see above). The burials in C, K-II (p. 189 and n. 41), S-2, S-3 were found by looters; the two away from center (J and N) eluded them.

The mantles of some tumuli at Gordion show a further kind of pre-mantle planning in the form of a retaining border<sup>86</sup> of earth identified by outlines of contrasting color or texture, triangular in radial section, running around the perimeters on ancient ground level. These could be seen and studied only in trenches which crossed the outer edges of the mantles, so the data are few, as that method of breaching a tumulus was not always used (see pp. 2–3).

However, the following rough inter-associations can be made:

MM, P, W, Z	Theoretically masted (if the rubble column in Z can be considered equivalent in usage to a wooden mast); extensive dumping from periphery over large retaining borders toward center certainly occurred in these four
MM, P, W, S-1, S-2, Z	Each showed evidence for retaining borders in at least one peripheral quadrant (usually in the main access trench)
H, J	Evidence could have been eroded away on downhill sides, but no evidence appeared on uphill side
B, C, G, H, J, S-3	Trenches were cut through periphery but no retaining border was noted
KY, N, Q, S, X, Y	No trenches were cut through the edges of the mantles to ancient surface.

In at least one example of a huge retaining border,

83. Tumulus E was protected by a similar core of stones. See Kohler, *Gordion II*, Pt. 2.

84. M. Schede, AA 1930, fig. 23 (after E. Forrer, *MDOG* 65 [1927] fig. 20 after p. 40). See also von der Osten, *Explorations . . . 1926*,

48–49 and fig. 78.

85. Rudenko, *Frozen Tombs*, 4 (fig. 2), 14, 293.

86. This refers to the “outer ring of clay” mentioned by R. S. Young (*Gordion I*, 84).

i.e., in Tumulus Z where it was cut through by trench 1 on the northwestern side, a large remainder of stones from the formation of the cap(?) was clearly covered by one of the first dumps of retaining border. This argues that the cap was probably complete before the border was begun (see Fig. 64[D]).

From the above data it appears that no firm or final conclusions can be drawn concerning the reasons for

the use of quarter-rings, half-rings, or complete rings of earth laid down before the central dumps of earth were placed to finish the mantle. Since this phenomenon occurs also among the group of cremation tumuli, whose mantles widely range in size, it would be advantageous to postpone the full discussion of "retaining borders" to the section of that volume devoted to tumulus construction.

# Platforms, Coffins, and Assemblage Patterns

Having examined the methods by which wooden chambers were made and the techniques for raising their stone inter-caps and earth mantles over them, we may turn to a study of the contents of the graves.

The assemblages of finds will be shown to differ from each other in many ways. First we shall look at the types of platforms and coffins on and in which the body was laid in the grave, then at the gift assemblages. Resultant grouping of like usages should aid in the discussion of the final internal sequence of the burials.

## PLATFORMS

Further proof that the Phrygians handled wood adeptly is manifested in their production of plank platforms, split-log coffins, and built coffins. When we arrange the bits of evidence, we find that the bodies were laid in the chambers in a variety of ways. In the absence of dromos and door into the grave, the body had to be lowered over the edge of the pit, sometimes to rest upon a preplaced support:

G <sup>1</sup>	Underpadding of textiles or "possibly remains of clothing(?)"
W <sup>2</sup>	Underpadding of textiles
H	Traces of plank platform; no carpentry nails preserved

1. The order of mention of the tumuli follows that laid out in n. 3, p. 165.

2. K. DeVries in Young, *Gordion I*, 197.

3. In spite of the advanced state of their knowledge of the joining and finishing of wood, the Phrygians seem to have lacked experience in the slow curing of green (i.e., freshly cut) lumber. In the softwood species, including the conifers, the water content of the

J	Platform or light bench, completely postulated upon position of body (see p. 57); no nails preserved.
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Such pads and platforms are the simplest conceivable bedding methods for the installation of a body.

## COFFINS

Sometimes the body must have been lowered in its coffin with ropes (except perhaps in MM, see below). We have seen that Tumulus B fortunately furnished us with a complete coffin *in situ*, consisting of bed and lid both neatly hollowed to follow the outside surfaces of a split log whose top was curved downward and whose bed was curved upward to form thin ledges at both ends. The coffin in B further gave evidence for the use of lead to fill the long checks caused in green wood which was allowed to dry out too fast.<sup>3</sup> Iron bands accompanied the coffin although their exact application was not clear. Nevertheless, this coffin becomes the point of departure for a summary of the evidence we have for other coffins in the wooden chambers:

B	Closed split-log coffin on log platform; iron bands with iron nails, lead sealings
C	Coffin-shaped space preserved in earth; iron bands, lead sealings

sapwood is basically very high, but varies greatly with the weather. The wood shrinks (causing checking and splitting) or swells due to loss or gain (respectively) of water in the cells of the sapwood. In this regard cedar and pine must have presented insoluble problems to the carpenter; they do today in spite of modern deeply penetrating finishes and chemical surface applications to reduce shrinkage.

MM <sup>1</sup>	Large elaborate split-log coffin bed; iron bands
K-II <sup>9</sup>	Iron, lead (log coffin?)
K-IV, <sup>10</sup> S-2	Iron bands (log coffin?)
S-1	Iron, lead (log coffin?) laid on reed mat
S-3	Fragments of wood(?). See p. 147.

After careful study of the coffin found in Tumulus B, and of all the furniture in Tumulus MM, Elizabeth Simpson<sup>7</sup> has established to this writer's satisfaction that Midas' "bed" in Tumulus MM was in reality the bottom half of a huge split-log coffin. She concluded that the heavy end-ledges (accompanied by heavy iron bars) had broken away from the central bed to angle obliquely toward the floor. All the parts, after re-examination, fit the new visualization of the king's having been lowered into his coffin which had been pre-arranged in the tomb. This pushes the tradition of split-log coffins back at least to the period of the Kimmerian invasion.<sup>8</sup>

The evidence from Tumuli B and MM encourages me to press the argument that similar pieces of iron and lead in a chamber imply the former presence of log coffins which have rotted completely away (e.g., in C, S-1). Similarly, iron bands alone may stand in lieu (K-IV, S-2) since not every log coffin needs have split—especially in wet weather—before being put in the tomb.

Phrygian parallels for the technique of scooping out log-sections to form hollow curved shapes can be

found, e.g., in the bowls and plates of Tumulus P, in the table tops in P and MM, and in the large kneading troughs from the Burned Level in TB 5 on the City Mound.<sup>9</sup>

Evidently the Phrygians also used *built* coffins:

X?	Solid-headed bronze nails preserved
K-III <sup>10</sup>	Walls of plaquelike veneering held with solid-headed bronze nails. L. 2, W. 0.80 m.
K-II <sup>11</sup>	Ivory decorative pieces preserved.

From Tumulus K-III G. Körte published large fragments of straight wooden plaquelike wall pieces made of three layers of thin wood panels whose exterior surface exhibited a checkerboard of margined squares each containing coarse reeding, sometimes rounded, sometimes sharpened, arranged in alternating directions. The panels were held together by bronze nails with solid domical heads and square shafts. Note that there were no iron bands which might signal a simpler coffin in K-III.

From here it is a far leap, but perhaps a safe one, to the theory that the nails found in Tumulus X, which are similar to the nails in the K-III coffin and show hammering aside at the same distance down the shafts, indicate the presence of such a built coffin in X. Bronze nails of this type, bent as for this usage, were found nowhere else in the tumuli.

4. R. S. Young (*Expedition* 16, no. 3 [1974] 4; *Gordion* I, 101, 156, 187–190, 259–260) described the "bed" which he found in Tumulus MM. He believed it had head- and footboards, rails, etc., with four heavy blocks of wood at the corners giving it the appearance of a four-poster, and that the iron bars which stretched crosswise, securing the "headboard" and "footboard" in position at either end, supported the ends of the planks of the main platform.

5. G. Körte, *Gordion*, 105, 109 (uncat.).

6. *Ibid.*, 99 (uncat.).

7. *Furniture from MM*, figs. 57–62. The closely reasoned arguments set forth in her catalogue entry "The Coffin" (*ibid.*, 174–188), accompanied by new measured drawings, establish that the "head" and "foot" (as seen in Young, *Gordion* I, 187–190, figs. 112, 113) were the original horizontal end-ledges which contained large bays in their edges, probably useful for pulling the finished coffin out of the forest and for lowering it by ropes into the MM chamber. The four large blocks, each with one angled side, served to prop its rounded bottom and prevent it from tipping. See also E. Simpson, *Archaeology* 39 (Nov./Dec. 1986) 42; *idem*, *AJA* 91 (1987) 309; *idem*, *JFA* 17, no. 1 (1990) 66–87; *idem*, *Wooden . . . Furn.*, 15, fig. 18.

8. See also K-IV (above, n. 6), which may put the log coffin into definitely pre-Kimmerian times. Cf. tumulus METU II (Ankara), which contained iron bands and T-shaped lead bars (Buluç, *Ank. Frig. Nekr.*, 24).

9. R. S. Young, *AJA* 64 (1960) 242, pl. 62, fig. 28.

10. *Gordion*, 44, 45 and fig. 6a-c. The nails in fig. 6c were bent back after piercing the three thicknesses, and the ends are now broken away. The interpretation of these plaque fragments as the walls (and lid) of a coffin has been challenged by my colleagues in conversation. However, because the plaques were in close association with a body and were held together with solid-headed nails bent aside on the interior, and not merely decorated with straight short-pinned, hollow-headed tacks of the type found as decoration on Gordion furniture of this early period, I wish, having examined the fragments still in Berlin, to follow G. Körte (*Gordion*, 43–45) in his opinion that the plaques were indeed part of a flat-sided built coffin which at least in some areas had three-ply wooden walls. The patterning and workmanship reflect an early interest in wooden surfaces showing finely ridged texturing. Another application of this style of ridging appears in Tumulus P (TumP 148, 149; see Kohler in Young, *Gordion* I, 61–62, figs. 31, 32, pl. 28A,B), and upon an unpublished decorated wooden plaque (W 119) from CC 3 on the City Mound.

11. The built coffin in Tumulus K-II (G. Körte in *Gordion*, 110–117, "early sixth century," but see K-II here, p. 195 and n. 13) lost its wooden walls to rot probably due to the low mantle of loose earth over the chamber, but its ivory cymation strips and appliqués have been preserved. Built wooden sarcophagi dating to the fifth century B.C. and later, from the Kertch Peninsula (Sokolskii, *Sarcophagi, passim*; A. Wasowicz, *RA* 1990, pt. 1, figs. 1–3; Meiggs, *Trees and Timber*, 294 and pl. 13), have apparently preserved and combined the three traditions: overlapping wall pieces, textured surfaces, and decorative moldings. See also n. 12.



In summary, the pre-Kimmerian Phrygians appear to have furnished some kind of protection, textiles or coffin bed, under the body (W, G?, MM), and sometimes a type of coffin with lid to seal in the body. The earliest evidence of a lidded coffin itself comes from K-III, and then, later, by extrapolation from the preserved metal parts associated with such coffins (nails). Cf. Tumulus X.

The "bed" in Tumulus P remains an exception, concerning which I look forward to the results of the restudy by E. Simpson.

The post-Kimmerian burials which showed evidence for a continuation of the use of some platform or bench under the body were H and possibly J; those with log coffins or indications of them were B, C, K-II,<sup>12</sup> S-1, S-2. Those with no evidence whatever were KY, N, and Z, of which Z had been looted. Among those with weak or no evidence, G, J, KY, and Z show other indications of their being nonconforming (pp. 186, 189).

### PRE-KIMMERIAN TRADITIONAL BURIAL ASSEMBLAGES

It appears that of the lesser tumuli with wooden chambers dated to the pre-Kimmerian period (G, Q, X, Y) all have been looted. We must rely then on the "great" early tumuli to yield a pattern of what a pre-Kimmerian Phrygian, assumed to be of the ruling class, and who inhumed his dead in a wooden chamber, was wont to consider worthy gifts. An examination of this material appears to be a reliable means of arriving at a statement of the Early Phrygian tradition.

The contents of Tumuli MM,<sup>13</sup> P,<sup>14</sup> W,<sup>15</sup> K-III,<sup>16</sup> and K-IV<sup>17</sup> together yield a sort of checklist of what was considered suitable. (I leave until the "Sequence" chapter [XIX] any detailed arguments concerning the problems of the inner serial chronology of the tumuli.)<sup>18</sup>

METAL (bronze unless otherwise noted):

#### *Banqueting vessels and implements*

- Cauldrons (MM, P, W, K-III, K-IV)<sup>19</sup>
- Iron ring stands for cauldrons (MM, P, K-III)
- Ladles (MM, P, W, K-III, K-IV)
- Large trefoil-mouthed jugs (MM)
- Small wide-mouthed trefoil jugs (none, but see p. 60)
- Small narrow-necked trefoil jugs (P, MM)
- Side-spouted sieve jugs (MM, W, K-III, K-IV)
- Round-mouthed cups/jugs (W, K-III)
- Spouted bowls with horizontal handle (MM)
- Sieve-spouted bowls with horizontal handle (MM)
- Bowls with swiveling rings and banded rim (MM, K-III; P, W: bronze on wood)
- Bowls with fixed lifting handles (MM, P, K-III)
- Omphalos bowls, petaled (MM, P, W)
  - ribbed (MM, P, W)
  - plain (MM, P, W, K-III)
  - flat-based (W, K-III)

Plain bowls (MM, P, W, K-III)

Repairs and fittings on bronze vessels (MM, P)

Fire-tending implements (P: iron; K-III: bronze and iron)

#### *Personal adornment and gifts*

- Precious jewelry (none, but see p. 197)
- Toy: Quadriga (P)
- Belts, disks and studded leather (MM, W, K-III, K-IV)
  - solid (P)
  - open-work (MM)
- Fibulae, double-pinned (MM, P, K-IV)
  - double-pinned with tassels (MM)
  - single-pinned (MM, P, W, K-III, K-IV)
- Cosmetic implements (none, but see p. 213)
- Weapons (none, but see p. 213)

IVORY:

- Pendant (W)

BONE:

- Game: Knucklebones (P)

12. Cf. G. Körte in *Gordion*, 105, 109, "iron bands" and "angled rods of lead" which have to do with the closing and mending of a log coffin. I believe that in K-II there were two coffins: a log coffin with iron and lead, and in addition a built sarcophagus with ivory trim (*ibid.*, 112). Perhaps the latter was torn apart, or separated by the looters, so that its bed and the body were found along the south wall and the lid fragments along the north. See G. Körte in *Gordion*, 112; and n. 11, above, on the Kertch sarcophagi.

13. Young, *Gordion* 1, 102–109.

14. *Ibid.*, 11–77, pls. 7B–33.

15. K. DeVries, *ibid.*, 196–199; Young, *ibid.*, 199–218, pls. 87–94.

16. G. Körte in *Gordion*, 38–100.

17. *Ibid.*, 100–104.

18. The author, as a member of the Gordion Committee who mutually arrived at the conclusions given final formulation by M. J. Mellink in Young, *Gordion* I, 269–270, assumes here the chronological order W, K-III, P, K-IV, MM. The lesser tumuli of pre-Kimmerian date (G, Q, S, X, Y) will have to be placed chronologically among the greater tumuli to expand the listing. See the chronological sequence reached below, Table 4, p. 192.

19. In this section, for objects appearing in the catalogues of the tumuli in question, no precise referencing appears necessary beyond the general notes 13–17 above. Uncatalogued objects scattered through the lists and discussions are specifically footnoted.

## POTTERY:

*Painted ware*

- Open-trough spouted jugs (K-III)
- Side-spouted sieve jugs (W, K-III)
- Round-mouthed jugs (P, K-III)
- Animal forms, askoi (P)
- Dinoi (none, but see p. 160)
- Bowls (P, K-III)
- Stemmed plates (P)

*Monochrome wares, buff and gray*

- Open-trough spouted jugs (K-III)
- Side-spouted sieve jugs (P, W, K-III)
- Small wide-mouthed trefoil jugs (K-III)
- Narrow-necked trefoil jugs (P)
- Round-mouthed cups/jugs (P, K-III)
- Twin jars with linking handles (P)
- Animal forms, askoi, rhyta (P)
- Dinoi and necked jars (MM, P, W, K-III, K-IV?)
- Amphoras (MM, P, W, K-III)
- Necked jars, storage (P, W)
- Bowls, sipping (P)
  - rim-banded (K-III)
  - stemmed (K-III)
  - plain (K-III)
- Stemmed plates (K-III)
- Ring stands (K-III)
- One-handed utility pots, some with lids (K-III)

## GLASS; BLUE, GREEN, AND VITREOUS PASTE:

- Neck-ringed juglets (P)
- Bottles (P)
- Bowls (P)

## STONE:

- Vessels (none)
- Whetstones (none)

## WOOD:

*Banqueting furniture, vessels, implements*

- Serving stands (ex: "Screens") (MM, P, W, K-III; see p. 81, n. 39)
- Tables, inlaid (MM, P, K-III)
  - plain (MM, P)
- Stools (MM, P, K-III)
- Bowls, plates, trays (P, W, K-III)
- Spoons, ladles (P)

Carrying sticks (P,<sup>20</sup> K-III<sup>21</sup>)*Personal gifts*

- Figurines (P, K-III)
- Fans (P, K-III)
- Parasols (P)
- Boxes (P)

## TEXTILES:

- Spread under and over body in "beds" or coffins (MM, P, K-III, K-IV)<sup>22</sup>
- Folded under body (W)<sup>23</sup>
- Bags for objects, or cloth wrapped around food containers (MM, P, W, K-III)<sup>24</sup>
- Hanging from walls (possibly P)<sup>25</sup>

## MARKS AND WRITING:

- In wax (MM)<sup>26</sup>
- On pottery (P, MM symbols)<sup>27</sup> (MM words)<sup>28</sup>
- On metal (MM)<sup>29</sup>

ASSEMBLAGES IN THE LESSER  
PRE-KIMMERIAN CHAMBERS

The lesser pre-Kimmerian Phrygian tumuli show assemblages similar to those of the great tumuli, but to a great extent remain at the disadvantage of having been looted. In most cases they lack all metal objects.

In brief the contents remaining inside the chamber of G were small pieces of plain bronze bowls, three imported fibulae, and a tack; in pottery a brown-on-buff "petaled" cup and a painted jar. In the Southwest Deposit outside the chamber were one large round-mouthed jug, two amphoras, and a jar. The collections from G, taken together, conform in small part to the pattern of contents in Tumuli P and K-III. The absence, however, of evidence for furniture, cauldrons and dinoid jars, or class XII fibulae and a belt, must be noted. The painted pot-forms which were present do not conform at all.

Tumulus Q contained class XII fibulae, but in general the assemblage is disqualified by a lack of adequate evidence for a pattern.

20. Young, *Gordion I*, 12 (uncat.).

21. G. Körte in *Gordion*, 70, uncat., accompanying K-III 51.

22. Young, *Gordion I*, 101, 189-190; R. Ellis, *ibid.*, 308 (MM); Young, *ibid.*, 309 (P); G. Körte in *Gordion*, 45-47 (K-III); *ibid.*, 100 (K-IV).

23. K. DeVries in Young, *Gordion I*, 197; R. Ellis, *ibid.*, 309.

24. R. Ellis, *ibid.*, 304, 308 (W); Young, *ibid.*, e.g., 101, 102 n. 28, 111, 112, 121, pl. 100B (MM); Young, *ibid.*, 14 (P); R. Ellis, *ibid.*, 303, 304 (P); G. Körte in *Gordion*, 71-74 *passim* (K-III).

25. Young, *Gordion I*, 7, 8; R. Ellis, *ibid.*, 302.

26. R. S. Young, *Hesperia* 38 (1969) 260, 262, nos. 25, 32, 33; *idem*, *Gordion I*, 129-130, 273-275; Cl. Brixhe, *ibid.*, 273 ff., fig. 134A-C

(see bibliography, p. 273); Brixhe and Lejeune, *CIPP*, 99-101, nos. G-104 to G-107.

27. Young, *Gordion I*, 43 (TumP 87 bis), 173 (MM 361), 174 (MM 370); Roller, *Nonverbal Graffiti*, 5 (1A-11), 17 (2A-8, 2A-7) respectively.

28. R. S. Young, *Hesperia* 38 (1969) 260, no. 31; *idem*, *Gordion I*, 173 (MM 362); Cl. Brixhe, *ibid.*, 275, fig. 134E (see bibliography, p. 273); Brixhe and Lejeune, *CIPP*, 102-103, no. G-109.

29. R. S. Young, *Hesperia* 38 (1969) 260, no. 30, *idem*, *Gordion I*, 139 (MM 119); Cl. Brixhe, *ibid.*, 275, fig. 134D (bibliography, p. 273); Brixhe and Lejeune, *CIPP*, 102, no. G-108 (with bibliography).

Tumulus S, though subject to complete destruction by damp, yet with a belt part and a fibula adheres to the formula in part.

Tumulus X leaves us with only pottery for comparison: a painted sieve-spouted jug, and in gray ware a small wide-mouthed trefoil jug, dinoi, and an amphora. This remnant fits with the pattern in K-III.

Tumulus Y contained only fibulae, a round-mouthed jug, a wide-mouthed trefoil jug, a dinos, a jar, and an amphora. This pattern of deposit approaches that of Tumulus P, although the forms differ.

It appears that the lesser tumuli of the pre-Kimmerian period, although they have suffered losses, yet fit in a basic sense into the greater combinations shown in the list of gifts from the great tumuli. When there is variety, as in G, it is furnished both by absences of the usual and by the types of the imports.

### ASSEMBLAGES IN THE POST-KIMMERIAN CHAMBERS

Further source material for the final discussion of chronology and interrelationships among the lesser tumuli may be derived from an analysis of combinations of contents found in the post-Kimmerian chambers. Did the sets of gifts continue to adhere to the Early Phrygian notions expressed in Tumuli K-III, P, and MM, which show assemblages with the widest array of types represented (see above)? Here we are guided by presence or absence of categories and by the function of an object rather than by details of its shape or decoration. Absence of types in unlooted groups, as well as in looted groups of theoretically great riches (e.g., Tumulus Z), may be very important.

In Tumulus B the log coffin continues the pre-Kimmerian tradition, as do the jug, jars, and amphoras related to food supply and service. Some other aspects of Tumulus B are newly introduced and stress in fact the uniqueness of Tumulus B among the lesser and post-Kimmerian tumuli: lettering incised on the "head" wall, the interment of two bodies (both female; see p. 12, nn. 12, 13),<sup>30</sup> gold jewelry (**TumB 1**), bronze straight pins (uncat.), ivory spindle? and whorl? (**TumB 7, 8**),<sup>31</sup> and clay whorls (**TumB 31, 32**). Note

the absence of wall nails for suspension, cauldrons, bowls with rim bands, and omphalos bowls, as well as of the canonical bronze belts and fibulae.

As seen before, the pre-Kimmerian burned offerings found in the stone cap and two post-Kimmerian functional items<sup>32</sup> seem to be part of a new and different tradition. See below, "Assemblages Found in the Stone Caps."

The girl child in Tumulus C would, in respect to the contents pertaining to her sex (vessels for cosmetics **TumC 4-6, 8**), have no pre-Kimmerian parallels in kind. However, the indirectly attested small wooden coffin, the game, the animal vessel appropriate to her age (**TumC 3**), and the dinos, bowl, and saucer furnished for food and storage (see p. 33, n. 39) seem to have been offered in accordance with the old pre-Kimmerian ways seen in Tumulus P. The absence of a belt is not exceptional in the case of a female (see p. 189).

For the paucity of gifts in presumably unlooted Tumulus H, we can plead only its overall poverty, although this is difficult when we examine **TumH 2-6**: bowl, jug, small cup, small "saucer," and decorated jar for storage (respectively). These constitute an elegant food service, one item of which, the East Greek Bird bowl, was imported. Note that the cup and saucer are somewhat small, but they continue in essence the pre-Kimmerian notion of what was suitable. The saucer perhaps corresponds to the wooden saucers in Tumulus P, and the tiny pottery saucers in C and A<sup>33</sup> (all burials of young people).

The presence of a platform under the body and a wall nail (**TumH 1**) shows conformity. The absence of a belt in this burial of a youth(?)<sup>34</sup> poses a problem. He is the second-earliest male encountered in the west group (see under Tumulus G, p. 37) who lacks such a gift. Certainly none of the distinctly female attributes found in Tumuli B and C are present here. The uncatalogued mass of blue paste is a foreign item, but cannot now be analyzed. We do not know whether the lost fibulae were of class XII. If they were not, that and the beltlessness could also point to foreign influence.

Without a professional opinion of the age of the person, based on the skeletal material, "youth" remains a tentative term (see n. 34).

30. The only pre-Kimmerian adult skeleton about whose sex a hesitant pronouncement was made was that in Tumulus W (see K. DeVries in Young, *Gordion I*, 196-197). But see argument based on *belts* below, p. 189. Skeletal material from Tumulus Y was unsexable and that from X, nil.

31. Spindles and whorls are new, as we know of no assuredly female burial among the Pennsylvania pre-Kimmerian tumuli. See n. 30.

32. See the uncatalogued "hitch" (p. 13, and n. 15) and its counterpart, ILS 99, in Tumulus E (Pl. 83A).

33. *Ibid.*, cremation Tumulus A, cf. P 5105, 5473 a-e.

34. Both excavator and architect agreed that the scanty remains of the skeleton were those of a youth. This opinion is supported by the comparisons with other burials of young people in C, N, P, and A. However the fragments of bone in H cannot at present be located in Ankara, and so have not yet been professionally aged or sexed.

Tumulus J, being unlooted, provides one of the best collections available from among the lesser tumuli. Of the tomb contents, **TumJ 1-3** (bronze trefoil jug, petaled and ribbed omphalos bowls) and **TumJ 17** (together with Fig. 25G, storage vessels) furnish, in the absence of cauldrons, ladles, etc., a partial Phrygian food service given directly to the deceased.

The rest (**TumJ 4-16** plus the uncatologued whetstone) comprises an array of weapons and implements which, except for **TumKY 17**, etc., was not seen elsewhere at Gordion. The writer believes this J-group, rather than being characteristic of the donors, typifies the buried man, who must be a non-Phrygian, probably a Scythian archer.<sup>35</sup>

Except for the thoroughly Phrygian gifts of the knucklebones (**TumKY 19, 20**) and the storage amphoras (**TumKY 21, 22**), everything in the Tumulus KY burial is personal in nature. Of the "personal" gifts, **TumKY 1-16** make up into a belt or possibly some other accoutrement with sewn-on plaques and small toggle-fasteners, and **TumKY 17** is a pair of tweezers. Belts of this type and personal implements are distinctly not to be found on any pre-Kimmerian gift list, and so may indicate another foreigner inhumed at Gordion, in this instance dating to the Kimmerian invasion or immediately after it.

The only excavated horse burial associated with an inhumation is the well-preserved pair buried beside the chamber in the KY pit.<sup>36</sup> The nose pieces (**TumKY 23, 24**) were distinctly local in design, but neither horses nor their trappings<sup>37</sup> are yet known at Gordion to have been gifts to the dead in pre-Kimmerian times.

In the poorly endowed burial in Tumulus N we find (**TumN 1-8**): fibulae, plain bronze bowls, and a globular pottery jar. This combination as far as it goes appears to adhere to the pre-Kimmerian pattern.

Placement of two bronze bowls and a blue-green glazed bowl (**TumN 9-11**) in the stone cap is, as in B, a sudden departure from the pre-Kimmerian habit (see below, "Assemblages Found in the Stone Caps") and may, along with the chronology of the contents, indicate an early post-Kimmerian position for N in the series.

Although Tumulus S-1 was thoroughly looted and burned, the large number of fragmentary gifts rescued

from the mix in the pit still represented riches and total adherence to the pre-Kimmerian pattern. These (**TumS1 1-21**) consisted of cauldron, ladles, rim-banded bowl, ribbed bowl, petaled bowls, plain omphalos bowl, parts of solid belts, and patching strips. In addition, the gift of a *multitude* of fibulae (**TumS1 22-71, 89-100**) most resembles the practice in Tumulus MM.

From the sunken stone cap, and above it in the looters' area, pottery evidence is substantial (see **TumS1 73-75**, and Figs. 54H,I, 55A uncat.). See below, "Assemblages Found in the Stone Caps."

A lead clamp (**TumS1 72**) probably belonged to a log coffin. The use of wall nails follows the pre-Kimmerian Phrygian custom of suspending gifts.

Tumulus S-2, also thoroughly looted, yet supplies evidence for a characteristic group of pre-Kimmerian type. Iron bands (**TumS2 9**) bespeak a coffin and large iron nails (**TumS2 8**) are of a type which implies that gifts were suspended from the walls.

The bronze fragments (**TumS2 1-4**) confirm the presence of a banded-rim bowl with swiveling handle, a petaled bowl, and perhaps a piece of furniture. In pottery, except for **TumS2 10**, the shape-categories are dinoi and low-necked jars.

No gifts appear to have been placed in the cap or in the mantle.

This assemblage contains nothing by nature dissonant with a pre-Kimmerian group. Its late dating is based upon development in form and decoration only.

Since the form and function of the vessel (**TumS3 2**) in ruined Tumulus S-3 remains doubtful, continuity here cannot be affirmed. The amber bead (**TumS3 1**) appears to be unique.

In Tumulus Z evidence is lacking for the skeleton, the presence of a coffin, and the latter's usual lead and iron accompaniments. The chamber was so thoroughly looted that inside it only remaining handles (**TumZ 1-3**) suggest that three bronze bowls with swiveling ring handles and rim bands once hung on the iron nails, some of which were found, and great numbers of which are to be implied from their traces in the beam-faces (see Figs. 65A,B, 66A,B). Directly over the broken roof beams the sherds provided rim and base forms for a great number of pottery dinoi and jars (Fig. 68F). Bronze objects carried up into the stone

35. The combination of gifts accompanying the Scythian horse burials at Norşuntepe is closely akin to the assemblage found in J. See p. 57 and (following) n. 36.

36. See above, p. 74 and below, App. B by S. Payne.

37. One possible exception may be the ivory pendant, TumW 81 (Young, *Gordion I*, 218, pl. 94H). It is merely globular, not showing the blossom end of the usual pomegranate form. One similar ivory pendant, a pomegranate, however, was found at Ephesus in

1980 (see A. Bammer, *AnatSt* 32 [1982] 78, pl. XXIc) well under the "Spolienboden" associated with the Kroisos Temple. Bammer does not comment on the pendant's function. The size of TumW 81 is appropriate for an ornament suspended from a horse's breastband of the type illustrated by Anderson, *AGH*, pl. 13b, or from a collar of the type in his pls. 16 and 20. See also the ornaments on the pair of horses with rider (BI 422), a fragmentary ivory plaque from a post hole in the burned Phrygian floor of Meg. 4 (R. S. Young, *AJA* 68 [1964] 287, pl. 89, fig. 22).

cap by the looters were (**TumZ 8–15**): a sieve-spouted bowl (the only example preserved in the lesser tumuli), further disjoined parts of bowls with swiveling handles and rim bands, several reeded and petaled bowls, a socket from a fibula tassel (unique after the time of MM). Pottery was represented by a small jug (**TumZ 20**), a painted dinos (**TumZ 19**), and many gray dinoi and other storage vessels. All the items which *do* appear in this group can be found in pre-Kimmerian assemblages. This is exemplified especially by the bronze sieve-spouted bowl (**TumZ 8**) and the fibula tassel (**TumZ 14**), rare objects with close relationships with MM 50<sup>38</sup> and MM 183<sup>39</sup> respectively.

What we lack, i.e., bronze cauldrons, laddles, belts, and common fibulae, may be worthy of note, as traces of these types persist elsewhere through looting and even fire (see Tumulus S-1).

In summary, the tumuli which continue the pre-Kimmerian pattern of burial contents into the post-Kimmerian period are: N (poor, unlooted), S-1 (rich, looted), S-2 (? , looted).

Those containing females, or with deviating combinations of gifts in the burial of a male, appear dissimilar to the above: B (two females with writing on wall), C (female, child, looted), H (poor, beltless male), J (medium-rich, male, weapons and personal implements), KY (poor, foreign belt[?], associated horse burials), K-II (female, rich, looted), Z (potentially rich, lacking some important bronze objects including common fibulae, and having a "caged" chamber).

Tumuli B, C, and K-II deviate from the pre-Kimmerian combination because the burials were female only (C and K-II accompanied by alabaster and all three without belts). H was a beltless male, which makes it also an exception to the pre-Kimmerian usage.

## ASSEMBLAGES FOUND IN THE STONE CAPS

For any fruitful discussion we must confine ourselves here to the caps of unlooted tumuli.

During the excavation of Tumuli P and W the stone caps were explored from the top down, at the time when the vertical excavations came down over the

burials. The caps contained nothing. The vast stone cap over the burial chamber in MM was examined as it was taken out through the tunnel, and no gifts were found. Tumuli Q, X, and Y, all looted, yielded some material among the stones of their caps, but this was assumed to be part of the extruded burial assemblages. The cap of looted G contained waterworn Hittite sherds, as well as material later than the burial—fragments which furnished a Hellenistic *terminus post quem* for the date of its looting—but no material was contemporary with the burial.

G. Körte states that some sherds were found mixed in the stone cap over the burial chamber of K-III.<sup>40</sup> For K-IV there was no mention.

However, in the post-Kimmerian period three unlooted burials (B, J, and N) had in their caps groups of gifts which appear to have been deposited intentionally after the chambers were roofed and while the caps were being assembled. The nature of these assemblages deserves examination.

Some may believe that Tumulus K-II should be drawn into this discussion, but I am of the opinion that K-II had been disturbed.<sup>41</sup>

The stone cap over the Tumulus B burial contained **TumB 12–16**: a "medium-sized" bronze cauldron with turned-out flat rim and geometric plain handle-attachment plate, a group of studs from a pre-Kimmerian studded leather belt, an iron handle possibly from a cauldron lid, and a ferrule which is possibly a "hitch" (see p. 13 and n. 15); in pottery, a pair of painted spouted jugs. The fact that the bronze vessel parts were burned may mean either that they were caught in the fire that burned the Northeast Ridge at some time before 650 (the date of the burial in Tumulus H) and were subsequently swept into the cap along with some charred logs, or that the cauldron was used in the contemporary burial ritual, somehow allowed to burn, and then placed in the cap accompanied by burned logs perhaps from the funerary cooking fire(?). The final deposition of the pair of unburned jugs over the grave may be related to the placement of large spouted jugs over two of the cremations.<sup>42</sup>

The metal and pottery vessels, possibly of use at a banquet, as they were judged to be in Tumuli MM, P, W, etc., are here deposited only in the cap, not in the

38. Young, *Gordion* I, 49, pl. 64D.

39. E. Kohler, *ibid.*, 154–156, 159 fig. 99, pl. 75A.

40. *Gordion*, 40.

41. As evidence of this I cite the three proveniences of the parts of the large Waveline amphora, K-II 26 (G. Körte in *Gordion*, 117–118 and fig. 97a). Four sherds belonging to it were found near the head of a skeleton laid out in the mantle, some sherds were in the stone cap, and some inside the burial (*ibid.*, 108).

The stone alabaster, K-II 59 (H. 0.44 m.; *ibid.*, pl. 6), was also found in three large pieces from three proveniences: in the grave, in the cap, and "outside the grave" (*ibid.*, 123). Although on p. 110 Körte "excludes" the possibility of looting in K-II, on p. 117, when he must admit that the decorative ivory plaques were also scattered up into the mantle, he retreats to a strange explanation for their dispersal.

42. E.g., in Tumuli A (P 11) and F (P 252; E. Kohler in *Young Symposium*, 75 fig. 7); Kohler, *Gordion* II, Pt. 2.

burial. The combination of cauldron and belt (if it is accepted as a gift) may be akin to the combination of cauldron parts, ring-handled bowl, and belt(?) parts deposited in the cap of Tumulus J (see just below).

In Tumulus J a larger group of gifts than that in B was deposited in the stone cap (**TumJ 18–30**). It marked a sure departure from pre-Kimmerian practices. **TumJ 18–20** were cauldron parts and a ring-handled bowl with rim bands; **30** was a ladle handle; **21–29** were belt pieces. It appears that the mantle over the cap continued to be a place for a deposit of great variety, stone and pottery pieces also connected for the most part with banqueting (**TumJ 31–53**): dinoi, jugs, omphalos bowls, tripod plates (see detailed list for West Slope Deposit, p. 58).

Whether the fragmentary horse-bit and rein rings (**TumJ 31, 32**) were gifts cannot be determined; they may have been sporadic in mantle earth, or they could support an argument that **TumJ 21–29** were not belts but some kind of equine accouterment.

The tripod plates and stone mortar fragments (**TumJ 50–53**) also seem strange. They could have been used for the meal preparation and thrown in the direction of the stone cap with the other gifts, but it is more likely that they came in from the habitation area nearby.

If these two deposits are connected, the West Slope Deposit continuing the gift-giving in the stone cap, it must mean that in this case the funeral feasting was continued even during the period of mantle-building. Merely from the weathered height (1.20 m.) and the diameter (22 m.) of the tumulus, it would be difficult to estimate how many days this process lasted (probably not many). It is possible that for a period banqueting took precedence over mantle-building.

The iron “hitch” found in the B group may be related in function to the fragmentary horse trappings found in J. This leads to the conclusion that objects thrown into these two unlooted caps perhaps had to do with the ritual of the wake-feast, but also included objects from a cortege, or those used in the final drawing up of the heavier stones for the cap.

Tumulus N is the third unlooted tumulus which contained gifts (**TumN 9–11**) among the stones of the cap. The two fragmentary plain bronze bowls and a fragment of a small vitreous-glazed bowl hardly constitute a banqueting group, but may point to a small number of mourners at the closure of this very small chamber, probably made for a young person.

Unfortunately, the evidence from only three tombs appears thin to support a theory that after the Kimmerian raids a new rite came into use—that of bestowing among the stones of the cap the dishes and paraphernalia used during the wake-feast. The objects may merely have been thrown at the stones, as many were fragmentary when retrieved. The belts deposited in the cap of J, however, appeared carefully rolled.

Tumulus S-1 presents itself as a possible further example, as the inordinate number of dinoid jars, amphoras, bowls, etc., found in the looted burial and directly over it, would almost have crowded the interior of the chamber. It is a probability, then, that many of them were in the cap prior to the looting and fire. Whether or not S-1 and, possibly, on the same grounds, Z are acceptable as further examples of banqueting continuing after the roof was laid, it appears that the habit began soon after Tumulus MM and continued at least down to the time of Tumulus B (see sequence list, p. 192), with the exception of Tumulus H which had only Hittite fragments in its cap.

# The Internal Sequence of the Inhumation Tumuli and Their Dating

We turn now to a study of the final sequence. An attempt will be made to establish this as closely as possible upon the evidence submitted up to now. Some discussion of the interrelationships expressed in the "Chronology" sections for each tumulus, although these are sometimes based on meager evidence, should allow us to suggest an approximate temporal order for the inhumation tumuli.<sup>1</sup> Building methods for chambers and tumuli should also be helpful. Fixed points based on results of earlier studies of the finds will enter the discussion whenever possible. Results are formulated on Table 4.

For the three great tumuli an order W,<sup>2</sup> P,<sup>3</sup> MM<sup>4</sup> was established in Young, *Gordion I*; K-III and K-IV, in G. Körte's chronological order, were inserted to yield the sequence W, K-III, P, K-IV, MM, based on fibulae, pottery, and the historical evidence presented in the summaries in *Gordion I*.<sup>5</sup>

It is the responsibility of Volume II, Part 1, to flesh out this series to the complete number of inhumations

excavated (21), which includes Körte's III (also a "great tumulus"), IV, and II, by assigning an order to all the inhumation tumuli (pre-Kimmerian, Kimmerian, and post-Kimmerian). Without detailed reiteration of the arguments for dating each tumulus, i.e., all the material contained in individual catalogue entries and the "Chronology" section of each tumulus introduction, an attempt will be made to fix approximate positions by reviewing the main interrelationships.

The result of this attempt, based on the evidence at hand for the excavated pre-Kimmerian group, appears to strengthen the sequence W, K-III, P, K-IV, MM. Several tumuli are seen on aerial photographs of the Gordion district<sup>6</sup> to run along ancient roads leading in toward Tumulus W from the east and north, so W may not be the earliest in existence, but it is demonstrably the earliest of those dug by G. Körte and R. S. Young (see n. 2).

The next consideration is an attempt to thrust the "lesser" pre-Kimmerian and Kimmerian tumuli (G, KY,

1. Frequent references to objects described in the catalogues found at the end of each lesser tumulus will not be constantly individually footnoted to the pages upon which these numbered objects appear. The fact that the lesser tumuli on the Northeast Ridge have been presented in alphabetical order, and those on the South Ridge in the order S-1, S-2, S-3, Z, should simplify the locating of the full description of any individual object together with its comparanda and discussion.

2. For R. S. Young's early ideas on the dating of W, see his preliminary report for the 1959 campaign: *AJA* 64 (1960) 225-232, "last quarter of the eighth." See also K. DeVries in Young, *Gordion I*, 199, "decades if not generations before the catastrophe that struck Gordion. . . ." M. J. Mellink, *ibid.*, 266-277, "a generation before Midas." Other discussants have placed the date variously: Caner, *Fib. in Anat.* I, 5, "first half of the eighth." For further intricacies, see O. White Muscarella, *QRevArch* (Dec. 1982) 8, "at the earliest 750-740 B.C."; *idem*, *BibO* 43 (1986) col. 195. R. M. Boehmer, *BaM* 15 (1984) 259-260, "740-725 B.C." G. K. Sams, *Gordion IV*, 196, "750 B.C."

3. R. S. Young: *Archaeology* 9 (1956) 266-267; *ILN* (10 Nov. 1956) 797-799; *AnatSt* 6 (1956) 16-18; *AJA* 61 (1957) 325-331, pl. 90, fig. 15 to pl. 96, fig. 38; *TAD* 7, no. 1 (1957) 14-15, 33-34, pls. VI-IX; *ICCA X*, Vol. 1, 24, n. 16; *Gordion I*, 1-77, pls. 2-33. In all these reports Young dated Tumulus P "around 700 B.C." See, however, *Gordion I*, 269-270.

4. R. S. Young: *AJA* 62 (1958) 147-154, pls. 23-27; *TAD* 8, no. 1 (1958) 4-13; *Expedition* 1, no. 1 (1958) 4-13 "725-700 B.C."; *ILN* (17 May 1958) 828-831; *Archaeology* 11 (1958) 227-231, "between 730 and 700"; *Hesperia* 38 (1969) 259-260, "before 717"; *Gordion I*, 79-190, pls. 34-83. See also *ibid.*, 269-272.

5. For fibulae: DeVries in Young, *Gordion I*, 198-199; Mellink, *ibid.*, 269. For pottery: Sams, *ibid.*, 46-51, 175-176, 215-216, 251-257; Mellink, *ibid.*, 266-267. For historical evidence: Mellink, *ibid.*, 171-172.

6. For other aerial photographs of Gordion, see Bradford, *Ancient Landscapes*, 70-71, pls. 21, 22; Young, *Gordion I*, pl. 1; *Young Symposium*, pp. 71, 114; Sams, *Gordion IV*, pl. H.

TABLE 4  
TEMPORAL SEQUENCE OF THE INHUMATION TUMULI

	Northeast Ridge		South Ridge
	West Group	East Group	
750			
740		W 750-740?	
730	G 735? (L)	Q 730? (L) K-III 725	
720	?	P 720; S 720 (L)	
710	Period of Phrygian Houses	K-IV 710	
700		X 700 (L); Y 700 (L) MM, KY 696 ±	
690			
680			
670	Conflagration date?		S-1 675? (L) Z 670? (L)
660		N 680-650	
650	H 650		
640			
630	B 630		
620			
610	J 620-600		
600			
590			
580			
570			S-3 600-550 (L)
560			S-2 580-545 (L)
550			
540	K-II 550-540 (L)* C 540 (L)		
Total	6	11	4
			Total: 21

(L) = looted

\* = See p. 189 and n. 41, p. 195 and n. 13.



Q, S, X, and Y) into this sequence in order to arrive at the extended list for the earlier group.

Evidence for the use of two walls of a chamber heightened to embrace the roof beams (or just the lower roof beams) occurred only in W and G, and another peculiarity of these two alone is the laying out of the body on the floor with merely a textile padding under it. We place G then immediately after W. The double roof on G associates it also with K-III (and P).

G is the earliest of the tumuli to be located on the west end of the Northeast Ridge. It contained an abnormal assemblage of gifts: fibulae (two non-class XII, **TumG 3** and **4**) from outside Gordion; pottery (**TumG 7** and **8**) with eastern plateau affinities; no evidence for the usual belt on the body or as a gift. This contrasting combination, although on other grounds shown to be close in date to W and P, may be part of the reason why G was given a location at a distance from the other early tumuli. When G was built, the western area was still probably clear of habitation, although the Hittite cemetery lay nearby.<sup>7</sup> The mantle of G, however, was as free of scattered contents as were those of W, K-III, P, and MM.<sup>8</sup>

See under **TumG 10** (p. 41, n. 31) Akurgal's date for Tumulus G (725-690).

Resulting sequence: W, G, K-III, P.

Q can be placed only with reference to the primitive traits of its fibulae. Flat-backed hooks here occurred on XII,4s and a XII,13. Fibulae from Y (**TumY 2, 3**), a XII,2 and a XII,13, fall between TumW 56-60 and **TumQ 3**. Based upon fibulae alone, then, the sequence would go W, Y, Q; however, when pottery arguments are brought to the placement of Y (see Y below), only the sequence W, Q is left. G, on the basis of the primitive hook on its XII,7A fibula (**TumG 5**), should come before **TumQ 3**, and K-III should come after Q, since K-III fibulae showed not only the primitive hooks of those in W, G, and Q, but also a few tendencies toward the shorter, grooved hooks found on the fibulae of MM.<sup>9</sup>

Resulting sequence: W, G, Q, K-III.

Tumulus S, the simple inhumation grave, contained only a few badly preserved objects. **TumS 2**, a XII,7A fibula, should stand prior to those from K-IV. And the belt plaque (**TumS 1**) stands in direct relation to a wooden inlay piece from Tumulus P.<sup>10</sup> S appears to be a poverty-stricken satellite of P.

Resulting sequence: P, S, K-IV.

Into the old established sequence W, K-III, P, K-IV, MM, we must now place X and Y. Although the fibulae in Y retain the primitive hooks seen only in K-III and previously, Sams's data assure us that painted sieve jug **TumX 2** is paralleled, especially in its form, only in the Destruction Level, and so falls between K-IV and MM. Y, although containing only gray ware, has close relationships with X, so that both X and Y probably precede MM.

Resulting sequence: K-IV, X, Y, MM, all of which probably cluster around the date of the Destruction.

In KY the motifs on the horses' nose pieces are very close to thematic material from the belts of Tumulus P and the wooden objects from P and MM.<sup>11</sup> This probably associates P, MM, and KY. The very fact of the accompanying horse burial brings KY down to the Kimmerian period. MM and KY are also alike in that each contained one gift of a belt (in KY, possibly some other accoutrement?), not lying on the body, but laid across the feet. Both of these, although completely different from each other in design, were fastened by toggles.

KY appears to belong to a non-Phrygian—a Kimmerian?—with accompanying horse burial and some non-Phrygian attributes: belt(?) with sewn-on plaques, and tweezers which have not appeared at Gordion in a provenience earlier than the Kimmerian Burned Level.

So MM and KY are both connected with the Kimmerian invasion, and probably date to it. It is difficult to determine which grave was actually closed first. If the layer of chips on KY (predating the KY burial) was connected with the stoneworking for the retaining wall in the MM burial, then possibly MM was closed first. Or, since the stone wall had risen along with the log

7. See p. 35, n. 3. For extent of Hittite cemetery excavated in 1950-53, see Mellink, *Hitt. Cem.*, pls. 1, 4. Additions made by later excavation (1962) are published by G. R. Edwards, *Expedition 5* (Spring 1963) 43-44. Ann Gunter, *Gordion III*, pp. 4-6, 45, 81-82, "Museum Site," discusses the new Hittite burials.

8. For mention of clean mantles in these tumuli, see: R. S. Young, *Gordion I*, 2 and n. 4; esp. K-III, G. Körte in *Gordion*, 39.

9. For K-III, excavation and finds, see G. Körte in *Gordion*, 38-82. He dated K-III ca. 700 B.C. (*ibid.*, 95, 98). Akurgal (*Phryg. Kunst*, 130) followed him: "um 700." Muscarella (*Phryg. Fib. Cord.*, 4) placed the date "a decade or two before 700" followed by Boehmer (*Kleinfunde*, 51 n. 323 and 55 n. 375). Young (*Gordion I*, 10) placed K-III "around 700." G. K. Sams (*ibid.*, 51), speaking of the pottery, dated K-III to "within an active lifetime" from

Tumulus P, "probably considerably less." M. J. Mellink (*ibid.*, 270) favors a date generally near that of the Destruction Level. E. Caner (*Fib. in Anat.* I, 6) unaccountably put it back to ca. the middle of the eighth century and Muscarella in his review of Caner (*BibO* 43, nos. 1-2 [1986] col. 195) suggests lowering that date to "730 ± B.C.?" Sams (*Gordion IV*, 196) more recently favors ca. 725/720. As we can now see, several tumuli (P, S, K-IV, X, and Y) probably fall between K-III and the Destruction; 725 seems acceptable for K-III.

10. The question whether woodworkers adapted ideas from bronzeworking, or bronzeworkers adapted ideas from woodworking is discussed on pp. 96, 203.

11. Consult n. 10.

intermediate walls and the squared-beam chamber walls, and the rubble filling packed between them—a long building process—the finished stone wall may have predated the installation of the burial in MM by some time. Since the king was approaching the mature age of sixty-five, the Phrygians may have completed the preparation up to the point of installation before Midas died, and the interval between finishing the stone wall and the installation of the body and gifts remains unknown. Likewise the interval between the completion of the stone chips layer over KY, and the later installation of the KY grave, is unknown. We must group MM and KY close together, but KY probably after MM.

Resulting sequence: P, MM, KY.

N appears particularly poor, as belonging to the years after the devastation caused by the Kimmerians, and evidently to a destitute branch of the tumulus-building families.

A break seems to occur between KY and N, in that all of KY's comparisons look backward to P and MM, whereas comparanda for N's fibulae are in part with the pre-Kimmerian fibulae of P and MM, and in part forward-looking to characteristics relating to fibulae from Tumulus S-1. Some of the fibulae in N have comparanda from the Clay Deposit on the City Mound and the strata above it. The necked jar (**TumN 8**) was comparable to **TumH 5** and uncatalogued examples from Z (Figs. 68F[j], 69A[g]). **TumN 11**, the bowl with vitreous glaze, may place the installation of N prior to the fire on the Northeast Ridge (which is datable at present only as pre-650 B.C.). N, then, is probably post-Kimmerian, and should be grouped chronologically near S-1 and Z, but an open range of 680–650 seems appropriate at present for N.

Resulting sequence: KY, N (S-1 and Z).

The profusion of bronzes in Tumulus S-1 included belt handles (**TumS1 18, 19**) derived from highly developed XII,14A fibulae, which are advanced far beyond any fibulae in MM and N. Fibulae of XII,9β type (with solid stud heads on a flat arc), found in numbers in S-1, also are found only after the Kimmerian Destruction. Arguments based on pottery dinoi and necked jars also place S-1 later than MM, close to Z, and earlier than B.

Resulting sequence: N, S-1, Z (and B).

In Tumulus Z, a painted dinos (**TumZ 19**) has a very good parallel in P 745 (from a house floor predating the fire on the ridge). The same house floor contained P 744, a faceted jug related to **TumH 4**. Tumulus H, however, patently dates after the fire that destroyed the house; so H follows, after an unknown but perhaps short interval, the houses burned by the fire. H also

has a definite absolute date close to 650 B.C. (see **TumH 2**).

Resulting sequence: Z, H.

It must be noted that Tumuli B, H, Z, and S-1 are four tumuli distinguished from all others excavated by the use of a sighting on north during the mantle-planning process. Z, although related to the masted group, which needed no use of north, had a north-south line of stones laid out on the ground under the mantle. This appears to place Z as transitional between pre-Kimmerian masting and post-Kimmerian guide walls in mantles. Yet it should, on grounds of contents, follow S-1 (see above).

B, which appears the most complicated in its guide-wall system of the four cited as using north, has also other reasons for being dated later than H: the bronze handle attachments on **TumB 12**, the lebes-cauldron from the stone cap, can be paralleled best by objects in Tumuli F (a cremation dated by an import to 630–620 B.C.)<sup>12</sup> and J (see **TumJ 18–20**). For further discussion of J, see below.

Resulting sequence: S-1, Z, H, B.

Other linkages among H, B, and J can be seen. H and B are notable for systems of guide walls different from each other, yet having, along with their guide walls, burials far south of their final planned centers. Tumulus J's burial has no guide walls and is located away from center, but to the west. J, therefore, stands outside the group: S-1, (Z), H, and B.

If we turn again to the pottery sequence, we see that on **TumH 5**, a necked jar, the lower half is narrowed in toward ovoid, and **TumB 3, 9, and 10** show this even more. B, then, comes later than H.

Affirming that J may come later than S-1, a fragment of a belt handle like **TumS1 16 and 17** (from the burial of S-1) was found, possibly fortuitously, in the stone cap of J (see **TumJ 21**).

Tumuli B and J were neighbors (before K was built), facing each other across a steep draw which may have contained a branch of the main road running from the east (see Figs. 1 and 2). On the basis of a few items, B and J stand in a slightly reciprocal position to each other, i.e., items in the burial of J have parallels in the mantle of B: the only two arrowheads from B (**TumB 21 and 22**, in its mantle) are of Scythian types found in the J burial (**TumJ 6–10**). The stone mold, **TumB 36** (from B's mantle), must have turned out "spools" for a bronze bowl with swiveling handles and banded rim, of the type seen in the stone cap of J (**TumJ 20**). Thus, if we based our argument on the longer-lived bronzes, B might follow J.

However, when we consider pottery, that more sensitive indicator of change, we see that there are even

more cogent reasons why J should follow B. Parallels for **TumJ 34** and P 260 in cremation Tumulus K (dated by an import to ca. 600 B.C.) stand together in a cremation at Kameiros (see p. 68, n. 68). This should pull the date of J down closer to K, and hence should place J later than B.

Resulting sequence: H, B, J.

After J there is a gap in the list of inhumation tumuli on the west end of the Northeast Ridge, possibly to be filled by a few which appear on aerial photos as having been plowed away. Alternatively, the gap may be accounted for by a rise in the popularity of cremation tumuli after 630–620, the date for Tumulus F, which at present is thought to be the earliest of the excavated cremations.

On the South Ridge, however, there may be (in addition to excavated S-2 and S-3) several unexcavated tumuli dating after Z.

For the placement of Tumuli S-2 and S-3 in the sequence, only sparse evidence is at hand. The plain bronze swiveling handle (**TumS2 2**) may be an heirloom, since its parallels are with the heirloom group in Z, and earlier than the molded handles (**TumZ 1, 10**). In fact **TumS2 1–3, 5–7, 11–13** are objects in bronze and pottery with relationships both pre-Kimmerian and early post-Kimmerian.

13. For Tumulus K-II, G. Körte (*Gordion*, 104–129) preferred a date ca. 600 B.C. (*ibid.*, 129). K. Bittel (*IstMitt* 5 [1942] 101–102 and n. 122) does not dispute Körte's decision concerning the "rhodische-milesische Vasen" in K-II. He felt that the illustrations (*Gordion*, 118, fig. 97a,b) were reproduced so poorly as to make study of parallels impossible without handling the material. (I tend to agree concerning the latter, as I suspect the accuracy of the outlining of some of the half-tones.)

In 1955 E. Akurgal (*Phryg. Kunst*, 131, no. 12) brought the date of K-II down to 560–550, citing the ivory cymation (*Gordion*, 110, fig. 87).

However, I wish to cite new associations for both the Waveline amphora (K-II 26; *ibid.*, 118, fig. 97a) and the wide-bodied banded lekythos (K-II 27; *ibid.*, 118, fig. 97b) comparanda for both of which were found at Sardis in the "Domestic Area" on the east side of the "Colossal Lydian Structure" in Sector MMS (C. H. Greenewalt, Jr., *BASOR Suppl.* 25 (1988) 26–30, esp. nn. 13 and 18, and fig. 12; N. D. Cahill, *ibid.*, 62–70).

K-II 26 was recognized and listed by Hanfmann in the group he studied as comparanda for the Tarsus "Eastern Greek" example (T.36.177): *Aegean and Near East*, 176–182, figs. 17–25 (with extensive bibliography). The example from K-II is catalogued, but not further discussed. A further example (*Gordion* P 4514, from the Pennsylvania excavations), which is in Lydian ware, came from a loosely datable context on the City Mound. Sams (*Expedition* 21, no. 4 (Summer 1979) 14, fig. 12) dates it "sixth century, probably first half." One is tempted to take the Sardian date of 547, which has been found appropriate by N. H. Ramage (*AJA* 90 [1986] 418–424, pl. 27) and N. D. Cahill (*BASOR Suppl.* 25 [1988] 62–70), for the collection in the "domestic area" mentioned above, but there are slight differences in form to be considered. The Sardian example (P84.99/8971) is wider, comparatively, at the shoulder and has a proper "waveline" on the

**TumS2 14**, the low-necked jar, however, falls later than the heirlooms; on body-shape comparisons, it appears to fall after B and, like **TumS2 10**, to date to the early Lydian period.

Resulting sequence: Z, (H), B, (J), S-2.

Data for positioning S-3 in the sequence are even fewer than those for S-2. S-3 shows the placement of the burial to be northwest of center and so may be a satellite of Z. The interval of years between Z and S-3 is, however, unknown. **TumS3 1**, the amber bead, can be associated at Gordion only generally with the amber in K-II (see below), with J 28 in cremation Tumulus D, and with the strata above the Clay Deposit on the City Mound. The imported pot, **TumS3 2**, is currently of little help in dating. If S-2 has only early Lydian affinities, then S-3 could fall between S-2 and K-II, but it would be wiser to leave a wide window in the series for both S-2 and S-3; for S-3 let it be for the first half of the sixth century, when amber was popular, and in the years of Lydian domination.

K-II, whose connections seem to be with both East Greece and Lydia, on more up-to-date evidence than G. Körte had at his disposal, appears to date close to but somewhat later than the Lydian-Persian confrontation of 546 B.C.,<sup>13</sup> and Tumulus C slightly later than K-II.

neck and a complete "necklace" (see *BASOR Suppl.* 25 [1988] 28, fig. 12); K-II 26 is carelessly done and lacks the true "waveline."

K-II 27, a wide-bodied lekythos, in spite of its apparently sagging body shape must be related to two examples from Sardis: P84.97/8969 "globular lekythos decorated with bands of red slip" from the Domestic Area (see *ibid.*, and n. 18), and no. 3 from grave 61.1 (C. H. Greenewalt, Jr., *CSCAntiq* 5 [1972] 116–118 and pl. 3[2] left). These latter, however, have rounder bodies than K-II 27.

The form of the egg-and-dart cymation from the built coffin (see p. 184) may be an indication of a mid-sixth-century or slightly later(?) date for the K-II group. Good parallels lie in the archaic Ionic cymatia from Samos. One cymation is dated by E. Buschor "in the 40's" (*AthMitt*) 72 [1957] 6). A similar one is found on an echinus on a capital from the Polykratean Temple, but Reuther (*Heratempel*, 49, fig. Z 41) considers it to be a type found also earlier than the Polykratean Temple. Others are illustrated by H. Kyrieleis (*Führer durch das Heraion von Samos* [Athens, 1981], 67–69, esp. figs. 43 and 44.) as belonging to the Polykratean Temple.

My conclusion from these comparisons is that K-II may contain an assemblage somewhat later than the Sardian examples. The question is, how much later?

K-II contained no fibulae and no belts, but did have an imported alabastron (*Gordion*, 123, no. 59, pl. 6) and a plain alabastron, and an ivory flat figurine of a female; this may mean that the occupant of the burial was a female who died perhaps somewhat later than the battle of 546, and whose gifts had connections with Lydia and East Greece.

General dating for K-II: 550–540 B.C.

For other discussions of K-II, see herein p. 184 and n. 11 (built coffin), p. 197 (amber), p. 189 and n. 41 (looting).

C contains Lydian lydia, imported alabastra, as well as Phrygian black polished vessels, dating prior to, but

close to, Tumulus A.<sup>14</sup> C is, thus, the latest of the timber tombs.<sup>15</sup>

Resulting sequence: S-3/S-2, K-II, C.

14. See E. Kohler in *Young Symposium*, 68: arguments for dating Tumulus A ca. 540–525 B.C.; also Kohler, *Gordion II*, Pt. 2.

15. One disturbed "tumulus" (MS 8), in the Museum Site excavated by G. R. Edwards in 1962, was briefly published by him as a "largely demolished tumulus . . . of perhaps the seventh or sixth

century B.C." *Expedition* [Spring 1963] 43–44, figs. 5, 6). The burial contained hobnailed boots, however, which should be compared rather with many other groups of hobnails in pit burials of Roman date at Gordion. Cf. McClellan, *Iron*, 639–647.

# Selected Forms of Gifts

The functions and progressions in shapes or techniques of manufacture for selected objects from the three great tumuli were discussed in the section "Commentary" in Young, *Gordion* I. Those comments will be briefly referred to here and, where possible, additions will be made from the evidence of the lesser inhumation tumuli. If new forms of a type appear in the seventh and sixth centuries, they will be discussed

at the end of each section.

The sequential order of the tumuli, as suggested in the foregoing chapter, will be used in their presentation; the order of the objects listed follows the list of the contents of the pre-Kimmerian tumuli on pp. 185-186.

Details of description and comparanda for any individual item will be found in the catalogue entry for that item (see **TumB 1**, **TumC 1**, etc.).

## *Jewelry*

### GOLD

No personal jewelry except for bronze fibulae (see below) appeared in the pre- or post-Kimmerian inhumations, either "great" or "lesser," until the unique occurrence in Tumulus B:

**TumB 1** Gold socket with paste inlay (near neck of skeleton in coffin).

**TumB 1** has been interpreted as strung on an unknown material (bronze would have left traces at least of color; gold would not have been destroyed). It could have been strung on some sort of cord which would have disappeared, as here. The Tumulus B assemblage (see p. 187) has in other ways shown a variant character, so perhaps *precious* earrings or pendants are a non-Phrygian attribute before the Lydian and Persian periods. The presence of precious jewelry in abundance begins in Tumulus F, the earliest known cremation (also last quarter seventh century).

### AMBER

A few carefully shaped pieces were recovered:

<b>TumS3</b>	1	Biconical bead (disturbed fill of burial pit)
K-II	62 <sup>1</sup>	Almond-shaped piece (L. 0.02 m.) (in grave)
	63	Wedge-shaped piece (L. 0.02 m.) (in stone pack).

Since Tumulus K-II dates close to the time of the coming of the Persians (see p. 195, n. 13), the date for the use of amber in the timber-grave tumuli may spread through the latter part of the Lydian period at Gordion and into the Persian. See J 28 in Tumulus D cremation, dated close to 550 B.C.

\*\*\*

A full discussion of precious jewelry belongs in Volume II, Part 2, as numerous and varying types occurred in the cremation tumuli (A, D, F, I).

1. C. Körte in *Gordion*, 128 (K-II 62, 63) and fig. 114.

## Bronze

## VESSELS

## CAULDRONS

## "VERY LARGE" CAULDRONS AND THEIR IRON RING STANDS

Cauldrons of great size (D. 0.70–0.78, D. rim 0.48–0.58 m.) and their ring stands did not appear in post-Kimmerian inhumations; there was only one (B 426) in the latest of the cremations (Tumulus E).

Discussion of these has therefore been postponed to *Gordion* II, Part 2.

## "MEDIUM-SIZED" CAULDRONS AND THEIR IRON RING STANDS

Falling between the "very large" cauldrons above and the "small" cauldrons below is a middle-sized class of cauldron (Ds. ca. 0.50, D. rims 0.25–0.29 m.):

*Pre-Kimmerian*

TumW	1,2 <sup>2</sup>	Hammered bull's-head atts., br. rings, wide rim, textiles
K-III	50 <sup>3</sup>	Br. T-att., iron rivets, iron "replacement" rings
TumP	2 <sup>4</sup>	No h. pres., separately made rim, riveted on via iron neck band

TumP 2 and K-III 53, 54 (below) had iron neck bands to strengthen a separately attached rim and to provide a strong bed for the attachment of heavy iron carrying rings. Various types of iron additions to bronze cauldrons were fairly common.<sup>5</sup>

*Post-Kimmerian*

Only one cauldron in this size category was found among the lesser-tumulus collections:

TumB	12	Br. plate att., decorated ring att., flat wide rim (in stone cap).
------	----	--

It is to be noted that it was found in a burned state along with other objects burned and unburned, but contemporary for the most part (see pp. 13, 189).

No tripods were found under TumW 1, 2, TumP 2, or accompanying **TumB 12**. One appeared, however, in Tumulus K-III appropriate to support K-III 50:

K-III	100 <sup>6</sup>	(D. 0.32 m.) Legs sq. in section, welded to simple ring; feet turned out.
-------	------------------	---

All that can be stated from present evidence is that cauldrons of this size became extremely rare after the Kimmerian raids. There are many instances, however, of the continuation of the use of the shape in pottery—possibly also for ritual banqueting. See especially uncatalogued examples in Tumuli S-I (Fig. 55A[b]) and Z (Figs. 68F[a-c], 69A[a-c]); see general discussion of dinoi and low-necked jars, pp. 218–220).

