

- (2) Petrie, *Gizeh and Rifeh*, Pl. VI D, 121, diminutive variation, from mastaba T.
- (3) Harvard-Boston Expedition, *mss. notes on Zawiat-el-Aryan*, one porphyry from mastaba Z 500, time of Khaba.

Type 3-III b, flat-bottomed spheroidal jar:

- (4) Garstang, *Mahâsna and Bêt Khallâf*, Pl. XXVII, 2, (Fig. 38, No. 3), syenite, from K 5.
- (5) Harvard-Boston Expedition, *mss. notes on Zawiat-el-Aryan*, seven examples of porphyry from mastaba Z 500, time of Khaba.

Type 3-III c, quasi-spheroidal jar with shoulder, flat bottom:

- (6) Garstang, *Mahâsna and Bêt Khallâf*, Pl. XX, breccia, from K 2. *Third Egyptian Dynasty*, Pl. IX, 11 (Fig. 38, No. 4), breccia, from R 1; Pl. VII shows two examples from that tomb.
- (7) Quibell, *Tomb of Hesy*, Pl. XXVII, 2 (Fig. 38, No. 5) and 5, eleven examples, all heavy, of porphyry or gabbro, late stairway.
- (8) Hearst Expedition, *mss. notes on Naga-'d-Dêr*, porphyry, from late stairway tomb N 689.
- (9) Harvard-Boston Expedition, *mss. notes on Zawiat-el-Aryan*, one example, porphyry, from Z 500, time of Khaba.

(3) Type 3-IV. Shoulder Jar with Horizontal Handles

Curiously enough, two examples of the old predynastic barrel-shaped jar with two horizontal handles have been found in a cemetery of Dynasties II-III.

Type 3-IV a, old form of handled jar = PD-IV a:

- (1) Mace, *Naga-'d-Dêr II*, p. 44, No. 8, found in the surface débris, porphyry.
- (2) Hearst Expedition, *mss. notes of Cem. N 500 at Naga-'d-Dêr*, grave 639, contracted burial in wooden box with coarse pottery jars (see Mace, *Naga-'d-Dêr II*, Fig. 86, No. 11), pink limestone.

Considering the materials and technique of these jars, I have no doubt that both were actually predynastic jars, re-used for burial purposes at a time when the use of stone vessels was largely a matter of tradition.

The characteristic jar of type IV is the later form with the true shoulder and wide disc mouth like those so common in the Mycerinus temples.

Type 3-IV d, two-handled shoulder jar, high form:

- (3) Quibell and Green, *Hierakonpolis*, Pl. XXXVI, granite, unpierced handles, boring unfinished, inscribed with the name of Khasekhem.
- (4) Garstang, *Mahâsna and Bêt Khallâf*, Pl. XXVII, 3, syenite, from the large stairway mastaba K 5 (Fig. 38, No. 8).
- (5) Mace, *Naga-'d-Dêr II*, p. 44, No. 7, from a small brick-lined grave with mastaba, alabaster, with four other alabaster vessels (Fig. 38, No. 7).
- (6) Petrie and Quibell, *Naqada*, p. 6 a, stairway tomb 522, probably refers to H 40, but provenience of H 40 is not discoverable from the publication.
- (7) Quibell, *El-Kab*, Pl. X, 29, from stairway tomb No. 5 (?), according to text, p. 8 (misprint?).
- (8) Quibell, *Tomb of Hesy*, Pl. XXVII, 3, from large stairway mastaba (end of Dynasty III), alabaster (Fig. 38, No. 6).
- (9) Hearst Expedition, *mss. notes on Naga-'d-Dêr*, grave 553; shaft mastaba N 561 (earlier than Sneferuw mastaba); both alabaster.
- (10) Harvard-Boston Expedition, *mss. notes on Zawiat-el-Aryan*, three of alabaster, one with dummy handles, from Z 500, time of Khaba.

This type is represented among the vessels on the wall of the Hesy tomb (Quibell, *Tomb of Hesy*, Pl. XV) and at Medûm in a tomb of the next period (Petrie, *Medum*, Pl. XV, left-hand side), where they are labelled as containers of oils or perfumes.

(4) Type 3-V. Shoulder Jar without Handles

The shoulder jars, although not so common as in Dynasty II, are fairly well represented, as in the tomb of Khasekhemuwy. A few large forms have been found in the great stairway tombs; but the smaller forms, especially the barrel-shaped jar and the squat jar, are numerous in the first half of the dynasty. One large jar, imitating a pottery wine jar with network of cords, was found in the tomb of Hesy (a late stairway tomb).

Type 3-V extra, tall jar:

- (1) Quibell, *Tomb of Hesy*, Pl. XXVII, 11, alabaster; cf. the jars from the tomb of Khasekhemuwy (type 2-V extra).

Type 3-V a (1), large or medium-sized jar:

- (2) Garstang, *Third Egyptian Dynasty*, Pl. XI, four different forms, alabaster, from R 1 and R 40 (Fig. 39, Nos. 1-4).
 (3) Quibell and Green, *Hierakonpolis*, Pl. XXXVII, alabaster, inscribed with the name of Khasekhem (?).

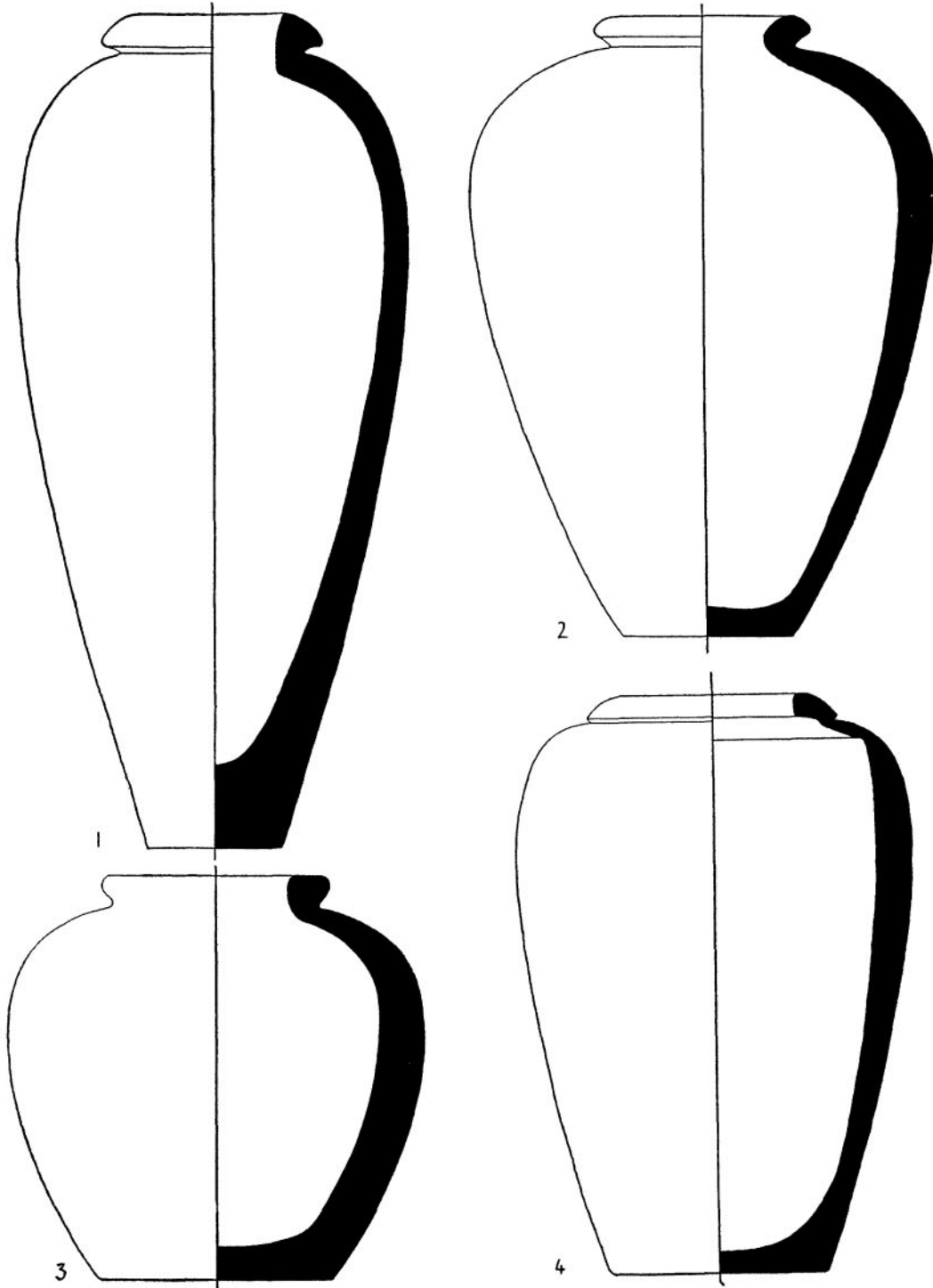


FIGURE 39. DYN. III. STONE VESSELS, TYPE V A (1). SCALE $\frac{1}{4}$

- (4) Hearst Expedition, *mss. notes on Naga-'d-Dêr*, from late stairway tomb, N 587, alabaster (h., 24 cm.).
 (5) Harvard-Boston Expedition, *mss. notes on Zawiat-el-Aryan*, two of alabaster, from mastaba Z 500 (time of Khaba), barrel-shaped.
 (6) Quibell, *Tomb of Hesy*, Pl. XXVII, 12, two of alabaster.

