

# PALMETTE STAMPS FROM AN ATTIC BLACK-GLAZE WORKSHOP<sup>1</sup>

(PLATES 66–71)

**T**HIS article contains an account of a method of study which, it is hoped, will lead to greater precision and clarity in our knowledge of Attic black-glazed pottery bearing impressed decoration; in particular, it may ultimately resolve some of the uncertainties which at present surround the developments and innovations of the first half of the fourth century B.C. In its essentials the method consists of identifying and grouping together vases on which the impressed palmettes were made by the same stamp.

The new approach to the problem was made possible by the discovery that two large deposits of pottery found during the excavations of the Athenian Agora contain fragments of nearly fifty vases on which the ornament is remarkably uniform; the pattern is almost invariably composed of a ring of linked palmettes surrounded by rouletting, and the palmettes have in every case been made by one of four very similar stamps. This group of related pieces, represented here by Nos. 4 to 19, provides evidence for a number of conclusions about the character of the stamps and the way in which they were made and used. Although as a general rule on any given vase of the fifth or fourth century the palmettes were all produced by a single stamp, occasionally an impression differs markedly from its neighbours. With an isolated example the natural assumption would be that the workman began the decoration with one stamp and replaced it by another when he realized that the first one was faulty. On Nos. 11 and 12, however, there are a certain number of well-made palmettes which are clearly by the same stamp; on both vases there are also defective impressions (Pl. 67). This combination is by no means unique, and it suggests that many of the imperfections which occur in this kind of ornament arose not from the use of a damaged stamp, but from carelessness in the manipulation of a perfect one. In the discussion which follows, the illustrations include several pieces which do not belong to the group just mentioned; they have been selected because they are exceptionally clear examples of some of the principal faults which are found and because they demonstrate that

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these faults were not confined to one particular series of vases but recurred throughout a considerable period of time.

At first sight it might seem improbable that a single stamp should produce widely varying impressions, but in fact most if not all of the variations can be explained by the form of the stamp and the way in which it was handled. Examination of the evidence shows that the face of the stamp was slightly convex, not flat, and that the impression was made not by pressing the stamp squarely down on the clay, but by applying it at an angle; the top of the stamp was then rotated by a circular movement of the hand, and thus made to pivot on its lower end, so that the convex face was rolled over the surface of the clay in every direction. Figure 1, left, illustrates the

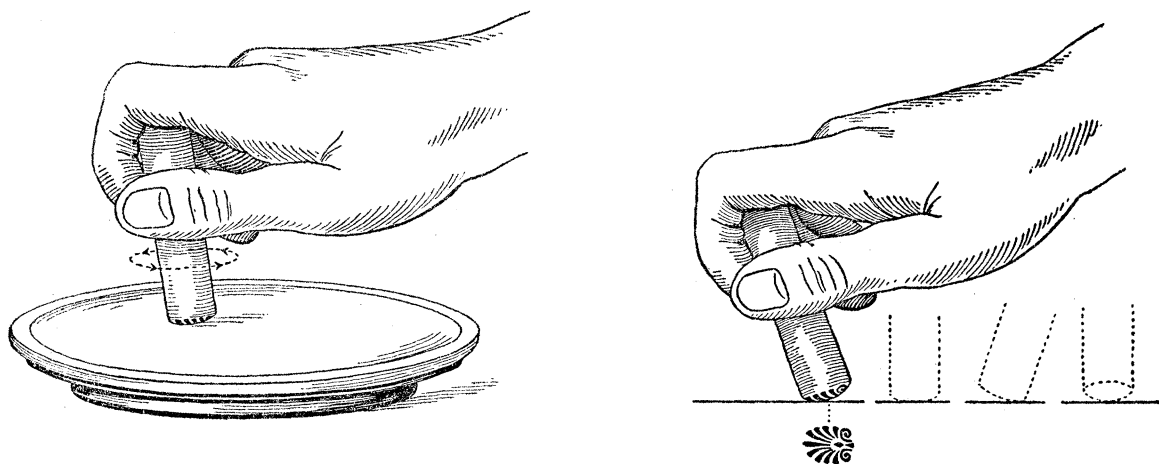


FIG. 1. Left: The application of a palmette-stamp to a vase and the method of rotation. Right: Four successive positions of a palmette-stamp during its rotation.

