

SECRETS OF THE DARK MOUND

JEMDET NASR 1926-1928

Roger Matthews



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Robert Matthews

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“The dark mound still keeps many of its secrets”

(Henry Field 1953, 179)

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Preface

I first visited Jemdet Nasr in the autumn of 1987. Attracted by the look and feel of the place, as well as by the fresh academic debate on the significance of the site and the discoveries made there during the 1920s (Finkbeiner and Röhlrig 1986), I decided to seek permission and support to excavate there myself. To cut a short story even shorter, following two winter seasons of fieldwork at Jemdet Nasr in 1988 and 1989 the closure of Iraq to British (*inter alios*) archaeologists meant that plans for further fieldwork at the site have been on ice ever since. In late 1990 I began work on the material excavated from the site in two seasons of fieldwork in 1926 and 1928. This material now resides in a series of museums which had some say in the 1920s seasons, principally the Iraq Museum in Baghdad, the Field Museum of Natural History in Chicago, and the Ashmolean Museum in Oxford. Over the course of a couple of years I was able to inspect, draw, photograph and record all artefacts from the 1926 and 1928 seasons, with the exception of some lost or misplaced items and those in the Iraq Museum, Baghdad (Appendix). A preliminary account appeared in 1992 (Matthews 1992a). Much of the material from the 1926 season was published by Mackay (1931) but with inadequate drawings and a text now long outdated. Material from the 1928 season has never received competent publication. The current volume thus presents for the first time a full publication of all accessible material from the 1920s excavations at Jemdet Nasr, excluding objects in the Iraq Museum, Baghdad. Throughout the spells of museum work and publication preparation I have been very generously encouraged and financially assisted by the British School of Archaeology in Iraq, to all of whose representatives I am sincerely grateful.

This work would not have been possible without the considerable assistance and advice which has greeted me in all the museums where material from Jemdet Nasr

is now stored. I extend my warmest gratitude to the staff who have aided me and granted permission to study and publish items in their collections. In particular, I wish to thank, at the Ashmolean Museum, Oxford: Dr P. R. S. Moorey, Keeper of Antiquities; at the Field Museum of Natural History, Chicago: Dr B. Bronson, Curator, C. Gross, Collections Manager, W. Grewe-Mullins, Assistant Collections Manager, J. Klein, Archivist, Dr D. Reese and C. Sease; at the Oriental Institute of the University of Chicago: Prof McG. Gibson, Dr K. L. Wilson, Curator, and R. D. Tindel, Registrar; at the Pitt Rivers Museum of the University of Oxford: L. Mowat, Research Assistant. I am additionally grateful to Dr Moorey for his help with the procurement of photographs from the 1920s seasons included in this volume. During the production of this book I have been greatly assisted by Tom Pollard, particularly in the inking of drawings, mounting of plates and compilation of catalogues. I am extremely grateful to him for all his hard work. Sincere thanks also go to Başak Boz for her kind assistance with aspects of the preparation and to Roz Smart for her voluntary work in several important areas, which greatly speeded up the production of the volume. My thanks also to Dr Harriet Crawford for several valuable suggestions and to Anna Lethbridge for assistance with publication preparation.

My final thought in waving a fond farewell to the 1920s seasons at Jemdet Nasr is to express the sincere hope that the site will not have to undergo another hiatus of sixty years, as it did after the 1928 season, before excavations and explorations can once more be restarted at the site and in its surroundings.

Roger Matthews
Ankara, 19.vii.1998

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Chapter one

TO WHAT PURPOSE DISTURBING THE DUST?

Jemdet Nasr in the 1920s

1.1 A long, low mound named Jemdet Nasr: the site before excavation

The third and fourth decades of the twentieth century were a vital time of discovery and achievement in the story of Mesopotamian archaeology. Following the gruelling Mesopotamia campaigns of 1915-1917, British interests in the modern state of Iraq were realised in the creation of a British mandate over that newly created country. Gertrude Bell, an enormously talented official in the British administration of Iraq, was appointed as Director of Antiquities and, with characteristic skill and verve, applied herself to the daunting task of overseeing and organising the conduct of foreign excavations in the land of Mesopotamia, as well as to creating a new Iraq Museum in Baghdad. Her success in these endeavours, even in the short years before her early death in 1926, needs no underlining here. Under her guidance archaeological research in Iraq flourished and, by means of new regulations controlling the movement of excavated artefacts from Iraq, the peerless collections of the Iraq Museum were steadily accumulated.

Among British projects in Iraq in those years pride of place goes to the excavations directed by Leonard Woolley from 1922 to 1934 at the great Sumerian city of Ur in the south of Iraq (see fig 1 for location of sites). Woolley's boundless energy coupled with his well-honed field skills and lively imagination met their perfect match at Ur, where he unearthed the spectacular and the mundane with equal care and ability. Other British fieldwork conducted in Mesopotamia during these inter-war years included that of Max Mallowan at Nineveh, Arpachiyah and Tell Brak and of Woolley again at Tell al-Ubaid. The French were working at Telloh, the Americans at Fara and from 1928 onwards the Germans, building on their brilliant pre-war successes at Babylon and Aššur, began a long series of campaigns at the enormous site of Warka (Uruk) in the south, an association still alive today. Major American involvement in Mesopotamia came in the impressive shape of the Oriental Institute of the University of Chicago, working at the Assyrian capital of

Khorsabad and then turning their attentions to a suite of four sites in the Diyala region east of Baghdad. Meanwhile a team from the University of Pennsylvania investigated the mound of Tepe Gawra in north Iraq. The culmination of these researches and discoveries came in two conferences, one in Baghdad in 1930, the other in Leiden in 1931, when initial attempts were made to rationalise and evaluate the import of so much new information recovered in such a short spell from the soil of Iraq (for a short history of the archaeology of Mesopotamia, see Matthews 1997a).

In the years 1923 to 1933, more or less in parallel with Woolley's work at Ur, a joint American-British team conducted a programme of fieldwork centred on the Sumerian city of Kish, located only 15 km east of Babylon. This project was co-sponsored by the Field Museum of Natural History of Chicago and the Ashmolean Museum of Oxford University and was headed, not by an archaeologist, but by an epigraphist, Stephen Langdon, Professor of Assyriology at Oxford University. Langdon's field director was Ernest Mackay, succeeded after Mackay's departure for Mohenjo-Daro in 1926 by Louis Watelin.

Late one afternoon in March 1925, towards the end of the 1924-1925 season of excavations, an Arab, who may have been a Hilla-based dealer in antiquities, entered the excavation camp at Kish. Members of the expedition were sitting at tables registering the day's finds and catching their breath in the shade of the great Sumerian ziggurat (the following account is based largely on that provided by D. Mackay 1927, from where the quotes are taken). To the assembled group the Arab showed inscribed clay tablets and painted potsherds in vivid colours, unfamiliar to the archaeologists present. Rousing the excavation team's interest, the local then brought out "a strange pottery object, the size and shape of a pork pie, decorated with notches round the upper edge. It was solid. It was weighty. And the top was blackened with marks of burning. We passed it around the little group and put it down; we had not seen such a thing

before.” (A typical Jemdet Nasr solid potstand—the actual stand is depicted in fig 37:1, pl 34: right, and is the only solid stand to have a museum accession date in 1925). Having successfully sold his artefacts to the Kish team, the Arab was asked to bring something whole from wherever he had unearthed these objects: “By the will of Allah, sahib, I will try. But it is five hours’ journey hence.”

The Arab returned three days later, bringing several complete painted jars as well as more decorated sherds and inscribed tablet fragments. ‘Ali Daoud, one of the local foremen at Kish, was sent to investigate, riding on horseback across the alluvial desert to the mound known by the locals as Jemdet Nasr, “the small mound of (Sheikh) Nasr”, where a sub-tribe of Arabs were dwelling in tents. ‘Ali Daoud returned to Kish with further fragments of tablets and painted sherds. The Kish team decided they would have to visit the site and see it for themselves. A Ford motor car was borrowed from the town of Hilla, water and fuel loaded aboard, and the expedition set off across the desert on the 26th of March 1925, heading north-east towards the river Tigris. In the car were Ernest Mackay, his wife Dorothy and Father Eric Burrows, as well as ‘Ali Daoud and a driver. It was a Friday, the day of rest and prayer. Once beyond the irrigation canals and cultivated fields the expedition entered “a strange new world, where all was mirage and unreality... Now all around we beheld an immense flat waste of fine greyish-yellow alluvial soil sprinkled with tiny pebbles, which made hard and excellent running for the car, whose very speed added to the sense of unreality.”

After driving for some distance through the flat, open landscape the crew arrived at a large mound, Barghuthiat, “the mound of the fleas”, where tribesmen directed them on to their goal. Before long they reached “a long, low mound named Jemdet Nasr.” The site comprised two mounds, one substantially larger than the other. On top of the smaller mound large square bricks of the Neo-Babylonian period were clearly visible. The surface of the larger mound was strewn with painted potsherds. Mackay and Father Burrows paced the mounds, producing simple contour plans while Dorothy took photographs from a short distance to the south-east (reproduced in Mackay 1931 pl LXXV:1), the Ford a small dot on the scrubby flat land. As clouds gathered, the expedition made tracks for home, coursing along with herds of gazelle and reaching the camp at Kish in time for “a comfortable English tea in our dug-out dining-room.”

The above account relates to the first genuinely archaeological visit to the mounds of Jemdet Nasr, but it seems that others may have been busy at Jemdet Nasr in the years before 1925. There is considerable confusion about the precise provenance and date of accession of many proto-cuneiform tablets thought to originate from Jemdet Nasr (see Englund and Grégoire 1991, 7; Englund 1996, 7-9; Matthews 1992a, 1-2, for general discussion of this and related problems). In his 1936 publi-

cation of archaic texts from Uruk, Falkenstein included a group of thirty-six tablets acquired by the Vorderasiatische Museum, Berlin, in 1903, stating his belief that they originated from Jemdet Nasr, based on the occurrence of identical seal impressions on some of the excavated tablets from Jemdet Nasr and on one of the Berlin tablets (Falkenstein 1936, 4). German excavators at Fara had bought the thirty-six tablets on the antiquities market in 1903 and the tablets had lain unnoticed in the Berlin collections until Falkenstein had them brought to his attention in 1931. More recently, Green has pointed to a strong association between the Berlin tablets and a small group of proto-cuneiform texts excavated in 1941 at Tell Uqair, only 15 km north-west of Jemdet Nasr (Green 1986). The probable toponym KU_{6a} RAD_a UR₂ occurs on at least two of the four Uqair texts and on eighteen of the thirty-six Berlin tablets, and is thought to designate the city name Urum which may equate with Uqair itself (Matthews 1993, 35-6; McEwan 1981, 56; Steinkeller 1980, 25).

In addition to the thirty-six Berlin texts published by him in 1936, there is another, tangential but intriguing, connection between Falkenstein and Tell Uqair which is worth the telling. During Seton Lloyd and Fuad Safar’s excavations at Tell Uqair in 1941 a pro-German coup led by Rashid ‘Ali al-Gailani took place in Baghdad. Lloyd, along with other Britons in Iraq, including Freya Stark, was obliged to spend a month interned in the British Embassy compound on the banks of the Tigris (related with characteristic style in Lloyd 1986, 80-3). In the meantime, a German force had landed in Iraq in order to bolster anti-British sentiment, already stimulated by the local Nazi Party in Baghdad under the leadership of Julius Jordan, the excavator of Uruk (Jordan had cut his archaeological teeth with Koldewey at Babylon and Andrae at Aššur in the years before the First World War). Among the German landing party was none other than Adam Falkenstein. Following the collapse of the Rashid ‘Ali coup and the return of Baghdad to British influence the German party, including Falkenstein, beat a hasty retreat through Kurdish north Iraq and into Turkey (related in Englund 1996, 9 fn 14). German excavations at Uruk, now directed by Lenzen, did not recommence until 1953.

The real provenance of the group of thirty-six tablets bought by German archaeologists in Iraq in 1903 remains unknown. It may be that they came from a range of sources, illicitly excavated, and were then amalgamated and sold as a group by the dealer. Some may have come from Uqair, some from Jemdet Nasr and some from yet other sites in central or south Mesopotamia, including perhaps Fara itself (whence one other proto-cuneiform tablet in the Berlin collections had perhaps come: Deimel 1922, 73, no. 2; Englund 1996, no. 72; Matthews 1995, fig 1:6). We will never know for sure. It is clear, however, that all the tablets or tablet fragments, as well as the painted potsherds, brought to the Kish camp by locals in spring 1925 were purchased by Mackay on behalf of

Langdon, who immediately appreciated their significance for the study of early writing in Mesopotamia. Langdon related how twelve of these tablets were then sold on to the Louvre and six were sold to the British Museum (Langdon 1928, iii). Rather confusingly, Thureau-Dangin, in his publication of the Louvre proto-cuneiform tablets asserts that the Louvre purchased them in March 1924, perhaps a mistake for March 1925 (Thureau-Dangin 1927, 26). More confusingly still, Scheil, in his 1929 publication of the British Museum texts mentions that the tablets were excavated at Jemdet Nasr prior to 1915, perhaps a mistake for prior to 1925 (Scheil 1929, 15).

Despite these uncertainties there is no doubt that, in addition to the Berlin 1903 group, proto-cuneiform texts were available on the antiquities market in Iraq before 1925. It may be that the Louvre texts published by Thureau-Dangin (1927) and the British Museum texts published by Scheil (1929), as well as others bought in 1920 by James Breasted for the Oriental Institute, Chicago, were all sub-lots of an original purchase in Baghdad by a Paris dealer, J. E. Géjou (Englund and Grégoire 1991, 7). In that case, Langdon's 1928 account of the distribution of the 1925 Jemdet Nasr tablets must be erroneous.

A further group of proto-cuneiform tablets, seventeen in total, was purchased by Van Der Meer at Kish in 1934-1935 and published by him in 1936 with the suggestion that they originated from Jemdet Nasr (Van Der Meer 1936). This group, more recently published by Englund (1996), contains sign combinations, especially AN MAR and BU PAP NAM₂, which are rare or completely absent on the tablets legally excavated from Jemdet Nasr in 1926 and 1928, suggesting an origin elsewhere (Matthews 1995, 392).

In sum, archaic proto-cuneiform tablets had reached the antiquities market in Baghdad around the start of the twentieth century and continued to do so in the years thereafter. It is almost impossible to ascertain the probably manifold provenances of these texts, and naturally it is only after their undisputed discovery at the site of Jemdet Nasr from 1925 onwards that we find scholars willing, sometime overly so, to attribute the majority of unprovenanced proto-cuneiform tablets to Jemdet Nasr. In truth, only one unprovenanced text, that published by Falkenstein as his 1936 no. 656, which bears the famous city seal impression (Matthews 1993, 34-8), can with some plausibility be assigned to Jemdet Nasr itself.

In addition to the tablets and tablet fragments, Mackay purchased considerable quantities of Jemdet Nasr painted vessels and potsherds at Kish in 1925. These pots were accessioned by the Ashmolean Museum in Oxford later in 1925 and are conveniently listed in Moorey (1978, fiche 3). The purchases of March 1925, in particular the archaic texts, greatly stimulated Langdon's interest and he determined that the next Kish season should be partly devoted to the excavation of the newly

discovered mounds of Jemdet Nasr, 26 km north-east of their base-camp at Kish.

1.2 Excavations at Jemdet Nasr in 1926

In examining the 1920s excavations at Jemdet Nasr we are dealing with the past twice over. Our aim is to investigate aspects of the ancient past, the centuries around 3,000 BC when Jemdet Nasr was at its prime, but in doing so we have to apply similar procedures to the 1920s excavations themselves. We cannot approach the one without looking through the lens of the other. The two are inextricably connected, an archaeology within an archaeology, time past contained in time past. The first legal excavations at Jemdet Nasr took place early in 1926, with a second short season in spring 1928. In trying to reconstruct what happened at Jemdet Nasr during those few weeks we face very particular, but not unfamiliar, problems and concerns. As archaeologists we are trained to use patchy and incomplete bodies of evidence in order to bring to life, in some sense, the long-dead past. It is always a matter of making do with inadequate information, incompletely recovered, partially recorded and often poorly understood. These constraints apply as much, though in very different specific ways, to our approach to the 1920s as to our approach to the late fourth millennium BC.

The sources for the 1926 excavations at Jemdet Nasr are sparse. They comprise a handful of personal letters, some partially completed object register forms, a couple of floating plans and some sentences of description in scattered published and unpublished reports. As best we can reconstruct it, the course of events was as follows (based on the accounts in Field 1926a; 1929, 11-4; 1953, 78-83; Field and Martin 1935, 310-1; Langdon 1927; Mackay 1931, 225-6):

The 1926 season lasted from early January to mid March. Work at Jemdet Nasr was personally directed by Langdon, clearly motivated in the main, like many before and since, by the prospect of discovering inscribed tablets. As already mentioned, Langdon was a philologist, not an archaeologist, and this failing is all too clear in his approach to the excavations and their recording. Langdon failed to keep even the most basic records of what he was doing at the site. Considered in the light of the procedures routinely in use by Woolley and his team during the same years at Ur, to take a contemporary example, there is no escaping the conclusion that Jemdet Nasr was "badly excavated, the excavations were badly recorded and the records were correspondingly badly published," to quote Seton Lloyd's verdict on Langdon and Watelin's work at Kish (Lloyd 1969, 48).

Each day of the 1926 season Langdon drove in the expedition Ford the 26 km from Kish to Jemdet Nasr, returning in the afternoon. It was not an easy drive. Temporary bridges had to be built across irrigation ditches in the cultivated areas around Kish, but once clear of the fields the flat plain provided smoother going. A shel-

ter of palm branches and reed mats was erected near the main mound to provide shade for the workmen, who remained at the site for the duration of the season. Estimates of the number of workmen involved vary from twelve to sixty, but most of the time there appear to have been twenty to thirty of them, working in four and then eight gangs. The workmen were under the charge of one Hassan Jedur and were protected from bands of roving raiders by an armed guard from the Kish camp. Langdon took water to the site each day from Kish until spring rains filled a nearby catchment basin. He also carried dates and bread for the workmen who each day "welcomed the professor by kissing his feet and giving loud voiced thanks to Allah for his safe arrival with their precious supply of water and food" (Field 1929, 12).

Apart from Langdon, no other members of the Kish expedition were involved in the 1926 excavations at Jemdet Nasr. In an unpublished report dated 29th January 1926 and now in the Field Museum archives (Field 1926b), Henry Field gave an account of the daily routine at Jemdet Nasr, describing how Langdon departed from Kish at 7.15 am each day, taking one and a half hours to cover the distance. Field mentions that Langdon was at the time excavating a series of small rooms "which are regularly surveyed and planned by Mr. Mackay" but there is no other indication that Mackay ever visited Jemdet Nasr in the course of the 1926 season and Mackay himself states that it was Langdon who planned the architecture (Mackay 1931, 226). Henry Field had happened to visit Kish in January 1926 in order to inspect human skeletal remains and was able to visit Jemdet Nasr in Langdon's company on the 6th of January, very close to the start of the season. He claimed to have been present when the first complete painted vessel was recovered (Field and Martin 1935, 311) and the first archaic tablets (Field 1953, 81). It appears that Langdon was in sole charge of up to eight gangs of workmen, digging at widely separated points of the mound, starting with a trench at the east end of the main mound. Judging from the inadequate sketch plans originally published by Langdon (1927, 69), a minimum of seven sizeable trenches were opened in addition to the clearance of the main area containing the large building. It is hardly surprising that Langdon almost completely failed to record the activities of the workmen under his control. In pl 1, a rare and grainy shot, Langdon can be seen in the trenches with some of his men as they dig deep into the mound.

Following each day's work on site Langdon drove back to Kish at sunset, carrying the day's finds in wooden cases packed with straw. After tea the objects were unpacked, cleaned and recorded by Mackay on object register cards, with extremely limited, and almost always no, information on findspots. The original object cards are now in the Kish archive in the Field Museum, Chicago, with copies held in the Ashmolean Museum, Oxford, and the Iraq Museum, Baghdad. The cards have basic descriptions of objects and are dated so that it is

possible to reconstruct, at least loosely, the sequence of discoveries (see section 1.3). The earliest object card, for a small pot, gives a findspot as "1 ft below surface" but thereafter almost no comments are provided about provenance.

In addition to Henry Field's often unreliable accounts we have a few letters written by Langdon during the course of fieldwork. On the 18th February 1926 Langdon wrote to a Mr Davies at the Field Museum, thanking him for the award of extra money and stating that he would increase the workforce once the money arrived. Langdon asked Davies if the Field Museum had a good pot restorer and went on to mention the discovery in the previous week of 150 pictographic tablets, probably a temple archive. Langdon then described a scene familiar to all who have worked in south Iraq during the spring: "Day before yesterday I was caught out at Jemdet Nasr by a terrific rain storm which turned the whole plain into a morass, and was compelled to walk back to camp 18 miles, part of the way in 4 inches of mud and water. Tomorrow I shall go out by horse and see whether I can get the motor home. We must supply the men with water out there. In dry weather there is no sweet water within 14 miles."

On the 2nd of May 1926, several weeks after the close of the 1926 season, Langdon wrote from Baghdad to Henry Field, having spent the previous five weeks with jaundice in a Baghdad hospital, "I was so ill that I could not make much use of your excellent camera, having used only one reel... It was hard work going to Jemdet Nasr every day all winter. But I dug the place up and got away with magnificent pottery and other things." Copies of the photographs referred to by Langdon, mainly of objects, are now in the Field and Ashmolean Museums. In his account Field tells how Langdon "was taken to Baghdad Hospital in a delirious condition. He was in this hospital for several weeks, and even after his return to England, a whole year elapsed before he was back to his normal state of health" (Field 1929, 13).

Following the close of work on site all finds were divided between the three interested parties—the Field, Ashmolean and Iraq Museums of Chicago, Oxford and Baghdad respectively. Tablets, of which about 200 were found at Jemdet Nasr in 1926, were divided between Oxford and Baghdad only, while most of the pottery went to Chicago where much of it was restored by T. and H. Ito (Field and Martin 1935). In general only whole vessels and decorated sherds were kept. Publication of the 1926 season was scattered and inadequate. Langdon produced an account in German accompanied by sketch plans of the mounds and the location of his trenches (Langdon 1927), but later admitted that the published plan was inaccurate in its orientation (Langdon in Mackay 1931, 223). The scale of the main building plan was also wrong: published as 1:80 it is in fact at 1:800. The original of this plan, now in Oxford, includes symbols denoting the location of tablets, seals and painted pottery, but

no specific item can be located at any specific point. Objects from the 1926 season were, rather selflessly in the circumstances, published by Mackay (1931), while Langdon produced an unsatisfactory account of the tablets (1928).

The nature of Langdon's discoveries at Jemdet Nasr in 1926, poorly dug and recorded as they were, was nevertheless astonishing. Their presentation and study form the bulk of this volume, but here a brief summary is called for. Langdon's work was concentrated on the larger of the two mounds, Mound B, which covers an area of about 7.5 hectares and rises 3.5m above plain level. To the west, Mound A covers 1.5 hectares and reaches 2.9m in height. A baked brick building of Neo-Babylonian or later date sits on top of Mound A, overlying much earlier deposits. There is a baked brick wall with gateway and rounded turrets around this mound (partly noted by Mackay 1931, 226; excavated and planned in Matthews 1989, fig 12). Mound C, 500m to the east, comprises numerous baked brick fragments and appears to have no connection with the main occupation at Jemdet Nasr.

Somewhere on Mound B, Langdon exposed a large building, covering an area of some 95 x 40m, composed of suites of small rooms arranged along the sides of open courts. Other architecture was in general not detected or not recorded. From within the large building, and elsewhere on the mound, a most distinctive assemblage of artefacts was recovered, including proto-cuneiform tablets, decorated and undecorated pottery, and cylinder seals with stylised designs, as well as other assorted items, all of which receive study in later chapters of this volume. Even before excavations began it was clear that this assemblage of material culture belonged to a period more ancient than anything yet recognised from Kish or, till then, from Ur.

1.3 *The sequence of discoveries in 1926*

The fact that many of the object cards from the 1926 season are dated allows us to reconstruct, at least in outline, some aspects of the chronology of discovery during the period from early January to mid March 1926. In addition, it is possible to identify many of the objects purchased from locals by the Kish expedition in March 1925. These are all distinguished by their 1925 accession dates in their Ashmolean Museum numbers, as listed in the figure catalogues in this volume. It is notable that the 1925 objects comprise several complete painted vessels and fine-ware pots, generally compact and readily portable, as well as many of the more striking polychrome and monochrome painted sherds. A complete bevelled-rim bowl (fig 9:3), the "pork pie" solid stand described by Dorothy Mackay (see above and fig 37:1), and a grooved "bolas" stone (fig 42:1) were also brought to the Kish camp and purchased in 1925.

Turning to the 1926 excavation season, the earliest dated card is 4th January 1926, the latest 16th March 1926, but many of the cards are dated simply "January

1926", "February 1926" or "March 1926". In addition, a great many have no date at all. From the cards that are dated, we can see that during January 1926 a steady throughput of spouted vessels, including one with an inscription (fig 24:10), handled vessels, solid stands, bevelled-rim bowls and a total of five cylinder seals were registered. On 3rd February 1926 at least three painted vessels (figs 13:4, 13:9, 15:4) were excavated, and on 11th February a sealing with piedmont style seal impression was recovered from below a plano-conex brick wall (fig 7:8, pl 19). Around the estimated time of the discovery of the tablet archive, at least three intact conical bowls (fig 10:10-12) plus the bowl with phallic centre-boss (fig 11:7) were registered on 15th February. The spouted vessel with painted five-pointed star motif, fig 25:4, was registered on 2nd March, and many of the beads and amulets were found during that month. Beyond these observations and given that Langdon was operating in several trenches at any one time, and that the majority of finds made in 1926 do not have dated object cards, it is not possible to reconstruct the course of Langdon's activities or the sequence of his discoveries in any meaningful detail.

1.4 *The 1928 season*

No work took place at Jemdet Nasr during the 1926-1927 Kish season, perhaps because of the still frail state of Langdon's health and the departure in 1926 of Mackay for Mohenjo-Daro. Louis Watelin replaced Mackay as field director at Kish from that year. Meanwhile Henry Field was busy raising funds in Chicago, eventually persuading a certain Dr Henry J. Patten to provide \$500 towards the continuation of excavations at Jemdet Nasr. Field hoped in particular to recover human skeletal material to further his studies into the physical anthropology of ancient Mesopotamia. In honour of Dr Patten all finds from the 1928 season were numbered with the prefix P(atten)JN. Following a preliminary visit to Jemdet Nasr in January 1928, Watelin closed down the excavations at Kish in March and moved the entire workforce of at least 120 men to Jemdet Nasr for a ten day spell starting on the 13th March 1928. Shelters were constructed for the men, and water was obtained from the nearby catchment basin. Watelin, Field and Eric Schroeder were present throughout the ten day season (information on the 1928 season comes principally from Field 1929, 22-3; 1953, 175-9; Field and Martin 1935).

Conditions at Jemdet Nasr in 1928 were tough. Field mentioned the "excessive heat, the water barely drinkable, sandstorms, and a plague of locusts" (Field 1929, 23). Indeed the imminent approach of Ramadhan coupled with the influx of locusts encouraged Watelin and Field to close the season after only ten days. On the final day Field made two round trips to Kish in the Cadillac, ferrying finds and equipment: "On the last trip I turned as the sun was beginning to throw a long shadow over the barren desert from the low mound of Jemdet Nasr... The Jemdet Nasr period is now as well known as

any of the archaeological periods in Southeastern (*sic*) Asia, but the dark mound still keeps many of its secrets" (Field 1953, 179).

Langdon had set a hard target in 1926, but Watelin more than matched him in his cavalier attitudes to excavation and recording at Jemdet Nasr. Watelin does not appear to have kept any systematic, even non-systematic, records at all of what he was doing on the mound with 120 or more workmen, nor did he make any measured plans of his results. The only surviving records are undated object cards, again succinct to the point of worthlessness, letters and a few photographs. The letters were written in French by Watelin to Langdon who was by then in Oxford: originals are in the Field Museum with copies and English translations by Anne Perkins in the Ashmolean Museum.

Watelin had obviously started his work at Jemdet Nasr armed only with a copy of Langdon's 1927 article in *Der Alte Orient*. In a letter of the 14th of March 1928 Watelin complained to Langdon, "I set the men to work in places which had not been excavated according to the plan in *Der Alte Orient*, whose orientation is false and whose scale is impossible to understand. I do not know how to fit in with the plan rooms which I have cleared." In fact, Langdon's plan was at 1:800, as we have mentioned, something Watelin should have been able to work out for himself. In the same letter Watelin included a sketch plan which makes it reasonably clear that Watelin was working in an area in the centre of Langdon's large building: again he should have been able to see this for himself. Watelin continued to unearth painted pots, seals and a few tablets in the course of his short season. His work is perhaps best epitomised by his own remarks on the back of a photograph of five large spouted vessels in a room (illustrated in Moorey 1976, pl XV.a; here pl 11): Watelin's baffled caption reads simply "Poterie de où?"

With so many men at his disposal Watelin dug at least one deep sondage through more than 4m of deposits, water filling the trench at a depth of 6m. He exposed a series of kilns (Watelin 1934, pl XXVII.1; see also Field 1929, pl XII) and assorted brick structures. Fortunately for Field, the remains of at least six human skeletons were also recovered. Field relates how motion pictures were made of the work at Kish in the 1927-1928 season: "Several thousand feet of good motion pictures were obtained illustrating the work of excavation and form an important pictorial record of the activities of the expedition. Mr. Showket of the 'Mesopotamia Studio' in Baghdad was the professional operator employed from time to time." I have been unable to find out if any footage was shot at Jemdet Nasr and where, if at all, it survives.

Finds from the 1928 season received cursory publication. Langdon published the few new texts (Langdon 1931), while other articles covered painted pottery (Field and Martin 1935), grain (Field 1932a) and human remains (Field 1932b). Watelin hoped to return to Jemdet

Nasr one day but he died in 1934 off the coast of Chile, and Jemdet Nasr remained untouched in any major way until an attempt in 1956 during the Musaiyib project to dig a canal right through Mound B, followed by the start of new excavations in 1988 (Matthews 1989; 1990; 1992b; 1997b).

1.5 The import and impact of Langdon and Watelin's work at Jemdet Nasr

Langdon's discoveries at Jemdet Nasr in 1926 were immediately recognised as being of major significance for the archaeology of Mesopotamia. Exploration over previous decades had only begun to reveal the outline of Mesopotamia's most ancient past. The first investigations in south Mesopotamia, in the early nineteenth century, had been those of Claudius Rich, who conducted a detailed survey of the ruins of Babylon. The artefacts collected by Rich, when sent to Europe in 1821 after his death, were the first Mesopotamian objects to reach Europe in any quantity and stimulated great interest. The story of exploration in the great Assyrian cities—Nineveh, Nimrud, Khorsabad—does not belong here (see especially Lloyd 1980; Larsen 1994), but it is worth pointing out that between 1878 and 1882 Layard's ex-assistant Rassam cut a trail of archaeological incompetence through many of the great mounds of central and south Mesopotamia, including Babylon, Borsippa, Telloh, Sippar and, close to Jemdet Nasr, the site of Cutha. Previously, during the 1850s, the first explorations had taken place in the south, with Taylor digging at Ur and Eridu, and Loftus at Warka and Larsa. French archaeologists dabbled at Kish and Babylon, while Layard himself dug into Babylon and Nippur, but the lack of spectacular stone sculptures weakened their interest and they returned to the relief-clad palaces of the north.

The first Sumerian city to be dug to any degree was Telloh, excavated in largely reckless fashion by the French from 1877, followed by Nippur, excavated by Americans from 1887. The biggest push into archaeological modernity came with the large-scale arrival of German teams at Babylon from 1899 and at Aššur from 1903. While the American Edgar Banks hacked his way through Bismaya (ancient Adab), the excavator of Babylon, Koldewey, sank trenches into the Sumerian city of Fara (ancient Shuruppak) in 1902-1903, recovering substantial quantities of material, including painted pottery, whose true significance was not at the time recognised. Indeed the Fara material from the 1902-1903 excavations was not published until 1931 (Heinrich 1931), several years after the two seasons at Jemdet Nasr. Prompter publication might have meant that today we would be discussing material from a small site called Jemdet Nasr dating to the Fara period (as it happens, the term "Fara period" or "Fara style" is applied as a designation for Early Dynastic IIIA texts and glyptic from Mesopotamia). In the meantime, French archaeologists working in Iran, particularly at the important multi-

period site of Susa, were steadily defining a long sequence of prehistoric and historic occupation. Indeed the Susa sequence was of paramount significance for south Mesopotamian archaeology at least until the time of the Baghdad and Leiden conferences in 1930 and 1931. German excavations at Samarra and Tell Halaf in 1911-1913 yielded painted pottery from earlier prehistoric occupation in central and northern Mesopotamia, but this material was not correctly understood in chronological terms until many years later.

After the end of the First World War the pace of research in Mesopotamia quickened. Hall and Campbell Thompson made initial explorations at the southern sites of Ur, Eridu and Tell al-Ubaid, but it was not until Woolley started work at Ur from 1922, with additional investigations at Tell al-Ubaid in 1923-1924, that a genuine archaeological approach to understanding early Mesopotamian civilisation could be made. Langdon's work at Kish and Jemdet Nasr came at this time. Initial attempts to comprehend the Jemdet Nasr material were centred on the Susa sequence, not a straightforward matter given the 400 km or more which separate the two sites. Key concerns amongst archaeologists and philologists of the 1920s were the dating of the two main Susa pottery styles, I and II, and how these styles might tie in with the question of the origin of the Sumerians, a people lost to history for several millennia until the discovery and decipherment of texts in Sumerian from Telloh and other sites in the nineteenth century. Initial reactions were to equate the Jemdet Nasr painted pottery with the Susa II style as well as with the, in fact much older, painted pottery from Tell al-Ubaid.

The Baghdad conference of January 1930 finally established a south Mesopotamian chronological sequence running from Ubaid through Uruk to Jemdet Nasr, with each period typified by material from its eponymous site. Thereafter the terms "Jemdet Nasr period" or "Jemdet Nasr culture" came into regular use, particularly on the part of Woolley in his assessments of material from Ur and Kish but also, less appropriately, in attempts by others to connect what we now call Ninevite 5 painted pottery of north Mesopotamia with its southern contemporaries.

The proto-cuneiform tablets recovered by Langdon and Watelin were received with interest by the world of Mesopotamian philology. At the time of their discovery the Jemdet Nasr tablets were the oldest form of writing yet discovered, their only rivals being the so-called proto-Elamite tablets from Susa, which in fact are approximately contemporary with the Jemdet Nasr texts. The thousands of even older texts from Uruk did not

appear until the years from 1928 with the resumption of German excavations there, at about the same time as the recovery of slightly later, Early Dynastic I, tablets from Ur. Much smaller collections of archaic texts were excavated in later years from the sites of Kish, Tell Asmar and Tell Uqair (see Matthews 1997c for general review of the origins of writing in Mesopotamia and Iran. All non-Uruk proto-cuneiform tablets from Mesopotamia are now published in Englund and Grégoire 1991; Englund 1996; Englund forthcoming). Using Deimel's publications (Deimel 1922; 1923; 1924) of the Early Dynastic IIIA tablets from Fara, certainly written in Sumerian, Langdon was able in his publication of the Jemdet Nasr texts (Langdon 1928; 1931) to make some sense of many of the pictographic signs employed on these earlier tablets.

In sum, the distinctive material recovered from Jemdet Nasr in 1926 and 1928 took its place within a complex and relatively well-ordered archaeological scheme which was gradually refined and honed as new results appeared from sites widely scattered throughout Mesopotamia and beyond. More recent decades have seen the Jemdet Nasr material form the focus of specific concerns and debates, to the outline of which we may now turn.

In the years following the excavation and publication of material from Jemdet Nasr, investigations at a range of sites in Mesopotamia, including Kish, the Diyala sites east of Baghdad, Tell Uqair, Uruk, Ur, Nippur and Abu Salabikh, amongst others, recovered further material remains comparable in at least some respects to the Jemdet Nasr corpus. In 1983 a conference was held in Tübingen in order to address the fundamental issues which had come to the fore (Finkbeiner and Röllig 1986). The main concern of the Tübingen conference was a desire more tightly and securely to define the material culture of a putative Jemdet Nasr period, indeed to ascertain whether or not it was justifiable to use the term as a chronological indicator at all. Closely related to this issue was a need to define the geographical distribution of Jemdet Nasr material.

But a wider and more significant concern is to explore the possible role or roles of the Jemdet Nasr period or culture, if such can be defined, within the complex and increasingly richly attested processes of social and economic development in Mesopotamia commonly labelled "the rise of civilisation". In this context, chronological and geographical definition may act as a springboard for wider discussion of the place of Jemdet Nasr within the story of the origin and early development of complex, urban, literate civilisation in south Mesopotamia in the late fourth millennium BC.

Chapter two

THE MYSTERY OF LANGDON'S LARGE BUILDING

2.1 The location and context of the site

Before considering the question of the location of the large building excavated by Langdon and Watelin we should clear up any doubts about the location of the site of Jemdet Nasr itself. Langdon's published plan (Langdon 1927, fig 10) mistakenly showed Kish as being to the south-east of Jemdet Nasr: it in fact lies to the south-west. We may reasonably wonder how Langdon managed to make it home to Kish every evening in 1926. Marshes marked on Langdon's plan to the north and south of Jemdet Nasr have long since been drained and then irrigated as part of the general transformation of the landscape. Jemdet Nasr is located close to a substantial cluster of mounds to the east, belonging to the complex known as Tell Barghuthiat, "mound of the fleas", with other sizeable mounds to the north at Rashada. The small mound of Jemdet Ubaid is also indicated to the south of Mound B at Jemdet Nasr. Beyond the inner ring of neighbours lie the major sites of Cutha, Babylon and Kish, all within 40 km or less.

During the 1926 season Langdon spent two days digging with a dozen men at Jemdet Ubaid, concluding that the walls here were of the same date as those on Mound B at Jemdet Nasr. Jemdet Ubaid had been thoroughly dug over by locals searching for antiquities, but Langdon could not ascertain whether any of the painted pots and inscribed tablets came from this mound (Langdon 1927, 69-70). More recent surface survey of Jemdet Ubaid indicates its occupation during the later third and early second millennia BC (Gibson 1972, 140).

The mounds of Barghuthiat, directly to the east and south-east of Jemdet Nasr, were briefly investigated by Langdon in 1926. From the top of Mound D came a large stone slab inscribed with "Palace of Nebuchadnezzar, King of Babylon". The presence of a Neo-Babylonian palace on Mound D of Barghuthiat gives a valid context to the probably contemporary walled guard-post sitting on top of Mound A of Jemdet Nasr a few km to the north-west (Matthews 1989, fig 12, pl XXXIII:c). Watelin dug at Barghuthiat in 1933, the

year before he died, camping with 200 workmen threateningly close to Jemdet Nasr but fortunately resisting any temptation to continue his work there. Limited information about the dating of sites in the vicinity of Jemdet Nasr has been recovered (Gibson 1972) but a thorough modern survey of the region is seriously needed.

2.2 The location and orientation of Langdon's lost building

In his 1926 season at Jemdet Nasr Langdon excavated what was unquestionably a very important and substantial mud-brick building, measuring approximately 95 by 40m. Since its excavation this structure has become a major focus of uncertainty in attempts to understand the nature of Langdon's results at Jemdet Nasr. We have seen that Langdon was no archaeologist, so we may be thankful that he managed to make a plan at all. In the report on his 1926 visit to Jemdet Nasr Henry Field mentioned that Mackay made regular trips to the site from Kish in order to plan the architecture exposed by Langdon (Field 1926b) but, as we have seen, there is no other evidence to support the suggestion that Mackay ever visited Jemdet Nasr during its excavation and, on the contrary, Mackay himself states that Langdon carried out the planning (Mackay 1931, 226). There are two major concerns: location and orientation.

Jemdet Nasr is not a huge site. Mound B measures approximately 350 by 300m at its widest points, containing about 7.5 hectares in total area (for an accurate contour plan of Mounds A and B, see Matthews 1989, fig 1; here fig 2). How is it possible that a building covering about half a hectare could now be lost within such a restricted total area? The trouble is that whereas Langdon made careless and inaccurate records, Watelin in 1928 made none at all. For Watelin all we have to go on is that sketch in his 14th March 1928 letter to Langdon. From the sketch we know, even if he did not, that Watelin was indeed digging in the middle of Langdon's building. But we have absolutely no idea about what he got up to with his 120 men in the remaining eight days of excavation. It

may be that all the visible surface traces, including all those cleaned and mapped in 1988 and 1989 (Matthews 1989; 1990), pertain to Watelin's unrecorded activities rather than to Langdon's partially and misleadingly recorded activities. There is no way of telling at present.

Langdon published a plan of Mound B (Langdon 1927, fig 11) but with the by now familiar problems of scale and orientation. In text the scale is written as 20mm to 100m, i.e. 1:5,000, but the printed scale gives 40mm to 40m, i.e. 1:1,000. In fact the text is correct: the scale is 1:5,000. The orientation is given with north, unusually, to the right and west to the top of the page. In Mackay's publication of the objects from Jemdet Nasr Langdon included a correction (Langdon in Mackay 1931, 223), stating that west should be north. Certainly this alteration makes more sense of the morphology of the mound, steeper to the north, gentler to the south.

On his 1927 plan of the mound Langdon located the palace, as he called it, in the centre of the south slopes of Mound B. A stylised staircase clearly shows the main access to the building from the west, with the walls aligned almost exactly north-south. Leaving aside for the moment the question of orientation (see below), is this the correct location on the mound of Langdon's large building? Langdon's plan of the mounds (Langdon 1927, fig 10) includes a small arrow designated "Palace" pointing to the south-east quadrant of the mound, thus agreeing with his revised version of the plan of Mound B (Langdon 1927 fig 11). In a detailed treatment of this problem Margueron discussed most of the possibilities, concluding that the building was indeed located in the south-east quadrant of the mound (Margueron 1982, 25-7, fig 6b). One of his clinching arguments, however, was that traces of walls visible on the surface of Jemdet Nasr and photographed by him in 1968 (Margueron 1982, fig 11:a-c), supported this interpretation. In fact, as pl 2 illustrates, our cleaning of the surface of the mound in 1988 clearly demonstrates that the walls photographed by Margueron in 1968 lie in the north-east, not the south-east, quadrant of the mound.

Work at Jemdet Nasr in 1988 and 1989 was partly aimed at solving the question of where this large building was located. If we look at the plan of the mound, fig 2, some gross features stand out. Along the south edge of the mound there is a deep cut which we originally saw as belonging to Langdon's explorations. The locals soon informed us, however, that this trench resulted from an attempt in 1956 to dig a drainage canal right through the mound as part of the Musaiyib irrigation project, an attempt promptly stopped by a delegation from the Department of Antiquities in Baghdad. Apart from this trench there is actually very little disturbance along the south stretches of Mound B, and there are also no large spoil-heaps or obvious trenches on the west slopes of the mound. To the north and east, by contrast, there is every evidence of massive activity, including substantial spoil-heaps and wide expanses of featureless silt, accumulated

in old trenches (Matthews 1989, 228-31; 1990, 25-7). Langdon's large building must lie somewhere in the east half of Mound B. By cleaning and planning the surface architecture (Matthews 1989, fig 2; 1990, fig 1; here fig 2) I believe we relocated the building in the north-east quadrant of the mound, but there is still room for uncertainty and a location in the south-east is not out of the question. If we turn to the issue of the building's orientation, however, the case for the north-east quadrant is strengthened further.

In his German report of 1927 Langdon included a plan of the large building (Langdon 1927, fig 12). It is reproduced with north at the top right corner of the building and the scale is allegedly 1:80, details which thoroughly confused Watelin in 1928. Langdon later made no mention of the erroneous scale, but a scale of 1:800 makes sense of the plan within the context of measurements given by Langdon in his report. Langdon later confessed that the orientation of the published plan of the mound, his fig 11, was incorrect, as we have seen. The corrected version gives an almost exact north-south orientation for the building's main axis. Langdon's plan of the mound, however, his fig 12, orients the main axis as running north-west—south-east, with the corners oriented towards the cardinal points. Which version, if any, is correct?

We need to return to the original plans if at all possible. In fact, there are two pencil plans of the large building plus a couple of small area plans, all of them in Oxford. One plan (pl 3) covers three sheets of stiff paper, most of the building fitting onto one sheet, with extension sheets to cover one end of the building and the stair access. This plan has a characteristically confusing pencil note indicating "scale 1 mm = 10 mm, 10 mm = meter (*sic*)". No orientation is indicated. There are some notes giving depths of rooms, but solely in the area of the stair access, up to a maximum of 100 (presumably cm) deep. Another pencil plan in Oxford (here pl 4) depicts a set of half a dozen rooms which Moorey correctly interpreted as fitting onto one corner of the large building, as in fig 3 (Moorey 1976, fig 3).

There is another intriguing plan fragment in Oxford, shown in pl 5. This plan shows only a couple of rooms but with detailed measurements, in cm, along each wall face. There is only one place on the large building where this plan will comfortably sit, and that is along the rooms immediately to the right as one enters the building from the stairs along the long axis. This fragment thus gives us some detailed and absolute figures for the sizes of rooms and therefore for the building as a whole. For a start, they confirm the 1:800 scale of Langdon's first publication of the building in 1927 (Langdon 1927, fig 12).

But Langdon's 1927 publication of the building is based on another plan, not the three-sheet one described above but the one shown in pl 6. This plan is drawn in pencil on a single sheet of stiff paper with added paper strips along the edges and has several annotations clearly

meant for the eyes of the editor of *Der Alte Orient*. The plan shown in pl 6 seems to have been drawn up in Oxford by Langdon using pl 3 as a guide. It looks as though he wanted to get the complete plan on a single sheet of paper for convenience of transport to Germany for his 1927 article.

Differences between the two pencil versions of the large building have been discussed by Margueron (1982, fig 7). What is clear is that the plan in pl 3 is earlier than the plan in pl 6. A close look at the rooms depicted in the detailed fragment, pl 5, shows differences in the widths of the two rooms, one being 233 cm wide, the other 256 cm wide. The difference is accounted for by a thickening of the inner wall of the narrower room. This detail is completely missing from the same rooms in the pl 6 plan, which supports the suggestion that Langdon copied, or miscopied, the pl 6 plan from the pl 3 plan. The overall difference between the pl 3 and pl 6 plans, however, is the rather squat appearance of the later version, caused by the way in which Langdon expanded the width of the rooms along the main range. How and why did he do this? As we have surmised above, his main aim was to get the plan onto a single sheet of paper. To do so he scaled down the length of the main range of rooms but, because it was not necessary, he omitted to scale down the width of these rooms. They therefore appear more squat and many of the walls are thicker.

Not surprisingly, there is plenty of room for confusion when we examine the pencilled orientation notes made by Langdon, and perhaps others, on the later plan, pl 6. In faint pencil there are indications of N, E, W and S at the mid-points of the sides of the building. There are also darker lines with arrows and letters denoting SWS - NEN and ESE - WNW along two sides of the building. Within the building plan itself there is a faint pencil symbol comprising a cross headed by an arrowed line. If we take the long axis of the cross as pointing north then we end up with the long axis of the building as oriented ENE - WSW. This is an orientation which fits excellently with that of all architecture planned by us on the surface of the mound in 1988 and 1989, including the expanse of walls in a silt matrix in the north-east quadrant of the mound (Matthews 1989, fig 2; 1990, fig 1; here fig 2). This orientation also fits with the written account given by Langdon in his 1927 report. Here he tells how the building is on the east side where the mound has a gentle slope, and that the rooms are well preserved on all except the north side where they are badly eroded due to weathering of the north edge of the mound (Langdon 1927, 70). Finally, Langdon states (1927, 72) that another large building stands at the south-west corner of the main building—precisely where the suite of extra rooms fits onto the plan (fig 3). If he is correctly using his cardinal points in all these statements—and we can never be sure of that—then taken together they can only mean that the large building was located in the north-east quadrant of the mound.

2.3 *The plan and construction of Langdon's large building*

What was the nature of this elusive yet important building at Jemdet Nasr? In terms of plan, it extended over an area at least 95 by 40m, more if we include the extra rooms on the south-west corner, although we may agree with Langdon that these belong to a separate but abutting building. The entire building appears to have sat on a low platform, only partially traced by Langdon. Access to the building began with a stairway of unbaked brick on the main south-east range, ascending to a small anteroom from which one could proceed to all rooms and courts of the building. The rooms, at least as excavated, are arranged in linear sequence, many, but not all, being accessible from the central courts. Langdon admitted that some of the rooms on the east side had no connection with the interior of the building, suggesting that more of the building must have existed to the east. We have to face the possibility that not necessarily all of the planned walls and rooms belong together. Mackay is quite explicit about the difficulty of tracing many of the walls (Mackay 1931, 226). Langdon found a small brick platform, topped by two large vessels, just inside the main entrance to the building. A much more substantial platform to the north constitutes the main internal feature of the building, mounted by three broad steps climbing a total of 1m above the court.

Open areas appear to form a substantial part of the large building. Several kilns, probably for pottery or brick firing, were excavated in what Field calls "the largest room discovered at Jemdet Nasr" (Field 1932a, 309), as illustrated in Field 1929, pl XII and Watelin 1934 pl 27:1 (pls 7-8). Our own work at the site uncovered more kilns and areas of industrial activity around what we understand to be the fringes of the large building (Matthews 1989, 230, pl XXXIII:b; 1990, 27; 1992b, 198). Much of the burning detected by Langdon and attributed by him to a massive conflagration of the entire site can in fact be traced to the rake-out and general debris from these firing activities in the vicinity of the large building.

The walls of the building were constructed of mud-brick, each brick measuring 20 by 8.5 by 8 cm, otherwise known as *Riemchen*. These bricks were generally unbaked but a few baked examples occurred. A second type of brick measured 23 by 9 by 6.5 cm, so-called *Flachziegel*, and was always baked (pl 9). These bricks had three holes pierced through one face and were never found in walls but either as paving (Mackay 1931, 289) or as scattered rubble (Langdon 1927, 72). In 1989 we located a scatter of these baked three-holed bricks in the north-east area of the mound (Matthews 1990, pl IV:a; visible in pl 10). In his 18th March 1928 letter to Langdon, Watelin mentions baked bricks measuring 28 by 16 by 5 cm, also with three holes, but there is no other evidence for bricks of these dimensions. Watelin also mentions unbaked bricks of 27 by 13 by 8 cm, substan-

tially larger than those described by Langdon and Mackay. They may have come from structures dug by Watelin in 1928 other than Langdon's large building of 1926. According to Mackay the large building had a roof of wood with reed-matting and clay covering, as is the practice today, and there were ceramic gutters or drains (Mackay 1931, 226, 289). During our 1980s work in the north-east area we also found substantial quantities of bitumen lumps and pieces of burnt roofing clay with reed impressions (Matthews 1989, 231).

Some architectural elements are represented amongst the collections of Jemdet Nasr artefacts in the Ashmolean and Field Museum stores. A total of twenty-seven complete and three fragmentary baked bricks are kept in the Field Museum (fig 52:1), all of them with a line of three holes pierced through, or almost through, their thickness, each hole c. 1 cm in diameter. The bricks have smooth sides and a raised lip along the edges of the top, clearly showing that they were mould-made. On the underside there are impressions of interwoven split-reed matting, demonstrating that the bricks were laid out to dry on reed mats before being baked in kilns, the three holes perhaps facilitating this process. Bricks exactly like the Jemdet Nasr three-hole ones were found in excavations at Eridu, where they are described as belonging to "building remains found underneath the Amar-Sin ziggurat" (Safar *et al.* 1981, 240, fig 119). Similarly shaped bricks, but without the three holes, were found at Tell Uqair, close to Jemdet Nasr (Lloyd and Safar 1943, pl 16).

Fragments of baked clay gutters or drains from Jemdet Nasr are also stored in the Ashmolean and Field Museums (fig 52:2-3, pl 40). One has a fixing hole through its base at its narrower end, probably to secure overlapping segments to each other or to fix the drain to a surface. Very similar drain pieces, all of baked clay, are known from Tell Uqair (Lloyd and Safar 1943, pl 16), Farukhabad (Wright 1981, fig 76:a) and the Uruk region (Adams and Nissen 1972, 214). They show a need to channel water away from sensitive walls and surfaces constructed of unbaked mud-brick and mud plaster, as in the large building at Jemdet Nasr.

Another possibly architectural element found at Jemdet Nasr is illustrated in fig 52:4, the only example from the site. This artefact is of baked clay, shaped like a bookend with two faces at right-angles, each bearing sixteen circles in a grid. A stout handle connects the two faces at the back and there is bitumen along the edges. Similar examples have been excavated at Uqair (Lloyd and Safar 1943, 155, pl 28:2), Uruk (Jordan 1931, pl 19), Tell Brak (Mallowan 1947, pl 30:12) and Hassek Höyük (Behm-Blanke 1989, pl 8), and have been interpreted as elements of decorative wall designs, but it is not easy to understand their role within such a construction. They may also have functioned as stamps, making series of gridded circular designs on soft wall plaster in the manner of wall-cone decoration.

Wall-cones themselves were found in small quantities at Jemdet Nasr, as illustrated in fig 53, pl 41, and include thin and thick varieties with traces of red paint or bitumen at the thicker end. They occur at a wide range of small and large sites across Mesopotamia, but of course are best known from the large cult buildings at Uruk in the Uruk period. There is no evidence to suggest that any of the wall-cones, or the gridded circle device discussed in the previous paragraph, had a direct connection with the large building at Jemdet Nasr, as no *in situ* finds of wall-cones were made at the site. Some of the closest parallels for the Jemdet Nasr wall-cones come from approximately contemporary deposits at such Mesopotamian sites as Fara (Martin 1988, 191:1-2), Abu Salabikh (Postgate 1983, 87), Uqair (Lloyd and Safar 1943, pl 16), Eridu (Safar *et al.* 1981, fig 118), Ur (Woolley 1955, pl 15) and Ubaid (Hall and Woolley 1927, pl 15:2).

2.4 *The contents of Langdon's large building*

Perhaps the most tantalising, and in the end frustrating, aspect of the 1920s excavations at Jemdet Nasr is the wasted potential for a valid contextual approach to proto-historic Mesopotamian society. Langdon had clearly stumbled upon an immensely important building on Mound B at Jemdet Nasr, and from many of its rooms he recovered a most distinctive assemblage of artefacts, including proto-cuneiform tablets, painted pottery and engraved cylinder seals. What do we know about the exact provenances of any of these objects? The short answer, and there is no long answer, is very little indeed, but let us consider all the evidence.

On fig 3 findspots of tablets, painted pottery and seals are marked by T, P and S respectively. These allocations are based on pencil notes on the two versions of the plan of the large building as well as on comments in Langdon's early publication (Langdon 1927). Despite these indications, however, we are not able to identify a single specific object as originating from a single specific room.

As far as tablets are concerned, in his 18th February 1926 letter to Mr Davies of the Field Museum, Langdon mentioned the discovery "last week" of some 150 pictographic tablets, probably, in his opinion, a temple archive (Matthews 1992a, 2, 5). In all, something like 215 tablets were excavated at Jemdet Nasr in 1926, so the find of 150 of them together at some time around Valentine's Day 1926 was by far the single most important epigraphic find ever made at the site. As already mentioned, the failure of Langdon to record the tablets even in the most basic manner on dated object cards means that we are not able to identify with certainty any of the 150 tablets within the recovered total of tablets. In his 1927 report Langdon describes how about 150 tablets were found in the room on the outermost south-west corner of the building (Langdon 1927, 73), clearly the small room immediately adjacent to the suite of rooms belong-

ing to an abutting but separate structure. There can be little doubt that this room functioned as the major archive store of the building.

On the plans Langdon marked other tablet findspots in several of the long narrow rooms along the main casemate wall, as well as in the extreme north-east corner. In his 1928 excavations somewhere within or around Langdon's building, Watelin found further scatters of fragmentary tablets probably along the north limits of the building, as marked on his sketch. In all cases we cannot be sure that the tablets belong directly to the large building from which they were recovered. Some or all of them may originate from eroded levelling debris overlying the building, for example, or from eroded bricks collapsing out of the upper parts of the walls. But the find of 150 tablets within the walls of a small well-defined room does suggest that at least most, and perhaps all, of the tablets can be closely associated with the building as planned.

The missed opportunity for secure provenancing of the Jemdet Nasr texts is particularly galling in view of the complete lack of primary contexts for all other proto-cuneiform texts from Mesopotamia (as summarised in Nissen 1986). Archaic tablets have been excavated from Uruk (c. 4,000 tablets, all from rubbish deposits or construction material), Ur (c. 375 tablets, all from rubbish deposits), Uqair (four tablets, possibly from construction material) and the Diyala sites of Khafaje and Tell Asmar (three tablets, all from rubbish deposits). Outside the Mesopotamian heartland small quantities of archaic texts have been found in rather more primary contexts, such as on the floors of contemporary buildings (see Nissen 1986, 330 for discussion). The archive of 150 tablets from the south-west corner room in the large building at Jemdet Nasr is thus extremely important in being, by some way, the earliest reasonably secure attestation of a textual archive. Although we might suspect that many, even all, of the proto-cuneiform texts from Uruk and Ur once belonged within large-scale archives, it is not until some 500 years later, in the Early Dynastic III period, that we have secure archaeological evidence of such practices in Mesopotamia. As to their contents and significance, the social and administrative import of the Jemdet Nasr tablets is briefly considered in the following chapter.

Turning now to seals, again we are unable to relocate a single specific seal to a precise findspot in the building. We do know that seals occurred, in uncertain numbers, in two rooms on the east side of the building and that Watelin had found "about 15 cylinder seals and some very old seals" within one day of starting to dig in Langdon's building (according to his letter of 14th March 1928, quoted in Moorey 1976, 99). Strangely we do have some contextual information about the only clay sealing recovered during the 1920s excavations. This sealing (depicted in fig 7:8, pl 19) comes in two large fragments and has a piedmont style scene of a quadruped with other motifs. In a rare moment of loquaciousness the object card, dated 11th February 1926, reads "Prof. Langdon

states that he found these fragments under a plano-convex wall". Given the absence of plano-convex walls in the large building, we may reasonably assume that these sealing fragments were found elsewhere on the mound.

A major element of the building's inventory is the pottery and again Langdon's early report of 1927 is vital in addressing this issue. There appear to have been substantial occurrences of *in situ* pots standing or lying on floors within the large building. Two sizeable vessels, which crumbled to pieces on exposure, were found stood upon a little platform just inside the main access (Langdon 1927, 72)—they may have held and dispensed water for washing hands upon entry to the building. On his plan Langdon marked with an asterisk those rooms which contained notable quantities of painted pottery (Langdon 1927, fig 12). He reported that the two rooms adjacent to the central platform with three steps were full of splendid painted vessels, while painted sherds occurred in almost every room and in rubble in the courtyards (Langdon 1927, 73). Four jars were found together in the corner of one room (Field and Martin 1935, 311). The room with asterisk on the west side of the building contained many plain vessels as well as a pot in the shape of a pig (Langdon 1927, 73; here fig 38:1). A small blackened jar containing charred grains of wheat was found lying against the wall of one of the small rooms (Field 1929, 12; 1932a, 304).

Further *in situ* vessels were uncovered in Watelin's excavations. His letters of 14th and 18th March 1928 mention the discovery of a few painted vessels and numerous sherds. A group of at least five very large spouted vessels was found together on the floor in the corner of one room (illustrated in Moorey 1976, pl XV:a; here pl 11). At least two of these vessels can be identified and one is now housed in the Iraq Museum (PJI176 = IM6122), its object card reading "From group of 6 large kettles in palace". An unpainted jar containing charred barley grains was found in a small room "lying toward the northeast end of Jemdet Nasr" (Field 1932a, 308-9), presumably part of the large building.

From later work at the site in 1988 and 1989 it is worth pointing out that careful recovery of surface pottery over much of Mound B yielded higher frequencies of painted sherds in the north-east area than in other parts of the mound (Matthews 1990, 26-7). While there are certainly chronological aspects to this issue, the occurrence in certain areas of the mound of typical Jemdet Nasr plain pottery types, unaccompanied by decorated sherds, strongly suggests that the painted pottery is significantly associated with the large building in the north-east area.

2.5 *The function of Langdon's large building*

Having exhausted the subjects of the location, orientation and contents of the large structure excavated by Langdon and Watelin in 1926 and 1928, we now have to face the most difficult issue of all: what was the social function of this most unusual building?

There can be no doubting the non-domestic nature of this structure. Whatever its function it is far too large to have served as a domestic dwelling. Langdon called it a palace while Mackay preferred to see it as "a small temple surrounded by priests' quarters" (Mackay 1931, 226). Nowhere does Langdon discuss his reasons for identifying the building as a palace, and it is difficult to agree with this interpretation. Neither is it easy to situate the building within the broad context of large buildings from the whole span of Mesopotamian architecture. Its plan bears little or no relation to buildings which have been identified, with varying confidence, as temples (Heinrich 1982) or palaces (Margueron 1982).

In his review Moorey compared the Jemdet Nasr building in a general way with contemporary large-scale structures excavated at Uruk and viewed as cultic and administrative in nature (Moorey 1976), an interpretation largely accepted in Margueron's analysis (Margueron 1982). In particular, Moorey drew attention to the shift at Uruk from the grand, well-planned architectural layout of archaic level IV to the more dispersed arrangement of smaller buildings in archaic level III, contemporary with Jemdet Nasr. At Jemdet Nasr itself we have the faintest hint of an imposing well-built *Reimchen* structure directly underlying, and on the same alignment as, Langdon's large building (Matthews 1990, 32). As is clearly demonstrated by the pottery, there is unequivocal evidence for a Late Uruk presence at Jemdet Nasr, and we should certainly entertain the idea that Langdon's large building is the latest version of a series of substantial and important buildings existing over a significant period of time.

Margueron showed that the plan of the building could be divided into several discrete or semi-discrete units (Margueron 1982). There are indications that some of the rooms along the main south-west to north-east range are only accessible from other unexcavated rooms lying to the south-east. There are also the additional rooms, perhaps belonging to a contemporary but separate large building, located on the south-west corner of the large building. These hints suggest that the building as planned may only be a fraction, albeit a significant one, of the original complex of structures. It should also be considered that the thicknesses of the main walls of the planned structure are such that an upper storey could have existed. The planned rooms are sizeable enough to have served as store-rooms, especially of non-bulky materials. We know that quantities of grain and perhaps spices were contained within the building. Other perishable items such as finished textiles, dates and other foodstuffs could also have been stored in these rooms, under the control of a central administration.

An administrative interpretation of the building's purpose is supported by its recovered contents, in so far as we can identify them. We can be fairly confident that large numbers of proto-cuneiform tablets, including at least one sizeable archive, lots of painted and plain pots, including many standing *in situ* on floors, and some num-

bers of cylinder seals were all recovered from within the building and can be connected with its function in some way. As we will see in the following chapter, the tablets alone strongly point to an administrative and economic context for the building. We should not ignore the evidence for craft activities in and around the building. We have mentioned above the kilns and ovens found both in the 1920s and the 1980s excavations. The manufacture of pottery (Moorey 1976, 100), perhaps of the painted pots so typical of Jemdet Nasr, may have been a fundamental element in the role of the building complex. If so we can expect the shaping, firing and decorating of the pots all to have taken place within the confines of the complex.

The survival of numbers of pots *in situ* suggests that the building was destroyed violently and such is the interpretation provided by Langdon from the start (Langdon 1927, 69; Mackay 1931, 226-7). We need also to bear in mind that much of the burning of surrounding deposits may have come from the pursuit of fire-using craft or cooking activities in the area. Although the large building itself seems not to have been rebuilt, we have recovered evidence for later occupation and administrative activity in the north-east part of the mound, in the form of an extensive rubbish dump containing very early Early Dynastic I pottery and seal impressions (Matthews 1990, 32-6). It is possible that the large building thus had not only a Late Uruk predecessor but also an Early Dynastic successor, at least in some form. It is greatly to be hoped that fieldwork in and around this large building will one day again prove feasible, and that it will shed some much needed light on what is certainly one of the most important building complexes from ancient Mesopotamia.

2.6 Other trenches excavated in 1926 and 1928

Although most of Langdon's and Watelin's work was focused on the large building, other trenches were opened on the mound, especially by Langdon, and we have some very limited information about what was found in those trenches. As already discussed, several rooms of an adjacent large building were excavated at the south-west corner of the main building and here Langdon recovered painted and plain pottery (Langdon 1927, 72). According to him, his trial trenches B and C, which must have been on the south and west sides of Mound B, produced no results at all, not even a single wall (Langdon 1927, 72). But three larger areas, which must be trenches H1, H2 and H3, and which Langdon tells us were near the summit of the mound, were more productive, yielding numbers of self-contained mud-brick houses. In the central area designated H1, which had been severely affected by fire, more painted vessels and a store of charred wheat grain were recovered from rooms (Langdon 1927, 72-3). Plain pottery was excavated from a room beyond the north side of the large building (Langdon 1927, 70-1), and miniature vessels in green fabric (compare Matthews 1989, fig 8) were found in the houses at the highest point

of the mound (Langdon 1927, 72-3).

We have no direct information at all about the location of Watelin's trenches outside the large building, but from Field's comments on the graves (see below) we can at least determine that he excavated trenches on the west and central areas of the mound (Field 1932b, 968-9).

These snippets indicate that, contrary to Langdon's assertion that Mound B comprised only a single large building (Langdon 1927, 70), other structures were found on the mound, and that these included apparently domestic mud-brick houses, some of which may have been of plano-convex brick. In our own work we uncovered and excavated parts of such buildings of Early Dynastic I date towards the centre of the mound (Matthews 1989, 242-4; 1990, 31-2). It is also clear from the pottery at least that Langdon must have excavated areas of Late Uruk date, completing missing any walls which may have been present. Surface observations indicate extensive Early Dynastic I occupation across the west and central areas of Mound B, with Late Uruk evidence especially along the south parts of the mound (Matthews 1989, 227).

2.7 Graves

No graves were found in 1926 but in the 1928 season six graves were excavated, much to Henry Field's delight as he had raised the funding for the season on the promise of skeletal finds. All human remains were in poor condition due to the wet soil and their proximity to the surface of the mound (compare Matthews 1990, pl V:a). Our information on the graves can be summarised as follows (based on information in Field 1932b; Field and Martin 1935; Moorey 1976, 100):

Grave JN1: "Fairly complete skeleton found at a depth of 75 cm at the eastern end of the mound. The skull and long bones were badly crushed. The grave furniture consisted of one unpainted pottery vessel" (Field 1932b, 968). In addition, the 1928 object register cards state that a single copper bowl, PJN175, was "found with grave JN1". The current whereabouts of this bowl are unknown. Three other copper containers, PJN174A-C (= F158254), are described as "found together, with no skeletal remains".

Grave JN2: "A fragmentary skull found at a depth of 50 cm. The skull was badly crushed and no observations were possible. Grave furniture consisted of two badly broken painted pots and a number of individual beads" (Field 1932b, 968). The two pots are illustrated in Field and Martin 1935, pl XXXII:4-5. Field there states that the

skeleton was flexed and lying on its right side (Field and Martin 1935, 317). Both vessels are covered in a light red slip and one has incision on its upper rim surface. Field suggests they may be late Jemdet Nasr (Field and Martin 1935, 317). On the object register cards the pot PJN172, a vase, is identified as being from burial JN2. The two painted vessels PJN172B-C are likely to be the pots illustrated in Field and Martin 1935, pl XXXII:4-5, so there were probably three vessels with this burial. The beads were numbered PJN172D and have the Iraq Museum number IM5889, but their nature is now unclear.

Grave JN3: "A flattened skull found at a depth of 75 cm slightly east of JN1. Grave furniture consisted of a painted kettle and two unpainted pottery jars" (Field 1932b, 968). The painted kettle is illustrated in fig 26:4, previously published in Field and Martin 1935, pl XXXIII:2 but without the six-pointed star.

Grave JN4: "A complete skull found at the western side of the Tell at a depth of 1.25 m. The skull was slightly crushed...No grave furniture was found with this skull, but fragments of broken painted and unpainted jars were closely associated with these human remains" (Field 1932b, 968-9).

Grave JN5: "A fragmentary skull found near JN4 at a depth of 1.25m. There was no grave furniture" (Field 1932b, 969).

Grave JN6: "A very fragmentary skeleton found in the centre of the Tell at a depth of 75 cm. There was no grave furniture" (Field 1932b, 969).

It seems that there was probably another burial excavated in 1928. The object register cards for items PJN117A and PJN117C, both pots, state they come "from grave outside palace SE, at depth of 1/2 metre. V. plan", a tantalising suggestion that a plan was made showing the location of the palace and associated features including burials. As far as we know no plan survives from the 1928 season, except that sketch in Watelin's letter of 14th March 1928. PJN117A has the Iraq Museum number IM6182, while PJN117C is now lost.

