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AND EGYPTIAN RESEARCH ACCOUNT  
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# PREHISTORIC EGYPT

ILLUSTRATED BY OVER 1,000 OBJECTS  
IN UNIVERSITY COLLEGE, LONDON

BY

W. M. FLINDERS PETRIE  
HON. D.C.L., LL.D., D.LIT., F.R.S., F.B.A., M.R.I.A.

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# PREHISTORIC EGYPT

## CHAPTER I THE MATERIALS

I. BEFORE discussing the prehistoric civilisation of Egypt, it seems needful to give some account of the scattered sources of information, and the way in which they have been utilised. There is much material, but of very unequal value. The mere publication of an object, even if illustrated, is not necessarily of use. Apart from a few unique specimens of various kinds, it may be said that no publication is of use unless the object is part of a group from the totality of which some relative date may be assigned, or part of a comparative series. We are not here concerned with material which merely illustrates in general the style of early Egypt—such belongs to second-grade museums. Our concern here is with the relative ages of styles and products, the material which teaches the history and evolution of the civilisation. The methods by which the relative ages are discriminated will be dealt with further on.

It will be clearest to take the various publications in their order of date, two dozen volumes on the subject having been issued between 1896 and 1915. Nine of these refer to the protodynastic age, and are dealt with additionally in the volume on *The Rise of the Dynasties*.

1896. *Naqada and Ballas* (Petrie and Quibell) 86 plates. This was the first publication of any connected material of this age; and it is, as yet, the largest store of illustration, the 25 plates of pottery serving till now as the *corpus* for subsequent registration of types, now expanded with all subsequent discoveries as the *corpus* of *Prehistoric Pottery*. As the subject was entirely new, discrimination of periods could not then be attempted; and owing to the bulk of material the publication of separate graves was limited to the most remarkable. The register of the grave-numbers of pottery was, however, largely maintained; from that, later

on, the relative dating was worked out. These ages of the grave-groups are published in the *corpus* of *Prehistoric Pottery*. There are 540 graves dated within 10 units, and mostly much closer.

1896. *L'Âge de la Pierre et les Métaux* (De Morgan) 604 figs. In this, by happy intuition, though without any definite proof, De Morgan treated the Naqadeh discoveries as being pre-dynastic. He dealt here with all periods, from earliest palaeolithic down to the sixth dynasty, in very suggestive outline, though without any details of relative age in the prehistoric civilisation, nor any statement of tomb groups, and therefore it was of little use subsequently.

1897. *Ethnographie Préhistorique et Tombeau Royal de Négadah* (De Morgan). This continued the discussion of the prehistoric, largely taken from plates of *Naqada*. The tomb of Neithetep (Queen of Mena?) is fully described, and some details are given of Amélineau's opening of the Royal Tombs at Abydos. The large group of Neithetep's tomb is of the greatest value for the beginning of the 1st dynasty.

1901. *Diospolis Parva* (Petrie). In this the whole range of the prehistoric civilisation was classified as to age, the relative dates being assigned to all the types of pottery, and the other classes of products. With some small rectification in detail this dating holds good when applied to all later discoveries, and is here followed. Twenty plates of new prehistoric material in tomb-groups, supply fresh details; 500 graves are fairly dated from this work.

1902. *El Amrah and Abydos* (Randall-MacIver and Mace). The cemetery at El Amrah supplies 19 plates of material, and a full register of the pottery and objects sufficient to date about 80 grave-groups. The rough classification in periods is not close enough, and every group has been re-examined and dated as closely as may be. The list of dates of graves is given in the *corpus* of pottery.

1902. *Hierakonpolis II* (Quibell and Green).

The first part (1900) does not extend before the early dynastic age. In the second part (1902) is the unique painted tomb of the middle of the second prehistoric age.

1911. *Predynastic Cemetery at El Mahasna* (Ayrton and Loat) 38 plates. This gives a good register of about 38 grave-groups, fairly dated.

1912. *The Labyrinth, Gerzeh, and Mazghuneh* (Gerzeh, Wainwright). The whole of the pottery was dated when found, by the *corpus*, and about 70 graves are approximately fixed, and used in the present volume. The list of dates of the graves is given in the *corpus* of pottery.

1910. *Archaeological Survey of Nubia, 1907-8* (Reisner) 102 plates. This contains the register of about 20 grave-groups sufficiently recorded for dating; beside 28 grave-groups of the protodynastic age. The other material is later. It is difficult to co-ordinate this material, as the current numbering of types is abandoned, and a fresh *corpus* of smaller size is used. The conversion table to reduce this new *corpus* to the standard is given in the *corpus* of *Prehistoric Pottery*.

1912. *Archaeological Survey of Nubia, 1908-9* (Firth). In this it is possible to date about 24 graves; but, as even the new *corpus* is abandoned, and only separate sketches given of each group, reference is still more difficult. As there are discrepancies between the drawings and photographs, the typing is somewhat uncertain.

1915. *Archaeological Survey of Nubia, 1909-10* (Firth). About twenty graves might be dateable, but the scarcity of distinctive types hinders using most of them. It is unfortunate that the Nubian survey neither unites with the earlier registration, nor keeps a continuous new register, so that its scientific value is largely lost.

1914. *Cemeteries of Abydos, I, II* (Peet). About thirty graves are dateable in each of these volumes, the pottery *corpus* being followed in registration.

2. Taking next a review of the protodynastic material (s.d. 76 and on) from the start of the dynastic civilisation a century or two before Mena, down to the iiiird dynasty, the principal sources are the following:

1896. *Naqada and Ballas*. 21 graves dated.

1897. *Tombeau de Négadeh*. Large group of material from the tomb of Neithetep, probably Queen of Mena.

1900. *Royal Tombs I*. Large groups from 5 kings' tombs, and those of surrounding servants.

1901. *Royal Tombs II*. Large groups from 7 kings' tombs, and surroundings. All these royal tombs are specially valuable for the precise period being fixed, and the objects being of fine work and abundant.

1901. *Diospolis Parva*. 55 graves dated.

1900, 1902. *Hierakonpolis*. A large mass of material just before Mena, and of the iind dynasty.

1902. *Abydos I*. Further pottery, etc., of the Royal Tombs; 11 rich tombs of the 1st dynasty; 8 plates of early dynastic pottery from the temple site, all levelled, and thus dated.

1902. *Mahasna* (Garstang). Royal Tombs of the iiiird dynasty.

1907. *Gizeh and Rifeh*. Great tomb of 1st dynasty.

1911. *Mahasnah* (Ayrton and Loat). 14 dated graves.

1912. *Turah* (Junker). 122 graves fairly dated, after reducing Junker's notation to the standard *corpus* (see *Tarkhan I*, lxviii).

*Naga ed Deir* (Reisner). 13 graves dated, so far as the figures can be reduced to the *corpus*.

1910. *Archaeological Survey of Nubia* (Reisner). 28 dateable graves.

1912. *Archaeological Survey of Nubia* (Firth). 6 dateable graves.

1913. *Tarkhan I*. 296 dated graves, s.d. 77-82.

1914. *Tarkhan II*. 785 dated graves, similar.

1920. *Harageh*. 70 graves, about 50-70 s.d.

1920. *Lahun*. 33 dated graves, 1st-iiiird dynasty.

3. The sum-total of graves fairly fixed in relative age, then, is as follows:

	—75 S.D.	S.D. 76—
Naqada . . . . .	540	21
Diospolis . . . . .	500	55
Royal Tombs . . . . .	—	12
El Amrah . . . . .	80	—
Abydos I . . . . .	—	11
Mahasna . . . . .	38	14
Gerzeh . . . . .	70	—
Turah . . . . .	—	122
Naga ed Deir . . . . .	—	13
Nubia, 1907 . . . . .	20	28
„ 1908 . . . . .	24	6
„ 1909 . . . . .	20	—
Cemeteries of Abydos I, II . . . . .	60	—
Tarkhan I . . . . .	—	296
Tarkhan II . . . . .	—	785
Harageh . . . . .	70	—
Lahun . . . . .	—	33
	<hr/>	<hr/>
	1,422	1,396

The latter class is, however, by far the richer, from the fullness of material in the royal tombs of various sites.

The striking feature of this material is its uniformity of styles over a long range of country. From Gizeh and Turah for 350 miles to Naqadeh there is no difference in the protodynastic work; and the same is true of the earlier prehistoric times for more than 300 miles from Gerzeh to Naqadeh. Moreover 200 miles farther south in Nubia the styles of this age are perfectly continuous, although mixed with other types which belong to Nubia. Thus for over 500 miles the prehistoric civilisation seems to have been so well organized and unified that the same tastes, ideas, patterns and materials prevailed throughout. This shows that there were not isolated and warring tribes, which prevented intercourse and trade, but rather a peaceful, if not a united, rule over all Egypt and Nubia.

Beside the publications of discoveries, reference should also be made to Capart's *Primitive Art in Egypt*. Though most of the illustrations duplicate those in the volumes just named, there are also many objects in museums hitherto unpublished, and the arrangement of the material is helpful.

Owing to the mass of material, the subject will be divided in three volumes. The present, *Prehistoric Egypt*, deals with every class of object (except flint-work) down to the beginning of the dynastic influence, and continuous subjects, where no new motive arose, down to the 1st dynasty, and the tables of dates of the published graves. With this is the volume of the *corpus* of *Prehistoric Pottery and Palettes*, specially needed for registration of graves during excavation, and with the tables of conversion of different register numbers, and catalogue of forms of pottery vases in University College. A third volume, *The Rise of the Dynasties*, will contain all the material which is characteristic of that movement, and the *corpus* of pottery belonging to that period.

## CHAPTER II

### THE DATING

#### THE RELATIVE DATING

4. WHEN the first great mass of graves was examined at Naqadeh, it was seen that there had been an earlier and a later period, as certain types of pottery were manifestly decadent in style. These

were classed apart as Late Pottery. The earlier pottery was divided into eight entirely different classes of work and material: the black-topped pottery, baked partly in ashes; the red polished pottery, similar, but baked in flame; the fancy forms, square, oval, double, animals, boats, etc., which were not concentric; the red pottery with white line designs; the black pottery with incised designs; the wavy-handled pottery with two ledge handles; the decorated pottery with red painted designs, and the rough brown pottery. These classes fulfil the first need of classifying, that they should be distinctive, and leave no doubt as to which class an example belongs. When a general view could be taken of the whole material it appeared evident that the wavy-handled pottery gave a long series of gradual changes of form, from a globular to a narrow cylindrical type. This provided a first means of subdividing the general mass of pottery.

Next it was seen that a large part of the grave-groups were of pottery unlike that found with the wavy-handled series. These were then classed according to the proportion of types which belonged to the wavy-handled series. Then it was seen that, the fewer types were in common with the wavy-handled, the larger was the proportion of white-lined designs. Thus the white-lined pottery was the furthest removed from the wavy-handled. Further, the graves arranged in order of community of types with the wavy-handled are in inverse order of community of types with the white-lined pottery. Such is the basis of the gradation by age, resolving the confused mass of hundreds of graves into rational order.

Another method next comes into play. If we had a series of graves certainly in their original order, then any changes in order would be more likely to scatter the examples of any type than to concentrate them. Therefore the more the range of each type can be reduced by changes of order of the graves, the more likely are we to approach the original order. For this purpose the earlier and later examples of each type were sought, and the graves containing them were shifted nearer together, so long as other types were not scattered by the changes. Thus the result is reached of having the shortest total of ranges of all the types, and this is the more probable order. The more peculiar a type is—such as singular decoration—the less likely is it to have had a long range of use. Such

are the principles of the gradation of a long series of graves, in the order of their age. The details can be seen in more detail in *Diospolis*, pp. 4-8.

The practical method was to use for each grave a slip of card  $\frac{3}{8} \times 7$  inches, ruled with columns for the several kinds of pottery; in each column were entered the numbers of the types found in the grave. These slips could be quickly arranged and shifted on boards, each holding about 50 cards in a column of 18 inches high. Thus some hundreds of graves could be searched over and considered in one single view.

The number of graves thus taken into account was 900, each containing not less than five different types of pottery. All that have been found and published since—about 450 graves—have been further taken into account, in making up the *corpus* of forms now published, and the extent of range of each type.

5. For permanent reference the whole 900 graves, when placed in their most probable order or sequence, were divided in 51 equal sections, and these were numbered 30 to 80, and such numbers termed Sequence Dates, marked as S.D. It has since been found that S.D. 79 is the beginning of the 1st dynasty. The numbers before S.D. 30 are left for any future discoveries of earlier material.

This numbering does not at all imply equal intervals of time; it means only equal numbers of burials in the cemeteries of Naqadeh and Diospolis. It fortunately happens that Naqadeh alone covers every period of the prehistoric that has yet been found in Egypt; there is no gap in the series, nor are there any burials that can be placed earlier. Yet it is probable that there was considerable variation in the number of burials in each century, and they are likely to have been more numerous as population and wealth increased. Hence the earlier numbers of Sequence Dates probably cover more years than the later numbers. The total period we shall consider further on.

The division into fifty parts has been felt by some persons to be too minute for the precision obtainable, and it has been termed "a very minute subdivision"; accordingly different authors have lapsed on to a few broad divisions instead. Now it is the first principle of scientific measurement, of space, weight, or time, that the means of registration shall be sufficiently detailed not to lose any possible accuracy of result. In a series of physical measurements an instrument must show at least

one place of figures farther than the range of variation. How closely then does the scale of 50 divisions serve to distinguish the detail of dating the graves? Take any cemetery with rich graves containing plenty of dating material, and see how much range of uncertainty is left on using the scale of 50 parts. For instance in El Amrah, the ranges of date of the richest graves run thus: S.D. 35-41, 32-41, 46, 41-46, 41-43, 38, 48, 52-53, 44-50, 47, 48-50, 37-43, each of these having at least half a dozen dated types for fixing the limits. These ranges are of 7, 10, 1, 6, 3, 1, 1, 2, 7, 1, 3 and 7 divisions. Any much coarser scale would certainly cause a loss of accuracy in the results, the average range of uncertainty being only 4 divisions, and many graves being fixed to one single division. The scale of 50 parts is therefore none too fine; and any coarser series of divisions would be a waste of good material. There is no pretension to fictitious accuracy in using it, and we may remember that—where there is sufficient material—it means on an average an uncertainty of two or three divisions on each side of any single number that is stated.

#### THE LENGTH OF THE PERIOD

6. So far we have only been dealing with the relative ages of graves, as shown by the order of them expressed in Sequence Dates. The time-values of these Sequence Dates, and the years comprised in the period of the prehistoric graves, is the present question.

It is quite futile to compare the number of known graves with the population at any period. The greater part of the people were poor and had no distinctive burial of objects with them. If we took account of all the known graves of the historic ages, we could not account for a hundredth of the population that we know to have existed. The only possible clue is the proportion of graves of the prehistoric to those of the historic ages.

Unfortunately there are no cemeteries sufficiently recorded of all periods together to give a satisfactory comparison. The best is the group of cemeteries extending over about eight miles recorded in *Diospolis*. There is enough ground there to prevent merely picking out one period; the whole of it was completely searched; it had not been flagrantly exhausted by recent plundering, before we went over it; and the range of time covers all

periods to the xviii<sup>th</sup> dynasty and Roman graves, while the prehistoric range is fairly general, but poor in the s.d. 40-50 age, much as the historic range is poor in the xix<sup>th</sup> to xxx<sup>th</sup> dynasty age. There is thus a somewhat similar ground for comparison of the prehistoric and historic periods. The resulting number of graves that we recorded is about 1,200 prehistoric, and 850 historic. Allowing for historic graves which had been plundered out, and were not counted by us, the numbers would not be very unequal between the two ages. We cannot suppose that the prehistoric population was more numerous or richer than that of historic times, and it was probably fewer and poorer, so the time allowed for the prehistoric would have exceeded that of historic ages, and might be much longer. The historic period according to the Egyptians was 5,500 years to Roman times, or 3,400 years by the impossible chronology of Berlin. Hence the beginning of the prehistoric civilisation would be put to 11,000 B.C. (or at least 7,000 B.C.), but more remote if the prehistoric people were fewer and less wealthy than the historic. Thus though we are still rather in air in estimating the range of the prehistoric, yet we can see that it was at least some thousands of years, and we may contemplate anything back to about 10,000 B.C. as open to consideration.

7. We now turn to approach the question from the other end. Recent research on the helium and lead constituents of rocks has given a tolerably consistent view of geologic time; and as the helium contents give a *minimum* age, and the lead gives a *maximum* age, it is unlikely that such results are both far from the truth in one direction. (See *Proc. Royal Soc.* Nos. 547, 562, 569, 571, 578.) The broad result is an age of a million years for 100 feet thickness of strata. This is taking the maximum thickness of each stratum; and as even that is not probably the full extent, there may have been 100 to 200 feet deposit in each million years. The amount of meteoric nickel in the abysmal red clay would indicate somewhat the same order of quantity, pointing to about 400 feet in a million years (*Nature*, 2280, p. 487).

Taking only the determinations of Tertiary age, they give 100 feet, 50 feet, and 400 feet *per* million years; but the very minute amounts to be detected in these shortest ages of strata are least favourable to accuracy. Yet the scale is not widely different

from that of the longer periods. If we accept 200 feet per million years, or 5,000 years to 1 foot, it may be taken as a fair estimate. This may be compared with the rate of denudation, which varies from 700 years to 7,000 years, averaging 3,500 years for 1 foot. On the whole age of the world the rate of denudation probably equals that of deposit. By simple solution the denudation of chalk in English rainfall is about 1 foot in 5,000 years. All this will show that when we have to deal with greatly changed surface conditions, such as valleys ploughed out since gravels containing implements were deposited, rivers deepened as much as 80 feet between the Mousterian and Magdalenian periods, the filling up of the Nile Valley with 600 feet of silt and the washing of it out again, we have the work of more probably over, rather than under, 100,000 years before us in the human period. Blanckenhorn would give 10,000 years for the age of the Solutrean; Geikie, following Penck, 20,000 for the Magdalenian, or Schmidt 20,000 for the beginning of the Magdalenian, coeval with the prehistoric cemeteries of Egypt. Such dates would only imply the average removal of 4 feet of surface, and that seems too little rather than too much to allow for the changes that have taken place.

8. It appears, then, only reasonable to grant the evidence of the numbers of graves as dating the prehistoric graves to 8,000 or 10,000 B.C. To be asked to end them with the 1st dynasty at 5,500 B.C. is as late as we can ask geology to grant, and we may well put the beginning of that age to 8,000 or 10,000 B.C. In any case, the suppositions which would bring the 1st dynasty to 3400 B.C., and crowd the prehistoric into a few centuries before that, would seem to be quite irreconcilable with the geologic scales of time action. Provisionally we may say that 8,000 B.C. is the latest date likely for the beginning of the prehistoric graves. See p. 50, note.

9. Another datum is given by the Nile mud deposits. These rest upon the sandy and rocky bed which was the original Nile valley floor. So long as enough rain filled the Nile, its velocity was kept up and no mud fell. When rain ceased the current slackened, mud was deposited, and agriculture became possible. The deposit of about 5 inches a century shows that this mud-bed began between 5,000 and 13,000 B.C., according to varying depths. As the lesser depths were elevations originally, and the deposit was probably slight to begin with, it is reasonable to credit an age of 8,000 or 10,000 B.C.

for the beginning of cultivation and the rise of prehistoric civilisation.

10. Another way of looking at the matter is from the periods of the civilisation. There are two well-marked periods, or different civilisations, in the prehistoric graves. Now the average length of a cycle of civilisation in Egypt is 1,300 years, and so two cycles would imply a length of 2,600 years on an average. This added to 6,000 B.C. of the dynastic immigration, would give a date before 8,000 B.C. But we must remember that this is the *minimum* geologically, and that archaeology cannot deny that the date may be more remote.

If, then, the 50 divisions of Sequence Dating cover about 2,500 years, each division is on an average 50 years in length. The variations of the rate of burials, however, would greatly vary this scale, as we may see by comparing the number of burials known of the xviiiith and of the xxiind dynasty. The unit of Sequence Date may roughly be said to be not shorter than a generation, and generally about a life-time.

The various indications of the age of the beginning of the prehistoric civilisation of Magdalenian connection, and of the earlier desert flints of Solutrean connection, stand thus :

	Egyptian prehistoric, = Magdalenian.
By proportion of graves	. . . 11,000 B.C.
By Magdalenian age } in Europe {	20,000 ,,
Solutrean age }                   { or after 10,000 ,,	
By Nile deposits	. . . 8,000 or 10,000 B.C.
By periods of civilisation, rather before 8,000 B.C.	

The abbreviations for reference to published volumes are as follows :

- A. *El Amrah and Abydos*, MacIver and Mace.
- A.S.N. See E. F. and R.
- Ab. II. *Abydos II*, Petrie.
- C. *Cemeteries of Abydos*, I or II, Naville and Peet.
- D. *Diospolis*, Petrie, cemeteries B, H, R, U.
- E. *Survey of Nubia I*, Firth, 1907-8.
- F. *Survey of Nubia II*, Firth, 1908-9.
- G. *Gizeh and Rifeh*, Petrie.
- H. *Hierakonpolis I and II*, Quibell and Green.
- K. *Primitive Art*, Capart.
- L. *Mahasnah and Bēt Khallaf*, Garstang.
- M. *Pre-dynastic Cemetery of El Mahasna*, Ayrton.
- N. *Naqada*, Petrie. (Also cemetery and graves.)
- R.T. I. *Royal Tombs I*, Petrie.
- R.T. II.    ,,        ,,    *II*, Petrie.

- Q. *Archaic objects*, Cairo Catalogue, Quibell.
- R. *Survey of Nubia*, Reisner.
- T. I. *Tarkhan I*, Petrie.
- T. II. *Tarkhan II*, Petrie.
- W. *Gerzeh*, Wainwright (in Petrie, *Labyrinth*).
- U.C. Specimens at University College.

### CHAPTER III

#### HUMAN FIGURES

11. THE period of human figures in the round is closely limited to the first civilisation; those which can be dated are—

S.D. 32	. . .	1 example
34	. . .	5
36	. . .	3
38	. . .	3
39	. . .	1
41	. . .	2
42	. . .	1
44	. . .	1

Thus nearly all belong to the age from the end of the white-lined pottery to the beginning of the decorated pottery. It is only the heads on combs that extend later, to 42 and 50 s.d. We do not here count those of which the dating is vague.

The different classes of figures seem to be mostly contemporary. The figures of clay, of vegetable paste, and of ivory, well made, all begin at 34. The ruder peg-shaped ivory figures, and the rough blocks with triangular faces, begin at 38. The course of work seems therefore to follow the same rapid growth and gradual decay which is seen in later civilisations.

12. One of the earliest dated figures is of ivory, long and slender, a man wearing the sheath, and having inlaid bead eyes. This is between 31 and 37 s.d., but by the white-lined bowl found with it the date can hardly be after 34 (M xi). The style of this figure fairly carries with it the ivory figures here, 22, 23, 24, and all these should therefore be placed about s.d. 34. These are part of a group, which was bought together from a local country dealer, as having been found at Ballas, and the work and condition of them agree together. Thus the group ii, 18-24 will all belong to about s.d. 34, and with these must be placed some of the MacGregor figures (K 129, 135). The figure ii,

23 has had the sheath undercut, and afterwards broken away. Probably rather later, and more fixed in style, is ii, 6, carrying an object on the head; and this leads on to the rougher figures xlvi, 1, 2, 3 (see N, lix, 7) which we dated to s.d. 38. They clearly represent women carrying jars, presumably of offerings for the dead; and they were placed upright in a row along the side of the grave. The eyes are white beads inlaid, as above. We have, then, a fairly defined position for the best art of the early prehistoric—figures carefully wrought in the round at 34, and passing into formal copying at 38.

To this stage succeeded the block figures, with a rudely indicated pointed beard, such as i, 9, 10; ii, 1 to 5; iii, 2; xlv, 44, 45. These are dated by some from Naqadeh. Of s.d. 38 is the figure N, lix, 4, having the breasts marked with beads, which do not recur later. Of s.d. 41 are three N, lix, 2, 8, and found with 2 was also 8 A (no. ii, 4 here), these are less detailed; later still there is no. 5 and a more purely mechanical cut of figures, N, lix, 10, of s.d. 42-47. The five stages of which we can trace the dates, from 34 to 42 show a continuous decay due to mechanical copying. The drill-hole necklace at 38 (xlvi, 2), 41 (ii, 4), and 42 (xxix, 23), gives a date for ii, 6 and 30.

The new civilisation which came in about s.d. 40, started afresh, with the heads on ivory combs, of which a double-faced one, N, lix, 1, is of 42, and another, lix, 5, of 50 s.d. With this style, having long eyes and incised lines, agrees the tusk head no. 8.

13. The carved tusks of ivory are a separate class, and unfortunately none of good work have been found by scientific excavation, capable of being dated. The plain heavy tusks, with cut and pierced tip, are dated to 34 (M xi), and at Naqada to 33 (U.C.), 31-42, 37 (I426), 31-59 (N 1703 U.C.), 41-43 (N 1539 U.C.), 43, 44 (N, lxii, 35). Two of the tusks with eyes only are of 44 (lxii, 34). They extend, therefore, over the same range as the figures noted above; and, being in the same material, we are bound to suppose that the changes in work would be parallel. There is one tusk with a very rudely cut face at s.d. 41 (N, lxiv, 81). So by comparison with the series of figures it seems probable that the well-cut heads i, 1, 2, 4, 5, 6, 7 all belong to before 40, more likely about 35. There are no figures of the second prehistoric age at all like these, nor are such tusks found after 44. The double head 8, from a tusk, seems to be of different char-

acter, with long eyes and incised lines, like the comb head of s.d. 50 (N, lix, 5); hence this may be assigned to the last stage of the tusks, when under the second civilisation. Another ivory figure, i, 3, seems to show a woman in a long flounced dress, of about 45 by the similar lines on dated tusks.

14. Having now traced the stages in those figures which show the best work, we turn back to the rougher materials. Female figures were often made of vegetable paste and Nile mud, usually modelled on a stick, and coloured with red and black. The earlier of these were at s.d. 34 (D, v, 101) with modelled arms; by s.d. 38 the arms disappeared (N, lix, 11), as also in the Berlin example (K 127). In the examples here xlv, 29-33, the black wigs are modelled separately over the bald heads coloured red, nos. 31-33 being parts of wigs. The date of the two pieces of wig 31-2 (N 1546) is 37. The figure 30 is entirely coloured red, with black eyes, 4 black V lines parallel across the chest, suggesting necklaces, with four black crossing lines on the back, while black spots suggest a bead girdle round the hips. There is no trace of clothing in the modelling or painting; but there are remains of linen sticking to it, from a line below the breast, downward. As it had a separate wig, it may have had a separate dress. The other figure, 29, was similar, but less full in the form; there is also a stick and scrap of head of a third figure. Pieces of two parts of figures here are from Naqadeh 1413; and part of another, from N 1705, is of s.d. 45. There is also a male figure of similar work, dated to 39 (A, xii, 7).

15. Clay and pottery figures were the usual cheap substitutes for better material. Figures of men are dated to about 35 (Garstang, *Mahasna*, pl. iii) and to 36 (D, v, U, 96, and x, 17, 18; here xlv, 43); they are reduced to mere pegs with heads in 43 (A, ix both figures). A seated figure of a man found with model tools (D, vi, B 119) is only vaguely dated to 33-55 s.d. Another seated figure, iii 3, is of unknown source, but from the work seems to be prehistoric. All wear the sheath, except the erect figure s.d. 35, which is nude.

A headless figure is shown in iv 2; and fragments of a figure also occurred dated to 31-38 (A, p. 38, b 202). The men looking over a wall (D, vi, B 83; K 160) are only vaguely dated to 33-48 s.d.

16. Female figures are dated to 34 (head M, xv; A, a, 90, p. 16), and of 36-38 is a seated figure of good work (M xvi). Pottery figures are vaguely

dated to 33-48 (D, vi, B 83) and probably about 44 (D, vi, B 109). The figures here of clay iii, 4, 5 were brought together, and are obviously of the same fabric. The heads were modelled bald, and the hair worked over afterwards. There is no outline of garment shown, but the absence of detail about the pelvis seems to point to clothing being worn low down, though it does not hide the breast.

Another style of figure has no features, but only a beak head. On the buff clay figure iv, 3 there is painted a red apron in front, curving round to the sides of the legs, secured by a red girdle, tied behind, with long ends hanging down. The dress on iv, 4 is painted white, reaching from the armpits to the ankles. No. 5 is part of a similar red figure, and no. 6 a whole figure of pottery painted red. Nos. 1 and 7 are beak heads, 1 of buff clay with black lines, 2 of pottery painted red-brown in front.

17. Another class of figures are those in pottery boats. A fine model of a boat, with incurved ends and a middle cabin, has two men in it (Berlin, K 158). Another boat with curved ends ending in rosettes, is here vii, 17. In it is a pottery woman seated, like no. 16, and held in place by wavy ridges along the sides. The upper part of the figure is hidden by a mat-work awning which is tied down to the edges of the boat. A group of these boats was found some years ago, and appeared all together at a Luqсор dealer's. Being a new type, I doubted their antiquity, but the age was put beyond question by the present example, sold to me later. The ties which hold the awning are too brittle to be moved, and have clearly been in position for centuries. The wavy ridges apparently represent snakes, of which the heads were reared up alongside of the feet of the figure. Beyond is a vertical hole on each side, and further a large hole in the middle. These clearly held masts or poles, perhaps a mast and two staying poles, forming a tripod. Regarding the date of this class, unfortunately all ravaged from graves without a history, there is some clue in a boat with similar ends painted on a box from El Amrah (A, xii), which is dated between 35-41. Another strange boat form, vii, 15, has a figure at the end all in one with the boat, seated with feet projecting; and in the middle of the boat is what looks like a corpse at length on a bier; the projection of the long face and feet can hardly mark anything but a body. This may represent the dead in a funereal boat, with an attendant to guide it. From the colouring of the pottery it would seem to

be rather of the xith dynasty than prehistoric. The other boats and figures might likewise be figures of the dead in their funereal boats.

Other figures which should be noted are the fine stone bearded statuette, wearing only a sheath and girdle, of the MacGregor collection (K 20), the slate palette with head, and perhaps arms (see Palette series and K 52), and the slate head on an inscribed stem, here xlvi, 1, 2, which will be considered with the proto-dynastic, as it is obviously much later than the figures we have noticed here. The pot-marks (N, li) should be noticed, but they are not early; no. 2 is of s.d. 61, and 1, 3, are undated.

18. The steatopygous type remains to be noted; all the preceding figures are of the normal human form. Only two steatopygous figures have been found in dateable graves, and these were with "a red bowl with a pattern painted inside" (N, p. 13), but the discoverer does not record the type. This is enough to show that the figures must be placed between s.d. 31 to 34. The same date is shown by the paintings on a figure of similar clay and style in N, lix, 6, as the moufflon and the plant there are exactly like those on the white-lined pottery.

The figures in this collection are all made of buff clay, unbaked, and all drawn in black line, unless noted. The details are as follow.

Pl. iv, 8 has the rhombic-leaved plant on left thigh, and a V mark (see pl. vi), on right thigh three zigzag bands; across the back of the pelvis a rhombic-leaf branch. On the right hip a line of SS as on N, lix, 6; and up the abdomen a line of VV, as on N, lix, 6.

IV, 9 had the arms turned up around the breasts and a broad black band across the front as a girdle. On the neck a small circle with a cross in it, like the hieroglyph for a town. For 10 see pl. vi, and the back of 6 on the next plate. Since photographing, the head iv, 1 is seen to join the figure 9.

V, 1, 2, 3, views of a complete figure, snapped and rejoined at the thinnest point. On the back and left shoulder-blade an antelope with wavy horns (see pl. vi.). Over the right shoulder a striped band, ending in an hour-glass figure. Across the pelvis an enclosure with a plant (?) in black and blue colour. On the front, long eyes, left normal, right upright. Two green lines parallel on each side joining in the beak, a black line between them. Traces of spotty necklace; below it traces of design in black. Pubic edge modelled very prominent, and wide black patch



all over to middle of thighs. On ankles, bands of parallel lines, like the bead anklets of the pyramid age, and the traces of such on prehistoric bodies. This is the only figure with feet.

V, 4, 5. Black lines of eyebrows and eyes (?). Between breasts a line of  $\Lambda$  pattern (see pl. vi), inverse of N, lix, 6. Around front of waist, four parallel zigzags. On wrists bracelets, like anklets of last. On back, traces of black lines. On back of pelvis W zigzag of parallel horizontal lines. Compare with these patterns those from New Guinea, *Jour. R. Anthropol. Inst.* xlviii, of which pl. vii, 5 is closely like the  $\Lambda\Lambda$  pattern here.

V, 6. Lines joining in beak. On throat two oval beads (?) one over the other, wavy line below. Over right arm  $5 \times 3$  black spots. Over left, three wavy lines (?). On abdomen diagonal wavy lines. Below that a broad black band. On the back, several lines of indistinct nature.

A fragment of a figure, painted red, shows the fact that the legs were modelled separately, and then joined together.

Other figures of this class are published in N, vi, partly duplicated in K 123-4, another in Berlin is in K 125; one from Nubia in F, pl. 11, is an exaggeration of the thinner type v, 2. This Nubian is of later age, not well defined, but probably 60-70 s.d. A vase figure, which represents the same race, is of 33-41; see D, v, B 102; K 101.

It is obvious that these steatopygous figures belong to a different race to the generality of prehistoric figures, which are always slender, as ii, 20-24, or attenuated, as iv, 4, 6. From the time of their discovery they have been linked up with the similar figures found in Malta, and with the ivory carvings of Solutrean age from the French cave of Brassempuy (N 34). Other figures from Thrace, Illyria, Poland, Greece, and Crete (references see K, p. 164), and the figure of the wife of the chief of Punt at Deir el Bahri, all seem to belong to the same type. It may be that the type existed independently in different stocks, as the hips are the position in which fat can be stored with the least disability of the person, for action or in health. Yet it is tempting to see in the diffusion of this type, now only persisting among the Korannas of South Africa, the early spread of a race which has been gradually expelled from Europe, then from Malta and Egypt, next from Somaliland, and the last refuge of which is in South Africa. To appreciate the meaning of these figures in Egypt, we should note that they

are always female, and only occur in the first civilisation. They apparently represent slaves to wait on the deceased, belonging to an earlier race which was enslaved or expelled by the Libyans who founded the civilisation. The occurrence of the type as late as 60-70 in Nubia would agree with this race being pushed southward out of Egypt.

19. List of human figures in the collection (the dates in ellipses are only inferred by style):

Plate.	Material.	S.D.
i, 1. Tusk	. . . . .	(35)
2. "	. . . . .	(35)
3. "	. . . . .	(45)
4. "	. . . . .	(33)
5. "	. . . . .	(33)
6. "	. . . . .	(34)
7. "	. . . . .	(35)
8. "	. . . . .	(45)
	Modern, Katanga, K 156.	
9. Slate	. . . . .	(38)
10. Brown steatite	. . . . .	(37)
ii, 1. Ivory, ostrich shell eye, N 276	. . . . .	41
2. "	. . . . .	(41)
	similar piece, N 1583 n.d.	
3. "	. . . . .	
4. "	N 1757 n.d. . . . .	(41)
5. "	. . . . .	(44)
6. "	. . . . .	(40)
	fragment of man in a skin, N 499.	
7. Lead.		
8. Wood.		
9. Brown limestone.		
10. Ivory, with base gold band.		
18-24. Ivory, found together at Ballas	(34)	
	20 and 22 have eyes of green glazed steatite beads.	
25. Alabaster, figure of boy.		
26. Ivory, similar work to 24 . . . . .	(34)	
27. Ivory, peg figure of man . . . . .	(40)	
28. Ivory, delicate work, face lost . . . . .	(75 ?)	
29-30. Ivory, peg figures of women . . . . .	(40)	
31. Ivory, female figure.		
iii, 1. Clay painted red; top of figure like iv, 2, Diospolis, B 83 . . . . .	33-48	
2. Slate, ceremonial hammer, head on front, two heads on sides at other end . . . . .	(40)	
3. Pottery.		

Plate.	Material.	S.D.
	4. Drab clay.	
	5. Drab clay faced with buff wash (really of xith dynasty).	
iv, 1.	Buff clay, head of no. 10.	
	2. Nile mud, painted red, Diospolis B 83 . . . . .	(36)
	3. Buff clay, red apron.	
	4. Pottery, red-faced, white dress.	
	5. " "	
	6. " "	
	7. " red-brown facing.	
	8. Buff clay, black ink patterns .	(34)
	9. " " . . . . .	(35)
	10. " " back of v, 6.	
v, 1, 2, 3.	Buff clay, black and green paint . . . . .	(40)
	4, 5. Buff clay, black patterns .	(33)
	6. Buff clay . . . . .	(35)
	" painted red, legs only.	
vii, 15.	Pottery, buff wash.	
	16. " red wash . . . . .	(40 ?)
	17. " coiled string awning .	(40 ?)
viii, 36.	Limestone, Tarkhan 1333, n.d. .	(78 ?)
xlvi, 29, 30.	Paste figures, painted red, with black detail . . . . .	(38)
	31-3. Pieces of separate wigs, N 1706, N 1546 . . . . .	37
	Portions of legs of paste figures, coloured red, N 1705 . . . . .	45
	and two figures, round and flat, of N 1413.	
	43. Nile mud, painted red. Dios. U 96	36
	44. Slate, inlaid ostrich shell eyes, with another and ii 4, N 1757 . . . . .	(41)
	45. Ivory, thick: figure?	
xxix, 23.	Bone, face on back and front, N 1411 . . . . .	42
	24. " . . . . .	(42)
xlvi, 1, 2, 3.	Ivory, pot-bearers, N 271 .	38

See also slate palette, xliii, 1, White-lined pottery, Decorated pottery, and forehead pendants, for other human figures.

#### CHAPTER IV

##### ANIMAL FIGURES

20. THE amulets in animal form have been described in the volume *Amulets*; here they will be regarded as examples of the animals, along with

other animal figures. All such figures may very likely have had a magical value, whether suspended on the person, or placed elsewhere. The interest of them here is in the art, and the kinds of animals shown; further examples of animals occur in the second section on the proto-dynastic remains.

**BABOON:** apparently not found before the late prehistoric age, either in the round or in drawings. One here in copper, ix, 38, is of s.d. 77 from Tarkhan 1552. Another is the curious figure of a baboon holding its young, seated upon an alabaster frog, viii, 37. The combination is so strange that it might be suspected as modern; but there is no question as to the age of the frog, and it has a raised socket all in one piece on the back; the baboon is also ancient, by the state of the ivory, and it has a tang which fits the socket. As it is very unlikely that a country dealer would chance to get a figure to fit in this way, there seems no doubt left as to its being in original order. A thin flat oval plate of nacreous shell is interposed between the baboon and the frog. Similar figures of a baboon and young occur from Hierakonpolis and Abydos, of dynasties 0 and 1. A slate palette here has two baboon heads at the side of it.

**DOG:** domesticated in Egypt from early prehistoric times; see the dog hunting a crocodile on a white-lined bowl, xxiii, 2. A flint figure, chipped out of a thin flake, vii, 2, shows much the same variety as that on the bowl, the usual Egyptian cur. A very different type is that of the alabaster head viii, 35, with long flap ears, thick lips, and spots over the eyes; this is like the long-legged hound of Amenemhat in *Beni Hasan* I, xiii. Another dog figured here is the deerhound in relief on ivory, xlviii, 6. A dog with a collar is on a handle of an ivory spoon, N, lxi, 2. Also see the pot-marks, N, li, 25, 26; D, xx, 14-16, 19, of s.d. 65 and 66. The only dated figure of a dog is of 34 (C, II, iv); but a dog's head was found in a grave of 36 (Naqadeh 286, N. p. 26), and in a grave-pit in the T cemetery at Naqadeh were the bones of about twenty dogs. The dog figures of ivory from the proto-dynastic time are dealt with in that section; one hunting is shown on a comb in K 44.

**JACKAL:** apparently represented at about 31-34 s.d., on a white-lined jar above the ichneumon, xvii, 67. It twice occurs among amulets which may be prehistoric, as they cannot be paralleled later, namely the haematite figure ix, 11, and the syenite ix, 24.

LION: absent from early figures, and only one vaguely dated example occurs at about 64, from Naqadeh 711 (N, lx, 12), probably after 60 in any case. Three lions and a hare, from a game, are undated (N, vii). Of isolated figures there are three in limestone, viii, 25, 27, 28, from Gebeleyn; one in breccia, viii, 26; one in green noble serpentine, ix, 23; a lioness in ivory, ii, 12; a lion and lioness in reliefs on an ivory knife-handle, xlvi, 3, which is probably about 60-65 S.D.; the lion on an ivory spoon-handle, chasing a dog, N, lxi; and the great stone lions of Koptos, one of which, mainly entire, is at Oxford (K 142), the other is in fragments, not yet unpacked, at University College. In the close of the prehistoric and early dynasties the lion figure is often found, and to that age must be placed the alabaster lion, viii, 24, which has been the end-piece of a low seat, the attachments of which are seen below it, related to the lion ends later placed on seats. The early dynastic figures are dealt with later. See the pot-marks, N, li, 6-10. The claw, ix, 51, is from Naqadeh 1503, of date 36. Claws of green serpentine are found at 60 (N, lviii, Q 23); those here, ix, 21, are bought, undated; see *Amulets*, no. 24.

21. HARE: found along with lion figures for a game (N, vii; lx, 17).

Ox: commonly found from the earliest age. At El Amrah of 31 (A, ix, 6, 9, 10), of 32 (ix, 1, 3), of 34 (ix, 2). In ix, 6 and 9, the bull and cow are distinguished; in ix, 1 the oxen are a row of four feeding at a trough, and therefore completely domesticated. There were also four clay cows of 37-43 (A, b 132), and four, white with black stripes and white with red stripes, of 44 (A, b 139). At Mahasnah was an ivory cow, between 31-44 (M, xix), and one of pottery (M, xxi). There are here nine pottery kine, as vii, 11-14. In all these the horns are usually curving forward, sometimes downward, only once upward, and never wide-spread. The early type seems to have the incurving horn on a level, and this was somewhat varied both down and upward. The later type with wide-spread horns, as pot-mark N, li, 14, is unknown in the carvings. The upright horns are seen on a limestone figure, painted with red and black stripes, viii, 46. Upright horns amulet, see xxiii, 6.

A model horn of black polished pottery, ending in an ox head, with inlaid ostrich egg eyes, was found in grave 20 Gerzeh, of S.D. 58. The purpose of it seems to have been for holding a powder, as it has

a plug closing a hole below the head, singularly like the snuff-horn used by the Basutos at present; see *Gerzeh*, pl. vii, p. 23 (Univ. Coll.).

The most usual amulet of early times was the bull's head, front face, with the horns curving downwards, dated to 34-46 by N, lxi, 4. It continued in use, conventionalised, till S.D. 76 (*Abydos I*, li, 4, 5), and in a very rude form till the 1st dynasty (*Ab. II*, xiv). The examples here are in ix, 1 of bone, 2 green serpentine, 3 noble serpentine, 4 bone, 5 carnelian. Others not figured here are of grey serpentine, sard, slate, black steatite (2), brown serpentine, alabaster (3), and a very large one of green serpentine: see *Amulets*, pl. xxxviii, where they are termed ram's heads, from not noting the early type of ox, with forward and downward horns. There are here three dated examples, two from Dios. U 379 of 67, and one from Tarkhan 1256, 77-81. A fine example in ivory, at Berlin, is figured K 152. This amulet seems connected with the magic value of the bucrania placed over doorways (*Hierakonpolis I*, xiv), the bucranium over the shrine of Shedti in the Fayum (*Labyrinth*, xxix), the painted skulls of oxen and goats in the "pan graves" of the Nubian invaders of Egypt, the bull's-head amulet in Spain, hung on buildings in Majorca, and commonly hung on fruit-trees and buildings in Malta, Sicily, and Algiers at present. A natural form of the ox head, of quartz covered with blue-green glaze, is at ix, 22.

SHEEP are found, not so early as the ox. One with shaggy fleece is dated to 44 (D, vi, B 109). Others have corkscrew horns, but are not dated (M, xxi, 8). The ram couchant is found as an amulet in green serpentine, ix, 25, and see the palette N, xlvi, 1. The *audad*, or Barbary sheep, occurs on the white-lined pottery (N, xxix, 91, 93, 95; pl. xviii, 73), also in flint work at Berlin (K 118), besides the slate palettes later on.

MONSTER: a quadruped with falcon head, occurs in limestone (N, lx, 13) vaguely dated to 44-64. There is here the hinder part of a similar quadruped, hollowed out, apparently as a vase, cut in fine-veined breccia.

ANTELOPES: commonly figured on Decorated pottery, but rare otherwise. On combs they are figured at 33 (leptoceros?), 35 (gazelle), 33-46 (hartebeest), (N, lxiii, 60, 63, 59), and here viii, 1 undated. A gazelle hunted by a dog is on the fragment xlvi, 6. A flint figure chipped out of a flake is at vii, 1. Other flint figures of the hartebeest and ibex are at Berlin (K 116, 117). The hartebeest is figured

as a slate palette, xliii, 4 N, and N, xlvi, 11. A deer with palmate horn, and the rounded nose of the elk, is of s.d. 39 (D, xi, 1). Ibexes are on a large comb of the later period, K 44, and engraved on slate, xliii, 4 c. An amulet of horns made of noble serpentine was found with malachite, and a rhomb of calcite, of 44-55, in grave N 632, xxiii, 6.

ORYCTEROPUS, *aard-vark*, or ant-eater. Two little square ivory plaques with finely cut figures of this animal in sunk relief are in ii, 14, 15. These have evidently come from the inlay of a box, a small ebony peg remaining in the edge of 14. The date is unknown, but the work is too good for anything after the pyramid age, and they may well be late prehistoric.

PORCUPINE: probably intended by the spiny figure with a long head spine below the lioness on xlvi, 3. It is more clearly seen on the fragment of a duplicate of this at Berlin (K 38).

HORSE. The horse has not been found represented in Egypt before the xviii<sup>th</sup> dynasty, when it was brought from Central Asia by the movement of the Kassites into Babylonia about 1,800 B.C. It has, however, been supposed to have been introduced long before, and to have become extinct (K 190). It is therefore possible that the disc ii, 17, with a rudely outlined horse on it may be prehistoric; it is of ivory, the common material of early times, which became much rarer as the elephant was driven southward. The incision is not at all like the work of the xviii<sup>th</sup> dynasty, or any later age that we know. The disc is double convex, like a thick lens, without any hole or attachment.

HIPPOPOTAMUS: one of the commonest animals in early Egypt, figured on the white-lined pottery xix, 71, 72. It is found as a slate palette at 34, and also in clay and cut in limestone as a plug pendant (D, B 101); in clay at 36-38 (A, ix, 5); as a large modelled figure of pottery at 41 (D, vi, R 134); and as a plug pendant at 45, in the grave N 1475. It is drawn on white-lined pottery before 34 (xviii, 71, 72), and on a pottery box at 35-41 (A, xii). Four hippopotami are in the round on an ivory spoon-handle (N, lxi), undated. There is also a pot-mark (N, li, 10) of 34-38. A large granite figure, very clumsily done, is at Athens (K 139). Of the figures here ix, 28 is of brown steatite, pierced to hang as an amulet; 29 and 31, of pink limestone, are pendant plugs with a circular top pierced, which will be discussed with the tusk pendants; 30 of grey-brown steatite has an imitation

plug at the top. Other hippopotamus figures are of ivory (xlvi, 4, from a comb); of alabaster (viii, 30, broken and turned on end); three of clay, as viii, 45; and a head of limestone, viii, 44. It is figured, apparently on a boat, on the base of which is a serpent cut in green serpentine, ix, 27. It occurs also as the head of an ivory hair-pin, viii, 2. The hippopotamus goddess Ta-urt is figured holding the crocodile by the tail, on the ivory xlvi, 5. A flint flake chipped as a hippopotamus was found at Kahun (*Kahun*, viii, 22), and is probably therefore as late as the xi<sup>th</sup> dynasty; this is not impossible, as flint figures enter the dynastic period (*Abydos I*, xxvi, p. 21). See also limestone ix, 53.

ELEPHANT. There is a fine incised figure on a slate palette, of s.d. 33-41, palettes in the form of an elephant (N, xlvi, 5, 6, 7) of 38-73, and potmarks of 33 and 37-48 (N, li, 11, 12). It is also a ship ensign at 47 (N, lxv, ii, 4), pl. xxiii 5. Probably later, the elephant appears on the Min statue (*Koptos*, iii), and the Hierakonpolis ivories (*H. I*, xvi). It is here in ivory, on a fragment of a thin cylindrical object (xxiv). Two vases have heads upon them (xxxvi, 63, 65) which have been termed hippopotami; but the upward turn of the front makes that impossible, and they can only be young elephant heads, before the tusks lengthen. No. 63 is of alabaster, and 65 of hard buff limestone. Another figure, 62, in the same limestone, is difficult to understand; it seems to be an animal with small eye and mouth, and a frontal horn, which could be most nearly paralleled in the rhinoceros.

Three indistinguishable quadrupeds, cut in bone, ix, 16, 17, are of unknown age, and might be Coptic.

22. FALCON: commonly called "royal hawk," is first found in the form of the early royal emblem on a crescent, as a ship standard, xxiii, 5 (D, xvi, 41 b). The regular type with a thick body cut off square at the tail is dated to 44-64, in the group N 721 (N, lx, 14, 15), of limestone, and of thin sheet-lead which probably covered a wooden case now decayed. Of sard it is found as an amulet at 77 and 78; see ix, 36. The same type is also found in glazed quartz (N, lx, 18), and on the hair-pin, N, lxiii, 48. The examples here are of bone, ix, 6, from the prehistoric town at Nubt, no. 7 of bone, 8 of yellow and black serpentine. Other examples of the same are of bone (2), schist, grey steatite, and green serpentine; see *Amulets*, pl. xli. A very fine slate palette of falcon shape is in the palette series, xliii, 20 G.

BIRDS are otherwise not clearly defined; there is the earliest piece of glaze, N, lx, 19, of s.D. 31; and here, ix, 9, the pelican? as at Hierakonpolis; two pottery birds viii, 31 (D, vii) 32; two bird-form vases viii, 33, 34, of brown serpentine, and black and yellow serpentine; ten pottery bird-form vases, pl. xxiv; a flying bird chipped in flint, vii, 3; and a bone figure ix, 10. The most usual place for bird figures is in the series of slate palettes, xliii, 20 G to 22 B, where they are of nearly all periods. They are also very usual as the ornament on combs, in a single or double form, xxix, 2 to 13; and as the favourite head to ivory hairpins, viii, 3 to 11, from s.D. 33 onward. Pottery figures of a flying or standing bird are not uncommon, as there are nine here in the fancy forms, F 69; see N, xxvii. Flamingoes are a usual design on the Decorated pottery, both standing and flying.

23. NILE TURTLE is first seen on a white-lined bowl, of 34? xxiii, 2. It was modelled at an early time in clay, D, vi, B 83, of 33-48. It was a usual figure for slate palettes, xliii, 14-17, dated to 33-41 in D, v, B 102. See figures in N, xlvii, 9-18; D, xi, 6-11; A, viii, 1 of 40-51; W, xii, 2, 7. A fine porphyry turtle with the legs and head well formed is stated to be a mace head, and therefore of 31-40; it is at Berlin, K 67.

CROCODILE: appears on the white-lined bowl of 34?, xxiii, 2, and on several other vases of the same age, as xvi, 7. It appears on one of the later slate palettes (*Rise of the Dynasties*); also as figures of chipped flint in dynasties 0 and 1 (*Abydos I*, xxvi, p. 21). It is held up by the goddess Ta-urt, on the ivory relief, xlviii, 5.

FROG is never drawn, but is found carved, as ix, 18 of grey steatite, 19 of grey-green steatite, and 20 of ivory. Others are viii, 37 of alabaster, 38 of black and white marble, 39 and 40 of bright green limestone, 41 a vase of white limestone, 42 a vase of black serpentine with the feet carefully marked. Unfortunately none of these are from known graves. There is one dated example of a frog amulet, of 65 (N, lviii, Q 709).

SERPENTS are occasionally figured on pottery (F 66) as K 125 in relief, and at a late date, 65? painted on pottery, as xxii, 78 F, and K 96. Other figures in the round are apparently not early, as the red limestone head ix, 12; and (perhaps of xiith dynasty) a grey marble head with copper rings for eyes, ix, 52. Thus the uraeus never appears, and other serpents only at a late date; similarly the

other main emblem of historic times—the royal falcon—rarely appears, and only in the later pre-historic age. Serpents of chipped flint are found, broken in fragments, vii, 5-8. The main examples of the serpent are towards the close of the pre-historic age, when the entwined serpents, with rosettes or flowers between them, are favoured; see the ivory knife-handle here, xlviii, 4, the part of a similar handle at Berlin (K 38), and the grand gold-leaf handle of a rippled flint knife at Cairo, K 33. This group of serpents and rosettes is almost exactly the same as on the Indian *naga* steles; see also the Mesopotamian twined serpents in *Anc. Egypt*, 1917, 33. The coiled serpent is found as an amulet of lazuli (*Amulets*, xii, 96 e), which may be pre-historic. Coiled serpents, divided into sections, are found in limestone, such as in *Amulets*, xlvii, 96 f, and on a limestone lid of a jar, undated, N, xliii, 2. A large coiled serpent of blue glazed pottery was on sale at Luqsor about twenty years ago, but at that time I doubted its genuineness. Unfortunately none of these have been found in recorded work, so the date is not known. Serpents round vase, xxiv, 14.