method of application, the dotted line and the arrow indicating the rotary motion; Figure 1, right, shows four successive positions of the stamp during its rotation. By this procedure a skilled and careful workman could ensure that every part of the palmette left its mark, and could produce a palmette of even depth and with all its petals complete, whether the surface to be decorated was flat or concave. Careless handling, however, might result in a palmette like the first one on No. 18 (Pl. 69, 18 b) where, although the petals have been pressed well home on either side, the outline of the palmette converges sharply toward the top; moreover, there are eight petals instead of the usual nine. Only the end of the center petal has survived, and a close examination of the impression shows that the first part of the stamp to touch the clay was the tip of the center petal; the stamp was then rotated in a clockwise direction, but during the rotation it was allowed to twist between the fingers. In consequence, the petals on the left side were displaced, and when the center petal of the stamp again

came in contact with the clay, it coincided with the imprint of the fourth petal on the right. A similar accidental turning of the stamp accounts for the peculiarities of the right-hand palmette on No. 1 (Pl. 66, 1 c); the volutes and the individual petals correspond to those of its neighbour, but the two sides of the palmette splay outward; the same distortion can be seen in all four palmettes of No. 2 (Pl. 66, 2 a and b). Even when the stamp was firmly held, failure to roll it over to an equal degree throughout its rotation could produce surprising consequences; the four palmettes on No. 3 (Pl. 66, 3 a, b, c) were all made by the same stamp, for their hearts and volutes correspond down to the smallest imperfections, yet the contrast between the form and general appearance of the petals of the right-hand palmette (Pl. 66, 3 c) and those of the other three is startling. On all four of the fragments mentioned above the decorated area is concave, so that the faulty impressions cannot have been made by a stamp with a flat face, which would tend to emphasize the outline at the expense of the interior. Even more decisive is the decoration in the center of the flat plate, No. 6 (Pl. 66, 6 d); the four hooked lines were made by the right-hand volute of the stamp used for the surrounding palmettes; the impressions are firmly and evenly struck, yet with the exception of the stem of the heart no other part of the palmette can be seen; it is a physical impossibility to produce such an effect with a flat stamp.

Among the examples illustrated in this article will be found many with an extra petal, a faulty or distorted rib between two petals, or a gap in the row of petals on one side; these peculiarities, too, can result from faulty manipulation. The palmettes on Plate 71, i to viii, were impressed in clay which was firm, though by no means leather-hard, by means of a modern reconstruction of the kind of stamp described above; the impression at the left end of the upper row is correctly struck, but the others show clearly that most of the defects which are found in ancient impressed palmettes can be reproduced by an undamaged stamp. The experiment also demonstrates that differences in general outline or in one or two details are not sufficient to prove that two impressions were made by different stamps unless both palmettes are perfectly struck; in comparing a good imprint with a poor one, or two defective impressions, each with a different fault, attention should be paid above all to such features as the relation between adjacent petals, the shape of the heart, and the setting of the volutes.

Equally instructive is the relationship between the four separate stamps whose similarity gave the first impulse to the present investigation. It is true that they have certain obvious differences. On No. 4 (Pl. 66, 4 b) the petals are slender, with rounded ends, and the volutes are complete. The palmettes on No. 8 (Pl. 67, 8 b) bear a general resemblance to those on No. 4, but they can be distinguished by the setting of the first petal on the left and by the curtailment of the volutes. On No. 16 (Pl. 68, 16 b) the petals are broader and all save the three middle petals have been cropped, while the lower part of the volutes is missing. On No. 10 (Pl. 67, 10 b) the volutes are defective and the petals have suffered even more severely; No. 16 and No. 10 also differ in the

angle at which the first rib on either side meets the heart. Yet in other respects, such as the shape of the heart, the curve of the volutes, and the line of several of the ribs, the internal structure of all four palmettes is remarkably uniform. For this uniformity only two explanations seem possible; that all four stamps were carved or modelled in one workshop, and perhaps by one man, in a deliberate effort to achieve a close correspondence in details, or that they all come from a single mould and were touched up while still soft. There is nothing to support the theory of deliberate imitation, which would be a lengthy and laborious business, whereas experiments with a mould have proved it to be a simple and expeditious means of producing a stamp; moreover, the account given below of the procedure which it was found natural to adopt when using a mould illuminates many of the distinctive features of the four stamps under discussion.