"SMALL" CAULDRONS AND THEIR IRON RING STANDS<sup>7</sup>*Pre-Kimmerian and Kimmerian*

A much greater number of "small" cauldrons (D. 0.18–0.24, D. rims 0.12–0.225 m.) were presented as gifts in the pre-Kimmerian and Kimmerian burials, usually, but not always, in pairs:

TumW	3,4 <sup>8</sup>	Bird att., sq.-sec. bucket h., twisted ends, rim cast in one
K-III	51 <sup>9</sup>	Br. bar att., iron ring h., carrying stick
	52	Br. bar att., substituted(?) iron ring h., rim thick, cast in one
	53,54	Br. T-att., br. ring h., separate rim riveted on through iron neck band
TumP	3,10 <sup>4</sup>	T-att., br. ring h., rim cast in one
	5	T-att., br. ring h., narrow rim, carrying stick
K-IV	1 <sup>11</sup>	(ruined)
	2,3	No hs., cast
MM	4 <sup>12</sup>	T-att., br. ring h., separate rim brazed on

ments falls between my "medium" and "small" than between my "large" and "medium," so I believe this distinction should be made.

8. Young, *Gordion* I, 201, fig. 118, pl. 88B,C (TumW 3, 4).

9. G. Körte in *Gordion*, 70–71 and figs. 47, 48 (K-III 51–54).

10. Young, *Gordion* I, 11–12, pl. 8A-D (TumP 3–5).

11. G. Körte in *Gordion*, 100–101, figs. 73, 74.

12. Young, *Gordion* I, 110–111, fig. 71, pl. 58A-I (MM 4–9).

2. Young, *Gordion* I, 199–201, fig. 117, pls. 87A-D, 88A; K. DeVries, *ibid.*, 221, 222.

3. G. Körte in *Gordion*, 92.

4. Young, *Gordion* I, 11, pl. 7B; McClellan, *ibid.*, 38, ILS 753, 754, fig. 17A,B.

5. J. McClellan, *ibid.*, 29 with nn. 49, 50.

6. G. Körte in *Gordion*, 81 (not ill.).

7. Young listed these "medium" and "small" examples together in a group termed "small." However, a greater break in measure-

5	T-att., br. ring h., separate rim brazed on (brass) <sup>13</sup>
6,7	T-att., br. ring h., separate rim brazed on
8,9	T-att., br. ring h., rim cast in one
10,11 <sup>14</sup>	T-att., br. faceted bucket h., twisted ends, rim cast in one
12,13 <sup>15</sup>	T-att., cast bull's heads, br. faceted bucket h., twisted ends, separate rim brazed on.

The function and pairing of the small cauldrons with T-attachments and the techniques used on them during the pre-Kimmerian and Kimmerian periods have been thoroughly discussed by R. S. Young.<sup>16</sup> Those and all the rest from excavated Gordion tumuli have been conflated in the above list, which attempts to make the pairs and their distinctions easily seen.

As a result of her work on the reconstruction and reinterpretation of the "screen" in Tumulus MM, E. Simpson<sup>17</sup> has put forward a new theory concerning the function of the "screens" as serving stands, which must have been of special significance if one contemplates the inlaid decoration lavished upon them. The top shelves or "frames" include in their design two (in Tumulus P) or three (in Tumulus MM) large hollow circles. Simpson believes, on evidence of size and remnant bronze stains, that they were meant to serve as ring stands for the small cauldrons, which in every case were found near the "screens." TumW 80<sup>18</sup> and K-III (Möbel) 2<sup>19</sup> were successfully drawn into the argument as also being parts of serving stands.

The cauldrons were often accompanied by ladles occurring singly or in pairs (see below, "Ladles"). The complete serving complexes with their containers constituted impressive gifts.

TumW 1 and 2 were too large to be accommodated within the width-measurements of the stand (TumW 80), but the small cauldrons TumW 3 and 4 would be suitable.

Iron tripods for small cauldrons did appear, however, later in the pre-Kimmerian period:

K-III	101 <sup>20</sup>	(D. 0.185, H. 0.15 m.) Feet turned out
	102	(H. 0.39 m.) Preserved foot turned out.

The remains from K-III result in a happy theoretical combination: two small cauldrons on the serving stand, and two on iron tripods. It is to be noted that in the Destruction Layer of TB 4 on the City Mound a tripod (ILS 303<sup>21</sup>: OD. 0.24, ID. 0.18, H. 0.20 m.), with turned-out feet like those of K-III 101 and 102, was accompanied by pottery vessels only.

#### Post-Kimmerian

"Small" cauldrons were evidently much more common than the larger forms of cauldron in the post-Kimmerian period and appear to have remained in use for at least a short interval:

<b>TumS1</b>	<b>1</b>	Faceted bucket h. frag. with cast loop
<b>TumJ</b>	<b>18</b>	Crescentic att., iron ring h., separate rim-brazed or riveted on (see Fig. 26B; in stone cap)
	<b>19</b>	Crescentic att., br. ring h. (see Fig. 26C; in stone cap).

**TumS1 1** is evidence for the continuation of the small cauldron with bucket handles<sup>22</sup> in the later period, albeit with an altered system of fastening rings.

**TumJ 18** and **19** are not a pair, but appear to represent two cauldrons of similar size and type. The attachment B 470 in Tumulus F<sup>23</sup> represents a third cauldron close in type to **TumJ 18** and **19**.

A cauldron rim fragment (GD. rim 0.17 m.) in a post-Kimmerian context (B 1800; on top of the rubble bedding of Building P)<sup>24</sup> seems to preserve in vague form the bird's-tail theme in its attachment plate, but has plain narrow rods for "wings." The rim is two-piece, appearing to consist of a hoop triangular in section as core and to be wrapped by the wall sheet which is hammered over and downward to be brazed to itself.

A close study of the development of all cauldron rim shapes and means of attaching, where rims or attachments are added, should be undertaken by a metallur-

13. A. Steinberg, *ibid.*, 287, sample no. 91.

14. Young, *ibid.*, 111-112, pl. 58J,K (MM 10, 11).

15. *Ibid.*, 112, fig. 72, pl. 59A-C (MM 12, 13).

16. *Ibid.*, 223-224.

17. *Furniture from MM*, 144-151. See Young in *Gordion I*, 65 and fig. 34 (TumP 151B), also 180 and fig. 105 (MM 378B); see also p. 81 and n. 39.

18. Young, *ibid.*, 217-218, fig. 129, pl. 94C; the "frame" if preserved has not been described.

19. G. Körte in *Gordion*, 49, 50, fig. 9a.

20. *Ibid.*, 81 and fig. 70b,c (K-III 101 and 102).

21. McClellan, *Iron*, 373, 380, no. 250, pl. 53.

22. The only other probable use for this form of handle end would be on the handles of a situla. Since no situlae are at present known at Gordion outside Tumulus MM (MM 45, 46), the presence of a small cauldron seems more likely in Tumulus S-1.

23. Cremation: Kohler in *Young Symposium*, 65-66. Last quarter seventh century. See also *Gordion II*, Pt. 2.

24. G. K. Sams interpreted the provenience as indicative of the early phase of Building P. See *Gordion Notebook* 143 (1969) 79.

gist—perhaps to appear, along with trace-element analyses, in a special-study monograph devoted to the total bronze industry at Gordion.

Note under “Ladles” below that Tumulus S-1 probably contained at least three ladles and J preserved one, to accompany the cauldrons listed above. We should also recall the distinct possibility that cauldrons of the above sizes once existed in Tumulus Z.

However, according to evidence gathered thus far, neither bronze cauldrons of the above size range nor their ladles appear to post date ca. 620–600 B.C.

Only one post-Kimmerian fragment, possibly from an iron ring stand for a small cauldron appears to have survived: ILS 483 from Tumulus F, with a preserved foot in the shape of a split hoof.<sup>25</sup>

## LADLES

### *Pre-Kimmerian and Kimmerian*

Young<sup>26</sup> has listed the Gordion ladles and a few from Ankara and Ephesos as parallels. He treated in detail the forms, and the techniques used in making and decorating them. The ultimate origin of the ladle may lie farther east.<sup>27</sup>

TumW	7 <sup>28</sup>	Rect. tang, ridgelike bead/reel, sq. stem, rest lost
	8	Cast and hammered 3-pc., rect. tang, anim. head, sq. stem, anim. head, ribbon with central groove at elbow
K-III	91 <sup>29</sup>	Hammered 2-pc., sq. tang, stem soldered on, ribbon stem with grooved margins, flat-cut rough bird's(?) head at end
TumP	8 <sup>30</sup>	Hammered 1-pc., rect. tang, plain ribbon stem, flared end
	9	Cast 2-pc., sun-disk tang, reels and double bar, double-rod stem, double bar and reels, hammered ribbon elbow with flared end
K-IV	4 <sup>31</sup>	Cast 1-pc., rect. tang with concave sides and grooved margins, ribbon stem grooved, small grooved bolster near elbow, plain end

MM	47 <sup>32</sup>	Hammered 1-pc., rect. tang with concavesides, ribbon stem grooved, bolster at top
	48	Hammered/patched 1-pc., rect. tang with concave sides, ribbon stem grooved to end, two cast bolsters attached near top front and back of hook.

As Young emphasized, a variety of tang types, stem types, and decoration on ladles seems to persist from beginning to end at Gordion, with no single line of development during the pre-Kimmerian period. The rod stem begins in Tumulus W and then the ribbon and rod both continue after K-III side by side: the rod was cast and the ribbon may merely be the hammering flat, especially at the elbows, of the initial cast rod in each case. One minor trend is observable: the decorative cross-elements begin as bars or animal heads to mask joints, but true bolsters do not appear before K-IV, where they are attached to the stem not necessarily as masks of joints.

A very heavily burned, uncatalogued example was saved out of the burned layer in Megaron 3.<sup>33</sup> It had stepped rectangular tang, bead/reel, sq. stem, bead/reel, elbow lacking (may have lost bolsters?).

Bolsters on ladle stems persist beyond the Kimmerian period.

### *Post-Kimmerian*

Evidence for post-Kimmerian ladles is scanty:

<b>TumS1</b>	<b>2</b>	Frag.: ribbon stem, grooved, 2 plain bolsters
	<b>3</b>	Frag.: ribbon stem, grooved, profiled bolster
	<b>4</b>	Frag.: plain bolster only, from square-sectioned ladle stem
<b>TumJ</b>	<b>30</b>	From stone cap; iron: false double stem, 2 bar-like crosspieces.

Of great interest is the iron ladle(?) handle from Tumulus J. In this instance we have no evidence for the angle of stem to cup, but the one other iron ladle known to the writer comes from ninth-century Hasanlu in northwest Iran.<sup>34</sup> Its lost handle, to judge from the position of the preserved stump, stood in the same

25. McClellan, *Iron*, 374, no. 251; Kohler, *Gordion* II, Pt. 2.

26. *Gordion* I, 227–229.

27. *Ibid.*, 229, n. 52; M. J. Mellink, *ibid.*, 266.

28. Young, *ibid.*, 203, 227–229, pl. 89A (TumW 7), pl. 89B-D (TumW 8). In the accompanying lists the ladles are described according to their significant parts, beginning with bowl and ascending.

29. G. Körte in *Gordion*, 75, fig. 59.

30. Young, *Gordion*, I, 13, 227–229, pl. 8H (TumP 8), fig. 7, esp. 229, pl. 8I (TumP 9).

31. G. Körte in *Gordion*, 101, fig. 74.

32. Young, *Gordion* I, 123, 227–229, pl. 64A,B (MM 47, 48).

33. Cited by Young, *ibid.*, 227.

34. *Ibid.*, 229, n. 52.



relation to the lip of the cup as did all those in bronze from Gordion.

It appears that these later ladles occur only in proveniences which also contained small cauldrons (S-1, J). A cauldron was indicated in Tumulus F (B 470),<sup>35</sup> but its ladle may have been lost in the original pyre or in transit to the secondary installation.

Chronologically this brings the latest small cauldrons and ladles, at present known from the tumuli, down to the last quarter of the seventh century.

### LARGE JUGS WITH TREFOIL MOUTH

MM 16-25 (Ds. 0.29-0.353 m.), which lay fallen at the foot of the west wall of the chamber in MM, constituted a group of ten technically advanced jugs, each made from several pieces and having ridged joins and folded roll handles. These were described in detail and discussed by R. S. Young.<sup>36</sup>

In pottery closely similar jugs appeared in Early Phrygian pre-Destruction and Destruction levels on the City Mound.<sup>37</sup> However, there were no predecessors in either bronze or pottery in the pre-MM tumuli, and no bronze examples have been found in post-Destruction contexts in either tumuli or city.

### SMALL JUGS WITH NARROW NECK AND TREFOIL MOUTH

#### Pre-Kimmerian and Kimmerian

The techniques used in making the great number of bronze jugs preserved from the pre-Kimmerian period have been discussed in great detail by R. S. Young.<sup>38</sup> There were none in Tumulus W, and none in (looted) G, Q, X, and Y; two not forming a pair appeared in Tumulus P, and a multitude in Tumulus MM:

TumP	6,7 <sup>39</sup>	Hammered 2-pc.(?) plus disk, folded roll h.
MM	26 <sup>40</sup>	Hammered 3-pc., central ridge mask, folded roll h.
	27	Cast 1-pc., folded roll h.
	28	Cast 2-pc., ridge mask, folded roll h.

29	Hammered body, cast shoulder-rim, ridge mask, folded roll h.
30	Hammered body, cast shoulder-rim plus disk, ridge mask, folded roll h.
31-33	Hammered body, cast shoulder-rim plus disk, ridge mask, folded roll h.
34,35	Hammered 1-pc. (or plus disk?), folded roll h.
36-38	Hammered 1-pc. plus disk, folded roll h.
39-43	Hammered 1-pc.(?), folded roll h.
44	Hammered 3-pc., smooth overlap at neck, ridge mask on belly, studded solid strap h.

#### Post-Kimmerian

<b>TumJ</b>	<b>1</b>	Hammered rim only; at least 2-pc., wide neck, folded strap h.
-------------	----------	---

The post-Kimmerian remains are fairly meager, two out of three examples having been burned in cremations (see Tumulus F: B 469 and Tumulus M: B 467). They furnish evidence, however, that small narrow-necked bronze trefoil jugs were being manufactured at least down into the Lydian period (Tumulus M).<sup>41</sup>

**TumJ 1** shows an attempt to copy the carefully finished rectangular-sectioned strap handles seen in MM 44 (above) and in pottery in post-Destruction levels on the City Mound and, e.g., in Tumulus H (**TumH 3, 4**). But in **TumJ 1** knowledge is preserved of the pre-Kimmerian preference for folding two pre-hammered strips of metal together to form the desired handle, here rectangular in section instead of rounded.

### JUGS WITH SIDE SPOUT, SIEVED

TumW	5 <sup>42</sup>	Cast 1-pc. body, concave base, wide neck, flat lip, solid round-sec. high-swung h. riveted on, spout half a closed tube flanged against wall, half an open trough
MM	14 <sup>43</sup>	Hammered 1-pc. body, concave base, saucer rim, folded h. with studs at att., spout a tube flanged against wall, half closed, half open trough

35. See above, "Small' Cauldrons," p. 199, and *Gordion* II, Pt. 2.

36. *Gordion* I, 114-116, fig. 74, 224-227, pl. 60A-P.

37. *Ibid.*, pl. 96E; G. K. Sams, *Gordion* IV, pp. 60-61.

38. *Gordion* I, 116-120, 224-227. In the list below, the terminology and opinions concerning method follow those of R. S. Young.

39. *Ibid.*, 12-13, fig. 6, 226, pl. 8E-G (TumP 6, 7).

40. *Ibid.*, 116-121, figs. 75-77, esp. 226-227, pls. 61A-62B (MM 26-44).

41. E. Kohler in *Young Symposium*, 65, 66 and fig. 10 (F), 66 and esp. 67 (M). See also *Gordion* II, Pt. 2.

42. Young, *Gordion* I, 201-202, pl. 88D.

43. *Ibid.*, 113-114, fig. 73, pl. 59D-F (MM 14, 15).

- 15 Hammered 1-pc. body, concave ring base, med. neck, stepped-up rim, folded h., lid fits over rim and loops through h. Spout 1/3 tube, 2/3 flared trough.

This shape has been generally considered in publications by G. Körte, R. S. Young, and G. K. Sams to be that of a drinking vessel. Moorey, however, presents arguments for its usage as a dipper.<sup>44</sup>

Not much is yet known about the tinning of ancient metal vessels, but it is possible that these bronze cups remained unlined. At least no remnant of tinned linings has been noted as a result of visual examination. It is possible that bronze was safe for the storage and drinking of cold water, beer, "barley wine" (κριθνός οἶνος = ale), or grape wine; milk or any milk product, however, such as liquid yogurt or kumiss, drunk directly from an untinned container would have been hazardous to Phrygian health. In British and Indian laboratory studies<sup>45</sup> the ingestion of copper-contaminated milk has been found to be associated with a variety of serious hepatic disorders, especially in children.

Perhaps, instead, the three bronze vessels listed above were mere showpieces; MM 15 especially appears to be a tour de force of the bronzeworker's craft. At any rate examples in bronze seem to have been extremely rare and not to have continued beyond the time of Tumulus MM. See the discussion below (pp. 223–224) of the ceramic jugs with side spout and sieved wall, which, to judge from their greater numbers, must have been preferred to the metal ones.

#### SPOUTED BOWLS WITH LIFTING HANDLES

This is a rare type of bronze bowl, with only three examples in pre-Kimmerian burials:

- |       |                  |   |
|-------|------------------|---|
| K-III | 92 <sup>46</sup> | (D. not given) Open spout, shape unspecified, bronze rings thought to receive two swinging(?) iron handles, K-III 108 |
| MM    | 49 <sup>47</sup> | (D. 0.22 m.) One lifting h. (horizontal att. at rim), short trough open at rim, cast in one, flared                   |

- |    |   |
|----|---|
| 50 | (D. 0.197 m.) One lifting h. (horizontal att. to rim), separate flared trough attached to sieved wall by flange, bar across trough at bowl rim. |
|----|---|

The two types, with and without sieved wall, must have had two distinct purposes, perhaps the polite tipping up to dispense some liquid already in a satisfactory state (MM 49) or one containing undesirable solids (MM 50).<sup>48</sup> The only possible example of the type in Tumulus P is of wood.<sup>49</sup>

One further example was recovered from a post-Kimmerian burial:

- |      |   |   |
|------|---|---|
| TumZ | 8 | Handle lost, separate trough flanged to sieved wall, no bar at rim. |
|------|---|---|

TumZ 8 most resembles MM 50. Later examples in bronze have not appeared, but neither has the shape in pottery. The function of these bowls must have been taken over by some other shape, most probably in pottery, or else the custom which required their use ceased.

#### LARGE BOWLS (NONSPOUTED) WITH TWO FIXED HANDLES

- |       |                  |  |
|-------|------------------|--|
| K-III | 55 <sup>50</sup> | (D. 0.48 m.) Rim strengthened with br. band riveted. Cut-out patterned hs. (1-pc. with bowl) supported by vertical rods riveted to wall. Contained dark red powder from conifer(?). Fumigation powder? |
|       | 56               | (D. 0.49 m.) Standing arched grips on bronze bar, iron band set around rim   |
|       | 57               | (D. 0.35 m.) Standing arch h. with lotus buds on top, 5 rivets (studs on interior); patched on floor   |
|       | 58               | (D. 0.425 m.) Iron rings in br. loops on horseshoe-shaped bars riveted to walls; textile frags.  |
|       | 59               | (D. 0.245 m.) Heavy standing rings riveted to walls; plain bars under rim to R. and L. of rings; rim slightly thickened, beveled toward exterior <sup>51</sup>   |
| TumP  | 10 <sup>52</sup> | (D. 0.315 m.) Thickened rim flattened; arched h. att. to bar under rim, riveted to wall (stud heads on interior)   |

44. G. Körte in *Gordion*, 55; G.K. Sams in *Gordion I*, 251, 252; P.R.S. Moorey, *Iranica Antiqua* 15 (1980) 195.

45. See M. S. Tanner *et al.*, *Lancet* (20 Oct. 1983) 992–995. I owe this reference to Marianne Das.

46. G. Körte in *Gordion*, 75; possibly with handles, pp. 81–82 (fig. 70h).

47. Young, *Gordion I*, 123–124, pl. 64C,D (MM 49, 50).

48. If the contents of these bowls were ingested, the Tanner data would apply here also. See above, n. 45.

49. See TumP 142 (Young, *Gordion I*, 60, pl. 27C).

50. G. Körte in *Gordion*, 71–72, figs. 49–52 (K-III 55–59).

51. Observed by this writer in Berlin.

52. Young, *Gordion I*, 14, pl. 8J,K.

MM	51 <sup>53</sup>	(D. 0.217 m.) Handle shaved to be doweled above to rim and below to wall; curved supports under straight rod which goes beyond supports; rim thickened and flattened on top	146	Wooden bowl, frag. of wooden bolster, untapered br. h.	
	52	(D. 0.279 m.) Handle supports rise from long scalloped horizontal plates under rim; lifting rods, horizontal, extend beyond curved supports; former set of rivet holes still showing in rim	147	Wooden bowl, bolster lost, top of spool flush with rim, triple bands	
	53	(D. 0.25 m.) Spools (some studded) att. to rim (flat on top). Arched handles on att. bar doweled to wall; two separate times of att.	MM	57 <sup>60</sup>	Br. bowl, plain br. h., untapered, cast naillike heads top and bottom of spools, top of spool flush with rim
	54	(D. 0.242 m.) Rim thickened and flattened. Ring hs. appearing fixed in curved tube lying on rim. Whole fixture cast and doweled to rim.	68	Br. bowl, plain br. h., untapered, studded(?) spools, spool tops flush with rim	
			60	Br. bowl, faceted br. h., untapered, ridged spools, spool tops flush with rim	
			61,67	Br. bowl, plain br. h., slightly tapered, plain spools, spool tops flush with rim	
			69	Br. bowl, plain br. h., slightly tapered, bolster with nail-headlike platform, spools nail-headlike at top and bottom, spool tops flush with rim	
			65	Br. bowl, plain br. h., tapered, bolster with low platform, plain spools flush with rim	
			63	Br. bowl, plain br. h., tapered, bolster with nail-headlike platform, plain spools flush with rim	
			56	Br. bowl, plain br. h., tapered, bolster and spools with solid cast naillike heads, tops of spools flush with rim	
			55,62	Br. bowl, plain br. h., tapered, studded bolster and spools, tops of spools flush with rim	
			66	Br. bowl, plain br. h., tapered, plain spools, upper ends slightly overlap rim	
			59	Br. bowl, plain br. h., tapered, bolster and spools with cast buttons overlapping rim	
			58, 64	Br. bowl, plain br. h., tapered, bolster and spools with studs overlapping rim.	

Bowls of this type occurred in fair numbers in the three tumuli cited, but were seen in no other tumuli either earlier or later. Thefad for these and the foregoing class of bowl with fixed handles may signal a special relationship among Tumuli K-III, P, and MM.

#### WOODEN AND BRONZE BOWLS WITH SWIVELING HANDLES AND BANDED RIM

The extended presentation of these bowls by R. S. Young<sup>54</sup> leaves little upon which to comment. Three aspects of decoration, however, are important: (1) the bolsters, (2) the ring handles,<sup>55</sup> and (3) the spools out on the rim bands. Before the Kimmerian Destruction all these began to show directions of change which continued into the post-Destruction period.

#### Pre-Kimmerian and Kimmerian:

TumW	24 <sup>56</sup>	Pair plain br. untapered hs. from wooden bowl(?)
K-III	Holz 4 <sup>57</sup>	"Eine holzerne Schale mit Ringhenkeln aus Bronze"
TumP	31-33 <sup>58</sup>	Br. untapered h. (from wooden bowl?)
	145 <sup>59</sup>	Wooden bowl, studded bolster holding bands round in section, plain br. untapered h., studded spools, spool tops flush with rim

Ancestral both to the bowls in wood with mountings still in wood, but with bronze rings, and to the bowls all in bronze, was probably the original plain wooden bowl, which without a tightening support would tend to split when it shrank in the dry air (only constant treatment with oil or storage under water could have prevented this). It is possible that an early tightening mechanism around the edge of the bowl was a binding of withes or of textile cording, either or both tacked to the exterior rim. This might explain why the all-wooden copies of the rim bands were round in section and sometimes even tripled,<sup>61</sup> and why the early wooden bowls have hollowed under-rim profiles (to keep the

53. *Ibid.*, 124-125, pls. 64E,F, 65A,B (MM 51-54).

54. *Ibid.*, 229-233.

55. *Ibid.*, 232 (handles), esp. 231 (spools).

56. *Ibid.*, 207, fig. 125.

57. G. Körte in *Gordion*, 43, 52.

58. Young, *Gordion* I, 17, pl. 10K (TumP 31-33).

59. *Ibid.*, 60-61, fig. 30, pl. 27E-1 (TumP 145-147).

60. *Ibid.*, 125-130, figs. 80-85, pls. 65C-67G (MM 55-69).

61. E.g., TumP 147: *ibid.*, 61, pl. 27I.

cord in place?).<sup>62</sup> When these attachments were copied in bronze, the round section of the rim band and the hollow under the rim gradually became lost because the rationale for these disappeared.<sup>63</sup>

Although we must proceed without the aid of a complete set of profiles for those bowls entirely of bronze, it seems that a rough line of development emerges from evidence seen in the plain ring handles, which can be arranged in a progression (see list above) from untapered at ends through slightly tapered to well tapered. It is to be noted that among these bowls the earliest lengthwise decorative faceting of the handle was added upon an untapered handle (MM 60).<sup>64</sup>

Following the general direction taken by the handles, the bolster style upon the earliest bronze examples shows immediately vertical central and end ridging (again MM 60, ridged only on its ends, appears to be the only exception). The spools on the rims are studded as early as Tumulus P. These are at first found with the tops of the spool proper flush with but outside the top of the rim, then with studs or naillike heads partially overlapping the rim (in MM).

#### Post-Kimmerian

<b>TumS1</b>	5	Rim band frag. only
<b>TumZ</b>	1,10	Br. hs. with molded dec.
	2,3,11	Plain br. hs., slightly tapered; 3 and 11 possibly a pair
	9	Rim band frag., round in sec.
<b>TumJ</b>	20	Br. bowl, bolster knob rests on rim, spools have naillike heads
<b>TumS2</b>	1	Br. bowl, frags., rim erect, thick, flattened (not folded)
	2	Plain tapering ring h.

In post-Kimmerian inhumations the same lines of development continue. The tapered ring handles take on molded decoration (see **TumZ 1** and **10**, where a connection with fibula arcs is demonstrable), and lengthwise faceting on them advances to deep fluting. In the cremations the studs on the spools, extending well over the rim, grow into knobs at both the tops and bottoms of the spools, and move from simple to intensively molded.<sup>65</sup>

## OMPHALOS BOWLS

Machteld Mellink<sup>66</sup> has presented the full array of pre-Kimmerian and Kimmerian bronze omphalos bowls from Gordion in a discussion of their disposition in the tomb, their history, the development of details of shape and technique, and their function.

The walls were petaled, ribbed, or plain. Bases were flat, slightly flattened, or sometimes formed a mere resting surface around the base of the omphalos. Omphaloi were varied: (1) small hollow cones which formed simple yet satisfactory finger-holds hammered into the bases of one-piece bowls, (2) straight-sided, (3) mushroom-shaped, and (4) tall, cleverly knobbed and plastically decorated. Medallion-like designs sometimes surrounded the omphalos, decorating the floor. Medallions were cast, and had one to seven ridges, which were sharp, rounded, or mixed sharp and rounded. The platform could be plain or stepped. Omphaloi of types (2), (3), and (4), raised by hammering and accompanied by their cast medallions, were fastened to a separate wall section.

## PETALED OMPHALOS BOWLS

### Pre-Kimmerian and Kimmerian

TumW	9 <sup>67</sup>	(D. 0.124 m.) Hammered, nonlotus petaling, small omph.
	10	(D. 0.15 m.) "Cast" (Young) with rosette base, ridged rim
TumP	11 <sup>68</sup>	(D. 0.141 m.) "Cast" (Young) small omph., knobbed, nonlotus petaling, ridged rim
MM	70-73 <sup>69</sup>	(D. 0.178-0.195 m.) Normal lotus-petaled bodies, 3-7 ridges, highly decorated omph.; added lugs on rim of MM 70; some with "accents"
	74-122	(D. 0.152-0.236 m.) Normal lotus-petaled bodies, 1-7 ridges, or (MM 122) plain platform; <i>ca.</i> hemisph. omph.; some with "accents"
	123	(D. 0.157 m.) Abnormal variant petals, platform system, hemisph. omph.; no "accents."

62. *Ibid.*, 60, e.g., fig. 30 (TumP 145); in only one bronze bowl is this curve under the rim preserved: MM 58, *ibid.*, 127, pl. 65F.

63. Compare A. Knudsen, *Berytus* 15 (1964) 65 n. 14, in which she cites but does not follow J. Birmingham (*AnatSt* 11 [1961] 189), who also believed in a wooden prototype.

64. Young, *Gordion I*, 128, fig. 80F, Pl. 66B,D.

65. This discussion concerning bowls in Tumuli F (B 468), M (B 466), and A (B 265, 267, 325, 326) will be continued in Kohler, *Gordion II*, Pt. 2.

66. *Gordion I*, 233-236, 266, 269. F. Matz (*Klio* 30 [1937] 110) discussed the Mesopotamian ancestry of the omphalos bowl. See also Lushey, *Phiale*. In 1939 Lushey knew from Gordion only the "plain omphalos bowls" from Tumulus K.III (nos. 60-72; see also below, pp. 205-206).

67. Young, *Gordion I*, 203-205 (TumW 9, 10), figs. 119-122, pl. 89E,F.

68. *Ibid.*, 14, fig. 8, pl. 9A-C.

69. *Ibid.*, 131-141, figs. 86-90, pls. 68-70 (MM 70-123).

In the pre-Kimmerian petaled omphalos bowls, the petals followed several tiering systems, with petals numbering from 12 at the base (multiplying to 48 at the rim), 13 (to 52), 14 (to 56), 15 (to 60), 16 (to 64), 17 (to 68), and 18 (to 72). One exceptional system (see MM 123) began with 32 at the base but multiplied only to 64.

Very often zigzag or arched punchlike marks are made on the rims over the tips of the petals; similar marks, but rounded, also sometimes appear, as if accenting also the bases of the petals. These marks are seen inside only, outside only, and sometimes on both faces but not as the obverses or reverses of each other.<sup>70</sup>

The main petal areas were hammered into a form—perhaps of a type similar to MC 198 (Pl. 83I), a rough moldlike piece which provides a fired clay swage block for petals of several different measurements.<sup>71</sup>

#### Post-Kimmerian

<b>TumS1</b>	<b>7B</b>	Frag.: tiered petals
	<b>8A,B</b>	Fraggs.: tiered petals with “accents”
	<b>9</b>	(D. 0.18 m.) Petaled frag. with “accents”
<b>TumZ</b>	<b>12</b>	(D. 0.18–19 m.) Petals and “accents”
<b>TumJ</b>	<b>2</b>	(D. 0.172 m.) Tiered petals (14 to 56), no “accents,” one ridge, erect rim
<b>TumS2</b>	<b>3</b>	(D. 0.15 m.) Tiered petals and “accents”
	<b>4</b>	Frag.: tiered petals and “accents”; rim erect.

In the above group the range of rim-diameters (0.15–0.19 m.), the style of accents for hammering, and their petaling continue through **TumS2 3**.

**TumJ 2**, however, is simpler, more shallowly worked, unaccented, and slightly irregular in the positioning of the petal tips at the rim. **TumS2 3** is the latest known (and smallest) bowl of the tiered-petal style deposited in an inhumation tumulus.

A new class of bowls, possibly with omphalos but with untiered petals, is represented by two fragments from center walls (**TumS1 7A**, **TumZ 13**, GPW. one reed 0.0035 m.). This type of reeding, excellently disciplined, appears very soon after the Kimmerian

Destruction. See p. 125, n. 53 for a discussion of “discipline” in the reeding of bronze and pottery.

#### RIBBED OMPHALOS BOWLS

##### *Pre-Kimmerian and Kimmerian*

The bowls of this period are (with the exception of MM 124) horizontally ribbed on the interior and plain on the exterior, denoting that they were done by casting (except for omphalos).

<b>TumW</b>	<b>17<sup>2</sup></b>	(D. 0.16 m.) Flat base, 8 ribs on int., 2 sharp ridges around large omph.
<b>TumP</b>	<b>127<sup>3</sup></b>	(D. 0.182 m.) Ridged rim, 8 flutes and ridges on int., 3 sharp ridges around hemisph. omph.
<b>MM</b>	<b>1247<sup>4</sup></b>	(D. 0.184 m.) Cast 2-pc., grooved on ext. by hand, platform with 3 steps around omph.
	<b>125–130</b>	(Ds. 0.156–0.21 m.) Cast 2-pc., 5–10 ribs on int. only, 1–7 ridges around omph.

##### *Post-Kimmerian*

<b>TumS1</b>	<b>6</b>	(D. unknown) Narrow fluting (GPW. 0.006 m.) on ext.; possibly not omph. bowl
<b>TumJ</b>	<b>3</b>	(D. 0.165 m.) Cast, 7 light undulant flutes in wall, 5 sharp ridges and step around omph.

**TumJ 3** extends the well-known pre-Kimmerian type in a slightly deviant form down to ca. 620 B.C.

The new type of fluting on **TumS1 6** introduces a variant horizontal adaptation of the narrower “reeing” seen on **TumS1 7A** and **TumZ 13**, q.v.

#### PLAIN OMPHALOS BOWLS

These appeared in great numbers in the excavated tumuli of the pre-Kimmerian period.

70. See *ibid.*, 140, fig. 90A. The writer wishes to offer the suggestion that, since the marks do not transfer through to the opposite face as they would if hammered in after the casting, to accent the tops and bottoms, these marks were already in the cast plain bowl walls as guides to be followed when the petals were hammered. This trick is at least as early as the cast ridge arching above the complicated petaling system of TumW 10 (*ibid.*, 204–205, figs. 121, 122, pl. 89F) and may have been especially useful for the hammering of the MM petaling system; petals

irregular or squeezed in the design were not found where the “accents” were present.

71. MC 198: from a pre-Kimmerian plaster-dump fill in the area south of Meg. 9. Max. dim. 0.11, PH. petal-troughs 0.031 m. “Bowl circumference” almost flat.

72. Young, *Gordian I*, 205, fig. 123, pl. 89G.

73. *Ibid.*, 15, pl. 9D.

74. *Ibid.*, 141–143, fig. 91A-D, pl. 71 (MM 124–130).

*Pre-Kimmerian*

TumW12-15 <sup>75</sup>	(Ds. 0.146-0.157 m.) Cast 2-pc., hemisph. body, 2-3 ridges around omph.
16	(D. 0.186 m.) Cast 2-pc., flattened base, 2 ridges around omph.
17,18	(D. 0.137-0.144 m.) Hammered 1-pc., flattened base, conical and hemisph. omph.
K-III 60-69 <sup>76</sup>	(Ds. 0.14-0.19 m.) 2-pc., 1-4 ridges around omph., some brassy in color
70	(D. 0.175 m.) No ridges, plain omph.
71	(D. 0.16 m.) Poss. hammered, flat base, no ridges, plain omph.
72	(D. 0.15 m.) Form as above, decorated omph. filled with lead
TumP 13-21 <sup>77</sup>	(Ds. 0.142-0.185 m.) Cast 2-pc., 3-4 ridges around omph., many brassy in appearance
22	(D. 0.171 m.) Cast 2-pc., flat base, 3 sharp ridges
MM 131-164 <sup>78</sup>	(Ds. 0.142-0.24 m.) Cast 2-pc., 1-6 ridges, or platform plus sharp ridges around omph.
165,166	(Ds. 0.159-0.171 m.) Cast 2-pc., platform around omph.
167	(D. 0.223 m.) Cast 2-pc., stepped platform, decorated omph.

It appears that these bowls, since they show no "accents" or planning marks around the cast rims, were possibly meant from the beginning to remain plain-walled bowls. They begin (for us) in Tumulus W (seven examples) and end their pre-Kimmerian and Kimmerian group in Tumulus MM with a large number (thirty-seven examples).

They appear to share fully, with the decorated bowls, the general history of the varietal development as to ridges, platforms, shapes of omphaloi, etc.

*Post-Kimmerian*

TumS1 10	(D. 0.14 m.) Cast 2-pc., 3 sharp ridges around omph., plain flaring very thin rim.
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There is evidence, then, that the plain omphalos bowls, which are the result of a two-piece casting system prior to any hammered additions to the walls, were produced also in post-Kimmerian times. This is to be expected since they existed parallel to the bowls

with rims treated in the mold to define areas for petaling. We have seen that these latter continued as late as the Tumulus S-2 example (see **TumS2 3** above).

The plain omphalos bowls are found as late as Tumulus S-1.

## PLAIN BOWLS

*Pre-Kimmerian and Kimmerian*

TumW	19 <sup>79</sup>	(D. rim 0.147 m.) Hammered, thin, flattened base, deep, groove under rim
	20	(D. 0.15 m.) Heavy, wide, shallow, rim thickened
	21	(D. 0.145 m.) Ditto, suspension hole plugged
	22	(D. 0.138 m.) Hammered(?), rim thickened, slightly flared
	23	(D. 0.139 m.) Cast(?), heavy flattened base, walls tighter than hemisph.
TumG	1	(no D.) Frags. of rim, direct, slightly thickened, beveled toward outside on top
	2	(no D.) Rim frag., hemisph. bowl; rim direct, slightly thicker than that on <b>TumG 1</b> , beveled toward outside on top
K-III	73 <sup>80</sup>	(D. 0.18 m.) Hammered, rim flaring, groove under rim, brassy color, rim pierced for suspension
	74	(D. 0.185 m.) Rim flat
	75	(D. 0.185 m.) Deeper than 74, traces of textile
	76	(D. 0.17 m.) Same, remains of textile
	77	(D. 0.19 m.) Heavy, cast, hemisph., brassy color, remains of textile
	78-80	(Ds. 0.155-0.185 m.) Hemisph., broken
	81	(D. 0.15 m.) Hemisph., rim plain and slightly flattened, hole for suspension, remains of plain-weave textile
	82-86	(Ds. 0.145-0.195 m.) Same, some only partially preserved
TumP	29 <sup>81</sup>	(D. 0.145 m.) Probably cast, heavy, shallow hemisph., plain rim, suspension hole
	30	(D. 0.123 m.) Same, but no hole
MM	168 <sup>82</sup>	(D. 0.141 m.) Cast, heavy, thick at base and rim, hemisph., collared by band
	169	(D. 0.138 m.) Same
	Uncat. <sup>83</sup>	Crushed, no further description.

original catalogue entries for 73 and 81 are observations made by the writer while in Berlin.

81. Young, *Gordion I*, 17, pl. 101J (TumP 29, 30).

82. *Ibid.*, 147, fig. 93, pl. 73C,D.

83. A third plain bowl was noted by Young (*ibid.*, 147, n. 74). See Young, *Gordion Notebook 63* (1957) 194.

75. *Ibid.*, 205-206, figs. 123, 124, pl. 90A-E (TumW 12-18).

76. G. Körte in *Gordion*, 73 (nos. 60-72), figs. 53, 54.

77. Young, *Gordion I*, 15-17, pls. 9F,G, 10A-H (TumP 13-28).

78. *Ibid.*, 143-147, figs. 91E-I, 92, pls. 72, 73A,B (MM 131-167).

79. *Ibid.*, 206-207, pl. 90G-I (TumW 12-23).

80. G. Körte in *Gordion*, 74, figs. 55, 56 (K-II 73-86). Additions to

Small hemispherical (or slightly deeper) bowls appear ubiquitous and must have been appropriate as drinking cups, to be held in the hand when full. Some show evidence of holes for suspension when not in use. Even if they were not tinned on the interior, perhaps a variety of non-acidic liquids could have been drunk from them, especially cold water, without a change of taste. But milk products would have proven disastrous.<sup>84</sup> In Tumulus K-III there are fourteen examples, a number which adheres to the pattern of groups of seven found among the pottery gifts in both Tumuli K-III and P.<sup>85</sup>

The prevalence of hammering over casting or vice versa in the manufacture is difficult to judge, as the evidence is not always altogether clear and is not mentioned in every case. Rims occurring in flattened, flared, and direct forms, sometimes thick, sometimes thin, reveal no pattern of development. The bandlike collars found on MM 168 and 169 do not appear elsewhere.

The ranges of greatest diameters (at rim) overlap throughout the burial groups, the smallest (D. 0.123 m.) occurring in Tumulus P (because it was a child's grave?) and the largest (D. 0.195 m.) in Tumulus K-III, where the shape was found in the greatest number.

#### Post-Kimmerian

<b>TumN</b>	<b>1</b>	(Est. D. 0.16 m.) Hammered rim folded toward int.; body <i>ca.</i> hemisph.
	<b>9</b>	(in cap) (Est. D. <i>ca.</i> 0.10 m.) Ditto, but rim thinner
	<b>10</b>	(in cap) (Est. D. 0.12 m.) Rim thickened, direct on int., everted and flattened on ext., body in slight reverse curve, walls thin.

Fragments of a hammered plain bowl (B 2018) with a thin rim triangular in section were found in the Tumulus E group (the latest).<sup>86</sup> This late occurrence may mean that the form continued in bronze as a representation of a drinking cup, although it existed in numerous examples in pottery, which are rarely found in graves.

**TumN 1, 9, 10** are classified as plain bowls because it is thought that in an unlooted tomb a heavy cast floor from around an omphalos should have survived (e.g., **TumJ 3**). A fragmentary platform did survive even in the looted tomb S-1 (e.g., **TumS1 10**).

## BELTS

### STUDDED LEATHER WITH DISKS AND OPEN-WORK END-PLAQUES

#### Pre-Kimmerian and Kimmerian

<b>TumW 25,26<sup>87</sup></b>		Disk (D. 0.136 m.) with large studded leather medallion design exposed through central hole; 3 frags. studded belt, end-plaque
<b>K-III</b>	<b>95<sup>88</sup></b>	One belt in coffin: pc. leather with thin and bronze <i>platten</i> ; end-plaque with cutouts and studs; studded pieces backed by leather; frag. of leather with finely studded marginal lines
	<b>Uncat.</b>	(Orig. L. 0.15 m.) Frag. of studded open-work plaque
<b>TumS</b>	<b>1</b>	Disk (D. 0.20 m.), decorated with 2 sets of 3 conc. ridges; ctr. of disk open
<b>K-IV</b>	<b>5<sup>89</sup></b>	All parts found: disks (D. 0.19–0.215 m.) conc. ridged and studded, at ctr. small studded leather medallion exposed, 2 lugs, squared patterns of studding on belt (W. 0.185–0.19 m.), end-plaques (L. 0.185–0.20 m.) with openwork and studded dec.
<b>MM</b>	<b>170,90</b>	Disks and parts of studded leather belts
	<b>171,177,178</b>	5 end-plaques (one L. 0.192, rest incomplete) belonging to MM 172–176 but individually unassignable.
	<b>172–176</b>	
	<b>179</b>	

**TumS 1** and **K-IV 5** are here added to the list of studded belts from pre-Kimmerian proveniences discussed by the writer in Young, *Gordion I*.<sup>91</sup> A striking parallel for the general design of TumW 25 is found on a belt disk from southeast France (Plain of Aups; Dep.

84. See p. 202 and n. 45.

85. For discussion of sets of seven, see G. Körte, *Gordion*, 84; G. K. Sams in Young, *Gordion I*, 46, 252.

86. The date of Tumulus E at this writing is not yet firm. Further study should fix it near the end of the sixth century, plus or minus. See *Gordion II*, Pt. 2.

87. Young, *Gordion I*, 207–208, fig. 126, pl. 91A.

88. G. Körte in *Gordion*, 45, 48, 76. The writer assumes, with the aid of later knowledge, that in Tumulus K-III the bronze K-III 95 (p. 76) was the disk which, combined with the leather disk-

backer (fig. 8, p. 48) and the end-plaque (fig. 7b), formed a bronze and leather belt of the type found in MM 170–179 listed herewith (see n. 90). The measurements closely correspond. The fragment illustrated in fig. 7a exhibits fine studding at the belt margins.

89. *Ibid.*, 101. Under no. 5, G. Körte described in detail a disk for a bronze and leather belt.

90. Young, *Gordion I*, 147–154 (MM 170–179), esp. figs. 94, 95A–E, 96, 97, pls. 73E–K, 74A–L. See also E. Kohler, *ibid.*, 236–237.

91. Pp. 236–237.

Var).<sup>92</sup> The motif on **TumS 1** is exploited also in Tumulus P (which is here taken as standing chronologically between K-III and K-IV). K-IV 5 is related also to the MM belts by the pattern on its disk (two sets of three concentric ridges setting off the studded circles).<sup>93</sup>

#### Post-Kimmerian

<b>TumS1</b>	89	Studs, some with straight stems, some with folding tabs (74)
	Uncat. <sup>94</sup>	Disk from studded belt; conc. ridges, open ctr.
<b>TumB</b>	13	12 studs in 3 sizes (in stone cap).

The Tumulus S-1 burial included a collection of objects previously discussed as heirlooms (see above, p. 121).

B 1514<sup>95</sup> from the North Cellar (fragmentary disk with four fine concentric ridges between studded margin and inner break) could have joined the fill in the cellar via the pits through its floor, some of which pierced to the Kimmerian burned debris under the Clay Deposit.<sup>96</sup> The design on B 1514 comes close to that on MM 170.<sup>97</sup>

The evidence shows that the studded-belt type went out at the time of the Kimmerian raids or very soon afterward. The above pieces are from post-Kimmerian proveniences, but it is probable that each of them is a survivor from pre-Kimmerian times.

#### LEATHER WITH OPEN-WORK PLAQUES AND ANCHORED TOGGLELIKE FASTENER

Just one example of this type occurred in the pre-Kimmerian tumuli:

MM	180 <sup>98</sup>	Open-work plaques tacked end to end on leather; belt fastened by heavy toggle (for tied or double-hooked closure?).
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One possible example of this type of plaque (B 1670)<sup>99</sup> is known from the City Mound. It is coarsely decorated with open-work technique in circles, half-circles, lozenges, and drops; tack holes were preserved in edging bands: no inner studded banding, and no catch-holes. The coarseness of the openwork on B 1670 is approximately akin to that on the belt end-plaque in K-III;<sup>100</sup> however, the shapes of the individual cutouts are, among those on the open-work plaques found, closest to those on MM 180.

This type of belt seems extremely scarce. There are no examples in the lesser excavated tumuli, and B 1670 may be a survival from the pre-Kimmerian period on the City Mound.

#### SOLID WITH HOOKS, ARC HANDLES, AND STRAPS WITH CATCH-HOLES

##### Pre-Kimmerian

TumP	34 <sup>101</sup>	Open 2-loop belt strap riveted to belt, finely incised belt design of squares separated by pairs of narrower rectangles; handle of fibula type XII,7 with flat pierced end tabs for fastening to belt; string bay on each edge of belt almost closed
	35	Open 3- to 4-loop strap riveted to belt, finely incised belt design of squares separated by pairs of thin strips; handle XII,7 with flat pierced end tabs for fastening to belt; string bays opening up
	36	Open 3- to 4-loop strap riveted to belt, finely incised belt design of framed squares separated by 3 studs; handle modified XII,7 with animal heads and flat pierced tabs for fastening to belt; bays behind hook have become mere cavetto.

92. F. Benoit published (*Gallia* 18 [1960] 313 ff., fig. 39) a belt disk of pre-Kimmerian Phrygian type, with studded double margin, a four-armed central element, and adaptations of the volute design disposed in the circular field. The Aups disk was solid so that the center design was executed by incision and light punching, in lieu of the tiny-stud method used at Gordion. Kilian-Dirlmeier, *Gürtelhaken*, 97-98, no. 393, pl. 35, associated the Aups disk with the Kapelna type (mistakenly, I believe, interpreting the one preserved turned-back "lug" as a functional horizontal hook). She, however, considered the disk "isoliert" in time and space for lack of European parallels.

93. See MM 171, 173, 175, 178.

94. See p. 118, n. 14, and pl. 61A (*in situ*).

95. See Kohler in *Gordion* I, 237, n. 85, in which for "South Cellar" read "North Cellar."

96. R. S. Young, *AJA* 70 (1966) 268.

97. Young, *Gordion* I, 148-151, fig. 94A.

98. *Ibid.*, 154, fig. 95F (p. 150), pl. 75M; Kohler, *ibid.*, 237.

99. (Unpub.; orig. L. 0.182 m.) *Ibid.*, 237, n. 85. It comes from a sixth- to fourth-century context.

100. G. Körte, *Gordion*, 48, fig. 7b.

101. Young, *Gordion* I, 17-20 (TumP 34-36), figs. 9-11, pls. 11-12D; Kohler, *ibid.*, 238.



*Post-Kimmerian*

- TumS1 11,12** Belt fragments with bands of striated decoration at margins, sewing holes
- 13-15** Open-work straps with catch-holes and hinges
- 16,17** Hinges
- 18,19** Belt handles type XII,14A. **TumS1 18** has 5, **TumS1 19** possibly 7 compound bead-and-reel with intervening reels on arc which ends in ridged blocks
- TumJ 21** Fragmentary handle type XII,14A (in stone cap).

The points of advance of the Tumulus S-1 solid belts beyond the pre-Kimmerian solid examples are discussed on p. 127: additional catch-holes, hinging of straps, loss of complexity in the decoration of the belt itself, advance of arc-handle decoration from fibula type XII,7 to XII,14A.

In the mantle of Tumulus K<sup>102</sup> was a catch-hole strap (B 421) from such a belt. It was of thin sheet with punctate decoration, rolled at the end as if once bent around a hinge.

On the City Mound a scattering of parts belonging to this type of belt was found, from the level of the lower strata in the Clay Deposit and the first pits into it, upward to the Galatian Level. Keeping the stratigraphic sequence approximate from earlier to later, one encounters the following array of unpublished belt parts:

- B 1685** (in clay under South Cellar) Arc handle with 7 compound bead-and-reel and 6 intervening reels (XII,14A); ends have pierced tabs for fastening to belt
- B 1147** (trench MW2, pit in clay) Arc handle (XII,14A) with prop and thin grooved end-blocks
- B 1509** (trench TB7B, layer 6) Two open-work frags. from catch-hole strap, design of circles and figure eights, inner end with holes for stud attachments to hinge
- B 1320** (trench W1S, layer 5) Plain belt with sewing holes, two cavettos in end beside hook and cavettos on edge, arc handle (XII,14) with prop
- B 1499** (trench M5A, below floor 4) Small frag. strap with square catch-holes and repoussé dot decoration

- B 1669** (trench WS 5/6 N, layer 6, pit) Plain belt, long tapering hook with cavettos at each side on end of belt but not on sides, arc handle (XII,13) semicircular in section with plain blocks at center (where prop) and at ends (where riveted to belt)
- B 1604** (trench M6C, South Cellar, in pithos on lower floor) Plain belt with sewing holes, long hook with cavetto cuttings on end of belt, no side cavettos, arc handle with 7 major moldings (XII,14A), prop, and end-blocks ridged
- B 1605** (trench M6C, South Cellar, scattered over lower floor) Plain belt, long hook with cavettos at end of belt only, arc handle (XII,14A) with plain base-blocks, open-work strap of 3 rows of contiguous circles divided by narrow plain bands; patch folded and riveted over edge of belt
- B 1607** (trench M6C, South Cellar, on lower floor) Plain rect. frag. of sheet from belt, sewing holes along long sides and one end
- B 1606** (trench M6C, South Cellar, over lower floor) Fragment elongated hook, only
- B 1510** (trench M5E, South Cellar, fill) Fragment of open-work catch-hole strap with diaper design of circles and eights, row of contiguous open circles down ctr.
- B 1638** (trench M6A, South Cellar fill) Fibula-like belt clasp (XII,14A); ends squared off with rivets in back
- B 1441** (trench CC annex 2, pit in clay/earth, mixed fill) Hinge cross-ridged with bead-and-reel, attached by 2 rivets to bit of sheet (inner end of strap?)
- B 1195** (trench MN, layer 2c fill) Arc handle (XII,14A) with prop, end-blocks filed back in degrees and with 2 rivets each for att.
- B 677** (trench ET-N3, level 2) 2 strips of sheet from belt (PL. 0.70 m.) decorated with repoussé striations as if combed lengthwise; strap tongue-shaped with row of 4 holes, decoration repoussé line of dots around edge and around holes.

Much has been said about the belts of Tumulus P (TumP 34-36) and their being ancestral to the Chiote

102. Kohler, *Gordion II*, Pt. 2. K is a cremation tumulus with a *ter-*

*minus ante quem* for its mantle of ca. 600 B.C.

belts of the seventh century (see p. 127, n. 77). The pieces on the above list show, however, that many of the steps in the development from the Tumulus P to the Chios groups were taken at Gordion.

To place the belts from Tumulus S-1 in the larger sequence from the City Mound, it is necessary to look at belts from low in the Clay Deposit, from pits in the top of the Clay Deposit, and from the South Cellar, which was originally cut from floor 4 through the Middle Phrygian layers into the Clay Deposit.

The handle B 1685, although its XII,14A decoration was more complicated than that of **TumS1 18** or **19**, yet had the thin horizontal tabs for studded attachment to the belt like those seen in the Tumulus P examples. This shows that handle ends of tab type continued during the period up to the development of the XII,14A handles.

In the S-1 group difficulties are created by the lack of evidence from the decorated hook ends of belts; however, the other belt parts recovered show the first consistent set of general changes: hinging of the "shouldered" strap, larger number of catch-holes, handles of a slightly simpler XII,14A than that of B 1685 above, but with the added cross-ridged end-blocks. Belts from the general levels 6 and 5 above the Clay Deposit furnish evidence for the changes which took place in the hook end of the belt: cavettos remain in the end of the belt beside the hook, but the side bays seen on TumP 34-36 have disappeared.

B 1499 is the only example so far known at Gordion with square catch-holes and repoussé dot decoration like that seen on Chiote straps.<sup>103</sup>

B 1604, 1605, and 1607, from the lower floor of the South Cellar, have XII,14A handles with plain or ridged added end-blocks, and belting plaques in shorter lengths with sewing holes on ends as well as sides; these elements take us beyond the Tumulus S-1 style, with reference not only to handles but also to complete belts (hinged straps, etc.). This type was theoretically seen in Ionia before the Ionian local traits (handles of Chiote fibula type, vertical decoration on hinge posts, etc.) were added.

As mentioned above, the S-1 belt handles may have been the earliest examples of the XII,14A type, but the other evidence for development (hinges) may place S-1 a little later than B 1685 and B 1147, but not much, in view of the extensive group of pre-Kimmerian heirloom vessels found in Tumulus S-1.

These belts were modified in Gordion at least to the

extent seen on those from the floor and mixed fill of the South Cellar before they found their way to Chios, where belts then took on the characteristic Chiote squarish fibula handles whose round nail-headlike ends were incised in radiating lines.

These latter modifications appeared on Chiote handles of Boardman's types F and H in deposits dating as early as HS period III (660-630).<sup>104</sup> It is important to note that at both Gordion and Emporio the belt parts in evidence could have survived from times earlier than their proveniences implied.

### LEATHER(?) WITH SEWN-ON PLAQUES

#### *Kimmerian*

<b>TumKY</b>	1-6	Disks of various sizes, with raised ctr.
	7,8	Plain disks
	9-11	Crescents
	12	Semicircle
	13	"Tongue"
	14	Straight strip
	15,16	Toggles

#### *Post-Kimmerian*

<b>TumJ</b>	22	Rectangular "dotted H"
	23,24	Rectangular H
	25	Square "dotted H"
	26	Rosette in square
	27	Frag.: edging pieces
	28	Roundel: cross in circle
	29	Large concentric circles (D. 0.19 m.) near straight edge.

These two groups of plaques, found in the burial of KY and in the deposit in J's stone cap which was construed to be contemporary with the main burial, would make up into belts of the usual width (*ca.* 0.17 m.) but may represent some other accoutrement. The groups seem related to each other in that they were manufactured by the repoussé method and that all were to be sewn onto a background. They differ from each other, however, in their probable syntax and the nature of their designs. Both bronze plaque types lie outside the normal Phrygian gift assemblages, and form two groups which for other reasons (KY: tweezers, horse burials; J: weapons, tweezers) are seen to be foreign to Gordion (pp. 229, 232).

103. Boardman, *Greek Emporio*, esp. 219, nos. 279, 309-320 (pls. 88, 90), of which nos. 315 and 318 came from period HS II (690-660); this seems to place square catch-holes in Chios earlier than in Gordion.

104. *Ibid.*, 217, 219, esp. nos. 276 and 279 (fig. 142 and pl. 88). See also discussion by O. White Muscarella in *Anat. . . . Near East*, 339.

## FIBULAE

The long period of use of fibulae by the Phrygians at Gordion offers a convenient time frame within which to place the development of the local group XII fibulae. Evidence marshaled in this account is restricted to that from the inhumation tumuli.

Muscarella<sup>105</sup> published a study of all the fibulae from Gordion excavated through the 1965 season. No Phrygian tumulus except Z, which contained no fibulae except for a bronze bead from a tassel of a double-pinned example, has been excavated since then. Therefore Muscarella's tabulations for the tumuli are very satisfactory (see his appendix A).<sup>106</sup> Only minute differences occur between his listings and the data published by Young for Tumuli W, P, and MM.<sup>107</sup>

E. Caner<sup>108</sup> brought together fibulae with proveniences in central and west Anatolia, from the earliest through the sixth century B.C. He reclassified into smaller, more specific groups the classes of Blinkenberg and Muscarella, and pursued close parallels. By his detailed analysis, especially of the numerous varieties of decoration in the XII,13 and XII,14 types, he has performed a great service.<sup>109</sup>

The fibulae from the inhumations are presented here in Table 5 according to Blinkenberg's original types and Muscarella's additional types with only a few exceptions: I follow R. Boehmer's<sup>110</sup> introduction of Types XII,9 $\alpha$  and XII,9 $\beta$  to distinguish hollow studding from solid studding added upon a XII,9 arc; I follow R. S. Young<sup>111</sup> in melding Muscarella's type XII,13A back into type XII,11 of Blinkenberg, thereby restricting the XII,13 types to fibulae with round- or oval-sectioned arc and three properly molded (i.e., some combination of block or bead-and-reel) swellings.

There are only slight changes from Muscarella's appendix A in my listing of individual entries.<sup>112</sup>

Theoretically the morphological development of fibula types should proceed through a very rough general progression:

1. Open molds before closed molds:

Rectangular and D-sectioned arcs before oval- and round-sectioned arcs.

Blocks flush to one face before blocks extruded on both faces, or bead-and-reel.

2. Simpler working before elaborate working in the molds:

Plain round arc before faceted or fluted arc.

Swelling before reel or bead-and-reel at center of arc.

Fewer reels around beads before numerous reels (or compounded beads and reels).

3. Less handwork before more handwork added to the basic piece after it was freed from the mold:

Basic: turning of hook and winding of spring.

Plain arc before drilling of arc for studding.

Fewer before more incised lines.

Less before more milling of surfaces.

Gross before fine milling.

Round-bottomed grooves before precise cleaning and filing of square-bottomed grooves.

Plain reels before channeled reels.

At Gordion the highest point in this process of elaboration was reached by the fibulae found in MM, at the cut-off point caused by the Kimmerian Destruction. This does not mean that simple types did not continue to be made by lesser masters, or by greater masters from preference, at the same time that some further development was taking place, or that heirlooms were not given as gifts along with the more advanced forms. Compare MM 195 with MM 319 or, among the double-pinned fibulae, MM 190 with MM 186.<sup>113</sup>

In Table 5 the tumuli are listed on the left according to the final sequence given in Table 4 (p. 192). The group XII subtypes are made to follow very roughly the order of the discussion above, rather than Blinkenberg or Muscarella, because the numbering of the group XII classes did not in the Blinkenberg system move from simple to complex or strictly from early to late. The most primitive, open-molded type would have to have rectangular or D-sectioned arcs, with blocks flush with at least one flat face. None so simple as this has yet been found in Gordion, so the idea for the manufacture of such fibulae must have come at a period earlier than Tumulus W.

105. Phryg. Fib. Gordion. See Young, *Gordion* I, 241, n. 97.

106. Phryg. Fib. Gordion, 78.

107. Tumulus MM contained 51 rather than 50 examples of type XII,9. See *Gordion* I, 160 (MM 187A) and n. 95.

108. *Fib. in Anat.* I.

109. Muscarella, *BibO* 43 (1986) 200.

110. Kleinfunde, 56-58, nos. 98, 99, 101, 102 (pl. VI); Unterstadt, 5, nos. 2530-2536 (pls. III, IV). See herein p. 129, **TumS1** 26, esp. n. 97.

111. Young, *Gordion* I, 241 and n. 100.

112. In the K-III listing I, too, cannot be sure about the distinctions between XII,7 and XII,7A. See G. Körte in *Gordion*, 78; Muscarella, *Phryg. Fib. Gordion*, 17-18 and n. 17; *idem*, *BibO* 43, pts. 1-2 (1986) cols. 198-199; Young, *Gordion* I, 241, 244.

I have had to omit from my catalogue the single specimen of XII,7A listed by Muscarella as being in the "fill" of Tumulus J; it came from the gravel layer which is a pre-tumulus context. Three imported fibulae from the *mantle* of B (**TumB** 18-20) were inadvertently left out of Muscarella's app. A.

113. Young, *Gordion* I, pls. 76-79.

TABLE 5  
FIBULAE IN THE INHUMATION BURIALS

	XII,3	4	5	7A	7	2,2A	9	9β	11	13	14	type unident.	import
W	DP 27,28			29-33; 35-55						34;56-60 (blocks)			
G (L)				5									3,4
Q (L)		1,2								3 (blocks)			
K-III <sup>a</sup>	DP 96:6; SP 2-5,7		38,39 (blocks)	96:8-31			96:1			96:40,41 (blocks, reels)		DP 96:42 <i>b-d</i> SP 96:24 <i>6</i> (?) 96:42 <i>a</i>	
P	DP (8); 37-39, fir. <sup>b</sup>												
S (L)				(2)									
K-IV				6:6-15 <i>a</i>			6:1-5			6:16-17 <i>a</i>	6:18-23	DP 6:24 <sup>c</sup>	
Y (L)						2				3			
MM					DP 188-194; SP 195-234 <sup>d</sup>		DP 185A; SP 235-284		SP 285-317	DP 187	DP 185,186; SP 318-356		
S-I (L)						22-25 87 (x)		26-28; 83 (x), 90-93	29-32	33-45; 94-99	46-71; 82 (x), 100		
Z (L)												14 DP?	
N									2,3 (blocks, beads)	4-7 (blocks, beads)			
H												(2)	

DP double-pinned

SP single-pinned, when in group with DP; otherwise plain numbers are SP.

(L) looted

( ) quantity of items when unidentified or uncatalogued

(x) in peripheral burial

Note: Some catalogue numbers represent more than one example

a. G. Körte in *Gordion*, 76 ff.

b. Young, *Gordion* I, 20-21, fig. 12.

c. G. Körte in *Gordion*, 103, no. 24, fig. 83. It was excluded by Blinkenberg as being unique and unclassifiable. See Muscarella, *Phryg. Fib. Gordion*, 18 and n. 16.

d. Young dropped the distinct sub-type XII,7A with reference to Tumulus MM, but employed in the Tumulus W catalogue: TumW 29-33, 49-55. XII,7A is a sub-type which is thought to precede XII,7 (*Gordion* I, 209; Muscarella, *Phryg. Fib. Gordion*, 18, 38; Caner, *Fib. in Anat. I*, 51 ff.)

The simplest at Gordion, with flat or D-arc and blocks not beads, but made in a closed mold, are incorporated in types XII,3, 4 and 7, not in XII,2 and 2A. I therefore place the latter classes after 7. Class XII,7A is placed before XII,7 (see note d. on Table 5). The resulting chart-flow would reflect the simplest and perhaps earliest at the upper left and the most elaborate (14s) at the lower right. The top-downward development appears to follow, in general, blocks before beads, beads before bead-and-reel complexes, etc., down to Tumuli MM and N. After the Kimmerian break, Tumulus N contained the latest chamber burial for a wearer of demonstrably group XII Phrygian fibulae on the Northeast Ridge.<sup>114</sup>

The fibula sequence then continues on the South Ridge with Tumuli S-I and possibly Z. The size of the collection of fibulae from the S-I burial places it in direct relationship with Tumulus MM; Z also stands

close to MM because of the tassel remains from a large double-pinned example of unknown arc style (see **TumZ 14**, although we have noted that its presence may be fortuitous).

Fibulae in Tumulus S-1 range from XII,2 to XII,14 with no examples of XII,3 through 7. The range is thus narrower, and the numbers are larger for XII,13 and 14 than for the earlier types present there. On the studded examples of XII,9 found in S-1, all studs are solid, so they belong to the later variant, 9β.

Examples from later inhumation tumuli came only from their mantles (J) or due to their poor state of preservation were completely unidentifiable and possibly not group XII (H). Imported fibulae were present in the burial of Tumulus G and in the mantle of Tumulus B.

A few fibulae, found in cremations, will be discussed in Volume II, Part 2.

## Bronze and Iron

### WEAPONS

No weapons were found in tumuli of pre-Kimmerian date. Let us see, however, where a definition of the post-Kimmerian proveniences leads:

Bronze:

<b>TumB 21,22</b>	Arrowheads (mantle)
<b>TumJ 5-10</b>	Arrowheads (burial)

Iron:

<b>TumH 11</b>	Arrowhead (mantle)
<b>12</b>	Spearhead (mantle)
<b>TumJ 14</b>	Spearhead (burial)
<b>15</b>	Large arrowhead (burial)
<b>16</b>	Double ax (burial)

All these weapons were from mantles of unlooted tumuli except for those inside the J burial, which has been shown to be a warrior's (possibly a mercenary's) grave and under Scythian influence. The generally weaponless chambers indicate in an encapsulated manner that those buried in wooden chambers either were not as a rule of the military class at Gordion or else were buried without weapons because of special beliefs.

