

EGYPT AT ITS ORIGINS 3

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THE NAQADA I TOMBS H17 AND H41 AT EL-MAHÂSNA: A VISUAL RECONSTRUCTION

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When working at Abydos during the last months of 1908, E.R. Ayrton and W.L.S. Loat were informed about a cemetery being looted at nearby el-Mahâsna. They visited the site and identified it as a Predynastic cemetery, which they subsequently excavated in January 1909. As usual for the time, only the most important finds were described or illustrated in the excavation report. The objects themselves were distributed to a number of museums, amongst them the Egyptian collection of the Royal Museums for Art and History in Brussels. Fortunately, the contents of individual tombs seem to have been kept together during the distribution, and the Brussels museum received nearly all of the objects from Tombs H17 and H41. Tomb H41 was one of the richest in the cemetery, containing among other significant objects, a very interesting human figurine. The material from Tomb H17 includes a palette with lightly engraved decoration, which was unnoticed by the excavators.

The inventories of the two tombs are discussed with particular attention given to their visual presentation. For this purpose, parts of the tombs are reconstructed in drawing, using the published photographs in combination with the actual objects in Brussels. The reconstruction of the figurine from Tomb H41 is of particular interest in the context of the recent discoveries in the settlement of el-Mahâsna (see Anderson this volume).

Introduction

When excavating at Abydos on behalf of the Egypt Exploration Fund (EEF) during the last months of 1908, E.R. Ayrton (1882–1914) and W.L.S. Loat (1871–1932) were informed about a cemetery being looted at nearby el-Mahâsna. They visited the site, identified it as a Predynastic cemetery, and subsequently excavated it in January 1909 (Ayrton & Loat 1911). The cemetery occupied an oval area of about 165 × 137 m on the north bank of a wadi. The excavators estimated the original number of tombs to be about 600, of which they claim to have excavated about half (Ayrton & Loat 1911: 2), although the highest tomb number they mentioned is H143. Heavily plundered both in antiquity and in modern times, the tombs still yielded a rich and diverse array of funerary equipment.

As usual for the time, only the most important finds were described or illustrated in the publication, which appeared two years after the excavation (Ayrton & Loat 1911). The objects themselves were distributed amongst a number of the museums that subscribed to the excavation work of the EEF, including the Egyptian collection of the Royal Museums for Art and History (RMAH) in Brussels. As a long time subscribers, the RMAH received a significant part of its Egyptian collection from EEF excavations (van de Walle 1980; Hendrickx 1986). From the excavations at el-Mahâsna, the museum was sent the contents of Tombs H17 and H41 as well as a number of individual objects in 1909.¹ Their arrival in Brussels was immediately announced in the bulletin of the museum (Capart 1909), but they were not inventoried into the collection until 1913.

Ayrton and Loat (1911: 2) noted that the cemetery was occupied throughout the Predynastic period.² The published evidence indeed allows tombs dating from Naqada IA until Naqada IIIB to be identified (Hendrickx 1989: 355–356, see also Kemp 1982; Wilkinson 1996: 51–53). Tomb H41, one of the richest in the cemetery, was dated by the excavators before Sequence Date (SD) 56 (Ayrton & Loat 1911: 16, pls. 5.22, 16–17; Thomas 2004: 1048).³ Tomb H17, less richly endowed, but equally as interesting, was dated before SD 41 by the excavators (Ayrton & Loat 1911: 10–11, pls. 1.5, 13.3).⁴ Both tombs can now be dated to Naqada IC owing to the presence of a White cross-lined bowl in H17 and the dominance of Black-topped pottery in both tombs, amongst which are slender beakers with concave upper bodies and restricted jars (cf. Hendrickx 2006: 75; see also Hartmann this volume). The aim of the present contribution is to provide the fullest possible publication of both tombs and present a brief discussion of the interesting objects that they contained.

¹ The distribution of the objects was announced by Emily Paterson, secretary of the EEF, to Jean Capart, director of the RMAH, in a letter dated 4 August 1909 (archives RMAH). In addition to the material from the two tombs under discussion, the following inventory numbers of the Egyptian collection at the RMAH are also from Ayrton and Loat's excavation at el-Mahâsna: E.2932–2934, E.2936–2942, E.2944–2945, E.3011.

² The cemetery excavated by J. Garstang in 1900–1901 was considered by Ayrton and Loat (1911: 2) as the chronological continuation of the cemetery excavated by them. Although this is quite possible, the very limited information provided by Garstang (1903: 5) does not allow this to be confirmed beyond doubt, nor does the 1983 survey conducted by D.C. Patch (1991: 261, 404–406).

³ Petrie ascribed Tomb H41 to SD 36–38 (Petrie 1920: pl. 52; see also Baumgartel 1960: 67).

⁴ Petrie ascribed Tomb H17 to SD 36–44 (Petrie 1920: pl. 52).

Tomb H17

Tomb H17, containing the remains of a woman and a child, had already been partially disturbed when discovered (Ayrton & Loat 1911: 10–11, pl. 1.5). The skeleton of the woman was partially in situ, as were some of the objects (Figs. 1–2). The northern part of the tomb, where the legs of the deceased were originally placed, was entirely disturbed, while the area around the head was less so, although the more precious objects in Predynastic burials were usually placed in that vicinity. The remaining funerary equipment (Fig. 3) consisted of pottery (Figs. 4–9), a comb (Fig. 10), beads (Fig. 11) and four palettes (Figs. 12–15).

Amongst the pottery from the tomb are one Black-topped (Fig. 4, E.2925) and three Polished-red small oval dishes (Figs. 5–7, E.2923–2924, 2926), as well as one concentric Polished-red bowl (E.2922, Fig. 8). They were identified by Ayrton & Loat (1911: 11, pls. 31, 38) according to W.M.F. Petrie's typology, but only four of them can be identified in Brussels on this basis: P11g (Fig. 8, E.2922); F12 (Fig. 5, E.2923); F12a (Fig. 6, E.2924); and F12b Black-topped (Fig. 4, E.2925). Ayrton and Loat also list an oval bowl of type F11c, but this does not correspond to the remaining oval plate registered in Brussels (E.2926) as coming from



Fig. 1. Tomb H17 during excavation (Ayrton & Loat 1911: pl. I.5).

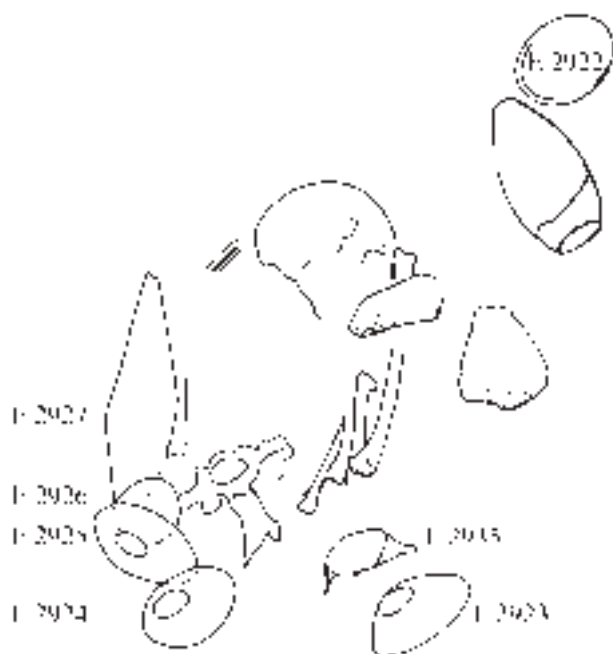


Fig. 2. Tomb H17, object placement reconstructed.



Fig. 3. Objects from tomb H17 in Brussels (photo by R. Mommaerts).



Fig. 4. Black-topped oval bowl, Brussels E.2925 (1:3).

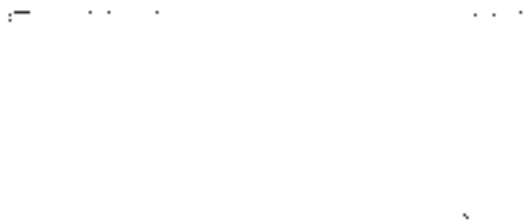


Fig. 5. Polished-red oval bowl, Brussels E.2923 (1:3).



Fig. 6. Polished-red oval bowl, Brussels E.2924 (1:3).



Fig. 7. Polished-red oval bowl, Brussels E.2926 (1:3).

Fig. 8. Polished-red bowl, Brussels E.2922 (1:3).



Fig. 9. White cross-lined bowl, Brussels E.2935 (1:3).



Fig. 10. Bone comb, Brussels E.2943 (2:3).

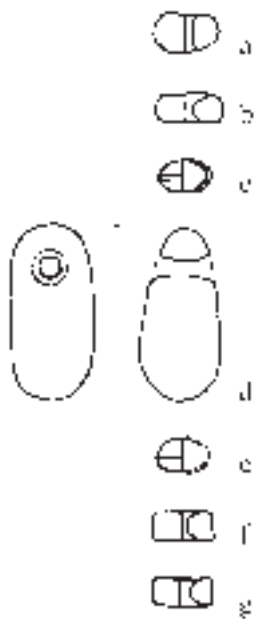


Fig. 11. Beads, Brussels E.2931 (1:1).
a) limestone (?). b, d, f, g) carnelian. c, e) gold.



Fig. 12. Greywacke palette, Brussels E.2927 (1:3).



Fig. 13. Greywacke palette,
Brussels E.2928 (1:3).



Fig. 14. Greywacke palette,
Brussels E.2930 (1:3).



Fig. 15. Greywacke palette,
Brussels E.2929 (1:3).

Tomb H17. An error during excavation, publication or registration must have occurred. Because the tomb number is written on the object, an error in publication seems the most likely explanation.

The Black-topped bowl (Fig. 4, E.2925) has a hole in the vessel wall. The discolouration around this hole indicates that it is the result of an accident during firing and was presumably caused by the explosion of a bubble of air trapped in the clay. Despite this fault, the vessel became part of the funerary equipment.

The pottery inventory was composed not only of bowls. A Black-topped jar of the Petrie type B63c, containing grain, is mentioned by Ayrton & Loat (1911: 11), but this was not received by the RMAH.⁵

The only other vessel attested is a fragmentary White cross-lined bowl (E.2935) (Figs. 9, 16–17). The white paint has entirely disappeared, but as the paint flaked, it caused the polished slip below it to flake also, leaving a scar, which allows the original painting to be reconstructed with a high degree of accuracy (Figs. 9, 17). Only the interior of the bowl was decorated. Five triangles filled with cross-hatching hang down from the rim, a motif extremely popular for White cross-lined pottery, possibly imitating basketry. A less common motif is that of a Nile turtle (*Trionyx triunguis*), which appears on the tondo of the bowl.⁶ The head of the animal is drawn with the characteristic triangular shape that can also be seen on a bowl in Cleveland (Fig. 18, Berman & Bohac 1999: no. 46) and on several palettes (e.g., Naqada tomb 271, Oxford AM 1895.841, Payne 1993: no. 1809; New York MMA 10.176.78, Fischer 1968: 24, no. 17, fig. 10.17). On the palettes, the pointed snout of the animal is generally shown, but this is not the case on the Mahâsna bowl or on the parallel in Cleveland. A pointed snout without triangular head is, however, indicated for two turtles on a footed bowl from Naq' el-Alawna (Oxford AM E.2785, Payne 1993: no. 389). The lines protruding beyond the carapace of the turtle are only depicted on the bowl from el-Mahâsna. This unique feature is not difficult to explain. The Nile turtle, as most soft-shelled turtles, has ribs that extend beyond the carapace (Fig. 19) and these have been rendered in the bowl painting.