The curvature of the stamp demands a mould with a concave face, into which the palmette is cut in intaglio; for this part of the process it was found necessary to call upon the help of a skilled draughtsman, but once the mould exists the rest of the work can easily be done by unpractised hands. There is as yet insufficient evidence to permit useful speculation about the material used in antiquity for the mould; in the experiment here described a block of plaster of Paris was employed. As regards the stamp, in view of the fact that the operation took place in a potter's shop, and in the light of the stamps used at a later date in the manufacture of moulds for Megarian bowls, the obvious suggestion is that it was made of clay; the results shown on Plate 71, i to xii were in fact obtained with this medium. The first step is to form a small rod of clay of sufficient length and thickness to provide a good grip for the fingers; the tip of the rod is kept moist and soft, while the rest of it is allowed to dry until it is firm. Under these conditions sufficient pressure can be exerted to drive the soft part of the clay well home into the mould without the rod collapsing or bending in the hand. The clay is allowed to dry until the face of the stamp is firm, though still plastic; the operator then removes it from the mould, trims away the surrounding flange where the clay has spread out over the blank part of the mould, and gives any finishing touches which may be needed. It may, for example, be advisable to strengthen the line of the volutes or to clean out the division between two petals; carelessness at this stage may result in the displacement of one or more petals, with a consequent distortion of the ribs in the final impression; negligence in cutting away the flange leads to the loss of the tips of the petals or of the lower part of the volutes, while accidental pressure on the face of the stamp causes the flattening which can be observed on the left-hand petals of No. 11 (Pl. 67, 11 b). The palmettes illustrated on Plate 71, ix to xii were produced by four separate stamps, all made from the same mould in the manner described above; the combination of a general likeness with various divergences in detail affords a good parallel to the relationship between the four ancient examples. In the modern reconstruction of the process the stamps were hardened by

thorough drying; it may well be that in antiquity they were fired in a kiln, but in any case their life must have been limited. The interval which may separate two stamps from the same matrix is more difficult to determine, and conjecture on the subject is at present premature, but vases which bear the imprint of the same stamp may be regarded as closely contemporary.

The usefulness of the conclusions here presented is not limited to the study of the manufacture of Attic black-glazed ware; they have also a wider application. Even at this early stage it is clear that the recognition and grouping together of vases which were produced in one workshop within a comparatively short space of time may be expected to give a sharper definition to our knowledge of fourth-century Attic pottery. It can now be shown that a single establishment might produce a considerable range of shapes, all displaying certain common characteristics. The major group discussed below consists of cup-kantharoi, plates, bolsals, and bowls of two kinds, one with the same kind of broad ring-foot as No. 2, the other resembling No. 10; there is also a stemless cup, No. 9, an uncommon form at this period. In general the quality of these vases is high for their time; the glaze is good, and their feet and rims, though lacking the refinement and delicacy of the most careful fifth-century work, are neatly executed. Regardless of their shape, all but one of the members of the group have a completely glazed underside which rises to a cone at the center and passes into the inner face of the foot in an unbroken curve. The one exception, the stemless cup, shows that the earlier system whereby a vase with a ring foot had a flat underside decorated with circles of glaze, might still be followed in a workshop whose normal practice was to produce the new, labour-saving variety. Equally important, however, is the discovery that contemporary examples of a shape, though very similar in general proportions, may vary appreciably in detail. The four cup-kantharoi, Nos. 25 to 28, provide a clear illustration of this point; in the relationship between the height and the diameter of the lip or the width of the foot they are closely connected, but they all differ in the profile of the lip and foot, the transition between body and wall, and the treatment of the underside. Such minor variations are not surprising, and even without the evidence of the palmettes they would not have been thought to have any chronological significance. The same cannot be said of the peculiar form of the cup-kantharos No. 14 (compare also *Olynthus*, XIII, pls. 183 and 191, No. 503); the wide rim and foot, and the low wall, might seem clear indications that it is an early example of the shape, whose presence in a later context is the result of chance survival. Yet the other vases which bear the imprint of the same stamp have numerous parallels among the material from Olynthos; in particular, there are fragments of cup-kantharoi whose degree of development comes close to that of such vases as *Olynthus*, XIII, pls. 183, 187, and 189, Nos. 505 and 506. No. 14, with its counterpart from Olynthos, must therefore be regarded, not as the predecessor of the form current in the second quarter of the fourth century, but as an exceptional contemporary variant.