### TWEEZERS

At least five types of tweezer can be differentiated at Gordion. The earliest dates to the coming of the Kimmerians. (A) and (B) (Figs. 32A and 25D) occur from the time of the Kimmerian Destruction to possibly as late as ca. 546 B.C. (C) to (E) begin after 546 B.C. and extend to the Roman period.

(A) Heavy cast areas are located at grooved loop, which takes suspension ring, and below, where rivet secures base of loop. Legs are thin bands which widen at pincer ends.

**TumKY 17** (chamber)

Other examples from early proveniences are B 1918 and B 1336 from the Destruction Layer in TB 7 and TB 1, respectively, on the City Mound; one example, B 420, came from the burned debris of a house on the west end of the Northeast Ridge.

(B) Heavy cast suspension loop secured below by enclosing band (no rivet). Legs as in type (A).

**TumJ 12** (chamber)

Another example, in the mantle of Tumulus M, is B 446,<sup>115</sup> which then acquires a *terminus ante quem* of ca. 546 B.C. or a little earlier.

114. Only the fibulae in Tumulus H (see p. 45 and n. 9) leave us in some doubt.

115. E. Kohler in *Young Symposium*, 66-67, *Gordion II*, Pt. 2.

(C) Lighter form found usually in bronze made without heavy cast top; consists of flat band hammered to form loop for suspension ring. At shoulder was rivet, usually securing at center suspended pick, which could swing out for use.

Approximately 22 bronze and 2 iron examples come from City Mound, layers 6–2 (above Clay Deposit).

(D) Flat bronze band folded in center, with hole punched through fold to form suspension ring. No

wrapping ring, rivet, or pick. Spoon-shaped at pincer ends.

B 439<sup>116</sup> from the mantle of Tumulus E has a *terminus ante quem* from its provenience close to the end of the sixth century.

(E) Plain iron band, forged with open fold.

This type has appeared, to date, on the City Mound only in the later Hellenistic pits into the Clay Deposit or in Roman Level 1: ILS 6, ILS 171.<sup>117</sup>

## Iron

### FIRE-TENDING IMPLEMENTS

Only Tumuli K-III and P yielded displays of iron fire-tending implements inside the chamber.

K-III	94 <sup>118</sup>	Coals scraper (bronze)
	104	Coals scraper (iron)
	105 <sup>119</sup>	Fork (iron)
TumP	41 <sup>120</sup>	Fork (iron)

42	Hooked rod (iron)
ILS 755	Socketed rod or poker? (iron)

This tendency links these two tumuli closely. However, such groups do not recur among the other early tumuli or the later inhumations.

Only later, in the metal deposit in Tumulus E, there was a “hooked bar” and a poker (ILS 118 and 119).<sup>121</sup>

## Pottery

Ceramic material, selected by criteria of *occurrence in more than one tumulus* and in significant proveniences within a tumulus, i.e., in groups pertaining to the main burial as found in the catalogue, becomes here the basis for an attempted summary of pottery development. Pottery from the mantles is discussed when the *terminus ante quem* provided by the burial may be of some significance for the object.

The painted wares, occurring in small numbers, are divided basically into wares by potting and painting techniques. Monochrome wares, which occur in sufficiently large numbers, are grouped by shape.

ware from lesser pre-Kimmerian tumuli (G, X) and also post-Kimmerian tumuli have been drawn into his other general discussions of the early painted pottery.<sup>123</sup>

### BICHROME ON WHITE GROUND COAT

Several pre-Kimmerian examples existed on the City Mound, dating from EPB V through the Burned Level.<sup>124</sup> As a rule they showed sparing use of red.

From the tumuli:

### PAINTED POTTERY

Detailed statistics on the presence of painted wares in the great pre-Kimmerian tumuli (W, P, and K-III) have been furnished by Sams.<sup>122</sup> A few items of painted

#### Post-Kimmerian

<b>TumH</b>	<b>18</b>	Small-necked trefoil jug (mantle)
	<b>19</b>	Sherd (mantle)
<b>TumB</b>	<b>24</b>	Jar fragment (mantle)
<b>TumJ</b>	<b>36</b>	Dinos (West Slope Deposit)

116. See p. 207 n. 86.

117. McClellan, *Iron*, 627, nos. 510 (pl. 67) and 511 (pls. 35, 67).

118. *Gordion*, 75 and fig. 70a (p. 81).

119. *Ibid.*, 81 and fig. 70e,f.

120. J. McClellan in Young, *Gordion I*, 27–29, figs. 16, 17D and n. 43.

121. See p. 207, n. 86.

122. In Young, *Gordion I*, 32, 46–51 (P), 173, 175–176 (MM),

215–216 (W); *AnatSt* 24 (1974) 169–172, figs. 1–5 (P); *ICCA X*, Vol. 1, 229, 231, pl. 61 (K-III 10, TumP 56); *Archaeology* 30, no. 2 (Mar. 1977) 112, 113 (TumW 61, 62); *Gordion IV*, see under Tumulus listings in index.

123. *Painted Pottery*, index, s.v. Tumulus B, G, H, etc.; *idem*, *Gordion IV*, index, s.v. (as foregoing).

124. P 1187 (CC 2), P 2295 (Meg. 3), P 3042 (CC 4). See Sams, *Painted Pottery*, 474–478, nos. 92–94; *idem*, *Gordion IV*, nos. 927, 722, 626.

	<b>58</b>	Dinos or jar sherd (mantle)
	<b>59</b>	Sherds (mantle)
K-II	42 <sup>125</sup>	Sherd (mantle)
<b>TumC</b>	<b>19</b>	Sherd (provenience in tumulus unknown).

None of these is from inside a burial; thus, except for **TumJ 36**, they are brought together here only with reference to the *termini ante quos* furnished by the dates of the tumulus burials (see Table 4, p. 192).

The biscuit color varies from gray, almost throughout, to buff/red ware with a streak of gray at the core.

**TumH 19** and **TumB 24** show a fairly generous usage of red in the decoration.

The group shows several basic techniques with reference to the amount of polishing present: (1) both decoration and ground coat matte, **TumH 19**; (2) partially polished decoration on matte ground coat, **TumJ 36**; (3) matte decoration on polished ground coat, **TumJ 59**, **TumC 19**; (4) both decoration and ground coat polished, **TumH 18**, **TumB 24**, **TumJ 58**, K-II 42.

These all appear to be individual specimens, hardly related to each other in style, except perhaps for **TumH 18** and **TumB 24**, which are better-preserved unburned vessels probably from the surrounding pre-tumulus common cemetery.

### BICHROME ON CLAY GROUND

This category is scantily represented in the tumuli, as it is on the City Mound. Decoration is matte over a polished or wiped fabric.

#### Pre-Kimmerian

TumW	62 <sup>126</sup>	Sieve-spouted jug, basically Sams type 1 (burial)
TumP	61 <sup>127</sup>	Fruit stand (burial)

#### Post-Kimmerian

<b>TumB 25-27</b>		Sherds (mantle)
<b>TumS3 2</b>		Fragmentary closed form (burial).

TumW 62 is unique in color of fabric, with exceptional compact spout, etc., and has been discussed as an import perhaps from another Phrygian center. The

fruit stand, TumP 61, is unique in that it combines bichrome decoration (on the plate) with an early example of painted mottling (on the stem and foot). **TumB 25** is a sherd probably from a jar of normal household size, from a neighboring house or common burial. **TumB 26** and **27** may be from a single plastically banded pithos; the geometric motifs on the latter are local. **TumS3 2** appears at first akin to Cypriote, but may be of an East Greek or southwest Anatolian fabric.

### MONOCHROME ON LIGHT GROUND COAT

The variety of fabrics artificially assembled here under the label "monochrome" should not be considered as belonging in a single ware classification. The group is presented only for the convenience of the reader.

#### Pre-Kimmerian

<b>TumG 8</b>		Jar (burial)
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#### Post-Kimmerian

<b>TumS1 77</b>		Sherd (mantle, MT 2)
<b>TumH 17</b>		Sherd of Alişar type (mantle)
<b>TumB 15,16</b>		Pair spouted jugs with painted animal panels (stone cap)
K-II	40 <sup>128</sup>	Sherd (mantle)
	41	Sherd (mantle).

Of the above only K-II 41 had a fired clay color that was gray throughout; K-II 40 had a gray streak at the core. All the rest were described as pink, red, or buff through the biscuit. The applied color can be black or dark brown; exceptionally, also purplish (**TumS1 77**). These may be on ground coats from white through cream.

**TumG 8** and **TumH 17** have been discussed in the catalogue as imports.

**TumB 15** and **16** have figural silhouette designs upon black-framed white panels stretching from right of handle round to left of handle, and are the only examples polished over both decoration and background.

125. G. Körte in *Gordion*, 120 and fig. 100, R.

126. Young, *Gordion* I, 213, pl. 92J,K; G. K. Sams: *ibid.*, 253, 254; *Painted Pottery*, 552, no. 166, 553; *Gordion* IV, index, s.v. TumW 62.

127. Young, *Gordion* I, 37, fig. 20, pl. 17J; Sams *Gordion* IV, index s.v. TumP 61.

128. G. Körte in *Gordion* 120, nos. 40, 41; Sams, *Gordion* IV, index, s.v. Tumulus K-II 40, 41.

## MONOCHROME ON CLAY GROUND

Exclusive of black-on-red and brown-on-buff, which are treated separately hereunder, and Lydian and East Greek glazed wares, the discussion of which is postponed to *Gordion* II, Part 2, this group remaining in the general "painted" category is not very extensive, and yet includes a variety of techniques: black/brown matte painting on reserved cream/yellow/orange/buff/tan ground, treated by wiping before, or polishing either before or after, the decoration was applied.

## Pre-Kimmerian

<b>TumG</b>	<b>7</b>	Round-mouthed jug with petaled body (burial)
	<b>10</b>	Large round-mouthed jug (pot deposit in stone pack)
K-III	4,5 <sup>129</sup>	Pair side-spouted sieve jugs, Sams type 1 (burial)
<b>TumX</b>	<b>2</b>	Side-spouted sieve jug, Sams type 1 (burial)

## Kimmerian

<b>TumKY</b>	<b>26</b>	Sherd (stone cap)
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## Post-Kimmerian

<b>TumZ</b>	<b>19</b>	Dinos (burial)
<b>TumH</b>	<b>20</b>	Sherd (mantle)
	<b>21</b>	Feeding bottle (mantle)
	<b>28</b>	Pithos sherd (mantle)
<b>TumJ</b>	<b>35</b>	East Greek bowl (West Slope Deposit)
K-II	28–39 <sup>130</sup>	Various shapes; some possibly black-on-red. See below. ("earth outside burial")
<b>TumC</b>	<b>15</b>	Fragment of painted dinoid amphora (mantle).

Although only two examples of this general category (after the exclusions mentioned above) were found in the great tumuli (K-III 4, 5), a few appeared in the lesser chamber burials and a few more in mantle deposits or general contents. Most of the sherds are of undefined shapes. Very rarely do examples of these painted shapes occur in more than one tumulus.

## BLACK-ON-RED WARES

This is not the arena in which to make pronouncements on the sources of the imported black-on-red wares,<sup>131</sup> since only one example (**TumH 16**) happens, to my knowledge, to come from the lesser inhumation tumuli. Others do, however, occur in Gordion and G. Schaus<sup>132</sup> has distinguished three imported classes of West Anatolian Black-on-Red wares occurring on the City Mound, Küçük Hüyük, and in the houses and common cemetery on the Northeast Ridge.

## Post-Kimmerian, matte

<b>TumH</b>	<b>16</b>	Black-on-Red sherd (mantle)
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**TumH 16**, a painted piece of plate-floor, I believe belongs to Schaus's "Black-on red-slip" class<sup>133</sup> and, since it comes from the mantle of the tumulus, presumably can date before 650 B.C.<sup>134</sup>

Other black-on-red wares, not falling in Schaus's defined classes, are present in the lesser tumuli. One is called "Phrygian-made,"<sup>135</sup> which is found mainly in local shapes or painting styles. Another has some of its shapes related to Cypriote, and is still designated by the loose term southwest Anatolian.<sup>136</sup> Both these wares still need further study. There may be other classifications as well.

In the post-Kimmerian period a few "Phrygian-made" and "southwest Anatolian" black-on-red examples from the lesser tumuli show at least some areas of burnishing:

129. G. Körte in *Gordion*, 55–56, nos. 4, 5, figs. 19, 20; Sams, *Gordion* IV, see index, s.v. K-III 4, K-III 5.

130. G. Körte in *Gordion*, 119–120, figs. 98, 99.

131. M. V. Seton Williams, *AnatSt* 4 (1954) 137, 138 (Cilician survey); J. Mellaart, *Bulleten* 19 (1955) 119 ff. (southwest Anatolian survey); G. K. Sams, *Painted Pottery*, 375–377 (nos. 1–4), 384–388 (nos. 13–17), 394–398 (nos. 24, 25), 403–426 (nos. 31–47); *idem*, *Expedition* 21, no. 4 (Summer 1979) 13. For black-on-red ceramics in the Levant and Cyprus, see J. Birmingham, *AJA* 67 (1963) 32 ff., in which she reworks the dating of black-on-red published in *SCE* IV, pt. 2, 258 ff.

For a definition of Sardian Black-on-Red, see Greenewalt, *Ritual Dinners*, 17 and nn. 18–20.

132. *AnatSt* 42 (1992) 151–178.

133. *Ibid.*, 152, 154 ff.

134. For chronology of Tumulus H, see pp. 47–48.

135. G. Schaus, *op. cit.*, 153 and nn. 4 and 5. Several examples of "Phrygian-made" I agree are pre-Kimmerian: e.g., G. Körte in *Gordion*, 59 and no. 11 (siebkanne) in Tumulus K-III, and Young, *Gordion* I, 35, TumP 54 (round-mouthed jug), in Tumulus P.

136. G. Schaus, *op. cit.*, 153 and n. 8; see also n. 131 above.



*Post-Kimmerian, polished*

<b>TumJ</b>	<b>34</b>	Juglet (burned; West Slope Deposit)
<b>K-II</b>	<b>28–39</b> <sup>137</sup>	Sherds: various shapes ("earth outside burial")
<b>TumC</b>	<b>7</b>	Bowl sherd (burial)
	<b>18</b>	Pyxis sherd (provenience in tumulus unknown).

The lesser tumuli show a range for black-on-red ware with polished areas, from *ca.* 620/10 to *ca.* 540 B.C.<sup>138</sup>

*BROWN-ON-BUFF WARES*

Superior examples of brown-on-buff pottery came from the great tumuli (TumW 61;<sup>139</sup> K-III 3, 6–10, 12, 13;<sup>140</sup> TumP 49, 50–52, 55–57, 60<sup>141</sup>). These are of creamy buff fine ware, nonmicaceous and nonslipped, with a hard polish over motifs painted in fine brown line. Only on TumP 49 was a second color applied over the polished surface.

No vessels of this outstanding class can be added from the lesser tumuli, either pre-Kimmerian or post-Kimmerian. But see Sams's discussion of several pieces apparently surviving in post-Kimmerian proveniences on the City Mound.<sup>142</sup>

## MONOCHROME WARES

*LIGHT-FIRED*

Again the selection of wares and shapes included in this category shows great variation, and has, because scant in the tumuli, been gathered here from every source: burials, mantles, and "unknown." No inner groups can be formed for study of development.

*Pre-Kimmerian*

<b>TumW</b>	<b>72</b> <sup>143</sup>	Narrow-necked amphora (burial)
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*Post-Kimmerian*

<b>TumZ</b>	<b>21</b>	Fragmentary bowl (mantle)
<b>TumH</b>	<b>3</b>	Wide-mouthed trefoil jug, fluted (burial)
<b>TumB</b>	<b>2</b>	Early Lydian (?) shouldered lekythos (in coffin)
<b>TumC</b>	<b>3</b>	Lydian (?) animal-shaped vase (in looted burial)
	<b>13</b>	Sherd, barbotined (provenience in tumulus unknown)

TumW 72 is to be noted as the only red-ware storage vessel of the entire pre-Kimmerian tumulus pottery group. It has a coarse biscuit with a rare combination of inclusions.

The post-Kimmerian examples (except for **TumC 3**) show a light-fired color throughout the ware, but are in other ways hardly interrelated. **TumZ 21** may be useful in calling attention to the fact that a few patently unburned bowls were buff-colored originally, in contrast to the great number of gray bowls presumably burned to buff in the Destruction Level on the City Mound. **TumH 3** was of eggshell thinness and fired red throughout, and, as such, is unique among the timber burials. **TumB 2** shows a rose-brown color throughout, and **TumC 3** is the only piece with dark core (brown-buff/gray) contrasting with an orange surface. **TumC 13** (q.v.), light buff throughout, is a mystery sherd.

**TumB 2** and **TumC 3** are possibly Lydian (earlier and later, respectively?) and will be reconsidered in the general discussion of Lydian wares from the tumuli in *Gordion II*, Part 2.

*DARK-FIRED*

At Gordion there is a large general family of monochrome wares which is dark-fired. From the earliest Iron Age period, even including that of the handmade wares,<sup>144</sup> a dichotomy existed in this general class. There are ceramics showing short-term reduction<sup>145</sup>

137. G. Körte in *Gordion*, 119. These are painted over reserved backgrounds.

138. For chronology of Tumuli J and C, see pp. 59 and 28–29.

139. Young, *Gordion I*, 212, pl. 92G-I.

140. G. Körte in *Gordion*, 55, 56–58, 59–60, figs. 18, 21–23, 26, and pls. 2, 3; Akurgal, *Phryg. Kunst*, pls. 11, 12, 14 (=K-III 6, 8, 10, 13); *idem*, *Kunst Anat.* 78, figs. 46–48 (=K-III 3, 6, 8).

141. G. K. Sams, *AnatSt* 24 (1974) 169–172, 181–195; Young, *Gordion I*, 33–37 and fig. 19, pls. 15C-E, 16A-C(R and L), E, F, 17A-F.I.

142. *AnatSt* 24 (1974) 169–170, figs. 13–15; *idem*, *Gordion IV*, 165, 302 ff., pls. 159–160.

143. Young, *Gordion I*, 215; Sams, *ibid.*, 256; *idem*, *Gordion IV*, 36.

144. Handmade wares have not occurred in the tumuli excavated to date, but they are found in numbers on the City Mound. See Gunter, *Gordion III*, pp. 95, 106; Sams discusses them in detail in *Gordion IV*, 19–29, 194–197.

145. Sams in Young, *Gordion I*, 47. He treats firing techniques in further detail in *Gordion IV*, 22–23, 34–36.

with brown, red, orange, or buff biscuit and darkened surfaces which may sometimes retain blushes of light color. The second subclass of dark pottery is thoroughly reduced so that the whole biscuit is gray to black. Both types of dark-fired wares occur in the inhumation-tumulus burials.

The problem of the effect of secondary firing upon already dark-fired pottery is ever-present in the Destruction Level on the City Mound,<sup>146</sup> but it also arises in the cremation graves, and among the inhumation pottery in situations where an inhumation was burned by looters (S-1), or in deposits of slightly burned pottery sometimes placed near or in the stone cap of a burial, e.g., the West Slope Deposit in Tumulus J.<sup>147</sup>

After the earliest appearance of thoroughly reduced pottery on the City Mound in EPB IIb, the two techniques appear at all times to have been applied to any or all current forms of pots, with perhaps preferences for one or the other at one time. This, however, is difficult to analyze, and appears at present to be a patternless distribution.

The dark pottery from the inhumations occurs in numbers large enough to justify a listing here according to a variety of pot-forms, in an attempt to find which forms were offered as grave goods and how they developed, and whether those forms persisted or died out as grave goods in post-Kimmerian times.

Some examples of the black polished true gray ware were very thin-walled and had qualities or attachments which showed their kinship with metal shapes. These began as early as Tumuli K-III, X, and Y,<sup>148</sup> and were seen in post-Kimmerian H. They also had a strong resurgence in the Persian period.

In the lists which follow, "SR" after the name of the pot-shape indicates short-term reduction, with light (buff, red, or brown) biscuit; "GF" indicates firing to gray/black throughout.

#### VARIED SHAPES, RARE

These were found, among the inhumations, only in the burial of Tumulus P; like the painted examples found with them, some were probably meant to represent animals with which the child was familiar, offered for his entertainment in addition to more ritualistic forms.

#### Pre-Kimmerian

TumP	62 <sup>149</sup>	Goat vessel (SR)
	63	Deer or bull vessel (SR)
	67	Horn-shaped rhyton (SR)
	68	Ring vase with trefoil mouth (SR)
	69	Twin jars with linking basket handles (SR)

One zoomorphic vessel occurred among the Post-Kimmerian groups, but not in gray ware (see **TumC** 3). Other "varied" shapes did not reappear at all in the later burial groups in the tumuli.

#### DINOI AND LOW-NECKED JARS

The vessels in this group have by Sams's definition heights from 0.05 to 0.40 m., and therefore form a category smaller than "large storage" jars (above 0.40). The general development of forms and functions of these dinoi and low-necked jars as food containers in the burials has been discussed by Sams.<sup>150</sup> In the earliest tumulus, W, the form is expressed by a pair of bronze "medium-sized" cauldrons with hammered bull's-head attachments (see p. 198; **TumW** 1, 2). Tumuli G and Q contained no dinoi in either material, but it should be remembered that these two were looted, although in the former representative pottery in other forms survived (see below).

#### Pre-Kimmerian

K-III	47 <sup>151</sup>	Ellipsoidal, flat-based, free ring handles (GF)
	48	Ellipsoidal, ring-based, free ring handles (GF)
TumP	80, <sup>152</sup> 86,87	Ellipsoidal, flat-based (SR)
	83	Ellipsoidal, disk-based (SR)
	79,81,82,84, 85,87 bis	Ellipsoidal, ring-based (SR)
<b>TumX</b>	<b>4,5</b>	Ellipsoidal, footed, fine ware (GF)
<b>TumY</b>	<b>6</b>	Ellipsoidal, flat-based, fine ware, mottled (SR)
	7	Ellipsoidal, footed, fine ware (GF)

146. See Sams, *Painted Pottery*, 48–52 and n.7; *idem*, *Gordion IV*, 38–40.

147. See above, "Assemblages in Caps," p. 190.

148. Details concerning the thin-walled examples are found in the catalogue entries (and in discussions below, in which vessels are grouped by shape), e.g.: K-III 47, 48 (G. Körte in *Gordion*, 67), **TumX** 3–5, and **TumY** 5, 7. These are all jugs with bolsters on high-swung handles, ribbon handles, or handles triangular in

section (in imitation of the two-piece handles?: Young, *Gordion I*, 225–226), or dinoi with plastic ring handles, elevated feet, etc.

149. For **TumP** 62–69, see Young, *ibid.*, 38–39, pls. 18A-D, H-J, 19A, B; Sams, *Gordion IV*, 74, 76.

150. Sams in Young, *Gordion I*, 254–255; *idem*, *Gordion IV*, 91–96, 291–294.

151. G. Körte in *Gordion*, 67.

152. Young, *Gordion I*, 41–43.

*Kimmerian*

MM	368, <sup>153</sup> 370 367	Ellipsoidal, disk-based (SR)
360,361,365,366	369	Ellipsoidal, ring-based (SR)
		Spherical, flat-based (SR)
		Spherical, disk-based (SR)
362-364,371		Spherical? ovoid? base missing (SR)

*Post-Kimmerian*

<b>TumN</b>	8	Slightly ellipsoidal, short, wide curving neck, flaring rim, flattened (SR)
<b>TumS1</b>	74	Wide spherical, slight neck, rim lightly ledged, mottled from refining (SR)
	79	Rim sherd: steep shoulder, flaring collar rim, unledged; brown paint (SR)
	80	Base sherd, possibly from <b>TumS1 79</b> (SR)
	Uncat.	Jar rims, bag IV: chamber fill; Fig. 54I(a-i) (SR)
	Uncat.	Jar rims, bag I: NE edge of grave pit; Fig. 55A(a-l) (SR)
	Uncat.	Jar rims, bag V: mantle; not ill. (SR)
<b>TumZ</b>	Uncat.	Sherds from upper bodies: from tight dinos rims to short, curving necks; bag 2: "cleaning fallen roof beams"; Fig. 68F(a-j)
	Uncat.	Ditto, bag 1: "mixed stone and wood from top of rubble cap to appearance of roof"; Fig. 69A(a-j)
	Uncat.	Ditto, bag 3: "Mix of RR trench (Tr. 1) and Trench 2"; Fig. 69B(d)
<b>TumH</b>	5	Spherical, tightening near bottom in direction of ovoid; rim everted, slightly flattened, incised decoration on shoulder (SR)
<b>TumB</b>	3	Spherical/ovoid; neck wide, concave-sided; rim everted, flattened (GF)
	9,10	Spherical/ovoid; neck wide, concave-sided; rim flaring (9 GF; 10 SR)
<b>TumJ</b>	Uncat.	Sherds: concave-sided to straight-sided necks; Fig. 25G (SR)
<b>TumS2</b>	11	Spherical dinos, short flaring collar rim; mottled (SR)
	12	Ditto, dark brown (SR)
	13	Spherical body, short neck, flaring rim (SR)
	14	Spherical/ovoid, neck increased in proportional height; rim plain, flaring, lightly ledged (SR).

The earliest identifiable Phrygian dinos on the City Mound appeared in the context EPB IV.<sup>154</sup> Of the various possible origins for dinoi discussed by Sams, the most acceptable seems to me to be the derivation from Gordion's own bronze forms as found in, e.g., Tumuli W and K-III.<sup>155</sup> I believe that the priority in time belongs with bronze forms, because, e.g., some early examples in pottery (see K-III 47, 48) are of fine ware and add specialties (bolsters, swiveling ring handles, etc.) natural to bronze but not to clay-working. These are fired gray throughout perhaps in imitation of dark metal or perhaps merely because they were thin-walled in a reducing atmosphere. Like-sized examples in P and MM were thicker-walled, whether by reason of the potter's carelessness or because they were a step removed from copying bronze forms and were copying pottery; these often are not fired gray through the core. Examples of dinoi in post-Kimmerian tumuli are all thicker-walled.

If we try to link the dinos forms in the burials with those found in the pre-Kimmerian contexts on the City Mound, at the head of the development stands W with its bronze cauldrons. The next in chronological descent, Tumulus G, has none of either material, but one recalls that the burial proper of G had been looted. However the absence of dinoi in G, including the undisturbed "pot deposit in the stone pack," may be due to preference rather than the unavailability of the form, since Sams demonstrates its presence in contexts EPB IV and V, which are earlier than the Terrace Deposition. He dates Tumulus G pottery to the general period of EPB V and the Terrace Deposition.<sup>156</sup>

Where pottery dinoi and low-necked jars are present in the pre-Kimmerian period, it appears that bases show a variety of shapes (footed, ring, disk, concave disk, and flat). Base forms are therefore of little use in an attempt to align pot-shapes. Of much greater use is the development of body-shape (ellipsoidal, spherical, ovoid) and neck-shape (wide to slightly narrower; low and curve-sided to higher and straighter-sided) in proportion to body-width. The progression in body-shape from ellipsoidal to spherical was accomplished in Tumuli P and MM. Tumulus P produced only about two with slight tendencies toward spherical, whereas MM contained out of a total of twelve only three that could be termed still slightly ellipsoidal. The jar in N was still slightly ellipsoidal. In later H and J bodies are spherical; in Tumuli B and S-2 jars begin to appear ovoid, first with a slight straightening to oblique in the

153. *Ibid.*, 173-174, pl. 80D-J (MM 360-371).

154. Sams, *Gordion IV*, 219 and no. 60.

155. *Ibid.*, 93 and n. 145.

156. *Ibid.*, 193. Note that Tumulus G showed vagaries also in its general pattern of assemblage (p. 186). We should remember that the material carried into the Terrace Deposit may date earlier than its deposition, in the same way that the contents of a tumulus mantle may predate the deposition of that mantle.

lower half of the body, and then to an ovoid form which is close to that of a fragmentary ovoid jar occurring in the mantle of *ca.* mid-sixth-century Tumulus M (P 285, Pl. 83j).<sup>157</sup>

Detailed treatment of the rim (plain flaring, or everted; flattened or ledged) appears to bear little relationship to the progression of body types. Inner ledging of the rim appears to be only occasional, beginning with Tumulus P (on about four out of ten dinos rims); **TumX 5** is ledged; in the Tumulus MM group none are ledged. Only two or so appear ledged in each of the later Tumuli S-1 and Z. This must mean that, if these were meant for even temporary storage, ledging may not have been coordinated with the use of lids. It is thought that in some instances the food-laden dinoi were wrapped in textiles which would serve as protection at the time of offering, and if the textile were tied in a knot, they could have been hung on wall nails.

In spite of the theoretically traceable development in jar bodies and necks, some collarlike rims persisted on dinoi down to the time of the S-2 burial (**TumS2 11**).

## AMPHORAS

The category "small amphora" with height under *ca.* 0.15 m., as defined by Sams, has no examples in the tumuli—it seemed to serve no purpose in a grave. There are, however, many "large amphoras" of more capacious size (H. 0.20–0.70 m.): "narrow-necked" and "open-mouthed" amphoras,<sup>158</sup> both of which no doubt held food supplies for the deceased.

### NARROW-NECKED AMPHORAS

(*D. RIM UP TO 0.20 M.*)

Three varieties are neck-handled, shoulder-handled, and a variety to be considered in between these. The third type has handles which rise from the base of the neck and return to the outer shoulder; these we shall call "angle-handled." All three types of handle placement, being already present in Tumulus W, had an early beginning in Gordion, and as a result will not be helpful with dating.

Let us align the narrow-necked amphoras according to our established tumulus sequence.

### Pre-Kimmerian

<b>TumW</b>	65 <sup>159</sup>	Neck-handled, slim ovoid body, small knobs on handle arches (SR)
	68,70,71	Neck-handled, wide ovoid (SR)
	67,69	Angle-handled, wide ovoid (SR)
	66	Shoulder-handled, wide ovoid (SR)
<b>TumG</b>	11	Neck-handled, slimmer ovoid than average examples from W, small knobs each side of handle attachments (deposit in stone pack) (GF)
	12	Handle type unknown (deposit in stone pack) (GF)
K-III	1, <sup>160</sup> 2	Shoulder-handled, wide ovoid
<b>TumP</b>	91,92 <sup>161</sup>	Neck-handled, wide ovoid to spherical (SR)
	96	Neck-handled, wide ovoid, knobs on handle arches (SR)
	95,98,101	Angle-handled, wide ovoid to spherical (SR)
	93,97,99,	Shoulder-handled, wide ovoid (SR)
	100,102–104	
<b>TumX</b>	6	Angle-handled, wide ovoid (SR)
<b>TumY</b>	8	Angle-handled, body like TumW 65 (SR)

### Kimmerian

MM	372, <sup>162</sup> 374–377	Neck-handled, spherical (SR)
	373 <sup>163</sup>	Angle-handled, spherical (SR)
<b>TumKY</b>	21	Angle-handled, wide ovoid; stamped dec. (GF)
	22	Shoulder-handled, wide ovoid; incised dec. (GF)

### Post-Kimmerian

<b>TumS1</b>	75	Angle-handled (SR)
	84	Neck-handled (H. 0.23 m.), ridge at base of neck, ledged rim, hole in base. Held cremation 2, in top of support layers under mantle. (GF)
<b>TumB</b>	4,5	Shoulder/body-handled, widening mouth (transitional to "open-mouthed") (SR)

All the pre-Kimmerian examples from the tumuli are of "storage" size, i.e., from *ca.* 0.40 to 0.70 m. in

157. E. Kohler in *Young Symposium*, 66–67; *Gordion II*, Pt. 2.

158. I follow shape designations as distinguished by Sams (*Gordion IV*, 77–85).

159. For the amphoras from Tumulus W, see Young, *Gordion I*, 214, 215, pl. 93D-C; Sams, *ibid.*, 215–216, 255–257.

160. G. Körte in *Gordion*, 53–54, "Ton" 1 and 2, figs. 16, 17. Having examined the placement of the handles on K-III 2 in Berlin, I found it similar to that on K-III 1.

161. Young, *Gordion I*, 44–46, pl. 21D-H.

162. *Ibid.*, 175, pl. 80K,M.

163. *Ibid.*, 175, pl. 80L.

height, and all stood on the floor in the burials.<sup>164</sup> Kimmerian **TumKY 21** and **22** are similar to these in size and also stood on the floor. Tumulus MM examples, however, are smaller, perhaps because it was planned that they should be packed upright in the bronze cauldrons in the burial.

Examples from Tumuli S-1 and B are like MM's in size—**TumB 4** and **5** were contained inside the closed coffin (along with a lekythos and a jar), and **TumS1 75** was of unknown location in the tumulus, but possibly to be associated with a coffin (see p. 136). Amphoras in Tumuli S-1 and B, resembling each other, follow closely the development of the low-necked jars of the period, but have added handles. The handles of the latest, **TumB 4** and **5**, having dropped to the outer shoulder, are far removed from the neck handles of the earlier amphoras of the size.

#### OPEN-MOUTHED AMPHORAS

Sams uses this term to embrace storage amphoras of two shapes: "wide-necked amphoras," and "kraters," the latter being the more open-necked of the two (i.e., of neck-diameter similar to height). These show great variety of elaboration in shape and decoration in the pre-Kimmerian rooms on the City Mound, but appear fairly routine in the tumuli. Few were found:

#### Pre-Kimmerian

TumP	88,90 <sup>165</sup>	Kraters, bodies wide ovoid, spaced single and double ridges on necks (SR)
	89	Wide-necked amphora with ridges on neck (SR)
K-IV	10 <sup>166</sup>	Rim sherd, flat, with stamped decoration (SR)

#### Post-Kimmerian

<b>TumS1</b>	<b>81</b>	Handle fragment (burned; edge of grave pit)
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164. See under "Narrow-necked Storage Jars," below, a discussion of ridges as an aid to controlling the tipping of a large vessel. Here they are sometimes absent when the handles are applied at the neck.

165. Young, *Gordion* I, 43–44, fig. 21A-C, pl. 21A-C.

166. G. Körte in *Gordion*, 104, fig. 84 (max. dim. 0.10 m.). Sams believes this sherd belongs to the wide-mouthed amphora class. On the rim the compound semicircle stamps, here in opposing rows on a curve, form running compound loops like those on

A long series from the Destruction Level was used for storage in the service units on the City Mound; others appeared in hoards of storage vessels associated with the post-Destruction buildings bedded in the Clay Deposit, e.g., Building M.

Another long series of kraters, very homogeneous in shape, lay in common graves under the tumuli on the Northeast Ridge or occurred in tumulus mantles. E.g.:

**TumH 29** H. 0.22 m. (in mantle)

A pre-tumulus child burial under guide wall A in Tumulus B was contained in P 16 (H. 0.46 m.; see Fig. 5,K). P 277, an open-mouthed amphora, was a storage vessel in a house under Tumulus J. Kraters were also used for a series of child burials under Tumulus D, e.g., P 290 (H. 0.455), P 294 (0.51), P 415 (0.457 m.). In a house under Tumulus E, P 343 (H. 0.29) forms another example. All of these amphoras probably date before the fire on the ridge, i.e., to some interval before 650 B.C.<sup>167</sup> P 771 (H. 0.317 m.), found crushed in the cremation in Tumulus M, extends the use of the form down to ca. 560.<sup>168</sup> The shapes of these plain kraters found in burials or mantles can hardly be distinguished from one another.

One special type of gray-ware amphora rim, with a lip which stood erect on the outer edge of a broad flat ledge, and was decorated by fine horizontal ridges on the exterior, never appeared in a burial but recurred on sherds from the mantles of several tumuli:

<b>TumH</b>	Uncat.	Ridged four times (est. D. rim 0.27 m.; Fig. 22K) (GF)
<b>TumB</b>	<b>29</b>	Ridged four times (Fig. 9C) (GF)

Other examples occurred in the mantles of Tumuli F (MU 54-40-39, ridged six times), A (P 5393, four times), and E (P 5242, four times; P 5391, five times on a lip both standing and pendent).<sup>169</sup>

A firm beginning date of 650 B.C. can be given to this distinctive domestic series by the date of the burial in Tumulus H. The fad for this attractive multiple wheel-ridging evidently continued with other applications: e.g., upon a horizontal plate-rim of alabaster (ST 736) from a fourth-century ash dump near Building X.

the frames above and below the carved scenes on the wooden plaques found among the Kimmerian debris in Meg. 3: W 89 (*AJA* 64 [1960] 204, pl. 61, fig. 24) and W 108.

167. The pre-tumulus series will be discussed in the *Gordion* volume devoted to the habitations and common cemetery on the Northeast Ridge.

168. See p. 220, n. 157; *Gordion* II, Pt. 2.

169. For Tumuli F and A generally, see E. Köhler in *Young Symposium*, 65–66, 67–69; *Gordion* II, Pt. 2.

## NARROW-NECKED STORAGE JARS

*Pre-Kimmerian*

TumW	64 <sup>170</sup>	Body broad ellipsoidal (SR)
TumG	13	Body ellipsoidal/ovoid (GF)
TumP	105 <sup>171</sup>	Body elongated spherical (SR)

*Post-Kimmerian*

TumJ	17	Body wide ovoid, concave neck (SR)
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By definition "storage jars" are taller than 0.40 m. A series of four examples, one in each of four tumuli (W, G, P, and J), shows no particular line of development in base (all flat) or rim (all everted and ledged inside). Bodies are all slightly wider or narrower versions of "capacious ovoid," TumP 105 being the slimmest. Necks are tallest in proportion to body height in Tumulus W and shorten progressively in G, P, and J.

Pre-Kimmerian jars in this category were sometimes decorated(?) with ridges on the neck;<sup>172</sup> **TumJ 17** was plain. Since these jars were not buried in earth to any height, but stood on a tomb floor<sup>173</sup> and were handleless, one assumes that the neck-ridging and the well-everted rim were not completely purposeless, but lent some control to the grasp when one tipped the jar to take part of the contents or to empty it.<sup>174</sup> Note that TumW 64 has four evenly spaced ridges of about finger-width distance from each other on a neck high enough to accommodate a hand-grasp. As the necks shorten, control-devices appear to descend to the shoulder.<sup>175</sup> In **TumJ 17** the only, but yet efficient, hand-grip is under the overhang of the rim (Fig. 26A).

Any comparisons on progression in general shape were unimportant when one considers the overall, probably ideal, general shape of a necked storage jar.

## WIDE-MOUTHED TREFOIL JUGS

Sams considers the wide-mouthed trefoil jugs to be a category separate from narrow-necked jugs (see above). Over a wide body the rim is usually a mere collar, fairly straight or sometimes curving, or the jug may have a very low incurved neck with a short flaring rim. The bodies are usually comparatively thin-walled.

*Pre-Kimmerian*

K-III	25 <sup>176</sup>	Wide spherical body, neck ridge, bolster on rolled handle
TumY	4	Ellipsoidal (double-convex) body, arched h.
TumX	3	Ditto

Examples on the City Mound came from contexts EPB V, the Terrace Deposit, TG (SPH), and the Destruction Level in general. Many of these had shorter collar rims than those from the tumuli.<sup>177</sup>

Since all the major pre-Kimmerian tumuli (W, K-III, P, K-IV, and MM) had bronze lades in their serving sets, and of these only K-III had in addition pottery cauldrons and a wide-mouthed trefoil in its assemblage, K-III 25 may have been a dipper accompanying the extra pair of pottery cauldrons K-III 47, 48.<sup>178</sup> It may be, then, that in poorer(?) Tumuli Y and X the jugs should be thought of as dippers.

*Post-Kimmerian*

There were no wide-mouthed trefoil jugs in dark-fired ware.

One example (**TumH 3**), in monochrome red ware (pp. 49, 217), has a taller collar rim than the pre-Kimmerian ones; this may reflect a seventh-century modification in shape.<sup>179</sup>

170. Young, *Gordion I*, 213, fig. 127A, pl. 93C.

171. *Ibid.*, 46, fig. 21M, pl. 211.

172. See also the storage amphoras, "Open-mouthed Amphoras" above. Cf. also Young, *Gordion I*, 214, fig. 127B-E.

173. When not deposited in a tomb, these stood slightly propped in earth. See the North Court of the Phrygian Gate: Young, *AJA* 60 (1956) 260, pl. 87, fig. 25, pl. 91, fig. 36.

174. No pottery lades or dipper-cups were found with these jars. The bronze lades in W, P, MM, K-III, K-IV, and S-1 were thought to be parts of serving sets which included the small bronze cauldrons. The shortness of their handles would also make them awkward for use in a tall vessel with narrow neck. See Young,

*Gordion I*, 227-229; and E. Simpson on serving stands and serving sets: *Furniture from MM*, 144-151; *Archaeology* 39, no. 6 (1986) 41-47, esp. 44-46; Simpson, *et al.*, *Wooden Furn.*, 12-13.

175. See Sams, *Gordion IV*, 98. Bolsters on shoulders of jars are for "tilting and lateral shifting."

176. G. Körte in *Gordion*, 65.

177. Sams, *Gordion IV*, 3 and n. 16. Sams has assigned the name Terrace Gate (TG) to Young's former South Phrygian House (SPH).

178. G. Körte in *Gordion*, 67, fig. 43.

179. Sams, *Gordion IV*, 62.

## ROUND-MOUTHED JUGS

The earliest excavated example of a round-mouthed jug on the City Mound appeared, fully developed, in EPB Ib, and for its shape Sams adduces a European origin.<sup>180</sup>

*Pre-Kimmerian*

K-III	23 <sup>181</sup>	High, rimmed foot, body "lobed" by gouging, oblique neck, vertical roll over arch of handle (SR?)
	24	Raised foot lower than above, plain ellipsoidal-ovoid body, flaring neck, handle square in section (SR?)
TumP	66 <sup>182</sup>	Plain ellipsoidal-ovoid body, straight neck, fine ware (SR)
<b>TumY</b>	5	Flaring neck, plain body, fine ware (GF)

The heights of the above range from 0.10 to 0.18 m. measured to the rim. Sams discusses the affinities between the examples from K-III and P and adds painted parallels.<sup>183</sup> **TumY 5** he relates to production groups represented in the Destruction Level in the City.<sup>184</sup>

*Post-Kimmerian*

<b>TumZ</b>	20	Raised base, fluted body, flat strap handle, fine ware (GF)
<b>TumH</b>	4	Body grooved twice, fine ware (GF)

To the post-Kimmerian group should possibly be added **TumJ 37-43** from the West Slope Deposit, even though the rims are missing, as the body and base shapes do not fit into categories with trefoil mouths (see above). These would bring the use of the form down to ca. 620 B.C. Fine rims from such jugs were found also in the mantle of Tumulus C (Fig. 12L[a-c], uncat.); these would have a *terminus ante quem* of ca. 540.

The general range from K-III 23 to **TumH 4**, and the proportions of bodies to bases and to necks, show great variety. However, in size, they fall roughly within

Sams's categories of "normal" and "large" round-mouthed jugs found on the City Mound.<sup>185</sup> The common traits apparent throughout are fineness of ware, and a general elegance (or even extravagance) of curve which increases in the post-Kimmerian group. The earliest truly fluted example from the tumuli appears in Tumulus Z (**TumZ 20**).

## SIDE-SPOUTED SIEVE JUGS

The general form is a phenomenon of Phrygian life and burial ritual.<sup>186</sup> Having appeared in small numbers in bronze (TumW 5 and MM 14 and 15; see pp. 201-202) among copious examples in painted pottery (see pp. 215, 216) and monochrome ware (esp. Tumuli K-III and P below), the jugs achieved a great variety of shapes and modes of decoration in pre-Kimmerian times. Sams<sup>187</sup> distinguishes three types of body-shape, based on: (1) the round-mouthed jug, (2) the low wide-mouthed trefoil jug, and (3) the narrow-necked jug. These types are not of chronological significance if we note that in painted wares all three types are in vogue at once. In gray ware, however, type 2 is favored.

*Pre-Kimmerian*

TumW	63 <sup>188</sup>	Body type 2, tube spout cut away to wall, rolled loop handle (SR)
K-III	16 <sup>189</sup>	Meld of body types, flat bridge over stepped spout; wide punched handle (GF)
	17	Type 3, tube spout cut away (GF?)
	18	Type 2 lobed, tube spout cut away (GF)
	19	Type 2, flat bridge over stepped spout; twisted handle (GF)
	20	Type 2, open trough, plastic hawk on bridge (GF)
	21	Type 2 ridged, flat bridge over stepped spout (GF?)
	22	Type 2, added strainer on top; open trough (GF?)
TumP	72 <sup>190</sup>	Body type 2, strainer on top, open stepped trough from shoulder (SR)

180. *Ibid.*, 53.

181. G. Körte in *Gordion*, 64-65, nos. 23, 24 (figs. 35, 36); Akurgal, *Phryg. Kunst*, 55, n. 250, pl. 25a (K-III 24).

182. Young, *Gordion I*, 39, pl. 18C.

183. *Gordion IV*, 53.

184. *Ibid.*, 57.

185. *Ibid.*, 52.

186. G. Körte in *Gordion*, 83-84; Sams, *Painted Pottery*, 78-84, 318; *idem*, *Archaeology* 30 (1977) 108-115; *idem* in Young, *Gordion I*,

251-254; *idem*, *Gordion IV*, 67-69.

187. *Ibid.*, 68-70.

188. Young, *Gordion I*, 213, pl. 93A,B.

189. G. Körte in *Gordion*, 62-64, figs. 28-34; caption of fig. 31 should read (L) 19 and (R) 18. Akurgal, *Phryg. Kunst*, 56, n. 251, pls. 23, 24, 25b (K-III 16, 17, 20, 22).

190. Young, *Gordion I*, 40-41, pls. 19H-20H. For a discussion of sets of seven occurring here and in K-III, cf. G. Körte in *Gordion*, 84-85; Sams in Young, *Gordion I*, 47, 252.

73,74	Type 2, open stepped trough flush with rim (SR)
75	Type 2, open stepped trough cut away from tube at shoulder (SR)
76-78	Type 2, flat bridge over spout, relief dec. on body (SR)

As can be seen from the above list, three main types of spout have also appeared by the time of Tumulus K-III: (1) trough open from the wall, attached at neck or shoulder, (2) trough beginning as tube at shoulder and cut away on top for various distances from outer end, and (3) open trough merely bridged by a small strip of clay applied at the wall and sometimes decorated. The pattern of development of the spout including the interior stepping precludes its being a strict dating device. The body-forms (all types) are usually ellipsoidal to hold as much liquid as possible, although the presence of a sieve in the wall lets the liquid immediately out into the trough—hence the raised troughs for the most part, and a need for them to be tipped by hand-holding.<sup>191</sup> One of the steadiest and most fillable forms was found in the Destruction Deposit (Meg. 3). On it the sides of a well-raised trough are built up to flush with the rim, e.g., P 2202, P 2235.<sup>192</sup>

This great variety of sieved shapes affirms a long history for beer-drinking prior to its appearance at Gordion. Some examples made in bronze (pp. 201-202) and some in painted ware (pp. 215, 216) have become extreme in design, perhaps made especially for the entertainment of the drinkers.

Pottery sieve jugs from Meg. 3 and the TB and CC rooms have been discussed by Sams and DeVries.<sup>193</sup>

#### Post-Kimmerian

<b>TumSI 78</b>	Type 2, tube spout cut away at outer end (stone cap, disturbed) (GF)
Uncat.	Sherd: short open trough (chamber fill, Fig. 54H) (GF)
K-II 43 <sup>194</sup>	Trough fragment (mantle) (GF)

Very few of the post-Kimmerian examples left to us were *certainly* from inside a burial. The two from Tumulus S-1 may originally have been in either the

burial or the cap; the original location of that from the mantle of K-II cannot be vouched for. It may have been swept in from nearby house floors.

Gray-ware sieve jugs (P 283, 318, 365, 747) are known from the house floors and the burned level on the Northeast Ridge.<sup>195</sup> These date before or with the fire, i.e., to some interval prior to 650 B.C. For the date of the mantle contents of K-II there is only a *terminus ante quem* of ca. 550 B.C. (see p. 195, n. 13).

**TumSI 78** is close in type to those from the houses, hence dates pre-650.

This may mean that pottery sieve jugs were luxury items<sup>196</sup> which ceased as gifts at a date sometime during the Lydian hegemony. The latest *bronze* specimen came from Tumulus MM (see pp. 201-202).

#### BOWLS WITH SWIVELING HANDLES AND RIM BANDS

Bowls and basins of this type were found earliest in wood with attachment system indicated in wood, and carrying bronze rings (TumP 145-147),<sup>197</sup> sometimes all in bronze (see list, pp. 203-204), and here all in pottery. These last appear to be copying the first two types, since the attachments are completely unfunctional in pottery. It is as if the potter did not really understand the reason for the attachments, but merely thought of them as decorative. Ann Knudsen, when publishing a painted example from a burial in Lydia, gathered together evidence for bronze and pottery bowls of this type and discussed possible origins and parallels.<sup>198</sup> Young reviewed her material when he presented the bronze examples from Tumulus MM and extended their history in bronze down into the period of Greek copies from Phrygian models.<sup>199</sup>

#### Pre-Kimmerian

K-III 46 <sup>200</sup>	D. 0.22 m. Two bolster handles with holes for swiveling handles; ridge-rim band. Traces of four spoons. Bowl thin-walled (GF)
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191. *Ibid.*, 252.

192. Sams, *Gordion IV*, 68, 275 no. 816.

193. Sams, *Archaeology* 30 (1977) 110-111; K. DeVries in *Young Symposium*, 35, 48 fig. 9; Sams, *Gordion IV*, 65, 255-277.

194. G. Körte in *Gordion*, 120, 121, figs. 101, 102 (caption should read "nos. 44 and 45").

195. Anderson, *Comm. Cem.*, 177-182. P 365, from under Tumulus H, has fluting on the shoulder.

196. See Sams in Young, *Gordion I*, 253; *idem*, *Gordion IV*, 67.

197. Young, *ibid.*, 60-61, fig. 30, pl. 27E-I.

198. *Berytus* 15 (1964) 59-69. Knudsen (p. 65) derives the wooden bowls from bronze examples; this appears to me illogical (see pp. 203-204 and n. 63).

199. See here p. 203, n. 54; Young, *Gordion I*, 229 ff., nn. 53-68; *idem*, *ProcAPS* 107, no. 4 (1963) 361-362, fig. 19.

200. G. Körte in *Gordion*, 66-67. Körte believed his no. 46 copied bronze technique (p. 67). I concur.



*Post-Kimmerian*

**TumB 30** D. 0.39–0.40 m. Rim sherds, rim bands square in section, ending in spools flush with rim (mantle) (coarse, but GF)

Bowls of this type in bronze extended in date down to the cremations in Tumuli M and A (hence to *ca.* 530 B.C.) and showed steady development in style (see p. 220 n. 157). Pottery examples, however, cannot be confirmed *in burials* at Gordion later than Tumulus K-III. They may have been considered utilitarian in contrast to the fine available bronzes.

## OMPHALOS BOWLS

Bronze omphalos bowls, which have been characterized as “drinking bowls,”<sup>201</sup> occur so seldom in pottery copies in the tumuli that no sequence of shapes or styles for the latter can be traced.<sup>202</sup> Pottery examples from the West Slope Deposit in post-Kimmerian Tumulus J (**TumJ 49, 48, and 47**) are petaled, plain,

and “with wall unknown” respectively. There are no others catalogued from the tumuli on the Northeast Ridge, or even from their mantles to my knowledge. This latter circumstance must mean that they were not popular as drinking cups in the houses, or as gifts inside the poorer burials on the ridge. Those in J, mottled buff/black, may have been made for the funereal banquet and then deposited as the mantle-building began.

This may explain an uncatalogued sherd from an unknown location in the tumbled chamber fill of Tumulus S-1 (Fig. 55A[r]). In the vicinity of S-1 no domestic area or common cemetery has yet been found, hence a petaled drinking bowl may have accompanied the numerous dinoid jars for banquet purposes.

A pottery fragment of an omphalos bowl in Berlin (inv. 1029x) may have come from some now unknown provenience in the mantle of Tumulus K-II.<sup>203</sup>

The use of pottery omphalos bowls can be traced then surely to the late seventh century, *possibly* to the mid-sixth century B.C. (see p. 195, n. 13 where I attempt to redate Tumulus K-II).

## Wood

## WOODEN FURNITURE

To the reader who has perused the publications dealing with the wooden furniture preserved in the great pre-Kimmerian tumuli, W, P, and MM, it would seem improbable that furniture ceased to be a gift to the post-Kimmerian dead. In spite of the absence of a clay cap, and the looting of the tumulus, furniture studs were preserved in Tumulus S-2 (**TumS2 5–7**). Sturdy central pins under hollow hemispherical heads bearing traces of wood give evidence that some decorated piece was once present. Any piece surviving the Kimmerian invasion may have made a gift of heirloom type, possibly dating back in style to Tumulus P or

even W, but probably not MM, since the furniture in MM was unstudded.<sup>204</sup>

If, however, there ever were any examples other than that in Tumulus S-2, they must have been completely destroyed by the damp-dry cycles in burials whose clay caps were pierced (X, Y, Z), or whose mantles consisted completely of earth (N, H, B, C, etc.) or were thinner over off-center burials (G, N, H, B, J).

It should be noted here that although the evidence may be incomplete, it is not conflicting. No evidence for furniture has occurred on the west end of the Northeast Ridge, except for a very theoretical bench in Tumulus J (see p. 57).

201. Mellink in Young, *Gordion* I, 233–236.

202. Cf. *AJA* 72 (1968) 235, pl. 76, fig. 15 (P 3618), an omphalos from a black polished bowl. It came from layer 6B in trench M7-H, which belonged to the early phase of the “Persian-Phrygian Bldg.” (*ibid.*, pl. 73, figs. 3L and 11L)—i.e., pre-Kimmerian Phrygian in an area not burned by the Kimmerians. The omphalos is concave on its sides, resembling the omphaloi of MM 130 and 135 (Young, *Gordion* I, 135, fig. 87C,D) in shape and size.

203. Not numbered (or mentioned) by G. Körte in *Gordion*. I saw it in one of the remnant groups of the Gordion collection marked “Tumulus II” in the depot of the Charlottenburg Museum.

204. E. Simpson, having restudied the furniture from MM, reconfirmed this fact in a personal communication.

### *Postponement of Discussion*

General, integrating discussion of several classes of objects represented in these inhumation burials, but also to a much greater extent in the cremations, is postponed to Volume II, Part 2. Examples are, e.g.: gold jewelry (A, F, I), Lydian pottery (A, D, M), Greek and East Greek imported pottery (A, F), stone alabaster (A), horse trappings (A, E), and vehicular materials (A, E, F).

Along with some points of mantle construction, "retaining borders" (see above, p. 5) are postponed to Volume II, Part 2, along with such general ritual as animal sacrifice, banqueting, and the possible use of corteges.

This should avoid fragmentation and repetition of these discussions.

A general class of bronze and iron objects, from out-

side the burials proper, but accidentally caught up into the tumulus mantles over both inhumations and cremations, provides a wide range of domestic and agricultural implements which appear fairly consistent in nature with objects from the houses on the North-east Ridge. In addition, several stone head idols, which have been found in the houses and are apparently related to domestic cult, have appeared in the tumulus mantles (never *in* the burials). Of these, only one (**TumB 17**) had a connection with a main burial, although that was probably by coincidental choice of the mantle planner (see pp. 13–14 where the author accepts Young's theory of the sighting lines). The general discussion of these objects should be brought into relation with the contents of the houses, and therefore will be left to the volume planned on that subject.

# Summary and Conclusions

The Phrygian tumuli (see Figs. 1, 2) excavated by the University of Pennsylvania expedition to Gordion in the years from 1950 to 1969 comprise a group of eighteen inhumations and nine cremations of Phrygian date (and several of later date; see p. 7, n. 3.). R. S. Young published the three largest and richest wooden chambers in *Gordion I: Three Great Early Tumuli* (P, MM, W). Of the fifteen remaining inhumations, termed "lesser," two groups containing wooden chambers are located on the Northeast Ridge: one on its west slopes (B, C, G, H, and J) and another located farther east (KY, N, Q, X, and Y). In this eastern group there is also a plain earth burial under a tumulus (S). Tumuli MM and P were part of the main eastern cluster; W was at a distance farther east. Still another group of excavated "lesser" inhumation tumuli, Phrygian in date, is located on the South Ridge (S-1, S-2, S-3, and Z).<sup>1</sup>

The sequential order of the inhumation tumuli is discussed in Ch. XIX. They are listed briefly, with an attempt at absolute dating, on Table 4.<sup>2</sup> The lesser tumuli, beginning with G, stretch in time from close to W, which is thought to be the earliest of those excavated, past Tumulus MM, considered the latest of the "great early tumuli," to Tumulus C, which dates in the first decade of the Persian period at Gordion (i.e., after 546 B.C.).

In the following discussion, which is an attempt to characterize certain clusters of tumuli, the inhumation

tumuli excavated by G. Körte in 1900 (K-II, III, and IV) will be included where appropriate.

Tumulus W stands in a line of tumuli visible on aerial maps.<sup>3</sup> Many of these have been plowed away, but appear to align with the road from the east; more tumuli in lines as if along roads(?) come from the northeast and southeast to join the main east road (now the "back road" to Polath).<sup>4</sup> W, dated variously 750–700 B.C.,<sup>5</sup> provides a model of an Early Phrygian burial, not necessarily the earliest, as to both chamber and contents.<sup>6</sup> To summarize, the wooden chamber was simple, with half-log under-sill props,<sup>7</sup> squared side beams with unclear because unexplorable lapping, and a single roof of thirteen beams laid crosswise. It ranks fourth in clear measurements (see Table 2, p. 170). Its contents yield the earliest known assemblage pattern for those Phrygians who wore fibulae and disk-and-studded-leather belts, and placed as gifts bronze vessels (cauldrons, ladles, jugs, side-spouted sieve jugs; petaled, ribbed, and plain omphalos bowls, and plain bowls). In wood we find the earliest "screen" (serving stand, see p. 81, n. 39) and some tray-plates. This assemblage was a forerunner of those in the other great tumuli and also of those in certain of the lesser tumuli. Even though tastes and styles in objects changed, and although some tumuli have unfortunately been thoroughly or in part looted, the later burials related to W are fairly clear.

1. For details concerning the chambers and the mantles, consult Tables 1–3 (pp. 166, 170, and 179) and pertinent sections in the main text under each tumulus-letter. See also Index.

2. Please note that Table 4 (p. 192) includes in its total (21) the three inhumations K-II, K-III, and K-IV, excavated by G. Körte (*Gordion*, 38–129). Of these, K-III ranks among the "great early tumuli." The present summary discussion will follow Table 4, and present the result of the arguments in Ch. XIX on the internal sequence.

3. See Bradford, *Ancient Landscapes*, 70, fig. 22. Compare with our plan, Fig. 1.

4. Cf. G. Körte in *Gordion*, 36–37 and figs. 2 and 3.

5. For details of opinions on the dating of W, see p. 191, n. 2.

6. K. DeVries in Young, *Gordion I*, 191–199 (chamber and chronology); R. S. Young, *ibid.*, 199–218 (catalogue). The gifts in Tumulus W may also be gleaned from their occurrences in the correlated list of objects in pre-Kimmerian assemblages from W, P, and MM on pp. 185–186 herein.

7. *S.v.* "sills" on p. 5, and Young, *Gordion I*, p. 194, fig. 115A,B (W).

With Tumulus Q in the east group on the Northeast Ridge (Figs. 37, 38, pls. 51–52) an intermittent list of lesser tumuli begins, showing formulaic carpentry but poorer amenities. Although looted, evidence was preserved for a sand and gravel floor, theoretically housed joints (see p. 92) at the corners of the wooden chamber, a single row of beams forming the roof, and a clean earth mantle. The chamber contained fibulae of Phrygian type XII,4, and XII,13 with blocks on the arc (**TumQ 1–3**).

Next in chronological order in the east group, K-III<sup>8</sup> expands the examples in the “W-pattern” on a grand scale. Its pit was floored with small stones; the chamber had a wooden floor and squared-beam walls under a double roof, with clear measurements of chamber: 3.70 x 3.10 x 1.90 m. Its stone cap and masted clay mantle associate it with Tumulus P as do the prevailing styles among its rich contents (see pp. 185–186). The assemblage of gifts follows the W-pattern: studded belt, fibulae, etc., with certain additions, a built sarcophagus (p. 184–185), and a greater number of varieties of bronze and pottery vessel forms. Fire-tending implements occur as gifts only in K-III and P. G. K. Sams dates Tumulus K-III along with P (see below) on the basis of pottery types to the general period of the Terrace Deposition on the City Mound.<sup>9</sup>

Tumulus P, the “Child’s Tomb,”<sup>10</sup> is related to K-III in many ways: rubble pit lining, wooden floor, housed joints, double roof, mast, and wide range of bronze vessels, and pottery both painted and monochrome polished. Bronze vessels, which seem of about equal quantity and quality in K-III and P, have forms distinctly earlier than those in MM. Parallels for the pottery come from K-III and the Terrace Deposition on the City Mound (see n. 9). Services of seven sieve jugs and seven bowls, etc., occur in both P and K-III. There are also a number of brown-on-buff examples and other painted wares, but also black polished dinoi and specialized shapes. The askoi in P, however, find a parallel in the Destruction Level (see list on p. 218)<sup>11</sup>

Tumulus S (Fig. 39; Pl. 52), whose belt plaque and fibula show affinities with examples from Tumulus P, belongs in this pre-Kimmerian group so far as assem-

blage goes, but, being an inhumation in a plain unlined earth cist below one of the smaller tumuli, it becomes an exception. Parallels for this burial usage are rare. However, out of the four tumuli explored by Schmidt at Kerkenes Dağı<sup>12</sup> one contained a shallow cist grave.

K-IV<sup>13</sup> was poor in contents, possibly due to the destructive seepage through a relatively low earth (not clay) mantle. The carpentry of its chamber adhered to the general rules of W, K-III, and P, except that it was smaller in some of its measurements. Its scant contents make it hard to date, but there was evidence for a coffin, bronze vessels, and fibulae earlier than MM’s. The fibulae, close to those in P but slightly more advanced, place it before but near the date of the Destruction. Since black polished ware was found in the stone cap (an exceptional location for finds of any nature in the pre-Kimmerian period), there may be evidence of looting here.<sup>14</sup>

X, thoroughly looted (Figs. 40–42; Pls. 53–54) preserved only evidence for its double roof, for a theoretical built coffin (**TumX 1**), and for painted and black polished pottery (**TumX 2–6**) dated by Sams to the Destruction Level (pp. 104–105). Perishables were lost from this group: a built coffin perhaps like the one in K-III, perhaps also belts and fibulae.

In Y, also looted (Figs. 43–46, Pls. 55–57), we see a single roof, housed joints, and fibulae of the earlier types: an imported “elbowed leech,” a XII,2 and a primitive XII,13. The black polished pottery shapes, however, bring Y down, along with X, close to the date of the Destruction (pp. 109, 111).

MM, the “Great Tumulus,”<sup>15</sup> we believe contained the body of King Midas. Its contents date later than those in P, K-III, and K-IV. Midas had historical connections with eastern kings from 717 to 709 B.C., and died ca. 696, during the Kimmerian invasion.<sup>16</sup> The carpentry of the chamber was the most highly developed of those excavated: two walls, an outer of stone and an inner of unhewn logs, surrounded the tomb proper, which was of well-finished squared beams under a gabled roof, the only one so far discovered at Gordion. The spaces between the inner face of the

8. For dating of K-III, see p. 193, n. 9.

9. See p. 4. “Terrace Deposition.”

10. For references to excavation, contents, and Young’s dating of Tumulus P, see p. 191, n. 3. See also Young, *Gordion I*, 269–270.

11. Sams, *Gordion IV*, 65–66, 274–275.

12. E. F. Schmidt, *AJSL* 45 (1929) 252–253 and fig. 47.

13. G. Körte in *Gordion*, 98–104; Mellink in Young, *Gordion I*, 269, citing DeVries, *ibid.*, 198.

14. Although looting is not mentioned by Körte, the arguments for it are seen in the fact that the mantles of the other pre-Kimmerian tumuli in that locality are free of contents, since

there was no habitation district in the immediate vicinity. Here, however, pottery was found in the cap, whereas such deposited evidence for banqueting, and gift-giving in caps, occurred only in post-Kimmerian tumuli (see pp. 189–190).

15. For references to excavation, contents, and Young’s and others’ dating of Tumulus MM, see p. 191, n. 4. See also Young, *Gordion I*, 269–272.

16. A. Körte, *Gordion*, 20, agrees with Eusebius concerning the date of the death of Midas. See also M. J. Mellink, in Young, *Gordion I*, 271–272. O. Muscarella, *QRvArch* (Dec. 1982) 9, lists the opinions of many authors concerning the death of Midas and its relevance to the date of Tumulus MM.

stone wall and the outer face of the chamber wall were packed with stones which rose to a domical cover over all. Over that was a colossal cap of clay which held up during excavation under it. Inside the chamber was a profusion of bronze vessels, including imported types, studded leather belts, fibulae, furniture (including a large coffin bed; see p. 184 and nn. 4, 7), and textiles. In summary, the burial contained evidence for the highest of Phrygian accomplishments in the age of Midas. The lesser tumuli share in such grandeur only in very small part.

KY (Figs. 28–32, Pls. 42–46E), situated on a flat plateaulike area southwest of Tumulus MM, had not been looted, probably because it in no way resembled a tumulus. Generally it consisted of a layer of soft brown earth (I) over a layer of limestone chips from a stone-cutting project (II). The nature of the harder earth under these (III), whether artificial or natural, is unknown. The burial pit, dug in an area where the chips had been scraped back, consisted of an irregular rectangle containing the usual wooden chamber and, in the stone pack on the east side, the burial of two bridled horses. The stone side packs and low cap consisted of fist-sized boulders which were in turn covered only by the flat brown earth layer.