EELS of pottery rarely occur, as xlvii, 7, 8; 7 has a hole in the base, with incised lines on either side of it, of indistinct purport; the whole surface has been jabbed closely with a pointed tool, to indicate the roughness of the skin; 8 has an impression of a wooden stamp on the head, which was prevented from sticking by interposing a piece of very thin muslin. The stamping represents a disc, two bars (like *tau*), a hemi-disc (? *kha*), an oblong block (? *men*), another bar, a god with head of falcon (?) or eel, right arm raised, left arm down with *onkh*, behind him a long *neter*, below that a *t* sign, before him a uraeus the end of which is under the feet. Below is another *men* (?) sign, a falcon with the triangle *da* before it, and a short bar behind. The whole work resembles that of the sealings of the iind dynasty, of Perabsen; see *Royal Tombs II*, xxii, 179.

FISH are very commonly copied for slate palettes of all periods. A slate fish in the round, xliii, 35, xlv, 10, is probably prehistoric; as also may be the fish of steatite viii, 6. Fishes are painted on the white-lined pottery xviii, 71, xxiii, 2, but not on the Decorated. Fish-shaped vases are often found of 33 to 40 s.D.; see the fancy pottery F 68. and pl. xxiv.

SCORPION: occurs on white-lined pottery, xvi, 61, of 34 or earlier, and on late Decorated D 78 c f, of about 65. It is not found as an amulet before

about 70, and occurs at the beginning of the 1st dynasty, ix, 46 (Tarkhan II, 1438, s.d. 79; and 80? in 1528). It was the name, or title, of a pre-Menite king, and commonly found at Hierakonpolis in this connection, as will be noted in *The Rise of the Dynasties*.

LOCUST: only found in one large figure of bright green limestone, viii, 43.

BEE: the long Sudani beetle was an amulet, as found at Abydos in dynasty 0 (*Abyd. II*, xiv) and in crystal here ix, 55 from Tarkhan of the same age, and in green serpentine of s.d. 77, ix, 35, 37.

FLY: a frequent early amulet, as here in lazuli of 40 (N 1858). It occurs in a group at 60 (N, lviii, Q 23). Two of pink limestone and one of green serpentine are undated; see ix, 14, 15.

## CHAPTER V

### THE WHITE CROSS-LINED POTTERY (PLS. X-XVIII)

24. THIS class of pottery gives the most insight as to the abilities and ideas of the earliest civilisation of Egypt, and hence every example of it should be noticed and compared. As to the period of it, the range is placed to s.d. 31-34; many graves without it are classed into the same range by statistics of the other pottery, hence it is not made an arbitrary class. But, as in distribution it is the opposite to the wavy-handled class which begins at 40 and runs on to the historic times, it must clearly come at the beginning of the first period. Only the rudest graves with a single cup in them can be placed before the white-lined pottery. No trace of this class has been found in the later pre-historic periods or the historic times. Yet—strange to say—the colouring and designs have survived down to the present time in the highlands of Algiers. It might be expected that a few examples would linger on later than s.d. 34; possibly a few of rougher and degraded style may be later; yet the entire absence in all graves that are clearly of later date shows that only an insignificant amount could be placed later than the limits here assigned.

The examples are not widely published. The series at the College, here in pls. x-xviii, is of 74 specimens (7 already published in following books): *Naqada* (N) 53, mostly now at Oxford and Manchester; at Cairo, in *Catalogue of Archaic Objects* (Q) 36 (none important); *El Amrah* (A) 22; *Diospolis*

(D) 10; *Mahasna* (M) 14; *Cemeteries of Abydos II* (C) 3; Garstang, *Mahasna*, 1, copied here, pl. xxiii, 1; *L'Anthropologie*, 1898, pl. iii, 1, copied here, xxiii, 2; *Arch. Survey Nubia* (R) 1; altogether 208 specimens. They are classed here according to the character of the designs, pls. x-xviii, 1-6, spots, lines, rhombs, triangles; 7-26 parallel lines, mostly chevrons; 27-44 crossed lines; 45-49 objects; 50-59 plants; 60-74 animals. The subdivisions are stated in the description, in which references will be given to all the parallels that are published, as it is hardly practicable to republish them here.

25. The motive which clearly underlies the ornament is that of basket work. Even the spot patterns, as 1, 2, probably copy the little hollows in a piece of over-cast basketry, such as that in *Qurneh* xxvi, or *Gizeh and Rifeh*, X F. A simpler use of round spots in rows is in M xxiv, H 35, but spots are one of the rarest decorations of this age. See also Q 11529.

Parallel lines are also unusual, unless as shading, Q 11573. The oval tray, 4, may be copied from the ribs of basketry, and 3 is probably from the same idea. A bowl with six radii of 5 lines each is in D, xiv, 45, and parallel lines sloping round a tube in N 85 c. Other radiating line designs are in Q 11498, 11510, 11579.

Zigzags formed of lines all parallel are obviously from basketry, as N 34, 77, 84, A 12 a; M xxvii, 13. Zigzag lines are sometimes found, but are unusual; see N 85 d; M xxiv, H 45, H C, xxvi, 1; A 3, 4, 10 out, 19; Q 11518-9, 11528. Rhombs shaded with parallel lines are sometimes found, as no. 5; and shaded with crossed lines, N 74.

The plain block vandyke is rare, a contrast to the constant use of it shaded. There is a bowl with this, no. 6, and others in N 60, 91, 93. Parallel lines were only exceeded by the crossed lines as a favourite means of design. Sometimes, as nos. 7, 8, they run across the vandykes, following the circular weaving of a basket; see Q 11503; or, less usually, shade a vandyke, as in no. 9. The chevron is the favourite use of parallels, sometimes alone, as nos. 11-15; N 52, 75 a b, 76, 78, 79 a b; A 12 b; D 27, 62; C II, iv, 3; Q 11505, 08, 11517-20, 11575. It is combined with parallel lines in no. 10, A 22. Or combined with a counter-chevron in nos. 16-21; N 7, 8, 11, 85 b, 86; Q, 11502, 11574; and D 31 b. Or with rhombs in no. 22. Or with zigzags, N 56, A 4. Another class has a central patch or group, copied from the base of a basket, as nos. 17, 19, 23,

24, 25; N 6 to 24, 34 to 40; Q 11517, 9. The chevron sometimes has a mid-rib, as nos. 24, 26, but that is unusual.

26. The other great class of design is the cross-lined triangles. These hardly seem derived from the chevron triangle, as the lines scarcely ever meet down the middle, as in 39, 41, but merely shade over the whole triangle uniformly. The plain hatching in four or five triangles, 27, 28, 31, appears curved owing to foreshortening over the curve of the bowl; the lines are always straight and uniformly spaced. See also N 26-30; A 5, 7; M xxiv H 15; Q 11499-11501, 09, 13, 16, 11566-7, 11578; and two H odd. Triangle and counter-triangle occur in 32; A 6; D 31 a, c. Triangles with parallel lines between are sometimes used, as nos. 33-37, A 8. Cross-lined chevrons are placed around a central circle, N 21-24, 38. Sometimes hatched triangles are mixed with line chevrons, as nos. 36, 40 to 43; N 28, 32; A 15; D 31 a, 43 a b; M xi, xxiv H.T., xxvi; Q 11531, 4, 11577; R. p. 319. Large triangles are mixed with groups of small triangles in no. 59; N 36; D 43 a; Q 11517. Radii may also be cross-lined, as N 44; and bands or squares in no. 41; H 72, 73, 84; D 43 a b; C II, iv, 5; M xxiv. Rarely, cross-lines are put over the whole vessel, as no. 44.

27. The various kinds of objects represented are the more instructive matter. The row of five objects on 45 are unexplained; possibly a yoke with cross-bars to hold the animals' necks may be the source. On 46 the lower row look like stone axes let in to stout wooden handles, and the upper row may be stone hoes. The cross-lines may be only to express solidity, like shading. A strange object is on 47 and 48, a middle stem, with square objects attached at the sides; see Q 11535, 11571.

The ship, so usual on the later Decorated pottery, seems to be shown in plan on 49. There is the long outline, pointed at each end, the two square cabins marked by the cross sticks of the roofing, the oars along the sides, a wavy line across them for the water, and in the prow is the branch for shading the look-out. That such ships with cabins were used in the period of white-lined decoration is proved by a bowl which is copied here, pl. xxiii, 1, showing also the oars. With this form of ship dated so early, there need be no hesitation in recognising the ship on the oval tray 49.

28. The plants are the most usual decoration, and show a remarkable interest in artistic figures, apart

from any utilitarian or magic intention. They are not merely one or two conventional forms, but eleven different kinds are distinguished one from another. The simple stem with straight leaves is the most usual, as on nos. 15, 50, 74; N 2, 40, 42, 54, 69, 76; A 9, 10, 11, 20 (branching), and 21; C II, iv, 4, 5; Q 11535. It may be a palm-leaf, in some instances but not in all. Another stem has leaves curling over outward at the end, no. 67. On another the leaves bend down sharply, as nos. 57, 58, 59; Q 11533. Other leaves are wide and curve outward, A 21. Others curl inward, as 53, 56, 65, 69, or appear thick and fleshy, turning in sharply, as 54, 55, perhaps *Peplis portula*. A bud with pairs of broad leaves below it is used geometrically in N 48. Wide rhombic leaves in pairs, with some inflorescence on the stem, are often shown, nos. 58, 68; xxiii, 1; N 85 d; M xiv, xxvii; (Q 11508?); perhaps the henna, *Lawsonia alba*. A branching tree with narrow leaves is figured once on no. 59, possibly the *sont* acacia. A flowering plant with drooping bell flowers is on no. 51. Lastly, tufts of grass or reeds are placed above water lines on no. 68. No. 60 may possibly be a degraded plant form. I have to thank Miss Garlick for some suggestions of names.

29. Animals are often summarily figured, and difficult to distinguish. The bowl 61 has three scorpions around it. No. 62 has a wavy pattern, which is probably a degradation of a crocodile figure, as on the next. The oval dish 63 appears to represent a crocodile hunt. The large crocodile that fills the middle is shut in by hurdle-work above, apparently controlled by two men at the right hand, probably connected with the rope with coiling end before them. Below are three hippopotami, and what may be intended for splashes of water caused by the hunted crocodile.

A dog seems to be intended by the figure in the middle of no. 64; for a good figure see xxiii, 2. Cattle are figured on 66, the forward position of the horns resulting from their being noticed when grazing.

The upper animal on 67 looks like an oryx at the head, but the length of tail could only be intended for a jackal. The lower animal, by the length of curve of the tail, must be an ichneumon, the bristly hair being represented upright. On 68 are probably dogs above, and a stork below. The horned beast on 69 seems surrounded, or hunted, by dogs. The cattle on 70, and hippopotami on 71 and 72 are fairly well done, and less natural on Q 11570 and

xxiii, 1. On 73 the larger animal must be the African goat by the wattles on the throat. The animal with diverging horns and long hair on the chest is the *audad*, desert sheep (*Ovis tragelaphus*); the animal with parallel curved horns is doubtless the ibex.

30. Lastly come the human figures, which are very scarce. The most distinctive is the vase here, no. 74, with a combat of long- and short-haired men. The long-haired man is probably of the usual prehistoric people, wearing the sheath, and having the long hair as often actually found on the bodies. He is successfully attacking the short-haired man, who wears a hanging appendage, perhaps a dagger-sheath; see *Hierakonpolis*, vii, 6. Neither figure seems to have any other clothing. The zigzag line connecting the legs may be expressive of their connection in one figure, like the zigzag lines joining the outlines of quadrupeds, or may be to express rapid motion. The dots down the legs of the vanquished figure may express hairiness, suggesting that he belonged to a colder climate. Two other figures of men, wearing the sheath, are on a bowl, C II, xxvii, and another figure of a long-haired man hunting oxen is on a bowl, M xxvii. A man hunting hippopotami, and two women are on xxiii, 1. There are also two rude diagrams of men on no. 63.

Figures of women are very rare. Of the wide type the only complete ones are on a bowl from Mahasna (xxiv, H. 88): these are formed as an hour-glass figure of two triangles for the shoulders and hips, a neck, and some enlargement for a head above, and a girdle of fringe ending the figure below. Remembering the Nubian *rahat* fringe, it seems that this was the usual covering for women in the early prehistoric age. A portion of a similar figure is on the bowl with a boat (pl. xxiii, 2). Another, headless, is on a painted pottery box of s.d. 35-41 (A xii). A woman is on the bowl xxiii, 1.

31. The various figures of animals published here and elsewhere, of the early period, 31-35 s.d., are as follows, with references:

- Scorpion, no. 61; xxiii, 2.
- Fish, no. 71; xxiii, 2.
- Crocodile, no. 63; xxiii, 2; M xiv; C II, xxvii.
- River Turtle, xxiii, 1, 2.
- Stork, no. 68.
- Small birds, xxiii, 2; A 21.
- Hippopotamus, nos. 63, 71, 72; xxiii, 1, 2; A 21; Q 11570.
- Antelope, long-tailed, pot-mark N 22 (s.d. 38).
- Giraffe, N. 98; M xxiv.

- Ibex, no. 73; M xxvii; N 91.
- Goat, no. 73; N 91, 93, 95.
- Audad, no. 73; N 93, 95; D 93.
- „ young? D 93.
- Ox, forward horns, nos. 66, 69; N 97; M xiv; pot-mark N 15.
- „ upright horns, no. 70; A 17; M xxvii.
- „ spreading horns, A 17.
- Elephant, M xiv; pot-mark N 11.
- Hare, D 93.
- Ichneumon, no. 67.
- Jackal, no. 67.
- Dog, nos. 64, 65?, 66, 68; xxiii 2; D 93, 96?
- Man, nos. 63, 74; xxiii 1; M xxiv, xxvi; C II, xxvii.

## CHAPTER VI

### THE DECORATED POTTERY

(PLS. XIX-XXII; CORPUS PLS. XXXI-XXXVII)

32. THIS is the most important class of remains for the detail of the second period, as it shows so much of the products of which no other traces are left. The numbers with letters are *corpus* types.

It may be divided into three stages, well defined and separate. From s.d. 31 to 39 there are a few examples; in 31 of rush-band pattern (10 g, 13 w), in 36 of marbling (63 c), in 37 of chequer (29 a), and in 39 rush-bands appear on a larger scale (68 a). All these are very rare and sporadic; yet there can be no question as to the early date, as 10 g is associated in grave Naqadeh 1449 with two of the cross-lined bowls (C 1, C 6), which class is the most remote from the usual age of decorated pottery. These point therefore to the simpler styles of decoration being really contemporary with the first prehistoric age, 31-39 s.d., but in an adjoining region from which they were rarely imported.

At 40 there is a sudden burst of new types, the spiral (35 a), aloe (36 a), and deer (36 c), all appearing at once. This marks the entry of a fresh civilisation, and probably of a fresh race. That the forms are taken from stone vases, and one of the earlier ones, in s.d. 36, imitates marbling, points to the source being in a rocky country of variegated stones, with little clay for pottery. The ship type begins at 45, and two fresh types come in later, at 46 s.d., the flamingo (41 m) and the row of hills (55 a, 56 b, 59 c d). These belong to the age when the



new-comers were well settled in Egypt; they took the flamingo of the Delta marshes as a subject, and coming from the hills they noticed the contrast of hill and plain.

33. The end of these naturalistic designs is almost as sudden as their beginning. There was a diminution after s.d. 60, and with 63 they entirely disappear. This change was not only a negative one, of the decay and loss of types, but some new styles come in. The barrel-shaped pots with an internal brim, to hold a conical cap, entirely copied from basket-work, begin at 64 or 65 s.d. and continue to s.d. 77 (*Tarkhan* 2057) or 80 in type D 74. The tall jars with rough figures of animals begin in s.d. 60, type 78 b (*Diospolis*), and are obviously late by their coarse style, see *corpus*, pl. xxxvii. Another new type of brush-work appears, in two or three comma-like strokes (66 b to p, pl. xxxv), beginning in s.d. 69. Beyond these types there are only left rough groups of lines without any structural meaning.

At first sight it might seem that these three natural divisions of periods agreed with Dr. Reisner's Early, Middle, and Late Prehistoric. Those terms, however, refer to Nubian periods, which are stated to be later than equivalent stages in Egypt (*A.S. Nubia*, 1907, p. 320). As there was not a single object with a royal name in the proto-dynastic Nubian series, it is difficult to fix exactly of what age the divisions are. At least it is plain that the "Late Prehistoric" there includes the spiral pottery of 44-64 s.d., the boat pottery of 40-63, and the wavy-handled of 57-66 s.d. In the next stage of "Early Dynastic" are included the triple-line pottery of 63-74 s.d., a spiral pot (*E.D.* vi, 8, reference should be 492) of 58 s.d., wavy-handled pots of s.d. 65 and onward. Thus the divisions would be about 20 s.d. later than in Egypt. There was no absolute dating, and as there are no reasons given for these dates, they may be classed with the statement (*A.S.N.* 329) that plain cylinder jars with cord pattern have "never been found in Egypt before the 1st dynasty"; the fact is that such jars were entirely over and gone before the Royal Tombs of the 1st dynasty, where later degradations of them are found.

34. We turn now to consider the types of the Decorated pottery in the *corpus*. 1 b, d, m, t, are imitations of mottled stone, the first two with ledge handles, the others with pierced handles. The imitation is best done on the latter two; 1 d has been sprinkled with a brush of colour from three

directions, 1 b is very badly splotched with a brush. As to the date of these, 1 b is dated to s.d. 63, and accords in form with W 43 dated 57-66; 1 d is like W 3 g of *Diospolis*, not dated, but from the forms of W 3 b (42-3) and W 3 d (48-53) it might be placed at about 45; 1 m resembles the stone type at about s.d. 60; 1 t is most like the pottery D 68 m and s at about 60. Other imitations of marble are the bowl 65, of s.d. 63, and the flat pots 62, 63 b, 63 c, ranging from 36 to 71 s.d. Thus marbling was used over the whole of the middle period; so far from the painted pots of the xviiiith dynasty being early imitations of fine stones, they were only following the cheap shams of thousands of years earlier.

35. Type 2 here in the *corpus* denotes the wavy handles with line patterns; 2 k is dated to 52; and 2 n, s, are of about 60-65 by the Wavy-handle series. The style of pattern would agree with such a date. The meaning of these wavy lines, vertical and horizontal, and the bands of lines on 2 s, together with all the line patterns down to 12, seems to be a copy of twisted rush-work covers, made to hold the stone vases. Such rush-work we know in modern times on the Italian oil flasks, used for the same reason—the difficulty of hanging or carrying vases without handles. The collar and base of rush-work, joined by bands, are very plainly seen on 4 a to 4 c, which entirely prevent attributing these wavy line patterns to imitation of veins in stone. In type 13 the original form is evidently vertical cords around the vase, held together by alternate squares of cross-plaiting, so as to show the vase between the cords. Similar cords and cross-plaiting is the origin of the chequers on type 29; and when the cords were forgotten the squares of connecting cords like 10 n were left isolated, as on type 12. Such rush cording belongs to the earliest stage of the vases, before they were made in Egypt, as in 10 g and 13 w of s.d. 31. It degrades in late times into groups of lines without any meaning and placed irregularly, as on 21 d of 75 s.d. and others at Tarkhan extending to 80. The purpose of the twin vases, type 14, also 33 a, 43 t, is not known. They are always small, as if for toilet use; but they never have any galena or malachite in them, so they cannot have been for kohl. Presumably they were for some liquids which have entirely vanished.

The spotted vases, type 16, may have been intended to imitate some crystalline stone. They extend from 48 to 60 s.d., or the latter half of the second period.

36. All of the line patterns are largely influenced by a habit of holding three or four brushes together, in order to speed the work. On any lined vase it will be found that the lines are all multiples of 2, 3, or 4, according to the number of brushes held together. Three brushes continued to be used in the coarsest late work, as 25 a, c, 26 a, g. This system of work extended to the spirals, which were made by a group of brushes, as shown by the thick colour beginning all along the same radius. Four brushes are used thus, then three or four turns made in the middle by free hand, and one turn round the outside to finish the spiral.

37. The spirals have often been put down as imitations of nummulites in limestone. The history of the type does not favour this view. The single spiral as 31 belongs to s.d. 40-45; the groups as 35 a are of 40-50; but the continuous surface of spirals, as 67, is later, of 46-58. If the source were nummulitic the continuous mass would be the earlier, and the study of detached large spirals would be later. Moreover the nummulite is usually seen in cross section in limestone, but no such spindle-shaped form is ever painted; and there is no instance of nummulitic limestone being made into vases, except one in pyramid times. The spiral rather seems to be a piece of pure ornament, inspired by trying to fill up the face of a small ovoid pot, as type 31. It might be due to a spiral mat of twisted rush applied to each side of a pot, and joined down the edges, as hinted by 31 a, where wavy lines join the edges of two spirals. A late variety has a wavy line placed between the spirals, detached, as 32 l, 35 n, and in 67 d dated to 58-63 s.d.

38. The flowering plant, which is the main subject of type 36, is an aloe according to Dr. Schweinfurth, and on his authority we term it such. It is never represented as springing from the ground, but always in a tub or vessel, around which the leaves hang. The vessel is sometimes pointed, as 36 a, or flat-based, as 36 b, or a large tub like the cabins of the ships, as 36 d. Above it is a double arch, which probably represents the concentric sheaths of leaves round the base. From that the long central stem rises, and hangs over with a terminal flower. So far as we can imagine a meaning for this plant here, it would be funereal. It is usual in Egypt now to place aloes in pots upon a grave; being a desert plant the aloe can survive the drying up in such a situation, and it is occasionally watered. From its permanence it is regarded as an emblem

of duration of life, and may thus have a value in sympathetic magic, or the doctrine of similars, to influence the survival of the departed soul.

Along with the aloe are often figured bushes, of an indeterminate kind, as 36 k, p, and below ships on 43 a, 43 b, 44 d. Of these 36 p might throw light on the species intended, as it has loose little branches projecting.

39. Rather later than the spiral, aloe, and bush, about s.d. 45, the figures of ships begin to appear, types 40 to 48. As a different interpretation has been put upon these, it is needful to call attention to the facts. It has been proposed that these represent forts, with two block-houses forming a pylon entrance, and that the oars represent sand-ripples. Now the details are all against such a rendering. Similar ships (or forts) are figured on the painted tomb of Hierakonpolis (s.d. 63), though without oars. There is a steersman holding the steering paddle at the stern, and in the bows is always a branch as a shade for the look-out, and usually a chair below it. The tying-up rope dangles from the stem. This difference of the two ends is entirely in the nature of a ship, it is quite meaningless for the sides of a fort. Further, one of the ships (or forts) at Hierakonpolis has the very high end, exactly like a figure of a ship with a square sail on a vase in the British Museum (pl. xxiii, 3). On the ivory knife-handle in the Louvre (*Ancient Egypt*, 1917, 27) are ships of both the types which are seen at Hierakonpolis, standing in threes grouped together, overlapping; these cannot possibly be forts. Yet other evidences come from the earlier pottery of the white-lined on red. In vi, 49 is the top view of a ship; the two cabins are marked by the cross lines of the roof-thatch, around the ship are the oars projecting with large blades, a wavy line for a water ripple runs between them, at the bow (right end) is the branch. This is obviously in agreement with the ships on the pottery; it cannot possibly be a fort. On another early dish (xxiii, 2) is an obvious figure of a ship and similar oars with triangular blades, with square cabins, and a branch at the prow. In all these various examples, the details show unquestionably that the figure is that of a ship, and not of a fort. The ostrich-farm theory is still more impossible. It is to be hoped that writers will consider the facts, and not so often revive impossible theories.

40. The features of the ships on the pottery we may notice, beginning with the stem. At the bows

is a branch or branches, as on the Hierakonpolis ships, over a seat for the look-out. These branches underwent changes in drawing (xix-xxii). First is a plain branch (40 b, m, 41 d undated); then a double branch at 46 (41 b) and 50 (46 d), and undated at 40 n, 44 p, 47 g; further, a triple branch at 52 or 3 (47 a, 43 k). The double branch is stiffly outlined at 46 (45 b), and by 52-63 this becomes a rigid double or triple mass of cross-lines (of 52-56 in 48 c, 58-60 in 51 b, 58-63 in 44 d). Thus the formalism of the branch progresses with date, and it serves as a good indication of age for vases without any tomb-date. We may summarise it thus:

Single branch . . . . .	before 46
Double „ . . . . .	„ 46-50
Double formal . . . . .	„ 46
Triple branch . . . . .	„ 52, 53
Double cross-barred . . . . .	„ 45-63
Double or triple cross-lined . . . . .	„ 52-63

In the middle are the two cabins with a gangway between them. Below the gangway the side of the ship is coloured red at Hierakonpolis, corresponding to the gap in the oars on the pottery drawings. This probably represents some structure on the side similar to the red cabins; it might be a hurdle that served to lift as a gangway to the shore. In any case the gap in the oars would be needed for a clear way when at a landing bank. The cabins are more fully shown at Hierakonpolis; they had annexes of less height (as also *Naqada*, lxvii, 14); on the corners they had loops of withy (?) to serve to hold in the oars when stacked out of the way. In one case an upper story appears as a shelter for a seated man, shaded by a branch.

41. Behind the cabins is the tall pole bearing an ensign. The use of ensigns of ports on ships was well known later, as Strabo describes how the horse ensign of Gades was recognised when found in the Indian Ocean (II, iii, 4). That these ensigns (xxiii, 5) are essentially port signs, like the letters on the sails of fishing-boats, is indicated by the three, four, and five hills (nos. 19-21). These are not known as signs of any deity, nor are they likely to be personal marks of owners. No doubt some of these ensigns are religious emblems, as 16 of Ra, 28 of Neit, 32 of Min; but such would be very likely to be adopted as port signs where such deities were worshipped, like the city signs of the owl of Athene or the caduceus of Hermes.

Referring to the separate signs, 1 seems to be the shoulder and arms of a man. 2, the elephant, which occasionally appears in pre-dynastic times (marks *Naq.* II, s.D. 33; 12, s.D. 37-48; *Dios.* slate 43, s.D. 33-41) and earliest dynastic (*Hier.* xvi; *Kopt.* iii). As it was known on the Nile, and also in North Africa (by the Carthaginians) it does not fix a region. 3, the falcon on a curved base, such as is seen later at Hierakonpolis (xix, xxxiv, 1) as the royal emblem; this probably belongs to the Nile Valley, but might refer to a royal factory on the coast. 4, the wide horns of the ox and lyre-shaped horns of the hartebeest are only found once. 5, the commonest sign is the two pairs of horns; and 6 may be a variant of this, badly drawn. 7 probably represents four pairs of horns, set around a square base. No such horns curving inward are usual in Egyptian hieroglyphs; the regular Egyptian type is that of the wide splaying horns, both in the 1st dynasty and in the later hieroglyphs. 8 is a rougher form of 7.

The only plant represented is the flowering-stem of the aloe, 9 to 12, and the separate flower 13. The frequent figures of the aloe upon the pottery, as well as these ensigns, seem connected with the ideas still remaining in modern Egypt. The aloe there is an emblem of vitality and long life, and, as such, is hung as a charm over the doors of houses, where it can live for years without earth or water, according to Lane. It is, with the same symbolism, often placed in pots over the graves. It is stated to hinder evil spirits from entering a house. Further, aloe wood is used to burn in fumigating, especially to a visitor on leaving a house, perhaps with the idea of protection from coming evils. The aloe as a town sign would be appropriate to any place where it freely grew. Such would be more likely along the Mediterranean coast than on the Nile, where the towns were all on the alluvial inundated plain. As the aloe flourishes now in Southern Italy, it was doubtless common on the sandy coast of North Africa. The two signs, 14, 15, may represent plants, but are indistinct.

Of cosmic signs there is the sun, 16, shown as in later times. 17 may be intended for the same or for a mace. The groups of hills, 18, 19, 20, 21 are evidently local signs, particularly appropriate to ports, as being seen from a distance. It seems very unlikely that four or five hills could be a sign of any place in the Nile Valley, where the hills are almost always a level table-land, with occasional

valleys; nor could these refer to the flat coast of the Delta. It is rather on some part of the coast of Syria or North Africa that so many hills would be found together.

The sign 22 differs from others in being on a double pole. The nature of it is unknown, as also the following signs 23 to 27. Nos. 24, 25 are found also on slate palettes (D, xii, 43; *Liv. Ann. Arch.* iv, 140), and as a pot-mark (D, xxi, 88-94; *N. liv.* 248-252; A, xvii, 2). Sign 28 is probably the crossed arrows, the regular symbol of Neit. 29 and 30 are the harpoon, commonly used in the early pre-historic times; for any fishing station this would be a likely symbol. The double-pointed dart, 31, with the duplicated ends 32, is found as a pot-mark (*Naq.* 117-121; *Dios.* 73-79). The single ends are like that of the sign in relief on a slate from El Amrah, s.d. 58 (pl. viii), and the double form is like that of the relief figures on the Min statue of Koptos (*K.* iii). In both of these cases the emblem on a pole seems to be intended for that of the god Min, and therefore the signs, 31, 32 may be credited with the same connection. Min, as a god of the desert, might be worshipped at any desert coast. He seems originally to have been brought in from the land of Punt (see *Athribis*, 8-9), by the Koptos road. Hence as a port deity he might appear at Qoceyr on the Red Sea, or at Koptos or Panopolis on the Nile. As he is also represented in the Oasis of Khargeh, he might have been taken as the deity of one of the Libyan ports on a desert shore. It does not appear therefore that these signs are quite distinctively of the river or of the sea; the hills favour belonging to sea-ports, and the absence of any of the known nome signs, or of the common crocodile, hippopotamus, palm, or other Egyptian products, is against these ensigns belonging to Nile towns.

It is surprising to find several signs in exactly the form in which they were later used in Egypt, such as the falcon on a crescent (3), the circle with a central spot for the sun (16), and the cross for the arrows of Neit (28), all about s.d. 50. Similarly among the pot-marks is the plant of the south (40-67), the crown of Lower Egypt (35-39), and the falcon and ostrich feather standard (s.d. 63, *Dios.* 51). These imply that a good deal of the historic Egyptian system has probably come down through the pre-historic ages, though our scanty material of those long periods only shows some fragments of the story.

The main question to be solved is where these ships were trading. Were they only for Nile traffic,

or were they for the Mediterranean or Red Sea? The use of a great number of oars is in favour of sea traffic. On the Mediterranean, in all ages, rowing galleys have been the most dependable vessels; we find them as the main fighting force from Ramessu III down to Louis XIV. On the contrary, oars are useless on the Nile, as the stream can only be overcome by wind power, and oars only appear for crossing the stream, or rarely for aiding in the descent on the current. On the Red Sea, oars would also be much needed, as the coral reefs prevent tacking, and the difficulties of navigation practically stopped the track from Qoceyr up to Suez. The evidence of the signs of many hills for the ports is also strongly in favour of sea rather than river traffic.

42. Two remarkable vases should be noted, on pl. xxi. No. 45 m has three ships on it, and above each is a sign in relief on the pottery (marked by thin outline), and painted red upon the relief. These signs are the harpoon, the crocodile, and the crescent. There is no connection between these and the ensigns of the ships below them. The other notable vase is one with a ship moved by long punting poles, pushed from the shoulder exactly like poling on the modern *dahabiyeh*. It resembles the Nile boat also in having a row of cabins upon it; these appear to be occupied by women, and two women stand out on the bows. It seems to represent the pleasure-boat of some chief with the *harem* on board for an airing. The bows seem to be a corrupt form of that on the vase Q 11557. Not only is the drawing of this boat unique, but on the other side are some figures of gazelles and flamingoes drawn with unusual delicacy and spirit.

43. Just after the appearance of the ship design, the group of flamingoes began to be figured, s.d. 46, as on 41 m, 45 m, 46 j, 53 d, 55 a, b. At first these were termed ostriches; but, as my friend Dr. Forbes pointed out, they are undoubtedly the flamingo, now so common on Lake Menzaleh. These marsh birds show that the Delta was well known to the designers of pottery; and they may explain another part of the design, the groups of horizontal lines with a flexure in the middle; such appear above the flamingoes on 45 m, and with them on 41 m. It seems that this group represents a flock of flamingoes flying to or from the observer, so that the outstretched wings are seen edgewise, with a slight shift at the body.

Antelopes are represented from s.d. 40 onward,

sometimes with the aloe (36 c), or over ships (47 b, c, g), below ships (47 m), and on the reverse of a ship vase (46 k).

44. A puzzling object of artificial kind is shown below the ships on 41 d, j, m, n, s, u, 48 c; and at the side of the vase in 43 a, b, 45 b, 47 g. It seems never to be found except with ships. It is attached by cords to the top of a pole (41 j, 45 b). It is of some flexible material, apparently stretched by diagonal sticks, and drawing in along the sides with a curved outline. It has been called a shield, but no shield would have a pole projecting below it, or be slung from a pole at the top. As it is almost always associated with the ships, there is a strong suggestion that it was a sail, perhaps of matting hung from a temporary mast, which could be taken down when not required. It usually has on either side of it a small cabin like those on the ship, see 41 m, n, s, u, 43 a, b, 45 b, 48 c. This may be to indicate that its place was between the cabins, stuck upon one of the cabins. The great difficulty of this view is that in no case is it shown upon the ship. Perhaps as it was of small size, and only set up occasionally, it was not looked on as a part of the ship, but as a piece of movable furniture, like a steering paddle or a baler.

45. The rows of S figures, as on 41 a, u, 45 b, vary in position to a reversed N. It has been suggested that they are a degradation of a flight of birds, and that seems to be the only explanation of them. The concentric semicircles of wavy lines, as on 45 b, 47 c, 50 a, b, 59 p, are yet unexplained. They only occur on wide pots, usually with little triangular knob suspensors, 45 b, 50 a, b, 59 p. They seem to represent something connected with the form of the pot, rather than with the design drawn. Are they possibly developed from loops for carrying the pot, attached to the suspensor knobs, and hanging down between? The jar 59 t has apparently had large circular handles, between the suspensor knobs; they have been broken off, and the stumps ground down, at the parts cross-shaded.

46. The family of squat jars, 61-63, 67-69, seem to be of a different source from the rest of the Decorated pottery. They never have any of the familiar design of ships, plants, flamingoes, deer, or hills. There is no doubt that they are of the same age as all those designs; and separation of them from all the usual subjects seems to show that they were made by an entirely different school. Now in Nubia the squat jars are not uncommon (*A.S. Nubia*, 1907-8, p. 327;

1908-9, pp. 113, 116, 137, 143, and many pl. 43; 1909-10, p. 97, pl. 27), whereas only a single ship vase (1909-10, pl. 27) is reported. Probably none of these were made in Nubia, and all were brought in from Egypt; but the disproportion shows that the squat jars were produced nearer to Nubia than the ship jars. As also the ship jars bear the Delta flamingo they are probably northern, while the squat jars are southern. The squat type begins with rush-work patterns, 68 at 39 s.d., and 9 c at 40 s.d.; next comes imitation marbling at 43 (63 b), and then spirals at 46 (67 a). This form is well known in stone from s.d. 38 onward, having been brought in with the second prehistoric civilisation; it continued to be copied in very rough form to the third dynasty (Garstang, *Mahasna*, xxvii). The plain undecorated forms are included with the others here, as they are of the same fabric, and unlike any other class of pottery.

The bowls 71, 72 are incised, and really belong to the school of white-lined pottery, at s.d. 32; 74 a, d, are also incised, of the end of the prehistoric age; 76 is a copy of a basket, incised, of early date, s.d. 34; 77 has a row of men, painted with their arms raised up.

47. The class of tall jars with rude figures is of the last age of the prehistoric, s.d. 60 and onward. The beginning of such decoration is seen in the crocodile hunt on 78 a (s.d. 52). Then follow crocodiles and serpents on 78 b, at s.d. 60, and others apparently as late or later, 78 c-f, ending with mere wavy lines at s.d. 75, type 20 c.

The bowl 79 m has been painted with a triple brush, making groups of 6, 9, or 12 lines.

48. The model boats, 81, show somewhat of construction. They were evidently not mere reed floats, as they are thin and well deepened inside. Nor were they dug-outs, as the separate parts are clearly shown. The lines suggest longitudinal ribs with narrow strips running from side to side. The material is not obvious. There was no tree with suitable bark, or which would split in thin sheets; matting would be made wider to avoid joints; papyrus bundles would not bear the pressure of water; skins would be wider. Such boat models are early, at Naqadeh they were of s.d. 32, 33, 35, and three of 36. A later type, 80, is of s.d. 52, painted with figures of sailors between the stripes. See pl. xxiv.

The remaining forms might rather have been placed in the fancy class, as they can hardly be called Decorated.

The earlier part of this Decorated class, 1 to 19, has been re-arranged and re-numbered. The Naqadeh series has been greatly extended, by later work and by types purchased, and many of the numbers assigned to the additions were incongruous. In this part therefore it seemed necessary to change the notation, though elsewhere only a very few changes of the established *corpus* have been tolerated. No doubt a somewhat more consistent arrangement might be made throughout, with all the present material in hand; but as the scheme of the first year's discoveries proves to be so nearly what is needed, it is better to avoid the confusion of the past records which would ensue on a general re-numbering.

## CHAPTER VII

### WEAPONS

#### MACES (PLS. XXV, XXVI)

49. THERE are two main types of stone maces and their funerary imitations: the disc of the first period, and the pear-form of the second period. Of the dated examples the earliest discs are of a shallow cone form with slightly reflexed slope in S.D. 31 (N, vii, 1443) and 34-38 (N 1416; limestone, Univ. Coll.); and a very shallow plano-convex pottery model at 32 (N 1437). A deeper plain cone is shown at 32, in the model, A, xii, 1; and at 34, in the clay model, D, v, 56. There is a slightly concave outline, prolonging the central hole, of S.D. 34 (A, x, 6, 90): with a distinct concavity and longer hole, of 35-40 (D, v, 86, on handles), of 33-41 (D, v, 102), before 40 (M, xix, 4), 36-43 (M, xx, 3), of 37, 37, 36-43, 42-46 (in R. 62 c, 10, 11, 2, 12, apparently), and of 42, fig. 12 (N 1401). With the last was one of breccia, fig. 3, with a sharply tubular centre; another of probably the same age—vaguely 31 to 44—is in M, xix, 2. Thus the form passes from a very shallow cone to a tubular projection.

Limestone models, coloured with black and white bands, or with spots, belong to 31 (N, vii, 7), to 34 (A, x, 6, a 90), 35-41 (N, vii, 3), 44-70 (N, vii, 5), and 63 (N, vii, 4), by which time the painted imitation of stone had passed into an independent pattern.

A convex variation, fig. 8, appears at 38 in syenite (A, x, 6, a 102). Later there comes a deep cone with reflex outline, between 44 and 70 (N, vii, 5). This type continues as late as Hierakonpolis, fig. 4, along

with an exaggerated tubular form, fig. 3, and a thin concavo-convex form of debased style. The series of forms found at Hierakonpolis (early dynastic) are, nearly all, erratic and debased. Thus it appears that as actual weapons they range from 31 to 42; a few limestone models, and the purely ceremonial survivals at Hierakonpolis, are all that are later. They continued to be figured among offerings, in a debased form, as late as the xiith dynasty.

50. The manner in which they were mounted for use is shown by the pair of maces with handles of ivory and horn (D, v, 86), the length of the whole being four diameters of the head; date about 35-40.

A clay model of a mace on a handle, of date 34, is rather over five diameters long. This latter (A, xii, 1) shows a spiral line around the handle, and on some pear-shaped maces a spiral line is represented, or a band passing down the head, see *Riqqeh* xxiii; LACAU, *Sarcophages*, xliii, 273, 275-6, 279. Now the diameter of the hole in the head is often only a quarter of an inch, even in the largest, fig. 2, weighing two pounds; it is absurd to suppose that a handle of ivory or horn cut so small would not be snapped if actually used. The working handle must have been tough and pliable, and the only likely form would be a strip of dried hippopotamus hide, thinned down at the top to the size of the hole, and with the thin end long enough to pass down the outside of the head and coil round the handle, so as to secure the head from falling off. That some such binding was used, and not any wedging as in a hammer, is proved by the holes tapering to the flat top, where they are smallest, so that no wedging on is possible. A disc mace is found in Denmark (*Mem. Ant. Nord.* 1914-15, pp. 104, 107), but other references given are to biconvex maces.

51. The second type of mace is the pear-form. The earliest dated example is fig. 36 of S.D. 42 (N 1401), or another of 36-43 (M, xx, 3): these are widest at the base, short, and almost globular. A more flat-topped form appears at 43-48 (D, vi, 236), like fig. 48, which comes from N 1488, unfortunately very vague in date (33-72). At S.D. 52 there is a full well-poised form, fig. 34, in breccia (N 1241). There is also a narrow barrel form, at 52, fig. 24 (N 690). A low globular form recurs at 55-63, like fig. 27 (*Gerzeh*, iv, 2). At 60 is a higher form, like fig. 31. Unfortunately there are few well-dated examples published, and there is no definite trend in those quoted, the globular form covering both early and later. On reaching the proto-dynastic age

the great number found at Hierakonpolis (*H. II*, xxvii) nearly all have narrow bases, and conical lower ends; of this group there are here figs. 30, 32, as 38, 43, 44. This type is found with the name of Khofra in his temple at Gizeh (*Scarabs*, 43·11), also commonly figured on coffins of the xiith dynasty, and it continued to be represented in the hand of the King slaying his enemies, down to the end of the temple scenes. The great ceremonial mace heads covered with sculptured scenes, found at Hierakonpolis, are of the form of fig. 37. Peculiar examples are fig. 45 of basalt with nine irregular pits in the face; fig. 29 with eleven drilled holes filled with grey paste; and fig. 31 with a sign  $\ddagger$  cut on the upper part. Pear-maces are found in Italy (*Bull. Pal. Ital.* xxix, 150-186); the forms in various countries need to be placed together to distinguish the several different types. From Viterbese they are of Eneolithic age, with pillowy copper adzes, and a wide dagger with three rivets.

52. Other forms of maces, 49-65, are not precisely dated. 41 is from Koptos. 42 is beautifully finished hard white limestone. 43, 44 seem connected, and 44 is of a type found at Hierakonpolis (*H. II*, xxvii, 18), probably early dynastic. The broken example, fig 53, shows how the drilling was worked from each side. The ridged form, fig. 57, may be compared with *H. II*, xxvii, 18, 19, probably of the same age; being of a hard dioritic stone it is not likely to be later. Fig. 58 is the end view of an oval mace of shelly marble from Hierakonpolis.

Pointed maces, figs. 59, 60, are unusual. They belong to the first period, as they are dated to 33-41 (*D*, v, 102), to 36-43 (*M*, xx), and to the same in Nubia (*R* 62 c, 7, 8), only the latter have a groove round the middle instead of a hole. The axis of 60 is symmetrical as usual; 59 is a rare form with the points in the line of the base. Pointed maces are found in Italy, France, Denmark, and Britain; see *Bull. Pal. Ital.*, xxvi, 101.

A long hammer-shaped mace of black and white porphyry, fig. 62, is rare. A hexagonal mace comes from Nubia (*R* 62 c, 5), of date 37.

Lobed mace heads, figs. 61, 63, 65, have never been found in a recorded grave; so neither region nor date is known, but they are somewhat like a mace of the earliest age of Susa, with four knobs around it (*Ancient Egypt*, 1917, 33). These here are all of the same design, a pear-form head, with two horizontal bars at the sides, and a boss on the stem between them. 61, 63 are in hard white crystalline

marble, 65 in dark green chlorite. They seem likely to be a foreign make, perhaps brought by the proto-dynastic people from Elam. Fig. 64 is an ovoid of red limestone, pierced, with eight holes on each side, from the prehistoric town of Nubt. The bottom row on pl. xxvi are spindle-whorls, dealt with later on.

The materials of these mace heads are:

- |                                  |                                 |
|----------------------------------|---------------------------------|
| 1. Porphyry.                     | 38. Drab limestone, Koptos.     |
| 2. Syenite.                      | 39. Hard marble.                |
| 3. Brown limestone, H.           | 40. Hard marble.                |
| 4. Porphyry.                     | 41. Alabaster, Koptos.          |
| 5. Syenite.                      | 42. Hard wt. limestone.         |
| 6. Diorite.                      | 43. Br. and bk. marble, H.      |
| 7. Syenite.                      | 44. Grey Marble, H.             |
| 8. Syenite.                      | 45. Basalt.                     |
| 9. Syenite, H. concave.          | 46. Geobertite.                 |
| 10. Syenite.                     | 47. Hard wt. marble.            |
| 11. Syenite.                     | 48. Alabaster, N 1488.          |
| 12. Porphyry.                    | 49. Hard alabaster, Koptos.     |
| 13. Syenite.                     | 50. Hard wt. marble.            |
| 14. Porphyry.                    | 51. Alabaster.                  |
| 15. Syenite.                     | 52. Alabaster.                  |
| 16. Syenite.                     | 53. Grey metamorphic.           |
| 17. Breccia.                     | 54. Breccia.                    |
| 18. Syenite.                     | 55. Breccia.                    |
| 19. Limestone.                   | 56. Brown alabaster.            |
| 20. "                            | 57. Bk. and wt. schistose       |
| 21. Alabaster.                   | 58. Veined marble, H.           |
| 22. Clay.                        | 59. Alabaster.                  |
| 23. Wt. and bk. marble.          | 60. Breccia.                    |
| 24. Brownish limestone, N 690.   | 61. Crystalline marble.         |
| 25. Grey metamorphic.            | 62. Porphyry.                   |
| 26. Hard wt. limestone, 48 B.    | 63. Hard wt. limestone.         |
| 27. Breccia.                     | 64. Pink limestone, S. Town.    |
| 28. Hard wt. limestone.          | 65. Chlorite.                   |
| 29. " " "                        | 66. Limestone.                  |
| 30. Hard limestone, pinkish. H   | 67. " "                         |
| 31. Hard wt. limestone.          | 68. " N 177.                    |
| 32. Drab limestone, H.           | 69. " "                         |
| 33. Alabaster.                   | 70. " hard pink and wt., N 267. |
| 34. Breccia, N 1241.             | 71. Breccia.                    |
| 35. Hard wt. limestone, N. Town. | 72. } Limestone.                |
| 36. Alabaster, N 1401, S.D. 42.  | 73. } S. Town.                  |
| 37. Hard wt. limestone.          | 74. } Naqadeh.                  |
|                                  | 75. }                           |



Also 14 other disc-maces, 9 pear-maces, and 18 spindle-whorls. H above, from Hierakonpolis.

An ivory ceremonial mace head, pl. i, 12, has two bands and two zigzag lines of drilled holes around it. From this drilled decoration it is probably of about S.D. 40.

#### STONE AXES (PL. XXVII)

53. The flint working of the prehistoric civilisation is so much connected with the general subject of flint working before that, and after it down to the xviii<sup>th</sup> dynasty, that it seems best to treat the whole of the flint work together as a separate study, with comparisons from other lands.

From a few sites in Egypt polished stone axes have appeared, but never in dated graves. The main amount has been found in the lowest levels of the town of Koptos, and certainly therefore of the earliest dynasties or prehistoric. The material is seldom flint, but generally basaltic or quartzose rock.

The dating has been found in Nubia. A camp site there produced sundry axes, splaying, with conoid butts, like the Egyptian specimens; and this camp, by the pottery found in it, is dated to S.D. 63 (R, 63 d, 11-23, pp. 215-218). Two specimens, more polished, were after the 1st dynasty (nos. 8, 9.) Another group, from a grave, is published in *Survey of Nubia*, 1908-9, pl. 38, one of which was with a pot which has a wide range of 43-70, but not dynastic, so they would quite agree with the camp date of 63. Mr. Firth, the finder, has kindly sent me the type of the pot. He states that such axes are found in Nubia as late as the Old Kingdom; but, as the comparative objects are not published, this may be on the later scale of dating, which is contradicted by the Royal Tombs, where the indications would set it several centuries earlier.

#### ARROW-HEADS (PL. XXXI)

54. The ivory arrow-heads here are all bought, undated. The barbed type, xxxi, 19, 20, is known to be of the second period, by N lxi 14 of 49-63. The plain points, 17, 18, are of the 1st dynasty, like those from the Royal Tombs.

#### HARPOONS (PL. XXVIII)

55. The harpoons of ivory, bone, and horn are very limited in their spread. They were found in a few graves, and in the town, at Naqadeh, and two

were at El Amrah; no others are recorded. The dating is known in only eight cases, and those not precisely. The earliest, 34-38, has three barbs, xxviii, fig. 9 (N 1345), and this form continued to 59-63, fig. 8 (N 1215), and to 61 (N, B, 99). The next in origin is the two barbed at 45, fig. 6, of horn, top barb broken (N 1705); this continued to 46-53 and 48-53 (A, xii, 4; b 21, b 106). Apparently later is the rise of the single barb form, fig. 5, of between 49 and 63 (N 1215), also dated to between 44 and 63 (N 272). Thus the facts, though scanty, point to a simplifying of the type in course of time, from about 35 to 50. Other examples, from the South Town at Naqadeh are figs. 3, 4, and a broken one like fig. 10. The others on pl. xxviii have been bought without a record. Fig. 11 is a green slate arrow-head, probably for fishing, like the harpoon. The attachment of the cord to harpoons is provided in the earliest by a notch cut above the lowest barb, seen in fig. 9. On the suppression of the lower barbs, only leaving the top one, this attachment became a mere stop notch with or without a slight knob, as figs. 3, then 4, lastly 7.

56. The copper harpoon is found as early as that of bone. For the forms here see *Tools*, xlv, 24-39; there are three more here like 26-28. Unfortunately none of these are from recorded graves, except 24 from N 1808, only vaguely dated to 36-63. From published examples the earliest is 34-38 for a small size (N 1345). Another of full size, certainly of the first period by its association with the disc and pointed maces, is dated to 36-43 (M. xx); this has a stop knob. A large size is of 54, grave N.T. 9 (N, lxx, 7); and a medium one of 61 (N, lxx, 8), of 55-63 (W, iv, 2), and of 80 (R, 65 b 5). On reaching the 1st dynasty a more complex type comes in, with a top and middle knob and a stop knob (R. T. II, xxxv, xlv). The slender forms, of thin stem and a single barb, are seldom dated; see two models of the xi<sup>th</sup> dynasty from Harageh, one with a stop knob, and one with a double head (*Tools*, xliii, 38-9). The double head type continued ceremonially till late times, as in the figures of Koptos (*Koptos*, xxi). The simple barb on a long thin stem also appears in the Maket tomb, xviii<sup>th</sup> dynasty (*Illahun*, xxvi, 47), and as it is not dated to any early period, it seems as if it were dynastic. It would thus be contemporary with the similar form of bronze age in Italy (*Tools*, xliii, 54).

The harpoon seems to have been used only in the first and second prehistoric ages, and to have



been merely an archaic and ceremonial survival in the last prehistoric and later periods. Not a single harpoon was found in the two thousand graves of Tarkhan, nor any except models in later tombs. The frequent scene of harpooning in the tombs may show a dilettante survival, like archery at present, or a funerary survival; in practice it seems to have disappeared before historic times, as harpoons likewise vanished after the Magdalenian age in Europe.

## CLAY AND WOOD MODELS

57. In a prehistoric grave at Hierakonpolis (*H. II*, 51, pl. lxvii) were clay models of a knife and two forked lances, xxviii, figs. 13, 14. These are coloured red on the blade and the tips of the lances, buff on the handle and the body of the lances, and a broad black band edges the buff, top and bottom. The red represents flint covered with blood (for such lances are unknown in metal), the butt is linen covering, and the black represents fibre binding to secure the linen.

Probably the model knife and two lances of baked pottery, coloured red, figs. 15, 16, 17, are also prehistoric. On the knife handle are three lines of white and some dots between, like the painting of white-lined pottery. This indicates some binding; beside which there are remains of some fibre (? papyrus) binding, sticking to the handle.

Another model of a forked lance, fig. 18, of red brown rough pottery, is unpainted. Part of a model of a curved knife, fig. 19, is coloured red on one side only.

Wooden models of double-edged knives are coloured; fig. 20 dark red blade with spiral black line around it, white handle; another with plain red blade, two red stripes on handle; fig. 21 plain wood, with spiral red line around the blade, red band and zigzag on the handle, remains of fine muslin wrapper; another blade similar, but broken.

It seems that all these clay, pottery and wooden models are funerary substitutes for weapons in the prehistoric graves.

Fig. 12 is a clay cone, coloured buff, with a red band round the base, and two pairs of black lines round it above. Grave B 17 Naqadeh.

Fig. 22 is one of the pottery objects found in the offerings of the temple of the ivth dynasty at Abydos; supposed to be the pottery substitutes offered when Khufu forbade sacrifices.

## CHAPTER VIII

## METAL WORK, MEASURES AND WEIGHTS

## COPPER IMPLEMENTS

58. DAGGER. The flint forms should be taken into account in considering the development of copper work. The earliest flint daggers start at 36-40, a rhombic form with a lumpy handle (D, vii, 259). For the rest see N, lxxii; the rhombic outline continues in 36-44 (N 1410), 32-48 (N Q 489), 35-52 (N Q 148), and 52 (N 1241); a shorter handle and slight mid ridge comes in 51 (N 414); lastly a rounded butt in 56 (N 331). The development is thus regular, from the rhomb to the round butt.