A complete turtle carapace was found in tomb 264H.2 at Helwan (Saad 1947: 108, pl. 47). It had been placed over the body of the deceased, whose lower legs and feet were missing. In light of this absence,

⁵ The jar may have been distributed to another museum, but it is more likely that it was left on the site if it was in poor condition.

⁶ The turtle was not noticed by Ayrton and Loat (1911: 11), who describe it only as “decorated inside with ordinary criss-cross pattern in white.”



Fig. 16. White cross-lined bowl E.2935. (photo by R. Mommaerts).



Fig. 17. White cross-lined bowl E.2935. Artistic reconstruction.



Fig. 18. White cross-lined bowl, provenance unknown, Cleveland 1920.2008 (Berman & Bohac 1999: 103, no. 46).



Fig. 19. Carapace of *Trionyx triunguis* from Tomb 264H.2 at Helwan (Saad 1947: pl. 47).

Z.Y. Saad suggested that the carapace reflected the fact that the tomb owner had crawled on his hands and knees during his lifetime. However, Saad overlooked the fact that a Nile turtle is not a land turtle. The latter occurred in ancient Egypt, but never played a role in iconography or symbolism (cf. Fischer 1968: 8–9; Vernus & Yoyotte 2005: 286). H.G. Fischer (1968: 9–11) considered turtle representations in the Predynastic to have served an apotropaic function and this could easily be the reason

for the turtle carapace in the Helwan tomb and its representation on the White cross-lined bowls.⁷

Only a few elements of the personal adornment remained in the tomb. A small bone comb (Fig. 10, E.2943, Ayrton & Loat 1911: pl. 13.3) is in such poor condition that its original shape is beyond recognition.⁸ All of the teeth are broken off and their length cannot be determined. The excavation report also mentions fragments of ivory bracelets (Ayrton & Loat 1911: 11), but these are not in Brussels. Some beads were found dispersed throughout the fill of the tomb (Ayrton & Loat 1911: 11, pl. 13.3), which must have been overlooked during the plundering of the tomb since amongst them are two gold beads (Fig. 11c, e). In addition there are three carnelian beads (Fig. 11b, f, g), one carnelian pendant (Fig. 11d) and one limestone (?) bead (Fig. 11a). Gold beads are exceptional in the Predynastic period, obviously because they were highly prized by tomb plunderers. According to E. Baumgartel (1960: 3), the beads from Tomb H17, together with those from H41 (discussed below), are the only gold beads known for the Naqada I period. The rarity of gold in undisturbed tombs of any period of the Predynastic indicates the importance of these two tombs from el-Mahâsna (cf. Baumgartel 1960: 3–6). For the composition analysis of the gold beads, see the Appendix.

The four palettes (Figs. 12–15, 20) it contained are another remarkable aspect of Tomb H17 (Ayrton & Loat 1911: pl. 13.3). Such finds in a single tomb are most exceptional, and only two other tombs are known to us that have a similar number of palettes. Four were found in Tomb a16 at el-Amra, and Tomb b62 from the same site contained five (Randall-McIver & Mace 1902: 19, 20–21, 37–39, pl. 8). One of the palettes from Tomb H17 is a miniature with a perforation at one extremity (Fig. 15, E.2929). It shows no traces of use for grinding and the striations from the fabrication are still visible. There is, however, some damage visible at the edges, indicating that it was originally part of a necklace or something similar and should be considered an amulet rather than a palette proper. Two palettes (Figs. 13–14, E.2928, E.2930) only show slight traces of use, but the third (Fig. 12, E.2927) has been used extensively for grinding on both sides, producing slight hollows in the centre on both

⁷ For the presence of turtle remains in the settlement at el-Mahâsna, apparently in a ritual context, see Anderson *this volume*.

⁸ Ayrton & Loat (1911: 28) state that the comb is made of ivory, but it is actually bone (determination courtesy of W. Van Neer in 1992).



Fig. 20. Palettes and beads from Tomb H17 (photo by R. Mommaerts).

faces. The extensive use of the object is further demonstrated by the breakage of one extremity, while the other shows traces of reworking. The vigorous usage of this object is even more noteworthy as it was originally decorated.⁹ The decoration consists of a series of lightly engraved snakes clearly visible on one side, but the other side was probably also decorated. The snakes were partially erased by the grinding of pigment and the 'destruction' of the snakes in this manner may have had apotropaic significance.¹⁰

⁹ The decoration on the palette was apparently not observed by the excavators and remained unnoticed until Frank Förster pointed out the decoration during a visit in 2007.

¹⁰ An extensive discussion of this palette is being prepared by the authors within a publication concerning all known decorated rhomboid palettes.

Tomb H41

Tomb H41 was one of the richest and most important tombs found at el-Mahâsna (Figs. 21–22, Ayrton & Loat 1911: 16, pls. 5.22, 16–17).¹¹ Although partially disturbed, a significant number of objects remained either in situ or in the fill of the tomb (Figs. 23–50). The tomb contained the remains of three individuals. According to the excavators, the skeleton of a woman was in the centre of the grave with the disarticulated skull and bones of a child in front of it. Behind the central skeleton was another heap of bones belonged to an adult, but the skull was missing. Ayrton and Loat attributed their condition to the result of plundering, but the difference in preservation between the burial of the woman and the two others makes this questionable. The tomb was certainly looted, but the disarticulation of the two skeletons may also have been caused when the tomb was opened to insert additional burials. Deliberate dismemberment is also a possibility (cf. Dougherty & Friedman 2008 for further references). In the case of Tomb H41, nothing more definitive can be said,

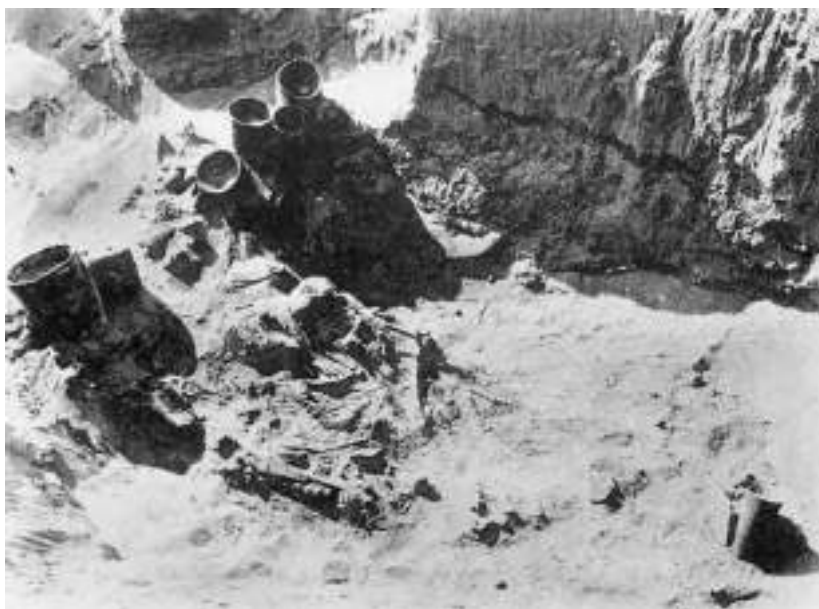


Fig. 21. Tomb H41 during excavation (Ayrton & Loat 1911: pl. 5.22).

¹¹ For a description of the tomb, see also Baumgartel 1960: 67–68.

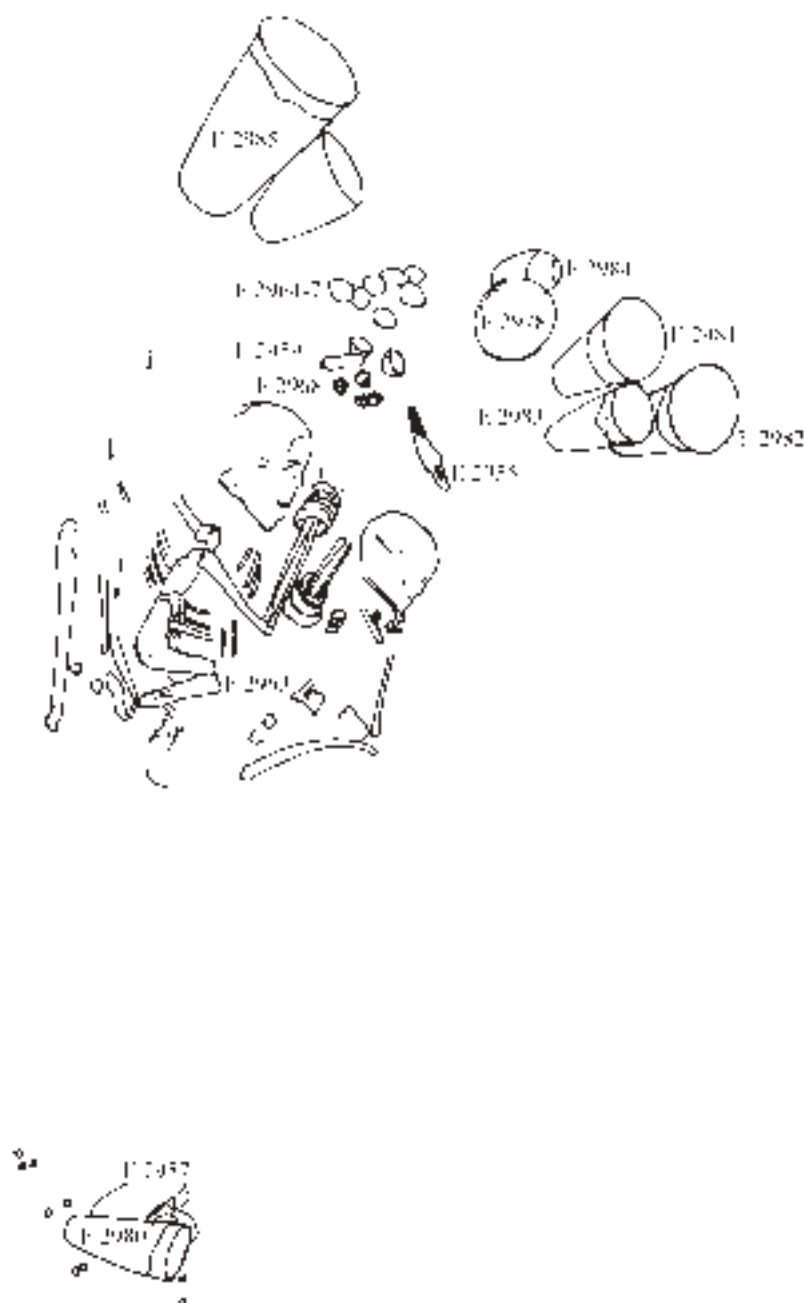


Fig. 22. Tomb H41 plan with reconstructed object placement.

