## CHAPTER X

## OTHER OBJECTS FOUND IN THE MYCERINUS TEMPLES

## 1. FLINT KNIVES, SCRAPERS, AND FLAKES

A number of flint implements were found in the temples of Mycerinus, (a) in the pyramid temple, twenty-five, many of them unbroken, on the floors of the magazines (16-18), (b) in the valley temple, six on the floor of the offering room (III-2) and many fragments of knives and flakes in the débris of all periods. Seventeen fragments of knives were found in the débris of the court at the valley temple and ninety-three flakes or chips. These were all roughly chipped after the manner of the ceremonial-traditional flints of Dynasties III-V, and were originally without doubt placed in the magazines as part of the temple furniture.

The forms presented were six in number:
Type I Broad knife without handle, one example, Pl. 18 d , No. 3.
" II Broad knife with handle formed in the flint, Pl. 18 d, No. 2; cf. also, d, No. 5; a, Nos. 3, 12.
" III Narrow knife with handle formed in the flint, Pl. 18 a-b, Nos. 3, 7, 11; c, Nos. 7-11; d, Nos. 1, 4, 5.
" IV Triangular flint (scraper?), Pl. 18, a, No. 10; c, Nos. 1-4.
" V Flint flake with one or both ends worked to a point, Pl. 18 a-b, Nos. 2, 4-6 (fragmentary).
" VI Flint flake, narrow with square ends, Pl. 18 a-b, Nos. 1, 8; c, No. 6.
The broad knives are degenerate variations of the crude broad knives of Dynasties I and II. ${ }^{1}$ These Early Dynastic broad knives are usually large and have a pronounced bend backwards, which gives the cutting edge a fine curve. In the later royal tombs of Dynasty II the curvature is lessened and some examples of fine rather slender knives with curving back and front edge have been found. ${ }^{2}$ In the tomb of Khasekhemuwy, the last king of Dynasty II, the knives were smaller and more clumsy with still less curvature and straighter backs, sometimes even with slightly convex backs. ${ }^{3}$ As in the case of the stone vessels, the flints of Dynasty III followed those of Khasekhemuwy, ${ }^{4}$ but flint knives are rare in private graves of Dynasty III. The Mycerinus flint knives follow the forms of Dynasty III and present a further marked deterioration over the examples from the tomb of Khasekhemuwy. This deterioration is most evident in the working of the handles of type II in the Mycerinus collection. which are usually merely rudimentary. The one example of type I is probably a knife intended to be of type II in which the working of the handle has been neglected.

Type IV, the triangular flint with worked edges, may also be traced from Dynasty I through Khasekhemuwy and the Bêt Khallâf grave to the Mycerinus collection. Several variations of the form occur both in the Mycerinus temples and earlier, one nearly triangular with equal sides and a point, a second of a taller triangular form (isosceles) with a point, and a third similar to the second but with rounded corners (nearly ovoid). The best formed examples are those of Khasekhemuwy. The flints of type IV from Dynasty III, ${ }^{5}$ and from the Mycerinus group are distinctly less well worked than those of Khasekhemuwy.

Type VI, the narrow flake, has the same history as the knives and scrapers (?) but in Dynasties I and II including Khasekhemuwy, it is accompanied by a wider type - in which the ends were carefully worked. In the Mycerinus collection this better form is wanting.

A seventh type interpreted by Mr. C. M. Firth as a crescent-shaped stone-borer, was found in the tomb K 1 at Bêt Khallâf and in the Abydos temenos. ${ }^{6}$ No examples occurred in the Mycerinus temple, or in the tombs of Dynasty I at Abydos; and this flint was probably a practical implement which did not become ceremonial.

[^0]All the six types found in the Mycerinus collection also occurred in the mastabas of Dynasties IV and V at Giza, types I-III being however very rare. The subsequent history is obscure. Professor Petrie found flints at Kahûn, which he dates to Dynasty XII, ${ }^{1}$ and flint knives of similar form to type II are represented on the wall of the tombs of this dynasty at Beni Hasan.

Thus the flints like the stone vessels are impractical ceremonial-traditional objects, made only for the tomb, by craftsmen practising a dead art. As I have said elsewhere, they were probably "ghostknives" for the slaughter of spirit cattle in the other world.

## 2. VESSELS AND IMPLEMENTS OF COPPER

All the objects of copper found in both the Mycerinus temples were heavily patinated, when not entirely corroded by oxidation. As far as recognizable, they consisted of vessels, models of vessels, and tools or implements.