The copper form does not start till 48-54 (A, vi), a flat-based triangle without any tang, trusting to its width to have a grip in the handle; this form arose when the flint work was giving up the long handle. A slight projection and a rivet is allowed in 61-2 (A, x). Both of these are of the flat, wide, triangular blade, usual in the copper age of Europe; see *Tools*, xxxv, 70-1 Crete, 72 Italy, 74 La Tène.

An entirely different type appears in 63, with long narrow blade, and deep mid-rib, forming a cusp and two curves on each side (N, lxxv, grave 336). This was taken out by myself, from the thigh of a body stained green by it, and the whole grave was fully registered and well dated. Thus there is no chance of uncertainty about it. The type is well known later from Cyprus in the xviiiith dynasty, and its appearance isolated as early as s.d. 63, shows how very fragmentary our knowledge yet is. Two ivory models of daggers here were bought, undated, xlvi, 21, 22.

FORKED LANCE.—This is a large subject in the flint series, ranging through the whole of the first and second periods, from 32 to 63. The single example in copper (M, xix, 5) is before 40, and agrees with the form then made in flint. Like the flint, it has fine notching along the curved edge and some way round the tips.

59. FLAYING KNIFE (*Tools*, xxxi, K 2-6).—This form is wide and short, usually slightly dished so as to slide over the curves of the body, to separate the hide. The handle is a short tang, as little force is needed, and length would be in the way during work. One like K 2 is dated to 49 (N, lxxv, grave 807). Another, broken at the end, was of about 70 (A, xii, 9, p. 27). Others from Tarkhan, K 4, early in the ist dynasty, are narrower, with parallel sides. It is

notable that two here are worn away on one side alike; this would be the cutting edge towards the worker when holding the knife concave downwards in the right hand, which would be the position in skinning.

**HOOKEK KNIFE.**—This is only known in one example, before 40 (M, xix, 5). From the small size,  $3\frac{1}{2}$  inches long, it could not be used with much force. It is of the pruning-hook type, like those used in the iron age (*Tools*, lvii, 60-67), and suggests that vines were already cultivated in the first pre-historic age.

**60. AXE.**—The earliest large copper axe seems to be that from the camp site in Nubia, of about 63; it is semicircular, with a slightly concave back (R 65, b 9). As this is much more like the type of the iind—iiird dynasty in Egypt, and was close to the surface above a hearth, it might have been left there by accident after the period of the camp. The earliest large axe in Egypt is square, of date s.d. 78, from Diospolis (D. vii) and Tarkhan (*T. I*, iv, v), and examples here, *Tools*, iii, 101-3, are probably of the same age.

**ADZE** (*Tools*, xvi).—The adze is dated to ? 61 (N 1298) without widening edge, and to 56 (N 39) with splayed edge (N, lxxv); but others here of smaller size (*Tools*, 60-1), 3 and 4 inches long, are probably earlier stages. The straight-sided adze continued to 76 (N, lxxv), but always with a flat top. The semicircular top begins with the dynastic people at 78 (D, vii, 74), and continued at Tarkhan (*T. I*, v; *Royal Tombs*, I, v, II, vi; *Gizeh*, iii, A) and elsewhere in the 1st dynasty; see *Tools*, xv, xvi.

**CHISEL** (*Tools*, xxii).—This begins at a very small size in the first period, as a little bar of copper, flattened at both ends, dated to 38, *Tools*, 46 (N 297), to 49, no. 44 (N 807); later the edge is not straight but pointed, in 58 (N 162) and some date after 40, no. 45 (N 63). For these and other forms see N, lxxv, 9-23.

The chisel with a point at the other end is known at 34-38 (N 1345), at 58 (N 162), and after 40 in N 63.

The chisel with square shank is of 34-38 (N 1345), 58 (N 162), and 61 (N 1233).

It thus appears that the first idea of the chisel is as a small graving tool, held between the fingers, and not pushed with much force; both ends were used alike. The square butt end used for pressure only gradually ousted the double-ended tool.

The rimer is found at 34-38 (N 1345), 58 (N 162),

at 62 (N 1270), some date after 40 (N 63), and at 66 (N 3).

**61. TWEEZERS.**—A pair was found in a grave which is not dated, but which by its type is probably about 40 (Amrah, a 104). Otherwise they are not known till the 1st dynasty.

**KNIFE.**—A small copper knife with square tang, blade partly lost, was found in N 63, and is of some date after 40.

**EARPICK.**—One has apparently been found, of 58, see N, lxxv, grave 162.

**PRICK POINT.**—This was probably used for extracting thorns, like the point in the later sets with tweezers and cutter. In later times such points are known, as xviiiith dynasty, Ghurob, and one point here seems probably for the same use.

**PINS** (*Tools*, lxxv).—These may have been for prick points, or for fastening garments. The distinctive feature is the loop head (N, lxxv, 15), which in some cases is twisted round the stem (lxxv, 19). The type begins at 31, *Tools*, lxxv, 106 (N 1490, 1606), then 34 (N 1260), 33-37, as fig. 106 (N 1821), 37 (R 65 b, 1, 2), 39 (N 1485), 34-46 (R 66 a 12), 41 (N 1759), 43-56, as fig. 104 (N 1856), 61 (N 1233), 61-72, as fig. 106 (N 293). The end wound on the stem is widely found north of the Mediterranean (*Tools*, lxxii).

**NEEDLE** (*Tools*, lxxv).—The earliest at 34, xxiii, 15A (N 1260), has not a pierced head, but a hook to catch the thread, needing therefore to be handled carefully to keep the thread on the hook. A needle is named from El Amrah, of 31-41 (A b 117), and another of 55-61 (b 65). Needles pointed at each end, with eyes  $\frac{1}{4}$  inch from end, are after 40 (N 63), and the same form lasts to 66 (N, lxxv, 21, grave 3). At 72 a small end eye appears, xxiii, 15C (N 1212), made by hammering out and turning over; the union is doubtful.

**BODKIN.**—A thin flat bodkin is of 66 (N, lxxv, 22).

**SPOON.**—A silver bowl to a spoon, with a copper handle, was found at El Amrah (A, b 233) of date 60. Two pieces of a copper spoon are named as found in N 430, 39-63. A silver spoon (N. p. 46) 57-64.

**FOREHEAD PENDANT.**—This is rarely of copper, one from N 1770 is of about 61. Another apparently (M, xix, 5) is before 40.

**RINGS.**—Of 35 is a broad strip of foil with zigzag punched pattern, xlvi, 10, probably a finger-ring (N 1552). Similar strips of foil, but tapering to the ends, were in N 1480, of 33-55 (N, lxiv, 100). A plain band of foil as a ring was of 44-50 at El Amrah (A, b 28), and others in a, 67; also from

Ballas 224, undated. A plain wide finger-ring of 72 comes from N 1248. A broad flat ring, 1.8 inside 2.3 outside width, is of 68, xlvi, 11 (N 1290). An armlet (?) is formed by a crescent-shaped strip, overlapping at the ends (xlvi, 11).

Beside the copper foil of the above ring at 35, there was foil made as early as 33 (A, a 58).

VASE LID.—A cover for a vase, made of thin copper, was found of date 55-57 (W, viii, 24).

CHAIN.—The principle of a chain was already invented in the first period, as it was found with a clay figure of a man, which is characteristic of that age (A, a 67). Much later, copper chain occurs in the iind dynasty tomb of Khosekhemui.

#### GOLD WORK

62. There is no doubt that a considerable quantity of gold work was made in the prehistoric age, as, though nearly all the graves were plundered for gold in early times, yet many examples have been found in the few graves that were intact. The gold known belongs to the second prehistoric age; and it is remarkable that copper should have been abundantly used in the first age, without any of the native metal—gold—being obtained.

Beads and wire are the earlier form of gold work. A gold wire ring and beads belong to between 46 and 52 (N 723). Gold beads were certainly used from 47 to 65; the solid beads are dated to 38 (N 1547), 49-53 (N 822), 44-63 (A, a 3), and 58-63 (W, p. 22, grave 80). It was more usual to beat out thin gold tubes, carefully turned over to a flat end, and then filled with a paste of carbonate of lime, in order to keep them from being crushed. Such beads are found of 47 (A, b 40), 46-53 (A, b 106), 48-50 (A, a 122), 50-52 (A, b 87), 55-63 (W, v 67), 57 (A, b 17), 58-60 (A, b 104), 60 (A, a 96), and 65-72 (W, v 55). This art of thin gold work backed by paste thus began by 47 and continued to Roman times (see *Ornaments*).

Fittings to stone vases, of beaten gold lips, plating round handles, and wire loops, belong to the same general period as the beads, but none have been recovered in recorded graves, all known were looted by plunderers. Gold tips to a bow were found in Nubia, of 57 (R 65 a, 3, 4). A gold pendant of foil with a punched dotting is of 59 (N, lxx, 16). A tube of gold and copper alloy of 48-59 was found at Naqadeh (N 1247, p. 28). The most important examples of gold work, evidently of the second

period, are the two knife-handles in the Cairo Museum; one with animals and entwined serpents and rosettes, the other with incised figures of women, and of a ship (K 33, 34).

#### SILVER WORK

Silver is much rarer than gold in the early ages. It was obtained probably from Northern Syria which was less accessible to the Egyptians than Nubia—the land of gold. Also it needs nearly always to be mined, whereas gold can be found in stream-workings. The earliest examples are a cap of a vase of 42 (N 1257; lxx, 2) and hollow globular beads from the same grave (lxx, 1). A silver spoon was of 57-64 (N, p. 46), and a ring of 61 (N, p. 46). All of these are from Naqadeh, and none seems to have been found elsewhere.

#### LEAD

Very few objects of lead are known from the prehistoric age. Among a group of small animal figures, there was a hawk which had been thinly coated with lead (N 721; lx, 14) over a core—probably of wood—which had decayed (s.d. 44-64). There is in the collection a leaden figure of a woman of prehistoric type (xxiv, 3). As galena is common it is strange that lead is not oftener found.

#### IRON

The only occurrence of iron was at Gerzeh, where tubular beads of iron were found in two graves dated to 55-63 and 60-66 s.d. So the iron may be certainly dated between 60-63. It was so much valued that it was threaded with gold beads. Whether the source was meteoric, or native iron produced by reduction in basalt, is not known. (*Labyrinth*, 15-19, pl. iv; group fig. 2 is in this collection.)

#### WEIGHTS AND MEASURES

63. On a basalt vase, xxxiv, 5, there is inscribed the mouth sign and two strokes beneath it, reading in the usual hieroglyphs "fraction one half." This vase contains 7,200 grains of water when quite full; so the whole measure would be 14,400 grains, or 10 deben. This is quite likely. But as that form of vase belongs to about s.d. 36-40, it would show that not only had the prehistoric people a unit of liquid measure, in accord with the later weight unit, but also that the Egyptian mode of writing a fraction

dates from the first prehistoric age. Both of these are large propositions. The marks are undoubtedly ancient, but whether prehistoric, or added later by historic Egyptians, might perhaps be questioned. The subject is complicated by a series of basalt jars with various fractional marks on them, which were offered to me in Egypt, and subsequently bought by a museum. These marks, however, looked fresh, as if recently added; moreover, the higher the numbers of strokes the larger the jar, whereas the higher numbers, being denominators of the fraction, should have been on smaller jars. I concluded that the numbers were recent. In the present case the number seems ancient, and the seller of the jar did not notice it, so that there is good ground for its being ancient.

64. In several graves at Naqadeh were cylindroid stones with domed ends. They were never worn, and had no use as implements. On comparing the weights of them they all agree within the limits of variation of the gold standard, *nub*, the *beqa* of Palestine, which was certainly known in the ivth dynasty, by the weight of Khufu, and in the ist dynasty by the gold bar of Aha. These are:

Grave.	S.D.	Weight.	÷	Unit.
461 . . .	40-61	2785	15	185.7
B 107 . . .	33	5676	30	189.2
1773 . . .	31-41	7694	40	192.3
Bought . . .		1163.6	6	194.0
1873 . . .	46	589.7	3	196.6
1866 . . .	43	3996.6	20	199.8
1563 . . .	32	4224.5	20	211.2
Bought . . .		2180.2	10	218.0
Bought . . .		118.0	$\frac{1}{2}$	236.0
Porphyry turtle .		790.0	5	197.5
„ cylinder		418.4	2	209.2

The forms of 189.2, 192.3, 211.2 are cylinders with rounded ends; of 194.0, 199.8, 236.0 pointed domes with rounded bases; 218.0 same with flat base; 185.7 cone with rounded base; 196.6 a rounded oblong like early Old Kingdom weights. Two porphyry objects are added here, as perhaps also being weights.

65. There is also a possibility of another class of objects being weights. There are some rounded cones of limestone paste, artificially worked up, as the hole through them has evidently been formed while plastic, probably on a thread. They are painted with wavy line patterns in black. There

is also a rounded double cone of clay, whitewashed and painted, which has similarly a threading hole. The weights of one pair with similar long zigzag lines (xlix, 8, 9) are 313.5 and 941.3 grains, evidently as 1 to 3. Another pair with rectangular and sharper zigzag lines (xlix, 6, 7) are 261.7 and 485.5, probably 1 to 2. The big double cone (xlix, 10) is 1267.0 grains. Now these may all be connected, and with these we may note two large stone rings, one of alabaster (xlix, 11), too large for a thumb, too small for a wrist, 3763.8 grs. and one of breccia, 4435.0 grs., which might be worn on the arm. Also a finely wrought syenite slab, which might otherwise be a stone palette, 3785.6 grains.

Cone	261.7	÷	2	130.8
„	313.5	÷	$2\frac{1}{2}$	125.4
„	485.5	÷	4	121.4
„	941.3	÷	$7\frac{1}{2}$	125.5
S.D. 40 . . .	1267.0	÷	10	126.7
Alabaster ring .	3763.8	÷	30	125.5
Syenite slab .	3785.6	÷	30	126.2
Breccia ring .	4435.0	÷	36	123.2

This seems to be the well-known Daric standard of Mesopotamia, which has the same range of values, and the same sexagesimal multiples as the two stone rings. The cones have been bought, without a history, but the double cone from grave N 1251, is of 40 date, and so is of the beginning of the second period, the civilisation of which seems to have come from the East.

66. At Tarkhan six alabaster cones were found in the graves, two pairs, and two singly. They do not fall into a very simple arrangement, as they indicate a multiple and division of the qedet by 3; yet the frequency in later times of weights of a third of the qedet (over fifty here) would be thus explained as a survival of an old ternary division. The amounts are:

Grave.	Grains.	÷	Unit.
1548	845.3	18	47.0
{717	478.2	10	47.8
{717	144.8	3	48.3
{728	872.6	18	48.5
{728	985.0	20	49.2
1892	980.0	20	49.0

This would correspond to a qedet of 141-147, median 145.2, which would be quite normal, the

Old Kingdom qedet being 139-151, median 145. It might be questioned if this 48 grain-unit is not a quarter of the *beqa* or *nub* standard. It would correspond to a unit of 188-196, median 193, but the fractional multiples would be very improbable on the *nub* basis.

It would thus appear that the *nub*, or *beqa* of Palestine, was the aboriginal Libyan standard of the first civilisation; the Daric or Babylonian shekel was the standard of the second or Asiatic civilisation; while the qedet, last of all, was due to the dynastic invasion.

67. A small balance beam (xlvi, 36) is made of hard pink-brown limestone, a material often used in prehistoric work, but seldom later. The beam is 3.35 inches long, .16 to .20 wide, .17 to .20 deep. The middle hole for suspension is .08 wide, the end holes for the pans are .06 wide. The arms between the holes are 1.595 and 1.600 long, a difference of 1 in 320; but on actual trial a difference of 1 in 120 was found; a change of 1 in 500 was visible in the level of the beam. The strings shown in the photograph are modern.

## CHAPTER IX

### PERSONAL OBJECTS

#### COMBS (PLS. XXIX, XXX)

68. THE main distinction in this class is that the combs with long teeth, for fastening the hair, belong to the first period, and only a sixth of them come between 41 and 47, when they end. Those with short teeth are none before 40, and nearly all about 57-60, when they declined into mere ornaments.

The earliest have a plain flat top, dated here to 31 (N 1595, 6 teeth; and a similar one from N 149); 33-37, xxix, 18 (N 1821, 5 teeth; and a similar one, xxix, 17, N 1708); a much longer one of 36 (N 1503); and a short one of 10 teeth, of 38, xxix, 19 (N 1465), of 42 (N 1411), and of 58 (N 162). Similar combs, as N, lxiii, 55, are also of 38 and 41, vaguely of 31-56; also from El Amrah, (a 120) of 47. Plain combs of thin cut horn are of 34-39 (N 1507), and xxx, 10, vaguely of 38-67 (N 1598).

An early decoration was of quadrupeds, standing up on the top of the comb. None of these are later than 42. Those from Naqadeh (N, lxiii) are of 33 (1497), 34 here (1661), 35 (1687), 33-46 (1586),

and 40-43 (260); from Mahasnah one with an ass (?) of 34 (pl. xi comb, xii animal), and one of about 42 (pl. xvii). From Nubia one with animal lost, of 35-46 (R 66 a 18). One hippopotamus is placed along with other animals, xlvi, 4; a hippopotamus (?) of 38, xxix, 1 (N 1649); also combs with animals lost of N 1647, and another. Two broken quadruped combs are of 34 (N 1661) and 33-69 (U 255).

Birds are the most usual figures, ten between 31-39, and five between 40-47. First is a thick narrow comb with apparently a bird, of 31, here (N 1505). A small comb of 4 teeth, with a bird on it, is of 32 (D, x, 6); and another (N 1614) of three teeth here, seems to have had a bird (lost), and is of 33. Thus the earliest are very simple and small. Plain figures of birds (N, lxiii, lxiv) are dated to 34 (N 65; D, v, 101), 38 (N 65, 67), 31-39 (N 67), flying 42 (N 69), 44 (N 72), 47 (N 64), and 58 (N 162), omitting those of vague dating. A separate base is sometimes placed between comb head and bird, as D, x, 1, of 36, and D, x, 2, of 69. Those here are xxix, no. 4 of 34-46, no. 6 of 35-41, no. 3, undated. With a separate base is no. 5 of 38, and with a double base of 31-42. Two birds seem to have been on no. 7 of 36 (N, lxiv, 86).

This last leads to the multiple bird tops, which become modified almost into horns. This type is dated to 33 and 36 in N, lxiii, 56, here xxix 12, and to 43 (D, x, 3). There are only vague datings to N, lxiii, 58; and no dates for those here xxix, 8-11, 13; but 11 is like one of 58 (N 102). Another here has the row of dots, which belong to 38-42. The largest example of this type has four pairs, with a gazelle (?) at the top (K 43). The horns become modified into a ring, almost closed in N, lxiii 57; of 35-43; it is quite closed in N lxiv 73 of 40-43, here xxix, 16, and N lxiii 57 A of 50. Apparently a ring, on a stem with six notches, is of 58 (N 162).

Indistinct forms, modified from the horns, are of 51, N lxiv 70, here, slightly broken at the upper tip; as also another with a double base and horns or birds broken away.

The knob top appears at 34 (D, V, B 101), or with a base at 46, here xxix 15 (N, lxiv, 88). Two knobs are of 58 (N 162) and of 61-72, xxix, 14 here; joining on to the type of slate with a row of knobs, of 35-53 (A, x, 7). This latter looks like a magic or amuletic design.

A plain rounded top, without any object, appears at 40, N 1858, here. Two which have had birds (?)

broken away are of 39 (N 289) and 40 (N 1251). Another with the top notched at each side (N 1536, here xxix, 21) is accompanied by a short horn comb xxx, 12; xxix, 22 is simply broken at the top.

An instructive group of contemporary fragments is from N 162, of s.d. 58, comprising types as xxix 4, 11, 14, 17, 19, and D, x, 8; all are noted under the types above.

The two with human heads xxix 23, 24, and a third like 23, belong to about s.d. 42. The lines of dots as necklace appear to date from 38 (N, lix, 7) to 42 (N, lix, 1, 1411).

69. The short-tooth comb begins at s.d. 40, with distinct teeth, but shortened (N, lxiii, 52). The square form with grooved teeth at one end and slight notching at the other, as N, lxiii, 54, is of 57 (1230), 58 (A, viii), 60 (Q 23), 46-61 (177), and 60-61 (147). The wide form, with short depth (N, lxiii, 51) is of 31-58 (1875), 59 (Q 185), and 35-68 (1413), so the only good dating places it contemporary with the square form. Unfortunately those here are none well dated. Beside that of 35-68 (here xxx, 11) there is one of 37-57 (N 325).

While the material of the long-tooth combs is usually bone, or else ivory, the short-tooth combs—passing out of real use—became made of various materials. xxx, 5 is of noble serpentine; 6, 7 with diagonal cross lines are of ivory; 8 from N 1787 (undated) is ivory; 9, of ivory, may have been intended for a bird; 10 is of horn; 11 (N 1413) is ivory; 12 (N 1536) is horn; 13 is of ivory, and another like it also; two of ivory are without a cross line (one is N 325); 14 is of bone, as also a piece with long grooving of teeth; 15 is of buff limestone; 16 of brown limestone, the edge quite smooth and teeth represented by a zigzag line; lastly 17 is of breccia, with a very slight notching. Thus there is every stage of decay from the teeth several inches long, down to a smooth edge. In the first dynasty the comb reappears with a round top and moderate teeth, as the comb of Benerab under Aha (*R. T. II*, iii, 20); or with flat top at s.d. 81 (*Tarkhan I*, ii, 11).

The combined comb and hairpin seems to come from the comb with long handle xxx, 1, which is of about 40 by the lines of holes. The pin comb with a rounded shoulder is of 39 (N, lxiii, 53), and with square shoulder of 60-1, xxx, 4 (N 147, lxiii 53), while in D vi B 378 it is of 52. The others here, xxx, 2, 3, are not dated.

#### HAIR-PINS (PL. VIII)

70. The plain ivory hair-pin with flat top was used throughout the long period 31-72. The bird on the top, without or with lines below it, is of nearly the same age, 31-70. Strangely one of the most simplified birds is the earliest, of 31, like viii, 8 (N 1774); the few examples of good birds, viii, 3, 4, 5 are none dated. Two dated to 52 are of simple work (D, vi, 378). The head with two birds, D, x, 10, is of 65-75.

The pattern on the stem begins with crossing lines in 31 (N, lxiv, 82), which are also found in 44-50 (N 1852 here), in 44-54 (N, lxii, 25), in 58 (A, viii, b 62), in 57-66 (C. I, iii) and 77 (viii, 9 from Tarkhan 1584). Diagonal lines come 47-50 (N, 26) and 53-69 (N 1216 here). Spiral lines appear between 35 to 68 (N 1643, viii, 10), or 48-74 (N 1224, here; N, lxiv, 84) of 66 and 75 (N, lxii, 27). Thus the plain pin, the bird, and the crossing lines, belong to all periods, the latter being a favourite in even the sixth dynasty. The diagonal and spiral lines seem to belong only to the second period. In the beginning of the dynastic age only three or four perfectly plain pins were found in the two thousand graves of Tarkhan; and at the Royal Tombs only one extremely degraded bird pin of the time of Zet (*R. T. II*, xxxviii, 8). There are undated plain pins of 1101, three of 1517, four of 1788, and fragments from many graves.

Two ornamental pins, viii 1, with gazelle, and 2 with hippopotamus, cannot be dated, but probably these and the best bird pins belong to 33-38.

Flat hairpins are nearly all of the first period. The bird is the usual top, though often partly broken. The earliest here has a serpent end, viii, 19 of s.d. 34 (N 1654). Birds are of 34, and 33-37 (M xii, xiii 45); and here of 36, viii, 21 (N 1503). With bases underneath, of 34 (D, v, B 101) and 36 (N, lxiii, 61). A double base, with top decayed, is of 51, see viii 22 (N 259). A coarse flat pin, notched to form a head, is of 50 (N 1852 here), and a broad head, broken, of 31-48 (N 1677). A stem with five notches and horns or bird on the top is 31-56 (N, lxiv, 74); a similar stem with birds on the top is of 61-72, see viii, 20 (N 1293). Three other notched stems here, viii 17, 18, 23, are probably about 36 by their resemblance to N 61. A ribbed round head, viii 15, is of 40 (N 1251); no. 16 looks like a degradation of the same. Nos. 12-14 may be spoon-handles; but sometimes a broken spoon-handle

seems to have been converted into a hair-pin (see *Gerzeh*, viii, 32).

## ARMLETS (PL. XXXI)

71. The different materials that are used are shell, at 31-33; ivory at 31-72; bone at 31-72; alabaster at 38; tortoiseshell at 36-52. The flint here is not dated, but armlets were found of 70-80 (D, vii, 354), and of 80 at Tarkhan; so it seems that the flint armlets belong to the fine work of the ist dynasty.

The only distinction in form seems to be that the broad coarse armlets belong to early in the second period. These are the precursors of the very broad ornamental armlets of the Royal Tombs.

The examples here are as follows, giving first the Sequence Date, then the grave number at Naqadeh (or elsewhere), then *no.*, the number on the plate, xxxi, or *as*, the nearest such type; *n.n.* no number or date.

*Shell.*—S.D. 31, eleven of 1587, no. 27; 33, three of 1613, no. 21; *n.n.* five as 21; 65-76, Diospolis, 364, as 43.

*Ivory.*—31, 1587, as 22; 33, 1497, three bits; 33, 1613, two as 22, one broader as 41; 35, Diospolis, B 117, as 21; 33-41, Dios. B 102 as 21; 36, 1503, two as 21; 38, 1899, two as 22; 40, 829 large, bit; 40-44, 1893, two, no. 22; 42, 1411, as 21; 46, 1863, as 43; 47, 1841, two as 22; 57-64, 1018, as 33-38, broken; 65-80, 1343, as 28; 65-76, Diospolis, 364, as 41; 72, 1248, bits. No date, 389, 1530, bits, another as 43.

*Bone.*—31, 1595, as 21; 31-42, 1789, as 43; 42, 1411, thick bit; 49, 871, bit as 28; 72, 388, thick and broad; 78?, Tarkhan, 1333, no. 39-40. No date, 8 as 28, 891 as 28; no numbers, as 21, as 41, three as 28. A coarse massive armlet is 2.0 inside, 3.3 out, and 1.5 inches deep.

*Horn.*—No date, 1338, broad piece.

*Tortoiseshell.*—36, 1503, many bits as 33; 40, 1723, bit as 33; 41-51, 1440, bit as 33; 52, 690, bit as 33; no number, bought, six, nos. 33-38. Bit from 658, no date.

*Alabaster.*—38, 1899, as 42; *n.n.* as 21. Also a wide flat ring, 1½ inside, 4 outside, xlix, 11.

*Slate.*—56, Diospolis, U 230 as 43. *N.n.*; pair no. 43, no. 44. Tarkhan, two bits.

*Flint.*—56, Diospolis, U 230, as 43. *N.n.*; as no. 43; no. 44, flat ring.

*Breccia.*—A massive ring, 3.3 ins. wide inside, 5.0 outside.

*Grey Steatite.*—*N.n.*; no. 45.

## RINGS (PL. XXXI)

The dated rings are of S.D. 32, 1563, five, nos. 29, 30; 33, 1613, eleven, nos. 24, 25, 31; 34, 1592, five, nos. 23, 26; 33-55, 1480, eight, no. 32; undated, 1562; *n.n.* broad finger-ring.

The plain rings from Naqadeh run from S.D. 33 to 37. The knob rings, nos. 23-26, would suggest that a metal ring with a set stone was already in use as early as 33. As they disappear at 34, they are not likely to be connected with the armlets with knobs, nos. 39 and 40, which are from Tarkhan, and certainly between 77 and 81; these were found with the seated figure, viii, 13.

## SANDALS

Sandals have rarely, if ever, been found in prehistoric graves. Yet a model pair of sandals in ivory was found of S.D. 32 at Diospolis (D, x, 19). They are stained red, with cross lines left white. The loops are represented at the sides for an ankle strap, a mid strap, and a toe strap joining that. The sandal was therefore fully developed at the beginning of the prehistoric. After that there is an entire blank until we see Narmer followed by his sandal-bearer, both on the slate palette and mace head. In the middle of the ist dynasty we find the trays for sandals, with a foot-rest carved across the top, buried in the graves. *Tarkhan I*, xi 24, 25, and xii 10, 11.

## SPOONS (PL. XXX)

72. The spoon seems to have been unknown in the first civilisation, and even in the earlier part of the second period. Of ivory spoons the earliest fixed date is 46, and from that they increased in use down to the ist dynasty. There is but little difference that can be dated. The splay end to the handle is from 51 to 72; the plain end with a hole seems to be later, being of 77 in xxx, 22. The plain end without a hole is of 52 (D, vi, 378); but, in the scarcity of dated examples, it would not be safe to deny wider dating.

Referring to the examples here, in xxx, 21 is a very deep bowl, with pointed handle, and the ivory looks early, but no such spoon has been found otherwise. 22 is from N 1707, like others in N 104 and N 1234, and dated by Tarkhan 1584 of 77. Also *Tark. II*, ii, 1 of 77, 5 of 78, 10 of 81. 23, 24 are larger and thicker, and like N, lxi, 9, of 73-74, also the Nubian R 66 b 25 of 79, and *Tark. I*, xiii, 10

of 79. 25, with a bowl peaked toward the handle, is as N 17 (in lxi 5) dated to 47, and therefore the earliest here dated. 26 has a bowl V-shaped all along. 27 has a deep vesica bowl and wavy handle, such as occurs in *Tark. I*, xiii, 12 and 15, of 79, and *T. II*, ii, 9 of 77. 28 is vaguely dated to 35-61 by N 1203. No. 29 with the splay end, is as N, lxi, 8, ranging from 51 to 72; other examples are W, iv, 60-66, W, vi, 52-63; and a cross end to the handle, unpierced, of 55-57. No. 30 is N 743 of 60? 31-33 are without history. 32, by the form of the handle, seems to be prehistoric, but there is no other instance then of a spoon of wood. 33 is of slate. A short spoon with a falcon on the end of the handle from Ballas 224, is undated.

Other materials used are silver, also a slate bowl with copper wire handle covered with stone beads (N, lxi, 6) of 42, and hence the earliest dated spoon. Square bowls are found in s.d. 77 (*Tark. II*, ii, 3 and 7). A square bowl covered with rows of deer outside, and deer on the handle, is of 78 (*Tark. I*, xiii, 4). Other decorated bowls have hands outside, *T. II*, ii, 4, of 78; also a rosette and animals, *T. II*, ii, 5, of 78. The handles were also decorated with figures of animals in the round, as that with a lion chasing a dog, or with four hippopotami (N, lxi, 2, 3). Others have the ibex (K 39), and a falcon of 77-78 (M, xx, 4).

#### GAMES (PLS. XXXI, XLVI)

73. The commonest objects for games are the marbles used in playing. They are of various fine materials, quartz, porphyry, carnelian, and agate, as well as limestone, and selected natural pebbles of quartz and ironstone—probably decomposed pyrite nodules from the limestone (xlvi, 26-31). Unfortunately most of the records do not state the material. The marbles do not occur before about 38 or 39 (A, a 113 by comb type, N 1485, 17 ironstone U.C.), so they are probably due to the second civilisation, which began about then. Some are dated to 36 here (N 1503), to 45 (N 472), to 47 (A, b 37), and vaguely to 31-48 (N 1677, 21 white quartz pebbles, U.C.), to 36-55 (A, a 75), to 34-59 (N 267, 7 ironstone, U.C.), to 35-68 (N 379, 5 rough porphyry, U.C.), to 46-66 (N 1239), to 52 (N 1209), to 49-63 (N 1215, porphyry, grey marble, breccia, U.C.), to 52-56 (A, b 107), to 52-62 (N 399, 3 porphyry, U.C.), to 52-66 (A, vii, 4), to 52-70 (W, G, 116, 6 grey granite, 5 limestone), to 58-66 (N 1246), and to 60

(A, vii, 1). Thus only one is necessarily beyond the limits of the second civilisation, 39-63. They reappear in the reign of Zet, 1st dynasty; there is one of chalcedony (*Gizeh and Rifeh*, iii), and early in the 3rd dynasty 52 of white quartz, 2 carnelian, 1 brown agate, 9 hard brown limestone, all of beautiful finish, 22 at U.C. (*G.R.* iv, pp. 7-8). An undated ball is of calcite (N 691). There are many unnumbered balls in the College Collection, 6 black and white porphyry, 1 breccia, 1 lazuli, 4 marble, 4 of ironstone.

74. The use of these balls is shown by the group for a game of ninepins, N, vii, of about s.d. 60 from Naqadeh. The ninepins are of alabaster and breccia, the four balls to play with are of black and white porphyry, .47 to .57 diam., and three slips of veined brown marble are proportioned for a gateway .96 wide and 1.17 high, to play through. Portions of other such sets are here, as a bar of porphyry with the balls of N 1215, xlvi, 26-31, above, 49-63; 5 porphyry balls and an alabaster bar, xlvi, 35, N 379; a bar of breccia, N T 10, of 52, xlvi, 32; a syenite bar with malachite, N 10 of 70; and bars of grey marble and porphyry, xlvi, 33, 34, bought. This game therefore is probably dated to about 50-60, and continued to xii dyn.

75. Another frequent gaming piece is the slip of ivory, marked with bracts on one side. Six such slips, with one having diagonal lines, two thick and one thin rod, were in N 1215 of 49-63. The slip is copied from the slips of split reed, used down to the present day for casting a throw; four are used together, and the number thrown is shown by how many fall with the outside or the inside uppermost. Here one square slip or rod with diagonal lines on three sides and none on the fourth, with three plain rods and four blocks, are of N 1229; date 62; and portions of a set of four slips with diagonal lines on one side xxxi, 1, 2, N 1245, are of the second period. There is a similar square rod in Cairo Museum (14498), and with cross lines (14492, 14504). Slips with bracts, along with diagonal line slips, rods with bracts and plain rods, were found with balls, blocks, four lions and a hare together in a pit N Q 711 not dated (N, vii, 2). There is here a group of rods with bracts, xxxi, 3-6 (bought). Also a set of three slips with bracts, and five blocks, 3 of bone, 1 syenite, and 1 of marble, curved, from Ballas 43; no record. Of plain rods there are dated examples here of 34-56 (N 169), 44-64 (N 450), 43-67 (N 376), 62 (N 1229), 66, xxxi, 7, 8 (N 679), 58-70 (N 343),



and 78 xxxi, 3-6 (Tarkhan 10). Thus the use of these rods certainly ranges from 56 to 78, and they seem to be of the same age as the marked rods and slips.

76. Blocks, xxxi, 11-16, are found along with rods in some cases, but not with balls without rods. They therefore belong to the smooth rods. With 5 blocks there were 6 rods (T 10), with one block there were 11 ends of rods broken up (N 169), so apparently 6 rods were used with the blocks. See also in *Tarkhan I*, xiv, groups 17, 271. In the large gaming set, found buried by itself (N, Q, 711, pl. vii) there were 1 pair of pink limestone blocks, 1 pair of bone, 1 pair of alabaster, and 12 pairs of limestone. In the College there are 5 blocks, found with 6 rods, and a domed piece, s.d. 78 (*Tarkhan I*, xii, xiv, grave 10); 1 block with broken rods, of 34-56 (N 169); and 4 blocks, bought.

The whole set of gaming articles found together (N, Q, 711, pl. vii) were: 2 tapered slips with short bracts in mid; 1 slip with long bract; 2 slips with diagonal lines; 6 rods with middle knob and end knots; 6 plain rods; all these ivory. 4 lions, 1 hare, of limestone. 1 pair pink limestone blocks, 1 pair alabaster, 1 pair bone, 2 pairs limestone, each pair different size from others; 5 other pairs of limestone blocks, alike in size. 33 flint balls, and one dumb-bell flint.

From the various groups we can now specify what objects went together in different games. The plain rods go with the blocks, as above noted. The slip with cross lines diagonally goes with balls, probably ninepins (A, vii, 1). The slips with bracts go with blocks (Ballas 43) and with ninepins (N 1215) also crossed slip and plain rods. The rods with bracts go with the 4 lions and hare (N, Q, 711, vii, 2, the other elements of this group having been already associated above). The use of tall pawns does not come in before the dynastic people (see *Tarkhan* and *Royal Tombs*). Two pieces, pl. i, 14, are therefore of the 1st dynasty.

The game on a squared board, usual in historic times, was already begun by about s.d. 42 (M. xvii); this is the only example of the prehistoric age, and it is dealt with in the catalogue of *Games*, along with the later examples. Cones of clay that might be playing pieces are of 36-38 (A, ix, 7, b 163). Sets of cones of alabaster and breccia in this collection may be prehistoric. An ivory game-piece is in i, 14.

Rattles of pottery are found along with the game board, of about 42 (M xvii) and 51-63 (W, vi); and

such are not unusual in historic times. See the section on *Toys*.

## TUSKS (PLS. XXXII, XXXIII)

77. Apart from the subject of the large straight tusks, like those with human heads, which have been considered along with human figures, there is a very large class of tusks which have been attached by their wide ends to leather work, by means of pierced holes around the base (s.d. 31-50). These pass into flat tags of ivory and bone (31-55), and also into tags and cones of stone (34-60?). The range thus belongs to the first and second periods, but ends entirely before the third or late prehistoric age. Here we shall review the order of the designs, referring to plates xxxii, xxxiii, which are numbered continuously, denoted here by "fig."

The earliest is a perfectly plain tusk, fig. 9, with sixteen holes around the top, of s.d. 31 (N 1587); a similarly plain tusk with eight holes is from N 1488. Another plain tusk is fig. 1. The decoration begins at s.d. 33, with fig. 7 (N 1497), having three lines around it half-way down, and three lines near the tip; this is a solid tusk, so in place of holes there is a groove round the top, for binding it on. Another solid tusk with similar lines, of coarse work, was in grave N 1348, but is only vaguely dated 33-48. A pair of large tusks (fig. 2) have each a single line around, near the tip, and above that two holes, originally filled with black paste, and a bead of ostrich-shell for an eye; lines from those go round and upward. Another undated tusk has two pairs of lines around and many at the tip.

78. The simplest sloping lines are on fig. 10, where two pairs of lines each encircle the tusk diagonally, not joining as a spiral. Bands of diagonal lines are first dated at 37, fig. 16, from N 1426. A nearly similar tusk here was in N 1542. Another tusk has a single wide band of diagonal lines. A different system is the opposing groups of diagonals, fig. 15, from N 1583, undated; these tusks are slightly hollow, and are cut off flat in the solid part; probably a pair of solid tusks were carved from the rest.

A pair of tusks with zigzag lines down the inner curve, and parallel lines on the outer curve, fig. 14, may be about this age. Other zigzag lines can hardly be later than 40, and are more likely about 35, as on the pair of fine tusks each with two zigzags, fig. 4; and fig. 5 with a double zigzag on one side, and a single on the other. Fig. 6 has two rectangular zigzags, formed by drilled holes.

The next stage was passing from diagonals into spiral lines, which come at 43, fig. 13, a pair from N 108, and at 46, fig. 11, a pair from N 1871. Some were also found at El Amrah (A, b 75 of 46-56).

After this the decoration seems to have reverted to the earliest type of plain rings, three or four in the middle and eight at the tip, on a pair, fig. 3 (N 1419) of 44; others, probably of the same age, are a pair, fig. 8, and a single one smaller. Firstly the plain tusk appears again, with only two little rings at the tip, at s.d. 50, a pair from N 1732.

Another form of short rounded tusk, with incised triangles on it, has 14 holes with some leather remaining, around the top; from N 1536, undated.

79. *The Flat Tags.*—These begin with a few plain lines around, at 31, fig. 18 (N 1606). Next come zigzag diagonal lines at 33, figs. 21, 22 (N 1407); also fig. 33 of 34-63 is probably nearly as early, one of a pair (N 1772). Others of the same class are figs. 35, 36, dated to s.d. 36-39 (A, vii, 2), to 35-43 and 38-43 (A, a 89; b 220), and to 44? (D, vi, 109). Another here with only two pair of lines is like one of 33-41 (D, v, 102). The quadruple zigzag pattern, on fig. 26, might be a little later, perhaps of 38, because decadent and less regular designs, on figs. 34, 24, and 19 are probably before 40, by M. xix, which is not likely to be later. Spirals around tags begin at s.d. 31-9 (A, a 26), and continue 35-43 (A, a 59), 40 (N, lxii, 19, or 1251), 44 (N 1419), 41-8 (A, b 78), 46, fig. 32 (N 1871), 50, fig. 29 (three, Diospolis, R 155), 50 and 53 (D, x, 21) and 55, fig. 39 (N 1486). Other spirals, undated, are fig. 17, probably early in the series (38?), one of three alike; and figs. 20 and 30, less bold and rather later (40?), but not at all degraded.

Another step was the notching of the edges in place of continuous lines. This begins at 35, fig. 40 (N 1552), like N, lxi, 1, of 31-7, 35-43, 45, 47. Probably fig. 23 is also of 35. Fig. 28, from N 149 undated, is like D, v, 102, of 33-41. Edge lines imitating a spiral are of 37, fig. 38 (N 1736); a similar tag is of 36-39 (A, vii, 2). Sloping edge lines, opposing, are dated to 43 (pair here, N 1866). Plain edge lines continue in 45, fig. 31 (N 1575); and lastly there are a pair of thin, badly cut tags of 47, fig. 41 (N 1781). A pair of thick, coarsely notched tags, fig. 25, are undated.

Edge notches and diagonals are united in the large tag, fig. 27, of s.d. 44 (N 1419). Zigzags continued in s.d. 46, fig. 32 (a pair, N 1871), and down to 52, as here (N 1697). Peculiar forms are

a narrow tag without any hole or groove for tying, bearing three lines at middle, and three at tip; also a pair of plain thick coarse tags with grooves.

80. *The Stone Tags.*—The dated examples extend from 34 to beyond 52, and they were used therefore side by side with ivory tags. The first here is of fig. 48 dated to 34, of alabaster (N. 1900); another of alabaster, flatter and wider, is that of 38 (N. 1414). Two round tags of alabaster, figs. 45, 46 (N. 1860), are of 39-43, dated by A, vii, 2 of 36-39, A, a 66 of 43; D, x, 22 of 36-44. Cones begin by 34, see D, v, 101; M. xiii. The large cones of red limestone 53, 55 (N 1705) are of s.d. 45, but similar cones are of 37? (R, 62 c, 13). With these go the cone N 1432 here, and one bought, fig. 56. Probably of like date are a pair of alabaster cones, fig. 54. A pair like fig. 47 are dated to 43 (A, a 66). By s.d. 50 the tag had shrunk to the little alabaster, fig. 50 (N 268); and the last appearance is the long cylindrical tag dated between s.d. 52 and 63, figs. 51-2 (N 399). Others undated here are of red limestone, figs. 43, 44, 47, 58, pair, and 61; of buff limestone, fig. 42, and a pair as fig. 44 (N 1583); of alabaster, figs. 49, 57, and one similar, also 59, 60; of pottery, fig. 62, made in imitation of the red limestone, from El Amrah (A, x, 6). Clay cones are found; one covered with red leather (N 1705) is of 45; three others of bare clay (N 1905) being found with a rhombic slate, are probably before 40. There is a double pointed tag of ivory, with 12 holes drilled for tying on, i, 11.

Regarding the use of these tusks and tags, they were attached to leather, which is often found sewn on to the grooves and holes by leather strips, or were of clay, covered with leather. This was for ornament, and such ornament might arise on leather dress from wearing tusks as trophies of hunting, or might belong to leather water-skins as plugs to stop the holes of the limbs. The purpose is not yet certain, and the only positions noted are of three along a forearm (A. p. 24). We need the clearance of a well-preserved and intact grave to settle the question.

## CHAPTER X

### THE STONE VASES (PLS. XXXIV-XLII)

81. THE hanging stone vases here, nos. 1 to 139, on pls. xxxvii-xlii, are classed in order like the

*corpus*, *Naqada*, viii, ix. The system of order is, round-bottomed squat vases from flattest to highest, 1-14; flat-bottomed 15-28. Barrel vases, of equal curve above and below, in order from most globular to tallest form, 29-65. Shouldered vases from nearly barrel form to the highest shoulder, 66-108. Tubular vases, without feet 109-112; with conical foot 113-117, included here, though not hanging, because of connection with following 118-134 vases with feet, in order of degradation of foot. Oval vases 135-139.

The history of the squat type must be entirely taken from the *corpus*, as none in University College are dated, except the small one, no. 22. In *Naqada* viii the earliest type is 4 of s.d. 38, the widest mouth in proportion; to that follows type 5, of 34-43 in one grave, 45, 45, at Diospolis 66, and much larger of 66 s.d. After this arose type 3 of 52-3 and 63; lastly is the flattest base of all, *Diospolis*, ix, 1 of s.d. 66. So the course of changes was from the most open mouth and deepest form, to narrow mouth, and then shallowest form, ending in a wide flat base. Of the small flat-bottomed vases type 7 is of 46 and 58, and 8 is of 44 to 65 in ten examples. The very coarse little one here, no. 22, is of 65 s.d. This form is exactly contemporary with the Decorated pottery forms which are scarcely known before 40 and end at 63: evidently the same changes of civilisation affected stone and pottery alike. The type survived into the 1st dynasty, as in *R. T. II*, xlix, 129-132, 455.

82. The barrel forms of all proportions begin and also end nearly simultaneously. The ranges of s.d. are earliest for types 15, 25, 26, 29, beginning at s.d. 42. Types 23 and 28 are not noted before s.d. 47, and 30 begins at s.d. 50. None of them end before 61 (types 26, 29); at 66, 30 ends; and the others at s.d. 69. One, the most globular, is found in a rather degraded form down to the 1st dynasty.

The shouldered form begins as a slight variant on the barrel form at s.d. 42 (type 33), and 47 (t. 32); it is more distinct as time goes on, and the high shoulder 42 begins at s.d. 60, and type 45 at s.d. 66. This merges into the types 47-51 usual in the 1st dynasty. The barrel and shouldered types persisted in the 1st dynasty, as in *R. T. II*, 122-6, 204-6.

83. The tubular basalt vases, nos. 109-112, are undated; but the similar type 63 is late, of 52 and 73 s.d. (D, ix, 4). The basalt vases, 113-117, with a tall conical foot are early, as type 62 is of 38, and one from Diospolis is of 38. They led on to the

series, nos. 118-134, which begins with the full form type 72, no. 121, of s.d. 32 on to 51. Later is no. 119 of s.d. 47, no. 120 of s.d. 51, and no. 118 like type 58 of s.d. 63. The very wide short vases nos. 123, 124 are not late, 123 being of s.d. 42-3. Thus the tendency was from full and wide forms to narrow, although the foot type started from a tube form. The degradation of a clear conical foot to the mere button of nos. 125-130 is obviously a descent of type.

Lastly the oval forms 135-139 are of the middle period, 38-60 s.d., in types 71-75 placed in *Naqada* xii. The examples here are no. 135 of 57-64, and no. 136 of 52 s.d. The large oval jar of breccia, no. 14, may be noted with these, but the material and work rather link it with the squat jars.

84. The standing stone vases are here re-arranged, as the older *corpus* is inconsistent in period and in arrangement. Much of it is now known to belong to the proto-dynastic age. The College series here includes a few of that later age, to show the change of type; but the bulk of the dynastic vases are included in the catalogue of *Stone and Metal Vases*.

85. The little saucers 140-142 are probably late prehistoric, as the bottom is rounded, or only slightly flattened: those from Tarkhan and the Royal Tombs have a distinctly flat base. The materials—noble serpentine and porphyry with large crystals—indicate the later prehistoric age. No. 144 is dated to s.d. 44. The more definite base to no. 143, and flat brim, suggest a late date; 145 might be of the 1st dynasty, as in *R. T. II*, xlviia, 63. No. 146 is undoubtedly of dynasty 0, as it is from Hierakonpolis and bears the name of "The Falcon Ro," both falcon and name being protected by the arms of the *ka*. This King Ro was first recognised on a sealing (*R. T. II*, xiii, 96), with the falcon on the mouth sign, and the same as pot-marks (*R. T. I*, xlv, 2-8). If the name occurred only in this form it might possibly be merely a stand for the falcon. It is therefore very satisfactory to find it here set apart under the *ka* arms; and also from an entirely different site, a capital instead of a cemetery. The hemispherical bowl 147 may be late, as it is almost like *D. ix*, 19, of 80 s.d., or *R. T. II*, type 311, of the end of the 1st dynasty. The basalt bowl 148 is like that of the middle of the 1st dynasty, *R. T. II*, types 109, 119.

86. The conical cups are of the middle prehistoric age, 149 of s.d. 61 and 151 of s.d. 46. In the early dynasties the form changed to splaying outward at

the mouth. No. 150 is only a model, scarcely hollowed at the top. There is no evidence as to the date of the conical cups with brims, 153, 154; nor about the curved cups, 155, 156, both of which are thin, and the forms beautifully wrought, with slightly hollowed foot. The alabaster cup 157 might be of historic times. The very thick and clumsy breccia cup looks like the base of a table inverted; but as it is of 63 s.d., and no tables are known before the 1st dynasty, it seems as if this must be a vessel. The saucer 159 has a stumpy handle, pierced for hanging up. The breccia bowl 160 rather suggests the 1st dynasty (see that from *Royal Tombs II*, type 416): the material makes it unlikely that it is later. The blue and white marble bowl with handles, 161, looks as if it had been a squat vase like no. 5, broken, and cut down at the top. The long oval alabaster dish is of the same type as the white-lined pottery tray, *Naq. xxix*, 70 (no. 4, pl. x here), and is therefore probably early, about s.d. 31-35. No. 163, a rough gypsum dish, is of the usual proto-dynastic type from Hierakonpolis.

87. The discrimination of cylindrical jars needs care, as they extend over the whole prehistoric age in various forms. The tall, plain cylinder, slightly convex in the side, belongs mainly to the early prehistoric time. Three here, nos. 172-3-4, are dated 33, 37, 34 s.d.; of four from Diospolis, three were in a grave dated some time between 33-41, and one dated 32-46; two from Nubia are of 31 and 37? (R, 64, b 3, 4); three from Naqadeh were of 33, 37-57, 44, and one of 72. Thus the type is of the early age 31-37 s.d., only one in a dozen being later. These are nearly all two diameters or more in height. The shorter cylinders are similarly dated. Those, like nos. 166, 167, 169, with a plain angular brim, bevelled above, are of 34 (*Naqada*, S 4 a, 4 c), 34? (*M. H.* 29, pls. xii, xxi), between 33 and 41 (*D.* ix, 11), and of 37? (R, pl. 64 b 2). Similar, but widening below, is of 31 (R, 64 b 1), and 34 (*Naqada*, S, 8). The rounded brim is rather later, as no. 170, between s.d. 37 and 57, and is usual in the 1st dynasty at Tarkhan.

The slightly conical class, as nos. 164-5, 178-183, seem to be later; one is dated, no. 178, to 45 s.d. The bulgy cylinders of basalt, 184-190, are none of them dated. The well-known rope pattern cylinders are dealt with fully in the later age, in the class of *Stone and Metal Vases*.

One of the most surprising dates is that of two small pointed vases, no. 192, from Gerzeh, fixed to

58-60 s.d. This form is otherwise characteristic of the vith dynasty. The beautiful little syenite vase, 200, judging from the deep cut under the brim, is probably of the 1st dynasty (compare *R. T. II*, 278). The little cup vases, 201-205, are undated.

88. The bottle form, 206, has a serpent in relief on either side; it is undated. The animal vase, 207, has a gold handle on either side; it seems to be of the same family as *Naqada*, S 82-84, which are of 44-64, 59, and 33-54 s.d.; probably 50-60 may be the age of this class; 208 is a black pottery vase imitating stone, and is placed here for comparison of material. Many other black pottery imitations are in the pottery *corpus*, class F, 70-100.

The square boxes, 209-212, are undated here. A painted box from Diospolis (xvi, 73) is undated; a second, vi, B 51, with four holes in the top edge, is of about s.d. 40. Another box with painted sides is of 35-41 (A, xii, 10-13). So these seem to come at the close of the first prehistoric age. The pairs of circular boxes, nos. 213-14, are undated.

89. Lastly there is a very interesting group of peculiar vessels, nos. 215-220, which are akin to those found in burials in Libya, as described by Mr. Bates in *Ancient Egypt*, 1915, 158-165. Since then he has pointed out that a similar vase to 215 was found by Dr. Reisner, of prehistoric age; and this enables us fairly to connect this form splaying to the base with the black pottery imitation of stone, type F 96 b of s.d. 34, and the wide-spreading brim resembles that of F 96 g, s.d. 40-50. It seems, then, that the family 215-16, 218 belongs to the first prehistoric age, and is probably of Libyan work; 217 may belong to the same family, but perhaps later. No. 220 resembles another of the Libyan group (*Anc. Eg.* 1915, 163, 7); 219 is obviously of the family of the white-lined pottery, type 65, which belongs to s.d. 31-34. These Libyan stone vessels, then, are a part of that civilisation which pushed into Egypt and formed the first civilisation there. No. 221 is doubtless much later, but it has the same splay at the base as 215-18, and the tie round the middle as 217, so it is probably of the same source.