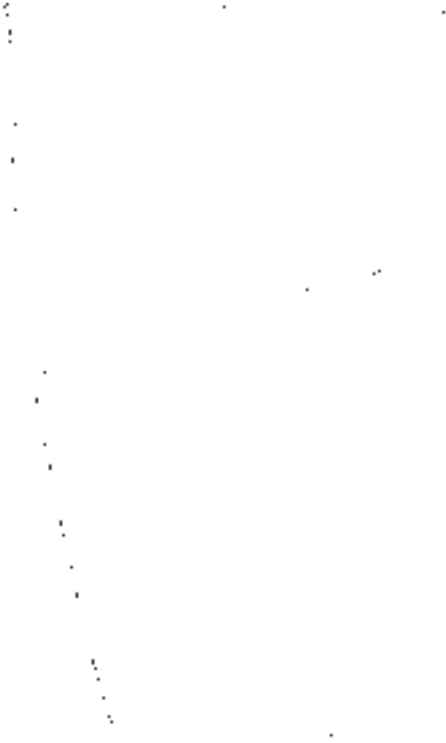


Fig. 24. Black-topped jar,
Brussels E.2985 (1:4).

Fig. 25. Black-topped jar,
Brussels E.2981 (1:4).

Fig. 26. Black-topped jar,
Brussels E.2983 (1:4).

Fig. 27. Black-topped jar,
Brussels E.2982 (1:4).

Fig. 28. Black-topped jar,
Brussels E.2980 (1:4).

Fig. 29. Black-topped jar,
Brussels E.2984 (1:3).

Fig. 30. Black-topped jar,
Brussels E.2977 (1:3).

Fig. 31. Polished-red bowl, Brussels E.2978 (1:3).

Fig. 32. Polished-red bowl, Brussels E.2979 (1:3).

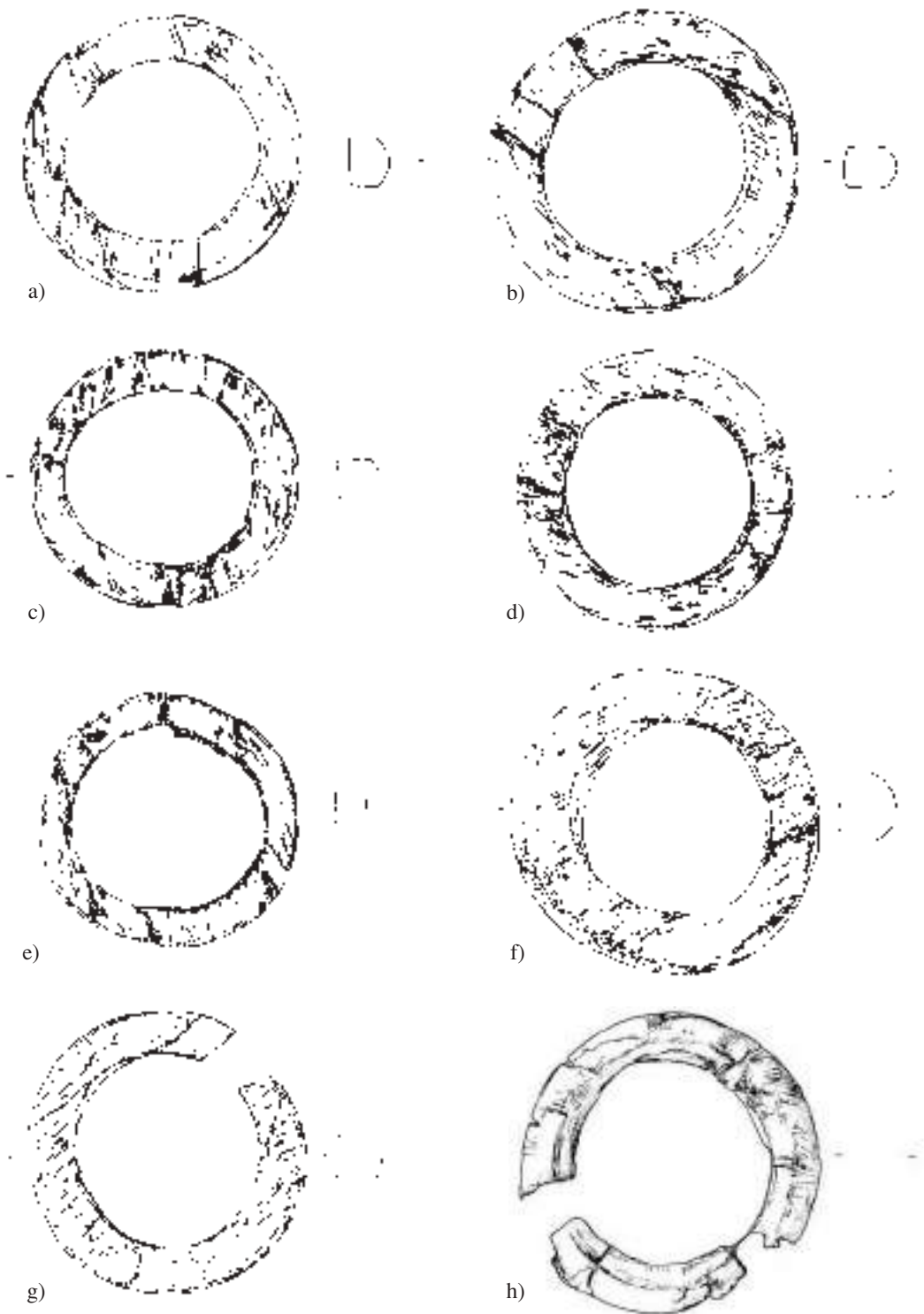


Fig. 33. Bone bracelets. a) Brussels E.2948. b) Brussels E.2949A
c) Brussels E.2949B. d) Brussels E.2950. e) Brussels E.2951.
f) Brussels E.2952. g) Brussels E.2953. h) Brussels E.2954 (1:2).



Fig. 34. Ivory comb, Brussels E.2955 (1:2).



Fig. 35. Ivory pendant,
Brussels E.2961 (1:2).



Fig. 36. Clay tusk,
Brussels E.2959 (1:2).



Fig. 37.



Fig. 38.



Fig. 39.



Fig. 40.



Fig. 41.

Fig. 37. Carnelian beads, Brussels E.2975 (1:1).

Fig. 38. Carnelian beads, Brussels E.2976 (1:1).

Fig. 39. Carnelian beads, Brussels E.2973 (1:1).

Fig. 40. Carnelian beads, Brussels E.2970 (1:1).

Fig. 41. Faience beads, Brussels E.2969 (1:1).

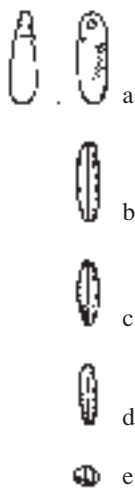


Fig. 42. Beads,
Brussels E.2971.
a) silver.
b-e) gold (1:1).



Fig. 43. Beads,
Brussels E.2972.
a) faience.
b-e, g) silver.
f, h) haematite (1:1).



Fig. 44. Slab of selenite, Brussels E.2956 (1:3).

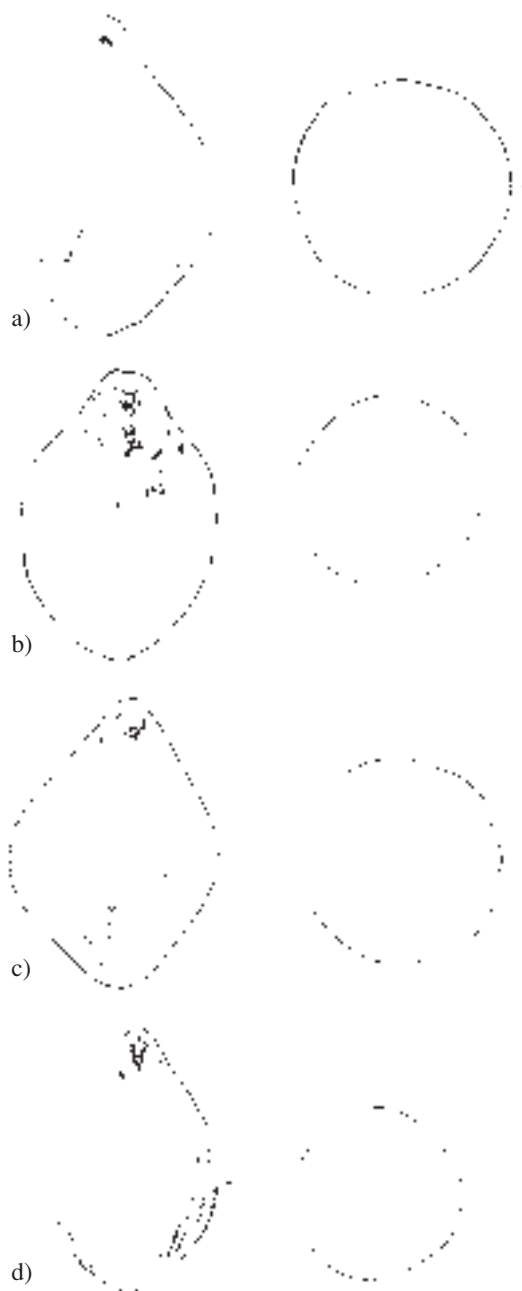


Fig. 45. Pottery rattles. a) Brussels E.2964. b) Brussels E.2965.
c) Brussels E.2966. d) Brussels E.2967 (1:2).

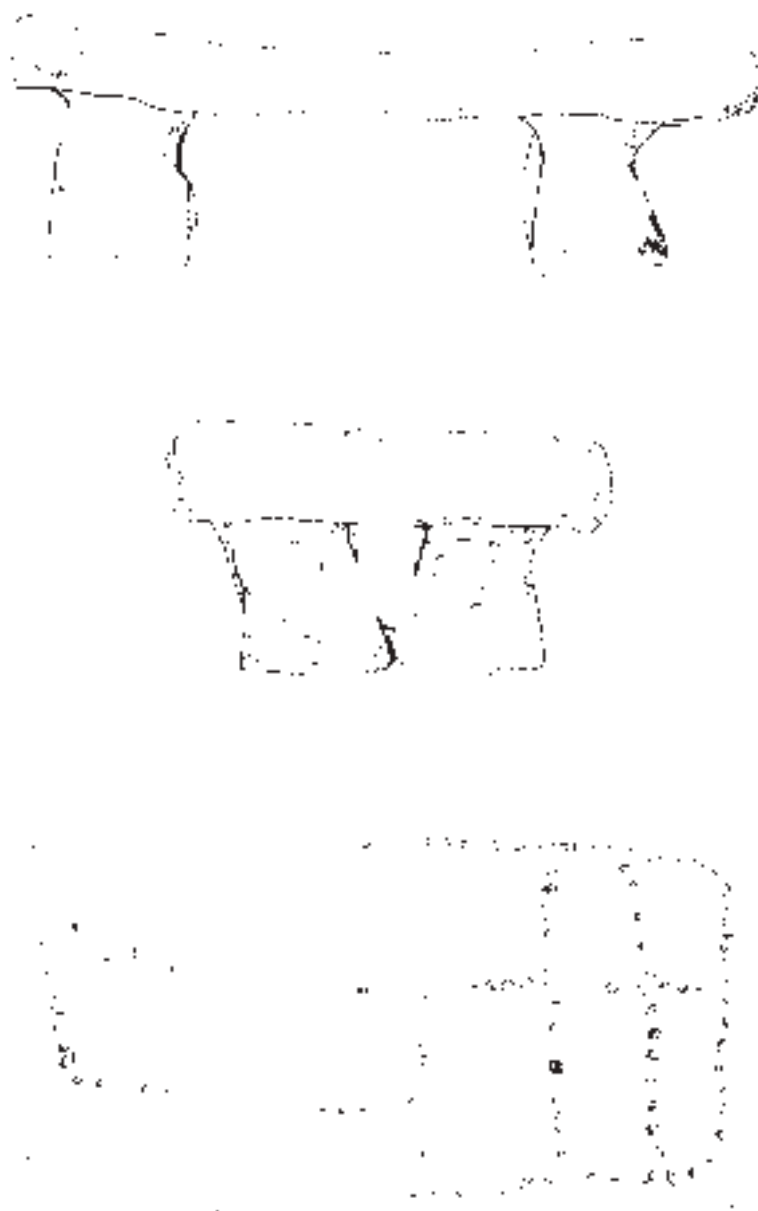


Fig. 46. Clay table, Brussels E.2957 (1:2).