Two large vessels were found as follows:
(1) A large hes-vase; height, 34 cm .; found in the floor débris of the court of the valley temple, one meter south of the stone pathway about opposite the stone basin. This came without doubt from one of the temple magazines. Pl. 65 d .
(2) A large elliptical pan or tray in fragments; diam. ca. $40 \times 30 \mathrm{~cm} . ; \mathrm{h} ., 7 \mathrm{~cm} . ;$ upside down on the wall dividing magazines (III-6) and (III-7), about 40 cm . above the floor, evidently displaced by plundering from magazine (III-7); under it was the set of magical implements of Cheops; the exact form was indeterminable. Pl. 61 e .

Seventeen models of copper vessels were also recorded, of which fourteen were basins and three jars. All these except three basins were found on the wall between magazines (III-6) and (III-7) under the copper pan No. 2, above:
(3) A model hes-vase badly corroded; height, $15 \mathrm{~cm} . \mathrm{Pl} .65 \mathrm{e}$.
(4) A small model jar, egg-shaped body, narrow flat base, short neck, wide disk-rim; height, 7.4 cm . Pl. 65 e.
(5) A model shoulder jar, flat base, roll-rim around mouth; height, 8.4 cm. Pl. 65 f .
(6) A stack of six deep model basins; height, 5.6 cm. ; diam. 9 cm . Pl. 65 f.
(7) Three similar basins in floor débris of room (III-20), opposite room (III-6). Pl. 65 e.
(8) Five shallow model pans; height, $2.8 \mathrm{~cm} . ;$ diam., 7.6 cm .

Another object of copper was a sheath for the tapering end of a squared wooden beam, perhaps a roofing beam from the outer offering room (II-1):
(9) Copper sheath for a beam; length, ca. 50 cm .; large end, $17 \times 17 \mathrm{~cm}$.; small end, $10 \times 10 \mathrm{~cm}$.; found in upper débris in magazine (III-16).

Two heavy practical copper blades were found, both unfortunately broken and incomplete. The breaking was intentional, but whether by the directors of the funeral of Mycerinus or by the later plunderers was indeterminable. Both were found in the plunderers' débris in the western side of the court outside magazine (III-3).
(10) Axe blade with curving cutting edge; back part broken off and missing, was probably straight with square corners like the models found in the tomb of Impy (G 2381 A ); height, 14.6 cm . (original); width, $6.6+\mathrm{cm}$. (originally about 13.8 cm . according to the models); thickness, 0.5 cm .; found in the lower débris in room (I-338). Pl. 65 i.
(11) Adze blade with slightly curving cutting edge; back end broken off and missing, was probably semicircular like the adzes from the Senezemib group, ${ }^{2}$ but may have been tapering and square cut like the earlier adzes; length, $13.6+\mathrm{cm}$. (originally, $c a .20 \mathrm{~cm}$.); width, 6.4 cm .; thickness, 0.5 cm .; found sticking to No. 9. Pl. 65 i.
(12) Two or more adze blades of the form of those illustrated in Annales XIII, pl. XI; slightly smaller than No. 11, about the size of the Senezemib adzes; found with chisels and other copper implements corroded in a mass, under the wall of room (I-50), in upper surface of the floor débris of court, together with the amulets and beads described on p. 235; the mass was wrapped in a coarse cloth (or sack) which had decayed but left a print of its weave on the copper oxide. Pl. 65 g .
(13) Small adze blade of same form as No. 12; length, 9.6 cm .; width of cutting edge, 4 cm .; width of butt, 2.2 cm .; width of neck of butt, 1.4 cm .; thickness, about 0.3 cm .; from magazine (III-6). Pl. 65 h.

[^1]Several practical chisels were found which, like the adze, were of the same form as the corresponding tool of the Senezemib group:
(14) Heavy broad chisel with rectangular shaft and wide cutting edge (like Photo. A 838 from G 2381 Z ); usual measurements, $15 \mathrm{~cm} . \times 1.5-1.6 \mathrm{~cm}$. wide and $3-5 \mathrm{~mm}$. thick;
(a) One or more examples in the mass of corroded implements found in (I-50 sub), see No. 12, above.
(b) One or more examples in the mass of corroded implements found in pyramid temple magazine (18).
(15) Long narrow chisel (?), with widened cutting edge and flat rectangular shaft, tapering from near butt to the cutting edge; length, 17 cm .; width near butt, 1 cm .; thickness, 0.3 cm .; found in Mycerinus valley temple magazine (III-7), under the crushed wall.
(16) Pointed chisel or drill with broad rectangular shaft and blunt point; length, $5.8+\mathrm{cm}$. (originally, $10-$ 12 cm .) ; width, 1 cm .; thickness, $0.3-0.4 \mathrm{~cm}$.; found in floor débris of court under (I-39), No. 45. Possibly one or more of same type in corroded mass from pyramid temple magazine (18).

One or two other fragments were found which might have been parts of chisels or drills.
(17) Point, similar to No. 16; length, 7 cm .; width, 0.6 cm .; thickness, 0.3 cm .; found in floor débris in (III-2), No. 36.
(18) Twisted fragment; length, 5 cm .; from (I-54) débris, No. 156.
(19) Long pointed shaft, round; length, 22.5 cm .; diam., 0.75 cm . from (I-55), under the granary, No. 155.