During our 1980s work a few graves of Late Uruk and Early Dynastic I date were recovered from near the surfaces of Mound A and B (Matthews 1989; 1990). No distinct cemeteries have thus been found at Jemdet Nasr, but scattered graves occur, some of which were certainly intra-mural.

Chapter three

THE MOST DRAMATIC OF ALL OUR FINDS

3.1 *The discovery and publication of the Jemdet Nasr tablets*

There is no doubt that it was principally the prospect of recovering archaic proto-cuneiform tablets which encouraged Langdon to sink his trenches into Jemdet Nasr in 1926. As outlined in Chapter 1, locals had brought tablets to the camp at Kish in 1925 and it is possible, though by no means confirmed, that finds of tablets had been made at the site earlier in the century. Unquestionably the most significant find of tablets was that made by Langdon during the course of the 1926 season, with pride of place going to the probable archive of 150 tablets recovered from a single room of the large building at some time around the middle of February.

In his autobiography Field gives an account of Langdon's emotions upon recovering the first excavated tablets from Jemdet Nasr: "Then, just as we were about to leave in order to be back in Kish before nightfall, one of the workmen clearing the floor of a small room found two tablets. In a flash Langdon was on his hands and knees. After he had cleaned the surfaces with a small brush he took out his pocket lens; then, squatting on the floor of that mud room, he let out a whoop of joy such as I had never thought to hear from the throat of any Oxford professor. As we gathered around him he was shouting: 'This is the most dramatic of all our finds! This is the first pictographic tablet in linear script to be found in this part of the world. It is the earliest form of writing here! It is much older than the cuneiform tablets. It must be nearly six thousand years old—possibly earlier....'" (Field 1953, 81). The allusion to the tablets being found actually on the floor of a room is intriguing, and adds to the body of evidence closely linking the tablets to the architecture within which they were found. The balance of this evidence points to the tablets being closely associated with the large building excavated by Langdon and, two years later, by Watelin (Nissen 1986, 321).

The 1926 tablets were published by Langdon, including hand copies of texts, copies of some of the seal impressions attested on many of the tablets, a sign list and a brief commentary (Langdon 1928). Langdon pointed to

the fact that the Jemdet Nasr tablets were inscribed with a sharp pointed stylus rather than a stylus with triangular narrow head. He dated the tablets to approximately 3,500 BC, probably about half a millennium too early in fact. In his commentary he provided some elementary comments on the contents of the texts and on the counting systems used therein. Mackay also dated the tablets to around 3,500 BC, commenting that the characters resembled pictographs rather than cuneiform signs (Mackay 1931, 227).

Langdon published tablets found by Watelin in 1928 in a brief review (Langdon 1931). We may reasonably doubt Langdon's attention to detail given his opening line: "The following tablets were excavated (*sic*) by M. L. Ch. Watelin in the course of two weeks' intensive work at Kish (*sic*) in the spring of 1927 (*sic*)". He did of course mean that they were excavated at Jemdet Nasr in the spring of 1928. Only six new tablets were published in the 1931 article, while 188 tablets featured in the publication of the 1926 season. Twenty additional tablets from the 1926 season missed these preliminary publications altogether (Brice 1979). The complete corpus of tablets from Jemdet Nasr finally received a publication befitting its significance with the painstaking work of Englund and Grégoire (1991), their seal impressions illustrated in the same volume (Matthews 1991) and discussed in a subsequent publication (Matthews 1993).

3.2 *The import of the tablets*

Given the exacting publication programme currently being undertaken on all archaic texts by the Berlin group, coupled with my own shortcomings with regard to the subject, I am not going to make an exhaustive attempt to explicate the meaning of the Jemdet Nasr texts. But a full understanding of the significance of the site and its excavation would not be possible without some consideration of their import, however brief and summary (the following comments are based on Englund and Grégoire 1991, 9-16; Matthews 1993, 28-30). In any case all remarks are provisional pending the publication by the Berlin group of a full commentary on these texts.

It has always been clear that the Jemdet Nasr

tablets are largely, even exclusively, administrative in nature. Langdon was quick to realise that no early precursors of Sumerian literature were to be found in these succinct inscriptions. The types of transactions and business dealt with can be summarised as follows:

1. Six tablets deal with calculations concerning the areas of fields, estimating surface areas from linear measurements, suggesting a concern on the part of some authority to measure and/or allocate set areas of productive land.
2. Six tablets deal with the measurement of grain, principally barley, in association with cultivated fields, in connection with either sowing or harvesting.
3. Ten tablets are concerned with the measurement of grain, principally barley, in connection with ploughing and seeding.
4. Sixty tablets deal with the measurement and/or disbursement of rations of grain, principally barley.
5. Seventy-eight tablets consist of accounts in various forms, some of them complex summaries of a range of commodities, others non-summary lists of items including cereal products, beer, livestock, fish, fruits and textile products.
6. Twenty-one tablets record the distribution of specific goods, principally dried fruit and textile products. These tablets, thirteen of which are sealed with the so-called "city seal" (see Chapter 4), appear to belong to a coherent group and were probably stored as an archive or part thereof.
7. Eighteen tablets give accounts in sexagesimal and bisexagesimal notation of unknown objects or commodities.
8. Thirteen tablets are concerned with the administration of moderate-sized herds of livestock.
9. Twelve tablets deal with groups of labourers working for a central authority.
10. Two tablets are of the so-called "numerical" type, having no signs other than numerical notation.
11. Two tablets appear to be animal identification tags.
12. Two tablets are lexical lists, one dealing with types of vessels, the other with toponyms.
13. Thirteen tablets have uncertain contents.

In sum, the Jemdet Nasr tablets are concerned with a wide range of economic and administrative matters. Topics covered include the administration of agricultural productivity and produce, the control of herds of animals, the distribution of rations of grain, the movement of quantities of specific commodities, the detailed accounting of various commodities, the control of groups of human labourers, and the listing of types of words. The tablets attest a powerful authority controlling numbers of people in terms of their labour, their daily provisions, their grain and livestock. At the same time this authority dealt in a range of economic transactions. Repeated occurrences of sign combinations probably to be interpreted as a powerful institution strongly suggest that much or all of this

highly controlled business was in the hands of a single authority. There is every reason to believe that the architectural manifestation of that authority is the large building excavated by Langdon in 1926.

3.3 The tablets from Jemdet Nasr and the development of writing

In palaeographic terms the Jemdet Nasr texts are comparable to those of Uruk Eanna Archaic III, a more developed writing stage than the earliest proto-cuneiform texts of Uruk Eanna Archaic IV (Nissen 1986). The significance of the Jemdet Nasr texts lies in the fact that they date to a timespan very shortly after the presumed first appearance of true writing. The earliest written texts, probably from anywhere in the world, have been excavated from secondary or tertiary deposits in Archaic level IV of the Eanna excavation area at Uruk.

Due to the paucity, often complete absence, of grammatical elements, attempts to relate the proto-cuneiform texts of Mesopotamia to a language or languages known from later evidence have not been successful (Damerow and Englund 1989, 1). The earliest texts unequivocally written in the Sumerian language date some half a millennium later, as in the Early Dynastic III texts from Abu Salabikh and Fara. Comparative studies indicate that early writing systems generally employ a one-to-one equivalence of sign, or ligature, to word, or of sign to signified thing. This aspect of proto-cuneiform writing may suggest an origin of literacy within a context of linguistic diversity, as an attempt to devise and implement a recording and communication system which transcends language barriers amongst ethnically and linguistically mixed groups of peoples (Matthews 1997c). This interpretation of the origin of writing finds agreement in the archaeological and artistic evidence from Uruk and other sites of later fourth millennium date, which strongly supports a picture of a massive increase in inter-regional interactions across large distances at this time (AlGaze 1993). The lack of grammatical elements in proto-cuneiform texts suggests that the texts were not designed to relate to a single spoken language but on the contrary may have been intended to be read in more than one language. It may therefore be meaningless to search for a single linguistic equivalent for proto-cuneiform.

The subsequent development of proto-cuneiform script away from a one-to-one match of sign or ligature to signified thing and towards a range of possible relationships between sign, signs and signified thing or concept, is likely to represent the tortuous process whereby written script became assimilated with a single dominant spoken language (a process discussed in Trigger 1998). As the evidence now stands, it appears that at least half a millennium was required for this development to complete its course in south Mesopotamia. The proto-cuneiform texts from Jemdet Nasr stand much nearer the start rather than the end of that long, complex and sparsely attested process.

Chapter four

SEALS AND SEAL IMPRESSIONS

4.1 Introduction

Glyptic art was recovered in various forms during the 1920s seasons at Jemdet Nasr. These forms comprise stamp seals, cylinder seals, cylinder seal impressions on proto-cuneiform tablets and a single example of a clay sealing with cylinder seal impressions. In this chapter we look at various aspects of the iconography and function of this glyptic assortment.

4.2 Stamp seals

About half a dozen stone stamp seals were recovered in total (fig 4:1-5). They are all extremely basic in design and execution, with simple drill-hole motifs and pierced holes for suspension. Similar stamp seals have been excavated at a range of Late Uruk to Early Dynastic I sites including Fara (Martin 1988, 224) and Telloh (de Genouillac 1934, pl 38). Impressions made by these stamp seals are as totally absent at Jemdet Nasr as they are at every other approximately contemporary site in Mesopotamia. If these objects had a role to play within the administrative bureaucracy of ancient Jemdet Nasr then we lack any convincing evidence for it.

4.3 Cylinder seals

The cylinder seals found by Langdon and Watelin at Jemdet Nasr were so distinctive as to form a major element in what came to be viewed as the typical Jemdet Nasr material culture (seals from the 1926 season are well treated in Mackay 1931). Cylinder seals were found by Langdon within the large building, as marked on the plan (fig 3). They occurred in two rooms, once in association with pottery and once with tablets and pottery. In his letter of 14th March 1928 Watelin talked of finding fifteen cylinder seals only one day after starting work. It is not clear if he had stumbled upon a cache of seals, but it is somewhat striking that in a single day he found more than half the total cylinder seals from all excavations at the site. In this connection it may be significant that three of the 1928 seals are only partially pierced through their length. Perhaps Watelin found these unfinished pieces as

part of a seal-carver's collection within one room of the large building. Unfortunately Watelin did not mark the provenance of the fifteen seals on his sketch-plan.

The style of engraving is rudimentary in all instances. Previous suggestions that Jemdet Nasr-style seals were cut using the bow drill and cutting wheel (Nissen 1977) may need revision in light of recent research indicating that the cutting wheel may not have been employed on seals until as late as the Old Babylonian period (Sax and Meeks 1994). Human figures are depicted on several seals (figs 4:6-9, 7:6, pl 12). The pony-tailed figures have outstretched arms and are seated on ladder-like objects which may represent couches or mats. In one example the figures are holding or manipulating objects in their hands (fig 4.8, pl 12). Two of the human-figured seals alternate the vertical orientation of the figures (pl 12). These seated figures have attracted a fair amount of attention in the glyptic literature, and have been conventionally interpreted as females engaged in a range of craft or other activities, such as pot-making, pot-decorating, weaving, spinning, bread-making or drinking (Mallowan 1947, 135-6 covers some of these options). One seal shows standing human figures in procession, holding vertical staffs to the front (fig 7:6). Possible spouted jars are indicated in one instance (fig 7:1, pl 13). One shell seal has a badly eroded design of upright figures, faintly resembling an Early Dynastic contest scene—this piece probably comes from Kish (fig 4:7).

Animals occur in about ten instances (figs 4:10, 5:1-8, pl 14). It is generally difficult to determine what type of animal is meant to be portrayed, but they are all quadrupeds and likely candidates include goat, sheep and cattle. Other more schematic scenes may perhaps betoken fish (figs 6:1-4, pls 15-16), while some designs appear to be purely abstract (figs 6:5-7, 7:2-5, pls 17-18).

When originally excavated at Jemdet Nasr these schematic drilled and cut seals were taken, along with the pottery and tablets, to be characteristic of the Jemdet Nasr period. Since then, however, very similar seals have been

excavated at a wide range of sites across the Near East, including Kish, Fara, Telloh, Nippur and Ur in south Mesopotamia (Buchanan 1966, nos. 35-37 etc; Martin 1988, 225; Parrot 1948, pl 2; Wilson 1986, 60; Legrain 1951, pl 2), Susa and Godin Tepe in south-west Iran (Amiet 1972, pls 89-96; Young 1986, 217), and Tell Brak, Habuba Kabira and Jebel Aruda in north Mesopotamia (Mallowan 1947, pl 21; Strommenger 1980, fig 43; Sørenhagen and Töpperwein 1973, pl 9; Van Driel 1983, 36). In the case of the Iranian and north Mesopotamian sites schematic seals are associated with pottery and other artefacts, including occasionally numerical tablets, strictly of Later Uruk date, while in the case of the south Mesopotamian sites they are associated both with Later Uruk materials (Nippur) and with Jemdet Nasr period pottery and tablets (Jemdet Nasr, Fara). It appears then that schematic seals continued in use in south Mesopotamia after having disappeared and been replaced by piedmont style seals, *inter alia*, in adjacent regions.

It is a striking fact that almost no impressions on clay of schematic seals have been found—there are none at all from south Mesopotamia and only one or two possibilities from adjacent regions (Amiet 1972, no. 729, from Susa is a rare example). The marked contrast between these seals and the naturalistic seal impressions on tablets from Jemdet Nasr and Uruk has been interpreted in various ways. Nissen (1977, 19) proposed that naturalistic seals represented personal authority while schematic seals stemmed from institutional authority, but the lack of schematic seal impressions is not catered for in this scenario. Others have suggested that naturalistic seals, with scenes of hunting and warfare, were used by males, while schematic seals, perhaps showing craft and domestic activities, were used by females (Collon 1987, 16; Pollock 1991, 381). The complete lack of schematic seal impressions, however, may suggest that these seals were never intended to make impressions but instead to function as badges of office (an idea first propounded by Le Breton 1957, 107 fn 2). It is also possible that schematic seals were used exclusively to make impressions upon soft and perishable substances, although it is not easy to imagine what these might have been (butter, dough, skin, textiles?). Viewed in the context of the large building, the painted pottery and the administrative tablets—dealing with human labour, animal herds, textiles, beer, grain and other commodities—it is certainly tempting to interpret the schematic scenes, of humans and animals, as being intimately connected with the administration conducted within the large building by a centralised authority.

4.4 Clay sealing

Only one clay sealing, found in three pieces (two of which join), was found during the 1920s excavations. As we have seen in Chapter 2, these fragments were found under a plano-convex wall and therefore have probably

no connection with the large building. There are seven rollings of the cylinder seal over the clay and a reconstruction of the seal scene is depicted in fig 7:8 (pl 19), correcting the *tête bêche* interpretation of Buchanan (1966, no. 72). This seal impression is very much in the so-called piedmont or glazed steatite style and has numerous parallels towards the east and north, particularly in the regions of Hamrin, Diyala and Susa (Pittman 1994). Similar motifs, including the angular cross and rosette within borders, occur on sealings from Tell Gubba (Fujii 1981, fig 22:11) and from Malyan in south-west Iran contemporary with proto-Elamite tablets (Sumner 1976, fig 5:e). In her extensive treatment of these seals and seal impressions, Pittman has convincingly argued a structural and symbolic connection between proto-Elamite script and the motifs employed in glazed steatite glyptic (Pittman 1994, 243-64).

The sealing probably dates to an occupation at Jemdet Nasr after the abandonment of the large building but may be contemporary with it. Marchetti (1996) dates the piedmont style in south Mesopotamia to the Jemdet Nasr and Early Dynastic I periods, thus contemporary with Pittman's dating to the proto-Elamite period. The reverse of the clay sealing is completely broken so that we are not able to assign a sealing function to it, but it may have been attached to portable goods. No seals of this type were found at Jemdet Nasr. This single sealing indicates the participation of the site of Jemdet Nasr in an extensive cultural or economic milieu ranging along the east and north fringes of south Mesopotamia, and acts as a corrective to our view of the site within its south, proto-Sumerian urban context.

4.5 Seal impressions on tablets

Eighty-one of the more than 240 proto-cuneiform tablets from Jemdet Nasr have seal impressions on their surfaces. These seal impressions were sketched and rather sloppily published by Langdon in his treatment of the tablets (Langdon 1928). New drawings of the seal impressions were published in the definitive edition of the Jemdet Nasr texts with a commentary on their significance appearing later (Matthews 1991; 1993).

All the tablet seal impressions are in the naturalistic style and no cylinder seals of this type were found at Jemdet Nasr. This is in exact contrast to the case of the schematic seals, of which no impressions were found. Where are the seals that made the tablet impressions? Perhaps they were made of perishable materials, such as wood, whose easy carvability may explain the finer modelling of this style. Or perhaps the tablets were sealed outside Jemdet Nasr at some location where these seals were in use—but this explanation does not ring true if we believe that the tablets are intimately linked to the daily administrative life of the large building.

Scenes depicted on the tablet seal impressions include human figures in a range of poses and situations, buildings, animals, birds, containers and designs. Many

of the scenes have an apparently cultic aspect to them, as with other sealed tablets (Matthews 1995). The best comparanda for these impressions are on sealed tablets from Uruk where many similar scenes occur. Other comparable impressions have been found at Fara, Kish and Nippur in south Mesopotamia, at Susa and Godin Tepe in Iran and at Habuba Kabira and Jebel Aruda in north Mesopotamia (references for all comparanda can be found in Matthews 1993, 20-4). Some of the closest comparanda, however, come from more recent work at Jemdet Nasr itself. Excavation in 1988 and 1989 of part of an extensive rubbish dump near the area of Langdon's large building recovered a large number of cylinder seal impressions, not on tablets but on clay sealings from door-pegs and containers, in very much the same style as the tablet seal impressions (Matthews 1989, fig 5; 1990, fig 10). Shared motifs include building façades, trees, rosettes, birds, animals and naked humans. But the 1988-

1989 sealings are firmly associated with pottery of very early Early Dynastic I date, immediately post-dating the Jemdet Nasr tablets. This evidence suggests that administrative activity continued at Jemdet Nasr after the demise of the large building and into the Early Dynastic period, an interpretation supported by the pottery.

Certainly the most important seal impression occurring on the Jemdet Nasr tablets is that of the so-called city seal. This impression, treated in Matthews 1993, is found on thirteen tablets, all dealing with small quantities of commodities such as dried fruit and textiles. The impression lists the names of several known, and some unknown, early Mesopotamian cities, including Ur, Larsa, Nippur, Uruk, Kesh and Zabala. The undoubted participation of Jemdet Nasr in this inter-city intercourse is difficult to apprehend in detail but the city seal is clear indication of mutual co-operation and interaction across the flats of the Mesopotamian plain around 3,000 BC.

Chapter five

POTERIE DE OÙ?

5.1 Introduction

The pottery from Jemdet Nasr was recognised by Langdon and Mackay as being distinct from any other assemblage which had hitherto been encountered in Mesopotamia. It was the strikingly painted pottery as much as the proto-cuneiform tablets which they and others understood to justify the invention of the term "Jemdet Nasr period". Early attempts, not entirely successful, to understand the assemblage focussed on excavated material from Susa and Musian. Quantities of material excavated in the decades since the 1920s now allow us to situate the Jemdet Nasr assemblage within a wider and more detailed context. The Jemdet Nasr pottery corpus is of considerable value in an attempt to define and explore chronological and geographical bounds for the Jemdet Nasr period.

Considerable quantities of pottery were recovered from Jemdet Nasr in 1926 and 1928. In general only complete, or nearly complete, vessels were retained, as well as decorated sherds. Plain sherds were presumably discarded or simply not collected at all. This fact of course means that there is a major bias in the assemblage as we have it. Nevertheless the presence of significant numbers of complete plain vessels in the available corpus does give us a wider picture than is provided by the decorated vessels alone.

5.2 *Jemdet Nasr pottery within its context*

The pottery from Jemdet Nasr is presented in the following illustrations (figs 8-38, pls 20-34). All the illustrated forms are listed in the accompanying table, which provides information on known comparanda in relatively discrete areas of Mesopotamia and adjacent regions. The list of comparanda is not exhaustive, especially for such commonly occurring types as bevelled-rim bowls, but it aims to provide a thorough idea of the range and intensity of comparative material in these regions.

There are many good parallels for the Jemdet Nasr pottery from a range of sites in south Mesopotamia. Although these parallels span considerable time periods,

from the Ubaid to the Akkadian, there is a considerable emphasis on the Jemdet Nasr and contiguous periods. The largest quantities of close parallels come from the sites of Abu Salabikh, Fara, Nippur and Uruk. In central Mesopotamia the best parallels are with sites such as Khafajah and the nearby site of Tell Uqair, while in the north there are fewer meaningful comparanda. Outside south and central Mesopotamia the points of comparison are almost exclusively with material of Uruk date.

There are several principal conclusions to be drawn from the Jemdet Nasr pottery assemblage and its comparison with other material. Firstly, on the basis of the material from the site and related assemblages from other sites, especially Nippur, it appears justifiable to distinguish a chronological period which may be termed "Jemdet Nasr". Secondly, the ceramic material which defines this period has a geographical distribution restricted to central and south Mesopotamia. This relatively confined geographical distribution stands in some contrast to the widespread diffusion over Mesopotamia and beyond of selected pottery types of the preceding Uruk period, suggesting a fundamental shift in political/economic/social alignments at the commencement of the Jemdet Nasr period. Finally, as early commentators noted (Harden 1934), it is very clear that the pottery from Jemdet Nasr itself covers a timespan greater than the Jemdet Nasr period, with substantial representations of material from the preceding Uruk period and the subsequent Early Dynastic I period. The bulk of the material, however, can be securely allocated to the short span of time known as the Jemdet Nasr period. All these conclusions support the idea that the material culture of the Jemdet Nasr period is best viewed *within* the context of local development from Uruk predecessors in this region of the ancient Near East.

Detailed comments on specific pot types and comparanda can be found in the accompanying table, but it is worth here underlining some major points about the Jemdet Nasr assemblage. Firstly, the polychrome and monochrome painted pottery of Jemdet Nasr has to some

extent received a fame out of proportion to its real significance. As a glance at the pottery figures will show, most of the complete vessels from the 1920s excavations lack any decoration, let alone polychrome painted decoration, and many of the complete pots are plain mass-produced types such as bevelled-rim bowls and conical cups.

Secondly, there are several clear correlations between vessel form and decoration. These correlations range from small carinated bowls with horizontal painted stripes (fig 11:8-10) to tall ledge-rim jars with red paint (fig 13:1-11, pl 23), and from squat ledge-rim jars with polychrome paint (figs 14-15, pl 24) to four-lugged jars with monochrome paint (figs 18-19, pls 25-26). Other close relations between form and decoration include spouted vessels with horizontal bands of paint (fig 24:1-3), spouted vessels with painted star motifs (figs 25:4; 26:2,4, pl 29), and strap-handled cups with bands of linear incision (fig 30).

Thirdly, an appraisal of the full range of Jemdet Nasr period pottery in southern and central Mesopotamia shows a remarkable unity not only in the forms of the vessels but also in the motifs and manner of decoration. Painted pottery of this period from a range of sites, principally Uqair, Nippur, Fara and Khafajah, displays often identical motifs to those occurring on the vessels from Jemdet Nasr itself, including geometric designs such as cross-hatched triangles, lozenges and other elements, and also figurative motifs such as snakes, birds, scorpions, fish, goats and trees. It is hard not to see these shared elements as representing a fixed and highly specific community of beliefs and interactions underlying the limited physical remains as we have them today.

Fourthly, as we have seen in Chapter 2, the limited information at our disposal suggests a connection between decorated vessels and the large building excavated by Langdon and Watelin, which in turn indicates a probable high-status role for these decorated pots and/or their contents. It is worth looking at what we know about the findspots of decorated vessels from other contemporary sites. At Fara in level 7 of trench DE 38/39 a discrete deposit of Jemdet Nasr pots and objects was found in close association lying amongst burnt debris probably on a floor. This deposit included thirteen complete vessels, two of which were decorated with polychrome paint, nine stamp seals, five cylinder seals, twenty-six stone tools, eleven metal tools, six bone tools, seven flint tools, nine spindle whorls, seventy-five beads and other assorted small items (Martin 1988, 20). A great many of these pots and objects have close parallels amongst the material from Jemdet Nasr, and at Fara they may well have

originated from a building with a range of functions similar to those of the Jemdet Nasr large building, including extensive craft activity and administration. Level 7 of trench DE 38/39 at Fara was notably overlain by a 1.5m thick almost sterile deposit of clay and sand, presumed to result from a major flood (Martin 1988, 21).

The decorated Jemdet Nasr pottery from Tell Uqair was also excavated from a distinctive context. Here, adjacent to the main temple platform of Late Uruk date a small shrine or chapel had later been built and had survived through several levels of occupation. The chapel comprised a rectangular room with a door at one end and an altar at the other. In one of the occupation levels of this building substantial quantities of intact painted vessels were found in association with four proto-cuneiform texts and other objects. More pottery of Jemdet Nasr type was excavated from an earlier building underlying the shrine (Lloyd and Safar 1943, 137, 146). At Uqair, then, there is a suggestion of a ritual aspect to the function of the decorated Jemdet Nasr vessels, but the association with the proto-cuneiform tablets also highlights an administrative connection. Jemdet Nasr pottery from Nippur, Inanna Temple Sounding levels XIV-XII, originated from a series of mud-brick buildings or sets of rooms which may have been domestic in function, but with significant evidence of craft activity in the form of stone and flint tools and a large circular oven (Wilson 1986, 58). Jemdet Nasr pottery from the Diyala sites of Tell Asmar and Khafajah came from a mixture of architectural contexts including domestic dwellings and shrines (Delougaz 1952). Excavations of level VII at Tell Gubba in the Hamrin region revealed strong connections between Jemdet Nasr pottery and an extraordinary building composed of concentric walls. Contents of this building included plain and decorated Jemdet Nasr pottery, storage jars with grain, spindle whorls, metal objects and seals (Fujii 1981). The Gubba level VII circular structure, while architecturally very different, by virtue of its distinctive contents forms one of the best parallels for the large building and its contents at Jemdet Nasr.

In sum, the assemblage of distinctive pots and sherds excavated at Jemdet Nasr in the 1920s continues to serve as a basis for study of a critical period in the development of human society in central and south Mesopotamia. The existence of a reasonably well-defined corpus of material identifiable as belonging to a specific time period and restricted to a small number of excavated sites, to which may be added a much larger number of surveyed sites, in central and south Mesopotamia can no longer be denied.

SECRETS OF THE DARK MOUND

Fig ref	Form	Decoration	Comparanda: site	Comparanda: region	Publication ref	Dating	Comments
8.1-9.12	bevelled-rim bowl	none	Abu Salabikh	South Mesopotamia	Pollock 1990, fig 4 f; Postgate 1983, 45, figs 13-15	Late Uruk-Jemdet Nasr?	Pollock notes (1990, 60) that bevelled-rim bowls are significantly outnumbered by conical bowls in pottery assemblages recovered from pits of Jemdet Nasr date on the Uruk Mound. Note also the complete absence of bevelled-rim bowls from the site of Fara despite widespread occurrence of material dating to the Jemdet Nasr period at the site (Martin 1988, 131).
8.1-9.12	bevelled-rim bowl	none	Endu	South Mesopotamia	Safar <i>et al.</i> 1981, 303-99-100	Late Uruk	From the Palace Sounding
8.1-9.12	bevelled-rim bowl	none	Nippur	South Mesopotamia	Hansen 1965, 202, fig 4; Wilson 1986, 59-60	Late Uruk-Jemdet Nasr	Bevelled-rim bowls are especially common in level XVI of the Inanna Temple Sounding, decreasing sharply in frequency in later levels, XIV-XII, of Jemdet Nasr date.
8.1-9.12	bevelled-rim bowl	none	Telloh	South Mesopotamia	de Genouillac 1934, pl VIII 4241	?	Dating uncertain
8.1-9.12	bevelled-rim bowl	none	Ur	South Mesopotamia	Woolley 1955, pl 56 JN2	Late Uruk-Early Dynastic I	Precise dating uncertain.
8.1-9.12	bevelled-rim bowl	none	Uruk	South Mesopotamia	von Haller 1932, Taf 18 A; Nissen 1970, pl 104.7, Pongratz-Leisten 1988, 275-293	Middle Uruk-Jemdet Nasr	Bevelled-rim bowls appear to span Archaic levels XII-III at Uruk.
8.1-9.12	bevelled-rim bowl	none	Jemdet Nasr	Central Mesopotamia	Matthews 1990, 32	Late Uruk	Bevelled-rim bowl sherds found in association with traces of large <i>Riemchen</i> structure underlying main Jemdet Nasr building
8.1-9.12	bevelled-rim bowl	none	Khafajah	Central Mesopotamia	Delougaz 1952, pl 21	Jemdet Nasr	Protoliterate c
8.1-9.12	bevelled-rim bowl	none	Gubba	Central Mesopotamia	Fuji 1981, fig 20.4	Late Uruk	Several examples
8.1-9.12	bevelled-rim bowl	none	Rubaidbeh	Central Mesopotamia	McAdam and Mynors 1988	Late Uruk	Found in large quantities here
8.1-9.12	bevelled-rim bowl	none	Tell Uqair	Central Mesopotamia	Lloyd and Safar 1943, 148	Late Uruk	Found as sherds
8.1-9.12	bevelled-rim bowl	none	Habuba Kabira	North Mesopotamia	Strommenger 1980, Abb 51; Surenhagen 1978, fig 1.19	Late Uruk	Abandonment of Habuba Kabira before the end of the Late Uruk period means that all bevelled-rim bowls from the site date to Late Uruk or earlier. Surenhagen (1986, 32) has shown that the pottery parallels for Habuba Kabira match with Eanna VII-VI, rather than with Eanna IV, as is now clear for Chogha Mish as well (Delougaz and Kantor 1996, 102)
8.1-9.12	bevelled-rim bowl	none	Mohammed Arab	North Mesopotamia	Kilick 1986, 229-30	Late Uruk	Rare occurrences of bevelled-rim bowls.
8.1-9.12	bevelled-rim bowl	none	Tell Brak	North Mesopotamia	Oates 1986, fig 3.40-42	Late Uruk-Jemdet Nasr?	Bevelled-rim bowls common in many parts of the site.
8.1-9.12	bevelled-rim bowl	none	Arslantepe	Anatolia	Frangipane and Palmieri 1983, 348	Late Uruk	Only two examples found, in level VIA.
8.1-9.12	bevelled-rim bowl	none	Kurban Hoyuk	Anatolia	Algaze 1986, fig 7 r	Late Uruk	Restricted to Late Chalcolithic levels.
8.1-9.12	bevelled-rim bowl	none	Tepecik	Anatolia	Esin 1982, fig 3.22-23, fig 7.3	Late Uruk	Rare occurrences of south Mesopotamian Late Uruk elements
8.1-9.12	bevelled-rim bowl	none	Chogha Mish	Iran	Delougaz and Kantor 1996, pl 83 F-U	Late Uruk	Found in vast quantities at this site. As at Habuba Kabira, the abandonment of the protoliterate settlement at Chogha Mish before the end of the Late Uruk period means that all protoliterate pottery from Chogha Mish dates to Late Uruk or earlier. Most of the Chogha Mish parallels, again as at Habuba Kabira, are with Eanna VI rather than Eanna V-IV (Delougaz and Kantor 1996, 102), suggesting a flourish substantially predating the Late Uruk climax contemporary with Eanna IV in south Mesopotamia.
8.1-9.12	bevelled-rim bowl	none	Farukhabad	Iran	Wright 1981, fig 47.1	Late Uruk-Early Dynastic I	Range of vessels similar in some respects to south Mesopotamian assemblages.
8.1-9.12	bevelled-rim bowl	none	Godin Tepe	Iran	Young 1986, fig 3.6-8	Late Uruk	Bevelled-rim bowls at Godin occur in a range of shapes and sizes in the level V Oval Enclosure along with other Late Uruk types.
8.1-9.12	bevelled-rim bowl	none	Susa	Iran	Le Brun 1971, 211	Late Uruk	Bevelled-rim bowls span Acropolis I levels 22-17A at Susa
8.1-9.12	bevelled-rim bowl	none	Tepe Yahya	Iran	Lamberg-Karlovsky and Tosi 1973, fig 104 D	Late Uruk-Jemdet Nasr?	Yahya IVC.
10.1-4	conical bowl	none	Abu Salabikh	South Mesopotamia	Pollock 1990, fig 3 a-h; Postgate and Moon 1982, fig 3	Late Uruk-Jemdet Nasr?	Conical bowls are the commonest pot type occurring in pits of Jemdet Nasr date excavated on the Uruk Mound (Pollock 1990)
10.1-4	conical bowl	none	Nippur	South Mesopotamia	Wilson 1986, fig 5.6	Jemdet Nasr	Occur in Inanna Temple Sounding level XIII, of Jemdet Nasr date, in shapes similar to those of Jemdet Nasr
10.1-4	conical bowl	none	Sakheri Sughir	South Mesopotamia	Wright 1969, fig 16 a-c	Early Dynastic I	Similar in shape to examples from Jemdet Nasr
10.1-4	conical bowl	none	Telloh	South Mesopotamia	de Genouillac 1934, pl VIII	?	Several examples from here, dating uncertain
10.1-4	conical bowl	none	Uruk	South Mesopotamia	von Haller 1932, pl 20 A; Nissen 1970, pl 104.3-4; Pongratz-Leisten 1988, 262.312, 273-4.368.89	Late Uruk-Early Dynastic	Very common at Uruk, and many of the shapes match the examples from Jemdet Nasr. See Nissen 1970 for detailed discussion of conical bowl types at Uruk
10.1-4	conical bowl	none	Khafajah	Central Mesopotamia	Delougaz 1952, pl 146 B.003.200b	Jemdet Nasr-Early Dynastic I	Similar shape to examples from Jemdet Nasr.
10.1-4	conical bowl	none	Jemdet Nasr	Central Mesopotamia	Matthews 1989, fig 3.7	Jemdet Nasr-Early Dynastic I?	Shapes similar to those from 1920s excavations.
10.1-4	conical bowl	none	Tell Uqair	Central Mesopotamia	Lloyd and Safar 1943, pl 22.3	Late Uruk-Jemdet Nasr?	Shape very similar to examples from Jemdet Nasr.
10.1-4	conical bowl	none	Uch Tepe	Central Mesopotamia	Gibson 1981, pl 61	Early Dynastic I	Found in large quantities

Fig ref	Form	Decoration	Comparanda: site	Comparanda: region	Publication ref	Dating	Comments
10 1-4	conical bowl	none	Habuba Kabira	North Mesopotamia	Surenhagen 1978, fig 1 21	Late Uruk	Chunky shape with thick base
10 5-9	cut-rim conical bowl	none	Abu Salabikh	South Mesopotamia	Pollock 1990, fig 4 a-c, Postgate 1983, 48	Jemdet Nasr	At Abu Salabikh cut-rim conical bowls are thought to be a transitional form between bevelled-rim bowls and rounded-rim conical bowls
10 5-9	cut-rim conical bowl	none	Nippur	South Mesopotamia	Hansen 1965, 208, fig 35, Wilson 1986, fig 5 1-2	Jemdet Nasr	Hansen (1965, 208) first identified this form as belonging uniquely to Jemdet Nasr levels at Nippur (Inanna Temple Sounding XIV-XII) Large and small versions occur, as at Jemdet Nasr
10 5-9	cut-rim conical bowl	none	Telloh	South Mesopotamia	de Genouillac 1934, pl VIII 4386	?	Good example of cut-rim conical bowl, but dating uncertain
10 5-9	cut-rim conical bowl	none	Uruk	South Mesopotamia	von Haller 1932, pl 20 A	Late Uruk	Occurrence in Eanna Archaic level IV suggests this form may originate during Late Uruk period
10 5-9	cut-rim conical bowl	none	Jemdet Nasr	Central Mesopotamia	Matthews 1989, fig 3 1-2	Jemdet Nasr	Found in area of 1920s large building in association with other types of Jemdet Nasr date
10 5-9	cut-rim conical bowl	none	Habuba Kabira	North Mesopotamia	Surenhagen 1978, fig 21 44	Late Uruk	Possible occurrence of cut-rim conical bowls at Habuba Kabira and at Arslantepe VI suggests this form may first appear during the Late Uruk period
10 5-9	cut-rim conical bowl	none	Karrana 3	North Mesopotamia	Fales <i>et al</i> 1987, fig 8 8	Late Uruk	Cut-rim conical bowl with small ring-base, possibly unrelated to the type from Jemdet Nasr
10 5-9	cut-rim conical bowl	none	Arslantepe	Anatolia	Frangipane and Palmieri 1983, fig 20 7	Post-Late Uruk	Level VIB2
10 10-12	thin-walled cup	none	Abu Salabikh	South Mesopotamia	Pollock 1990, fig 4 c, Postgate and Moon 1982, fig 4 1	Late Uruk?	Occurs on both the West Mound and the Uruk Mound
10 10-12	thin-walled cup	none	Nippur	South Mesopotamia	Hansen 1965, 202, fig 5, Wilson 1986, fig 4 1	Middle-Late Uruk	Occurs in levels XX-XV of the Inanna Temple Sounding, all of Middle-Late Uruk date
10 10-12	thin-walled cup	none	Uruk	South Mesopotamia	von Haller 1932, pl 20 A	Late Uruk	Occurs in Eanna Archaic level IV
10 10-12	thin-walled cup	none	Jemdet Nasr	Central Mesopotamia	Matthews 1990, fig 12 1	Late Uruk	In grave 3B77, associated with other Late Uruk vessels
10 10-12	thin-walled cup	none	Habuba Kabira	North Mesopotamia	Strommenger 1980, Abb 38, Surenhagen 1978, fig 1 4-9	Late Uruk	Not later than Late Uruk in date here
10 10-12	thin-walled cup	none	Choghha Mish	Iran	Delougaz and Kantor 1996, pl 80 N	Late Uruk	Not later than Late Uruk in date here
10 10-12	thin-walled cup	none	Susa	Iran	Le Brun 1971, fig 47 1-3	Late Uruk	Occurs in Acropolis I levels 17B-A
10 13	bowl sherd	paint	Ur	South Mesopotamia	Woolley 1955, pl 47 17	Ubaid	Very similar to Jemdet Nasr example Ubaid sherds have also more recently been found at Jemdet Nasr (Matthews 1990, 247)
11 1-5	carinated bowl	none	Abu Salabikh	South Mesopotamia	McAdam 1983, fig 162	Early Dynastic I	McAdam sees the internally sloping rim as an Early Dynastic I characteristic
11 1-5	carinated bowl	none	Tell Razuk	Central Mesopotamia	Thuesen 1981, pl 63 12-15	Early Dynastic I	Four of these found at Razuk
11 1-5	carinated bowl	none	Rubeidheh	Central Mesopotamia	McAdam and Mynors 1988, fig 28 15	Late Uruk	Definitely Late Uruk here
11 1-5	carinated bowl	none	Habuba Kabira	North Mesopotamia	Surenhagen 1978, fig 20 14-16	Late Uruk	Not later than Late Uruk in date here
11 6-7	carinated bowl	internal base feature (phallic?)	Uruk	South Mesopotamia	von Haller 1932, pl 20 B, Nissen 1970, pl 62 9/58	Uruk-Jemdet Nasr?	Two bowls with probably phallic protrusions from the interior of the base, one from Eanna Archaic level IX, the other from Eanna Archaic levels III-II
11 8-10	carinated bowl	painted bands	Ahmed al-Hattu	Central Mesopotamia	Surenhagen 1979, Abb 10	Late Uruk	From Mound C, definitely Late Uruk
11 11-13	everted-rim bowl	none	Nippur	South Mesopotamia	Al-Soof 1985, fig 9 17	Late Uruk	From Inanna Temple Sounding level XV, the latest Late Uruk level.
11 11-13	everted-rim bowl	none	Uruk	South Mesopotamia	Van Ess 1988, fig A 1	Akkadian	Identical to fig 11 11.
11 11-13	everted-rim bowl	none	Khafajah	Central Mesopotamia	Delougaz 1952, pl 151 B 184 220b	Early Dynastic III	Has slightly higher neck than Jemdet Nasr examples
12 1-4	tray	none	Nippur	South Mesopotamia	Wilson 1986, fig 5 11	Jemdet Nasr	Nippur version is larger than these small Jemdet Nasr examples, and has incurving rim
12 5-9	ladle	none	Abu Salabikh	South Mesopotamia	Moon 1987, nos 116-117, McAdam 1983, pl 7 a, fig 282	Late Uruk-Early Dynastic I	From West Mound
12 5-9	ladle	none	Ur	South Mesopotamia	Woolley 1955, pl 67 U14955	Pre-Early Dynastic III	Dating uncertain
12 5-9	ladle	none	Uruk	South Mesopotamia	von Haller 1932, pl 20 A-B, Pongrats-Leisten 1988, 209 5, Surenhagen 1987, 25 89	Late Uruk-Early Dynastic I	Occur in Eanna Archaic levels IV-II
12 5-9	ladle	none	Warka survey	South Mesopotamia	Adams and Nissen 1972, fig 69 13	Jemdet Nasr-Early Dynastic I	Survey find on site dating to Jemdet Nasr-Early Dynastic I
12 5-9	ladle	none	Tell Asmar	Central Mesopotamia	Delougaz 1952, pl 63 47	Jemdet Nasr or Early Dynastic I	Protoliterate or Early Dynastic I
12 5-9	ladle	none	Habuba Kabira	North Mesopotamia	Strommenger 1980, Abb 38, Surenhagen 1978, fig 19 158	Late Uruk	Reconstruction of handle of ladle shown in Strommenger 1980, Abb 38. Not later than Late Uruk in date here
12 5-9	ladle	none	Choghha Mish	Iran	Delougaz and Kantor 1996, pl 81 J-K	Late Uruk	Not later than Late Uruk in date here
12 5-9	ladle	none	Susa	Iran	Le Brun 1971, fig 45 3	Late Uruk	Acropolis I level 17
12 11	open bowl/lid	plum red paint	Nippur	South Mesopotamia	Hansen 1965, 207, fig 32 XIII-XIV, Wilson 1986, fig 7 7	Jemdet Nasr	Painted lids occur exclusively in Jemdet Nasr levels of the Inanna Temple Sounding, levels XIV-XII
12 11	open bowl/lid	plum red paint	Jemdet Nasr	Central Mesopotamia	Matthews 1989, fig 3 9	Jemdet Nasr	Found in association with other Jemdet Nasr types in area of Langdon's large building.
12 11	open bowl/lid	plum red paint	Khafajah	Central Mesopotamia	Delougaz 1952, pl 169 C 041 500	Jemdet Nasr-Early Dynastic I	Occurs in Protoliterate c-d levels
12 11	open bowl/lid	plum red paint	Tell Uqair	Central Mesopotamia	Lloyd and Safar 1943, pl 26 4	Jemdet Nasr	Painted lid found <i>in situ</i> atop painted vessel
12 12-16	open bowl/lid	none	Nippur	South Mesopotamia	Wilson 1986, fig 7 9	Jemdet Nasr	From level XII of Inanna Temple Sounding, large lid like fig 12 14

Fig ref	Form	Decoration	Comparanda: site	Comparanda: region	Publication ref	Dating	Comments
12-12-16	open bowl/ld	none	Uruk	South Mesopotamia	Pongratz-Leisten 1988, 257-273, 265-339	Jemdet Nasr	From Eanna Archaic level III
12-12-16	open bowl/ld	none	Habuba Kabira	North Mesopotamia	Surenhagen 1978, fig 3-33	Late Uruk	Not later than Late Uruk in date here
12-12-16	open bowl/ld	none	Chogha Mish	Iran	Delougaz and Kantor 1996, pl 85 F-1	Late Uruk	Not later than Late Uruk in date here
12-17	open-spouted bowl	none	Abu Salabikh	South Mesopotamia	McAdam 1983, figs 136-137	Late Uruk	Open spouts from pouring bowls found on West Mound
12-17	open-spouted bowl	none	Nippur	South Mesopotamia	Hansen 1965, 202, fig 3	Middle Uruk	Occur in levels XX-XIX of Innana Temple Sounding, very similar to fig 12.17
12-17	open-spouted bowl	none	Chogha Mish	Iran	Delougaz and Kantor 1996, pl 85 E-J	Late Uruk	Not later than Late Uruk in date here
12-18	incised-rim bowl	incision on rim	Abu Salabikh	South Mesopotamia	Pollock 1987, fig 6 g, McAdam 1983, fig 54	Late Uruk	Occur on West Mound and Uruk Mound, very similar to fig 12.18
12-18	incised-rim bowl	incision on rim	Nippur	South Mesopotamia	Wilson 1986, fig 5.8	Jemdet Nasr	Occur in Innana Temple Sounding level XIV, of Jemdet Nasr date, very similar to fig 12.18
12-18	incised-rim bowl	incision on rim	Uruk	South Mesopotamia	Pongratz-Leisten 1988, 265-340	Late Uruk-Jemdet Nasr?	From Eanna Archaic and related levels.
12-18	incised-rim bowl	incision on rim	Warka survey	South Mesopotamia	Adams and Nissen 1972, fig 30 ag, fig 42.26, fig 69.3	Late Uruk-Early Dynastic I	Occur on sites ranging in date from Late Uruk to Early Dynastic I
12-18	incised-rim bowl	incision on rim	Habuba Kabira	North Mesopotamia	Surenhagen 1978, fig 22.1-3	Late Uruk	Not later than Late Uruk in date here.
12-18	incised-rim bowl	incision on rim	Susa	Iran	Le Brun 1971, fig 46.5	Late Uruk	From Acropolis I level 17.
13-1-3	jar	plum red paint	Fara	South Mesopotamia	Martin 1988, 173.3	Jemdet Nasr	Very similar to fig 13.1, with small flat base and plum paint.
13-1-3	jar	plum red paint	Uruk	South Mesopotamia	Lenzen 1963, Taf 37 c; Pongratz-Leisten 1988, 265-338	Jemdet Nasr	Occurs in Eanna Archaic level III, with plum paint.
13-1-3	jar	plum red paint	Nippur	South Mesopotamia	Al-Soof 1985, fig 9.6, Hansen 1965, 206, Wilson 1986, fig 7.16	Jemdet Nasr	According to Hansen (1965, 206), this form first appears in level XV of the Innana Temple Sounding and becomes common in subsequent (Jemdet Nasr date) levels
13-1-3	jar	plum red paint	Tell Asmar	Central Mesopotamia	Delougaz 1952, pl 182 C.536.540	Jemdet Nasr-Early Dynastic I	Protoliterate d, all exterior painted plum, similar form to fig 13.2
13-4	jar	red and plum red paint	Khafajah	Central Mesopotamia	Delougaz 1952, pl 1	Jemdet Nasr	This polychrome-decorated form, as with the form in fig 13.1-3, is understood by Delougaz to belong to Protoliterate c, and to be Early Polychrome. Its absence at Tell Uqair suggests that the recovered pottery assemblage from that site may at least partly post-date some of the material from Jemdet Nasr itself. The squatter forms of this jar, fig 13.5-10, appear to belong to Protoliterate d in Diyala terms
13-7-10	jar	plum red paint	Nippur	South Mesopotamia	Al-Soof 1985, fig 9.10	Jemdet Nasr	From Innana Temple Sounding, level XII, the last Jemdet Nasr period level, supporting the suggestion that this squatter version of the jar is Protoliterate d in Diyala terms
13-12	jar	none	Fara	South Mesopotamia	Martin 1988, 175.14	Jemdet Nasr-Early Dynastic I	Identical to fig 13.12
13-12	jar	none	Ur	South Mesopotamia	Woolley 1955, pl 59.JN81	Late Uruk-Early Dynastic I	Very similar to fig 13.12
13-14	jar	none	Abu Salabikh	South Mesopotamia	Postgate and Moon 1982, fig 5.3	Late Uruk	From West Mound, stratified Uruk floor.
14-1-4	ring-based jar	plum red and reddish-black paint, applied blobs on shoulder, or groove	Fara	South Mesopotamia	Martin 1988, 173.1	Jemdet Nasr	Vessel very similar to fig 14.1.
14-1-4	ring-based jar	plum red and reddish-black paint, applied blobs on shoulder, or groove	Nippur	South Mesopotamia	Wilson 1986, fig 10.3-4	Jemdet Nasr	Similar painted vessels from levels XIV-XII of the Innana Temple Sounding
14-1-4	ring-based jar	plum red and reddish-black paint, applied blobs on shoulder, or groove	Uruk	South Mesopotamia	Pongratz-Leisten 1988, 262.316-317	Jemdet Nasr?	Similar vessels from Eanna Archaic and related levels
14-1-4	ring-based jar	plum red and reddish-black paint, applied blobs on shoulder, or groove	Gubba	Central Mesopotamia	Fujii 1981, fig 12.6	Jemdet Nasr	Vessel from level VII very similar to fig 14.1, with polychrome decoration, applied blobs and ring base
14-1-4	ring-based jar	plum red and reddish-black paint, applied blobs on shoulder, or groove	Tell Asmar	Central Mesopotamia	Delougaz 1952, pl 36 b, pl 192 D.514.370a	Jemdet Nasr-Early Dynastic I	Similar vessels, dated to Protoliterate d as Late Polychrome style by Delougaz.

Fig ref	Form	Decoration	Comparanda: site	Comparanda: region	Publication ref	Dating	Comments
14.1-4	ring-based jar	plum red and reddish-black paint, applied blobs on shoulder, or groove	Tell Uqair	Central Mesopotamia	Lloyd and Safar 1943, pl 26	Jemdet Nasr	Several similar vessels in terms of form and decoration, some with lids <i>in situ</i>
15.1-8	flat-based jar	plum red and/or reddish black paint	Nippur	South Mesopotamia	Al-Soof 1985, fig 9.9; Wilson 1986, fig 10.2	Jemdet Nasr	Vessels very similar in form and decoration to fig 15.5, from level XIV of the Inanna Temple Sounding. One example has incised, rather than painted, decoration on the shoulder
15.1-8	flat-based jar	plum red and/or reddish black paint	Ur	South Mesopotamia	Woolley 1955, pl 26 a, d	Late Uruk-Early Dynastic I	Pots similar in shape and decoration to fig 15.6
15.1-8	flat-based jar	plum red and/or reddish black paint	Uruk	South Mesopotamia	Lenzen 1963, Taf 33 a, d	Jemdet Nasr?	Very similar in shape and decoration to fig 15.1, but with raised ridge around shoulder. Also squat painted pot similar in form and decoration to fig 15.3-8 but with four applied blobs on shoulder
15.1-8	flat-based jar	plum red and/or reddish black paint	Jemdet Nasr	Central Mesopotamia	Matthews 1989, fig 3.10-11	Jemdet Nasr	Similar in shape and decoration to examples from 1920s excavations at Jemdet Nasr
15.1-8	flat-based jar	plum red and/or reddish black paint	Khafajah	Central Mesopotamia	Delougaz 1952, pl 155 B.513.170	Jemdet Nasr	Vessel from Protoliterate c level with similar form to fig 15.3 and similar decoration to fig 15.5
15.1-8	flat-based jar	plum red and/or reddish black paint	Tell Asmar	Central Mesopotamia	Delougaz 1952, pl 189 C.745.270	Jemdet Nasr-Early Dynastic I	Vessel from Protoliterate d level similar in form to fig 15.5 but with decoration in bands
15.1-8	flat-based jar	plum red and/or reddish black paint	Tell Uqair	Central Mesopotamia	Lloyd and Safar 1943, pl 22.5-7	Jemdet Nasr	Several squat painted vessels similar to those in fig 15.2-7. Their presence at Uqair, along with the absence of the taller painted jars (fig 13.1-10), suggest that these squat flat-based painted jars come late in the Jemdet Nasr assemblage
15.1-8	flat-based jar	plum red and/or reddish black paint	Oman area	Gulf	Potts 1986	Jemdet Nasr-Early Dynastic?	Several vessels similar in form and decoration found in Hafit period tomb cairns in Abu Dhabi and Oman. This type seems to be the only one from the Gulf with convincing Jemdet Nasr parallels
16.8-12	ledge-rim jar	plum red paint on exterior and interior	Habuba Kabira	North Mesopotamia	Surenhagen 1978, fig 30.37	Late Uruk	Several similar rims and necks from painted jars. Not later than Late Uruk from here. Their occurrence at Habuba Kabira indicates the origins of plum red painting on ledge-rim jars in the Late Uruk period at latest.
16.8-12	ledge-rim jar	plum red paint on exterior	Chogha Mish	Iran	Delougaz and Kantor 1996, pl 114.M	Late Uruk	Not later than Late Uruk in date here
17.1	lugged jar	plum red paint, four pierced lugs	Fara	South Mesopotamia	Martin 1988, 173.6	Jemdet Nasr-Early Dynastic I	Vessel very similar to fig 17.1
17.1	lugged jar	plum red paint, four pierced lugs	Uruk	South Mesopotamia	Lenzen 1963, Taf 37.j	Jemdet Nasr?	Vessel similar to fig 17.1
17.4	lugged jar	plum red paint, four pierced lugs connected by notched ridge	Nippur	South Mesopotamia	Hansen 1965, 207, fig 33	Jemdet Nasr	Notched ridges connecting pierced lugs appear in levels XIV-XIII of the Inanna Temple Sounding
17.8	lugged jar	four pierced lugs	Nippur	South Mesopotamia	Al-Soof 1985, fig X	Middle-Late Uruk	Four-lugged jars, some with incision, span levels XIX-XV of the Inanna Temple Sounding
17.8	lugged jar	four pierced lugs	Telloh	South Mesopotamia	de Genouillac 1934, pl V	?	Dating uncertain
17.8	lugged jar	four pierced lugs	Jemdet Nasr	Central Mesopotamia	Matthews 1990, fig 12.2	Late Uruk	Example found in grave 3B77
17.8	lugged jar	four pierced lugs	Arsilantepe	Anatolia	Frangipane and Palmieri 1983, fig 33.4	Late Uruk	Only example of a four-lugged, round-based jar found at Arsilantepe
17.8	lugged jar	four pierced lugs	Tepecik	Anatolia	Esin 1982, fig 7.4	Late Uruk	Three examples of four-lugged bottles from Tepecik, all from building of Late Uruk date
17.10	lugged jar	incision on shoulder, four pierced lugs	Nippur	South Mesopotamia	Hansen 1965, 203, fig 14	Middle Uruk	Vessel very similar to fig 17.10, with four lugs and band of cross-hatch incision. From level XVIII of Inanna Temple Sounding, equated to Eanna Archaic VI. The absence at Jemdet Nasr of four-lugged vessels with cross-hatch triangles, as occur at Nippur from level XVI of the Inanna Temple Sounding, is notable
17.10	lugged jar	incision on shoulder, four pierced lugs	Tell Agrab	Central Mesopotamia	Delougaz 1952, pl 22.c, pl 164 B.663.213	Late Uruk-Early Dynastic I	Vessel similar to fig 17.10 from Protoliterate levels
17.10	lugged jar	incision on shoulder, four pierced lugs	Jemdet Nasr	Central Mesopotamia	Matthews 1990, fig 12.5, 7	Late Uruk	Two similar vessels from grave 3B77
17.10	lugged jar	incision on shoulder, four pierced lugs	Habuba Kabira	North Mesopotamia	Surenhagen 1978, fig 7.67	Late Uruk	Several examples of four-lugged vessels with incision, but all have cross-hatched triangles as well as bands of cross-hatch. Not later than Late Uruk from here

SECRETS OF THE DARK MOUND

Fig ref	Form	Decoration	Comparanda: site	Comparanda: region	Publication ref	Dating	Comments
17 10	lugged jar	incision on shoulder, four pierced lugs	Chogha Mish	Iran	Delougaz and Kantor 1996, pl 122 A	Late Uruk	Not later than Late Uruk in date here
17 10	lugged jar	incision on shoulder, four pierced lugs	Susa	Iran	Le Brun 1971, fig 51.1-5	Late Uruk	Several examples from Acropolis I levels 17A-B
17 11	lugged jar	punctates on shoulder, four pierced lugs	Nippur	South Mesopotamia	Hansen 1965, fig 11 a	Late Uruk	Vessel very similar to fig 17 11, with four pierced lugs and punctates around shoulder
17 11	lugged jar	punctates on shoulder, four pierced lugs	Chogha Mish	Iran	Delougaz and Kantor 1996, pl 114 E	Late Uruk	Not later than Late Uruk in date here
18 1-19 8	lugged jar	monochrome paint, four pierced lugs	Khafajah	Central Mesopotamia	Delougaz 1952, pl 28 a	Jemdet Nasr	Similar vessel from Sin Temple I
18 1-19 8	lugged jar	monochrome paint, four pierced lugs	Jemdet Nasr	Central Mesopotamia	Matthews 1989, fig 3 12	Jemdet Nasr	Similar vessel from area of Langdon's large building
18 1-19 8	lugged jar	monochrome paint, four pierced lugs	Tell Uqair	Central Mesopotamia	Lloyd and Safar 1943, pl 23-24, 27	Jemdet Nasr	Several four-lugged vessels similar in form and decoration
18 3	lugged jar	dark red paint, four pierced lugs	Nippur	South Mesopotamia	Wilson 1986, fig 9 4	Jemdet Nasr	Vessel similar to fig 18 3 from level XIV of the Inanna Temple Sounding
18 3	lugged jar	dark red paint, four pierced lugs	Khafajah	Central Mesopotamia	Delougaz 1952, pl 28 c-d	Jemdet Nasr	Vessel similar to fig 18 3 Sin Temple III
18 3	lugged jar	dark red paint, four pierced lugs	Khafajah	Central Mesopotamia	Delougaz 1952, pl 186 C 603 253a	Jemdet Nasr	Similar vessel from level III of the Sin Temple, Protoliterate c
24 1-3	spouted jar	red-brown paint	Abu Salabikh	South Mesopotamia	Postgate and Moon 1982, fig 5 4	Jemdet Nasr	Large spouted jar with three bands of brown-purple paint from West Mound
24 1-3	spouted jar	red-brown paint	Ur	South Mesopotamia	Woolley 1955, pl 63 JN144	Late Uruk-Early Dynastic I	Vessel similar in form to fig 24 1-2, but without the paint.
24 1-3	spouted jar	red-brown paint	Uruk	South Mesopotamia	Lenzen 1963, Taf 37 d, Pongratz-Leisten 1988, 257 275	Late Uruk-Early Dynastic I	Vessels similar to fig 24 1-2, but more globular in shape.
24 1-3	spouted jar	red-brown paint	Khafajah	Central Mesopotamia	Delougaz 1952, pl 19 h, 196 D 665 542	Jemdet Nasr	Squat spouted jar with three painted bands from level II, Protoliterate c, of the Sin Temple, more globular than fig 24 1-2
24 1-3	spouted jar	red-brown paint	Tell Uqair	Central Mesopotamia	Lloyd and Safar 1943, pl 22 10	Late Uruk-Jemdet Nasr	Vessel similar to fig 24 1-2, but without paint.
24 4-5	spouted jar	none	Nippur	South Mesopotamia	Hansen 1965, fig 28	Late Uruk	Vessel similar to fig 24 4 from level XV of the Inanna Temple Sounding.
24 4-5	spouted jar	none	Telloh	South Mesopotamia	de Genouillac 1934, pl 7 4981	?	Vessel similar to fig 24 4, dating uncertain
24 4-5	spouted jar	none	Warka survey	South Mesopotamia	Adams and Nissen 1972, fig 69 2	Jemdet Nasr-Early Dynastic I	Similar rim and neck form from site of Jemdet Nasr-Early Dynastic I date.
24 4-5	spouted jar	none	Khafajah	Central Mesopotamia	Delougaz 1952, pl 180 C 526 362a	Early Dynastic I	Vessel with similar neck and rim, but with more carinated shoulder, longer spout and ring base, all features later than Jemdet Nasr date spouted vessels
24 6, 9-10	spouted jar	none	Ur	South Mesopotamia	Woolley 1955, pl 64 JN149-151	Late Uruk-Early Dynastic I	Vessels very similar to fig 24 6
24 6, 9-10	spouted jar	none	Uruk	South Mesopotamia	Lenzen 1963, Taf 37 f, Pongratz-Leisten 1988, 258 286, Sirenhausen 1987, 20 10	Late Uruk-Jemdet Nasr	Vessels very similar to fig 24 6
24 6, 9-10	spouted jar	none	Warka survey	South Mesopotamia	Adams and Nissen 1972, fig 69 10	Jemdet Nasr-Early Dynastic I	Vessel very similar to fig 24 9 from site of Jemdet Nasr-Early Dynastic I date
24 6, 9-10	spouted jar	none	Tell Uqair	Central Mesopotamia	Lloyd and Safar 1943, pl 22 14	Late Uruk-Jemdet Nasr?	Vessel similar to fig 24 6
24 6, 9-10	spouted jar	none	Arslan-tepe	Anatolia	Frangipane and Palmieri 1983, fig 33 3, 5	Late Uruk	Only two examples of banded bottle rims from Arslan-tepe similar to fig 24 6, 9
24 7	spouted jar	none	Nippur	South Mesopotamia	Al-Soo'f 1985, fig 8 19	Late Uruk	Similar vessel from level XVI of the Inanna Temple Sounding
25 1-2	spouted jar	none	Ur	South Mesopotamia	Woolley 1955, pl 62 JN124-125, 129	Late Uruk-Early Dynastic I	Vessels very similar to fig 25 1-2
25 1-2	spouted jar	none	Tell Agrab	Central Mesopotamia	Delougaz 1952, pl 180 C 526 262a	Early Dynastic I	Vessel similar to fig 25 1, but without the ring base.
25 1-2	spouted jar	none	Dhahran-Damman	Gulf	Potts 1986, pl 1 c-d	Early Dynastic I	Vessel very similar to fig 25 1, but without the ring base.
25 3	spouted jar	incised nicks on carination	Khafajah	Central Mesopotamia	Delougaz 1952, pl 37 a-c	Jemdet Nasr-Early Dynastic I	Carination with nicked ridge is seen as an Early Dynastic I feature in the Diyala, but in the case of fig 25 3 is associated with clearly Jemdet Nasr elements such as the ledge rim and lack of ring-base
25 4	spouted jar	red paint	Jemdet Nasr	Central Mesopotamia	Matthews 1989, fig 3 21-25	Jemdet Nasr	Several occurrences of five-pointed stars, painted and incised, on sherds from area of Langdon's large building
25 5-6, 11	spouted jar	none	Nippur	South Mesopotamia	Al-Soo'f 1985, fig 8 2-3, 5-6, Hansen 1965, figs 17-18	Middle-Late Uruk	Vessels with droop spouts from levels XVII-XV of Inanna Temple Sounding
25 5-6, 11	spouted jar	none	Ur	South Mesopotamia	Woolley 1955, pl 61 JN113	Late Uruk-Early Dynastic I	Droop spout on vessel similar to examples from Habuba Kabra
25 5-6, 11	spouted jar	none	Uruk	South Mesopotamia	von Haller 1932, pl D	Late Uruk	Droop spouts span Eanna Archaic levels VII-IV at Uruk

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Fig ref	Form	Decoration	Comparanda: site	Comparanda: region	Publication ref	Dating	Comments
25 5-6, 11	spouted jar	none	Warka survey	South Mesopotamia	Adams and Nissen 1972, fig 30 o	Late Uruk	Droop spout used as a Late Uruk indicator
25 5-6, 11	spouted jar	none	Khafajah	Central Mesopotamia	Delougaz 1952, pl 17 e	Late Uruk-Early Dynastic I	Droop spout
25 5-6, 11	spouted jar	none	Tell Uqair	Central Mesopotamia	Lloyd and Safar 1943, pl 22 27	Late Uruk?	Loose droop spouts
25 5-6, 11	spouted jar	none	Habuba Kabira	North Mesopotamia	Strommenger 1980, Abb 27, Surenhagen 1978, fig 17.102	Late Uruk	Tall, narrow vessels with droop spouts. Not later than Late Uruk in date
25 5-6, 11	spouted jar	none	Choghha Mish	Iran	Delougaz and Kantor 1996, pl 111 G-L	Late Uruk	Range of tall, narrow vessels with droop spouts. Not later than Late Uruk in date here
25 8	spouted jar	red paint	Nippur	South Mesopotamia	Hansen 1965, fig 27	Late Uruk	Vessel with similar form, from level XV of the Inanna Temple Sounding
26 3, 5, 27 2-3, 28 2-29 3	spouted jar	none	Telloh	South Mesopotamia	de Genouillac 1934, pl VII.4430	?	Vessel similar to fig 28 7. Dating uncertain
26 3, 5, 27 2-3, 28 2-29 3	spouted jar	none	Uruk	South Mesopotamia	Surenhagen 1987, 56 1	Jemdet Nasr?	Vessel similar to fig 28 4, from K-LXII-XIII
26 3, 5, 27 2-3, 28 2-29 3	spouted jar	none	Khafajah	Central Mesopotamia	Delougaz 1952, pl 182 C 534 222	Jemdet Nasr-Early Dynastic I	Vessels from Graves 10 and 18, very similar to fig 28 7, Protoliterate c-d
26 3, 5, 27 2-3, 28 2-29 3	spouted jar	none	Khafajah	Central Mesopotamia	Delougaz 1952, pl 182 C 535 242	Jemdet Nasr	Vessel from Grave 8 very similar to fig 28 4, Protoliterate c
26 4	spouted jar	red paint, raised notched ridges	Uruk	South Mesopotamia	Nissen 1970, pl 65 17/9, pl 72 20/17, 20/23	Jemdet Nasr-Early Dynastic I	Sherds and spouted vessels with six-pointed rosette as in fig 26 4
26 4	spouted jar	red paint, raised notched ridges	Khafajah	Central Mesopotamia	Delougaz 1952, pl 31 c-c'	Jemdet Nasr	Spout with six-pointed rosette either side of spout as in fig 26 4
27 1	spouted jar	red paint?	Ur	South Mesopotamia	Woolley 1955, pl 63 JN137	Late Uruk-Early Dynastic I	Large spouted vessel, but with rim not similar to fig 27 1
27 1	spouted jar	red paint?	Warka survey	South Mesopotamia	Adams and Nissen 1972, fig 69 12	Jemdet Nasr-Early Dynastic I	Very similar vessel to fig 27 1, from site of Jemdet Nasr-Early Dynastic I date
27 1	spouted jar	red paint?	Tell Asmar	Central Mesopotamia	Delougaz 1952, pl 194 D 535 542	Early Dynastic I	Vessel very similar to fig 27 1, including the rim
27 3	spouted jar	groove on shoulder	Abu Salabikh	South Mesopotamia	Pollock 1990, fig 9 e	Jemdet Nasr	Several examples of similar spout, with pushed in lower face, come from pit of Jemdet Nasr date on the Uruk Mound at Abu Salabikh
27 4-28 1	spouted jar	red paint?/handle	Fara	South Mesopotamia	Martin 1988, 173 2	Jemdet Nasr	Very large vessel with handle and two spouts, painted on shoulder
27 4-28 1	spouted jar	red paint?/handle	Nippur	South Mesopotamia	Al-Sooif 1985, fig 8 10	Late Uruk	Vessel very similar to fig 27 4, from level XVI of the Inanna Temple Sounding
27 4-28 1	spouted jar	red paint?/handle	Tell Razuk	Central Mesopotamia	Thuesen 1981, pl 70 12-22, pl 71 1-10	Early Dynastic I	Large vessels with overhanging ledge rims are common at Tell Razuk, but not clear how many may have been spouted
27 4-28 1	spouted jar	red paint?/handle	Habuba Kabira	North Mesopotamia	Surenhagen 1978, fig 9	Late Uruk	Large spouted vessel with handle and red paint, but also with four lugs
30 1-7	handled cup	incision	Abu Salabikh	South Mesopotamia	McAdam 1983, 54	Late Uruk-Early Dynastic I	Strap-handled cups occur on surface of West Mound
30 1-7	handled cup	incision	Fara	South Mesopotamia	Martin 1988, 175 11	Jemdet Nasr-Early Dynastic I	Vessel with single strap handle and incised bands
30 1-7	handled cup	incision	Nippur	South Mesopotamia	Al-Sooif 1985, fig 7, Hansen 1965, fig 6, Wilson 1986, fig 4 9	Middle Uruk-Jemdet Nasr	Strap-handled cups span levels XX-XIII of the Inanna Temple Sounding
30 1-7	handled cup	incision	Telloh	South Mesopotamia	de Genouillac 1934, pl 5, 23 1	Late Uruk?	One example occurs in a grave attributed to Late Uruk date
30 1-7	handled cup	incision	Ur	South Mesopotamia	Woolley 1955, pl 60 JN107	Late Uruk-Early Dynastic I	Strap-handled cup without incision
30 1-7	handled cup	incision	Uruk	South Mesopotamia	von Haller 1932, pl 18 c; Nissen 1970, pl 90 38/36, Pongratz-Leisten 1988, 209 8	Late Uruk	Strap-handled cups occur in Eanna Archaic levels IX-VI
30 1-7	handled cup	incision	Warka survey	South Mesopotamia	Adams and Nissen 1972, fig 30 I-J	Late Uruk-Early Dynastic I	Similar examples
30 1-7	handled cup	incision	Khafajah	Central Mesopotamia	Delougaz 1952, pl 20 a-c	Jemdet Nasr	Vessel similar to fig 30 1
30 1-7	handled cup	incision	Habuba Kabira	North Mesopotamia	Surenhagen 1978, fig 5 58	Late Uruk	Vessel with single handle but no incision
30 1-7	handled cup	incision	Choghha Mish	Iran	Delougaz and Kantor 1996, pl 95 H-N	Late Uruk	Assorted handled cups with incised parallel lines. Not later than Late Uruk here
30 1-7	handled cup	incision	Susa	Iran	Le Brun 1971	Late Uruk	Very similar vessels from Acropolis I 17A-B
31 1-3	handled vessel	none	Abu Salabikh	South Mesopotamia	Pollock 1990, fig 5 c	Jemdet Nasr	Very similar form with handle from pit of Jemdet Nasr date
31 1-3	handled vessel	none	Nippur	South Mesopotamia	Wilson 1986, fig 7 5	Jemdet Nasr	Similar sherds with handles from levels XIV-XIII of the Inanna Temple Sounding
31 1-3	handled vessel	none	Uruk	South Mesopotamia	Lenzen 1963, Taf 19 c; Pongratz-Leisten 1988, 209 6, Surenhagen 1987, 58 31	Late Uruk-Early Dynastic I	Very similar single-handled sherds and vessels from Eanna Archaic levels of Late Uruk-Early Dynastic I date

SECRETS OF THE DARK MOUND

Fig ref	Form	Decoration	Comparanda: site	Comparanda: region	Publication ref	Dating	Comments
31 1-3	handled vessel	none	Warka survey	South Mesopotamia	Adams and Nissen 1972, fig 69 15	Jemdet Nasr- Early Dynastic I	Single-handled vessel from site of Jemdet Nasr- Early Dynastic I date
31 1-3	handled vessel	none	Tell Uqair	Central Mesopotamia	Lloyd and Safar 1943, pl 22 4	Jemdet Nasr	Single-handled vessel with incised bands
31 5	handled vessel	small spout	Khafajah	Central Mesopotamia	Delougaz 1952, pl 24 b, 166 B 757 605	Jemdet Nasr- Early Dynastic I	Vessel identical in form to fig 31 5, with handle and small spout, but with slight incised lines around body, from Houses 12 at Khafajah, Protoliterate d
33 7	hole-based vessel	single hole near base	Kish	Central Mesopotamia	Mackay 1929, pl 54 5	Early Dynastic III	Very similar vessels from graves in the 'A' cemetery at Kish.
33 7	hole-based vessel		Tell Asmar	Central Mesopotamia	Delougaz 1952, pl 152 B 225 540, 145 A 756 520, 160 B 555 540b	Early Dynastic III/ Proto-imperial	Several examples of similar vessels, with single hole near base, all from late Early Dynastic-Akkadian levels.
33 9	bottle	none	Tell Asmar	Central Mesopotamia	Delougaz 1952, pl 145 A 758 540, 189 C 758 510	Isin-Larsa	Similar to fig 33 9 but with more elaborate rim
33:10	jar	incision	Warka survey	South Mesopotamia	Adams and Nissen 1972, fig 42 30	Late Uruk	Sherd very similar to fig 33 10 from Late Uruk site.
33:10	jar	incision	Habuba Kabira	North Mesopotamia	Surenhagen 1978, fig 24 21	Late Uruk	Several similar forms, but without incision.
33 16	jar	incision	Tell Razuk	Central Mesopotamia	Thuesen 1981, pl 67 1-14, 68 1-14	Early Dynastic I	Several similar forms, but without incision.
34 2-3	bowl	none	Tell Razuk	Central Mesopotamia	Thuesen 1981, pl 63 1-4	Early Dynastic I	Similar straight-sided tall bowl sherd
35 9	jar	none	Tell Uqair	Central Mesopotamia	Lloyd and Safar 1943, pl 22 13	Late Uruk-Jemdet Nasr?	Very similar to fig 35 9
35 10	bottle	none	Ur	South Mesopotamia	Woolley 1955, pl 25 top	?	Vessel very similar to fig 35 10, of unknown date.
35 10	bottle	none	Tell Asmar	Central Mesopotamia	Delougaz 1952, pl 164 B 664 540a-c, 165 B703 240	Early Dynastic I- Early Akkadian	Vessels similar in form to fig 35 10 from a range of levels
35 11	bottle	none	Adab	South Mesopotamia	Banks 1905-6, no 32	?	Similar to fig 35 11.
35 11	bottle	none	Nippur	South Mesopotamia	Hansen 1965, fig 42 a	Early Dynastic III/ Akkadian	Identical to fig 35 11, from TB XIII-XI
35 11	bottle	none	Ur	South Mesopotamia	Woolley 1955, pl 68 RC 255	Early Dynastic III/ Akkadian	Identical to fig 35 11, from Royal Cemetery
35 11	bottle	none	Kish	Central Mesopotamia	Mackay 1925, pl 16 28-30	Early Dynastic III	Similar to fig 35 11.
35 11	bottle	none	Tell Asmar	Central Mesopotamia	Delougaz 1952, pl 3 a-b, pl 162 B634 570a-b	Early Dynastic III/ Akkadian	Several examples from Tell Asmar
35 11	bottle	none	Susa	Iran	Steve and Gasche 1971, pl 70 18	Akkadian	Similar to fig 35 11.
35 12	jar	none	Jemdet Nasr	Central Mesopotamia	Mathews 1990, fig 4	Early Dynastic I	Vessel similar to fig 35 12, containing carnelian beads.
35 12	jar	none	Tell Uqair	Central Mesopotamia	Lloyd and Safar 1943, pl 22:12	Late Uruk-Jemdet Nasr?	Very similar to fig 35 12
35 16-19	single-lugged vessel	single pierced lug	Khafajah	Central Mesopotamia	Delougaz 1952, pl 50 f B 544 541	Early Dynastic I	Similar form with single lug split into two pierced halves, from Houses 7
36 1-10	miniature four-lugged vessel	four pierced lugs/red paint	Nippur	South Mesopotamia	Al-Sooif 1985, fig 10 15; Hansen 1965, fig 25; Wilson 1986, fig 4 5	Late Uruk	Miniature vessels of fine green fabric with lugs, as in fig 36 4-6, appear in levels XVI-XV of the Inanna Temple Sounding
36 1-10	miniature four-lugged vessel	four pierced lugs/red paint	Telloh	South Mesopotamia	de Genouillac 1934, pl 24 2	?	Miniature four-lugged vessel, uncertain dating
36 1-10	miniature four-lugged vessel	four pierced lugs/red paint	Uruk	South Mesopotamia	Surenhagen 1987, 81 43	Late Uruk?	Miniature vessel similar to fig 36 9, but not painted
36 1-10	miniature four-lugged vessel	four pierced lugs/red paint	Habuba Kabira	North Mesopotamia	Surenhagen 1978, fig 18 122-126	Late Uruk	Several examples of miniature four-lugged vessels
36 1-10	miniature four-lugged vessel	four pierced lugs/red paint	Chogha Mish	Iran	Delougaz and Kantor 1996, pl 112 114	Late Uruk	Assorted four-lugged vessels with a range of decoration. Not later than Late Uruk here
36 15	miniature handled cup	incision	Rubeidheh	Central Mesopotamia	McAdam and Mynors 1988, fig 33 88	Late Uruk	Full-size version of this miniature, with single handle and incised/impressed rocker design
36 15	miniature handled cup	incision	Chogha Mish	Iran	Delougaz and Kantor 1996, pl 95 A	Late Uruk	Not later than Late Uruk here
37 1-7	solid stand	paint/bitumen/nicks	Abu Salabikh	South Mesopotamia	Postgate and Moon 1982, fig 4 3	Late Uruk-Early Dynastic I	From West Mound, with grooved upper surface and notched outer edge
37 1-7	solid stand	paint/bitumen/nicks	Nippur	South Mesopotamia	Wilson 1986, fig 7 10	Jemdet Nasr	Found in levels XIV-XII of the Inanna Temple Sounding
37 1-7	solid stand	paint/bitumen/nicks	Ur	South Mesopotamia	Woolley 1955, pl 64 JN160	Late Uruk-Early Dynastic I	Similar to fig 37 5
37 1-7	solid stand	paint/bitumen/nicks	Uruk	South Mesopotamia	Lenzen 1963, Taf 34 k-l, Pongratz Leisten 1988, no 242	Jemdet Nasr?	Several examples from Uruk.
37 1-7	solid stand	paint/bitumen/nicks	Warka survey	South Mesopotamia	Adams and Nissen 1972, 212	Late Uruk-Early Dynastic I	Found on seven sites, all with Jemdet Nasr date occupation.
37 1-7	solid stand	paint/bitumen/nicks	Khafajah	Central Mesopotamia	Delougaz 1952, pl 20 e	Jemdet Nasr	Plain solid stand
37 1-7	solid stand	paint/bitumen/nicks	Jemdet Nasr	Central Mesopotamia	Mathews 1989, fig 3 5	Jemdet Nasr	From area of Langdon's large building
37 1-7	solid stand	paint/bitumen/nicks	Kish	Central Mesopotamia	Watelin 1934, pl 7 1	Jemdet Nasr?	Several solid stands from Kish
37 1-7	solid stand	paint/bitumen/nicks	Tell Uqair	Central Mesopotamia	Lloyd and Safar 1943, pl 16	Late Uruk	At least seven found in association with the Painted Temple
38 2	handled vessel	none	Ur	South Mesopotamia	BM121975 1928 10 10 672	?	Unpublished example in British Museum, similar to fig 38 2.
38 3	bowl	none	Abu Salabikh	South Mesopotamia	Postgate 1983, fig 316	Late Uruk-Early Dynastic I	Similar to fig 38 3. Possible spinning bowl - see Strasser 1996

Fig ref	Form	Decoration	Comparanda: site	Comparanda: region	Publication ref	Dating	Comments
38.3	bowl	none	Adab	South Mesopotamia	Banks 1905-6, no 16	?	Boat with holes at two ends, very similar to fig 38.3. Possible spinning bowl - see Strasser 1996.
38.8	handle	twisted	Warka survey	South Mesopotamia	Adams and Nissen 1972, fig 30.1	Late Uruk	Twisted handle taken as Late Uruk indicator.