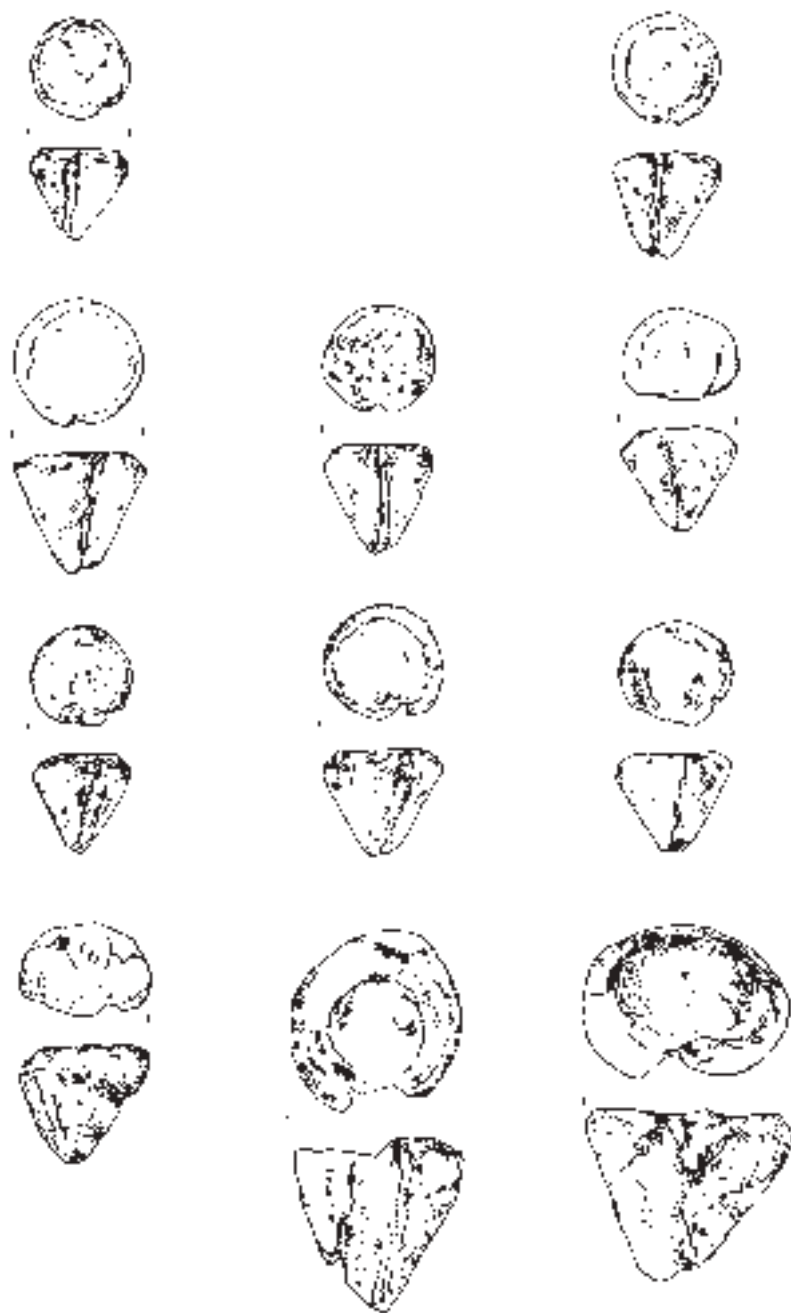


Fig. 47. Clay cones, Brussels E.2957b (2:3).

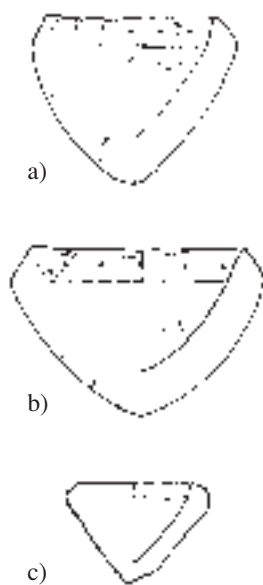


Fig. 48. Pottery cones. a) Brussels E.2958. b) Brussels E.2962.
c) Clay cone, Brussels E.2960 (1:2).

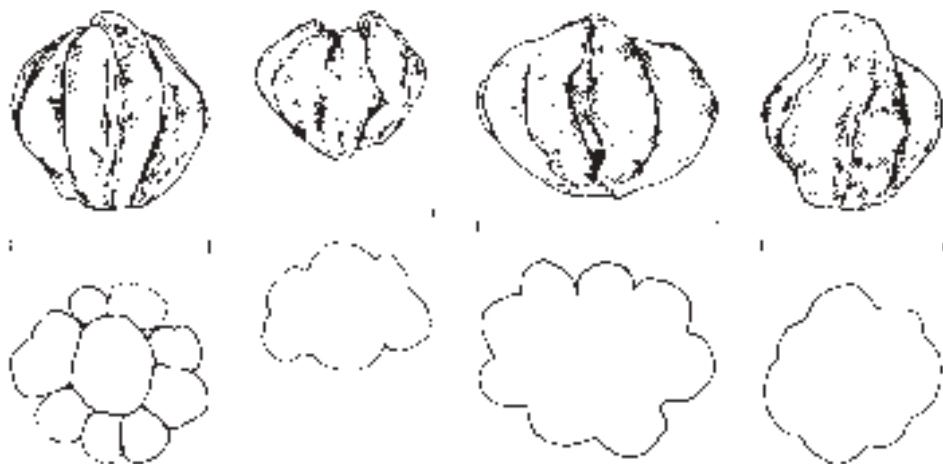


Fig. 49. Garlic models in clay, Brussels E.2968 (4:5).



Fig. 50. Vegetable paste figurine, Brussels E.2963 (2:5).

given the lack of detailed information on the circumstances at discovery. The fact that particular attention was given to the burial of at least the central body is obvious not only from the important funerary equipment found with it, despite the looting of the tomb, but also by the large masses of resin found around its neck and feet (Ayrton & Loat 1911: 16). Unfortunately, the nature of the resin is not specified, but it may be considered as part of the body treatment before or during burial. The main reason for its usage may have been its sweet smell, the same reason it was also used in mummification during Dynastic times. At Hierakonpolis, resin has been found in many burials at the 'workers cemetery' HK43, but in far greater quantities at the elite cemetery HK6 (Friedman et al. this volume). The large amount found in Tomb H41 again confirms the social importance of the tomb owners.

Ayrton & Loat (1911: 16) mention eight Black-topped vessels (Figs. 24–30) and one Polished-red bowl (Fig. 31). There are indeed eight Black-topped vessels inventoried in Brussels as coming from Tomb H41 (E.2977, E.2979–2985), but one is an oval bowl (Fig. 32, E.2979) that does not correspond to any of the types mentioned by excavators. Of the eight vessels listed in the publication as coming from the south-west end of the tomb, seven can be identified in Brussels: B25h (Fig. 24, E.2985); B25j (Fig. 26, E.2983); B26d (Fig. 28, E.2980); B27m (Fig. 27, E.2982); B52a (Fig. 25, E.2981); B62d (Fig. 29, E.2984); B65b (Fig. 30, E.2977); and P11d (Fig. 31, E.2978). The vessel of type B26b mentioned twice (one was also found in the northern part of the tomb) by the excavators has no match in Brussels. The problem becomes even more complex when an attempt is made to equate the vessels in Brussels with those visible on the excavation photograph (Figs. 21–22, Ayrton & Loat 1911: pl. 5.22). Another Black-topped jar can be seen to the right of the large jar E.2985, but this vessel is not in Brussels, and it is not a beaker of type B26b. On the contrary, the jar in the photograph is a restricted vessel with a large aperture, similar to Petrie's B74 series. Obviously, an error has occurred, but it can not be ascertained whether this was made when Ayrton and Loat described the tomb, during the preparation of the shipment to Brussels or during registration in Brussels.

Most of the vessels can be re-positioned thanks to the published photograph of the tomb. Almost all were found in the southern part of the tomb, 'above' the heads of the deceased. A single vessel stood in the southern part of the tomb. Originally, more pottery must have been present because the excavators mention a large number of sherds distributed throughout the fill (Ayrton & Loat 1911: 16).

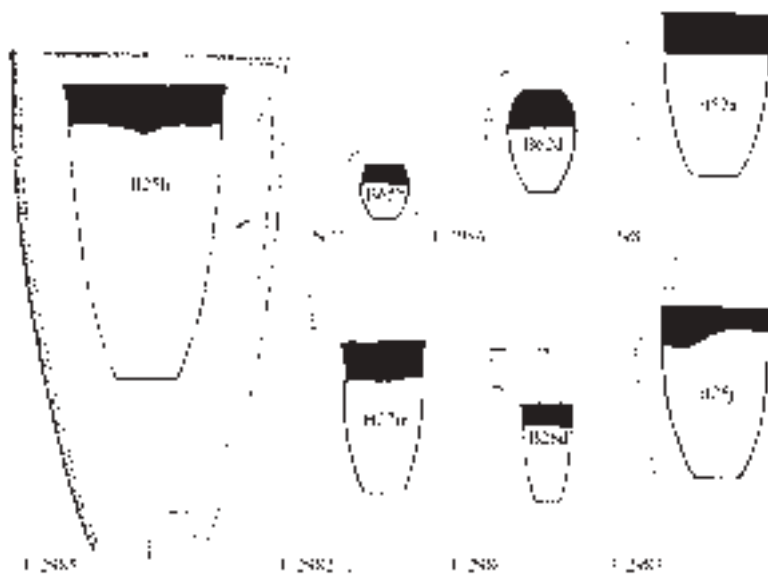


Fig. 51. Petrie types attributed by Ayerton and Loat.

When the drawings of the actual vessels are compared to the types attributed to them in the publication, it is not difficult to see that a certain ‘liberty’ was taken during type identification (Fig. 51). This lack of rigour and the subjective nature of type attribution have been recognised for some time (e.g., Kaiser 1957: 76, note 10; Hendrickx 1996: 44–45). It is a problem that hampers all detailed chronological analysis of early excavations, and it illustrates once again the importance of chronological sequences derived from recently excavated material (e.g., Buchez this volume; Hartmann this volume).

All of the pottery vessels show traces of use and some are rather severely damaged at the rim (cf. Fig. 23). Flaking of the haematite slip is also visible in several cases. As most pottery found in Predynastic tombs, clearly these vessels had been used in daily life.

On the well-preserved central skeleton, seven bracelets (Fig. 33) were found in situ (Fig. 65), four on the lower right arm and three on the left (Ayerton & Loat 1911: pl. 16.2). All of them are broad, relatively heavy bracelets made of bone, but two of them are thicker than the others (Fig. 33f, h, E.2952 and E.2954); these were the upper ones on each arm.