The chamber, of the usual type, with housed joints and single flat roof, stood west of the pit center. The treatment of the sills at the corners is unknown; clear measurements were ca. 2.32 x 1.85 m.

Gifts in the chamber were: bronze round and crescent plaques for a toggled belt or other accouterment (**TumKY 1–16**) strewn in a line across the feet of the defunct, tweezers (**TumKY 17**), knucklebones (**TumKY 18–20**), and gray-ware narrow-necked amphoras (**TumKY 21, 22**).

The two horse burials on the east side were laid on their sides, head to head with their backs against the pit scarp. These had iron bits and highly decorated bronze nose pieces (**TumKY 23–25**), whose workmanship and designs were exactly akin to those on a belt in Tumulus P. Skeletally their sizes suggest that they may not have worked as a viable yoked team (pp. 242–243). It is noteworthy that someone with Kimmerian connections (non-Phrygian belt, if it is a belt, no fibulae, tweezers, a horse burial dating to the Destruction period) should yet have locally made horse trappings. Local pottery was to be expected.

The horse burial at Norşuntepe,<sup>17</sup> although it was

without human association, has been mentioned as generally related to KY.<sup>18</sup> However, the gifts deposited with the Norşuntepe horses (two “lance heads,” knife with half-plaques on the handle, bits, rein ring, etc.) are more akin to the finds in Tumulus J (late seventh century; see below).<sup>19</sup>

N (Figs. 33–36; Pls. 46F–50) is small, and the latest of the inhumations excavated in the east group; it remained unlooted probably because it was situated away from the center of its mantle (Fig. 33B). The end walls of the chamber were specially cut before being housed. The chamber, with single flat roof, was poorly preserved because it was shallowly covered with an earth (not clay) mantle. The occupant was an adolescent. A bronze bowl (**TumN 1**), fibulae (**TumN 2–7**), and black polished dinos (**TumN 8**) place it as one of the W to MM cluster based on assemblage. It is, however, post-Kimmerian, dating close to Tumulus Z. One sherd from the stone cap (**TumN 11**, fragment of bowl with vitreous glaze) has a parallel from a house floor under Tumulus D. The floor dates before the fire on the west end of the Northeast Ridge (670?),<sup>20</sup> certainly before Tumulus H (650; see below), which is the earliest of the tumuli placed over the resulting burnt layer.

The tumuli in the above group (Tumuli W to N) appear to be related to each other in that they lie along an ancient road between two points, W and N (see Fig. 1).<sup>21</sup> They adhere (with the exception of KY) to a general set of rules for pit-making, carpentry, gift assemblage (cauldrons, bowls, jugs, belts, fibulae, and dinoi, amphoras, and jars as banqueting and storage vessels), and mantle-building over stone caps. If the tumuli are large, the mantles lie over a clay cap which supported a wooden mast: W, K-III, P, MM (Fig. 71[a]); or, if they are smaller, the mantles are of fairly clean earth, without mast: Q, K-IV, X, Y (Fig. 71[b]), and N (Fig. 71[g]). These are “belt- and class XII fibula-wearing” Phrygians.

Following upon post-Kimmerian N, and in the same tradition, is the group on the South Ridge (S-1, Z, S-3, and S-2). Of these, both S-1 and Z contain groups of heirlooms, closely resembling gifts in P and MM. In each of them, however, new post-Kimmerian forms are represented. No evidence for habitation or common cemetery has yet been found under the tumuli on the South Ridge, so probably the contents of their mantles are to be associated with their own looted burials.

S-1 (Figs. 47ff., Pls. 58ff.) has highly developed car-

17. H. Hauptmann in *METU Keban 1970*, 105–107, pls. 59[1,2]; 69[1,2]. *Idem* in *Bittel Festschrift*, 258–267, 269, figs. 2–4, dates his group to the seventh century.

18. H. Hauptmann in *METU Keban 1970*, 105.

19. Cf. M. J. Mellink, *AJA* 76 (1972) 177, pl. 36, figs. 6, 9. She

considers the Norşuntepe group to be Scythian of the seventh-sixth centuries B.C.

20. G. Anderson, *Comm. Cem.*, 51. Her date for the destruction, 650 B.C., is based on her date of 640 for the main burial in Tumulus H. See (here) pp. 48–49.

21. G. Körte in *Gordion*, 37, fig. 2.

penry with pit flooring of gravel, under-sill props, and a socle of stones under the centers of the end walls of the chamber. The sills were cross-lapped; the end walls above the sill were housed in the side walls. Due to looters, who caused a consuming fire, the roof was missing, the walls became charcoal left *in situ*, and the burned grave goods were scattered from the chamber floor upward into the disturbed cap and mantle. Leading from the stones of the cap were double sets of standing stones aligned to the cardinal directions. These are understood as having to do with the locating of center and the laying out of further guide walls in the original mantle (p. 119, Fig. 49B).

Among the finds (see lists pp. 117, 118) was a group of pre-Kimmerian forms: fragments of ladles, fragments from several ring-handled bowls, petaled omphalos bowls, parts of a disk-and-studded-leather belt, and a profusion of fibulae (as in MM). Among more contemporary forms were belt fastenings of the arc type found on Tumulus P belts, but with hinged straps, and some arcs based upon advanced XII,14A fibulae. A lead clamp fragment (**TumS1 72**) probably indicated a log coffin (see below; also Tumuli B and C). A bronze bail from a missing cauldron, bronze vessels finely ribbed and reeded on the exterior, fibulae of Type XII,2, 2A, 9 $\beta$ ,<sup>22</sup> 11, 13, and 14, and gray-ware dinoi, jugs, and storage vessels.

A cist grave and two urned cremations lay in the support layers (IV and III) and two more urned cremations had been installed in the mantle (II). See **TumS1 82–100**.

Associations of the finds place S-1 after MM and earlier than Z.

Tumulus Z (Figs. 63ff.; Pls. 77ff.), the southernmost of those surveyed on the South Ridge, was among the largest excavated (see Table 3 and Pl. 58A). As an aid to mantle placement it had a stone "tower" instead of a wooden mast.

The chamber was normal Phrygian, with under-sill props, end walls housed in side walls, flat roof and reed matting over it. Exceptional about it was a cross beam with L-shaped nails for gifts under the roof at center. It was evidently supported at the same height as four horizontal "tie beams" extending beyond the side walls and mortised at their ends over eight heavy tenoned posts, which stood outside the walls, bedded in the pit floor. This "caging" method is an element in the carpentry employed in the Pazyryk barrows.<sup>23</sup> There were two types of wall nail: one made L-shaped by clenching, as in MM, H, and S-2, and another with forged-on cube to form the hook (post-Kimmerian and found elsewhere only in Tumulus S-1).

Again, in spite of thorough looting, Z appears to have contained a group of bronze heirlooms like those in S-1 (see p. 156): plain ring handles from rim-banded bowls, a sieve-spouted bowl. The contemporary, post-Kimmerian, gifts were reeded and fluted bronze vessels, handles with molded decoration torn from bronze bowls, and in pottery a painted dinos and a gray fluted jug. From the looters' shaft, which may have contained also sherds from the mantle, were many fragmentary fine black-burnished jugs, and the usual dinoi and jars. Evidence was lacking for belts of any kind, or fibulae (one tiny socket from a pre-Kimmerian double-pinned example may have been fortuitous).

In Z the W-pattern is diminished, and is blended with another which must share common ancestry with the Altai people of the fifth century. Dating is based on associations of the painted pottery dinos (**TumZ 19**) with pottery from a burned house floor earlier than the material in Tumulus H (650 B.C.)—thus, *ca.* 670(?).

In Tumulus S-3 (Figs. 61ff.; Pl. 76) a small low tumulus on a promontory below Tumuli Z and S-2, there was little left after looting. The pit, located northwest of center, as was that in its richer, earlier neighbor, Z, could hardly be measured. But fragments of wood were proof of a wooden chamber, and (according to the excavator) perhaps of a coffin. Left to us from the looters' mix were only two gifts: a biconical amber bead (**TumS3 1**), and sherds of a small closed vessel with a bichrome band on shoulder/belly (thinned red paint edged below by a narrow black band, top of band not preserved) (**TumS3 2**). Analogies for both the bead and the vessel are vague. The date falls possibly between 600 and 550 B.C.

S-2 (Figs. 56ff.; Pls. 70Kff.), although a large tumulus, had been plowed down to a height of 1.79 m. and was found to have been looted. Ancient surface and a working floor adjacent to the pit ran over layers of sandy clay (IV), clay with selenite plates (V), and laminated clay (VI). The pit, southwest of center, was very large and preserved around its edges evidence for the Phrygians' original back-dirt with a passage through it presumably for pulling up timber and stones. The chamber, unfloored, was set directly on the clay. At all levels the end walls were housed in the side walls. The roof was single and flat. In the stone cap, which was confined to the boundaries of the pit, two levels of straw matting were interposed. A log coffin at the southwest end of the chamber is premised on the presence of iron bands, as seen in Tumuli K-IV, MM, B, and C. L-headed nails for suspension of gifts were of the simpler, clenched type.

22. See p. 129 and n. 97.

23. See pp. 152–155 *passim* and nn. 14–18.

Gifts were found along the edges of the chamber and scattered upward through the refilled looters' hole in the mantle. The bronze fragments (banded-rim bowl, an undecorated ring handle, studs from wooden furniture) formed an heirloom group with pre-Kimmerian connections. The bronze petaled bowls, however, were more akin to **TumJ 2**. Again it is the pottery that brings the date down. Although some dinoi (i.e., **TumS2 11–13**) had collar-rims, the shape development of the low-necked jar, **TumS2 14**, falls between that of **TumB 3, 9, 10** and P 285, a burial container set contemporaneously into the mantle of Tumulus M, which dates to the Lydian period, but still needs study in detail.<sup>24</sup> One Lydian base sherd from a lekythos(?), **TumS2 10**, can place the tumulus in the Lydian period but not precisely within it.

The date of S-2 is estimated to be in the range 580–545.

Chronologically, S-2 brings to a close the discussion of the eastern group of tumuli, which began with W to N on the east end of the Northeast Ridge and seems to have continued on the South Ridge. These were the belt- and fibula-wearing Phrygians, with the exception of KY and Z, which will be discussed again in the "foreign" group below.

On the west end of the Northeast Ridge a separate grouping begins with pre-Kimmerian Tumulus G. When G was built, there were as yet apparently no houses in this area, although a pre-Kimmerian Phrygian common cemetery, still to be dated precisely, has been identified in the vicinity.

Tumulus G (Figs. 13–17; Pls. 23–30) lies south of the village on the 16- to 17.5-m. contour strip which contains also B (see below), F, and E.<sup>25</sup> The burial is located south of center and had but a shallow covering of earth at that point. Through some clue (a sinkage of some sort?) the looters found and ransacked it. The diameter of G, 25.04 m., and its height, 2.23 m., place it among the smaller tumuli (see Table 3, p. 179).

As preparation in G, extensive cuts in the underlying clay may indicate a search for the accompanying layers of water-washed gravel, which provided part of the material for the side packs and cap. A pile of stone (pile 1) was left on the ancient surface as a remnant of those drawn up for use. The pit was exceptional in that space was left along its south scarp to accommodate a pot deposit (**TumG 9–13**; four storage vessels and a fortuitous(?) sand-core bead) in the stone pack outside the chamber, and it also is the only pit that was benched at one end at mid-height to allow for extra-long top-roof beams. Directly on the clay of the pit

floor long beams ran under and beyond the side sills. The carpentry of the chamber showed intricacy and uncommon care in finish: there were sills, and two wall beams on sides and ends all cross-lapped, except that the upper set was secured by a mere L-hook of the end beams over the side beams, necessitating a concomitant stone side pack. The end walls were taller than the side walls and rose to share with the lower, crosswise, roof the bearing surface for the upper, lengthwise, roof. This holding system occurred elsewhere only in Tumulus W, which had only a single roof.<sup>26</sup>

The contents of G were scattered through the churned fill of the grave: rims of two plain-walled bronze bowls (**TumG 1, 2**), two imported fibulae (**TumG 3, 4**) of types found also in island sanctuaries, and a fibula of type XII,7A. The pottery (**TumG 7, 8**) consisted of a painted round-mouthed jug and jar, both of which have affinities with the eastern plateau. There were no examples of the usual dinoi. The looting left us only fragmentary skeletal material, a pile of stones (pile 2) thrown out from the chamber on a level above ancient surface, and two stray Hellenistic sherds, by which the looting may be dated Hellenistic or later.

Tumulus G is dated by its architecture close to Tumulus W, by its general contents certainly pre-Kimmerian, and by its painted pottery close to K-III and P. We place it between W and K-III.

But perhaps, after the installation of G, houses sprang up, and that prevented further tumuli from being located there until after a fire which put an end to many of the houses. Then we begin with Tumulus H, followed by inhumations B, J, K-II, and C.

Tumulus H (Figs 18–22; Pls. 23–30), then, initiates the post-Kimmerian series of wooden chambers on the west end of the Northeast Ridge. The installation and the mantle-building probably destroyed a small area of the earlier common cemetery as well as part of a house complex.

The burial in H began as a pit dug into the steep southeast slope of the ridge in such a way that while the chamber and side packs were being built over its plain clay floor, the downhill end had to be shored up by a support layer of earth running over a burned dwelling. There are two theories concerning the construction of the chamber walls above the cross-lapped sills. A cribwork system of beams alternating on the sides and ends has been advocated (Fig. 20B), but the use of solid walls with housed joints above the sills seems warranted by the photographic record. Wall beams were left rounded on the exterior. Under the

24. Tumulus M is a cremation to be published in *Gordion II*, part 2.

25. See Tumuli E and F, *ibid.* See also n. 28 below.

26. K. DeVries in *Gordion I*, 196 and fig. 115A.

roof an extra lengthwise beam crossed the center to equal in height the two side walls. A single flat roof was then laid across the three beams, leaving two open spaces at each end. Because of these spaces (which were like those left over the side walls of Tumulus Z) and the generally light construction of the chamber, the concomitant side packs were of large stones, carefully laid to avoid lateral pressure against the walls.

The skeletal fragments were those of a youth, once lying on a light wooden platform-bier or pallet. For gifts he had only pottery (**TumH 2-6**), placed around the edge: an East Greek bird bowl (650 B.C.), which was presumably hung on an L-headed wall nail found in the same corner, a red fluted wide-mouthed jug, and a very small black polished jug and saucer. One semi-polished jar can, on the basis of form, be placed between slightly ellipsoidal **TumN 8**, and **TumB 3, 9**, and **10**, which had narrower necks and shoulders on ovoid bodies. The finds from the stone cap and earth mantle (**TumH 8-34**) are a mix of all periods up to 650 B.C., probably coming from the common cemetery and the habitation area. A definite set of banqueting utensils does not distinguish itself from the rest of the motley group.

The mantle itself contained remains of three guide walls leading from the northeast in to the northeast corner of the grave. The use of north in the planning associates H with Z, S-1, and B (Fig. 71 [c-f]). A second mantle with its center north of the first center, and apparently containing no further guide walls, was erected over the original, smaller, mantle, enlarging and extending the whole tumulus toward the north, uphill.

Perhaps about twenty years later, Tumulus B (Figs. 3ff.; Pls. 4ff.) was installed, well to the north from Tumulus H, on a prominent knoll facing northwest, and situated across a gully (branch road?) from Tumulus J (see below; J and K were later). The ridge in this area was composed of a natural sand and gravel layer (ancient surface) over hardpan (clay). In the area of B the house-dwellers had placed a deep layer of earth which supported a dry-laid simultaneously built stone cellar wall (i.e., walled storage space under a house), which stood on a paving of small stones. The fire on the ridge left a thick burned layer over the support layer.

The stone cellar walls were retained as stone pack for a wooden chamber built inside them and needing only occasional chinking between cellar wall and chamber wall. The chamber had suffered rotting under its thin mantle but had not been looted, and evidence remained for lap-jointing in an irregular manner at the sill, and the top of the walls at its southeast end; unslotted side walls, however, extended beyond absent end beams at the northwest end. The

southeast wall had graffiti thought to be the initials of the incumbents (pp. 11, 235). The roof, of unsquared and still tapering logs, was supported at the southeast end by a short extra length of hewn wood to level it up.

Inside the burial one skeleton in a log coffin lay on a log dais, and another lay on the stone floor. The crushed coffin had cracks mended with lead and the lid sealed to the bed with iron bands. Found inside the coffin (**TumB 1-5**) were a setting from an earring(?), buff lekythos, gray jar, and two black narrow-necked amphoras; outside the coffin at its head, an ivory spindle with ram's head, and a whorl (**TumB 7, 8**). Finds from the floor around the second skeleton were two low-necked jars and a clay whorl (**TumB 9-11**). Dinos were absent (as in G and H).

The cap contained (**TumB 12-16**) burned fragments of a lebes-cauldron, a fragment of a pre-Kimmerian studded belt, two "hitches" (p. 13, n. 15, Fig. 9A), and a pair of unburned spouted jugs with painted animal panels. This group may represent in part heirlooms and in part contemporary banqueting utensils.

From the center of the stone cap a line of stones (Fig. 5) proceeded due north, past a stone head idol (**TumB 17**) used as a sighting point, to the chosen center of the tumulus. This became guide wall A-B. Also converging on that center from the periphery came guide walls (C-D to H-I) meeting in a roughly columnar stack of stones under the center—which probably discouraged looting right at its start. Contents of the mantle (**TumB 18-36**) consisted of various objects from the nearby houses and common graves, including at random three more head idols.

B stands after H (therefore also after S-1) and close to J, i.e., ca. 630 B.C.

The mantle of Tumulus J (Figs. 23ff.; Pls. 31ff.), which lay on the west edge of the western group on the Northeast Ridge, was spread over two house complexes and a child's burial bedded in the surface gravel layer. The burial pit was cut into the slope well away from center and suffered no looting, only destruction of its roof, walls, and perishable goods, due to the thinness of the mantle over it. Small stones lay under a wooden floor. The sills of this nearly square chamber were cross-lapped, and the upper wall beams, of thinner planking than usual, were *probably* housed (north-south in east-west). Cap and side packs were largely of stone robbed from nearby house walls.

The contents were in part exceptional for Gordion. In addition to the usual bronze jug and omphalos bowls (**TumJ 1-3**) the possessions of a warrior and huntsman (**TumJ 4-16**) were laid out in the south half of the grave: in bronze a pair of knives, several arrowheads, cosmetic implements; in iron, a spearhead, large arrowhead, and double ax; in stone, a sharpener. This array, resembling the group from Norşuntepe,



has Scythian affinities;<sup>27</sup> Phrygian fibulae and belts were lacking. The skeleton lay among sherds of broken storage pots (**TumJ 17**, plus the uncatalogued examples on Fig. 25G) in the north half of the chamber. In the cap was a burned collection of mainly banqueting material (**TumJ 18–30**): bronze cauldrons, an iron ladle handle, a painted dinos, an imported black-on-red bottle, and gray ware. Belts and horse trappings appear to have been given also. More banqueting material, called the West Slope Deposit (**TumJ 31–53**), continued straight up over the cap into the mantle while it was being built, suggesting that banqueting went on for some time after the cap was laid.

Dating, linked to Tumuli F and K,<sup>28</sup> places J between 620 and 600.

G. Körte's Tumulus II (here K-II, see Fig. 1) was situated at about the same contour-elevation as Tumuli H and I, and next to them on the southeast. In spite of being looted (arguments, p. 189, n. 41) it appeared very rich. A large wooden chamber (see Table 2) with floor-planks laid directly on the clay pit floor, may have been installed inside an abandoned cellar (see p. 167) as in the case of Tumulus B. The corner jointing of the chamber is not specifically described. It had a flat double roof, and some evidence for pegging together of wall beams (as in Tumulus METU II)<sup>29</sup> but such pegging has been found nowhere in the Pennsylvania excavations.

G. Körte believed that, in K-II, there was a built sarcophagus, decorated with ivory plaques, and cymation strips of egg-and-dart. However, the presence of lead sealings and iron bands may mean that, since these were separated from the built sarcophagus, an additional log coffin like that in Tumulus B was present.<sup>30</sup> The rich contents found on and over the floor included jewelry, alabastra (figured and plain), pottery both imported and local; important for dating are a "Waveline" amphora (K-II 26) and a wide-bodied Lydian lekythos slightly related to that in Tumulus M (P 762).<sup>31</sup> These and the style of the egg-and-dart help to place the date close to 550 B.C. (see p. 195, n. 13).

Tumulus C (Figs. 10ff.; Pls. 13ff.) covered with its mantle several domestic and burial features, "West House," and three burials (Figs. 11A[D-H], 11B[D-H]), all of which predated the burning on the ridge. The main Phrygian burial for which Tumulus C was made was installed in the usual pit cut close to "West House," which had furnished material for the burial project.

The burial in C had been so very thoroughly looted that only pieces of chamber wall were left in a pit filled with stones and earth. But an empty space was apparent, once occupied by a child's wooden coffin.

The pit (2.20 x 2.10 m. at floor level) was paved with large flat stones matching those in the courtyard of "West House." The size of the chamber is theoretical (see Table 2), and among the smallest of all those dug. The beams were evidently flawed, or some were left with their taper, since several cakes of plaster were used as chinking or binding devices (see **TumC 14**). Left in the coffin cavity were scraps of human bone, thin iron bands, knucklebones, and fragments of an alabastron and lydia. In the disturbed fill of the chamber were further pieces of the alabastron and lydia, and additional gifts, i.e., an animal-shaped vessel probably of Lydian origin, more pottery, and plaster cakes. Further fragments of beams, plaster cakes, lead sealings from the coffin, fragments joining previously mentioned lydia, and the animal vessel were found mixed in several distinct piles of stone left on the looters' working levels in the mantle. The assemblage belongs to a female child. The mantle was of earth (not clay) and built without guide walls (see Fig. 71[g]).

The shapes of the pottery (Phrygian and Lydian) place Tumulus C chronologically before Tumulus A, a cremation of ca. 540–525 B.C.,<sup>32</sup> and close to, but after, the fire on Küçük Höyük (546).<sup>33</sup> Date of C: 546–540.

It is probably dangerous to draw sweeping conclusions about the tumulus cemeteries at Gordion without including the cremation tumuli. However, a few statements can be made with reference to the inhumation tumuli alone.

Tomb preparation, being a major undertaking in W, P, and MM, the "great early tumuli," was a drawn-out procedure. Perhaps at each death either a properly dug pit or a reserved area in a platform of supporting earth, a stone side fill, and the wall beams in place to the eaves had already been advanced to a stage awaiting the installation of a body with its gifts. At least, after this much was accomplished, the funeral procedure could be prompt. Then roof beams and the stone cap (perhaps with the lowest section of mast) were all that were immediately necessary. At some later time the clay cap further propping the mast, and the clay or earth mantle could be added.

Except for Tumulus Z, which was large and needed a

27. See above, note 17.

28. For F, see E. Kohler in *Young Symposium*, 65–66 and figs. 3–13; *Gordion II*, part 2. For K, *ibid.*

29. S. Buluç, *Ank. Frig. Nehr.*, ill. 4(2).

30. No such lead or iron accompanied the built sarcophagus in K-III. See p. 184 and n. 10.

31. E. Kohler in *Young Symposium*, 67 and figs. 15–18; *idem*, *Gordion II*, part 2.

32. E. Kohler in *Young Symposium*, 67–69, figs. 20–32; G. Roger Edwards, *ibid.*, 163, figs. 1 and 2. See also *Gordion II*, part 2.

33. R. S. Young, *UMB 17*, pt. 4 (1953) 26–29; *idem*, *Archaeology* 6 (1953) 159–166.

clay cap to support the stone "tower" it had in lieu of a mast, the lesser tumuli had no clay inter-caps over their stone caps, and except for occasional instances of stone guide walls in mantles, the later part of the process, the mantle-building, was much simpler than in pre-Kimmerian times.

Banqueting may be tied in with either or both of two processes. In W, MM, and P, with their great masted mantles, the stone caps under them were free of gifts, and the paraphernalia of banqueting were placed in the tomb, with the corpse—which may mean that all the banqueting and gift-giving took place within two or three days after the death of the occupant and before the roof beams were laid, unless trepanning and body-preparation were practiced as with the Scythians.<sup>34</sup>

By contrast, in the lesser post-Kimmerian tumuli, all the pre-burial phases of preparation being the same, the body was disposed and banqueting may have begun immediately, as in earlier examples, since banqueting material is sometimes found in the grave—but it also must in some cases have continued after the laying of the roof and during the amassing of the stone cap, as now the paraphernalia of eating are sometimes found in the caps, and in J (see above) in a deposit continuing up well into the mantle.

Apropos of the subject of banqueting, the colorations termed "mottled," "streaky buff," or "buff to black," found on the surfaces of some gray-ware vessels in the West Slope Deposit of Tumulus J may mean that **TumJ 37–39** and **41–46**, although of a fine ware, must have been allowed close to a cooking(?) fire. The only other large group of mottled gray ware came from Tumulus S-1, where a fire caused by looters recolored the surfaces of the dinoi, low-necked jars, and some larger storage vessels. See **TumS1 73–75** and Figs. 54I–55A. For this reason perhaps these "streaky-surfaced" vessels should not be considered a distinctive kind of *ware*.

Some extraordinary foreign relationships have been observed in three of the "lesser" inhumation tumuli. These are in KY (east group on the Northeast Ridge), Z (South Ridge), and J (west group on the Northeast Ridge).

The earliest of the three, KY (see above), is thought to be of the Kimmerian period for several reasons. Its horse burial, the presence in the gift assemblage of non-Phrygian implements such as tweezers, and the strange row of plaques to be sewn onto a toggled belt

or other accouterment of cloth or leather, and the absence of fibulae and Phrygian belt, argue that KY belonged to a nomadic guest or mercenary. Dating depends on the decoration of the horse trappings, which is related to a belt in Tumulus P, and the Kimmerian habit of accompanying a human burial with a sacrifice of horses.

The second, Tumulus Z (see above) had elements in its carpentry seen in the Pazyryk barrows. Its assemblage, however, consisted of the usual Phrygian gifts (some pre-Kimmerian heirlooms and some contemporary post-Kimmerian objects) except that belts and fibulae were lacking. Z no doubt belonged to someone sharing ancestry with the people of the Altai who built "caged" chambers.

By 620–600 Tumulus J again shows differentiation from Phrygian customs. The chamber was close to normal, but the assemblage contained Scythian weapons and cosmetic implements—again proper Phrygian belts and fibulae were lacking. For the first time, also, the contents of the stone cap and the West Slope Deposit in the mantle showed evidence for a prolonged period of banqueting after the placement of the chamber roof.

If we analyze the contents of the rest of the inhumations on the west side of the Northeast Ridge, looking for evidence of belts of the disk-and-studded type, or the solid type, or for fibulae of class XII, none appears for certain in the burials, beginning with pre-Kimmerian Tumulus G (except **TumG 5**, a XII,7A) and continuing chronologically through J.<sup>35</sup>

K-II and C date close to 546 B.C., and both of them lack belts and fibulae. Perhaps by this time of transition from the Lydian to the Persian period of influence, the old Phrygian accompaniments of the Tumulus W type of assemblage had ceased to be important. On the South Ridge also, Tumuli S-3 and S-2, both falling within the Lydian period, show, in spite of their looting, a change from the W assemblage.

A discussion of the presence of guide walls, which occurred in only S-1, Z (modified), H, and B (see Fig. 71[c-f]), should be postponed until the cremations D and E, which also have guide walls, can be presented.

Hence, we postpone some general conclusions concerning the tumuli dating after J until the cremation tumuli are published. The discussion of banqueting and of mantle building, for example, will also be continued in Volume II, Part 2.

34. See Rudenko, *Frozen Tombs*, 279–283.

35. Fibulae in G came only from its mantle. In H the two fibulae which rested in a blue paste mass are of unknown type (and also, possibly foreign). Fibulae catalogued with B and J (only one of

which was Type XII) came only from their mantles. The fragmentary belt clasp in the stone cap of J was probably fortuitous. I.e., *positive* evidence in burials for the presence of "W" and "P" belt types and Class XII fibulae is lacking throughout.

# Appendix A

## Inscriptions

Cl. Brixhe, M. Lejeune, Nancy-Paris, France

à la bibliographie donnée dans le volume I (R. S. Young, *Three Great Early Tumuli*), p. 273, ajouter:

Zgusta, *KP* = Zgusta, L., *Kleinasiatische Personennamen*, Prag 1964.

Brixhe-Lejeune, *CIPP* = Cl. Brixhe, M. Lejeune, *Corpus des inscriptions paléo-phrygiennes*, Paris 1984.

Les lectures et les commentaires proposés ici sont empruntés à ce dernier recueil.

### TUMULUS B

#### SIGNES |, ↑, †, † SUR LE PAROI SUD-EST DE LA CHAMBRE FUNÉRAIRE

Si j'ai bien compris la disposition de la chambre funéraire et si j'interprète correctement votre hypothèse [see pp. 11, n. 6; 173, nn. 37, 38]:

a. | serait une ébauche malheureuse du ↑ incisé plus bas;

b. † serait associé au cercueil et au squelette qui s'y trouvait; ↑ le serait au second squelette, celui qui a été trouvé sur le sol, le long de la paroi Nord-Est.

Songez-vous à l'initiale des noms des défunts? Ce n'est pas impossible en soi. On a, en effet, sur les poteries, un certain nombre d'exemples de signes isolés, qui peuvent être considérés comme marques de propriété:

— sans doute initiale du nom du propriétaire, si le signe appartient à l'alphabet;

— simple marque symbolique, si le signe n'est pas alphabétique.

G-203 = I 369: à l'intérieur, sur le flanc, ↑; sur le fond × (symbole non alphabétique).

G-208 = I 395: à droite *n*, signe isolé ou fin d'un mot; à gauche marque symbolique ✕.

G-225 = I 457: deux signes alphabétiques isolés diamétralement opposés, A et ↑

G-254 = I 548: √ = *y*.

G-257 = I 552: †, plutôt *v* que *e* (avec deux appendices latéraux seulement).

G-260 = I 557: un *n* sans doute isolé.

G-213 = I 416: avec un graffite, un *n* isolé et une marque symbolique (une sorte de croix gammée: ✕).

Donc, dans le chambre funéraire du tumulus B, l'hypothèse de ↑ (*ts*?) et † (*l*) pour désigner les défunts par l'initiale de leur nom n'est pas impossible.

Mais si | ne constitue pas une erreur, il faut naturellement chercher dans une autre direction: points de repère pour l'orientation et l'ajustement des poutres?

### LE GRAFFITE DU TUMULUS J

**TumJ 63** (Fig. 72; Pl. 41I)

Fragment de calcaire blanchâtre, de forme approximativement triangulaire. Inscription sinistrotourne, peut-être incomplète à droite et à gauche.

Brixhe-Lejeune, *CIPP*, G-06 = I 77

Au début, à droite, partie supérieure d'un *b*, plutôt que d'un *r*. À la fin, à gauche, restes d'une lettre qui pourrait être un *s*. D'où . . . **†babaš†**. Cette séquence, si elle correspond à un mot, évoque le nominatif—sans doute sigmatique—d'un anthroponyme masculin fréquent en Asie Mineure, cf. en paléo-phrygien *baba* (nominatif asigmatique) en M-01b, G-121 et peut-être G-184, *bba* en M-02; à l'époque gréco-romaine *βαβας* (masculin) et *βαβα/βαβαββα* (féminin), Zgusta, *KP*, § 133-1, 11, 12.



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# Appendix B

## *The Equids from Tumulus KY*

Sebastian Payne, Cambridge, G. B.<sup>1</sup>

As Fig. 29B shows, the two equid skeletons lay, head to head, to the east and southeast of the burial chamber (see above, p. 74). The north equid lay with its back against the east wall of the pit, on its left side, with both hind legs half bent, one foreleg slightly more bent and the other extended; the south equid lay in the southeast corner of the pit, on its right side, with its left fore and hind legs extended and its right hind leg half bent.

Pls. 43B, 44 and the excavation notes indicate that the skeletons were essentially complete and in articulation when excavated. But the bone was in poor condition, and the weaker parts of the skeletons must have suffered considerable damage when they were removed from the ground: by the time the skeletons were examined in 1981 the skulls and jaws were reduced to crumbling fragments, with little hope of useful reconstruction, and the ribs, vertebrae, and some of the upper limb bones had suffered considerable damage. Lower leg and foot bones were generally in good condition, as were the teeth.

### IDENTIFICATION

Measurements taken on both equid skeletons are given in Tables 6 and 7.

All the upper cheek teeth (Pl. 84A,B) in both animals have well-developed caballine folds and relatively long protocones (protocone indices for the north equid are between 0.35 and 0.48 in P<sup>3-4</sup> and between 0.39 and 0.45 in M<sup>1-2</sup>, and for the south equid between 0.43 and 0.50 in P<sup>3-4</sup> and between 0.55 and 0.61 in M<sup>1-2</sup>).

The lower premolars (Pl. 84C,D) have wide U-shaped lingual sulci, and well-developed *plis hypoconids* and ptychostylids, with postflexid indices in P<sub>3-4</sub> between 0.45 and 0.53; penetration by the buccal sulci is relatively shallow. The lower molars (Pl. 84C,D) have wide lingual sulci, though with a greater tendency to a sharper angle in the trough especially in M<sub>3</sub> (only recently in full wear in both animals). Ptychostylids and *plis hypoconids* are present in all lower molars in the north equid; but more weakly developed in the south equid, where M<sub>1</sub> in particular has no *pli hypoconid* and little more than a trace of a ptychostylid. Penetration by the buccal sulci is moderate in the lower molars in the south equid, and deep in the north equid. Postflexid indices in M<sub>1-2</sub> are between 0.36 and 0.43.

Taken in conjunction, these characteristics clearly indicate that the Gordion KY south equid is a horse rather than a donkey or an onager. In donkeys, protocones tend to be relatively shorter, caballine folds are rarely well developed, lingual sulci tend to be more narrowly V-shaped, and penetration by the buccal sulcus is usually shallow even in the molars (Eisenmann 1980, 1981).<sup>2</sup> In onagers, protocones are relatively longer, as in horses, but caballine folds are again scarce, and penetration of the buccal sulcus shallow even in the molars. In horses, the protocone index generally increases from P<sup>4</sup> to M<sup>1</sup>, while in donkeys and onagers it often decreases (Eisenmann 1980: table 13): it increases from 0.48/0.50 to 0.55 in the Gordion KY south equid.

The identification of the Gordion KY north equid is less certain. In particular, the relative shortness of the protocone in M<sup>1</sup> and M<sup>2</sup> would be unusual in a young

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2. Eisenmann (*loc. cit.*) rightly stresses the considerable individual variation seen in all dental characters in the equids.

horse; against this, however, the deep penetration by the buccal sulcus in the molars (deeper than in the Gordion KY south equid) would be unusual in an onager or a donkey. In donkeys, and, to an even greater extent, in onagers, the metacarpals are relatively slender (Eisenmann 1979). The Gordion KY north equid has relatively stout metacarpals: their slenderness index ( $100 \times \text{shaft width/greatest length}$ ) is  $14.7/14.5$ , values close to those of the south equid, and very much within the normal range for horses.

It seems most probable that both the north and south equids are horses; but a possibility that has also to be considered is that the Gordion KY equids might be hybrids. Relatively little is known about the skeletal and dental characteristics of mules, and almost nothing about hybrids between onagers and horses or donkeys.

### AGE AND SEX

Information about the state of eruption and wear of the teeth and the state of fusion of the epiphyses is summarized in Table 8. On the basis of ageing data and criteria in modern horses (e.g., Habermehl 1975; Silver 1969), both Gordion KY equids would be judged to have been about 5–5.5 years old at the time of death, the north equid possibly marginally older than the south equid.<sup>3</sup> In both, the third or corner incisor is in early wear (in modern horses this erupts at 4.5–5 years, and its lingual edge, which is completely or partly unworn in both Gordion KY equids, usually comes into wear by 5.5–6 years); in the south equid the upper third molar (erupts in modern horses at 3.5–4 years) is still not in full wear, and some of the vertebral centra are still fusing (fusion in modern horses at around 5 years), while in the north equid the upper third molars are just in full wear and all vertebral epiphyses are fused. In both equids the infundibula in the first or central incisors are still moderately deep.

Both Gordion KY equids have well-developed canines (Pl. 85A,B), making it almost certain that they were male, though it was not possible to confirm this from the shape of the pelvis as these were so broken. There is nothing to suggest that they were geldings: while castration is thought to delay epiphyseal fusion without delaying dental eruption, the state of epiphyseal fusion in the Gordion KY equids does not appear to be delayed in relation to the age indicated

by the teeth; also representations of horses in the ancient Near East suggest that entire stallions were normally used both for riding and for traction, as is the case in the Near East to the present day.

### MEASUREMENTS AND TYPE

Bone measurements are given in Table 7. Withers heights (Table 9) were calculated from the lengths of the long bones, using Kiesewalter's factors (von den Driesch and Boessneck 1974); on this basis, the south equid was 135–138 cm at the withers (13.1–13.2 hands), and the north equid 125–130 cm (12.1–12.3 hands). The similarity in the estimates given by the different long bones in each case lends additional confidence to these estimates; and shows that the limb bones of the Gordion KY equids were similarly proportioned to those of the modern horses on which Kiesewalter's calculations were based.

In modern terms, horses under 15 hands (152.4 cm) are classified as ponies. The Gordion KY equids, however, are more slender-boned than ponies, and are probably better described as small horses: the slenderness index ( $100 \times \text{shaft width/greatest length}$ ) of their metacarpals is between 14.5 and 15.0, and of their metatarsals between 10.6 and 11.2.

### "BIT-WEAR"<sup>4</sup>

In both Gordion KY equids the front corner of both lower  $P_2$ s is bevelled (Pl. 85C,D). Unlike the normal occlusal surfaces of the cheek teeth, where the harder enamel stands up in ridges above the softer dentine, the bevelled surfaces are completely flat. The transition between the flat bevelled surface and the normal surface of the posterior part of the tooth is fairly sharp: in each animal the left tooth is more bevelled than the right.

Bevelling of this kind has been noted before in horses dating from the first and second millennia, and has been interpreted as bit-wear, and thus as evidence for the use of a bit (e.g., Azzaroli 1980; Bókönyö 1972). Clutton-Brock (1974), describing similar but more pronounced bevelling on the lower left  $P_2$  of the Buhen horse (from Egypt, dated to ca. 1675 B.C.), comments that this shows that the horse was "ridden or driven with a bit which would have been made either of

3. Possible differences between modern and ancient equids, and between horses and other equids, introduce some uncertainty into age estimates based on modern horses. There is, however, no reason to believe that there are important differences in this respect between ancient and modern horses; and what is important is that the ageing data establish that the Gordion KY equids

were fully grown but still relatively young—likely to have been broken for at least a year or two, with many useful working years still to come.

4. I am indebted to Mrs. M. A. Littauer for a long and very helpful correspondence on this subject.

TABLE 6  
TUMULUS KYEQUIDS: TOOTH MEASUREMENTS

Upper cheek teeth:	SOUTH EQUID (MALE)							NORTH EQUID (MALE)					
	right	P <sup>2</sup>	P <sup>3</sup>	P <sup>4</sup>	M <sup>1</sup>	M <sup>2</sup>	M <sup>3</sup>	P <sup>2</sup>	P <sup>3</sup>	P <sup>4</sup>	M <sup>1</sup>	M <sup>2</sup>	M <sup>3</sup>
Length (OL)		36.5	28.8	27.8	26.0	26.1	juv.	38.1	29.1	27.3	25.6	25.5	24.8
Protocone length (LP)		10.0	13.5	13.9	14.3	15.7	(13.5)	9.0	10.3	13.2*	10.1	11.0	11.5
Protocone index (LP/OL)		0.27	0.47	0.50	0.55	0.60	—	0.24	0.35	0.48	0.39	0.43	0.46
Approx. crown ht.		60	63	—	—	—	—	59	62	75	64	76	80
	left	P <sup>2</sup>	P <sup>3</sup>	P <sup>4</sup>	M <sup>1</sup>	M <sup>2</sup>	M <sup>3</sup>	P <sup>2</sup>	P <sup>3</sup>	P <sup>4</sup>	M <sup>1</sup>	M <sup>2</sup>	M <sup>3</sup>
Length (OL)		36.5	29.2	27.7	26.3	26.2	juv.	39.2	29.3	27.3	25.4	25.5	24.8
Protocone length (LP)		10.3	12.7	13.3	14.4	15.9	juv.	9.6	10.3	11.0*	10.3	11.6	10.9
Protocone index (LP/OL)		0.28	0.43	0.48	0.55	0.61	—	0.24	0.35	0.40	0.41	0.45	0.44
Approx. crown ht.		61	65	76	69	83	84	57	61	73	65	75	80
Lower cheek teeth:	right	P <sub>2</sub>	P <sub>3</sub>	P <sub>4</sub>	M <sub>1</sub>	M <sub>2</sub>	M <sub>3</sub>	P <sub>2</sub>	P <sub>3</sub>	P <sub>4</sub>	M <sub>1</sub>	M <sub>2</sub>	M <sub>3</sub>
Length (OL)		32.5	28.1	26.7	25.6	25.8	28.3	33.0	28.8	28.4	25.1	24.9	—
Noeud double length (Lnd)		14.8	16.8	14.7	14.0	12.9	12.2	17.2	18.4	16.7	15.4	14.1	13.5
Postflexid length (LF)		16.1	14.0	13.4	9.5	10.8	10.9	17.9	15.3	12.8	9.6	9.3	9.1
Distance from buccal to lingual sulcus (Bei)		7.2	5.4	4.9	2.2	2.0	2.9	5.6	4.1	3.8	1.3	0.5	0.2
Noeud double index (Lnd/OL)		0.46	0.60	0.55	0.55	0.50	0.43	0.52	0.64	0.59	0.61	0.57	—
Postflexid index (LF/OL)		0.50	0.50	0.50	0.37	0.42	0.39	0.54	0.53	0.45	0.38	0.37	—
Approx. crown ht.		>54	>73	>84	74	>83	84	52	69	79	71	76	75
	left	P <sub>2</sub>	P <sub>3</sub>	P <sub>4</sub>	M <sub>1</sub>	M <sub>2</sub>	M <sub>3</sub>	P <sub>2</sub>	P <sub>3</sub>	P <sub>4</sub>	M <sub>1</sub>	M <sub>2</sub>	M <sub>3</sub>
Length (OL)		32.6	28.2	26.8	25.6	25.6	28.8	33.2	29.3	28.6	25.2	25.0	29.5
Noeud double length (Lnd)		15.0	17.1	14.7	14.4	12.9	12.3	16.5	18.6	16.4	15.5	14.5	13.4
Postflexid length (LF)		15.7	14.8	12.8	9.2	10.9	10.8	18.1	14.9	13.0	9.8	9.3	8.8
Distance from buccal to lingual sulcus (Bei)		6.8	4.9	4.8	2.7	2.3	3.2	5.4	4.6	3.6	1.3	0.3	0.2
Noeud double index (Lnd/OL)		0.46	0.61	0.55	0.56	0.50	0.43	0.50	0.63	0.57	0.62	0.58	0.45
Postflexid index (LF/OL)		0.48	0.52	0.48	0.36	0.43	0.38	0.55	0.51	0.45	0.39	0.37	0.30
Approx. crown ht.		>51	>72	>83	75	>81	82	49	69	80	73	76	73

Notes: All measurements are given in mm; those in brackets are only approximate (within an estimated  $\pm 2\%$ ). Lengths (OL) are taken mesio-distally, on the occlusal surface, from the middle of the mesial side to the middle of the distal side of the crown, including any external cement; lengths of protocones, noeuds doubles and postflexids are taken as simple maxima, including the enamel; Bei is the smallest distance from the buccal to the lingual sulcus, not including enamel (see Payne 1991, for more details of measurement definitions).

\* sic!

TABLE 7  
TUMULUS KY EQUIDS: POSTCRANIAL MEASUREMENTS

	SOUTH EQUID (MALE)		NORTH EQUID (MALE)		SOUTH EQUID (MALE)		NORTH EQUID (MALE)		
	right	left	right	left	right	left	right	left	
<b>Scapula</b>									
GLP	(88.3)	—	—	—	SD/GL	0.150	0.146	0.147	0.145
BGmin	(47.8)	—	—	—	CD/GL	0.44	0.43	0.44	0.43
					Bp/SD	1.45	1.46	1.51+	1.53
<b>Humerus</b>					<b>Femur</b>				
GLC	—	264.8	246.2	247.1	GL	—	—	>345.3	—
GLI	—	280.0	259.8+	260.5	GLC	—	—	>315.8	—
Bp	—	85.2	82.3	82.1	<b>Tibia</b>				
SD	—	—	31.0	30.6	GI	346.6	341.2	—	—
BT	—	71.0	66.9	66.7	LI	315.9	312.3	—	—
HTC	34.7	34.7	32.3	32.4	Bp	90.2	91.4	—	—
					SD	—	36.4	—	—
<b>Radius</b>					Bd	70.3	70.4	65.2+	—
GL	327.6	327.8	301.7+	305.2	SD/GL	—	0.107	—	—
LI	312.2	312.4	(293.2)	289.0	<b>Calcaneus</b>				
Bp	76.6	77.2	76.2	75.5	GL	107.0	106.6+	100.1+	—
BFp	(69.2)	(70.2)	68.0	68.7	<b>Astragalus</b>				
SD	35.2	34.2	35.3	34.2	LmT	57.2	57.6	56.6	—
Bd	71.6	71.7	—	68.1	BFd	49.2	49.9	47.3	—
BFd	(59.4)	(59.0)	56.9+	56.4	<b>Metatarsal</b>				
SD/GL	0.107	0.104	0.117-	0.112	GL	267.3	267.6	(251.7)	248.6
<b>Metacarpal</b>					GLI	264.5	264.6	(248.0)	243.1
GL	221.6	219.4	208.3	208.5	Bp	47.1	47.1	46.8	46.4
GLI	218.1	216.7	204.7	205.0	SD	28.3	28.4	—	27.9
Bp	48.1	46.7	46.1+	46.4	CD	(92)	(93)	—	(89)
Dp	33.2*	32.0*	32.0+	32.1	BFd	49.1	49.1	44.8+	45.7
SD	33.2*	32.0*	30.6	30.3	Dd	35.5	35.3	34.9	34.9
CD	(98)	(94)	(92)	(90)	SD/GL	0.106	0.106	—	0.112
BFd	48.7	48.9	45.2+	45.2	CD/GL	0.34	0.35	—	0.36
Dd	34.6	34.0	32.4	32.6					

	SOUTH EQUID (MALE)				NORTH EQUID (MALE)			
	ant.	ant.	post.	post.	ant.	ant.	post.	post.
<b>Phalanx 1</b>								
GL	86.4	86.2	84.0	83.2	80.9	81.1	77.2	77.1
Bp	54.6	54.4	55.0	55.1	50.5	51.0+	52.1	51.4
SD	34.0	33.0	32.0	32.2	31.1	(31.2)	29.9	29.6
Bd	45.9	45.6	44.5	44.5	43.2	43.5+	41.0	40.6+
BFd	43.0	42.3	41.6	41.9	41.9	42.2	41.1	40.5
<b>Phalanx 2</b>								
GL	46.2	45.4	48.8	48.7	43.2	43.7	44.6	45.3
Bp	51.6	51.3+	51.3	51.9	49.4	50.3	49.3	48.7+
SD	44.5	44.3	42.9	43.1	42.1	42.2	40.2	40.4
BFd	48.5	48.5	46.4	46.3	47.0	47.3	43.7+	—
<b>Phalanx 3</b>								
GL	(60+)	(61+)	(60+)	—	(60)	(61)	(55+)	—
GB	76.9+	79.7+	74.8+	—	—	—	65.3+	—
BF	46.6	48.6	45.6	—	44.9+	(44.0)	42.0	41.7

Notes: All measurements are given in mm; those in brackets are only approximate (within an estimated  $\pm 2\%$ ); + = bone slightly chipped or abraded, measurement thought to be within 2% of the original value. Definitions follow von den Driesch (1976), except that scapula BGmin is the smallest breadth across the glenoid, humerus HTC is the diameter of the central constriction of the distal trochlea, and GL in phalanges was taken with callipers, not in a measuring box.

\* sic!



TABLE 8  
TUMULUS KYEQUIDS: DATA ON AGEING

	<b>SOUTH EQUID (MALE)</b>	<b>NORTH EQUID (MALE)</b>
<b>Incisors</b>	All permanent incisors have erupted; I <sub>1</sub> infundibula isolated, still fairly deep; I <sub>2</sub> in wear buccally, still unworn/partly worn lingually; I <sub>3</sub> in wear buccally, unworn lingually	All permanent incisors have erupted; I <sub>1</sub> infundibula isolated, still fairly deep; I <sub>2</sub> infundibula just/almost isolated; I <sub>3</sub> in wear buccally, largely unworn lingually
<b>Canines</b>	In early wear	Unworn/in early wear
<b>Cheek teeth</b>	All erupted; all except M <sup>3</sup> in full wear; M <sup>3</sup> in early wear	All erupted and in full wear
<b>Vertebrae</b>	Some central epiphyses fully fused, others fusing	Central epiphyses fully fused
<b>Scapula</b>	Bicipital tuberosity fully fused	—
<b>Humerus</b>	Fully fused proximally and distally	Fully fused proximally and distally
<b>Radius, ulna</b>	Fully fused proximally and distally	Fully fused proximally and distally
<b>Pelvis</b>	Acetabulum fully fused	Acetabulum fully fused
<b>Femur</b>	Fully fused proximally and distally	Fully fused proximally and distally
<b>Tibia</b>	Fully fused proximally and distally	Fully fused proximally and distally
<b>Calcaneus</b>	Tuber calcis fully fused	Tuber calcis fully fused
<b>Metapodia</b>	Fully fused distally	Fully fused distally
<b>Phalanges</b>	First and second phalanges fully fused proximally	First and second phalanges fully fused proximally

Notes: Early wear is defined as when dentine has been exposed by wear, but when the exposed dentine is still only in limited areas which are not yet fully interconnected (and the fossettes in the upper teeth are not yet isolated); full wear when the exposed dentine is fully interconnected and the stable adult wear-pattern has been reached. Epiphyses are defined as fusing when the epiphysis no longer separates from the shaft or centrus without bone breakage, but when a gap is still visible at least at some points between the epiphysis and the shaft or centrus; and as fully fused when no gap is any longer visible.

TABLE 9  
TUMULUS KYEQUIDS: WITHERS HEIGHT ESTIMATES

	Formula used	SOUTH EQUID (MALE)		NORTH EQUID (MALE)	
		cm.	cm.	cm.	cm.
<b>Humerus</b>	GLI x 4.87	136		(127+)	127
<b>Radius</b>	L1 x 4.34	136	136	(127)	125
<b>Metacarpus</b>	L1 x 6.41	136e	136e	128e	128e
<b>Tibia</b>	L1 x 4.36	138	136		
<b>Metatarsus</b>	L1 x 5.33	138e	138e	130e	(128e)
<b>Range</b>		135-138		125-130	
		(= 13.1-13.2 hh)		(= 12.1-12.3 hh)	

Notes: Formulae used follow von den Driesch and Boessneck (1974), after Kiesewalter.

e = estimated value: as L1 was not measured for the metapodia, it was estimated at 97.5% of GLI and 96% of GL for the metacarpals, and 98% of GLI and 97% of GL for the metatarsals. 1 hand = 101.6 mm.

bone or of bronze," and that "according to Littauer (pers. comm.) this is the earliest material evidence for the use of the bit" (*loc. cit.*, p.93). In apparent confirmation, the Gordion KY field notebook records that each equid had an iron bit in its mouth (Gordion Notebook 43 [1955] 86), fragments of which have survived (see **TumKY 25**, pp. 81–82).

It is, however, hard to see how bit-wear could cause bevelling of this kind. Bits are fitted so that the mouth-piece lies in the corner of the mouth, some distance in front of the anterior cheek teeth. When a horse is on a tight rein, its face is almost vertical and the mouth-piece of the bit bears on the lips and the bars of the mouth (the diastema, or toothless gap in the lower jaw between the incisors and the cheek teeth). On a looser rein, or at higher speed, the horse's nose goes forward and it holds its head at about 45°. If the rider pulls on the rein at this point, the mouthpiece bears first on the corner of the mouth, and then on the bars of the mouth, when the horse should bend its neck, bringing its face back closer to the vertical. If the horse resists, and the reins are pulled harder, the mouthpiece would finally be brought back against the cheek teeth, but it would end up in the corner between the gum and the anterior premolar, *not* against the upper corner of the anterior premolar. While it is possible for the horse to "tongue" the bit so as to raise it in the mouth, or for a rider to raise his hands while the horse's face is close to horizontal, so that the mouth-piece could bear against the upper corner of the lower premolars, the rider would have little control; it seems unlikely that both horse and rider would do this long enough and often enough to produce a marked wear facet, and unlikely also that the resulting facet would be as flat as it is in both the Gordion KY equids and in the Buhen horse (Clutton-Brock 1974: fig. 2).<sup>5</sup> Also there is no corresponding modification of the opposing upper front premolar; and this also seems to exclude the possibility that the bevelling might have been produced by the horse chewing the bit while at rest but still bridled.<sup>6,7</sup>

Bevelling of the lower anterior premolar can be caused if a horse is "parrot-mouthed", i.e., when the upper tooth-row overshoots the lower tooth-row; this

can again be excluded in the present case because it is clear from the upper anterior premolars that no abnormality of this kind is involved.

Another possibility is that this bevelling was deliberately caused. In modern polo ponies the anterior corners of the premolars are sometimes deliberately rasped, or even chiselled off and then rasped, to make the horse more comfortable when wearing a gap bit and reduce the risk of damage to the mouth. In Britain this is commonly done to the upper premolars but not to the lower premolars; in Argentina, however, it is common practice to chisel off and rasp the corners of the lower as well as the upper premolars.<sup>8</sup>

This is done to polo ponies because they often have to be turned or pulled up very sharply, so the risk of damage to the mouth is high. The horses used in the ancient Near East for hunting and in battle, whether ridden or as chariot horses, would have been equally at risk of damage to the mouth, especially with the large and rather loosely-held bits that were commonly in use, and rasping would have been a sensible way to reduce the risk. To suggest that this was done to the Gordion KY horses hardly argues an implausible level of veterinary competence: the tools required are simple, and rasping is not hard to carry out if the horse is kept still with a twitch.<sup>9</sup> The importance of horses in the ancient world, and the competence of those who dealt with them, is clear from writers such as Xenophon.<sup>10</sup>

## COMPARISONS AND DISCUSSION

An interesting parallel is provided by the burial of three horses of broadly similar type, two male and one female, in a chamber grave at Norşuntepe in east Anatolia (Boessneck and von den Driesch 1977–78).<sup>11</sup> All three were about the same age as the Gordion KY equids. Further afield, Bökönyi (1974) contrasts the Iron Age horses of southern Russia and eastern Europe with those of western Europe, which were smaller and lighter-built. Measurements for the two groups overlap broadly, however; the Norşuntepe and

5. Mrs. Littauer (in litt.) now believes it unlikely that the bevelling seen in the Buhen horse was caused by bit-wear.

6. Mrs. Littauer also comments that long jointed bits are common in the first half of the first millennium; these are unlikely to cause wear straight across the front of the tooth, being more likely to act on the outside (labial) corner of the tooth.

7. I have consulted a number of veterinary surgeons, all of whom find it unlikely that this bevelling was produced by bit wear.

8. I am indebted to John Walmsley, of Walmsley, Mantell and Partners, Veterinary Surgeons at Liphook, Hants., for this information.

9. If so, this bevelling would be indirect evidence for the use of a bit, and the conclusion that a bit was used on the Buhen horse would not be called into question.

10. Slit nostrils in horses as early as Middle Kingdom Egypt (Littauer 1969) provide evidence for another kind of early veterinary operation on horses.

11. The original dating for this burial was *ca.* 700 B.C., but Hauptmann (1983) has more recently suggested that it dates from the Scythian period.

Gordion KY equids all fall in the overlap zone, though, as a group, closer to the eastern than to the western average.

Bevelling of the anterior corner of P<sub>2</sub> has been reported from Egypt in the second millennium (Clutton-Brock 1974), in a number of cases from Hungary (Bökönyi 1972) and Italy (Azzaroli 1980) in the first millennium, and in one case from England in the Roman period (Payne 1983). The lack of reports from later sites might be taken as casting further doubt on its interpretation as caused by bit-wear, but it is possible that it has simply not been noted or reported; better knowledge of its chronological and geographical distribution may help in understanding its cause.

As the Gordion KY equids are of the same sex, and both at an age at which they are likely to have been broken in and trained, but still with many useful working years ahead, it is attractive to suppose that they were a valuable matched pair, sacrificed as grave gifts. An alternative possibility, however, as they are somewhat mismatched,<sup>12</sup> is that they were animals which had proved unsatisfactory in some way, which were sacrificed as a substitute for a more valuable pair of animals.

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I am most grateful to Keith DeVries for inviting me to study the animal bones from Gordion, to the members of the Gordion excavation team for making me welcome and helping in many ways, to Berrin Kuşatman who acted as my assistant, and, especially, to Ellen Kohler for help, encouragement, advice and patience. My grateful thanks also to Mary Littauer for a long and helpful correspondence, to Rosemary Payne for much helpful discussion, and to Juliet Clutton-Brock, Brian Eagles and John Walmsley for reading and commenting on an earlier draft of this appendix.

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12. I am grateful to Rosemary Payne for pointing this out. Mrs. Littauer comments: "... chariot horses, which run under a neck yoke, had to be particularly well-matched in order to avoid damaging each other", but also: "If these horses had been harnessed for merely processional use and not for trotting or galloping,

they might have been hitched together. Even the apparent difference in height may be minimized by differing angulations in the joints of the animals: that they were used as a team (in this case) cannot be entirely ruled out".

# TÜRKÇE ÖZET

## Turkish Summary

Pennsylvania Üniversitesi'nin 1950-1969 yılları arasında Gordionda Frig Çağına ait tümülüs kazılarında 18 mezar ve 9 kremasyon gömüsü bulunmuştur. (Daha sonraki çağlara ait olanlar için, bkz. Sayfa 7, n. 3). Profesör Rodney S. Young, en büyük ve zengin ahşap oda mezarlarından üç tanesini, W, P ve MM, *Gordion Excavations (1950-1973) Final Reports I. Three Great Early Tumuli* kitabında yayınlamıştı (*University Museum Monograph* No. 43). Geri kalan tümülüsler bu kitapta "daha küçük" olarak adlandırılıyor. *Gordion* II, Bölüm 1, "daha küçük" gömüleri, Bölüm 2 ise kremasyon mezarlarını kapsıyor.

Bu kitabın girişinde 15 tane küçük gömü konu edilmiştir. Bunlar I.Ö. geç 8-6 yüzyıla tarihlenir, Kuzeydoğu Bayırı (*Northeast Ridge*, bkz. Şek.: 1, 2 ve kısım: 1) ve Güney Bayırında bulunurlar (*South Ridge*, bkz. Şek.: 1 ve kısım: 2).

Kuzeydoğu Bayırında bulunanlar alfabetik sıraya göre B, C, G, H, J, KY, N, Q, S, X ve Y olarak, Güney Bayırındakiler de S-1, S-2, S-3 ve Z olarak adlandırılmıştır.

"Daha küçük" tümülüslerin tranşe planlarına bakıldığında (bkz. Şek.: 3B, 10B, 13B, 15B v. s.), çeşitli kazı yöntemleri kullanıldığını görüyoruz. Tranşeler kazıldıkları sıraya göre numaralanmıştır; buluntular da aynı sırayı takip eder.

Her tümülüsün 'giriş' bölümünü takip eden envanter kataloğu o tümülüsün stratigrafisine göre gruplandırılmıştır.

"Daha küçük" tümülüslerden çıkan malzeme *Gordion* I'de yayınlananlardan daha çeşitli olduğundan Tümülüs W, P, ve MM ye ait buluntu (*assemblage*) listesi çok daha geniştir (bkz. Sayfa 185-186). Madeni buluntuları, altın, tunc, demir ve kurşun olarak sıralayabiliriz. Maden buluntu grubu içinde sırayla, takı, kap, kemer ve fibula, silâh ve aletler, incelenir. Bunları fildişi, kemik, cam, çanak-çömlek, çeşitli kilden

malzeme ve taş izler. Taştan heykeller diğer taş malzemeden önce sıralanmıştır. Sonra, epigrafik malzeme konu edilir. At koşum takımı ve taşıma araçlarına ait malzeme az sayıdadır; bunlar değişik malzemelerden yapılmıştır ve listenin sonunda bulunur.

Kimmer öncesine tarihlenen çanak-çömlek konusunda, G. Kenneth Sams'ın *Gordion* IV yayınında belirtilen ve *City Mound*'dan çıkarılan çanak-çömleğin stratigrafisi takip edildi: bunlar sırayla, Erken Frig Binası devirleri I-IV, teras birikintisi ve tahrip katıdır.

Frig Çağı tümülüs gömülerine ait insan iskelet kalıntıları Ankara Üniversitesi Paleontoloji Bölümünden Prof. Berna Alpagut tarafından etüdü edilmektedir.

Bu kitapta kullandığımız özel anlamlı kelimeler ve deyimler için bir sözlük hazırlanmıştır (bkz. Sayfa 4-5).

I-XII. bölümde, Kuzeydoğu Bayırındaki tümülüslerden batıdaki (B, C, G, H, J) ve doğudakiler (KY, N, Q, S, X, Y) sunulmuştur. Her tümülüs için, Frig Çağı öncesi, Frig Çağı, mezarlar ve mezarların üzerindeki toprak birikimi içinde bulunan belgeler verilmiştir. Yağma edilmiş olanlar da belirtilmiştir. Mezar ve mezar üstü toprak birikiminden çıkarılan buluntuların kataloğu her tümülüsün tarifi ile beraber verilmiştir. Katalogun sonunda her buluntu için karşılaştırmalı liste (*comparanda*) bulunur.

Kuzeybatı grubundaki tümülüsler genellikle birbirine benzer. Genellikle yapı metodlarına uygun olarak, büyük bir çukur kazılmadan önce toprak düzleştirilir (çukurların yönlendirilme şekilleri için, bkz. Şek.: 70A ve Cetvel: 1, Sayfa 166). Çukurun en altına su akımını sağlamak için bir sıra taş konur ve ahşap hatıllardan dört köşe bir oda yapılır (oda ölçülerini karşılaştırmak için, bkz. Cetvel: 2, Sayfa 170). Her hatılın dışına sağlamlaştırmak için taşlar dizilir. İlk hatıl tabakasının köşeleri genellikle çapraz şekilde

üstüste bindirilmiştir ve böylece tahta döşemeyi destekler (bkz. Şek.: 16, 35A, 48B, v.s.).

Döşeme üzerindeki kısa duvarların hatılları yan duvar hatıllarının içine yerleştirilmiştir. Düz dam uzunlamasına veya çapraz olarak inşa edilmiş, köşe taşları ile sıkıştırılmıştır. Damın üstü bir konik meydana getiren büyükçe taşlarla örtülmüştür. En üstteki toprak birikimi, konik şeklinde ve değişik yüksekliktedir (toprak birikimleri karşılaştırması için, bkz. Cetvel: 3, Sayfa 179).

Kuzeydoğu Bayırında, yukarıda anlatılan genel mezar şekillerinin daha değişik örnekler de vardır. Tümülüs B bir bodrumun içine kazılmıştır, duvarın taş ve hatılları arasında sadece ince bir taş dizisi eklenmiştir. Tümülüs G'de ise tek dam yerine çok ağır bir çift dam kullanılmıştır (bkz. Şek.: 15A). Tümülüs H'in yapısında ise damı destekleyen hatıl uzunlamasına yerleştirilmiştir ve iki dış duvarın üst kısmında da aralıklar bırakılmıştır (bkz. Şek.: 20B).

Tümülüs N'de ise dış hatılların uçları kesilerek yan duvar hatıllarının dar aralıklarına bağlanmıştır (bkz. Şek.: 34B, 35A). Tümülüs KY çukuru içindeki yapının yaklaşık olarak yarı yüksekliğinde, gömü işlemi durmuş ve yan duvar taşlarının arasına bir çift yularlı at gömülmüştür (Şek.: 29B).

Kısım 2'de, Güney Bayırında kazılan dört mezar (S-1, S-2, S-3 ve Z), kısım 1'deki tarife göredir. Her tümülüsün buluntuları katalogta sıralanmıştır. Güney Bayırında erken yerleşme belgesi yoktur.

Bazı tümülüslerdeki Frig mezarları genel yapı yönüne aykırı olarak yapılmıştır (yukarıya bakınız). Tümülüs S-1'in "çukuru" toprakla desteklenerek yükseltilmiştir (bkz. Şek.: 49A). Tümülüs Z'nin yapısında, geniş kazıklar diklemesine çukurun iki yanına sokulmuş ve mezar odasının duvarları bu kazıkların içine inşa edilmiştir. Karşılıklı kazıklar daha sonra yatay bir hatılla bağlanarak, üstteki damı destekler. Bu yapılarda en üst duvar ile dam hatılları arasında açıklıklar vardır.

XVII. bölüm yapı yöntemlerinin ayrıntılarını karşılaştırmalı olarak anlatır, çukur ve taş kitlelerini, mezar odalarını doğramacılık yönünden, taş dizme yöntemlerini, üst konulan toprağın yapısını inceler.

XVIII. bölümde, tabutlu ve tabutsuz ölümler için kullanılan platformlar karşılaştırılır. Ahşap tabutlar ayrıntılı olarak incelenmiştir. Kimmer öncesi ve sonrası çağlarına ait mezar buluntuları aralarındaki farkı göstermek açısından, karşılaştırılmalı olarak

incelenmiştir. Mezar buluntuları, oda ve üst toprak olmak üzere gruplandırılarak karşılaştırılır.