Two single-barbed harpoons were also recorded, both light and small.
(20) Single barbed harpoon, plain tapering round shaft; length, 8.6 cm .; length of barb, 2.2 cm. ; width at point of barb, 1.2 cm .; diam. of shaft, from 0.6 cm . at barb to 0.3 cm . at tip; found in middle of court, in floor débris, No. 347 . Pl. 65 h .
(21) Similar harpoon, badly corroded; length, $5.3+\mathrm{cm}$. ; length of barb, 2 cm. ; width at point of barb, 1 cm .; diam. of shaft, 0.6 cm .; found in (I-331), court débris, No. 353. Pl. 65 h .

The examples of practical tools of copper raises the question of the hardness of the metal in the ancient Egyptian tools. The facts are quite clear and simple:
(1) Heavy practical adzes and chisels of copper have been found in numbers in tombs of the first six dynasties.
(2) Marks have been found on limestone in tombs and quarries of Dynasties IV-VI, which were obviously made by the same copper tools as those found in the tombs. In particular, the chisel marks have the same width as the copper chisels.
(3) The chemical analyses which have been made of these ancient tools have invariably revealed the fact that they were soft copper.

The conclusion is quite clear these tools must have been used to cut limestone, and as soft copper is not a practical material for that purpose, the copper in the tools has suffered some alteration by which the factor which produced their hardening has been lost. That is, - the modern analyses of ancient copper implements do not yield a decisive proof of the original state of those tools. I submitted the question in this form to Professor T. W. Richards, Professor of Chemistry at Harvard University, and received from him the following suggestions:
(a) The copper may have been hardened originally by the presence of small quantities of other substances which have disappeared by oxidation in the course of several thousand years.
(b) The hardness of the copper may have been produced by hammering the tool while the metal was cooling. This process produces an abnormal state of crystallization in which copper is harder than in the ordinary state. The abnormal state, as is usual in metals, would have relaxed after a certain time and the copper would have again assumed its ordinary soft state of crystallization.

Both these suggestions, Professor Richards informs me, require further investigation; but from an archaeological point of view, the answer is perfectly sufficient. The modern analyses do not prove that the Egyptian tools were of soft copper; and it remains for the metallurgist to decide the process by which the copper was hardened and the reason for its softening in the course of five thousand years or more.

Copper working in Dynasty IV was a living craft, and in accordance with that fact the copper vessels and implements found in the Mycerinus temples are generally those of the period. The same types are found in the mastabas of Dynasties IV-VI.

## 3. FLINT WANDS ("MOUTH-OPENERS") AND ACCOMPANYING MODELS

The flint wand with fish-tail tip, which is called $p \bar{s} \check{s}-k f$ " mouth opener," is well known in collections of Egyptian antiquities, where it rests in a depression in a slab of limestone or wood surrounded by other depressions containing usually at least six dummy vases of stone. Although so often found by illicit excavators and placed on the market for purchase, this slab and set of magical implements have seldom been found by European excavators. Professor Petrie records one slab with two dummy vases and part of a third from the tomb of Adu I, Dynasty VI. ${ }^{1}$ This slab has places for four conical bowls, set upright, two long-necked vases, lying down, a flint wand, and two small objects (perhaps flint knives). At Giza, we found one in the court of the Senezemib complex (Reg. No. 13-1-536). That slab had places for the flint wand, four conical bowls, and two tall jars, and it seems to be the usual form of Dynasties IV-VI. In the débris of pit G 2327 A , in this same complex, we found a set of dummy vessels consisting of four conical bowls (two of slate, one of quartz crystal, and one of grey quartzite), and two tall jars, one of crystal and the other of slate, but no flint wand. In the débris of shaft G 2381 Z , two conical bowls, one of crystal and one of slate, and two tall jars, one of crystal and one of slate, were found but again without the wand. In the tomb of Impy, which we found intact, there were, six conical bowls of slate; three conical bowls of crystal; one flaring bowl of clear quartzite; three tall jars of slate, all with narrow flat base; two tall jars of crystal, with narrow flat base; one tall jar of crystal, with fine pointed base.

Again no wand or slab was found; but of course both of these might have been of wood. However, a number of copper offering tables were in this tomb, several of which still had copper models attached, either standing on the top or resting in holes in the top, and one table had two of the conical bowls, one slate and one crystal, standing on the top. Therefore, the conclusion seems to be that in this tomb (Dynasty VI) these dummy models were placed upright on offering tables. ${ }^{2}$ Two of the tables had holes in the top and the pointed jar of crystal may have been inserted in one of the holed tables. It is to be noted that a number of other forms occurred among the bronze models, in addition to the conical bowls and tall pointed jar, showing that the tables were set out with various groups of vessels. One intact set, for example, had six conical bowls and a hes-jar; and in tombs of the Middle Kingdom at Bersheh we found several sets of wooden slabs with two faience bowls and two faience hes-jars standing upright, cemented in holes in the slab.