Type 3-V a (2), small-shouldered jar:

- (7) Mace, *Naga-'d-Dêr II*, p. 44, Fig. 101, Nos. 3-6 (Fig. 40, No. 1), Fig. 102, Nos. 4, 5, six examples of alabaster, from small brick-lined graves.
 (8) Hearst Expedition, *mss. notes on Naga-'d-Dêr*, three examples from small graves N 513, 536, and 637, alabaster.

Type 3-V b (2), truncated ovoid or barrel-shaped jar, small:

(9) Garstang, *Third Egyptian Dynasty*, Pl. IX, 23, three examples from R 40 (see Pl. VII). *Mahásna and Bêt Khalláf*, Pl. XXVII, 9, 10, from K 4 (Fig. 40, Nos. 2, 3).

(10) Mace, *Naga-'d-Dêr II*, p. 45, Fig. 102, Nos. 1-4, twelve examples, alabaster, from small brick-lined graves.

(11) Hearst Expedition, *mss. notes on Naga-'d-Dêr*, one from stairway N 599 and nineteen from small graves.

Type 3-V c (1), sharp-shouldered jar, high form:

(12) Petrie and Quibell, *Naqada*, p. 5a, stairway tomb 162, Pl. XI, 26, and from small tombs 260 and 275 (p. 7b).

(13) Garstang, *Third Egyptian Dynasty*, Pl. VIII, 1 and Pl. IX, 12 (Fig. 40, No. 4), from stairway R 40.

(14) Petrie, *Gizeh and Rifeh*, Pl. VI E, 143, from large stairway mastaba T.

(15) Hearst Expedition, *mss. notes on Naga-'d-Dêr*, one from stairway N 593, and from small grave N 581.

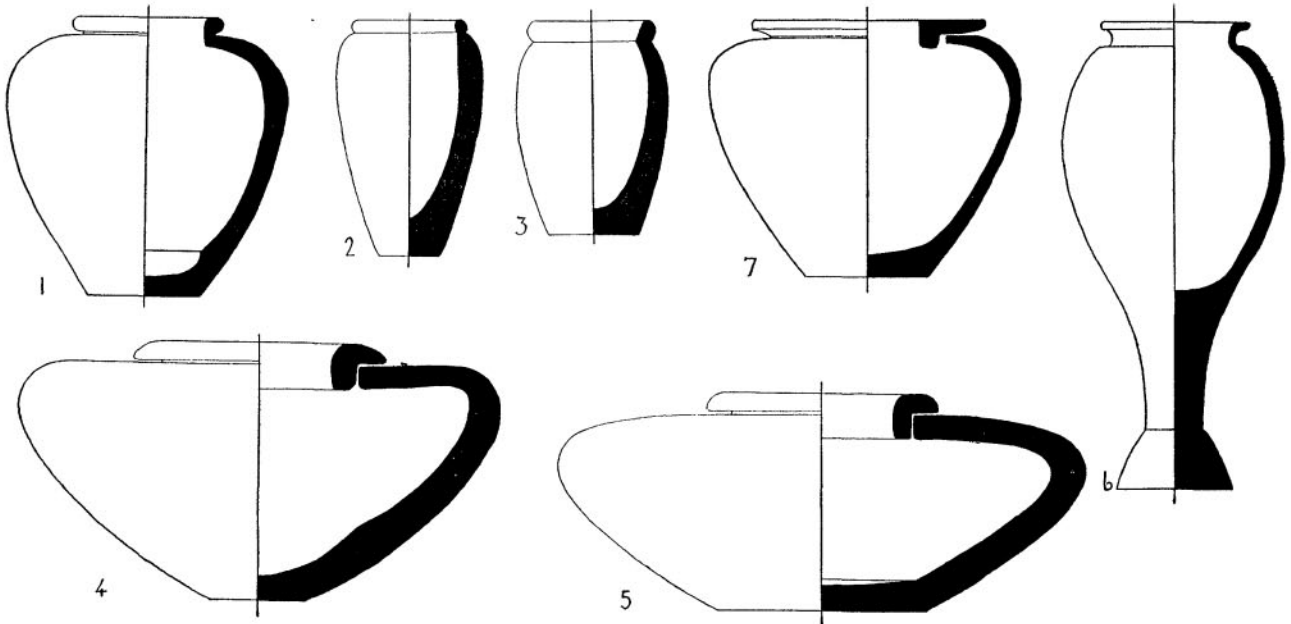


FIGURE 40. DYN. III. STONE VESSELS, TYPES V A-E. SCALE $\frac{1}{4}$

Type 3-V c (2), sharp-shouldered jar, squat form:

(16) Garstang, *Mahásna and Bêt Khalláf*, Pl. IX, 22 (Fig. 40, No. 5) from R 40 and, according to Pl. VII, three other examples from same tomb.

(17) Mace, *Naga-'d-Dêr II*, p. 44, Fig. 101, Nos. 1, 2, two examples only.

(18) Hearst Expedition, *mss. notes on Naga-'d-Dêr*, one from the early stairway N 573, and eight from small graves.

NOTE: This small ceremonial jar was not found in later stairway tombs at Naga-'d-Dêr or in the grave of the time of Khaba at Zawiat-el-Aryan.

Type 3-V d, *hes*-form jar:

(19) Mace, *Naga-'d-Dêr II*, Pl. XLVI a, 12 (Fig. 40, No. 6).

Type 3-V e, broad-shouldered jar with ledge rim around mouth. (See 2-IV e):

(20) Hearst Expedition, *mss. notes on Naga-'d-Dêr*, one from the shaft grave N 739, time of Sneferuw (Fig. 40, No. 7).

See also the vessels represented on the walls of the tombs in Professor Petrie's *Medum*, Pls. XIII and XV, and in Mr. Quibell's *Tomb of Hesy*, Pls. XXI and XXII.

(5) Type 3-IX. Round-Bottomed Dish and Bowl

The round-bottomed platters and bowls have almost disappeared in Dynasty III, except those with recurved rims (see type 3-XI, below).

Type 3-IX a (1), round-bottomed platter:

(1) Garstang, *Third Egyptian Dynasty*, Pl. IX, 17, from R I (Fig. 41, No. 1).

(2) Hearst Expedition, *mss. notes on Naga-'d-Dêr*, one alabaster, from N 561, previous to Sneferuw.

(3) Harvard-Boston Expedition, *mss. notes on Zawiat-el-Aryan*, three heavy of alabaster, from mastaba Z 500, time of Khaba (total alabaster bowls, thirty-three).

Type 3-IX b, round-bottomed bowl:

(4) Petrie, *Gizeh and Rifeh*, Pl. VI D, 127, alabaster, from mastaba T (Fig. 41, No. 2).

(5) Harvard-Boston Expedition, *mss. notes on Zawiat-el-Aryan*, two deep bowls, alabaster, from mastaba Z 500, time of Khaba.