XIX. bölümün konusu olan kronolojik sıralama, her mezar grubunda tarihlenmiş buluntulara dayanarak yapılmıştır. Kronolojik sonuçlar Cetvel 4, Sayfa 192 de sunulmuştur ve G. Körte tarafından kazılan tümülüsleri (*Gordion*, bkz. bibliografya) ve R.S. Young tarafından neşredilmiş olan "erken" tümülüsleri de içermektedir.

XX. bölüm, XIX. bölümde verilen bilgilere dayanarak, birden fazla örnekle temsil edilen, seçilmiş buluntu tiplerini, şekil ve bezeklerin gelişmesi açısından inceler. Buluntular, takı (kehribar dahil), bronz kaplar, kemerler, fibula, silahlar, cımbızlar, ateşle ilgili aletler, boyalı çanak-çömlekler, kırmızı ve gri monokrom kaplardan oluşur.

XXI. bölüm, yukarıda verilen bilgileri tekrarlar, tümülüsleri, yabancı etki özelliklerine göre gruplara ayırarak inceler. Bu incelemede bazı yabancı kaynaklar belirtilmiştir.

Mezar ve kremasyon hediyelerinden çok sayıda bulunan bazı tiplerin incelenmesi *Gordion* II, 2. ye bırakılmıştır: örneğin, takı, bronz kazanlar, Lidya ve Doğu Yunan çanak-çömleği ve taştan *alabastra*. Kremasyon gömülerinin üzerindeki toprak taş duvarlarla bölümlere ayrılmıştır; bu toprağın yapısını inceleyen son kısım da ertelenmiştir.

Kitabeler hakkındaki araştırmalar Fransız uzmanlardan Cl. Brixhe (Nancy) ve M. Lejeune (Paris), tarafından Ek A da verilmiştir (bkz. Sayfa 235). Ek B de Tümülüs KY'nin yan duvar taşları arasında bulunan hayvan kemiklerine ait analiz raporu, İngiliz uzman S. Payne (Oxford), tarafından yazılmıştır (bkz. Sayfa 237-244).

Gordion kazı heyeti, 1950 yılından itibaren, araştırmaları süresince Milli Eğitim Bakanlığı, Başbakanlık ve Kültür Bakanlığı'na, Eski Eserler ve Müzeler Genel Müdürlüğü'ne, genel müdürler ve yardımcı müdürlere, gösterdikleri büyük yardım ve destekten dolayı teşekkürlerini sunmayı büyük bir borç bilir. Kazılar sırasında her türlü yardımlarını esirgemeyen kazı temsilcilerinden, Raci Temizer (1950-56), Çetin Anlağan (1965) ve Nihal Koloğlu'na (1969) içten teşekkür ederiz.

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# Concordance

The first table converts field numbers to catalogue numbers and is alphabetized by initial letters, which indicate material (B=bronze; P=pottery, etc. See list of minor abbreviations, p. xxxi).

B 1	<b>TumB 21</b>	B 195	<b>TumS1 2</b>	B 332a-j	<b>TumS1 95</b>
B 2	<b>TumB 22</b>	B 200	<b>TumS1 9</b>	B 332k-p	<b>TumS1 99</b>
B 4	<b>TumB 18</b>	B 201	<b>TumS1 10</b>	B 333a-f	<b>TumS1 94</b>
B 5	<b>TumB 20</b>	B 203	<b>TumS1 11</b>	B 334a-i	<b>TumS1 97</b>
B 11	<b>TumG 4</b>	B 204	<b>TumS1 12</b>	B 335	<b>TumS1 46</b>
B 15	<b>TumG 6</b>	B 205	<b>TumS1 5</b>	B 336	<b>TumS1 87</b>
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under-floor preparation (*See tumulus*)

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- wheel: 118, 172
- Vergina: 20
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- Vorys, J.E.: 43
- wake (*See feasting*)
- wall (*See stone*)
- wall nail (*See iron, nail*)
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- wheel (*See vehicular material*)
- wheatstone (*See stone*)
- whorl (*See clay; spindle whorl; etc.*)
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- display beam: 153, 158, 174, 175, 188, 230
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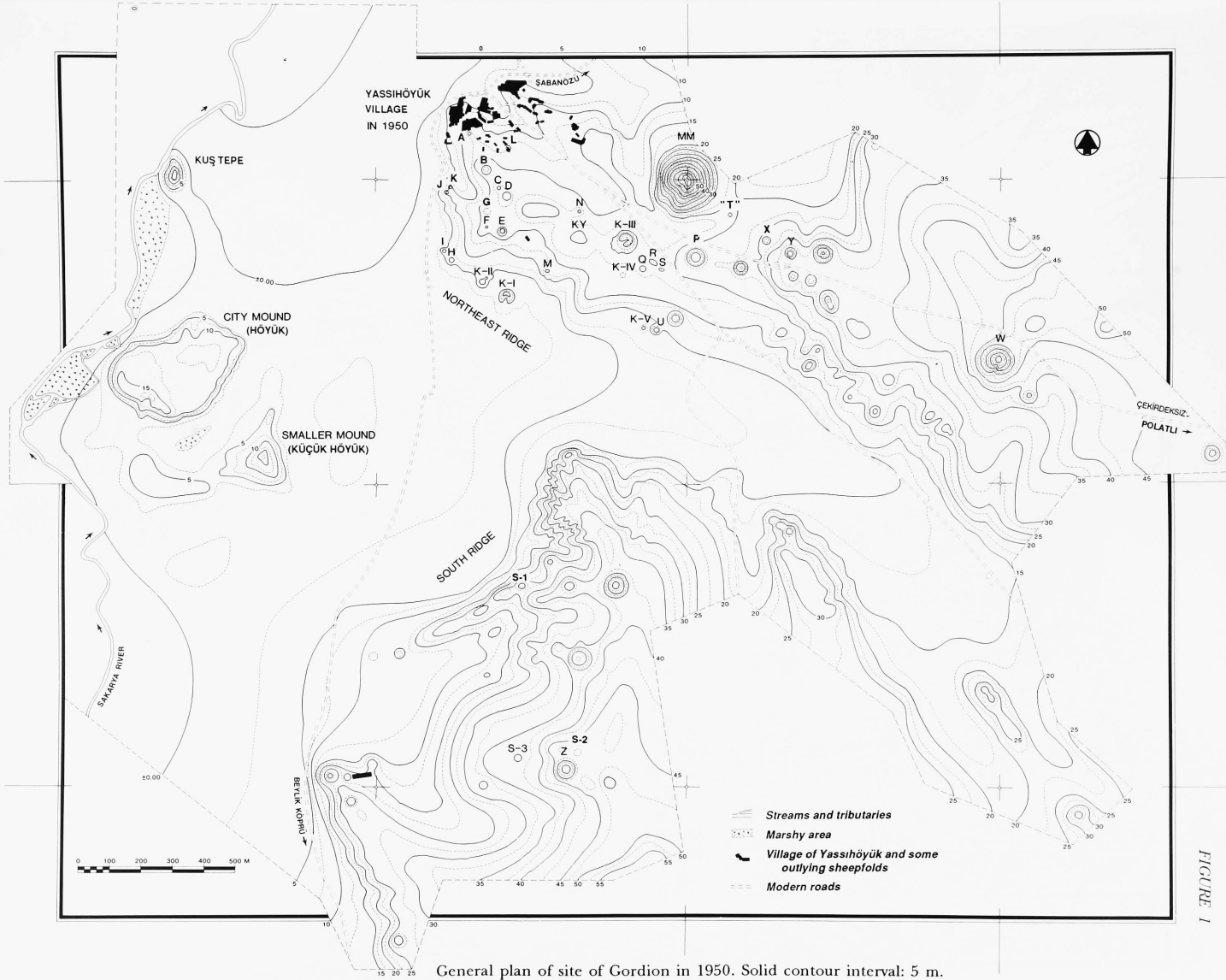
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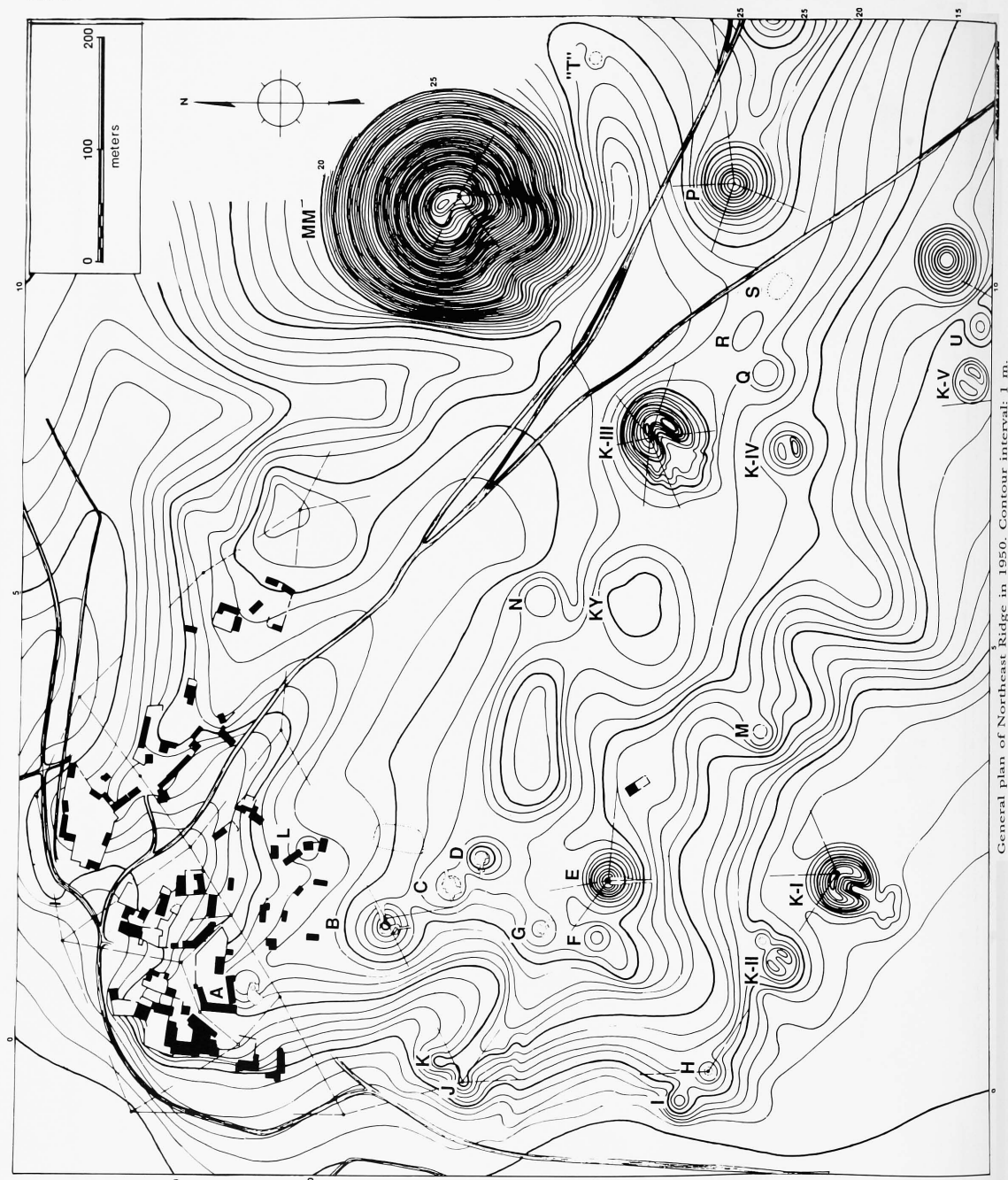
Young, Rodney S.: 1, 9, 12 n. 12, 13 n. 15, 14 n. 16, 15, 18, 26, 36, 43, 48, 64, 74, 76, 83, 86, 91 n. 2, 92, 95, 99, 101, 103 n. 8, 104, 107, 116 n. 6, 117, 130, 131, 151 n. 1, 153, 167, 168, 171, 173, 175, 176, 191, 198 n. 7, 199, 200, 201 n. 38, 202, 203, 207, 211, 224, 226, 227

zinc: 81 (*See also* brass)



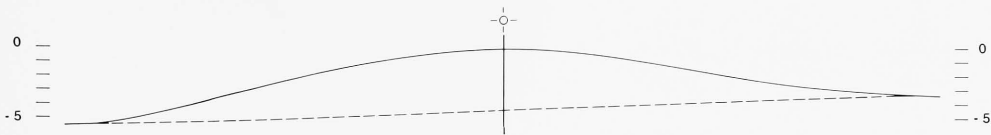
General plan of site of Gordion in 1950. Solid contour interval: 5 m.

FIGURE 2

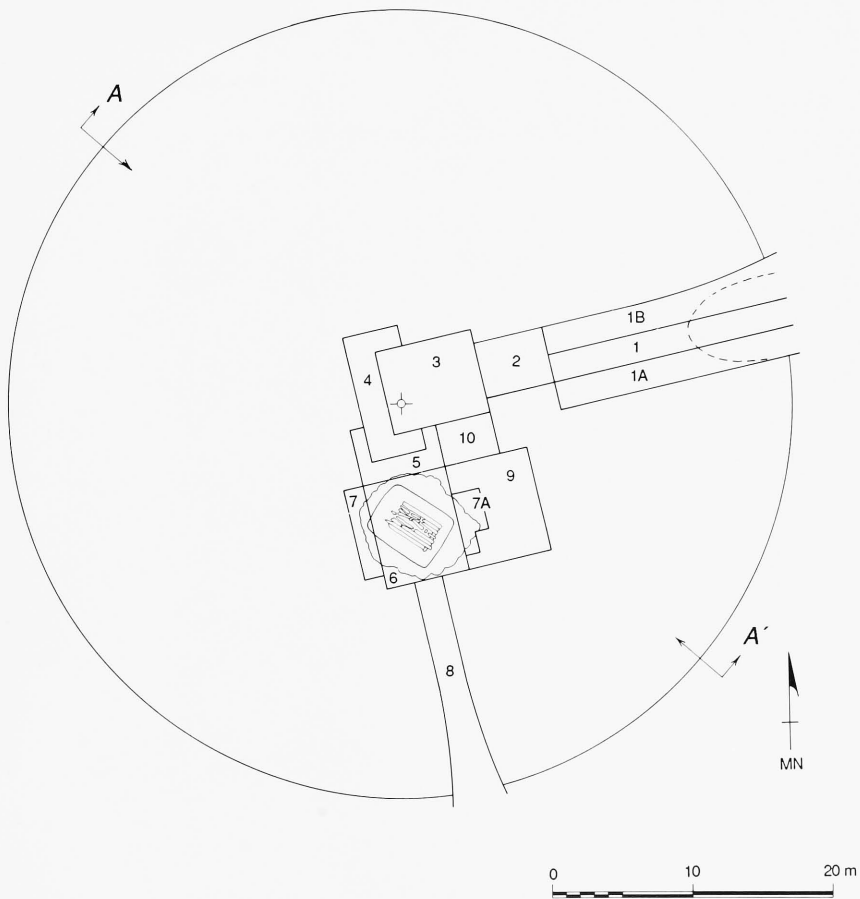


General plan of Northeast Ridge in 1950. Contour interval: 1 m.





A. Tumulus B. General pre-excavational profile A-A' (see Fig. 3B) across tumulus, taken on line toward center of Tumulus C. Dashed ground line is merely projected diameter to indicate incline of modern surface. Viewed from southwest.



B. Tumulus B. Plan of trench outlines with location of main burial.

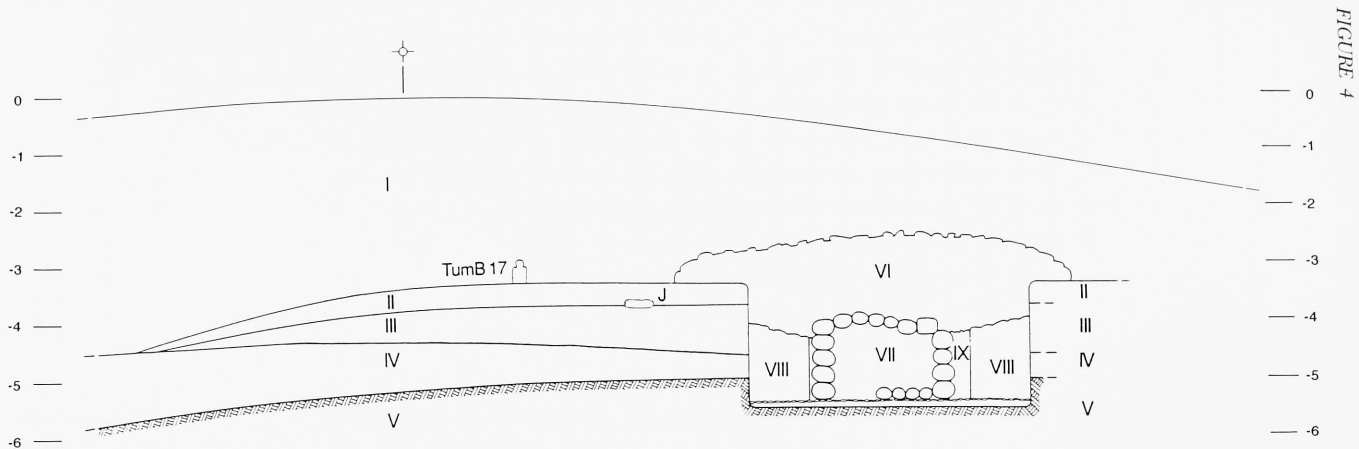


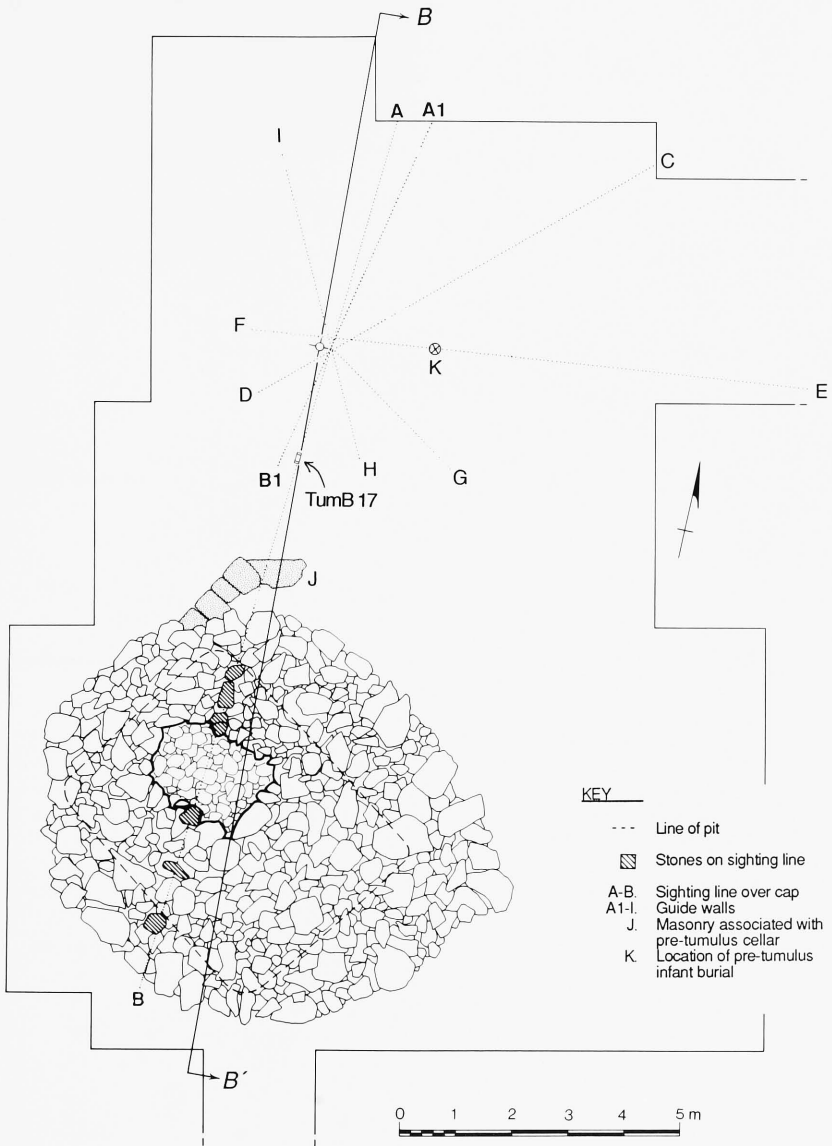
FIGURE 4

KEY

- I. Tumulus mantle
- II. Layer of burned debris
- III. Artificial support layer
- IV. Sand and gravel
- V. Hardpan
- VI. Stone cap
- VII. Wooden chamber
- VIII. Cellar walls
- IX. Area of chinking
- J. Masonry associated with pre-tumulus cellar

Tumulus B. Outline restored section *B-B'* (see Fig. 5) through main trenches. Viewed from west.

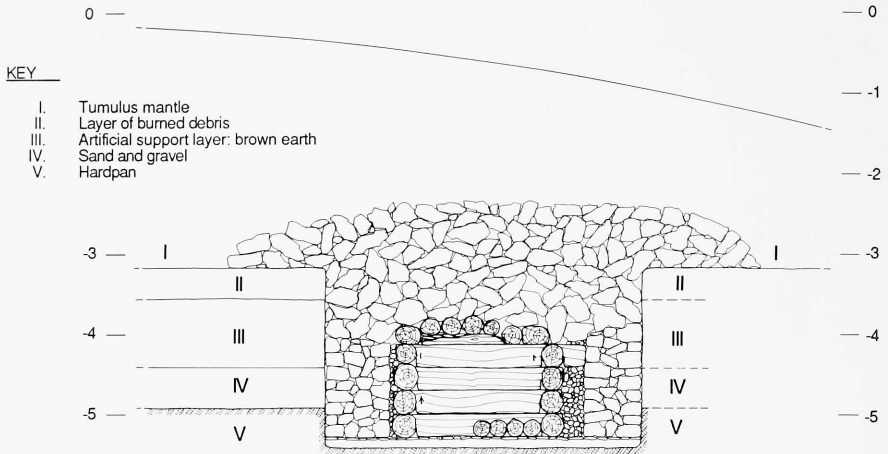
TUMULUS B



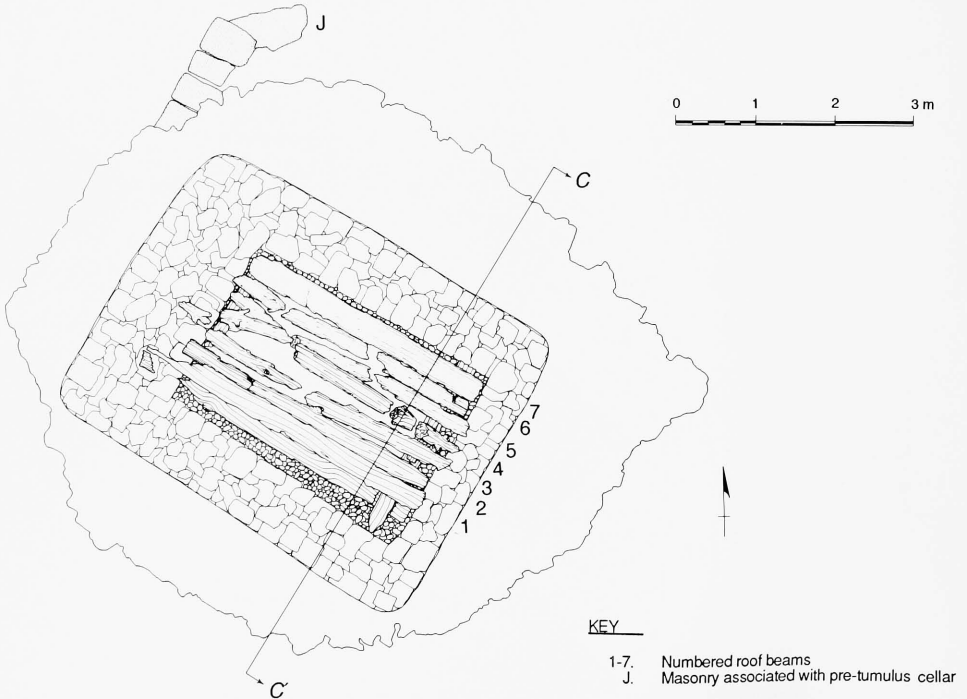
Tumulus B. Plan of central area with stone cap and guide walls.

FIGURE 6

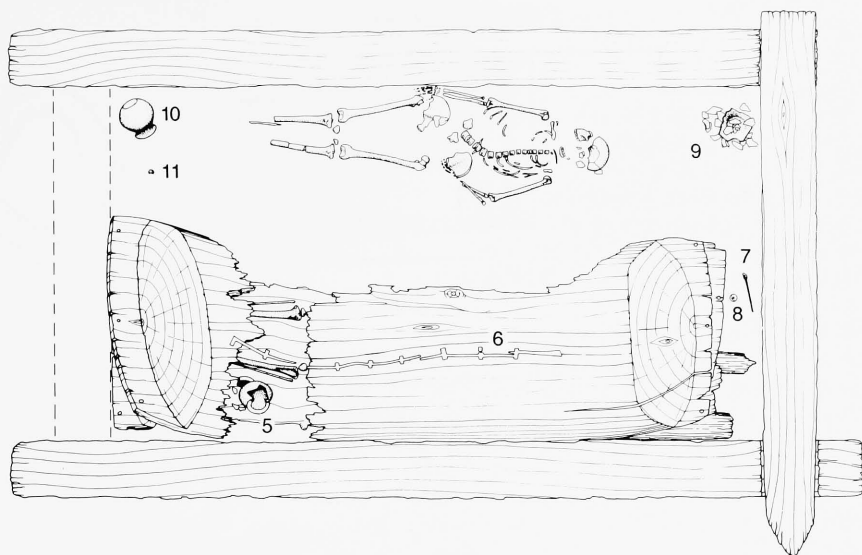
TUMULUS B



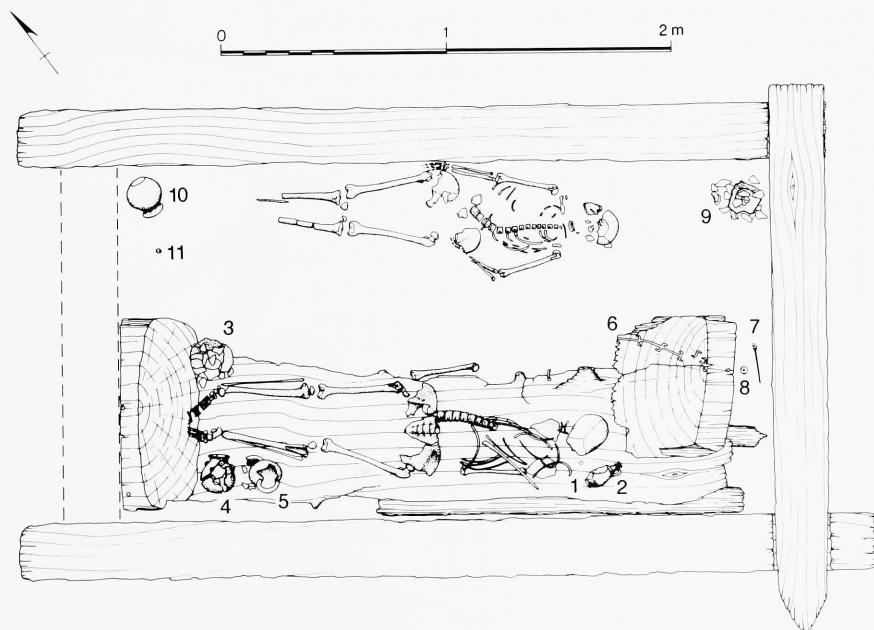
A. Tumulus B. Restored section C-C' through burial and view of southeast wall. Viewed from northwest.



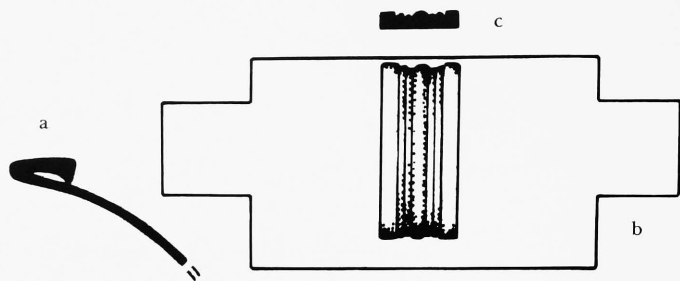
B. Tumulus B. Plan of burial complex at roof level.



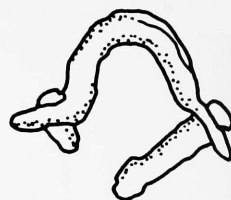
A. Tumulus B. Contents of chamber, coffin closed. Walls are shown at level of top beams.



B. Tumulus B. Contents of chamber, coffin open. Walls are shown at level of top beams.



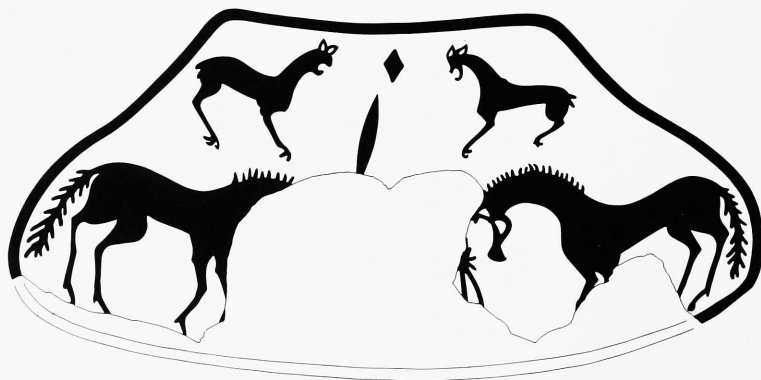
A. TumB 12. a. Profile. b, c. Details: attachment plate.



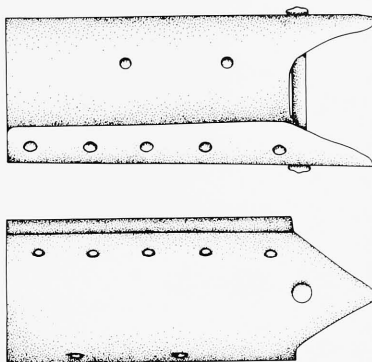
B. TumB 14.



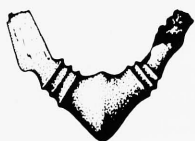
C. TumB 15. Detail: painted panel



D. TumB 16. Detail: painted panel



A. Tumulus B. Uncatalogued. Iron ferrule, "hitch" (1 of 2, 2 views)



B. TumB 18.



C. TumB 19.



D. TumB 20.



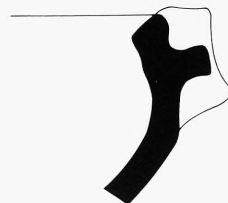
E. TumB 26.



F. TumB 28.



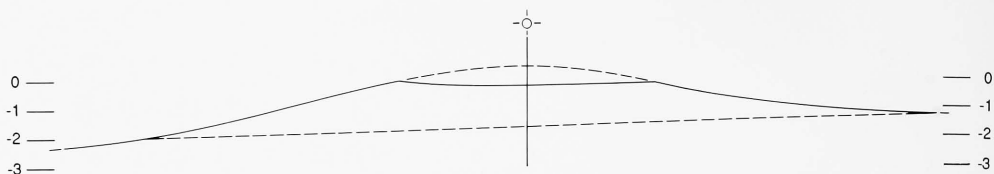
G. TumB 29.



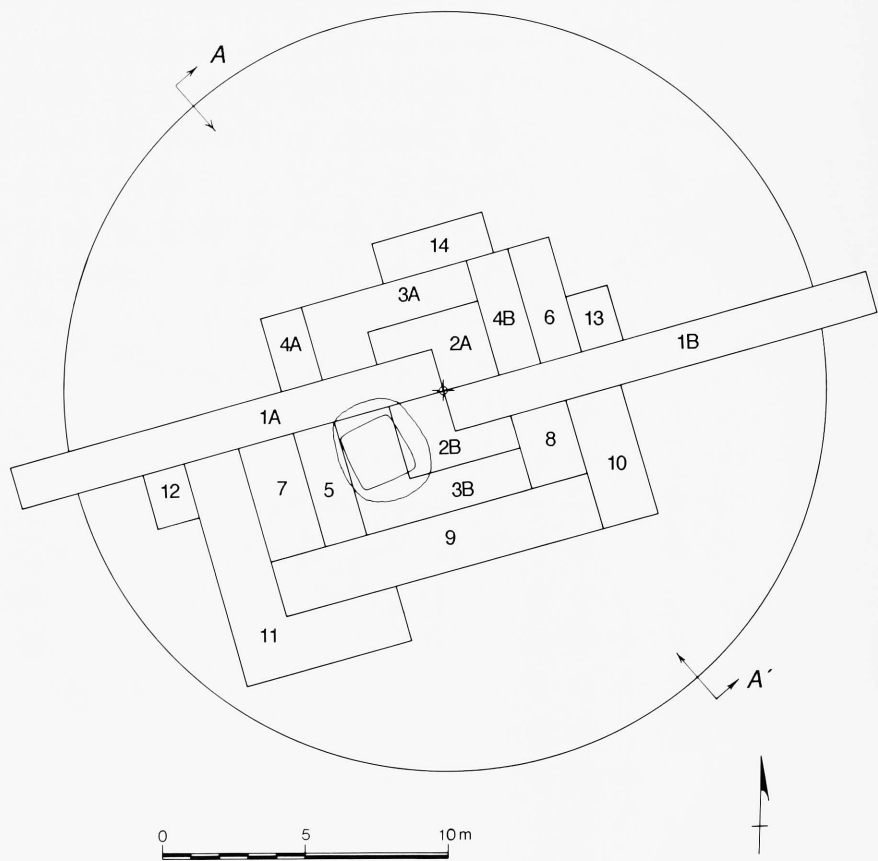
H. TumB 30.

FIGURE 10

TUMULUS C

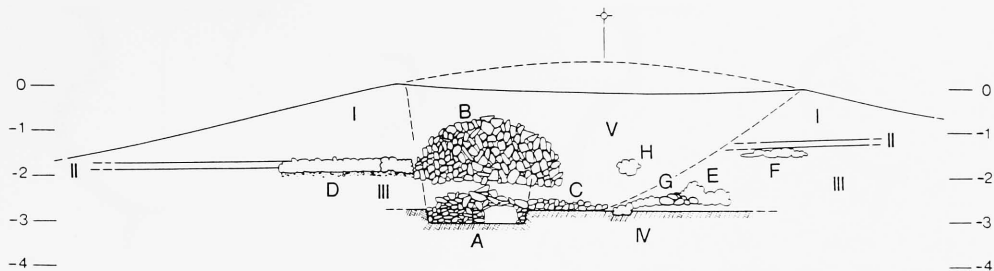


A. Tumulus C. General pre-excavational profile A-A' across tumulus on line  $41^\circ$  west of north, toward center of Tumulus D to southeast. Dashed ground line is merely projected diameter to indicate incline. Viewed from southwest.



B. Tumulus C. Plan of trench outlines with location of main burial.

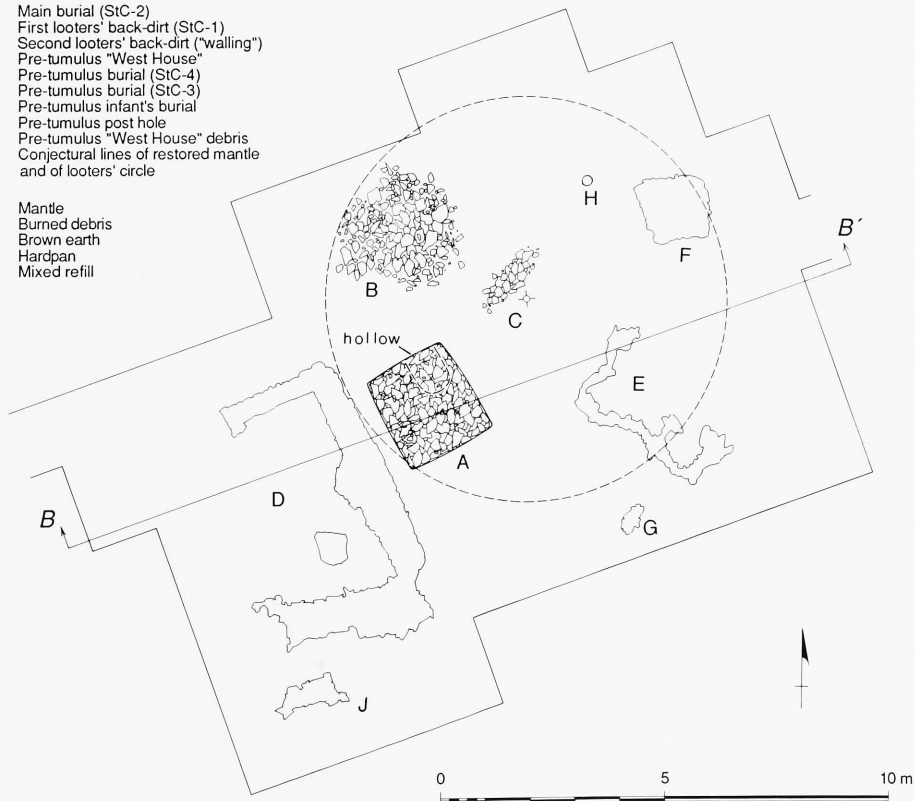




A. Tumulus C. Section *B-B'* through central area (trenches 12 across to 10 only), viewed from south. Features rendered in detail (A-C) belong to main burial in its looted state; features in outline (D-H) are pre-tumulus in date. Drawn in 1983 from measurements furnished by E.R. Gallagher in sketches and field notes.

KEY

- A. Main burial (StC-2)
- B. First looters' back-dirt (StC-1)
- C. Second looters' back-dirt ("walling")
- D. Pre-tumulus "West House"
- E. Pre-tumulus burial (StC-4)
- F. Pre-tumulus burial (StC-3)
- G. Pre-tumulus infant's burial
- H. Pre-tumulus post hole
- J. Pre-tumulus "West House" debris
- Conjectural lines of restored mantle and of looters' circle
- I. Mantle
- II. Burned debris
- III. Brown earth
- IV. Hardpan
- V. Mixed refill



B. Tumulus C. Plan of central area. Features rendered in detail (A-C) belong to main burial. Features in outline (D-H, J) are pre-tumulus in date.

FIGURE 12

TUMULUS C



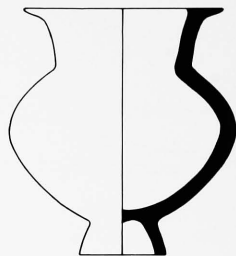
A. TumC 4.



B. TumC 6.



C. TumC 11.



D. TumC 12.



E. TumC 13.



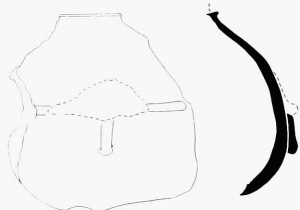
F. TumC 15.



G. TumC 17.



H. TumC 18.



I. TumC 21.



J. TumC 22.



K. TumC 23.



a



b



c

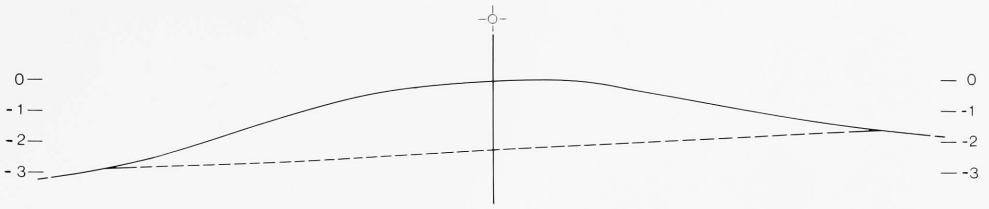


d

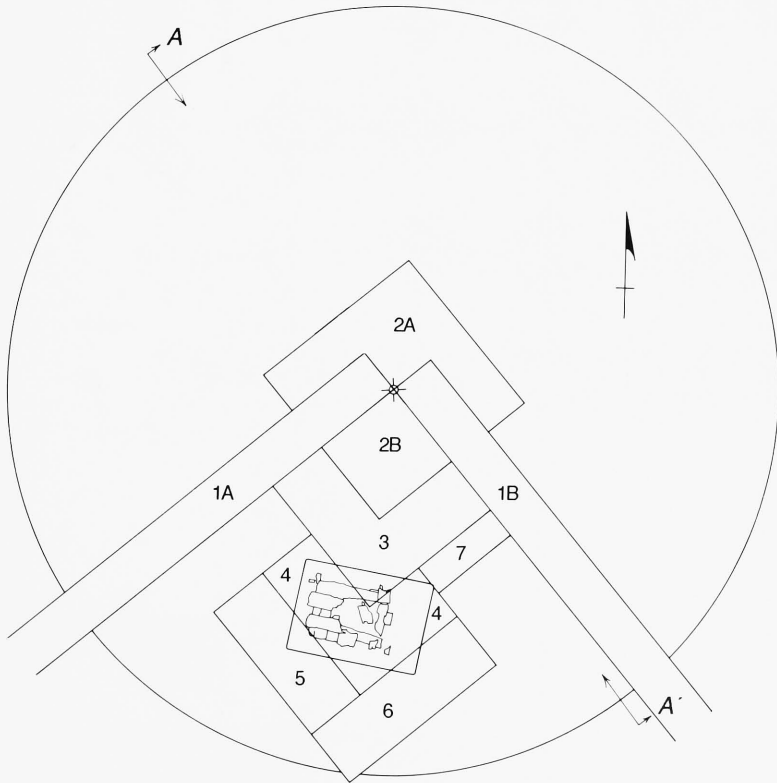
L. Tumulus C. Uncatalogued. Black-polished sherds (unstratified): a-c. Rims from fine round-mouthed jugs (D. rims 0.09-0.11). d. Body fragment from ribbed (fluted) jar or sieve-jug (PH. 0.028 m.).



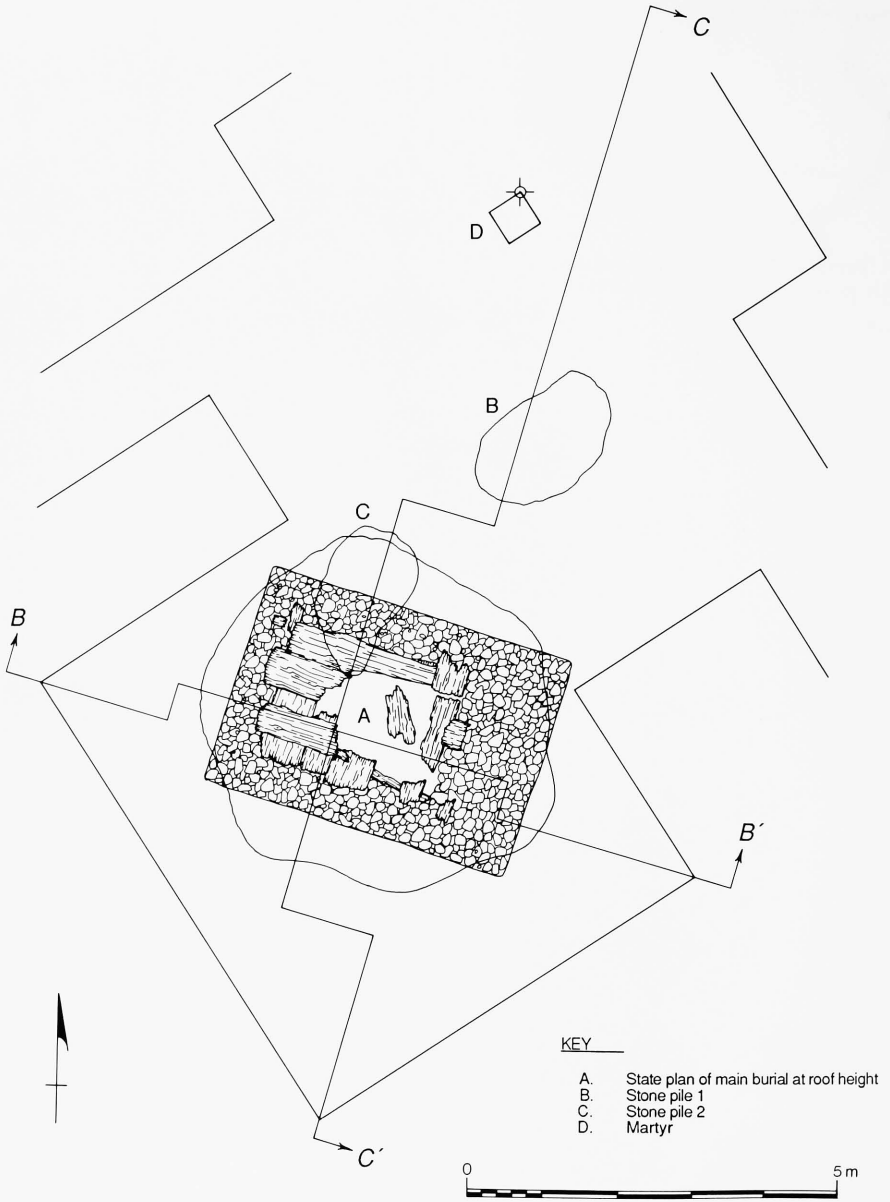
M. TumC 25.



A. Tumulus G. General pre-excavational profile A-A' on line 33° west of north. Dashed ground line is merely projected diameter to indicate incline. Viewed from southwest.



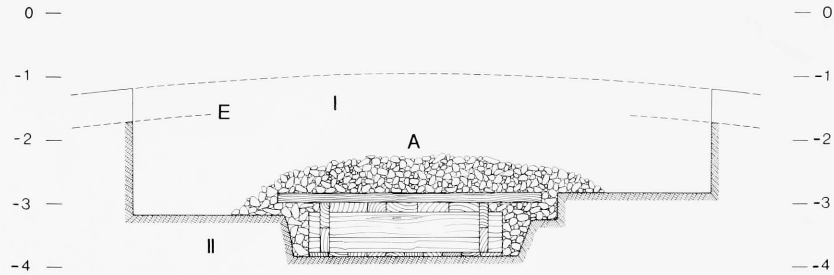
B. Tumulus G. Plan of trench outlines with location of main burial.



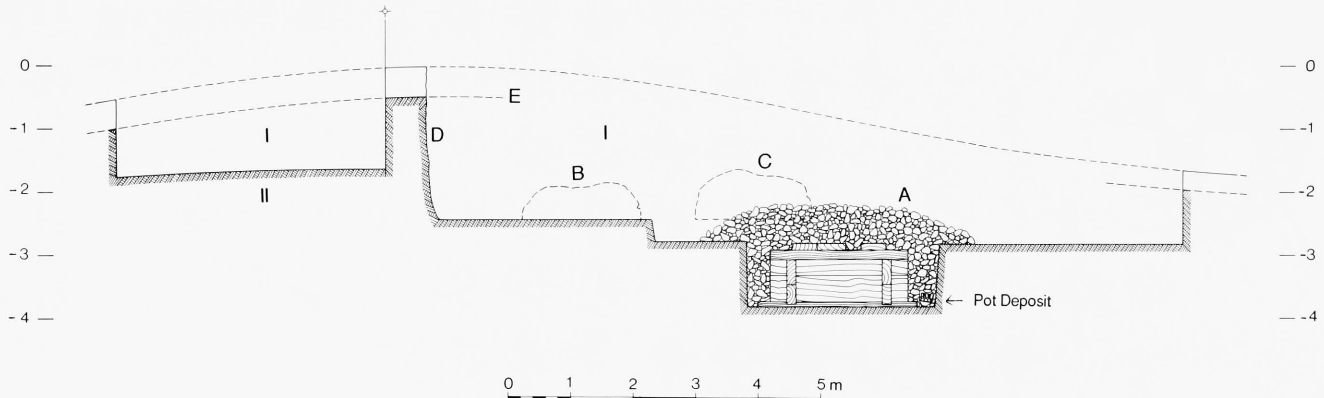
Tumulus G. State plan of chamber and stone pack at roof level. Stone cap, stone piles 1 and 2, and martyr in outline.

KEY

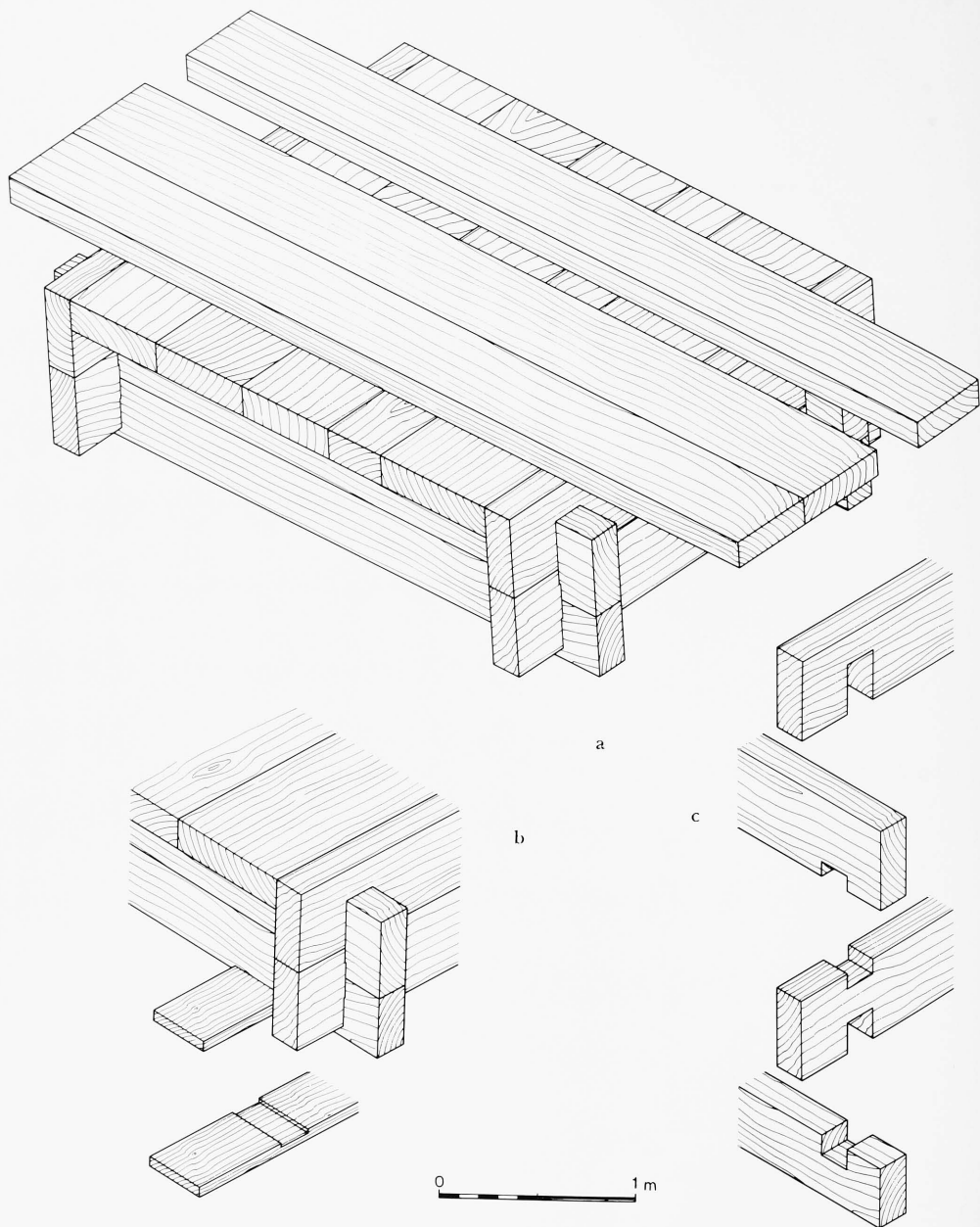
- I Tumulus mantle
- II Hardpan (clay)
- A Main burial
- B Stone pile 1
- C Stone pile 2
- D Martyr
- E Surface of clay originally



A. Tumulus G. Restored section B-B' through burial with view of north side wall. Viewed from south.



B. Tumulus G. Restored section C-C' through burial with view of east end wall. Viewed from west.



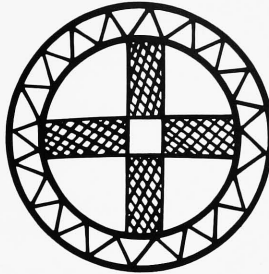
Tumulus G. a. Isometric reconstruction of chamber. Floor not included. b. Detail: reconstruction of northwest corner of chamber, upper roof beams not included. Below, detail of rabbeted floorboards under sill course. c. Detail: vertically exploded isometric view of joinery of northwest corner, roof beams not included. All viewed from northwest.



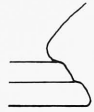
A. TumG 1.



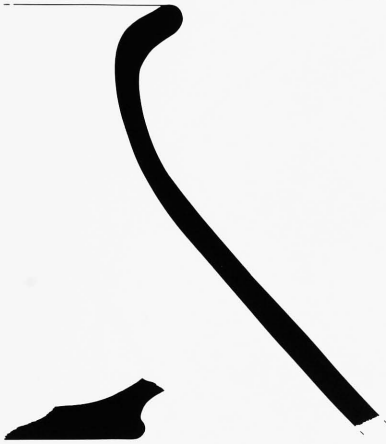
B. TumG 2.



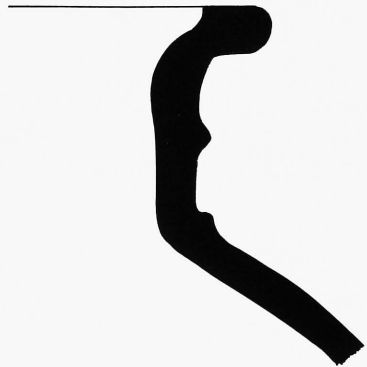
C. TumG 7. Detail: design on base



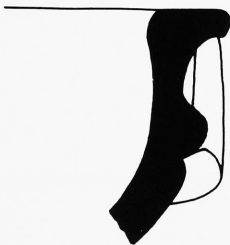
D. TumG 10.  
Detail: profile of base



E. TumG 12.



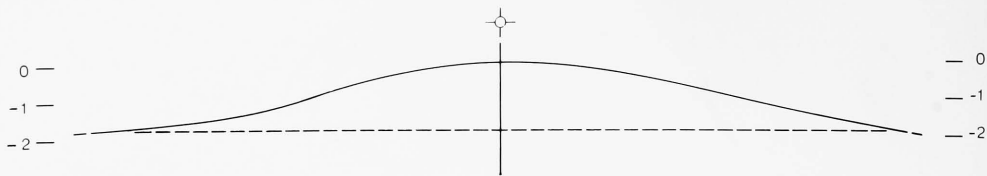
F. TumG 13. Detail: profile of ledged rim.



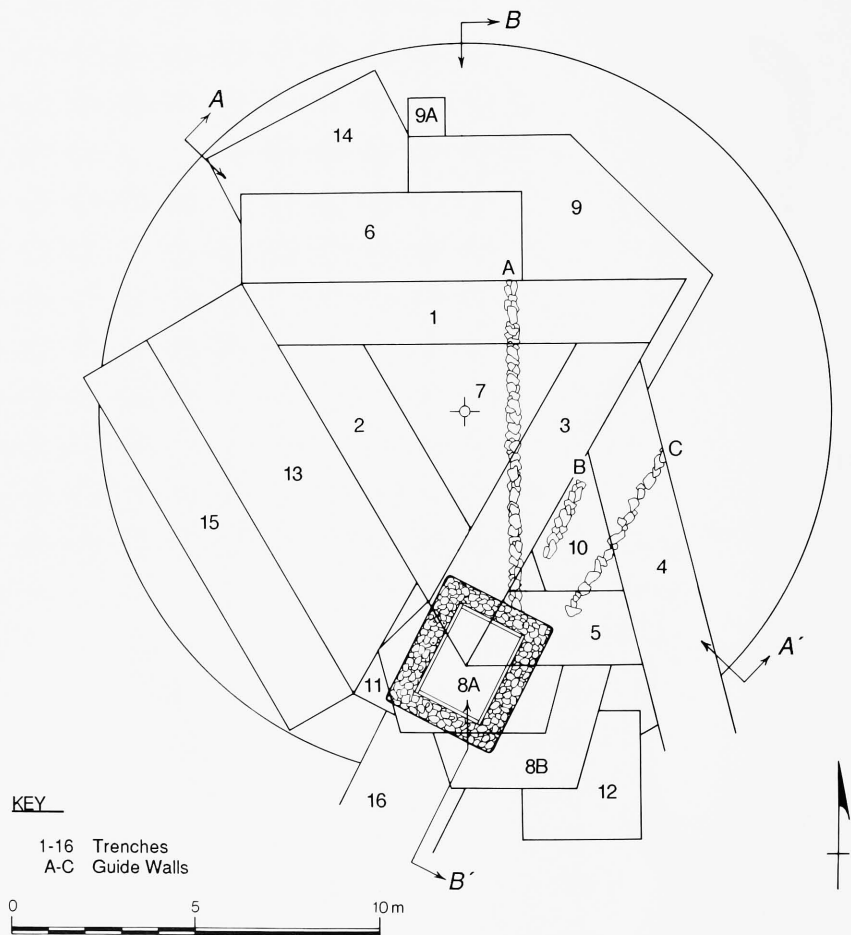
G. TumG 14A.



H. TumG 15.

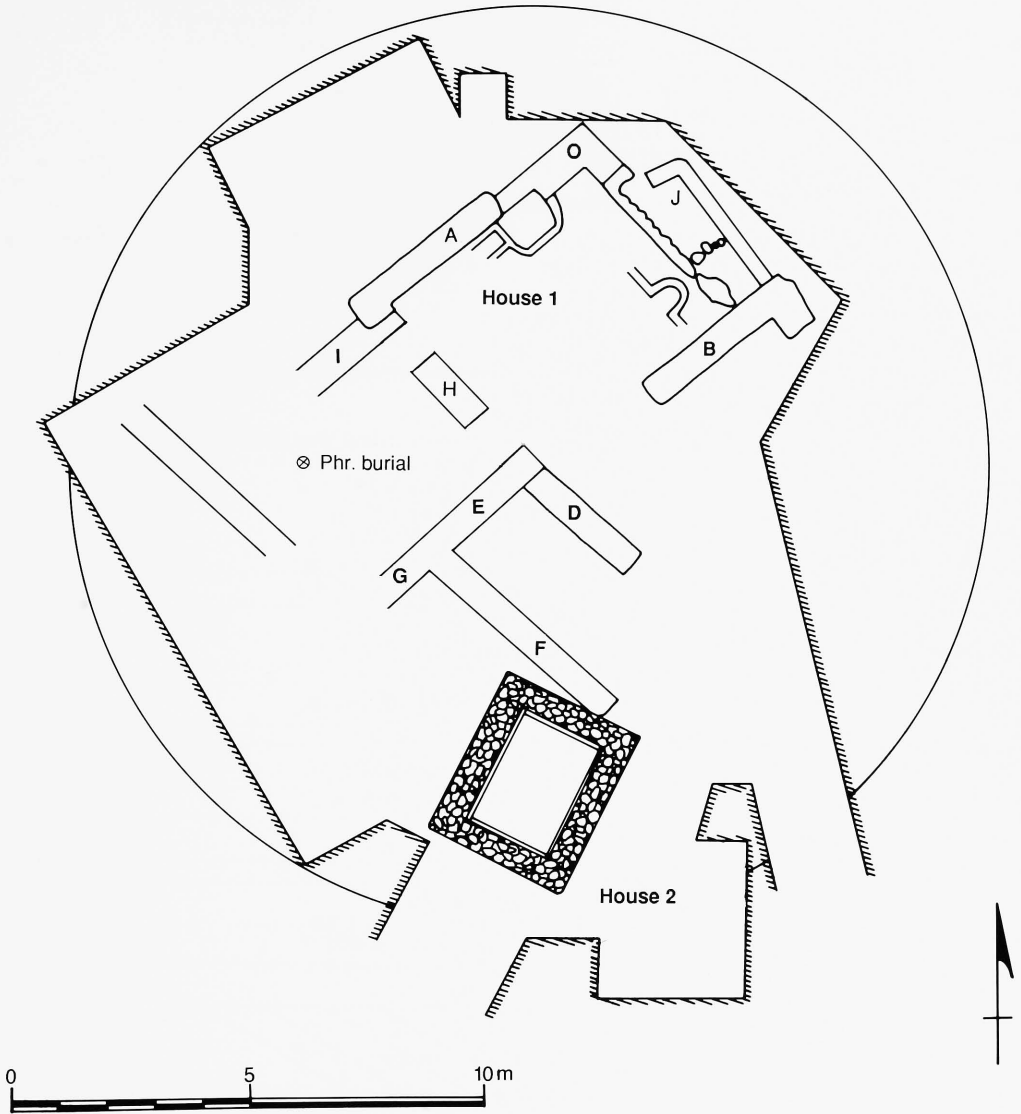


A. Tumulus H. General pre-excavational profile A-A' across tumulus, viewed from southwest. This profile line can be extended through center of Tumulus I. Dashed ground line is merely projected diameter.

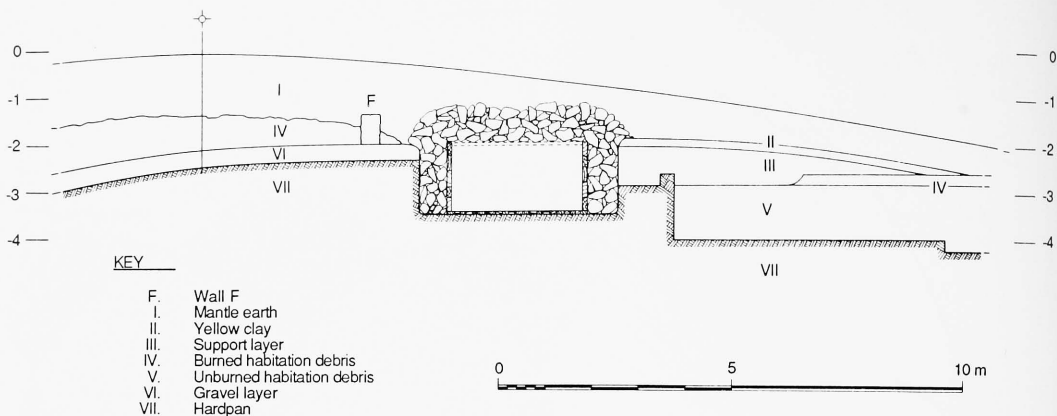


B. Tumulus H. Plan of excavation trenches and features pertaining to main burial (in detail).

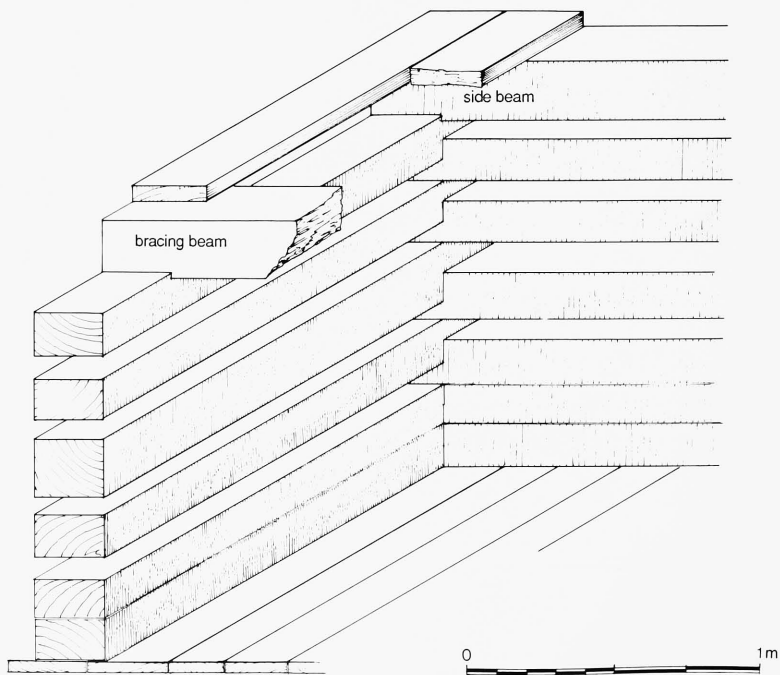




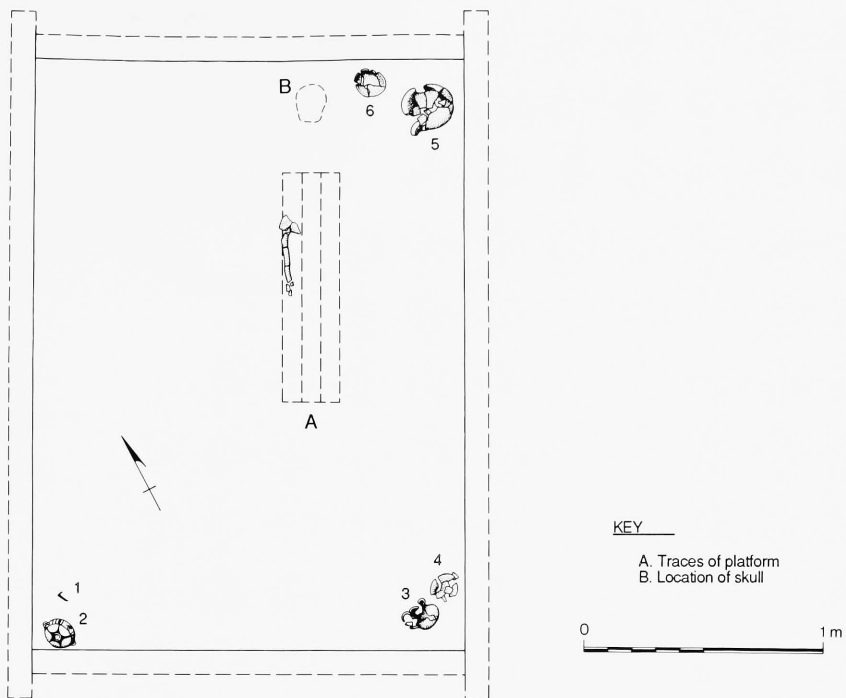
Tumulus H. Plan of trenched area. Features rendered in detail belong to main burial. Features in outline are pre-tumulus in date.