By a similar procedure it is also possible to date vases of uncommon shape by linking them with better known varieties. In Athens the light cup-kotyle is comparatively rare in contexts of the second and third quarters of the fourth century, so that its development during the period is hard to trace; No. 24, however, bears palmettes by the same stamp as those on the cup-kantharoi, Nos. 25 to 28, and comes from the same deposit as two of them. The evidence of the context is thus confirmed by other means, and since the cup-kantharoi can be dated by their similarity to examples from Olynthos (*Olynthus*, XIII, pls. 183, 187, and 189, Nos. 505 and 506), the cup-kotyle must also belong to the second quarter of the fourth century.

The instances given above show how the study of impressed palmettes may be used both to confirm and also to modify deductions drawn from other data. The vases so far mentioned belong to a period about which we are comparatively well informed; in Athens and elsewhere the evidence for the second and subsequent quarters of the fourth century is almost as plentiful as for the years before 400 B.C. The first quarter of the fourth century, however, is poorly represented, and only the most tentative opinions can be formed about the development of the various shapes at that time, or about the date at which such new forms as the kantharos and cup-kantharos were introduced. Some progress can be made by comparing the examples current in the preceding and succeeding eras and deducing the intermediate stages, but the possibilities of error latent in this method are shown by the stemless cup, No. 23. In isolation the neat underside and the thin foot with its careful moulding at first sight suggest a date soon after 400 B.C., at the latest; one might indeed be tempted to regard the vase as evidence that rouletting was introduced into Athens considerably earlier than is commonly supposed. Three other vase-fragments (Nos. 20 to 22), however, which are decorated by the same stamp as the cup, are indistinguishable in form from examples of the second quarter of the century; moreover, all four pieces come from two deposits which consist almost entirely of pottery of that period. The balance of the evidence therefore compels one to regard the cup as a late example of an old-fashioned form which contrasts strongly with the approximately contemporary vase No. 9.

From the vases just discussed, in particular Nos. 14, 23 and 24, it is apparent that the identification of a group of vases decorated by the same stamp may open the way to conclusions which could not be reached by other means. The results thus achieved encourage the hope that the same method of study may ultimately supply the requisite foundation for the chronology of the black-glazed ware of the early fourth century.

#### CATALOGUE

The first three items are unrelated pieces, which are included for purposes of comparison. Nos. 4 to 19 are selected from the large workshop group mentioned on p. 172; the four stamps with which the group is decorated are represented by Nos. 4 to 7, 8 and 9, 10 to 15, and 16 to 19

respectively. The catalogue also includes two smaller groups, Nos. 20 to 23, and 24 to 28, each group being decorated with a different stamp. At the end is an account of the modern impressions shown on Plate 71.

In each description, the palmettes, unless otherwise indicated, are counted from the left, beginning with the first fully preserved example; the numbering of the petals on either side of a palmette starts with the one nearest the volute.

The individual palmettes are reproduced at twice actual size; general views of the patterns at actual size and the complete vases and drawn profiles at one-half actual size.

1. Light cup-kotyle fragment. Pl. 66. Details, 1 b, the first palmette; 1 c, the second.

Inv. P 5736. P. H. 0.031 m.

From the upper filling of a well just outside the southeast corner of the market square; a context of the late fifth to early fourth centuries. Previously published from the same deposit: Inv. T 829, *Hesperia*, VIII, 1939, p. 304, fig. 15; Inv. T 831, *ibid.*, p. 308, fig. 16.