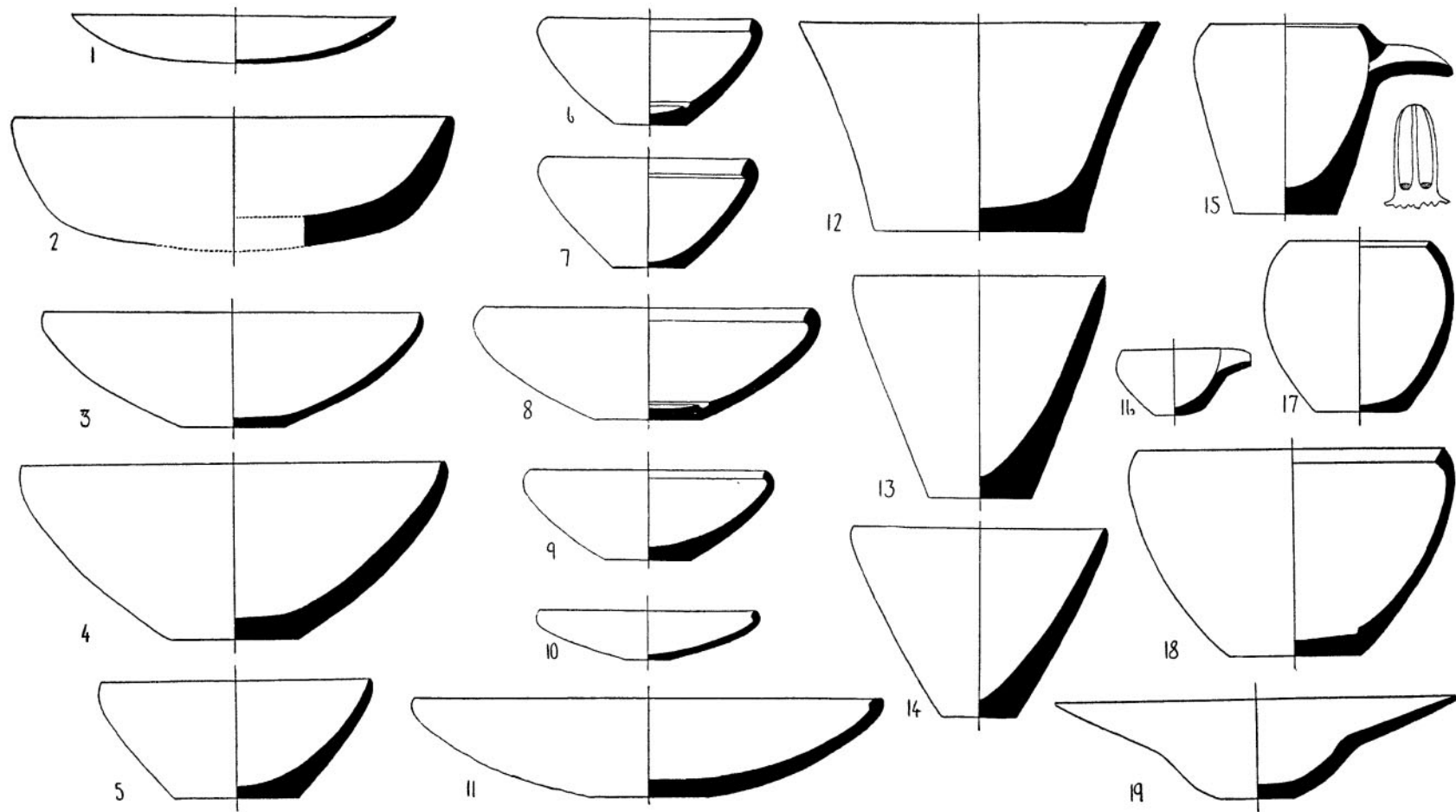


FIGURE 41
 DYN. III. STONE VESSELS, TYPES IX AND X. SCALE $\frac{1}{4}$

(6) *Type 3-X. Flat-Bottomed Bowl*

In Dynasty III, as in Dynasty II, the flat-bottomed bowls are more common than any other type of vessels. The variations of form may be described by the same symbols and combinations of symbols as in Dynasties I and II. But the group of bowls of Dynasty III on close examination proves to have a different appearance from that of the group of Dynasty I or of Dynasty II down to Khasekhemuwy. It is indeed nearly identical in its forms to the Khasekhemuwy group. There are more examples with convex sides, and the convexity is usually greater; fewer examples with sharp internal rim, and the slope of the rim is different; and the proportion of deep vessels has increased. A very characteristic form is the conical cup, both straight sided and concave sided, which is widely distributed, but occurs in no great numbers in any one grave. Another form which requires special notice is the wide bow with internal rim, one of the finer forms, which was found in six examples at Zawiat-el-Aryan, and bears the name of the Horus Khaba.¹ The materials of this bowl are veined marble and diorite. The same form in diorite occurs also with the name of Sneferuw (Dynasty IV).

The following references give the main material for the flat-bottomed stone bowls of Dynasty III, showing the examples with internal rim as distinguished from those with plain rim, but not attempting to mark the variations which merge into each other.

Type 3-X a (1), plain rim:

- (1) Garstang, *Mahâsna and Bêt Khallâf*, Pl. XII, 18 (Fig. 41, No. 5), 19, breccia and alabaster, from K 1; Pl. XIV, 15 (Fig. 41, No. 3), 16-19, 20 (Fig. 41, No. 4), 24, alabaster, from K 1; Pl. XXI, 4, 6, 8, 9, 11, alabaster, from K 2; Pl. XXVII, 4, alabaster from K 5.
Third Egyptian Dynasty, Pl. VIII, 2, 8, diorite, from R 40; Pl. IX, 16, 18 (breccia), 19, 20, alabaster, from R 40.
- (2) Petrie, *Gizeh and Rifeh*, Pl. VI D-E, 123 (alabaster), 134, from mastaba T.
- (3) Mace, *Naga-'d-Dêr II*, p. 43, Fig. 98, Nos. 7-10 (10 is diorite; rest, alabaster), six examples from small graves.
- (4) Quibell, *Tomb of Hesÿ*, Pl. XXVII, 7, five examples of alabaster.
- (5) Hearst Expedition, *mss. notes on Naga-'d-Dêr*, one of alabaster, from stairway N 587; one of alabaster (platter), from N 561, previous to Sneferuw mastaba.
- (6) Harvard-Boston Expedition, *mss. notes on Zawiat-el-Aryan*, twenty-five of alabaster, from mastaba Z 500, time of Khaba.

Type 3-X c, with internal rim:

- (7) Garstang, *Mahâsna and Bêt Khallâf*, Pl. XII, 1-17 (2, 4, 5, 6, 14 = Fig. 41, Nos. 10, 6, 9, 7, 8), porphyry, syenite, and breccia, from K 1; Pl. XIII, 1-8 (Fig. 41, No. 11), 10-12, alabaster, from K 1; Pl. XXI, 1, 2, 3, 5, 7, alabaster, from K 2; Pl. XXVII, 7, alabaster, from K 5.
Third Egyptian Dynasty, Pl. VIII, 3-7, diorite and porphyry, many examples from R 1; Pl. IX, 15, alabaster, from R 40.
- (8) Petrie, *Gizeh and Rifeh*, Pl. VI B-E, 97, 100-120 (alabaster), 125 (alabaster), 126 (syenite), 128 (syenite), 129 (alabaster), 130 (syenite), 131 (alabaster), 132 (diorite), 133 (alabaster), 138 (limestone), 139 (limestone), 140 (porphyry), 142 (diorite), 144 (diorite).
- (9) Mace, *Naga-'d-Dêr II*, p. 43, Fig. 98, Nos. 1-6; all of alabaster, seven examples from small graves.
- (10) Quibell, *Tomb of Hesÿ*, Pl. XXVII, 4, 8, fourteen examples of diorite and porphyry.
- (11) Hearst Expedition, *mss. notes on Naga-'d-Dêr*, three of alabaster and one of porphyry, from stairway N 587; one of porphyry, from stairway N 573 and one of dark diorite (?), from stairway N 599; one translucent diorite, from stairway N 689; one translucent diorite, from shaft mastaba N 739, inscribed with Horus name of Sneferuw.
- (12) Harvard-Boston Expedition, *mss. notes on Zawiat-el-Aryan*, ten examples of diorite, three of alabaster, and five of veined marble; the marble bowls are inscribed with the name of Horus Khaba.

Of the more unusual forms, the following may be noted for comparison with Dynasties I and II:

Type 3-X a (3), deep cup with straight sides and plain mouth, "conical cup":

- (13) Garstang, *Mahâsna and Bêt Khallâf*, Pl. XIV, 21-23, alabaster, three from K 1 (Fig. 41, Nos. 13, 14).
Third Egyptian Dynasty, Pl. X, 32, alabaster, from R 40.
- (14) Petrie, *Gizeh and Rifeh*, Pl. VI D, 124, syenite, from mastaba T; I also saw a number more from this same tomb among the vessels found by Mr. Covington.
- (15) Mace, *Naga-'d-Dêr II*, p. 43, Fig. 100, No. 2, alabaster.
- (16) Hearst Expedition, *mss. notes on Naga-'d-Dêr*, two from stairway mastaba N 587, one from stairway mastaba N 593; and three others from the small graves N 511, N 546, N 547; all of alabaster.
- (17) Harvard-Boston Expedition, *mss. notes on Zawiat-el-Aryan*, three of alabaster, from Z 500, time of Khaba.

¹ See Gauthier, *Livre des rois*, I, p. 42.

Type 3-X b (1) (z), deep cup with flaring plain mouth and concave sides:

(18) Garstang, *Mahâsna and Bêt Khallâf*, Pl. XXI, 14, alabaster, from K 2.

(19) Harvard-Boston Expedition, *mss. notes on Zawiat-el-Aryan*, one of alabaster, from Z 500, time of Khaba.

Type 3-X e (2) and (3), cup with spout:

(20) Garstang, *Mahâsna and Bêt Khallâf*, Pl. XXI, 10, 12, alabaster, from K 2; a bowl-jar with spout (Fig. 41, No. 15).

(21) Quibell, *El-Kâb*, Pl. X, 26, from stairway tomb 2 and No. 19 from small grave L 166 (Fig. 41, No. 16).

(22) Hearst Expedition, *mss. notes on Naga-'d-Dêr*, from shaft mastaba, 564.