In the pyramid temple of Mycerinus, a fragment of flint wand (Pl. 19 a) was found (Reg. No. 07-1-80, from room (15) in hole in floor), inscribed: "Mother of the king, Khamerernebty." The fragment was from near the butt of the wand and measured 6.6 cm . long with a width of 4.3 cm . below and 4.7 cm . above, owing to the taper of the shaft. The thickness was about $2-3 \mathrm{~mm}$. in the middle. One crystal bowl and several alabaster bowls of the required size were also found in the pyramid temple, but it was impossible to determine whether they had belonged to slab groups or were simply the ordinary models which, of course, were also magical in character.

In the valley temple, a full set consisting of flint wand, four conical bowls, one crystal and three slate, and two tall jars, one of crystal and one of slate, were under the bronze tray mentioned in the preceding section, found upside down on the wall between rooms (III-6) and (III-7). With these were the model bronze vases (above, section 2, Nos. 3-7), and, as the tall stone jar models have flat bases, the group bears a general resemblance to that of Impy (G2381 A, Dynasty VI). Neither slab nor table was found, and the whole set seems to have stood in the shallow pan, when it was dumped upside down on the wall by plunderers (?). The remarkable point about this set is that the very beautiful flint wand is inscribed: "The Horus, Mezeduw; the King of Upper and Lower Egypt, Khnum-Khuwf." Thus the flint wand, and perhaps the whole set, is marked as having once belonged to Cheops, presumably the grandfather of Mycerinus. Pls. 61e, f;65a, b.

A second flint wand was found in the offering room (III-2) of the valley temple. It was in the débris above the unfinished statuettes found in the western end of the room (Statues Nos. 27, 29, 31, 38, 39, and 43). This wand was very rudely made with the clumsy heavily curved tips of the later wands ( Pl .65 c ).

[^2]The Cheops wand is of a very graceful fish-tail form and suggests the form of the fish-tail flints of the Predynastic Period, except that the butt of the flint wand is cut off straight, while the predynastic knives have a tapering butt, which was inserted in a wooden handle. Professor Petrie was the first, I believe, to state that the fish-tail flint knife of the Predynastic Period was the ancestor of the flint wand. ${ }^{1}$ He gives two examples of the intermediate form which belongs to the rude traditional-ceremonial flint knives of Dynasty I. ${ }^{2}$ It is to be noted that the flint wands were not chipped, but finely ground by the technical methods of the stone engravers of the Old Kingdom. The flint wand had been handed down by tradition as a chipped flint, degenerating in form after the fine chipping of flint had become a lost art, and when its use as a magical implement was revived in Dynasty III or IV, the implement was improved by the application of the skill in working stone which had developed in that period. The resemblance of the set of implements from (III-6, 7) to those of Impy of Dynasty VI is especially to be noted. The use of these magical models was a living custom, and, as in similar instances previously noted, the tradition of the Old Kingdom followed that of Dynasty IV.

## 4. CYLINDER SEALS

Three cylinder seals were found, but none of them in such associations as to assure the conclusion that it was part of the original furniture of the temple.
(1) Silver cylinder seal, consisting of a tube of silver plate laid over a wooden core with a silver disk covering each end; pierced lengthwise with small hole; length, 4.3 cm .; diam., 2.2 cm .; edges damaged by corrosion. Pl. 64, 1.
Inscribed with six vertical lines of well-drawn hieroglyphics, of which each alternate line beginning with the Horus name of Chephren faces to right and every other line faces to left:
Line 1. The Horus Weser-ib, protected (?) of the White Crown. . . .
" 2. The Golden Horus Sekhem, Khafra, wearing the Two Crowns every day. . . .
" 3. The Horus Weser-ib, great god of. . . .
" 4. The King of Upper and Lower Egypt, Khafra, king (?), follower of Horus and Set, mighty (?) every day. . . .
" 5. The Horus Weser-ib, good god. . . .
" 6. . . . (?) Khafra, the making of a decree (for) the assistant of the scribe of the . . (?).
Found in Mycerinus valley temple room (I-54) upper débris.
This seal is of the same type as a seal of an official of Ysesy, Dynasty V, ${ }^{3}$ and another of an official of Pepy I. ${ }^{4}$ A much more rudely cut seal of sandstone, belonging to an official of Chephren, was found by the German Expedition at Abu Sirr in front of the tomb of Weserkafankh. ${ }^{5}$ No very plausible deduction can be made from the finding of this silver seal of an official of Chephren in the Mycerinus valley temple.
(2) Steatite cylinder-seal, pierced lengthwise; length, 4.4 cm .; diam., 2 cm .; rudely incised. Pl. 64, j.