Chapter six

SMALL FINDS OF METAL, STONE, CLAY AND BONE

6.1 Introduction

In addition to proto-cuneiform tablets, glyptic and pottery, a considerable range of other objects was recovered during the 1920s excavations at Jemdet Nasr. Many of these objects are now of obscure function and in some cases their dating is unclear. Others sit more comfortably within a known wider context.

6.2 Metalwork

Very few metal items were recovered and they are all illustrated in fig 39:1-5. The copper adze shown in fig 39:1 has good contemporary parallels at Habuba Kabira (Strommenger 1980, fig 29) and Farukhabad (Wright 1981, fig 75:c). The barbed fish-hook, fig 39:5, is matched by examples from Habuba Kabira (Strommenger 1980, fig 40), Fara (Martin 1988, 222:320) and Ur (Woolley 1955, pl 30). I have not found parallels for the copper goose with suspension ring, fig 39:4. Analysis of the adze and fish-hook has shown them to consist of arsenical copper (Moorey and Schweizer 1972).

6.3 Stone vessels

Stone vessels were also found in relatively small numbers, fig 40:1-9. The type of vessel illustrated in fig 40:8-9, with rectangles in relief set into the neck and ledge-rim handles, appears to be peculiar to Jemdet Nasr, the only other example known to me coming from recent excavations at the site (Matthews 1989, fig 4:3). The bowl with incised decoration on the rim, fig 40:6, has an exact parallel, but made of pottery, from Uruk (Lenzen 1963, pl 32:e). Other open bowl forms, fig 40:1-5, pls 35-36, are matched at a wide range of Mesopotamian sites of Uruk to Early Dynastic date. The distinctive ledge-rim jar, fig 40:7, has parallels at sites such as Fara (Martin 1988, 203:123), Ur (Woolley 1955, pl 67:JN52) and Telloh (de Genouillac 1934, pl 5:1b) and is of Early Dynastic I date.

6.4 Stone implements

Several examples were found of the curious implement

illustrated in figs 41:1-6, 42:1-5, pl 37. The objects have a flat highly polished base, round surfaces and grooves running at right angles across the curved surfaces. Their function is unknown, but use as a bolas has been suggested. The geographical extent of this object agrees well with the maximum extent of Uruk culture, as principally attested by pottery forms, taking in Arslantepe to the north (Frangipane and Palmieri 1983, fig 64:1), Habuba Kabira to the west (Strommenger 1980, fig 47), Susa, Chogha Mish and Sialk to the east (Le Brun 1971, fig 55:2; Delougaz and Kantor 1996, pl 29:I; Ghirshman 1938, pl 28:1) and Uruk itself (Lenzen 1963, pl 34:i). Other stone implements include simple disks, pestles, pounders, weights or sinkers, and miscellaneous shaped pieces (figs 43-45, 46:5-8, 10-13, 16), most or all of which may have functioned within an environment of domestic and craft activity in such processes as food procurement and preparation and textile and pottery production. Some of the pierced or waisted stone implements, figs 44-45, may have functioned as loom weights.

6.5 Baked clay objects

Given the readily available amounts of good quality clay to be had in their immediate vicinity it is not surprising to find that the inhabitants of Jemdet Nasr made good use of this commodity in manufacturing a great range of architectural elements, implements and decorative items. Baked clay bricks were recovered in some quantities, and about thirty are now kept in the stores of the Field Museum, Chicago. They are all of the same dimensions, 23 x 9 x 6.5 cm, as in fig 52:1, exactly matching the dimensions given by Langdon for bricks found by him in the large building (Langdon 1927, 72). They are all pierced, often not completely through, by three oblique holes and bear impressions on their flat sides of split reed matting. The holes may have been made to facilitate drying before baking. The bricks were clearly mould-made and sun-dried on matting before being baked in a kiln. Similar bricks, also with three holes, were found at Eridu (Safar *et al.* 1981, fig 119). Other architectural elements

include gutter or drain fragments, fig 52:2-3, pl 40. Similar U-section pieces of baked clay drain have been found at Tell Uqair (Lloyd and Safar 1943, pl 16), Farukhabad (Wright 1981, fig 76:a) and at sites of Late Uruk to Early Dynastic I date in the Warka survey (Adams and Nissen 1972, 214).

An unusual object of baked clay is depicted in fig 52:4. This item has two flat faces at right angles, each face bearing sixteen circular designs within a rectangular grid. The two faces are connected at the back by a thick handle and there are bitumen traces along the edges. Four similar objects were excavated at Uruk, bearing twenty circles on each of two faces and with handles on the reverse (Jordan 1931, pl 19). One broken example from Tell Brak has at least fifteen circles on one face (Mallowan 1947, pl 30:12), while a single instance from Tell Uqair has eight or twelve circles on each face (Lloyd and Safar 1943, pl 28:2). In an architectural reconstruction involving wall cones and similar stamped baked clay panels found at Hassek Höyük, Behm-Blancke (1989, fig 4, pl 8) has shown how the stamped panels may have fitted onto right-angled wall faces at door jambs or niches. These distinctive objects may thus have served as architectural decorative elements, bound by their handles into mud-brick masonry (as suggested by Lloyd and Safar 1943, 155), or they may have been used as hand-held stamps, fixing circular and gridded designs onto soft wall plaster. The concentric incised designs on the two faces would give an overall effect similar to that of series of wall cones set into wall faces. Wall cones themselves, of varying shape and size, some with traces of bitumen or paint, were found in small quantities at Jemdet Nasr, and are illustrated in fig 53, pl 41. Given the parallels for the wall cones and for the baked clay fittings, it is likely that at Jemdet Nasr they originate from a building or buildings predating the main large building itself. These objects are further evidence for the existence at the site of an important public structure of Uruk date.

Implements made of baked clay include bobbins or waisted weights, fig 46:6-7, and spatulae, fig 46:2-4, pl 38, with good parallels from Ur and the Warka survey (Woolley 1955, pl 16; Adams and Nissen 1972, 210). At least nine clay sickle pieces were recovered from the site, figs 47-48, pl 39. Given their preponderance today at Jemdet Nasr we can surmise that the retained examples form only a small sample of the total number of sickles encountered by Langdon and Watelin. Clay sickles occur in vast numbers on a wide range of sites in Mesopotamia and beyond, dating to all periods from the Ubaid to Early Dynastic I in south Mesopotamia at least. In a thorough study of these ubiquitous artefacts, Benco (1992) has stressed the multi-functionality of clay sickles, with use in grain harvesting, reed cutting and on-site plant processing. Clay sickles were mould-made and in the case of at least one example from Jemdet Nasr (fig 48:5) there are clear split reed matting impressions on the flat surface of the blade, indicating that once removed from the

mould the sickles were laid out on mats to dry before being baked, a production process similar to that of baked bricks. High-temperature firing ensured a tough and workable implement, manufactured in massive quantities for agricultural and craft activity. Of particular note amongst the examples from Jemdet Nasr is the complete miniature clay sickle, fig 48:4.

Spindle whorls of baked clay were found in some numbers at Jemdet Nasr, figs 49-50. Many of them bear designs made by incision or impression, including one with a five-pointed star (fig 50:11), a motif which also occurs on the pottery and as a proto-cuneiform sign. Spindle whorls would have been used in textile production based on locally exploited flocks of sheep and goat. The occurrence of specific motifs on some spindle whorls may suggest an intention to identify pieces of productive equipment, or their users, within an overall economic system, but the designs may also be simply for decoration.

Four examples of sizeable baked clay cart wheels were found, fig 51. These wheels are substantial enough to support a cart or carriage of the grandeur of the "Cult Wagon" from the Early Dynastic II Sin Temple at Khafajah (Delougaz 1952, pls 82-83). A good parallel for the wheels themselves comes from contemporary Fara (Martin 1988, 199:85). From Jemdet Nasr come many examples of baked clay beads with distinctive spiral grooving along the length, fig 54:8-31, pl 43. These beads are perforated through their long axis and have longitudinal shave marks where they have been shaped before firing. Fine vegetal striations can be seen inside the spiral grooves, indicating that the shaped beads were tightly wrapped in fibrous vegetal matter prior to baking. During firing the vegetal matter burned off leaving the spiral grooves, believed to be an attempt to imitate shell cores. Spiral-groove beads occur only on south Mesopotamian sites, such as Fara (Martin 1988, 217:231), Abu Salabikh (Postgate 1983, fig 317), Nippur (Wilson 1986, 62) and Telloh (de Genouillac 1934, pl 34:3c), and appear to be restricted to the Jemdet Nasr period. None at all were found at Habuba Kabira or Chogha Mish, for example.

6.6 *Beads, figurines and tokens of stone, bone and clay*

In addition to the items outlined above, assorted small objects made from a range of substances were found in some numbers. Incised and perforated bone beads, fig 54:1-6, pl 42, are matched by examples from Fara (Martin 1988, 219:286). Beads, pins and decorative elements of shell, stone, bone, clay and coarse frit were all found, figs 55-57, 59, pls 44, 46. Notable by their absence are any high quality artefacts of semi-precious stone such as lapis lazuli. Rare occurrences of camelian beads are likely to originate from Early Dynastic I contexts at the site, especially graves.

Shell pendants similar to those shown in fig 57:13-18 have been recovered at several contemporary Mesopotamian sites, including Fara (Martin 1988,

221:308), Telloh (de Genouillac 1934 pl 37:1) and Rubeidheh (Killick 1988, fig 26:21), while a pierced cowrie shell bead identical to fig 57:4 was found at Fara (Martin 1988, 213:211). I have not found parallels for the distinctive bat-shaped pierced pendants, one of shell, one of frit, depicted in fig 57:7-8. Clay figurines of miscellaneous quadrupeds, fig 58:1-8, are matched by many examples from a host of Mesopotamian and other sites. The hollow figure-head depicted in fig 58:11 is perhaps a decorative spout from a pottery vessel. Several of the shell and stone figurines, fig 58:10, 12-18, pl 45, are of high quality, with finely carved detail. Stone vultures similar to fig 58:16 occur at Fara (Martin 1988, 209:192) and Telloh (de Genouillac 1934, pl 36:4b). The female figurine shown in fig 58:15 is matched by an example from Farukhabad (Wright 1981, fig 75:h). The hollow stone phallus shown in fig 59:3, pl 47, was presumably designed for fitting onto a clay or wooden statuette.

Tokens, counters or game pieces are depicted in figs 60-62, pl 48. They occur in a set range of fairly standard shapes, including spheres, ovoids, disks, cones, rounded cones and biconical forms. Comparanda for these forms have been found at Telloh (de Genouillac 1934, pl 37:1), Fara (Martin 1988, 208:179-183) and Uruk (Schmandt-Besserat 1988). If these objects are indeed administrative tokens rather than game pieces, they are all of the simple type, in contrast to the preponderance of complex tokens at Uruk (Schmandt-Besserat 1988). Only two instances of possible complex tokens were found at Jemdet Nasr, fig 62:21-22. One has a beaked shape, matched by examples from Uruk and Susa

and interpreted as a spouted vessel (Schmandt-Besserat 1988, type XIII:2, no. 724; 1986, pl 4), although a bird's head also seems likely. The other possible complex token, fig 62:22, may simply be a scribe's doodle, but it does bear similarities to complex tokens with incised symbols from Uruk (Schmandt-Besserat 1988, type VII:22). The precise *modus operandi* of these tokens within an administrative system remains obscure.

6.7 General comments on small finds

The small finds from Jemdet Nasr are on the whole modest in terms of their manufacture and their material. Items of lapis lazuli and carnelian are absent or rare and the standard of stone-carving is relatively poor, as is also attested by the glyptic evidence. The majority of artefacts are made of locally available resources such as clay, bone, low quality limestone, bitumen and shell. Metal objects are scarce. There is little in this assemblage to suggest a far-reaching network of trade centred on central Mesopotamia in the late fourth millennium BC.

Many of the artefacts, such as the spiral-groove clay beads, the tokens and figurines, do however indicate a degree of regional communication and interaction amongst sites of Jemdet Nasr date in central and south Mesopotamia. As with the Jemdet Nasr period pottery, the closest and most common parallels come from sites such as Uqair, Fara, Telloh and Abu Salabikh. In practical terms, the small finds from Jemdet Nasr clearly originate from a context of agricultural and craft productivity, with activities such as spinning, weaving, harvesting, fishing and building all well-attested.

Chapter seven

STILL A DARK MOUND WITH SECRETS

7.1 A brief history of the site's occupation

In this final chapter I want to summarise and pull together some of the more significant points which arise from a study of the long-past excavations at Jemdet Nasr, taken in conjunction with more recent findings. Firstly considering the sequence of occupation, the earliest evidence takes the form of a few Ubaid period sherds, fig 10:13, supported by more recently excavated material from Mound A (Matthews 1989, 247) and perhaps also by at least some of the baked clay implements, including clay sickles, found at the site. The nature and extent of the Ubaid occupation at Jemdet Nasr is entirely obscure, but some idea of a nearby contemporary settlement is provided by the evidence from Tell Uqair, only 15 km to the northwest. The Ubaid remains at Uqair have been somewhat overshadowed by the Uruk painted temple and the tablets and pottery of Jemdet Nasr date, but there was undoubtedly an extensive Ubaid settlement with high quality painted pottery and large-scale architecture (Lloyd and Safar 1943). The extensive low tell at Uqair, Mound B, which is largely unexplored, appears from its surface indications to be an extremely impressive Ubaid site.

There is clearly a substantial occupation of the Uruk period at Jemdet Nasr, as attested by numerous specific pottery types and assorted objects. On Mound A there is pottery evidence for limited occupation of the Middle Uruk period (Matthews 1989, 247). As regards the 1920s excavations we know nothing at all about the original architectural contexts of the Uruk material, but there is no doubt about the existence of mud-brick buildings and graves of this date, as demonstrated by more recent work (Matthews 1990, 32, 36). There are hints, no more than that, of an Uruk predecessor of the large Jemdet Nasr period building, but it is clear in any case that there was a substantial human presence at Jemdet Nasr during the latter part of the Uruk period. Surface collection of pottery in the 1980s indicates extensive Late Uruk occupation across the south reaches of Mound B in particular.

We have our fullest picture of the site during the

century or two of proto-historical time which bears the site's name as a chronological marker, the Jemdet Nasr period. The first point to make is that Jemdet Nasr is not by any means a large site during this period. The surface evidence for Late Uruk occupation along the south of Mound B, if not redeposited levelling, may mean that the Jemdet Nasr period occupation is restricted to an area of 4-6 hectares of the north area of Mound B, although much may be buried below recent alluvium. The large building clearly sits as a fundamentally important element of this occupation, taking up at least 0.4 of a hectare by itself. Other structures of this period, in so far as we know them, appear to be much more modest (Matthews 1990, 29-31). We may thus be justified in seeing the site during this brief period as comprising a single very large and dominant building, probably situated on a raised brick platform, surrounded by mud-brick dwellings. There is evidence to suggest that the large building itself was destroyed by fire.

The following Early Dynastic I period is also well attested in the pottery from Jemdet Nasr, as discussed in Chapter 5, in the shape of certain spouted vessels and other forms. During the 1980s excavations, much more material of this period was recovered, including an extensive rubbish dump with very early Early Dynastic I pottery and sealings with cylinder seal impressions, possible evidence for a continuation of large-scale administrative practices at the site after the destruction of the Jemdet Nasr period large building (Early Dynastic I occupation at Jemdet Nasr is discussed in Matthews 1997b). Indeed the lower layers of this rubbish dump contain material, including painted pottery, of definite Jemdet Nasr date, while the upper layers contain material transitional from Jemdet Nasr to Early Dynastic I types. There appears therefore to be a strong continuity in this part of the settlement from Jemdet Nasr, and probably from Late Uruk, through to Early Dynastic I. Further evidence of Early Dynastic I occupation was found in the form of a plano-convex brick house in the centre of Mound B, its mass-produced tall cups indicating a date slightly later than the

large rubbish dump. Surface finds of true solid-footed goblets indicate that later Early Dynastic I levels once existed at the site, but none have been excavated. At least one burial of Early Dynastic I date was cut into Mound A, its contents including distinctive stone vessels and carnelian beads which do not occur at all in pre-Early Dynastic I material from the site. During the Early Dynastic I period, then, there is good evidence for the continuation of settlement at Jemdet Nasr, but the surface pottery suggests that this occupation may have been even more restricted in extent than that of the Jemdet Nasr period. There is no evidence for later Early Dynastic occupation at Jemdet Nasr, with the possible exception of a handful of pottery types, all of which may have originated from Kish, mistakenly identified as from Jemdet Nasr. Certainly the surface pottery today includes nothing from the later Early Dynastic periods.

Jemdet Nasr appears to have been abandoned at some time around 2,800 BC. There is then a very long period, at least two thousand years, for which we have no evidence of occupation at the site. Mound B was never reoccupied, but on Mound A at some time in the Neo-Babylonian or perhaps Parthian periods a smart baked brick building was constructed on the summit and surrounded by a fortified wall with rounded turrets (Matthews 1989, 245-7). The remains of this building are just visible on the summit of Mound A in the background of pl 1. It is very likely that this structure served within a network of fortified border or command posts across central Mesopotamia. Following the abandonment of the police post, the site once more lay unoccupied and unnoticed for centuries until the discovery of its ancient past by locals who subsequently brought the site to the attention of the Kish expedition in March 1925. Until the implementation of the Musaiyib irrigation project in the 1950s the site lay in an area of semi-desert and sparse scrub but today the area is once more fertile and green, as it must have been in the centuries around 3,000 BC.

7.2 *The nature of the settlement*

Looking at life at the site during the Jemdet Nasr period there is no escaping the over-riding importance of the large building excavated by Langdon and Watelin in 1926 and 1928. Any attempt to understand the nature of occupation at the site must begin and end with this mysterious structure. As we have already seen, the poor recording methods employed by its excavators seriously impair our ability to make sense of the building in terms of its exact layout and the artefacts recovered from within. Nevertheless, there are some connections to be made, and we can at least with some confidence associate the proto-cuneiform tablets, much of the painted pottery and many of the cylinder seals with that structure. What then was happening in this clearly important building and its vicinity?

Firstly, we should stress the manifold evidence for craft activity within and around the large building. A

series of substantial updraught kilns, perhaps for pottery manufacture, was excavated by Watelin in one of the open areas of the building (pls 7-8), and further large ovens, more likely for bread-making, have also been excavated along the probable north limit of the building, perhaps a kitchen area (Matthews 1990, 27-8; 1992b, 198). A wide range of other craft activities is suggested by the finding of items such as spindle whorls, loom or net weights, needles and assorted tools of bone, clay and stone. Thus, although there is nothing in the material record to indicate the working or use of luxury materials such as gold, ivory, lapis lazuli or carnelian, there is sound evidence for the production of a range of basic commodities, including textiles and pottery, all of which may have been based exclusively on locally available raw materials and resources.

If we take account of the proto-cuneiform tablets the picture is considerably augmented. We have already emphasised the physical connection between the tablets and the large building, and we are here assuming that the activities attested in the tablets are strongly associated with the building itself in some way. The tablets provide intriguing glimpses of a complex, multi-stranded and hierarchical system of accounting, control and administration, focused on one or perhaps two central administrative authorities. In particular, the frequently occurring sign combinations AB UB and AB NI+RU appear to be designations for controlling authorities within, or administered through, the large building, with the sign AB denoting "institution" and UB and NI+RU signifying specific branches of the administration at Jemdet Nasr or even the ancient name of the settlement itself (Matthews 1993, 29-30). In this connection, it is notable that the AB sign appears to be a representation of a major structure on a platform, as indeed the Jemdet Nasr large building was. One tablet, with associated cylinder seal impression uniquely showing a skirted "priest-king" figure, bears a designation, SANGA AB, which may identify a high-ranking individual official intimately involved in the upper echelons of power (Matthews 1993, 32). Although work remains to be done on identifying proto-historic Mesopotamian scribes through their individual writing styles, the initial impression is that, given the high quantity of necessary signs and ligatures to be learnt (as many as 1,200 in the earliest texts from Uruk), the skill of writing may have been highly restricted to a small, possibly high-status, professional cadre.

As briefly discussed in Chapter 3, the tablets show the involvement of the people and the administration of Jemdet Nasr in a range of locally rooted tasks, including crop and animal management, textile production and general labour. Many of the texts appear to be concerned with the issue of set portions of grain to individual labourers, perhaps an indication of strict control over the labour force, male and female. The seal impressions on the tablets show a range of scenes which to some extent corroborate and elaborate upon the textual evidence.

These scenes show humans in processions, carrying staffs and goods, humans in front of impressive building façades, perhaps temples, and humans in captivity or as prostrate victims of war. Depicted animals include cattle, goat and gazelle. Fantastic hybrid bird-lion creatures hint at a mythology and religious ideology which may connect with later Sumerian and Akkadian *Imdugud/Anzu* figures (Jemdet Nasr seal impressions are illustrated in Matthews 1993, figs 1-9). These images reinforce the textual and archaeological evidence in placing the large building at the nexus of a complex web of social, economic and religious interactions of a markedly centralised and regularised nature.

The textual emphasis on crop production, grain distribution and animal husbandry gives a strong indication of the agricultural basis of the site's existence. While there may be evidence for exotic trade yet undeciphered in the Jemdet Nasr texts, the weight of the evidence underlines the essentially local and rural nature of the activities which feature in those texts. The wealth of the site was clearly rooted in the efficiently managed and carefully controlled exploitation of its rural hinterland, with large-scale production of grain and fruits and the management of herds of domesticated animals. If we look for archaeological confirmation or elaboration of these aspects, we will not find a great deal in the way of supporting evidence. No animal bones were retained from the 1920s seasons, and from my own excavations in 1988 and 1989 all recovered animal bones were stored in the dig-house ready for study in autumn 1990, which unfortunately has not yet proved possible. We can nevertheless be reasonably sure that sheep, goat, cattle and pig provided the bulk of the meat supply for the inhabitants, that fishing would have been an important element, and that gazelle, wild ass, jackal and lion roamed the plains and distant hills beyond the farmed hinterland.

As to plants, we know from impressions on clay sickles and baked clay bricks that reeds were used to weave mats very much in the style employed to this day. We can be sure that banks of tall swaying reeds, shaken by the wind, would have lined the irrigation canals and drainage ditches which alone made agriculture possible on the hot flat plain that surrounded the site as far as the eye could see. Location of these channels and understanding of their placement within an ever-changing system of water management, which perforce involved organisation of labour and inter-community co-operation across substantial distances, remains a major aim for any detailed regional survey project which may one day take place in this region of Mesopotamia. Grains and seeds were recovered from within pots in several rooms of the large building. These pieces have been identified as wheat, barley and umbelliferous plants (Field 1932a; Moorey 1978, 152-3). The role of wine and beer in Jemdet Nasr society and economy is not understood but may have been fundamentally significant. References to various types of beer in early texts and the proliferation

of spouted vessels may indicate an increasing importance for beer—its production, distribution and consumption—in the early evolution of complex societies in Mesopotamia and beyond (Joffe 1998).

In sum, the evidence we have from Jemdet Nasr, patchy, incomplete and scattered as it is, gives us a hazy and shimmering picture of a small settlement on the central Mesopotamian plain, surrounded by fertile fields and orchards, with grazing for cattle, sheep and goat. The settlement was dominated by an imposing mud-brick building set on a platform, and within this building much of the economic, social and ritual life of the community was delineated, administered and monitored at least partly by means of an early form of writing. It is highly likely that the Mesopotamian plain hosted numerous similar small settlements within a loose network of interacting communities, all engaged in the almost chaotic procedures of co-operation and rivalry which enabled and characterised the rise of Sumerian civilisation in the centuries to follow.

7.3 The nature of the period

In conclusion, some general comments about the nature of the Jemdet Nasr period are in order. To consider firstly the question of the origin and extent of the material culture which gives the period its distinctive style, it now seems certain that all elements of the Jemdet Nasr material assemblage can be understood as local developments from preceding Uruk assemblages. Early attempts to see a derivation of Jemdet Nasr pottery from Iranian roots have not proved convincing, while work on south Mesopotamian Uruk material, both within its homeland and beyond, has increasingly demonstrated the stylistic proximity and kinship of Jemdet Nasr pottery, including the painted elements, to immediate and local predecessors. This argument is entirely supported by the evidence of cylinder seals and seal impressions, proto-cuneiform texts and other categories of artefact, all of which attest a continuum of development from Late Uruk south Mesopotamian cultural sources. The geographical extent of Jemdet Nasr material culture has been treated in Chapter 5. It can be summarised as occurring over south, central and east Mesopotamia, with very scarce echoes of influence beyond, as perhaps at Tell Brak in Syria where north-south contact may have survived in attenuated form after its cessation elsewhere (Oates and Oates 1993).

Turning to social and economic relations, the Jemdet Nasr period has to be viewed firstly within the context of what came before. During the preceding Uruk period, south Mesopotamian cultural influence became widespread over great areas of the ancient Near East, from west and central Iran to north and central Syria and into south-east Anatolia (most comprehensively discussed in Algaze 1993). This expansion of Uruk culture, which initially occurred during the Middle Uruk period at about 3,600 BC, took the physical form of massive public and ritual building programmes, a uniformity of

ceramic style and form, the common use of cylinder seals, clay bullae with tokens and numerical tablets across an enormous geographical area. Fully developed proto-cuneiform writing, however, almost certainly appeared after the collapse of Uruk colonies in Iran and on the Syrian Euphrates, and evidence for the very earliest writing, so-called Uruk Archaic writing style IV, is restricted to the site of Uruk itself (Nissen 1986).

Much debate has centred on the social and economic import of the Middle-Late Uruk material evidence. Notable features of this cultural milieu include massive public buildings, many of which are clearly temples, mass-produced pottery types, such as bevelled-rim bowls and conical bowls, schematic cylinder seals and a range of artefacts which may be seen as precursors of writing. In economic terms, many see the Uruk expansion as an élite-driven quest to secure and exploit resources available on the fringes, but not in the heartland, of Mesopotamia, including metals, assorted hard stones, timber and slaves. These resources may have been demanded by the increasingly high-status lifestyles of élite elements in south Mesopotamian society who sought to augment and reinforce their power through economic expansion. Control over the reins of power may in turn have been mediated via thorough manipulation, deliberate or not, of ritual practice and religious belief as imposed on the local, rurally-rooted, populace. Indeed, there is every possibility, perhaps impossible to verify or deny through the available evidence, that the spread of Uruk culture through the ancient Near East was accompanied by, and an integral component of, a spread of religious beliefs and practices which gave an overarching legitimacy to what was at base an economic and social phenomenon. The precise mechanics of interaction between south Mesopotamian Uruk colonists or traders and the local communities with whom they came into contact are likely to have varied from region to region. The evidence suggests that these interactions may have varied from outright colonial domination to more mutually respectful standards of behaviour. If the evidence of all subsequent empires in this region is an acceptable guide, frequent swings between these two extreme forms of interaction are likely to have been common in any given geographical zone of contact.

The evidence from a broad geographical spectrum of excavated and surveyed sites indicates that the Uruk expansion reached its peak, halted and then, at some time around 3,000 BC, collapsed. The reasons for this collapse are not clear but, again by analogy with later, historically attested empires, factors such as military conflict with mountain-dwelling neighbours, over-exploitation of finite natural resources both at home and abroad, and internal melt-down due to socially unsustainable levels of tax and labour manipulation may each or all have played a part. After this dramatic collapse, the Greater Mesopotamian universe fragmented into a number of largely autonomous entities including the Ninevite 5

world of the north, the Jemdet Nasr world of the south and the proto-Elamite world of the east. The Jemdet Nasr world can be viewed very much as the direct inheritor of the Uruk world system. Geographically it was located in the heartland of that world, and its physical culture displayed, as we have seen, every semblance of continuity from its parent. The development of modes of administration, attested in proto-cuneiform texts and cylinder seals, was entirely in line with previous Uruk trends, with many of the Uruk IV writing signs continuing in use and glyptic iconography showing detailed continuity. We may therefore envisage the people of central-south Mesopotamia in the Jemdet Nasr period as carrying on with their social, economic and religious practices in the Uruk tradition, despite their severely reduced geographical horizons.

As we have seen, the physical remains from Jemdet Nasr do not display great evidence of widespread contacts, but it is possible to discern certain features which underpin a network of communication and interaction both within the Mesopotamian plain and beyond. The homogeneity of material culture in the Jemdet Nasr world, well illustrated by in many respects identical assemblages of pottery, seals and other artefacts from sites such as Jemdet Nasr, Tell Uqair, Fara, Nippur, Uruk and Khafajah, argues for a high degree of constant social intercourse and interaction, no doubt rooted in already existing modes of transport and communication along tracks, canals and rivers. The occurrence of Uruk Archaic III type proto-cuneiform tablets at widely dispersed sites, namely Jemdet Nasr, Tell Uqair, Uruk, Khafajah, Tell Asmar and perhaps Fara and Kish (Matthews 1993, 26; Nissen 1986), is the best evidence we have for a shared approach to social and economic management of urban-rural relationships at this time. Indeed we have more evidence for the dispersal of writing across Mesopotamia in this period than at any time from its invention until the Early Dynastic III period some 700 years later. Given the paucity of excavation of sites of the Jemdet Nasr period in the Mesopotamian heartland, there can be no doubt about the existence of many more texts and archives from this period, now buried or dissolved in the Mesopotamian soil.

A major thread of evidence for intra-Mesopotamian contact during this time comes in the form of the so-called city seal impressions which occur on 13 of the tablets from Jemdet Nasr and one tablet perhaps from Tell Uqair. These impressions list the names of several Mesopotamian cities, those identified including Ur, Larsa, Nippur, Uruk, Kesh, Zabala and perhaps Tell Uqair and Cutha (see fig. 1). This sequence of city names matches closely, but not identically, with a contemporary seal impression from Uruk and Uruk Archaic III type proto-cuneiform lists of city names, also from Uruk. Tablets from Jemdet Nasr sealed with the city seal are concerned with small, probably symbolic, quantities of fruits and textiles, perhaps offerings by individual cities

to mutually sacred shrines, but the precise workings of these city leagues remain largely obscure (all city seal evidence is discussed in Matthews 1993). The important point here is that they provide further support for a picture of regional co-operation in south-central Mesopotamia of a thorough and intricate nature during the centuries following the collapse of the Uruk world.

External relations of the Jemdet Nasr world are less easy to discern. Following a period of close similarity in material culture between the Mesopotamian heartland and neighbouring regions to the north and east, almost all traces of interaction disappear. Pottery assemblages go completely their own ways, with virtually no traces of contact between these regions. But some echoes linger on. The style of glyptic known as piedmont or glazed steatite occurs in a broad arc of the Near East running from south-west Iran along the foothills of the Zagros and into north Mesopotamia (Marchetti 1996; Pittman 1994). A single sealing from Jemdet Nasr (fig 7:8, pl 19) demonstrates the participation of the site with in this world in some way, however remotely or indirectly. The emergence of proto-Elamite writing in Iran, contemporary with Jemdet Nasr, attests a separate writing tradition which must have been inspired in principle by previous Uruk contact but which developed in its own distinctive, though short-lived, way. Similarly, the striking symbolism and designs of proto-Elamite glyptic betoken a development related structurally but not substantively to previous Uruk models. Connections between the

Jemdet Nasr world and the Ninevite 5 world of the north are also hinted at through the piedmont glyptic connection, but as yet no evidence of a Ninevite 5 equivalent to proto-cuneiform or proto-Elamite writing has come to light. Nothing found in the material culture of Jemdet Nasr itself, nor at Jemdet Nasr period sites in south-central Mesopotamia, gives any indication of major, barely minor, trade with these previously intimately connected regions. A major breakdown in communication had undoubtedly occurred. Hints of new horizons, however, are provided by the occurrence of a handful of probable Jemdet Nasr type pots at sites in the Arabian Gulf (Potts 1986) and by such features as the shell-imitation beads (fig 54, pl 43) which may reflect a marine interest and involvement.

The Jemdet Nasr period was short-lived and restricted in its geographical spread. It followed a fundamentally important period of large-scale cultural diffusion and interaction across much of the ancient Near East. The real significance of the period lies in its continuity not only with what went before but also with what was to come. By maintaining the newly seeded practice of writing on clay in a context of sophisticated urban-rural administration, sites such as Jemdet Nasr kept alive and nourished the great proto-cuneiform tradition which was to take full root and blossom during the subsequent centuries of truly Sumerian civilisation in the heartland of Mesopotamia.

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Appendix

OBJECTS FROM JEMDET NASR IN THE IRAQ MUSEUM, BAGHDAD

1926 Season

GN2427	IM 2671	Stone hoe
GN2475		Pot
GN2476		Pot
GN2495		Pot
GN2503		Pot
GN2504	IM 2630	Pot
GN2508	IM 2640	Pot
GN2413	IM 2622	Pot
GN2514		Pot
GN2522	IM 2634	Pot
GN2524		Pot
GN2525	IM 2613	Pot
GN2544	IM 2631	Pot
GN2548	IM 2636	Pot
GN2551	IM 2635	Pot
GN2552	IM 2638	Pot
GN2569	IM 2608	Pot
GN2570	IM 2644	Pot
GN2576	IM 2783	Cylinder seal
GN2477	IM 2787	Cylinder seal
GN2578	IM 2785	Cylinder seal
GN2581	IM 2772	Stamp seal
GN2584	IM 2714	Stamp seal
GN2596		Clay bead
GN2940		Pot
GN2957	IM 2758	Metal bowl
GN2965		Pot
GN2984		Pot
GN2986	IM 2616	Pot
GN3005	IM 2782	Cylinder seal
GN3006b	IM 2682	Amulet
GN3012	IM 2639	Pot
GN3019		Pot
GN3029	IM 2623	Clay axe
GN3031		Pot
GN3051	IM 2696	Clay axe
GN3078		Spindle whorl
GN3081	IM 2753	Spindle whorl
GN3082	IM 2727	Spindle whorl
GN3083	IM 2754	Spindle whorl
GN3084	IM 2755	Spindle whorl
GN3086	IM 2773	Stamp seal
GN3090		Bone needle
GN3097		Pendant
GN3100	IM 2678	Clay figurine
GN3104	IM 2751	Clay sickle

GN3109	IM 2792	Cylinder seal
GN3119	IM 2718	Clay figurine
GN3122	IM 2735	Clay ball
GN3123	IM 2675	Clay figurine
GN3127	IM 2612	Pot
GN3128	IM 2633	Pot
GN3129	IM 2793	Cylinder seal
GN3131	IM 2788	Cylinder seal
GN3132		Stamp seal
GN3135	IM 2672	Stone hoe
GN3140	IM 2618	Pot
GN3143	IM 2632	Pot
GN3301	IM 2777	Cylinder seal
GN3304	IM 2720	Amulet
GN3306	IM 2689	Clay head
GN3308	IM 2719	Amulet
GN3309	IM 2712	Pendant
GN3311	IM 2702	Shell Pendant
GN3314	IM 2717	Amulet
GN3327	IM 2690	Bone needle
GN3331	IM 2703	Shell pendant
GN3332	IM 2713	Bead spacer
GN3336		Counter
GN3338	IM 2738	Counter
GN3340		Bone needle
GN3344	IM 2766	Metal spatula
GN3347		Pot
GN3353	IM 2649	Pot
GN3367	IM 2659	Stone vessel
GN3368		Bone pin
GN3375	IM 2744	Shell bead
GN3379	IM 2611	Clay wheel
GN3380		Clay wheel
GN3398		Stone weight
GN3401	IM 2750	Stone celt
GN3402		Bone needle
GN3412	IM 2749	Stone disc

1928 Season

PJN2	IM 5801	Cylinder seal
PJN5	IM 5798	Cylinder seal
PJN9	IM 5813	Seal
PJN10	IM 6127	Seal
PJN11	IM 5807	Seal
PJN14	IM 5808	Seal
PJN26	IM 5821	Seal
PJN18	IM 6125	Stamp seal

PJN19	IM 6129	Stamp seal	PJN117A	IM 6182	Jar
PJN21	IM 6124	Pig pendant	PJN119	IM 6114	Jar
PJN24	IM 6126	Lion figurine	PJN120	IM 8689	Saucer
PJN25	IM 6131	Seal	PJN126	IM 6108	Handled jar
PJN29	IM 6134	Pendant	PJN127	IM 6109	Squat jar
PJN35	IM 6128	Stone tessule	PJN128	IM 6107	Handled jar
PJN37	IM 6130	Stamp seal	PJN132	IM 6117	Cup
PJN40	IM 6133	Dove figurine	PJN134	IM 6119	Jar
PJN45	IM 6132	Inlay	PJN136	IM 6139	Spouted jar
PJN46	IM 5823	Beads	PJN137	IM 6100	Spouted jar
PJN52	IM 5775	Copper pins	PJN138	IM 6101	Spouted jar
PJN54	IM 5772	Copper pin	PJN139	IM 6112	Jar
PJN56	IM 5773	Barbed prong	PJN140	IM 5954	Stone cup
PJN58	IM 5715	Axe	PJN141	IM 5964	Cup
PJN61	IM 6120	Dog figurine	PJN149	IM 6137	Spouted jar
PJN67	IM 5660	Stone pendant	PJN155	IM 6118	Cup
PJN70	IM 5867	Bone needle	PJN157	IM 6115	Cup
PJN72	IM 5865	Pin	PJN163	IM 5834	Net sinker
PJN83	IM 5703	Stone vase	PJN164	IM 5983	Net sinker
PJN84	IM 6200	Vase fragment	PJN166	IM 6196	Stand
PJN86	IM 6102	Spouted jar	PJN171		Stone tumbler
PJN89	IM 6103	Bowl	PJN172		Vase
PJN91	IM 6183	Jar	PJN172B		Painted bowl
PJN95	IM 6105	Jar	PJN172C		Painted bowl
PJN100	IM 6113	Lugged jar	PJN172D	IM 5889	Beads
PJN103	IM 6121	Spouted jar	PJN176	IM 6122	Tall jar
PJN105	IM 6099	Spouted jar	PJN178	IM 6148	Stone cup
PJN107	IM 6110	Painted jar	No record	IM 6149,	Sherds
PJN108	IM 6039	Painted jar	available	IM 6150,	
PJN109	IM 6111	Painted jar	No record	IM 6161,	Sherds
PJN113	IM 6069	Jar	available	IM 6162, IM 6163,	
PJN114	IM 6038	Spouted jar		IM 6164, IM 6165,	
PJN115	IM 6104	Jar		IM 6166, IM 6167	
PJN117	IM 6909				

Fig 1. Map to show location of sites mentioned in text.

Open circles indicate sites identified, definitely or provisionally, as named cities in the "City Seal" impression from Jemdet Nasr.

Key to sites:

- | | |
|-------------------|---------------------|
| 1. Eridu | 2. Ur |
| 3. Larsa | 4. Uruk |
| 5. Telloh | 6. Zabala |
| 7. Fara | 8. Adab |
| 9. Nippur | 10. Susa |
| 11. Kesh | 12. Abu Salabikh |
| 13. Chogha Mish | 14. Kish |
| 15. Jemdet Nasr | 16. Cutha |
| 17. Tell Uqair | 18. Tepe Farukhabad |
| 19. Khafajah | 20. Tell Agrab |
| 21. Tell Asmar | 22. Tell Gubba |
| 23. Rubeidheh | 24. Godin Tepe |
| 25. Habuba Kabira | 26. Jebel Aruda |
| 27. Karana 3 | 28. Tell Brak |
| 29. Kurban Höyük | 30. Hassek Höyük |
| 31. Arslantepe | |

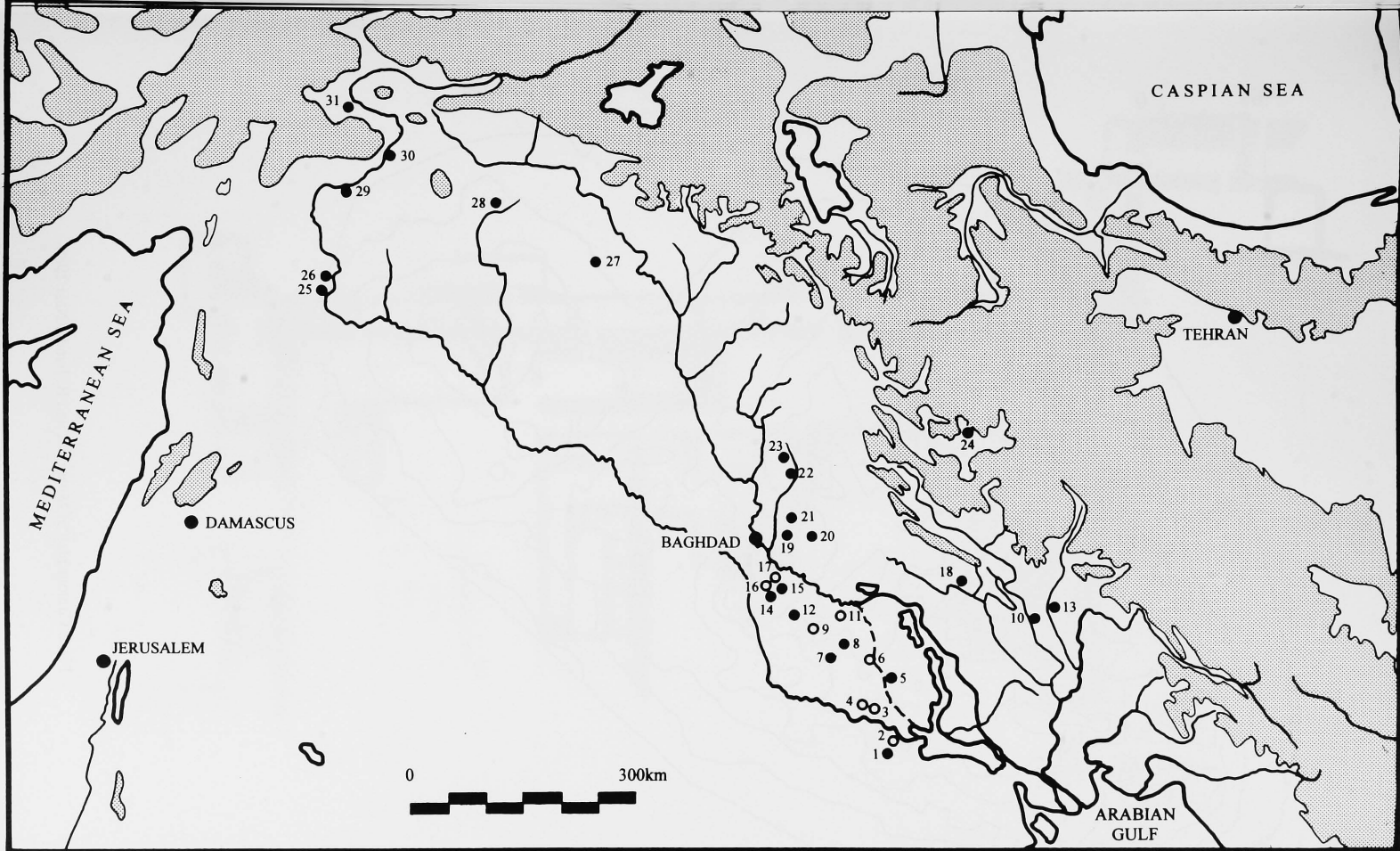


Fig 1. Map to show location of sites mentioned in text.

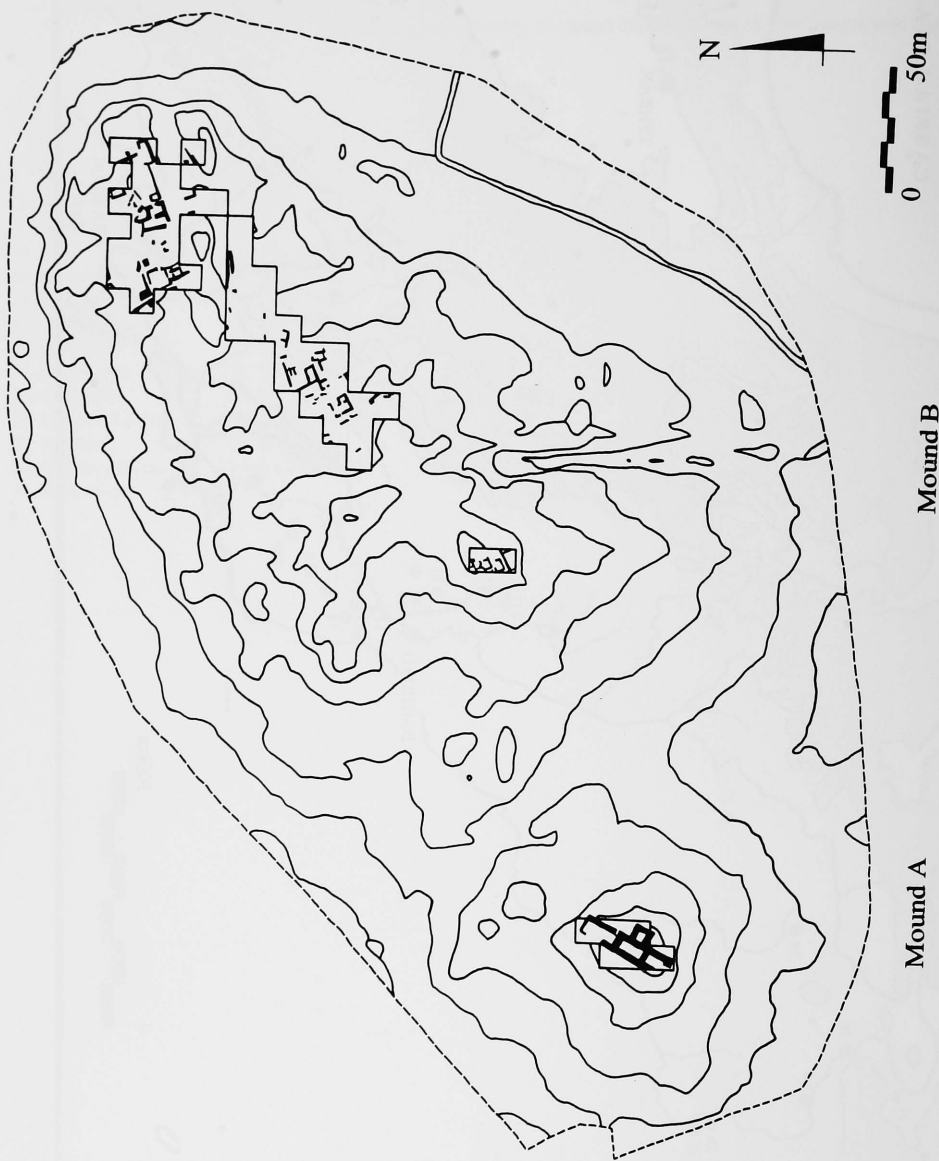


Fig 2. Contour plan of Mounds A and B, Jemdet Nasr 1988.

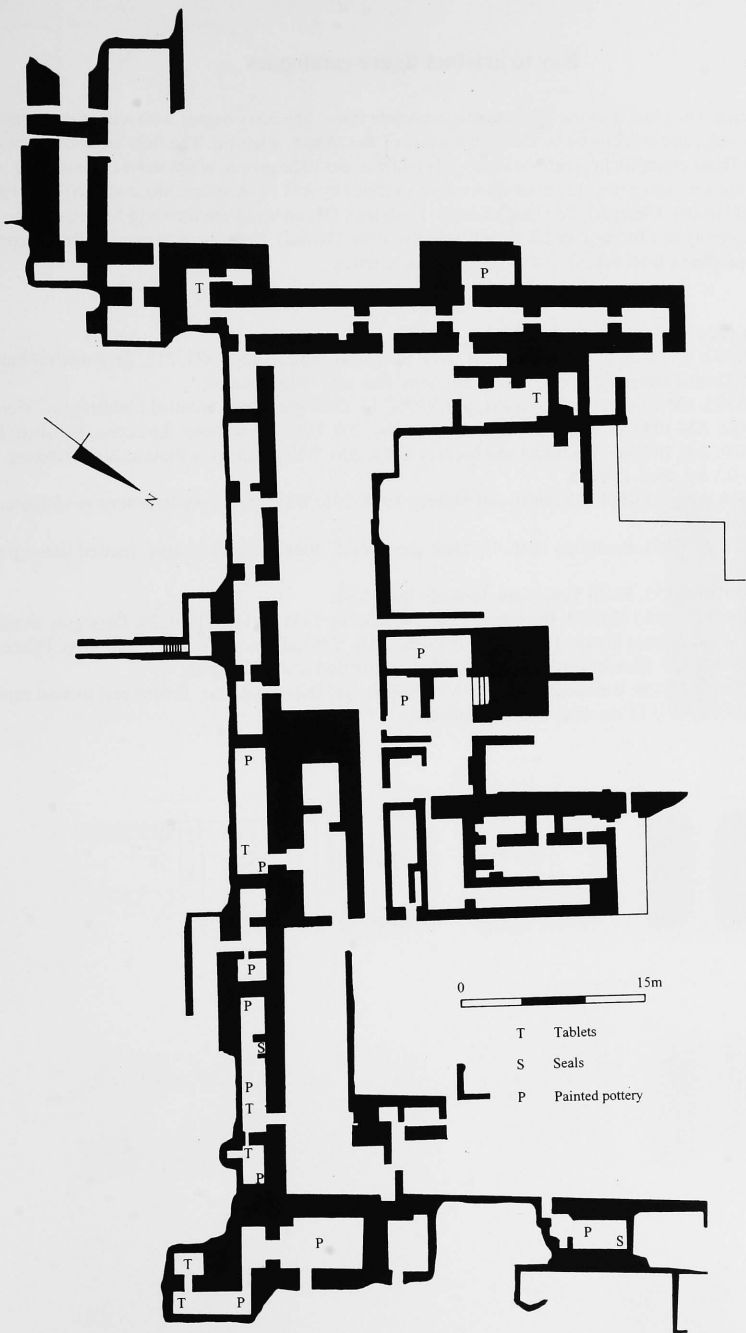


Fig 3. Mound B large building.

Key to artefact figure catalogues

Each artefact illustrated in a line drawing has a unique catalogue entry. The entry begins with a brief description of the object (e.g. stamp seal), and is followed by the field number of that object, if known. The field numbers were assigned during the season. Those commencing with the letters GN relate to the 1926 season, while those commencing with PJN are from the 1928 season. Next comes the museum number, prefixed by AM (Ashmolean Museum, Oxford), FM (Field Museum of Natural History, Chicago), IM (Iraq Museum, Baghdad), OI (on loan from the Field Museum to the Oriental Institute of the University of Chicago), or PR (Pitt Rivers Museum, Oxford). References to previous publication of the catalogued object precede a brief description of the object in question.

Fig 4. Stamp seals and cylinder seals. Scale 1:1.

1. Stamp seal. GN2582. AM 1926.482. Mackay 1931, 286. Buchanan and Moorey 1984, 212. Brown/white banded clacite. Pierced. Drilled design, each hole c. 0.05 cm deep. Flat side badly abraded.
2. Stamp seal. GN3303. FM 158217. Mackay 1931, pl LXXIII: 14. Dark grey stone, mottled pinkish-grey. Pierced.
3. Stamp seal. PJN32. AM 1930.87. Buchanan and Moorey 1984, 202. Pale yellow/beige limestone. Polished. Pierced.
4. Stamp seal. PJN20. AM 1930.86. Buchanan and Moorey 1984, 200. White/light grey limestone or alabaster. Drilled design, holes c. 0.1 cm deep. Pierced.
5. Stamp seal. PJN44. AM 1928.584. Buchanan and Moorey 1984, 201. White/light grey limestone or alabaster. Drilled design. Pierced.
6. Cylinder seal. AM 1928.452. Buchanan 1966, 19. Dark green/black stone, possibly steatite. Incised lines up to 0.1 cm deep. Pierced.
7. Cylinder seal. AM 1928.455. Shell. Very worn. Possibly from Kish.
8. Cylinder seal. GN2579. AM 1926.483. Buchanan 1966, 14. Mackay 1931, pl LXXIII: 9, 29. Dark grey mottled limestone. Drilled and incised design. Holes up to 0.15 cm deep. Vertical grooves up to 0.3 cm deep. Pierced.
9. Cylinder seal. FM 158522. Dark brown/red stone. Drilled and incised design. Pierced.
10. Cylinder seal. AM 1928.450. Buchanan 1966, 26. Very pale beige/white sandstone. Drilled and incised design coarsely cut. Holes up to 0.15 cm deep. Not fully pierced.

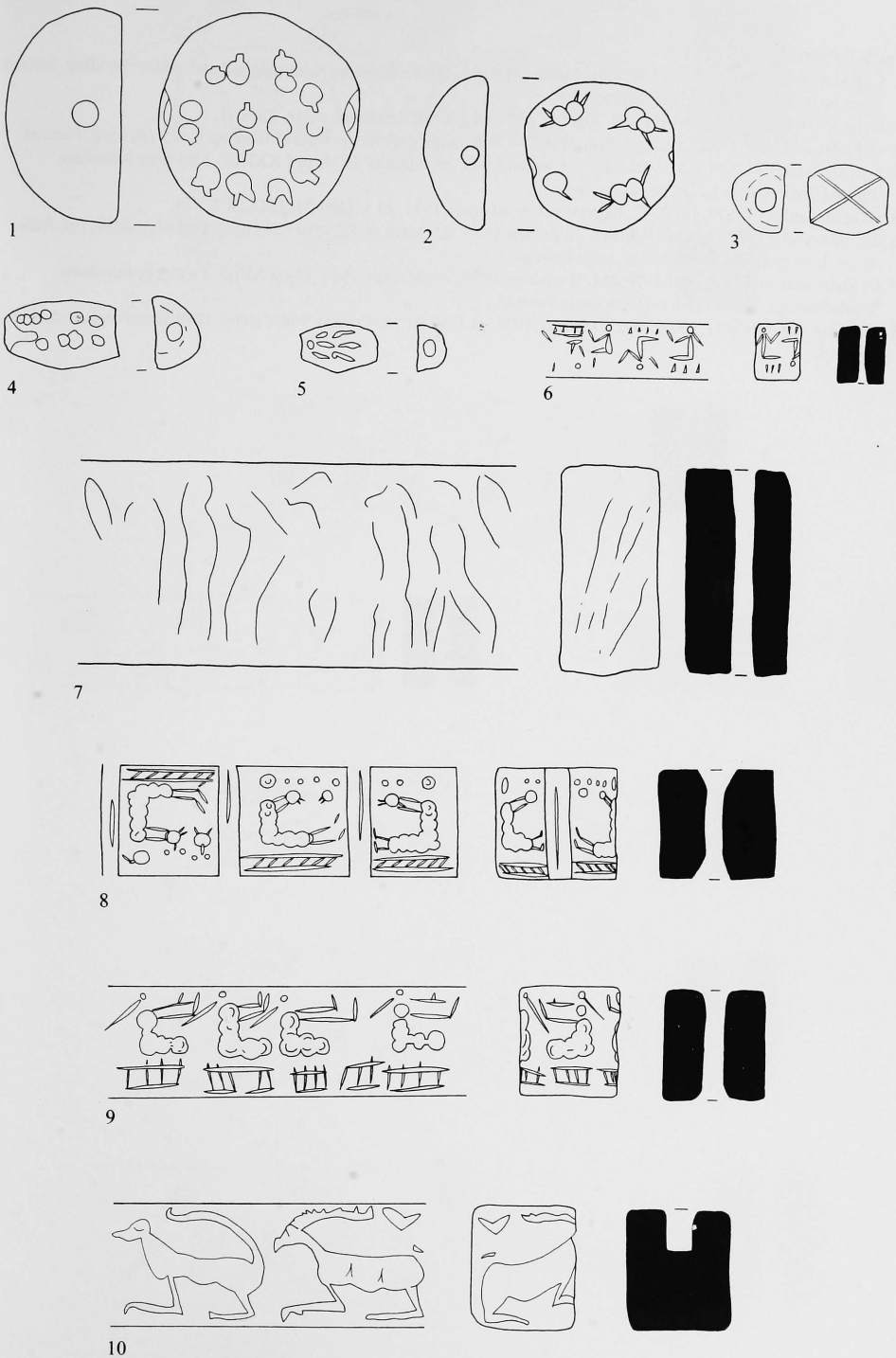


Fig 4. Stamp seals and cylinder seals. Scale 1:1.

Fig 5. Cylinder seals. Scale 1:1.

1. Cylinder seal. PJN6. AM 1928.462. Buchanan 1966, 31. White limestone with pale red and yellow banding. Incised lines up to 0.15 cm deep. Not pierced.
2. Cylinder seal. GN3036. FM 156609. Mackay 1931, pl LXXIII:19. Black stone. Pierced.
3. Cylinder seal. AM 1928.451. Buchanan 1966, 34. Pale beige/grey stone. Incised lines up to 0.1 cm deep. Pierced.
4. Cylinder seal. GN2580. AM 1926.491. Buchanan 1966, 38. Mackay 1931, pl LXXIII:2. Mid-grey limestone. Incised lines up to 0.15 cm deep. Pierced.
5. Cylinder seal. GN3129. IM 2793. Redrawn from Mackay 1931, pl LXXII:21; LXXIII:17, 31.
6. Cylinder seal. GN3357. AM 1926.485. Buchanan 1966, 42. Mackay 1931, pl LXXIII:4. Pinkish/reddish fine limestone. Incised lines up to 0.15 cm deep. Pierced.
7. Cylinder seal. GN3064. AM 1926.484. Buchanan 1966, 28. Mackay 1931, pl LXXIII:1. Pale grey limestone. Drilled design. Holes up to 0.15 cm deep. Pierced.
8. Cylinder seal. GN3341. FM 156601. Mackay 1931, pl LXXIII:18. Creamy white stone. Drilled and incised design. Pierced.