The deep bowl-jar of the Khasekhemuwy tomb may be noted especially, although in my lists its predecessors have not been distinguished from the other flat-bottomed bowls with internal rim.

Type 3-X d, bowl-jar with internal rim:

(23) Garstang, *Mahâsna and Bêt Khallâf*, Pl. XXVII, 8, one of alabaster, from K 5.

(24) Petrie, *Gizeh and Rifeh*, Pl. VI E, 145, diorite (Fig. 41, No. 18).

(25) Mace, *Naga-'d-Dêr II*, Fig. 100, Nos. 1, 2, both of alabaster, from small graves.

(26) Hearst Expedition, *mss. notes on Naga-'d-Dêr*, one diorite, from stairway N 573; and two of alabaster, from small graves N 531 and N 541.

(27) Harvard-Boston Expedition, *mss. notes on Zawiat-el-Aryan*, one of diorite, from Z 500, time of Khaba.

A single example of a very curious form was found in a stairway mastaba at Naga-'d-Dêr, which must be mentioned here as it occurs also in the Mycerinus collection. Professor Garstang found a similar bowl at Reqaqna (Dynasty IV) and noted the obvious suggestion of metal technique in its details. Professor Petrie has recorded a curious form¹ which may be connected with type X b (4). If so, the older stone form may have been copied from an older form of the copper vessel from which type X b (4) was copied.

Type 3-X b (4), flaring cup with concave sides and a cup hollow in bottom, inside:

(28) Hearst Expedition, *mss. notes on Naga-'d-Dêr*, alabaster (diam., 15 cm.), from late stairway mastaba N 587 (Fig. 41, No. 19).

(7) Type 3-XI. Bowl with External Rim

In Dynasty III, the bowls with external rim imitate closely the sub-types found in the tomb of Khasekhemuwy. Type 2-XI a (4) of that tomb, the deep bowl with external rim and short tubular spout, recurs in Dynasty III and, further, the same form without a spout. As already stated, similar pottery forms are known from Dynasty I,² and the exact form from Dynasty III.³ Nevertheless, the form seems more naturally explained as a copper form.

Type 3-XI a (3), deep bowl with contracted mouth and low external rim, flat base, without spout:

(1) Garstang, *Mahâsna and Bêt Khallâf*, Pl. XIV, 25, alabaster, from K 1 (Fig. 42, No. 1).

(2) Hearst Expedition, *mss. notes on Naga-'d-Dêr*, two examples of alabaster, from stairway N 587; one alabaster, from small grave N 634.

Type 3-XI a (4), deep bowl with contracted mouth and low external rim, flat base, with short tubular spout.

(3) Garstang, *Mahâsna and Bêt Khallâf*, Pl. XIII, 13, 14 (Fig. 42, Nos. 2, 3) and Pl. XXI, 13, all alabaster, from K 1 and K 2.

Third Egyptian Dynasty, Pl. X, 33, alabaster, from R 1.

(4) Quibell, *Tomb of Hesy*, Pl. XXVII, 1, three examples of alabaster, from late stairway tomb.

(5) Hearst Expedition, *mss. notes on Naga-'d-Dêr*, one of alabaster, from stairway N 599.

(6) Harvard-Boston Expedition, *mss. notes on Zawiat-el-Aryan*, one alabaster, from Z 500, time of Khaba.

One example of the bowl with grooved rim has been found at Bêt Khallâf and is nearly a duplicate of the bowl with grooved rim found by Petrie in the tomb of Khasekhemuwy.

Type 3-XI b (1), bowl with grooved rim:

(7) Garstang, *Mahâsna and Bêt Khallâf*, Pl. XXVII, 5, alabaster, from K 5 (Fig. 42, No. 4).

But in general, the grooved bowls and cups have given way to the modified forms of Khasekhemuwy. The bowl with upright recurved rim occurs without the cord in relief and with both flat and round

¹ Petrie, *Royal Tombs II*, Pl. LI F, 305, from tomb O.

² See Reisner, *Naga-'d-Dêr I*, p. 97.

³ See Garstang, *Mahâsna and Bêt Khallâf*, Pl. XXX, 19.

bottom. It was impossible to determine the bottom of the Khasekhemuwy bowls from the photographs in the publication, but they were no doubt flat, as the round-bottomed form does not appear in Dynasty III until late, probably in the time of Khaba.

Type 3-XI b (2), deep bowl with upright recurved rim and flat base:

- (8) Garstang, *Third Egyptian Dynasty*, Pl. IX, 14, alabaster, from R 40 (Fig. 42, No. 5).
- (9) Hearst Expedition, *mss. notes on Naga'-d-Dêr*, one of diorite, from shaft mastaba N 561, earlier than Sneferuw (Fig. 42, No. 6); one of diorite and two of alabaster, from small graves N 545, N 555 (diorite, Fig. 42, No. 7), and N 572.

Type 3-XI b (3), same as above with round bottom:

- (10) Quibell, *El-Kab*, Pl. X, 33, diorite, from stairway 8 (Fig. 42, No. 8).
- (11) Quibell, *Tomb of Hesy*, Pl. XXVII, 19, one of alabaster (see below), (Fig. 42, No. 9).
NOTE: This form is also a pottery form of the tomb of Hesy.
- (12) Harvard-Boston Expedition, *mss. notes on Zawiat-el-Aryan*, two examples of diorite, from Z 500, time of Khaba.

This bowl with upright recurved rim is the manifest predecessor of the beautiful bowls with flaring recurved rim which occur in Dynasties IV-VI. Its origin is obscure, perhaps, as suggested, derived from the stone bowl with grooved rim, or perhaps from a copper form. The earliest examples of pottery forms are:

- (a) Garstang, *Third Egyptian Dynasty*, Pl. XIII, 1.
- (b) Quibell, *Tomb of Hesy*, Pl. XXVII, 19.
- (c) Petrie, *Gizeh and Rifeh*, Pl. VI D, 122, from mastaba T.

In the time of Sneferuw, the pottery bowls with recurved rim became more common,¹ and were found in almost all the Cheops and Chephren mastabas at Giza. All these pottery forms have a round bottom like the late stone form 3-XI b (3). Judging from all this material, examples of the wheel-made pottery type are known from the latter part of Dynasty III, and the potter's wheel probably came into use in Dynasty III or late in Dynasty II.

In Dynasty III, the small squat cup with contracted mouth and grooved rim has been replaced by the Khasekhemuwy form in which the groove has disappeared and the rim has become a low band on top of the contracted mouth.

Type 3-XI c (2), squat cup with band rim:

- (13) Garstang, *Mahâsna and Bêt Khallâf*, Pl. XXVII, 6 (Fig. 42, No. 11), alabaster, from K 5; No. 14, large alabaster, from K 4; Pl. XI, one of diorite (?), from K 2.
Third Egyptian Dynasty, Pl. IX, 13, 21 (Fig. 42, No. 10), three examples, alabaster, breccia, and porphyry (cf. Pl. VII), from R 40.
- (14) Quibell, *El-Kab*, Pl. X, 17, 18, 30, 44, one of ivory, from stairway 2; one of alabaster, from stairway 8; one of diorite, from small grave L 206; and fifteen others from the small tombs summarily described on Pl. XXVII.
- (15) Mace, *Naga'-d-Dêr II*, p. 43, Fig. 100, Nos. 4-6, seven examples, all alabaster, from small graves.
- (16) Petrie, *Gizeh and Rifeh*, Pl. VI E, 137, porphyry, from mastaba T.
- (17) Hearst Expedition, *mss. notes on Naga'-d-Dêr*, one alabaster, from stairway N 587; two alabaster, from stairway N 599; three examples, diorite, from shaft mastaba N 561, previous to Sneferuw; and thirteen examples from small graves, seven of alabaster, four of diorite, one of breccia, and one of limestone.

(8) Type 3-XII. Table

With Dynasty III, the flat-topped table, which was apparently introduced by Khasekhemuwy, became fairly common. But a few examples of the older dish-topped table have been found in the earliest graves of this period. The flat-topped table occurs also in Dynasty IV and as late as Dynasty VI, but the great period of this shape begins with Khasekhemuwy and ends early in Dynasty IV.

Type 3-XII a, dish-topped table:

- (1) Garstang, *Mahâsna and Bêt Khallâf*, Pl. XXIX, 1 (Fig. 42, No. 12), 2, 3, 5 (Fig. 42, No. 13), 6, alabaster, from K 1, K 3, K 5.

¹ See Petrie, *Meydum and Memphis*, Pl. XXV.