Engraved: Main field, two male figures back to back.
Below (or above), hare crouching upside down; to the right, an enemy lying in a bent attitude; further to right, a man lying on his back between two Set-animals (?), facing in opposite directions with their feet towards the man.
Found in Mycerinus valley temple room (I-396) in old débris in NE quarter of court.
This type is presented by the cylinders Nos. 140-146 on Pl. VI of Professor Petrie's Scarabs and Cylinders, especially Nos. 140 and 146. The type with figures is known from Dynasty I down. ${ }^{6}$ Our seal probably belonged to some one connected with the service in the first temple.
(3) Limestone cylinder-seal, pierced lengthwise; length, 4.3 cm. ; diam., 2.6 cm .; very rudely incised and badly worn. Pl. 64 k .
Incised with six vertical columns of doubtful signs.
Found in Mycerinus valley temple room (I-361) débris, a house in the city in front of the temple.
This type is again a known type of the Old Kingdom. ${ }^{7}$ Our seal is probably from the period of the second temple.

[^3]
## 5. BEADS AND AMULETS

The beads found in the magazines at both temples were not numerous and mainly of one type, the ordinary long slender tubular bead of blue, black, or faded faience, measuring from 2 to 4.6 cm . in length and 3.5 to 5 mm . in diameter. These occurred in magazine (18) at the pyramid temple and in the débris at various other places in that temple. In the Mycerinus valley temple a few were found in the magazines and in three or four places in the débris of the court. This type is very common in the Old and Middle Kingdoms and has a history which covers practically the whole of the dynastic history of Egypt. The form, size, and glaze of the Mycerinus beads are those of the beads of the Old Kingdom.

In addition to these beads, one lot of beads and amulets was found in association with the bag of bronze tools mentioned in a preceding section (p. 231), under the walls of a circular granary and in the surface of decay of the first series of rooms in the court. They are thus shown to date previous to the reconstruction of the temple, that is to Dynasty V or the early part of Dynasty VI. This fact gives them a great importance because the types are well known from Upper Egyptian graves. The lot consisted of the following (Pl. 66 a ):
(1) String of about 270 ring-beads of dark blue faience, diam., ca. 4 mm ., thickness 1-1.5 mm.
(2) String of about 150 disk-beads of ostrich egg-shell, diam., $c a .5 \mathrm{~mm}$., thickness, $c a .1 .5 \mathrm{~mm}$.
(3) Six tubular beads of glazed steatite; $25 \times 8 \mathrm{~mm} . ; 21 \times 6 \mathrm{~mm}$.; $16 \times 5.5 \mathrm{~mm} . ; 12.5 \times 5.5 \mathrm{~mm}$.; $10 \times 4 \mathrm{~mm}$.; $9.5 \times 5 \mathrm{~mm}$.
(4) Five barrel-shaped "crumb-beads" of very dark blue faience body and light blue crumbs; length, ca. 13.5 mm .; diam. ends, $2.5-3$; diam. middle, $3-3.5 \mathrm{~mm}$.
(5) Two slender barrel-shaped beads, one of dark blue and one of light blue faience; length, $18 \times 5 \mathrm{~mm}$; the light one broken.
(6) One thick barrel-shaped bead of pale amethyst; $16 \times 9 \mathrm{~mm}$.
(7) Open ring of ivory; $14 \times 12 \mathrm{~mm}$.
(8) Large pendant, heart (?)-shaped, alabaster; height, 33 mm .
(9) Amulet, lower leg, red carnelian; pierced through upper part; height, 16 mm .
(10) Amulet, animal head (hippopotamus.?); slate, pierced neck; length, 12 mm .
(11) Amulet, turtle, ivory; pierced through head; length, 16.5 mm .
(12) Amulet, fish, ivory; ring-shank on back, length, 17 mm .
(13) Amulet, Thoeris, ivory; pierced through shoulder; height, 16.5 mm .
(14) Amulet, horned animal head, ivory; hole in forehead; height, 19 mm .
(15) Amulets, six rude scarabs, blue faience; pierced lengthwise; length, 8 to 11 mm .
(16) Amulet, sacred eye, blue faience; ring-shank; length, 12 mm .
(17) Amulet, open hand, blue faience; pierced through wrist; length, 12 mm .
(18-25) Amulets, eight small faience amulets or parts of amulets, difficult to identify.
These amulets are well known from the Old Kingdom. ${ }^{1}$ At Naga-'d Dêr, we found similar sets of amulets and beads of the same materials, ivory, carnelian, steatite, and faience, in about twelve graves associated with stone vessels and pottery which were dated at that time, quite correctly, to Dynasty V. With some variations in the forms and sizes of the amulets and with some additions, these amulets and beads have been found in graves of Dynasties VI-XII, and occurred in numbers in the Egyptian graves at Kerma. ${ }^{2}$ These images of divinities, divine animals, and symbols had, of course, the same protective character as the later better formed amulets of stone and faience.