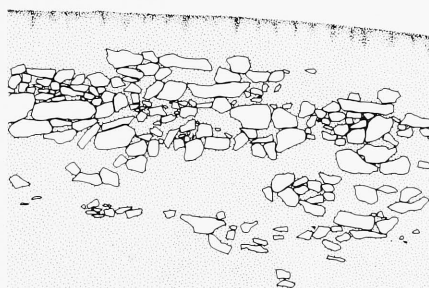
A. Tumulus H. Schematic restored section B-B', through central area (see Fig. 18B). Walls of chamber are conjectural. Viewed from northwest.



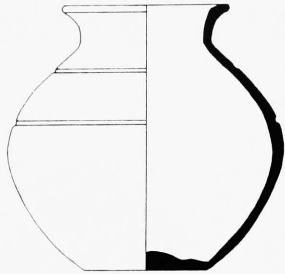
B. Tumulus H. Isometric reconstruction of chamber's southwest corner according to D. H. Cox's cribwork theory. Two out of three beams added on top of walls are shown. Viewed from northeast.



A. Tumulus H. Reconstructed floor plan of chamber. Thickness of walls and dimensions of platform conjectural.



B. Tumulus H. Detailed view of guide wall C where it crossed trench 4. Viewed from southeast.



B. TumH 5.



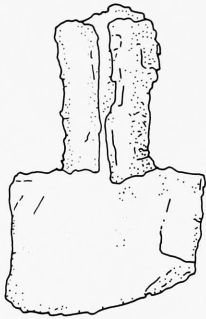
A. TumH 1.



C. TumH 6.



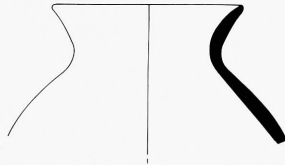
D. TumH 12.



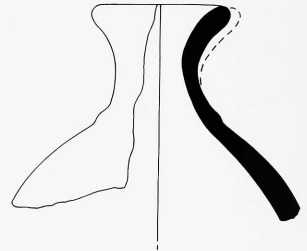
E. TumH 13.



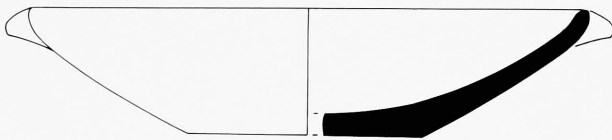
F. TumH 16.



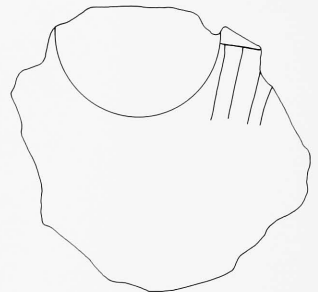
G. TumH 26.



H. TumH 27.



I. TumH 28.



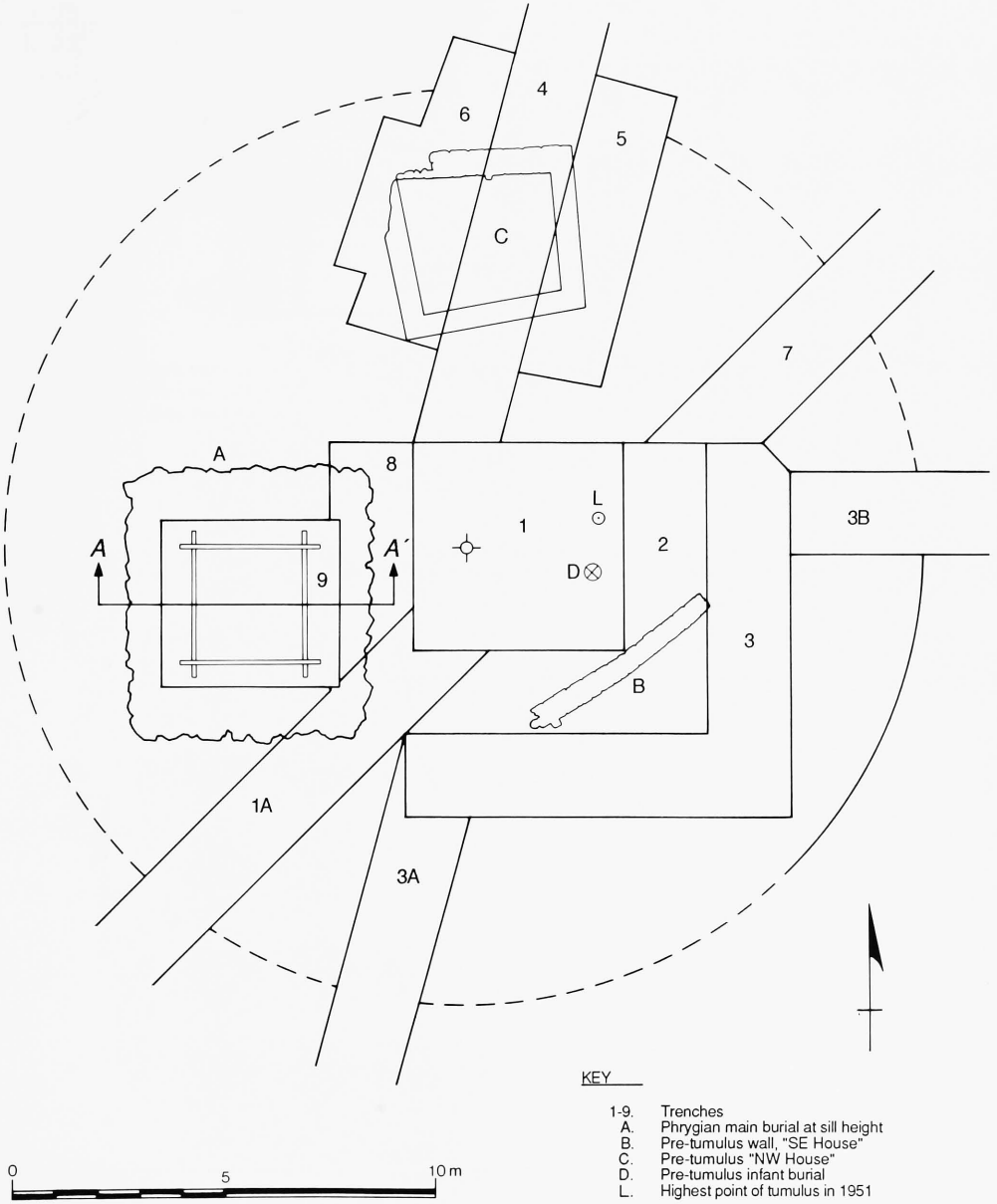
J. TumH 34.



K. Tumulus H.  
Uncatalogued. Profile of  
black-polished rim (D.0.27  
m.).



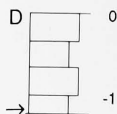
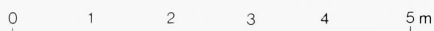
L. Tumulus H.  
Uncatalogued. Profile of  
black-polished base (D.  
0.065 m.).



Tumulus J. Plan of trench outlines with main burial at sill height, and pre-tumulus features. Only complex A belongs to main burial.

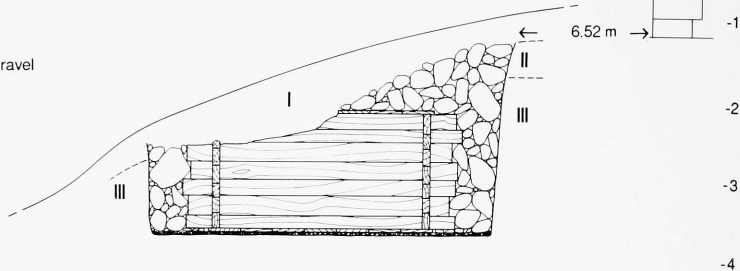
FIGURE 24

TUMULUS J

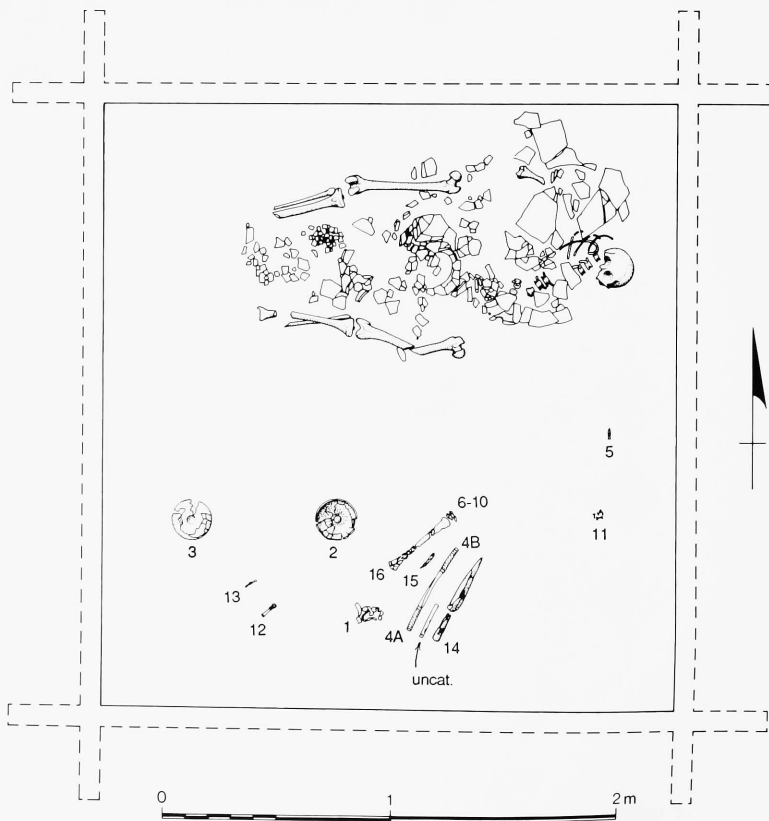


KEY

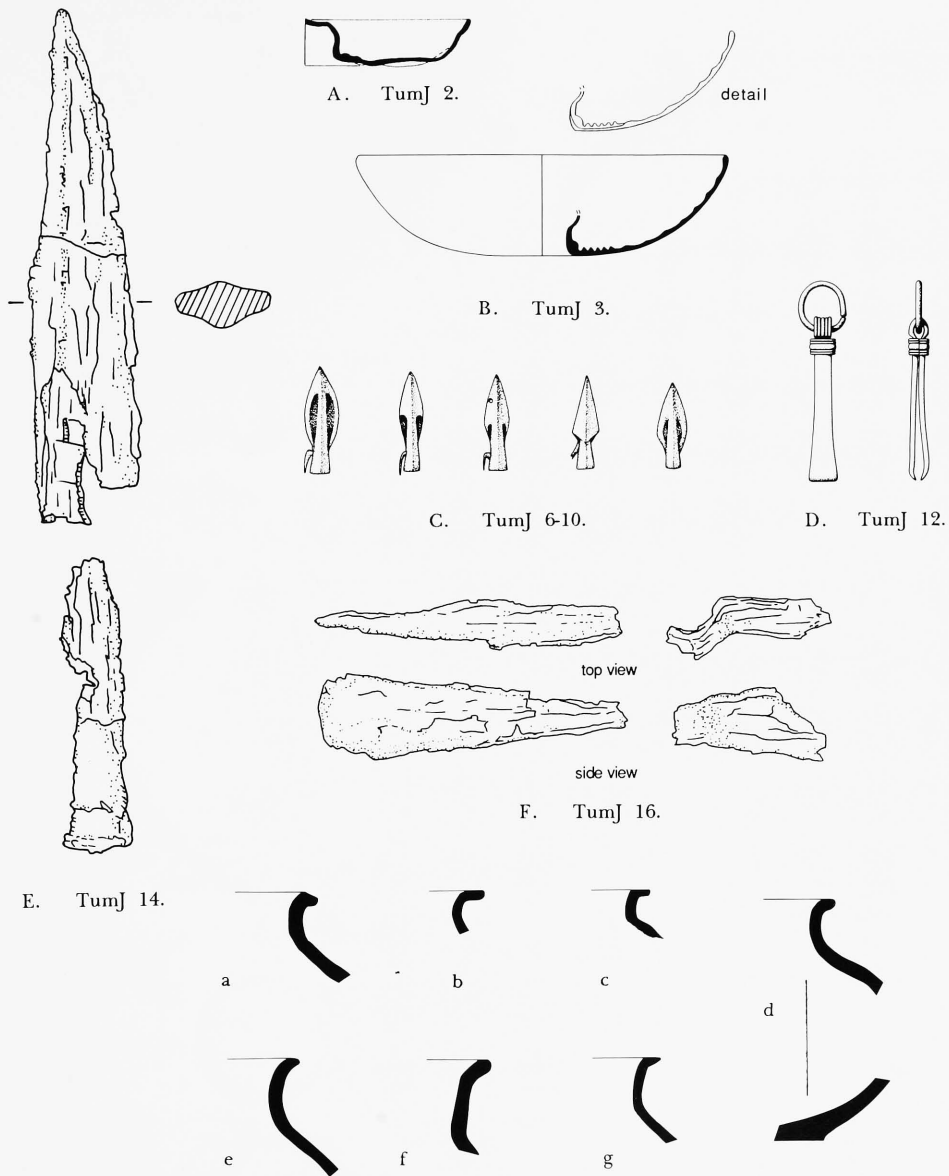
- I. Earth mixed with gravel
- II. Compacted gravel
- III. Clay
- D. Datum



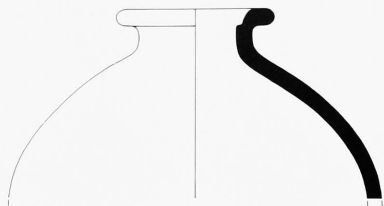
A. Tumulus J. Restored section A-A' (see Fig. 23) through burial area, with sole of expedition house at telescoped distance. Viewed from south. Drawn in 1983 after D. H. Cox, with additions and corrections from data in Gallagher's notebooks. Speculative: depths of beam-laps and lengths of ends of beams beyond laps.



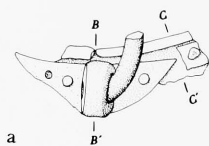
B. Tumulus J. Plan of finds on floor. Drawn in 1983 from Gallagher's sketch and measurements, and from photographs.



G. Tumulus J. Uncatalogued. Profiles of vessels (under and around body); a-g. Necked jar (D. and est. D. rims 0.11-0.16 m.). Badly deteriorated.

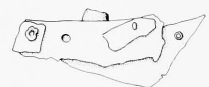


A. TumJ 17.  
Detail of rim.



a

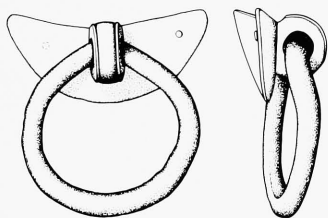
b



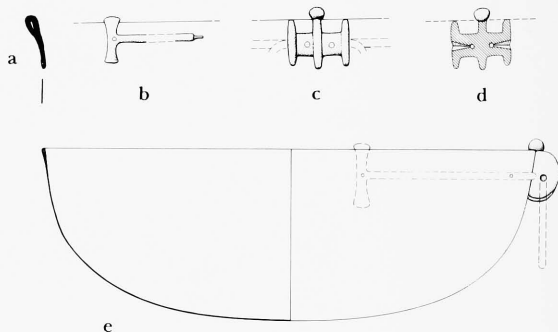
c

d

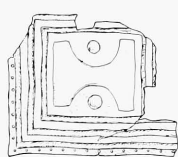
B. TumJ 18. a. Exterior view. b. Section and view at B-B'. c. Interior view. d. Section C-C'.



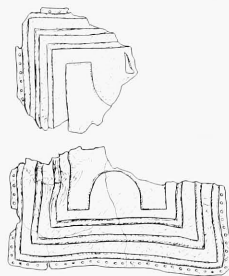
C. TumJ 19.



D. TumJ 20. Details: a. Section, folded rim. b. Spool and band. c. Bolster (ext.). d. Bolster (int.). e. Profile.



E. TumJ 22.



F. TumJ 23.  
(2 pieces).



G. TumJ 25.



H. TumJ 26.

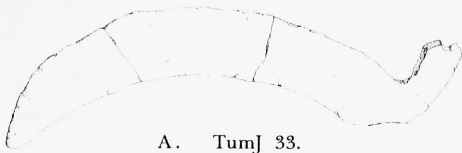


I. TumJ 28.

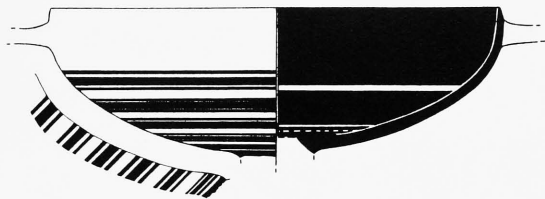


J. TumJ 30.





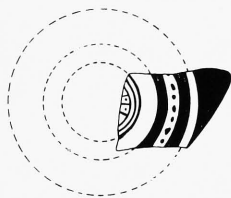
A. TumJ 33.



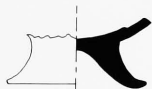
C. TumJ 35. Profile and interior floor.



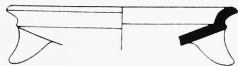
B. TumJ 34.



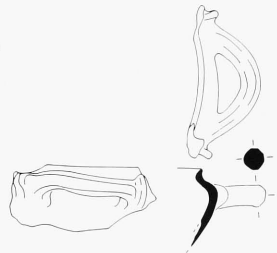
D. TumJ 36. (profile and wall).



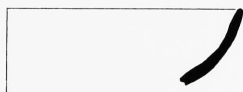
E. TumJ 46.



G. TumJ 50.



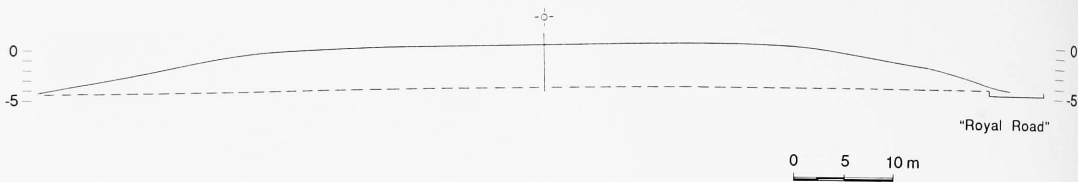
I. TumJ 62. (3 views).



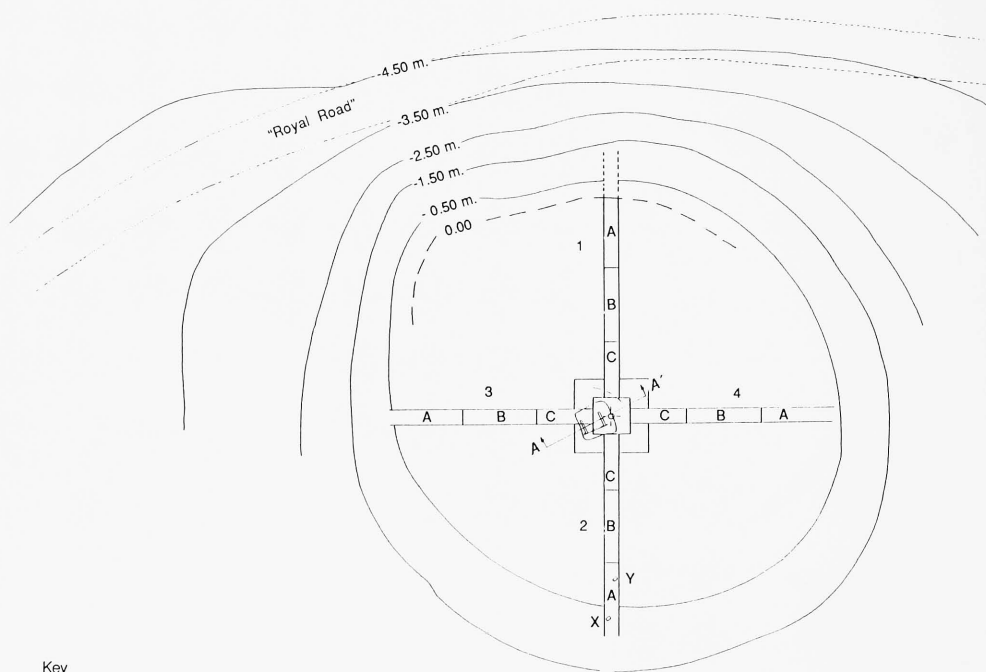
F. TumJ 49.



H. TumJ 51.

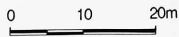


A. Tumulus KY. General profile of Küçük Yassihöyük. Dashed ground line is projected across -4.50m. "diameter." Viewed from east. "Royal Road" is at far right.

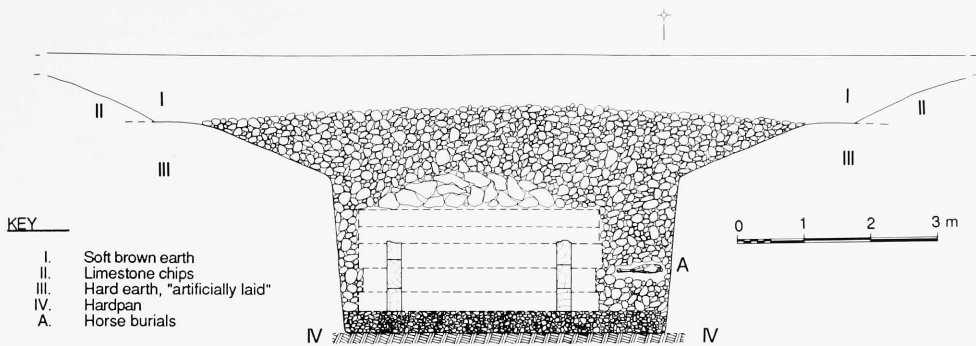


Key

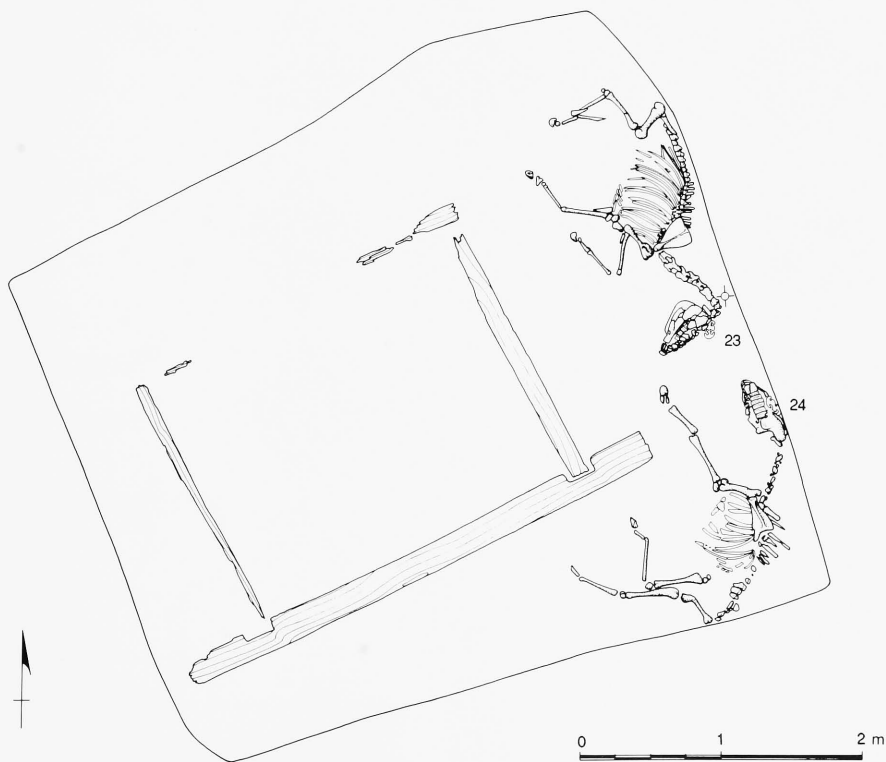
- 1-4. Trenches
- A-C. Subdivisions of trenches
- - - Edge of stone cap
- X, Y Secondary burials



B. Tumulus KY. Plan of trench outlines and main burial. Dashed contour line (0.00) is drawn at author's datum and outlines approximately flat portion of top.



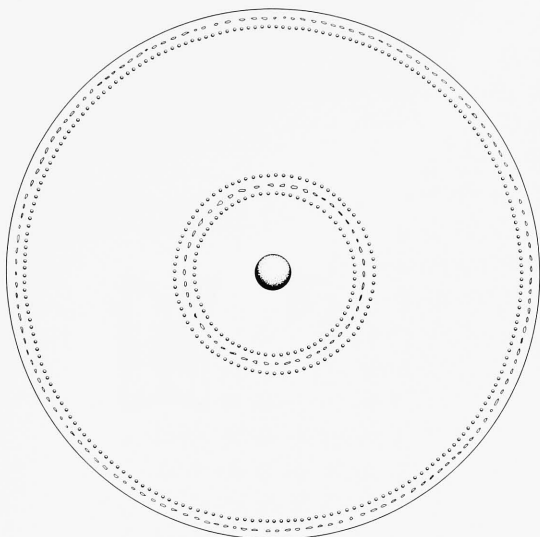
A. Tumulus KY. Section A-A' (see Fig. 28B) through chamber and horse burials. Chamber is restored; solid lines indicate known measurements, dashed lines are speculative. Viewed from south.



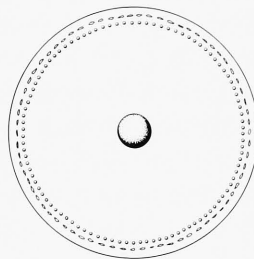
B. Tumulus KY. Plan of pit containing remains of chamber on best-preserved level, and horse burials.



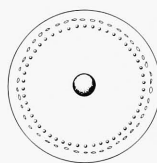
Tumulus KY. Plan of contents of chamber.



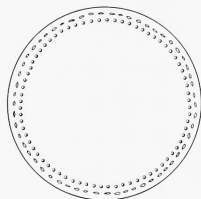
A. TumKY 1.



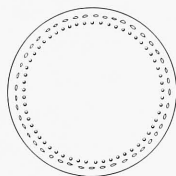
B. TumKY 3.



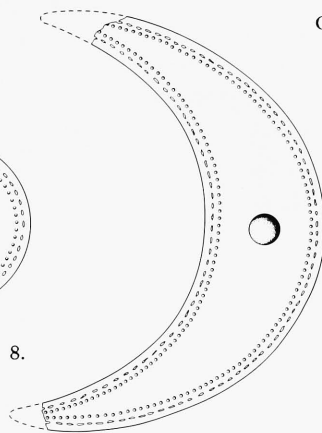
C. TumKY 5.



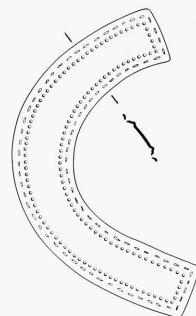
D. TumKY 7.



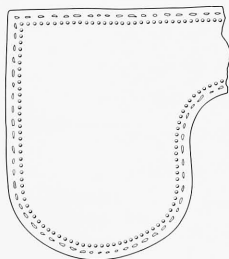
E. TumKY 8.



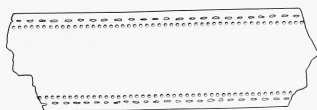
F. TumKY 11.



G. TumKY 12.



H. TumKY 13.



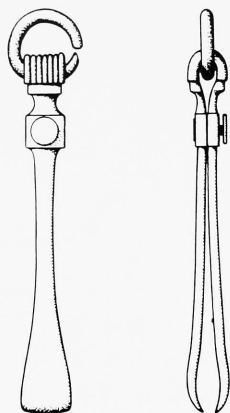
I. TumKY 14.



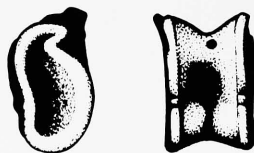
J. TumKY 15.



K. TumKY 16.



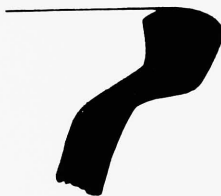
A. TumKY 17.



B. TumKY 19.



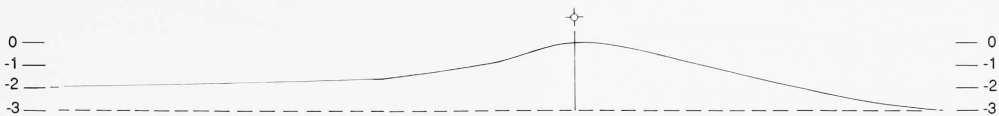
C. TumKY 21.



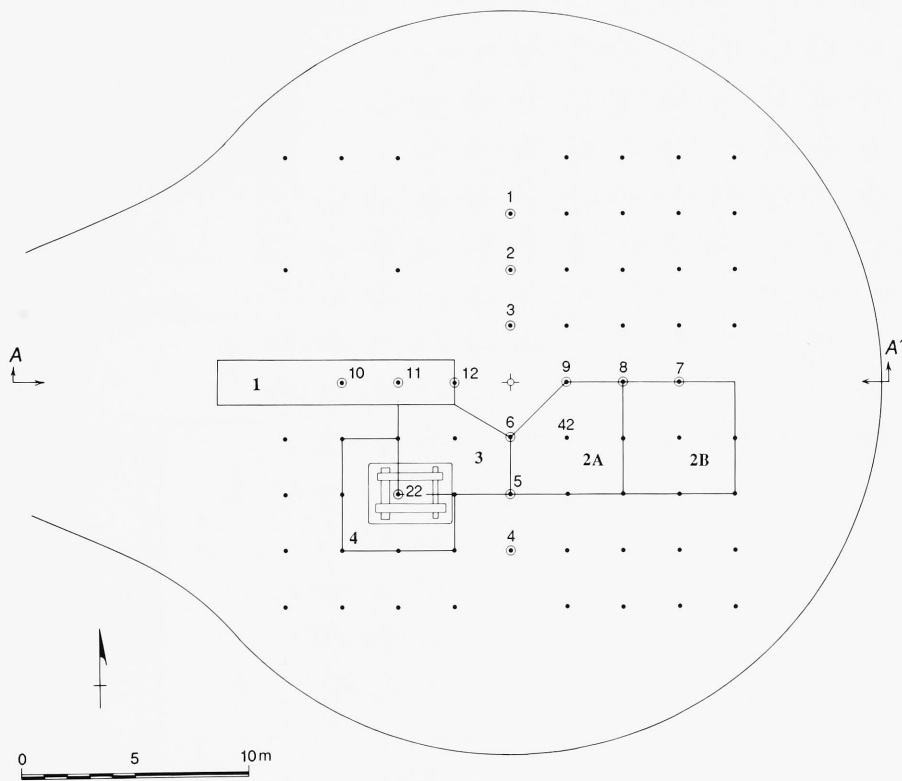
D. TumKY 22.



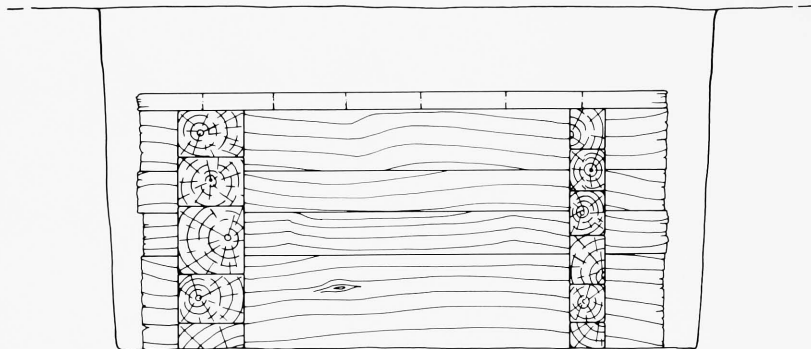
E. TumKY 23. Detail of restored chain for suspension of nose piece.



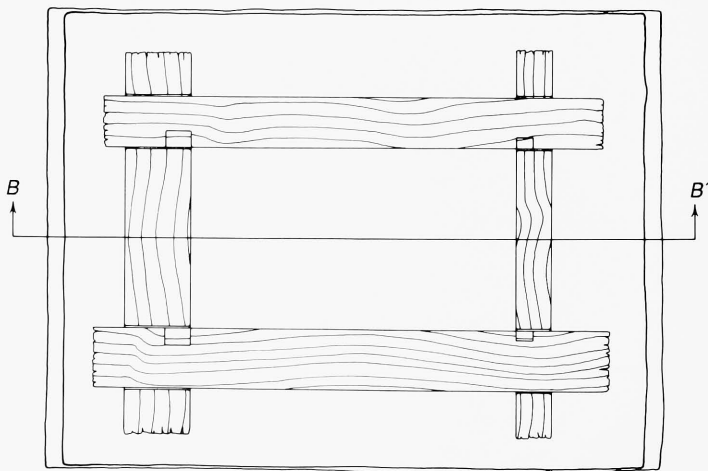
A. Tumulus N. General pre-excavational profile A-A' across tumulus, run on west-east line. Dashed ground line is projected at -2.99-m. level. Viewed from south.



B. Tumulus N. Plan of drill-grid and trench outlines; enclosing line is at approximately contour level -2.99 m. Main burial drawn at sill height.

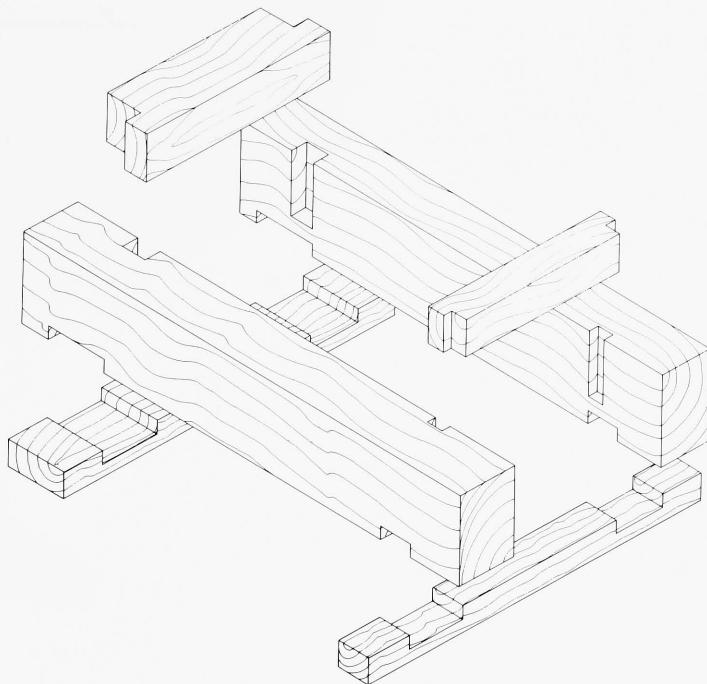


A. Tumulus N. Reconstructed section  $B-B'$  through east-west axis of chamber, with view of north wall. Number of roof beams is conjectural.

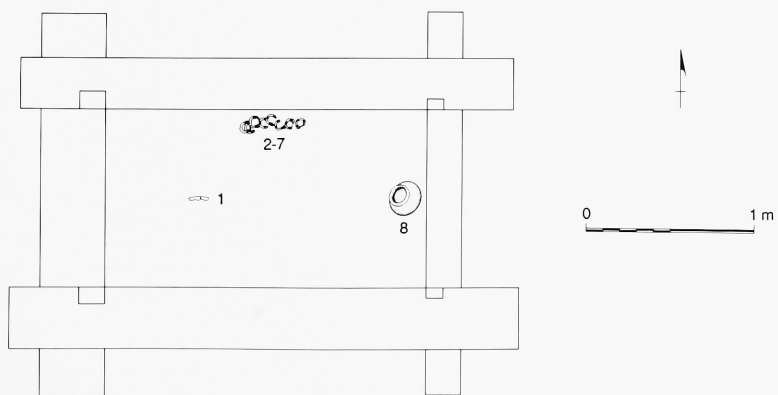


B. Tumulus N. Reconstructed plan of chamber at sill height. Slotting began with bottom of first proper end beams (see Fig. 35A).

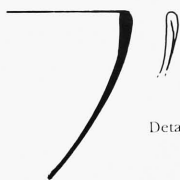




A. Tumulus N. Vertically exploded isometric view of lowest courses of burial chamber. Viewed from southeast.



B. Tumulus N. Plan of burial chamber showing location of contents.



Detail of rim.

A. TumN 1.



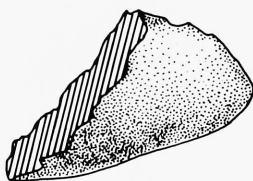
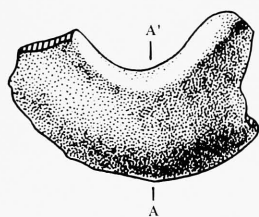
B. TumN 9.



D. TumN 11.



C. TumN 10.



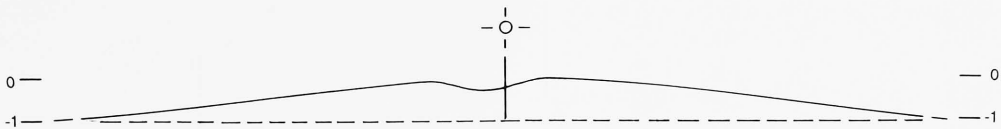
E. TumN 12.



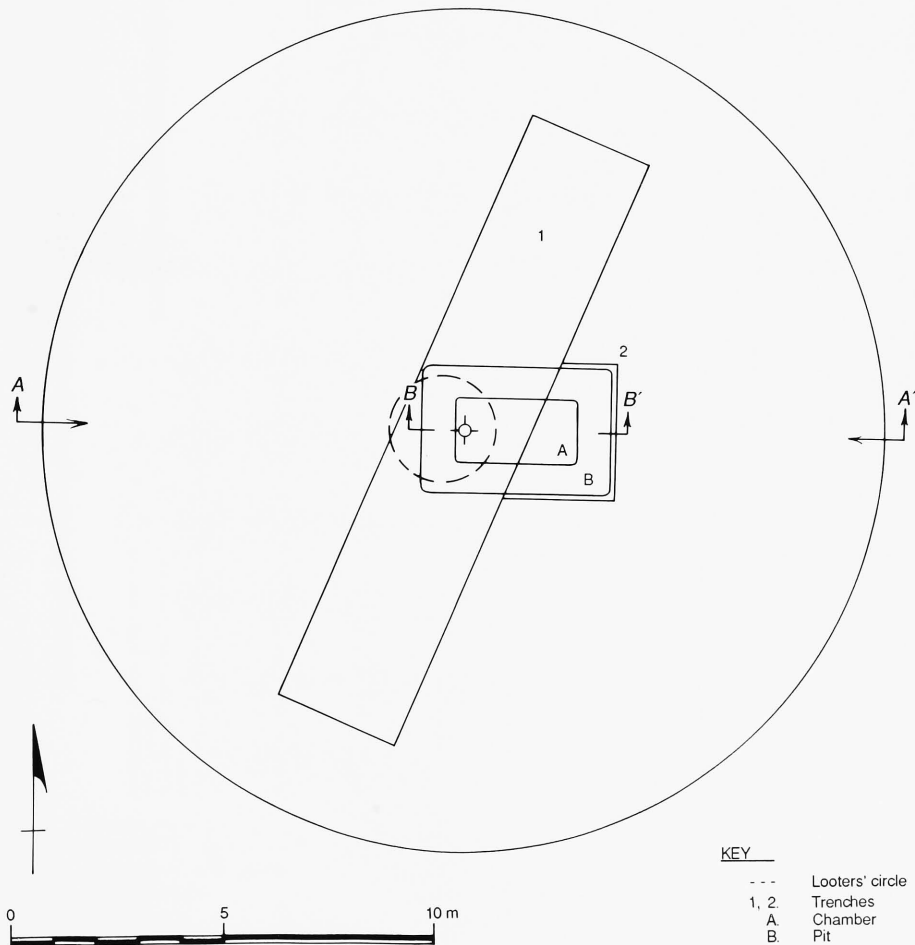
Section A-A'



F. Tumulus N. Uncatalogued. Black polished sherd from mantle: ribbed (fluted) jar fragment (Est.D. 0.19m.).

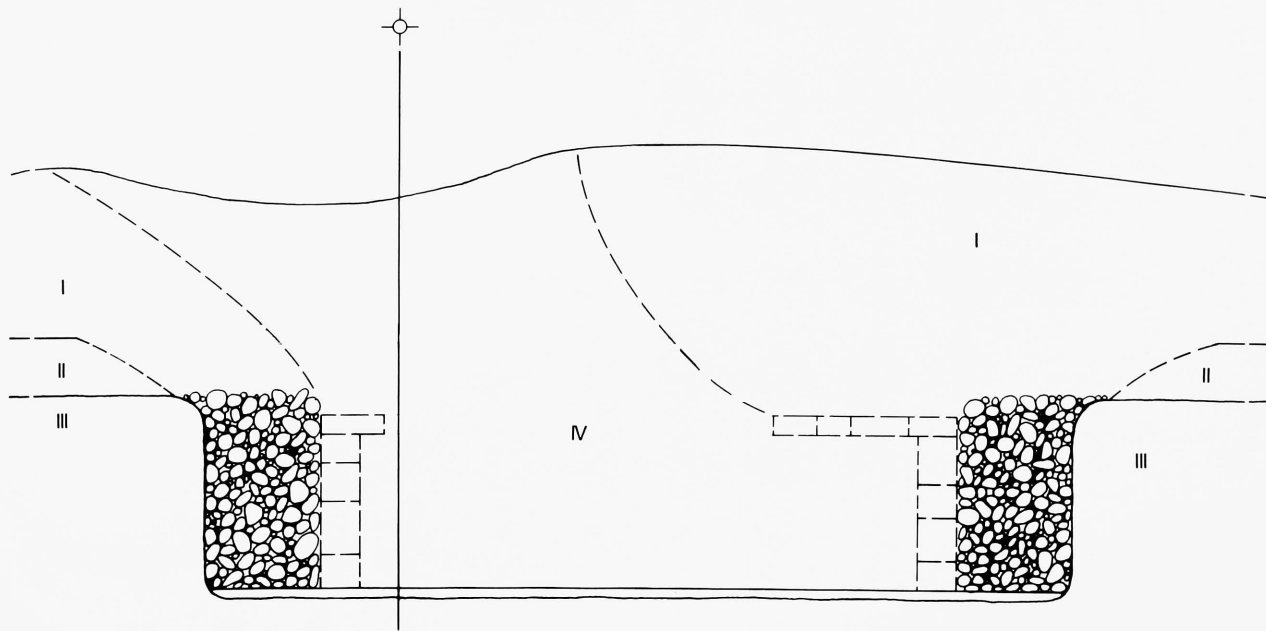


A. Tumulus Q. General pre-excavational profile A-A' of tumulus. Ground line is merely projected diameter. Viewed from south.



KEY	
---	Looters' circle
1, 2	Trenches
A	Chamber
B	Pit

B. Tumulus Q. Plan of trenches with outlines of pit and chamber.

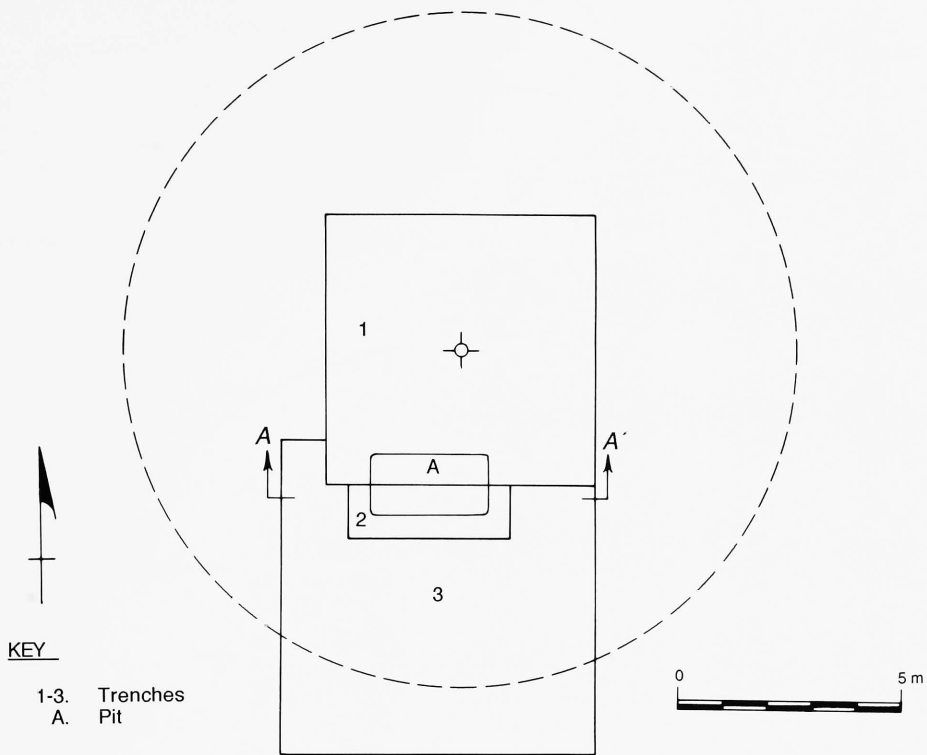


KEY

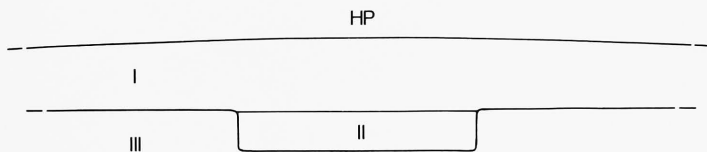
- I. Mantle earth
- II. Undescrbed, but probably sand and gravel
- III. Clay (hardpan)
- IV. Looters' refill: stones, earth, and sand



Tumulus Q. Partially restored section *B-B'* through burial. Viewed from south.



A. Tumulus S. Plan of excavation trenches and pit.

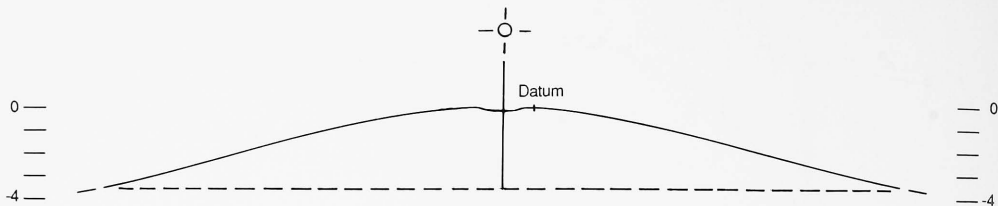


KEY

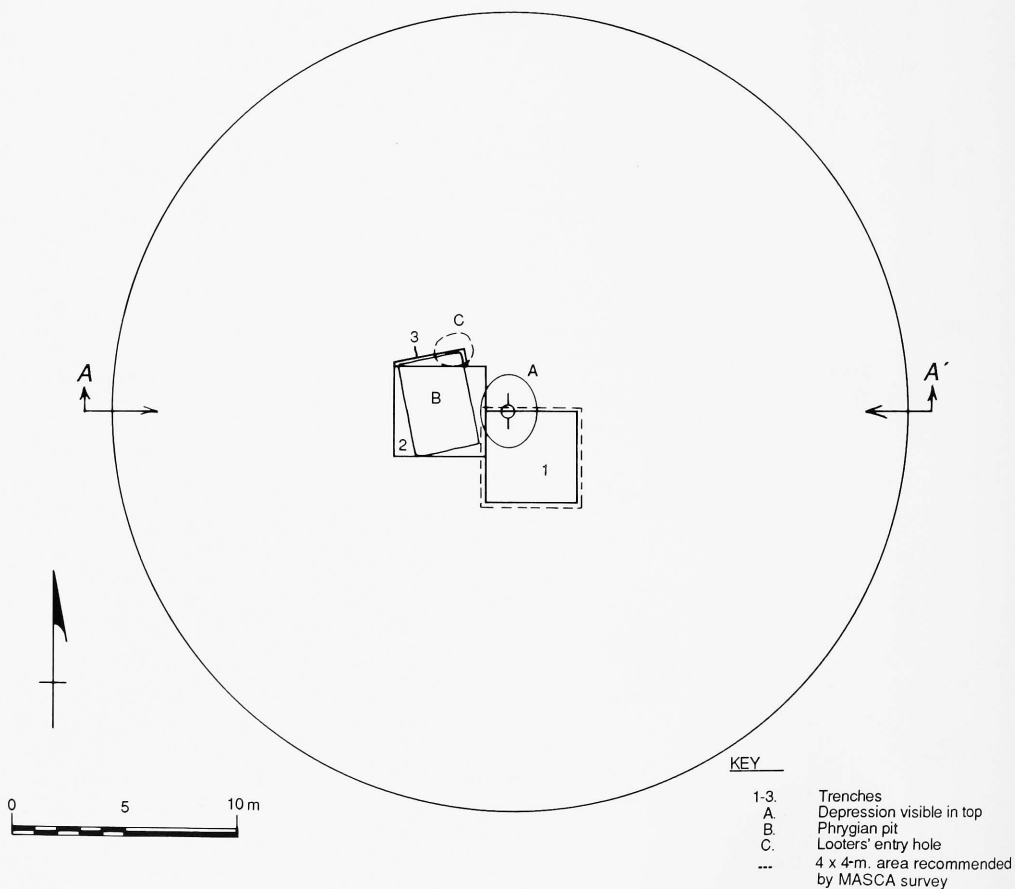
- I. Mantle earth, color unrecorded
- II. Reddish brown earth in pit.
- III. Clean sand and gravel
- HP. Highest point



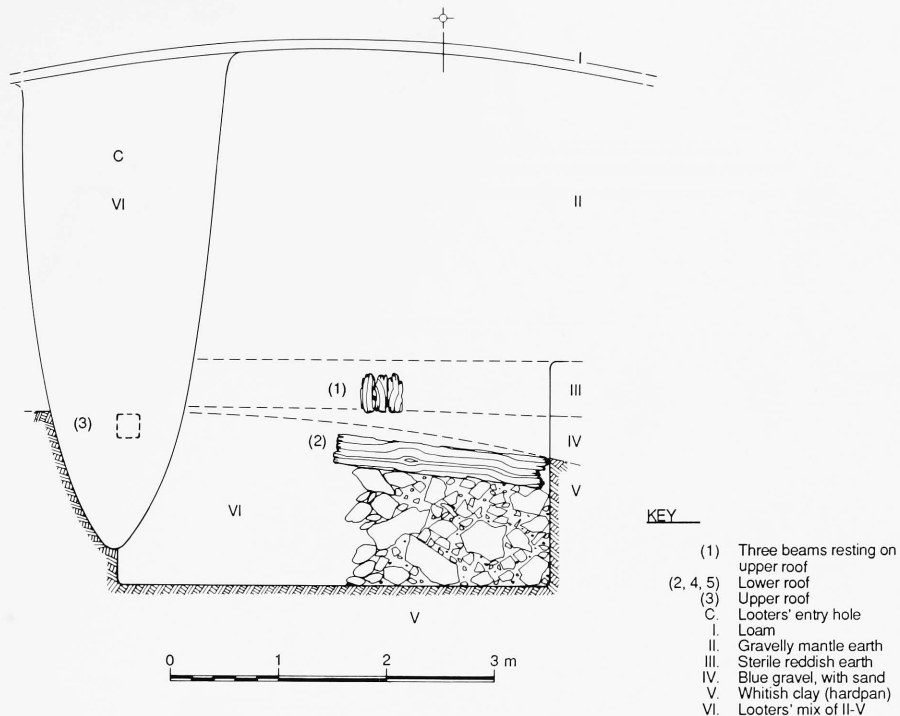
B. Tumulus S. Schematic section A-A' through pit. Viewed from south.



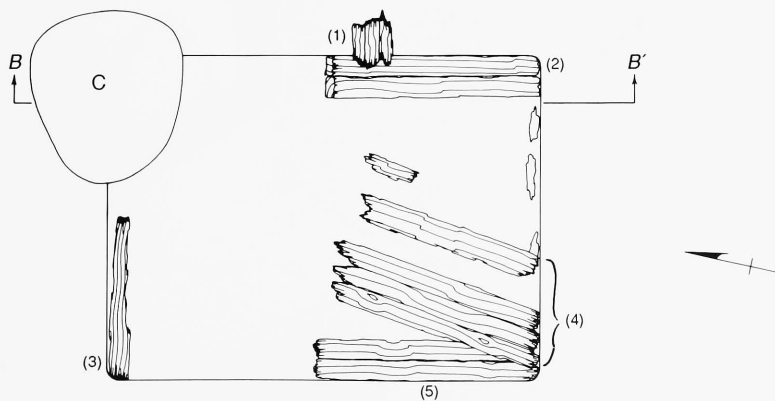
A. Tumulus X. General pre-excavational profile A-A' of tumulus. Ground line is merely projected diameter. Viewed from south.



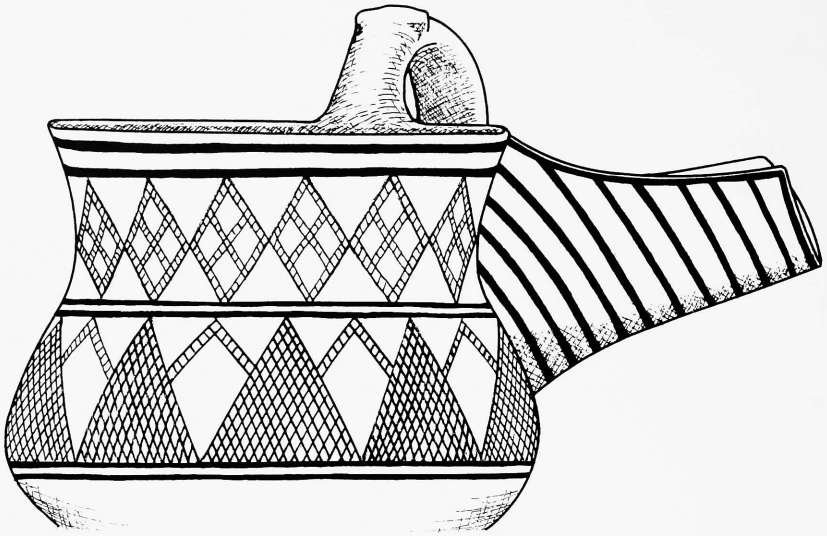
B. Tumulus X. Plan of excavation trenches and pertinent features.



A. Tumulus X. Section B-B' through burial as preserved, with elevation of east scarp. Viewed from west.



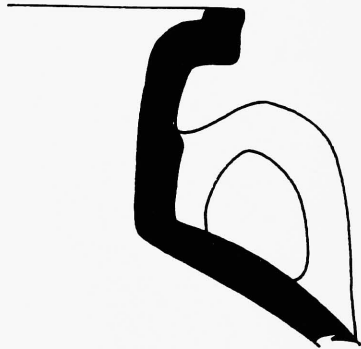
B. Tumulus X. Plan of pit at roof level.



A. TumX 2.

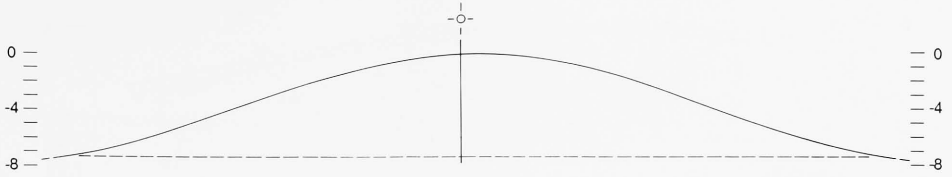


B. TumX 4.



C. TumX 6.





A. Tumulus Y. General pre-excavational profile A-A' across tumulus. Ground line is merely projected diameter. Viewed from south.



Key

--- 6x10-meter area recommended by MASCA survey

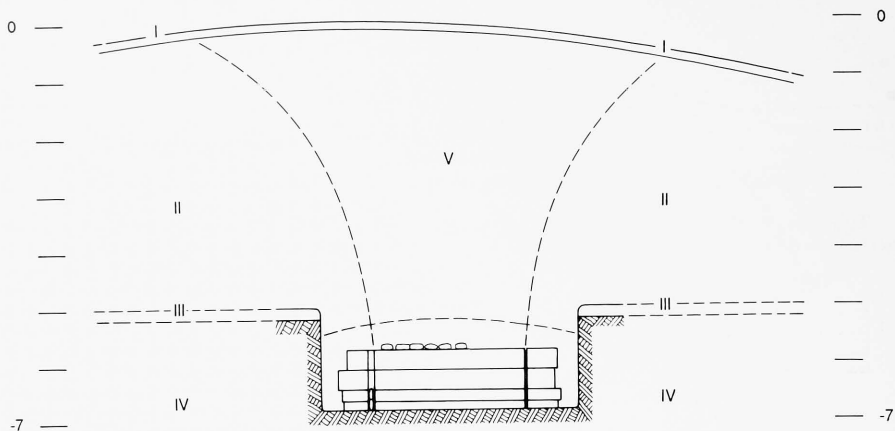
1-4. Trenches



B. Tumulus Y. Plan of trenches and pertinent features. Burial chamber drawn at roof height.

FIGURE 44

TUMULUS Y

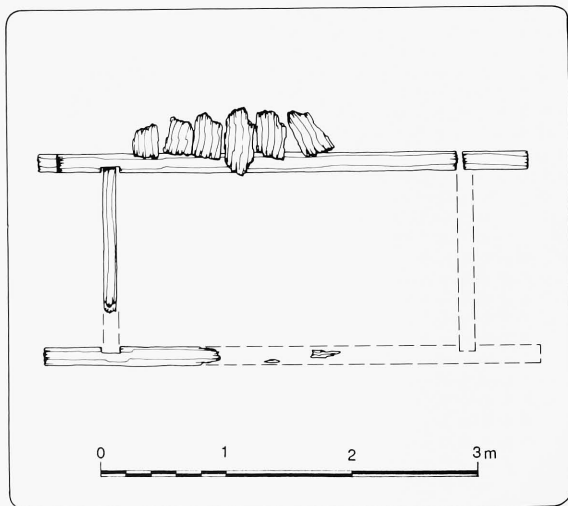


KEY

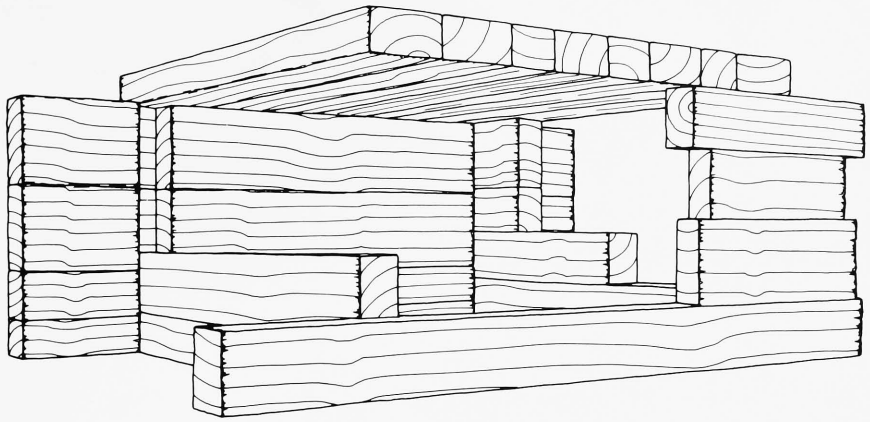
- I. Loam
- II. Mantle: brown earth mixed with gravel
- III. Gravel
- IV. White clay (hardpan)
- V. Looters' mix



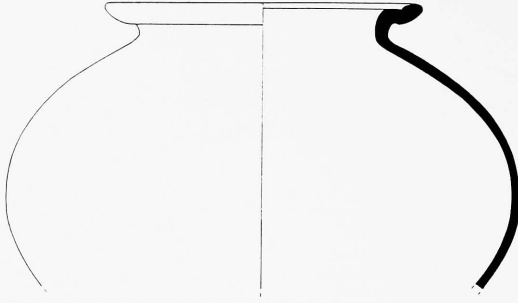
A. Tumulus Y. Section *B-B'* (see Fig. 43B) through chamber and trenches 2 and 3. Looters' hole remains speculative since it was not visible to excavator. Viewed from northeast.



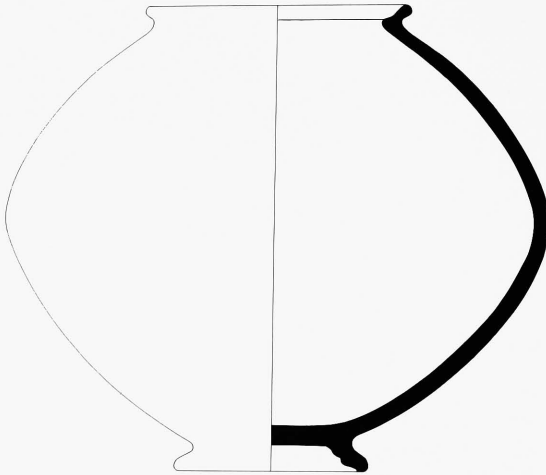
B. Tumulus Y. Plan of chamber at various preserved levels.



Tumulus Y. Reconstructed cut-away perspective drawing of chamber. Viewed from east. Not to scale.



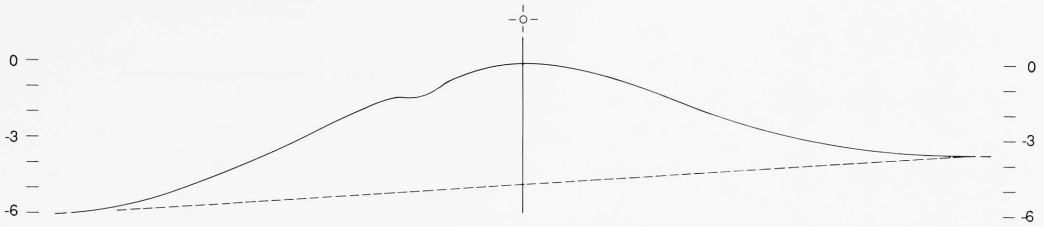
A. TumY 6.



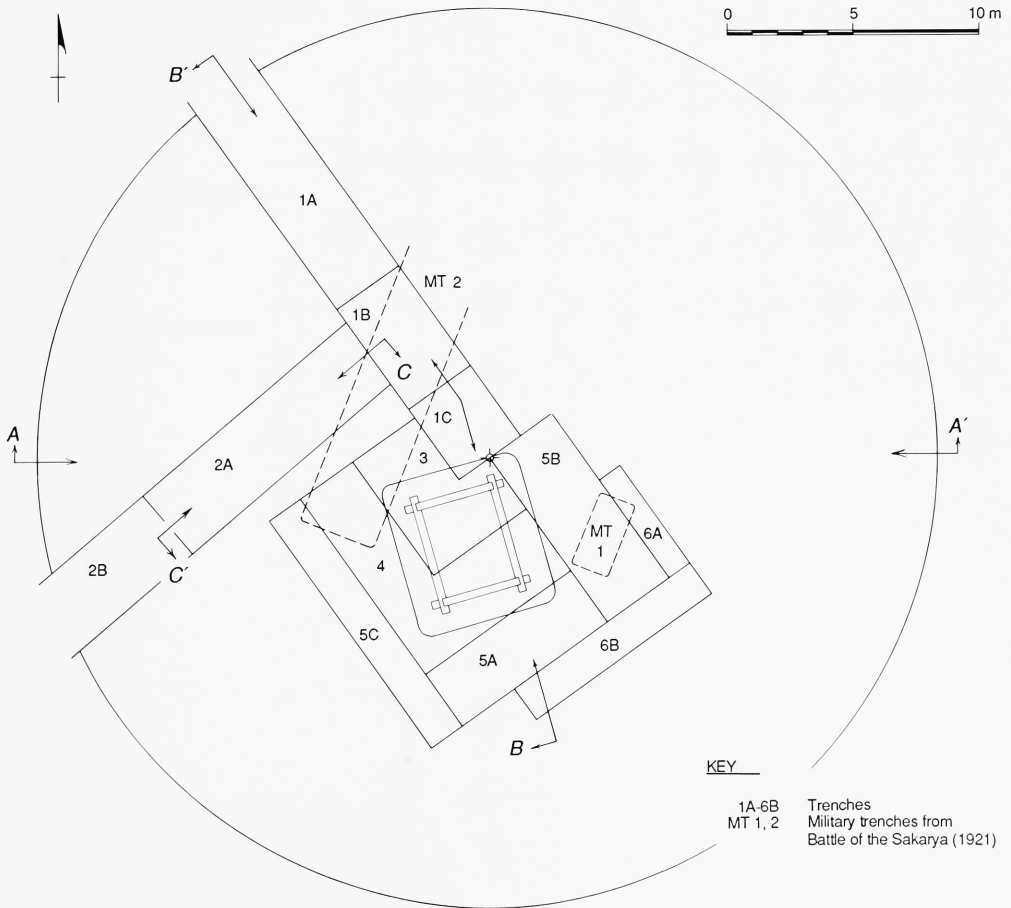
B. TumY 7.