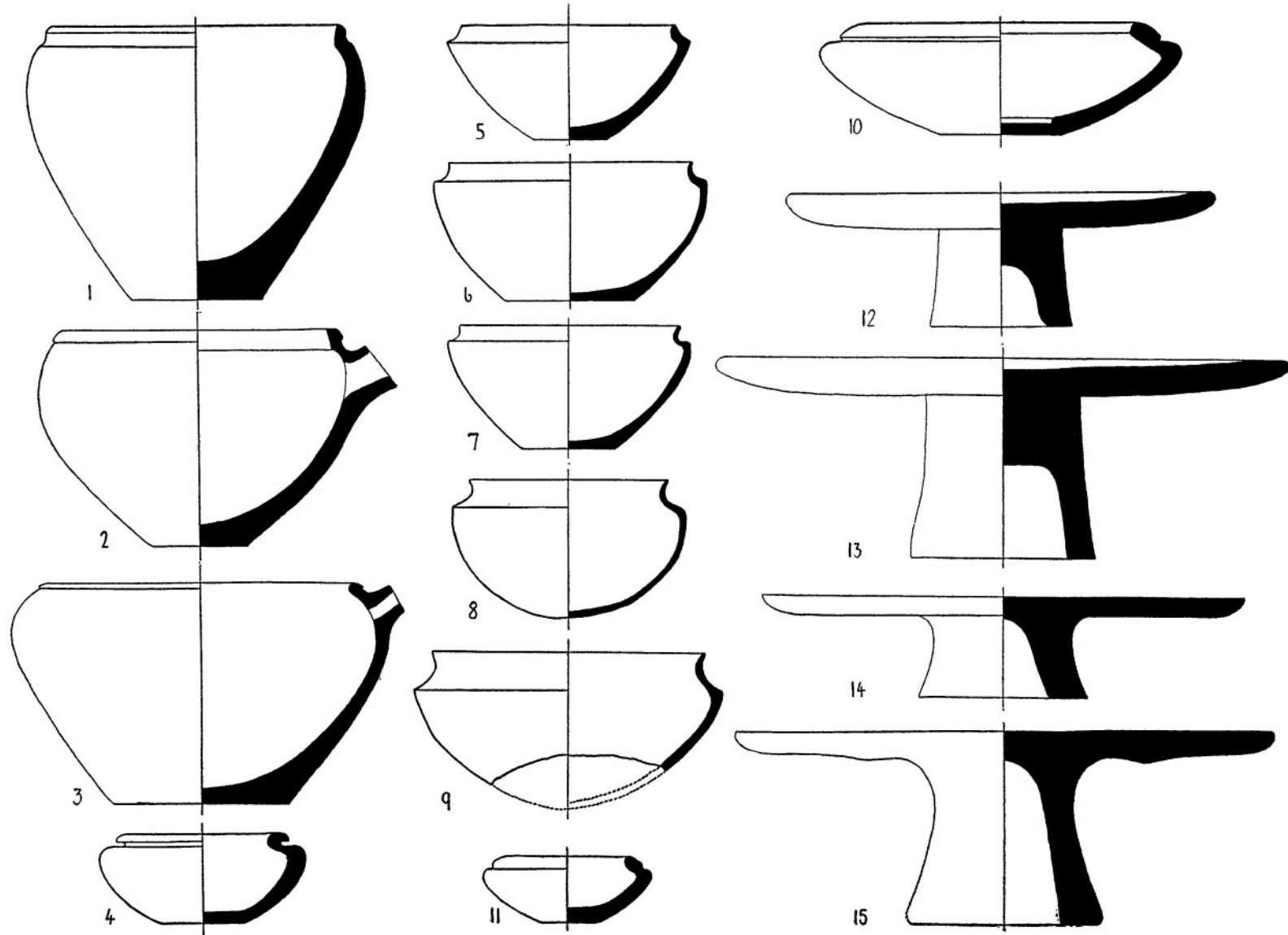


FIGURE 42
 DYN. III. STONE VESSELS, TYPES XI AND XII. SCALE $\frac{1}{4}$

Type 3—XII b, flat-topped table:

- (2) Garstang, *Mahâsna and Bêt Khallâf*, Pl. XXIX, 7, 8 (Fig. 42, No. 14), 9 (Fig. 42, No. 15), alabaster, from K 1, K 2, K 5.
Third Egyptian Dynasty, Pl. VIII, seven examples of alabaster, from R 1 and R 40.
- (3) Quibell, *El-Kab*, Pl. X, 49, from stairway 6.
- (4) Mace, *Naga'-d-Dêr II*, p. 46, two examples, from small graves.
- (5) Petrie and Quibell, *Nagada and Ballâs*, pp. 4-7, Pl. XVI, Nos. 167-170, from stairway tombs, B 201, 265, 353, 524, 764.
- (6) Quibell, *Tomb of Hesy*, Pl. XXVII, 6, thirteen of alabaster and three of porphyry.
- (7) Hearst Expedition, *mss. notes on Naga'-d-Dêr*, six of alabaster, from the stairway tombs N 573, N 587, N 599, and N 689; two of alabaster, from the shaft tomb N 561 and N 739 (time of Khaba); and five of alabaster and two of limestone, from small graves.
- (8) Harvard-Boston Expedition, *mss. notes on Zawiat-el-Aryan*, three alabaster, from Z 500, time of Khaba.

(E) STONE VESSELS OF DYNASTY IV

Dynasty IV witnessed a great change in the use of stone vessels in Egypt. The ceremonial-traditional character of many forms was exhibited by numerous examples of Dynasty III cited above, although some fine examples continued to be placed in the great stairway and early shaft tombs. The reign of Sneferuw brought the end of the old tradition of placing many stone vessels in the grave. A number of fairly well made diorite bowls inscribed with his name have been found widely distributed through Upper Egypt, and one very fine group of vessels was recorded from the tomb of Kamena at El-Kab. In this group was one of the beautiful round-bottomed bowls with flaring recurved rim made of translucent diorite of which a few examples occur in Dynasties V and VI. This form is the one great addition to the corpus of stone vessels known to us in Dynasty IV. But after the reign of Sneferuw, the great mastabas in the royal cemeteries of Cheops and Chephren at Giza contained few stone vessels, and these seldom polished, while stone models, often quite rude, occurred in numbers and in a variety of forms in these same mastabas. In the smaller graves of Dynasty IV, stone vessels are extremely rare, as rare as in any period of Egyptian history. The only stone types of the older period which are well represented in Dynasty V are the cylindrical jar with flaring foot (and lid) and the bowl with recurved rim (now often with a spout). Isolated examples of a few other older types have been found in Dynasty V — the quasi-spheroidal jar with two handles, the flaring cup, and the small cup with band-rim; but the most common vessels of this dynasty have new forms — the beautiful tapering jars, the similar jar with flat base, and the small jars with collar, all of which are copies of pottery or metal forms of Dynasty IV. Thus the use of stone vessels of the old traditional forms in private tombs came practically to an end with the reign of Sneferuw. The fact that the tradition was maintained for the royal tombs of both Dynasties IV and V emphasizes its abandonment in private graves.

The significance of this rather sudden decline in the manufacture of the old traditional forms of stone vessels becomes clear when the fact is noted that contemporaneous with the decline of stone vessels came the spread of the use of wheel-made pottery of fine forms, copying especially the types of stone vessels with recurved rim. The question as to when the potter's wheel came into general use is not easy to answer. The manufacture of practicable and beautiful stone vessels diminished little in Dynasty II, when stone vessels were certainly still being made for daily use. The vessels in the small graves of Dynasty III are generally of a ceremonial character and appear to have been made for funerary purposes, not for daily life. The conclusion seems obvious that pottery had taken the place of stone vessels in daily life early in Dynasty III, but the new wheel-made pottery does not appear until the very end of that Dynasty. The conclusions which I think most plausible are: (1) that the potter's wheel was invented or introduced towards the end of Dynasty II; (2) that wheel-made pottery was introduced for the purposes of daily life immediately after; (3) that the traditional forms of both stone and pottery vessels, steadily degenerating, continued to be made for the grave during Dynasty III; (4) that at the end of Dynasty III the wheel-made pottery, having been long in use, began to be placed in the graves; (5) that the traditional forms of stone vessels came practically to an end at the close of the reign of Sneferuw; (6) that at Giza, stone models were substituted from the reign of Cheops down; (7) that in Dynasty V, in Upper Egypt, a revival of the manufacture of very fine forms took place,

but these were usually quite small models, and followed generally the forms of the Giza models. The two larger forms are copies of wheel-made pottery jars of Dynasties IV–VI.

(1) *Type 4-I. Cylindrical Jar*

The cylindrical jar has taken on definitely the slender concave form with splayed foot. A few examples of the older form still occur, especially in dummy jars and in small models of alabaster and limestone. One example of the later disk lid is recorded, and the shape is in general a transition to the fine small jars of Dynasties V–VI and later. Needless to say, the cord around the neck has at last disappeared.