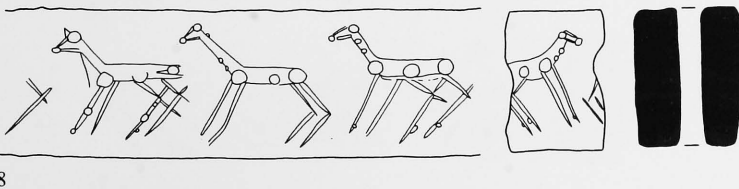
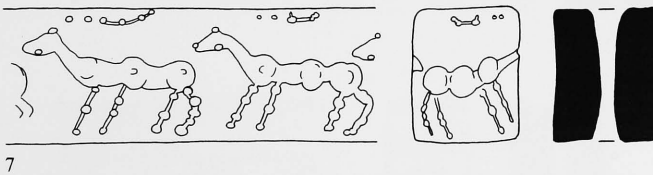
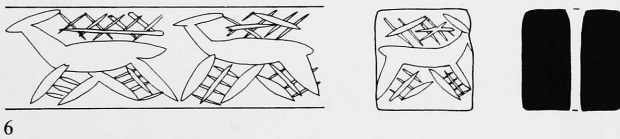
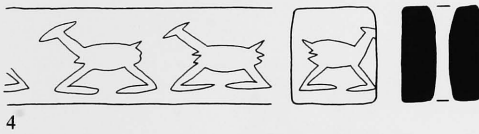
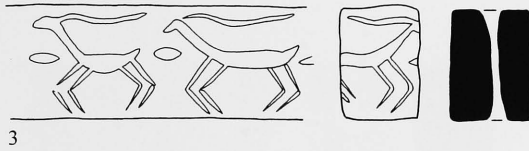
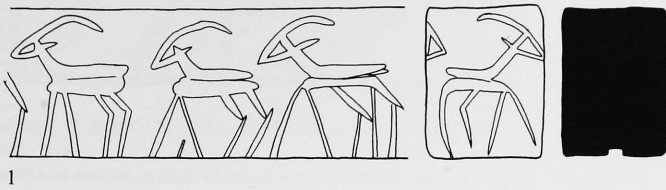
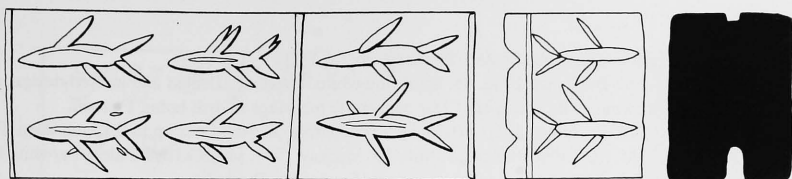


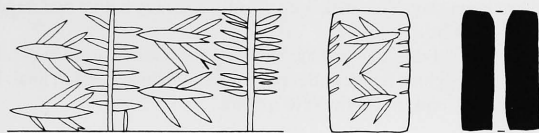
Fig 5. Cylinder seals. Scale 1:1.

Fig 6. Cylinder seals. Scale 1:1.

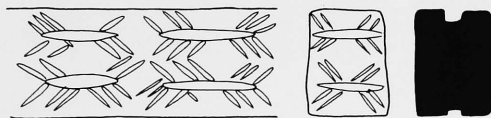
1. Cylinder seal. AM 1928.447. Buchanan 1966, 49. White limestone with brown/orange speckles. Incised lines are up to 0.1 cm deep. Not completely pierced.
2. Cylinder seal. GN3342. AM 1926.486. Buchanan 1966, 50. Mackay 1931, pl LXXIII:23. Fine black stone, possibly steatite. Incised lines up to 0.15 cm deep. Pierced.
3. Cylinder seal. AM 1926.547. Buchanan 1966, 53. Pale brown/cream limestone. Broken and glued together. Hole in side. Incised lines up to 0.05 cm deep. Not completely pierced.
4. Cylinder seal. GN2575. FM 156608. Mackay 1931, pl LXXIII:6. Pale yellow/white stone. Pierced.
5. Cylinder seal. AM 1928.453. Buchanan 1966, 67. Pinkish-red fine limestone/marble. Incised lines up to 0.05 cm deep.
6. Cylinder seal. AM 1928.454. Buchanan 1966, 66. Dark grey/green stone, possibly steatite. Incised lines up to 0.05 cm deep. Concentric striations at each end.
7. Cylinder seal. GN2583. FM 156607. Mackay 1931, pl LXXII:20; LXXIII:16, 30. Bone or baked clay. Dark grey and brown. Possibly burnt. Pierced.



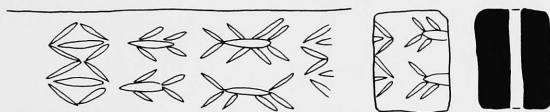
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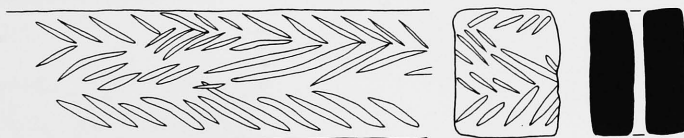
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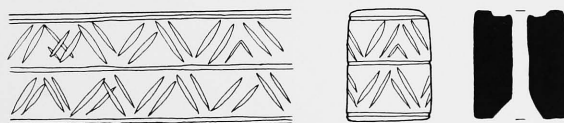
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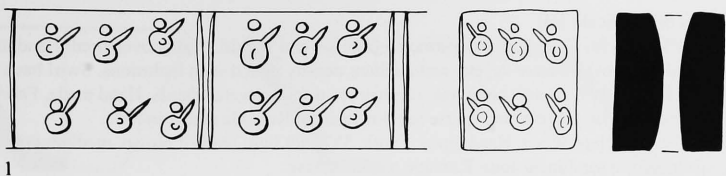


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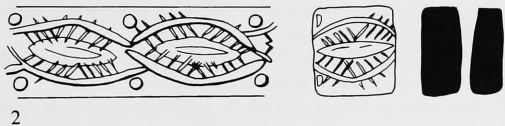
Fig 6. Cylinder seals. Scale 1:1.

Fig 7. Cylinder seals and seal impressions. Scale 1:1 (except no 7 = 1:2).

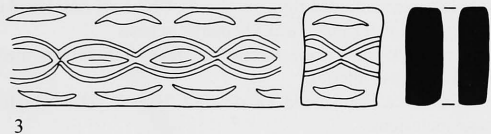
1. Cylinder seal. AM 1928.448. Buchanan 1966, 46. Hard fine white limestone. Drilled and incised design, drill holes up to 0.15 cm deep, narrowing as they deepen. Clear concentric markings in drill holes. Pierced.
2. Cylinder seal. AM 1928.449. Buchanan 1966, 60. Pinkish-red marble. Incised lines up to 0.15 cm deep. Pierced.
3. Cylinder seal. GN3302. AM 1926.490. Buchanan 1966, 59. Mackay 1931, pl LXXIII:8. Pale grey/white limestone. Crack in surface, probably from heat. Incised lines up to 0.15 cm deep. Pierced.
4. Cylinder seal. GN2576. IM 2783. Redrawn from Mackay 1931, pl LXXIII:22.
5. Cylinder seal. GN2577. TM 2787. Redrawn from Mackay 1931, pl LXXIII:21.
6. Cylinder seal. GN3301. TM 2777. Redrawn from Mackay 1931, pl LXXIII:24.
7. Sealing. FM 231142. Baked burnt clay. Very dark grey. Clearly a sealing but no seal impression survives on obverse. Basketry impressions on reverse (1:2).
8. Seal impression. GN2993A and B. From clay sealing AM 1926.678. Buchanan 1966, 72. Mackay 1931, pl LXXVI:13. Total of seven pieces glued together. Seven rollings of cylinder seal in total. Baked clay, blackened in places. Reverse faces completely broken. Fabric 5YR 7/4 pink.



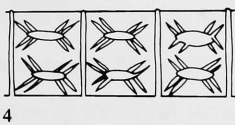
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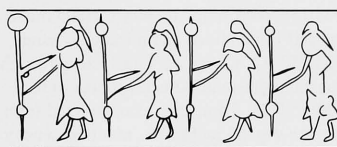
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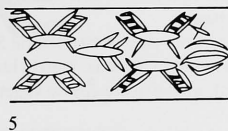
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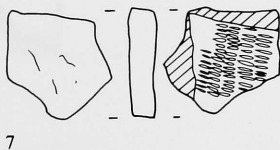
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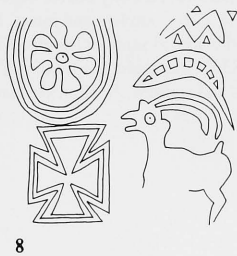
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Fig 7. Cylinder seals and seal impressions. Scale 1:1 (except no 7 = 1:2).

Fig 8. Bevelled-rim bowls. Scale 1:4.

1. Bowl. PJN152. FM 158448. Complete, reconstructed from several sherds. Highly over-fired. Hand made. Fabric 5Y 5/4 olive, medium density coarse vegetal and medium density mixed sand inclusions. Swirl base.
2. Bowl. GN 2526. FM 158399. Almost complete, reconstructed from several sherds. Hand made. Fabric 7.5YR 6/4 light brown, medium density vegetal and sparse sand inclusions. Knuckle marks in base.
3. Bowl. FM 158359. Complete, intact. Hand made. Fabric 5YR 6/4 light reddish brown, medium density coarse vegetal and sparse mixed sand inclusions. Knuckle marks in base.
4. Bowl. No number. Complete except for chips off rim and body. Hand made. Fabric 7.5YR 7/4 pink, medium density coarse vegetal and low density micaceous sand inclusions. Knuckle marks in base.
5. Bowl. FM 158370. Complete, intact. Hand made. Fabric 7.5YR 6/4 light brown, high density coarse vegetal and medium density mixed sand inclusions. Swirl base.
6. Bowl. FM 158445. Complete, intact. Hand made. Fabric 7.5YR 5/4 brown, very low density fine vegetal and medium density black sand inclusions. Knuckle marks in base.
7. Bowl. GN2528. AM 1926.368. Mackay 1931, pl LXVII:23. Complete apart from chips off rim. Hand made. Fabric 5YR 5/6 yellowish red, medium density vegetal and medium density mixed and micaceous sand inclusions. Knuckle marks in base.
8. Bowl. AM 1981.986. Complete, reconstructed from six sherds. Chips off rim. Hand made. Fabric 2.5Y 7/4 pale yellow, high density coarse vegetal inclusions. Knuckle marks in base.
9. Bowl. FM 158451. Complete, intact. Hand made. Fabric 7.5YR 6/4 light brown, medium density coarse vegetal and sparse sand inclusions. Level base interior.
10. Bowl. FM 158447. Complete, intact. Hand made. Fabric 2.5Y 7/4 pale yellow, high density coarse vegetal and medium density mixed sand inclusions.
11. Bowl. FM 158368. Complete, intact. Hand made. Fabric 5YR 6/6 reddish yellow, medium density coarse vegetal and sparse mixed and micaceous sand inclusions. Knuckle marks in base.
12. Bowl. FM 158366. Complete, intact. Hand made. Fabric 7.5YR 6/4 light brown, high density coarse vegetal inclusions and some mixed and micaceous sand.
13. Bowl. FM 158412. Complete, intact except for chips off rim. Hand made. Fabric 5YR 7/4 pink, medium density coarse vegetal inclusions. Knuckle marks in base.
14. Bowl. FM 158453. Complete, reconstructed from several sherds. Hand made. Fabric 5YR 5/4 reddish brown, low density coarse vegetal inclusions, medium density mixed and micaceous sand inclusions. Swirl base.
15. Bowl. FM 158360. Complete, intact. Hand made. Fabric 5YR 6/4 light reddish brown, low density coarse vegetal and shell, and high density mixed and micaceous sand inclusions. Swirl base.
16. Bowl. FM 158369. Almost complete, part of base missing. Reconstructed from two sherds. Fabric 5YR 6/6 reddish yellow, medium density coarse vegetal and mixed and micaceous sand inclusions. Nearly level base.
17. Bowl. AM 1928.472. Complete and intact. Fabric 5YR 5/6 yellowish red, high density coarse vegetal, and medium density mixed micaceous sand inclusions. Knuckle marks in base.
18. Bowl. FM 158362. Incomplete, 30% of rim missing and small part of body. Fabric 5YR 5/4 reddish brown, mixed sand inclusions and some shell. Knuckle marks in base.

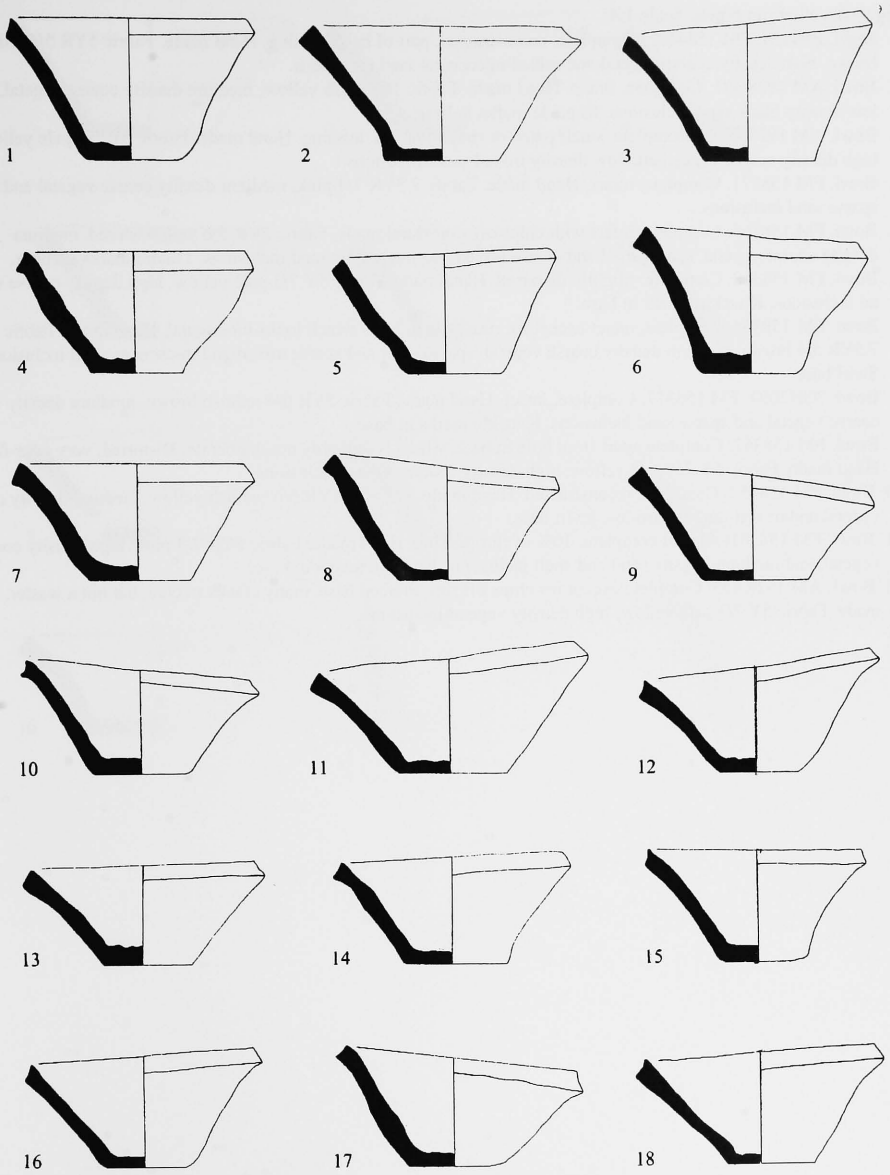


Fig 8. Bevelled-rim bowls. Scale 1:4.

Fig 9. Bevelled-rim bowls. Scale 1:4.

1. Bowl. PjN154. FM 158449. Incomplete, reconstructed, part of base missing. Hand made. Fabric 5YR 5/4 reddish brown, high density coarse vegetal and mixed micaceous sand inclusions.
2. Bowl. AM 1928.471. Complete, intact. Hand made. Fabric 10YR 7/6 yellow, medium density coarse vegetal, and low density black sand inclusions. Knuckle marks in base.
3. Bowl. AM 1925.400. Incomplete, small patch of rim, about 5% missing. Hand made. Fabric 5Y 7/3 pale yellow, high density coarse vegetal and low density mixed sand inclusions.
4. Bowl. FM 158371. Complete, intact. Hand made. Fabric 7.5YR 7/4 pink, medium density coarse vegetal and sparse sand inclusions.
5. Bowl. FM 158363. Complete, intact with chips off rim. Hand made. Fabric 5YR 5/6 yellowish red, medium density coarse vegetal, sparse shell and sparse mixed and micaceous sand inclusions. Thumb marks on base.
6. Bowl. FM 158358. Complete. Slightly distorted. Hand made. Fabric 5Y 7/3 pale yellow, high density coarse vegetal inclusions. Knuckle marks in base.
7. Bowl. FM 158364. Complete, intact except for neat hole in body which looks intentional. Hand made. Fabric 7.5YR 5/4 brown, medium density coarse vegetal, sparse shell and sparse mixed and micaceous sand inclusions. Swirl base.
8. Bowl. ?GN3094. FM 158377. Complete, intact. Hand made. Fabric 5YR 6/4 reddish brown, medium density coarse vegetal and sparse sand inclusions. Knuckle marks in base.
9. Bowl. FM 158367. Complete apart from hole in base, which is probably not deliberate. Distorted, very over-fired. Hand made. Fabric 5Y 7/4 pale yellow, high density coarse vegetal inclusions.
10. Bowl. FM 158452. Complete, reconstructed. Hand made. Fabric 7.5YR 6/6 reddish yellow, medium density coarse vegetal and mixed sand inclusions. Swirl base.
11. Bowl. FM 158361. Almost complete, 10% of rim missing. Hand made. Fabric 5YR 7/3 pink, high density coarse vegetal, and medium density sand and shell inclusions. Knuckle marks in base.
12. Bowl. AM 1928.473. Complete except for chips off rim. Pierced base, many cracks in clay, but not a waster. Hand made. Fabric 5Y 7/3 pale yellow, high density vegetal inclusions.

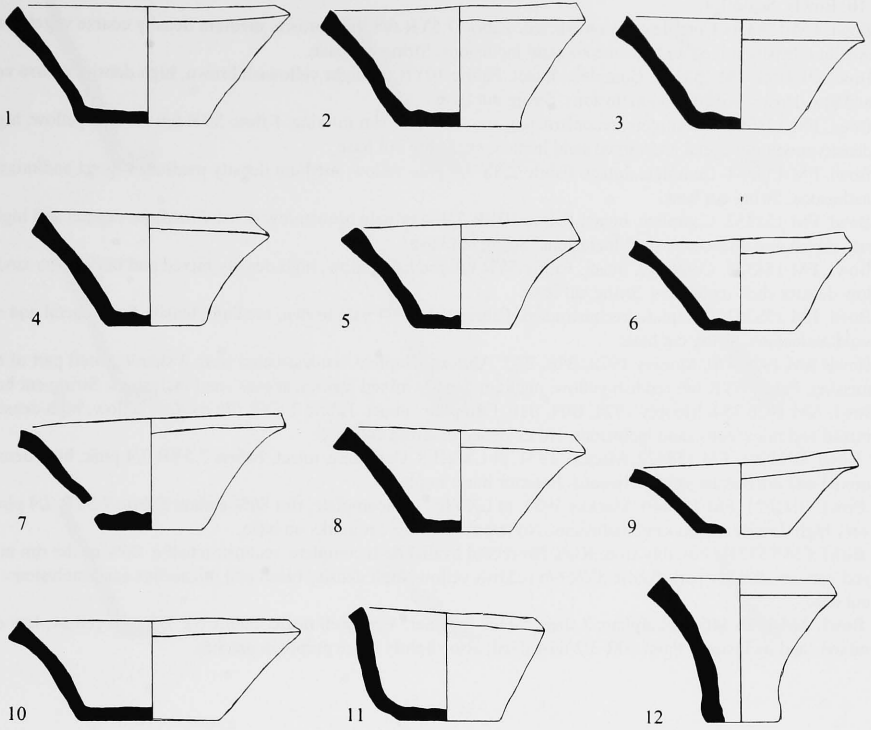


Fig 9. Bevelled-rim bowls. Scale 1:4.

Fig 10. Bowls. Scale 1:4.

1. Bowl. FM 158350. Complete, reconstructed. Fabric 7.5YR 6/4 light brown, medium density coarse vegetal, and medium density mixed and micaceous sand inclusions. String cut base.
2. Bowl. PJN153. FM 158381. Complete, intact. Fabric 10YR 6/4 light yellowish brown, high density coarse vegetal, and low density mixed sand inclusions. String cut base.
3. Bowl. FM 158385. Incomplete, reconstructed, about 25% of rim missing. Fabric 5YR 6/6 reddish yellow, high density medium vegetal and mixed sand inclusions. String cut base.
4. Bowl. FM 158384. Complete, intact. Fabric 2.5Y 7/4 pale yellow, medium density medium vegetal and mixed sand inclusions. String cut base.
5. Bowl. FM 158352. Complete, intact. Fabric 10YR 7/4 very pale brown, low density medium vegetal and high density mixed and micaceous sand inclusions. String cut base.
6. Bowl. FM 158353. Complete, intact. Fabric 5YR 6/6 reddish yellow, high density mixed and micaceous sand, and low density shell inclusions. String cut base.
7. Bowl. FM 158351. Complete, reconstructed. Fabric 10YR 7/4 pale brown, medium density fine vegetal and mixed sand inclusions. String cut base.
8. Bowl. AM 1926.470. Moorey 1978, B10, B13. Almost complete, reconstructed from 3 sherds, small part of body missing. Fabric 5YR 6/6 reddish yellow, medium density mixed and micaceous sand inclusions. String cut base.
9. Bowl. AM 1926.354. Moorey 1978, B09, B10. Complete, intact. Fabric 7.5YR 6/6 reddish yellow, high density mixed and micaceous sand inclusions. No evidence of string cut base.
10. Bowl. GN3061. FM 158422. Mackay 1931, pl LXVII:8. Complete, intact. Fabric 7.5YR 7/4 pink, high density mixed and micaceous sand inclusions. Exterior burnt in places.
11. Bowl. GN3021. FM 158440. Mackay 1931, pl LXVII:11. Incomplete, rim 80% extant. Fabric 7.5YR 7/4 pink, very high density mixed sand inclusions. No traces of string cut marks on base.
12. Bowl. FM 157241. Possibly from Kish. No record available. Incomplete, reconstructed, c. 20% of the rim missing, and very small body part. Fabric 5YR 6/6 reddish yellow, high density black and micaceous sand inclusions. String cut base.
13. Bowl. AM 1928.446. Incomplete, 2 sherds stuck together. Very well made. Fabric 5Y 7/3 pale yellow, low density mixed sand inclusions. Paint 10R 3/2 dusky red, also slightly more purple in patches.

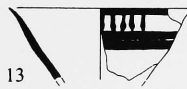
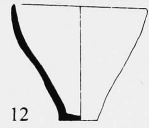
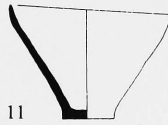
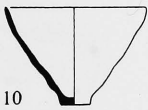
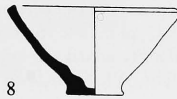
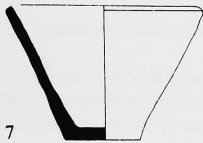
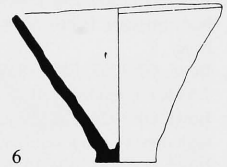
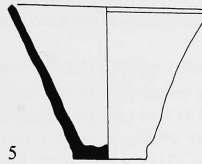
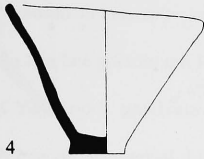
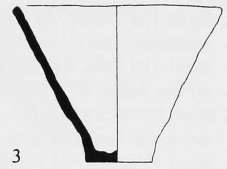
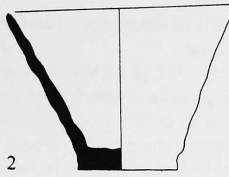
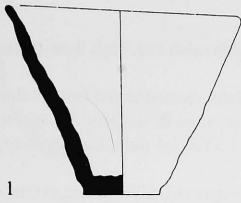


Fig 10. Bowls. Scale 1:4.

Fig 11. Bowls. Scale 1:4.

1. Bowl. FM 156232. Almost complete, 5% of rim missing. Fabric 5YR 5/6 yellowish red, high density mixed and micaceous sand inclusions. String cut base.
2. Bowl. GN 2964. AM 1926.469. Mackay 1931, pl LXVII:18. Almost complete, reconstructed from 3 sherds, chip off rim. Fabric 5YR 5/6 yellowish red, medium density mixed and micaceous sand inclusions. String cut base.
3. Bowl. PJN98. FM 158429. Complete, intact except for chip off rim. Fabric 7.5YR 7/4 pink, high density mixed micaceous sand inclusions. No clear string cutting marks on base.
4. Bowl. GN2942. FM 158392. Mackay 1931, pl LXVII:15. Incomplete, reconstructed, 60% of rim extant, part of body missing. Fabric 7.5YR 6/4 light brown, high density coarse vegetal, and low density micaceous sand inclusions. Poorly made, base not string cut.
5. Bowl. GN2506. FM 158489. Mackay 1931, pl LXVIII:19. Incomplete, reconstructed, rim 55% extant, parts of body missing. Fabric 5YR 5/4 reddish brown, medium density mixed and micaceous sand inclusions. String cut base.
6. Bowl. GN3053. FM 158393. Mackay 1931, pl LXVII:24. Incomplete, 30% of rim missing and part of body. Fabric 7.5YR 6/6 reddish yellow, high density mixed sand inclusions. String cut base.
7. Bowl. GN3024. FM 158428. Mackay 1931, pl LXVII:26. Incomplete, no rim surviving. Fabric 2.5Y 7/2 light grey, high density black sand. String pull base. Phallic protrusion on base interior.
8. Bowl. GN2497. AM 1926.497. Mackay 1931, pl LXVII:21. Moorey 1978, B14. Incomplete, about 55% of rim missing, part of body. All of base present. Fabric 2.5Y 7/4 pale yellow, medium density mixed sand inclusions. Paint 10YR 4/2 dark greyish brown.
9. Sherd. GN3456. AM 1926.501a. Does not join to 1926.501. Rim 20% present. Fabric 10YR 7/3 very pale brown, high density mixed sand inclusions. Paint 7.5YR 4/2 dark brown.
10. Sherd. GN3456. AM 1926.501. Rim 7% present. Fabric 10YR 7/3 very pale brown, high density mixed sand inclusions. Paint 7.5YR 4/2 dark brown (possibly originally purple/black).
11. Bowl. GN3054. FM 158395. Mackay 1931, pl LXVII:16. Almost complete, reconstructed, small part of body missing. Fabric 5YR 7/4 pink, medium density mixed and micaceous sand inclusions. String cut base.
12. Bowl. FM 158398. Complete, intact. Fabric 5YR 6/6 reddish yellow, high density mixed and micaceous sand inclusions. String cut base.
13. Bowl. PJN90. FM 158425. Complete, intact. Fabric 10YR 8/4 very pale brown, low density mixed and micaceous sand inclusions. String cut base.

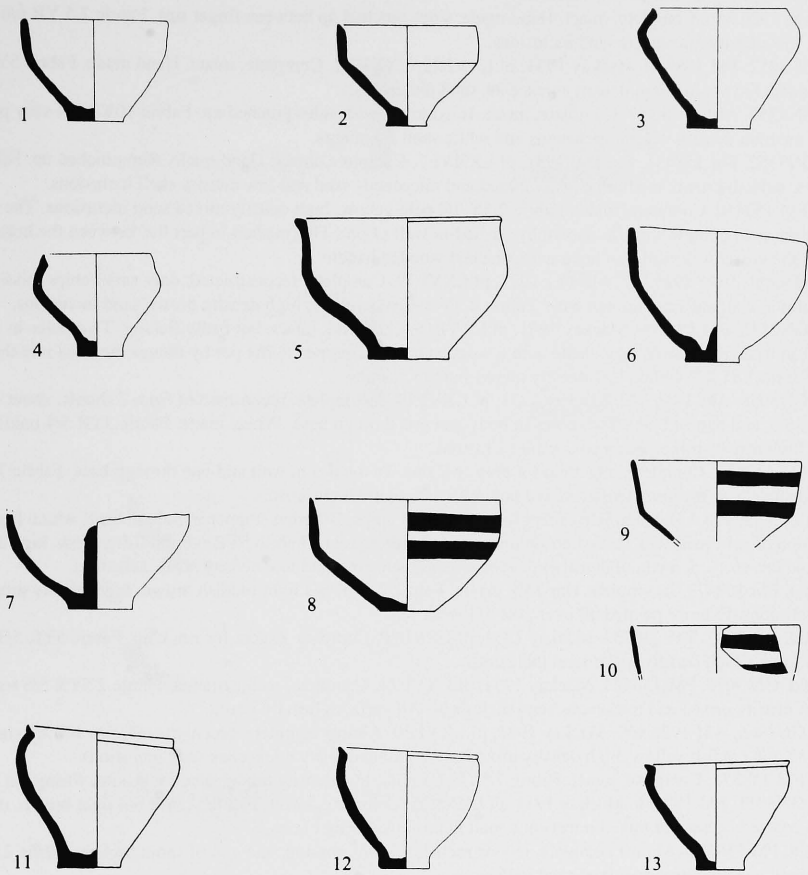


Fig 11. Bowls. Scale 1:4.

Fig 12. Trays, ladles, lids and bowls. Scale 1:4.

1. Tray. AM 1926.356. Complete, intact. Hand made, sides pinched up between finger tips. Fabric 7.5 YR 6/6 reddish yellow, low density micaceous sand inclusions.
2. Tray. GN3352. FM 158430. Mackay 1931, pl LXXVI:22; LXXVI:7. Complete, intact. Hand made. Fabric 5YR 6/4 light reddish brown, medium density micaceous sand inclusions.
3. Tray. GN3352. AM 1926.357. Complete, intact. Hand made with sides pinched up. Fabric 10YR 8/4 very pale brown, medium density vegetal inclusions and white shell fragments.
4. Tray. GN3352. FM 158431. Mackay 1931, pl LXXVI:7. Complete, intact. Hand made. Rim pinched up. Fabric 5YR 6/3, reddish brown, medium density mixed and micaceous sand and low density shell inclusions.
5. Ladle. FM 158410. Complete, intact. Fabric 2.5Y 7/4 pale yellow, high density mixed sand inclusions. The basal hole enters at an oblique angle as shown by pushed-in wall of pot. This pushed-in part lies between the holes in the wall, so the vessel was used as a ladle with attached wooden handle.
6. Ladle. GN3058. AM 1926.473. Mackay 1931, pl LXVI:19. Complete, reconstructed, only small chips missing. Two holes in wall and one through base. Fabric 2.5Y 8/4 pale yellow, high density brown sand inclusions.
7. Ladle. GN2533. FM 158408. Mackay 1931, pl LXVI:16. Complete, intact, but badly flaking. Two holes in wall and one in base. Reconstructed as ladle with a wooden handle strapped to the pot by thongs threaded into the wall holes. Fabric 7.5YR 7/4 pink, low density mixed sand inclusions.
8. Ladle. GN3058. AM 1926.472. Mackay 1931, pl LXVI:19. Incomplete, reconstructed from 2 sherds, about 10% of rim missing, and part of body. Two holes in body and one through base. Wheel made. Fabric 5YR 5/4 reddish brown, high density mixed micaceous sand inclusions.
9. Ladle. FM 158411. Complete, intact but for chips off rim. Two holes in wall and one through base. Fabric 7.5YR 6/6 reddish yellow, medium density mixed and micaceous sand inclusions.
10. Bowl/lid. AM 1926.474. Complete except for some small chips. Bitumen stopper in hole in base, which has impression of split reed stalk stuck into bitumen, and possible grains. Fabric 5YR 6/6 reddish yellow, high density black and brown sand, medium density micaceous sand inclusions and low density shell inclusions.
11. Bowl/lid. FM 158473. Incomplete, rim 75% extant. Fabric 2.5YR 6/4 light reddish brown, high density mixed sand inclusions. Exterior painted all over 10R 4/4 weak red.
12. Bowl/lid. GN 2547. FM 230753. Mackay 1931, pl LXVI:20. Complete except for rim chip. Fabric 5YR 5/3 reddish brown, high density black sand inclusions.
13. Bowl/lid. GN 3096. FM 158424. Mackay 1931, pl LXVI:24. Complete, reconstructed. Fabric 2.5YR 5/6 red, medium density mixed and micaceous sand inclusions. All surfaces heavily burnt.
14. Bowl. GN2966. AM 1926.467. Mackay 1931, pl LXVI:30. Almost complete, reconstructed, rim 100% extant. Fabric 5Y 6/6 reddish yellow, high density mixed and medium density micaceous sand inclusions.
15. Bowl. FM 158378. Complete, intact. Fabric 7.5YR 7/4 pink, low density mixed sand inclusions. String cut base.
16. Bowl. GN3011. FM 158486. Mackay 1931, pl LXVI:25. Complete, intact. Fabric 7.5YR 6/4 light brown, medium density coarse vegetal and mixed micaceous sand inclusions. String cut base.
17. Bowl/lid. FM 158401. Almost complete, reconstructed, 5% rim missing, and end of spout broken. Fabric 2.5Y 7/4 pale yellow, medium density mixed sand inclusions.
18. Bowl. GN 2487. FM 158439. Complete, intact, rim chipped. Fabric 10YR 7/3 very pale brown, high density mixed sand and large grit inclusions. Appears to be wheel made. Base not string cut.

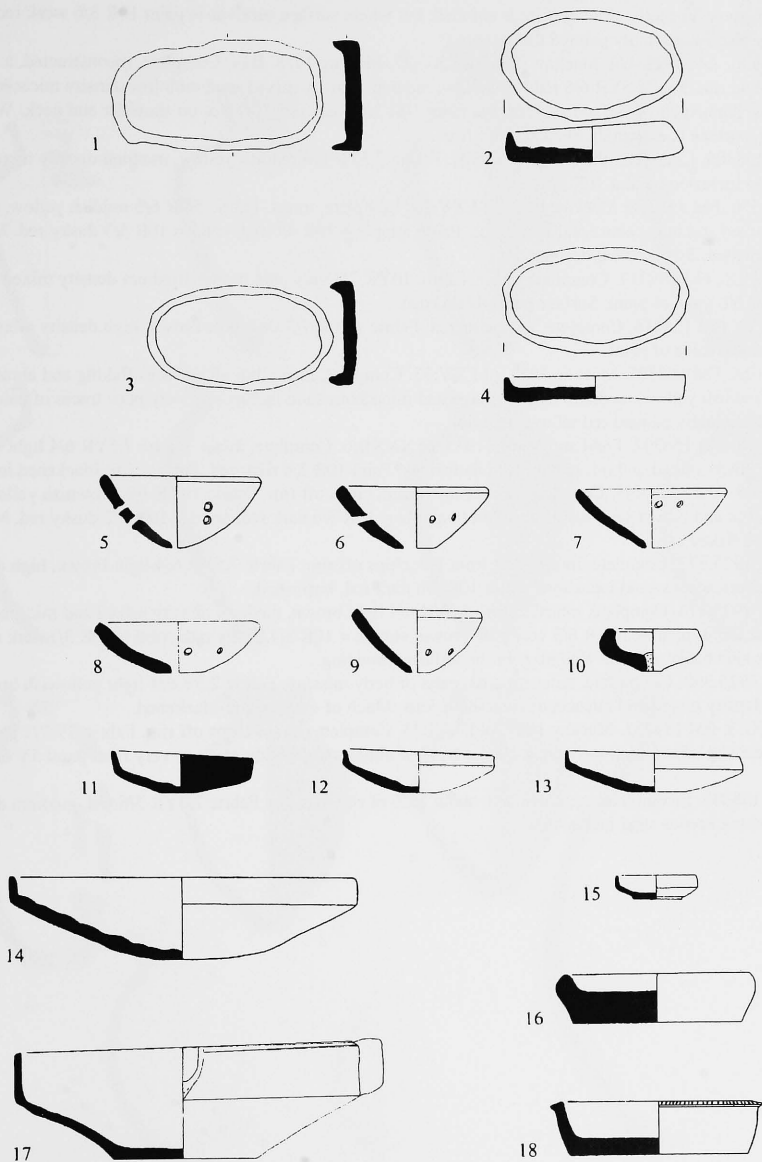


Fig 12. Trays, ladles, lids and bowls. Scale 1:4.

Fig 13. Tall jars. Scale 1:4.

1. Jar. PJN104. FM 158456. Complete, intact. Fabric 5YR 6/6 reddish yellow, medium density mixed and micaceous sand inclusions. Virtually all of surface is abraded, but where surface survives is paint 10R 3/6 weak red. Entire exterior probably originally painted this colour.
2. Jar. GN2496. AM 1926.494. Mackay 1931, pl LXV:27. Moorey 1978, B14. Complete, reconstructed, a few chips off body and rim. Fabric 5YR 6/6 reddish yellow, medium density mixed sand with low density micaceous sand inclusions. Almost all of surface abraded, but paint 10R 3/6 weak red, survives on shoulder and neck. Where surviving, surface is extremely blackened by fire.
3. Jar. FM 158305. Complete, though in 26 sherds. Fabric 7.5YR 6/6 reddish yellow, medium density mixed micaceous sand inclusions. Paint 10R 4/6 red.
4. Jar. GN2556. FM 158328. Mackay 1931, pl LXV:29. Complete, intact. Fabric 5YR 6/6 reddish yellow, medium density mixed and micaceous sand inclusions. Paint: stipple = 10R 4/6 red; solid = 10R 3/3 dusky red. Much of paint is abraded. Symmetrical design.
5. Jar. ?GN2501. FM 158317. Complete, intact. Fabric 10YR 7/3 very pale brown, medium density mixed sand inclusions. No trace of paint. Surface partly blackened.
6. Jar. PJN122. FM 158416. Complete, reconstructed. Fabric 10YR 7/3 very pale brown, high density mixed sand inclusions. No trace of paint.
7. Jar. GN3056. FM 158327. Mackay 1931, pl LXV:33. Complete, intact, but all surfaces flaking and abraded. Fabric 5YR 6/6 reddish yellow, medium density mixed and micaceous sand inclusions. Very poor traces of paint 10R 3/6 dark red. Originally painted red all over exterior.
8. Jar. PJN116. FM 158307. Field and Martin 1935, pl XXXII:6. Complete, intact. Fabric 7.5YR 6/4 light brown, medium density mixed and micaceous sand inclusions. Paint 10R 3/6 dark red. Surface fire-blackened in places.
9. Jar. GN2556. AM 1926.495. Complete, not reconstructed, chips off rim. Fabric 10YR 6/6 brownish yellow, high density black and brown sand inclusions. Paint: stipple = 10R 3/6 dark red; solid = 10R 3/2 dusky red. Majority of surface has flaked off.
10. Jar. AM 1925.372. Complete, intact apart from few chips off rim. Fabric 7.5YR 6/4 light brown, high density mixed and micaceous sand inclusions. Paint 10R 3/6 dark red, burnished.
11. Jar. AM 1925.374. Complete, intact. Fabric 7.5YR 6/4 light brown, medium density mixed and micaceous sand inclusions. Paint: plain = 10YR 8/3 very pale brown; stipple = 10R 3/4 dusky red; solid = 10R 3/1 dark reddish grey. One side badly abraded with no paint or surface remaining.
12. Jar. AM 1925.398. Incomplete, reconstructed, parts of body missing. Fabric 2.5Y 6/4 light yellowish brown, medium density mixed and micaceous sand inclusions. Much of exterior fire-blackened.
13. Jar. GN3013. FM 158433. Mackay 1931, pl LXVI:33. Complete but for chips off rim. Fabric 5Y 7/3 pale yellow, medium density mixed sand inclusions. Single band of either very shoddy glaze or very faint paint 5Y 6/4 pale olive.
14. Jar. FM 158389. Incomplete, reconstructed, about 15% of rim missing. Fabric 2.5YR 5/6 red, medium density mixed and micaceous sand inclusions.

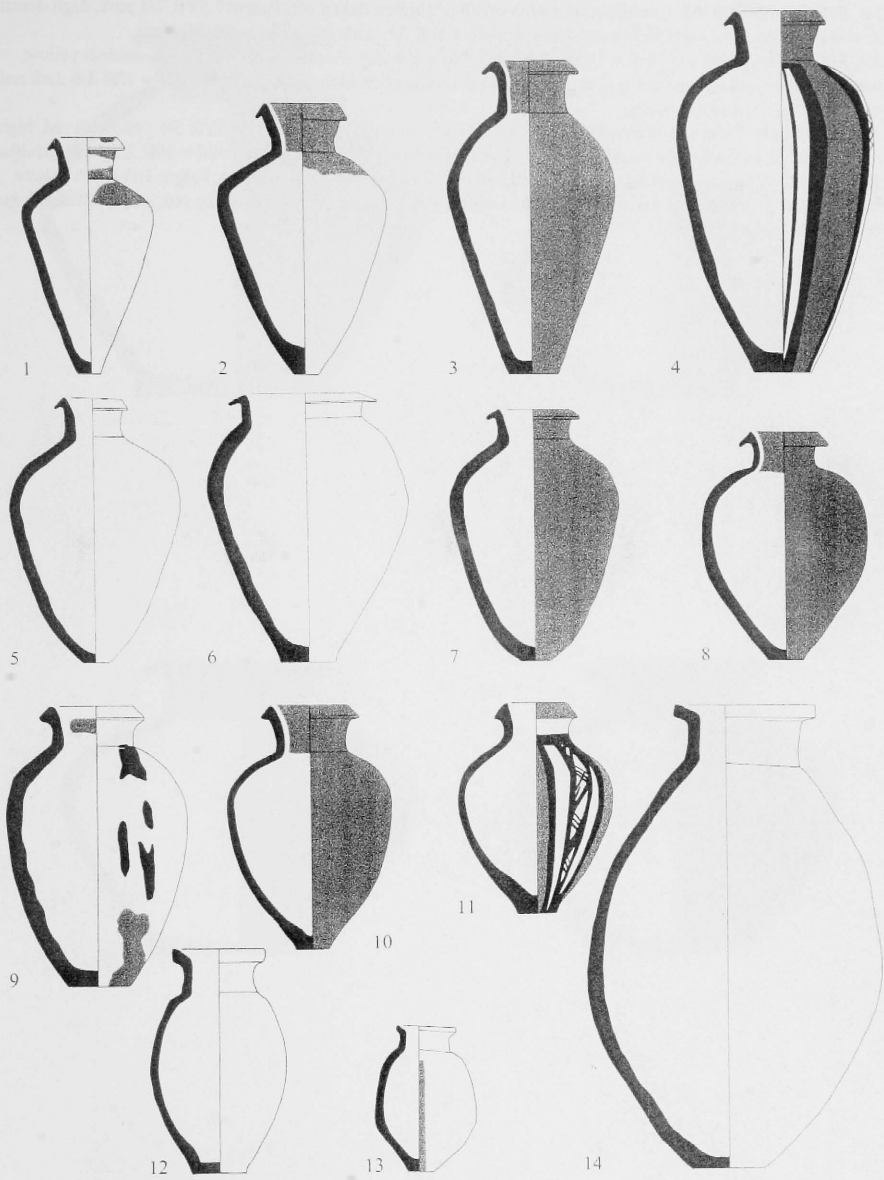


Fig 13. Tall jars. Scale 1:4.

Fig 14. Jars. Scale 1:4.

1. Jar. PJN121. FM 158355. Complete, intact but much of surface flaked off. Fabric 7.5YR 7/4 pink, high density mixed and micaceous sand inclusions. Paint: stipple = 10R 3/6 dark red; solid = N2.5/0 black.
2. Jar. FM 158304. Field and Martin 1935, pl XXX:1. Now in many sherds. Fabric 7.5YR 7/6 reddish yellow, medium density mixed and micaceous sand and low density shell inclusions. Paint: stipple = 10R 3/6 dark red; solid = 10R 2.5/1 reddish black.
3. Jar. FM 158309. Field and Martin 1935, pl XXX:2. Pot is in many sherds. Fabric 5YR 5/6 yellowish red, high density mixed and micaceous sand inclusions. Paint: stipple = 10R 3/6 dark red; solid = 10R 2.5/1 reddish black.
4. Jar. AM 1927.2111. Incomplete, reconstructed, almost all of neck and rim restored. Fabric 10YR 7/6 yellow, medium density mixed and micaceous sand inclusions. Paint: stipple = 10R 3/4 dusky red; solid = 10R 3/1 dark reddish grey. Much restored.

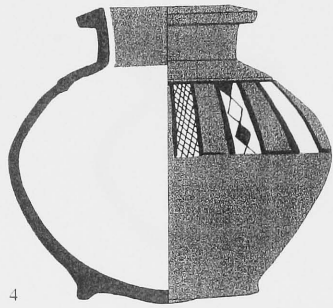
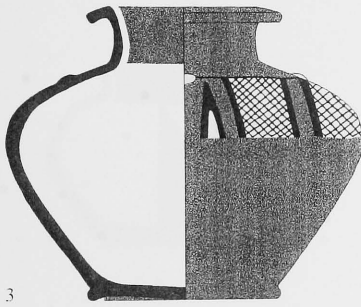
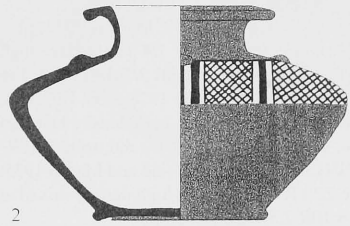
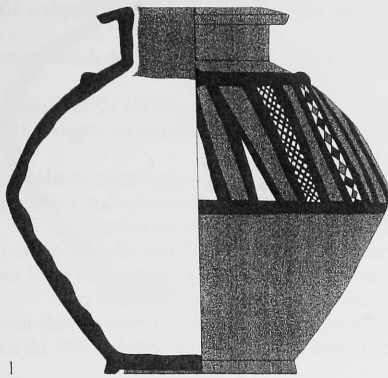


Fig 14. Jars. Scale 1:4.

Fig 15. Jars. Scale 1:4.

1. Jar. GN3472. FM 158356. Complete except much of rim chipped off, not reconstructed. Fabric 5YR 6/6 reddish yellow, medium density mixed micaceous sand inclusions. Paint: very light buff background: stipple = 10R 3/6 dark red; solid = 10R 3/3 dusky red. Surfaces badly eroded.
2. Jar. FM 158311. OI A26299. Field and Martin 1935, pl XXX:3. Fabric 7.5YR 7/4 pink, high density mixed and micaceous sand inclusions. Paint 10R 3/6 dark red.
3. Jar. AM 1925.375. Moorey 1978, B07. Complete, intact, some chips off rim. Fabric 10YR 8/3 very pale brown, high density black and micaceous sand inclusions. Paint: plain = 10YR 7/3 very pale brown; stipple = 10R 3/4 dusky red; solid = 10R 3/2 dusky red.
4. Jar. GN 2572. AM 1926.372. Mackay 1931, pl LXV:24. Complete, intact, though upper body, shoulder and rim fire-blackened. Fabric 2.5Y 7/4 pale yellow, high density mixed and micaceous sand inclusions. Paint: stipple = 10R 3/6 dark red; solid = 10R 3/2 dusky red. Traces of paint on unburnt sections of upper body.
5. Jar. AM 1925.371. Moorey 1978, B06, B07. Complete, neck and rim reconstructed from original sherds. Fabric 10YR 7/4 very pale brown, high density black and micaceous sand inclusions. Paint: plain = 10YR 8/3 very pale brown; stipple = 10R 3/4 dusky red; solid = 10R 3/1 dark greyish red. Traces of burnishing all over.
6. Jar. PJN133. FM 158301. Field and Martin 1935, pl XXX:4. Incomplete, reconstructed, parts of body missing. Fabric 2.5YR 6/6 light red, high density mixed and micaceous sand inclusions. Paint: stipple = 10R 3/6 dark red; solid = 10R 2.5/1 reddish black.
7. Jar. GN2474. FM 158302. Mackay 1931, pl LXV:17; LXXIX:3. Complete, intact but for flaking. Fabric 7.5YR 6/4 light brown, medium density mixed and micaceous sand inclusions. Paint is very faint, probably 10R 3/4 dusky red. Squared base.
8. Jar. AM 1925.373. Moorey 1978, B06, B07. Almost complete, except for 4 broken handles. Fabric 10YR 7/6 yellow, high density black and brown sand inclusions. Paint: stipple = 10R 3/6 dark red; solid = 10R 2.5/1 reddish black.

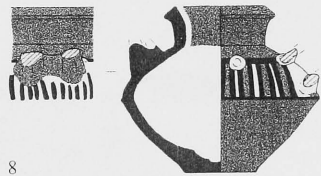
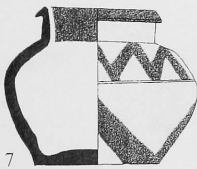
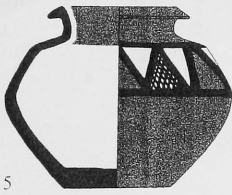
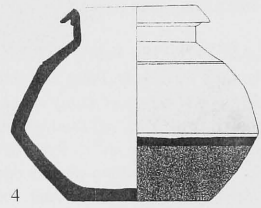
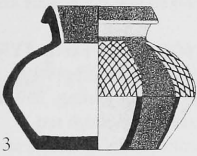
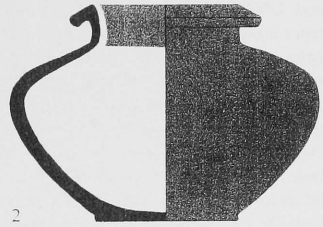
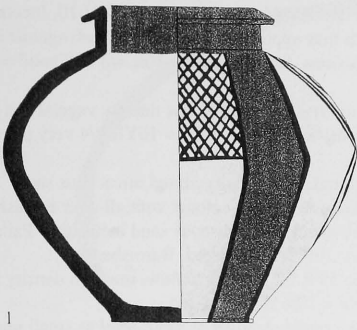


Fig 15. Jars. Scale 1:4.

Fig 16. Sherds from jars. Scale 1:4.

1. Jar. FM 158349. Mackay 1931, pl LXXIX:4. Decoration only Field and Martin 1935, pl XXXIV:10. Incomplete, reconstructed from many sherds. Applied ridge on shoulder with four applied unpierced lugs flush against it. Fabric 2.5YR 5/6 red, medium density mixed and micaceous sand inclusions. Paint: stipple = 10R 4/8 red; solid = 10R 3/4 dusky red.
2. Sherd. GN3456. AM 1926.501c. Rim 30% extant. Fabric 5YR 6/6 reddish yellow, low density vegetal and medium density mixed sand inclusions. Raised ridge with crescentic indentations. Paint: plain = 10YR 7/4 very pale brown; stipple = 10R 4/4 weak red; solid = N3/O very dark grey.
3. Sherd. AM 1925.376. Unpierced lugs. Fabric 5YR 5/6 yellowish red, high density mixed micaceous sand inclusions. Paint: stipple = 10R 3/6 dark red; solid = 10R 3/2 dusky red. Fresh colours with all-over burnishing.
4. Sherd. AM 1925.380a. Fabric 5YR 6/6 reddish yellow, high density mixed micaceous sand inclusions. Paint: plain = 10YR 7/3 very pale brown; stipple = 10R 4/4 weak red; solid = 10R 3/2 dusky red. Burnished.
5. Sherd. AM 1926.501. Applied ridge with incised notches. Fabric 5YR 6/6 reddish yellow, medium density mixed sand inclusions. Paint: plain = 10YR 8/3 very pale brown; stipple = 10R 3/4 dusky red.
6. Sherd. PR 1951.11.1. XIV.69. Originally 1945.56. Incised groove round shoulder at same level as small unpierced lug. Fabric 7.5YR 6/4 light brown, high density mixed micaceous sand inclusions. Paint: stipple = 10R 3/4 dusky red; solid = 10R 3/1 dark reddish grey; plain = 5Y 8/3 pale yellow. Traces of burnishing.
7. Sherd. GN3451. AM 1926.499a. Unpierced applied lugs at shoulder. Fabric 5YR 5/4 reddish brown, high density mixed micaceous sand inclusions. Paint: plain = 7.5 7/4 pink; stipple = 10R 3/6 dark red; solid = N3/O very dark grey.
8. Sherd. AM 1925.378a. Fabric 5YR 6/6 reddish yellow, medium density mixed and micaceous sand inclusions, possibly shell fragments. Paint 10R 3/6 dark red.
9. Sherd. FM 158314. Box of many sherds from same pot, incomplete. Rim 60% extant. Fabric 5YR 5/6 yellowish red, medium density mixed sand and high density micaceous sand inclusions. Paint: stipple 10R 3/6 dark red.
10. Sherd. AM 1981.945b and d. Reconstructed, two sherds from same vessel but not joining. 25% extant. Fabric 5YR 5/4 reddish brown, medium density mixed and micaceous sand inclusions. Paint 10R 5/6 red.
11. Sherd. AM 1981.945a. 25% extant. Fabric 7.5YR 6/6 reddish yellow, medium density mixed and micaceous sand inclusions. Paint 10R 4/4 weak red.
12. Sherd. AM 1981.945c. 13% of rim present. Fabric 7.5 YR 6/6 reddish yellow, low density sand inclusions. Paint vivid 10R 4/8 red.
13. Sherd. AM no number. 10% rim present. Fabric 2.5Y 7/4 pale yellow, medium density mixed coarse sand inclusions.

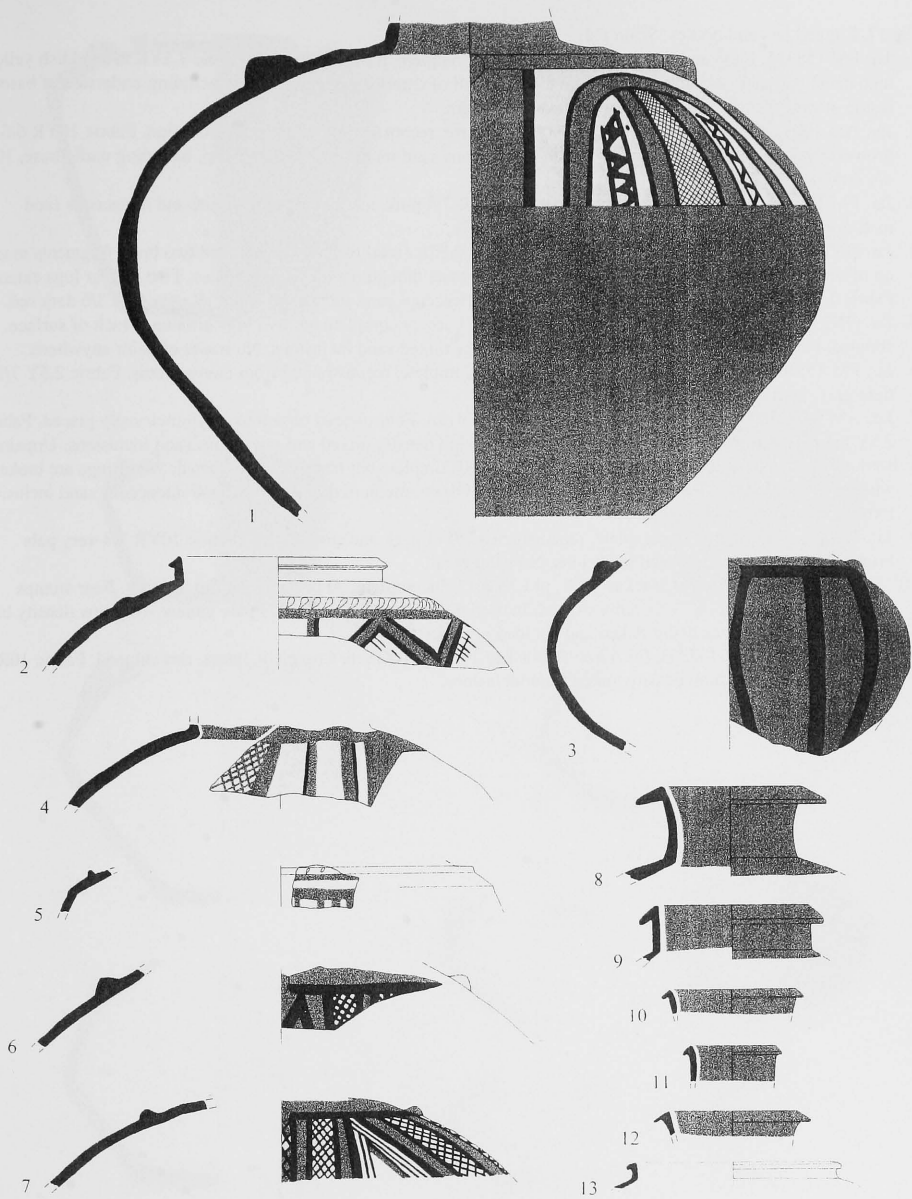


Fig 16. Sherds from jars. Scale 1:4.

Fig 17. Lugged jars and bottles. Scale 1:4.

1. Jar. FM 158315. Field and Martin 1935, pl XXX:6. Complete, though in pieces. Fabric 7.5YR 6/6 reddish yellow, high density mixed and micaceous sand inclusions. All of exterior is painted plum, including underside of base and inside of rim. Paint 10R 3/6 dark red. Burnishing marks.
2. Jar. AM 1927.2110. Moorey 1978, C01, B07. Complete, reconstructed with some restoration. Fabric 10YR 6/6 brownish yellow, medium density mixed and micaceous sand inclusions. All-over slip, including under base, 10R 4/4 weak red. Burnished.
3. Jar. FM 158493. Complete, reconstructed. Fabric 5YR 7/4 pink, medium density mixed and micaceous sand inclusions. Paint 10R 4/6 red, but very eroded in places.
4. Jar. GN3453. AM 1926.498a. Incomplete. Three rim sherds (total of 55% extant), and two body fragments made up of several sherds together. All sherds from same vessel though not all joining pieces. Two of four lugs extant. Fabric 7.5YR 7/4 pink, medium density mixed and micaceous sand inclusions. Paint all over 10R 3/6 dark red.
5. Jar. GN2539. FM 158400. Mackay 1931, pl LXIV:1. Largely complete but two lugs missing. Much of surface abraded. Fabric 10YR 7/4 pale brown, medium density mixed sand inclusions. No traces of paint anywhere.
6. Jar. FM 158308. Field and Martin 1935, pl XXX:8. Complete, reconstructed from many sherds. Fabric 2.5Y 7/2 light grey, high density mixed sand inclusions.
7. Jar. AM 1926.369. Complete except for small chip off rim. Four pierced nose lugs, asymmetrically placed. Fabric 2.5Y 8/4 pale yellow, core 7.5Y 6/6 reddish yellow, high density mixed and micaceous sand inclusions. Unpainted.
8. Bottle. FM 158310. Field and Martin 1935, pl XXX:9. Complete but largely reconstructed. All of lugs are broken where pierced through. Fabric 5YR 6/3 light reddish brown, medium density mixed and micaceous sand inclusions. Exterior all painted 10R 5/8 red.
9. Jar. PJN123. FM 158446. Incomplete, reconstructed, all of neck and rim missing. Fabric 10YR 7/4 very pale brown, high density mixed sand inclusions. No paint at all.
10. Jar. GN2571. FM 158326. Mackay 1931, pl LXIV:12. Incomplete, all of neck and rim missing. Four stumps survive where pierced legs originally existed. Incised decoration. Fabric 5Y 7/3 pale yellow, very low density black sand inclusions. Surface badly flaked and abraded.
11. Bottle. GN3365. FM 158333. OI A26295. Mackay 1931, pl LXIV:6. Complete, intact, rim chipped. Fabric 10R 7/3 very pale brown, high density mixed sand inclusions.

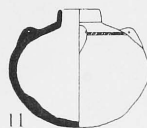
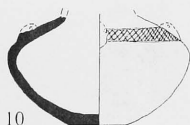
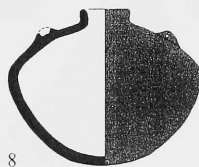
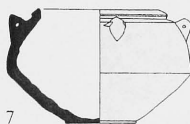
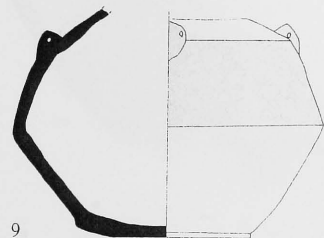
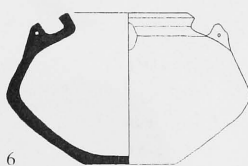
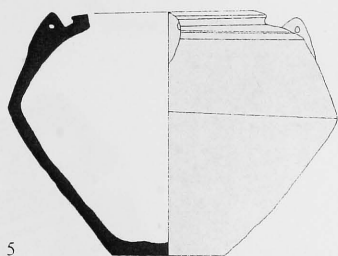
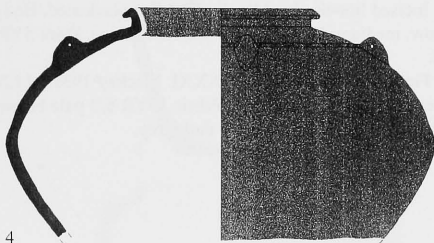
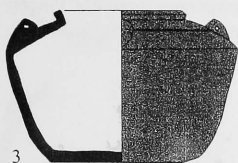
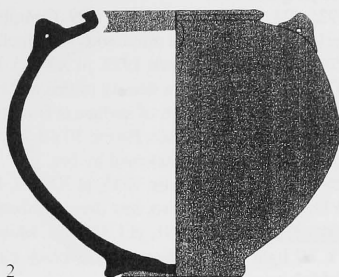
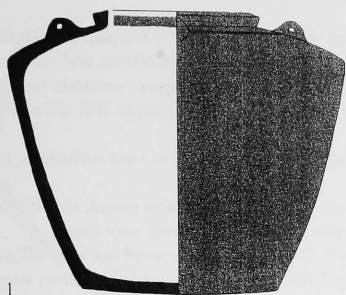


Fig 17. Lugged jars and bottles. Scale 1:4.

Fig 18. Lugged jars. Scale 1:4.

1. Jar. AM 1925.424. Moorey 1978, B07, B09. Complete, intact, not abraded. Fabric 2.5Y 8/4 pale yellow, high density black/brown and sparse micaceous sand inclusions. Paint 5YR 6/4 light reddish brown, and very faint.
2. Jar. FM 158348. Field and Martin 1935, pl XXX:5. Complete, reconstructed. Small groove connects lugs. Fabric 7.5YR 6/4 light brown, medium density mixed and micaceous sand inclusions. Paint: stipple 10R 4/8 red; solid 10R 2.5/2 very dusky red. Much of surface is fire-blackened.
3. Jar. FM 158303. Complete, intact. Fabric 10YR 7/3 very pale brown, low density mixed sand inclusions. Paint 10R 4/6 red. All surfaces heavily blackened by fire.
4. Jar. FM 158316. Field and Martin 1935, pl XXX:7. Incomplete, reconstructed. Base 50% extant, rim 45% extant. Fabric 10YR 8/3 very pale brown, low density mixed sand inclusions. Paint 10R 4/6 red, very faint.
5. Jar. AM 1925.387. Mackay 1931, pl LXXIX:5. Moorey 1978, B07. Complete, intact except one chip off rim. Fabric 2.5Y 7/2 light grey, medium density black sand inclusions. Paint: plain = 2.5Y 7/4 pale yellow; stipple 10R 3/1 dark reddish grey.
6. Jar. GN2944. AM 1926.371. Mackay 1931, pl LXIV:9. Complete, intact except for chip off rim and one missing lug. Incised line on shoulder. Surface fire-blackened. Body cracked by heat in one place. Fabric 2.5Y 7/4 pale yellow, medium density mixed sand inclusions. Paint 5YR 4/2 dark reddish grey, faint. Pattern repeats on other side.
7. Jar. Field and Martin 1935, pl XXXI. Mackay 1931, pl LXXX:1, 2. Incorporates sherd FM 158460. Incomplete, lower body and base missing. Fabric 10YR 6/3 pale brown, medium density mixed sand inclusions. Paint: stipple = 10R 4/8 red; solid = N3/0 very dark grey.

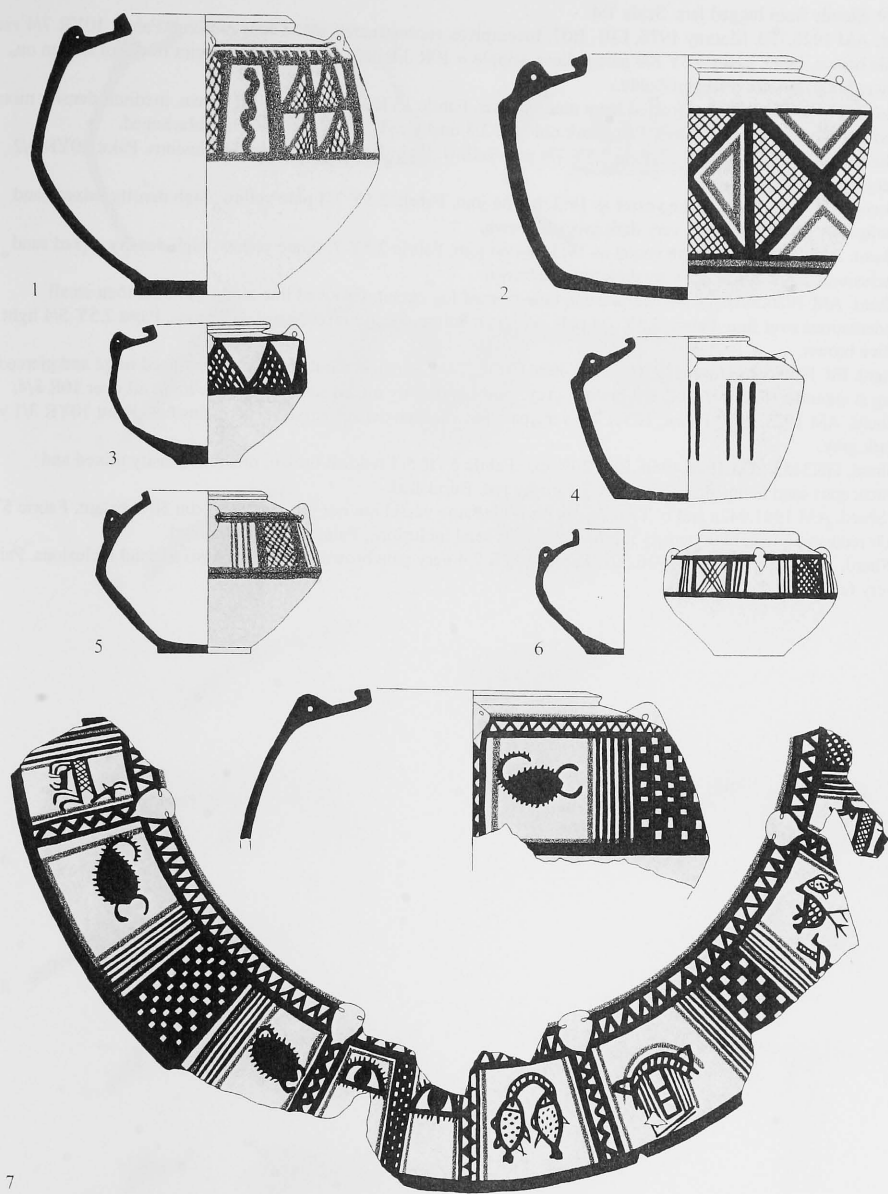


Fig 18. Lugged jars. Scale 1:4.

Fig 19. Sherds from lugged jars. Scale 1:4.

1. Jar. AM 1926.750. Moorey 1978. C01, B07. Incomplete, reconstructed, all of base missing. Fabric 10YR 7/4 very pale brown. Paint: plain = 5Y 8/4 pale yellow; stipple = 10R 3/6 dark red. Paint faint, faint traces of design on lower body, but not distinguishable.
2. Sherd. FM 158443. Reconstructed from many sherds. Fabric 5YR 6/4 light reddish brown, medium density mixed and micaceous sand inclusions. Paint dark red 10R 3/3 dusky red. Surface slightly fire-blackened.
3. Sherd. AM 1925.388a and e. Fabric 2.5Y 7/4 pale yellow, high density mixed sand inclusions. Paint 10YR 3/2 very dark greyish brown.
4. Sherd. AM 1925.388c. Same vessel as 19:3, but no join. Fabric 2.5Y 7/4 pale yellow, high density mixed sand inclusions. Paint 10YR 3/2 very dark greyish brown.
5. Sherd. AM 1925.388b. Same vessel as 19:3, but no join. Fabric 2.5Y 7/4 pale yellow, high density mixed sand inclusions. Paint 10YR 3/2 very dark greyish brown.
6. Sherd. AM 1926.501b(i). No rim present. One pierced lug extant. Grooved line along shoulder then small indentations over line. Fabric 2.5Y 7/4 pale yellow, medium density mixed sand inclusions. Paint 2.5Y 5/4 light olive brown.
7. Sherd. PR 1950.5.26 (formerly AM 1926.498d) XIII.174. Carinated shoulder sherd with raised ridge and pierced lug at shoulder. Fabric 7.5YR 6/2 pinkish grey, medium density mixed sand inclusions. Paint all over 10R 3/4.
8. Sherd. AM 1925.388d. Fabric 10YR 7/4 very pale brown, high density mixed sand inclusions. Paint 10YR 3/1 very dark grey.
9. Sherd. GN3453. AM 1926.498b. Rim 20% ext. Fabric 5YR 5/4 reddish brown, medium density mixed and micaceous sand inclusions. Paint 10R 3/4 dusky red. Burnished.
10. Sherd. AM 1981.942a and b. Two sherds from the same vessel but not joining. Total rim 30% extant. Fabric 5YR 6/6 reddish yellow, high density mixed micaceous sand inclusions. Paint 10R 4/4 weak red.
11. Sherd. AM 1981.944a and 1926.501. Fabric 10YR 7/4 very pale brown, low density mixed sand inclusions. Paint very faint, 10R 4/4 weak red.