## CHAPTER XI

### SLATE PALETTES (PLS. XLIII-V)

90. NEXT to the pottery the most frequent object in prehistoric graves is a slate palette. It is usually accompanied by a pebble of brown-yellow jasper for

grinding, and on the palettes is often a worn place, sometimes still retaining malachite. A bag of lumps of rough malachite is frequently found between the hands, galena is also frequent, and haematite is sometimes found in lumps, and also ground as red paint on the palette. This is the apparatus for painting around the eyes; the band of green malachite paint appears on the steatopygous figures of the first civilisation, and in the third dynasty there is the malachite band round the eyes of the mummy from Meydum (*Medum*, p. 18), and around the eyes of the sculpture of Hathor-nefer-hetep (*Saqq. Mast.* p. 4). The utility of the paint around the eye was to keep glare off and act as a germicide. The forms of the palettes vary greatly, and they will be taken in order, from the human figures to geometric shapes. In the following account "fig." refers to the College collection on pls. xliii, xliv; "type," or t, refers to the *corpus* volume of the Prehistoric.

91. The only human figure is here, fig. 1, and from the style of it like the heads, N, lix, 2, 4, it is probably about the date of 40.

Perhaps the dog and leopard are incised in a group on a slate, undated (*Liverpool Ann. Arch.* iv, 140):

The hare seems to be intended by type 7 D, of 77 (*T. II*, xxii, 7 c).

The Barbary sheep appears in type 2, undated, but before 70. It is incised on fig. 4 F here.

The hartebeest with lyre-shaped horns is a type 4 J of 34-46 (R 63 b 10), and 4 K was apparently similar before the horns were broken, date 39 (D, xi, 1). The gazelle is incised on a slate in a group (*Liv. Ann.* iv, 140). The types 3 D, M, 4 P, of 37 to 41, are uncertain, owing to loss of horns. The examples with the legs doubled up in rest are later, being dated to 62, fig. 4 V (N 95), and 77 or after, 4 U (*T. I*, xxix 27).

Hippopotami are early, dated to 34 (D, xi, 4), also fig 8 D.

Elephants are fairly outlined at 50 (type 5), and very degraded figures are of 73-76 (type 5 P) and 73-79 in Nubia (E 45 c 11). Type 6 may be intended for an elephant, of s.d. 38. Fig. 7 M seems to have a baboon head at each side; it is a very thick slate, with a quadruped engraved twice upon one face.

The Nile turtle was a favourite subject. With well-formed head and legs it is of 33 to 39 (type 14 D), fair in 60 (W, xii, 7), reduced to vague outlines by 70 (t. 14 N). With head only (t. 15), it appears

from 36-41 to 77 (D, v, 102; T. I, xxix, 8). The head remains as a mere bulge, t. 16 c, in 46 to 77 (t. 18; T. II, 44 h, m). Reduced to a plain disc from before 63 to 77 (N 1772; T. I, xxix, 10, 11), it finally had a notched border in 78 to 80 (t. 17 U; T. I, 23).

92. The falcon was not of importance early, and is only dated to 77, t. 20 c (T. II, 10 F, L). Another figure here, is the top of a triangular slate, type 20 s. The pigeon and duck are excellently rendered by two figures, undated (K, figs. 53, 54, French edition only). The vulture appears in figs. 22 A, 22 G, and xlv, 15.

Birds in general are badly defined; those with head and feet are from 46 to 58 (t. 23 P, N 512; A viii); with head only, from 48 to 79 (t. 24 D; t. 24 R).

A peculiar figure, types 28 to 32, has been difficult to interpret; provisionally I called it the *pelta*, from its resemblance to the Amazonian shield (N. p. 63). It is now possible to trace the history of it. The earliest form is the simplest; type 29, though not dated, was surrounded by graves of s.d. 34, 40 and 45; type 28 H is of 44 and of 35-37 in Nubia (R 63 a 8). In this simple form it looks most as if the idea was the reed boat, turning up at the ends, and sometimes with a load in the middle. This first form may be said to begin about 36 and go on to 44. Next, the middle load rises into a high mass, about 44 (D, vi, 51), and in 45 (D, vi, 120); or is developed as ornament at 46 (R 63 a 10). After this the middle mass is heightened and becomes the attachment for a magic slate, fig. 31 D at 52 (D 422 at U.C.), and vaguely of (36-55) M, xv, and (34-55) N 171, see xlv, 22-24. Lastly, by 63 the ends were modified to a bird's head and tail, N 836, t. 32 M; fig. 32 D.

93. The fish are very usual. They begin, t. 34, with a distinct Oxyrhynchus, or *Nefash*, at s.d. 36 (D, xi, 15). Next is a *Mormyrus cashyf* (fig. 35). Then the Latus, fig. 36. Next is a rounded fish with triangular projecting tail, t. 38 P of 36 and 42, fig. 38 c of 38, of 41-46 (R 63 b 5), of 44-48 (t. 35, 37), of 58 (A, viii), and on to 60, A, vii, 1.

A less splaying tail begins at 39 and goes on to 72 (t. 40 D, 42 to 48; t. 40 J, 46 to 72; t. 46 H of 59). A peculiar long rounded tail is of 42 (D, xi, 16). Rougher work now comes in, the gills are not marked, and the tail is made by notching in the oval outline, as t. 45 F of 46, and various examples which extend certainly from s.d. 48 to 63. This finally degraded into an oval, down to 74 (t. 57).

An improvement began at 63 to 75 with again making a distinct tail (t. 48). Then came a type with a long projecting tail with parallel lines t. 54, dated to 77 (M, xxiii, 3, T. II, 48 g, T. I, 28) and 80 (T. II, 47 k; T. I, 28).

The degradation into a mere oval was reached by 46, fig. 57 N (N 1863). A cross-line border was added from 61 to 80 (t. 59, B, D); a zigzag border at 77 (t. 61 D, T. II), and a notched border in 71-78 (t. 60, 61). A hollowed fish is of about 70 (M, xx, 2); and this became a vesica-shaped slate, hollowed on one side, t. 58, 59, in 77 and 81 (T. II, 81 d, g; T. I, 30).

94. Another large group is the double-bird-head palette, with considerable variations. The earliest of all has the two heads with a deep hollow between them, dated to 37 in Nubia (R 63 a 5), and to 46 (t. 65 D). Next the hollow becomes a V notch between heads at 38-44 (A, x, 4), which narrowed further, t. 67 D, rather later, and continued in this form, 67 T, down to s.d. 80. Another form with much slighter hollow between the heads, t. 69 c, D, is from 65 to 80 (N 161; R 63 B 4); and on the top of a square slate, t. 72 p, between s.d. 57 and 66 (C. I. iii 2).

The beginning of a new type is shown by a hump between the heads, t. 72 D, which begins from at latest 43, down to 50 (A, a 89; N 1725). This hump, rather lower, still lasted at 74 and 78 (D, xii, 33; T. II, 21 d, types 72 G K). The present evidence places the square hump, t. 80 P, or notched on the edge (E. 45 c 6), to 46 at the latest, continuing on to 58 (A, viii, 2) and 63, 64 (R 63 G 1; N. T 18); while the deeply notched forms, t. 76 G and fig. 75 K, are not dated before 57, 58 (A, x, 9; A, viii, 3), or slighter at 45 to 47 (t. 76 R). It seems unlikely that a square block should suggest the long radii of fig. 75 c, which seem much like the wing feathers sticking up when two birds are carried by the wings together. The feathers, however, might easily degrade to the type 76, and that to the notched block. It may be suspected therefore that more evidence would take back the long-feathered type, fig. 75, to 40 or earlier, and that our dated examples happen to be late in the history of the form. All through, we often find that a good form will continue to be made long after a degraded form has been started. It is the first appearance of any form that is the important point in its history. The dated forms are, with distinct radii, t. 76 R, s.d. 45 to 47; A, x, 9 of 57; A, viii, 3 of 58; T. II, 671 of 77, 78. With a

grooved block t. 78 D, s.d. 46 to 64; t. 78 G of 58. With a striated block, t. 78 M of 74. With a plain block t. 80 P of 38-47 and 63, t. 80 c of 50, A, viii, 2 of 58.

The type merges into an ovoid form, through t. 82 G to t. 87-88. These range from 37 to 78, and so were contemporary with all the types of double birds, and even earlier. This may make us doubt whether the ovoid is not the first form, modified by carving the birds' heads on it. An ovoid with two slight suggestions of heads is of about 75 (E. 45 c 3).

95. The rhombic slate is the earliest of all, starting at 30. The shape then is long, with some projections at the shorter axis, t. 90 D, and this lasts from 31 to 58, with a thick clumsy body. Without any projections the plain rhomb, t. 92 D, is dated from 33 to 70. But the great majority are before s.d. 40,  $\frac{2}{3}$  of the former and  $\frac{3}{4}$  of the latter type. The rhomb with a crescent on the end of it, t. 91 V, begins at 33 and goes on to 41 or later. With horns at the end, t. 91 T, it begins in the forties and appears as late as 77. The rather curved bulging outline is a late form of the forties and 53 (M, xv; D, xii). Broadly speaking, the rhomb belongs to the first period, with rare examples of later dates.

The rectangular palette begins at 39 or a little later, and therefore belongs essentially to the 2nd and 3rd periods. It was then oblong, without any lines, and is rarely found before 70. The equal-sided square form is of 77-80. The use of border lines on the oblong palette begins at 53, and on the square palette at 76. The rectangular palette then is almost entirely of the close of the pre-dynastic age, and the border lines stamp it as being under dynastic influence. But it was by no means of dynastic origin, as it belonged to the poorer classes, and is practically extinct by 79, or early in the 1st dynasty.

#### MAGIC SLATES

96. Slate figures of another class are too small for palettes, and show no trace of grinding. They always have a groove and sometimes a hole at the base, evidently for tying them together. In grave T. 4 at Naqadeh three such pieces, with human heads (N, lix, 2) were found tied together by a cord through them, (N p. 18, plan lxxxii). Beside them were two ivory tusks, one solid, one hollow, and an ostrich egg. The group seems as if it were the

outfit of a magician ; and the small figures remind us of the small flat pieces of wood, or other material, tied together, which are used in Central Africa to cast on the ground, for divining by the position in which they fall (*Anc. Egypt*, 1914, 164).

The earliest of such figures are birds, figs. 102 N, P, clearly dated to 33 by a white-lined bowl (N 1590), and also as late as 47 by a decorated vase with hill pattern (N 1781), see xlv, 18.

The next type is with the human head, fig. 102 G, i, 9, 10, from 38 to 41, and of bone of 41, ii, 1, and between 42 and 47 (N. T 24, lix 9, 10, like ii, 5).

The two horns, figs. 104 D, G, L, xlvi, 18-20, may be dated to 38-43, and 40-70 of limestone (A, b 220, a 26) compared with N, lxii, 37. The latter example in N 149 was with a slate of type 42 K, which is dated to 38 by N 271. So all these datings agree on 38-40 for the horns pendant.

Another class with two birds (or horns?), figs. 103 D H, xlv, 1, 4, 5, is dated to 40 by N 1251 (lxii, 42) and 43 (D, x, 11), and less exactly to 36-39, 36-43, 35-46, 32-48 (A, vii, 2, *Garst. Mah.* iv, A a 55, N 1675). Thus it must have ranged from 39 to 43. A later form is of ivory, 103 F, xlv, 41, dated to 46 by N 1871 (lxii, 40) and to 33-48 (N 1348).

A variant with stages beneath the horns, fig. 103 T, xlv, 3, is of 33 (N 1646, lxiv 89), 37 (A, b 68), 38-43 (A, b 220), and 41-48 (A, b 78). A very coarse form, fig. 103 J, xlv, 2, is of 46, a pair from N 1871. Another variant, fig. 103 N. Q, xlv, 6, has a middle object between the birds, of 32-48 (N 1675, lxii, 43), 35-46 (A. a 55), and 37 (D, x, 12).

Lastly there are the bird and double bird pendants. The single bird, fig. 100 D, is dated to about 40 (D, vi, 51), and 44 (D, vi, 109).

The double bird pendant is of 44, fig. 101 H, and 47, figs. 101 G, S; see xlv, 16-21.

Two heads of birds from pendants or palettes are of s.d. 33 (N 1590) and 34-59 (N. 278)

Thus this class of magic pendants is almost entirely of the first period, with a few survivals a little way into the second period.

A pendant in the form of a lion is in the MacGregor collection (K 55 A), and others with two bulls' heads were in the Price collection (P.S.B.A. 1900, 160).

97. Some peculiar points of the slates figured here should be noted, apart from the developments of form traced above. Fig. 4 C the incised lines are filled in with a red-brown paste; the eyes are beads of ostrich shell. Fig. 4 F the lines are scratched

and are very thin; the animals seem to be the Barbary sheep. Fig. 7 M, both incised figures, might be intended for lions, by the long tail and ears curving forward. Fig. 9 D, the eyes are filled with quarter spheres of bright crimson sard; the pieces do not seem to be parts of beads, but to have been made on purpose, and there is no reason to doubt their being original. Fig. 14 K, eyes of glazed beads, placed in recently? Fig. 14 P, the incised figure is of a zebra, by the tail. Fig. 23 D, the incised cartouche line appears to be ancient, yet the type of slate is not later than 58; as the cartouche line is the cord collar of the high priest of Horus (see Louvre statue) it might well occur on a slate as early as this, like other instances of later subjects. Fig. 35, the eye is filled in with a yellow paste, and a red pupil; the work is finely finished. Figs. 91 M, the incised lines are on opposite ends of a thick palette. Fig. 30 D has an incised design of a man trapping a quadruped; see the photograph, pl. xlv, 24. Fig. 101 F is of red limestone. Fig. 102 G has eyes of ostrich shell. Figs. 103 F, 104 D, 104 L are of ivory, 104 G of limestone.

Beside the forms of the figures on pls. xliii-xliv there are also in University College slates of the *corpus* types (see *corpus*, *Prehistoric Pottery and Slates*) as follows, with the reference to the source when known, and the date. 4 P, N 241; 17 U, NT. 33, s.d. 78; 23 P, N 512, 46; 24 D, N 524, 48; 24 J, N 1675, 32-48; 28 D bit, N 429, 48; 28 H, N 1237, 44; 30 H, NT. 22, and another varied; 31 D, N 171, 34-55; 38 H, N 1329; 40 J, N; 45 C, similar, mark 207.19; 45 F, N 1649, 38; 45 U, N 1203 (35-61); 46 D, similar; 46 M, N; 46 Q, Ballas?; 46 R, double size; 48, N 1267 (31-61); 54 F, Tark. 1063, 77; 57 C, N 1770, 61?; 57 G, N 799; 58 D, N 310; 61 D, N similar; 61 G, N 710; 65 D, N B 133, 46; 67 T, N 185, 47; 68, N 1257, 42; 69 D, N 161, 65; 78 D similar; 80 P, N 1891, 38; 88 G, N 1470, 37; 90 G; 90 L, N, bit; 92 D, with marks 91 M; 91 T, N; 94 K, Tark. 415, 80; 95 E, T 164, 81; 96 R; 98 L, Tark. 1047, 78; 98 M, N 113, 79, N 320, 77. Also three rectangular palettes, bevelled away beneath; and another thick bevelled slate marked 118. These might perhaps be dynastic.

#### HARD-STONE PALETTES

98. Another class of palettes made of porphyry and quartzose rocks has been found mainly in Nubia. Two examples are recorded from Naqadeh, a square



of granite of 45 (N 1528), and a syenite slab with green malachite on it, of about 60 (N 538). From Gerzeh there is a fish palette and rubber of black and white porphyry, date 52-61 (W. G. xii, 5) : also an ovoid of black syenite (xii, 6) with a porphyry pebble rubber, xlix, 12, date 58-59 (U.C.). There is also a square of white and grey dolomitic marble polished on top, rough around edges and below, from N Q 84, s.d. between 38-73 (U.C.). These last two and the following five bought examples are in the College collection. Of black and white syenite rock (1) a pillowy square 6.0 x 4.2; (2) a similar form with slight projections at one end, 3.7 x 2.8; (3) another 3.5 x 3.0; (4) a flatted pebble 2.5 x 1.8, xlix, 13. Of black and white porphyry there is a turtle (5), with legs and tail marked by grooves, and eyes by circles, with a slit for the mouth. These kinds of stone are mostly unknown in the materials of the early stone vases, only nos. 4 and 6 could be at all paralleled; so probably these have been brought down from Nubia, anciently or recently.

The Nubian forms are generally square or of a barrel-shaped outline. The dating of those in R 63 c is 11 and 17 of s.d. 78, 14 of 79, 13 of 80. Others in E 45 d are dated to 70-80, 73-79, 75-80, 78-80. It seems then that the main age of these is of the dynasties 0 and 1; yet, rarely, examples were brought in during the second prehistoric age. We can hardly avoid seeing the parallel in this dating to that of the square slate palettes, and these quartzose palettes seem to be a variant of the usual rectangular slate.

## CHAPTER XII

### MINOR ARTICLES

#### VASES OF IVORY, HORN, AND WOOD (PLS. XLVIII-IX)

99. THESE are unusual, but made in all periods. The plain cylinder of ivory with a slight brim begins at s.d. 31 (R 66 a 8), and is of 34 (M, xii). The cylinder with a slight ledge handle here, xlvi, 17, is probably of about 70, and a finely polished small cylinder, xlvi, 13, is like those of ivory in the age of Zet, s.d. 81 (*G. and R.* iii, iv, v). A very thin fine cylinder with plain band, much broken, is from N 128 undated.

The ivory vase with a foot is of 37 and 42 (N, lxi, 10, 11); and here a clumsy thick one, xlvi, 15, is of 43-44 (N 1412), and a small cup vase with a

zigzag round the base is of 47, xlvi, 14 (N 1865). Another, xlvi, 16, is undated, N 231, N. lxiv, 105. A similar ivory vase with a foot is of 36-43 (M, xx). Two small coarsely made ivory vases were bought, undated, xlvi, 18, 19.

Horn vases with a slight foot are dated to 41, N 1759, N, xlix, 2. Another is from N 1425, undated, N, xlix, 3. A long horn vase with foot was bought, undated, xlix, 1. A broken horn vase is xlix, 4. A vase with a pointed end from N 1796 is in N, lxiv, 102.

An egg-shaped wooden vase, xlix, 5, has a pattern of two rows of triangles, point to point, and a row of zigzag, all covered with cross lines. It is certainly ancient as it is full of a cake of brown friable vegetable paste, decayed.

An oval dish of ivory, here has been included in the catalogue of ivory, but it appears to be prehistoric by an exactly similar dish found in Nubia (R 66 a 1): there was no pottery with that, only a slate palette, which is unfortunately not published, so the dish may be of any part of the prehistoric age.

After the principal classes of objects already described there remain many isolated specimens to be noted. These will be taken in the order of Inscribed Objects, Stone, Ivory, Pottery, Metal, Wood, Fibre, Leather, and Shell.

100. INSCRIBED OBJECTS.—The ivory cylinder ix, 57, from Diospolis, U 364, (D. x, 34) is between 65 and 76, probably about the latter date, see xxiii, 7. A cylinder of limestone, ix, 56, has irregular wavy lines around it, not forming a pattern. It looks like a barbaric imitation, but it is dated to 46 (N 1863). This raises an important question as to cylinders originating so early, for all others that are known are under the influence of the dynastic people. The contents of grave N 1863 are well known and varied. Some types might extend to s.d. 60 or beyond, as B 11 f, 39 a, P 22, 93 d, 95 b, D 8 c. Of the others D 8 d, though not recorded beyond 48, might easily last as long as D 8 c; but three types are well marked, as B 23 b, s.d. 34-46; 79 b, of 32-46, P 26 b, of 32-50, and these have no cognate forms continuing later, so that it is very unlikely that they could all have continued here without leaving any trace elsewhere, as they are all usual types. It seems impossible, therefore, to stretch three clearly early types beyond 50 at the latest. The incised pottery is so rare that we cannot base much on it, but types N 24 and 26 in grave N 1863 could hardly go later than type N 28, which is of 50-52. The



evidence, then, is strong for an imitation of a patterned cylinder being of 46, or at least before 50. This might be a very early link with the dynastic race, who were certainly bringing in their art as early as 57-66, as shown by the carved handle of the rippled flint knife in the Louvre.

A little plaque, ii, 16, has a sign upon it, and six drilled hollows, with seven on the other side. The fragment of a thin sheet of ivory, with a hole broken through at the edge, ii, 13, has a row of signs on each side, drawn in xxiii, 8. They appear to be connected, as an inscription, but there is no date known for this piece, and it might be as late as the ninth dynasty, though the condition of it is like that of much prehistoric ivory.

101. STONE.—A few amulets are met among the animal forms described. Three little pointed pieces of noble serpentine are probably forms of the claw amulet; see *Amulets*, no. 24. Actual claws (of lions?) are found of 36 (N 1503) ix, 51.

The forked flint lance was used ceremonially, and one for this purpose was inserted in a gold handle; see *Amulets*, p. 16, for the series of types. Here there is one model in noble serpentine, set in an ivory handle, ix, 32, from Gerzeh 21. Another is of alabaster, ix, 33, undated. The form is also usually found in the sets of funeral offerings let into limestone slabs of the Old Kingdom (*Denderah*, xxi, *Cem. Ab. I*, iv). A rough rectangle of alabaster, ix, 43, is of 52 (N 690); and a long pendant drop of brown and white alabaster is of 30-43 (N 1466).

102. The forehead pendant begins with an egg-shaped outline (N, lxii, 23) which is dated to 50 (N.T. 5) and 52-62, shell (N 399); the latter is in U.C. with others undated, 2 grey marble, 1 porphyry, 1 black steatite (*Amulets*, 130, c, o, p, r, n). Next is a larger form dated to 54 (N 1848), to 52-62 (N 399), to 61 (N.T. 16), and undated N 142, 1384, with one unnumbered, all of shell, and one of noble serpentine (*Am.* 130, g, m, b, similar, h, k, q). All these are at the College. Another form is rounder, *Am. d*, dated to 54 (N 1848 ostrich shell), *Am. e*, 57-64 (N 1007 bivalve shell), 44-63 (N 272), 61? of copper (N 1770), and *Am. f*, unnumbered, of ivory. Three are of markedly conical shell, one of 60 (D, B, 323) two unnumbered, one with 17 holes drilled in the back (*Am. j, l*). An indication of use is given by the hook inside at the lower end in N, lxii, 21 of s.d. 61; also in two at the College undated, *Am. a* and *s*, the latter representing a bundle tied together. A parallel to this is found as a neck

amulet in the Old Kingdom; see *Anc. Eg.* 1917, 49. Two figures of shell, *Am* 130 *t u* are probably also a late form of forehead pendant.

Thus it may be broadly stated that forms are dated thus; lasting on to 65 (W, Gerzeh 55).

Egg-shaped, stone . . . . .	are 50-52
Conoid, all of shell . . . . .	„ 54-61
Oval, shell, ivory, copper . . . . .	„ 54-61
Cone shell . . . . .	„ 60
Inner hook . . . . .	„ 61

They are thus distinctly of the latter part of the second period, and not of long range. The wearing on the forehead is certain, from one that was found in position, and they are cut to fit easily the curve of the brow. The inner hook at the lower end seems as if intended to hold up a face veil, and, if so, the pendant would be the exact prototype of the gilt tube now worn in Egypt above the face veil. The veil is undoubtedly Bedawy at present, and probably of old Arab usage, hence it is to Eastern influence that the forehead pendants may be assigned.

103. The spindle-whorls were nearly all found in the prehistoric towns at Naqadeh, and proto-dynastic ones in the town of Abydos (I, lii). One, xxvi, 68, was in grave 177, probably of about 48 by the wavy-handled jar W 4, flat-topped comb, and bird slate 24 D. A pair of small whorls of hard pink-and-white marble, N 267, fig. 70, and xlvi, 40, are most likely about the same age; as they are so small and fine, and found with ironstone balls, they may be intended for some game. Two whorls are of red and white breccia, xxvi, 71. There are 13 examples in soft limestone from the South Town at Nubt, as figs. 72-75; also two from the North Town, like 68, 73. There are eight unnumbered, including 69, 71, and the two large whorls 66 and 67. From the small sizes of these whorls in general, it seems that the thread spun must have been thin and fine. It is possible that some of the larger whorls may have been for the stem of a pump-drill.

104. Some curious plates of steatite, xlv, 47-49, are of unknown use. They are pierced with a single hole at one end, and three, four, or five holes at the other. There are twenty-seven of them here, all bought together. It seems possible that these may be spacers for carton-weaving; see *Anc. Eg.* 1916, 139.

105. A plummet of emery, xxiv, 10, from N 1788, is dated between 34-46. Polishers of various kinds are needful in all ages. Three blocks of emery were

found, as xxiv, 11 (N 456) of 56, with a groove for polishing stone beads. The roughly chipped bead upon it was found separately. This mode of polishing accounts for the varieties of cylindrical, barrel-shaped, and conical edges, which depended on the tightness of the thread which held the beads together; if there was any slack the beads could rock more or less, and so acquire a sloping edge. A chalcedony polisher, ix, 44, may be intended for papyri, of dynastic age; its source is unknown. A black quartzose polisher, which would fairly fill the hand, was probably used for smoothing pottery; the use of a polisher on pottery is shown by a limestone figure of a woman polishing a jar, of the xiith dynasty, in University College.

A large number of the brown flint pebbles are here, that were used for grinding the malachite upon the slate palettes. Why this colour should have been selected is unknown; but out of 20 here, 15 are light wood-brown, the rest black, or nearly so.

A piece of breccia shaped on all sides, xxiv, 4, has not been explained. It is slightly hollowed beneath, and bevelled off on the top edge above; it might be the hinged wing-shaped cover of a toilet box of bird form, like the wooden toilet boxes of the xviiiith dynasty. The little triangles of slate, ix, 48-50, from N 399, are of 52-63; probably from inlaying.

106. IVORY.—A square bar of ivory, with re-entangling angles, was bought with a bar formed of two slips stuck together, holding between them two sheet-copper horns, xlvi, 37, 38. Similar horns on a pole are in relief on a slate of 33-41 (D, v, B 102); but the copper horns here might have been inserted when the slips of ivory were rejoined recently, for there is no recessing of the ivory, nor any socket mark on the copper. A short tusk, xlvi, 39, has a copper wire loop for suspension.

Knobs of ivory, of a quarter sphere, with a dowel hole below, are of 50-73 (N 208), and from N 439.

A handle of ivory, xlvi, 10, has two holes on one side, converging into one on the opposite side, evidently for a cord. The handle, 11, is of bone, for the head of a staff, with two peg-holes to secure the staff, and peg-holes at the ends to fix in plugs.

Four legs (?) of ivory, xlvi, 5-8, are flatted on the back as if for attachment to a flat surface, such as the sides of a box. An ivory tag, xlvi, 9, is for pillow-netting, like sets found of the xviiiith dynasty; this may be as late. A bull's leg is of 1st dyn.?, ii, 11.

Three slips with leafage lines, xlvi, 14-16, seem

to have come from around the base of a papyrus column.

A small square of ivory, xlv, 42, is divided in four by lines of rope pattern. Harageh 387.

BONE.—A massive bone armlet is described under the Armlets. A bone pricker is probably for basket making (xxiv, 6); see also R 66 b 36-51, for prickers and netting bones.

107. POTTERY.—Pottery was used not only for vases, but also for model boats; xlvi, 1-6, were unfortunately found without record, but are certainly early. A pottery scoop is thin and well baked (xxiv, 26) from D.U. 362, undated. A pottery bar 12½ inches long, 1½ thick, has the ends turned at right angles 3½ long. It looks like a stay for a support, or might be placed under a box to raise it from the ground. A model square dish is of 35 (N 1483), and a model cup is of 57 (N 1733). See also the black incised pottery, such as that from Tarkhan, II v 12, with a great variety of glazed and stone beads here.

108. The use of GLAZING was begun in very early times. The bird N, lx, 19, of green glaze on a sandy basis, from N 1774, is well dated by a white-lined bowl, type 8, parts of which were under the skull and the rest in the filling. This type is placed to s.d. 31; the ivory hair-pin, viii, 8, was with these. This is not isolated, as beads of green glaze on a sandy base are known, of 31 (N 1587), of 33 (N 1497, U 260), of 34 (N 1654), of 30-37 (U 317), of 38 (N 1899), of 39 (U 47). The agreement of all these dates in the first civilisation sufficiently proves that we may accept the glazed bird as dated by the white-lined bowl at 31. The questions of the later dates and forms of beads belong to the subject of beads in general.

109. After the glazing on a sandy base, glazing on stone began in the second civilisation. Blue glaze on quartz is dated to 35-48 (D.B. 117), 61 (N.T. 16), and 63-71 (N 1574): green glaze on quartz is of 58 (N 851). Upon schist, blue glaze is of 52 (D.B. 378, 381), and green glaze of 50 (N.B. 50), 52 (D.B. 378), 55 (D.B. 494), 57 D.B. 343), and 79 (N 113). This glazing on quartz is thus from 48 onward, even to the xiith dynasty, and on steatite from 50 onward to the Arabic age. Note the bull's head amulet of green glazed quartz, ix, 22.

A remarkable object of glazed quartz here is part of a boat, made in sections. The shape is that of six lashed bundles of papyrus, forming a deep boat with upturned ends. It was glazed over with dark

green glaze, and had gilt bands covering the joints of the pieces. There were at least seven blocks, joined by drill-holes, in which ties, probably of copper wire, were inserted. The whole boat must have been about 2 feet long. Three of the sections are shown at the base of pl. xlvi, and a piece showing tie-holes, fig. 25. Another object of glazed quartz is part of a lion, the forepaws broken from a whole figure, found at Koptos. In the Cairo Museum (42090) is a sphinx about 20 inches long, probably of Akhenaten, which is of quartz, evidently glazed anciently. The surface of quartz that has been glazed is partly dissolved, and has a glossy fused appearance, like partly dissolved sugar, which is quite characteristic. So many pieces of glazed quartz were found at Hierakonpolis, that the boat and lion-paws here may well be of the latter part of the prehistoric age, though there is no proof of the period.

110. GLASS.—Beside the early glazes noted under Stone Work, there is one example of a Hathor head impressed on blue glass, ix, 47. The glass is an opaque violet blue, in imitation of the finest lazuli. The impress is imperfect, the bars across the top having also been pressed across the face. Ancient conchoidal chipping proves the material to be glass. The grave, N 1759, is well dated by eight types of pottery, the most decisive of which is the early stage of marbled Decorated, D 63 c, so that it would be impossible to bring it much later than 41 s.d. shown by the pottery. The glass pendant was found in a small alabaster vase, placed with the horn cup, xlix, 2, between the forearm and upper arm, so there is no chance of its having been dropped by plunderers from elsewhere. It does not seem possible therefore to question (1) the making of violet frit—the most difficult kind, and (2) the production of moulded glass, at the beginning of the second civilisation, probably imported. The details are more fully stated in the catalogue of *Glass and Glazes*.

111. WOOD AND FIBRE.—Part of a wooden bull's leg of a couch is of 72, from D.H. 56. This is an early example of what became the standard form in the early dynasties. The first instance of a bull's-leg couch is in grave N. 3 of 66 s.d.

A wooden spoon of long oval form may be prehistoric. A piece of a throw-stick which has been joined by lashing is of uncertain age. Pieces of a box painted with red and black or white (not here) is recorded from N 222, but undated.

Reeds were used as a basis for paste figures, and

reeds covered with red paste are here, undated. Part of a band of chequered black and white rush work is undated.

Linen stuccoed and painted is found at s.d. 38 (N 271); and plain linen of 35–55 (N 1103, U.C.), and with haematite at 74 (N 17). The white dress of the women on the Hierakonpolis tomb, and on the pottery figure, iv, 4, shows that linen was freely used in the second age. Brown and white knitted stuff is recorded of 69 (N.T. 26), p. 24. String is here of 37 (N 1546).

Leather is found painted with blue paint at 32 (N 1563), and is here painted with yellow chevrons, N, lxiv, 104, at 33–37. Leather cushions stuffed are recorded at 37 and 66 (U.C.), from N 1914 and 711. There are also here rolls of leather tied up, leather stained red, and knotted leather thongs.

112. SHELL, of ostrich egg, is commonly found from 33 (N 1590) onward; the beads of ostrich shell are common in all ages. Clay models of ostrich eggs are of 34 (D.v, 101). Semicircular hooks of cone-shell, with a knob at one end, xxx, 18–20, are dated by one of 38, in grave N 1649; there are seven here varying from  $\frac{1}{4}$  to  $\frac{3}{4}$  of a circle.

Models of garlic made in clay, xlvi, 23, 24, of which there are seven here, of 40–43 (N 260, p. 26), are also dated to 31–44, 36–43, before 40, and 42 (M.H. 39, 23, 85, 41).

Two lumps of beer lees, from the bottom of jars, are of 38 (N 1465).

Two organic lumps apparently are the contents of stomachs (N 1437).

113. MATERIALS.—Malachite is the commonest mineral, having been used for face paint. Eighteen examples are dated after 41, while there are only two before that, of 34 and 38. It scarcely belongs therefore to the first civilisation.

Galena is also common in later times of 70 and onward, especially at Tarkhan, s.d. 77–81.

Specular iron is of s.d. 34 (N 1900), of 42 (N 1401), of 48–50 (A a 122); also from Tarkhan, 1666 and 2063.

Haematite is of 43 (A a 66), micaceous haematite is of 51 (N 259). All of these minerals are frequently found.

Blende is found at 47 (N 1734).

Goldfoil was as early as 34 at Gerzeh, 206.

Silver in fused buttons is of 46–52 (N 1760).

Copper, similarly, is undated in N 660.

Obsidian is of 34 (N 1260), of 43 (D x), a chipped flake pierced, xlv, 46, is of about 60 (N 743), and a

string of a dozen rough chipped disc beads from N 499, is undated.

Lazuli is found from 36 onward (D.B. 75), but was mostly used from 50-63.

Garnet is once found at 33 (D.U. 260), but after that often from 50 onwards.

Quartz was used throughout from 33 to 39, and then from 50 onwards.

Amethyst is found once at 55 (N 494), and then not till about 70 (D.R. 129).

Agate pebbles were common from 31 to 36, and then from 50 onward.

Carnelian was used throughout, from 32.

Serpentine is dated at 40 (D.B. 75), and at 52 to 58 (D.B. 378, 343).

Steatite was commonly used throughout, from 31.

Calcite was used throughout, from 32.

Turquoise is only found from 55 to 63 (N 494, 836).

Mica flakes were used about 52-62 (N 399).

Broadly, there is a gap in the production of beads from 40 to 50, in which time there was scarcely any work except in soft steatite and calcite. The second civilisation stopped the hard stone work of the first age, and did not revive it again until the luxurious age of 50-60. Other details about beads will be dealt with in the volume on *Beads*.

Clay beads are often found in great quantities, as imitations of stone, from 38 to 72.

Bricks were used as early as grave N.T. 15, some time between 50 and 70. The chamber was 84 × 60 inches, with an outer chamber, 43 × 82, the walls 22 thick. It had been used for five bodies. Another grave, lined with brickwork, was of 74 (N 17). After that, brick lining became common, as at Mahasna and Tarkhan.

Red coral, tubular, was collected in the first age, 36, 38, and broken up to separate the tubes as beads for threading (N 1503, 271).

Resin is often found in the second age, a dozen recorded instances being all between 38 and 62.

Corn had naturally decomposed, but imitation grain made of little rolls of clay was in grave N 1579, between 63 and 71, U.C.

Nebbek fruit is of the first age, of 31 (N 1443) and 37 (N 1546), both U.C.

### CHAPTER XIII

#### THE EPOCHS OF THE PREHISTORIC AGES

114. THE epochs of changes in the civilisation can be found in the history of the products which we

have traced out by Sequence Dates. Such epochs in historic times are never very sudden. A change of population and of styles is usually spread over at least a century or two. The Norman influence in England began a quarter of a century before the Conquest, but the fusion did not take effect till a century after. The Arabs were coming into Egypt as mercenaries three or four centuries before the Arab conquest. The Greeks were settling in Egypt as long before the Alexandrian conquest. So we should not expect to find sudden changes in the prehistoric, but gradual movements covering a few stages of sequence.

The most distinctive feature of alteration is the presence of material changes and new inventions. The mere continuance of a form or a style means little; the number of examples of a form, if we could trace them at any one time, would only be a record of blind habit and copying. The really distinctive matter is the starting of new forms. Now, though the types of pottery are in some cases slight variants, in other cases entirely new departures, yet all together they give some measure of the vitality of the classes which are distinctive of different periods, and so indicate the strength of each civilisation. In the curves, pl. L, the number of types that begin in each stage is shown by the height of a curve, the position from left to right goes with the time, from 30 to 80 Sequence Date.

115. Broadly speaking, the black-topped ware, the red polished, and the fancy ware belong to 30-40, the Decorated to 40-52, when the late began to supplant it. The Decorated ends with 63, whence the late steadily takes the place of all styles up to the dynastic age. Let us now look more closely at the curves.

The great burst of novelty at 31, when 34 new types appear, may be due to three causes: (1) an immigration of a ready-made civilisation; (2) a stimulus to invention from expanding circumstances; (3) a longer time being included in this earliest stage, when the population and their graves were fewer than afterwards. Probably all these causes acted, and we may glean more on this, further on. The immigration is the more likely cause, as the sudden drop at 32 would not agree with the other causes. There was a continued activity till a sudden fall in 39, after which the black-top was merely copied with a few variations. A sharp revival at 79, or at the beginning of the 1st dynasty, perhaps marks the bringing in of Nubian captives by the

dynastic expansion of Egypt southward, as this style lasted for many ages in Nubia.

The Red Polished ware is really all one with the black-topped, so far as material goes. The lower layer in the burning became blackened by the de-oxidising effect of the ashes, the upper layer was entirely red by being surrounded with air. In the same way black Greek vases can be changed to red or black alternately by letting in or stopping off the air from a furnace. There are, however, some distinctive forms belonging to the black, and others to the red ware, mainly due to the larger and more stable forms being packed in the lower layers of the kiln. We see then that the Red Polished begins a little after the black-topped, about one stage later, as the kilns were developed, and allowed of an upper layer. When the black top became less fashionable at 39, the Red Polished did not fall as suddenly, it declined gradually to 51. Both kinds had a flicker of activity of design at 57 and again at 63, and both appear in the early dynastic movement.

The fancy types begin later, one oval at 31, but the double, square, and animal types not till 33-34, when the white-lined patterns were declining. The entirely black ware, in imitation of stone, also begins at 34. These were all much less thought of after 40, and were neglected after 53. So far we have dealt with the first civilisation.

116. The Decorated ware belongs essentially to the second civilisation. A few examples are found from 31 onward, showing that the simpler styles of rush-work pattern were being made somewhere near Egypt and imported, and a gradual infiltration of the second people was taking place. Then suddenly at 40 the new styles came in with a rush, followed by a sharp fall, like that on the introduction of the black-topped ware, perhaps similarly due to importing ready-made styles. Then a steady growth of new styles continues to the culmination in the abundance of ship types at 46. At 53 there seems to have been a general decay of invention; every style, except the Late, sank into mere routine. There was some revival about 60 and 63, but after that the old styles were extinct, and only coarse daubing was left.

The Rough Pottery was merely the cheap substitute for better wares; but even that showed little vitality after 45, and was stagnant after 63.

The Late Pottery began to show itself with the second civilisation at 39; but its rise was at the fall of other styles in 53, when it became most active

with fresh forms. Everything—even the Late Pottery—shared in the fall at 63, which looks as if this were due to a barbarous intervention. After that, the Late styles increased, until a sudden burst of novelty at 73, and a total drop at 74-76. This is the third instance of such a rapid change. The Black-topped at 31, 32, and the Decorated at 40, 41, show the same strange variation. Of the three causes suggested for the change at 31, only the first is applicable to these other cases—that is, the immigration of a people with many fresh forms of pottery suddenly increasing the types, and then the dislocation of the conquest checking novelties for a generation or two afterwards. If this prove true we can definitely fix the bulk of the first civilisation entering at 31, of the second civilisation at 40, and the dynastic people coming in at 73. This gives an absolute time-value for 74-78, 5 stages, equivalent to the 300 years of kings before the 1st dynasty, or 60 years to each stage of sequence. This is, however, no authority for the time value of earlier periods, though presumably the population and graves had increased, and the average time of a stage would be longer rather than shorter in the earlier times.

117. Having reviewed the growth of types in pottery, the most continuous and coherent view of these ages, we can now see how far other changes may help us. The following are the more distinct and dateable points, placing the dates of beginnings before the subject, and the dates of endings after the subject:

Begin.	End.
Forked U Lances, 6 in 7 before . . . . .	38
38 Forked V Lances.	
38 Squat stone vases.	
38 Conical foot vases.	
38 Oval stone vases.	
38 Model semicircular tusks.	
38 Spirals on tags.	
38 First copper chisel.	
Combs with birds . . . . .	39
39 Comb and hair-pin combined.	
Round butt knife . . . . .	39
39 Squat pottery.	
39 Marbles.	
39 Rectangular slates (very rare).	
Hard stone beads . . . . .	40
Ivory tags . . . . .	40
Rhombic slates, 5 in 6 before . . . . .	40
40 Flint dagger.	

Begin.	End.	Begin.	End.
40		63	
Aloe and spiral designs.		Square-ended flints.	
40		Scimeter flint knife . . . . .	65
Combs, short.		66	
Hippopotamus, well-formed . . . . .	41	Bull's legs for couch.	
Combs, flat top . . . . .	41	69	
Human block figure . . . . .	42	Comma pattern vases.	
Maces, disc . . . . .	42	70	
42		Rectangular slates usual.	
Maces, pear.		76	
Combs with animals . . . . .	42	Square slates.	
42		78	
Barrel-shaped stone vases.		Round-topped adze.	
42		These changes are not at all of equal importance,	
Shouldered stone vases.		but they all show mental differences, probably due	
42		to social and political change. The totals of these	
Spoon (stone).		at each date are marked as curves, above the curve	
Clay figures, peg form . . . . .	43	of black-topped vases, pl. L. There it is seen that	
Tusk development . . . . .	43	the greatest number of new things ("Begin") is	
43		at 38, the influence a little preceding the main	
Small saucers of stone.		physical invasion at 40. The ending of old things	
Tusks, large . . . . .	44	is mostly at 40 to 42. Then there are hardly any	
Paste figures . . . . .	45	new things after 50; and the great fall of the old	
Double-edged flint knife . . . . .	45	styles is at 60-63, as we see in the curve of Decorated	
45		vases ceasing to produce any new types at 64. The	
Ship vases.		new type at 63 is a striking one, the square-ended	
45		flint flake, which continued till the end of the third	
Scimeter flint knife.		dynasty ( <i>Medum</i> , xxix, 26); that is the knell of	
46		the old order of the prehistoric. Another new type	
Flat base, handled, stone vases.		of the same date is the basket pot, with a lid which	
46		fits into a groove around the mouth, D 75 a, and	
Ivory spoons.		other such lids, 75 b, d. This style is familiar in	
46		the proto-dynastic age, made of glazed ware or black	
Bull's-head amulet.		incised ( <i>T. II. v. 12, 13</i> ). As such a form of basket	
46		is known in early Nubia, and was usual in Egypt	
Hill pattern on vases.		in later times, it seems that it may indicate a	
Combs, birds, latest . . . . .	47	southern origin.	
Combs, flat top, latest . . . . .	47		
Notched tags . . . . .	47		
48			
Glaze on stone.			
48			
Fly amulet.			
49			
Flying knife.			
Tusks, last decay . . . . .	50		
50			
? Triangular copper dagger.			
50			
Hard stone beads again.			
50			
Lazuli, garnet, quartz used.			
50			
Forehead pendants.			
50			
Ninepins.			
Stone tags . . . . .	52		
Spiral tags . . . . .	55		
56			
Rods for games.			
56			
Adzes, copper.			
57			
Serial flaking flint.			
Oval stone vases . . . . .	60		
Ninepins . . . . .	60		
Forehead pendants . . . . .	61		
Bone harpoon . . . . .	61		
Forked lances . . . . .	61		
Serial flaking flint . . . . .	63		
Boat slate with bird ends . . . . .	63		
Ship vases . . . . .	63		
Squat vases . . . . .	63		
Spiral vases . . . . .	63		

## CHAPTER XIV

## THE PREHISTORIC CIVILISATIONS

118. SOME outline of the changes in general civilisation may now be attempted. On the deserts behind the Fayum, and across from Egypt to Palestine, is a large class of worked flints which are never found in the graves in Egypt, and which are clearly of Solutrean style. They are akin to those found in the lower levels of Susa. The spread of these flints over what are now barren deserts, shows that they belong to an age with some rainfall, that is to say before the final elevation of the land dried up the Saharan Sea, and before the unchecked evaporation of the Nile made it lose its velocity, and drop the mud of the Nile Valley. The age of the Nile deposits is from about 8,000 or 10,000 B.C.

and this is therefore the later limit of the Solutrean flints—they may be much older. Now in the earliest graves are figures of the steatopygous people, probably as slaves to the slender people. This suggests that they may be the relics of the Solutrean flint workers. There is a less likely source of the steatopygous people, as slaves brought by the incoming Algerian people from Malta, where they are known to have lived; but it is much more likely that they are Egyptians. The authority for each of the following data will be found in its place in the preceding pages, and reference is therefore needless.

119. The people who brought in the continuous civilisation of Egypt at s.d. 30, first appear buried in shallow circular holes, with a single black-topped cup, a goat-skin over the body, and, rarely, a rhombic slate palette. Yet even then they fastened the skin with a copper pin. Immediately after these first immigrants there poured in a civilised people, with pottery so exactly like that still kept up in the highlands of Algiers, that we cannot but see here a Libyan immigration. They brought in a large variety of pottery, well-designed figure carving in ivory, and several other arts of life. They had much drawing in white lines on the pottery, but this was forgotten in a few generations, and its decay in Egypt is due to its having been brought from a different centre, and not being really native.

The general view that we get of the first civilisation is that of a capable and skilful people. The women wore a linen skirt or a waist fringe, while the men only used the sheath. Some shaved the head, doubtless with flint flakes, and wore wigs, so that there was much care of the person and cleanliness. Leather sandals were in use. For decoration, the long wavy hair was fastened up with long-toothed ivory combs, usually having the figure of an animal in open work on the top. Hair-pins, with figures of birds on the head, were usual. Armlets and rings of shell and ivory were worn. They carried bags of painted leather, and these—or water skins—were decorated with ivory tusks or tags stopping the leg holes.

The art of figure carving was well advanced. The ivory figures give a good idea of the type of the people, without exaggeration. Figures were also made in clay and paste. The slave women of the previous steatopygous race were also represented, with their characteristic tattooing patterns.

Pottery was the favourite product of these people. The care lavished on the perfection of shape and

outline, the polish of the surface, the thinness of the body, the great variety of form, all show a love of artistic treatment. The whole of it was built up by hand, without any wheel or circular motion, yet it is rarely that a lack of symmetry, or any irregularity, is obvious. Square boxes of pottery were sometimes painted.

Glazing was an art brought in with the invasion; glazed figures and beads were a usual decoration. This implies the skilful art of making the green or blue frit, which needs prolonged and precise heating, and the application of it to coat stone and siliceous paste with a continuous smooth glaze.

The artistic sense also appears in the vases of ivory and of stone, which were all entirely of hand-work, beautifully finished. With all this fine production of small objects there must have been an equivalent care in the houses and surroundings of the people. Some Central African peoples at present have excellent houses and fittings, and as the level of the arts of the Egyptians was higher than the modern Africans', we cannot suppose that their dwellings were not fully as good. All of these are buried now far below the mud of the Nile plain, and can only be matters of inference.

For weapons, the sharp-edged disc mace was the most usual, and the finest porphyries and other beautiful stones were sought for as materials, far better than those used in later ages. Harpoons were made of horn and of copper.

Flint was very skilfully worked, with surface scaling like that of the long knives of the great megalithic tombs of Denmark. Not only was the surface evenly wrought, but the edges were minutely serrated with deeply cut teeth, by some method which we cannot imagine, the depth of the notch being as wide as the tooth. Large double-edged knives and forked lances were finished perfectly in this style.

Slate palettes in the forms of various animals were used to grind the malachite, which was generally painted below the eyes, to serve as a germicide and also as a barrier to the glare of the desert. Magic figures of slate of a small size were used, along with tusks of the hippopotamus carved with human heads.

Copper was not common, but was employed for harpoons, for pins to fasten the skins on the person, and for small chisels used in carving.

Weights were established, on the standard later known as the gold standard, which was afterwards the most usual in the early dynasties.

The funereal system was developed as a formal ritual, as indicated by the positions of the offerings in the graves being usually in the same order. There was a firm belief in a future life, shown by the fine and valuable objects placed in the grave; and there was no dread of the return of the dead, as they are furnished with weapons. It was therefore affection and reverence for the dead which prompted the offerings.

Ships were already in use in the earlier part of the first civilisation. They were provided with square cabins, and rowed by a bank of oars. These imply a system of trading, and not merely small fisheries. As emery probably was brought over in the first period, this points to traffic with the Smyrna coast.

The mental attitude of these people is seen not only in their beautiful and delicate handwork, but also in their observation and love of nature, shown by the variety of plants copied in the designs on the early pottery. They were already using a system of signs as marks on property, showing that for personal objects, at least, they had passed from a communal stage. The variety of wealth seen in the very different size and richness of the graves also shows much personal gradation. The unity of the civilisation all over Egypt, and even into Nubia, indicates a political advance as a settled order of civilised connection over the country, by close and peaceful alliance of tribes, if not by united rule.

The whole outlook of that age must have been prosperous, well provided, with much artistic feeling, leisure for its expression, and perhaps as happy and sympathetic an attitude of mind as that in any later age of the country.

The physical type of the people was not uniform. While some had a pointed beard, sometimes long, as on pl. i, others were beardless, as ii 23. In both cases the head is of a high type, well developed and upright, without any negroid trace.

120. Throughout this age there had been living, within touch of the Nile Valley, another people in different surroundings. Instead of pottery imitated from basket-work, used by the Egyptians, they made imitations of stone vases. There is a strong suggestion that these are the same people who are represented bringing in a tribute of similar shaped stone vases at the early dynastic period (*The Rise of the Dynasties and Royal Tombs, II*, iv, 6, 15); they have a retreating forehead and a long pointed nose, with a small projecting beard, and the hair worn in a

pigtail. These then are the people who were trading—perhaps settling—in Egypt throughout the centuries of the first civilisation, and who entered the valley in a large wave at s.D. 38, bringing in many fresh classes of production. The maximum of new things was at 38, and these drove out of use the older things increasingly till 41-43. The home of this second civilisation must have been mountainous, by the supply of stone instead of clay for vases, and the length of the garments worn indicate that it was probably a high and cold region. The only such region in touch with Egypt is the eastern desert, bordering on the Red Sea, or possibly southern Sinai or the northern Hejaz.

These people differed from the earlier Egyptians in the care of the person, especially in the less care for the hair; the long comb disappeared, and only a short scratch comb was used, sometimes combined with a hair-pin. One cannot imagine the earlier people who carved their comb heads so lovingly with animal figures, wearing a comb upside down on a pin as their ornament. The personal relations also differed; the earlier people are often buried two or three together, the later always have single burials. This shows a different feeling in their ceasing to wish to be buried along with a previous burial, or with the sacrifice of wives at the funeral (D 35). Amulets came into use, the bull's head, fly, falcon, claw, and others. The forehead pendants came into use about the middle of the second civilisation, at first of stone and then of shell. These are linked with the modern shell pendant on the forehead in Africa, and the forehead ornament and face veil of the Bedawy.

Spoons were brought into use, of stone at first—probably from the rocky homeland—and then of ivory, which was common in Egypt. Horn cups also became usual. Bricks of dried clay were made for houses and tombs.

The special characteristic was the large class of Decorated pottery with red designs on a buff ground. From this we learn of the frequency of shipping, and the large size of galleys that were in use; this type belongs to the northern part of the valley, and, the wide squat vases without ships are of the southern region. All of the forms of stone vases, and of the imitations of them in pottery, are peculiar to this second period.

Although the slate palettes continue in use, yet a fresh class of hard stone palettes occasionally appears, probably introduced from the mountain



region. The working of flint was changed ; in place of the long double-edged knives, large single-edge flakes came into use ; these were later trimmed down to a flat plane, ground flat, and then evenly flaked all over in a ripple pattern. The flint dagger appears, the long curved scimitar knife, and forked lances with a deep V hollow. The disc mace entirely gave place to the pear mace ; the fine quartzose rocks ceased to be used and hard limestone was found to be the easier substitute.

Glaze was applied to quartz, for amulets and beads. Glass first appears as an opaque violet paste. Gold and silver come into use for beads, and ornaments on stone vases ; iron beads show the first knowledge of that metal. Copper became more usual, adzes, triangular daggers, and flaying-knives became common.

Various games were played: ninepins, board games, and marked slips used for casting throws. Weights were used, on the Daric standard of Babylonia. Religious signs begin, which continued through the history, such as the falcon on a crescent for the King, the crown of Lower Egypt, the signs of Ra, Neit, and Min. The cartouche appears, probably derived from the sacred cord of the high priest of Horus.

During this second civilisation, beginning at 38, there was a maximum of activity at s.d. 46, lasting on to 52, during which there was the greatest ability in work, shown by ripple-flaking of flint and fine stone vases. By 54 there is a cessation of originality in all the previous lines of work, and accompanying this is a sudden rise of the late pottery at 53. The new influences were beginning to filter into the country which were to lead to the overthrow of the second age. Yet the established forms continued to be made without much deterioration until a sudden collapse at 63, when the principal productions of Decorated pottery and ripple working all ceased, while very few new things were brought in. This seems to mark a great raid over the land, which swept off the capable artisans, and left it in a moribund condition. We must now look at the invaders.

121. The third period of the prehistoric opens far back, just as the second period was traceable all through the first age. In a grave well dated to 46, and which could not in any reason be put later than 50, there was an imitation signet cylinder, with mere rough marks on it in lieu of any real signs. The use of cylinders pretty certainly came in from Elam, and yet here is evidence of the unintelligent copying of a cylinder before 50. This does not stand alone.