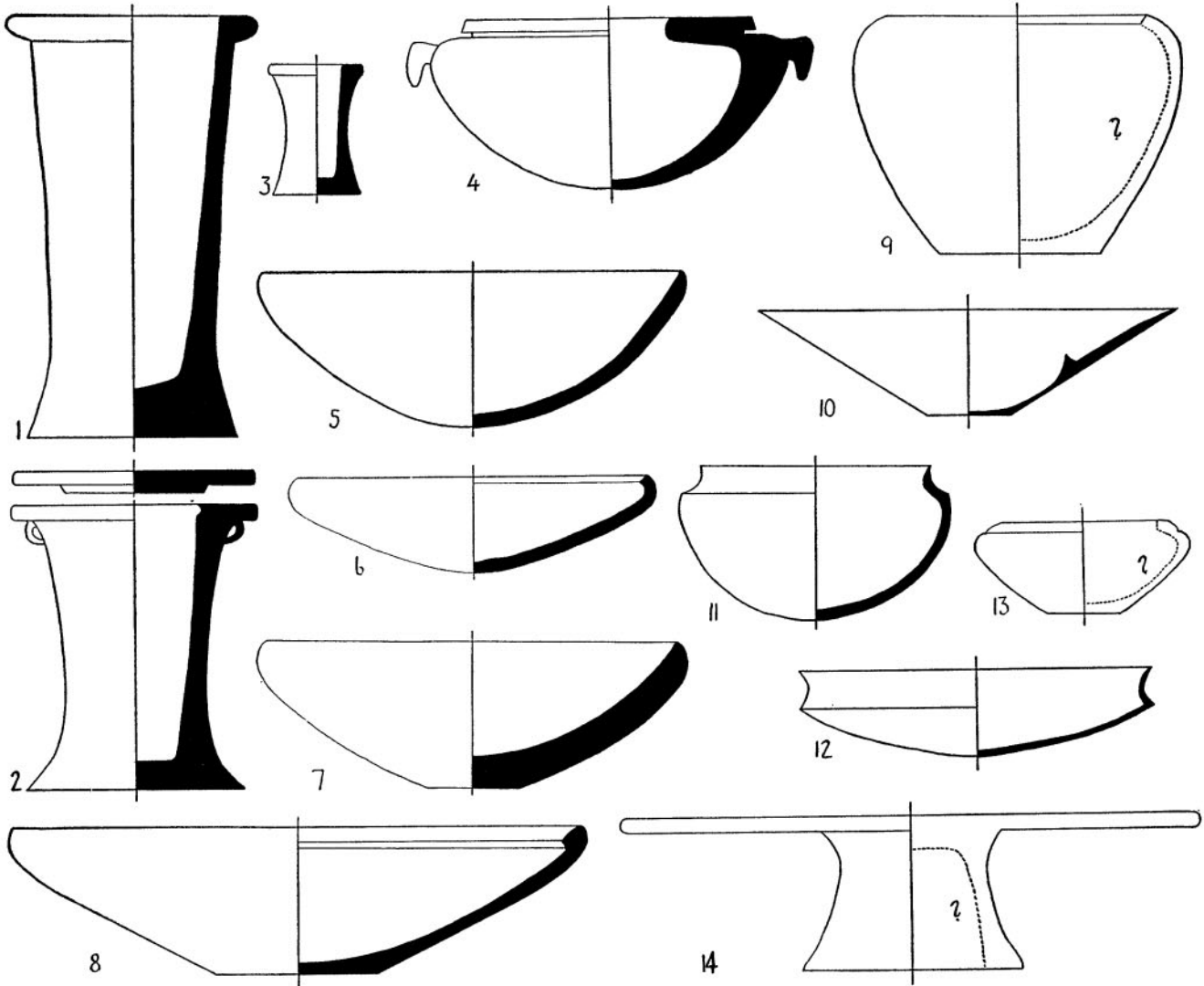


FIGURE 43. DYN. IV. STONE VESSELS. SCALE $\frac{1}{4}$

Type 4-I, c-d, cylindrical jar and dummy jar:

- (1) Quibell, *El-Kab*, Pl. X, 48, three from the Kamena tomb, mastaba A, reign of Sneferuw or Cheops; two from mastaba B (later than A); two from mastaba C, pits 4 and 5 (later than B); one each from 318, 88, and 233. All of alabaster.
- (2) Garstang, *Third Egyptian Dynasty*, Pls. 24, XXXII, one of alabaster and one of breccia, from R 63 (built just previous to R 64, date of Sneferuw or Cheops); Pl. XXXI, two of alabaster, from R 92, dated to Chephren or next reign.
- (3) Petrie, *Meydum and Memphis*, Pl. XXIV, 6, 8, 9 (Fig. 43, Nos. 2, 1), alabaster, from shaft tomb 55 (No. 8 of pronounced splay form, has two small horizontal handles just under the rim, and also a disk lid); Nos. 11–13, 15, fifteen of limestone and one of alabaster, all dummies, from shaft tomb 50.
- (4) Harvard-Boston Expedition, *mss. notes on great cemetery at Giza Pyramids*; one of alabaster from each of the Chephren mastabas, G 4240 and G 4640 (Fig. 43, No. 3). This represents the total from eight mastabas.

Type 4-I e, model jar:

- (5) Harvard-Boston Expedition, *mss. notes on the great cemetery at Giza Pyramids*. G 4631 B, one fine alabaster, Dynasty V (Fig. 44, No. 2).

G 4530 A, one fine splay jar and one rude old form jar, limestone, Chephren (Fig. 44, Nos. 3, 6); twelve, splay and straight forms, white limestone, Chephren.
 G 5733 E, three of alabaster, both forms, Dynasty V (Fig. 44, Nos. 4, 5).
 G 4520 B, one fine form, six, splay form, alabaster, Chephren (Fig. 44, No. 1).
 Other examples of both forms and of some very rude forms were found in the mastabas, G 4341 A, G 4631 B, and G 4733 E, all of Dynasty V.

(2) *Type 4-III. Spheroidal Jar with Handles*

The spheroidal jar with handles has also practically ceased, except for the examples in royal tombs.

Type 4-III, spheroidal jar with round bottom and undercut handles:

(1) Petrie, *Meydum and Memphis (III)*, Pl. XXIV, 14, granite, from shaft tomb 50 (Fig. 43, No. 4).

(3) *Type 4-IV. Shoulder Jar with Handles*

The shoulder jar with horizontal handles has not been found in any private grave of Dynasty IV, but does occur in the Mycerinus collection. At Giza we found one small model, however, of a shoulder

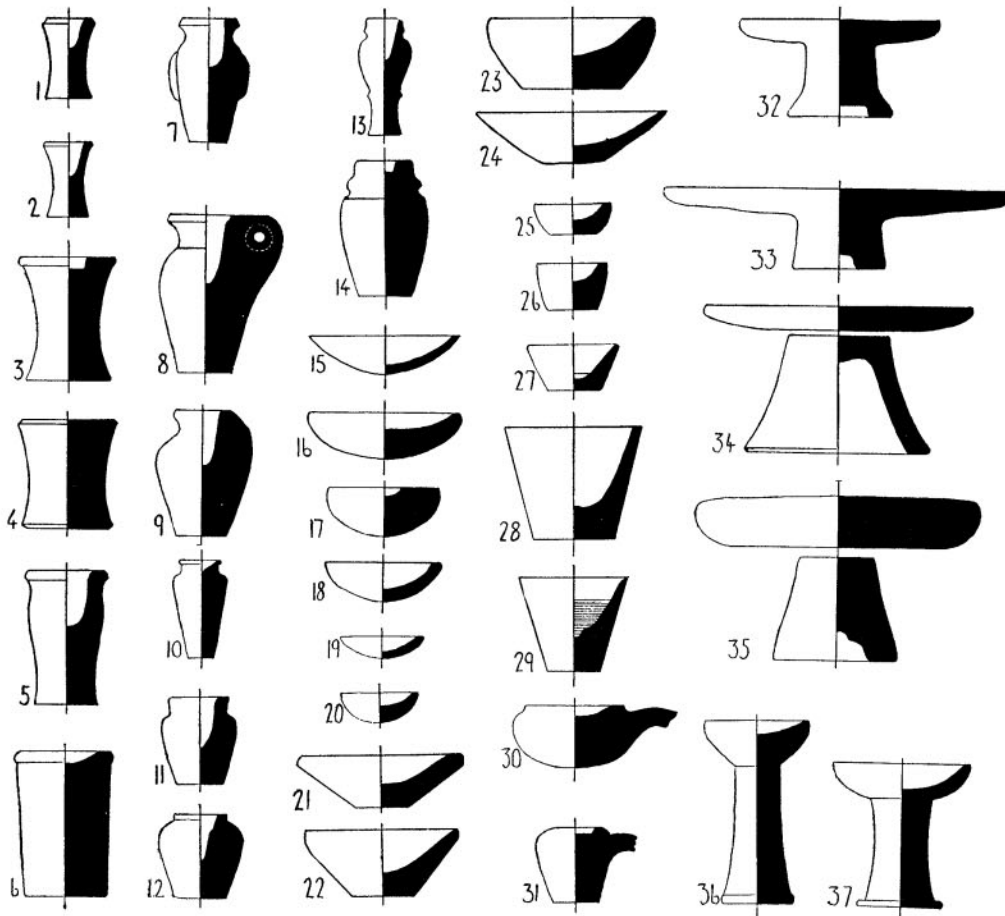


FIGURE 44. DYN. IV-V. MODEL STONE VESSELS

jar with neck and two side handles, which seemed to be a model of the two-handled pottery jar (Fig. 44, No. 7). There were also two stone models of a one-handled necked jar (Fig. 44, Nos. 8, 9) also a copy of a pottery form. Both these pottery forms occurred in the Cheops and Chephren mastabas.