The circular stamp-seal, the so-called "button-seal," is commonly associated with the crude amulets of Dynasties V-VIII, which include the scarab. It was not until Dynasty XI or thereabouts that the scarab came to be accepted as the proper amulet for the protection of the seal and joined with the stamp-seal to form the scarab-seal of the Middle Kingdom and later periods. It was without doubt the union of the scarab and seal, which caused the seal to be modified from a circular to an elliptical form. Other forms of amulet are also used for the seal, especially the frog, which was also one of the old amulets of Dynasty V. But in the Old Kingdom the stamp-seal or button-seal with an amulet is very rare. ${ }^{3}$ I am therefore in doubt about the date of the button-seal described below, which was

[^4]found in the débris of decay of the second temple in 1908 and should therefore be not much later than Dynasty VI.
(26) Button-seal of limestone, bearing on the top a human face with curiously striated hair or wig (sphinx ?); pierced sideways by a small hole just below the ears; diam., 3.1 cm . Engraved on seal side: two lizards or crocodiles, head to tail . . .


Figure 81

## 6. FAIENCE FRAGMENTS AND INLAYS

The moisture of the débris in the Mycerinus valley temple was unfavorable to the preservation of Egyptian faience, and the few fragments found were in very bad condition. The conditions were better at the Mycerinus pyramid temple, but there still fewer pieces were found.

The following are from the valley temple:
(1) In (III-8), fragments of a cylindrical cup, made of hard white paste, originally blue-glazed. The surface had been divided horizontally into bands 9 mm . wide; every other band had been channelled out and filled with black paste so that the outside was striped, with alternate horizontal bands of black, appearing purplish under the transparent blue glaze, and light blue, or green. Pl .65 c (on left).
(2) In (III-16), several large fragments from a wooden hes-jar similar to those found by the Germans at Abu Sîr. ${ }^{1}$ Pl. 65 c (on right). The inlays mentioned below were probably from this jar or similar jars.
(3) In (III-20), with fragments of stone vessels - a faience inlay in the form of a bull, from the Horus name of Mycerinus. See No. 2, above.
(4) In (I-21 sub), in floor débris of court, six fragments of small inlays. See No. 2, above.
(5) In (I-26 sub), No. 140, in floor débris of court, a complete inlay, the sign for "king of Upper Egypt." See No. 2, above.
(6) In (I-301 sub), several fragments of faience, probably inlays. See No. 2, above.
(7) In (III-2), under the floor of the second temple, six small fragments of a faience vase of unrecognizable form.

The following was from the pyramid temple:
(8) Mycerinus pyramid temple (10), in the sweepings from the temple, a large fine blue inlay, broken. The complete form was unclear, but the inlay was flat not curving. Pl. 20 h .

These few fragments of faience are clearly in the line of development from the crude vessels of Dynasty I to the fine jars of Dynasty V, and resemble in particular the ceremonial hes-vases of Neferirkara. The technique, was similar to that of the later faience. ${ }^{2}$

## 7. STONE HAMMERS

The greater part of the excavation in the limestone rock at the Giza cemetery was carried out by means of copper chisels, mallets, and stone hammers. In the quarry north of the Second Pyramid and at other places, the stratum of stone was divided by trenches about 20 cm . wide, and the stone between the trenches lifted by splitting along the line of the horizontal stratum. The excavation of the rock for burial shafts and other purposes was also begun by the cutting of trenches, and in these trenches the chisel marks show a blade like the broad chisel found in the Senezemib group, with a cutting edge about 16 mm . wide. The stone between the trenches was then broken away with hammers of hard stone. Four or five of these hammers were found in the cemetery and were of heavy axe form with a short broad back and a longer blunt edged front part. A depression around the body near the blunt end permitted the hammer to be bound to a divided stick or a pair of sticks. Smaller hammers of similar form were also found, and, in addition to these, a number of pounding stones which appeared to have been held in the hand. One example was found of a two-handled hammer of limestone, the use of which has been a puzzle on account of the material. It was broken, and the possibility arises that this particular example was found impractical.

In the pyramid temple, in magazine (17), on the floor, was found a heavy two-handled granite hammer of the same form as the limestone hammer just mentioned. The handles and the body were of one piece of granite. The body was 31 cm . high, with a diameter of 18 cm . across the bottom and

[^5]14.3 cm . across the top surface. The sides were slightly concave, so that the diameter of the body was 13.8 cm . On each of two sides, the stone swelled to a width of 21.4 cm ., and in each of these swellings or knobs, a hole had been worked so that the knobs were transformed into handles (see Pl. 20, a-c). The insides of the handles had been worn shiny by usage, and the wider lower surface of the hammer was bruised by use as a pounder. Now the granite casing of the pyramid had been dressed flat, after the stones were in the wall, by pounding and had been finished by rubbing. This great hammer by its weight, its form, and its material, was suitable for dressing granite by pounding, and the marks of its usage leave no doubt that it had actually been used for that purpose.