The fine ripple-working of flint knives lasted from 57 to 63, and a knife of this work had an ivory handle with scenes of Elamite character, and in a style which is evidently far above what the Egyptian was doing at that time (*Ancient Egypt*, 1917, 26). The handle, moreover, has scenes of fighting by maritime invaders, with two different types of ships, apparently Egyptian and foreign. The foreign type is like that of the black ship in the Hierakonpolis painting, dated to 63. Here then seems evidence of Elamite influence beginning before 50, and rising to actual conflict with the Egyptians by about 60.

There is another influence to be considered also. The third period is marked by the basket-pot, copied from a basket with a ledge round the top to hold a conical lid ; see Decorated type 75 a, b, d, of 63 s.d., and black incised ware, *Dios.* xiv, 67, of 68 s.d., and *Tark. II*, v, 12, 13, of s.d. 77-81 and 77, the latter of green glazed ware. This form of fitting in a lid is well known in Nubian baskets of later time, and a pot of black incised ware of this form was found in Nubia (*A.S. Nub.* 1909-10, pl. 46). Another special type, coming in at 63, is the square-ended flint flake with parallel sides, which lasted on to the early dynasties. Now this is found still earlier in Nubia at s.d. 37 (*R.* 62 a). This type of pot and flake then points to a Nubian influence coming in at 63. It may be that the Nubians swept down and broke the second civilisation at 63, independently of the Elamites ; or the Elamites may have entered the Nile Valley from the Red Sea up in Nubia, and have brought down Nubian types with them, but this is less likely.

So far then we may say that the Elamites were worrying at Egypt from about 60 or earlier, and the Nubians probably broke the second civilisation at 63. A good deal of the Late pottery came in from 53 to 61, but suddenly new types ceased at 62, and only gradually did the Late styles flourish again. They are therefore not due to Nubian, but more likely to Elamite influences. Gradually they increased with more and more novelties, until a sudden burst of new forms at 74, which seems to mark the invasion by the Elamite race that began the dynastic series. The entire cessation of new types in 75-77 marks the age of conquest, and then the outburst at 78 shows under a completed government the revival of work, which continued to expand with new forms well into the first dynasty.

Beside the points just noticed there are also some other features of the third period. The decoration

of pottery with groups of comma-shaped dabs of colour was the style which superseded all the other patterns; and the very coarse figures of crocodiles, scorpions, and serpents appear instead of the ships, gazelles, flamingoes, and aloes. A good bowl of this style is as early as 52. The flat triangular dagger vanishes, and the Cypriote type with a deep mid-rib appears instead at 63. A fresh standard of weight comes in at 77, the third of the qedet, which belongs to the national standard of the historical times. Flint armlets also seem to belong to the end of this third period, entering the dynasty 0.

We have thus, by a close attention to the relative ages of the pottery and all the other products, been able to trace the rise of two great civilisations, and the affinities of their sources; also to observe the fall of the second civilisation, the anarchy which followed, and the gradual occupation by the dynastic race which culminated in their conquest of the country. What has been thus done for Egypt may be also done for other lands if sufficient facts are observed and used. The rise of the dynastic influence and its triumph will be dealt with in a following volume on *The Rise of the Dynasties*.

#### NOTE

It seems desirable to anticipate here a statement of some conclusions which properly belong to the catalogue of *Flintwork*, as that is linked with the present subject of the prehistoric cemeteries.

There are known from Egypt groups of flint work of styles corresponding to all the principal periods recognised in Europe (see *Ancient Egypt*, 1915, part 2). The Chellean and Acheulian periods are as yet only known from scattered examples. The Mousterian style appears in a settlement on the present edge of the desert at Lahun, which proves that the Nile has not been above its present level since that time. The Aurignacian style is found in a settlement, mixed with ashes, on the desert at Naqadeh. The Solutrean is represented by great numbers of worked flints of many types, scattered over the deserts on both sides of Egypt and across to Palestine; the same style also occurring in flints from the great mound of Susa, with painted pottery. The Magdalenian flakes and bone harpoons are

similar to those of the Prehistoric cemeteries, which never contain flints of the earlier styles. In the historic period other designs of flint work prevail, down to the xviiiith dynasty. The order of the Solutrean, Magdalenian and polished flint styles being the same in Europe and in Egypt, gives good reason for such work in Egypt not being later than the same styles in Europe; hence the Prehistoric civilisations described in this volume are to be taken as being parallel with the Magdalenian age of Europe.

The general result is that while civilisations were successively developing in the more favourable climates of Elam, Mesopotamia, or Egypt, the influence of styles of work extended to the barbaric fringes of colder Europe, known to us mainly from remains of cave dwellers. Such a view necessitates accepting the shortest reasonable dating in geology, to meet the most extended view of the beginnings of the Oriental civilisations.

## I N D E X

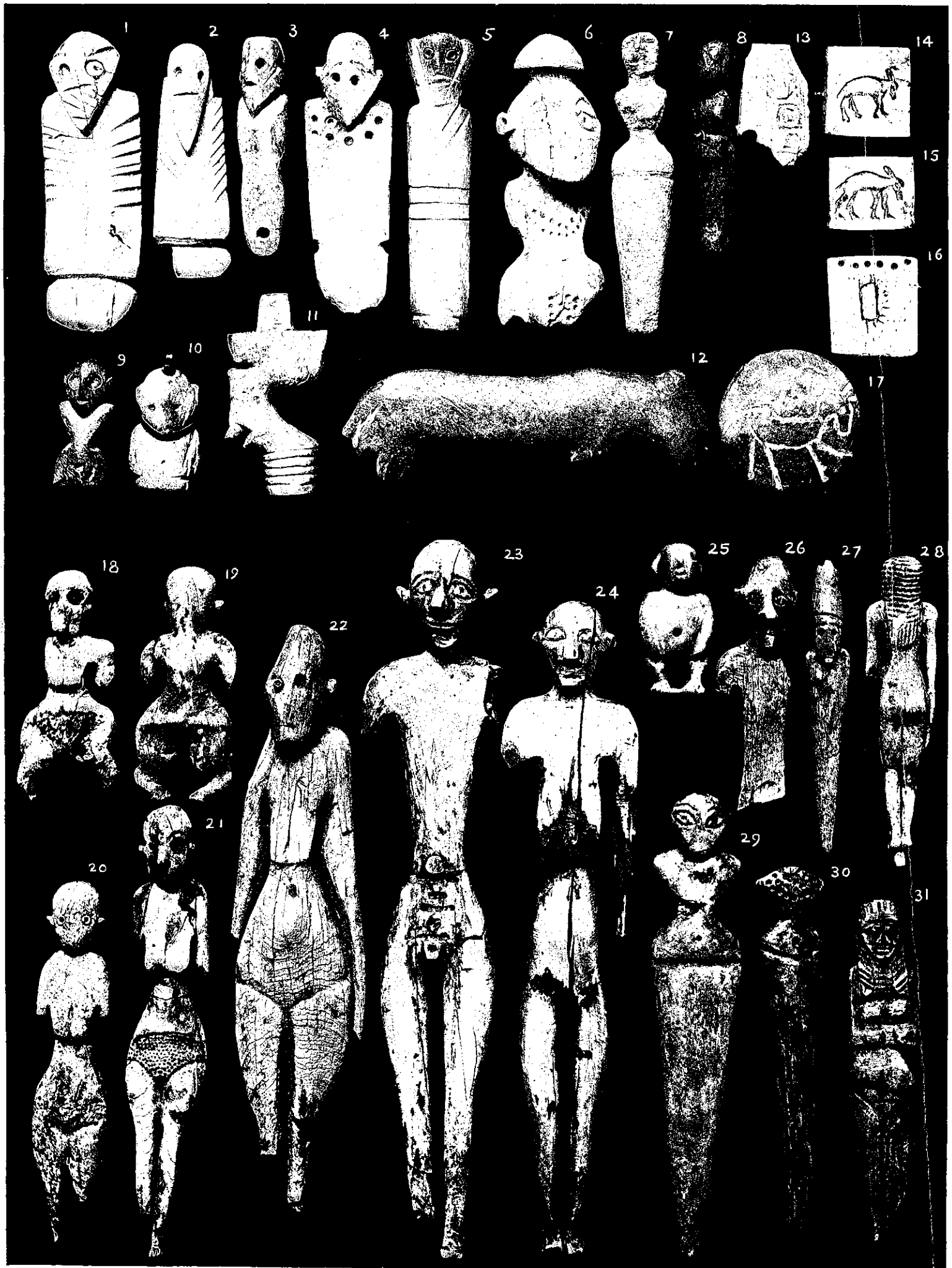
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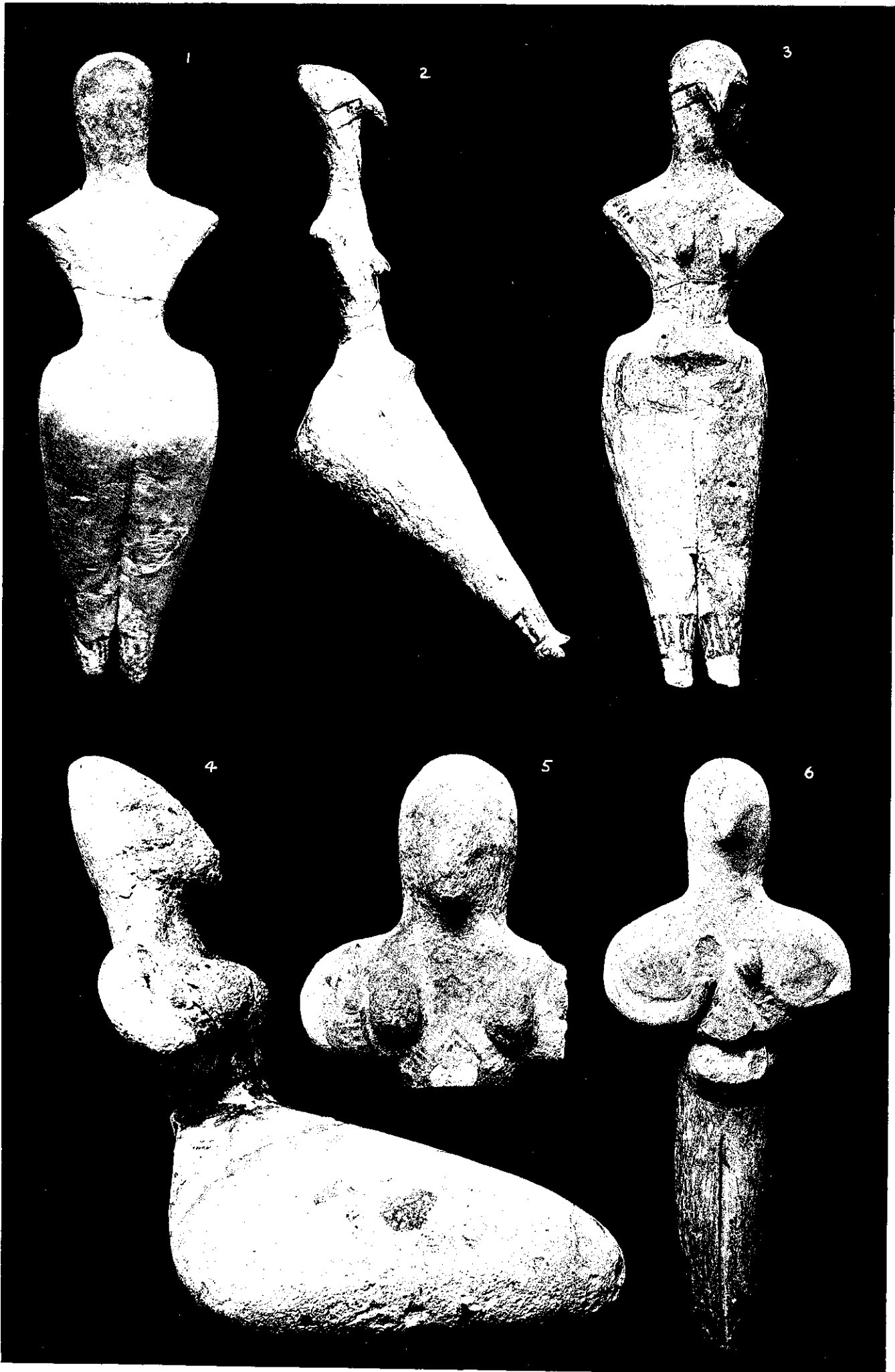


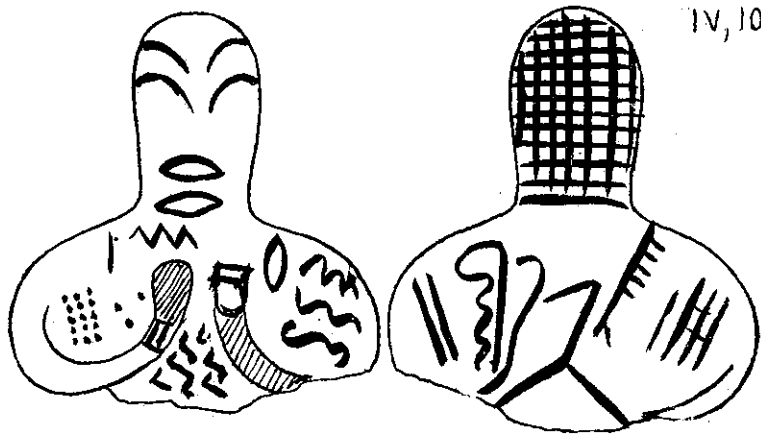












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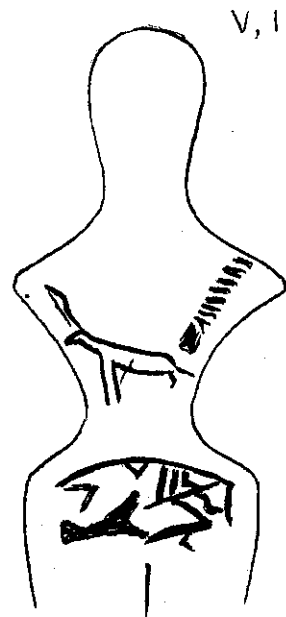
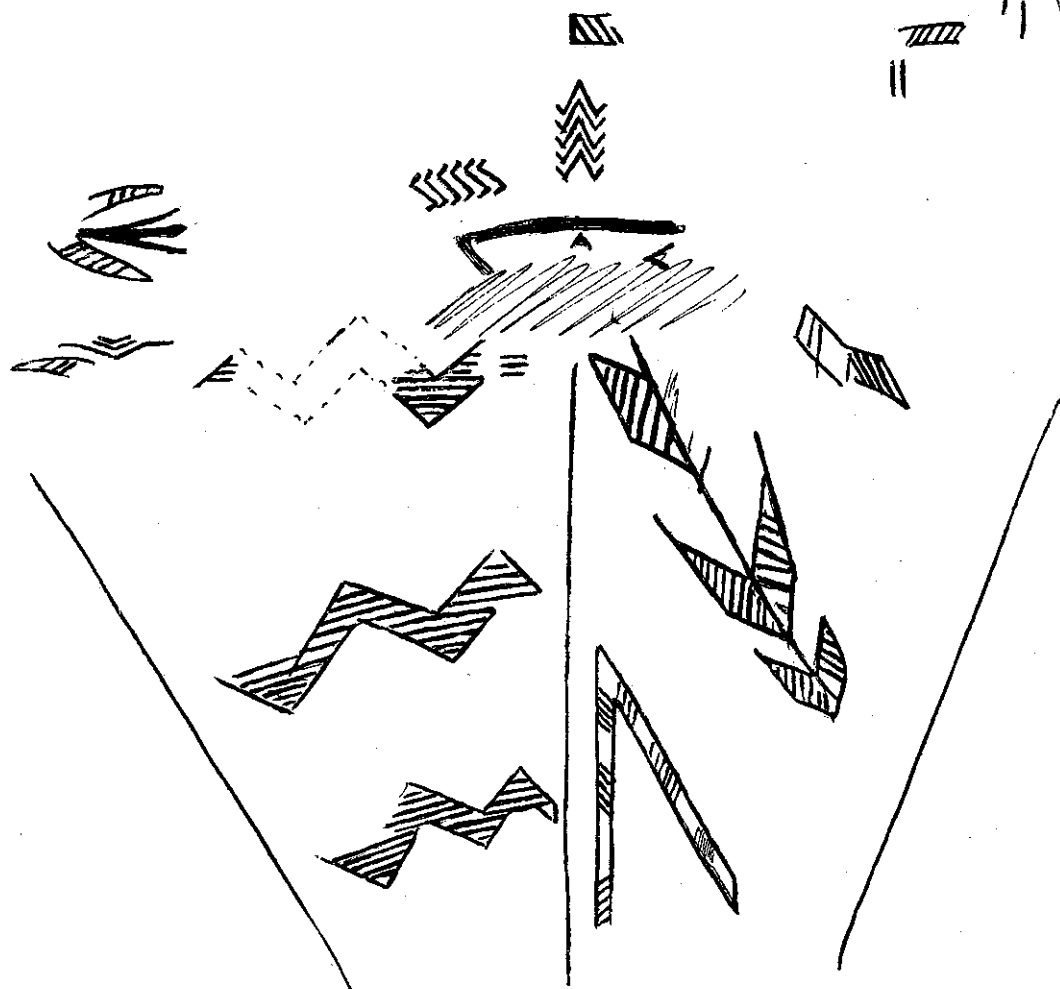
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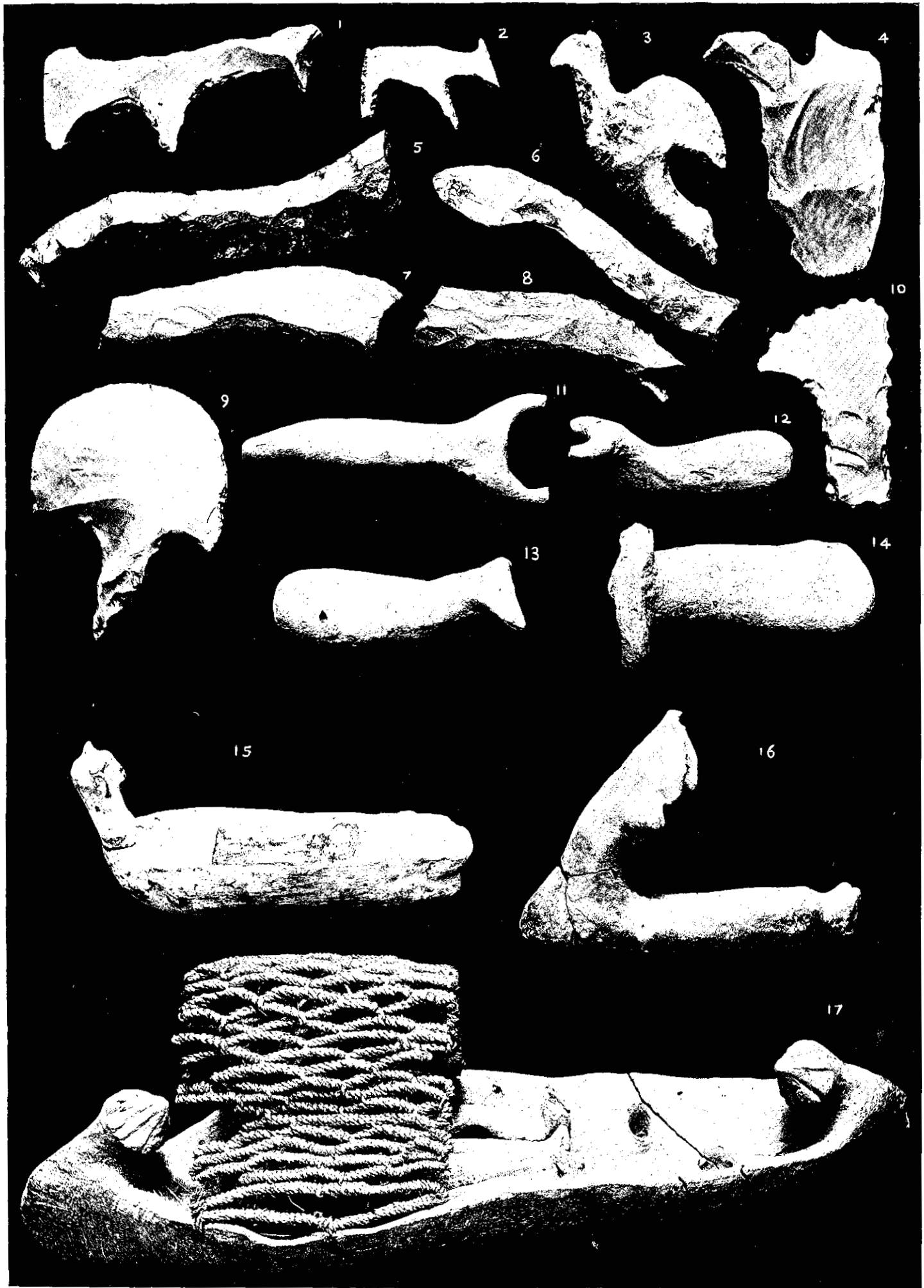
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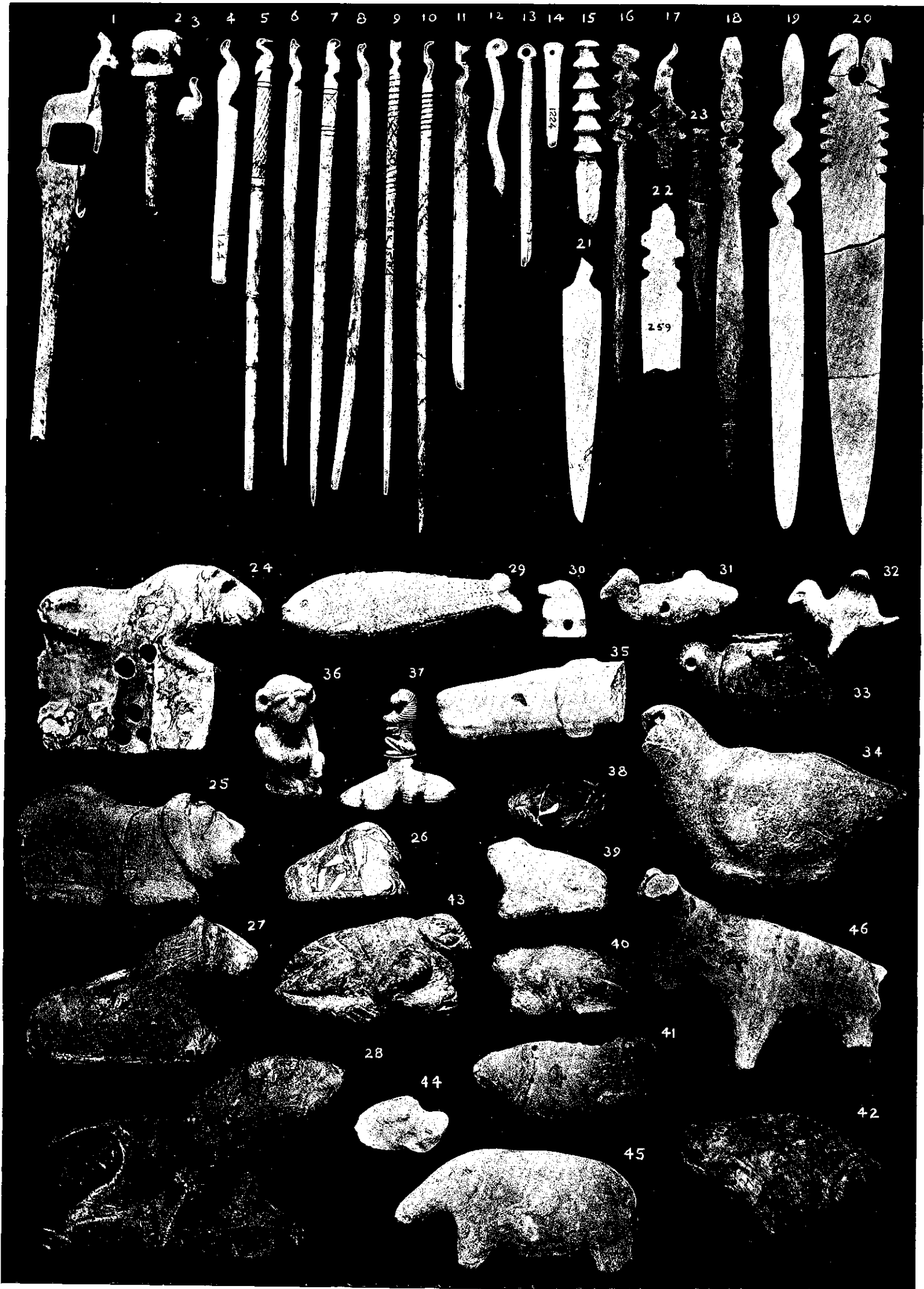


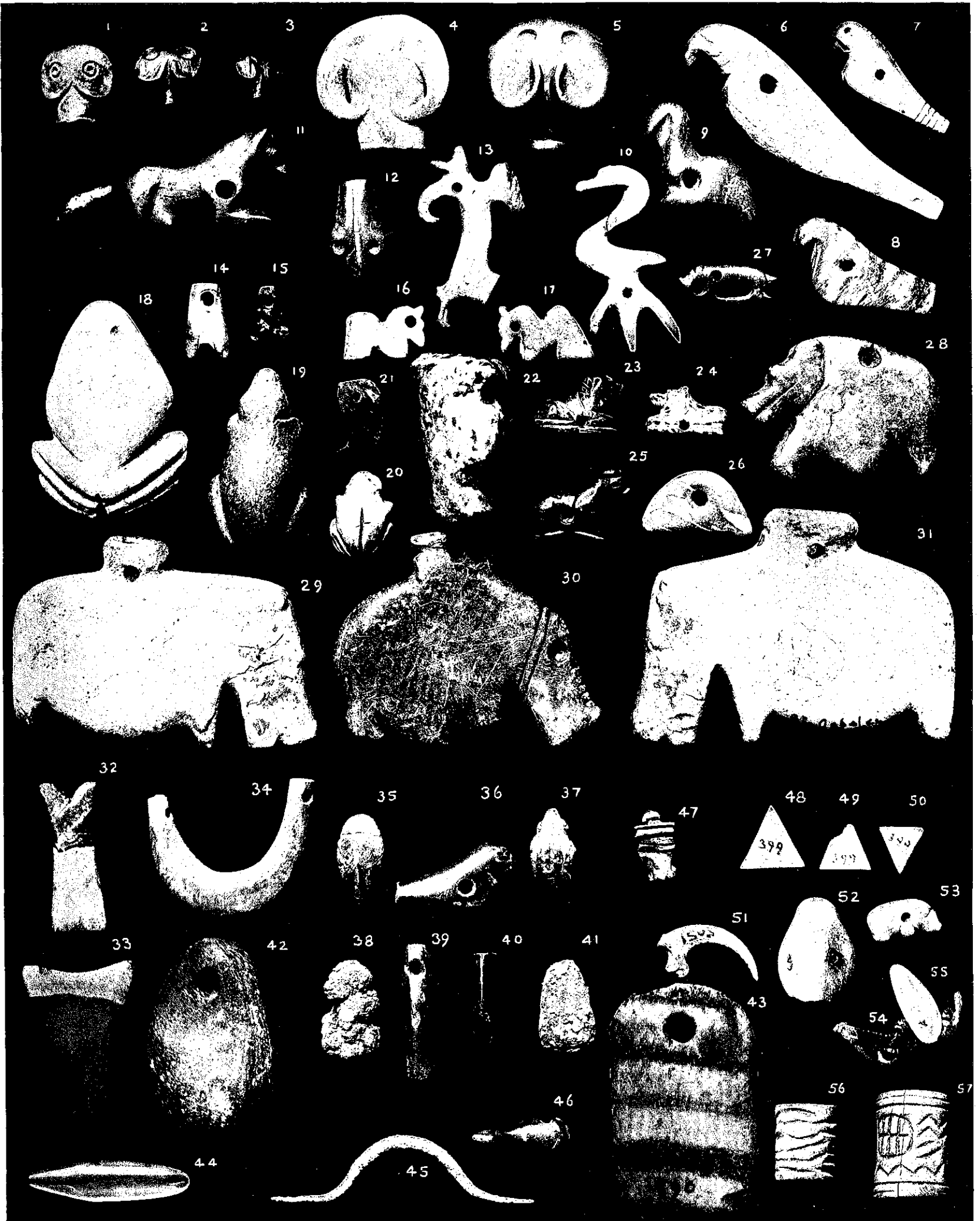
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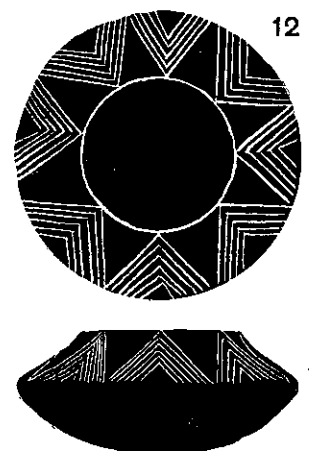
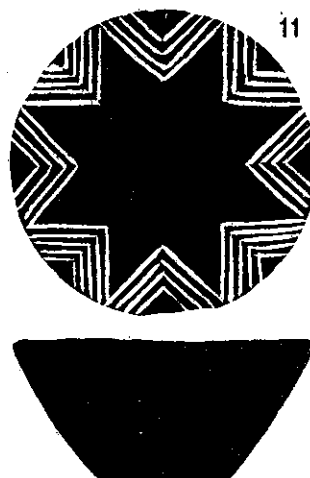
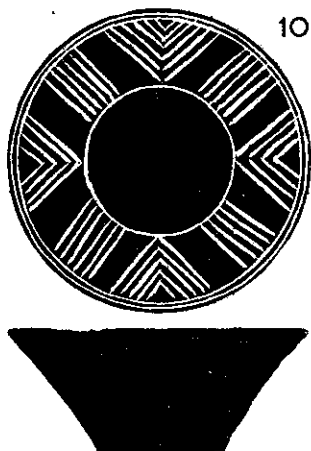
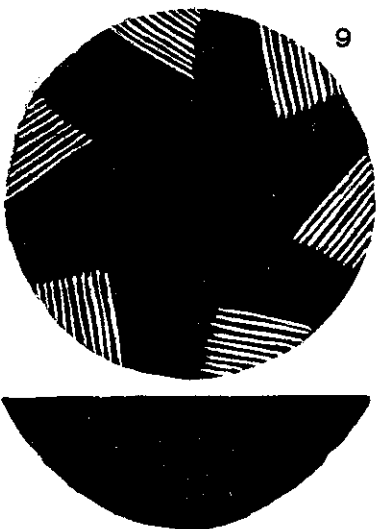
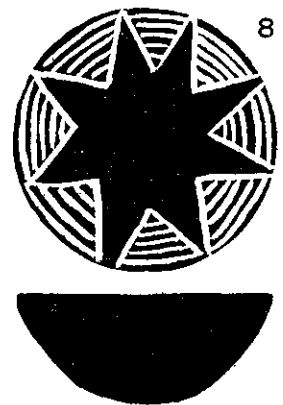
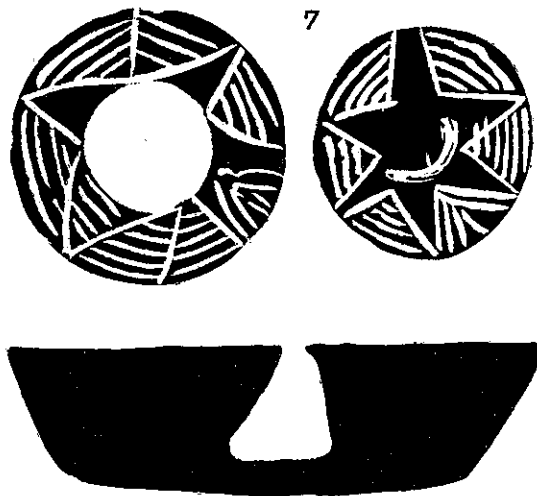
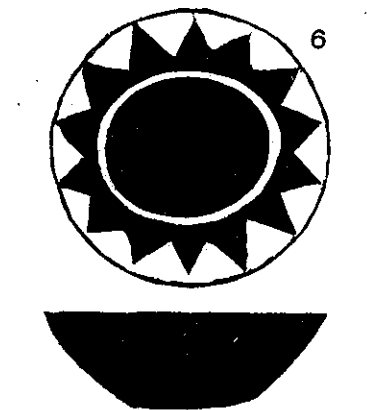
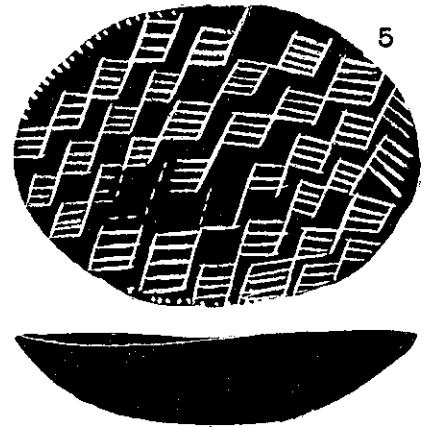
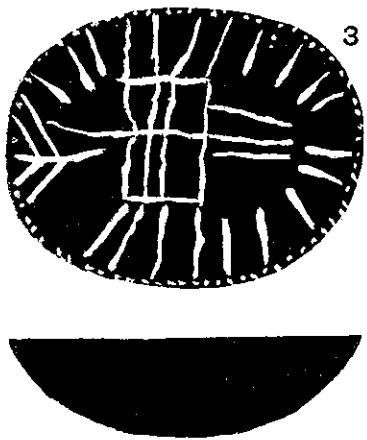
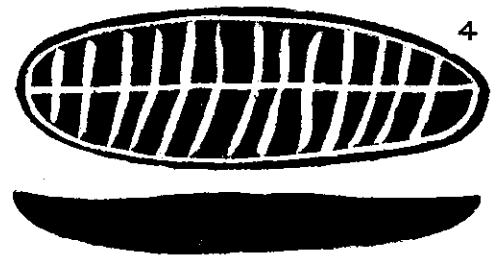
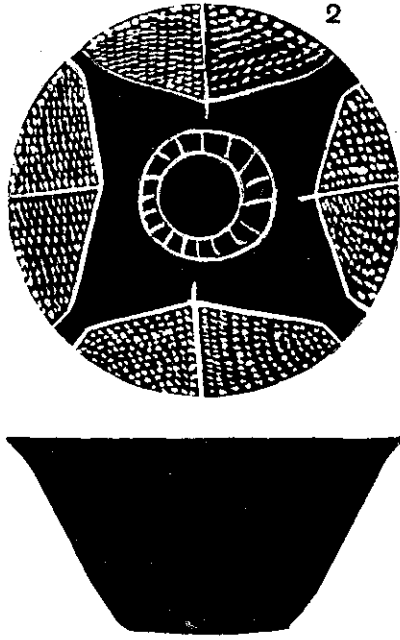
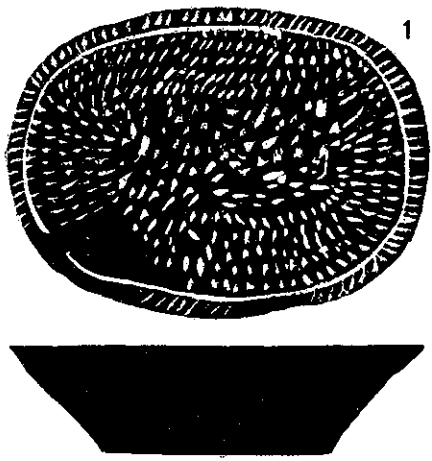
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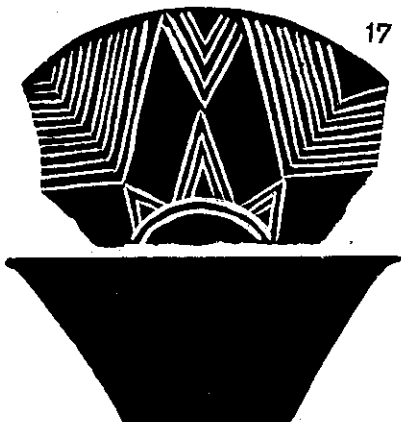
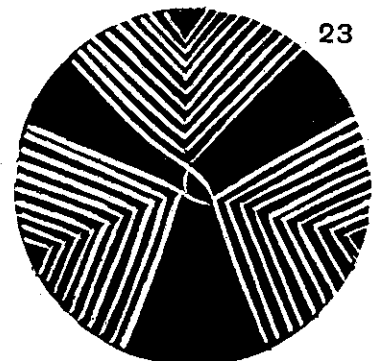
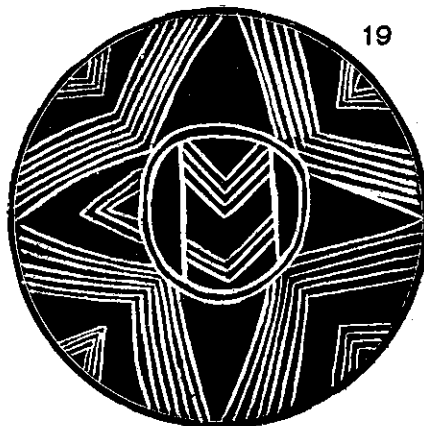
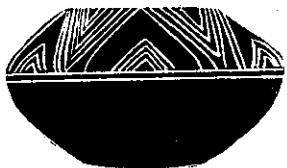
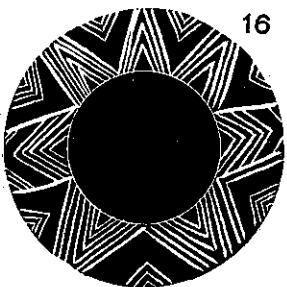
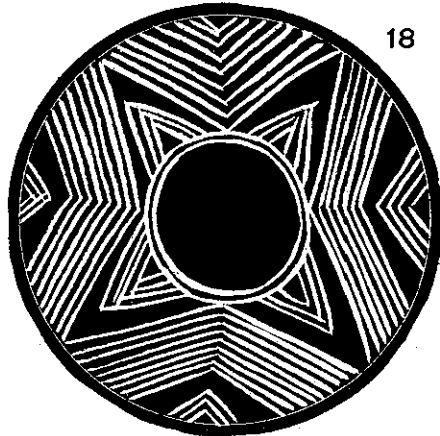
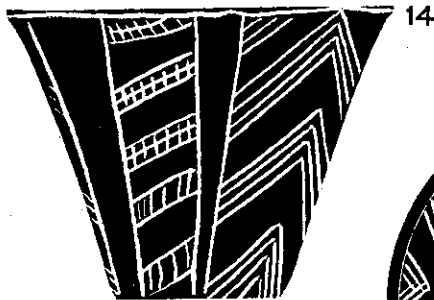
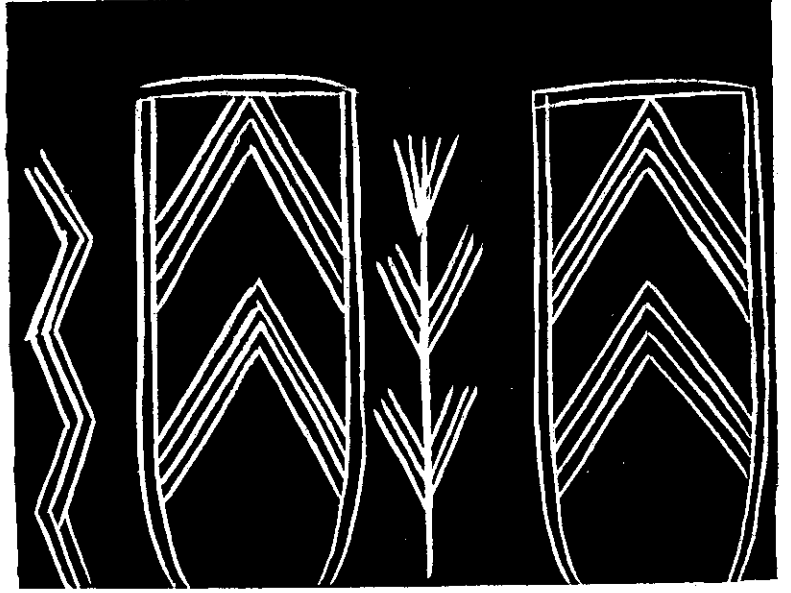
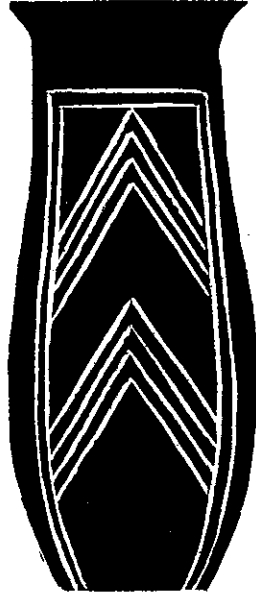
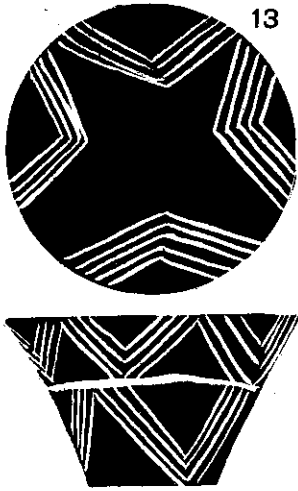


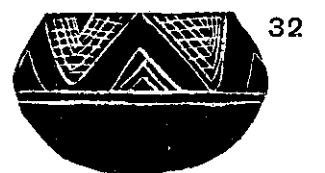
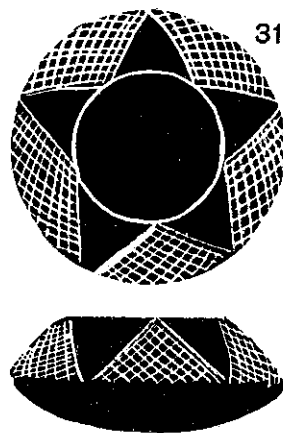
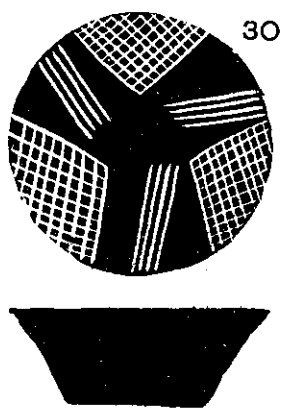
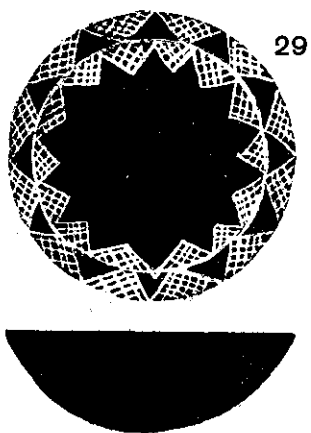
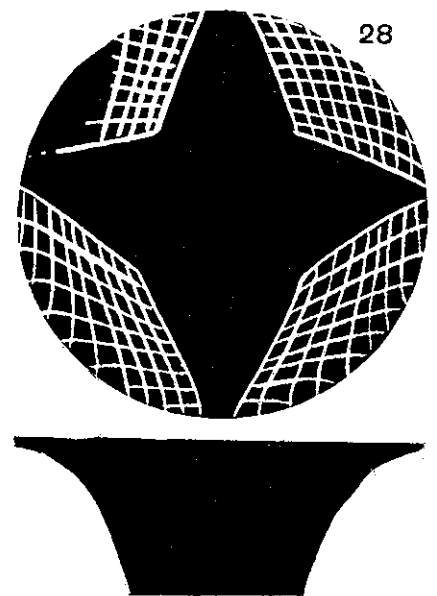
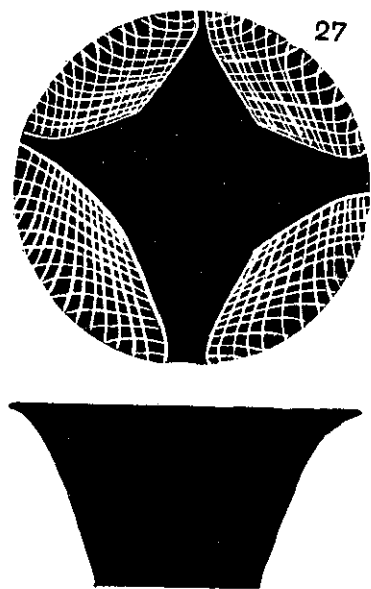
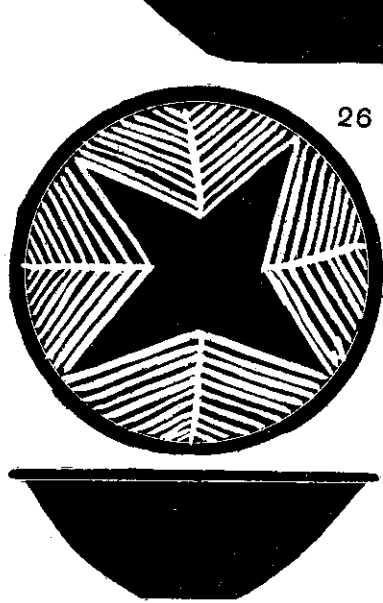
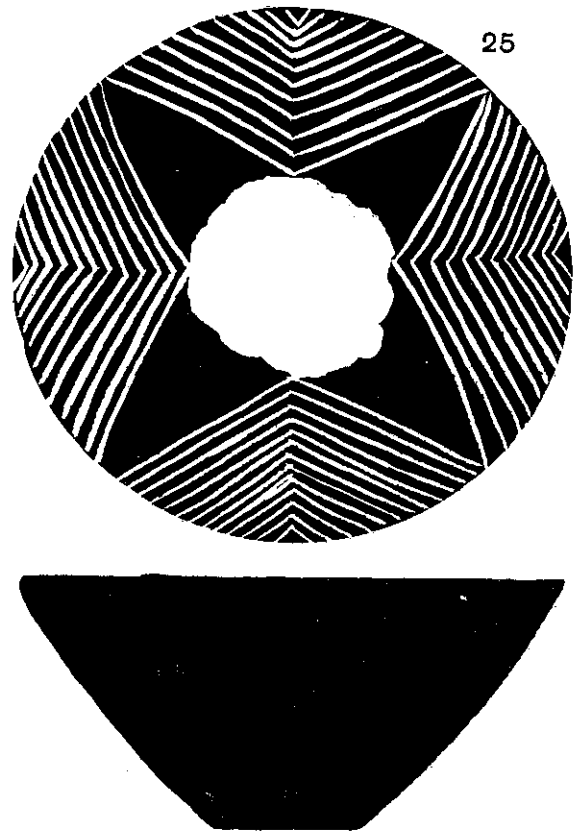
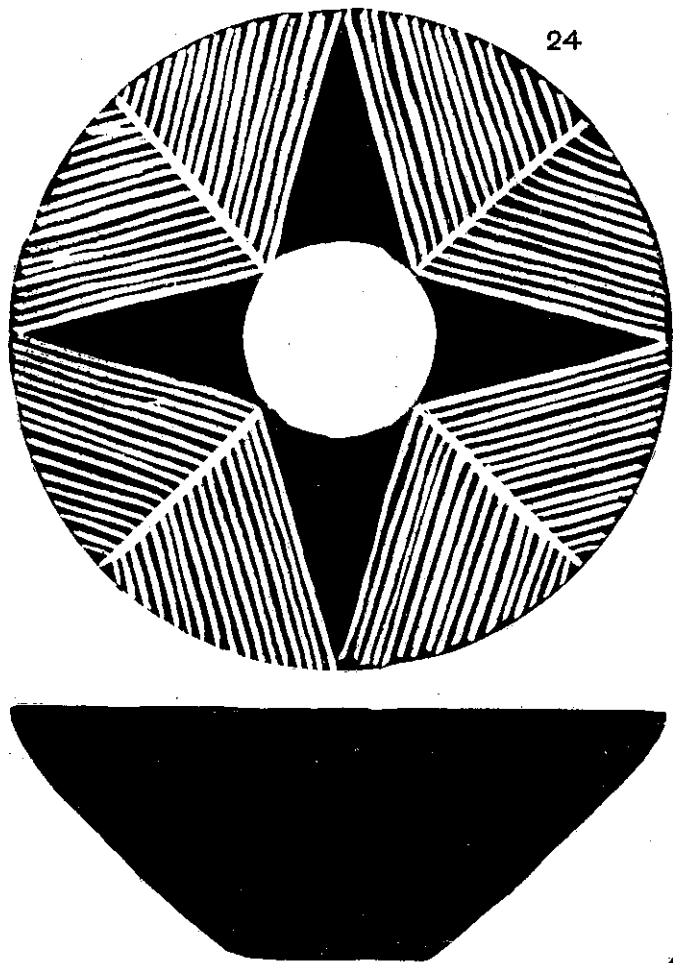


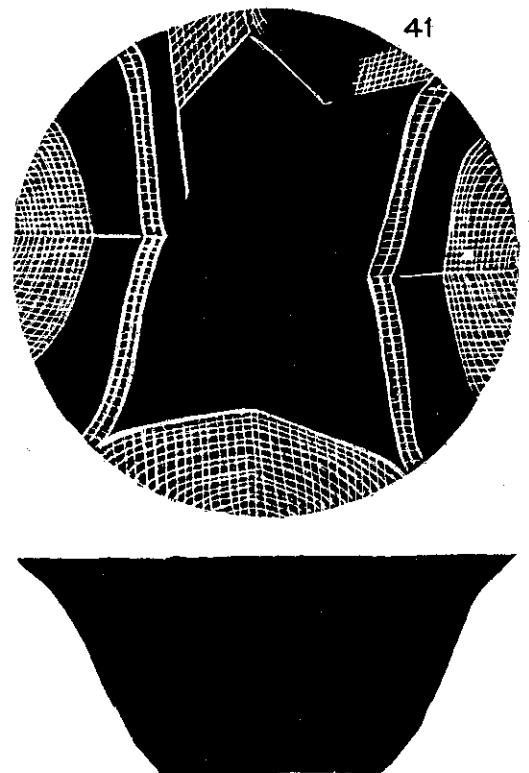
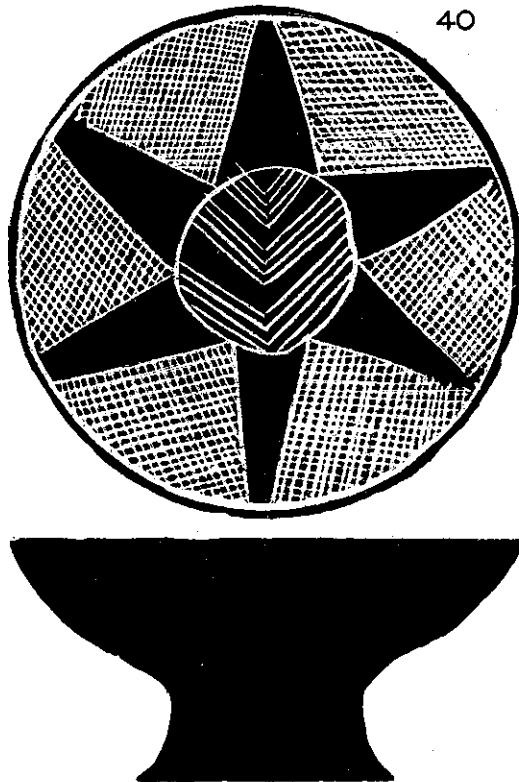
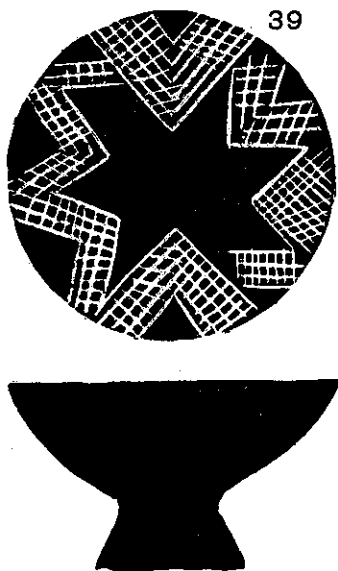
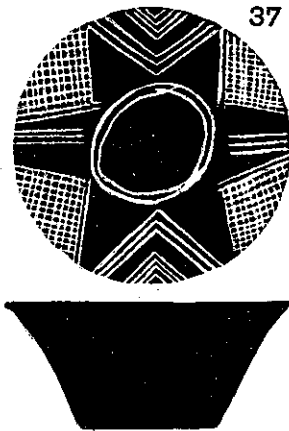
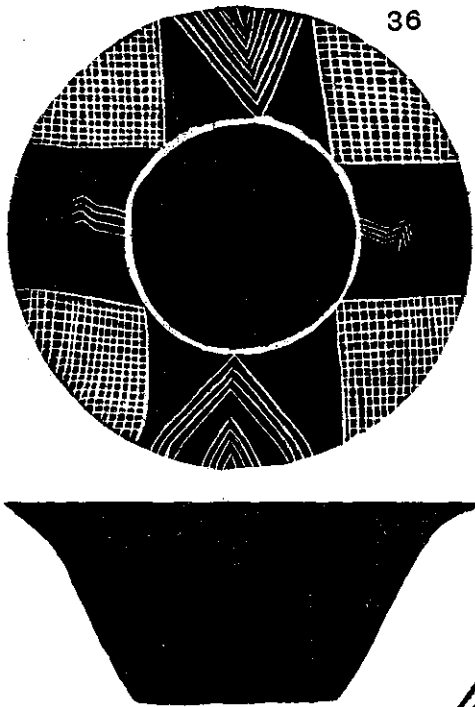
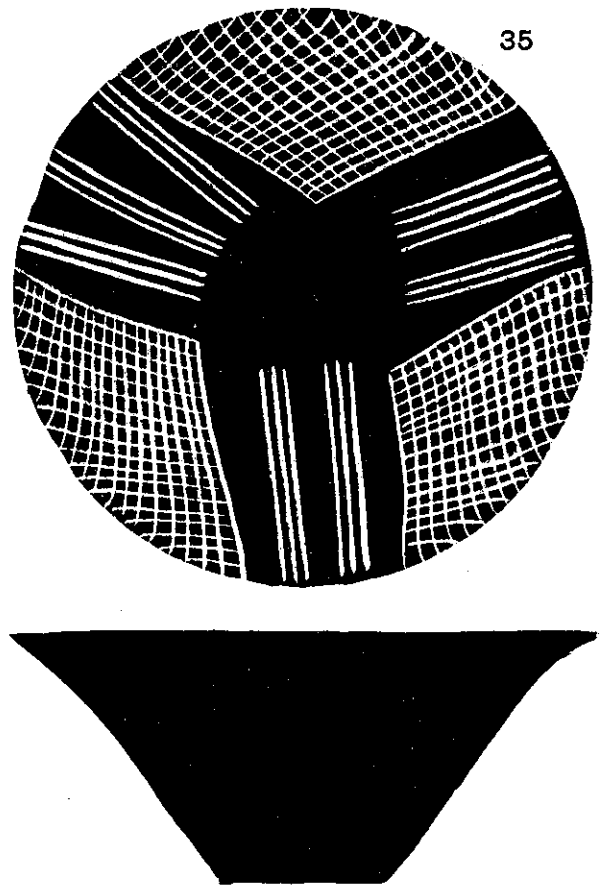
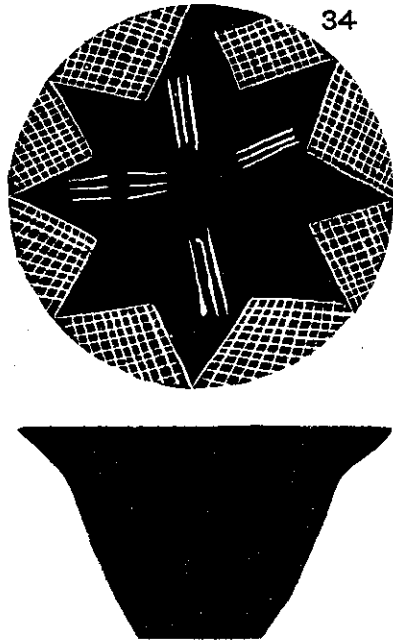
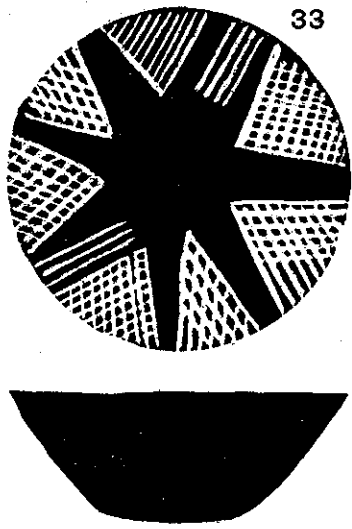