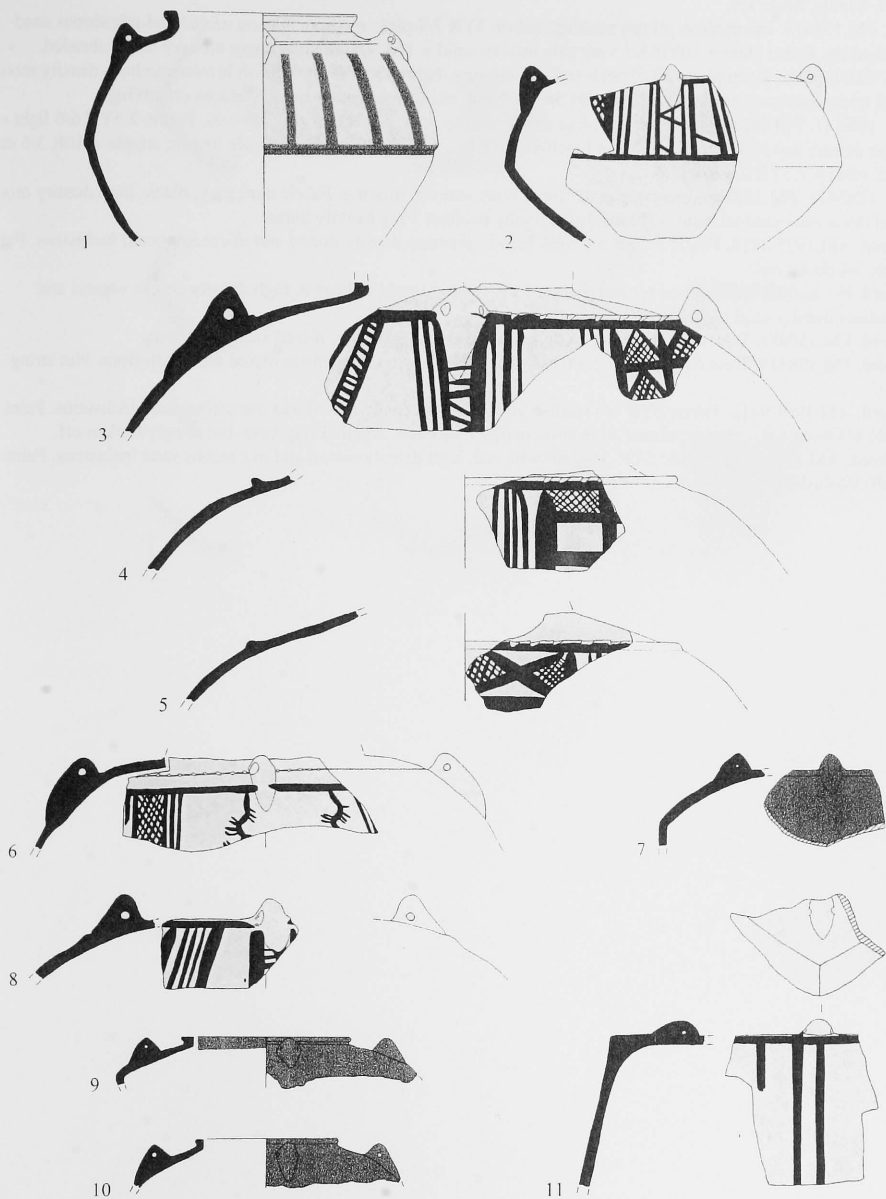


Fig 19. Sherds from lugged jars. Scale 1:4.

Fig 20. Sherds. Scale 1:4.

1. Jar. FM 158474. Incomplete, all rim missing. Fabric 5YR 7/4 pink, medium density mixed and micaceous sand inclusions. Paint: plain = 10YR 8/3 very pale brown; solid = 10R 7/4 pink. Surfaces all very badly abraded.
2. Jar. FM 158306. Incomplete, all of neck and rim missing. Fabric 2.5YR 5/4 reddish brown, medium density mixed and micaceous sand inclusions. Paint 10R 3/6 dark red, not painted under base. Surfaces crumbling.
3. Jar. PJN111. FM 158300. Body is complete and intact, no original neck or rim survives. Fabric 2.5YR 6/6 light red, high density mixed and micaceous sand inclusions. Paint; plain = 10YR 8/3 very pale brown; stipple = 10R 3/6 dark red; solid = 7.5YR 2/0 black.
4. Jar. GN3471. FM 158466. Incomplete, all upper body and rim missing. Fabric dark grey, black, high density mixed and micaceous sand inclusions. Probably originally painted. Very heavily burnt.
5. Sherd. AM 1925.381d. Fabric 7.5YR 6/4 light brown, medium density mixed and micaceous sand inclusions. Paint 10R 3/4 dusky red.
6. Sherd. No number. 15% of rim present. Fabric 5YR 6/4 light reddish brown, high density coarse vegetal and medium density sand inclusions.
7. Sherd. FM 158488. Base only. Fabric 2.5Y 7/4 pale yellow, low density mixed sand inclusions.
8. Sherd. FM 158319. Base only. Fabric 2.3Y 6/4 yellowish brown, high density mixed sand inclusions. Not string cut.
9. Sherd. AM 1981.941g. Fabric 5YR 6/6 reddish yellow, high density mixed and micaceous sand inclusions. Paint 10R 4/4 weak red, exterior painted all over including underside. Applied ring base, but mostly broken off.
10. Sherd. AM 1981.941a. Fabric 5YR 5/6 yellowish red, high density mixed and micaceous sand inclusions. Paint 10R 3/4 dusky red.

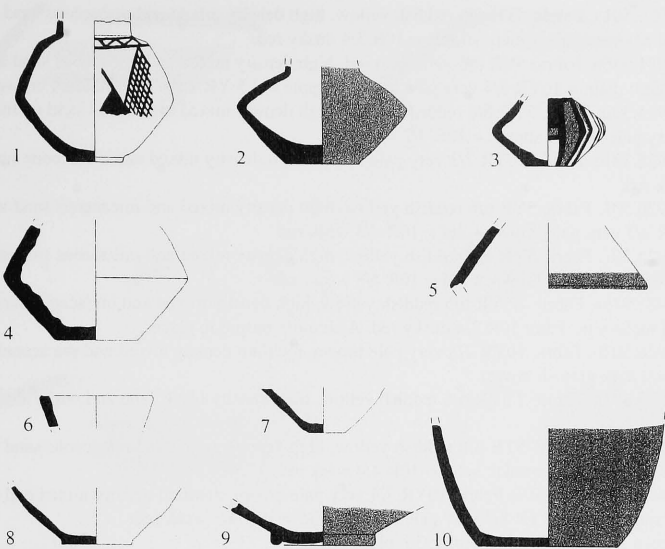


Fig 20. Sherds. Scale 1:4.

Fig 21. Sherds. Scale 1:4.

1. Sherd. AM 1926.501a. Fabric 5YR 6/6 reddish yellow, high density mixed and micaceous sand inclusions. Paint: plain = 10YR 8/3 very pale brown; stipple = 10R 3/4 dusky red.
2. Sherd. AM 1981.946b. Fabric 5YR 5/6 yellowish red, high density mixed and micaceous sand and white shell inclusions. Paint: plain = 10YR 8/4 very pale brown; stipple = 2.5 YR 2.5/4 dark reddish brown.
3. Sherd. AM 1925.392. Fabric 5YR 6/6 reddish yellow, high density mixed micaceous sand inclusions. Paint: plain = 10YR 7/4 very pale brown; stipple = 10R 4/2 weak red.
4. Sherd. AM 1925.381c. Fabric 10YR 7/3 very pale brown, high density mixed and micaceous sand inclusions. Paint 10R 4/4 weak red.
5. Sherd. AM 1926.501. Fabric 5YR 6/6 reddish yellow, high density mixed and micaceous sand inclusions. Paint: plain = 10YR 8/3 very pale brown; solid = 10R 4/3 weak red.
6. Sherd. AM 1926.501. Fabric 5YR 6/6 reddish yellow, high density mixed and micaceous sand inclusions. Paint: plain = 10YR 8/3 very pale brown; solid = 10R 4/3 weak red.
7. Sherd. AM 1981.946a. Fabric 7.5YR 6/6 reddish yellow, high density mixed and micaceous sand, and high density crushed shell inclusions. Paint 10R 3/4 dusky red. Also more purple in places.
8. Sherd. AM 1926.501b. Fabric 10YR 7/3 very pale brown, medium density mixed and micaceous sand inclusions. Paint 10YR 4/2 dark greyish brown.
9. Sherd. AM 1925.381b. Fabric 7.5YR 6/6 reddish yellow, high density black sand and white shell inclusions. Paint 10R 5/4 weak red.
10. Sherd. AM 1926.501. Fabric 5YR 6/6 reddish yellow, high density mixed and micaceous sand inclusions. Paint: plain = 10YR 4/4 very pale brown; solid = 10R 4/4 weak red.
11. Sherd. GN3456. AM 1926.501. Fabric 10YR 7/4 very pale brown, medium density mixed and micaceous sand inclusions. Paint: plain = 10YR 8/3 very pale brown; solid = 10R 4/3 weak red.
12. Sherd. Redrawn from Field and Martin 1935, pl XXXV:3.
13. Sherd. Redrawn from Field and Martin 1935, pl XXXV:8.
14. Sherd. Redrawn from Field and Martin 1935, pl XXXV:10.
15. Sherd. AM 1925.389. Very thick sherd. Fabric 10YR 7/3 very pale brown, very high density blue sand inclusions. Paint N3/0 very dark grey.
16. Sherd. PR 1951.11.5. XIV.69. Formerly 1945.56. Highly fired, possibly a waster. Fabric 2.5Y 7/4 pale yellow, medium density mixed sand inclusions. Paint 10R 3/1 dark reddish grey.
17. Sherd. AM 1926.501. Fabric 10YR 7/4 very pale brown, medium mixed and micaceous sand inclusions. Paint: plain = 10YR 8/3 very pale brown; solid = 10R 4/2 weak red. Paint abraded.
18. Sherd. AM 1981.946e. Fabric 10YR 7/3 very pale brown, high density mixed sand inclusions. Paint 10YR 3/1 very dark grey.
19. Sherd. PR 1950.5.26. Formerly AM 1926.501. XIII.174. Fabric 2.5Y 8/4 pale brown/yellow, medium density mixed and micaceous sand inclusions. Paint 10R 2.5/1 reddish black.
20. Sherd. Redrawn from Field and Martin 1935, pl XXXV:13.
21. Sherd. Redrawn from Field and Martin 1935, pl XXXV:1.

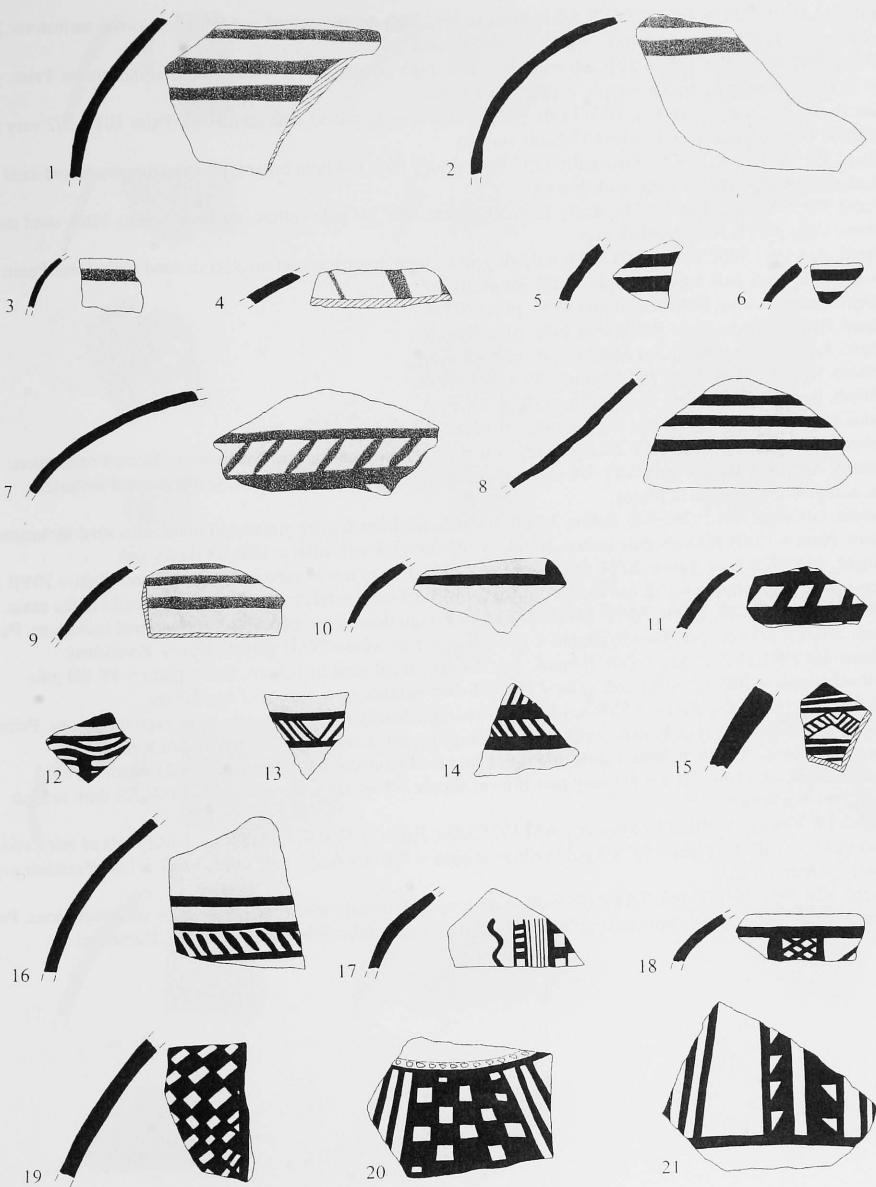


Fig 21. Sherds. Scale 1:4.

Fig 22. Sherds. Scale 1:4.

1. Sherd. AM 1925.383b. Fabric 7.5YR 6/6 reddish yellow, high density mixed and micaceous sand inclusions. Paint: plain = 10YR 8/3 very pale brown; solid = N3/0 very dark grey.
2. Sherd. AM 1925.380b. Fabric 5YR 6/6 reddish yellow, high density mixed micaceous sand inclusions. Paint: plain = 10YR 7/3 very pale brown; stipple = 10R4/4 weak red.
3. Sherd. AM 1925.388f. Fabric 2.5Y 7/4 pale yellow, high density mixed sand inclusions. Paint 10YR 3/2 very dark greyish brown. Same vessel as 13.4/13.5, but no join.
4. Sherd. PR 1951.11.4. XIV.69. Originally 1945.56. Fabric 7.5YR 6/4 light brown, medium density mixed sand inclusions. Paint 10R 3/1 dark reddish grey.
5. Sherd. PR 1951.11.3. XIV.69. Originally 1945.56. Fabric 2.5Y 8/4 pale yellow, medium density black sand inclusions. Paint 2.5YR N3/ very dark grey.
6. Sherd. AM 1981.946f. Fabric 7.5YR 6/6 reddish yellow, high density mixed micaceous sand inclusions. Paint: plain = 10YR 8/3 very pale brown; stipple = 10R 3/4 dusky red.
7. Sherd. Redrawn from Field and Martin 1935, pl XXXV:6.
8. Sherd. Redrawn from Field and Martin 1935, pl XXXV:7.
9. Sherd. Redrawn from Field and Martin 1935, pl XXXV:2.
10. Sherd. Redrawn from Field and Martin 1935, pl XXXV:9.
11. Sherd. Redrawn from Field and Martin 1935, pl XXXV:5.
12. Sherd. Redrawn from Field and Martin 1935, pl XXXV:11.
13. Sherd. No number. Fabric 2.5Y 7/2 light grey, low density white sand or shell inclusions. Incised decoration.
14. Sherd. AM 1925.403a. Fabric 2.5Y 7/4 pale yellow, medium density brown and micaceous sand inclusions. Incised exterior, abraded in places.
15. Sherd. GN3431. AM 1926.500b. Fabric 7.5YR 7/4 pink, medium density mixed and micaceous sand inclusions. Paint: plain = 10YR 8/3 very pale brown; stipple = 10R 3/6 dark red; solid = 10R 3/3 dusky red.
16. Sherd. AM 1925.381a. Fabric 10YR 6/3 pale brown, high density mixed sand inclusions. Paint: plain = 10YR 8/3 very pale brown; stipple = 10R 4/4 weak red; solid = 10R 3/1 dark reddish grey. Paint very fragile in the main.
17. Sherd. AM 1925.382. Fabric 7.5YR 6/6 reddish yellow, high density mixed and micaceous sand inclusions. Paint: plain = 10YR 8/3 very pale brown; stipple = 10R 3/6 dark red; solid = N3/0 very dark grey. Burnished.
18. Sherd. PR 1951.11.2. Fabric 7.5YR 7/4 pink, low density mixed sand inclusions. Paint: plain = 5Y 8/3 pale yellow; stipple = 10R 3/4 dusky red; solid = 10R 3/1 dark reddish grey. Traces of burnishing.
19. Sherd. AM 1925.385a. Fabric 7.5YR 6/4 light brown, high density mixed and micaceous sand inclusions. Paint: plain = 10YR 8/3 very pale brown; stipple = 10R 3/4 dusky red; solid = 10R 3/1 dark reddish grey.
20. Sherd. GN3451. AM 1926.499b. Fabric 10YR 6/3 pale brown, medium density mixed and micaceous sand inclusions. Paint: plain = 10YR 8/3 very pale brown; stipple = 10R 4/4 weak red; solid = 10R 3/1 dark reddish grey. Fire-blackened.
21. Sherd. PR 1950.5.26. XIII.174. Formerly AM 1925.383c. Fabric 7.5YR 7/4 pink, high density mixed micaceous sand inclusions. Paint: plain = 5Y 8/3 pale yellow; stipple = 10R 3/4 dusky red; solid = 10R 3/1 dark reddish grey. Traces of burnishing.
22. Sherd. AM 1925.383a. Fabric 7.5YR 6/6 reddish yellow, high density mixed and micaceous sand inclusions. Paint: plain = 10YR 8/3 very pale brown; stipple = 10R 3/6 dark red; solid = N3/0 very dark grey. Burnished.

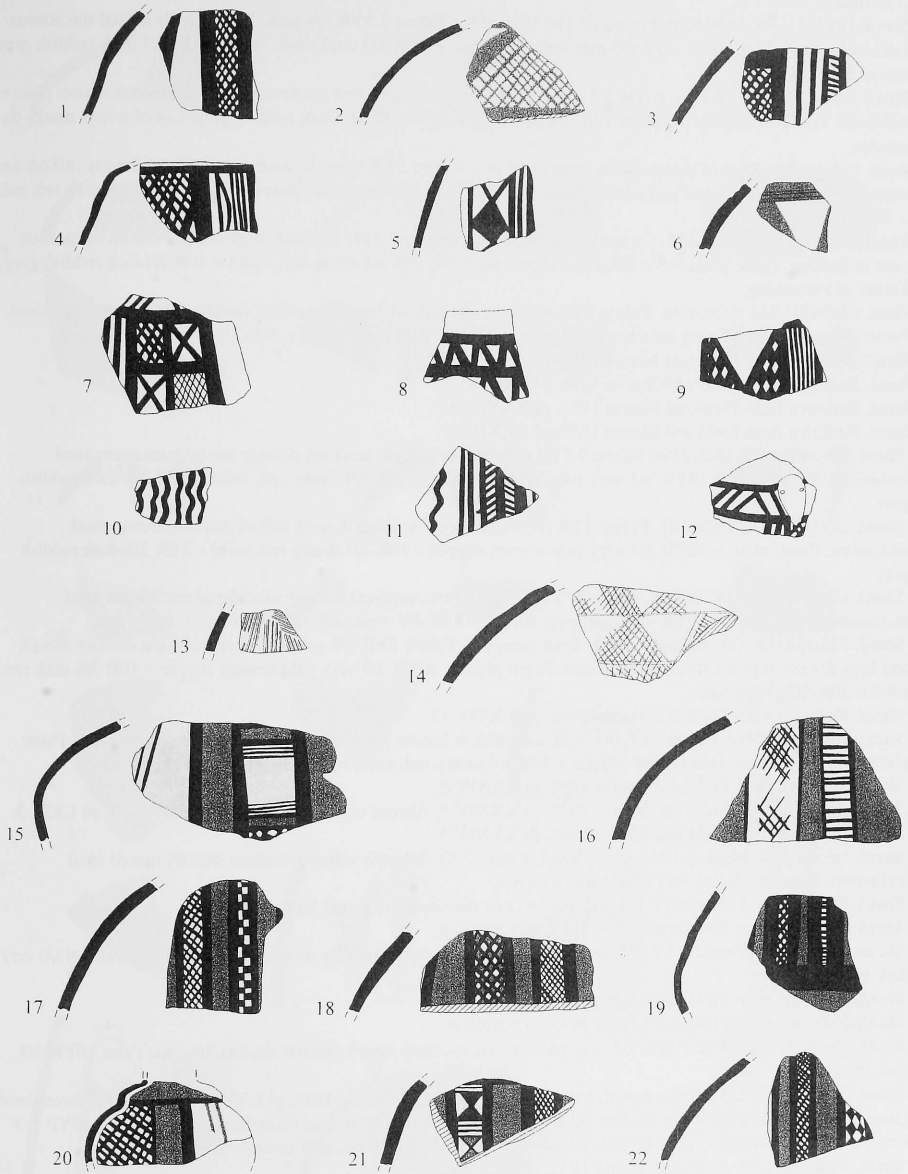


Fig 22. Sherds. Scale 1:4.

Fig 23. Sherds. Scale 1:4.

1. Sherd. GN3451. PR 1950.5.26. Formerly AM 1926.499c. Fabric 7.5YR 7/4 pink, high density mixed micaceous sand inclusions. Paint: plain = 5Y 8/3 pale yellow; stipple = 10R 3/4 dusky red; solid = 10R 3/1 dark reddish grey. Traces of burnishing.
2. Sherd. AM 1925.385b. Fabric 10YR 5/3 brown, high density mixed and micaceous sand inclusions. Paint: plain = 10YR 8/3 very pale brown; stipple = 10R 3/4 dark red; solid = 10R 3/1 dark reddish grey. Lot of wheel marks on interior.
3. Sherd. FM 158314. One of many sherds from same pot. Fabric 5YR 5/6 yellowish red, medium density mixed, and high density micaceous sand inclusions. Paint: plain = 10YR 8/3 very pale brown; stipple = 10R 3/6 dark red; solid = 10R 3/2 dusky red.
4. Sherd. PR 1950.5.26. XIII.174. Formerly AM 1925.384. Fabric 7.5YR 7/4 pink, high density mixed micaceous sand inclusions. Paint: plain = 5Y 8/3 pale yellow; stipple = 10R 3/4 dusky red; solid = 10R 3/1 dark reddish grey. Traces of burnishing.
5. Sherd. GN3451. AM 1926.499e. Fabric 5YR 6/4 light and reddish brown, medium density mixed sand inclusions. Paint: plain = 10YR 8/3 very pale brown; stipple = 10R 3/4 dusky red; solid = 10R 3/1 dark reddish grey.
6. Sherd. Redrawn from Field and Martin 1935, pl XXXIV:1.
7. Sherd. Redrawn from Field and Martin 1935, pl XXXIV:2.
8. Sherd. Redrawn from Field and Martin 1935, pl XXXIV:9.
9. Sherd. Redrawn from Field and Martin 1935, pl XXXIV:7.
10. Sherd. GN3451. AM 1926.499f. Fabric 7.5YR 6/6 reddish yellow, medium density mixed micaceous sand inclusions. Paint: plain = 10YR 8/3 very pale brown; stipple = 10R 3/4 dusky red; solid = 10R 3/1 dark reddish grey.
11. Sherd. GN3457. AM 1926.501. Fabric 5YR 6/6 reddish yellow, high density mixed and micaceous sand inclusions. Paint: plain = 10YR 8/3 very pale brown; stipple = 10R 3/4 dusky red; solid = 10R 3/1 dark reddish grey.
12. Sherd. GN2973. AM 1926.500a. Fabric 10YR 7/2 light grey, medium density mixed and micaceous sand inclusions. Paint: plain = 10YR 7/2 light grey; stipple = 10R 4/4 weak red; solid = 10R 3/2 dusky red.
13. Sherd. FM 158314. One of many sherds from same pot. Fabric 5YR 5/6 yellowish red, medium density mixed, and high density micaceous sand inclusions. Paint: plain = 10YR 8/3 very pale brown; stipple = 10R 3/6 dark red; solid = 10R 3/2 dusky red.
14. Sherd. Redrawn from Field and Martin 1935, pl XXXIV:12.
15. Sherd. AM 1926.499g. Fabric 5YR 6/4 light and reddish brown, medium density mixed sand inclusions. Paint: plain = 10YR 8/3 very pale brown; stipple = 10R 3/4 dusky red; solid = 10R 3/1 dark reddish grey.
16. Sherd. Redrawn from Field and Martin 1935, pl XXXIV:6.
17. Sherd. Redrawn from Field and Martin 1935, pl XXXIV:5. Almost certainly includes Mackay 1931, pl LXIX:3.
18. Sherd. Redrawn from Field and Martin 1935, pl XXXIV:3.
19. Sherd. No number. Mackay 1931, pl LXXX:4. Fabric 2.5Y 7/4 pale yellow, medium density mixed sand inclusions. Paint 10YR 3/2 very dark greyish brown.
20. Sherd. FM 158461. Fabric 2.5Y 7/4 pale yellow, low density mixed sand inclusions.
21. Sherd. Redrawn from Field and Martin 1935, pl XXXIV:8.
22. Sherd. FM 158462. Fabric 2.5Y 6/2 light brownish grey, medium density mixed sand inclusions. Paint N3/0 very dark grey.
23. Sherd. Redrawn from Field and Martin 1935, pl XXXIII:5.
24. Sherd. Redrawn from Field and Martin 1935, pl XXXV:4.
25. Sherd. FM 158459. Fabric 10YR 7/3 very pale brown, medium density mixed sand inclusions. Paint 10YR 3/3 dark brown.
26. Sherd. FM 158491. GN3016 in pencil, but very different from Mackay 1931, pl LXV:12. Incomplete, three sherds glued together. Fabric 5YR 6/6 reddish yellow, medium density mixed sand inclusions. Paint: plain = 10YR 8/3 very pale brown; stipple = 10R 4/6 red; solid = N2.5/0 black. Red paint also extends to inner neck.
27. Sherd. Redrawn from Field and Martin 1935, pl XXXIII:4.

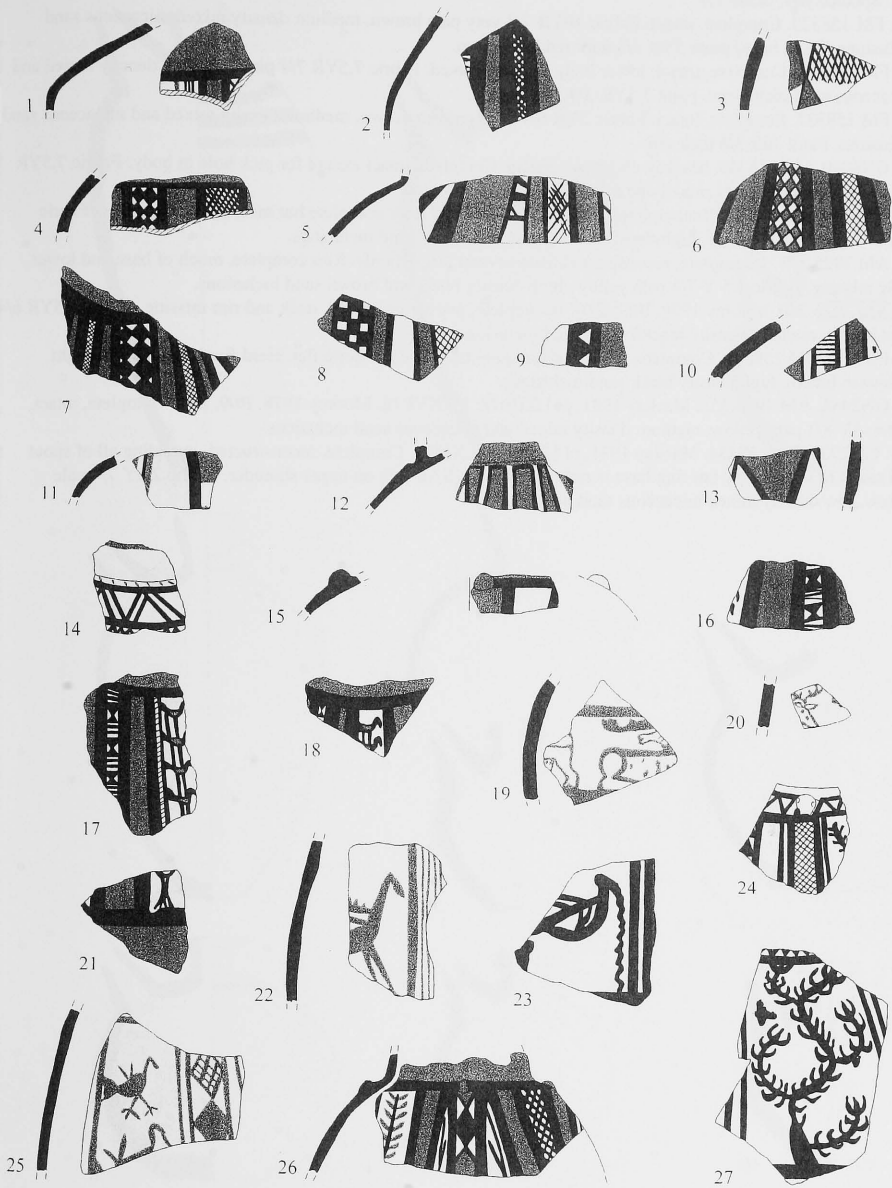


Fig 23. Sherds. Scale 1:4.

Fig 24. Spouted jars. Scale 1:4.

1. Jar. FM 158323. Complete, intact. Fabric 10YR 7/3 very pale brown, medium density mixed micaceous sand inclusions. Quite faded paint 5YR 3/3 dark reddish brown.
2. Jar. FM 158405. Complete, intact, lower body crudely shaved. Fabric 7.5YR 7/4 pink, medium density mixed and micaceous sand inclusions. Paint 7.5YR 3/4 dark brown.
3. Jar. FM 158322. Complete, intact. Fabric 5YR 6/4 light reddish brown, medium density mixed and micaceous sand inclusions. Paint 10R 3/6 dark red.
4. Jar. GN3040. FM 158343. Mackay 1931, pl LXIII:6. Complete, intact except for pick hole in body. Fabric 7.5YR 7/4 pink, medium density mixed and micaceous sand inclusions.
5. Jar. GN2554. FM 158485. Incomplete, reconstructed, rim and neck complete but most of body missing. Fabric 10YR 7/4 very pale brown, high density mixed and micaceous sand inclusions.
6. Jar. AM 1925.393. Incomplete, reconstructed from several large sherds. Rim complete, much of base and lower body missing. Fabric 2.5 Y 7/4 pale yellow, high density black and brown sand inclusions.
7. Jar. AM 1926.360. Moorey 1978, B09, B10. Incomplete, not reconstructed, neck and rim missing. Fabric 7.5YR 6/4 light brown, medium density black/brown sand inclusions.
8. Jar. PJN143. FM 158374. Complete, intact but for spout tip. Base not quite flat. Hard fired. Fabric 2.5Y light yellowish brown, high density black sand inclusions.
9. Jar. GN2484. AM 1926.353. Mackay 1931, pl LXIII:18; LXXVI:12. Moorey 1978, B09, B10. Complete, intact. Fabric 5Y 8/3 pale yellow, medium density mixed and micaceous sand inclusions.
10. Jar. GN2523. FM 158434. Mackay 1931, pl LXIII:22; LXIX:1. Complete, reconstructed, including all of spout and much of lower body but ring base is real. Inscription (SAL ? ?) on upper shoulder. Fabric 2.5Y 7/4 pale yellow, low density mixed micaceous sand inclusions.

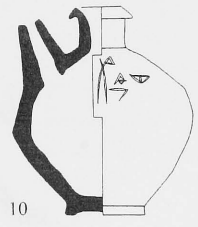
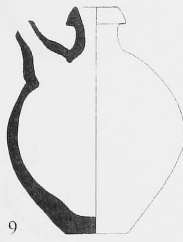
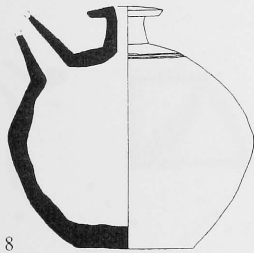
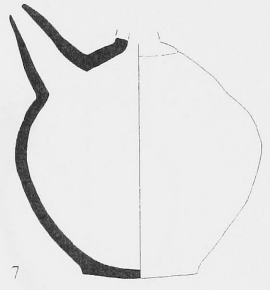
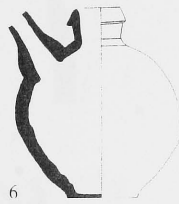
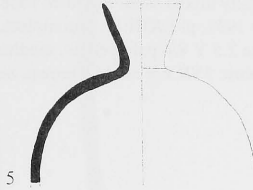
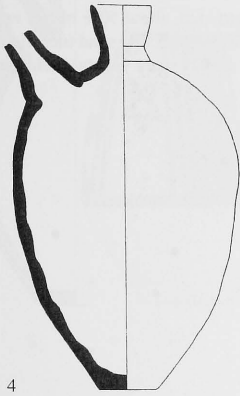
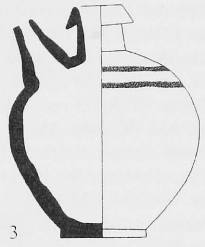
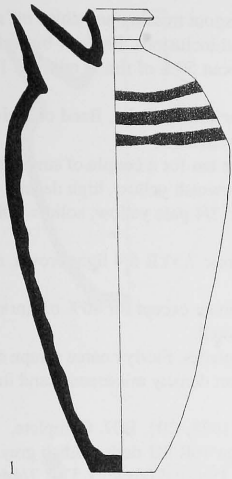


Fig 24. Spouted jars. Scale 1:4.

Fig 25. Spouted jars. Scale 1:4.

1. Jar. AM 1926.463. Moorey 1978, B10, B13. Complete, reconstructed. Tip of spout missing and chips off rim. Fabric 5YR 7/4 pink, medium density mixed, and low density micaceous sand inclusions. Exterior burnished.
2. Jar. GN2968. FM 158336. Mackay 1931, pl LXIII:25. Complete, intact but about 50% of rim is missing. Fabric 7.5YR 7/4 pink, medium density mixed and micaceous sand inclusions.
3. Jar. GN3348. FM 158331. Mackay 1931, pl LXIII:23. Complete, intact but for chips off rim. Band of incised nicks on shoulder. Unusual fabric 2.5Y 8/4 pale yellow, high density mixed sand inclusions.
4. Jar. GN3118. AM 1926.496. Mackay 1931, pl LXIII:29; LXVIII:11. Complete but for a couple of small chips off spout rim. Spout base, where joined to body, is cracked. Fabric 10 YR 6/6 brownish yellow, high density black/brown sand inclusions, low density mica inclusions. Paint: plain = 2.5Y 7/4 pale yellow; solid = 10R 3/6 dark red. Fire-blackened on one side.
5. Jar. PJN135. FM 158454. Complete, though spout has been reconstructed. Fabric 7.5YR 6/4 light brown, medium density mixed and micaceous sand inclusions.
6. Jar. GN3032. FM 158436. Mackay 1931, pl LXIII:26; LXXVI:8. Complete, intact except for 40% of rim missing. Fabric 10YR 7/3 very pale brown, high density mixed sand and low density shell.
7. Jar. AM 1926.464. Moorey 1978, B10, B13. Complete, reconstructed from 2 pieces. Fairly coarse scrape marks on lower exterior. Fabric 5YR 4/6 yellowish red, high density mixed, and medium density micaceous sand inclusions. Part of exterior fire-blackened.
8. Jar. GN2494. AM 1927.2109. Mackay 1931, pl LXIII:15; LXVIII:2. Moorey 1978, C01, B07. Complete, reconstructed, several gaps filled and painted. Fabric 5Y 7/3 pale yellow. Paint 10R 3/1 dark reddish grey.
9. Jar. PJN97. FM 158383. Complete, intact but for chip off rim. Rounded base. Unusual fabric: 7.5YR 7/4 pink, high density medium vegetal, very low density mixed sand. Rounded base.
10. Jar. GN2990. AM 1926.465. Mackay 1931, pl LXIII:17. Incomplete, reconstructed, about 50% of rim extant. Spout missing and part of body. Fabric 2.5 Y 8/4 pale yellow, medium density vegetal and sand inclusions.
11. Jar. FM 158377. Complete, intact. Fabric 5YR 6/4 reddish brown, medium density ware vegetal inclusions, sparse sand. Knuckle marks in base.

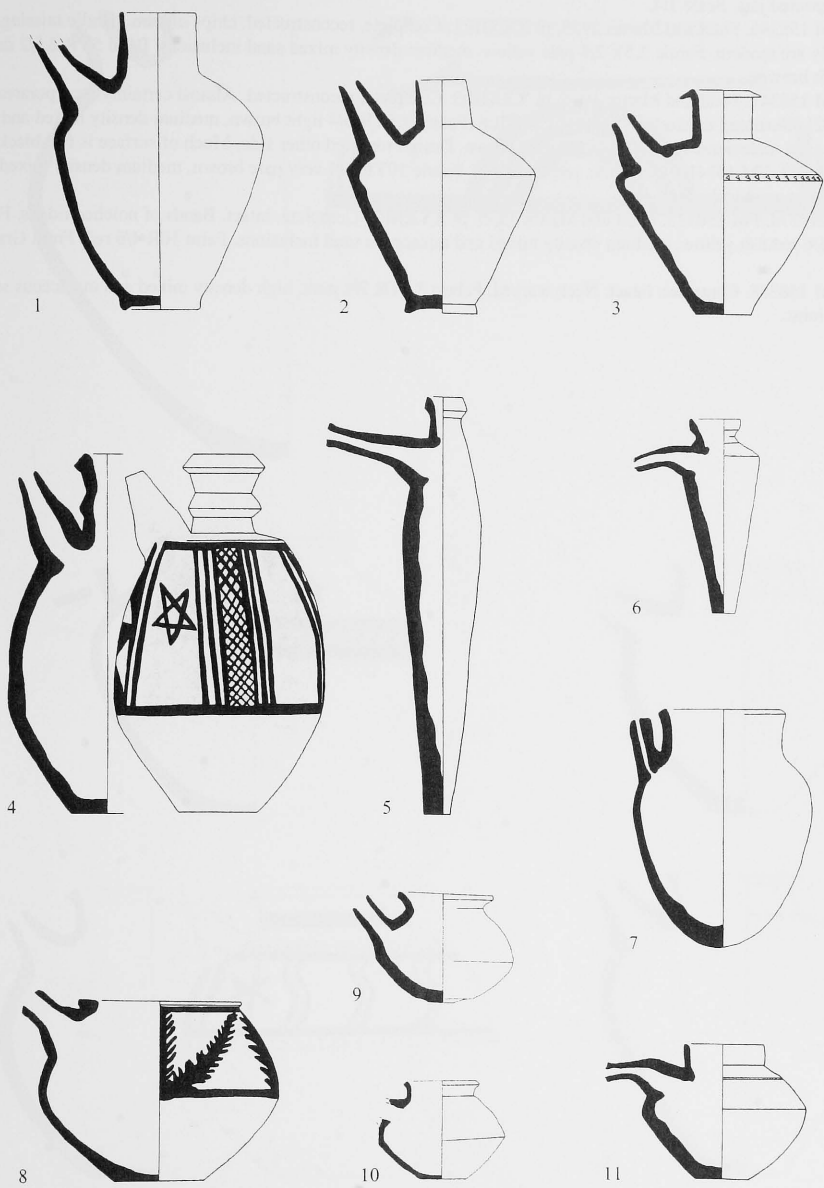


Fig 25. Spouted jars. Scale 1:4.

Fig 26. Spouted jars. Scale 1:4.

1. Jar. FM 158346. Field and Martin 1935, pl XXXIII:1. Complete, reconstructed, chips off rim, handle missing. Parts of body are modern. Fabric 2.5Y 7/4 pale yellow, medium density mixed sand inclusions. Paint 5YR 2.5/2 dark reddish brown.
2. Jar. FM 158347. Field and Martin 1935, pl XXXIII:3. Complete, reconstructed. Almost certainly incorporates sherd GN3421 illustrated in Mackay 1931, pl LXVIII:8. Fabric 7.5YR 6/4 light brown, medium density mixed and micaceous sand inclusions. Paint 7.5YR 3/2 dark brown. Design repeated other side. Much of surface is fire-blackened.
3. Jar. PJN142. FM 158417. Complete, reconstructed. Fabric 10YR 7/4 very pale brown, medium density mixed and micaceous sand inclusions.
4. Jar. PJN117d. FM 158313. Field and Martin 1935, pl XXXIII:2. Complete, intact. Bands of notched ridges. Fabric 5YR 6/6 reddish yellow, medium density mixed and micaceous sand inclusions. Paint 10R 4/6 red. From Grave JN3.
5. Jar. FM 158388. Complete, intact. Neck warped. Fabric 7.5YR 7/4 pink, high density mixed and micaceous sand inclusions.

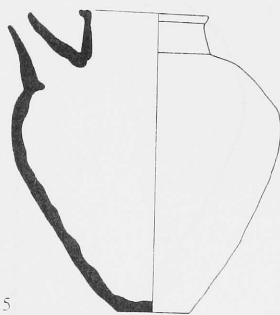
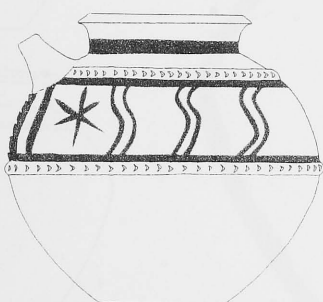
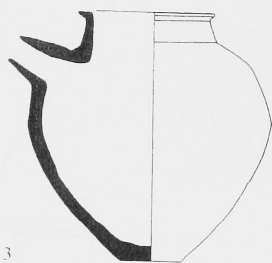
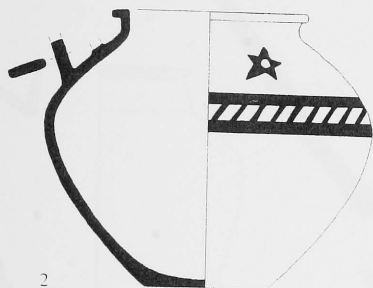
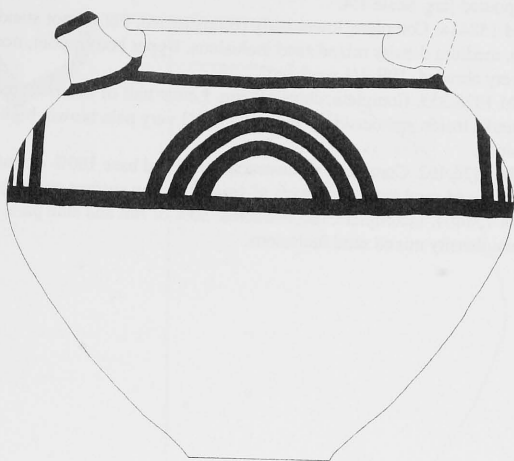
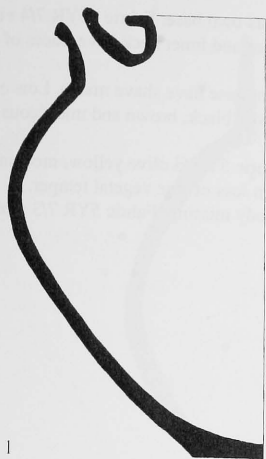


Fig 26. Spouted jars. Scale 1:4.

Fig 27. Spouted jars. Scale 1:4.

1. Jar. FM 158414. Complete, lower body reconstructed. Pot cannot stand on its own base. Fabric 10YR 7/4 very pale brown, medium density mixed sand inclusions. Upper body, spout, neck, rim and inner neck have traces of paint now very abraded, 10R 4/4 weak red.
2. Jar. AM 1926.355. Complete, chips off rim. Lower half of exterior and all of base have shave marks. Lots of wheel turn marks inside and outside. Fabric 10YR 8/3 very pale brown, high density black, brown and micaceous sand inclusions.
3. Jar. AM 1926.462. Complete, reconstructed, rim and base 100% extant. Fabric 5Y 6/6 olive yellow, medium density mixed sand inclusions. Lots of small holes on surface possibly from loss of fine vegetal temper.
4. Jar. FM 158404. Incomplete, reconstructed, 50% of rim and side parts of body missing. Fabric 5YR 7/3 pink, medium density mixed sand inclusions.

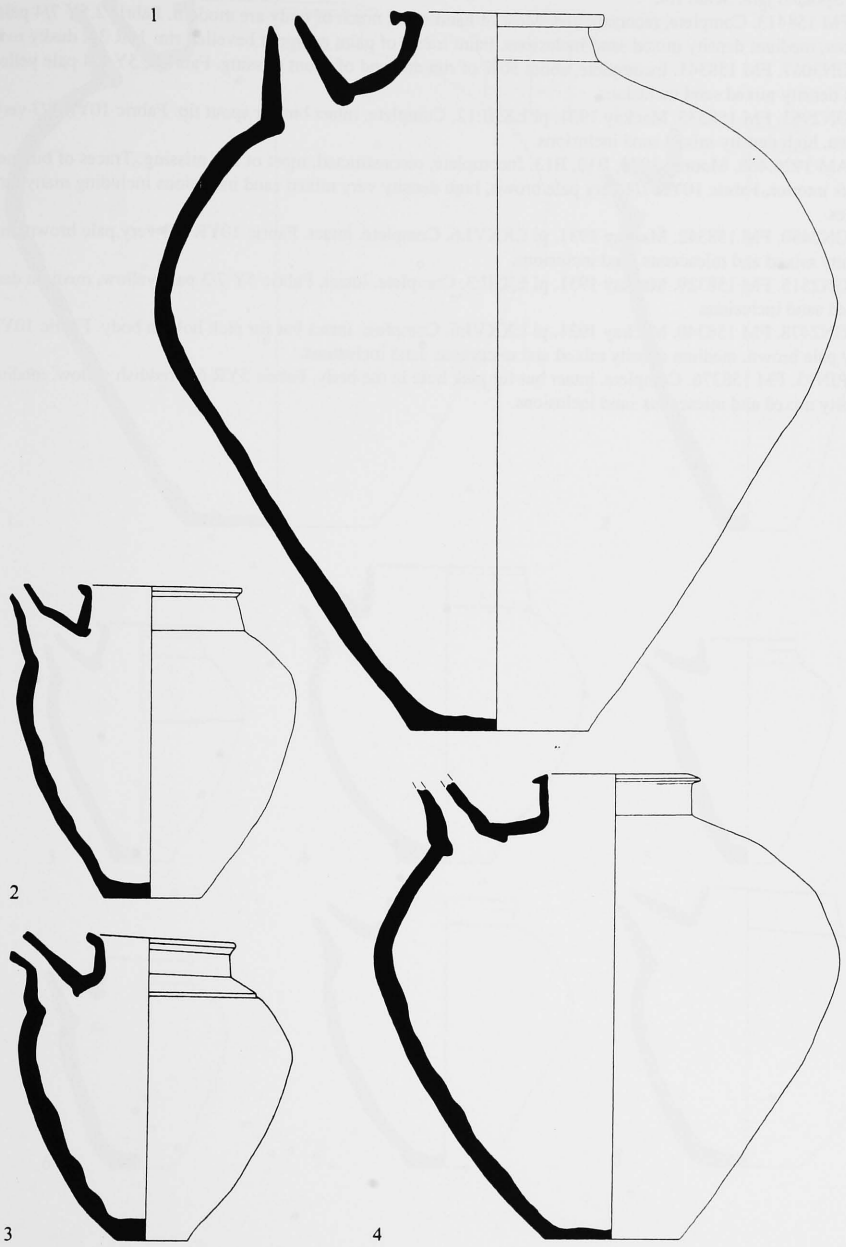
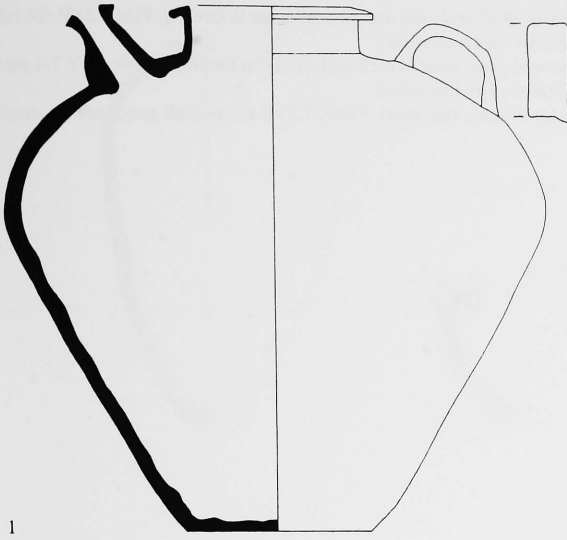


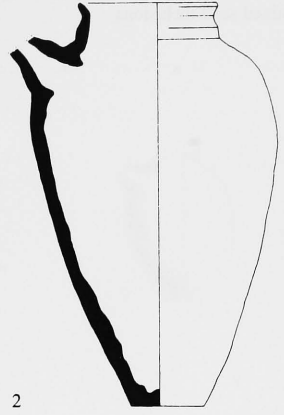
Fig 27. Spouted jars. Scale 1:4.

Fig 28. Spouted jars. Scale 1:4.

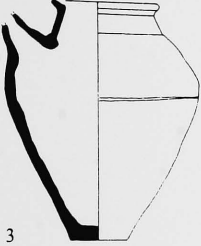
1. Jar. FM 158413. Complete, reconstructed. Most of handle and much of body are modern. Fabric 2.5Y 7/4 pale yellow, medium density mixed sand inclusions. Faint traces of paint on spout bevelled rim 10R 3/2 dusky red.
2. Jar. GN3067. FM 158341. Incomplete, about 50% of rim and end of spout missing. Fabric 2.5Y 7/4 pale yellow, high density mixed sand inclusions.
3. Jar. GN2963. FM 158335. Mackay 1931, pl LXIII:12. Complete, intact but for spout tip. Fabric 10YR 8/3 very pale brown, high density mixed sand inclusions.
4. Jar. AM 1926.468. Moorey 1978, B10, B13. Incomplete, reconstructed, most of rim missing. Traces of bitumen on lower interior. Fabric 10YR 7/4 very pale brown, high density very mixed sand inclusions including many larger pieces.
5. Jar. GN2480. FM 158342. Mackay 1931, pl LXXVI:6. Complete, intact. Fabric 10YR 7/3 very pale brown, medium density mixed and micaceous sand inclusions.
6. Jar. GN2515. FM 158329. Mackay 1931, pl LXIII:3. Complete, intact. Fabric 5Y 7/3 pale yellow, medium density mixed sand inclusions.
7. Jar. GN2478. FM 158340. Mackay 1931, pl LXXVI:6. Complete, intact but for pick hole in body. Fabric 10YR 7/4 very pale brown, medium density mixed and micaceous sand inclusions.
8. Jar. PJN93. FM 158376. Complete, intact but for pick hole in the body. Fabric 5YR 6/6 reddish yellow, medium density mixed and micaceous sand inclusions.



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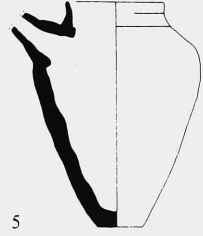
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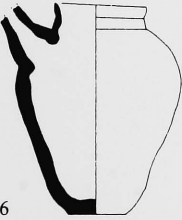
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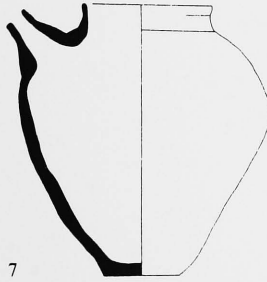
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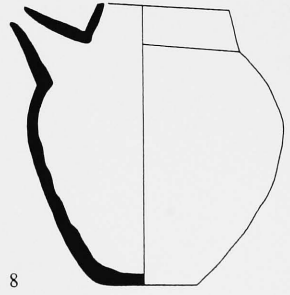
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Fig 28. Spouted jars. Scale 1:4.

Fig 29. Spouted jars. Scale 1:4.

1. Jar. PJN150. FM 158375. Incomplete, nearly all of neck, rim and most of spout is missing. Fabric 5YR 6/4 reddish brown, medium density mixed and micaceous sand inclusions.
2. Jar. PJN151. FM 158386. Incomplete, reconstructed, most of neck and all of rim missing. Fabric 2.5Y 7/4 pale yellow, medium density mixed sand inclusions. Fire-blackened.
3. Jar. FM 158435. All neck, rim and spout tip missing, rest intact. Fabric 7.5YR 6/2 pinkish grey, medium density mixed sand inclusions.

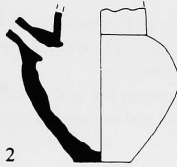
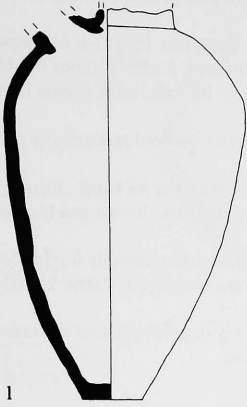


Fig 29. Spouted jars. Scale 1:4.

Fig 30. Handled cups. Scale 1:4.

1. Cup. GN3441. FM 158480. Complete, reconstructed. Fabric 2.5Y 7/4 pale yellow, medium density mixed sand inclusions.
2. Cup. GN2483. FM 158324. Mackay 1931, pl LXIV:23; LXXVI:12. Complete, intact but for chips off rim. Fabric 7.5YR 6/4 light brown, high density mixed and micaceous sand inclusions. Part of exterior fire-blackened.
3. Cup. AM 1926.361. Not reconstructed, handle and part of rim missing. Rounded base. Fabric 2.5Y 7/4 pale yellow, high density black sand inclusions.
4. Cup. GN3363. FM 158487. Mackay 1931, pl LXIV:22. Complete, intact but for handle missing. Fabric 5YR 6/4 light reddish brown, medium density mixed sand inclusions.
5. Cup. GN2526. AM 1926.358. Mackay 1931, pl LXIV:17. Complete, intact but for handle missing. Rounded base. Incised line on shoulder. Fabric 2.5Y 7/4 pale yellow, very high density black, brown and low density micaceous sand inclusions.
6. Cup. PJN94. FM 158387. Incomplete, reconstructed, rim 40% extant. Handles possibly originally attached to rim, but rim is broken in likely spots. Stumps of two opposing handles now broken off. Fabric 5Y 7/2 light grey, high density black and micaceous sand inclusions.
7. Cup. PJN92. FM 158406. Complete except for broken handle. Possibly originally one of a 'Siamese pair'. Fabric 5YR 7/4 pink, medium density mixed and micaceous sand inclusions.

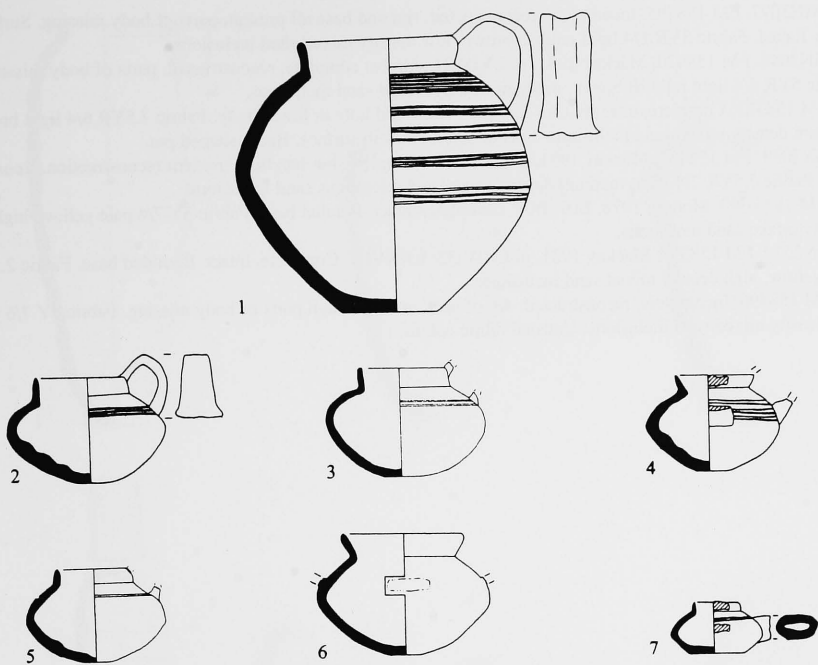


Fig 30. Handled cups. Scale 1:4.

Fig 31. Handled jars. Scale 1:4.

1. Jar. ?GN3077. FM 158495. Incomplete, reconstructed, rim and base all present, parts of body missing. Surface very badly flaked. Fabric 5YR 6/4 light reddish brown, low density mixed sand inclusions.
2. Jar. GN3044. FM 158420. Mackay 1931, pl LXIV:31. Almost complete, reconstructed, parts of body missing. Fabric 5YR 6/4 light reddish brown, medium density mixed sand inclusions.
3. Jar. FM 158321. Complete, intact but for missing handle and hole in lower body. Fabric 7.5YR 6/4 light brown, medium density mixed sand inclusions. Lots of small voids in surface. Badly shaped pot.
4. Jar. GN3033. FM 158432. Mackay 1931, pl LXVI:12. Complete, but handle is modern reconstruction. Rounded base. Fabric 7.5YR 7/4 pink, medium density mixed and micaceous sand inclusions.
5. Jar. AM 1925.399. Moorey 1978, B07, B08. Complete, intact. Pointed base. Fabric 5Y 7/4 pale yellow, high density mixed sand inclusions.
6. Jar. GN2519. FM 158357. Mackay 1931, pl LXIV:32; LXXVI:7. Complete, intact. Rounded base. Fabric 2.5Y 7/4 pale yellow, high density mixed sand inclusions.
7. Jar. FM 158496. Incomplete, reconstructed. All of neck intact, though parts of body missing. Fabric 5Y 7/6 yellow, low density mixed sand inclusions. Unusual fabric colour.

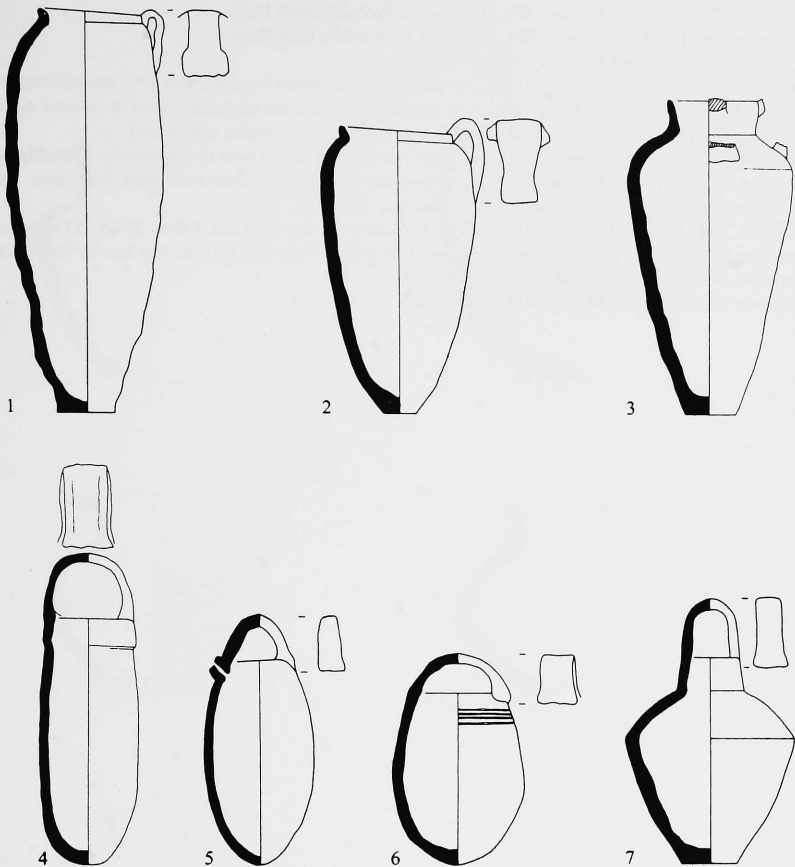


Fig 31. Handled jars. Scale 1:4.

Fig 32. Jars. Scale 1:4.

1. Jar. Redrawn from Field and Martin 1935, pl XXXII:2. Probably from Kish.
2. Jar. Redrawn from Field and Martin 1935, pl XXXII:1. Probably from Kish.
3. Jar. Redrawn from Field and Martin 1935, pl XXXII:3.
4. Jar. GN3055. FM 158344. Mackay 1931, pl LXV:21. Complete, intact but for about 15% rim missing and hole in lower body. Fabric 5YR 6/6 reddish yellow, medium density mixed and micaceous sand inclusions. Sparse traces of paint on exterior and interior neck 10R 3/6 dark red. Surface very abraded and eroded.
5. Jar. ?GN3066. FM 158322. Complete, intact but badly weathered. Small hole in upper body. Probably burnt, very uneven base. Fabric 5YR 6/4 light reddish brown, medium density mixed sand inclusions. Extremely abraded traces of plum and dark plum paint on all exterior but not rim.
6. Jar. GN2943. FM 158464. Mackay 1931, pl LXV:18. Complete, reconstructed. Fabric 10YR 7/3 very pale brown, medium density and mixed micaceous sand inclusions. Probably originally painted, but heavily fire-blackened.
7. Jar. Redrawn from Field and Martin 1935, pl XXXII:5.
8. Jar. Redrawn from Field and Martin 1935, pl XXXII:4.

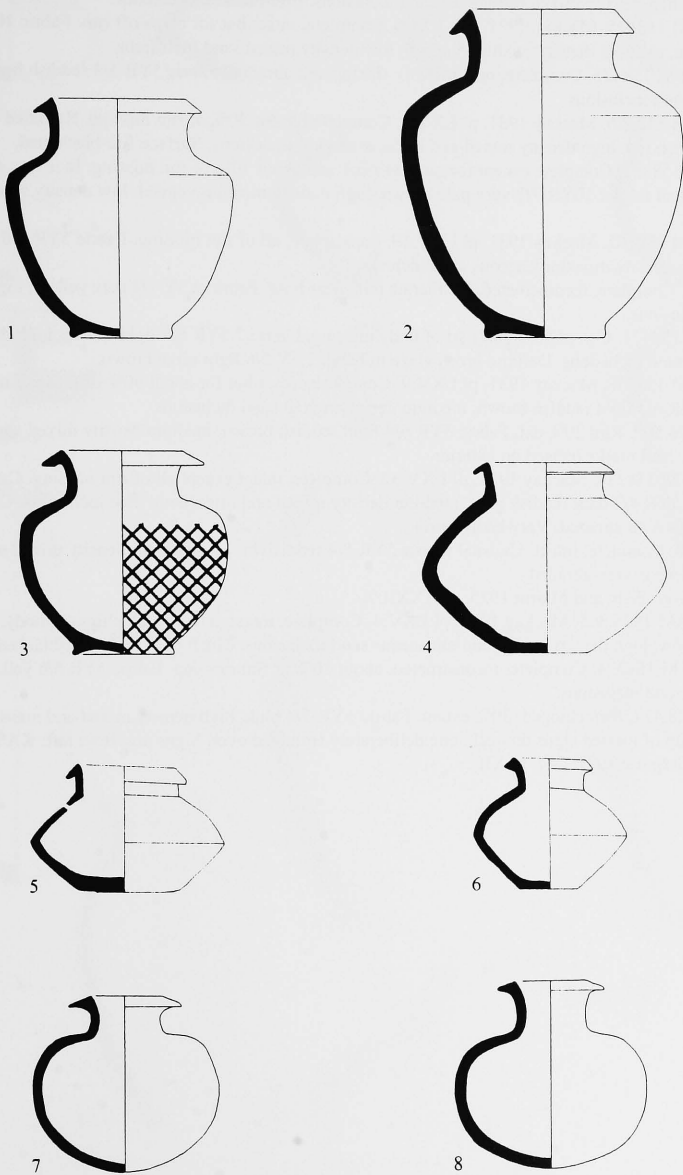


Fig 32. Jars. Scale 1:4.

Fig 33. Jars. Scale 1:4.

1. Jar. FM 158320. Complete, reconstructed except for small part of body. Badly shaped pot. Fabric 5YR 6/4 light reddish brown, high density mixed micaceous sand inclusions. Fire-blackened exterior.
2. Jar. GN3364. FM 158325. Mackay 1931, pl LXVI:6. Complete, intact but for chips off rim. Fabric 10YR 6/4 light yellowish brown, medium density medium vegetal, low density mixed sand inclusions.
3. Jar. GN3359A. FM 158423. Complete, intact. Badly flaking and abraded. Fabric 5YR 5/4 reddish brown, medium density mixed sand inclusions.
4. Jar. GN3062. FM 158426. Mackay 1931, pl LXV:5. Complete but for 30% of rim missing. Rounded base. Fabric 5YR 5/6 yellowish red, high density mixed and micaceous sand inclusions. Surface fire-blackened.
5. Jar. PJN99. FM 158382. Complete except for most of neck and about 70% of rim missing. In a very abraded condition. Unusual fabric: 10YR 7/3 very pale brown, high density medium vegetal, low density sand and some shell inclusions.
6. Jar. GN2555. FM 230105. Mackay 1931, pl LXV:19. Incomplete, all of rim missing. Fabric 5YR 6/6 reddish yellow, medium density mixed micaceous sand inclusions.
7. Jar. FM 158475. Complete, reconstructed. Deliberate hole near base. Fabric 2.5Y 7/4 pale yellow, high density mixed sand inclusions.
8. Jar. PJN88. FM 158421. Complete, small part of body missing. Fabric 7.5YR 6/4 light brown, high density mixed and micaceous sand inclusions. Definite green glaze in band, 2.5Y 5/6 light olive brown.
9. Jar. GN2510. FM 158438. Mackay 1931, pl LXV:9. Complete, intact but for about 90% of rim missing. Rounded base. Fabric 5YR 6/3 light reddish brown, medium density mixed sand inclusions.
10. Sherd. AM 1926.502. Rim 20% ext. Fabric 5YR 6/4 light reddish brown, medium density mixed and micaceous sand inclusions. Nail marks incised on exterior.
11. Jar. GN2549. FM 158334. Mackay 1931, pl LXV:32. Complete, intact except all of rim missing. Cannot stand on its base. Fabric 5YR 4/2 dark reddish grey, medium density mixed and micaceous sand inclusions. Colour caused by burning, surface all abraded. Very badly burnt.
12. Jar. FM 158468. Complete, intact. Unusual fabric, 5YR 5/4 reddish brown, medium density mixed micaceous sand inclusions. Surface is very abraded.
13. Jar. Redrawn from Field and Martin 1935, pl XXXII:7.
14. Jar. GN2502. AM 1926.365. Mackay 1931, pl LXV:4. Complete, intact, a few small chips off body. Fabric 7.5YR 6/6 reddish yellow, high density mixed and micaceous sand inclusions. Much of exterior fire-blackened.
15. Jar. GN2571. FM 158394. Complete, reconstructed, about 10% of rim missing. Fabric 5YR 5/6 yellowish red, medium mixed sand inclusions.
16. Sherd. AM 1928.474. Rim chipped, 20% extant. Fabric 5YR 7/4 pink, high density mixed and micaceous sand inclusions. Group of incised signs on neck, one deliberately smudged over. Signs are, from left: KAŠ DUG NE EN (Englund and Grégoire 1991, 244, pl XII).