It is difficult to escape the conclusion that this heavy stone hammer was part of the original furniture of the temple. Its function as a builder's implement brings it into the same class as the axes, adzes, and chisels found in the temples and also in the mastabas of Dynasties IV-VI. Indeed, the use of tools and models of tools as part of the funerary equipment was general from the Predynastic Period down, and such objects were found in almost all the royal tombs at Abydos.

Other stone hammers and rubbers were found in the two temples, but none of these could be said to be part of the funerary furniture. About thirty hammers or rubbers of very compact black granite (?) were found in the unfinished compartment of the Mycerinus pyramid temple and had evidently been used on the granite casing either of the pyramid or of rooms (7) and (8). These had not been formed but were quite rough, except on the surface which showed usage. They were of many different shapes and sizes, but all were fairly heavy. Many were chipped or broken by impact on another hard material. The used surfaces were invariably rounded like an irregular segment of the surface of a sphere; and these surfaces were both bruised and rubbed. It is clear that they had been used both for pounding (hammering) and rubbing.

## 8. MISCELLANEOUS OBJECTS

A number of miscellaneous objects were found which include:
(a) Shells.
(e) Color.
(h) A stone muller.
(b) Bone point.
(f) Mud jar-stoppers.
(i) A stone headrest.
(c) Ivory bracelet.
(g) Wood and charcoal.
(j) A painted pot.
(d) Plaster cones.
(a) Shells

The half mussel-shell is well known in all periods as a container for color, kohl, and similar materials. A number were found at both temples, one containing blue color, under circumstances which prove that such shells were part of the original funerary equipment. The significant examples were as follows:
(1) Fifteen half mussel-shells from pyramid temple magazine (18), No. 10. See Pl. 20 h . One of these contained blue color.
(2) One half of a mussel-shell, from Mycerinus valley temple room (I-302 sub), No. 39.
(3) Two half mussel-shells, from Mycerinus valley temple room (304 sub), Nos. 3, 4.
(b) Bone Point

Bone points occur naturally in all periods of Egyptian history. They are among the primitive implements of the Predynastic Period and, because of their cheapness and practicality, never went out of use.
(4) The point of a very fine bone awl or piercer; length, $4.5+\mathrm{cm}$.; greatest diameter, $8 \times 6.5 \mathrm{~mm}$., oval; polished by use; found in the débris in the portico of the pyramid temple. Pl. 20 h .

## (c) Ivory Bracelet

Ivory bracelets, like bone points, have been found frequently in graves of the Predynastic Period and even more frequently of the Early Dynastic Period. They occur in all later periods but never so frequently as in the Early Dynastic. In Nubia and in particular at Kerma, they are more common in the graves of the Middle Kingdom than in Egypt.
(5) One third of an ivory bracelet; original diameter about 7 cm .; triangular section with rounded corners, 6 mm . high and 5 mm . wide; found in débris of the portico at the pyramid temple. Pl. 20 h .

## (d) Plaster Cones

Three cone-like objects of fine white plaster (plaster of Paris) were found, the purpose of which I have not been able to determine. Pl. 20 i.
(6) A cone of fine white plaster; height, 7 cm .; diam. of base, 4.3 cm .; slightly irregular, but all surfaces smoothed while wet; not a cake from the bottom of a jar; found in pyramid temple, magazine (16), No. 4.
(7) A cylinder of white plaster with conoidal end; height, 8 cm .; diam. of base, 5.3 cm .; sides have vertical striations as if formed in a hole in wood; conoidal end and bottom smoothed wet; the bottom is uneven and not vertical to the long axis; found in pyramid temple, magazine (18), No. 2.
(8) A fragment similar to No. 7; found in débris in same room.

## (e) Color

(9) In a mussel-shell in pyramid temple, magazine (18), No. 1, was a thick layer of blue coloring matter, the fine granular blue which is used in the wall paintings of the mastabas.
(10) Under the bronze tray on the wall between Mycerinus valley temple (III-6) and (III-7), Mr. Bates noted a mass of lumps of yellow matter (mustard color), which resembled also the yellow used in the wall paintings and in particular for female statues.

## (f) Mud Jar-Stoppers

(11) The mud jar-stoppers with seals have been described on p. 19; a stopper without seal impressions was also found in the pyramid temple, magazine (18), No. 17.