(4) *Type 4-V. Shoulder Jar without Handles*

The shoulder jars also have practically disappeared. But the small stone models of a number of different shapes (Fig. 44, Nos. 10, 11, 12) occur in the Chephren and later mastabas at Giza. Some of these are duplicated in pottery models and all seem to be imitations of pottery rather than stone forms. The form with collar and small flat base, which is so characteristic a feature of the fine models of Dynasties V-VI, occurs in both stone and pottery (Fig. 44, Nos. 13, 14).

(5) *Type 4-IX. Round-Bottomed Platter and Bowl*

A few examples of round-bottomed platters and bowls occur as well as a large number of stone models, at Giza only. The earlier vessels are well finished, but the later ones and the models are merely smoothed.

Type 4-IX b, bowl:

- (1) Petrie, *Meydum and Memphis*, Pl. XXIV, 1-3, alabaster, from shaft tomb 55 (Fig. 43, No. 5).

Type 4-IX c, bowl with internal rim:

- (2) Harvard-Boston Expedition, *mss. notes on the great cemetery at Giza Pyramids*.

G 4640, alabaster, tapering body, sharp internal rim, contracted mouth, new form (Fig. 43, No. 6).

Type 4-IX d, models of platters, dishes, and bowls:

- (3) Harvard-Boston Expedition, *mss. notes on the great cemetery at Giza Pyramids*, numerous examples in alabaster and limestone, from the Chephren mastabas, G 4140 (Fig. 44, No. 18), G 4340 (Fig. 44, No. 15), G 4520, and G 4530 (Fig. 44, Nos. 16, 17); also from the mastabas of Dynasty V, G 4631 B (Fig. 44, Nos. 19, 20), G 4733 E, etc.

(6) *Type 4-X. Flat-Bottomed Dish and Bowl*

The examples of flat-bottomed bowls and models are more numerous than those with round bottom, as always heretofore. The earlier examples are again well finished, while the later are, in general, rude and unpolished.

Type 4-X a (1), plain rim:

- (1) Harvard-Boston Expedition, *mss. notes on Giza*, one alabaster (diam., 24.6 cm.), from G 4640 (Fig. 43, No. 7), Chephren; one diorite (diam., 18.2 cm.), from G 4733 E, Dynasty V.

Models: All the flat-bottomed model dishes have plain rim, or are dummies.

G 4140, fifteen, alabaster, Chephren (Fig. 44, Nos. 21-23).

G 4340, one, alabaster, Chephren (Fig. 44, No. 24).

G 4530, fifty of white limestone, Chephren.

G 4631 B, twelve, alabaster, Dynasty V (Fig. 44, Nos. 25-27).

G 4733 E, sixty-nine, alabaster, Dynasty V.

Type 4-X c, with internal rim, pans and bowls:

- (2) Quibell, *El-Kab*, Pl. X, 35 (Pl. III), one from mastaba A (Kamena, time of Sneferuw or Chephren); one from mastaba B (later than A), three from mastaba C (later than B), one from mastaba E, and four from mastaba 288 (one with name of Sneferuw); one each from shaft tombs 318 and 319; all these are of diorite.

- (3) Garstang, *Third Egyptian Dynasty*, Pl. 25, one of alabaster, inscribed with name of Sneferuw, from R 64; Pl. 31, one of diorite from R 92, dated to Chephren.

- (4) Hearst Expedition, *mss. notes on Naga'-d-Dêr*, one of diorite from shaft tomb N 604.

- (5) Harvard-Boston Expedition, *mss. notes on Giza*, two of alabaster (diam., 30 and 33 cm.), from mastaba G 4440, Chephren (Fig. 43, No. 8).

Type 4-X d, with internal rim, deep cup or open jar (bowl-jar):

- (6) Quibell, *El-Kab*, Pl. X, 39, one slate from mastaba 288; one alabaster (?) from shaft tomb 88; and one from shaft 204 (?).

- (7) Garstang, *Third Egyptian Dynasty*, Pls. 24, and XXXII, one diorite from R 63 (older than 64); one diorite from R 94 (probably Chephren or later) (Fig. 43, No. 9).

Some of the more unusual variations of the flat-bottomed bowls which occurred in Dynasty III are found also in Dynasty IV, but most of them only as models not as actual vessels.

Type 4-X a (3), straight-sided conical cup, models:

- (8) Petrie, *Meydum and Memphis*, Pl. XXIV, 5, alabaster, from shaft tomb 55.

- (9) Harvard-Boston Expedition, *mss. notes on the great cemetery at Giza Pyramids*, one alabaster from G 4140 and eight alabaster from G 4340, Chephren (Fig. 44, Nos. 28, 29).

See also herein cups of Cheops, p. 233.

Type 4-X e (3), cup with spout, models only, copying copper forms of Dynasties III-IV:

- (10) Harvard-Boston Expedition, *mss. notes on the great cemetery at Giza Pyramids*, two ewer-form of alabaster from G 4140 and G 4530 (Fig. 44, No. 31), Chephren.

One example again occurs in Dynasty IV of the alabaster cup with concave sides and hollow in the bottom, of which one example was noted in Dynasty III.

Type 4-X b (4), flaring cup with concave sides and a cup-hollow in bottom inside (see Dynasty III, same type):

- (11) Garstang, *Third Egyptian Dynasty*, Pl. XXXII, alabaster, from R 63, time of Sneferuw or Chephren; Garstang notes that this is a copper form (Fig. 43, No. 10).

(7) *Type 4-XI. Cup and Bowl with Recurved Rim*

The two forms of cups and bowls with recurved rim still occur. But the small squat cup with low band rim on the contracted mouth is recorded only in Upper Egypt at El-Kab. Three examples of the larger bowls are known, of which one, with upright rim, has a flat base, and two, one with upright and one with flaring rim, have round bottoms. The bowl with flaring recurved rim is of translucent diorite — a typical example of the beautiful bowls of Dynasties V and VI.

Type 4-XI b (3), deep bowl with upright recurved rim, round bottom:

- (1) Quibell, *El-Kab*, Pl. X, 33 (Pl. III), one of porphyry from mastaba A (Kamena; name of Sneferuw), (Fig. 43, No. 11).

Type 4-XI b (5), wide bowl with flaring recurved rim, round bottom:

- (2) Quibell, *El-Kab*, Pl. III, one of translucent diorite, from mastaba A (Kamena; name of Sneferuw) (Fig. 43, No. 12).

Type 4-XI b (6), model as b (5) with spout: (3) Harvard-Boston Expedition, *mss. notes*, limestone from G 4530 (Fig. 44, No. 30), Chephren.

Type 4-XI c (2), small squat cup with band rim on contracted mouth:

- (4) Quibell, *El-Kab*, Pl. X, 44, one porphyry from mastaba C (later than Sneferuw) (Fig. 43, No. 13); one diorite from shaft grave 319; one of "stone" from shaft grave 88.

(8) *Type 4-XII. Flat-Topped Table*

The flat-topped tables occur in most cemeteries of Dynasty IV, and in model forms in the Giza mastabas.

Type 4-XII a, flat-topped table:

- (1) Quibell, *El-Kab*, Pl. X, 49 (Fig. 43, No. 14), one of alabaster from mastaba A (Kamena; time of Sneferuw); one in mastaba B, two in mastaba C, and one each in the shaft tombs 288 (time of Sneferuw) and 319, all of alabaster.
- (2) Garstang, *Third Egyptian Dynasty*, Pls. 24 and XXXII, alabaster, from R 63 (previous to R 64); Pl. 25, one alabaster from R 64 (time of Sneferuw).
- (3) Harvard-Boston Expedition, *mss. notes on Giza*, one alabaster (diam., 47 cm.) from G 4440 (Chephren); one alabaster (diam., 38 cm.) from N 4640 (Chephren).

Type 4-XII c, flat-topped table, models:

- (4) Harvard-Boston Expedition, *mss. notes on Giza*, one of alabaster (diam., 10.5 cm.) from G 4530 (Chephren) (Fig. 44, No. 32); one of alabaster (diam., 17 cm.) from G 4631 B (Dynasty V), (Fig. 44, No. 33); two alabaster (diam., 9.6 cm. and 6.7 cm.), from G 4733 E (Dynasty V) (Fig. 44, Nos. 34, 35).