Series of multiple bracelets are well-attested for the Predynastic period,¹² but those from Tomb H41 are among the most impressive examples. Most Predynastic bracelets are rather thin and light, while those from Tomb H41 together weigh at least 400 g,¹³ and would have hindered free movement in life, if all were worn at the same time. The diameter indicates that the bracelets were worn on the lower arm and fitted rather tightly.

Another element of personal adornment is a large comb made of elephant ivory (Figs. 34, 52–53, E.2955).¹⁴ The comb is decorated with the representation of an animal, the head of which was unfortunately already missing when discovered (Fig. 52, Ayrton & Loat 1911: pl. 17.2 middle). Since that time, even more damage has occurred (compare Fig. 34 with Fig. 52). The animal depicted may have been a giraffe, but considering the limited number of examples of combs decorated with this animal (Naga ed-Dêr 7626, Lythgoe & Dunham 1965: fig. 185f; Aswan inv. 160, Gaballa n.d. fig. 49b; New York MMA 23.2.5, Kantor 1974: fig. 198a) and the more important number of gazelle representations (e.g., Boston 13.3509, Freed et al. 2003: 44; Oxford AM 1895.941, 1895.942–943, Payne 1993: nos. 1902, 1904–1905; UC 15177, Petrie 1920: pl. 8.1; UC 15461–15462, unpublished), the latter is probably to be preferred (Fig. 53).

Another ivory object is a tusk-shaped pendant, the tip of which is broken off (Figs. 35, 52, E.2961). The three grooves around the centre and the one near the broken tip were originally filled with an unidentified black paste. This type of object occurs frequently in Naqada I–II tombs (cf. Hendrickx & Eyckerman this volume), but generally in pairs. More curious is another pendant, cylindrical in shape with a perforation at the top, below which is a slight protrusion (Figs. 35, 52, 54, E.2959). It is modelled in Nile silt and was originally covered with a white pigment or

¹² Other tombs containing series of bracelets include: Abadiya B101 (Payne 1993: nos. 1795–1898); Abusir el-Meleq 54e10 (Scharff 1926: 145); Abusir el-Meleq 1052 (Scharff 1926: 155); Abydos M14 (Petrie 1902: 16); Armant 1579 (Mond & Myers 1937; Payne 1993: nos. 1799–1803); Badari 3802 (Brunton & Caton Thompson 1928: 51, pls. 32, 48.6); Ballas Q645 (Payne 1993: nos. 1785–1794); Elkab 60 (Hendrickx 1994b: pl. 28); Hammamiya 1673 (Brunton & Caton Thompson 1928: pl. 32); Helwan 659.H (Saad 1947: 26, pl. 12b); Hierakonpolis Fort Cemetery 138 (Adams 1987: 141); el-Mahâsna H29 (Ayrton & Loat 1911: pls. 11.2, 12.2); Mesaid 586 (Reisner 1936: 375, fig. 1); Naqada 1587 (Petrie 1920: 31, pl. 31.27); Tarkhan 149 (Petrie et al. 1913: 11); Zawiyet el-Aryan Z118 (Dunham 1978: 16; Reisner 1936: fig. 30).

¹³ The weights of the best preserved bracelets are: 53 g (E.2949A), 37 g (E.2950) and 96 g (E.2952). The latter is one of the thicker bracelets.

¹⁴ Identification courtesy of W. Van Neer in 1992.

Fig. 52. Ivory pendant,
ivory comb, and clay tusk
(Ayrton & Loat 1911:
pl. 17.2).

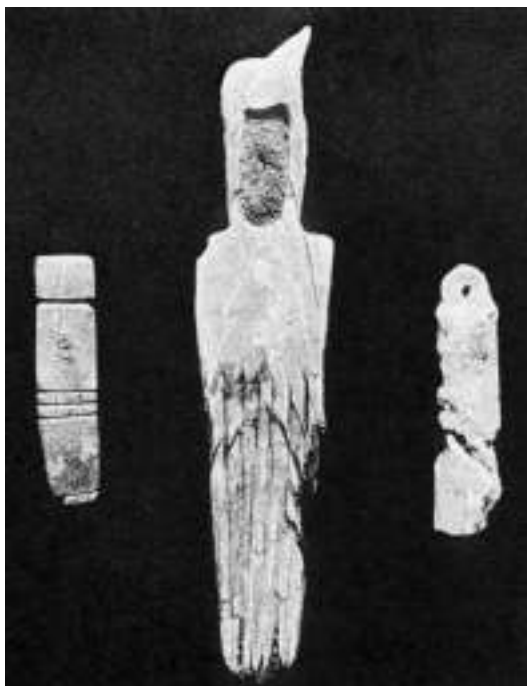


Fig. 53. Artistic interpretation
of comb E.2955 (1:2).



Fig. 54. Reconstruction of clay
tusk E.2959 (1:2).

slip (Ayrton & Loat 1911: pl. 17.2). Similar objects in (hippopotamus) ivory and bone from the Naqada I–II period are well known (cf. Hendrickx & Eyckerman this volume), but imitations are very rare and, as far as we are aware, are known only from Cemetery U at Abydos (Tombs U-416, U-627, Dreyer et al. 2003: 75, 78; Hartung this volume: fig. 12).

Equally remarkable are the necklaces and bead bracelets from this tomb (Fig. 55, Ayrton & Loat 1911: pl. 16.3), although, because an unspecified part of the beads was found in the fill, the composition for all of them is not necessarily the original one (Ayrton & Loat 1911: 16). Among them are two necklaces of discoid carnelian beads (Figs. 37–38, E.2975–2976), a bracelet (?) of similar beads (Fig. 39, E.2973), another very small bracelet (?) of carnelian (?) (Fig. 40, E.2970) and a necklace of long tubular faience beads (Fig. 41, E.2969). The most interesting, however, is a ring (?) (Fig. 42, E.2971) consisting of seven elongated gold beads (Fig. 42b–d), a rhomboid gold bead (e) and a silver pendant (a) (see analysis in the Appendix). In addition there is a bracelet (Fig. 43, E.2972) composed of a tubular faience bead (a) and one large round (f) and one small (h) haematite bead, while all of the other beads are made of silver. Of these, two are large and elongated (e), one is smaller of similar shape (b), one is cone-shaped (g), two are barrel-shaped (c) and two are round (d).¹⁵ Finally, one necklace (Fig. 56, E.2974) is made of small shells (*Pyrene testudinaria*), which originated from the Red Sea.

A final object that is probably related to personal adornment is a curious slab of selenite (Figs. 44, 57, E.2956). It is a naturally exfoliated slice of selenite, the cortex of which was preserved as a ‘frame’. As the soft stone is not suitable for grinding pigments, it cannot be considered a palette. The only known parallels from Upper Egypt are the slab in the important Badarian Tomb 569 at Badari (Friedman 1999) and two examples from Hierakonpolis (surface find HK11 and HK6 Tomb 26; Friedman 2008: 1181). We can only echo the statement of R. Friedman (1999: 8)

¹⁵ A note in the archives of the Egyptian collection in Brussels mentions for E.2972: “Le professeur Huybrechts de Liège a fait l’analyse des perles en juin 1921; en voici le résultat: Elles contiennent: silici (SiO₂): 2,55% + argent métallique: 4,07%; oxyde ferrique (Fe₂O₃): 2,55% correspondant à 1,67% de fer + des traces de calcium à l’état de carbonate. Les 90,83% restant sont constitués par des composés résultant de l’altération de l’argent, notamment du chlorure d’argent (soluble dans l’ammoniaque et reprécipitable par l’acide sulfurique) et un peu de carbonate d’argent (l’enduit des perles fait effervescence avec les acides). Les teneurs en silice et en oxyde ferrique sont les mêmes actuellement; mais c’est un pur hasard; car dans l’objet non altéré, le fer ne se trouvait pas à l’état d’oxyde ferrique, mais à l’état de fer métallique dont le poids est égal à 0,7 de celui de l’oxyde; les proportions de fer et de silice dans l’argent métallique n’étaient par conséquent pas égales.”

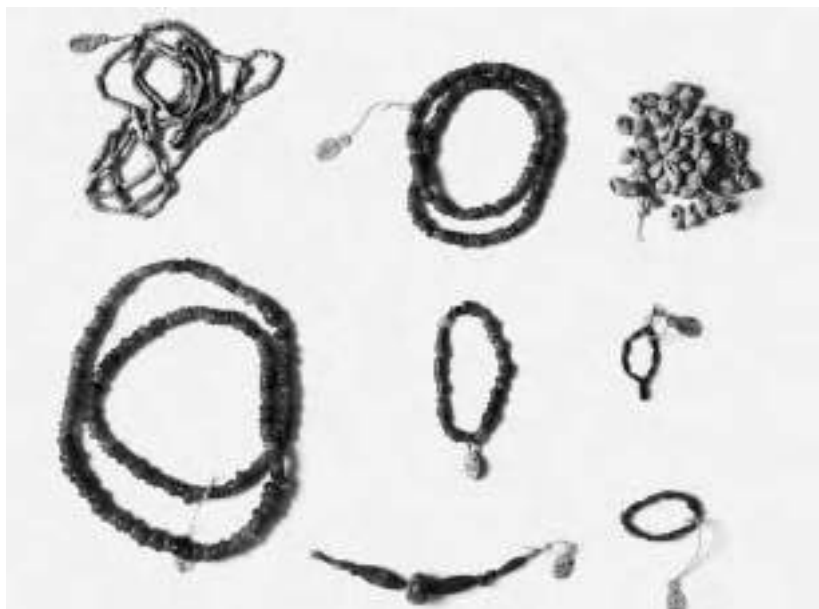


Fig. 55. Necklaces and bead bracelets (photo by R. Mommaerts).



Fig. 56. Shell necklace, Brussels E.2974
(photo by R. Mommaerts).



Fig. 57. Selenite slab, Brussels E.2956 (photo by R. Mommaerts).

that their “function or purpose remains a mystery.” Similar objects, but with perforations, were found at Maadi, but again without indication of their use (Rizkana & Seeher 1988: 53–54, pl. 7)

Other objects for which the purpose is not entirely clear are seven ceramic rattles. Only four were sent to Brussels (Fig. 45, E.2964–2967), the three others are now in Cairo (Fig. 58, Ayrton & Loat 1911: pl. 17.3). The rattles were made from Nile silt, coated with a polished haematite slip and are identical in fabric to Polished-red pottery. Inside the rattles must be some small pebbles or seeds, but as none of them are broken, what exactly they contain cannot be verified. Each rattle has a small perforation at one extremity allowing the object to be hung on a string. They show evidence of some damage, especially as scratches on the surface, which might be the result of use. Parallels for these rattles are known

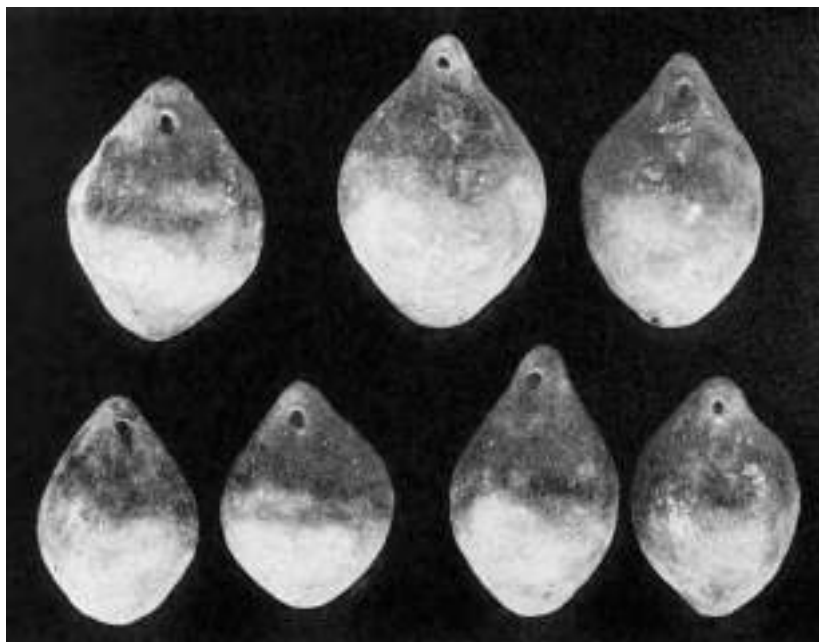


Fig. 58. Pottery rattles (Ayrton & Loat 1911: pl. 17.3).

from several sites, ranging in time from Naqada IC to the Naqada III period.¹⁶ Rattles have been found in both tombs and temple deposits and their function must be related to a ritual of some kind. Unfortunately, the find circumstances do not allow a precise determination of the context in which the objects may have been used. Their absence in settlement remains corroborates to some extent their proposed ritual function.