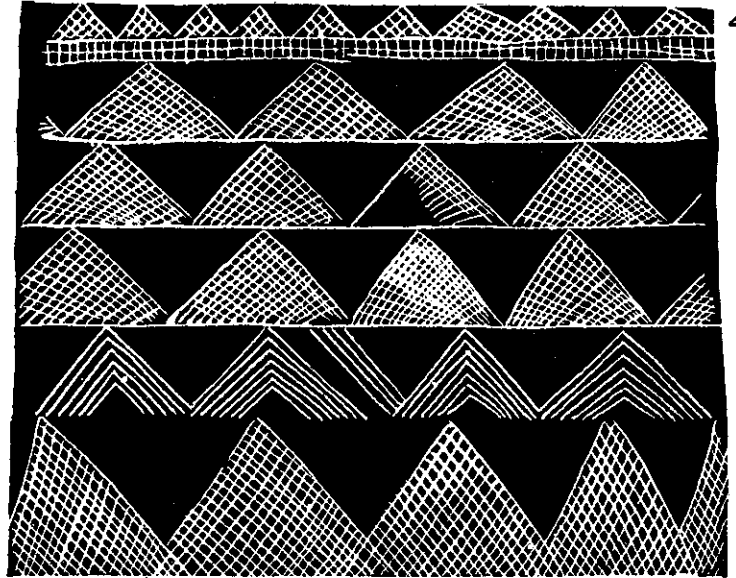
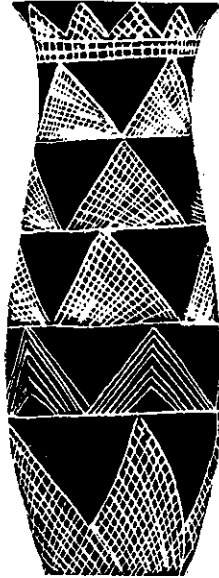
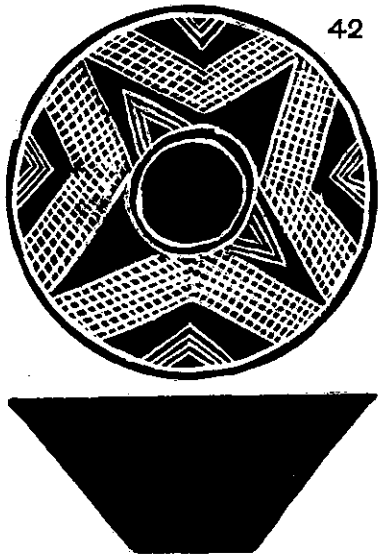




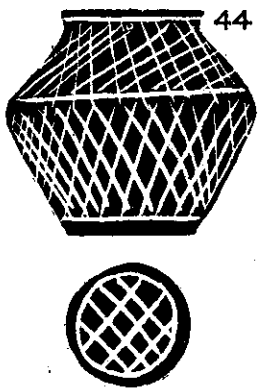




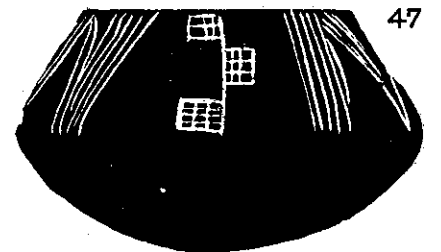




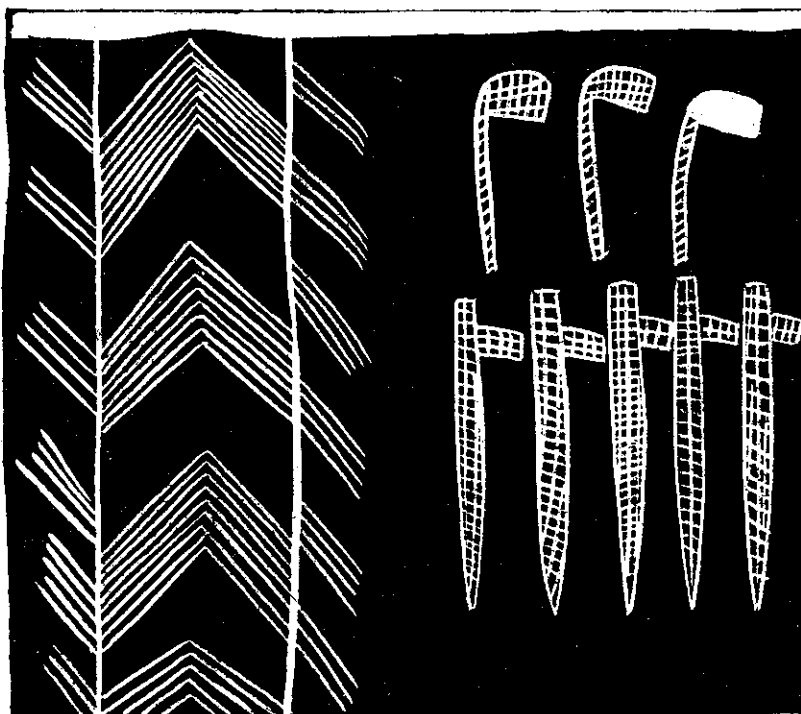
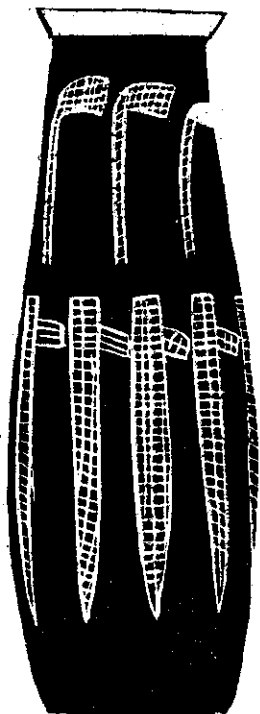
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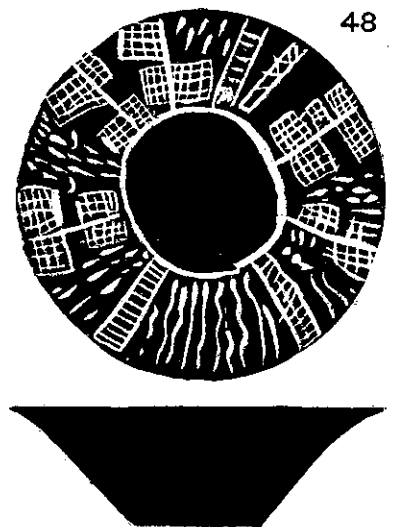
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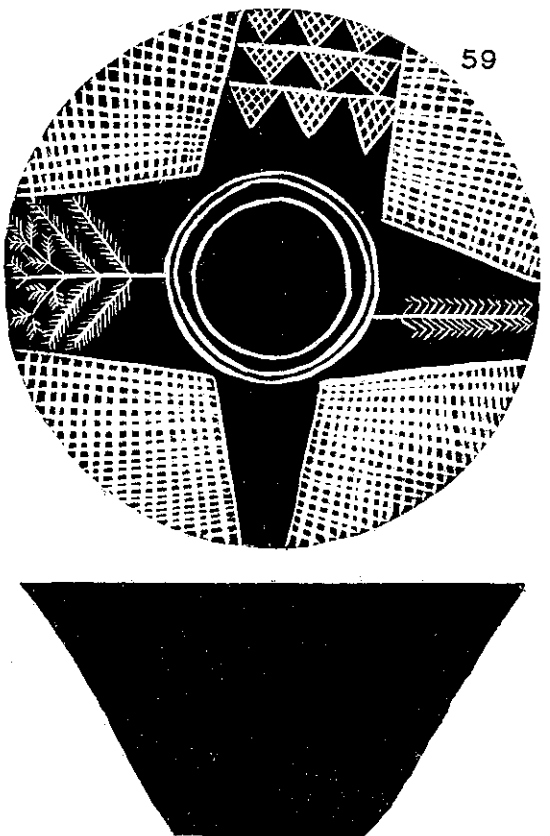
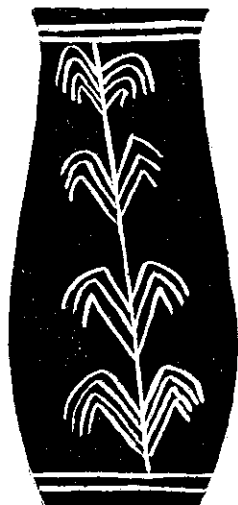
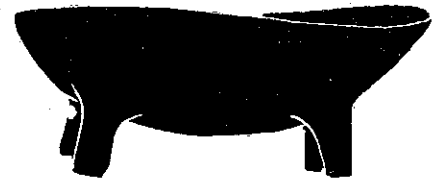
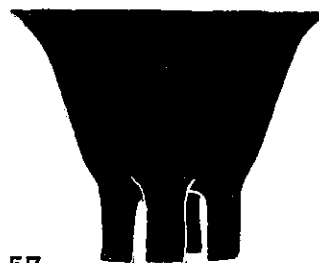
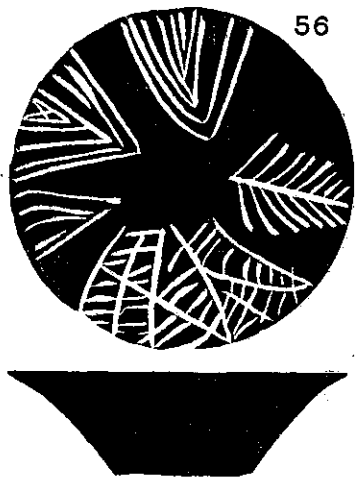
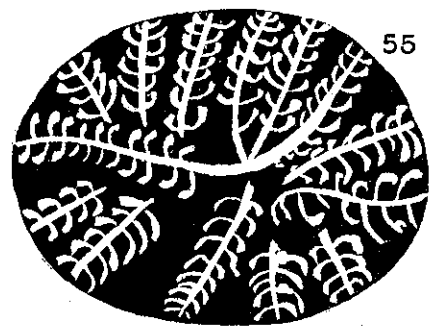
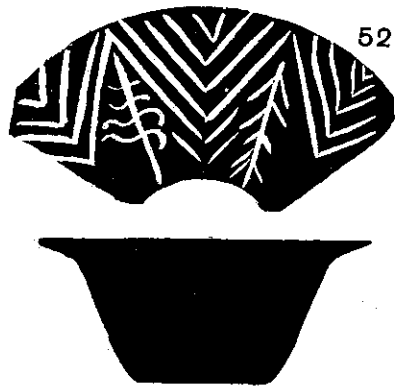
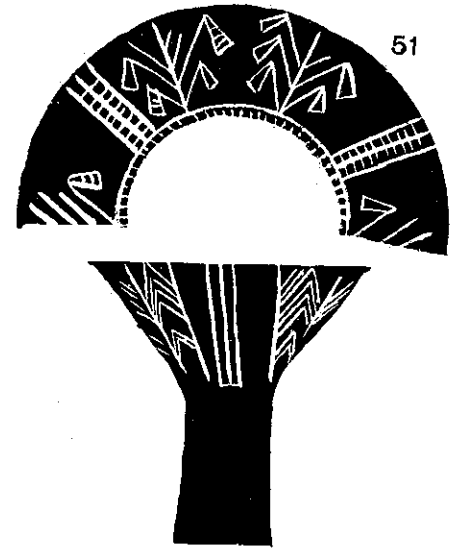
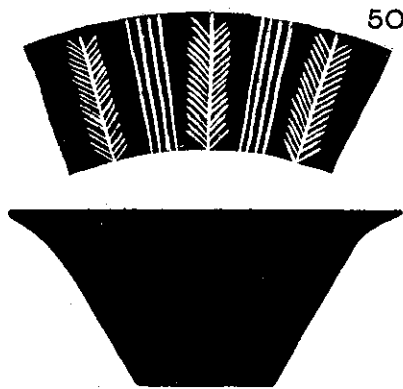
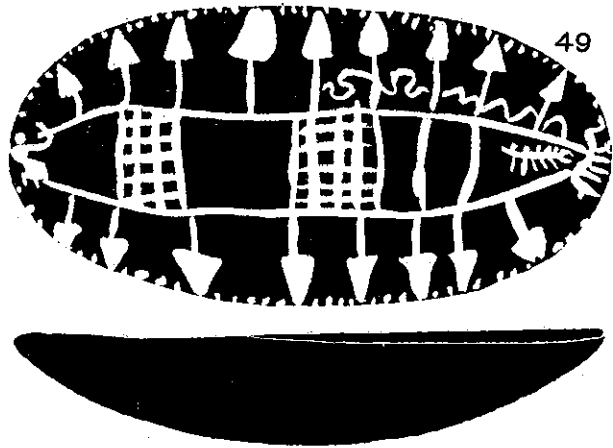


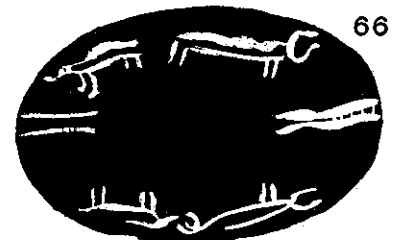
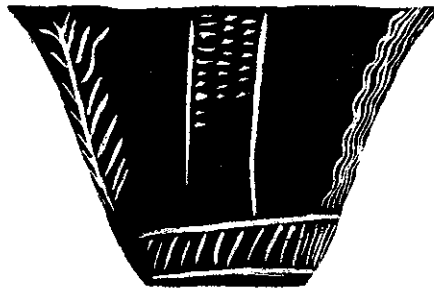
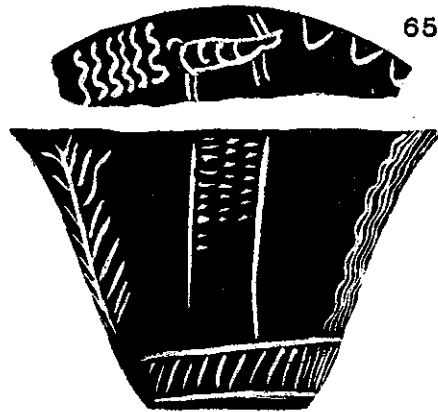
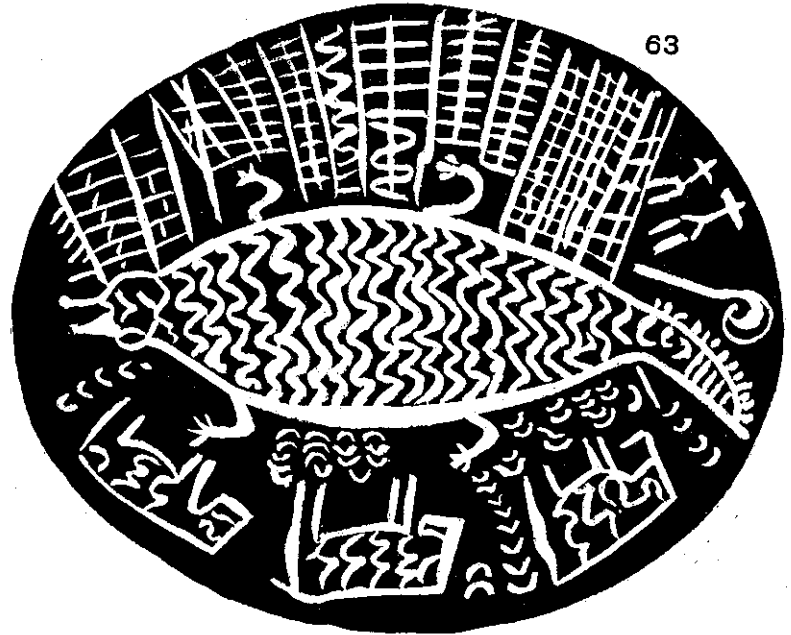
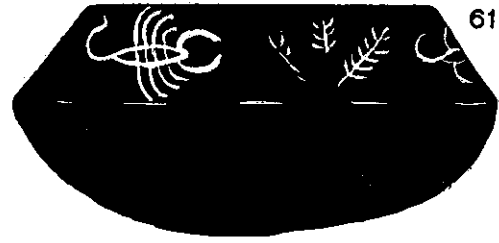
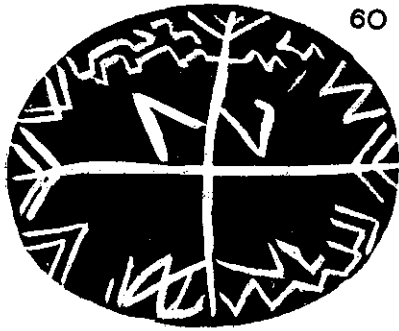
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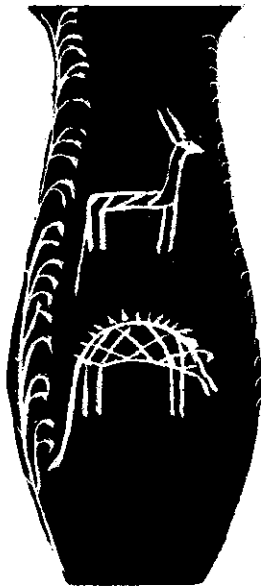


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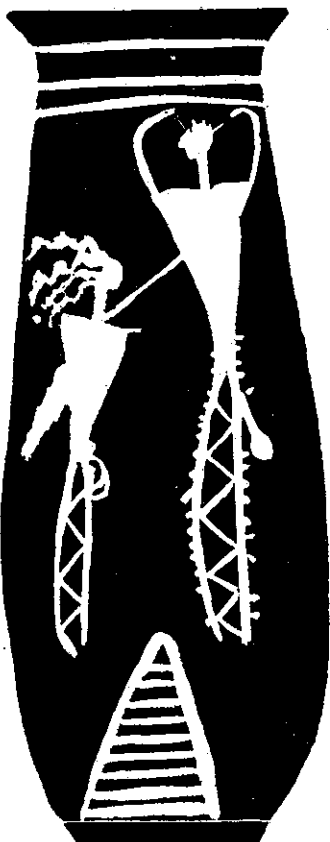
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69

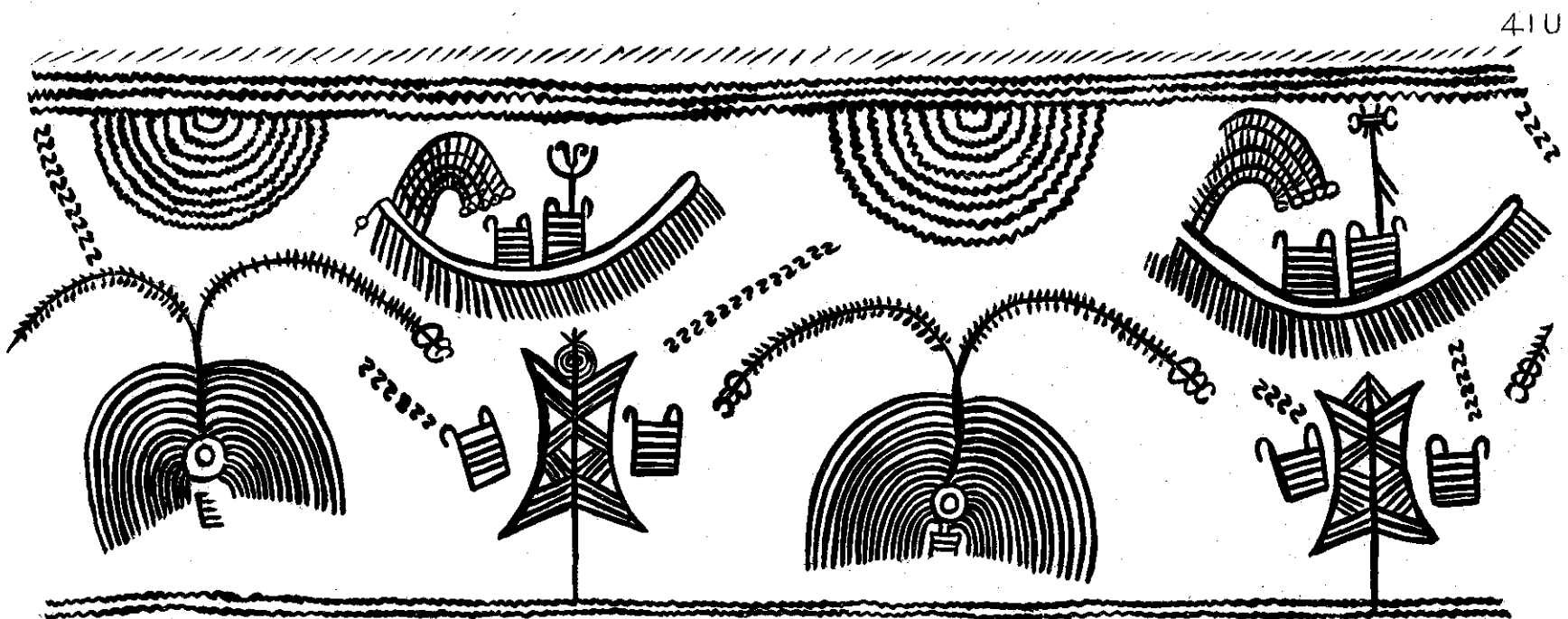
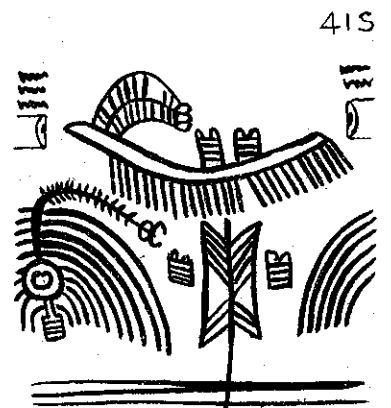
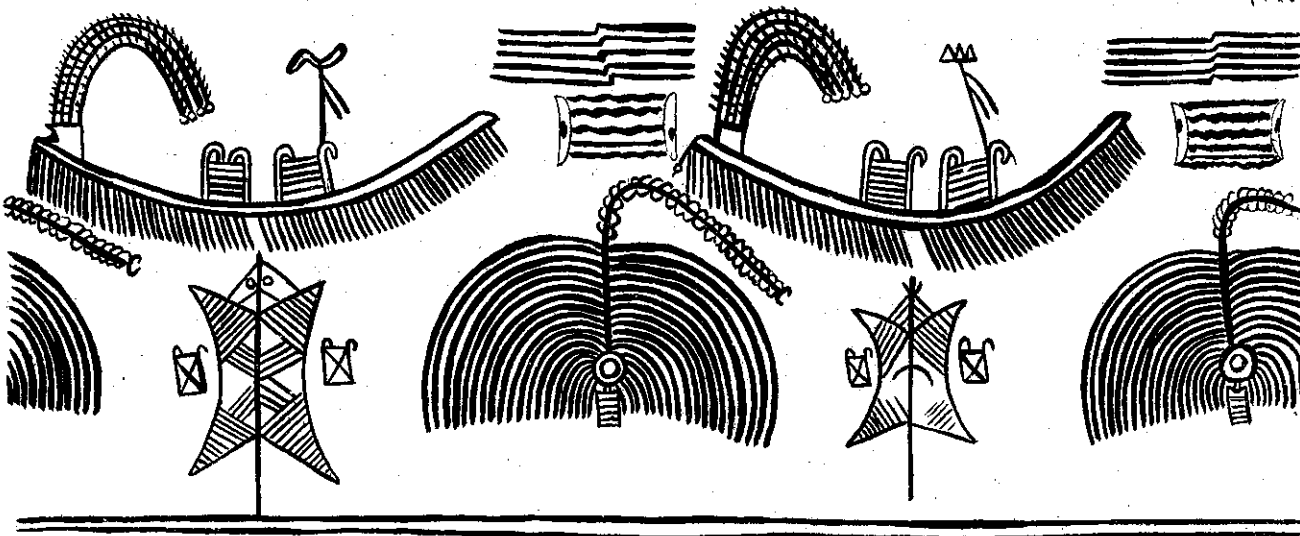
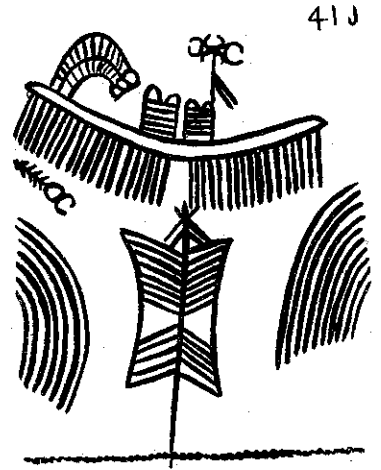
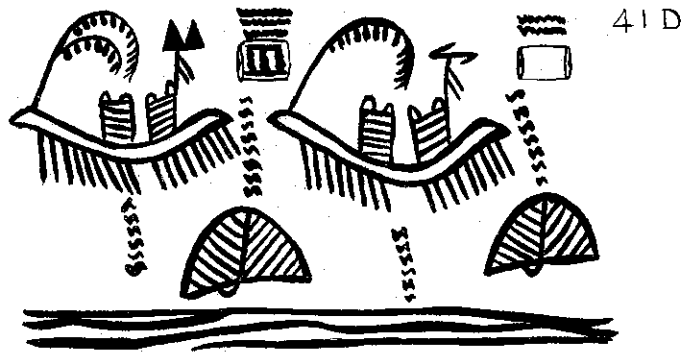
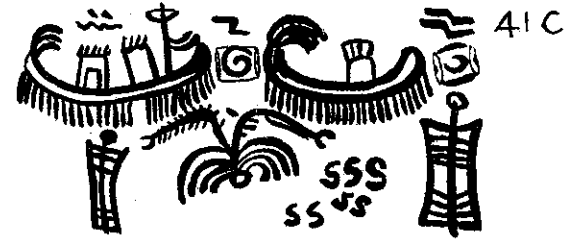
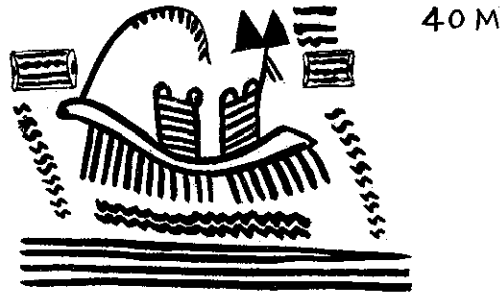
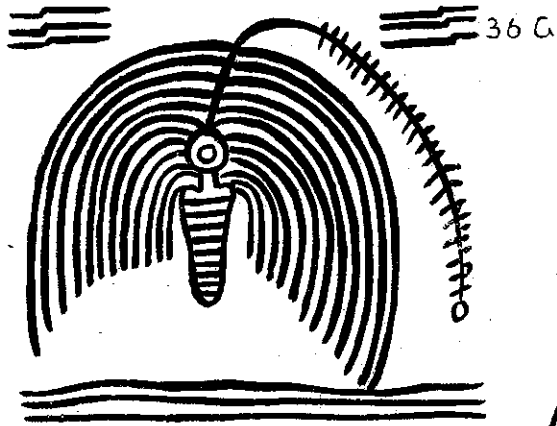


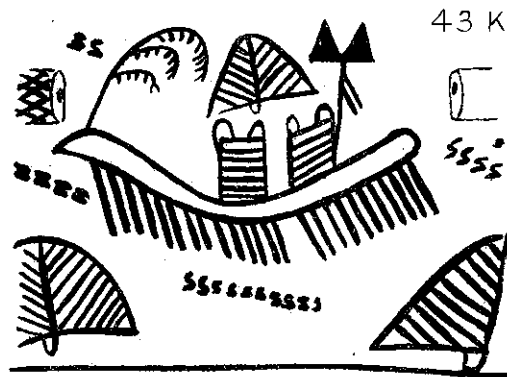
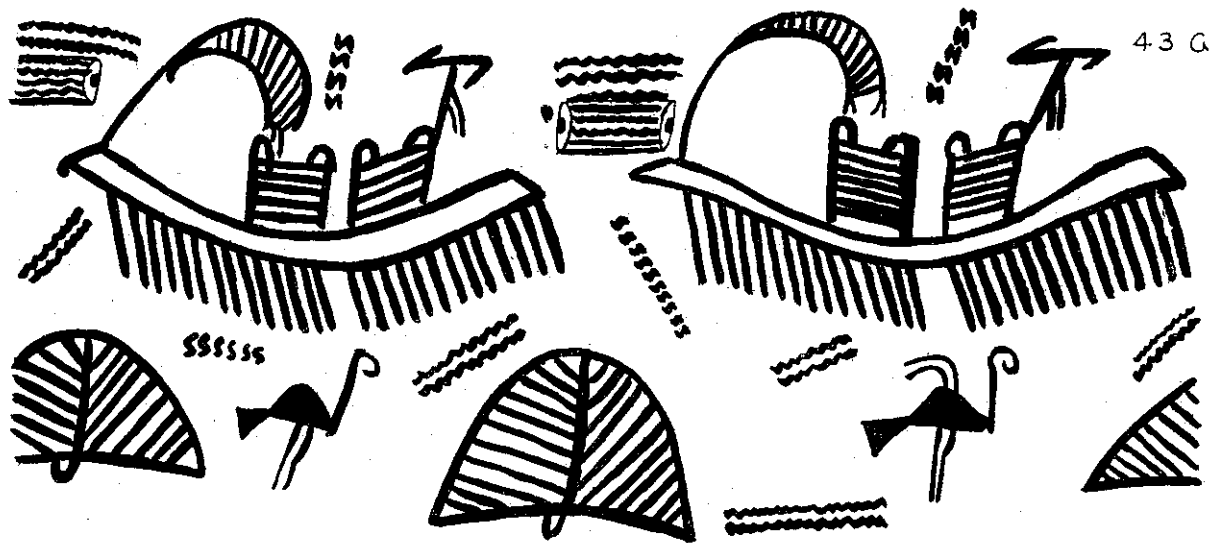
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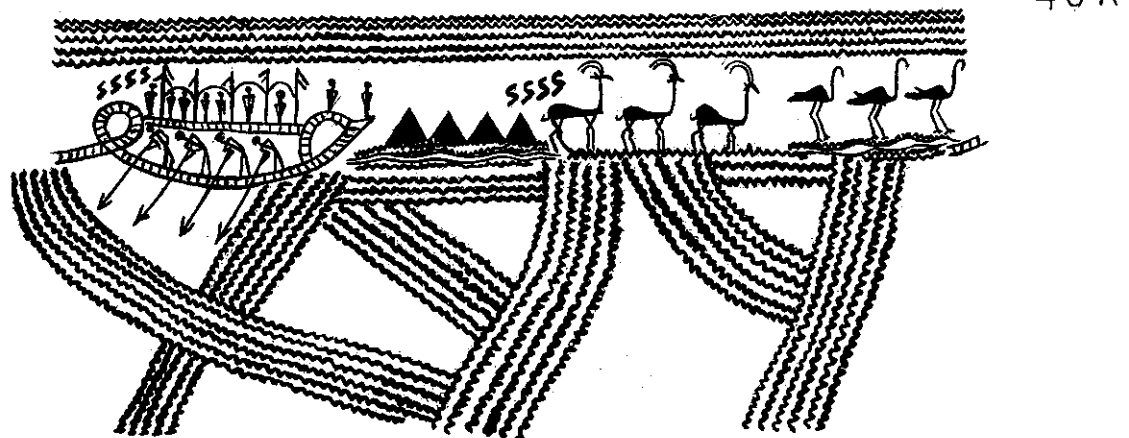
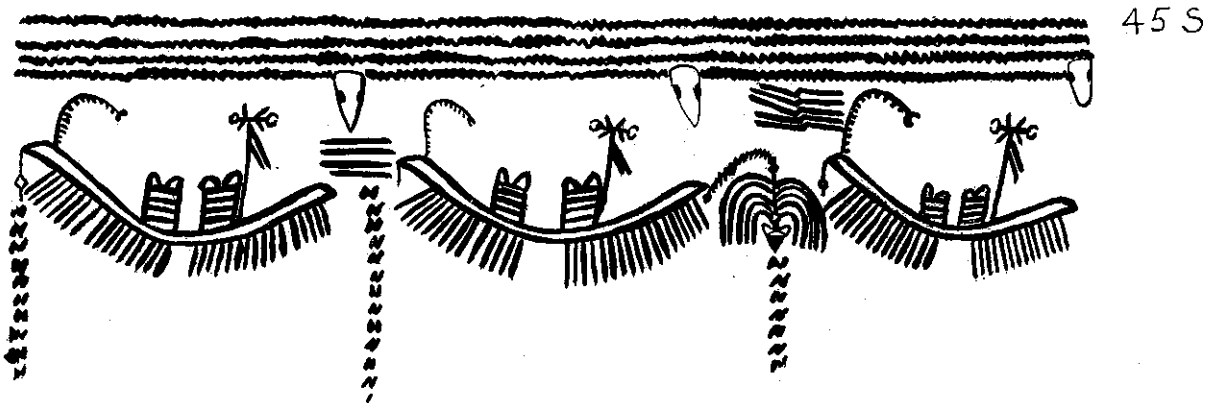
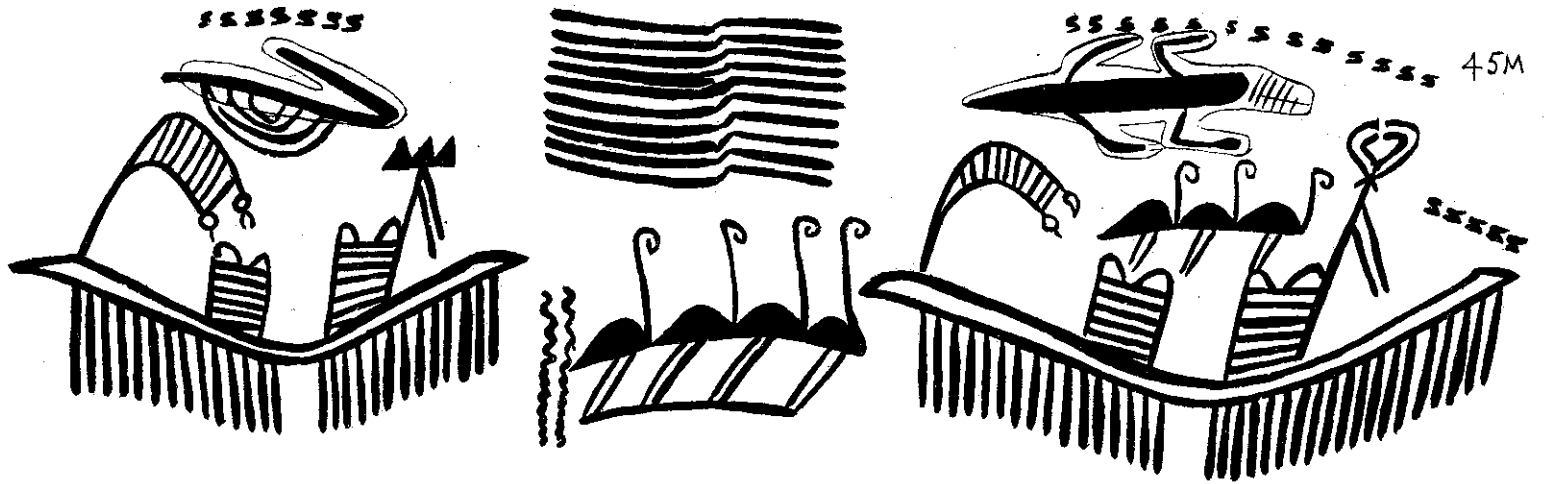


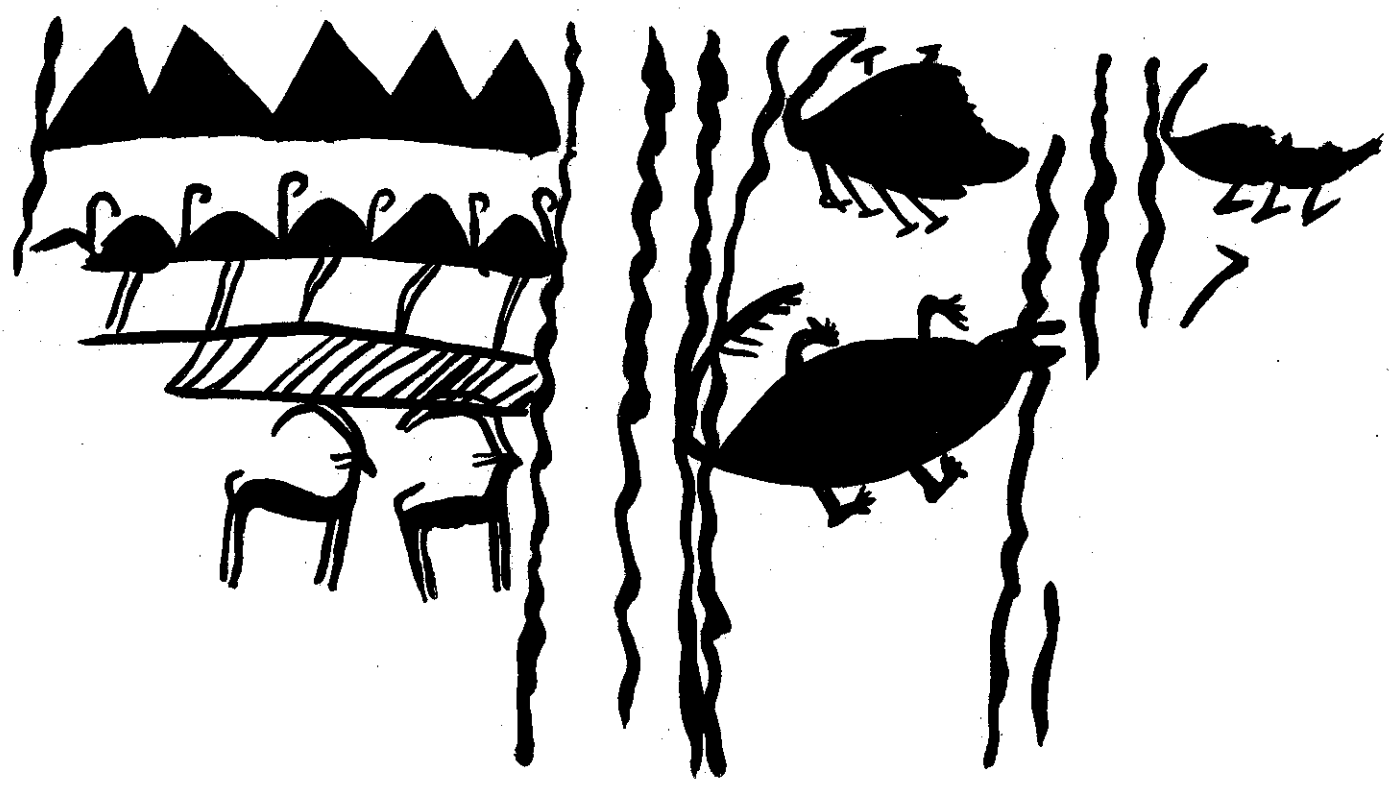
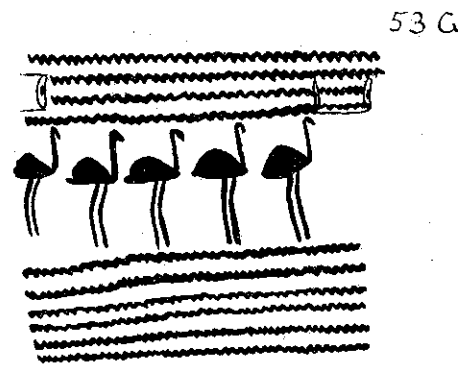
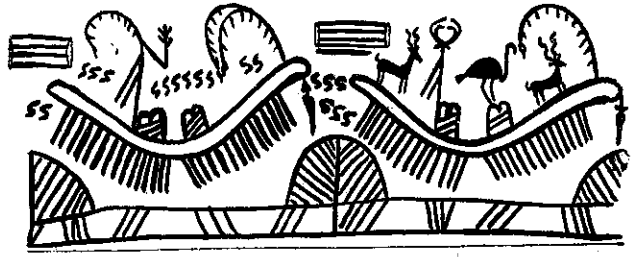
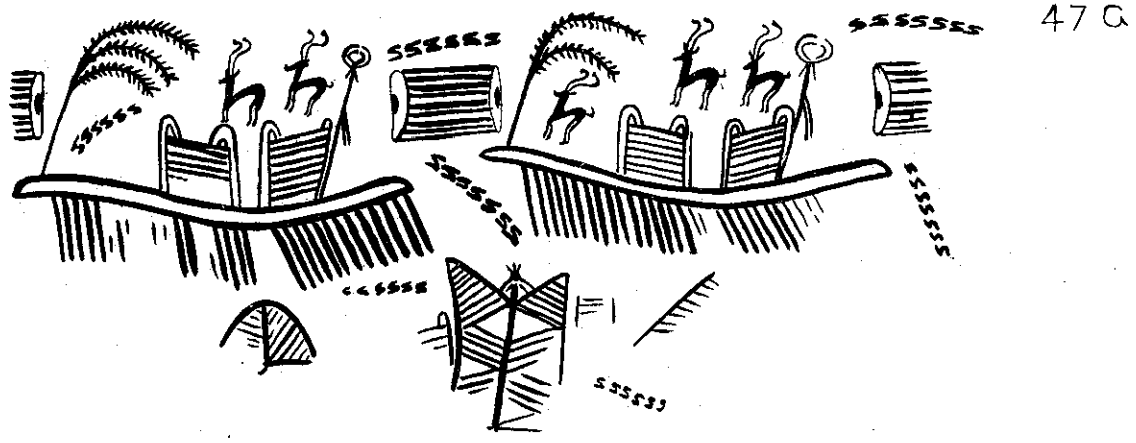
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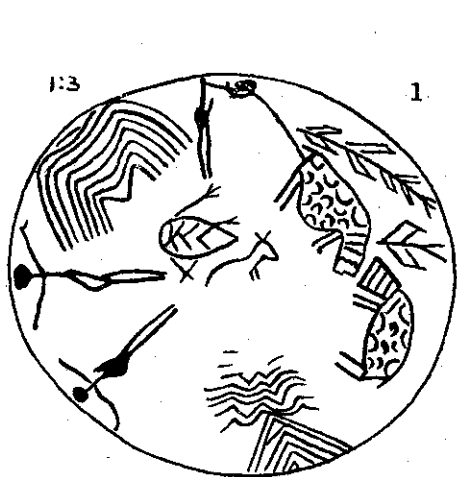




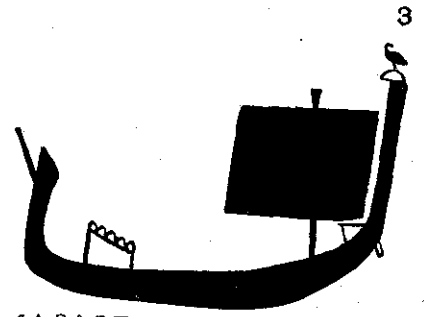








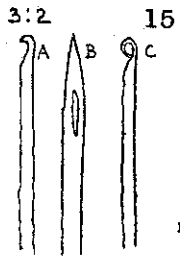
GARSTANG MAHASNA, S.D. 34?



CAPART, PRIMITIVE ART. 91

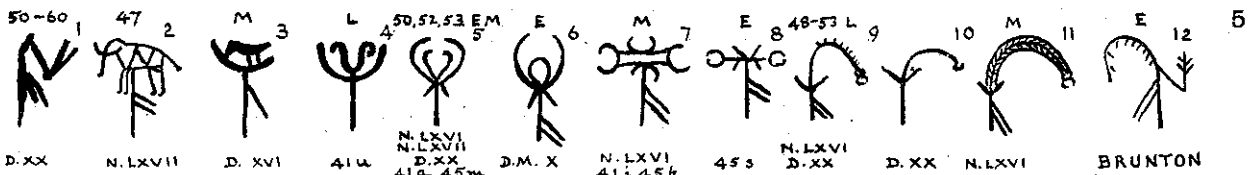


TARK. 16 S.D. 78

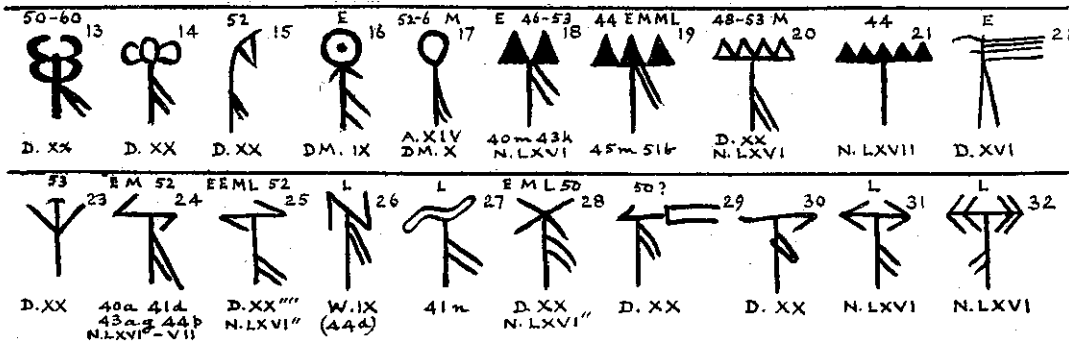


NEEDLE EYES.

L'ANTHROPOLOGIE 1898, IX, PL. III.

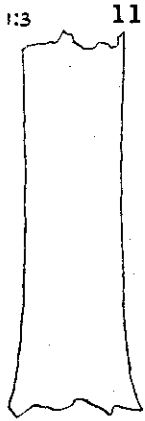


BRUNTON

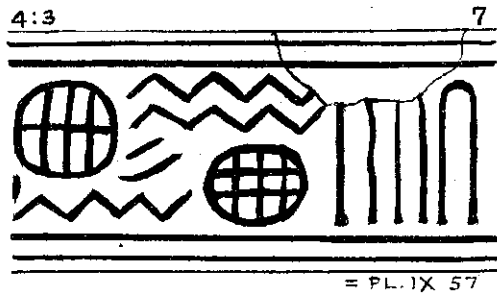


ABOVE ENSIGNS. E Early. M Middle. L Late Ship Type. Numbers = S.D.

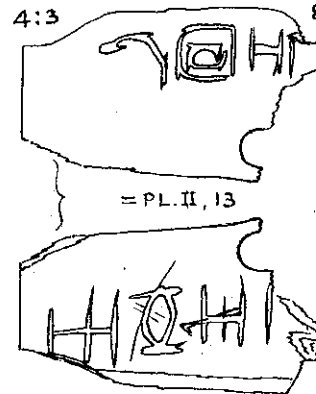
BELOW. A. Amrah. D. Diospolis. DM. De Morgan "Age-Pierre". N. Naqada. W. Wainwright Gerzeh.



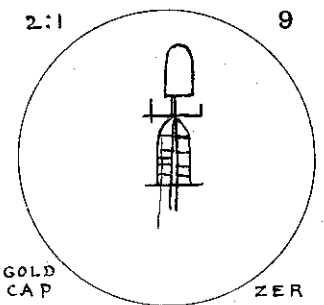
BL. GLAZE ROYAL TOMBS.