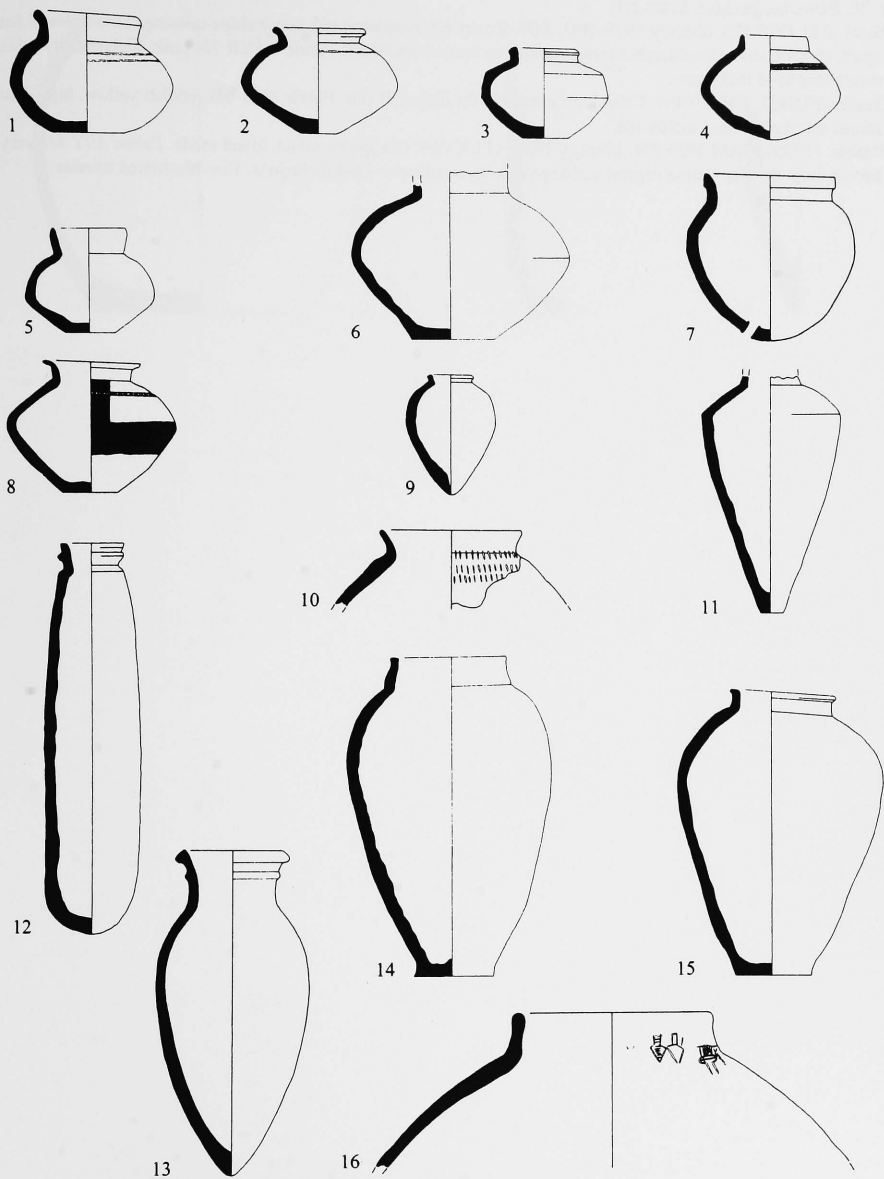


Fig 33. Jars. Scale 1:4.

Fig. 34. Bowl and beakers. Scale 1:4.

1. Bowl. AM 1925.423. Moorey 1978, B07, B09. Complete, reconstructed, some chips missing. Two holes, 2.5cm apart, on each side. Considerable scrape marks on interior and base. Fabric 7.5YR 7/4 pink, high density mixed and micaceous sand inclusions.
2. Beaker. PJN173. FM 158465. Complete, intact but for chips off rim. Fabric 5YR 6/6 reddish yellow, high density mixed micaceous sand inclusions.
3. Beaker. GN2521. AM 1926.471. Mackay 1931, pl LXVI:9. Complete, intact. Hand made. Fabric 10Y 8/4 very pale al brown, high density coarse vegetal and high density micaceous sand inclusions. Fire-blackened interior.

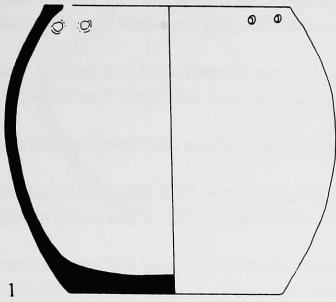


Fig. 34. Bowl and beakers. Scale 1:4.

Fig 35. Bottles and jars. Scale 1:4.

1. Bottle. GN3017. FM 158390. Mackay 1931, pl LXVI:4. Nearly complete, reconstructed, part of body and rim edge missing. Fabric 2.5Y 7/2 light grey, high density mixed sand inclusions. Possibly very faint hint of concentric bands of reserve slip.
2. Bottle. GN3065. AM 1926.466. Mackay 1931, pl LXVI:7. Incomplete, not reconstructed, rim missing. Fabric 7.5 YR 6/6 reddish yellow, high density mixed and medium density micaceous sand inclusions. Surface slip 2.5Y 8/4 pale yellow, eroded in places.
3. Bottle. FM 158467. Complete, intact. Fabric 5YR 6/3 light reddish brown, medium density mixed and micaceous sand. Rounded base.
4. Bottle. PJN93. FM 158376. Complete, intact except for pick hole in body. Fabric 5YR 6/6 reddish yellow.
5. Bottle. GN3125. FM 158463. Mackay 1931, pl LXVI:2. Complete, intact but for 60% of rim missing. Fabric 2.5YR 7/4 pale yellow, high density mixed sand inclusions.
6. Bottle. GN2969. FM 158397. Mackay 1931, pl LXVI:43. Incomplete, all of rim missing. Not reconstructed. Rim appears not to be circular, may even have been enclosed top possibly with holes. Lower body shaved. Fabric 2.5Y 7/2 light grey, high density mixed sand inclusions.
7. Bottle. GN3034. FM 158391. Mackay 1931, pl LXVI:34. Complete, intact. Fabric 2.5Y 7/4 pale yellow, high density mixed sand inclusions.
8. Bottle. AM 1926.362. Moorey 1978, B09, B10. Complete, intact but for few chips off rim. Hint of lip on one side of rim, but not clear. Incised decoration. Fabric 5Y 8/3 pale yellow, medium density mixed sand inclusions.
9. Bottle. AM 1925.394. Moorey 1978, B07, B08. Almost complete but for chunk off rim. Not reconstructed. Fabric 5Y 7/2 light grey, very sparse black sand inclusions, although almost no visible inclusions. Very faint and patchy traces of paint over body 10R 4/8 red.
10. Bottle. FM 158403. Complete, reconstructed but for chips off rim and small parts of body missing. Rounded base. Fabric 7.5YR 6/4 light brown, medium density mixed sand inclusions.
11. Bottle. FM 158338. Incomplete, reconstructed, about 60% of rim and part of body missing. Rounded base. Fabric 10YR 6/3 pale brown, low density mixed sand inclusions.
12. Bottle. AM 1925.395. Moorey 1978, B07, B08. Complete, intact, few chips off rim. Fabric 5Y 6/4 pale olive, no obvious inclusions. This is a very highly fired pot, but is fine ware. Base is cracked due to excess heat in kiln. Pot is heavy, but is not a waster.
13. Bottle. AM 1925.397. Complete, intact. Badly blackened by fire, and base cracked from over-firing. Fabric 5Y 7/3 pale yellow, very fine clay.
14. Bottle. FM 158444. Complete, intact, except for base broken in part. Rounded base. Fabric 7.5YR 6/6 reddish yellow, medium density mixed micaceous sand inclusions.
15. Bottle. AM 1926.363. Moorey 1978, B09, B10. Incomplete, rim missing. Remnants of 3 pierced holes and possible lip or spout on remains of broken neck. Fabric 5YR 7/4 pink, high density mixed and micaceous sand inclusions.
16. Bottle. GN3126. FM 158330. Mackay 1931, pl LXIV:20. Complete, intact except for surface chips. Single pierced lug. Fabric 7.5YR 6/4 light brown, medium density mixed and micaceous sand inclusions.
17. Bottle. PJN125. FM 158339. OI A26296. Complete, intact. Single pierced lug. Fabric 10YR 7/4 very pale brown, medium density mixed sand inclusions. Surface fire-blackened.
18. Bottle. FM 158470. Complete, intact. Single pierced lug. Fabric 7.5YR 6/4 light brown, medium density mixed sand inclusions. Lower body fire-blackened. Rounded base.
19. Bottle. FM 158318. Incomplete, broken into many sherds but all rim and neck intact, all of base missing. Single pierced lug. Fabric 7.5YR 7/4 pink, high density mixed sand inclusions.

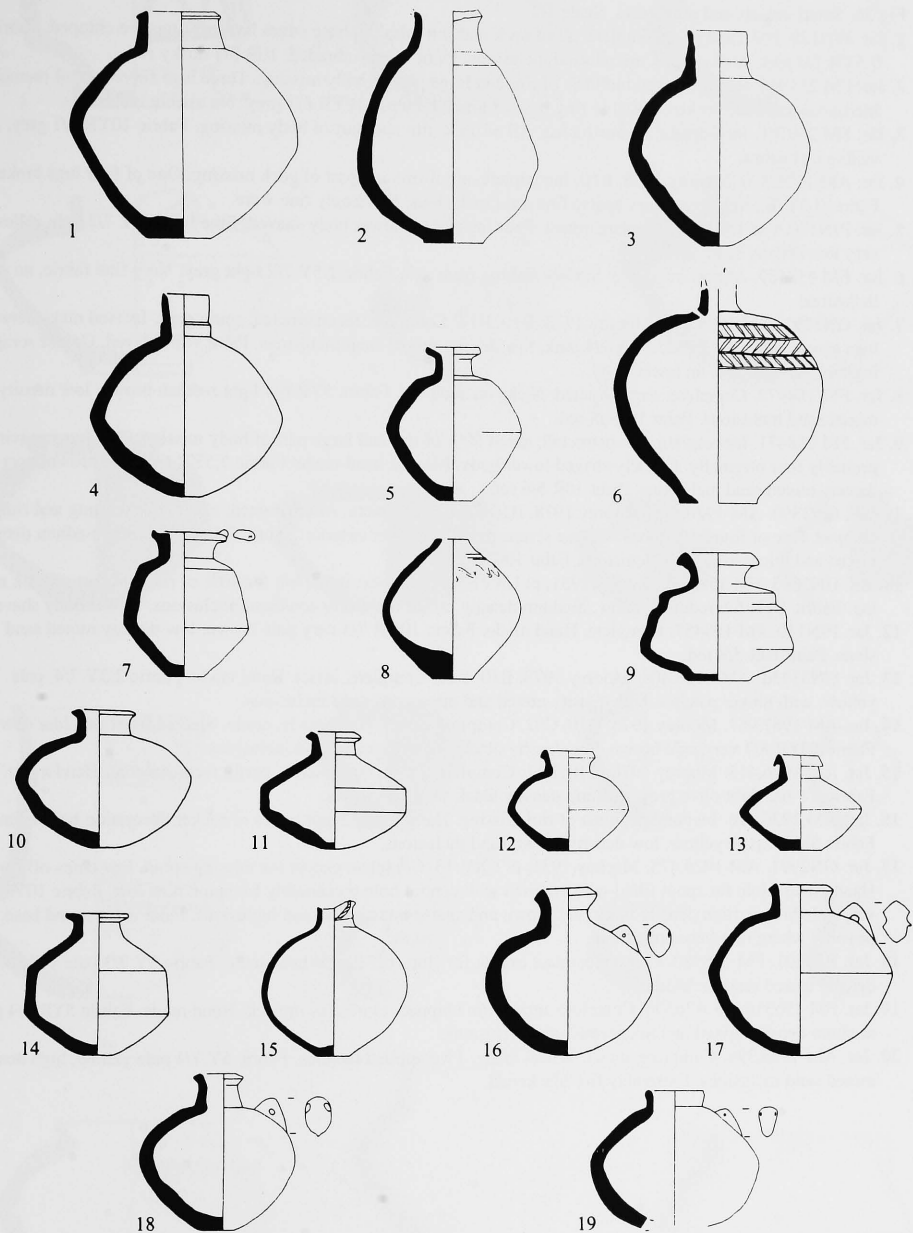


Fig 35. Bottles and jars. Scale 1:4.

Fig 36. Small vessels and miniatures. Scale 1:2.

1. Jar. PJN129. FM 158455. Incomplete, all of neck and rim missing, base edges broken. Lugs are chipped. Fabric 7.5YR 7/4 pink, high density mixed sand inclusions. Paint is very abraded, 10R 3/4 dusky red.
2. Jar. FM 231946. Reconstructed but 60% of rim and large part of body missing. Three lugs surviving all pierced. Incised nicks. Base broken, possibly ring base originally. Fabric 10YR 6/1 grey. No visible inclusions.
3. Jar. FM 230701. Incomplete, reconstructed. All of neck, rim and part of body missing. Fabric 10YR 6/1 grey. No visible inclusions.
4. Jar. AM 1926.370. Moorey 1978, B10. Incomplete, all of rim and part of neck missing. One of four lugs broken. Fabric 2.5Y 7/2 light grey, very sparse fine sand inclusions. Extremely fine ware.
5. Jar. PJN170. FM 158379. Complete, intact. Four lugs intact, lower body shaved. Fine fabric 5Y 7/3 pale yellow, very low density sand inclusions.
6. Jar. FM 158469. Almost complete. Surface flaking from salt. Fabric 2.5Y 7/2 light grey. Very fine fabric, no visible inclusions.
7. Jar. GN3391. AM 1926.503. Moorey 1978, B10, B14. Complete, reconstructed, some gaps. Incised nicks between lugs across shoulder. Fabric 5YR 7/4 pink, low density mixed sand inclusions. Paint 10R 5/6 red. Coarse scraping/burnishing marks on lower body.
8. Jar. FM 158472. Complete, reconstructed. Nicks on shoulder. Fabric 5YR 6/4 light reddish brown, low density mixed sand inclusions. Paint 10R4/8 red.
9. Jar. FM 158471. Incomplete, reconstructed, about 50% of rim and large part of body missing. One lug surviving, probably four originally. Crudely shaved lower body. May be hand made. Fabric 7.5YR 6/4 light brown, very low density mixed sand inclusions. Paint 10R 5/6 red.
10. Jar. GN3390. AM 1926.461. Moorey 1978, B10, B13. Incomplete, reconstructed, all of base missing and rim chipped. One of four lugs extant. Coarse scrape marks on lower exterior. Fabric 7.5YR 7/4 pink, medium density mixed and micaceous sand inclusions. Paint 10R 5/6 red.
11. Jar. GN3095. FM 158372. Mackay 1931, pl LXVI:36. Complete, intact but for 40% of rim and part of neck missing. Fabric 5YR 6/6 reddish yellow, medium density mixed and micaceous sand inclusions. Lower body shaved.
12. Jar. PJN110. FM 158457. Complete. Hand made. Fabric 10YR 7/3 very pale brown, low density mixed sand inclusions. Paint 10R 5/8 red.
13. Jar. GN3393d. AM 1926.409. Moorey 1978, B10, B11. Complete, intact. Hand made. Fabric 2.5Y 7/4, pale yellow, with pinker patches, high density mixed and micaceous sand inclusions.
14. Jar. AM 1967.957. Moorey 1978, B10, C02. Complete, intact. Hand made, crude. Shaved from shoulder down. Fabric 10YR 8/4 very pale brown, low density black and micaceous sand inclusions.
15. Jar. AM 1926.413. Moorey 1978, B10, B11. Complete, intact, but possibly partly reconstructed. Hand made. Fabric 5Y 6/2 light olive grey, medium density black sand inclusions.
16. Jar. AM 1926.476. Incomplete, most of rim missing. Hand made. Faint traces of rocker decoration below rim. Fabric 5Y 8/3 pale yellow, low density brown sand inclusions.
17. Jar. GN2991. AM 1926.475. Mackay 1931, pl LXV:13. Complete except for missing spout, few chips off rim. Hand made. Hole for spout filled with bitumen with central hole presumably for spout now lost. Fabric 10YR 8/3 very pale brown, high density black and brown and sparse micaceous sand inclusions. Faint ridge round base, possibly where ring base once fitted.
18. Jar. PJN101. FM 158380. Complete, intact except for chips off rim. Wheel made. Fabric 5Y 7/3 pale yellow, high density mixed sand inclusions.
19. Jar. FM 156316. OI A26300. Complete, intact, rim chipped, two holes in neck. Hand made. Fabric 5YR 7/4 pink, medium density mixed and micaceous sand inclusions.
20. Jar. AM 1925.396. Complete, intact. Wheel made. Two applied handles. Fabric 5Y 7/4 pale yellow, high density mixed sand inclusions. Extremely fire-blackened.

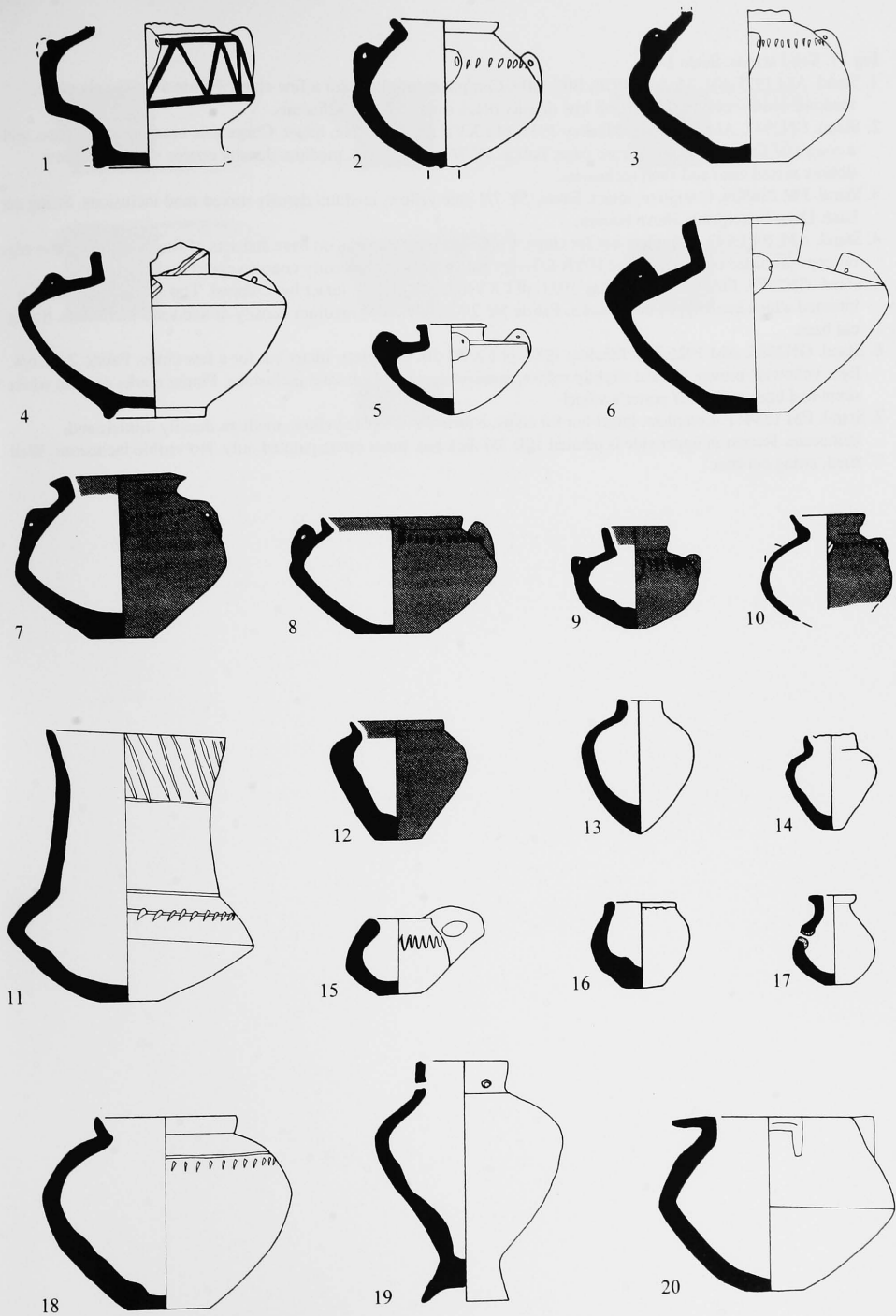


Fig 36. Small vessels and miniatures. Scale 1:2.

Fig 37. Solid stands. Scale 1:4.

1. Stand. AM 1925.401. Moorey 1978, B07, B09. Complete, intact but for a few chips. Fabric 5Y 6/3 pale olive, medium density coarse vegetal and low density black sand and grit inclusions.
2. Stand. GN2982. AM 1926.367. Mackay 1931, pl LXVII:33. Complete, intact. Concentric cord marks on base, with a couple of finger dents along base edge. Fabric 5Y 7/3 pale yellow, medium density coarse vegetal and low density mixed sand and shell inclusions.
3. Stand. FM 228989. Complete, intact. Fabric 5Y 7/3 pale yellow, medium density mixed sand inclusions. String cut base. Deep fingerprints above bottom.
4. Stand. AM 1981.947. Complete but for chips. Concentric string marks on base and sets of finger dents at base edge on opposite sides of stand. Fabric 10YR 8/3 very pale brown, high density coarse vegetal inclusions.
5. Stand. GN2983. FM 228988. Mackay 1931, pl LXVII:29. Complete, intact but chipped. Top side covered in thin bitumen which has dripped down sides. Fabric 5Y 7/3 pale yellow, medium density mixed sand inclusions. String cut base.
6. Stand. GN2985. AM 1926.366. Mackay 1931, pl LXVII:30. Complete, intact but for a few chips. Fabric 2.5Y 6/4 light yellowish brown, surface slightly redder, medium density black sand inclusions. Finger marks on base where stand had been pulled off potter's wheel.
7. Stand. FM 158441. Complete, intact but for chips. Fabric 5Y 7/3 pale yellow, medium density mixed sand inclusions. Recess in upper side is painted 10R 3/6 dark red. Inner circle painted only. No visible inclusions. Well fired, string cut base

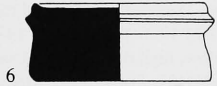
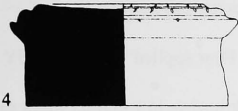
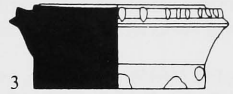
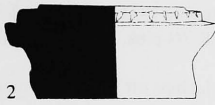
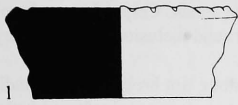


Fig 37. Solid stands. Scale 1:4.

Fig 38. Assorted pottery items. Scale 1:4.

1. Zoomorphic vessel. GN3047. FM 158419. Mackay 1931, pl LXXVI:2. Complete, intact. Chipped around top hole. Working marks all over surface. Fabric 7.5YR 7/4 pink, medium density mixed sand inclusions. Surface very pale buff.
2. Bowl. FM 158458. Incomplete, reconstructed, chips off rim. Three mountings along rim broken where handles originally fitted. Fabric 10YR 6/3 pale brown, low density medium vegetal and low density mixed sand inclusions.
3. Model boat/spinning device. AM 1926.478. Moorey 1978, B10, B13. Complete, reconstructed, a few small chips missing. Hand made. Fabric 5Y 7/3 pale yellow, medium density mixed and low density micaceous sand inclusions. Surface greener, and fabric redder in places.
4. Funnel. AM 1926.477. Moorey 1978, B10, B13. Incomplete, lower end broken. Four applied lugs. Fabric 5Y 8/3 pale yellow, high density mixed sand inclusions.
5. Spout. GN3137. FM 158442. Mackay 1931, pl LXXVI:3. Fabric 7.5YR 6/4 light brown, low density black sand inclusions.
6. Spout. PJN102. FM 228944. Fabric 7.5YR pink, medium density mixed sand inclusions.
7. Sherd. PJN78. FM 158407. Sherd from very large pot. Rim very much less than 5%. Unusual fabric: 10YR 6/4 light yellowish brown, medium density mixed sand inclusions. Applied figure.
8. Handle. GN3139. FM 158476. Mackay 1931, pl LXXVI:3. Overfired. Fabric 5Y 6/3 pale olive, high density mixed sand.
9. Handle. AM 1925.379. Fabric 10YR 7/3 very pale brown, high density mixed micaceous sand inclusions. Paint: stipple = 10R 4/4 weak red; solid = 10R 3/1 dark reddish grey. Fire-blackened.
10. Fitting. AM 1926.479. Moorey 1978, B10, B14. Complete, chips off rim. Presumably some sort of ornamental fitting to large pot. Seems wheel made. Fabric 5YR 6/6 reddish yellow, high density mixed sand inclusions. Surface 2.5YR 7/4 pale yellow.
11. Lid. AM 1928.475. Moorey 1978, B10, CO2. Complete, intact. Fabric 7.5YR 7/4 pink, medium density coarse vegetal and low density sand inclusions.

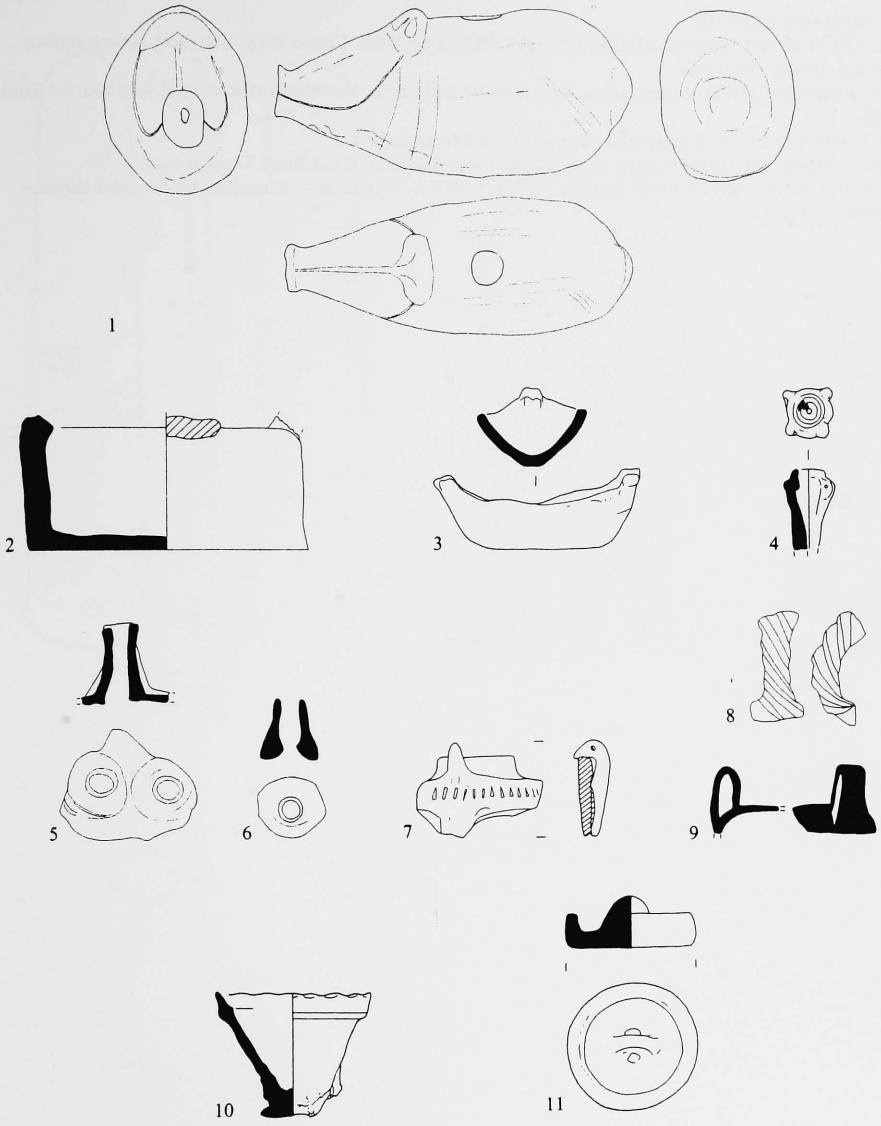


Fig 38. Assorted pottery items. Scale 1:4.

Fig 39. Metalwork. Scale 1:2.

1. Adze. GN 3136. AM 1926.449. Mackay 1931, pl LXXI:32; LXXV:6. Copper alloy. Complete, though surface corroded. Weight 285.0 gms.
2. Blade. PJN59. FM 231720. Copper alloy. Very corroded and fragile. Probable haft at one end with hole for fixing handle.
3. Haft. PJN49. FM 158220. Copper alloy tang or haft in bitumen matrix.
4. Figurine. PJN30. FM 158265. Copper alloy. Goose. Complete. In good condition. Loop on back.
5. Fish hook. GN2481. AM 1926.455. Mackay 1931, pl LXXV:4. Copper alloy. Complete, but corroded in places. Weight 10.23 gms.

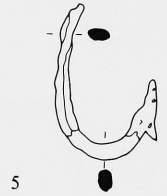
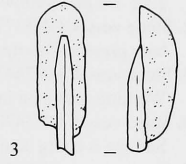
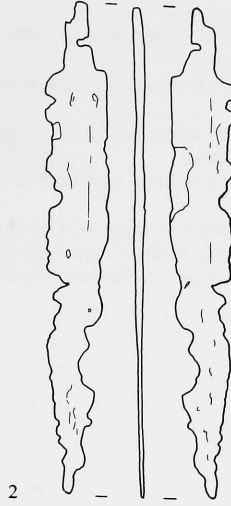
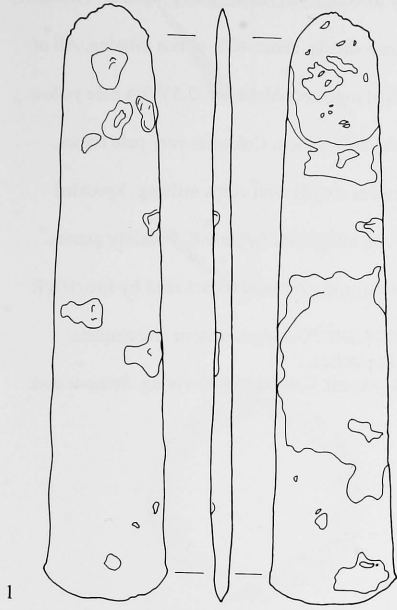


Fig 39. Metalwork. Scale 1:2.

Fig 40. Stone vessels. Scale 1:4.

1. Stone vessel. GN2444. AM 1926.510. Almost complete, part of body missing. Ten sherds glued together. Alabaster, 2.5Y 7/4 pale yellow. Working marks in many places.
2. Stone vessel. GN3377. FM 156429. Incomplete, reconstructed from two sherds, about 40% of rim missing. All of base present. Diorite, speckled black and milky white.
3. Stone vessel. GN2443. AM 1926.511. Complete, two large sherds glued together. Alabaster, 2.5Y 7/4 pale yellow. Working marks on interior and exterior.
4. Stone vessel. GN3470. FM 158478. Incomplete, base 100% extant, rim 30% extant. Colour is very pale brown. Surface is badly damaged in places.
5. Stone vessel. GN2958. AM 1926.435. Complete, reconstructed from three sherds with chips missing. Speckled black and light grey diorite.
6. Stone vessel. PJN167. FM 158418. Mid grey with dark pink patches and micaceous fragments. Possibly granite. Fine striations all over from working.
7. Stone vessel. GN2959. AM 1926.509. Intact apart from 70% rim missing and very badly blackened by fire. 10YR 8/3 very pale brown.
8. Stone vessel. GN3410. AM 1926.43. Originally 1925.334. Moorey 1978, B09. Grey/green stone. Incomplete, reconstructed. Rim 50% extant, one handle. Exterior fire-blackened in patches.
9. Stone vessel. FM 230698. Incomplete, reconstructed. Rim about 30% present. One handle surviving. Stone is dark pinkish grey, probably burnt.

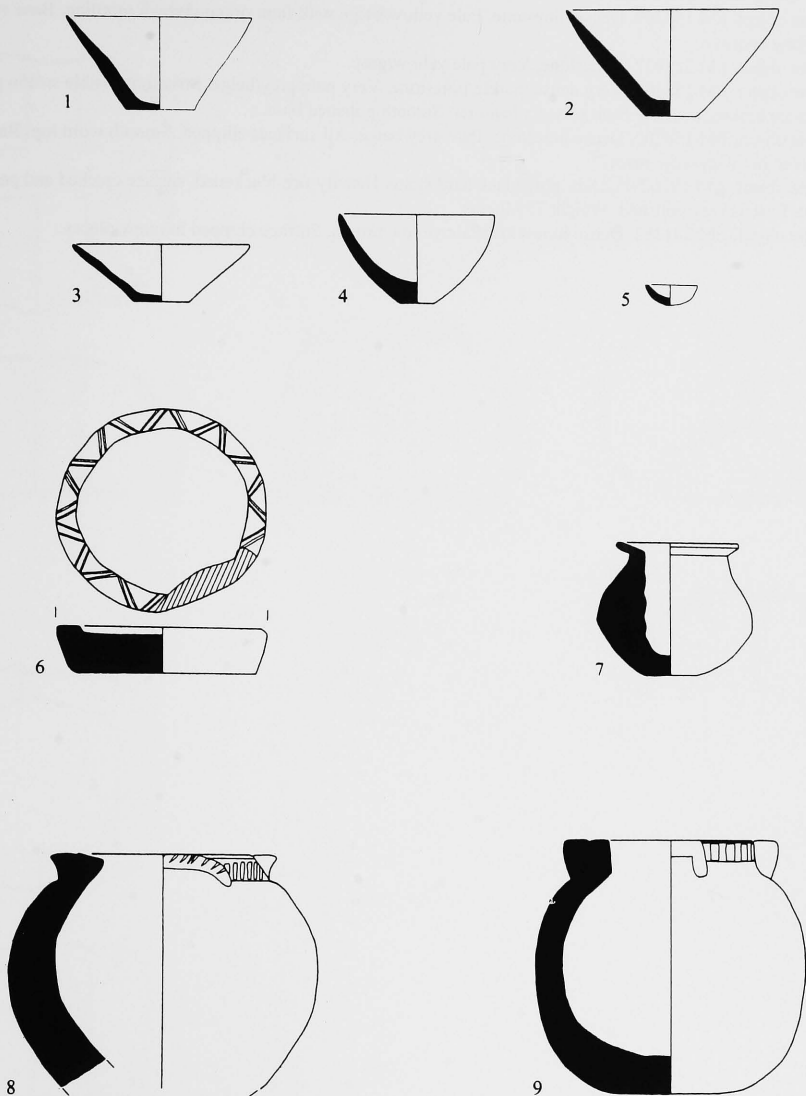


Fig 40. Stone vessels. Scale 1:4.

Fig 41. Stone tools. Scale 1:2.

1. Stone object. FM 158299. Dense limestone. Pale yellow/beige with faint orange/brown mottling. Base very smooth, slightly concave.
2. Stone object. FM 228927. Limestone. Very pale yellow/grey.
3. Stone object. FM 158201. Very dense marble/limestone. Very pale grey/beige. Striations visible within grooves. Surface broken, possibly from use as a hammer. Smooth polished base.
4. Stone object. FM 158202. Dense limestone. Pale grey/beige. All surfaces chipped. Smooth worn top. Base also smooth but with score marks.
5. Stone object. AM 1926.506. Dark grey/black hard stone. Heavily fire-blackened, surface cracked and peeling from heat. Base is very polished. Weight 751.0 gms.
6. Stone object. FM 231282. Dense limestone. Pale yellow/brown. Surface chipped in many places.

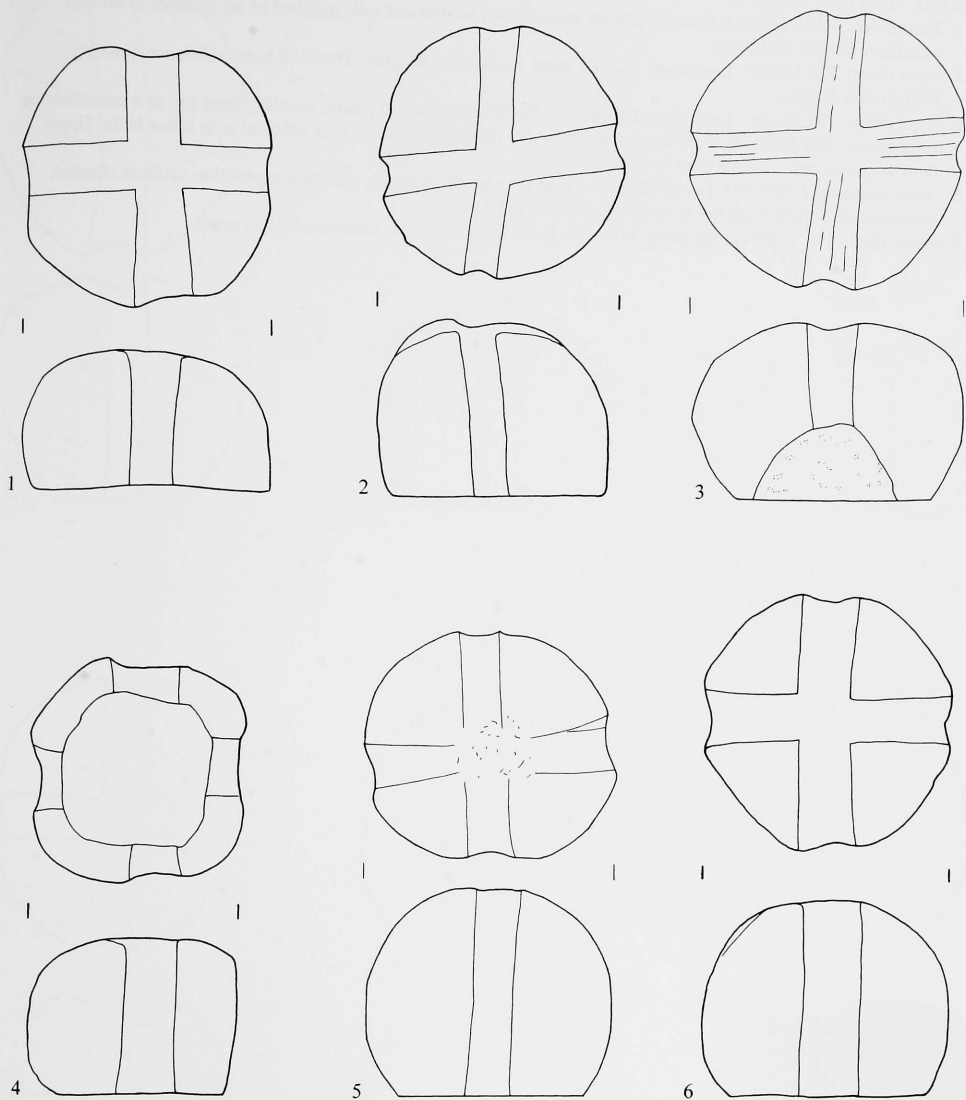
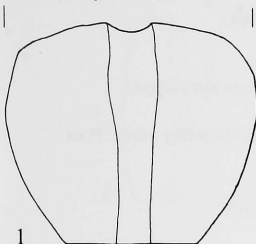
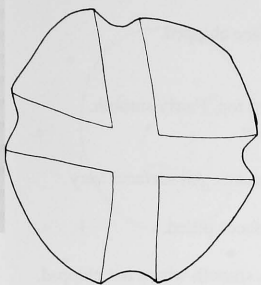


Fig 41. Stone tools. Scale 1:2.

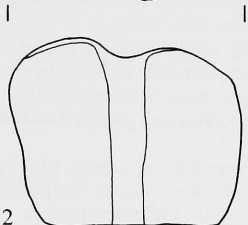
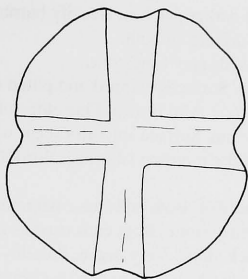
Fig 42. Stone tools. Scale 1:2.

1. Stone object. AM 1925.273. Dark grey/black stone. Base rounded and well polished as are grooves of all four shoulders. Weight 590.0 gms.
2. Stone object. FM 158203. Limestone. Heavily burnt black and dark grey. Traces of burnt substance, possibly bitumen, on flat base.
3. Stone object. FM 231281. Limestone. Pale brown. Surfaces chipped in places, possibly from use as a hammerstone.
4. Stone object. AM 1926.505. Pale beige stone. Possibly limestone. Base is very polished as is lower body. Upper body is coarse and more abraded. Weight 500.5 gms.
5. Stone object. AM 1981.948. Grey/light brown porous stone. Base highly polished, most other surfaces abraded, though small polished patches in evidence. Weight 465.0 gms.
6. Stone object. FM 229741. Limestone. Mid-dark grey. Burnt in places. One face broken away.

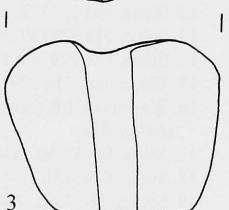
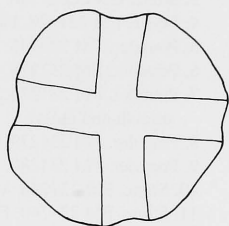




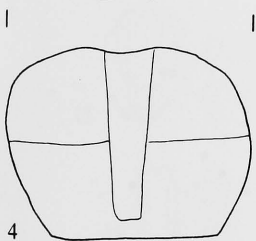
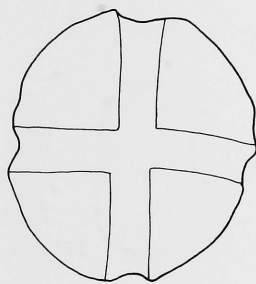
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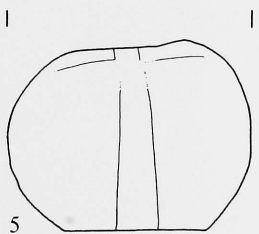
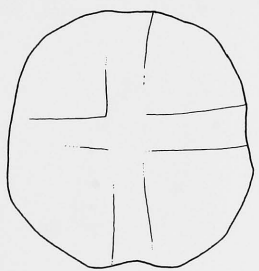
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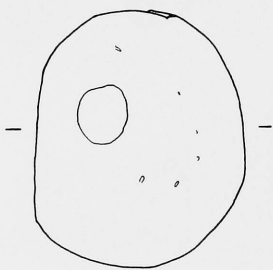
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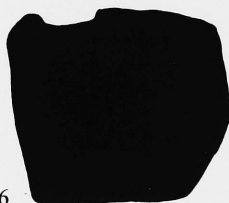


Fig 42. Stone tools. Scale 1:2.

Fig 43. Stone and flint tools. Scale 1:4.

1. Stone. FM 229745. Very dark grey with darker patches. Heavily burnt. Edges and surface chipped.
2. Stone. FM 229749. Mid pinkish-grey. Surfaces smooth.
3. Stone. GN3359b. FM 158215. Dark pinkish-grey sandstone.
4. Pestle. FM 231347. Pale beige limestone. Surfaces chipped and pitted except for domed top. Fairly smooth.
5. Pounder. FM 229746. Dense hard sandstone. Mid brown. Fine chips off much of surface.
6. Pounder. FM 231278. Dense hard sandstone. Surface smooth except where broken.
7. Pounder. FM 231276. Black with fine white mottling (diorite). Working striations in places. All surfaces very smooth and glossy.
8. Pounder. FM 231279. Greenish/black mottled. Both ends have hammer use traces. Surfaces pitted.
9. Pounder. FM 231280. Very dark grey dense stone. Both ends used as hammer.
10. Stone. FM 229748. Very dark grey/black stone. Very dense. Possibly basalt. Surfaces smooth where not chipped.
11. Stone. FM 229740. Flint. Very dark grey, no clear cortex. Non-chipped surfaces smooth.
12. Stone. FM 231277. Dark grey flint, cortex more brown.
13. Stone. FM 229739. Flint. Very dark grey with sparse beige patches. Surface as interior.
14. Stone. FM 229744. Flint. Very dark grey with beige patches. Very smooth surface where not chipped.
15. Blade core. FM 229749. Mid pinkish-grey stone. Surfaces smooth.
16. Blade core. PR (no number) VIII.56. Speckled dark grey flint with black speckles. Cortex milky white. Poor quality flint.
17. Stone. GN3439c. AM 1926.446. Rock crystal piece, chipped. Unfinished pendant.
18. Stone. GN2421. AM 1926.448. Pale brown stone, shaped. Not pierced. Weight 9.28 gms.
19. Stone. GN3439a. AM 1926.445. Rock crystal. Unfinished pendant.
20. Stone axe. GN3370. FM 158204. Mackay 1931, pl LXX:23; LXXIV:1. Mid grey stone. Striations.

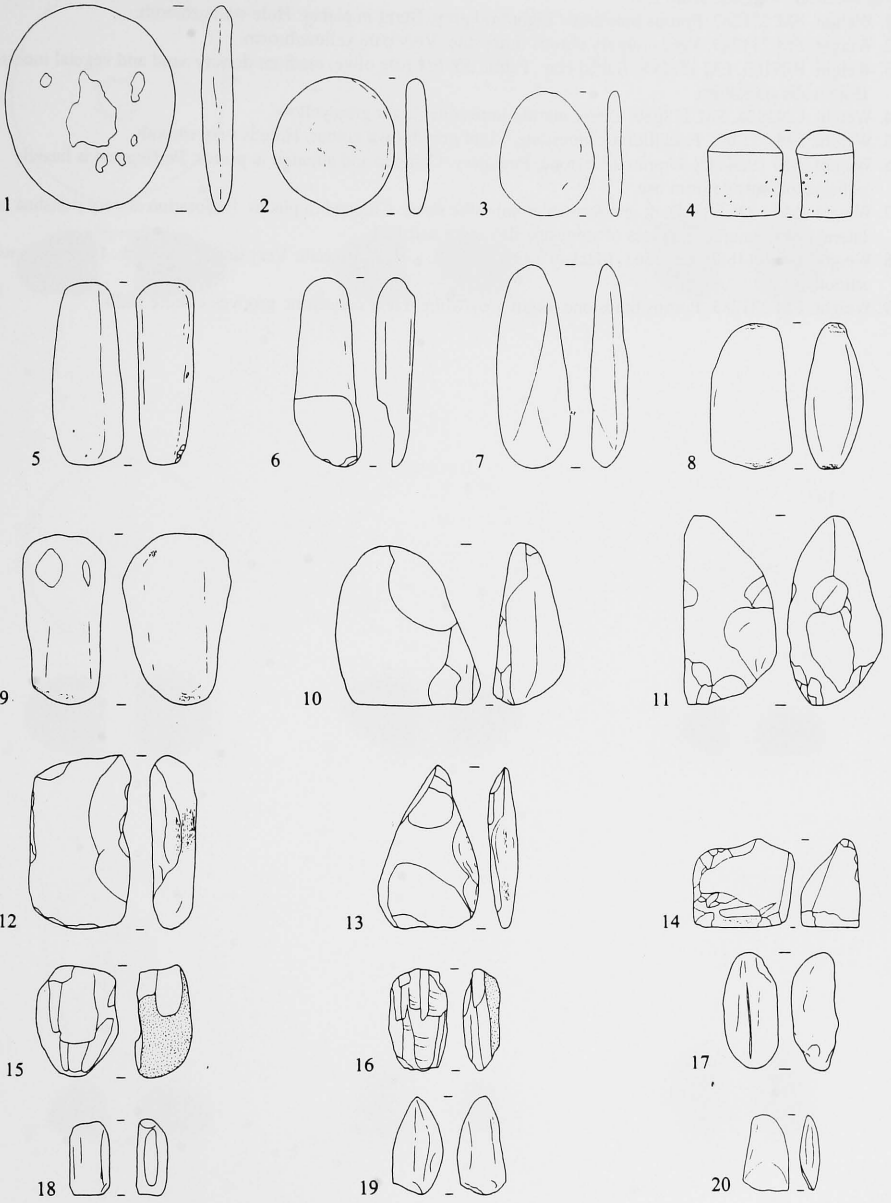


Fig 43. Stone and flint tools. Scale 1:4.

Fig 44. Stone weights. Scale 1:4.

1. Weight. FM 231287. Porous limestone. Light/mid grey. Burnt in places. Hole walls smooth.
2. Weight. FM 231289. Very crumbly porous limestone. Very pale yellow/brown.
3. Weight. PJN165. FM 158298. Baked clay. Fabric 5Y 6/4 pale olive, medium density sand and vegetal inclusions. Hole walls smoothish.
4. Weight. GN3454. FM 228980. Dense marble-limestone. Light grey/yellow.
5. Weight. FM 231285. Fossiliferous limestone. Light grey/brown colour. Hole is very smooth
6. Weight. AM 1926.508. Granite-like stone. Pink/grey. Chipped and abraded in places. Perforation is heavily polished on outside from use.
7. Weight. AM 1926.507. Dark grey/brown granite-like stone. Chipped in places. Perforation is very polished and has lateral groove marks. Surfaces of stone are also quite polished.
8. Weight. GN3414b. FM 231361. Mackay 1931, pl LXX:1. Porous basalt. Very dark grey/black. Hole walls worn smooth.
9. Weight. FM 231283. Porous limestone. Light grey/white. Faint concentric grooves in hole walls.

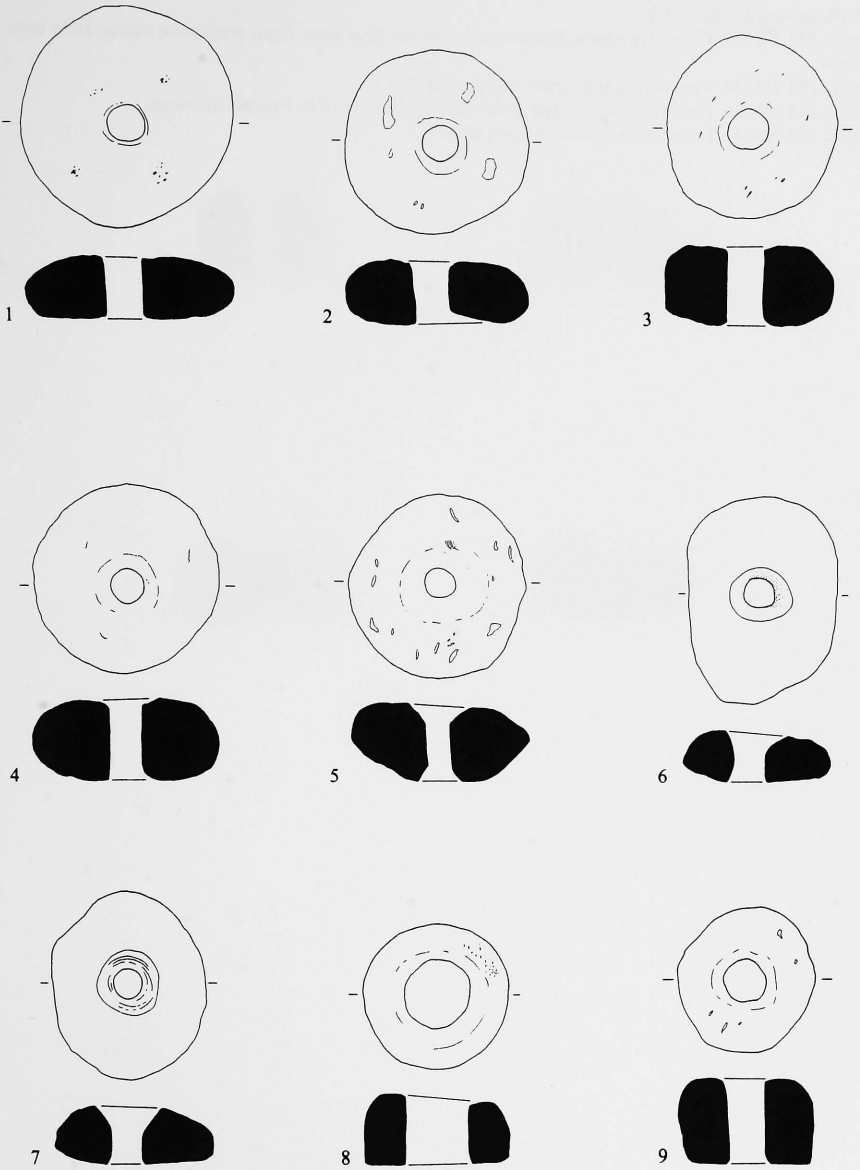
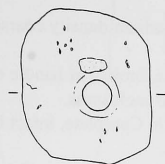


Fig 44. Stone weights. Scale 1:4.

Fig 45. Stone weights. Scale 1:4.

1. Weight. FM 231288. Porous limestone. Bitumen traces in one large pore. Light grey/white colour. Hole walls very smooth.
2. Weight. FM 231284. Very porous limestone. Mid grey/beige.
3. Weight. FM 231286. Dense limestone. Light yellow/brown. Surface quite smooth and worn.
4. Weight. FM 229742. Porous limestone. Light beige/white.





1



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3



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Fig 45. Stone weights. Scale 1:4.

Fig 46. Baked clay and stone objects. Scale 1:2 (except no 10 = 1:1).

1. Clay object. FM 228943. Baked clay. Fabric 2.5Y 7/4 pale yellow, medium density coarse vegetal and medium density mixed sand inclusions. Lots of finger marks in clay.
2. Spatula. GN3050. FM 228936. Mackay 1931, pl LXXV:8. Incomplete, broken at handle end. Chips off blade. Baked clay. Fabric 2.5Y 8/4 pale yellow, medium density mixed sand inclusions.
3. Spatula. GN3014. AM 1926.415. Mackay 1931, pl LXXI:29; LXXV:8. Complete, intact but for chips along edges. Baked clay. Fabric 5YR 7/4 pink, low density mixed sand inclusions.
4. Spatula. FM 158222. Incomplete, broken at handle end. Chips off blade. Baked clay. Fabric 10YR 7/3 very pale brown, medium density mixed and micaceous sand inclusions.
5. Container. FM 231427. Pale-mid grey patchy stone.
6. Bobbin/weight. GN3356. AM 1926.434. Mackay 1931, pl LXX:22. Intact with chips off. Black stone with grey streaks. Weight 25.44 gms.
7. Bobbin/weight. GN3305. AM 1926.411. Baked clay. Fabric 5Y 7/2 light grey, low density mixed sand inclusions. Weight 64.0 gms.
8. Decorative element. FM 229314. Very dark grey stone, possibly burnt. Slate?
9. Stopper. FM 228986. Baked clay. Fabric 7.5YR 5/4 brown, low density black sand inclusions. Very badly fire damaged or fired.
10. Decorative element. GN3400. AM 1926.436. Pink/grey stone. Base smooth and flat. Weight 11.18 gms. (1:1)
11. Weight. GN3098. FM 158221. Mackay 1931, pl LXX:16; LXXV:6. Complete. Grey-green stone. Weight 84.5 gms.
12. Weight. GN3378. AM 1926.504. Mackay 1931, pl LXX:9. Porous pale grey stone. Two smooth indentations one at each end. Part of surface has been used as hammerstone. Weight 325.0 gms.
13. Weight. GN3300. FM 158211. Mackay 1931, pl LXXV:6. Very pale grey/buff stone. Chipped. Weight 30.5 gms.
14. Clay object. PJN39. FM 158427. Incomplete, broken solid end. Baked clay. Fabric 2.5Y 7/4 pale yellow, medium density mixed sand inclusions.
15. Weight. GN3458. FM 228979. Mackay 1931, pl LXX:19. Complete but falling apart. Baked clay. Fabric 7.5YR 5/4 brown, no visible inclusions. Weight 63.5 gms.
16. Weight/spindle whorl. GN3382. AM 1926.407. Pale yellow limestone, fine grained. All surfaces well polished. Six notches on rim. Upper surface convex, lower slightly concave. Weight 137.5 gms.

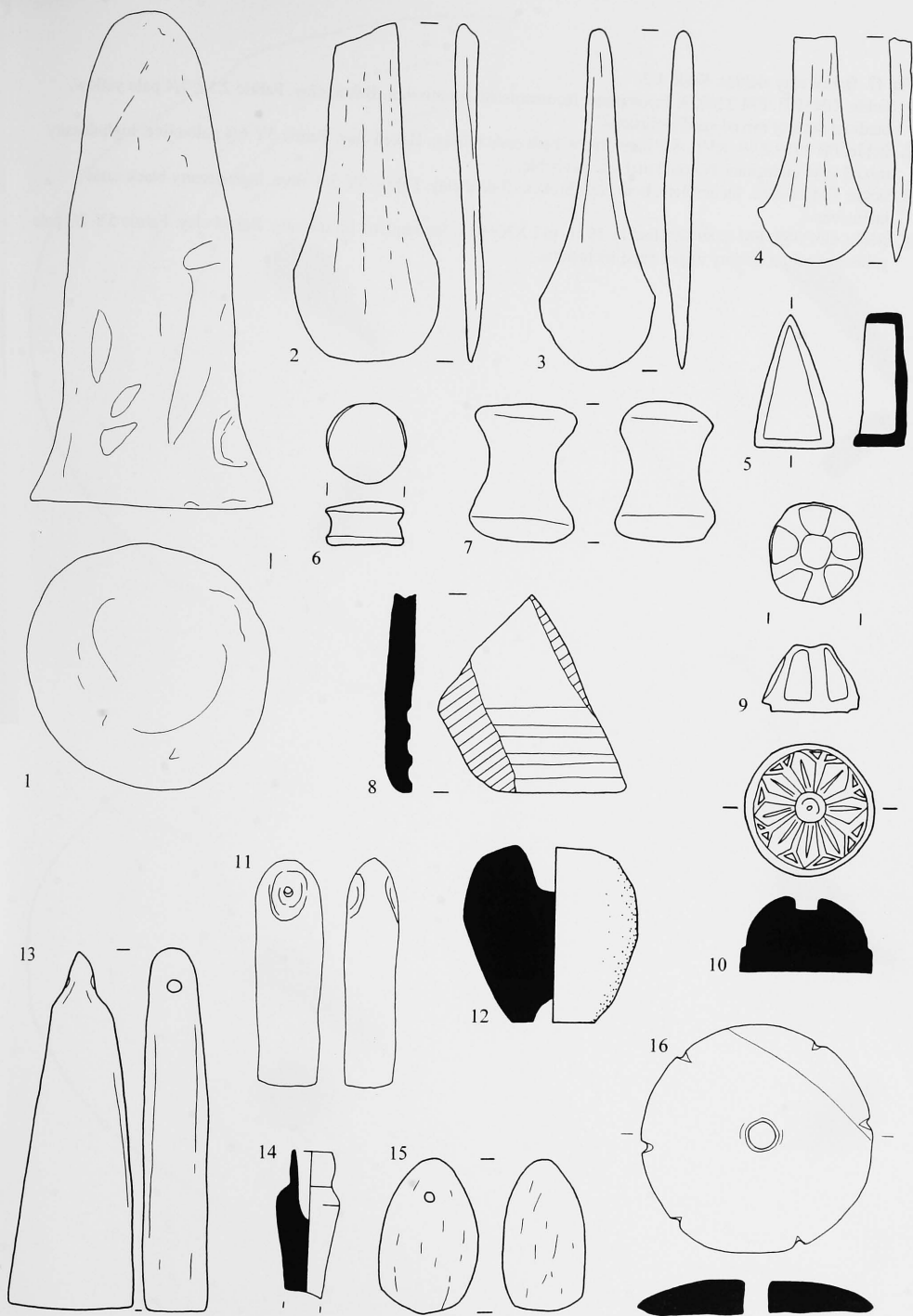


Fig 46. Baked clay and stone objects. Scale 1:2 (except no 10 = 1:1).

Fig 47. Baked clay sickles. Scale 1:2.

1. Sickle. GN3103. FM 228928. Incomplete, reconstructed, tip missing. Baked clay. Fabric 2.5Y 7/4 pale yellow, medium density mixed sand inclusions.
2. Sickle. PR 1959.2.49. XVII. 87. Incomplete, both ends broken. Baked clay. Fabric 5Y 6/4 pale olive, high density mixed sand inclusions. No reed mat traces visible.
3. Sickle. FM 229972. Incomplete, both ends broken. Baked clay. Fabric 5Y 5/3 olive, high density black sand inclusions.
4. Sickle. GN3369. FM 228940. Mackay 1931, pl LXXVI:11. Incomplete, tip missing. Baked clay. Fabric 5Y 7/3 pale yellow, medium density mixed sand inclusions.

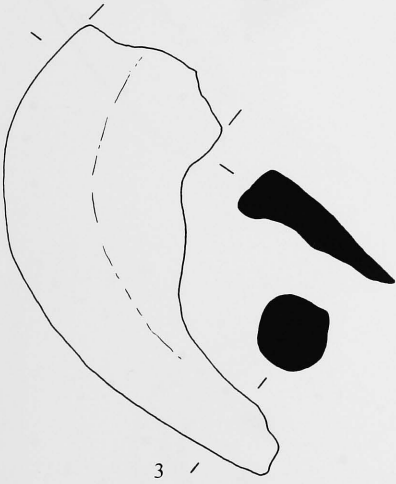
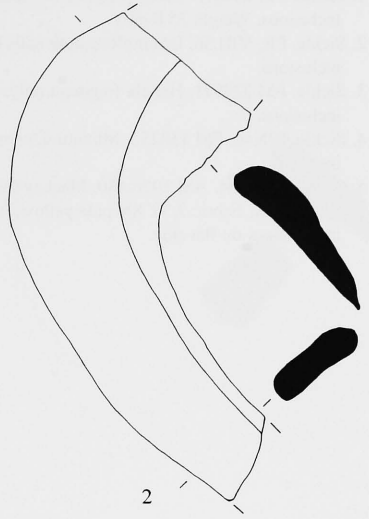
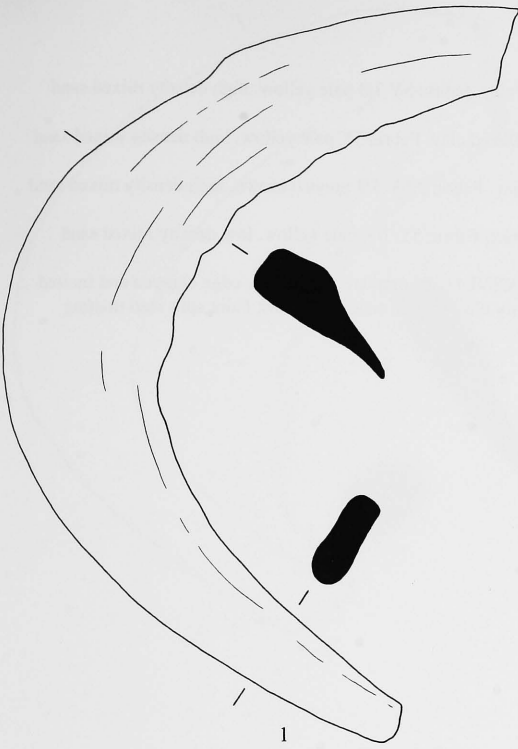


Fig 47. Baked clay sickles. Scale 1:2.

Fig 48. Baked clay sickles. Scale 1:2.

1. Sickle. FM 228973. Incomplete, tip missing. Baked clay. Fabric 5Y 7/3 pale yellow, high density mixed sand inclusions. Weight 35.0 gms.
2. Sickle. PR. VIII.56. Incomplete, both ends broken. Baked clay. Fabric 5Y pale yellow, high density mixed sand inclusions.
3. Sickle. FM 229971. Handle fragment only. Baked clay. Fabric 2.5Y 5/2 greyish brown, high density mixed sand inclusions.
4. Sickle. PJN48. FM 158252. Miniature, complete, intact. Fabric 5Y 7/3, pale yellow, low density mixed sand inclusions.
5. Sickle. GN3104. AM 1926.480. Mackay 1931, pl LXXVI:11. Incomplete, tip broken, edge chipped and incised. Baked clay. Fabric 2.5Y 8/4 pale yellow, high density black/brown sand inclusions. Faint split reed matting impressions on flat side.

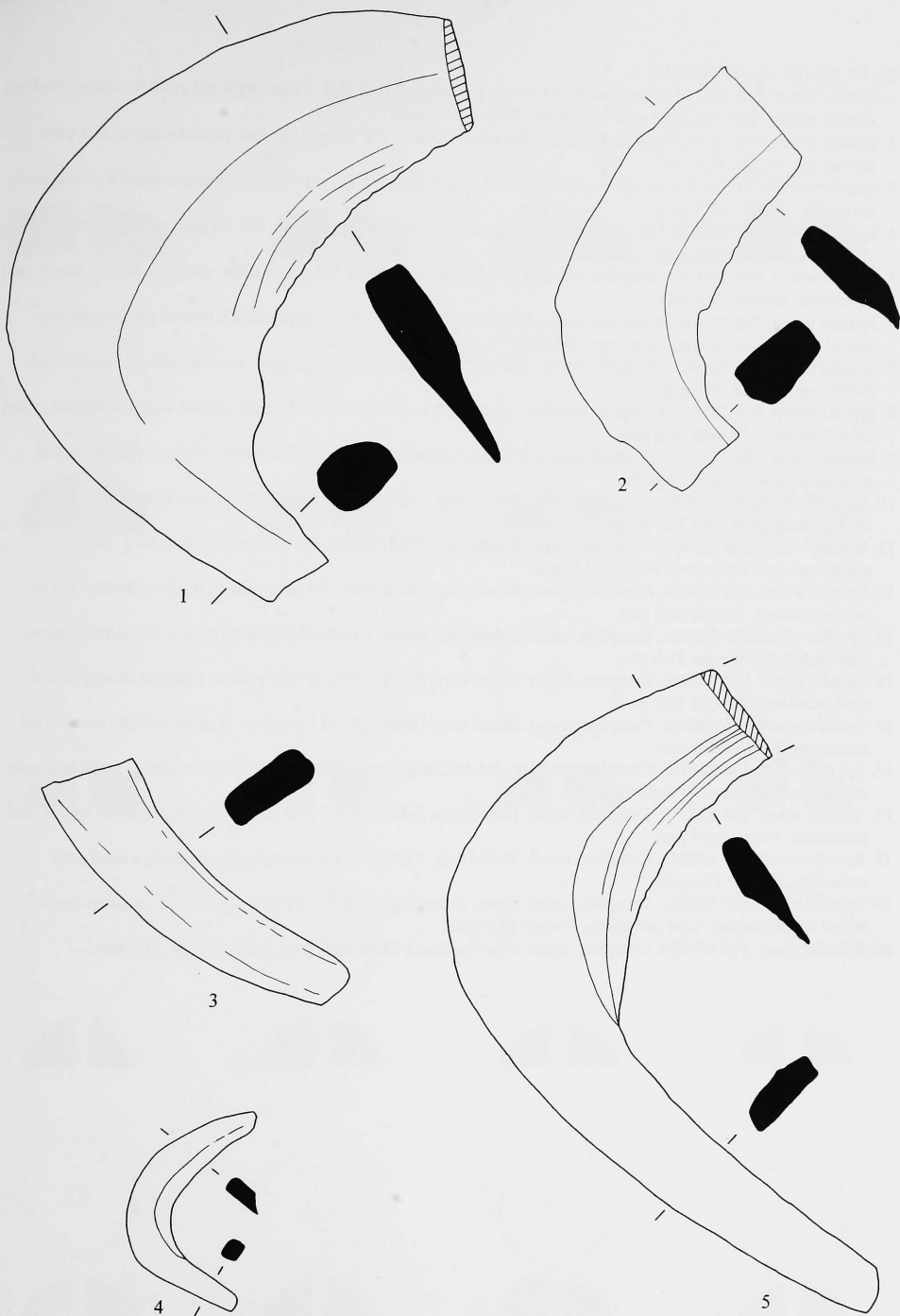


Fig 48. Baked clay sickles. Scale 1:2.

Fig 49. Spindle whorls. Scale 1:2.

1. Spindle whorl. FM 158224. Complete, intact except for chips. Baked clay. Fabric 5YR 6/6 reddish yellow, medium density mixed and micaceous sand inclusions. Weight 51.0 gms.
2. Spindle whorl. FM 228973. Complete, intact. Baked clay. Fabric 5Y 7/3 pale yellow, high density mixed sand inclusions. Weight 35.0 gms.
3. Spindle whorl. FM 228952. Complete, intact. Baked clay. Fabric 5Y 7/3 pale yellow, medium density mixed sand inclusions. Weight 23.5 gms.
4. Spindle whorl. FM 228949. Complete, intact. Burnt surfaces. Baked clay. Fabric 5Y 7/3 pale yellow, medium density mixed sand inclusions. Weight 30.0 gms
5. Spindle whorl. FM 228955. Complete, chipped. Baked clay. Fabric 5Y 7/3 pale yellow, medium density mixed sand inclusions. Weight 27.5 gms.
6. Spindle whorl. FM 228959. Complete, intact. Baked clay. Fabric 5YR 6/4 light reddish brown, medium density mixed and micaceous sand inclusions. Weight 23.5 gms.
7. Spindle whorl. FM 228967. Complete, intact. Baked clay. Fabric 5Y 7/2 light grey, medium density mixed sand inclusions. Weight 23.5 gms.
8. Spindle whorl. FM 228957. Complete but chipped. Baked clay. Fabric 2.5Y 7/4 pale yellow, medium density mixed sand inclusions. Weight 16.0 gms.
9. Spindle whorl. FM 228975. Complete, intact. Baked clay. Fabric 10YR 7/4 pale brown, medium density mixed sand inclusions. Weight 18.5 gms.
10. Spindle whorl. FM 228958. Complete, intact. Baked clay. Fabric 2.5Y 7/4 pale yellow, medium density mixed sand inclusions. Weight 14.5 gms.
11. Spindle whorl. FM 228964. Complete, intact. Baked clay. Fabric 7.5YR 7/4 pink, medium density mixed micaceous sand inclusions. Weight 23.5 gms.
12. Spindle whorl. FM 228956. Complete, intact. Baked clay. Fabric 2.5Y 7/4 pale yellow, medium density mixed sand inclusions. Weight 20.5 gms.
13. Spindle whorl. FM 228961. Complete, intact. Baked clay. Fabric 10YR 8/3 very pale brown, low density mixed sand inclusions. Weight 21.0 gms.
14. Spindle whorl. FM 228948. Complete, intact. Baked clay. Fabric 2.5Y 7/4 pale yellow, medium density mixed sand inclusions. Weight 18.0 gms.
15. Spindle whorl. FM 228962. Complete, intact. Baked clay. Fabric 5Y 7/2 light grey, medium density mixed sand inclusions. Weight 15.0 gms.
16. Spindle whorl. FM 228950. Complete but very abraded. Baked clay. Fabric 2.5Y 7/4 pale yellow, medium density mixed sand inclusions. Weight 19.0 gms.
17. Spindle whorl. FM 228972. Complete, intact. Baked clay. Fabric 5Y 7/3 pale yellow, medium density mixed sand inclusions. Weight 16.0 gms.
18. Spindle whorl. FM 158225. Complete, intact. Baked clay. Fabric 5Y 7/2 light grey, low density mixed sand inclusions. Weight 15.0 gms.
19. Spindle whorl. FM 228931. Complete, intact. Burnt. Baked clay. Fabric 7.5Y 6/4 light brown, medium density mixed and micaceous sand inclusions. Weight 16.0 gms.
20. Spindle whorl. FM 158226. Complete, intact. Fire-blackened. Dark pink/grey stone. Weight 20.5 gms.