## (g) Wood and Charcoal

In addition to the wood used as accessories in the masonry, as roofing, and as supports for the platforms in the masonry, a few recognizable pieces of decayed wood were found in various places. First of all, the arm of a wooden statue was uncovered in the mud débris of room (I-23) at the Mycerinus valley temple (see Statues, No. 49).
(12) Fragment of a decayed wooden board in pyramid temple, magazine (18), No. 15 ; about $60 \times 60 \mathrm{~cm}$. and 2 cm . thick; possibly from the shelf.
(13) Fragments of decayed wood were found under the flint wand of Cheops (Mycerinus valley temple III-7 to 8), which Mr. Bates thought might have been a slab or case for the wand.
(14) Fragments of decayed wood inside the silver seal cylinder of the official of Chephren proved that the core had been of wood.
(15) Fragments of a wooden beam, inside the copper sheath, section 2, No. 9, above.

The paucity of the remains of wood was due of course to the decay of that material caused by the moisture of the débris in which it lay.

Small bits of charcoal were found in many rooms in the Mycerinus valley temple, but the only significant occurrence was in two magazines of the pyramid temple.
(16) A double handful of charcoal was found on the floor of pyramid temple, magazine (17), and about twice that amount scattered over the floor of (18).

## (h) Stone Muller (?)

(17) On the floor of magazine (18) at the pyramid temple, a circular muller (?) of limestone was found, a roughly worked implement; diam. of circular plate, 15 cm .; thickness of plate, 3.5 cm .; diameter of central projection, at top, 6.5 cm .; total height, 9 cm .

## (i) Head-Rest

(18) On the floor of the room (I-27) at the Mycerinus valley temple was found a block head-rest of white limestone; length, 20 cm .; height, 13.5 cm .; thickness, at base, 6 cm .; the top is hollowed to a depth of 2.5 cm . This seems a very poor and rude head-rest for a royal tomb, and it was probably used in one of the later houses.

## (j) Painted Pot

(19) In room (I-28) sub, in the floor débris of the court, two fragments of a painted pottery jar were found associated with fragments of stone statues, stone vessels, flints, and faience inlays (from hes-jars), all without doubt from the original equipment of the temple. This pottery jar was of red ware with white slip (W. S. R. ware). The larger fragment had a yellow horizontal band on which was painted in broad blue lines a cartouche containing the name of Mycerinus. The background in the cartouche was white and the signs were blue. The back end of the cartouche, the last $k 3$-sign of the name and the side of the second $k 3$-sign were preserved. The second fragment was illegible. This jar may have been a hes-vase decorated like the hes-vases of wood inlaid with faience (see section 6, above).


[^0]:    ${ }^{1}$ See Reisner, Naga-'d-Dêr I, p. 112 and Pl. 40.
    ${ }^{2}$ Petrie, Abydos I, Pls. XIV-XV.
    ${ }^{3}$ Amélineau, Nouvelles Fouilles 1896-97, Pl. XIX; and Petrie, l. c.
    4 See Garstang, Mahâsna and Bêt Khallâf, Pl. XV, on left below from K 1.
    ${ }^{5}$ Garstang, l.c. ${ }^{6}$ Petrie, Abydos I, Pl. XXVI.

[^1]:    ${ }^{1}$ Petrie, Kahun, Gurob and Hawara, Pl. XVI. ${ }^{2}$ Annales XIII, PI. XI, 18.

[^2]:    ${ }^{1}$ See Petrie, Denderah, Pl. XXI and p. 8.
    ${ }^{2}$ Earlier examples (Dynasty V) are given in Professor Borchardt's Ne-weser-re', p. 130.

[^3]:    ${ }^{1}$ See Petrie, Abydos I, p. 24.
    ${ }^{2}$ Petrie, Abydos I, Pl. LI, 22, from the time of Den; Abydos II, Pl. XLI, 33, from the temple.
    ${ }^{3}$ See Petrie, Scarabs and Cylinders, Pl. IX, 5, 8. ${ }^{4}$ See Newberry, Scarabs, Pl. V, 10.
    ${ }^{5}$ See Borchardt, Ne-weser-re', p. $138 . \quad{ }^{6}$ See Petrie, R. T. II, Pl. XIV, 101-104.
    ${ }^{7}$ See Petrie, Scarabs and Cylinders, Pls. V and VII.

[^4]:    ${ }^{1}$ See Petrie, Deshasheh, Pl. XXVI. $\quad{ }^{3}$ See Newberry, Scarabs, p. 57.
    ${ }^{2}$ See Reisner, Kerma, IV-V, pp. 106 ff .; Garstang, Mahâsna and Bêt Khallaf, PI. XXXIX.

[^5]:    ${ }^{1}$ See Borchardt, Neferirke're', p. 60, Pls. 3-5.
    ${ }^{2}$ See Reisner, Kerma, IV-V, pp. 136-143.