= PL. IX 57

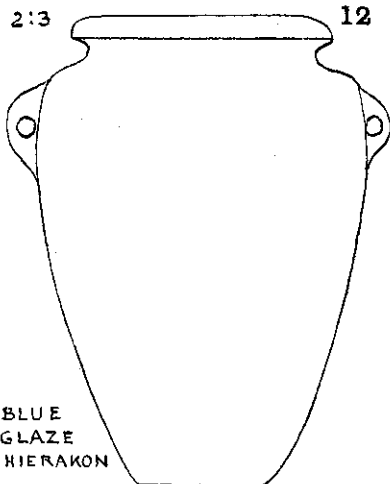


= PL. II, 13

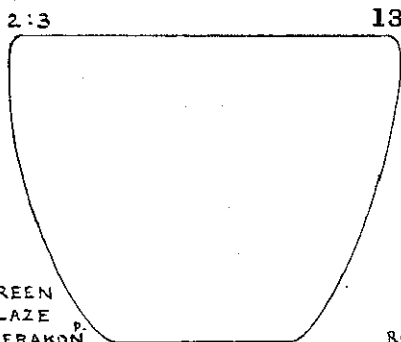


GOLD CAP

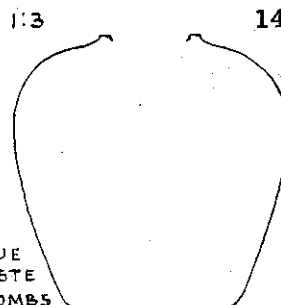
ZER



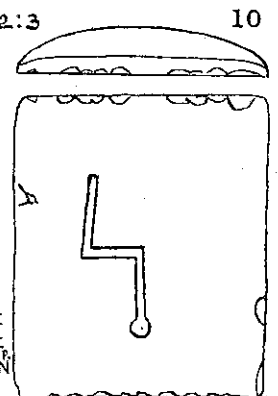
BLUE GLAZE HIERAKON



GREEN GLAZE HIERAKON



BLUE PASTE ROY. TOMBS



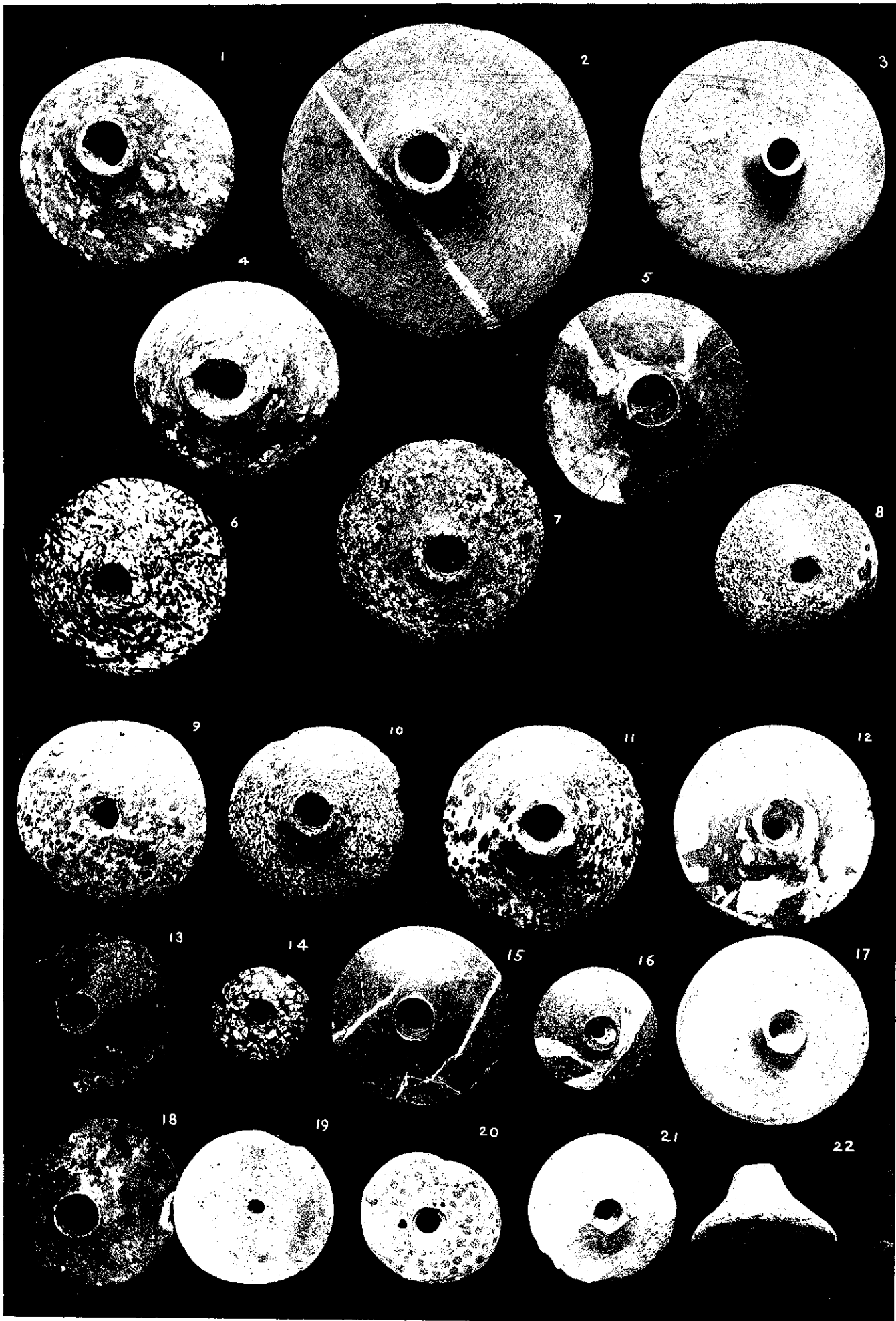
BLUE GLAZE HIERAKON

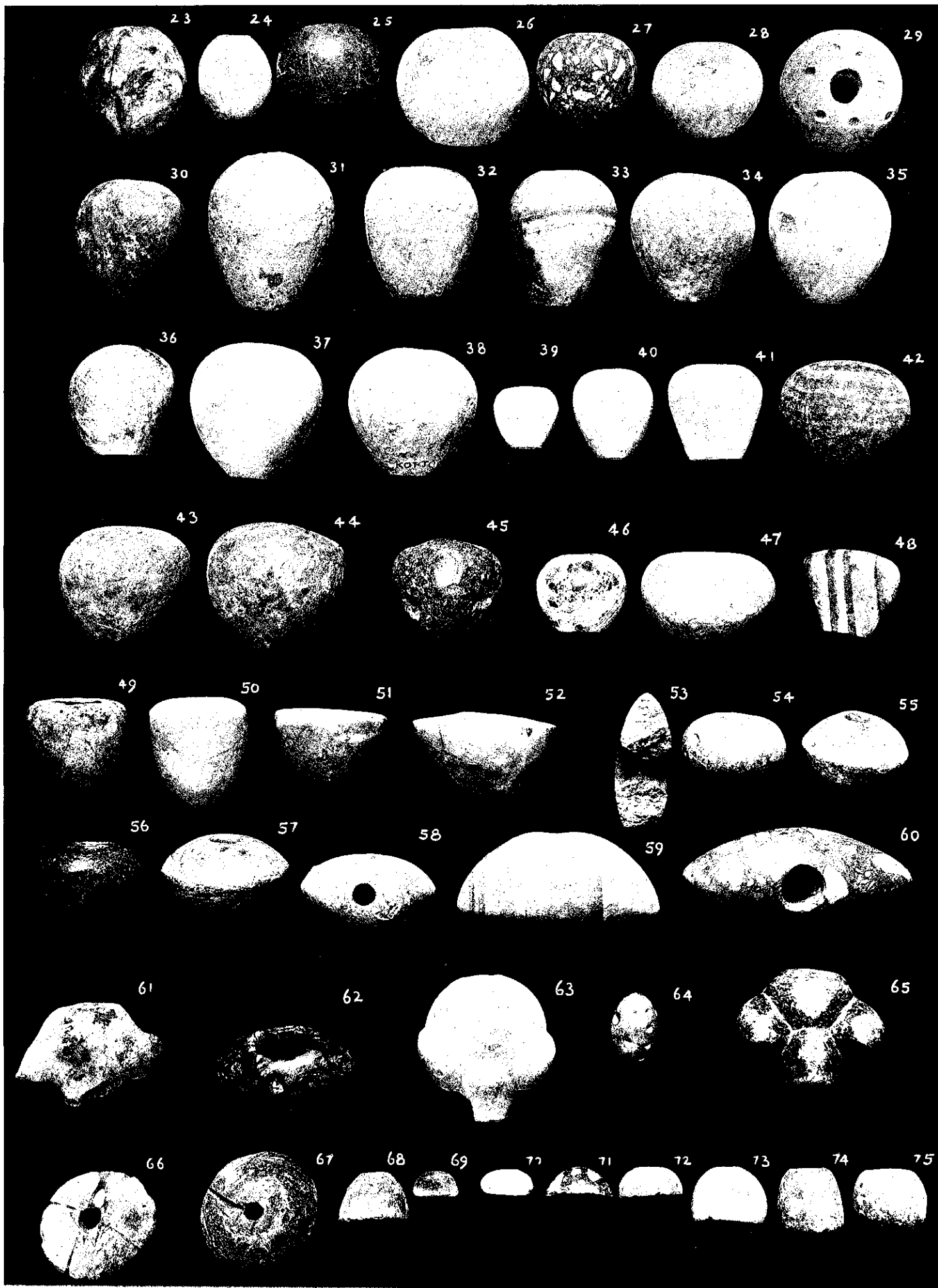
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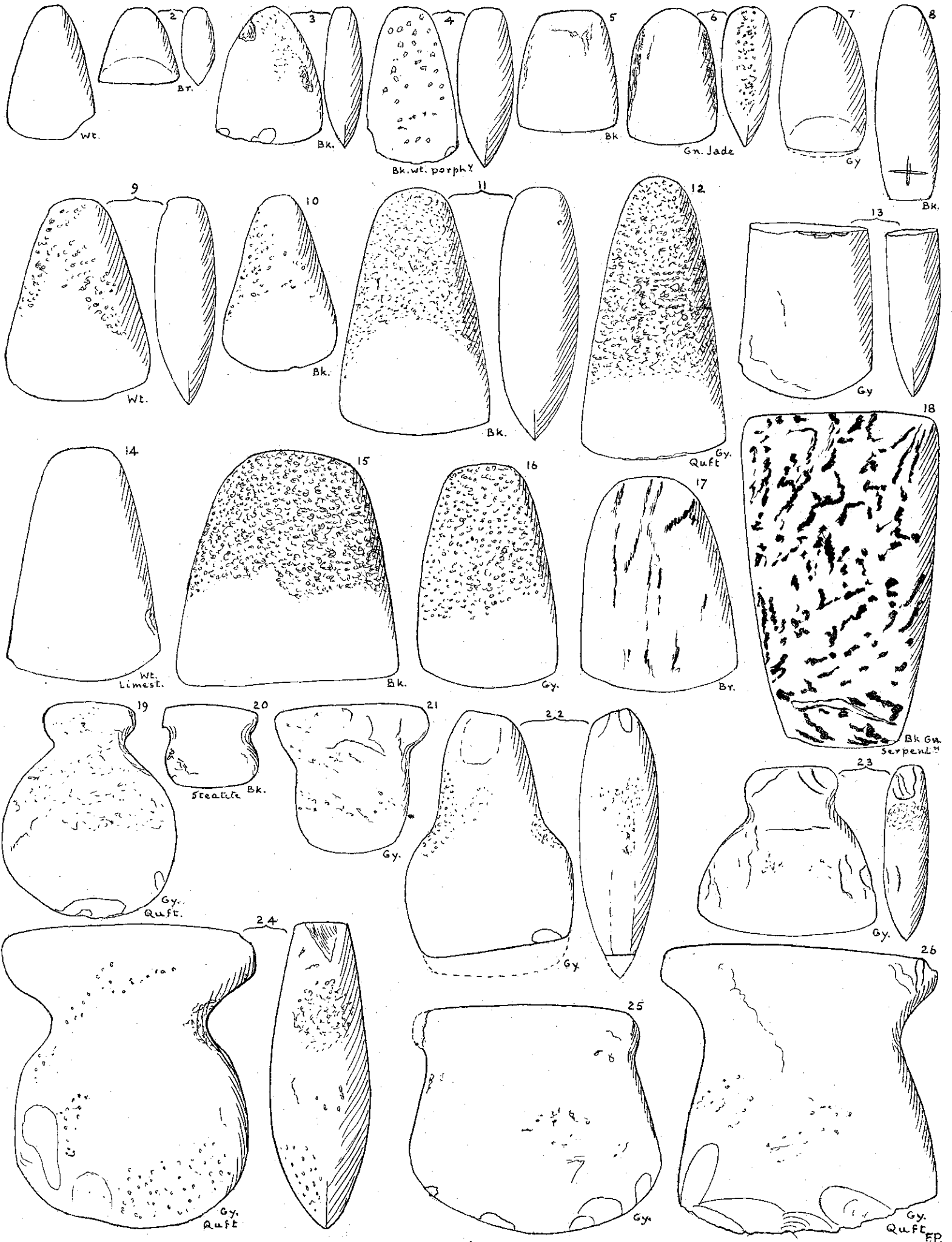
NOBLE SERPENTINE N. 632. S.D. 44-55

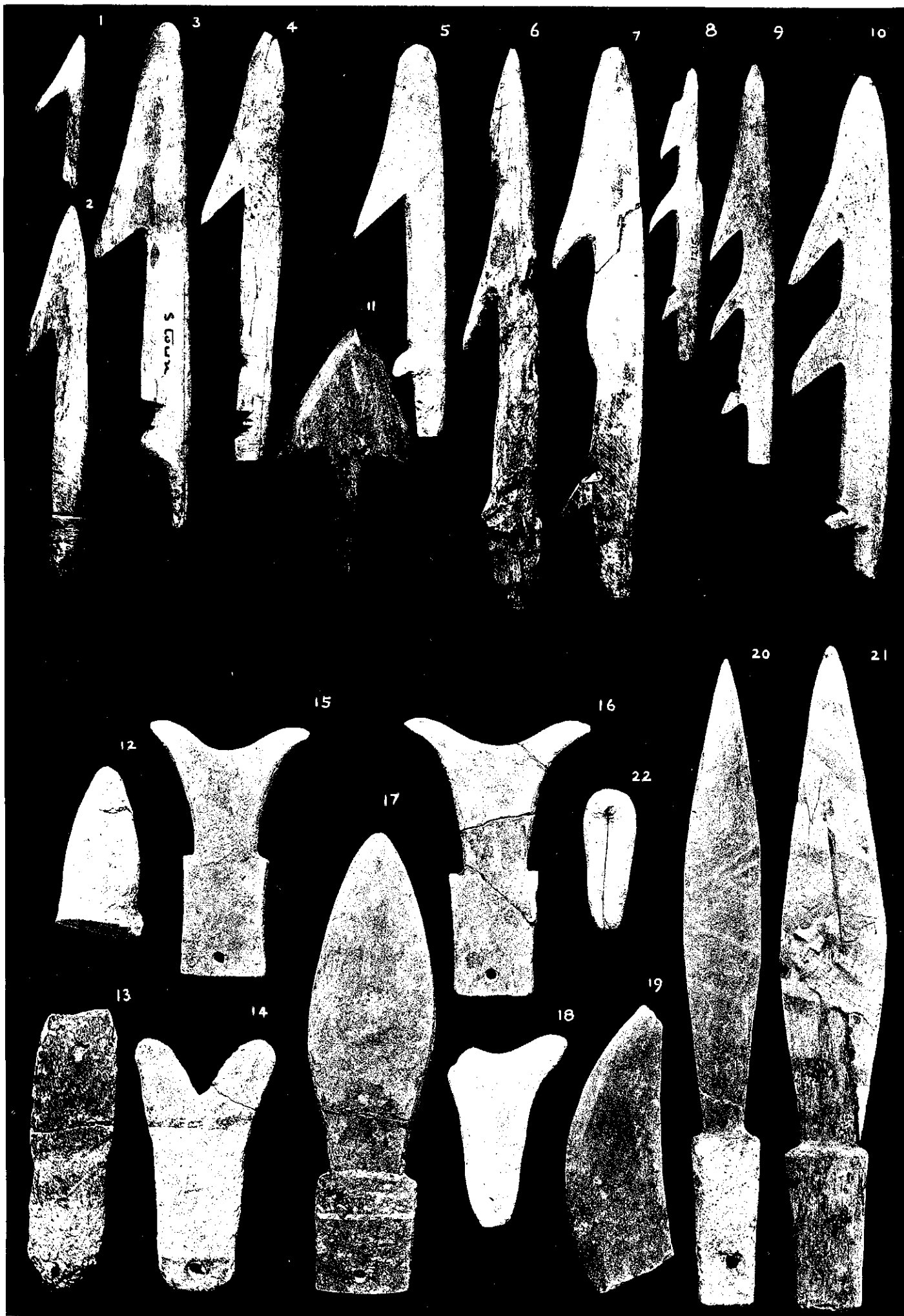


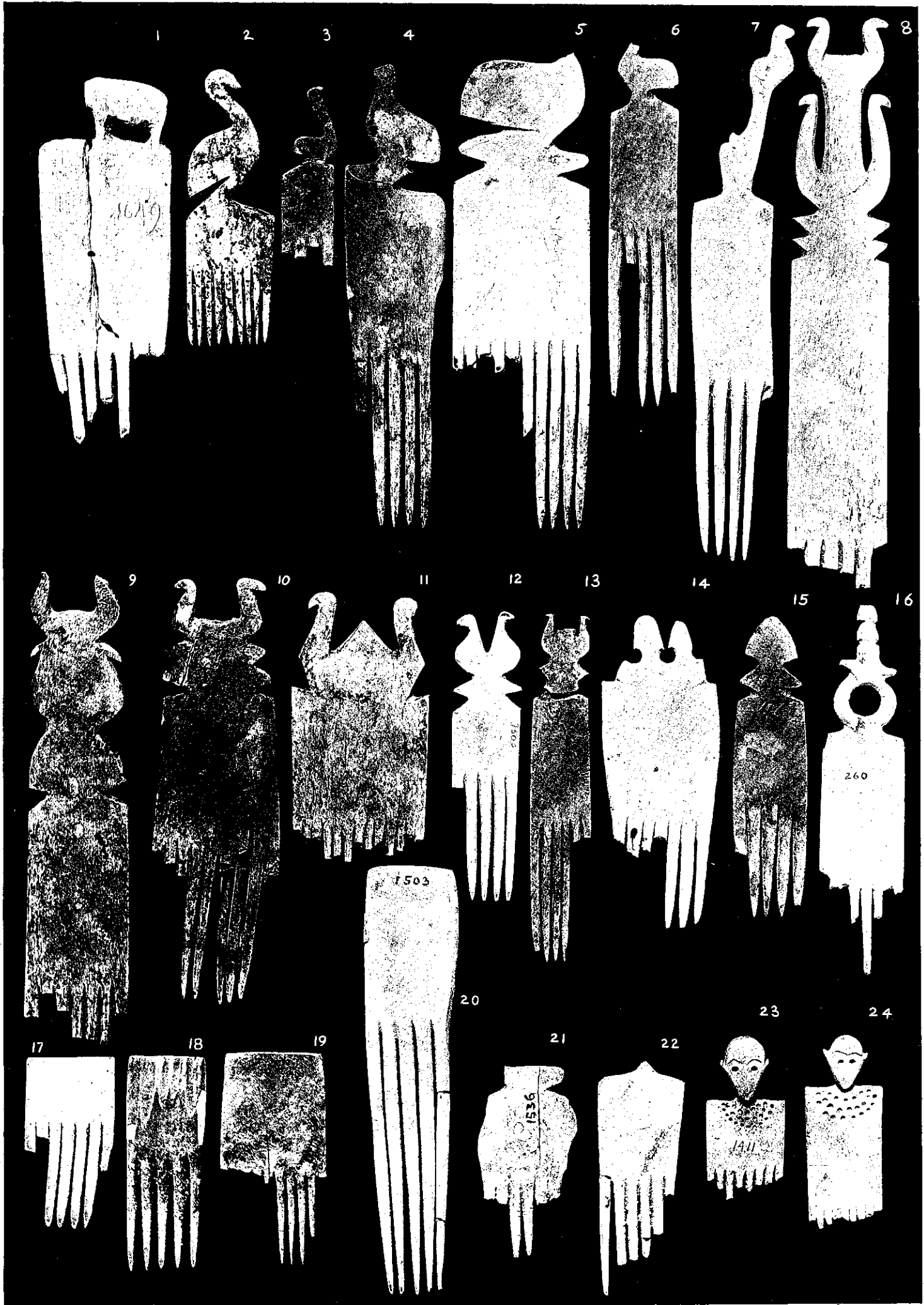




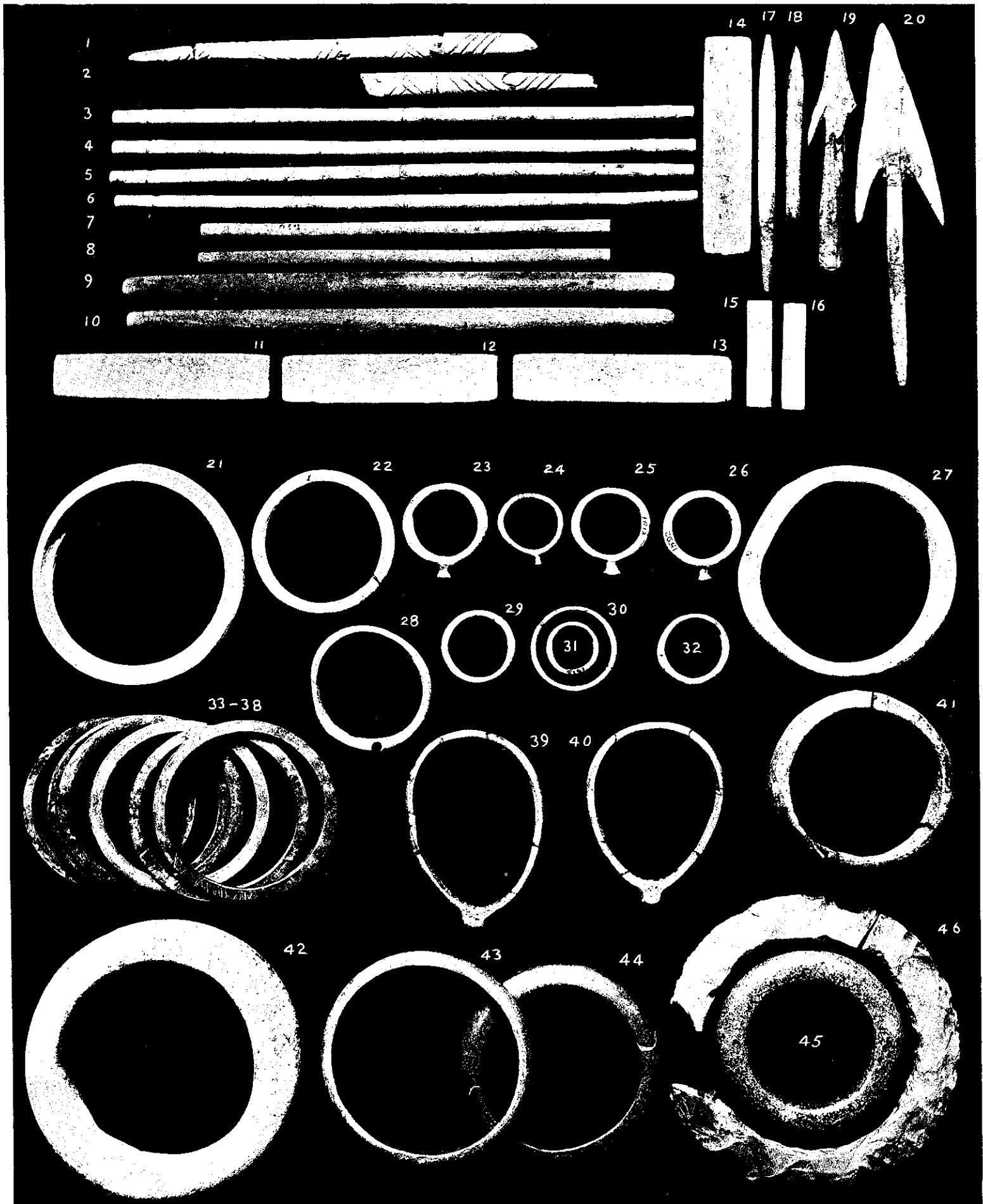


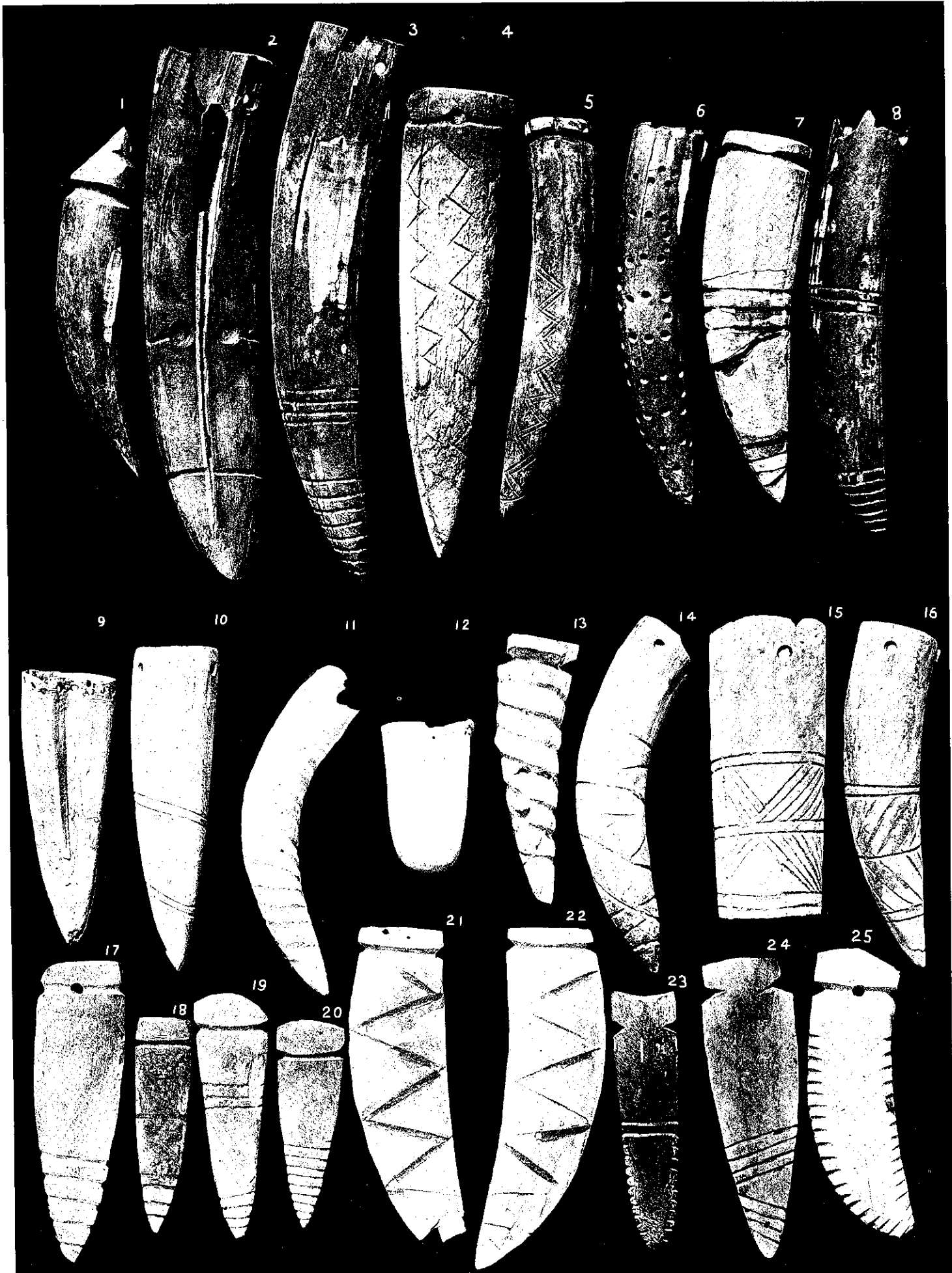


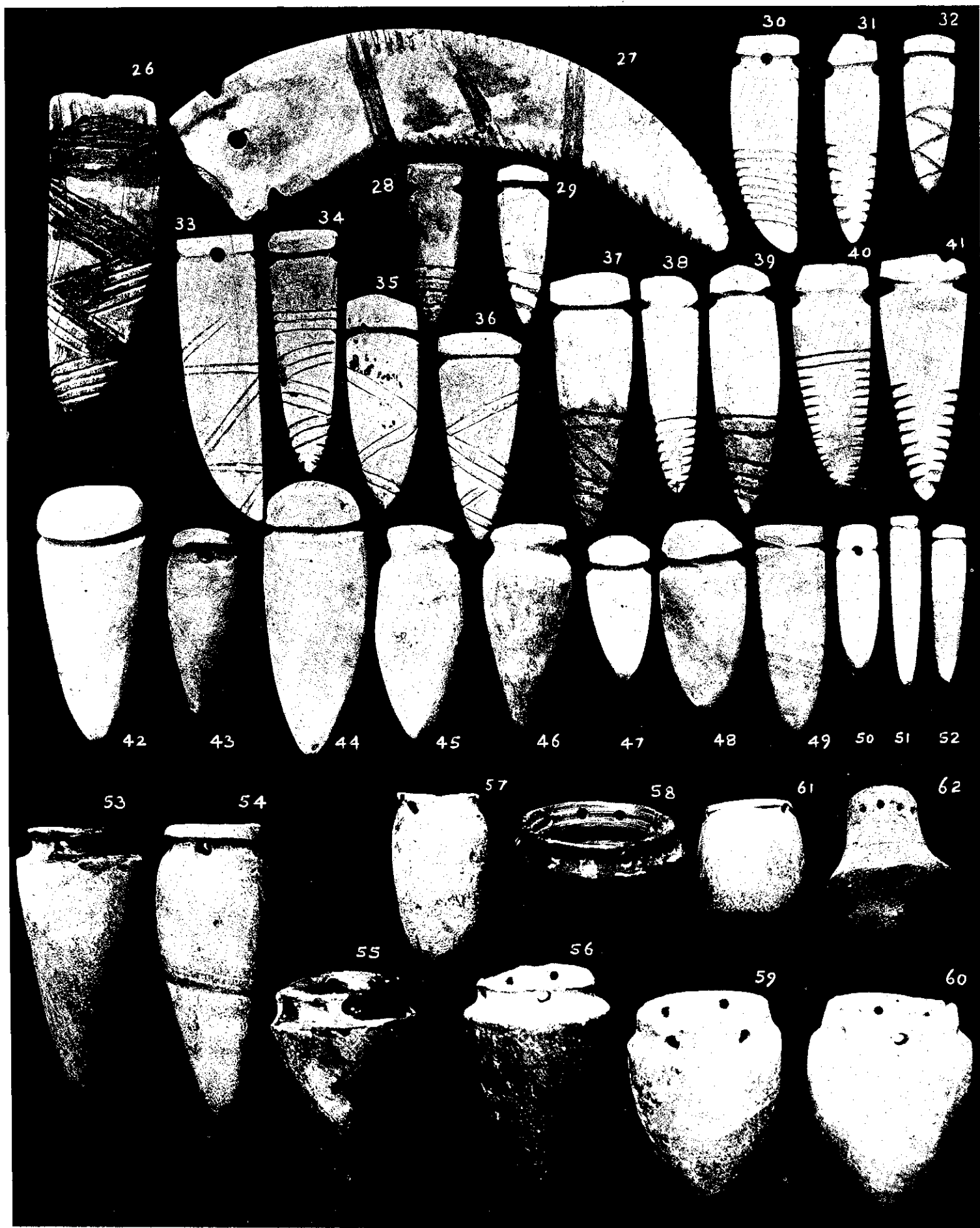








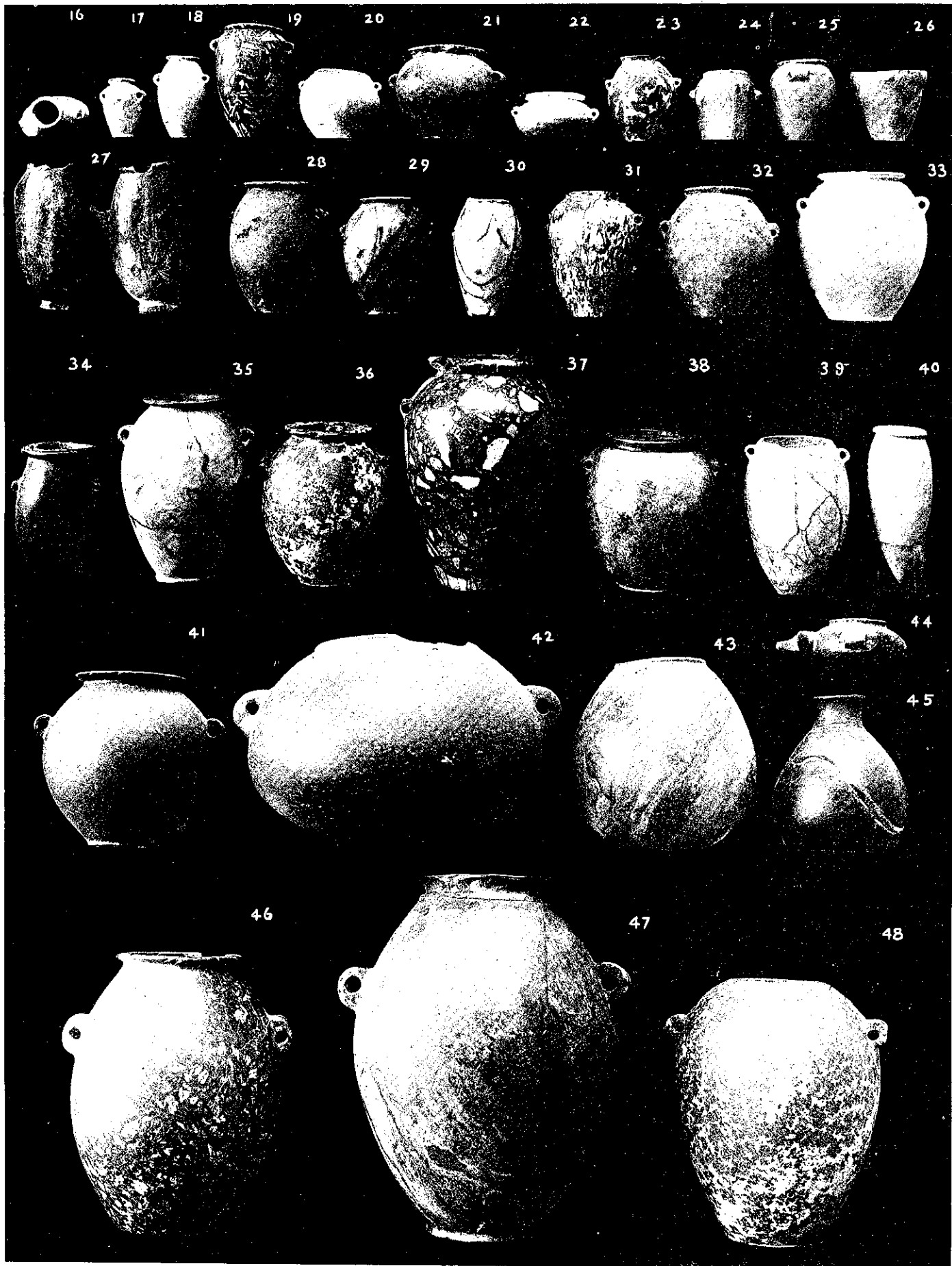


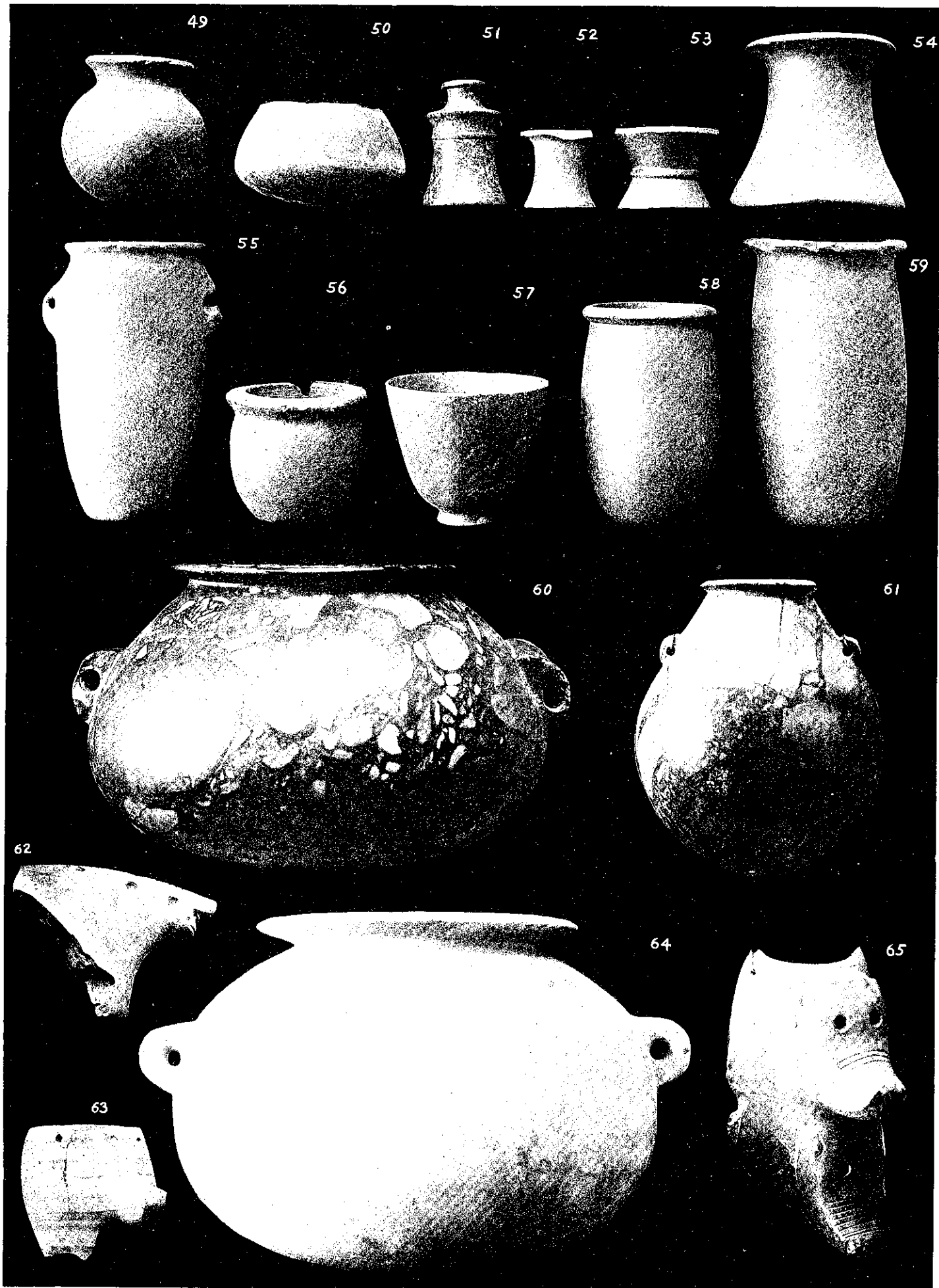


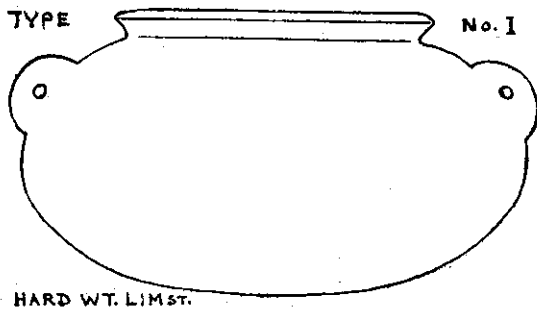




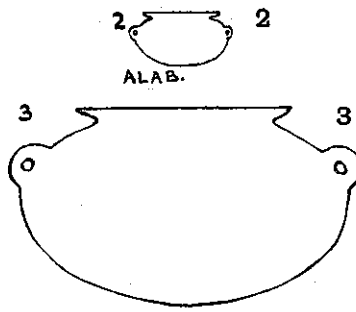




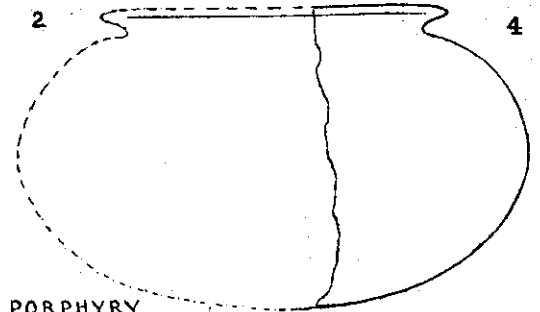




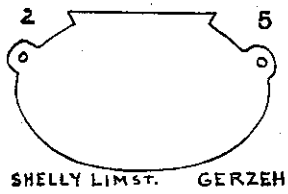
HARD WT. LIMST.



BASALT



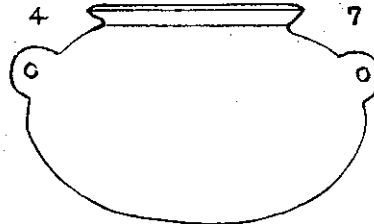
PORPHYRY



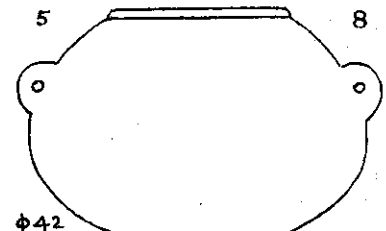
SHELLY LIMST. GERZEH



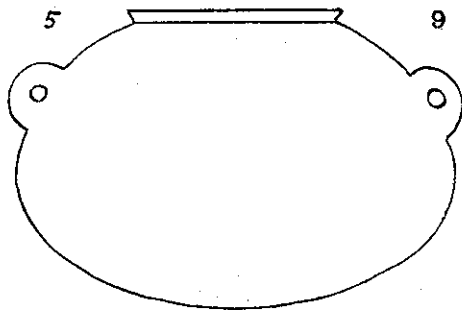
BRECCIA



HARD WT. LIMST.



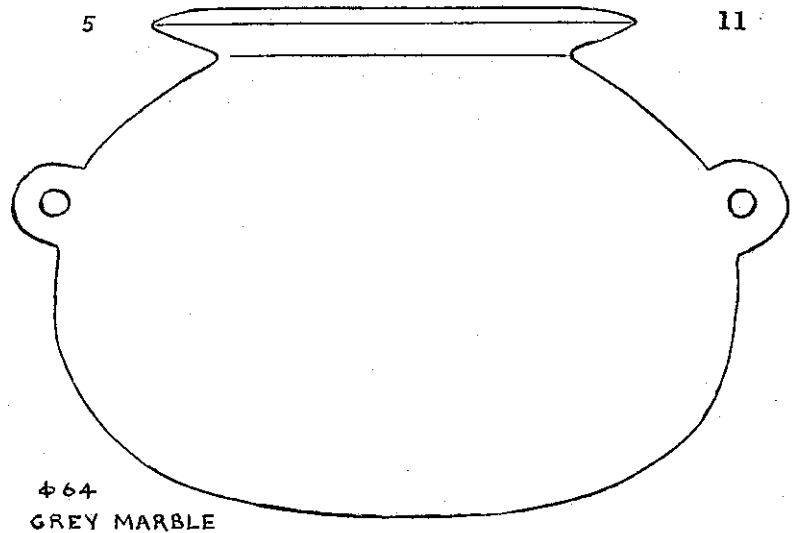
φ42  
BASALT



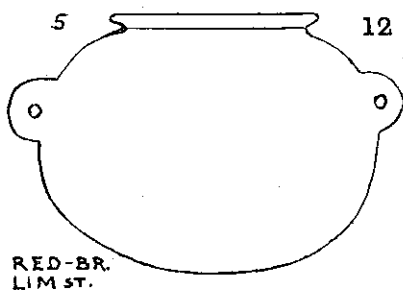
BUFF LIMST.



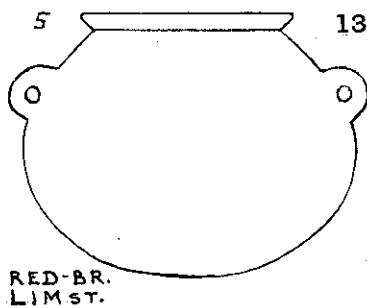
φ60  
BRECCIA



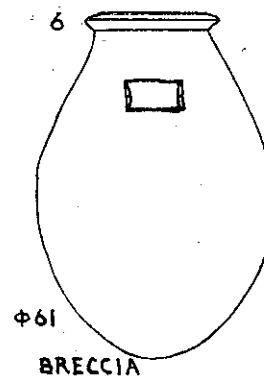
φ64  
GREY MARBLE



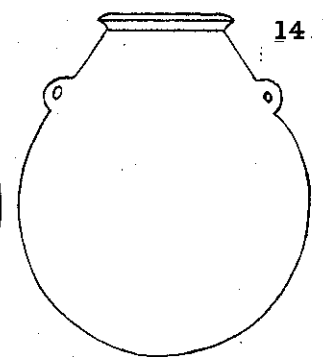
RED-BR.  
LIMST.



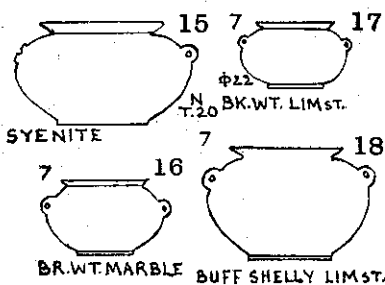
RED-BR.  
LIMST.



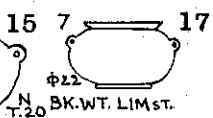
φ61  
BRECCIA



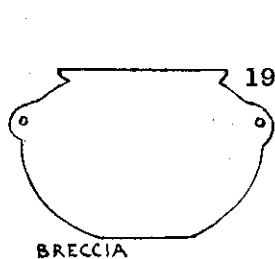
14



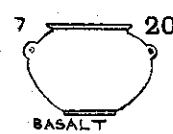
SYENITE



φ22  
N. T. 20  
BK. WT. LIMST.



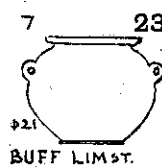
BRECCIA



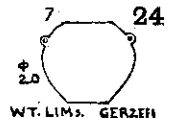
BASALT



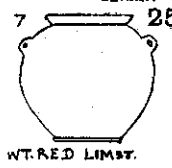
φ21  
GY. LIMST.



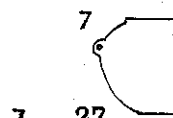
BUFF LIMST.



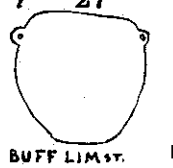
φ20  
WT. LIMST. GERZEH



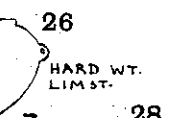
WT. RED LIMST.



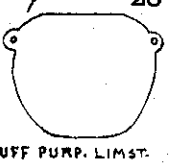
φ20  
WT. LIMST. GERZEH



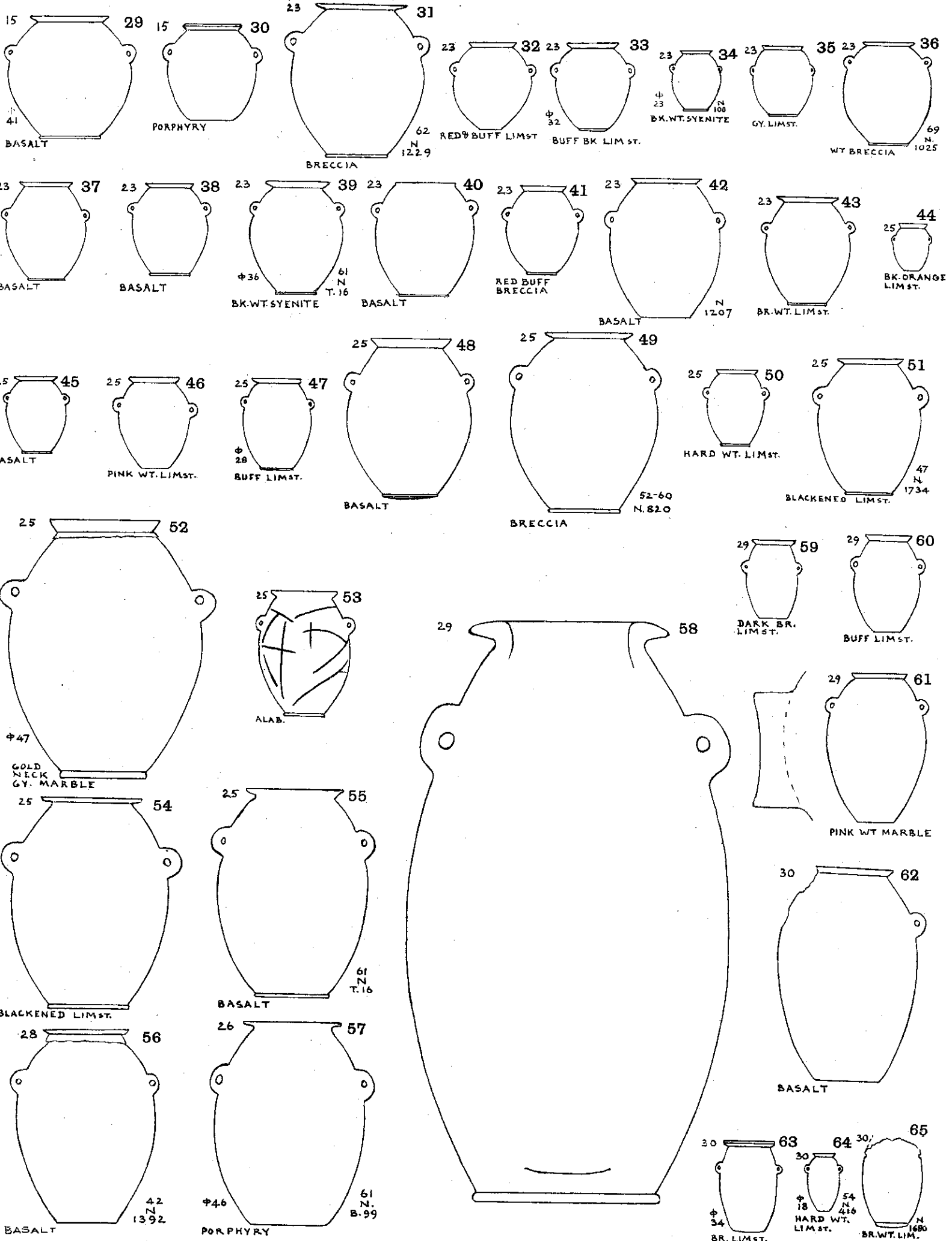
BUFF LIMST.

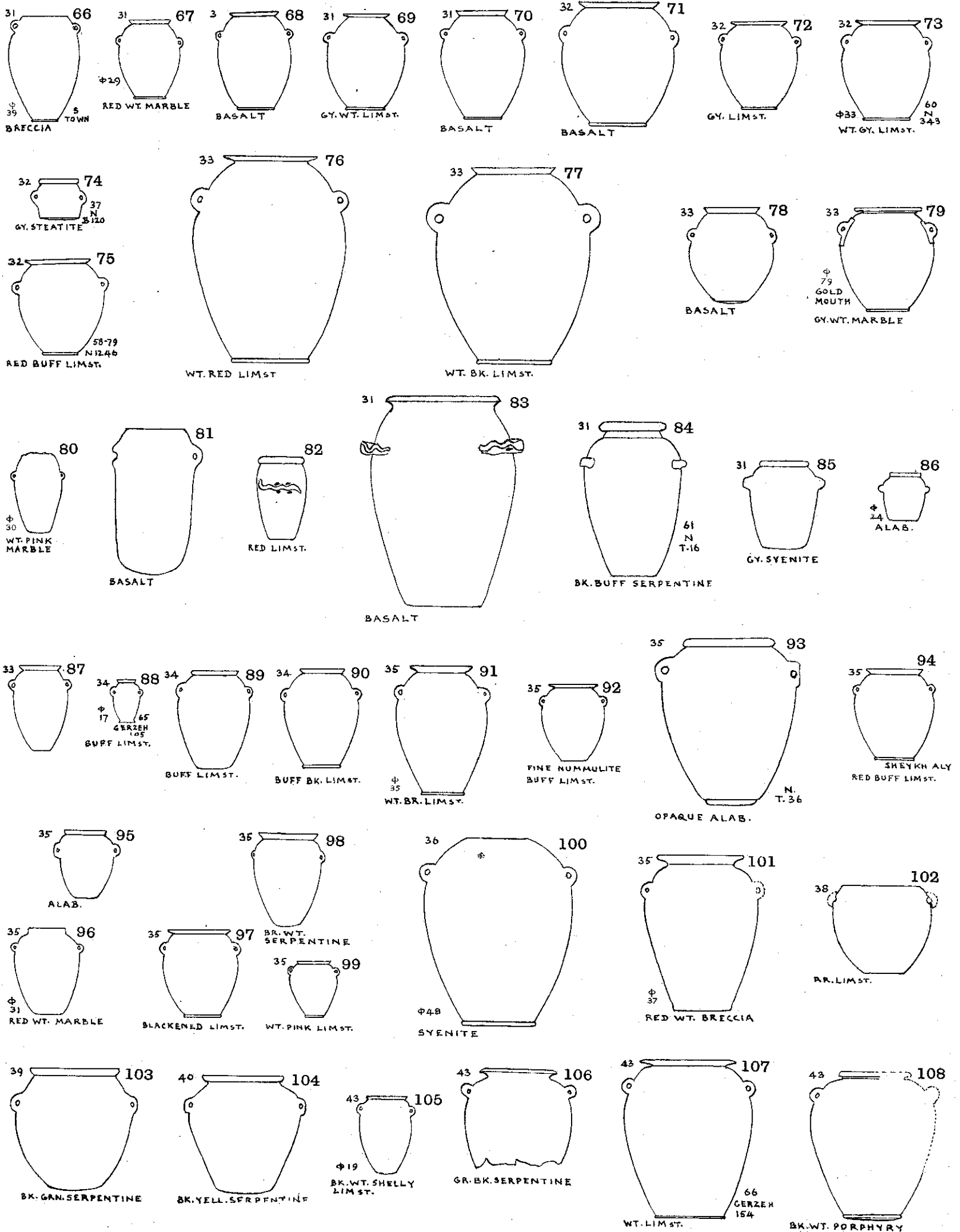


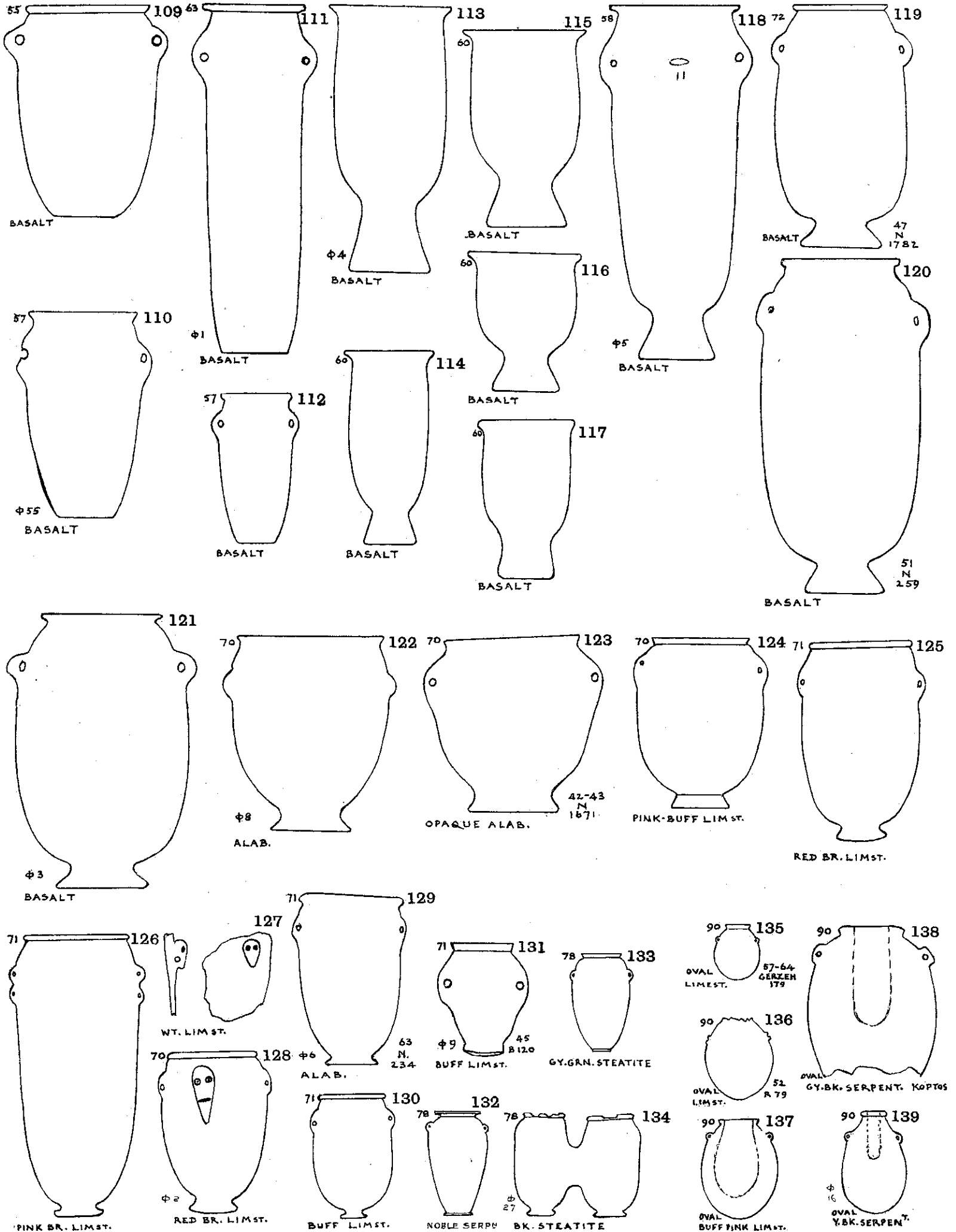
HARD WT. LIMST.