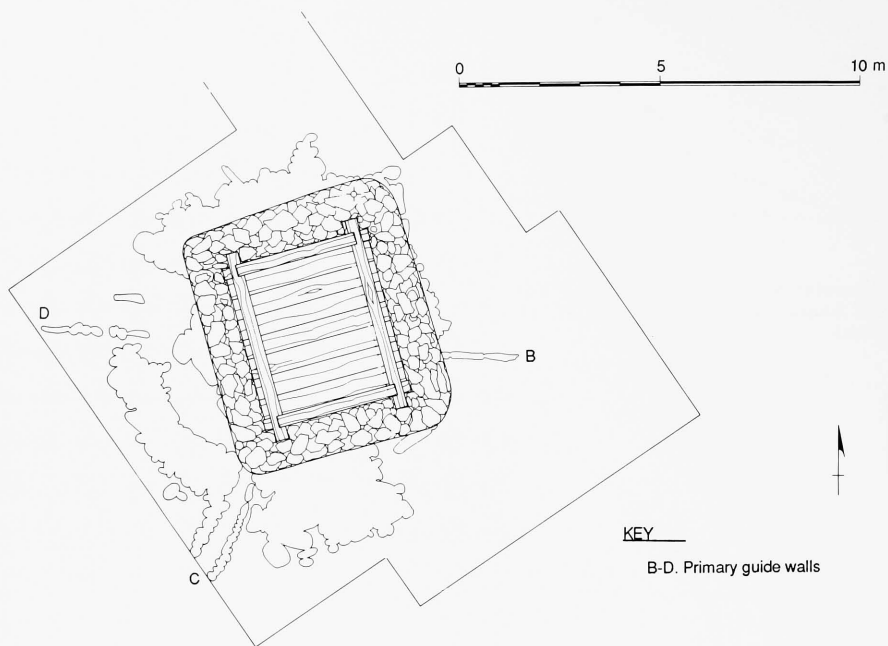
C. TumY 8.



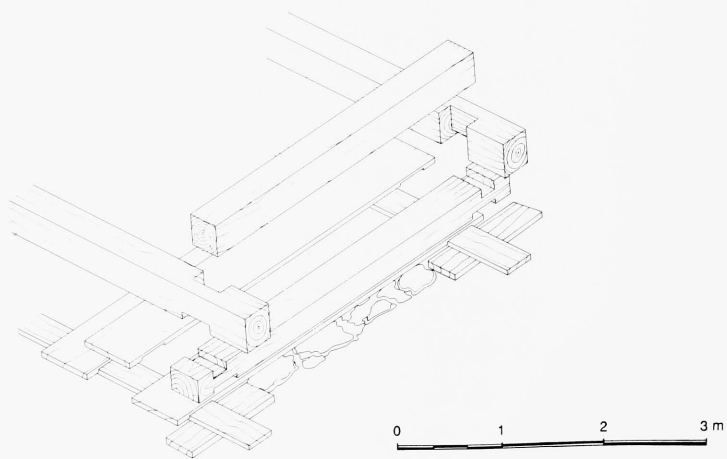
A. Tumulus S-1. General profile A-A' across tumulus. Ground line is merely projected diameter to indicate incline. Partially refilled cleft of second military trench shown left of center. Viewed from south.



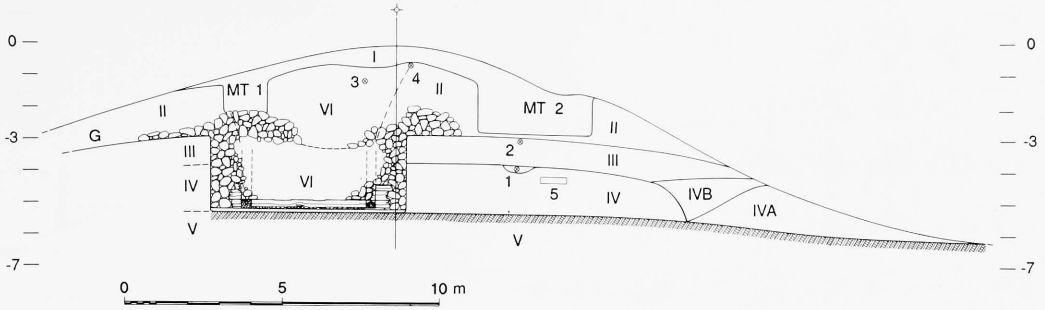
B. Tumulus S-1. Plan of trenches and main burial, with location of secondary features.



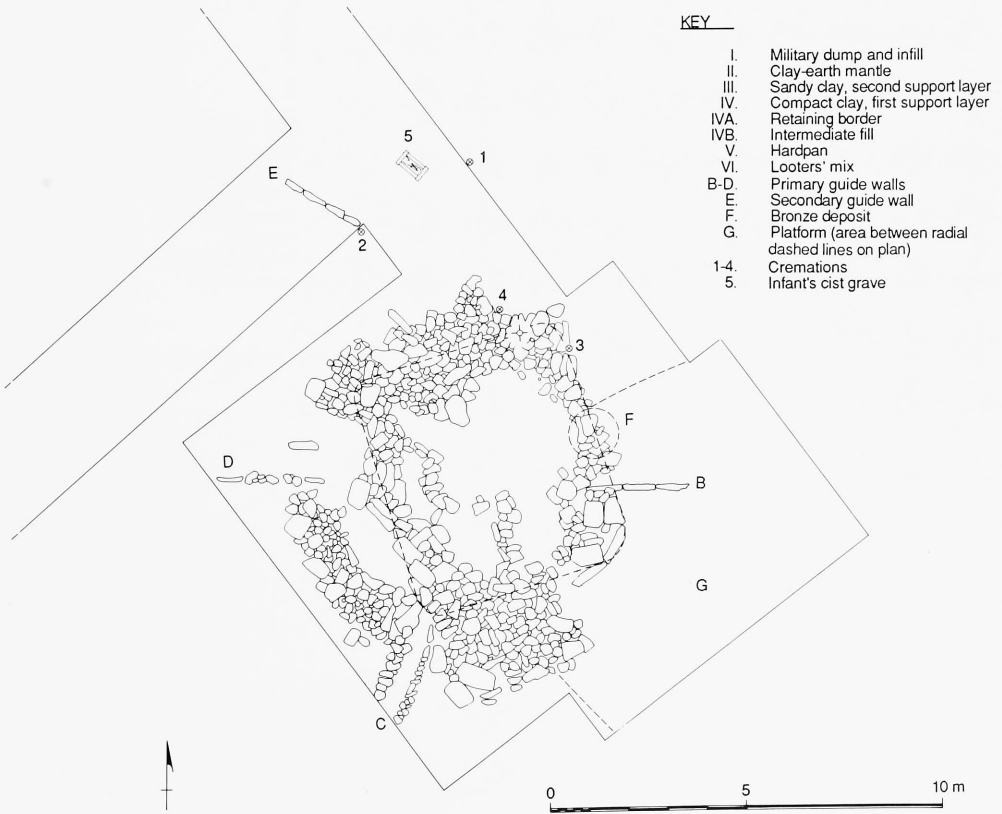
A. Tumulus S-1. Plan of burial complex at level of restored floor and sills. Outline of stone cap and primary guide walls.



B. Tumulus S-1. Exploded isometric drawing of southeast end of burial chamber.

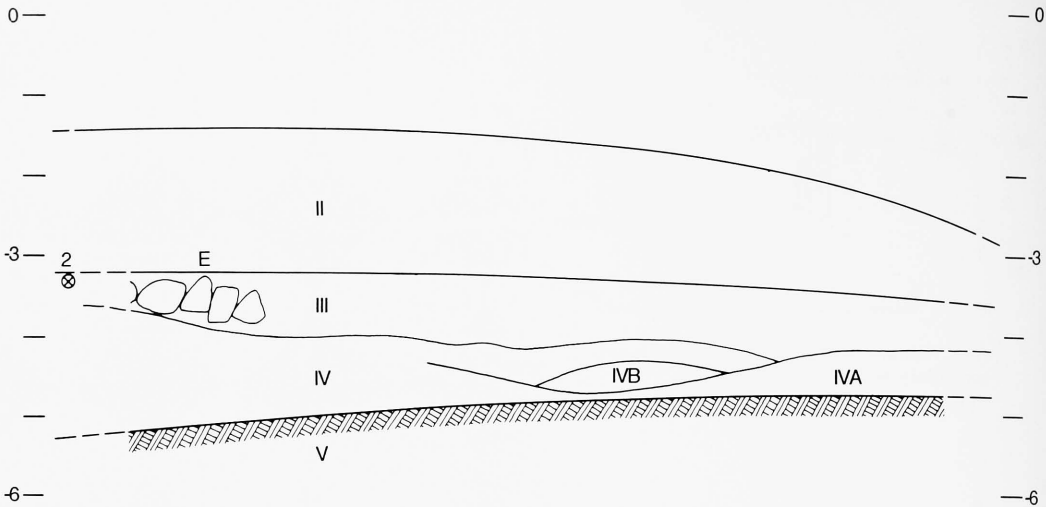


A. Tumulus S-1. Section B-B' through main trenches and burial (see Fig. 47B). Peripheral and secondary features are indicated. View toward southwest. Note retaining border (IVA) at northwest end.



- KEY**
- I. Military dump and infill
  - II. Clay-earth mantle
  - III. Sandy clay, second support layer
  - IV. Compact clay, first support layer
  - IVB. Retaining border
  - IVB. Intermediate fill
  - V. Hardpan
  - VI. Looters' mix
  - B-D. Primary guide walls
  - E. Secondary guide wall
  - F. Bronze deposit
  - G. Platform (area between radial dashed lines on plan)
  - 1-4. Cremations
  - 5. Infant's cist grave

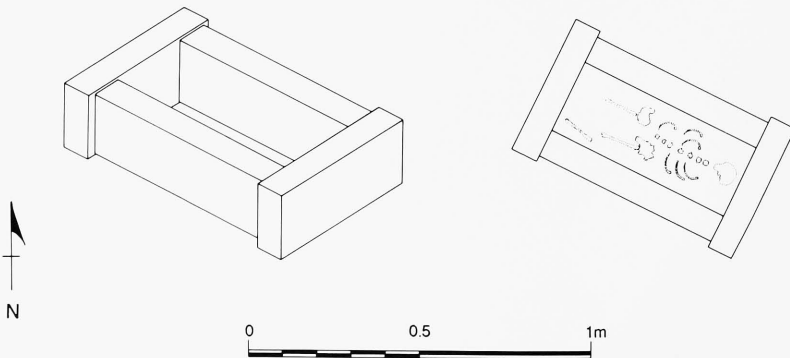
B. Tumulus S-1. Plan of burial at level of stone cap and primary guide walls, with peripheral features at all levels indicated.



KEY

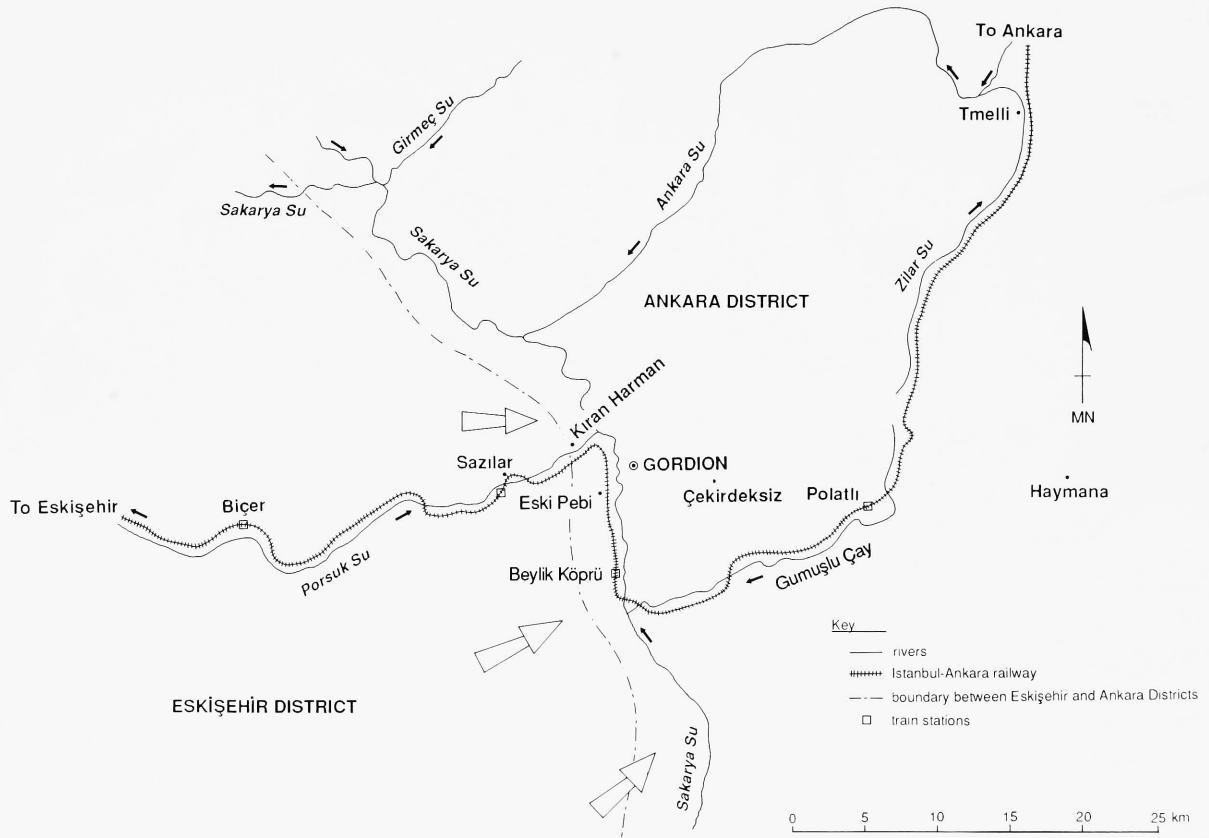
- II. Clay-earth mantle
- III. Sandy clay, second support layer
- IV. Compact clay, first support layer
- IVA. Retaining border
- IVB. Intermediate fill
- V. Hardpan
- E. Secondary guide wall
- 2. Cremation 2

A. Tumulus S-1. Section C-C' (see Fig. 47B) through trench 2A. Viewed from northwest.



B. Tumulus S-1. Mudbrick cist grave in layer IV.





Modern map of the Sakarya Valley near Gordion. The arrows indicate the general lines of the Greek attack during the Battle of the Sakarya.



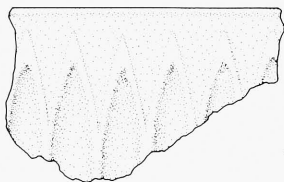
A. TumS1 6.



B. TumS1 7A.

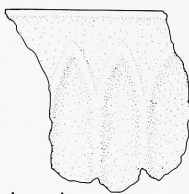


C. TumS1 7B.



interior

D. TumS1 8A.



interior

E. TumS1 8B.



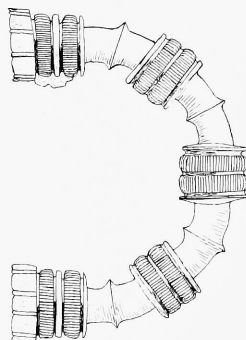
F. TumS1 9.



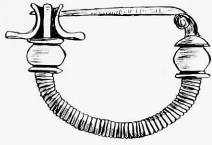
G. TumS1 10.



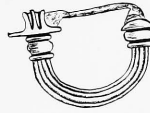
H. TumS1 14.  
Detail: reconstructed  
hinge.



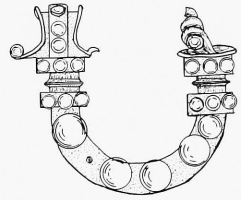
I. TumS1 18.



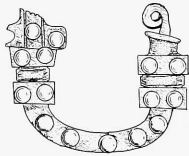
A. TumS1 22.



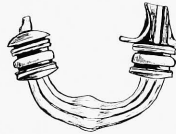
B. TumS1 24.



C. TumS1 27.



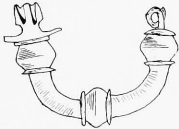
D. TumS1 28.



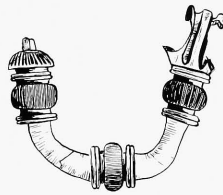
E. TumS1 30.



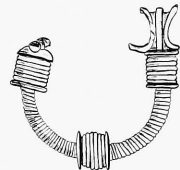
F. TumS1 31.



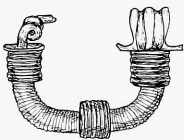
G. TumS1 40.



H. TumS1 42.



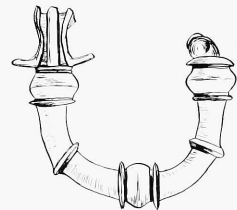
I. TumS1 43.



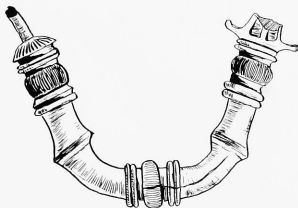
J. TumS1 44.



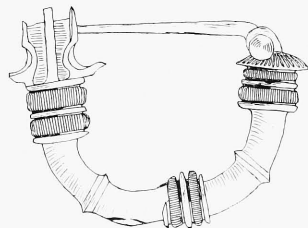
K. TumS1 45C



L. TumS1 46.



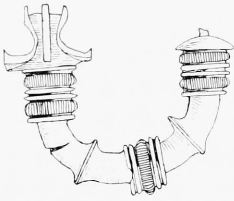
M. TumS1 53.



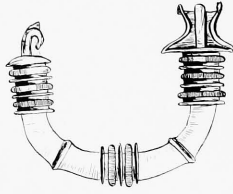
N. TumS1 56.

FIGURE 54

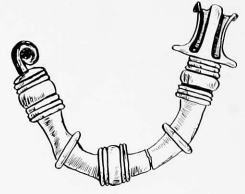
TUMULUS S-1



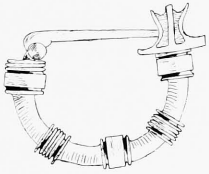
A. TumS1 57A.



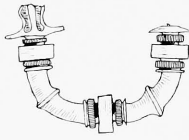
B. TumS1 60.



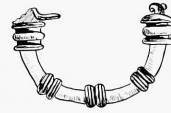
C. TumS1 65A.



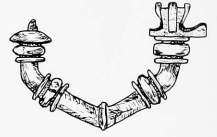
D. TumS1 68.



E. TumS1 69.



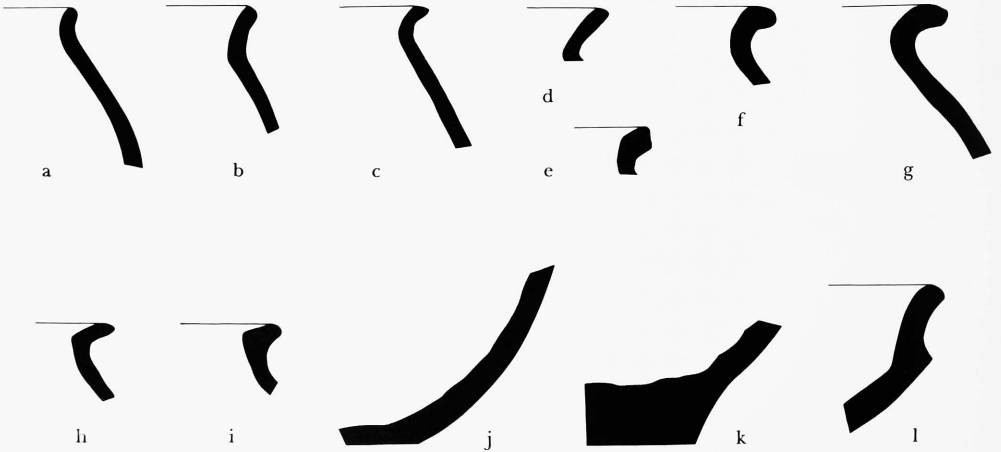
F. TumS1 70A.



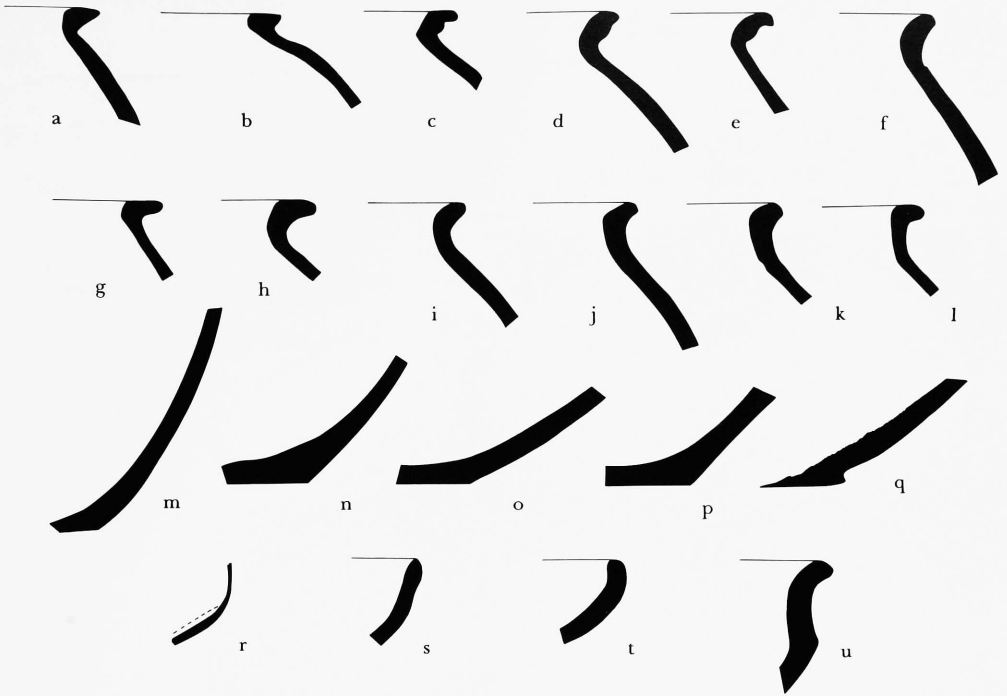
G. TumS1 71.



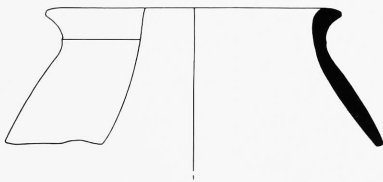
H. Tumulus S-1. Uncatalogued. Trough spout from sieve-cup.



I. Tumulus S-1. Uncatalogued. Profiles of various pottery wares, burned (chamber fill):  
 a-i. Mottled dinoi and low-necked jars (Est. D. rims 0.10-0.18 m.). j, k. Bases from coarser jars.  
 l. Gray carinated bowl.



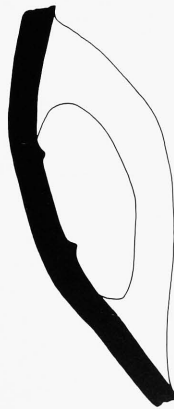
A. Tumulus S-1. Uncatalogued. Profiles of various pottery wares, burned (northeast edge of grave pit): a-l. Black-polished dinoi and low-necked jars. m-q. Bases of coarse gray closed vessels. r. Black-polished petaled bowl. s-u. Rims of plain and carinated bowls.



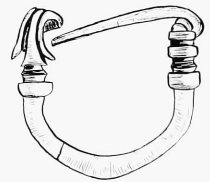
B. TumSI 79.



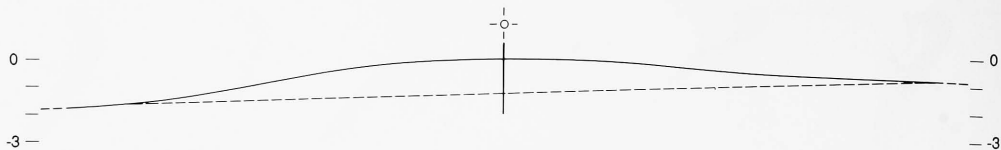
C. TumSI 80.



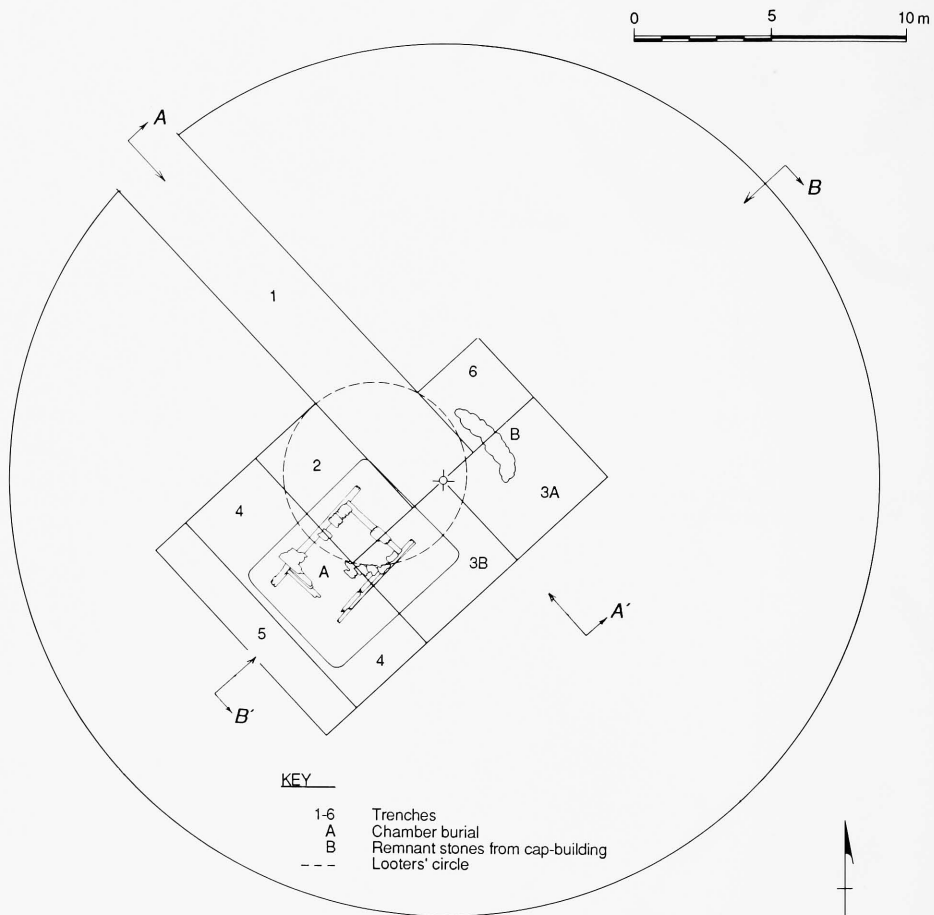
D. TumSI 81.



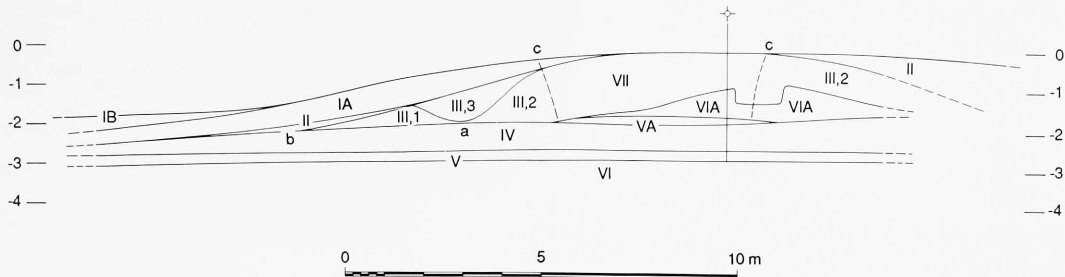
E. TumSI 87.



A. Tumulus S-2. General profile A-A' across tumulus. Dashed ground line is merely projected diameter to indicate incline. Viewed from southwest.



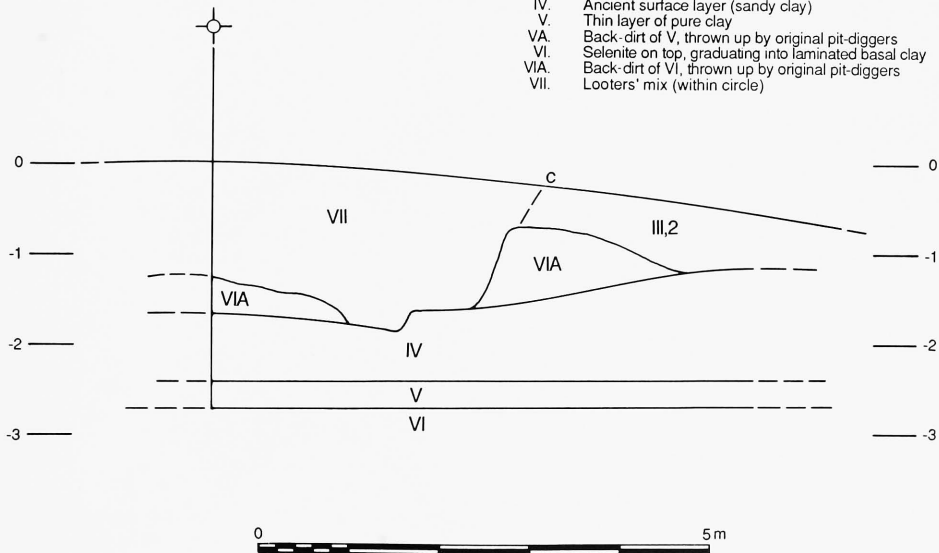
B. Tumulus S-2. Plan of trench outlines with main features.



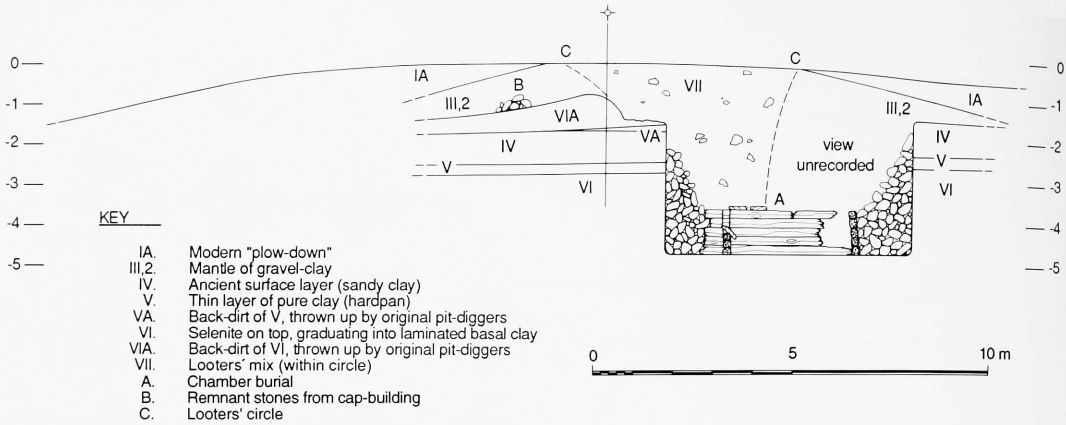
A. Tumulus S-2. Section A-A' (see Fig. 56B). Prior to excavation of pit. Viewed from southwest.

KEY

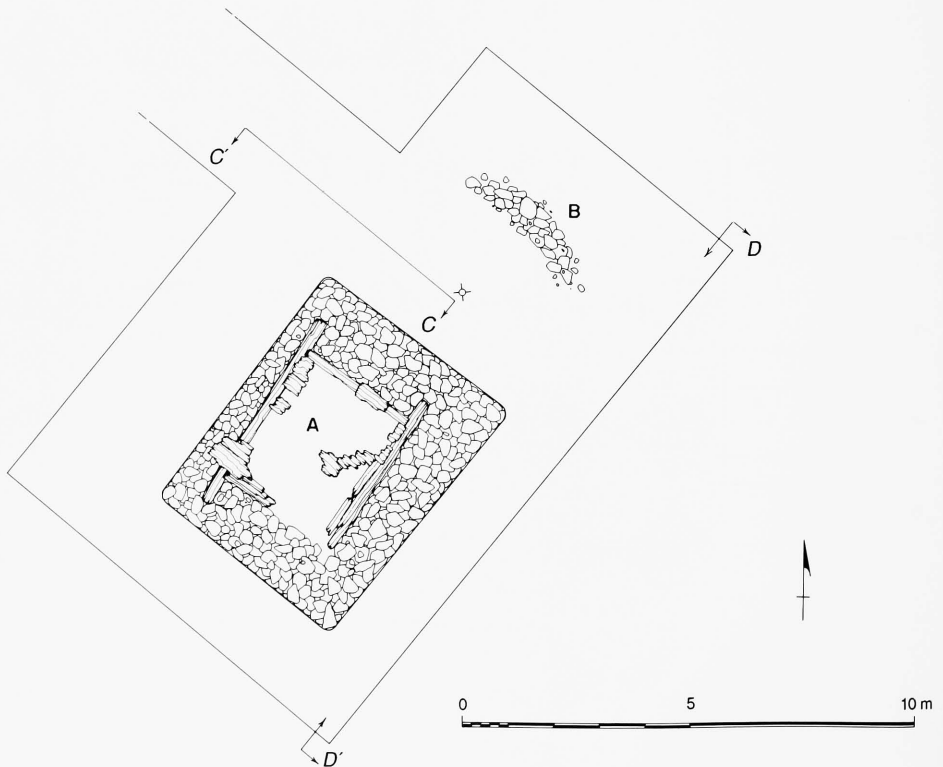
- a. Excavator's original "periphery"
- b. Writer's original "periphery"
- c. Looters' circle
- IA. Modern "plow-down"
- IB. Modern wash-down
- II. Historical washdown
- III.1. Retaining border
- III.2. Mantle of gravel-clay
- III.3. Intermediate fill
- IV. Ancient surface layer (sandy clay)
- V. Thin layer of pure clay
- VA. Back-dirt of V, thrown up by original pit-diggers
- VI. Selenite on top, graduating into laminated basal clay
- VIA. Back-dirt of VI, thrown up by original pit-diggers
- VII. Looters' mix (within circle)



B. Tumulus S-2. Section C-C' (see Fig. 58B). Prior to excavation of pit. Viewed from northeast.

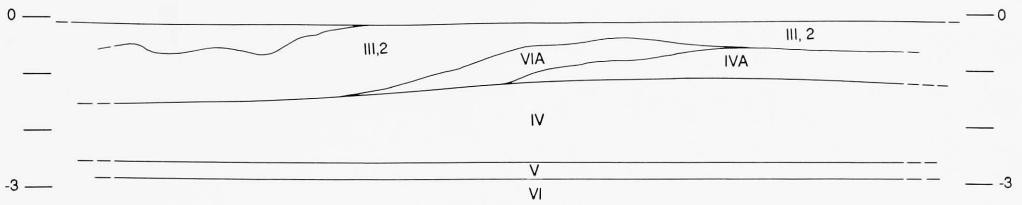


A. Tumulus S-2. Partially restored section *B-B'* (see Fig. 56B). Viewed from northwest.



B. Tumulus S-2. Plan of excavation. Area inside pit drawn at level of chamber roof.



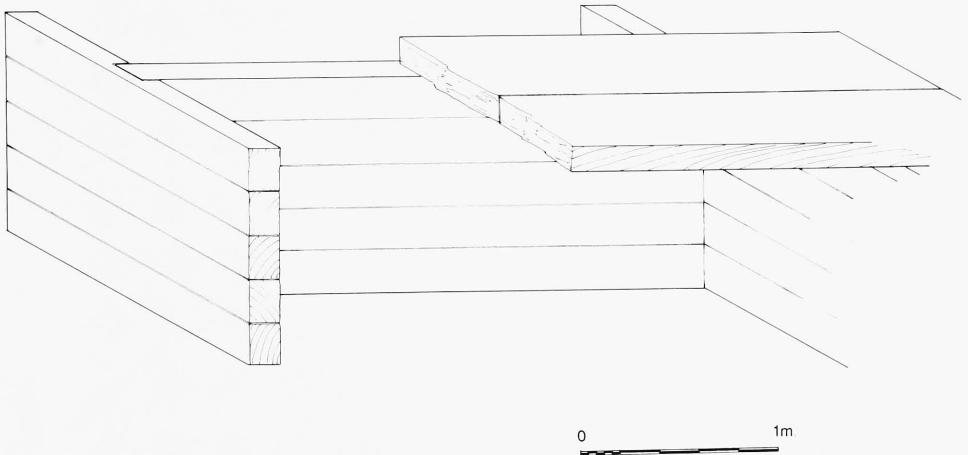


## KEY

- III, 2. Mantle of gravel-clay
- IV. Ancient surface layer (sandy clay)
- IVA. Back-dirt of IV, thrown up by original pit-diggers
- V. Thin layer of pure clay (hardpan)
- VI. Selenite on top, graduating into laminated basal clay
- VIA. Back-dirt of VI, thrown up by original pit-diggers



A. Tumulus S-2. Section *D-D'* (see Fig. 58B), final southeast scarp of trenches 3A, 3B, 4, and 5 (see Fig. 56B). Viewed from northwest.



B. Tumulus S-2. Reconstructed cut-away isometric drawing of wooden chamber. South corner at *L*; west corner at *R*.



A. TumS2 1.



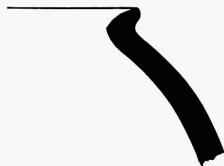
B. TumS2 3.



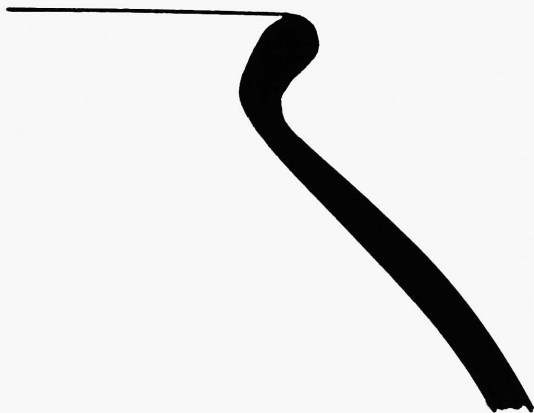
C. TumS2 4.



D. TumS2 10.



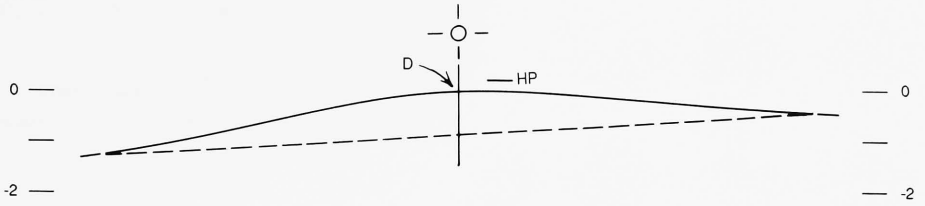
E. TumS2 11.



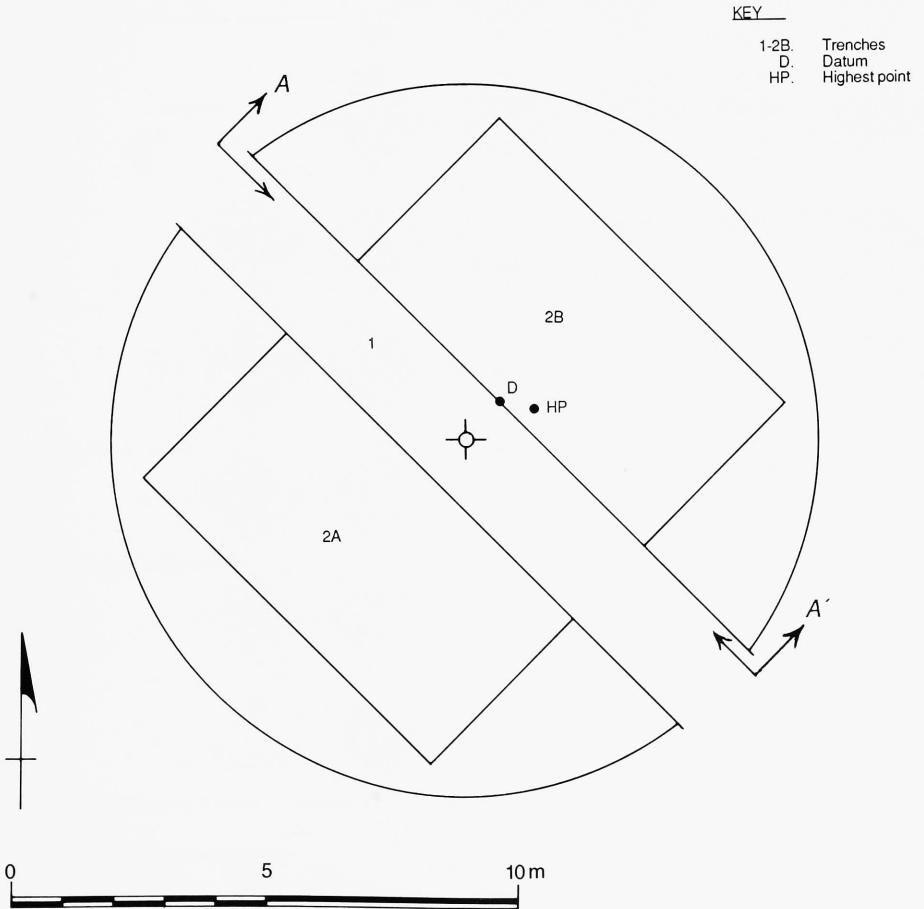
F. TumS2 12.



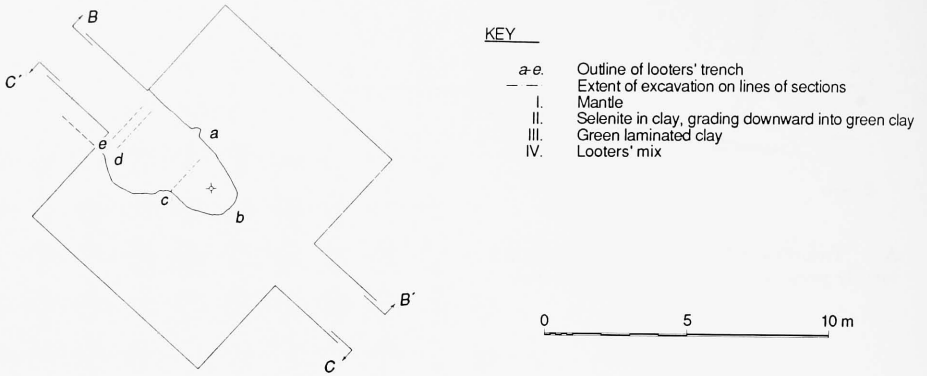
G. TumS2 13.



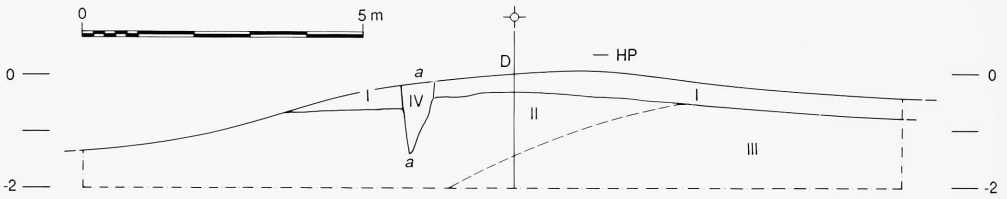
A. Tumulus S-3. General pre-excavational profile A-A' across tumulus. Dashed ground line is merely projected to indicate line of slope. Viewed from southwest.



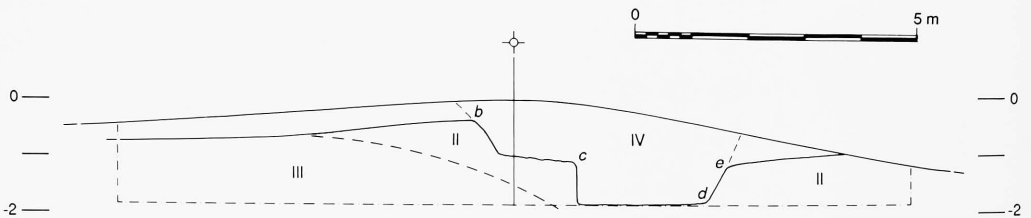
B. Tumulus S-3. Plan of trenches.



A. Tumulus S-3. Plan of excavation, showing line of looters' trench.



B. Tumulus S-3. Section B-B' along northeast scarp of Trench 1. Datum is 0.40 m. below highest point. Viewed from southwest.



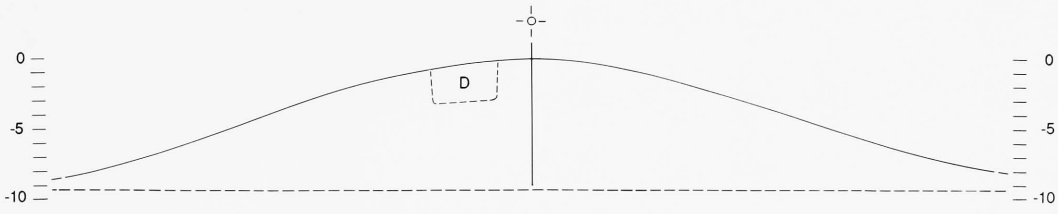
C. Tumulus S-3. Section C-C' along southwest scarp of trench 1. Viewed from northeast.



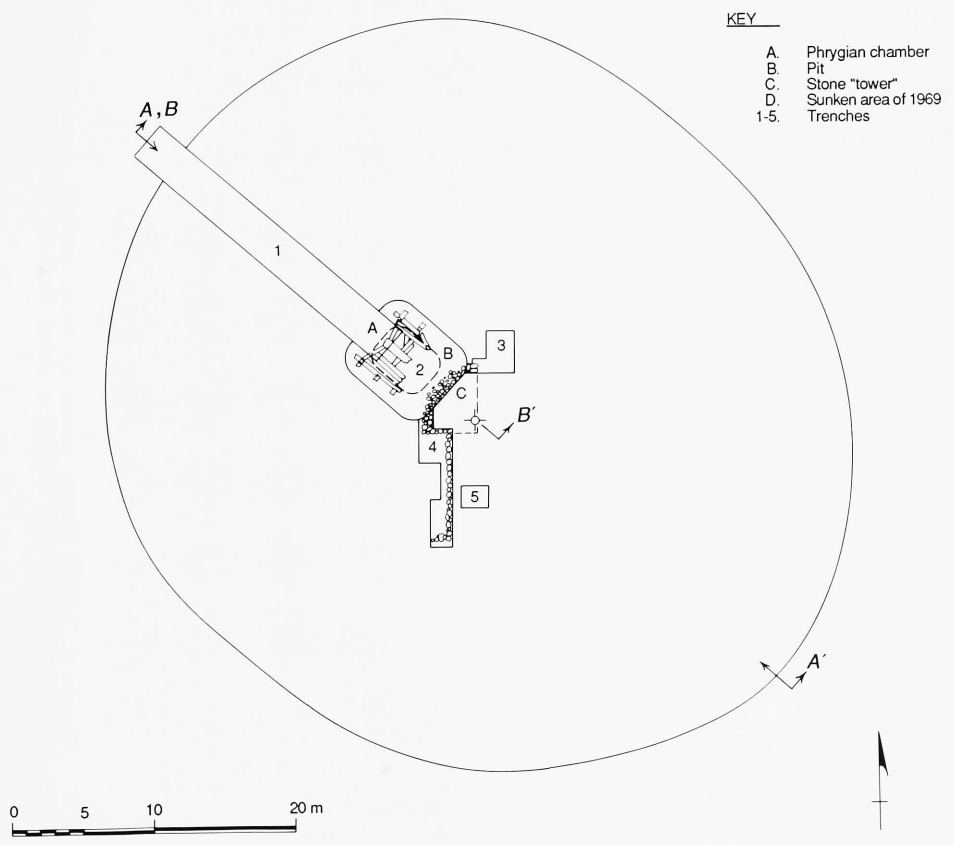
D. TumS3 1.



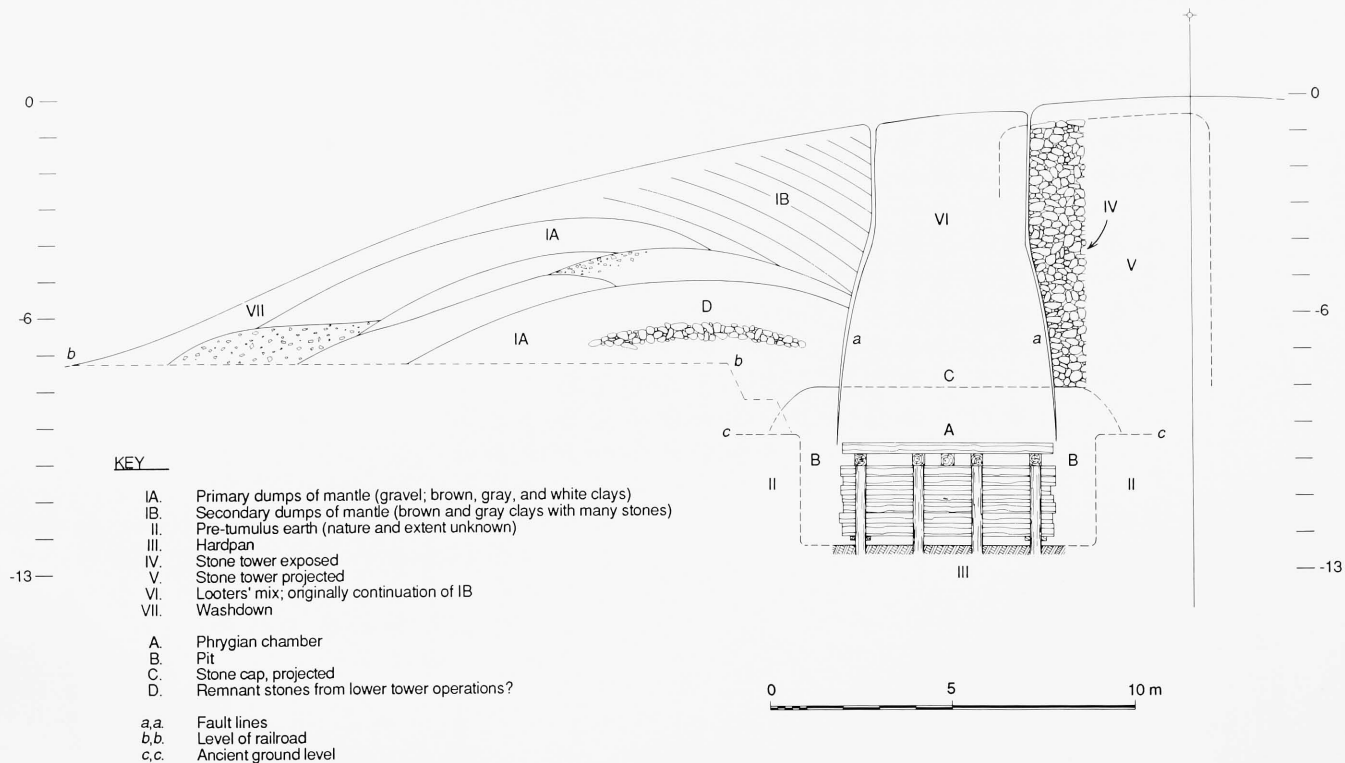
E. TumS3 2.



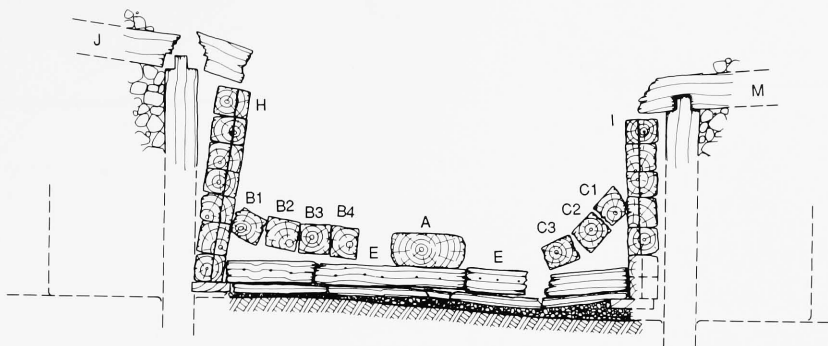
A. Tumulus Z. General profile A-A' across tumulus. Dashed ground line is merely projected "diameter" at -9.33 m. at center to indicate incline. Viewed from southwest.



B. Tumulus Z. Plan of excavation showing trenches and features connected with Phrygian burial.

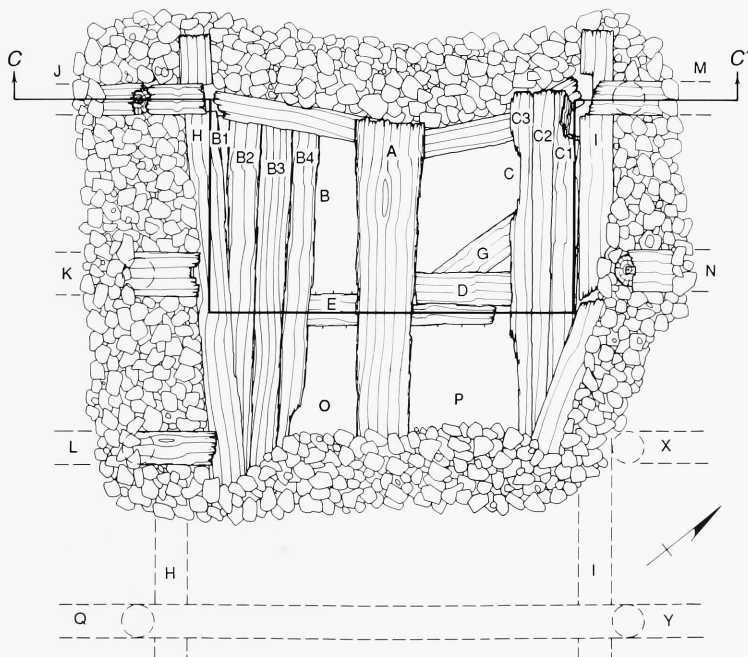


Tumulus Z. Partially restored section *B-B'* along northeast scarp of Trench 1, extended through trench 2. Reconstructed chamber is viewed from the southwest exterior. Original height not certain.

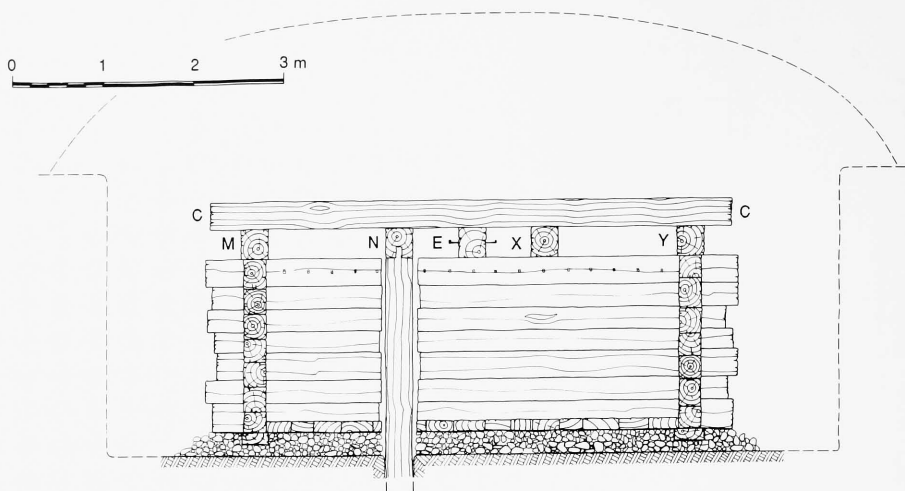


A. Tumulus Z. Section C-C' through chamber as found. Viewed from southeast.

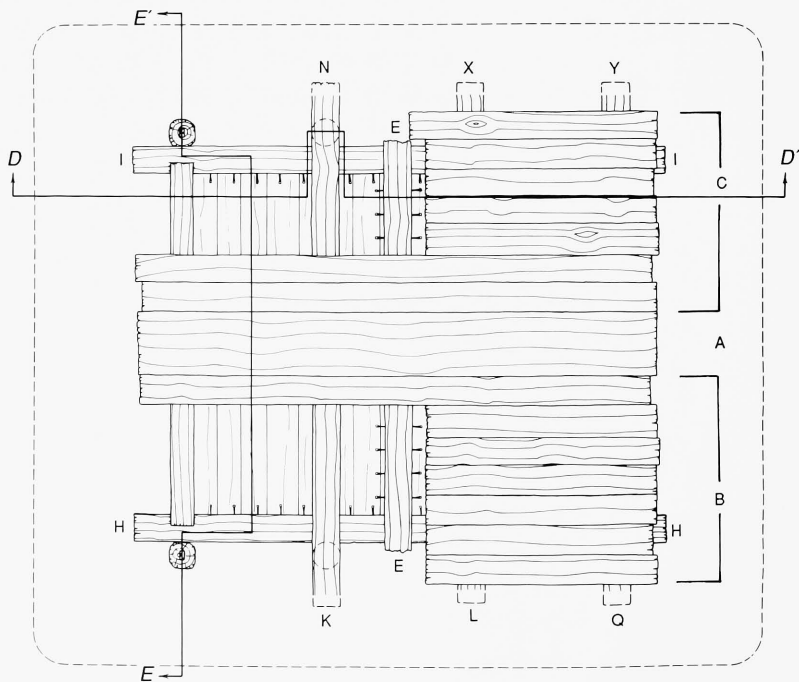
<b>KEY</b>	A. Central roof beam	J-M,K-N,L-X. Tie beams found	0	1	2	3 m
	B1-4, C1-3. Clusters of roof beams	O,P. Exposed floor area				
	D,G. Central pieces of K-N	Q-Y. Tie beam projected over projected southeast end wall				
	E. Display beam					
	H,I. Top beams of side walls					



B. Tumulus Z. State plan of chamber to extent excavated. Parts drawn here in dashed line are reconstructed in Figs. 66A,B, and 67.

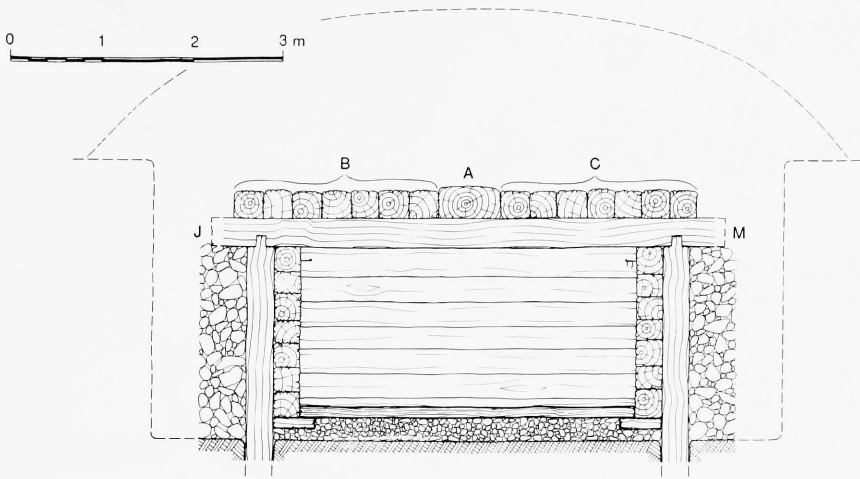


A. Tumulus Z. Reconstructed section *D-D'* through chamber lengthwise.

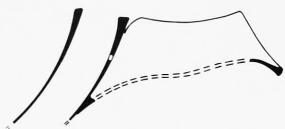


B. Tumulus Z. Reconstructed plan of chamber at roof height, cut away to show features at lower levels. Northwest horizontal tie beam (J-M) has been omitted to show housing of end wall.





Tumulus Z. Reconstructed section *E-E'* through chamber crosswise. Viewed from southeast.



A. TumZ 8. (2 views).



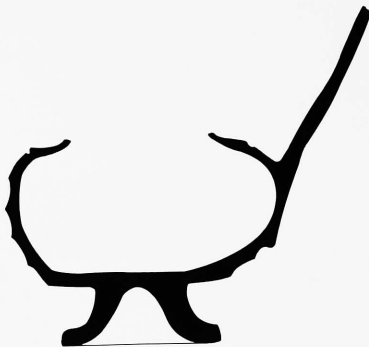
B. TumZ 12.



C. TumZ 13. (2 views).



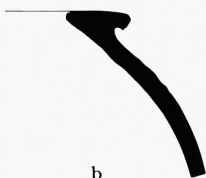
D. TumZ 19.



E. TumZ. 20.



a



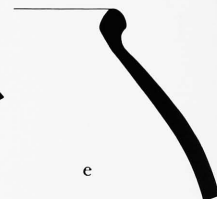
b



c



d



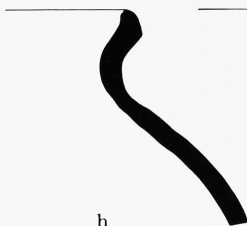
e



f



g



h



i

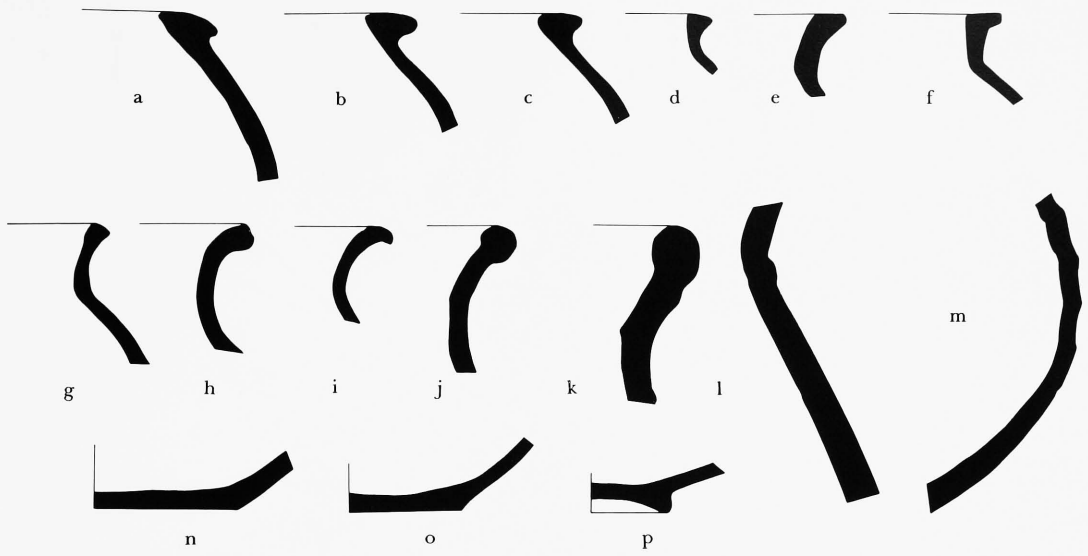


j

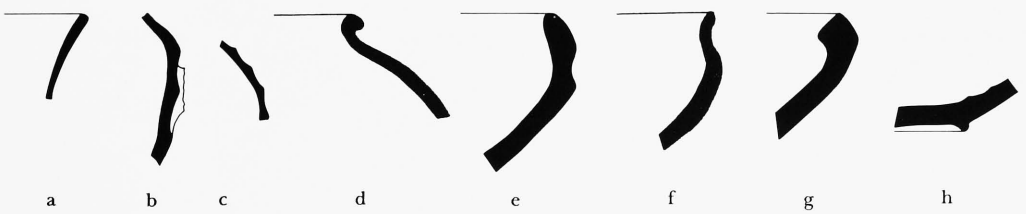


k

F. Tumulus Z. Uncatalogued. Profiles of black-polished sherds (cleaning of fallen roof beams): a-i. Dinoi (Est. D. rims 0.12-0.17). j. Jar (Est. rim 0.145 m.). k. Base of closed vessel (D. base 0.08 m.).



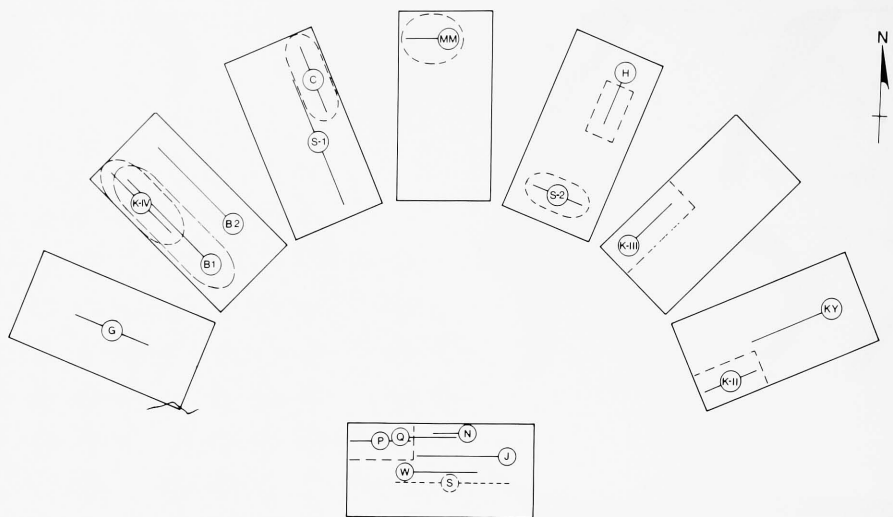
A. Tumulus Z. Uncatalogued. Profiles of black-polished sherds (mixed stone and wood fill from top of rubble, -8 m., to top of fallen roof): a-i. Dinosi and jars (Est. D. rims 0.12-0.19 m). j-l. Storage vessels. m. closed shape, fluted walls. n-p. Bases for closed shapes.



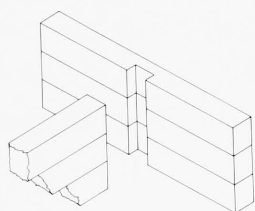
B. Tumulus Z. Uncatalogued. Profiles of black and gray polished (except e and f which are red ware) sherds (from trench 1 and from trench 2 down to -8 m.): a-c. Jugs. d. dinos. e-g. Bowls. h. Fine ring base on sturdy closed vessel.



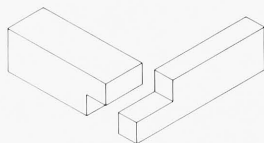
C. Tum Z 21.



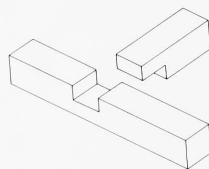
A. Schematic representations of (a) orientations of pits and burials, and (b) presence of coffins or platforms in inhumation tumuli at Gordian. Not to scale; sizes of chambers standardized. Circles represent heads, usually at ends of body-lines. If direction of head cannot be determined, circles appear at center of body-lines. See Table 1 and Table 2. Tumuli X, Y, and S-3 lack all skeletal evidence.