In the northern part of the tomb, a small, unfired Nile silt table (Fig. 46, E.2957) was found standing upright against a Black-topped jar (Ayrton & Loat 1911: pl. 5.22, right). As this part of the tomb was heavily disturbed,

¹⁶ Rattles have been found in the following tombs: Abadiya B111, not dated (Oxford AM E.2879, Payne 1993: no. 808); Abydos U-560 (Hartung this volume: fig. 10a); Gerzeh 27, Naqada IIC (London, UC 10748, Petrie 1912: 24, pl. 6); Hierakonpolis, Naqada III? (London, UC 15008, Adams 1974: no. 147); Naqada 1613, Naqada IC (Oxford AM 1895.467, Payne 1993: no. 418; Graff 2009: no. 139); Naqada 1615, Naqada IC (Oxford AM 1895.790, Payne 1993: no. 575); Sahel el-Baghlieh, not dated (Cairo CG 11504, Quibell 1905: no. 11504); Tell el-Farkha, temple, four examples, Naqada III (Chłodnicki & Ciałowicz 2002: pl. 9; Ciałowicz 2006: photo 20–21); Tell el-Farkha cemetery, several fragmentary examples, Naqada III (Ciałowicz 2006: 350); Unprovenanced, not dated (Amsterdam, Allard Pierson Museum 13821); Unprovenanced, not dated (London UC 45288).

this may not have been the original position of the table. Because of the rectangular divisions indicated by incised lines on the table top, it was identified as a *senet* gaming table by the excavators (Ayrton & Loat 1911: 30, pl. 17.1, 4), and it is for this reason that the nine small unfired Nile silt cones and two somewhat larger examples found in the tomb were considered to be gaming pieces (Fig. 47, E.2957).¹⁷ Although this interpretation was generally accepted (Pusch 1979: 156–158; Hendrickx 1994a: 40–41; Payne 1993: 235), it should now be rejected in the light of recent discoveries made at Abydos (Hartung in Dreyer et al. 1998: 97–98, this volume) and Hierakonpolis (Friedman 2003; Friedman et al. this volume), where these cones have not been found in sufficient quantities to represent gaming pieces. U. Hartung (this volume) considers the cones to be models imitating the seed cases of poppies. This was rejected by R. Germer (2008: 310) and also questioned by Friedman (2003). In several cases, cones have been found in leather bags or with leather adhering to them and in combination with plant remains or a vegetable paste. Until detailed investigation is undertaken, speculation about the function and meaning of the cones remains inconclusive.¹⁸

The circumstances of discovery indicate that the link between the table and the cones is highly questionable. Only a few of the cones were found in the vicinity of the model table. Several, including the two largest, were found among the bones of the second adult (Ayrton & Loat 1911: 16, 30). The table may still represent a gaming board, but this too is no longer a certainty. It may just as plausibly have been a table for the presentation of the model garlic found in the tomb (see below). Considering the rather careless manner in which it was made, it could be a model rather than a functional object.

Also made from unfired clay is a hollow cone with perforations around its rims (Fig. 48c, E.2960). It is in a poor state of preservation, but some remaining traces of the surface indicate that it was originally red-slipped. Two similar, somewhat larger, cones also from the tomb (E.2958, E.2962, Ayrton & Loat 1911: pl. 16.1, Figs. 48ab, 60) are made from red-slipped pottery and are far better preserved. They are identical to the two red-slipped examples from el-Mahâsna Tomb H45 (Ayrton & Loat 1911: 28, pl. 13.4), now in Bolton (1909-76:04, Thomas 2004: 1051, fig. 3).

¹⁷ The table has been displayed with the ‘gaming pieces’ since its arrival in the RMAH. The interpretation of the cones as gaming pieces was considered so certain that a ‘missing’ piece was made for the display.

¹⁸ In depth investigation of the cones and the organic materials with which they have been found is planned by Tanja Pommerening, Elena Marinova and Stan Hendrickx.

Although similar objects are known from many sites, they have never been satisfactorily explained. As they also occur in combination with leather, they may be larger versions of the solid clay cones discussed above, but their function also remains unknown.

Tomb H41 contained a number of garlic models (Ayrton & Loat 1911: 19, 29). Four complete (Fig. 69, Ayrton & Loat 1911: pl. 16.1, centre) and two fragmentary examples were recovered (Figs. 49, 59, E.2968a–f.). All were made of unfired Nile silt and covered with white pigment, of which now only faint traces remain. They were composed of individually modelled cloves placed around a cylindrical centre piece (cf. Fig. 59, lower right). Parallels are known from Tombs H23 and H85 at el-Mahâsna (Ayrton & Loat 1911: 21, 29), among others, and especially from several tombs in Cemetery U at Abydos, where they occur in conjunction with models of several different types (Dreyer & Polz 2007: fig. 260; Hartung this volume). The garlic models from Abydos are made in an identical manner to those from el-Mahâsna.

No symbolic meaning for garlic is known for Predynastic or Dynastic Egypt (cf. Germer 2008: 190–191). Although it is of course possible that the garlic models were placed in Predynastic tombs because of their nutritional value, it seems more likely that it was because of their perceived medicinal value (see Hartung this volume).

Finally, the most fascinating object from Tomb H41 is the figurine, which was found in situ on the body of the woman in the centre of the grave (Fig. 65, Ayrton & Loat 1911: pl. 16.2). The figurine was in a very poor state of preservation when found and the excavators relate that only the upper part of it could be saved by using copious quantities of paraffin wax (Ayrton & Loat 1911: 16). The lower part of the legs, which can clearly be distinguished on the excavation photograph (Fig. 65), could not be salvaged. This is most unfortunate because this figurine is the only one with known provenance to have its lower legs in a flexed position. The photograph also shows that the figurine was broken in several parts when found. These were recovered separately and restored afterwards to the state shown by Ayrton & Loat (1911: pl. 17.1; Figs. 60–61), but the figurine is no longer in this condition. Although there is no record of it, another restoration must have taken place, probably upon arrival of the objects in Brussels in 1909. This restoration did not take into account the excavation records and the remains of the upper legs were placed at an angle that is far wider than that shown on the excavation photograph (Fig. 62).¹⁹

¹⁹ Strangely, this was not noted by Ucko (1968: 96, no. 51).



Fig. 59. Garlic models, Brussels E.2968 (photo by R. Mommaerts).



Fig. 60. Figurine, garlic models and hollow cones (Ayrton & Loat 1911: pl. 16.1).



Fig. 61. Figurine,
artistic reconstruction
(after Ayrton & Loat 1911: pl. 16.1).



Fig. 62. Figurine, Brussels
E.2963, in its present state
(photo by R. Mommaerts).



Fig. 63. Figurine, Brussels
E.2963, detail of hands
(photo by R. Mommaerts).



Fig. 64. Figurine,
artistic reconstruction of upper body.



Fig. 65. Central burial with figurine and bracelets in situ (Ayrton & Loat 1911: pl. 16.2).



Fig. 66. Reconstruction of the central burial in Tomb H41.

Presently, a gap-filled section is visible between the hips and the torso. Presumably the restorer was ‘inspired’ by the more typical Predynastic figurines already in the museum at that time (cf. Hendrickx 1994a: 26–27), which do not have their lower legs indicated separately.

The inventory card in the Egyptian collection of the RMAH, with the description made in 1913, is also problematic. Here, the figurine is mentioned as “nue, couchée sur un côté, sans bras ni jambes, aux seins pendants, à la taille démesurée”. The most important error in this description concerns the pendant oversized breasts. A careful look at the figurine (Fig. 63) and the original publication photograph (Fig. 60) shows that the breasts are actually arms bent up before the chest. This position relates the figurine to the many examples that have their arms above their head (Ucko 1968).²⁰ It is presumably for reasons of stability, considering the material used (see below), that the arms were not placed above the head, but bent on the chest, as is also the case for a few other figurines (e.g., Ucko 1968: nos. 30, 190–191). Another new observation about the object, which is

²⁰ For discussion and interpretation of this pose, see Hendrickx 2002.

confirmed by the excavation photograph, is that the hair, or rather the wig, was added separately. The front part of the wig has disappeared; on the sides and the back, the hair may originally have been longer.

Although at present entirely black, the figurine is reported by Ayrton & Loat (1911: 16) to have been painted dark red. They noted at the same time that it was made of pottery, a claim that was never subsequently questioned. Baumgartel (1960: 67) says it was made of clay, and in his corpus of Predynastic figurines, P.J. Ucko (1968: 16) states that it is made of “black baked clay.” In reality, however, the figurine is made of a fine vegetable paste and modelled over two thin reed or wood sticks, which were observed during recent restoration.²¹ The figurine is so remarkable that it deserves to be discussed further in the context of related objects.

Figurines made of vegetable paste

It has occasionally been noted in the past that some Predynastic figurines were made of vegetable paste modelled over reeds or sticks; however, this has been rarely discussed in further detail. Baumgartel (1960: 65–71) completely ignores vegetal paste when discussing human figurines. Ucko (1968) notes the presence of vegetable paste for a number of figurines and tabulates its chronological presence and the sex of the figurines involved (Ucko 1968: 185–186), but does not discuss the reason for using this particular material. Most recently, M. Stoof (2010: 51–57) considers the possibility that the reeds or sticks on which the figurines are modelled represent human bones. Although ethnographic parallels exist for this concept, the idea seems unlikely for the Predynastic examples, for which the vegetable paste is most probably the essential element and the sticks are only technical necessities for manufacture. Stoof, however, does not discuss the possible implications of the use of vegetable paste.

The number of figurines known to be made of vegetable paste is relatively limited (Table 1), but this may well be a gross under-estimation of their frequency since vegetal paste was frequently mis-identified as pottery, especially when covered with red slip. Furthermore, the state of preservation of some examples demonstrates their fragility, and there can be no doubt that many figurines did not survive in plundered tombs. Even in well-preserved burials, they may have decayed beyond recognition and been missed by the excavators. In some cases, descriptions seem to refer

²¹ Unfortunately no photographic documentation was made during this restoration.

to this type of figurine, but no further information is provided to substantiate their composition (e.g., el-Amra a56, Randall-McIver & Mace 1902: pl. 5.8, “dolls”; el-Amra a118, Randall-McIver & Mace 1902: pl. 5.2, “mud sticks [dolls?]”).