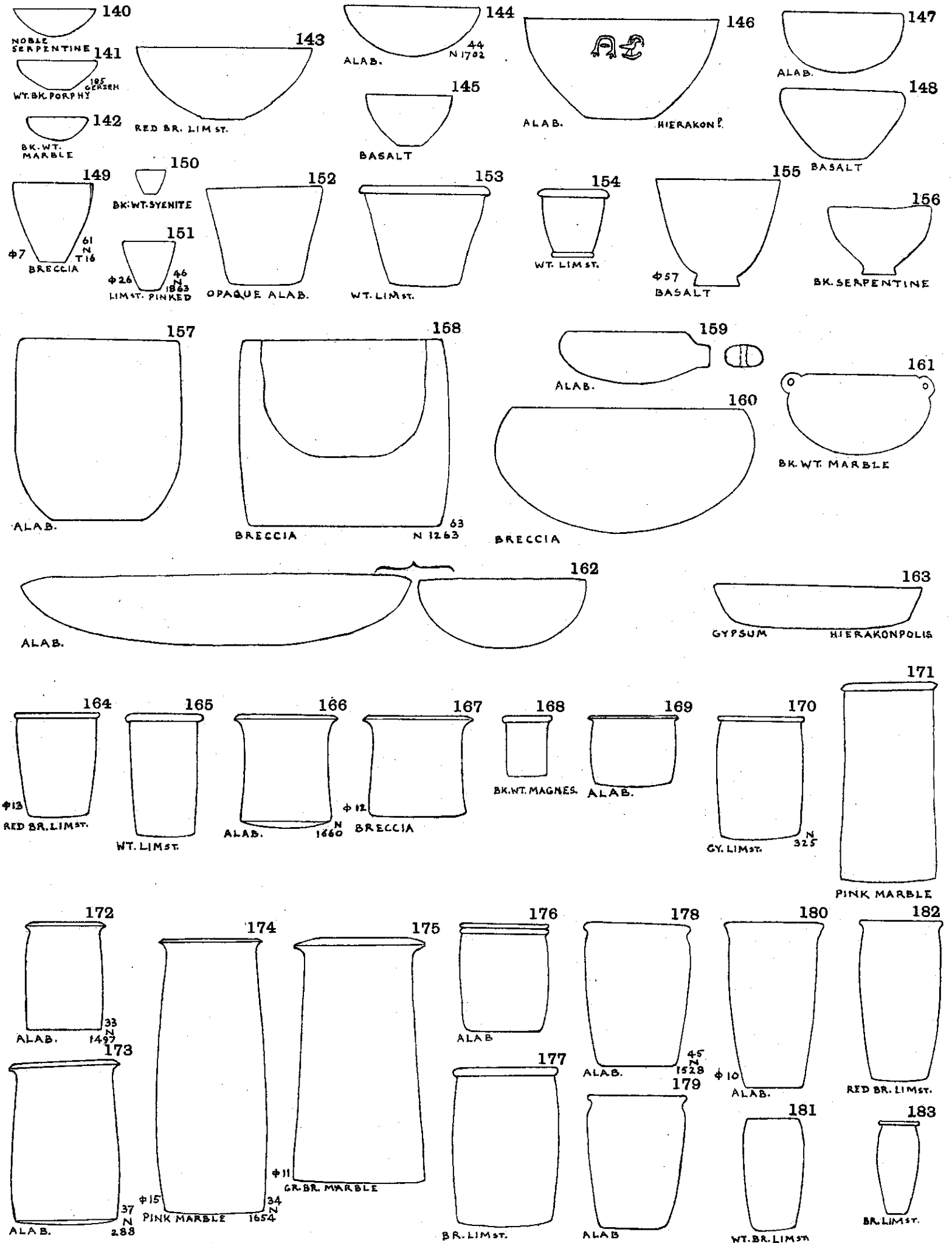


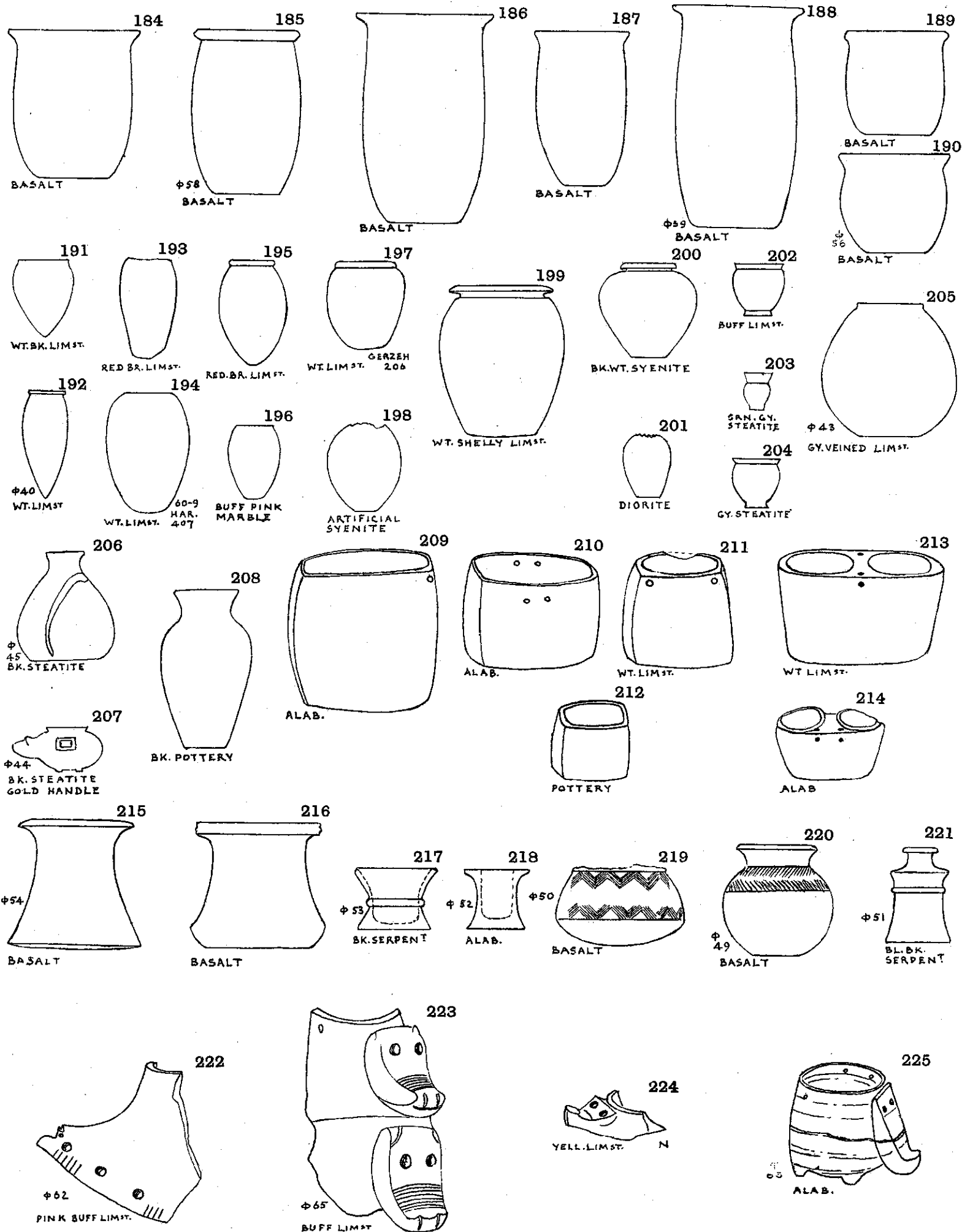
BUFF PURP. LIMST.



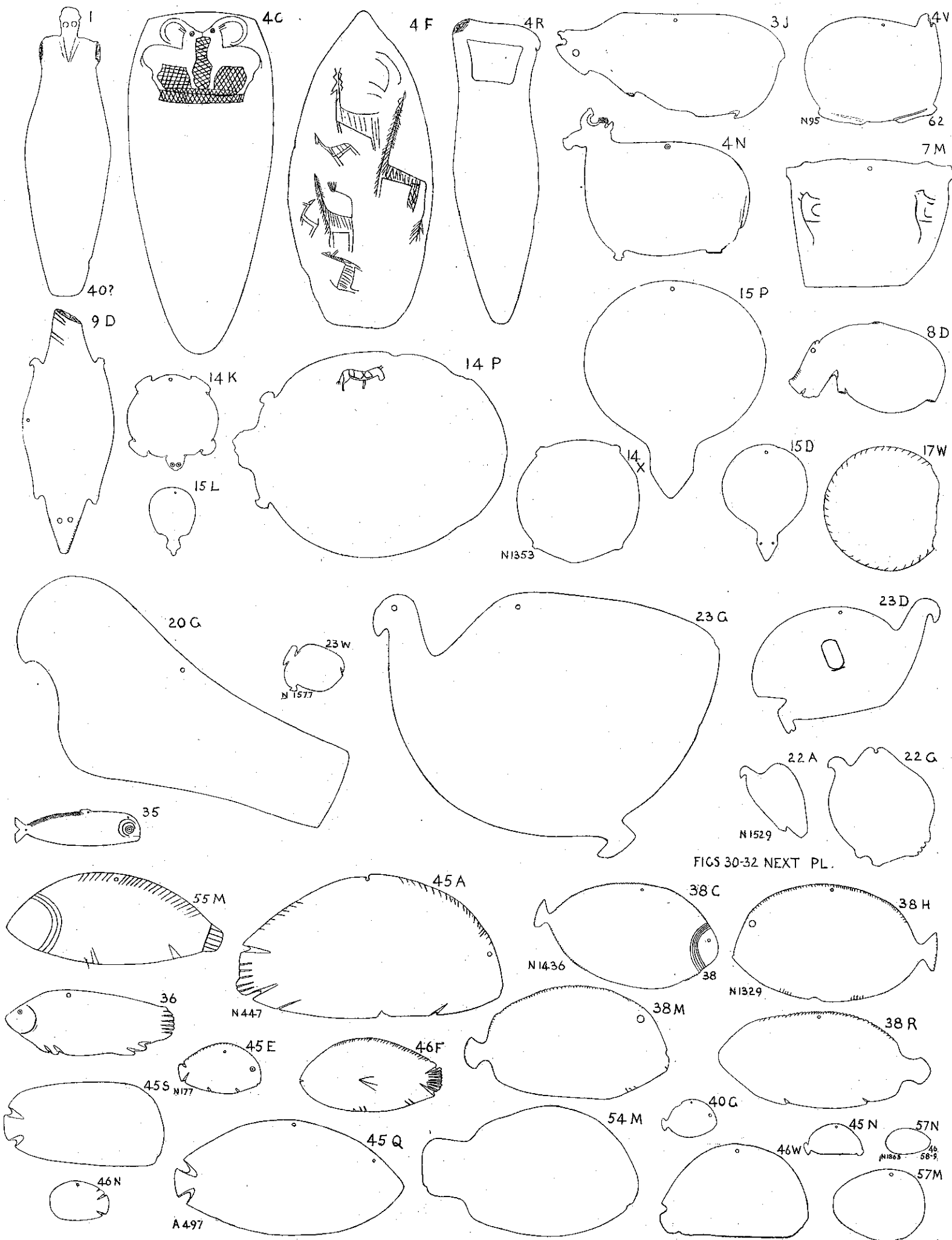




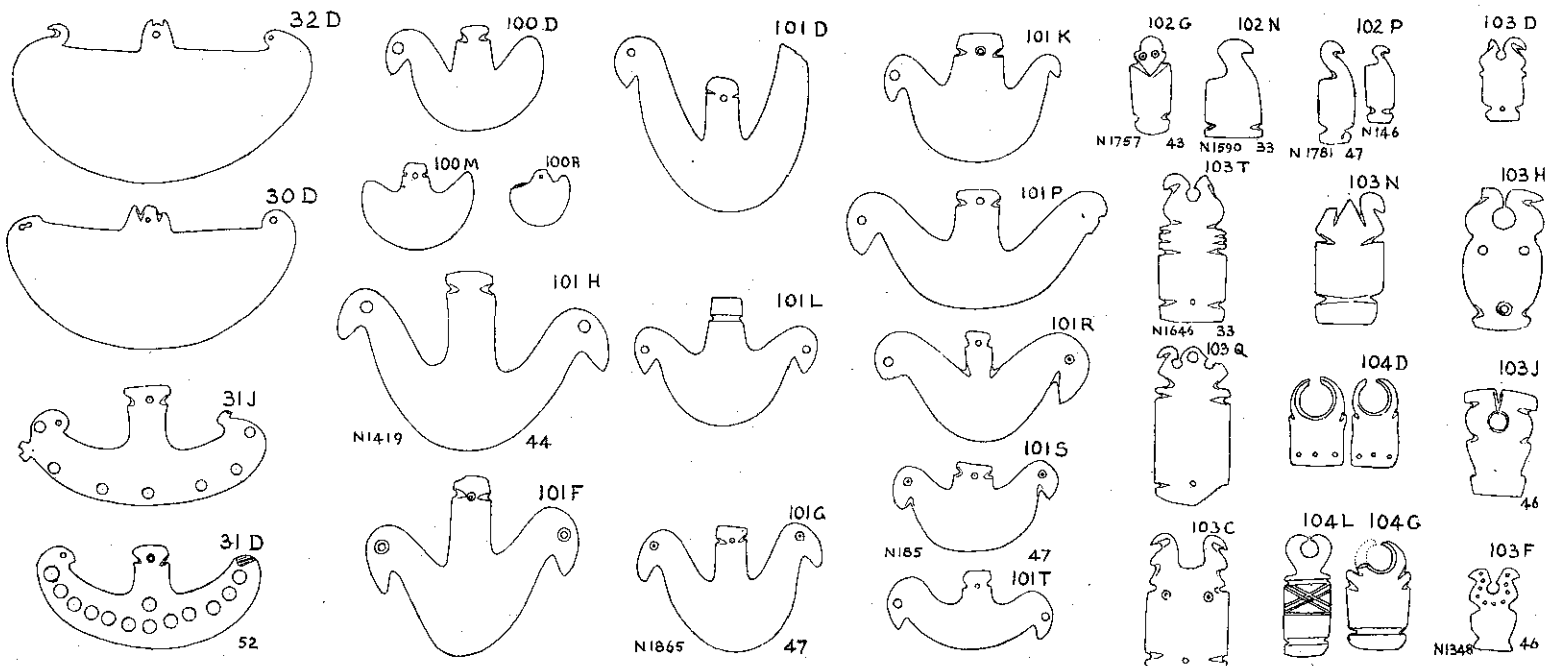
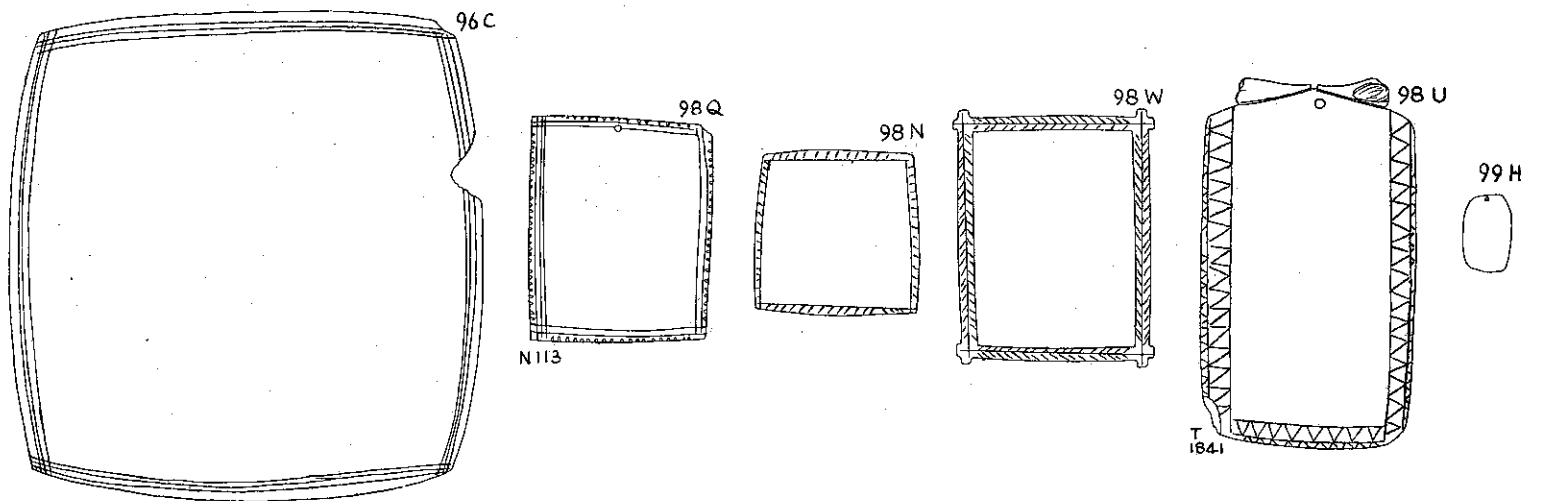
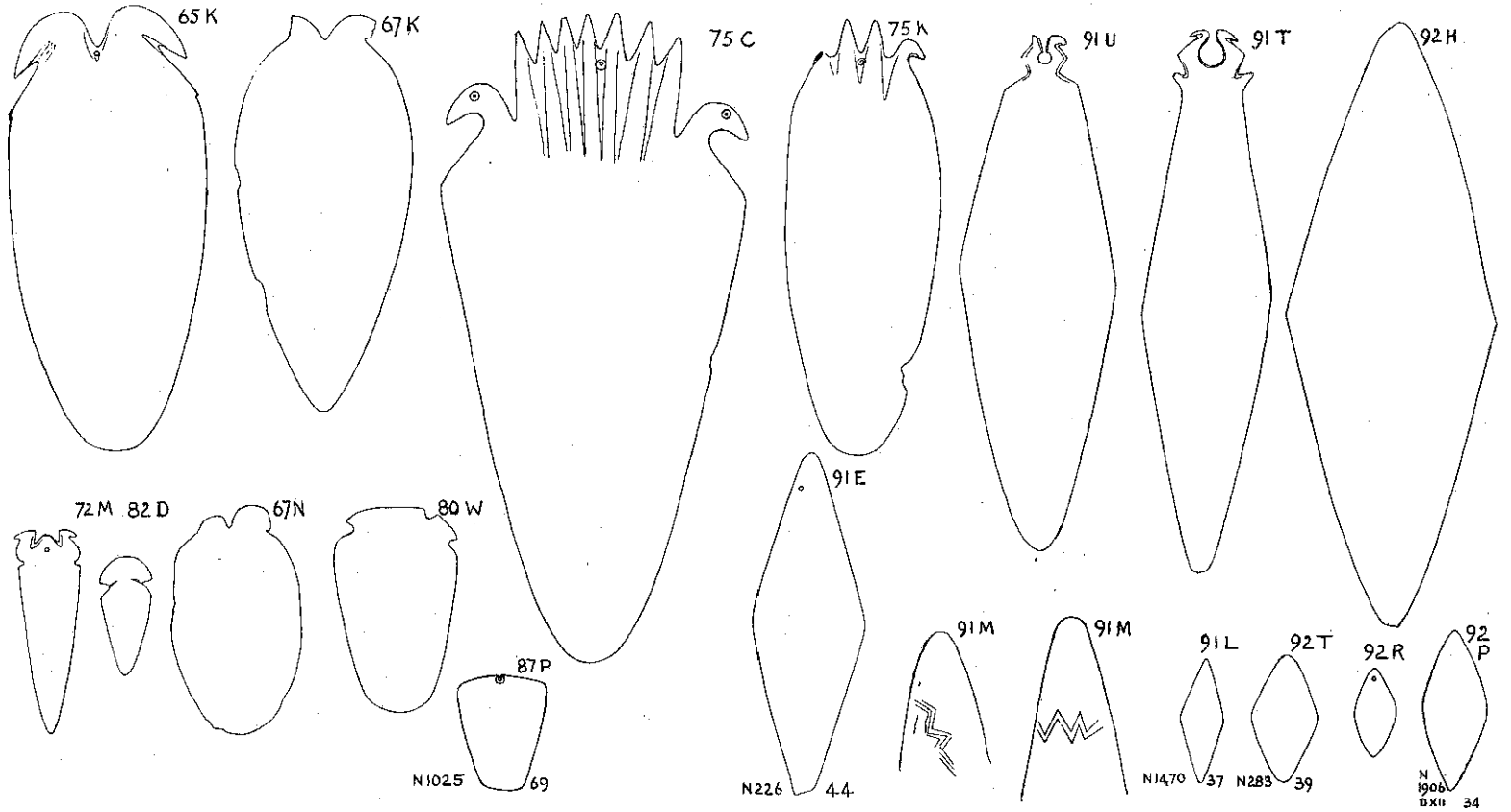


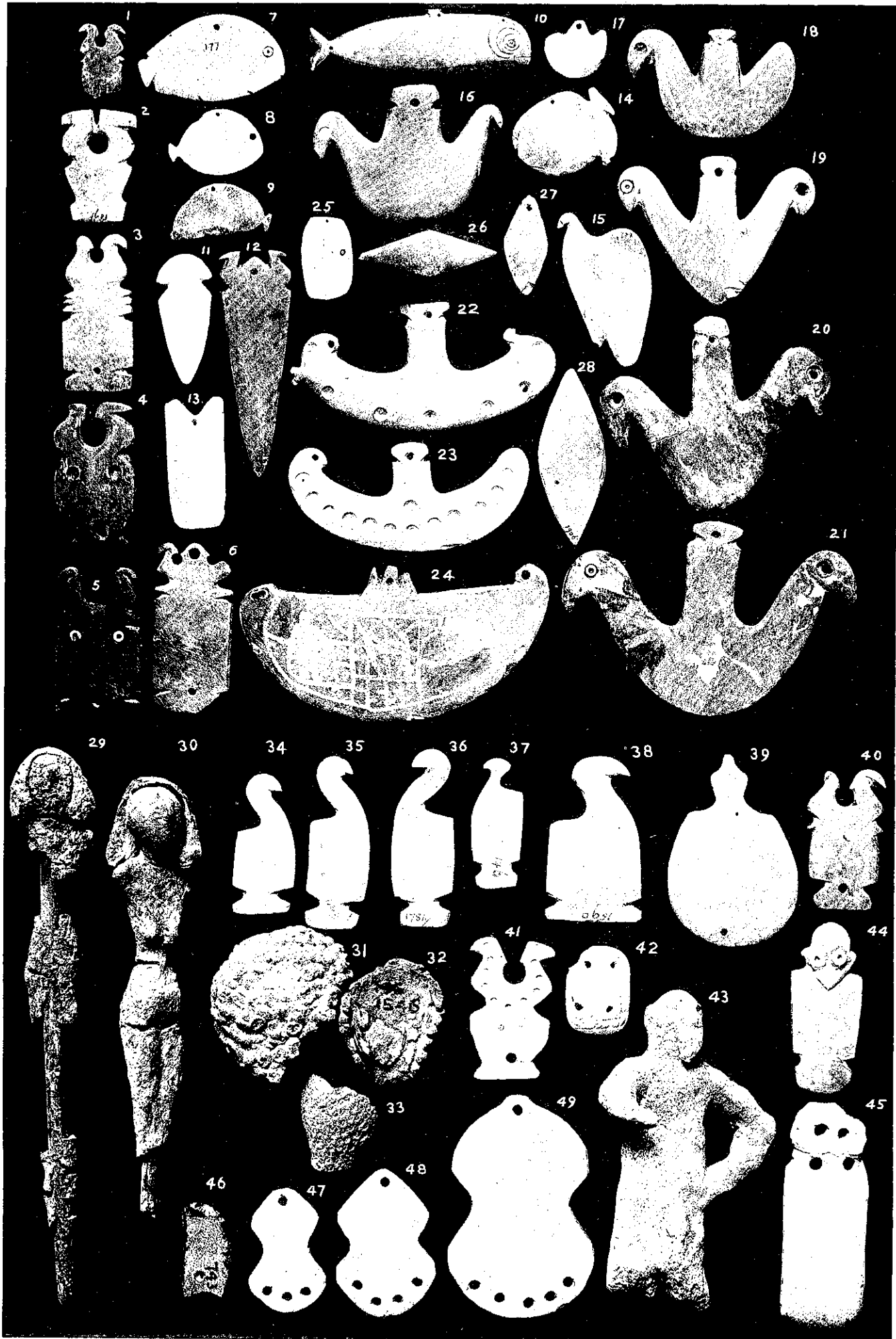




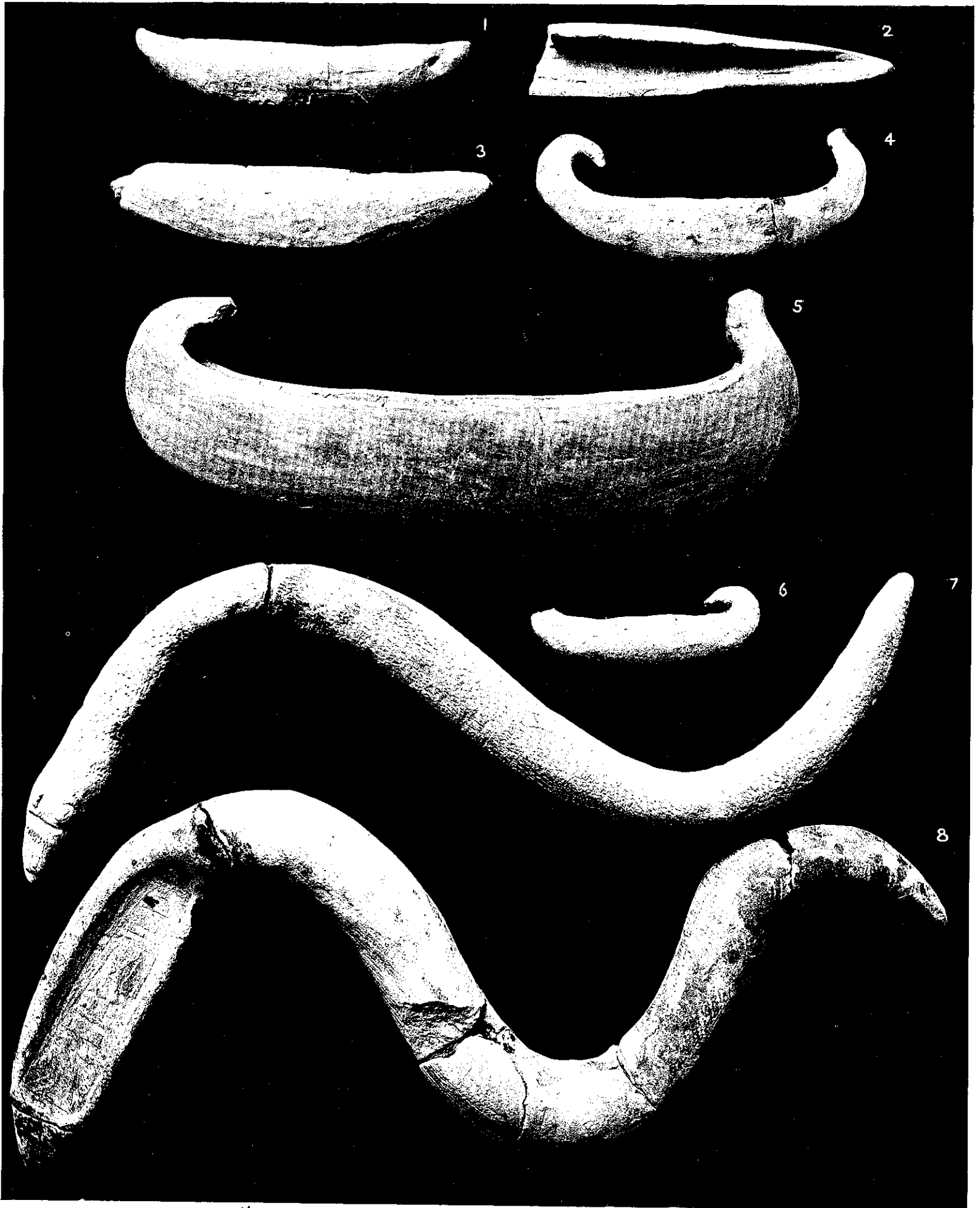


FIGS 30-32 NEXT PL.

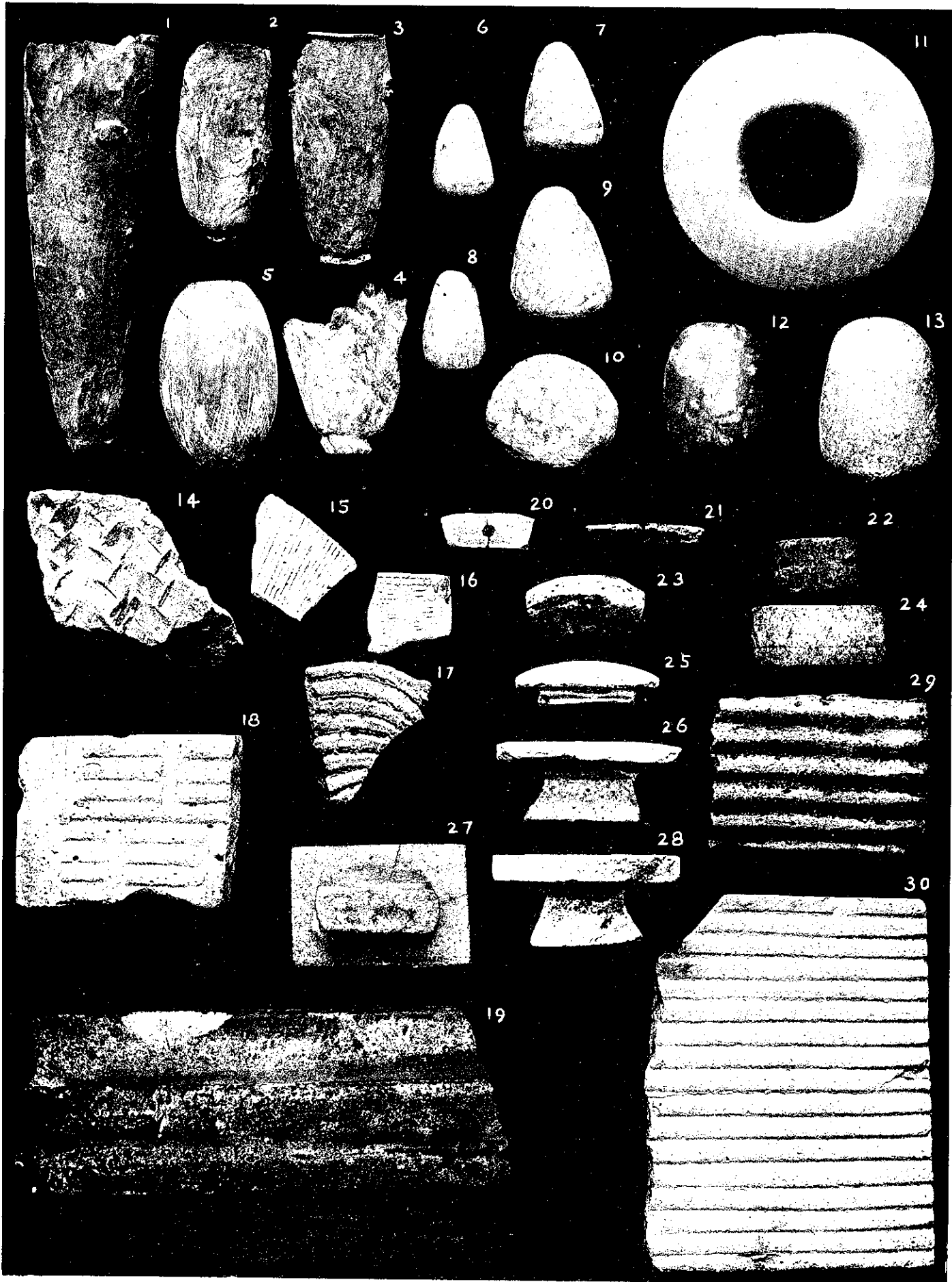






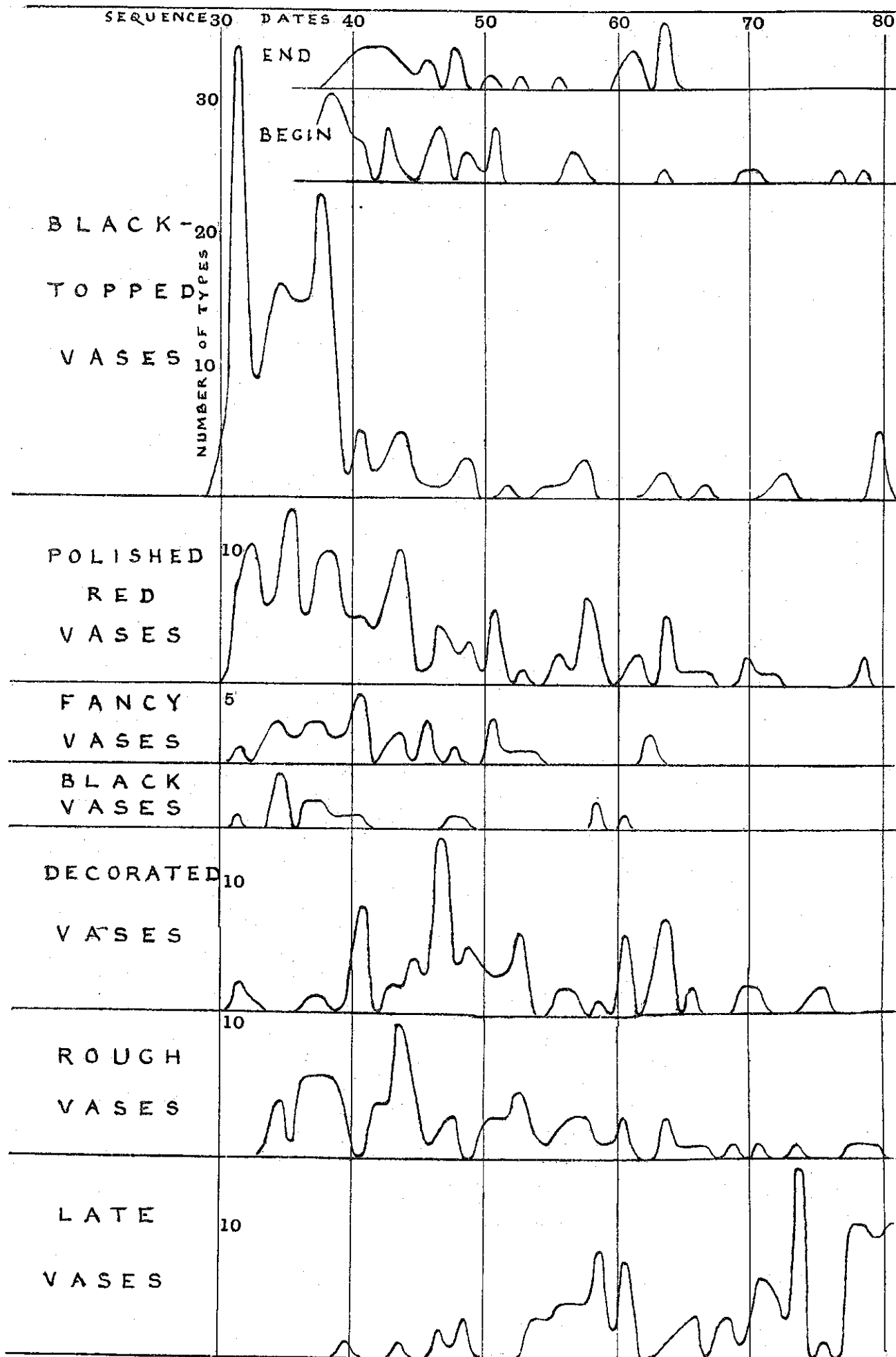






PERIODS OF CHANGE SHEWN BY THE NUMBER OF NEW TYPES OF POTTERY.

L.





SEQUENCE DATES OF GRAVES.

NAQADEH		NAQADEH		NAQADEH		NAQADEH		NAQADEH		EL AMRAH		GERZEH		GERZEH					
No.	S. D.	No.	S. D.	No.	S. D.	No.	S. D.	No.	S. D.	No.	S. D.	No.	S. D.	No.	S. D.				
1	65	299	46	690	52	1339	76	1573	31-48	1723	40	B	50	76	50?	10	52-63	138	62-66
2	69-72	301	39	714	62	1341	79	1574	31	1724	40-56	25	63	82	34-54	11	53-64	139	62
3	66	302	44	721	44-64	1342	80	1575	45	1725	50	28	47	85	36-41	12	57-65	140	55-63
4	43	315	67	723	46-52	1343	65-80	1577	38-50	1726	45	29	51	86	31-39	13	57	142	57-65
5	70	326	47	724	43-50	1345	34-38	1579	63-71	1727	49	50	50	88	36-39	14	52-63	144	53-58
17	74	327	39	730	48	1348	33-48	1584	32	1728	47	51	40-50	89	35-43	15	47-52	145	55-57
21	71	329	62	733	58-67	1359	39	1586	33-46	1729	40	91	61	90	34	16	47-63	146	63
31	63	330	62	743	60	1368	44-64	1587	31	1732	50	98	57	91	35-50	18	60-61	147	52-66
39	56	331	56	749	68-72	1376	46	1589	35-50	1733	51	99	61	94	39	19	63	148	52-66
45	72	337	79	807	49	1381	36-51	1590	33	1734	47	101	52	96	60	20	57-58	149	55-63
47	70	342	43-45	810	58	1389	44-59	1591	31	1736	37	102	32	102	38	21	61-65	150	50-65
51	56	346	57	812	56	1390	40	1592	34	1740	46-52	119	36-55	112	41?	23	55	151	52
89	58	348	37	820	52-60	1392	42	1594	37	1746	32	120	37	116	40	24	46-57	152	53
93	72	365	72	822	49-53	1395	33	1595	31	1748	38-43	121	35-54	117	57-61	25	58-62	153	52-65
95	62	367	38-41	823	52	1396	52	1599	32	1751	41-45	127	70	118	48	26	57-64	154	66
103	79	369	55-74	829	40	1400	40-57	1600	37	1759	41	133	46	120	47	27	51-63	155	52-63
108	43	370	52	834	52-68	1401	42	1602	36-44	1762	39-43	121	40-48	121	40-48	31	52-67	162	57-64
112	76	373	64	836	63	1405	51-58	1606	31	1765	50	124	48-50	124	40-57	32	47	163	52-66
113	79	374	72	840	45	1406	72	1609	34-38	1766	31	126	43-59	33	57-64	33	47	165	57-64
114	56	378	36-51	851	58	1409	37	1610	35-39	1767	34-46	126	43-59	34	48-59	34	48-59	169	61
117	35-48	385	64	862	58-63	1410	36-44	1611	36-38	1770	61	127	36-43	35	57-63	35	57-63	170	47
123	72	386	73-78	867	49-66	1411	42	1613	33	1773	31-41	129	43-63	37	50-52	37	50-52	172	58-70
124	72	387	30-34	871	49	1412	43-44	1614	33	1775	31	131	61-62	39	52-63	39	52-63	173	58-63
129	47-63	388	72	1004	54	1414	38	1615	38	1781	47	139	46	40	58-63	40	58-63	174	50-64
132	35-43	398	40-54	1007	57-64	1415	54	1619	38	1783	34	140	52-53	41	65	41	65	175	52-66
140	63	399	52-62	1008	47-48	1416	34-38	1621	33	1788	34-46	143	49-53	42	53-66	42	53-66	176	63
147	60-1	400	76	1010	62	1417	35-41	1625	34-48	1789	31-42	10	52	43	58-63	43	58-63	177	52-65
148	51-73	414	51	1018	57-64	1419	44	1626	34-48	1790	47	11	40-58	44	58-64	44	58-64	178	52-66
160	42	416	54	1021	68-59	1426	37	1628	31	1791	34-46	14	43-61	48	65-70	48	65-70	179	57-64
161	65	419	38	1025	69	1436	38	1634	32-48	1798	38-46	16	61	49	50-63	49	50-63	181	60-65
162	58	421	50	1037	60-70	1437	32	1636	33-48	1799	33-48	17	64	52	65-70	52	65-70	183	50-60
164	42	426	78	1108	40	1440	41-51	1638	47	1806	43-56	18	64	21	48-53	53	65-66	184	50
165	49	429	48	1205	47	1443	31	1644	32	1814	38	22	44	22	44	54	63-66	187	53-66
171	34-55	431	45	1206	70	1449	31	1645	41?	1816	35	23	38-44	23	38-44	55	65-72	188	52-66
172	44	434	47	1208	42	1450	37	1646	33	1817	36	24	39	27	39	57	67-64	189	52-66
173	52	436	56	1209	52	1457	38-41	1649	38	1821	33-37	25	64	28	44-50	58	67-64	192	51-57
174	33-48	460	77	1212	72	1458	52-68	1654	34	1823	32	26	69	32	70?	60	58-63	196	58-59
177	46-61	471	32-48	1215	49-63	1464	38	1657	55	1825	35-38	30	59	35	44-53	61	58-63	197	46-60
178	57	472	45	1216	53-69	1465	38	1658	33	1827	38	32	50	37	47	62	53-66	198	50-65
185	47	485	71	1218	62	1470	37	1661	34	1829	32	33	78	37	47	63	52	199	53
191	38-43	491	74	1220	46-53	1473	38	1662	35-51	1832	37-45	35	59	40	47	66	63	200	58-63
192	41	494	55	1221	60-68	1475	45	1663	33-46	1841	47	36	72	43	52-66	67	53-63	201	47-57
194	33	511	47	1222	43	1476	34	1667	44	1845	42	39	76	46	57-59	68	50-58	202	53-66
195	43	512	46	1229	62	1483	35	1670	31	1848	52	46	57-59	62	58	70	63	203	52-66
198	51	518	44	1230	57	1484	35	1671	42-43	1850	47	65	55-61	65	55-61	72	63	204	52-66
206	34	524	48	1233	61	1485	39	1675	32-48	1851	39	68	37	68	37	74	62	205	64
207	52-66	527	39-41	1237	44	1486	55	1676	32	1852	50	75	46-56	75	46-56	75	46-56	206	61
210	68	529	47	1238	44-51	1487	38	1677	31-48	1853	54	78	41-48	77	58	77	58	208	47
223	34	533	70	1241	52	1489	38	1678	31-56	1856	43-56	87	50-52	78	58-63	78	58-63	209	47
226	44	540	50	1247	48-59	1490	31	1679	34-37	1857	40-62	88	46	88	46	80	58-63	211	50-58
234	63	559	58	1248	72	1497	33	1680	44	1858	40	91	78-80	91	78-80	82	59	212	58
235	38	562	47	1250	56	1499	32-41	1681	32	1861	35-51	104	58-60	104	58-60	85	57-63	220	58-70
241	31-37	584	56	1251	40	1503	36	1683	39	1863	46	106	46-53	106	46-53	86	57-64	229	47-57
246	59?	569	58	1253	42	1505	31	1684	59	1865	47	107	52-56	107	52-56	93	58-63	230	52-66
247	46	572	47	1257	42	1507	34-39	1685	46	1866	43	117	31-41	117	31-41	95	63	232	50-51
249	53-62	576	54	1260	34	1515	31-34	1686	49	1867	49-50	119	48	119	48	99	63	233	52-57
259	51	578	44	1263	63	1526	36-50	1687	35	1869	46	127	34	127	34	103	47	235	63
260	40-43	597	50	1269	75	1528	45	1687	35	1871	46	132	37-43	132	37-43	104	47	239	52-65
262	38-56	598	53	1270	62	1534	44	1690	41	1873	46	136	31	136	31	104	64	241	65
265	76	610	47	1271	62-63	1538	32-50	1693	48	1877	45	139	44	139	44	105	65	242	63-65
268	50	620	42-58	1272	63	1539	40-43	1695	48	1878	45	151	52-53	151	52-53	106	65	247	52-66
269	32-48	624	64	1273	44-50	1540	41	1697	52	1880	44	163	36-38	163	36-38	107	53-66	248	52-65
270	57	625	44	1279	80	1546	37	1700	40	1884	53	166	60?	166	60?	109	52-66	249	59-61
271	38	631	57	1281	73-79	1547	38	1701	52	1888	47	184	34	184	34	110	57-64	250	52-61
272	44-63	639	63	1287	52	1547	38	1702	44	1891	38	189	57	189	57	111	44	253	60
273	32	643	46	1289	80	1552	35	1704	55	1893	40-44	199	43-62	199	43-62	115	61-65	257	70
276	42	649	43-59	1290	68	1552	35	1705	45	1899									

SEQUENCE DATES OF GRAVES.

MAHASNAH	DIOSPOLIS U	DIOSPOLIS U	DIOSPOLIS U	DIOSPOLIS B	DIOSPOLIS B	DIOSPOLIS R	DIOSPOLIS R	CEM. ABYDOS	NUBIA 8-9
No. 1 36-38	6 78	132 35	258 59	B 7 57	316 66	37 72	194 72	I. E	76.64 44
4 70?	8 66	134 38	259 36-40	8 57	323 60	39 59	195 78	11 63-64	67 50-51
5 45-57	12 74	135 73	260 33	18 57	324 51	40 52	196 72	44 31-47	112 40-46
6 33-45	13 66	136 42	262 65-75	25 57	325 63	41 58	197 73-79	49 39	134 60-65
8 75-79	19 76	140 37	267 36	26 64	326 67	42 60	200 78	74 60-72	142 66
10 30-37	23 51	141 50	268 35	27 57	327 42	44 75	203 78	75 57-74	143 63
12 33-47	24 60	142 34-44	269 32-44	32 59	328 53	50 60	204 77	90 33-38	144 65-70
15 34	25 56	144 47	272 32	33 63	331 48	52 78	206 78	120 33-46	79.3 60-63
16 30-38	26 68	145 35	273 37	34 35-39	334 39	54 72	208 77	127 30-47	11 58-63
17 36-44	27 78	150 38	278 65-80	35 34-41	335 44	55 51	214 72	132 31-55	45 78-80?
18 38-55	28 53	153 61	279 32-39	37 31	338 43	57 72	215 51	153 32-43	48 77-79
19 35-46	29 77	154 44	280 33	57 40?	339 64	58 72	216 75	166 35-53	66 47-50?
20 30-47	30 62	157 34	281 36	52 31-48	341 42	59 67	218 74	185 52-62	86 78-81
21 52-55	31 46	158 41	284 43	56 34	342 44	63 37	221 80	201 43-57	92 78-80
22 36-55	33 68	160 32	285 54	58 50?	343 57	64 53	222 76	205 34	97 57
23 36-43	34 52	161 76	286 56	59 46	345 63	69 64	224 54	256 52-61	117 73-79
26 30-36	35 55	162 42	290 32-46	60 64	346 62	70 76		264 57-68	122 67-79
29 34?	36 55-68	163 61	291 36-50	64 48	348 42	71 75		272 55	135 63-68
30 34	38 40	164 55	292 60	65 45	349 41	72 78		286 46-59	138 56
32 31-38	39 60	165 80	293 35	66 53	354 48-53	74 75		294 57-66	139 46-58
33 43-44	45 80	166 49	299 37	69 43	365 57	75 73		302 46-53	142 55
34 30-37	46 58	170 39	300 33-43	70 34	367 60	78 58		323 57-63	143 58-64
35 34	47 39	172 57	303 35	73 40	372 45	79 52		340 57-66	147 70?
36 37	49A 79	173 70	305 41	75 36-42	373 63	80 60		351 57	160 60?
39 31-44	49B 56	175 43	306 62	78 33	374 48	81 57		352 57-63	165 65
40 45-47	50 73	176 44	307 37-39	83 33-48	378 52	82 49		370 57-66	166 50?
41 36-38	51 63	177 63	308 41	84 34	379 66	83 41		381 57-62	80.13 40-58
42 35-36	52 62	178 55	309 39	86 35-40?	381 52	84 48		383 72-75	15 60?
45 33-37	54 74	181 51	310 39	88 31-34	392 59	85 58			16 60?
46 30-47	55 72	182 43	313 37	101 34	393 51	86 58			89.601 75
47 47-63	56 75	183 73	314 57	102 33-41	400 58	87 59			547 78-79
48 55?	57 76	184 66	317 30-37	103 35	401 64	88 60			686 57-59
49 31-50	58 72	185 53	319 37	107 33	404 68	91 53			
50 31-41	59 58	186 49	321 37	108 33	405 52	92 69			
52 30-47	60 65	187 53	325 36-43	109 44?	406 48	93 57			
53 32-33	62 52	190 58	327 32	111 33-48	407 71	94 74			
54 36-47	63 71	191 61	329 36	116 31-48	408 57	95 51			
55 40-45	64 58	192 65	331 36	117 35	410 49	99 51			
58 38	65 60	193 65	332 63	118 33-48	411 48	100 67			
60 43	66 77	194 51	334 60-72	120 45	412 46	102 57			
65 78-80	67 65-75	195 42	335 41	121 57	416 60	103 41			
66 78-80	68 41	196 57	336 33-44	122 45?	419 55	104 36			
68 70-78	69 76	197 61	338 35	123 32	421 41-48	107 34			
72 70-75	70 71	198 48	340 33	130 35	422 52	111 72			
75 68-76	71 71	199 48	343 40	137 31-38	423 66	112 70			
76 46-67	73 58	200 37	344 41-68	143 36	424 46	114 58			
77 42-59	74 78	201 67	345 40	158 63	425 53	116 62			
78 78-80	76 54	203 48	347 65	164 50-60	426 61	117 69			
80 47-57	77 66	204 67	349 36	176 65	427 45	119 64			
81 59	78 52	205 53	349 71	183 58	428 49	120 72			
82 57-64	81 74	207 43	351 54	184 46	429 57	121 56			
83 63?	82 68	208 72	352 47	185 65	430 60?	122 69			
84 71-78	84 40	209 57	353 32-44	186 63	431 66	123 71			
85 -40	85 69	211 80	354 70-80	188 58	432 40	124 75			
86 55-70	86 40	212 49?	355 33	190 65	433 39	127 42			
88 35	88 58-74	214 36	356 31	191 56?	434 68	128 69			
89 57?	89 55	215 71	358 38	192 66	441 68	129 67-79			
90 32-44	90 50	216 62	364 65-76	194 53	443 44	130 33			
92 71?	91 72	217 69	366 59	196 57	444 46	131 71			
93 33-47	96 36	218 50	369 38	197 49	447 51	132 66			
97 34	97 52	219 61	372 35	217 66	451 57	134 41			
99 35-36	99 56	222 35	374 37	232 68	452 59	135 66			
107 48-53	100 37	223 33-41	375 33	233 69	500 62-71	137 70			
108 78	102 57	225 39	376 37-40	234 66	503 58	138 79			
109 78-80	103 36	226 63	377 57	235 43	505 68	139 70			
115 75-78	104 43	227 63	379 67	236 43-48	506 68	141 61-68			
118 70?	105 44	228 63	380A 59	239 43-48	510 65	149 72			
121 77	107 35	229 34	381 37	241 31-41		151 57			
122 77-78	109 43	230 56	382 41-47	242 43		152 68			
124 77	110 62	232 36-44	383 36	248 52		155 50			
126 77	112 43	233 35-39	384 36	251 63		159 71			
128 77-78	113 32-48	234 35	385 70	253 65		162 68			
129 78	114 53	236 33	386 70	256 42		163 75			
134a 34-44	115 35	238 33	387 78	257 67		169 60			
135 34-44	116 38	240 68	388 36	258 53		171 64			
138 70?	118 39	241 70	389 36	260 53		173 75			
140 40-57	119 37	243 43	391 73	262 57		175 70			
	122 46	244 36	392 62	304 60		177 51			
	125 72	246 62	394 74	306 58-66		179 78			
	127 43	247 39	395 75	308 57-68		180 68			
	128 60	249 36	396 68	309 50		181 78			
	129 68	250 43	397 65	310 48		184 72			
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