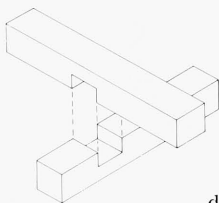
a. housed joint



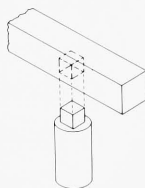
b. end-lap joint



c. T-lap joint

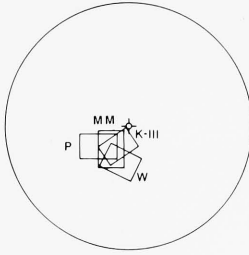


d. cross-lap joint

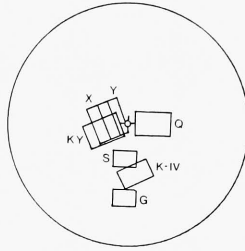


e. mortise and tenon

B. Isometric sketches to illustrate joints used by Phrygian carpenters in chambers of lesser tumuli.

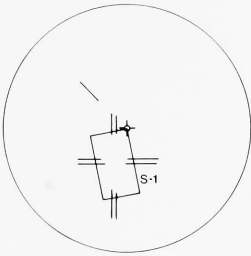


a. masts

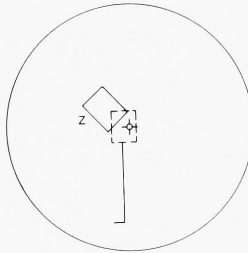


b. no evidence for masts

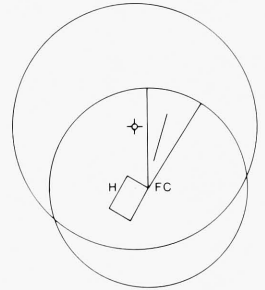
Pre-Kimmerian and Kimmerian



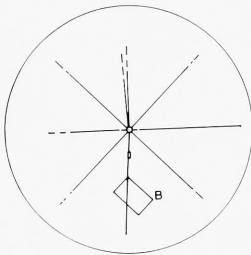
c. two sets of guide walls



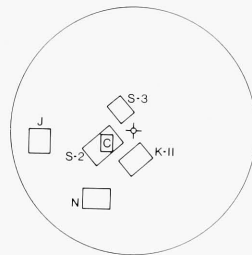
d. stone "tower," no proper guide walls



e. one set of guide walls;  
one mantle, extended;  
FC: false center



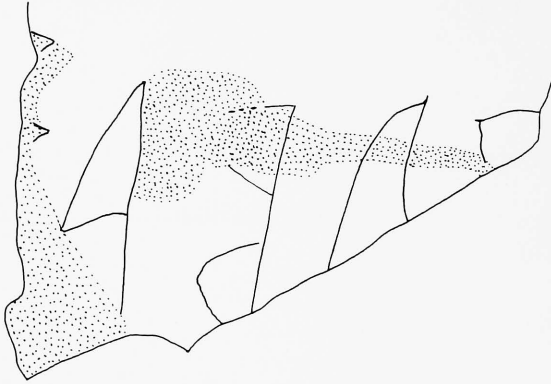
f. one set of guide walls; one mantle



g. no evidence for guide walls

Post-Kimmerian

Schematic representations of burial locations under mantles, and methods of tumulus planning. Not to scale; diameters of tumuli standardized.



TumJ 63



Air view (1957) of east end of Northeast Ridge: foreground, Tumulus M (*L*), Tumuli N, KY, K-III, K-IV (*C*), and Q, R, S, and P (*R*); middle ground, southeast extension of village and Tumulus MM. View toward northeast.



A. View toward southeast from top of Tumulus MM: Tumuli Y, X, and W along back road to Polatlı. In distance, village of Çekirdeksiz.



B. View toward south from top of Tumulus MM: foreground, K-IV (R) and K-V (L) show weathered German excavations; background, tumuli on South Ridge (L).





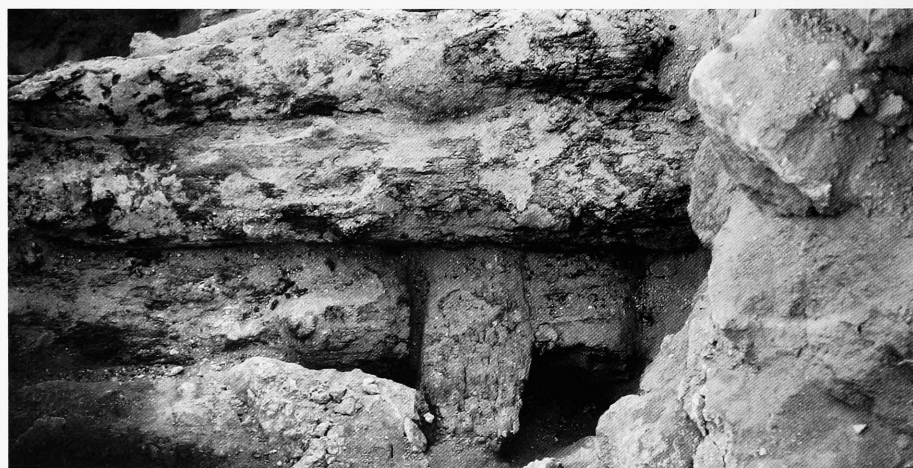
A. View toward west-southwest from top of K-III (1955): foreground, beginning of work on KY (R); middle ground, K-I (L) and Tumulus E (R); background, City Mound (C) and trees along Sakarya River (R).



B. View toward west-southwest from top of Tumulus MM: foreground, extension of village (R); middle ground, K-II (L), Tumulus E (C), expedition house (R); background, City Mound (L), Sakarya river (R).



A. Tumulus B. Roof logs at southeast end. Viewed from northwest.



B. Tumulus B. Roof logs and T-lap at top of wall in east corner. Viewed from southwest.



A. Tumulus B. Closed coffin appearing on southwest side. Note lead mends on lid. Viewed from northeast.



B. Tumulus B. Coffin closed, and skeleton on floor. Viewed from northwest.



A. Tumulus B. Coffin opened. Excavator's prop appears between upper walls. Viewed from northeast.



B. Tumulus B. Detail of upper half of coffin and skeleton cleaned. Note lead mend on coffin bed. Viewed from northeast.



A. Tumulus B. Stone cap. Viewed from north.



B. Tumulus B. Guide walls meeting at center of mantle, in trench 3 before trench 4 was added. Viewed from south.



A,B. TumB 1.



C. TumB 2.



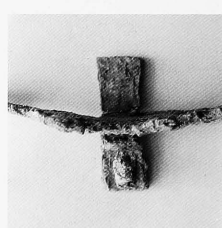
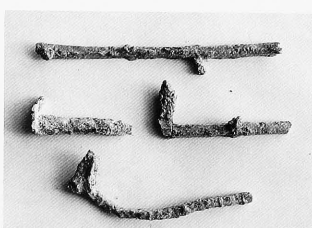
D. TumB 3.



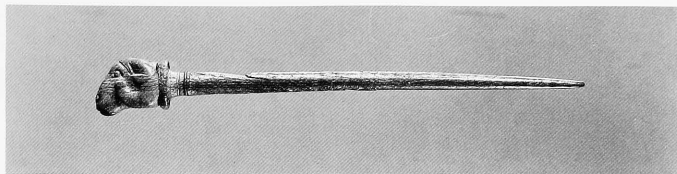
E. TumB 4.



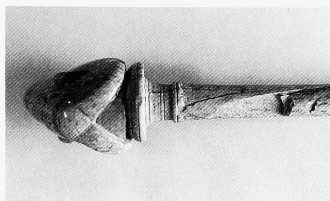
F. TumB 5.



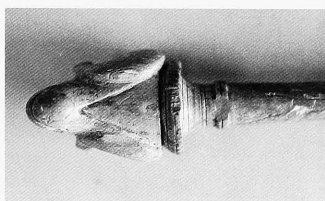
G-I. TumB 6.



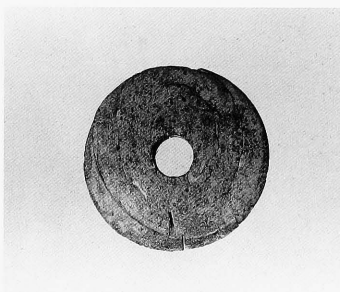
A. TumB 7.



B. TumB 7. Detail: top.



C. TumB7. Detail: bottom.



D. TumB 8.



E. TumB 9.



F. TumB 10.



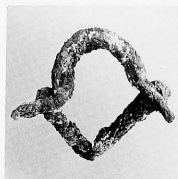
G. TumB 11.



A. TumB 12.



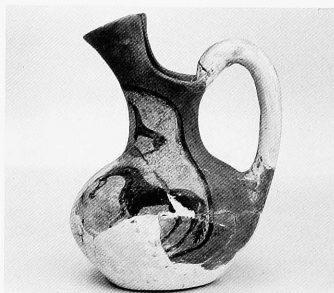
B. TumB 13.



C. TumB 14.



D,E. TumB 15.



F,G. TumB 16.





A,B. TumB 17.



C. TumB 18.



D. TumB 19.



E. TumB 20.



F. TumB 21.



G. TumB 22.



H. TumB 23.



I. TumB 24.



J. TumB 25.



K. TumB 26.



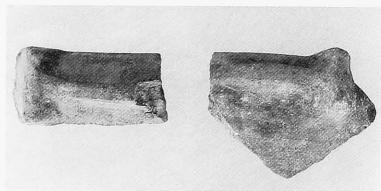
A,B. TumB 27A,B.



C. TumB 28.



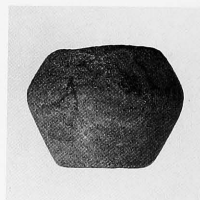
D. TumB 29.



E. TumB 30.



F. TumB 31.



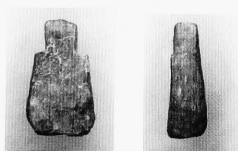
G. TumB 32.



H,I. TumB 33.



J,K. TumB 34.



L,M. TumB 35.



N. TumB 36.

A-E,J,K 1:4  
F,G 1:1  
H,I,L,M 1:6  
N 1:2



A. Tumulus C before excavation. Viewed from northwest (downhill side).



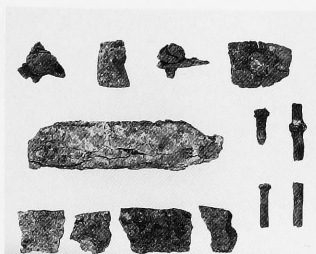
B. Tumulus C. Main burial with side packs exposed on exterior, and coffin hollow in northeast corner. Viewed from northeast.



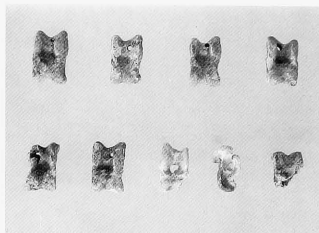
A. Tumulus C. Main burial with side packs exposed on exterior, and coffin hollow in northeast corner. Viewed from east.



B. Tumulus C. Second pile of looters' back-dirt.



A. TumC 1.



B. TumC 2.



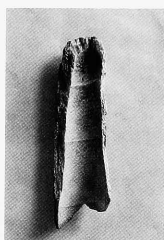
C,D. TumC 3.



E. TumC 4.



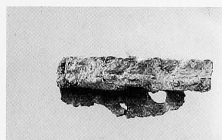
F. TumC 7.



G. TumC 8. Interior.



H. TumC 9.



I,J. TumC 10.



K. TumC 11.

A 1:5  
B,C,D 1:3  
E,G,H,K 1:4  
F,I,J 1:2



A. TumC 12.



B. TumC 13.



C. TumC 14.



D. TumC 15.



E. TumC 16.



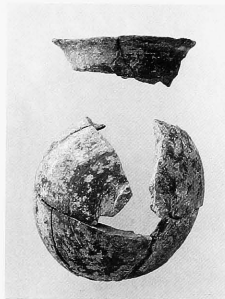
F. TumC 17.



G. TumC 18.



H. TumC 19.



I. TumC 20.



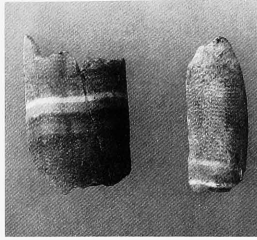
J. TumC 21.



K. TumC 22.



A. TumC 23.



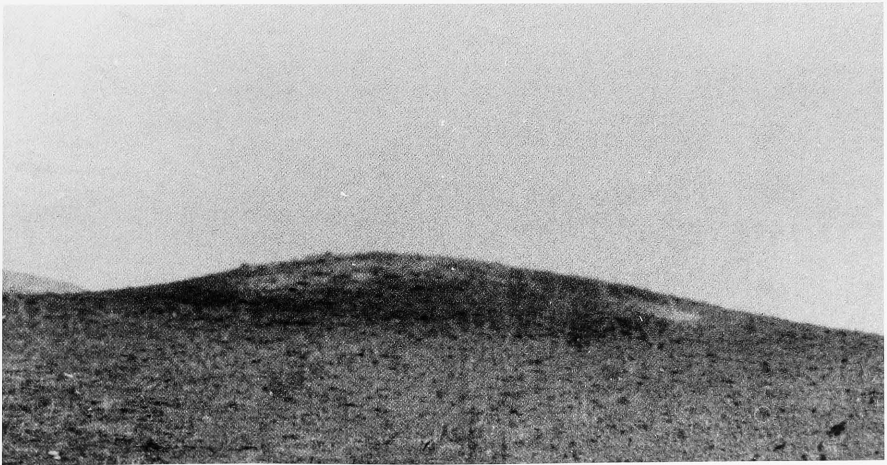
B. TumC 24.



C. TumC 25.



D. TumC 26.



E. Tumulus G before excavation. Viewed from northwest.



A. Tumulus G. Roof beams over looted grave. Viewed from southeast.



B. Tumulus G. West end showing crossing beams of double roof. Viewed from northeast.

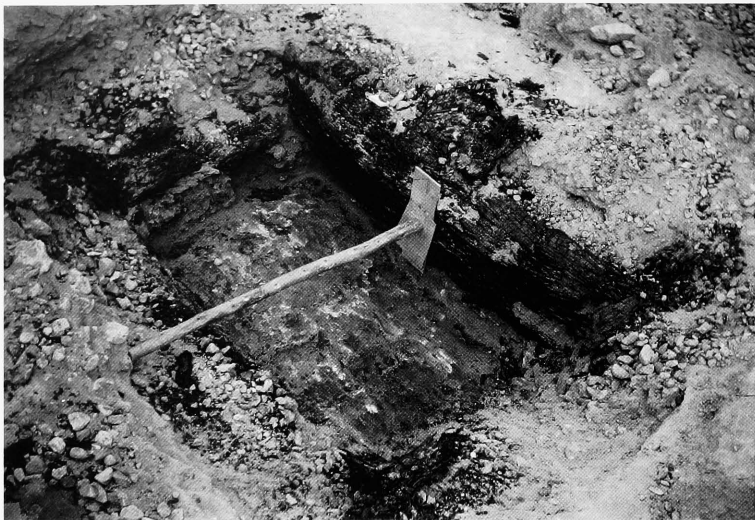




A. Tumulus G. Large stones once directly over roof fallen into looted chamber.



B. Tumulus G. Fragments of roof resting on floor of chamber. Beams at extreme right extended over pot deposit in side pack.



A. Tumulus G. Chamber cleaned. Note traces of wooden floor.



B. Tumulus G. Exterior after clearing of stone pack. T-head of east end beam held by both beams of south side wall. Floor planks extend beyond side wall.



C. Tumulus G. East end of north side wall showing extended floor planks and slot in side sill to take cross-lapping end sill.



A. TumG 1.



C. TumG 3.



D. TumG 4.



B. TumG 2.



E. TumG 5.



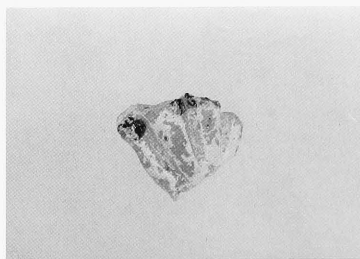
F. TumG 6.



G,H. TumG 7.



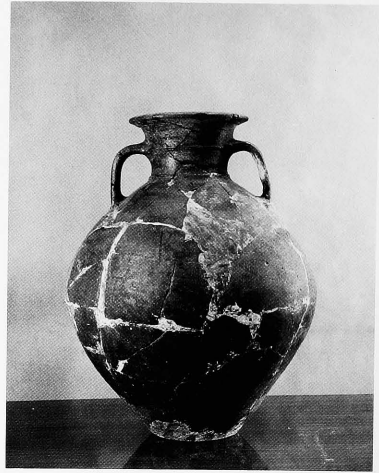
I. TumG 8.



J. TumG 9.



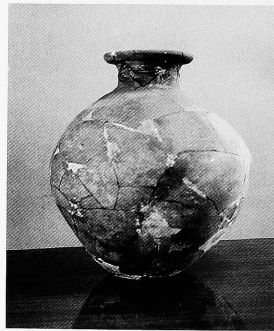
A. TumG 10.



B. TumG 11.



C. TumG 12.



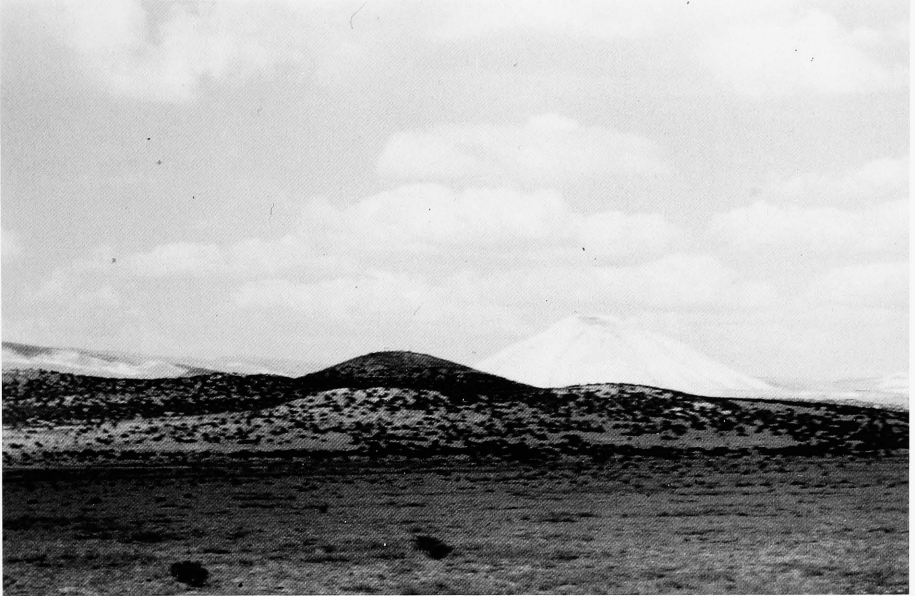
D. TumG 13.



E. TumG 14A,B.



F. TumG 15.



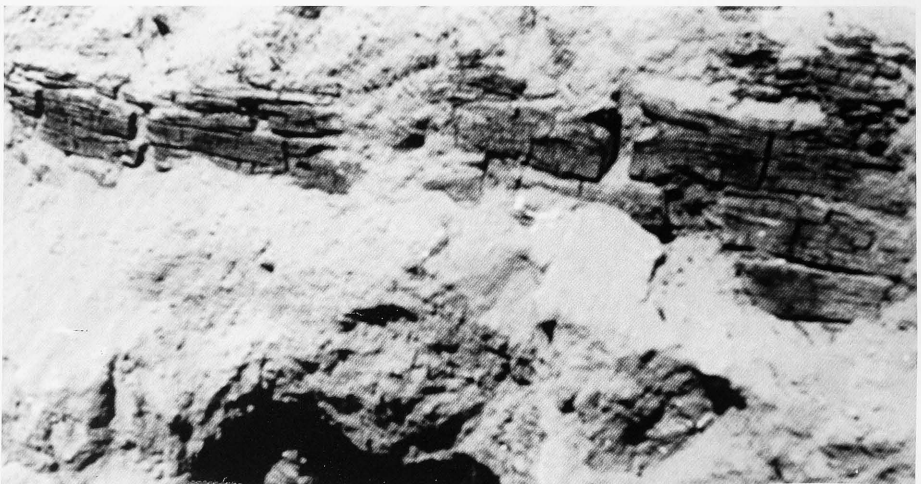
A. Southwest edge of Northeast Ridge: foreground, Tumuli I (*L*) and H; middle ground, Tumulus E (*L*); background, Tumulus MM (*R*). Viewed from west-southwest.



B. Tumulus H. East side of chamber.



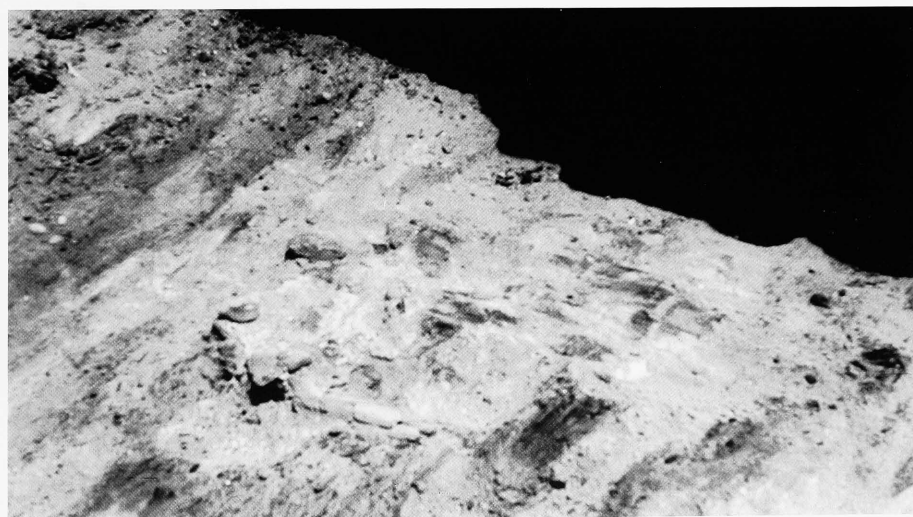
A. Tumulus H. South end and west side of chamber. TumH 2 upside down in corner.



B. Tumulus H. West side of chamber.



A. Tumulus H. North end. Stone pack, with pre-tumulus house wall above.



B. Tumulus H. Northeast quarter with skeletal remains and traces of wooden platform.

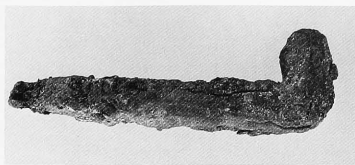


A. Tumulus H. Upper level of stones in cap.

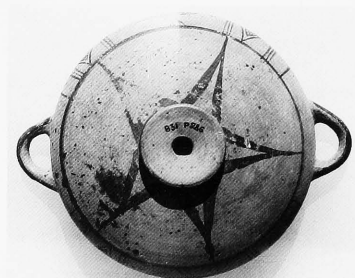


B. Tumulus H. Lower level of stones in cap.

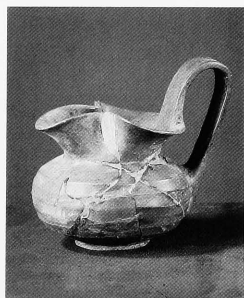




A. TumH 1.



B-D. TumH 2.



E. TumH 3.



F. TumH 4.



G. TumH 5.



H. TumH 6.



I. TumH 7.



J. TumH 8.

A, I 1:1  
B-F 1:3  
G, H, J 1:4



A. TumH 9.



B. TumH 10.



C. TumH 11.



D. TumH 12.



E. TumH 13.



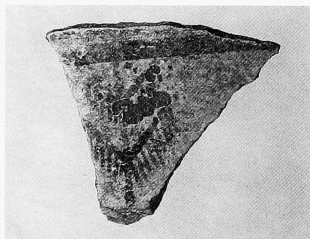
F. TumH 14.



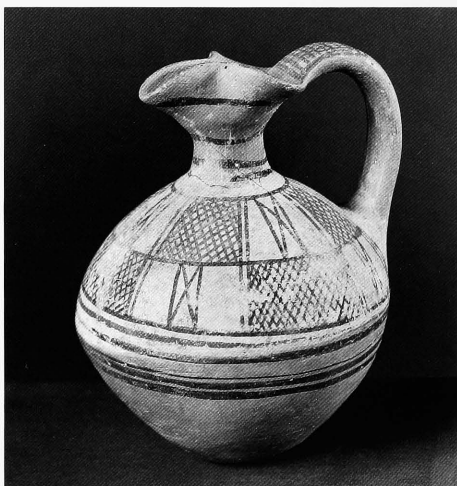
G. TumH 15.



H. TumH 16.



I. TumH 17.



J. TumH 18.



A. TumH 19.



B. TumH 20.



C. TumH 21.



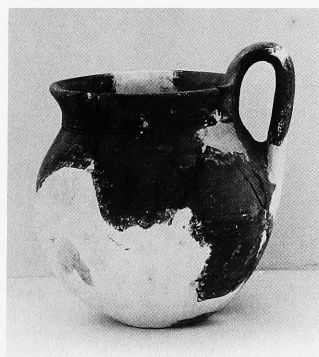
D. TumH 22.



E. TumH 23.



F. TumH 24.



G. TumH 25.



H. TumH 26.



I. TumH 27.



A. TumH 28.



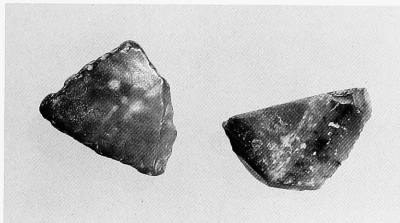
B. TumH 29.



C. TumH 30.



D. TumH 31.



E. TumH 32.

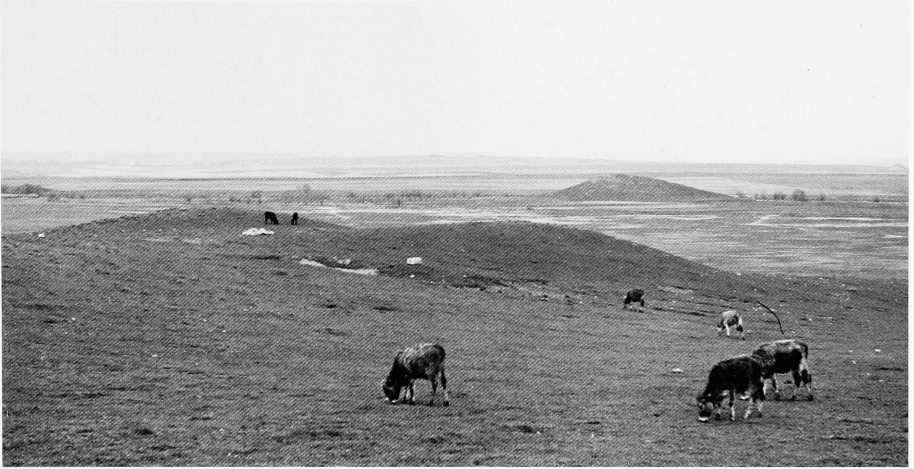


F. TumH 33.



G. TumH 34.

A 1:4 D 2:1  
B 1:5 E,G 2:3  
C 3:2 F 1:1



A. Tumuli J (L), K (C). and in background, Kuş Tepe (unlettered tumulus beside the Sakarya). Viewed from east.



B. Tumulus J. North and east walls. Heavy stones from fallen cap are still propping up north side. Viewed from southwest.



A. Tumulus J. Pit. Viewed from west.



B. Tumulus J. Skeleton and sherds on north side. Viewed from west.



C. Tumulus J. TumJ 14 (iron spearhead), lost whetstone, and TumJ 4A,B (pair of bronze knives) *in situ*. Viewed from northeast.



A. Tumulus J. Tumj 2 *in situ*.



B. Tumulus J. Tumj 3 *in situ*.



C. Tumulus J. Obliquely fallen roof beams at west end of chamber. Viewed from northwest.

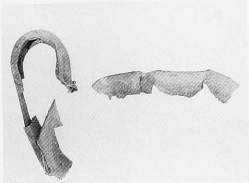


A. Tumulus J. Sunken stone cap.



B. Tumulus J. Bronze deposit in stone cap: appliqués *in situ*.

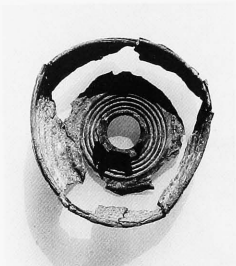




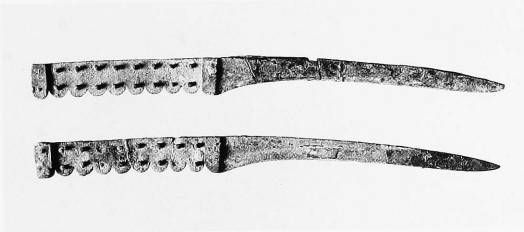
A. TumJ 1.



B,C. TumJ 2.



D. TumJ 3.



E. TumJ 4.



F. TumJ 4. Detail: handles, from below.



G. TumJ 5.



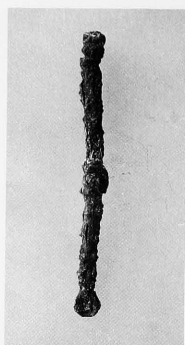
H-L. TumJ 6-10.



A. TumJ 11.



B. TumJ 12.



C. TumJ 13.



D. TumJ 14.



E. TumJ 15.



F,G. TumJ 16.



H. TumJ 17.

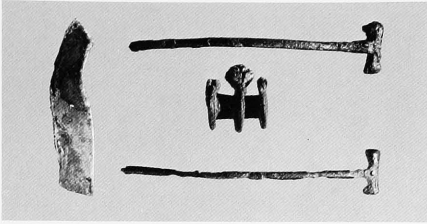


I. TumJ 18.

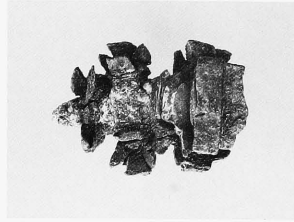


J. TumJ 19.

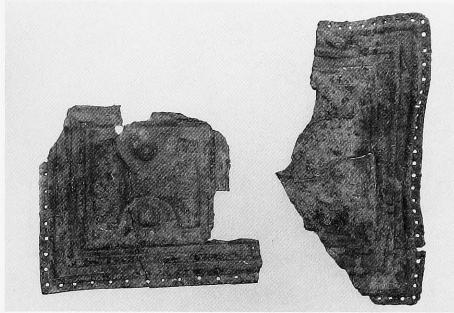
A-C	1:1	H	1:10
D, F, G	1:4	I	1:2
E	2:3	J	1:3



A. TumJ 20.



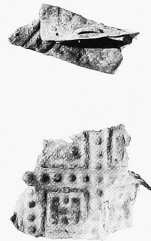
B. TumJ 21.



C. TumJ 22, 23.



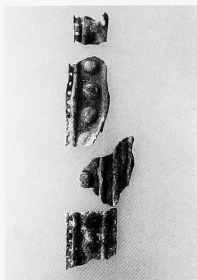
D. TumJ 24.



E. TumJ 25.



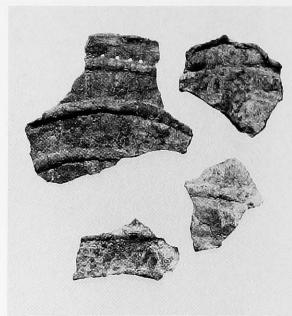
F. TumJ 26.



A. TumJ 27.



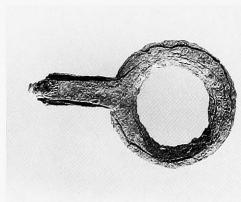
B. TumJ 28.



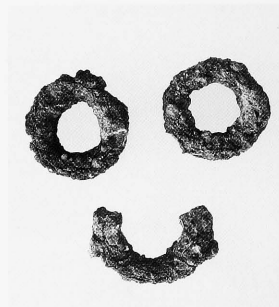
C. TumJ 29.



D. TumJ 30.



E. TumJ 31.



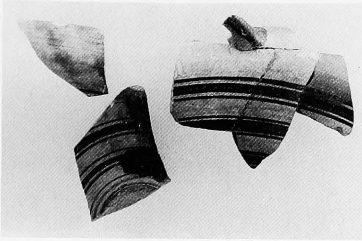
F. TumJ 32.



G. TumJ 33.



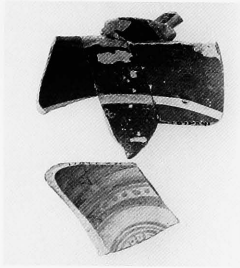
H. TumJ 34.



A. TumJ 35. Two views.



B. TumJ 36. Two views.



C. TumJ 37.



D. TumJ 38.



E. TumJ 39.



F. TumJ 41.



G. TumJ 42.



H. TumJ 43.



A. TumJ 44.



B. TumJ 46.



C. TumJ 47.



E,G. TumJ 49. Two fragments



I. TumJ 51.



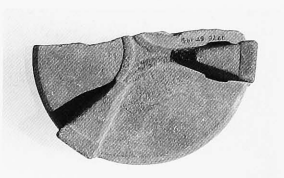
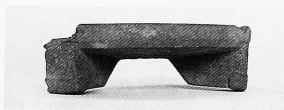
D,E. TumJ 48. Two views.



H. TumJ 50.



J,K. TumJ 52. Two views.



L,M. TumJ 53. Two views.



N. TumJ 54.

A,B 2:3  
C-E 3:5  
F,G 3:4  
I,N 1:2  
H,J-M 1:4



A. TumJ 55.



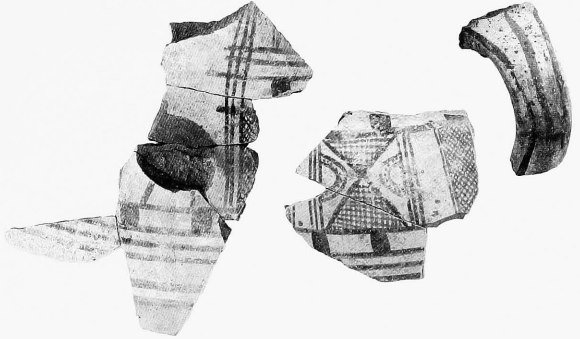
B. TumJ 56.



C. TumJ 57.



D. TumJ 58.



E. TumJ 59A-C.



F. TumJ 60.



G. TumJ 61.



H. TumJ 62.



I. TumJ 63.

A-C	2:3	G	1:2
D	2:5	H	1:1
E, F	1:3	I	1:4



A. Tumulus KY. Pre-excavational survey. Viewed from northwest.



B. Tumulus KY. Trench 5A-5B. Removal of stone cap.

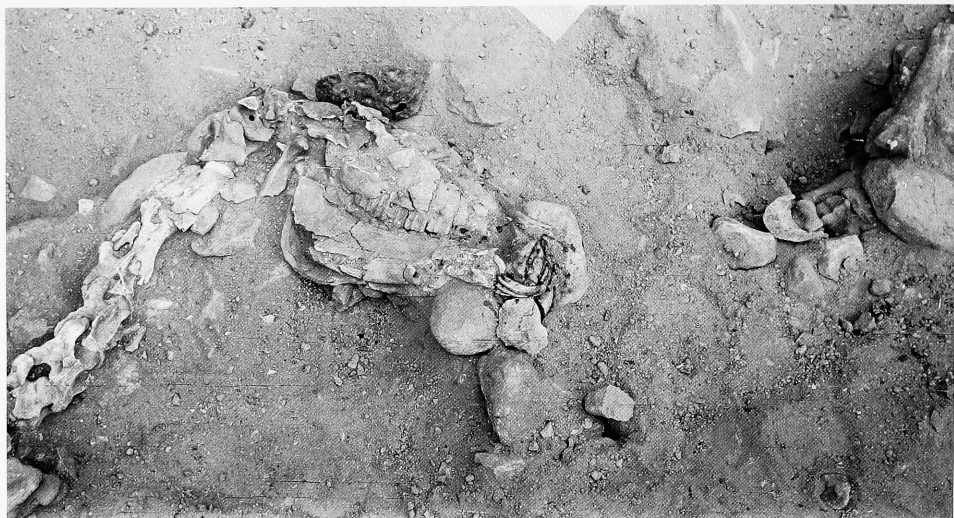




A. Tumulus KY. Chamber cleaned. Viewed from northeast.



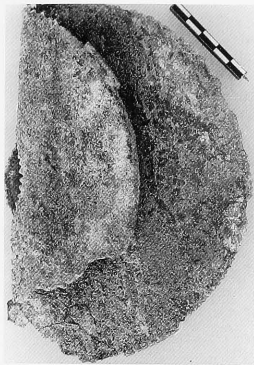
B. Tumulus KY. East end of burial: two bridled horses.



A. Tumulus KY. Head of north horse.



B. Tumulus KY. Head of south horse.



A.B. TumKY1.



C. TumKY4.



D. TumKY8.



E. TumKY9.



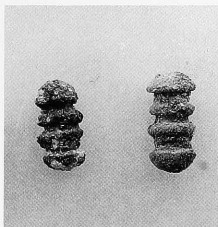
F. TumKY11.



G. TumKY12.



H. TumKY13.



I. TumKY16,15.



J. TumKY17.



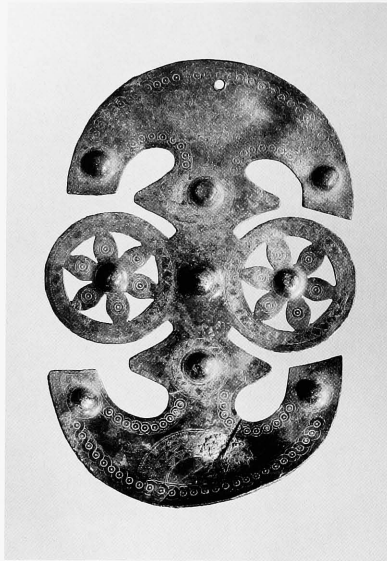
K,L. TumKY18,19.



A. TumKY21.



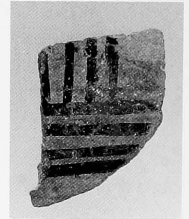
B. TumKY22.



C. TumKY23



D. TumKY25A.



E. TumKY26.



F. View toward west-southwest from top of Tumulus MM: foreground, Tumulus KY excavated (L), Tumulus N excavated (C), extension of village (R); middle ground, Tumulus E (C), expedition house on Tumulus J (R); background, City Mound (C).



A. Tumulus N. Drill at work and grid of finished drill holes (*R*).



B. Tumulus N. Stone cap partially cleared to top of collapsed roof.



A. Tumulus N. Cleared to top of collapsed roof.



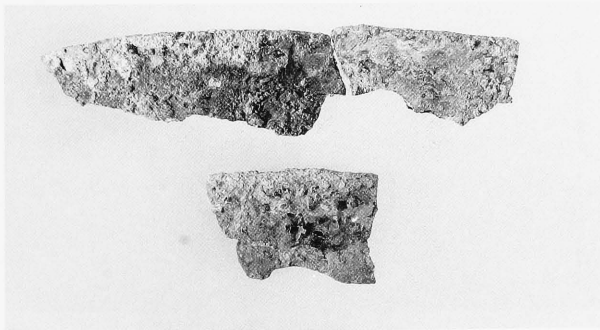
B. Tumulus N, cleared. Viewed from west of north.



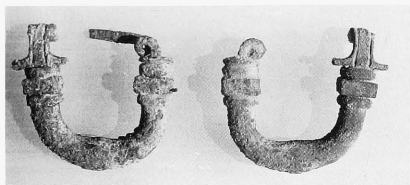
A. Tumulus N. Southwest interior corner of chamber.



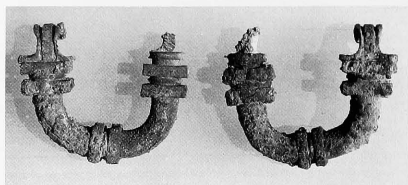
B. Tumulus N. Northwest interior corner of chamber.



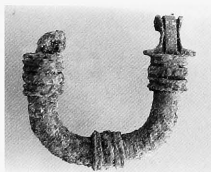
C. TumN 1.



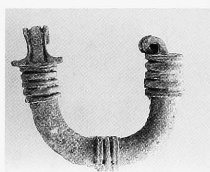
A. TumN 2.



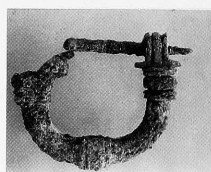
B. TumN 4.



C. TumN 5.



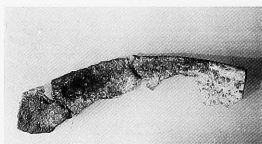
D. TumN 6.



E. TumN 7.



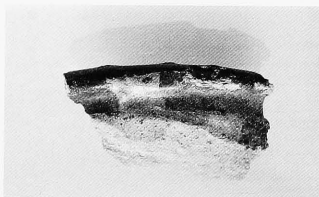
F. TumN 8.



G. TumN 9.



H. TumN 10.

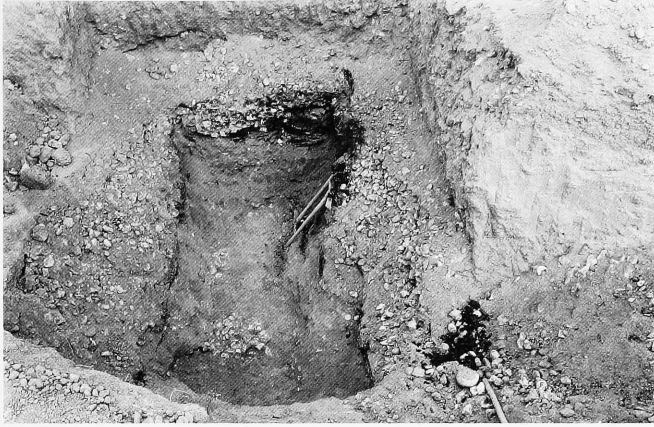


I. TumN 11.



J. TumN 12.





A. Tumulus Q. Chamber. Viewed from north.



B. Tumulus Q. Chamber. Viewed from west.



C. TumQ 1.



D. TumQ 2.



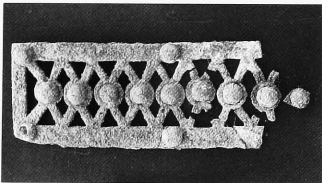
E. TumQ 3.



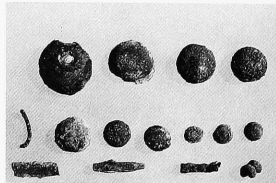
A. Tumulus S. Cist grave cleared. Viewed from east.



B. Tumulus S. Cist grave cleared. Viewed from north.



C. TumS 1.



D. Bronze studs, uncatalogued.



E. TumS 2.



A. View toward west from unlettered tumulus east of Y: foreground, Tumulus Y at beginning of excavation (*L*), Tumulus X after excavation (*C*, white), locus "T" (*R*); background, Tumulus P (*L*), Tumulus MM (*R*).



B. Tumulus X. Chamber cleaned. Viewed from west-southwest.



A. TumX 1.



B-E. TumX 2.



F. TumX 3.



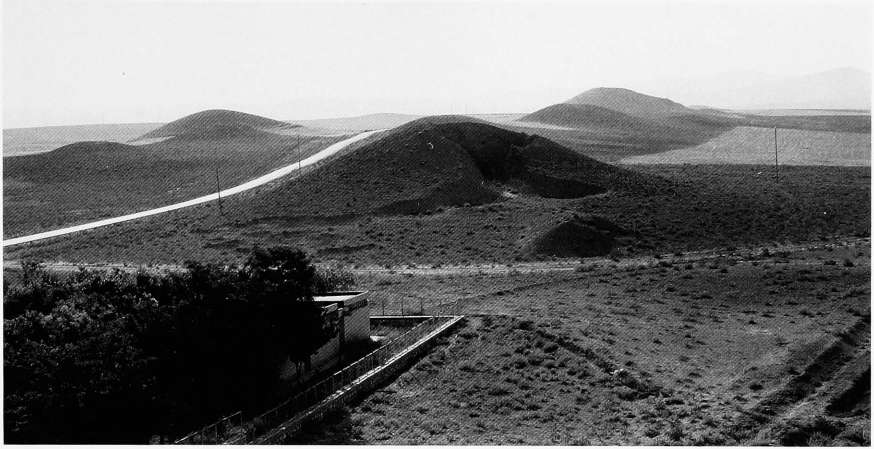
G. TumX 4.



H. TumX 5.



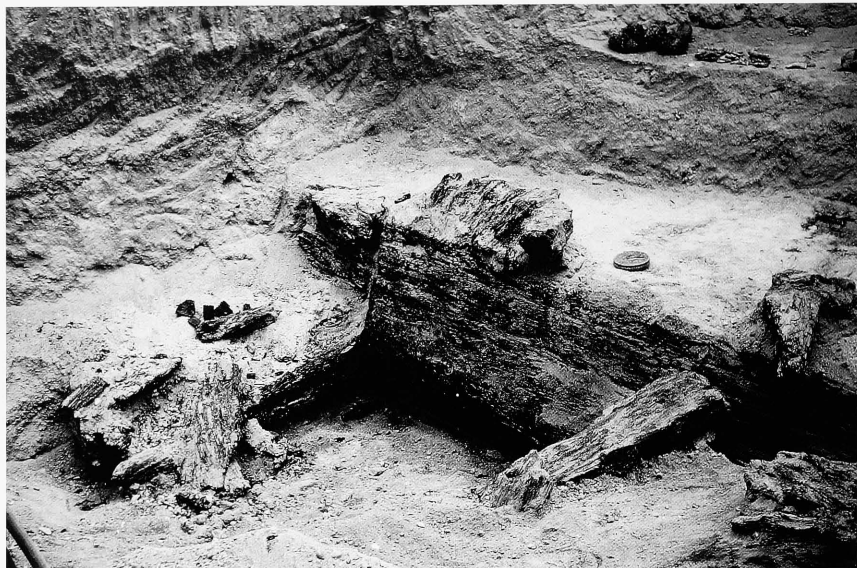
I. TumX 6.



A. View to east from top of Tumulus K-III (1982): foreground, Gordion Museum depot; middle ground, Tumuli X and Y and unlettered (to left of road to Polatlı), Tumulus P (to right of road); far distance, Tumulus W.



B. Tumulus Y. Foreground, trench 1; middle ground, trench 2 (before cutting of trench 3); background, unlettered tumulus. Viewed from southwest.



A. Tumulus Y. Chamber cleaned. Viewed from north.



B. Tumulus Y. Detail of interior south corner.



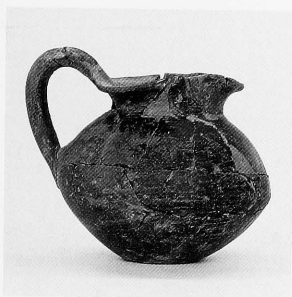
A. TumY1.



B. TumY2.



C. TumY3.



D. TumY4.



E. TumY5.



F. TumY6.



G. TumY7.



H. TumY8.



A. South Ridge before excavation. Viewed from Southeast Trench on City Mound (i.e., from west).



B. Tumulus S-1 before excavation. West side with depression left by military trench 2.





A. Tumulus S-1. Stratification along northeast scarp of trench I. Right of center: cremation 1 in surface of layer IV. Viewed from west.



B. Tumulus S-1. Northwest end of chamber. Viewed from east.



A. Tumulus S-1. Line of side wall beams extending beyond end wall in north corner. Viewed from southwest.



B. Tumulus S-1. Matting among stones of cap.



C. Tumulus S-1. Reed covering of platform on northeast side of pit.



A. Tumulus S-1. Bronze disk from bronze and leather belt *in situ*.



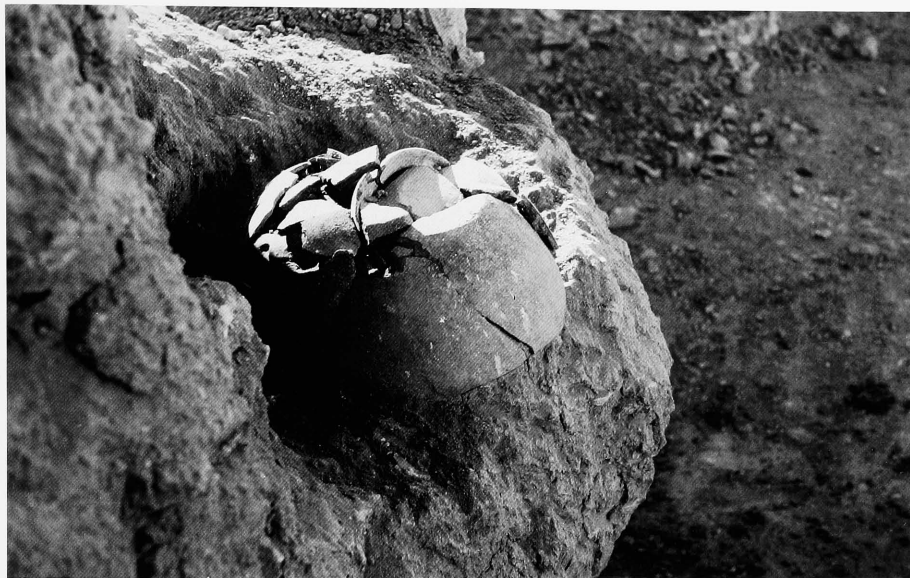
B. Tumulus S-1. View across pit toward west side, showing guide wall D.



A. Tumulus S-1. Guide wall E in mantle. At far left, cremation 2 *in situ*.



B. Tumulus S-1. Mudbrick cist grave in layer IV.



A. Tumulus S-1. Cremation 2 *in situ*.



B. Tumulus S-1. Cremation 3 *in situ*.



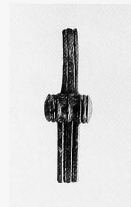
A. Tumulus S-1. Cremation 4 *in situ*.



B. TumS1 1.



C,D. TumS1 2.



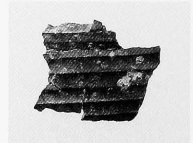
E. TumS1 3.



F. TumS1 4.



G. TumS1 5.



H. TumS1 6.



A. TumS1 7.



B. TumS1 8.



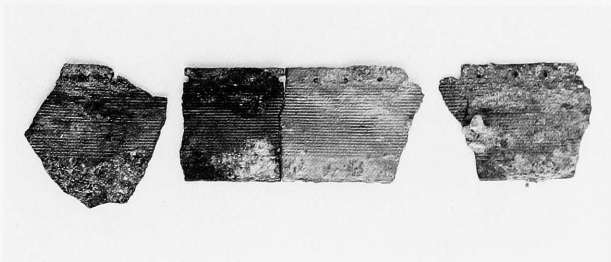
C. TumS1 9.



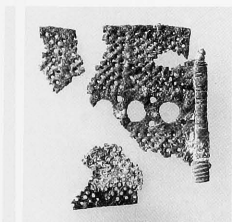
D. TumS1 10.



E. TumS1 11.



F. TumS1 12.



G. TumS1 13.



H. TumS1 14.



I. TumS1 15.



J. TumS1 16.

A 2:3 D 1:4  
B 2:5 E-J 3:5  
C 1:2



A. TumS1 18.



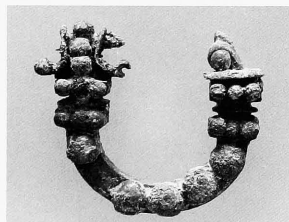
B. TumS1 19.



C. TumS1 21.



D. TumS1 23A.



E. TumS1 27.



F. TumS1 30.



G. TumS1 32.



H. TumS1 33.



I. TumS1 34.



J. TumS1 39A.



K. TumS1 41.

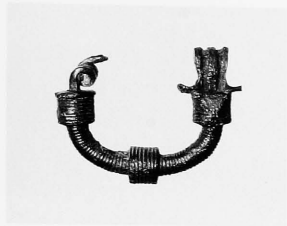


L. TumS1 42.



M. TumS1 43.





A. TumS1 44.



B. TumS1 45A.



C. TumS1 46.



D. TumS1 47.



E. TumS1 51.



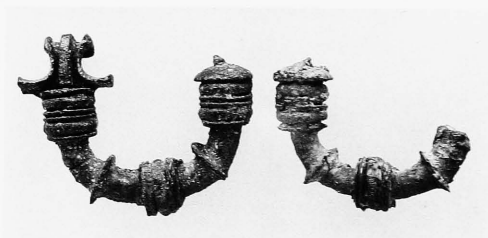
F. TumS1 53.



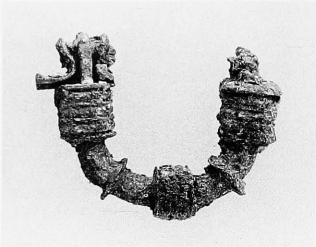
G. TumS1 54.



H. TumS1 56.



I. TumS1 57A,B.



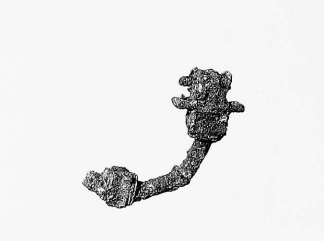
A. TumS1 58B.



B. TumS1 60.



C. TumS1 61B.



D. TumS1 62.



E. TumS1 64.



F. TumS1 68.



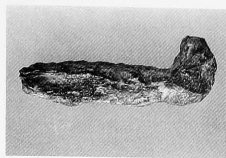
G. TumS1 69.



H. TumS1 70A.



I. TumS1 71.



A. TumS1 72.



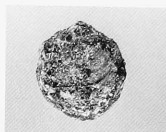
B. TumS1 73.



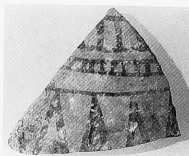
C. TumS1 74.



D. TumS1 75.



E. TumS1 76.



F. TumS1 77.



G. TumS1 78.



H. TumS1 79.



J. TumS1 81.



K. TumS1 82.



I. TumS1 80.



L. TumS1 83.



M. TumS1 84.

A 2:3 E, F, K 1:1 L 1:2  
B, D 1:5 G, H, I 1:3 M 1:8  
C 2:5 J 1:4



A. TumS1 85.



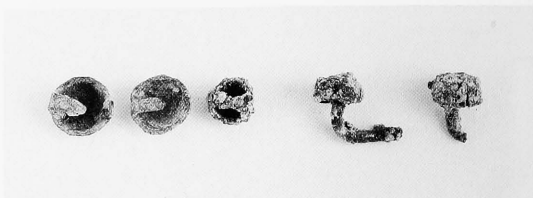
B. TumS1 86.



C. TumS1 87.



D. TumS1 88.



E. TumS1 89.



F. TumS1 90.



G. TumS1 91.



H. TumS1 92.



I. TumS1 93.



J. TumS1 100.



K. Tumulus S-2 before excavation. Viewed from north.



A. Tumulus S-2. Northeast scarp of trench 1. Viewed from west.



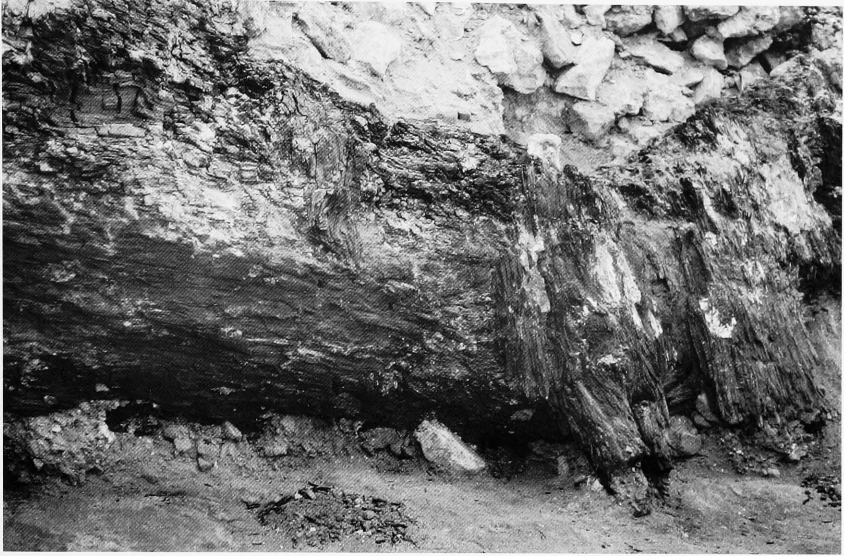
B. Tumulus S-2. Southwest scarp of trench 2 after exposure of stone cap's north corner.



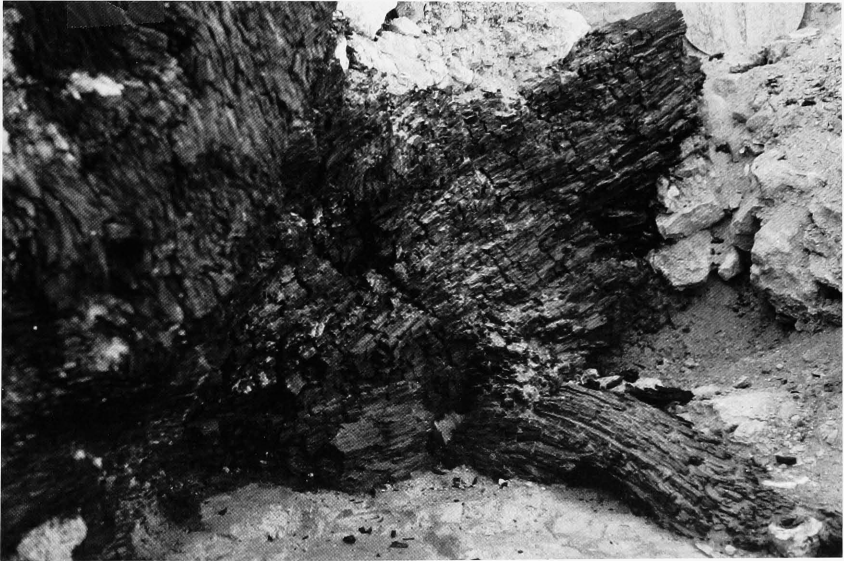
A. Tumulus S-2. Central trenches half-cleared. Viewed from east.



B. Tumulus S-2, cleared. Fragmentary roof beams fallen against northwest wall and lying on floor in southeast half. Viewed from south.



A. Tumulus S-2. Northwest wall of chamber. Fragments of roof beams. Viewed close-up from southeast.



B. Tumulus S-2. Interior of north corner of chamber after clearing outside northeast end wall. End sill enters slot in side wall.



A. Tumulus S-2. Interior of west corner of chamber. Fragments of roof beams still in place. Side wall extends beyond end wall.

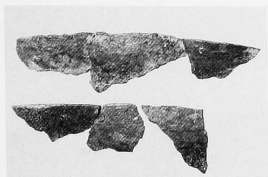


B. Tumulus S-2. Interior of east corner of chamber. Fragments of roof beams still in place.



C. Tumulus S-2. Stone pack on southwest end of pit, from interior. *L* to *R* through center: line of reed matting.

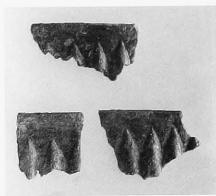




A. TumS2 1.



B. TumS2 2.



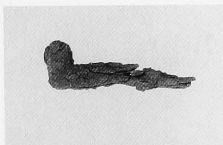
C. TumS2 3,4.



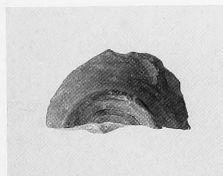
D. TumS2 5.



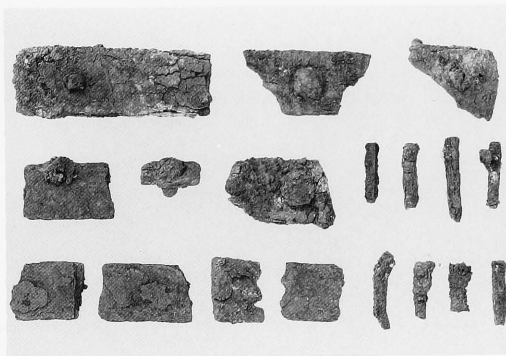
E. TumS2 7.



F. TumS2 8.



G. TumS2 10.



H. TumS2 9.



I. TumS2 11.



J. TumS2 14.

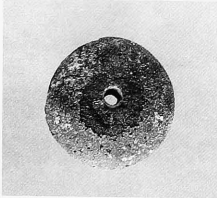
A 1:6 D 1:1  
B 1:4 I, J 1:5  
C, E, F, G 1:2 H 1:3



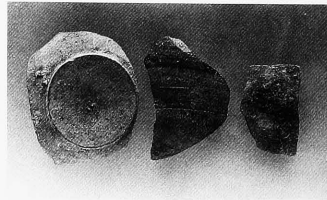
A. Tumulus S-3 before excavation. Viewed from northwest.



B. Tumulus S-3. Excavation area cleared. Viewed from north.



C. TumS3 1.



D. TumS3 2.



A. Top of South Ridge (1982): foreground, Tumulus S-3; middle ground, Tumulus Z; background, hills south of Cekirdeksiz.



B. View from top of Tumulus Z: west end of Northeast Ridge (*L*); foreground, three unlettered tumuli north of Z (*R*); background, Tumulus MM (*R*; white). Viewed from south.



A. Tumulus Z. Sunken area in top, which became opening for trench 2. Viewed from southeast.



B. Tumulus Z. Southwest side of chamber. Viewed from east.



A. Tumulus Z. Southwest side of chamber after floor cleaned. Viewed from northeast.



B. Tumulus Z. Northwest section (area between beams J-M and K-N) viewed from northwest toward fallen beams D and G. Roof beam A and clusters B and C have not yet been cleaned.



A. TumZ 1.



B. TumZ 2.



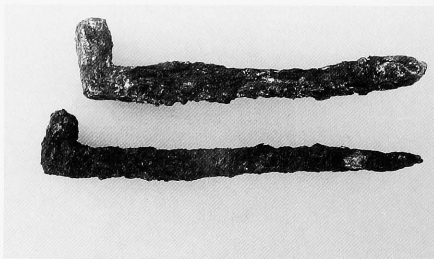
C. TumZ 3.



D. TumZ 4.



E. TumZ 5.



F. TumZ 7,6.

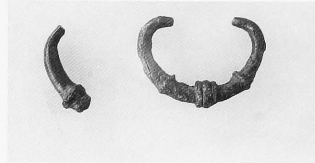


G,H. TumZ 8. In G spout has been removed.

A 1:3  
D 1:1  
B, E 1:2  
C, F 2:5  
G 1:5



A. TumZ 9.



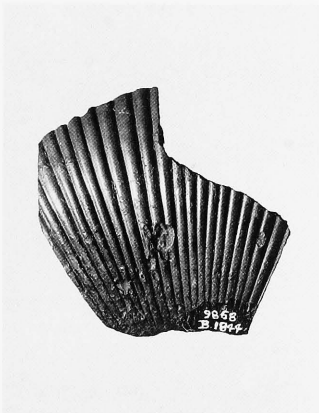
B. TumZ 10.



C. TumZ 11.



D. TumZ 12.



E. TumZ 13.



F. TumZ 14.



G. TumZ 15.

A, D 1:2  
B 1:4  
C 2:5

E, F 1:1  
G 2:3



A. TumZ 16.



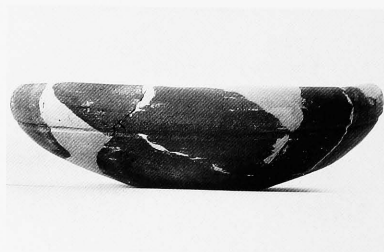
B. TumZ 18.



C. TumZ 19.



D. TumZ 20.



E. TumZ 21.

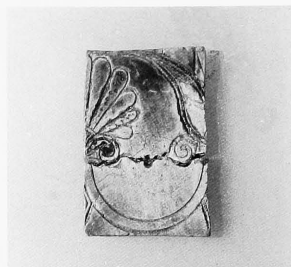




A. ILS 99. "Hitch." Tum. E.



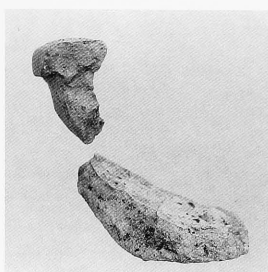
B. P 2168. Bichrome sherd: goat? CM.



C. BI 14. Ivory inlay: lotus and palmette. Under Tumulus C.



D. P 1183. Painted Phrygian jar. CC-1.



E. G 2. Blue paste bowl. Under Tumulus D.



F. Tump 82. Black-polished dinos.



G. P 745. Painted Phrygian jar. Common cemetery.



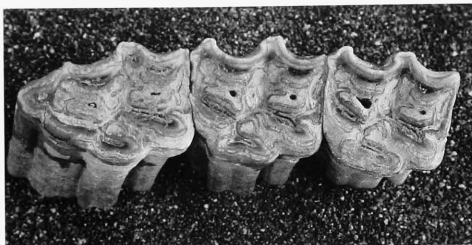
H. P 2217. Red ware bowl. CC-4.



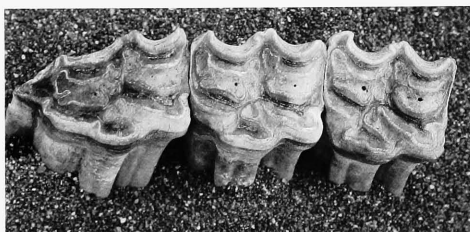
I. MC 198. Swage for hammering petals.



J. P 285. Gray ware necked jar



A. Tumulus KY. South equid, upper cheek teeth.



B. Tumulus KY. North equid, upper cheek teeth.



C. Tumulus KY. South equid, lower cheek teeth.



D. Tumulus KY. North equid, lower cheek teeth.





A. Tumulus KY. South equid, canines.



B. Tumulus KY. North equid, canines.



C. Tumulus KY. South equid, premolar with bevelled front corner.



D. Tumulus KY. North equid, premolar with bevelled front corner.