A detailed examination of the vegetable paste has never been undertaken and, for conservation reasons, this was not possible for the figurine in Brussels either. As far as can be observed, the Brussels figurine is composed of a material with very fine, short vegetable particles. The large majority of the figurines with known provenance have been found in cemeteries. There are only very few Predynastic human figurines from settlement sites, but these appear to be made from Nile silt and the vegetable paste is not attested.²² The seven (fragmentary) figurines found at el-Mahâsna (Anderson 2006: 216–221, 283–289, this volume: fig. 10) are all made of Nile silt and six out of seven were unbaked. From this limited evidence no firm conclusions can be reached, but at present it seems that figurines made of vegetable paste were restricted to tombs. One may wonder whether objects made of such a fragile material could have served any purpose in daily life (e.g., toys), since they would hardly have withstood manipulation. Instead, based on the figurine from Tomb H41, it seems that such objects were made especially for the grave and were placed in the tomb immediately after modelling (see also Hartung this volume). The figurine from H41 is deformed and bends to the right, a condition that could only have occurred if the figurine was not fully dried when it was deposited in the grave on the body of the woman.

It should also be noted that the animal figurines and model objects frequently found in Naqada I–early Naqada II tombs in the wider Abydos area are made of unfired clay, pottery or bone/ivory, but only very rarely of vegetable paste (see Hartung this volume). As far as can be ascertained at present, the use of vegetable paste for figurines is mainly restricted to human representations in a funerary context.

Almost all of the vegetable paste figurines are female, but the ones from el-Amra a18 and Naq’ el-Hai K.602 are definitely male (see Table 1). However, an association between the sex of the figurine with the sex of

²² Human figurines from settlement contexts include: Adaima, 3001/24 surface (Midant-Reynes & Buchez 2002: 454, 474, pl. 4.23.2); Badari, area 3200 (Brunton & Caton Thompson 1928: pl. 58.5; Ucko 1968: no. 85); Badari, settlement 3000 (Brunton & Caton Thompson 1928: pl. 58.5; Ucko 1968: no. 86); Hierakonpolis, Nekhen (Adams 1995: no. 116); Hierakonpolis (Ucko 1968: nos. 81–83); Hierakonpolis, Nekhen 10N5W (Hoffman 1989: fig 1.3); Mostagedda (Brunton 1937: pls. 24.32, 26.1–2); Naq’ el-Qarmila (unpublished, Maria Gatto pers. comm.). See also Anderson this volume; Di Pietro this volume; Hill & Herbich this volume.

Site, Tomb	Museum	Paste	Bibliography
Abadiya B101	AM E.978	Ucko 1968 no. 9 (on reed)	Payne 1993: no. 33
Abadiya B101	AM E.979	Ucko 1968 no. 8 (on reed)	Payne 1993: no. 34
Abadiya B101	AM E.980	Adams ms (on reed)	Payne 1993: no. 36
Abadiya B101	AM E.981	Ucko 1968 no. 10 (on reed)	Payne 1993: no. 35
Abydos U-178	Abydos	—	Hartung this volume
Abydos U-439	Abydos	—	Dreyer et al. 2003: pl. 15d
Abydos U-627	Abydos	—	Hartung this volume
Badari 3740	UC 19628	Ucko 1968 no. 4 (on stick)	Brunton & Caton Thompson 1928: 51
el-Amra a41	Cambridge AAM	Ucko 1968 no. 17	Randall-McIver & Mace 1902: 16
el-Amra a94	Cambridge AAM	Ucko 1968 no. 18 (on reed)	Randall-McIver & Mace 1902: pl. 12.7a-c
Gebelein (?)	Berlin 14161	Ucko 1968 no. 89 (on reed)	Scharff 1929: pl. 15.70
Gebelein (?)	Berlin 14162	Ucko 1968 no. 90 (on reed)	Scharff 1929: pl. 15.71
Gebelein (?)	Cairo JE 26618A	Adams ms (on reed)	Unpublished
Gebelein (?)	Cairo JE 26618B	Adams ms (on reed)	Unpublished
Gebelein (?)	Cairo JE 26618C	Adams ms (on reed)	Unpublished
Naqada 271	AM 1895.128	Ucko 1968 no. 32 (on reed)	Payne 1993: no. 30
Naqada 1413	UC 4600	Ucko 1968 no. 40 (on reed)	Ucko 1968: no. 40
Naqada 1413	UC 4601	Ucko 1968 no. 41 (on reed)	Ucko 1968: no. 41
Naqada 1488 ²³	AM 1895.1226	Ucko 1968 no. 45 (on reed)	Payne 1993: no. 32

²³ The figurines are not mentioned by Petrie in his notebook entry for Naqada Tomb 1488.

Site, Tomb	Museum	Paste	Bibliography
Naqada 1488	AM 1895.1227	Ucko 1968 no. 46 (on reed)	Payne 1993: no. 31
Naqada 1503	UC 19629	Ucko 1968 no. 43 (on reed)	Ucko 1968: no. 43
Naqada 1908 ²⁴	UC 5059	4 reeds covered with vegetable paste	UC Online Catalogue
Naq' el-Hai K602	Boston 13.3815	on reed	MFA Online Collections Database
Unknown	Berlin 14597	Ucko 1968 no. 161 (on reed)	Scharff 1929: pl. 15.72
Unknown	UC 16104	Ucko 1968 no. 93 (on stick)	Petrie 1920: pl. 45.29
Unknown	UC 16105	on stick	Unpublished
Unknown	UC 16106	Ucko 1968 no. 95 (on stick)	Petrie 1920: pl. 45.30
Unknown	New York MMA 10.130.2583	on stick	Unpublished

Table. 1. Vegetable paste figurines (partially based on an unfinished manuscript (ms) by the late Barbara Adams).²⁵

Catalogue of objects in Brussels

el-Mahâsna Tomb H17

Brussels inv.	Description	Ayrton & Loat 1911	Excavator object no.	Fig.
E.2922	Polished-red bowl	pl. 31. P11g	A	8
E.2923	Polished-red oval bowl	pl. 38. F12	C	5
E.2924	Polished-red oval bowl	pl. 38. F12a	E	6

²⁴ The objects are not mentioned by Petrie in his notebook entry for Naqada Tomb 1908.

²⁵ Stooft (2010: 52–54) lists a few more figurines as being made of vegetable paste, but according to the information available, these are actually made of clay. The figurines in question are Oxford E.984 (Stooft 2010: no. 278), Matmar 2643 (Stooft 2010: no. 286) and Oxford E.1059 (Stooft 2010: no. 288).

Brussels inv.	Description	Ayrton & Loat 1911	Excavator object no.	Fig.
E.2925	Black-topped oval bowl	pl. 38. F12b	F	4
E.2926	Polished-red oval bowl	—	G	7
E.2927	Palette	pl. 13.3	H	12
E.2928	Palette	pl. 13.3	J	13
E.2929	Palette	pl. 13.3	K	15
E.2930	Palette	pl. 13.3	L	14
E.2931	Beads	pl. 13.3	—	11
E.2935	White cross-lined bowl	—	D	9, 16, 17
E.2943	Comb	pl. 13.3	—	10

el-Mahâsna Tomb H41

Brussels inv.	Description	Ayrton & Loat 1911	Excavator object no.	Fig.
E.2948	Bracelet	pl. 16.4 lower	—	33a
E.2949A	Bracelet	pl. 16.4 upper	—	33b
E.2949B	Bracelet	pl. 16.2 in situ	—	33c
E.2950	Bracelet	pl. 16.4 middle	—	33d
E.2951	Bracelet	pl. 16.2 in situ	—	33e
E.2952	Bracelet	pl. 16.2 in situ	—	33f
E.2953	Bracelet	pl. 16.2 in situ	—	33g
E.2954	Bracelet	pl. 16.2 in situ	—	33h
E.2955	Comb	pl. 17.2 middle	—	34, 53
E.2956	Selenite slab	—	—	44, 57
E.2957	Model table	pl. 17.1, 4	—	46
E.2957b	Cones	pl. 17.1, 4	—	47
E.2958	Cone	pl. 16.1	P	48a
E.2959	Model tusk	pl. 17.2 right	—	36, 54
E.2960	Cone	pl. 16.1	—	48c
E.2961	Pendant	pl. 17.2 left	—	35

Brussels inv.	Description	Ayrton & Loat 1911	Excavator object no.	Fig.
E.2962	Cone	pl. 16.1	—	48b
E.2963	Figurine	pl. 16.1–2	—	50, 61–64
E.2964	Rattle	pl. 17.3	—	45a
E.2965	Rattle	pl. 17.3	—	45b
E.2966	Rattle	pl. 17.3	—	45c
E.2967	Rattle	pl. 17.3	—	45d
E.2968a	Garlic model	pl. 16.1	—	49a
E.2968b	Garlic model	pl. 16.1	—	49b
E.2968c	Garlic model	pl. 16.1	—	49c
E.2968d	Garlic model	pl. 16.1	—	49d
E.2968e	Garlic model, frag.	—	—	—
E.2968f	Garlic model, frag.	—	—	—
E.2969	Necklace	pl. 16.3	—	41, 55 top left
E.2970	Necklace	pl. 16.3	—	40, 55 lower right
E.2971	Necklace	pl. 16.3	—	42, 55 centre right
E.2972	Necklace	pl. 16.3	—	43, 55 lower centre
E.2973	Necklace	pl. 16.3	—	39, 55 centre
E.2974	Necklace	pl. 16.3	—	56, 55 top right
E.2975	Necklace	pl. 16.3	—	37, 55 lower left
E.2976	Necklace	pl. 16.3	—	38, 55 top centre
E.2977	Black-topped jar	B33k	F	30
E.2978	Polished-red bowl	—	—	31
E.2979	Black-topped bowl	—	C	32
E.2980	Black-topped jar	B22j	—	28
E.2981	Black-topped jar	B21b	S	25
E.2982	Black-topped jar	B22b	R	27
E.2983	Black-topped jar	B22b	T	26
E.2984	Black-topped jar	B62d	T	29
E.2985	Black-topped jar	B25h	H	24

the deceased in the burial does not seem to occur. While the figurine under discussion comes from the burial of a female, several female figurines are known from graves of males or children. Nevertheless, the relationship between the figurine in Tomb H41 and the body on which it was found is more than obvious. The figurine imitates the typical contracted position in which the body was laid in Predynastic times (Figs. 65–66).

This type of detailed imitation is unique; however, parallels for its deposition can be found. In Tomb a56 at el-Amra, two figurines were placed on the body of a male, parallel with the orientation of his upper body (Randall-McIver & Mace 1902: pl. 5.8, Ucko 1968: nos. 14–15). In addition, a fragmentary figurine of vegetable paste was placed within a basket on the chest of a woman in Tomb 3740 at Badari (Brunton & Caton Thompson 1928: 51; Ucko 1968: no. 4). Nevertheless, many figurines have also been found beside the body in other tombs and, overall, no regular pattern can be observed (Ucko 1968: 178–179).

Human figurines remain exceptional in Predynastic tombs and they are clearly not regular elements of the funerary rites (cf. Ucko 1968: 177). The incomplete information on the contexts of most figurines restricts the possibilities for recognising any specific characteristics of the tombs involved and at present no obvious reasons for the presence or absence of figurines in Predynastic tombs can be proposed.