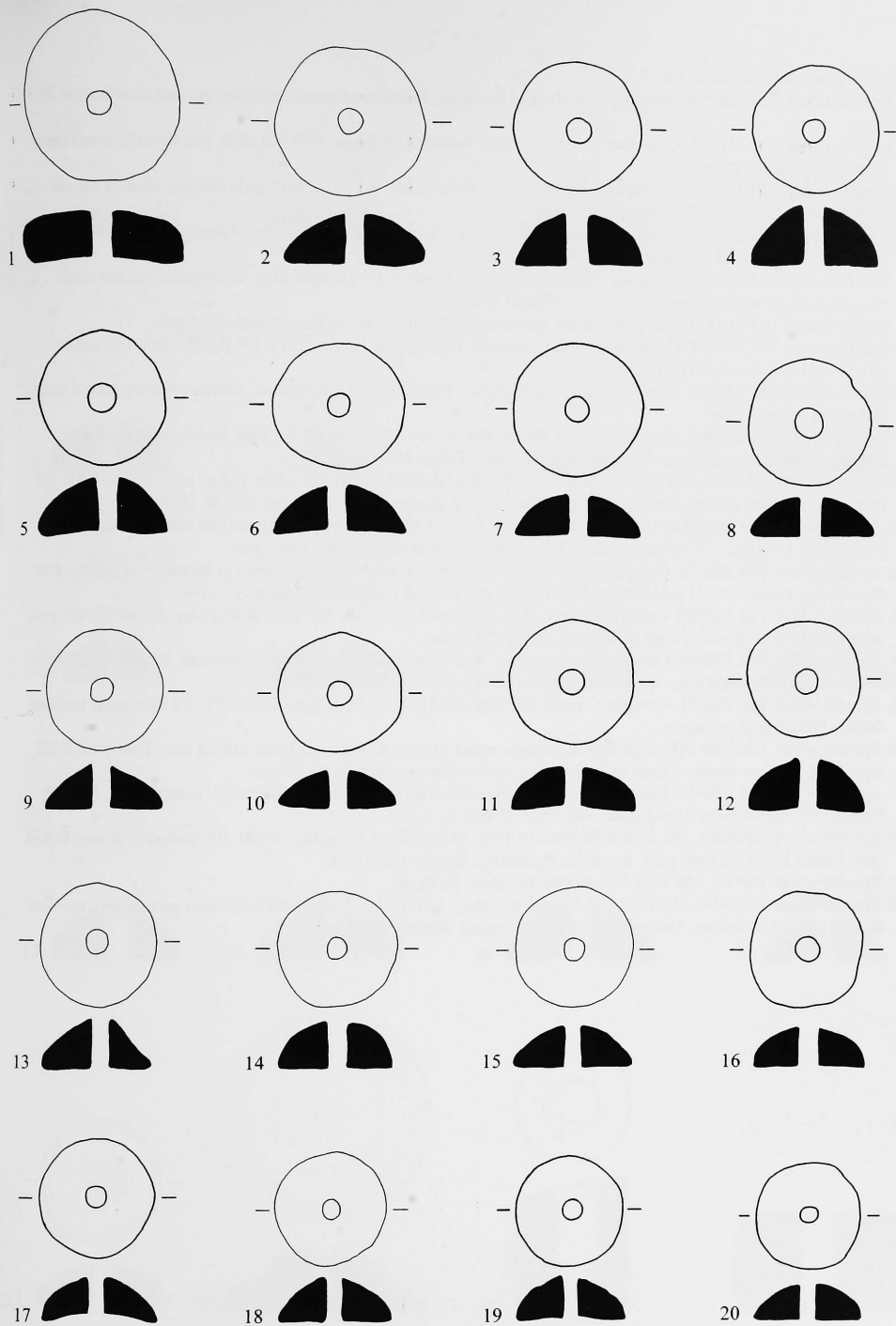


Fig 49. Spindle whorls. Scale 1:2.

Fig 50. Spindle whorls. Scale 1:2.

1. Spindle whorl. FM 228969. Complete, but chipped on edges. Pinkish red stone. Striations on surfaces. Weight 20.5 gms.
2. Spindle whorl. FM 158223. Complete except for chips. Baked clay. Fabric 5YR 7/4 pink, low density mixed sand inclusions. Weight 25.0 gms.
3. Spindle whorl. FM 229734. Incomplete, reconstructed. Baked clay. Fabric 10R 6/3 pale red, low density mixed sand inclusions. Weight 22.5 gms
4. Spindle whorl. FM 228963. Complete, intact. Shallow, thin, incised lines. Baked clay. Fabric 2.5Y 7/2 light grey, medium density mixed sand inclusions. Weight 37.5 gms.
5. Spindle whorl. FM 228974. Complete, intact. Baked clay. Fabric 2.5Y 7/2 light grey, high density mixed sand inclusions. Bitumen on upper surface only. Weight 17.5 gms.
6. Spindle whorl. FM 158229. Complete, intact. Black stone. Striations on surface. Weight 10.5 gms.
7. Spindle whorl. FM 228987. Complete but body abraded. Baked clay. Fabric 7.5YR 6/4 light brown, low density mixed sand inclusions. Weight 2.5 gms.
8. Spindle whorl. FM 228954. Complete, intact. Baked clay. Fabric 5Y 7/3 pale yellow, medium density mixed sand inclusions. Incised lines.
9. Spindle whorl. FM 228960. Complete, intact. Burnt. Baked clay. Fabric 10YR 6/2 light brown grey, medium density mixed sand inclusions. Very fine incised lines. Weight 15.0 gms.
10. Spindle whorl. GN3079. FM 158213. Mackay 1931, pl LXXIV:9. Complete, intact. Baked clay. Fabric 2.5Y 7/2 light grey, medium density mixed sand inclusions. Incised decoration 0.1 cm deep. Weight 24.0 gms.
11. Spindle whorl. GN3085. AM 1926.418. Mackay 1931, pl LXXIV:9. Complete, but several chips missing. Baked clay. Fabric very fine, 5Y 8/3 pale yellow. Incised five-pointed star. Weight 13.67 gms.
12. Spindle whorl. FM 228976. Complete, but chips off edge and at top. Two impressed circles made by hollow tool. Baked clay. Fabric 5Y 7/3 pale yellow, high density mixed sand inclusions. Weight 21.5 gms.
13. Spindle whorl. FM 228966. Complete, intact. Four impressed circles 0.4 cm deep. Baked clay. Fabric 5Y 8/3 pale yellow, high density mixed sand inclusions. Weight 23.5 gms.
14. Spindle whorl. FM 228965. Complete but for chips. Five holes made with hollow implement. Baked clay. Fabric 2.5Y 6/2 light brownish grey, high density mixed sand inclusions. Weight 32.5 gms.
15. Spindle whorl. FM 228971. Complete, intact. Six impressed holes 0.2 cm deep. Fabric 5Y 7/2 light grey, medium density mixed sand inclusions.
16. Spindle whorl. GN3366. AM 1926.419. Complete, intact. Rows of impressed holes. Baked clay. Fabric 2.5Y 7/2 light grey, medium density mixed and micaceous sand inclusions. Weight 28.59 gms.
17. Spindle whorl. FM 228953. Complete, intact. Impressed circles 0.1 cm deep. Baked clay. Fabric 10YR 7/3 pale brown, very high density mixed sand inclusions. Weight 23.5 gms.
18. Spindle whorl. GN3080. AM 1926.420. Mackay 1931, pl LXXIV:9. Complete, intact. Blackened in places. Baked clay. Fabric 10YR 7/2 light grey, no visible inclusions. Weight 13.99 gms.
19. Spindle whorl. PJN17. AM 1928.456. Complete, intact. Bitumen.
20. Spindle whorl. GN2419. AM 1926.437. Complete, intact. Baked clay. Fabric 10YR 7/3 very pale brown, medium density vegetal inclusions. One side has bitumen coating. Weight 17.05 gms.

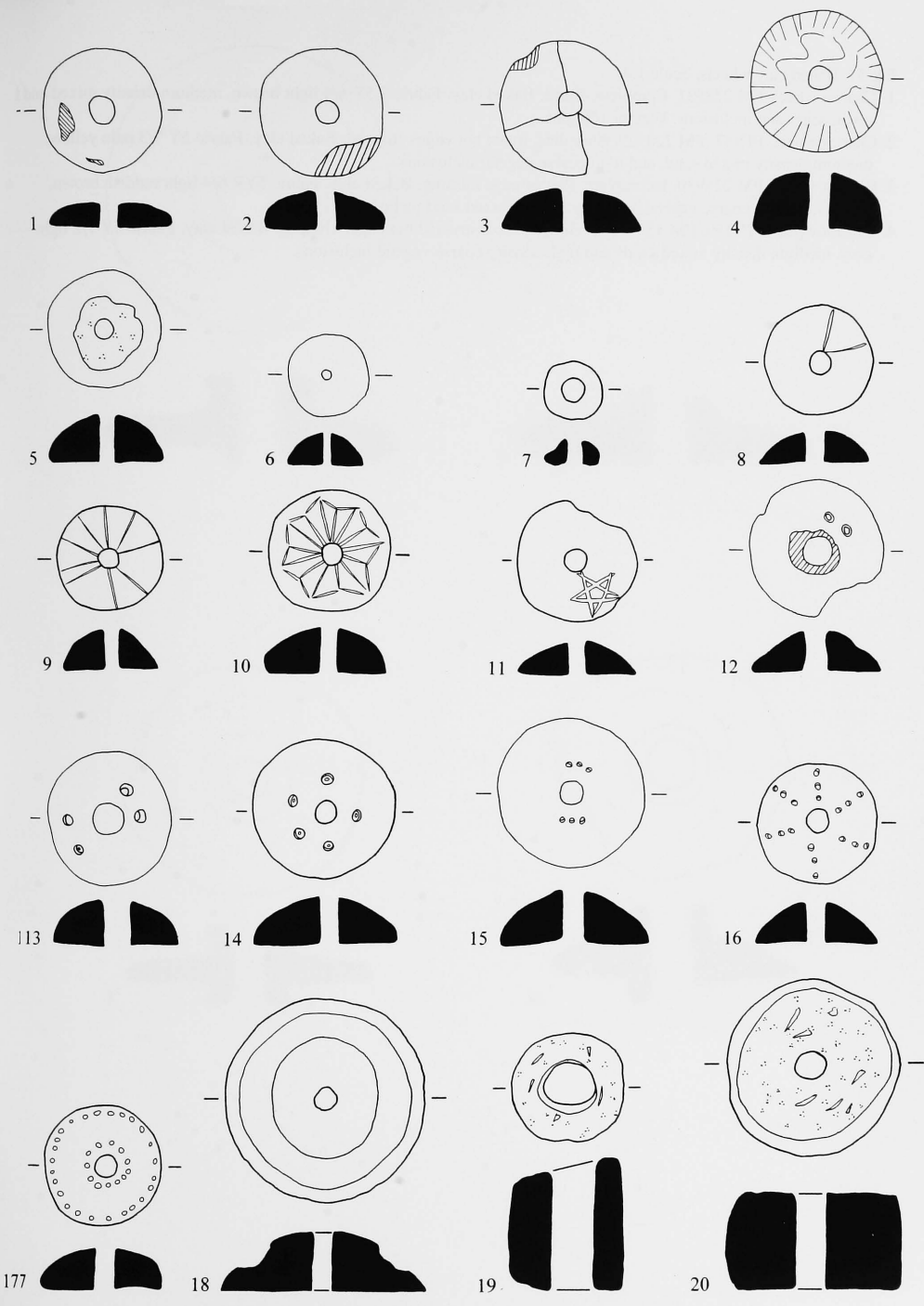


Fig 50. Spindle whorls. Scale 1:2.

Fig 51. Baked clay wheels. Scale 1:4.

1. Chariot wheel. FM 228931. Complete. Burnt. Baked clay. Fabric 7.5Y 6/4 light brown, medium density mixed and micaceous sand inclusions. Weight 160 gms.
2. Chariot wheel. PJN87. FM 228929. Complete, intact but edges chipped. Baked clay. Fabric 5Y 7/3 pale yellow, medium density mixed sand, and high coarse vegetal inclusions.
3. Chariot wheel. FM 228930. Incomplete. Part of edge missing. Baked clay. Fabric 5YR 6/4 light reddish brown, medium density coarse vegetal and high density mixed sand inclusions.
4. Chariot wheel. PJN159. FM 158415. Complete, reconstructed but edges chipped. Baked clay. Fabric 5Y 7/2 light grey, medium density mixed sands and high density coarse vegetal inclusions.

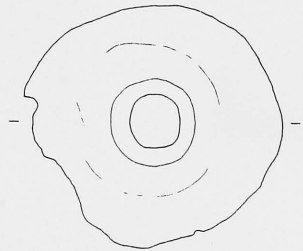
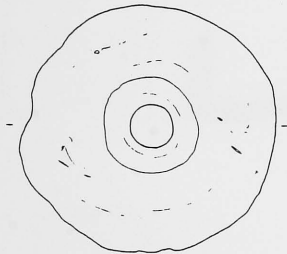
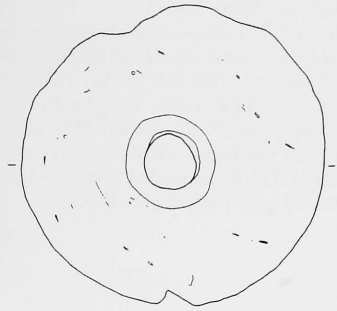


Fig 51. Baked clay wheels. Scale 1:4.

Fig 52. Baked clay objects. Scale 1:4.

1. Brick. FM 231722. Twenty-seven whole bricks and three fragments. Baked clay. Fabric 10YR 7/4 very pale brown, very high density coarse vegetal inclusions. Holes do not always go right through brick. All are baked.
2. Gutter. GN3443. AM 1926.364. Mackay 1931, pl LXXVI:9. Incomplete, narrow end damaged. Hand made. Baked clay. Fabric 5Y 7/4 pale yellow, high density coarse vegetal inclusions, sparse shell fragments.
3. Gutter. GN3442. FM 231721. Mackay 1931, pl LXXVI:9. Incomplete, wide end damaged. Baked clay. Fabric 10YR 7/3 very pale brown, medium density coarse vegetal and high density white sand or shell inclusions.
4. Stamp. FM 231723. Complete, but much reconstructed. Baked clay. Very pale yellow/ brown. High density vegetal inclusions. All edges have bitumen traces.

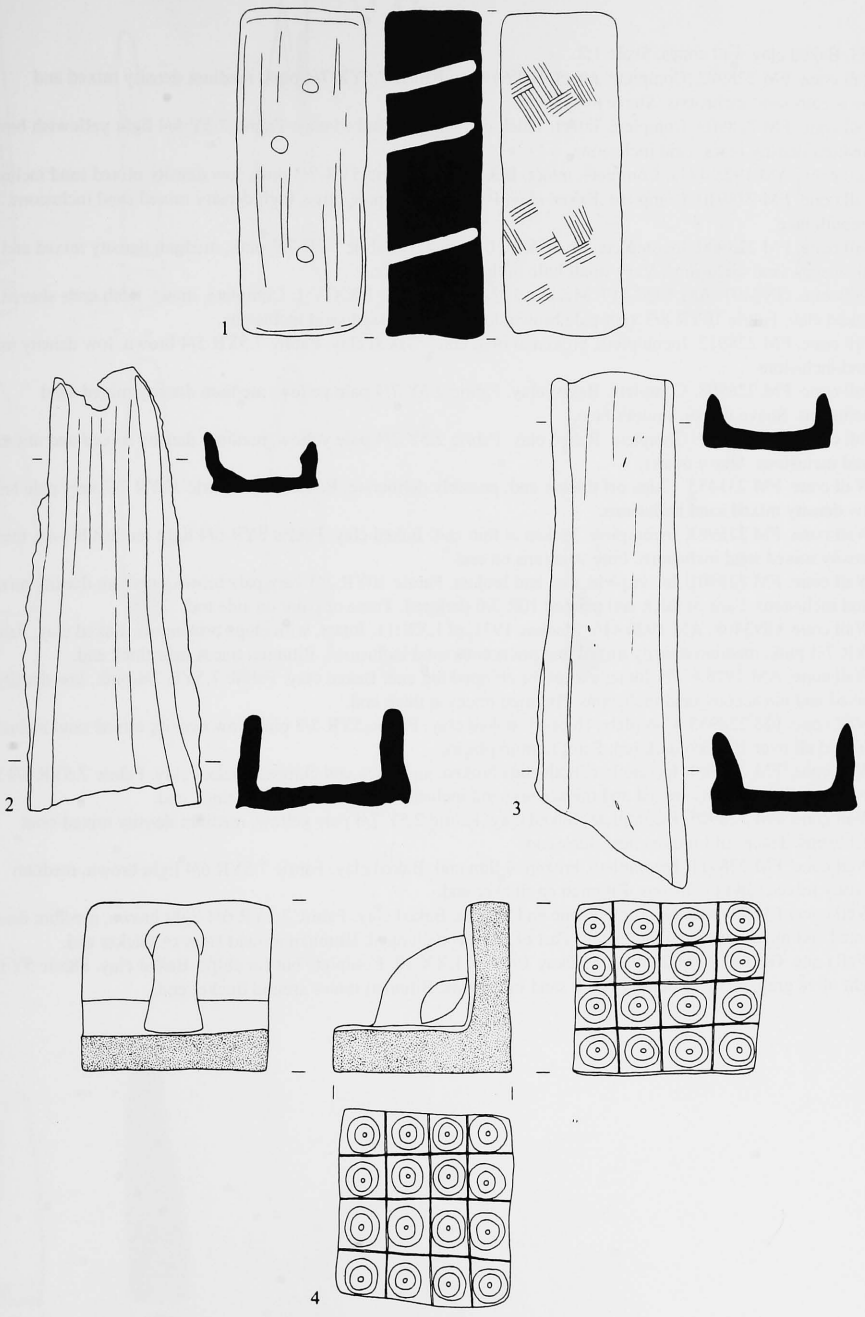


Fig 52. Baked clay objects. Scale 1:4.

Fig 53. Baked clay wall cones. Scale 1:2.

1. Wall cone. FM 228902. Complete, intact. Baked clay. Fabric 7.5YR 7/4 pink, medium density mixed and micaceous sand inclusions. Shave marks.
2. Wall cone. FM 228903. Complete, intact. Thick end chipped. Baked clay. Fabric 2.5Y 6/4 light yellowish brown, medium density black sand inclusions.
3. Wall cone. AM 1928.477a. Complete, intact. Baked clay. Fabric 5YR 7/3 pink, low density mixed sand inclusions.
4. Wall cone. FM 228910. Complete. Baked clay. Fabric 5Y 6/4 pale olive, high density mixed sand inclusions. Smooth face.
5. Wall cone. FM 228900. Incomplete, tip broken. Baked clay. Fabric 5YR 7/3 pink, medium density mixed and micaceous sand inclusions. Very small hole in thick end centre.
6. Wall cone. GN3407. AM 1926.417. Mackay 1931, pl LXX:12; LXXIV:1. Complete, intact. Both ends shaved. Baked clay. Fabric 10YR 8/3 very pale brown, low density mixed sand inclusions.
7. Wall cone. FM 228912. Incomplete, broken at both ends. Baked clay. Fabric 7.5YR 5/4 brown, low density mixed sand inclusions.
8. Wall cone. FM 228908. Complete. Baked clay. Fabric 2.5Y 7/4 pale yellow, medium density mixed sand inclusions. Shave marks, smooth face.
9. Wall cone. FM 228907. Complete. Baked clay. Fabric 2.5Y 7/4 pale yellow, medium density mixed and micaceous sand inclusions. Shave marks.
10. Wall cone. FM 231433. Chips off thicker end, possibly deliberate. Baked clay. Fabric 10YR 7/3 very pale brown, low density mixed sand inclusions.
11. Wall cone. FM 228983. Incomplete, broken at thin end. Baked clay. Fabric 5YR 6/4 light reddish brown, medium density mixed sand inclusions. Fine striations on end.
12. Wall cone. FM 228901. Incomplete, thin end broken. Fabric 10YR 7/3 very pale brown, medium density mixed sand inclusions. Face of thick end painted 10R 3/6 dark red. Trace of paint on side too.
13. Wall cone. GN3408. AM 1926.416. Mackay 1931, pl LXX:11. Intact, with chips broken off. Baked clay. Fabric 5YR 7/3 pink, medium density mixed and micaceous sand inclusions. Bitumen traces near thick end.
14. Wall cone. AM 1928.477b. Intact except for chipped big end. Baked clay. Fabric 7.5YR 7/4 pink, low density mixed and micaceous sand inclusions. Bitumen traces at thick end.
15. Wall cone. FM 228985. Complete, chipped. Baked clay. Fabric 5YR 7/3 pink, low density mixed sand inclusions. Painted all over 10R 3/6 dark red. Paint faint in places.
16. Wall cone. FM 228904. Incomplete, both ends broken, and thick end chipped. Baked clay. Fabric 7.5YR 6/4 light brown, medium density mixed and micaceous sand inclusions. Bitumen patch at thick end.
17. Wall cone. FM 228905. Incomplete. Baked clay. Fabric 2.5Y 7/4 pale yellow, medium density mixed sand inclusions. Traces of bitumen near thick end.
18. Wall cone. FM 228911. Incomplete, broken at thin end. Baked clay. Fabric 7.5YR 6/4 light brown, medium density mixed sand inclusions. Bitumen on thicker end.
19. Wall cone. FM 231442. Incomplete, one end broken. Baked clay. Fabric 7.5YR 6/4 light brown, medium density mixed and micaceous sand inclusions. Part of thick end chipped. Bitumen around sides of thicker end.
20. Wall cone. GN3409. FM 228981. Mackay 1931, pl LXX:10. Complete but for chips. Baked clay. Fabric 5Y 6/2 light olive grey, medium density black sand inclusions. Bitumen traces around thicker end.

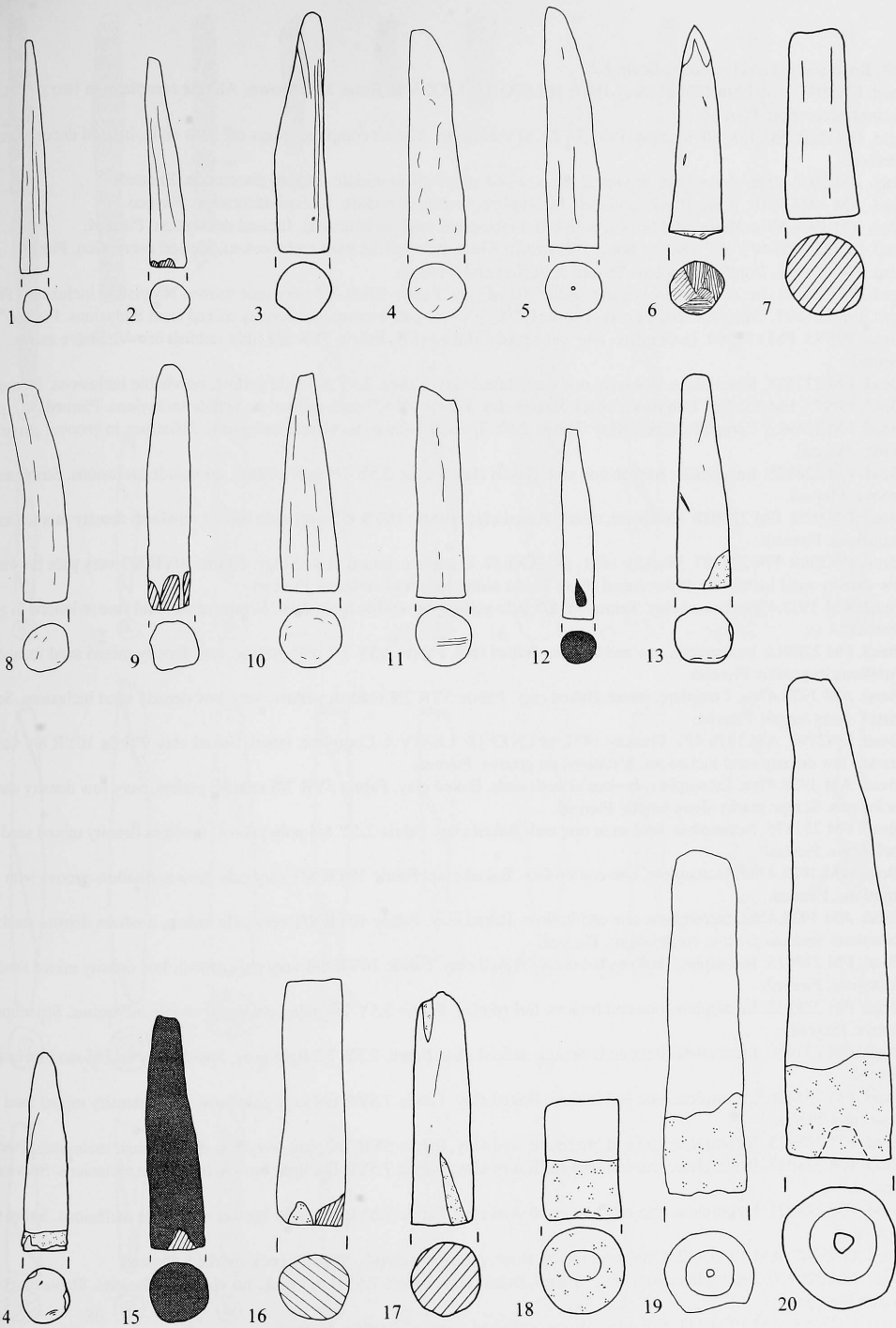


Fig 53. Baked clay wall cones. Scale 1:2.

Fig 54. Bone and baked clay beads. Scale 1:2.

1. Bead. GN3091. AM 1926.458. Mackay 1931, pl LXXI:13; LXXIV:8. Bone. Mid brown. Almost complete, in two pieces. Incised decoration. Pierced.
2. Bead. GN3120. FM 158280. Mackay 1931, pl LXXIV:8. Bone. Almost complete, chips off both ends. Incised decoration. Pierced.
3. Bead. AM 1926.521a. Bone. Dark brown. Broken at end, chips off in middle. Incised decoration. Pierced.
4. Bead. AM 1926.521b. Bone. Black, polished. Incomplete, broken in middle. Incised decoration. Pierced.
5. Bead. AM 1926.521c. Bone. Mid brown, polished. Incomplete, both ends broken. Incised decoration. Pierced.
6. Bead. PJN23. AM 1930.85. Shell or bone. Pale brown/white. Incomplete, both ends broken. Incised decoration. Pierced.
7. Bead. FM 228924. Bone. Incomplete, broken at thicker end. Pierced.
8. Bead. FM 231437. Incomplete, broken in middle. Baked clay. Fabric 10YR 8/3 very pale brown. No visible inclusions. Pierced.
9. Bead. FM 231422. Complete. Baked clay. Fabric 10YR 8/3 very pale brown, low density mixed sand inclusions. Pierced.
10. Bead. PJN75. FM 158260. Incomplete, one end broken. Baked clay. Fabric 5YR 6/4 light reddish brown. Shave marks. Pierced.
11. Bead. FM 231438. Incomplete, broken at one end. Baked clay. Fabric 2.5Y 8/4 pale yellow, no visible inclusions. Pierced.
12. Bead. PJN75. FM 158259. Complete, intact. Baked clay. Fabric 5Y 8/3 pale yellow, no visible inclusions. Pierced.
13. Bead. FM 228922. Complete. Baked clay. Fabric 2.5Y 7/4 pale yellow, no visible inclusions. Striations in groove, shave marks. Pierced.
14. Bead. FM 228925. Incomplete, broken one end. Baked clay. Fabric 2.5Y 7/4 pale yellow, no visible inclusions. Striations in groove. Pierced.
15. Bead. GN3452. FM 228938. Complete, intact. Baked clay. Fabric 10YR 8/3 very pale brown, medium density mixed sand inclusions. Pierced.
16. Bead. GN2599. FM 228937. Mackay 1931, pl LXXI:17. Complete, intact. Baked clay. Fabric 10YR 8/3 very pale brown, very low density sand inclusions. Pronounced shave marks along length of surfaces. Pierced.
17. Bead. AM 1928.476b. Baked clay. Fabric 5Y 8/3 pale yellow, no visible inclusions. Scrape marks and fine striations in groove. Pierced.
18. Bead. FM 228918. Incomplete, one end broken. Baked clay. Fabric 2.5Y 7/4 pale yellow, low density mixed sand inclusions. Striations in groove. Pierced.
19. Bead. AM 1928.476a. Complete, intact. Baked clay. Fabric 5YR 7/6 reddish yellow, very low density sand inclusions. Scrape marks along length. Pierced.
20. Bead. GN2597. AM 1926.421. Mackay 1931, pl LXXI:18; LXXIV:4. Complete, intact. Baked clay. Fabric 10YR 8/4 very pale brown, low density sand inclusions. Striations on groove. Pierced.
21. Bead. AM 1928.476a. Incomplete, broken at both ends. Baked clay. Fabric 5YR 7/6 reddish yellow, very low density sand inclusions. Scrape marks along length. Pierced.
22. Bead. FM 231435. Incomplete, broken at one end. Baked clay. Fabric 2.5Y 8/4 pale yellow, medium density mixed sand inclusions. Pierced.
23. Bead. AM 1928.476d. Incomplete, one end broken. Baked clay. Fabric 10YR 8/3 very pale brown. Shallow groove with striations. Pierced.
24. Bead. AM 1928.476e. Incomplete, one end broken. Baked clay. Fabric 10YR 8/3 very pale brown, medium density sand inclusions. Shallow groove, no striations. Pierced.
25. Bead. FM 228915. Incomplete, both ends broken. Baked clay. Fabric 10YR 8/3 very pale brown, low density mixed sand inclusions. Pierced.
26. Bead. FM 228925. Incomplete, one end broken. Baked clay. Fabric 2.5Y 7/4 pale yellow, no visible inclusions. Striations in groove. Pierced.
27. Bead. FM 231439. Incomplete, both ends broken. Baked clay. Fabric 2.5Y 7/2 light grey, low density mixed sand inclusions. Pierced.
28. Bead. FM 231436. Incomplete, one end broken. Baked clay. Fabric 7.5YR 6/4 very pale brown, low density mixed sand inclusions. Pierced.
29. Bead. FM 228923. Incomplete, one end broken. Baked clay. Fabric 5YR 7/4 pink, very low density sand inclusions. Pierced.
30. Bead. FM 228917. Incomplete, one end broken. Baked clay. Fabric 7.5YR 6/4 light brown, no visible inclusions. Shave marks. Pierced.
31. Bead. FM 228921. Incomplete, one end broken. Baked clay. Fabric 7.5YR 6/4 light brown, no visible inclusions. Shave marks. Pierced.
32. Bead. GN3447. AM 1926.442. Complete, intact. Bone, polished smooth. Slightly pock-marked. Pierced.
33. Bead. FM 228920. Incomplete, both ends broken. Baked clay. Fabric 7.5YR 8/4 pink, no visible inclusions. Shave marks along length. Pierced.
34. Bead. GN3453. AM 1926.443. Complete. Bone, polished, cracked slightly. Pierced.
35. Bead. PJN76. FM 228946. Complete. Bone, mid brown. Polished. Pierced.
36. Bead. GN2598. AM 1926.422. Complete, intact. Baked clay. Fabric 7.5YR 7/4 pink, low density sand inclusions. No groove. Pierced.
37. Bead. PJN76. FM 228945. Complete, but chipped at thinner end. Bone, mid pale brown. Clear working marks. Pierced.

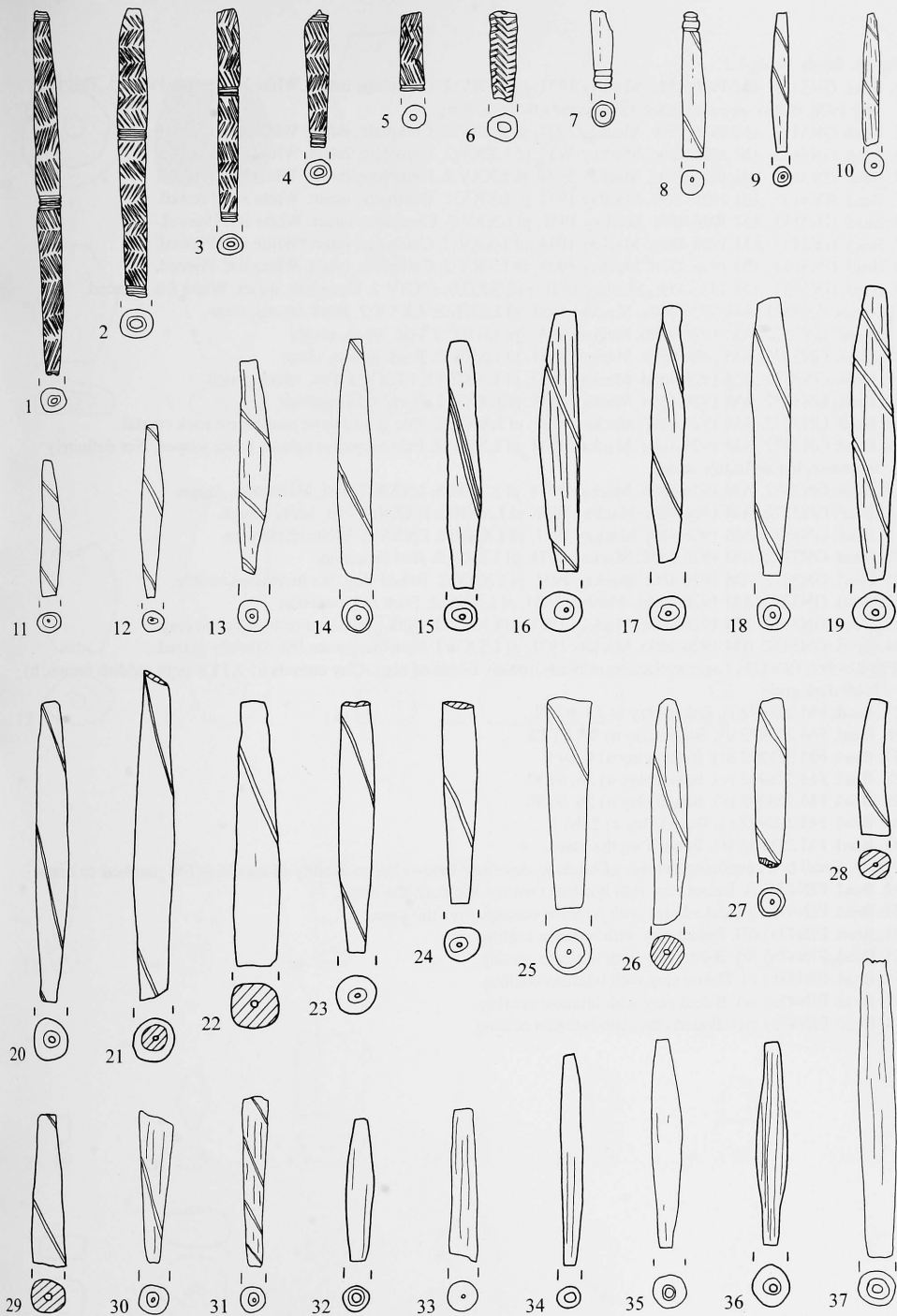


Fig 54. Bone and baked clay beads. Scale 1:2.

Fig 55. Beads. Scale 1:1.

1. Bead. GN3133. AM 1926.459a. Mackay 1931, pl LXXV:2. Complete, intact. White limestone. Pierced. This bead and 1926.459b-i wired together. One appears to be missing.
2. Bead. GN3133. AM 1926.459b. Mackay 1931, pl LXXV:2. Complete, intact. White frit. Pierced.
3. Bead. GN3133. AM 1926.459c. Mackay 1931, pl LXXV:2. Complete, intact. White frit. Pierced.
4. Bead. GN3133. AM 1926.459d. Mackay 1931, pl LXXV:2. Complete, intact. White frit. Pierced.
5. Bead. GN3133. AM 1926.459e. Mackay 1931, pl LXXV:2. Complete, intact. White frit. Pierced.
6. Bead. GN3133. AM 1926.459f. Mackay 1931, pl LXXV:2. Complete, intact. White frit. Pierced.
7. Bead. GN3133. AM 1926.459g. Mackay 1931, pl LXXV:2. Complete, intact. White frit. Pierced.
8. Bead. GN3133. AM 1926.459h. Mackay 1931, pl LXXV:2. Complete, intact. White frit. Pierced.
9. Bead. GN3133. AM 1926.459i. Mackay 1931, pl LXXII:9; LXXV:2. Complete, intact. White frit. Pierced.
10. Bead. GN3372. AM 1926.460a. Mackay 1931, pl LXXII:8; LXXV:2. Rock crystal, clear.
11. Bead. GN3372. AM 1926.460b. Mackay 1931, pl LXXV:2. Frit, white, rough.
12. Bead. GN3372. AM 1926.460c. Mackay 1931, pl LXXV:2. Rock crystal, clear.
13. Bead. GN3372. AM 1926.460d. Mackay 1931, pl LXXII:11; LXXV:2. Frit, white, rough.
14. Bead. GN3372. AM 1926.460e. Mackay 1931, pl LXXV:2. Dark red carnelian.
15. Bead. GN3372. AM 1926.460f. Mackay 1931, pl LXXV:2. Pale green/white translucent rock crystal.
16. Bead. GN3372. AM 1926.460g. Mackay 1931, pl LXXV:2. Pale turquoise colour, white striped. Not definitely turquoise, but definitely stone.
17. Bead. GN3372. AM 1926.460h. Mackay 1931, pl LXXII:5; LXXV:2. Frit, blue/white, rough.
18. Bead. GN3372. AM 1926.460i. Mackay 1931, pl LXXII:6; LXXV:2. Frit, white, rough.
19. Bead. GN3372. AM 1926.460j. Mackay 1931, pl LXXII:4; LXXV:2. White shell/bone.
20. Bead. GN3372. AM 1926.460k. Mackay 1931, pl LXXV:2. Red carnelian.
21. Bead. GN3372. AM 1926.460l. Mackay 1931, pl LXXV:2. Baked clay. No inclusions visible.
22. Bead. GN3372. AM 1926.460m. Mackay 1931, pl LXXV:2. Dark red carnelian.
23. Bead. GN3372. AM 1926.460n. Mackay 1931, pl LXXV:2. Dark grey stone or hard baked clay.
24. Bead. GN3372. AM 1926.460o. Mackay 1931, pl LXXV:2. Pale blue/green frit. Slightly glazed.
- FM 228992. PJN17E. Large collection of beads, mostly of baked clay. Clay colours a) 2.5YR light reddish brown, b) N4/0 dark grey:
 25. Bead. FM 228992 i). Baked clay a) 57, b) 55.
 26. Bead. FM 228992 ii). Baked clay a) 25, b) 12.
 27. Bead. FM 228992 iii). Baked clay a) 6, b) 9.
 28. Bead. FM 228992 iv). Baked clay a) 36, b) 33.
 29. Bead. FM 228992 iv). Baked clay a) 36, b) 33.
 30. Bead. FM 228992 v). Baked clay a) 2, b) 1.
 31. Bead. FM 228992 vi). Bone. Two the same.
- PJN47. Small box containing number of beads as described below. No possibility of ascribing FM numbers to beads:
 32. Bead. PJN47a) i). Baked clay with bitumen coating. Eighteen the same.
 33. Bead. PJN47a) ii). Baked clay with bitumen coating. Five the same.
 34. Bead. PJN47a) iii). Baked clay with bitumen coating.
 35. Bead. PJN47a) iv). Baked clay with bitumen coating.
 36. Bead. PJN47a) v). Baked clay with bitumen coating.
 37. Bead. PJN47a) vi). Baked clay with bitumen coating.
 38. Bead. PJN47a) vii). Baked clay with bitumen coating.

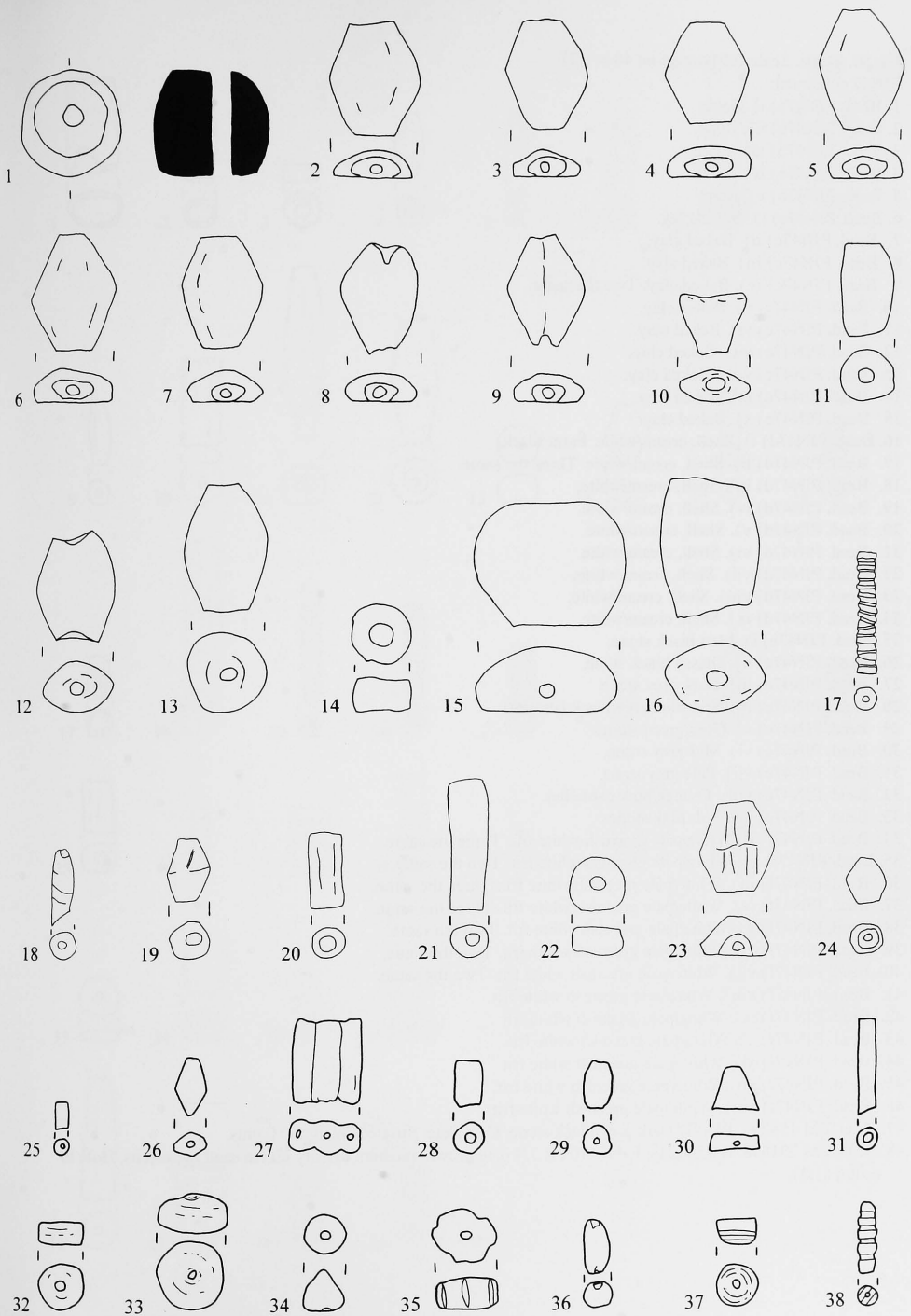


Fig 55. Beads. Scale 1:1.

Fig 56. Beads. Scale 1:1 (except no 48 = 1:2).

PJN47 continued:

1. Bead. PJN47b) i). Bone.
2. Bead. PJN47b) ii). Bone.
3. Bead. PJN47b) iii). Bone.
4. Bead. PJN47b) iv). Bone.
5. Bead. PJN47b) v). Bone.
6. Bead. PJN47c) i). Baked clay.
7. Bead. PJN47c) ii). Baked clay.
8. Bead. PJN47c) iii). Baked clay.
9. Bead. PJN47c) iv). Baked clay. Two the same.
10. Bead. PJN47c) v). Baked clay.
11. Bead. PJN47c) vi). Baked clay.
12. Bead. PJN47c) vii). Baked clay.
13. Bead. PJN47c) viii). Baked clay.
14. Bead. PJN47c) ix). Baked clay.
15. Bead. PJN47c) x). Baked clay.
16. Bead. PJN47d) i). Shell, cream/white, burnt black.
17. Bead. PJN47d) ii). Shell, cream/white. Three the same.
18. Bead. PJN47d) iii). Shell, cream/white.
19. Bead. PJN47d) iv). Shell, cream/white.
20. Bead. PJN47d) v). Shell, cream/white.
21. Bead. PJN47d) vi). Shell, cream/white.
22. Bead. PJN47d) vii). Shell, cream/white.
23. Bead. PJN47d) viii). Shell, cream/white.
24. Bead. PJN47d) ix). Shell, cream/white.
25. Bead. PJN47e) i). Matt black stone.
26. Bead. PJN47e) ii). Glassy black stone.
27. Bead. PJN47e) iii). Dark grey stone.
28. Bead. PJN47e) iv). Speckled grey/black (diomite).
29. Bead. PJN47e) v). Grey/green stone.
30. Bead. PJN47e) vi). Mid-grey stone.
31. Bead. PJN47e) vii). Pale grey stone.
32. Bead. PJN47e) viii). Orange/pink camelian.
33. Bead. PJN47e) ix). Soft pink stone.
34. Bead. PJN47f) i). White/pale greenish white frit. Three the same.
35. Bead. PJN47f) ii). White/pale greenish white frit. Two the same.
36. Bead. PJN47f) iii). White/pale greenish white frit. Three the same.
37. Bead. PJN47f) iv). White/pale greenish white frit. Three the same.
38. Bead. PJN47f) v). White/pale greenish white frit. Two the same.
39. Bead. PJN47f) vi). White/pale greenish white frit. Two the same.
40. Bead. PJN47f) vii). White/pale greenish white frit. Two the same.
41. Bead. PJN47f) viii). White/pale greenish white frit.
42. Bead. PJN47f) ix). White/pale greenish white frit.
43. Bead. PJN47f) x). White/pale greenish white frit.
44. Bead. PJN47f) xi). White/pale greenish white frit.
45. Bead. PJN47f) xii). White/pale greenish white frit.
46. Bead. PJN47f) xiii). White/pale greenish white frit.
47. Bead. FM 158291. PJN47. Dark grey/black stone. Complete. Striated. Weight 5.0 gms.
48. Bead. FM 231548. Baked clay. Fabric 10YR 7/4 pale brown, medium density mixed sand inclusions. Hole in centre (1:2).

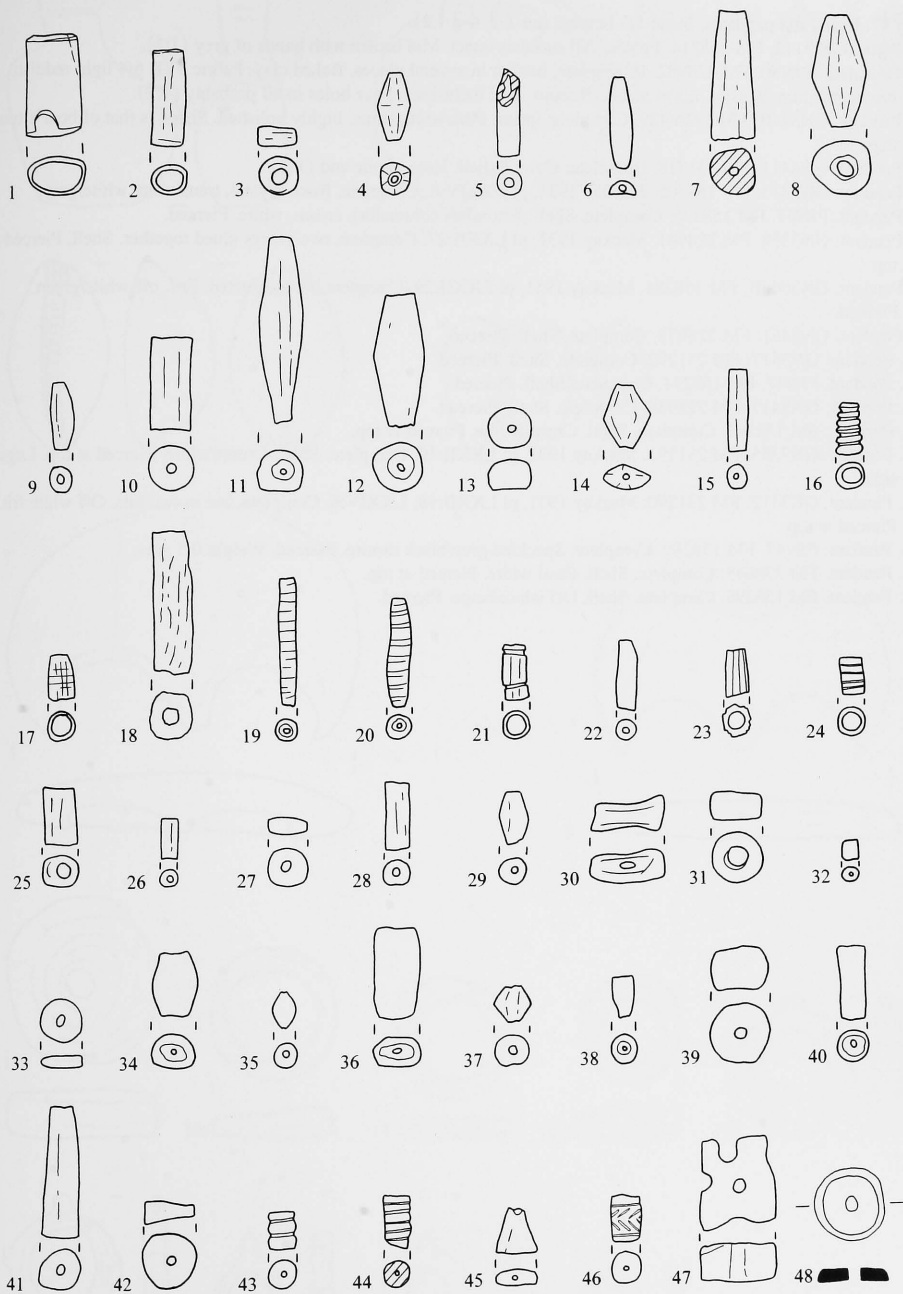


Fig 56. Beads. Scale 1:1 (except no 48 = 1:2).

Fig 57. Beads and pendants. Scale 1:1 (except nos 1-2, 4 = 1:2).

1. Stone. GN 3112. FM 158214. Pebble. All surfaces intact. Mid brown with bands of grey (1:2).
2. Ornament. PJN80. FM 228982. Incomplete, broken in several places. Baked clay. Fabric 5YR 6/4 light reddish brown, medium density mixed and micaceous sand inclusions. Four holes in all probably (1:2).
3. Pendant. GN3440. AM 1926.429. Complete, intact. Pink/white stone, highly polished. Shape is that of boar's tooth. Pierced.
4. Pendant. GN3411. FM 231718. Complete. Cowrie shell. Hole in one end (1:2).
5. Pendant. GN3313. FM 158205. Mackay 1931, pl LXXIV:6. Complete. Rock crystal, translucent white/grey.
6. Pendant. PJN47. FM 158296. Complete. Shell (Strombus columella), cream, white. Pierced.
7. Pendant. GN3358. FM 228941. Mackay 1931, pl LXXII:27. Complete, two pieces glued together. Shell. Pierced at top.
8. Pendant. GN3006B. FM 158281. Mackay 1931, pl LXXII:29. Complete, reconstructed. Frit, off-white/green. Pierced.
9. Pendant. GN3451. FM 228933. Complete. Shell. Pierced.
10. Pendant. GN3417. FM 231292. Complete. Shell. Pierced.
11. Pendant. PJN47. FM 158294. Complete. Shell. Pierced.
12. Pendant. GN3417. FM 228934. Complete. Shell. Pierced.
13. Pendant. FM 158293. Complete. Shell. Cream/white. Pierced at top.
14. Pendant. GN3355. FM 231291. Mackay 1931, pl LXXII:19. Complete. Shell. Cream/white. Pierced at top. Lugs at side.
15. Pendant. GN3312. FM 231290. Mackay 1931, pl LXXII:18; LXXIV:6. Complete, but in two bits. Off white frit. Pierced at top.
16. Pendant. PJN47. FM 158289. Complete. Speckled grey/black diorite. Pierced. Weight 0.5 gms.
17. Pendant. FM 228643. Complete. Shell. Pearl white. Pierced at top.
18. Pendant. FM 158296. Complete. Shell. Off white/beige. Pierced.

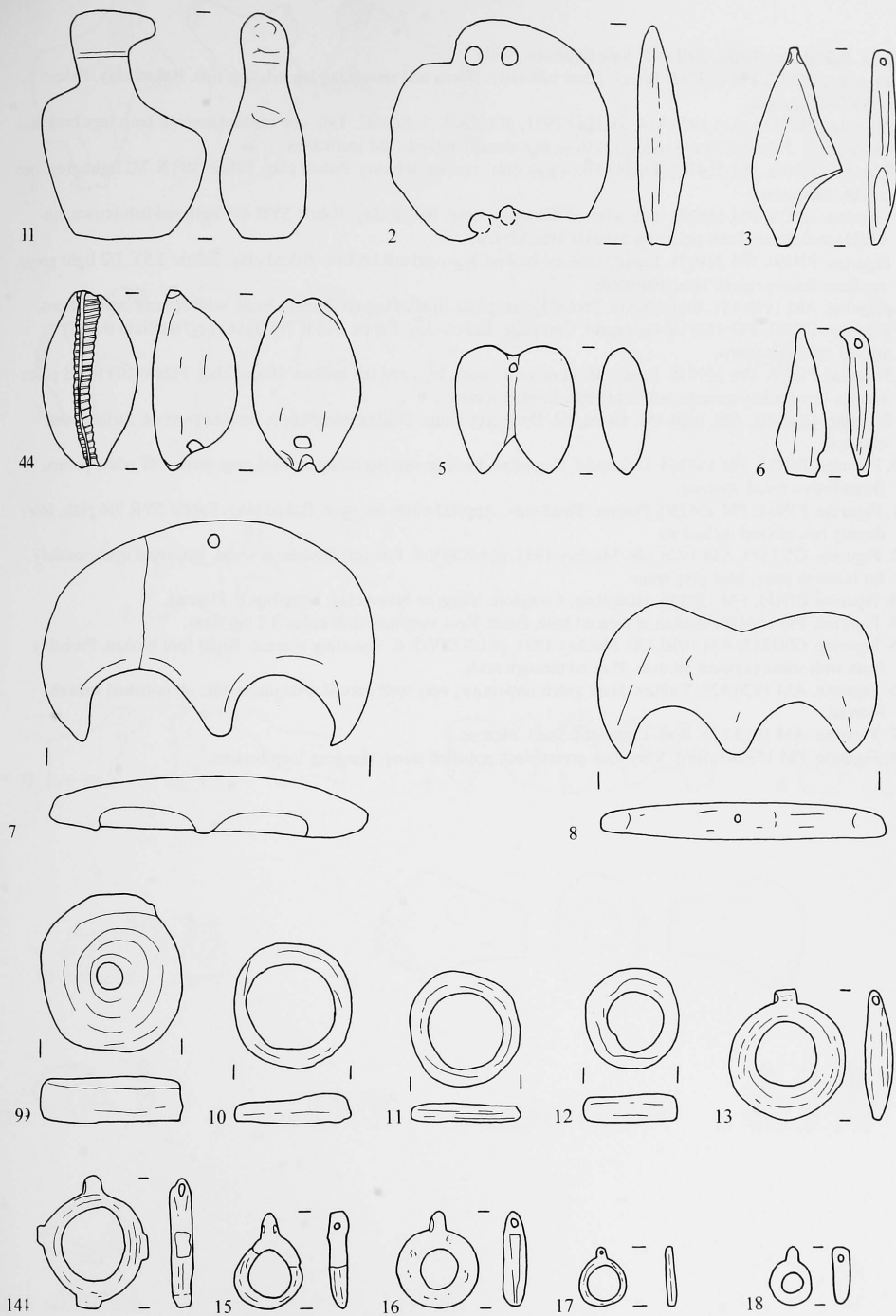


Fig 57. Beads and pendants. Scale 1:1 (except nos 1-2, 4 = 1:2).

Fig 58. Baked clay, bone, shell and stone figurines. Scale 1:2.

1. Figurine. PJN82. FM 229733. Bovid. Front half only. Horns and remaining leg missing tips. Baked clay. Fabric 2.5Y 7/2 light grey.
2. Figurine. GN3116. AM 1926.414. Mackay 1931, pl LXXIV:3. Equid?. Tail, one ear and ends of both legs broken. Baked clay. Fabric 5YR 6/6 reddish yellow, low density mixed sand inclusions.
3. Figurine. PJN62. FM 229735. Equid? Front part only, one ear missing. Baked clay. Fabric 10YR 7/2 light grey, no visible inclusions.
4. Figurine. PJN79. FM 158251. Equid/bovid. Rear part only. Baked clay. Fabric 5YR 6/4 light reddish brown, no visible inclusions. Paint traces on exterior 10R 5/8 red.
5. Figurine. PJN60. FM 228978. Equid? One ear broken, legs and tail broken. Baked clay. Fabric 2.5Y 7/2 light grey, medium density mixed sand inclusions.
6. Figurine. AM 1926.427. Equid/bovid. Probably complete. Shell. Pierced through back, with several indentations.
7. Figurine. PJN63. FM 231719. Ovicaprid. Complete. Baked clay. Fabric 10YR 7/2 light grey, medium density mixed sand inclusions.
8. Figurine. PJN65. FM 229736. Equid? Head missing, neck, legs and tail broken. Baked clay. Fabric 10YR 6/3 pale brown, low density mixed sand inclusions. Eroded surfaces.
9. Figurine. GN2402. AM 1926.431. Ovicaprid. Dark grey stone. Drilled indentation, but not pierced. Striated and chipped.
10. Figurine. PJN22. FM 158264. Ovicaprid. Complete, but one rear leg chipped. Mid grey stone, off white patina. Beautifully carved. Pierced.
11. Figurine. PJN81. FM 158250. Porcine. Head only. Applied blobs for eyes. Baked clay. Fabric 5YR 7/4 pink, low density mixed sand inclusions.
12. Figurine. GN3343. AM 1926.428. Mackay 1931, pl LXXIV:5. Porcine. Broken at waist. Recessed eyes possibly for bitumen inlay. Mid-grey stone.
13. Figurine. PJN31. FM 158256. Hedgehog. Complete. Stone or baked clay. Grey/black. Pierced.
14. Figurine. FM 158286. Broken at pierced hole. Bone. Eyes very neat drill holes 0.2 cm deep.
15. Figurine. GN3315. AM 1926.430. Mackay 1931, pl LXXIV:5, 6. Squatting woman. Right foot broken. Probably bone with white pigment all over. Pierced through neck.
16. Figurine. AM 1926.520. Vulture. Dark green serpentine, very well carved. Flat underside, all polished smooth. Pierced.
17. Figurine. AM 1925.123. Bird. Complete. Shell. Pierced.
18. Figurine. FM 158287. Bird. Very dark green/black polished stone. Hanging loop broken.

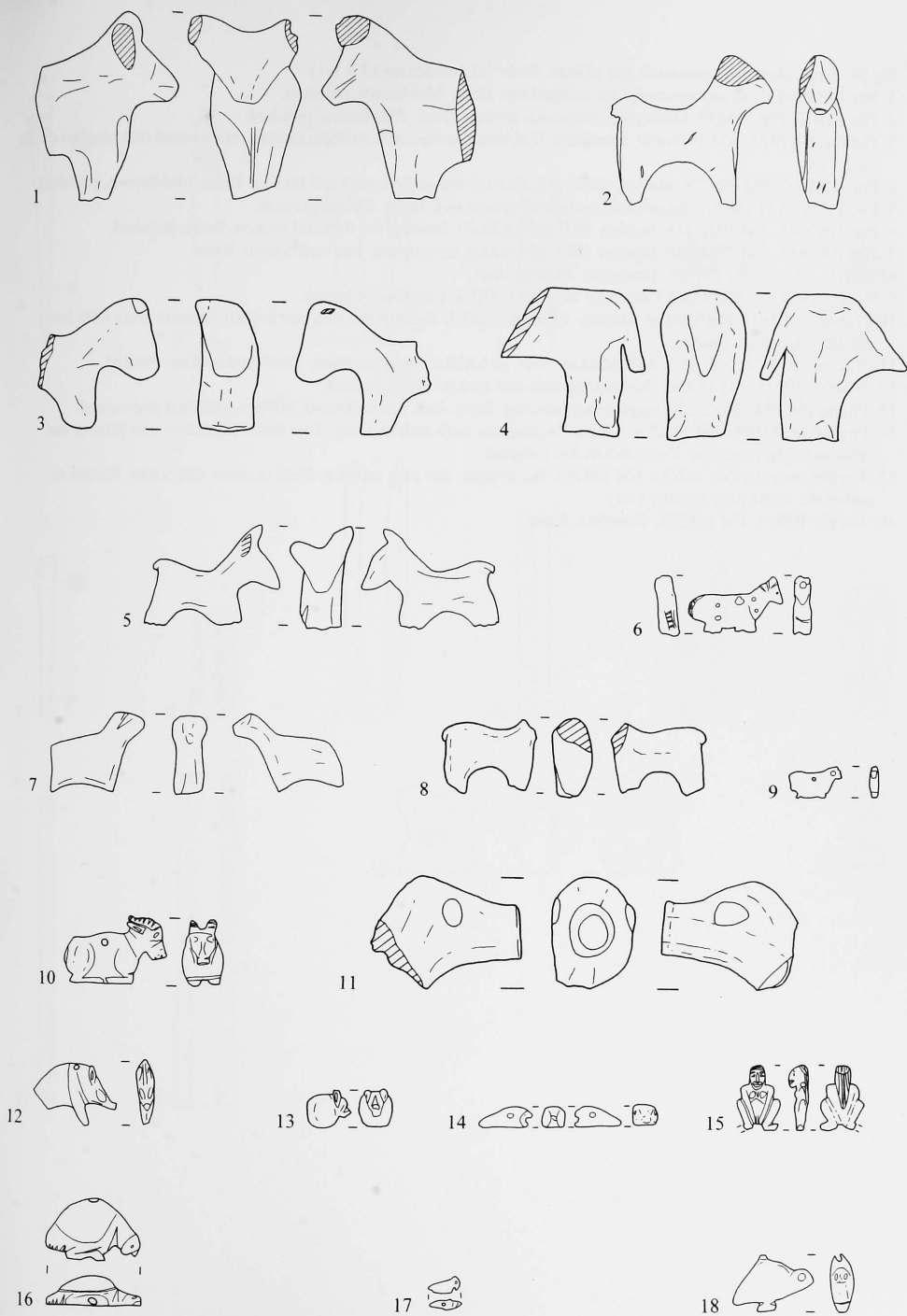


Fig 58. Baked clay, bone, shell and stone figurines. Scale 1:2.

Fig 59. Bone, shell and stone tools and objects. Scale 1:2 (except no 15 = 1:1).

1. Pin. FM 228932. Complete except for chipped top. Bone. Mid-brown, polished.
2. Pin. PJN76. FM 228947. Incomplete, both ends broken. Bone. Pale brown, polished.
3. Phallus. GN2422. AM 1926.439. Complete. Red/brown stone, well worked, smooth. Hole bored into shaft to depth of 2.2 cm.
4. Pin. GN3092. FM 158278. Mackay 1931, pl LXXI:11. Incomplete, thin end broken. Bone. Mid-brown, polished.
5. Pin. PJN68. FM 158261. Incomplete, broken at thinner end. Bone. Incised grooves.
6. Pin. GN3093. AM 1926.444. Mackay 1931, pl LXXI:10. Incomplete, thin end broken. Bone, polished.
7. Pin. GN3089. AM 1926.438. Mackay 1931, pl LXXI:8. Incomplete, thin end broken. Bone.
8. Spatula. PJN47. FM 158297. Complete. Worked shell.
9. Needle. GN3403. FM 158277. Mackay 1931, pl LXXI:4. Complete. Pierced.
10. Needle. GN3333. FM 158279. Mackay 1931, pl LXXI:1. Incomplete, thin end broken. Smooth bone with fine working striations. Pierced.
11. Needle. GN3334. AM 1926.440. Mackay 1931, pl LXXI:2. Polished bone. Thick end broken. Pierced.
12. Needle. PJN71. FM 158262. Incomplete, thin end broken. Bone. Pierced.
13. Pin/needle. FM 231429. Incomplete, top missing. Bone. Pale yellow/brown. Hollow, polished and carved.
14. Pin/needle. PJN68. FM 158276-1 and 2. Incomplete, both ends missing. Two bone fragments, non-joining but from same pin or needle. Very smooth and polished.
15. Toggle/gaming piece. PJN34. FM 158283. Incomplete, one plug missing. Shell or bone. Off-white. Recess in underside where plug missing (1:1).
16. Toggle. PJN34. FM 158285. Complete. Bone.

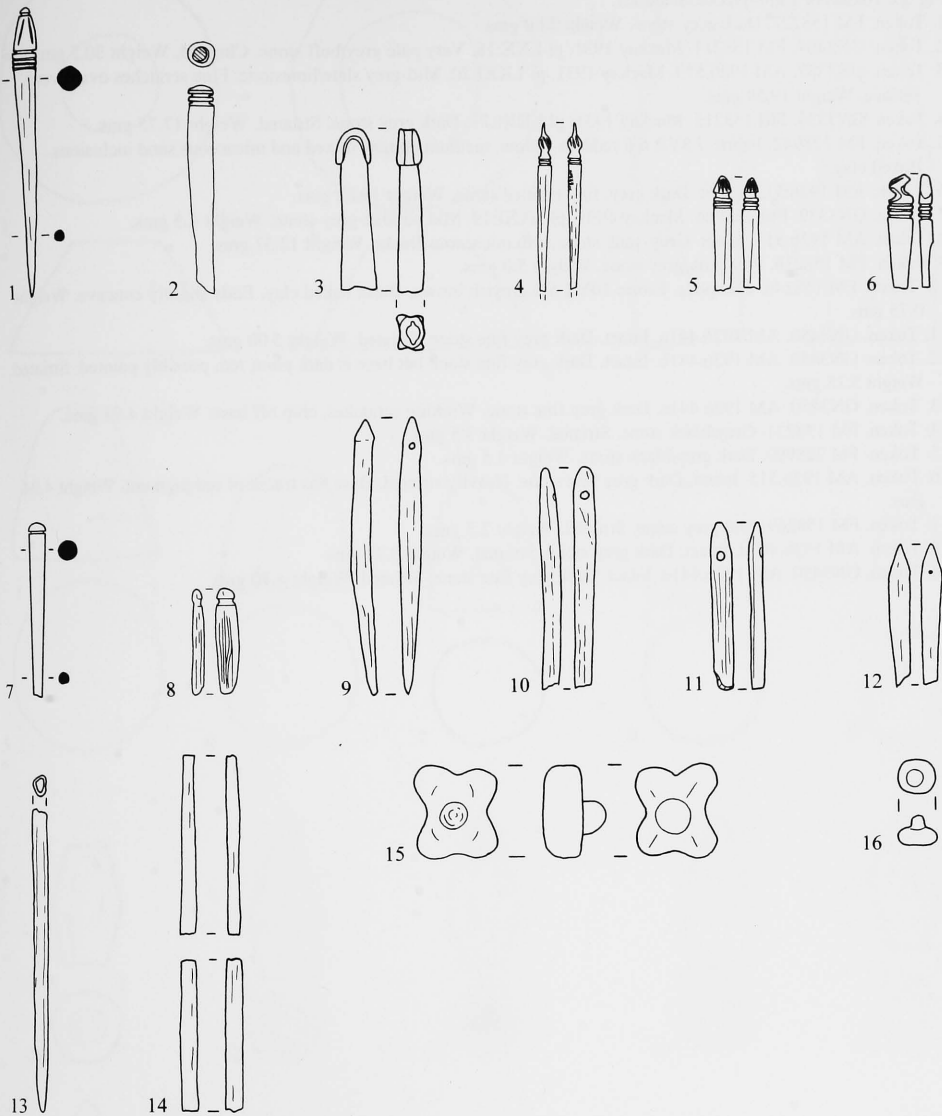


Fig 59. Bone, shell and stone tools and objects. Scale 1:2 (except no 15 = 1:1).