(9) *Type 4-XIII. Bowl-Stands and Jar-Stands*

The bowl-stands and jar-stands are represented in the models, but always with the bowl or jar attached and made of the same piece of stone.

Type 4-XIII a, bowl-stands, models:

- (1) Harvard-Boston Expedition, *mss. notes on Giza*, G 4733 E, two, one of alabaster and one of limestone (Fig. 44, Nos. 36, 37).

Type 4-XIII b, jar-stands, models:

- (2) Harvard-Boston Expedition, *mss. notes on Giza*, G 4520, two examples of alabaster; G 4631, one of alabaster (Fig. 44, No. 13).

2. STONE VESSELS OF MYCERINUS

(A) PROVENIENCE (SEE PLS. 66 b, c; 32 d; 71 f.)

The majority of the stone vessels were found in the valley temple magazines north of the central offering room, especially in rooms (III, 6, 7, 9, 10, 11, 12, 13). The vessels with very few exceptions were broken, but the fragments were on the floor of the Dynasty IV mud-brick temple (the first mud-brick temple). Although broken, many complete vessels were pieced together from the fragments. It is possible that the breakage was done intentionally at the time when the vessels were deposited; but part at least was due to the decay of the structure and to plundering. The middle rooms, (8), (14), and (15), had been entirely cleared out except for some fragments under the edges of the walls. The débris of the courtyard in the northwest quarter opposite these rooms contained a large number of fragments of stone vessels, some of which fitted on fragments found in the rooms. The fragments in the courtyard

were under the house walls, proving that the plundering of the magazines took place in Dynasty V. Other fragments were found scattered even as far as the house walls east of the front wall of the temple. A fragment of the hard stone squat jar, No. 64, found in (III, 7), was recovered in (I, 3); and a fragment of the flint bowl of Ra-neb, from (III, 7), was found in floor débris in the northwest corner of the court. Fragments were found in the débris of the latest houses, and I believe, therefore, that the theft of stone fragments for the manufacture of model saucers continued during Dynasty VI. Many unfinished examples of stone models were found, and, while most of them were undoubtedly made of fragments of statues, some of the saucers may have been made of fragments of vessels.

(B) DATE OF THE STONE VESSELS

A few of the stone vessels were inscribed, and in every such case the inscription gave the name of an earlier king. The examples were as follows:

- (1) Pl. 70 c. A bowl made of a flint nodule. The last inscription consists of a figure of a cat-headed goddess seated facing to right and immediately in front of her a hawk with the double crown on a frame which contains the Horus name, Hetep-sekhemuwy. This was incised on an erasure. To the right of the Horus frame, a partly erased inscription is seen, hawk and frame containing the name, Ra-neb. Traces of inscription are also visible above the seated goddess and a little to the left, which seem to indicate a third Horus name entirely erased. The conclusion results that Hetep-sekhemuwy was later in date than Ra-neb; that on the Cairo statue (No. 1) the order of the three names should be read: Ra-neb, Neteru-muw, and Hetep-sekhemuwy (see p. 103, note 1). That is, the name of the living king was placed first, then the oldest and then the predecessor of the living king.
- (2) Fig. 57, No. 37. A diorite bowl with a Horus name scratched inside. The name is illegible, but the traces suggest Hetep-sekhemuwy.
- (3) Fig. 57, No. 38. A diorite bowl with the name of Sneferuw in a cartouche scratched on the inside.
- (4) Fig. 57, No. 2. A diorite bowl with the name of Sneferuw without a cartouche; scratched.
- (5) Fig. 46, No. 99. Fragment of an alabaster cylindrical jar incised with the corner of a rectangular frame; inside the frame is the double crown of a figure, but the rest was never found.

No stone vessel was found with the name of Mycerinus himself.

On pp. 102-105, the significance of these older names has been discussed, and the conclusion drawn that the greater part of the stone vessels were made for the Mycerinus tomb and although many of them were still unfinished, all were placed in the temple by Shepseskaf as they were.


(C) TECHNIQUE OF THE STONE VESSELS

In general it may be said that, while almost all the forms of stone vessels are related to older forms of Dynasties I-III, the examples found in the Mycerinus temples, in common with those found in Dynasty IV mastabas, are generally crude and heavy. The walls are thick, and the smoothing is careless, even in finished specimens. In other words, the technique of the vessels of this period shows a general deterioration.

At the same time, the pottery of Dynasty V, especially in the large mastabas, shows a variety of fine practical forms beautifully made on the wheel. Thus it is clear that for ordinary household purposes the new pottery had displaced the stone vessels and that the stone vessels found in the tombs were made for funerary purposes as a matter of tradition. They were not taken from palace furniture, but were made for the grave. The fact that a few examples of beautifully finished vessels have been found in this and later periods shows that the crudeness of the work was not due to lack of skill but to haste and carelessness.

The methods of boring stone vessels with a boring stone fixed in a forked shaft weighted at the top and turned by a crank¹ continued to be used for all sorts of vessels.² The cylindrical hole was enlarged by rubbing with a stone held in the hand. The outside seems to have been finished by rubbing, but some of the unfinished hard stone vessels showed bruising marks as if they had been roughly formed before boring by hammering. No evidence was found of turning, such as concentric scratches on the outside of the vessel.

¹ See Reisner, *Naga'-d-Dêr I*, p. 1.

² See Davies, *Gebrâwi I*, Pls. XIII, XIV, XXIV; Steindorff, *Grab des Ti*, Pl. 134: 

In addition to the stone borer, a cylindrical tube borer was also used, especially for limestone and alabaster. The cutting edge appears to have been flat and left a groove about three millimeters wide.¹ In two cases where no attempt had been made to smooth away the stump of the core, the groove contained a fine gritty powder, not unlike pumice, tinged with green copper oxide. From this, it is to be concluded that the tube was of copper or of some alloy composed largely of copper. The tube may have been weighted with stones and worked by a crank handle or turned back and forth between the palms of the hands. The grooves on the cores and on the unsmoothed sides appear to be spiral, as if the turning were continuous in one direction. The outside surface was finished by rubbing, as in the case of the stone-bored vessels.

The holes in the handles had been bored from both sides and are widened at the entrances by the lateral play of the borer. They may have been made by a flint or copper drill set in the end of a round stick and turned by hand.² Pumice-like powder was probably used to increase the bite of the point.

(D) MATERIALS

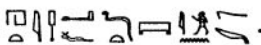

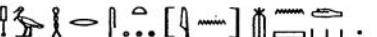
The total number of stone vessels, actually pieced together and drawn, from fragments found in the Mycerinus valley temple, was 546. In addition there was a large number of unattached fragments representing at least a hundred vessels or more. When the plundering and scattering are taken into account, it may be reasonably assumed that several hundred vessels have entirely disappeared and the whole number of vessels originally in the magazines of the valley temple was something over 800. At the pyramid temple, the vessels actually represented by the fragments found was less than 100. The magazine spaces in the pyramid temple were altogether much less than at the valley temple, and it may be concluded that the original number of stone vessels at the pyramid temple was also much less, possibly 200 or 300. For the present statistical purpose I take the 537 vessels drawn from the remains at the valley temple. The number of these is so great that the percentages based on them will probably not be far removed from the original percentages. In any case these vessels form the most reliable body of evidence now available.

The following table shows the numbers and the percentages of the vessels arranged according to material:

Material	Types	Forms	Number	Per cent
Alabaster	11	27	310	56.78
Porphyry and syenite	6	12	79	14.47
Diorite	8	22	74	13.55
Blue-veined limestone	4	6	50	9.16
Basalt	4	8	21	3.85
Slate	3	3	3	.55
Red and white breccia	2	3	3	.55
Volcanic ash	2	3	3	.55
Rose quartz-crystal	1	1	1	.18
Flint	1	1	1	.18
Yellow limestone	1	1	1	.18
Totals	33	42	546	100.00

The significance of these percentages has already been discussed in the section on Stone Vessels of Dynasty I (p. 139). Diorite, although known in scattered examples in the royal tombs of Dynasty I, was greatly favored in the tomb of Khasekhemuwy and became popular in the large tombs of Dynasty III. The blue-veined limestone is, I believe, included in the "grey marble" mentioned by Petrie, the "marble" of *Naga-'d-Dêr I*, the blue marble of Khasekhemuwy, and the veined marble of the Khaba vessels. Like the diorite, it was more frequent in the tomb of Khasekhemuwy than previously. The basalt is the same coarse brown stone as that of the Predynastic Period and the Abydos tombs. The slate, the breccia, and the volcanic ash were materials much more frequent in the Early Dynastic Period and

¹ See Petrie, *Pyramids*, Pl. XIV, 7, 8, p. 175, bottom.

² See bow-drill used on wood. Steindorff, *Grab des Ti*, Pl. 133; inscription . See also hand drilling of stone, *l.c.*, inscription ; also Davies, *Gebrâwi I*, Pl. XIII, Reg. 3. .