Conclusions

The study of tomb groups excavated a long time ago and published according to the standards of that time not only offers the possibility for more complete description, but occasionally also allows overlooked details of decoration or material to be recognised. The hitherto unnoticed decoration on the rhomboid palette and White cross-lined bowl from Tomb H17 are notable examples of the value of re-examining these tomb groups. Restudy of the material also permits an evaluation of the manner in which Petrie's typology of Predynastic pottery was used by other excavators and the amount of variation subsumed within a given corpus type. In addition to these aspects, which are valid for the restudy of all tomb groups, a few observations specific to Tombs H17 and H41 at el-Mahâsna could also be made. The presence of gold in both tombs did not exclude the use of what might seem 'cheap' replacement material for other objects, as illustrated by the mud tusk or the use of clay models. Obviously, a direct reflection of wealth was not the only concern when

the funerary equipment was gathered together or created (see also Hartung this volume).

Despite plundering, the variety of objects in these two Naqada IC tombs is remarkable. The diversity exceeds that typical for tombs of the Naqada IIC–Naqada III period, when the funerary equipment appears to have become much more standardised. On the other hand, the objects from both tombs discussed here find parallels in other tombs at el-Mahâsna and elsewhere. Therefore, the selection of objects fits into the symbolic context of a cultural background and is not primarily the result of individual choice, although the latter, of course, can explain the particular selection.

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APPENDIX

AURIAN SILVER AND SILVER BEADS FROM TOMBS
AT EL-MAHÂSNA, EGYPTANDREAS HAUPTMANN¹ & ALEX VON BOHLEN²¹ *Deutsches Bergbau-Museum Bochum, Germany*² *Leibniz-Institut für Analytische Wissenschaften, Dortmund, Germany*

In November 2009, two bracelets or rings composed of a few small beads from the Naqada I Tombs H17 and H41 at el-Mahâsna were investigated and sampled in a non-destructive manner at the Royal Museums of Art and History, Brussels.

The first item (Fig. 1, Brussels E.2931) comes from Tomb H17. It consists of seven beads: one bead is possibly made of limestone, four are of carnelian and two are possibly manufactured of gold. Gold beads are exceptional for the Predynastic period and the beads from Tomb H17 along with those from H41 are the only gold artefacts known for the



Fig. 1. Bracelet or ring from Tomb H17, Brussels E.2931
(photo by R. Mommaerts).



Fig. 2. Bracelet or ring from Tomb H41, Brussels E.2971
(photo by R. Mommaerts).

Naqada I period. Therefore, it was deemed important to determine whether the gold beads of E.2931 were manufactured from pure gold.

The second bracelet or ring (Fig. 2, Brussels E.2971) comes from Tomb H41, which was one of the richest and most important tombs found at el-Mahâsna. It was reported to consist of seven elongated gold beads, one rhomboid gold bead and a silver pendant (Ayrton & Loat 1911: 30). The elongated beads of E.2971 are of a surprisingly dark colour and have a dull metallic lustre. The question arose whether they did in fact consist of gold.

Sampling and measurements

Due to the high value of the objects, a non-destructive sampling technique was required, i.e., the removal of material from the beads had to be minimised in such a way that no damage would be visible to the naked eye. Therefore, we decided to apply a very sensitive method of instrumental analytical chemistry in which sample amounts of only a few micrograms (μg) were needed for a multi-element analysis: total reflection X-ray fluorescence spectrometry (TXRF). A schematic representation of TXRF is shown in Figure 3. The advantages and characteristics of TXRF have been described in several papers in the last years. Some of these papers review its application especially to objects of cultural heritage (von Bohlen 2004, Hühnerfuß et al. 2006), such as paintings (Klockenkämper et al. 2000), manuscripts (Devos et al. 1995), paper, pottery and musical instruments (von Bohlen 2009). It must be emphasised that this

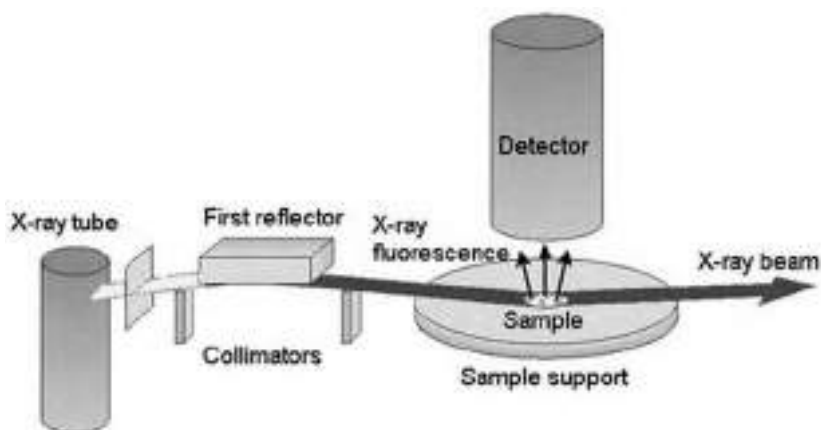


Fig. 3. Schematic representation of total reflection X-ray fluorescence spectrometry (TXRF).

kind of sampling only provides the composition of the surface of the material investigated and not its inner composition.

The most important aspect of TXRF is its excellent ability to perform extreme micro-analyses. The sample amounts required are less than $2\text{ }\mu\text{g}$ (10^{-6} g), while its detection limit for several elements is in the picogram range ($1\text{ pg} = 10^{-12}\text{ g}$). This allows for a very gentle sampling method which was especially developed for valuable objects that cannot be transported to the laboratory (von Bohlen 2004). The method consists of rubbing off a non-visible amount of material from the object by means of a clean cotton bud. After sampling, the loaded cotton bud is placed in a clean plastic container that is free of contamination and transported to the laboratory. The TXRF analyses are performed after simple preparation of the sample, which consists of transferring it to an adequate support without any chemical treatment. Typically, the samples are analyzed for 100 to 500 seconds and can be used later and analyzed again. This is possible because the method works without consuming material.

A TXRF spectrum, excited to fluorescence using a narrow band of the electromagnetic radiation (Bremsstrahlung) of a tungsten X-ray tube, was produced for sample E.2931c and is shown in Figure 4. Using this procedure semi-quantitative results were obtained. The accuracy of the analysis is of the order of 2–6% relative. Measurements were performed at the Institute Leibniz-Institut für Analytische Wissenschaften–ISAS–e.V., Dortmund, Germany.

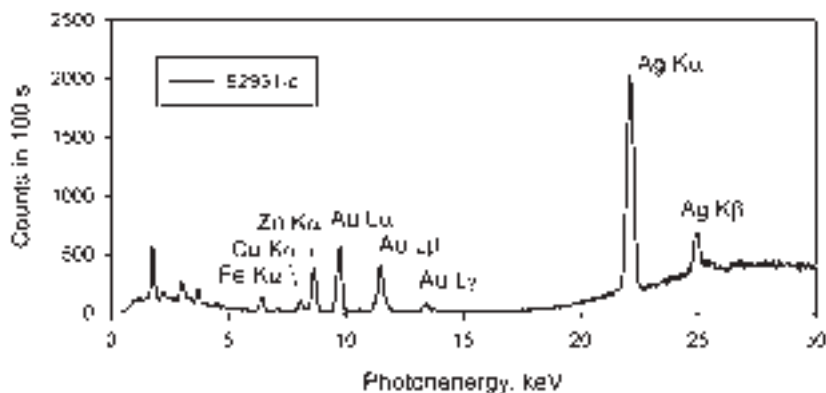


Fig. 4. Spectrum of a total reflection X-ray fluorescence spectrometry (TXRF)-measurement from E.2931c. Signals of the elements are not linearly proportional to the content of the elements in the samples and a calculation, including the specific sensitivities for each element, was necessary.

All of the nine beads from bracelet/ring E.2971 and two of the gold beads from bracelet/ring E.2931 were sampled. No visible traces of the sample removal could be observed after the gentle sampling procedure was carried out.

	E.2971.1	E.2971.2	E.2971.3	E.2971.4	E.2971.5	E.2971.6	E.2971.7	E.2971.8	E.2971.9	E.2931c	E.2931d
Fe	0.6	1.8	3.4	11.2	6.3	3.0	5.6	5.3	2.7	8.2	2.3
Cu	0.4	1.8	1.3	3.9	8.6	18.7	2.9	4.7	4.2	4.8	2.0
Zn	0.1	0.5	1.5	12.0	1.9	1.5	3.6	4.1	1.5	14.6	8.6
Ag	98.9	94.0	88.3	57.3	76.1	71.5	54.9	64.2	80.1	42.5	63.3
Au	0.0	1.8	5.5	15.6	7.1	5.2	33.0	21.7	11.4	29.8	23.9

Table 1. Results of TXRF-measurements of nine beads of E.2971 and of two metal beads from E.2931.

Results and discussion

As shown in Table 1, we determined in the beads the presence of the elements iron (Fe), copper (Cu), zinc (Zn), silver (Ag) and gold (Au). No lead was determined by TXRF; this element was below the detection limit of 0.5%.

Most of the beads from artefact E.2971 are composed of a rather strange alloy consisting of aurian silver alloy with gold ranging from 2% up to 33%. According to modern textbooks, native aurian silver is extremely

rare. It is, however, reported by R. Jameson (1820) who mentioned compositions with 72% Ag and 28% Au in hydrothermal veins. He noted that such ores would widely be exhausted in Europe.

Fertner and Gale (1979) and Gale and Stos-Gale (1981) analysed a large number of Egyptian silver artefacts and found similar continuous gradations between silver, electrum and gold in objects from the Pre- and Protodynastic periods as well as from the Old Kingdom and Middle Kingdom. In addition, they state that copper was an ubiquitous contaminant in Egyptian gold and silver objects, being commonly in the range of a few percent up to 10%. This is the case as well in the beads we analysed. It came as a surprise, however, that iron and zinc are also continuously associated elements. They show variations in their (lower) percentage levels.

Due to this rather strange combination of elements, we are not convinced that, for example, copper was deliberately added to the alloy (as is suggested by Stos-Fertner & Gale 1979) to debase the noble metal, to change the colour or to lower the melting point. Admittedly, in nature, 'pure' gold-silver deposits are widely distributed, but occasionally mixed gold-silver-copper-iron-zinc mineral associations also occur (Pohl 2005). It is our opinion, therefore, that the beads were smelted — perhaps in a 'trial and error stage' of metallurgy — from naturally occurring ores. It should be noted that one typical indicator for the presence of gold is malachite, a material commonly used in the Predynastic period.

Only two beads (E.2971.1, 2) are made of relatively pure silver. It is not clear if these beads were (s)melted from pure silver or natural silver chloride (cerargyrite, AgCl). It is more probable that they were made of silver extracted from silver-containing lead ores by a smelting and subsequent cupellation process. Such metallurgical operations were known in the 4th millennium BC in the Near East and are evidenced by finds from Habuba Kabira (Pernicka et al. 1998) and Fatmali Kalecik (Hess et al. 1998) in the upper Euphrates region.

The metal beads from artefact E.2931 are made up of a silver-gold alloy, with silver as the main constituent, and unusually high concentrations of gold (24% and 30%). In addition, they contain a few percent of iron, zinc and copper. They are similar to the beads E.2971.7 and E.2971.8.

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