Fig 60. Tokens or game-pieces. Scale 1:1.

1. Token. FM 158227. Dark grey stone. Weight 32.0 gms.
2. Token. GN3404. FM 158211. Mackay 1931, pl LXX:18. Very pale grey/buff stone. Chipped. Weight 30.5 gms.
3. Token. GN3337. AM 1926.519. Mackay 1931, pl LXXI:20. Mid-grey slate/limestone. Fine scratches over every surface. Weight 19.59 gms.
4. Token. GN3336. FM 158212. Mackay 1931, pl LXXI:21. Dark grey stone. Striated. Weight 17.75 gms.
5. Token. FM 228942. Fabric 7.5YR 6/6 reddish yellow, medium density mixed and micaceous sand inclusions. Baked clay.
6. Token. AM 1926.512. Intact. Dark grey, fine grained stone. Weight 19.82 gms.
7. Token. GN3339. FM 158206. Mackay 1931, pl LXXI:19. Mid pinkish-grey stone. Weight 4.5 gms.
8. Token. AM 1926.513. Intact. Grey, pink stone with micaceous flecks. Weight 12.37 gms.
9. Token. FM 158236. Pale pink/grey stone. Weight 5.0 gms.
10. Token. FM 158246. Complete. Fabric 10YR 5/2 greyish brown. Burnt baked clay. Ends slightly concave. Weight 0.75 gms.
11. Token. GN3450. AM 1926.441a. Intact. Dark grey fine stone. Striated. Weight 5.00 gms.
12. Token. GN3450. AM 1926.441b. Intact. Dark grey fine stone but base is dark plum red, possibly painted. Striated. Weight 5.18 gms.
13. Token. GN3450. AM 1926.441c. Dark grey fine stone. Working scratches, chip off base. Weight 4.91 gms.
14. Token. FM 158231. Grey/black stone. Striated. Weight 3.5 gms.
15. Token. FM 228990. Dark grey/black stone. Weight 4.5 gms.
16. Token. AM 1926.515. Intact. Dark grey fine stone. Heavily striated. Base has traces of red pigment. Weight 4.94 gms.
17. Token. FM 158269. Mid grey stone. Striated. Weight 2.5 gms.
18. Token. AM 1926.441d. Intact. Dark grey stone. Striated. Weight 3.72 gms.
19. Token. GN3450. AM 1926.441e. Intact. Dark grey fine stone. Striated. Weight 4.70 gms.

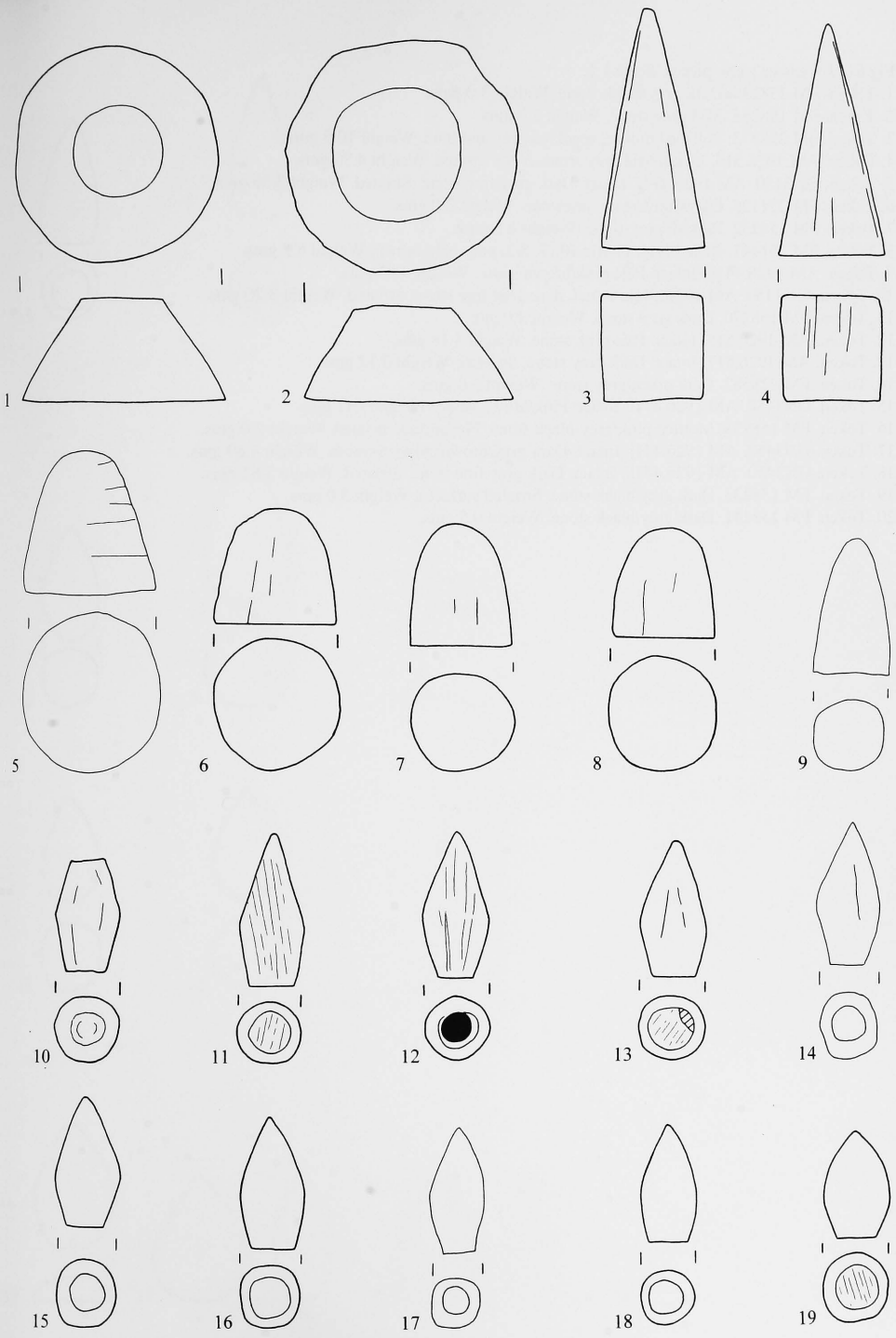


Fig 60. Tokens or game-pieces. Scale 1:1.

Fig 61. Tokens or game-pieces. Scale 1:1.

1. Token. FM 158234. Dark grey/black stone. Weight 3.0 gms.
2. Token. FM 158268. Mid grey stone. Weight 3.0 gms.
3. Token. FM 228273. Polished diorite, speckled grey and blue. Weight 10.5 gms.
4. Token. AM 1926.516. Intact. Mid grey stone. Very striated. Weight 4.70 gms.
5. Token. GN3450. AM 1926.441f. Intact. Dark grey fine stone. Striated. Weight 3.56 gms.
6. Token. FM 231125. Off-white/cream limestone. Weight 3.0 gms.
7. Token. FM 158232. Pinkish grey stone. Weight 8.5 gms.
8. Token. FM 231441. Baked clay. Fabric 10YR 8/3, very pale brown. Weight 8.5 gms.
9. Token. AM 1926.441g. Intact. Pale pink/brown stone. Weight 4.83 gms.
10. Token. GN3450. AM 1926.441h. Intact, dark grey fine stone. Striated. Weight 3.20 gms.
11. Token. FM 158270. Dark grey stone. Weight 3.0 gms.
12. Token. AM 1926.518. Intact. Pale pink stone. Weight 4.18 gms.
13. Token. AM 1926.517. Intact. Dark grey stone. Striated. Weight 3.12 gms.
14. Token. FM 228582. Dark green/grey stone. Weight 3.0 gms.
15. Token. GN3450. AM 1926.441i. Intact. Pink/brown stone. Weight 3.11 gms.
16. Token. FM 158238. Mottled pink/grey-black stone. Flat surface striated. Weight 2.0 gms.
17. Token. GN3450. AM 1926.441j. Intact. Dark grey/brown stone. Smooth. Weight 4.60 gms.
18. Token. GN3450. AM 1926.441k. Intact. Dark grey fine stone. Striated. Weight 3.62 gms.
19. Token. FM 158233. Dark grey/black stone. Striated surfaces. Weight 5.0 gms.
20. Token. FM 158241. Dark grey/black stone. Weight 0.5 gms.

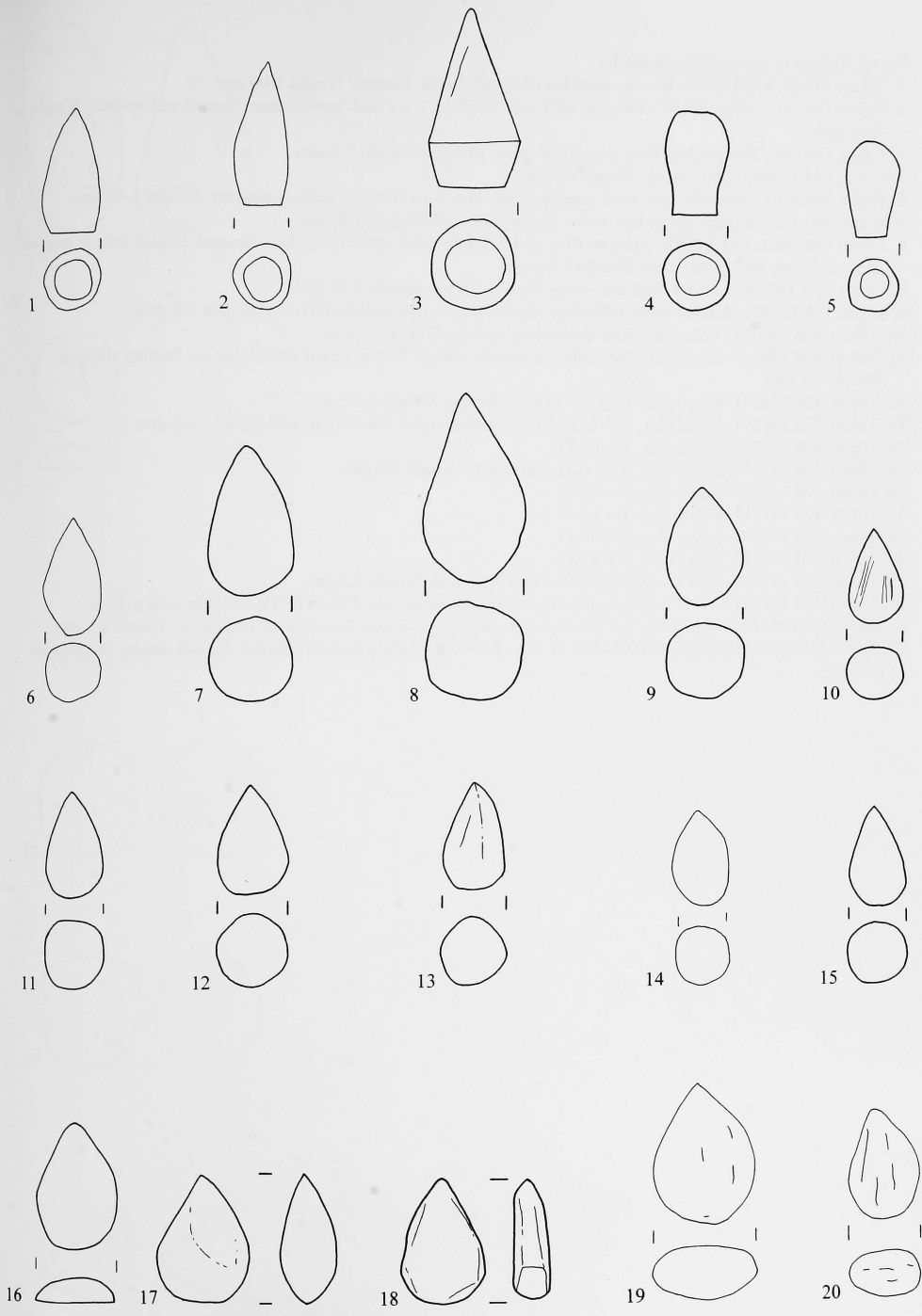


Fig 61. Tokens or game-pieces. Scale 1:1.

Fig 62. Tokens or game-pieces. Scale 1:1.

1. Token. PJN28. FM 158263. Diorite, speckled white and black. Pierced. Weight 19.0 gms.
2. Token. GN3373. AM 1926.447. Mackay 1931, pl LXXII:25. Very dark brown stone. Shaped and smooth. Weight 7.99 gms
3. Token. GN2467. FM 158208. Dark grey/black stone. Striated. Weight 2.0 gms.
4. Token. FM 158267. Beige stone. Weight 4.5 gms.
5. Token. GN3450. AM 1926.4411. Dark grey. Striated. Base very flat with reddish pigment. Weight 1.40 gms.
6. Token. FM 158240. Dark grey/black stone. Surfaces striated. Weight 1.5 gms.
7. Token. GN3307b. FM 158207. Mackay 1931, pl LXXII:24. Dark grey/black stone. Striated. Drilled hole in convex surface. Rotary drill-marks clear. Weight 0.5 gms.
8. Token. AM 1926.514. Intact. Mid-grey stone. Fine striations. Weight 2.87 gms.
9. Token. FM 158244. Banded stone. Off-white band in centre, two ends dark brown. Weight 1.0 gms.
10. Token. FM 231044. Yellowish-white alabaster or marble. Weight 2.0 gms.
11. Token. FM 158245. Baked clay. No visible inclusions. Fabric 5YR 6/4 light reddish brown. Surface chipped. Weight 0.5 gms.
12. Token. FM 158243. Baked clay. Fabric 7.5YR 5/2 brown. Weight 4.5 gms.
13. Token. FM 231255. Baked clay. Fabric 7.5YR 7/2 pinkish grey. Six similar. Weight 3.5 – 6.0 gms.
14. Token. FM 231255. Baked clay. See 62.13.
15. Token. FM 231045. Baked clay. Very dark grey/black. Weight 5.0 gms.
16. Token. FM 231255. Baked clay. See 62.13.
17. Token. FM 231255. Baked clay. See 62.13.
18. Token. FM 231255. Baked clay. See 62.13.
19. Token. FM 231255. Baked clay. See 62.13.
20. Token. FM 158226. Dark grey/black stone. Corner chipped. Weight 2.5 gms.
21. Token. FM 158274. Probably baked clay. Bird head with inclusions. Fabric 7.5YR 6/4 light brown. Hole originally pierced through but is now blocked with another substance. No surfaces are broken. Weight 2.5 gms.
22. Token. PJN26. FM 228991. Folded piece of clay. Burnt baked clay. Dark grey/black. Incised design. Fingerprints on edges.

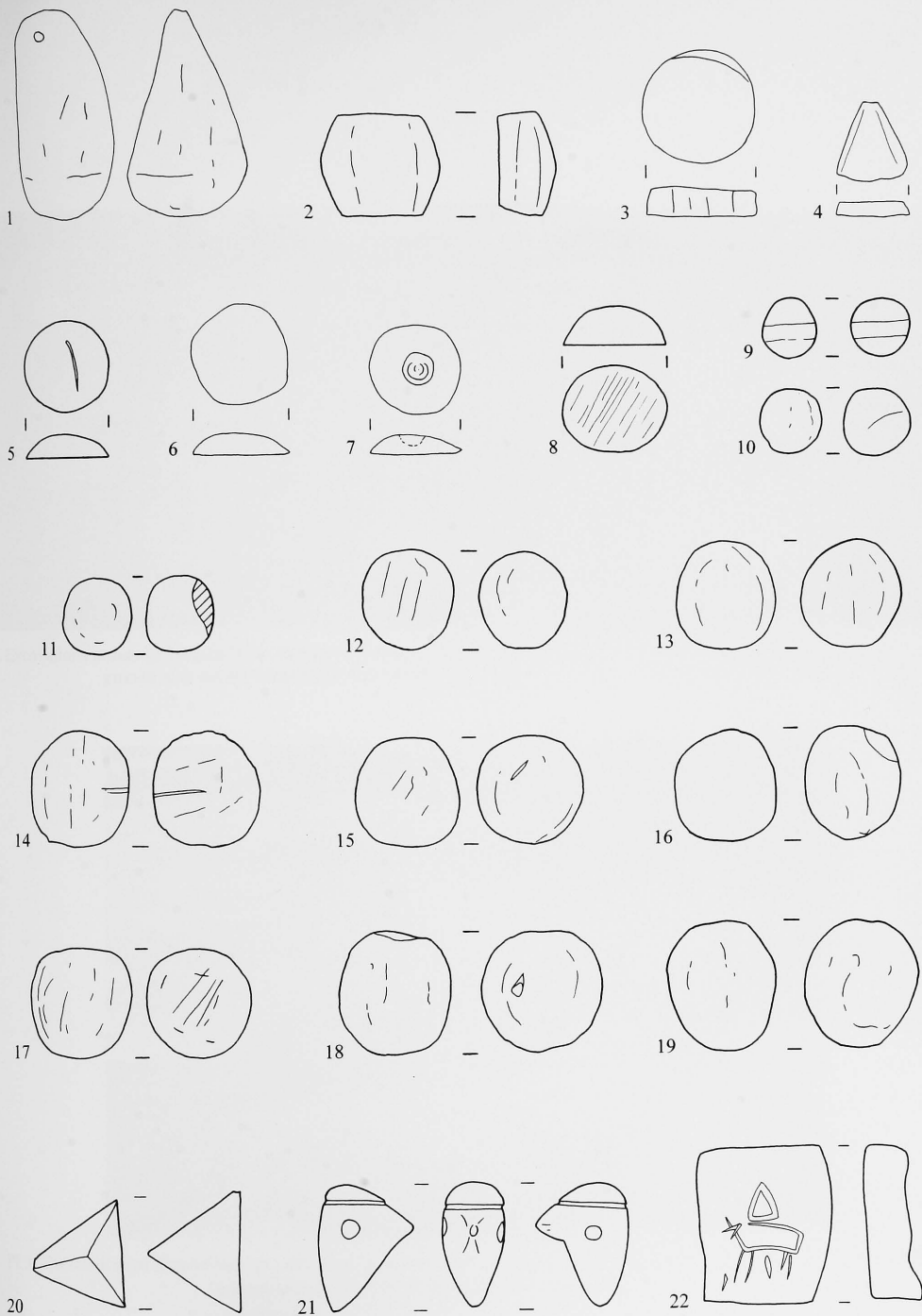


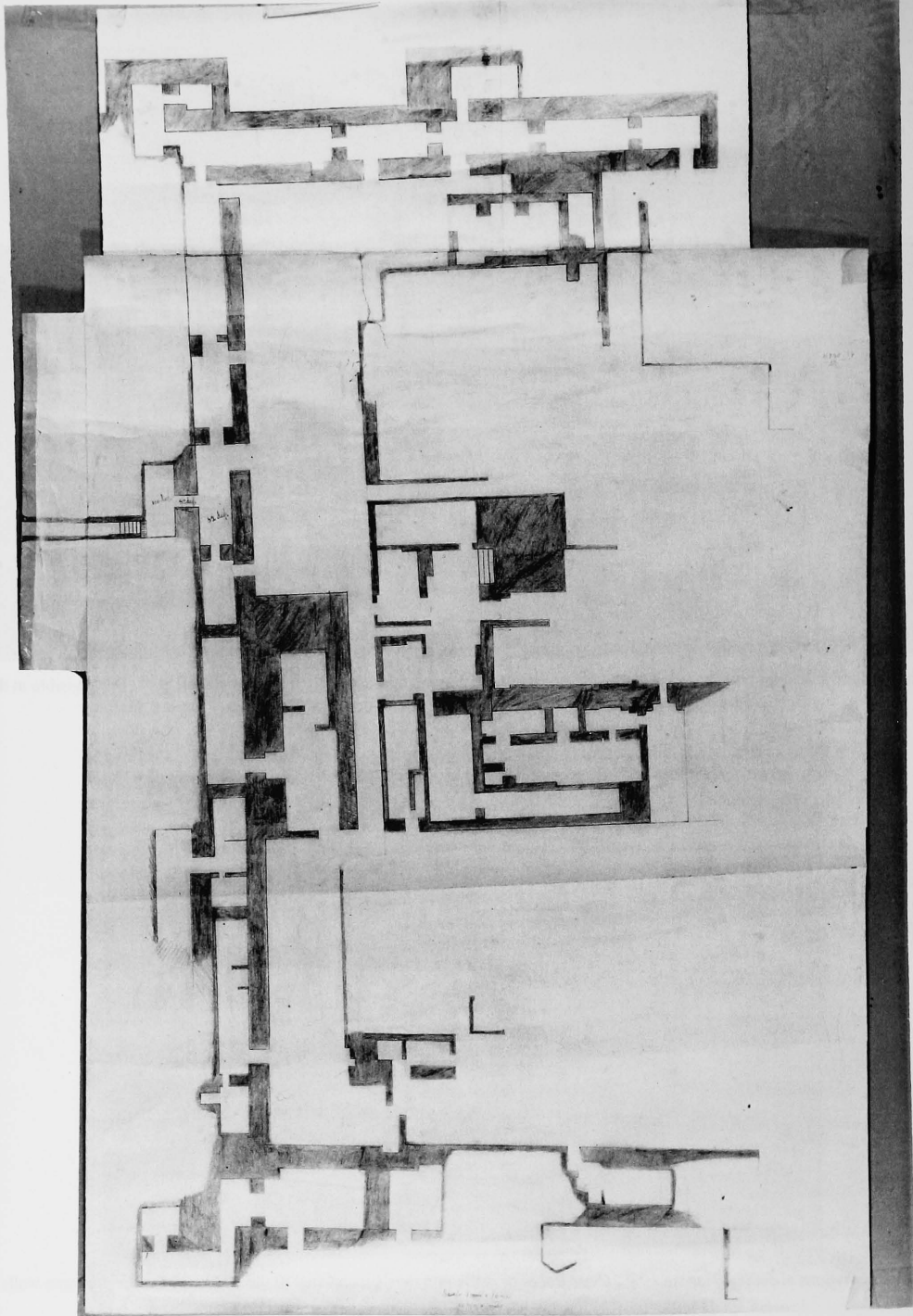
Fig 62. Tokens or game-pieces. Scale 1:1.



Pl 1. Excavations at Jemdet Nasr in 1926. Professor Stephen Langdon in white sweater on the right. Mound A clearly visible in the background with ruined baked-brick building on summit. Photo courtesy Ashmolean Museum, Oxford.

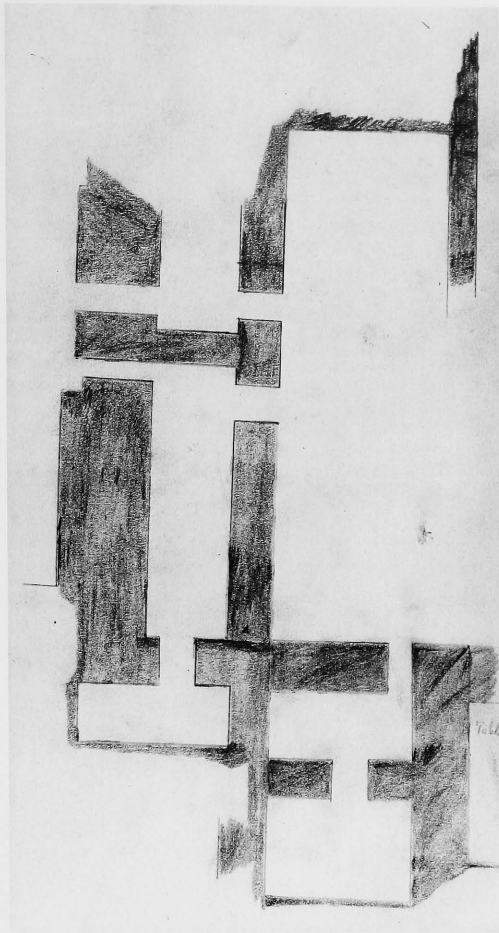


Pl 2. Excavations at Jemdet Nasr in 1988. Clear traces of walls previously excavated in the 1920s. These are the same walls photographed at the site by Margueron in 1968 (1982, fig 11:a-c).

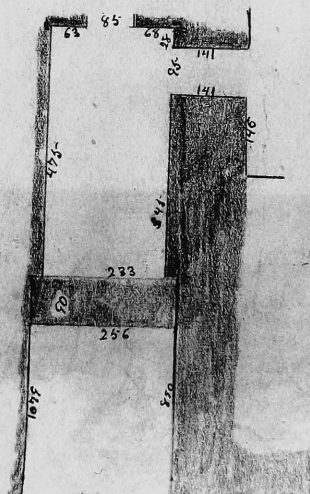


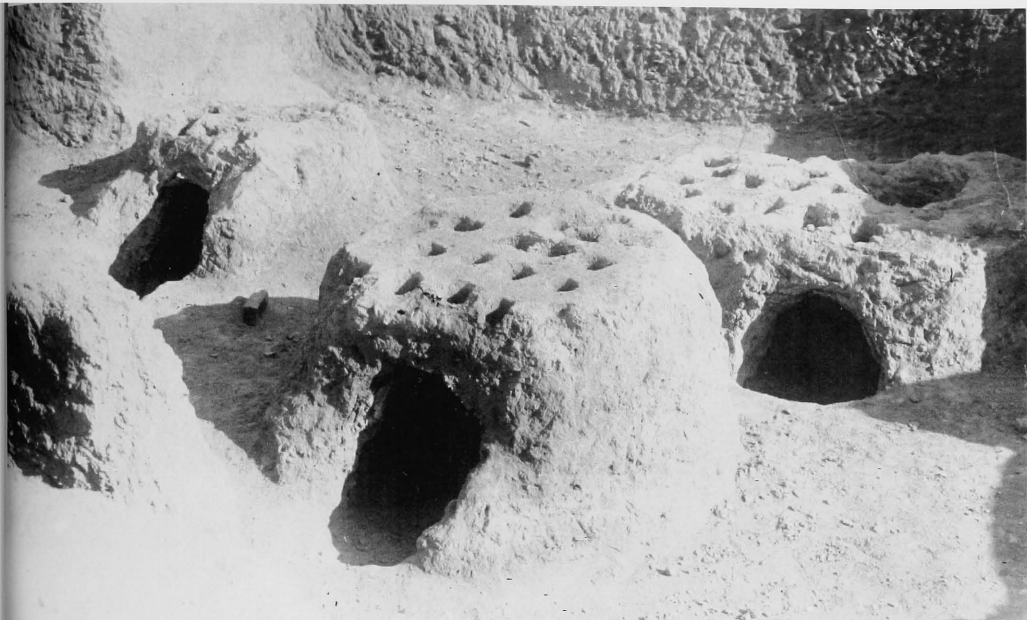
Pl 3. Langdon's pencil plan of the large building, now in Oxford. Photo courtesy Ashmolean Museum, Oxford.

Pl 4. Pencil plan of suite of rooms which fits on south-west corner of Langdon's large building (see fig 3).
Photo courtesy Ashmolean Museum, Oxford.



Pl 5. Detailed pencil plan of rooms with wall length measurements, presumably made by Langdon. Photo courtesy Ashmolean Museum, Oxford.

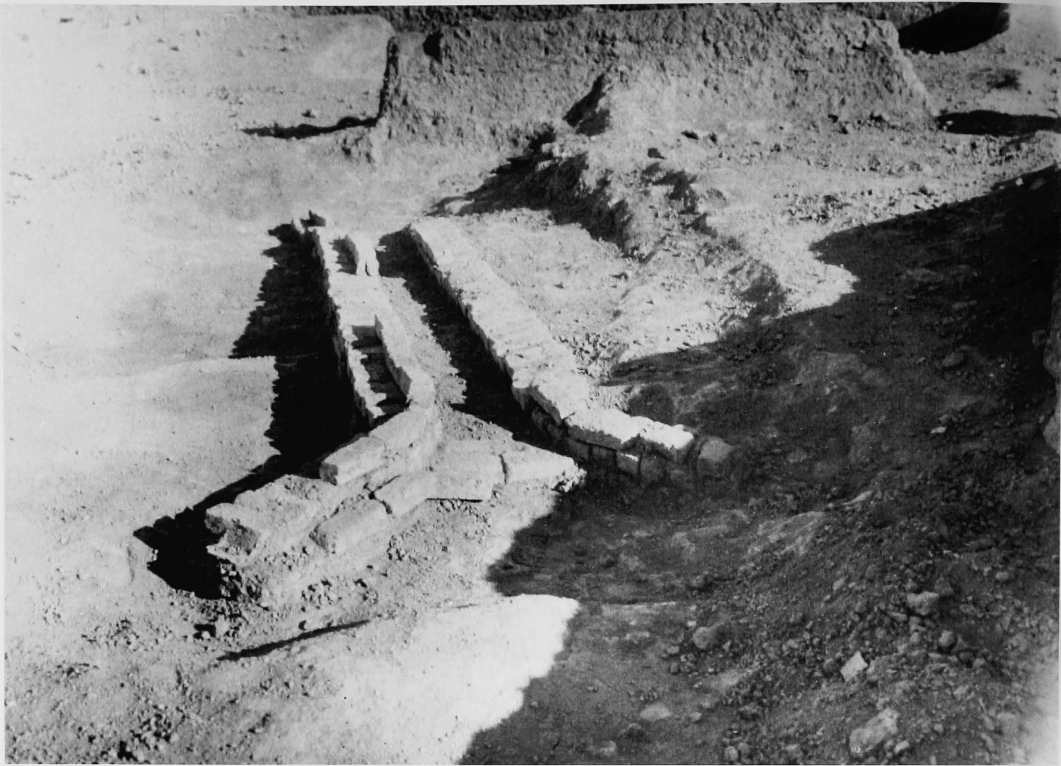




Pl 7. Kilns excavated at Jemdet Nasr in 1928 by Watelin. Photo courtesy Ashmolean Museum, Oxford.



Pl 8. Another view of kilns excavated in 1928. Note extensive spoil heaps in background. Photo courtesy Ashmolean Museum, Oxford.



Pl 9. *In situ* baked bricks, perhaps a drain, in the area of Langdon's large building. Photo courtesy Ashmolean Museum, Oxford.



Pl 10. Excavations at Jemdet Nasr in 1989. Clearance of silts from old trenches in the north-east of Mound B. Scatter of typical Jemdet Nasr three-hole baked bricks in foreground. Note vegetation around mound, completely absent in the 1920s.



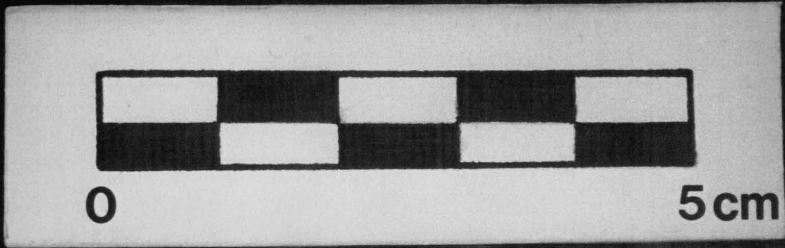
Pl 11. Set of large spouted vessels in a corner of a room excavated in 1928 by Watelin, who later wrote 'Poterie de où?' on back of photo. Photo courtesy Ashmolean Museum, Oxford.



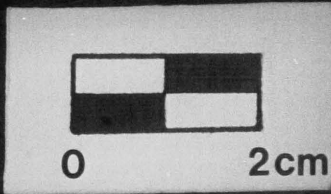
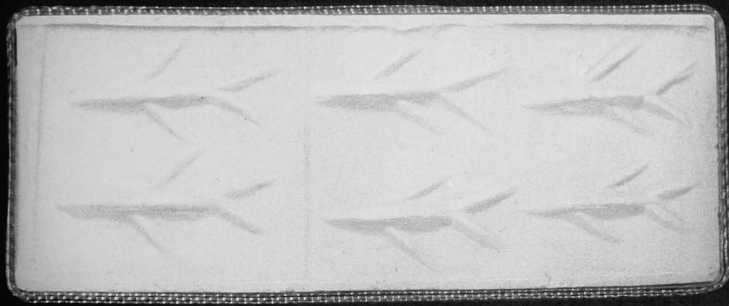
Pl 12. Cylinder seal and modern rolling. Fig 4:8. GN2579. AM 1926.483.



Pl 13. Cylinder seal and modern rolling. Fig 7:1. AM 1928.448.



Pl 14. Cylinder seal and modern rolling. Fig 5:6. GN3357. AM 1926.485.



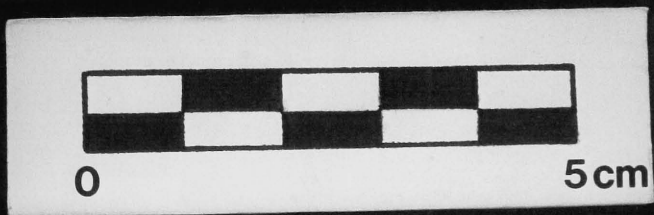
Pl 15. Cylinder seal and modern rolling. Fig 6:1. AM 1928.447.



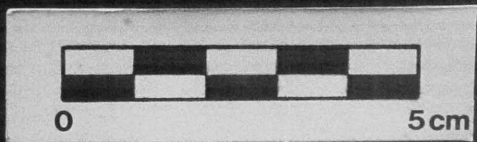
Pl 16. Cylinder seal and modern rolling. Fig 6:2. GN3342. AM 1926.486.



Pl 17. Cylinder seal and modern rolling. Fig 7:2. AM 1928.449.



Pl 18. Cylinder seal and modern rolling. Fig 6:6. AM 1928.454.



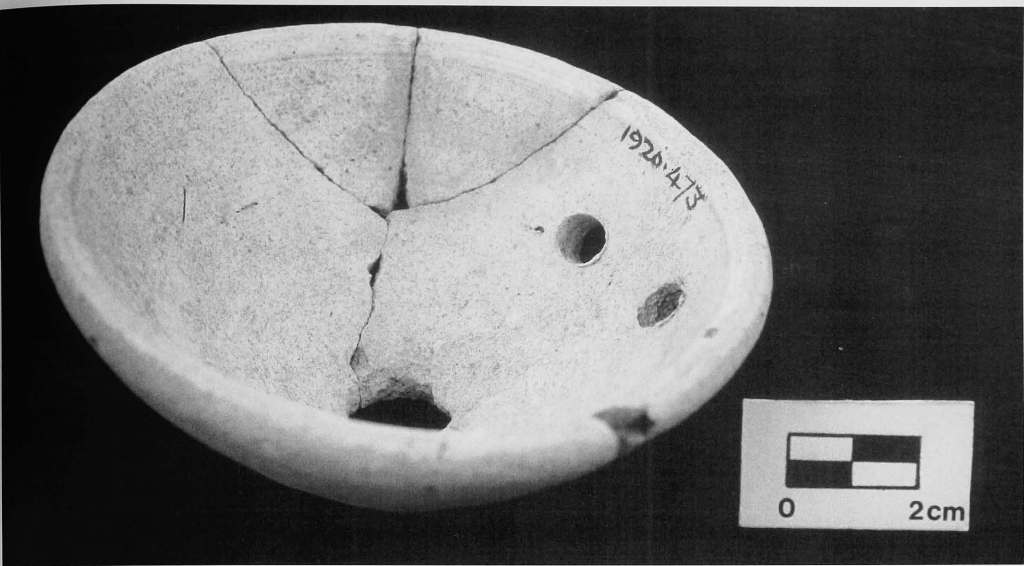
Pl 19. Clay sealing with seal impressions. Fig 7:8. GN2993A-B. AM 1926.678.



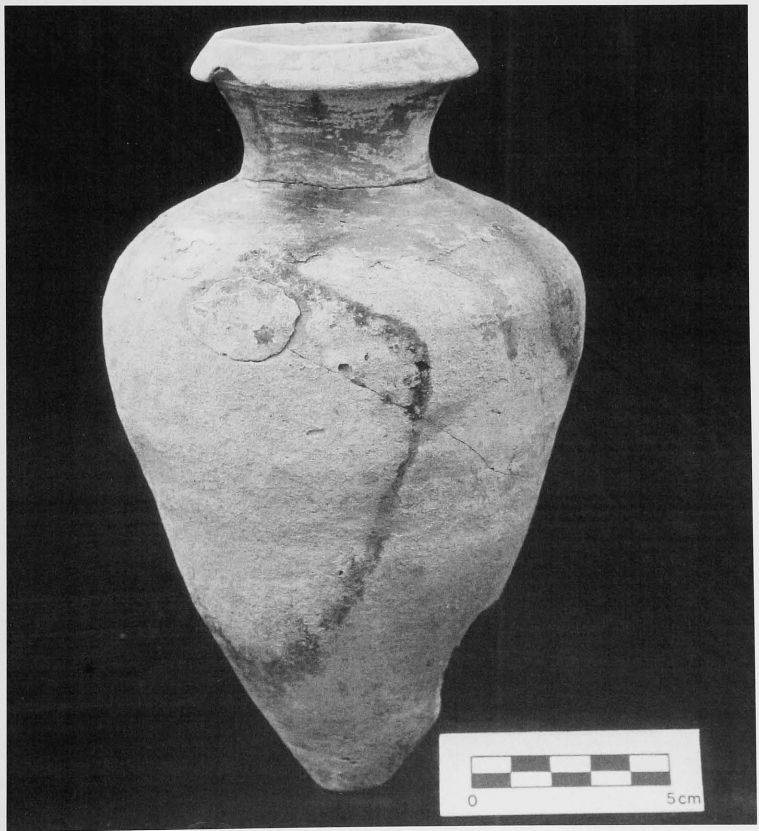
Pl 20. Bevelled-rim bowl.



Pl 21. Small tray. Fig 12:3. GN3352. AM 1926.357.



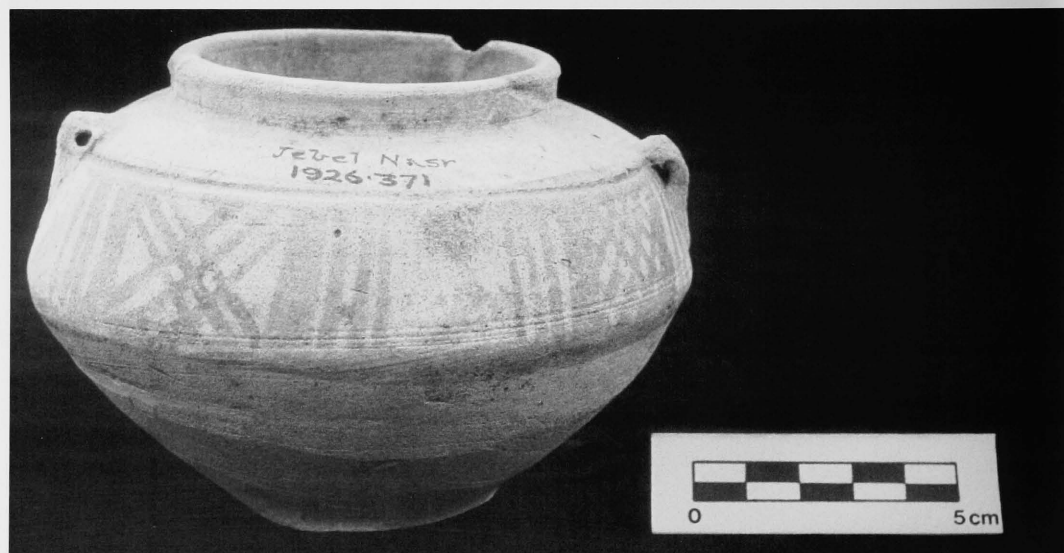
Pl 22. Ladle. Fig 12:6. GN3058. AM 1926.473.



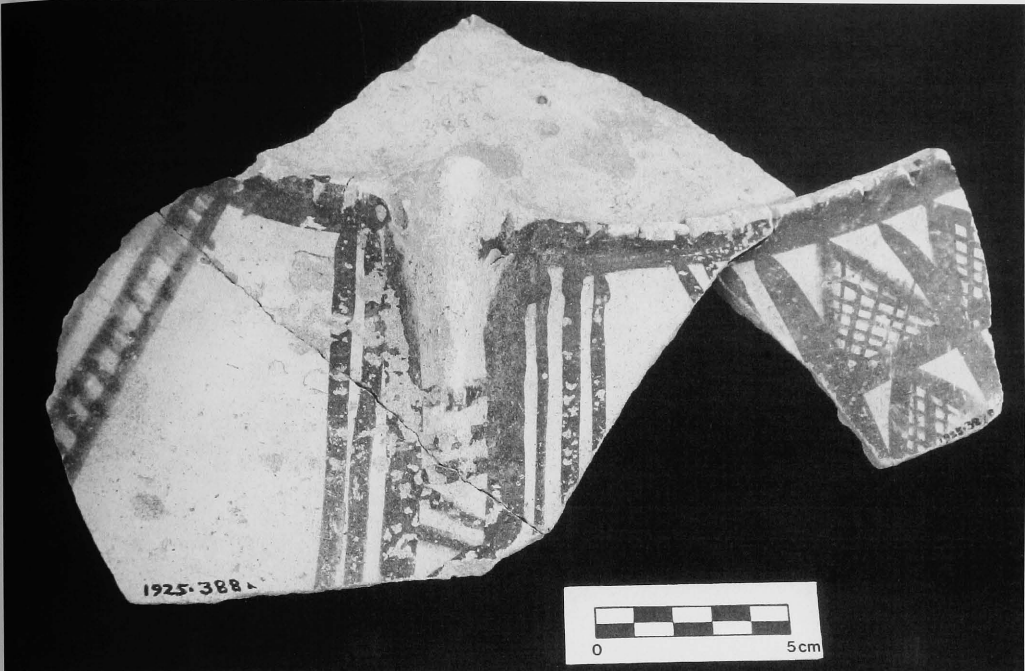
Pl 23. Tall jar. Fig 13:2. GN2496. AM 1926.494.



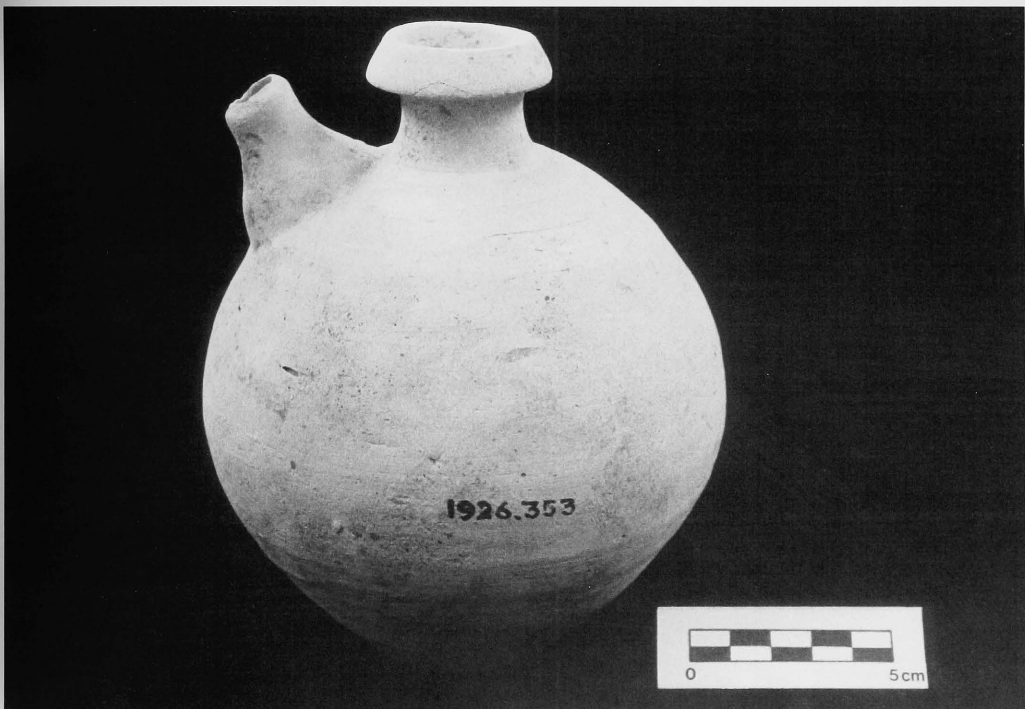
Pl 24. Jar. Fig 14:4. AM 1927.2111.



Pl 25. Lugged jar. Fig 18:6. GN2944. AM 1926.371.



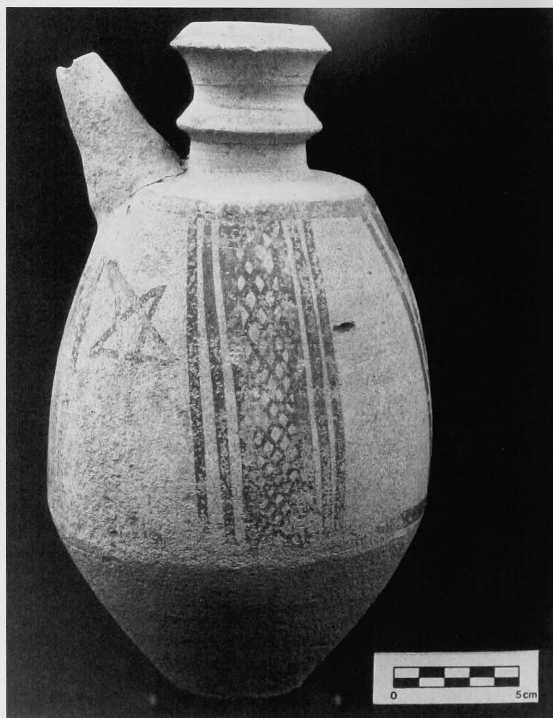
Pl 26. Painted sherds from lugged jar. Fig 19:3. AM 1925.388.



Pl 27. Spouted jar. Fig 24:9. GN2484. AM 1926.353.



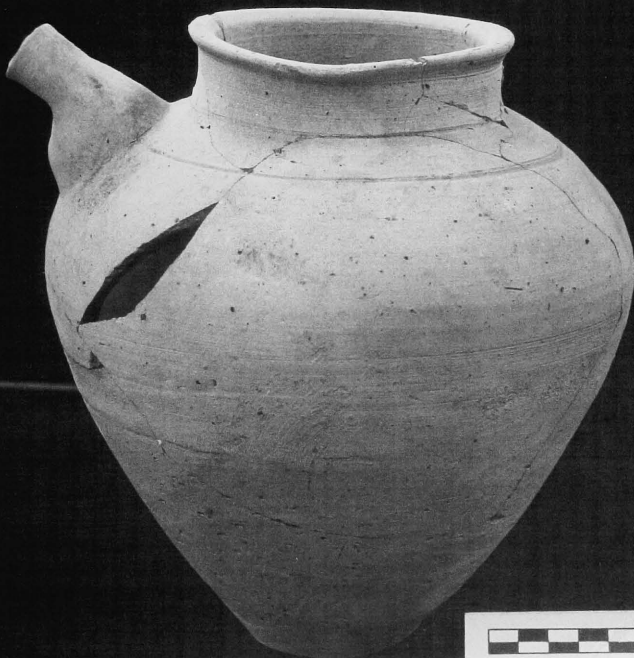
Pl 28. Spouted jar. Fig 25:1. AM 1926.463.



Pl 29. Spouted jar. Fig 25:4. GN3118. AM 1926.496.



Pl 30. Spouted jar. Fig 25:8. GN2494. AM 1927.2109.



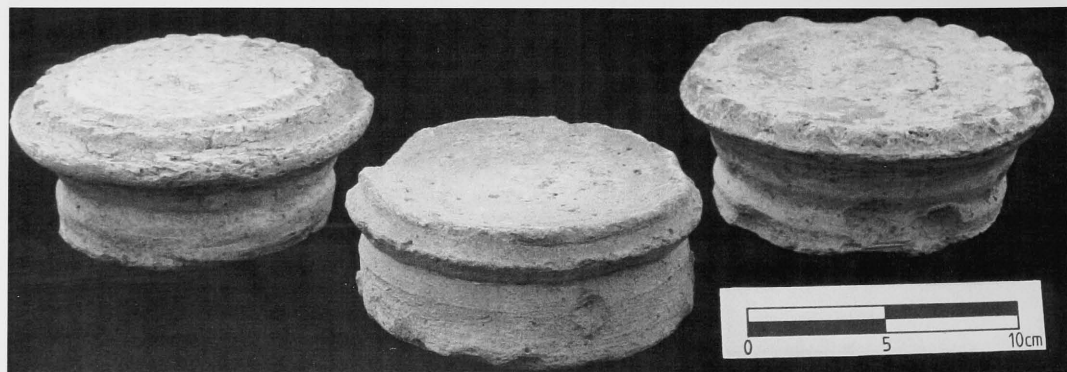
Pl 31. Spouted jar. Fig 27:3. AM 1926.462.



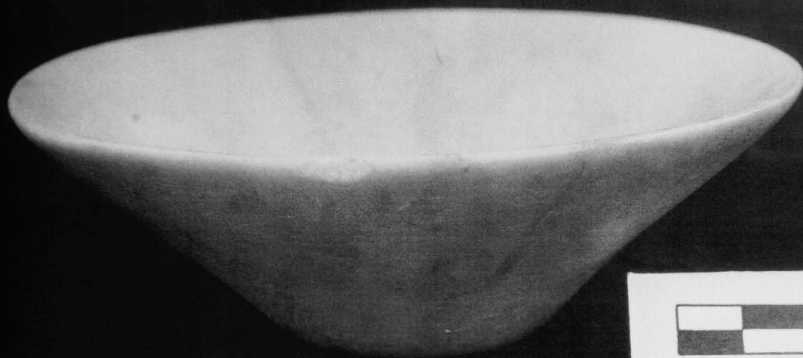
Pl 32. Inscribed sherd. Signs, from left, are KAŠ DUG NE EN. Fig 33:16. AM 1928.474.



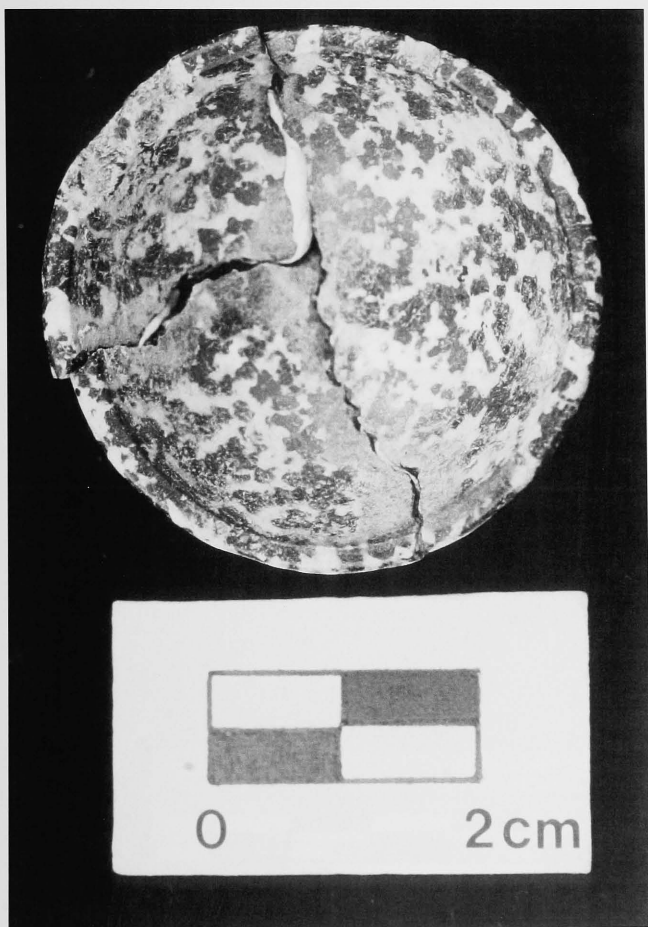
Pl 33. Assorted fine ware vessels.



Pl 34. Solid stands.



Pl 35. Stone bowl. Fig 40:3. GN2443. AM 1926.511.



Pl 36. Speckled stone bowl. Fig 40:5. GN2958. AM 1926.435.



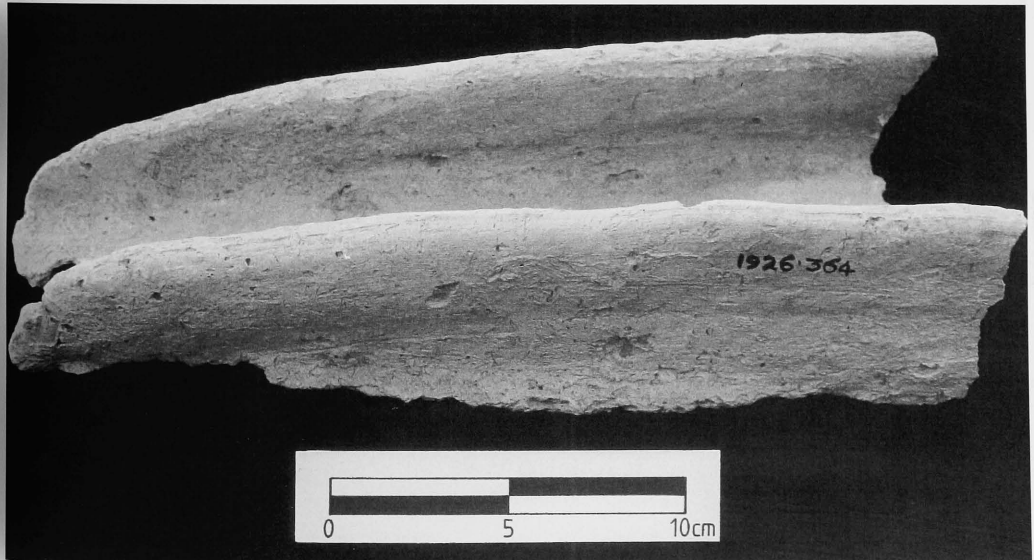
Pl 37. Stone "bolas".



Pl 38. Baked clay spatula. Fig 46:3. GN3014. AM 1926.415.



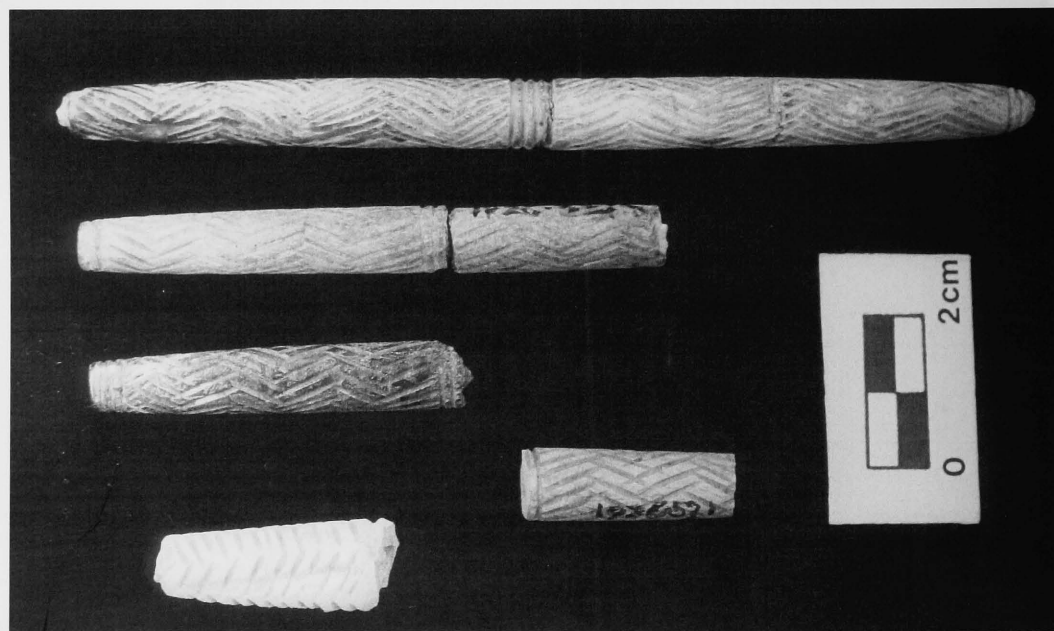
Pl 39. Baked clay sickle handle and part of blade. Fig 48:5. GN3104. AM 1926.480.



Pl 40. Baked clay gutter or drain fragment. Fig 52:2. GN3443. AM 1926.364.



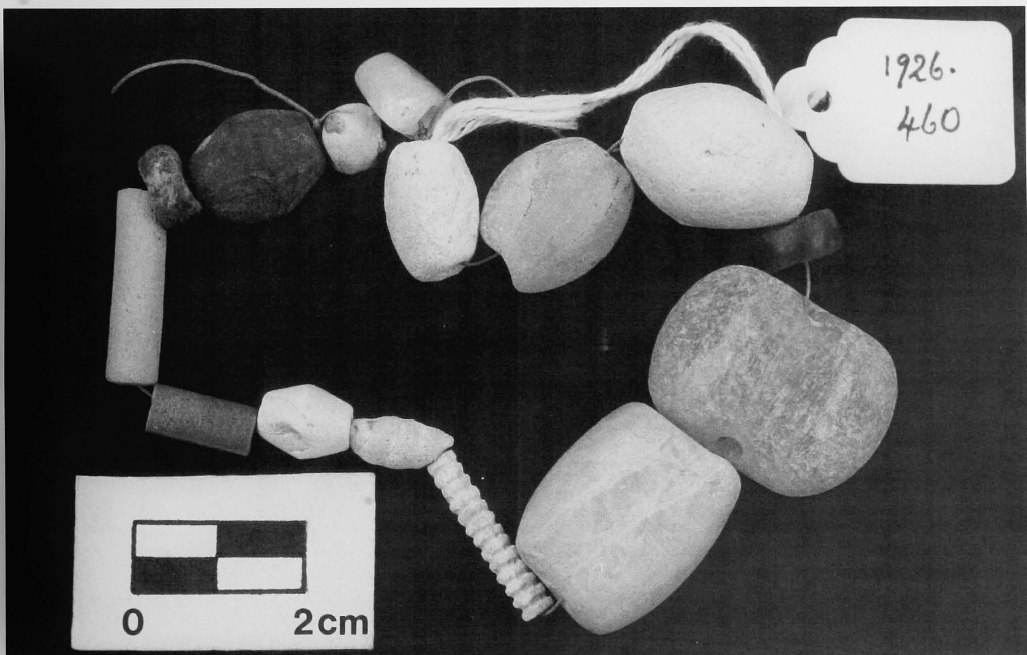
Pl 41. Assorted wall cones.



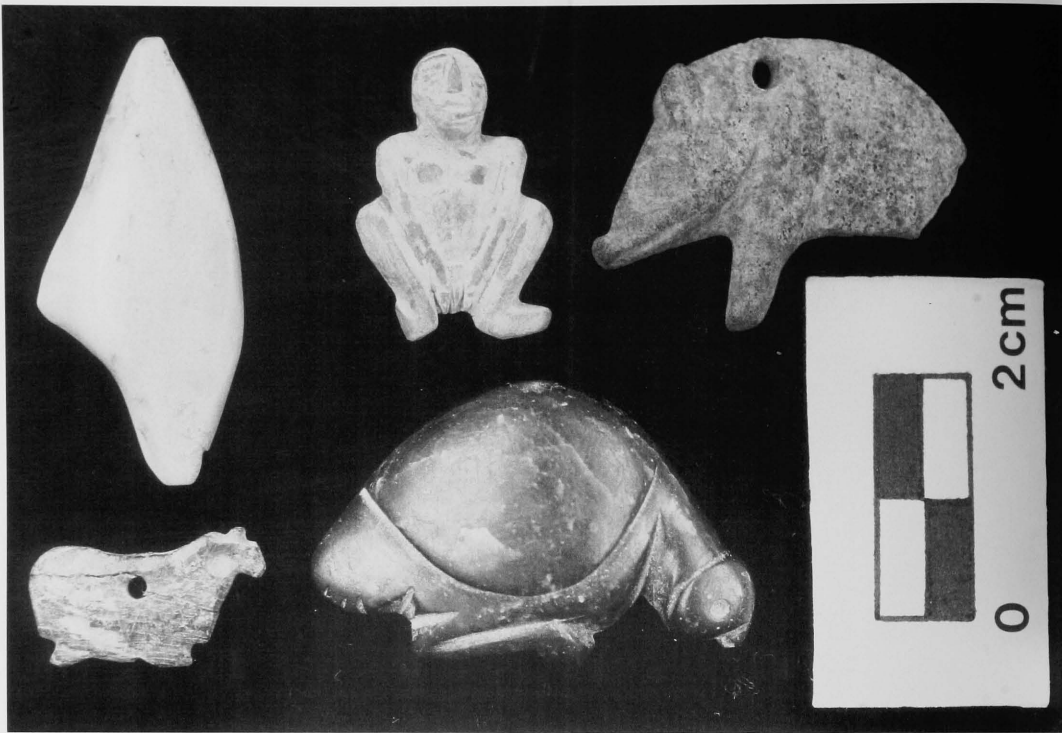
Pl 42. Incised bone beads.



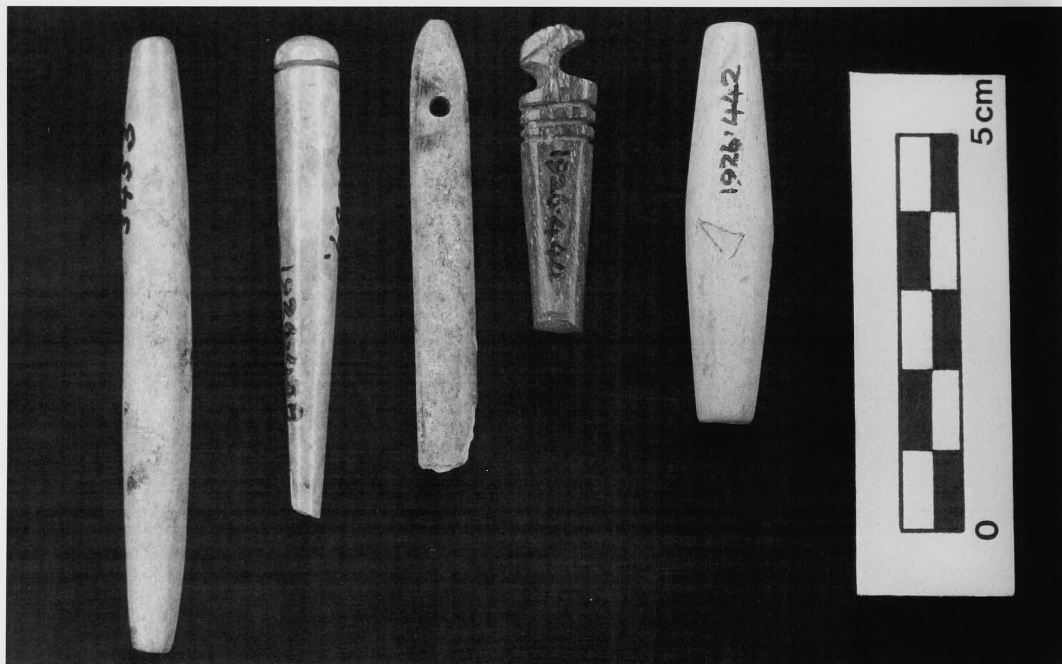
Pl 43. Baked clay beads with spiral groove.



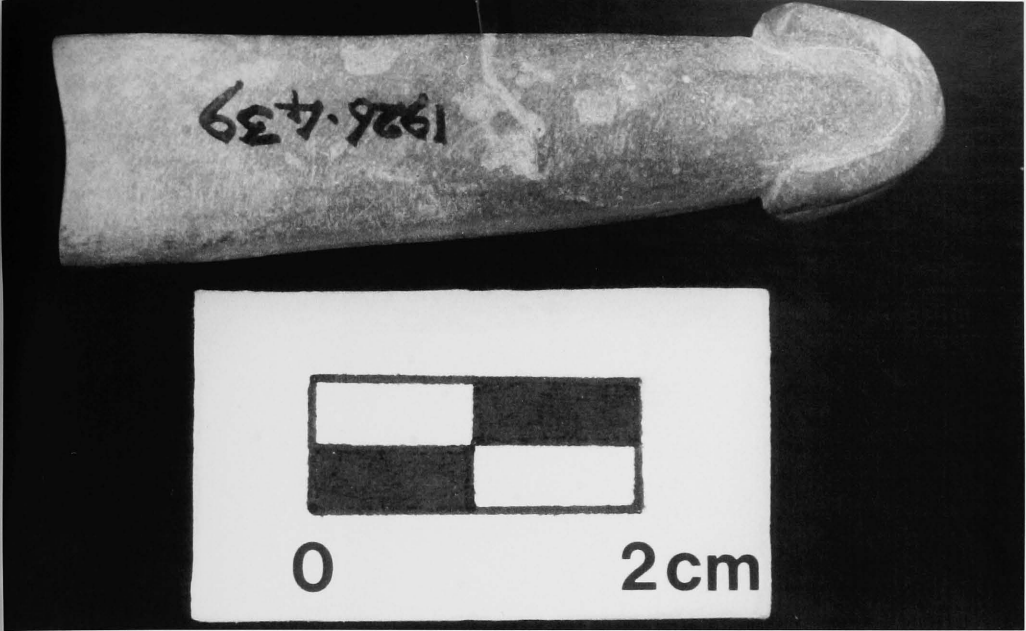
Pl 44. Assorted beads. Fig 55:10-24.



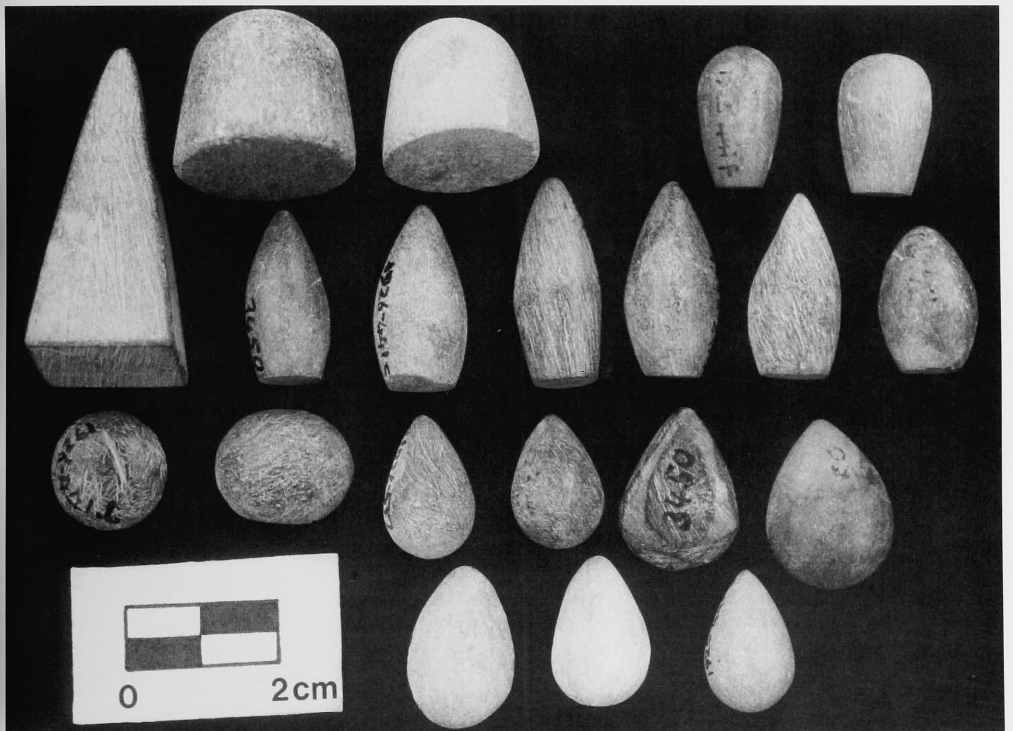
Pl 45. Shell and stone figurines.



Pl 46. Bone tools and beads.




Pl 47. Stone phallus. Fig 59:3. GN2422. AM 1926.439.



Pl 48. Stone tokens or game-pieces.





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IRAQ ARCHAEOLOGICAL REPORTS - 6

SECRETS OF THE DARK MOUND

Jemdet Nasr 1926-1928

Roger Matthews

Excavations in the 1920s at Jemdet Nasr, 100 km south of Baghdad, exposed a large building with an intriguing assemblage of painted pots, stylised cylinder seals and a uniquely important collection of early cuneiform tablets, all dating to around 3,000 BC. The distinctiveness of this material assemblage meant that the site gave its name to the Jemdet Nasr period of early Mesopotamian history. The excavations were not fully published at the time and since the 1920s there has been considerable debate about the value and significance of the excavation results. Following two seasons of renewed excavations at Jemdet Nasr in the late 1980s, a programme of recording and analysis of the 1920s material has been underway, now resulting in this final publication of all non-textual objects excavated at Jemdet Nasr in the 1920s seasons, excluding some items now in the Iraq Museum, Baghdad. The bulk of this material has not been adequately published before, and its publication here will add notably to the body of evidence relevant to the study of early society at the time of the development of urban literate civilisation on the south Mesopotamian plains.

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