About a quarter of the foot and floor preserved, with part of the wall. The form of the lower part of the foot is unusual; it has a straight, almost vertical face, with two horizontal grooves just below its upper edge. Flat, reserved underside, decorated with neat glaze circles and a dot; flat reserved resting surface; a scraped line near the junction of wall and floor.

The first palmette is correctly struck; in making the second the stamp was allowed to twist during its rotation, so that the two sides of the palmette splay outward; moreover it was rotated through more than a full circle, and in consequence the center petal and the fourth one on the right have each left two impressions. The exact correspondence of the details, however, shows that both the palmettes were produced by the same stamp. Compare also the modern impressions, Plate 71, i and v.

2. Bowl. Pl. 66. Detail, 2 b, the top palmette.

Inv. P 6960. Diam. 0.09 m.

From the filling of the eastern chamber of a cistern system in the level area south of the Hephaisteion. The bulk of the material accumulated during the last third of the fourth century; the deposit as a whole stops short of 300 B.C., but the presence in it of a few later frag-

ments suggests that it may have been dumped in the cistern early in the third century. Previously published from the same deposit: Inv. P 6728, G. van Hoorn, *Choes and Anthesteria*, Leiden, 1951, p. 82, No. 179 and fig. 462.

Complete save for a piece of the wall and chips from the rim. The broad resting surface reserved save for a narrow zone round the center; a reserved line at the junction of wall and foot. Profile much as *Hesperia*, XVIII, 1949, p. 329, fig. 5, no. 155.

On all five palmettes the sides splay outward, as a result of the stamp being allowed to twist during its rotation. Compare the modern impression, Plate 71, iii.

3. Bolsal fragment. Pl. 66. Details, 3 b, the top palmette; 3 c, the right hand one.

Inv. P 9305. Diam. of foot 0.063 m.

From a pit used for dumping the waste from a metal furnace, about 10 m. north of the Hephaisteion; filled up in the late fourth century B.C., but containing considerable earlier material. Previously published from the same deposit: Inv. P 7915, *Hesperia*, XVIII, 1949, p. 341, no. 138 and p. 319, fig. 1.

All the foot and floor preserved, with the start of the wall. The underside reserved, with three neat glaze circles and a dot. Profile of foot and underside similar to *Hesperia*, IV, 1935, p. 502, fig. 20, no. 14.

Most of the petals of the right-hand palmette have not their full length, as a result of failure to roll the stamp well over toward the upper part of the palmette during its rotation. As the decorated area is concave, a flat stamp could not give this result, but would produce either an impression with well-struck extremities and

no center, or one which was deep at one end and grew progressively more shallow toward the other. Moreover the difference between this palmette and the other three can scarcely be explained by assuming that it was made by a different stamp, since the details of the lower parts of all four correspond. Compare also the modern impressions, Plate 71, i and iv.

4. Bowl fragment. Pl. 66. Detail, 4 b, the first palmette.

Inv. P 22578. Max. dim. 0.099 m.

From a foundry pit, a pit in the courtyard of a small metal-working establishment outside the Agora to the northwest along the ancient road leading from the Dipylon (*Hesperia*, IX, 1940, p. 300). The pottery, though fragmentary, is homogeneous and belongs to the second quarter of the fourth century, the greater part of it being rather earlier than the most developed material from Olynthos. Already published from the same deposit: Inv. P 14649 (here No. 13), *Hesperia*, XVIII, 1949, p. 344, no. 153 and p. 325, fig. 4; Inv. T 1931, *Hesperia*, VIII, 1939, p. 290, fig. 4. From the same context: here, Nos. 4, 5, 8, 13, 20, 21, 22.

About half of the foot and floor preserved. A reserved line at the junction of wall and foot; the groove in the resting surface also reserved. Foot and underside as No. 10.

The decoration originally consisted of seven linked palmettes arranged in a circle, with an eighth at the center. On the third and fourth palmettes the third petal on the left has struck twice.

5. Cup-kantharos or kantharos fragment. Pl. 66. Detail, 5 b, the only complete palmette.

Inv. P 22599. Max. dim. 0.048 m.

From the filling of the foundry pit, as No. 4.

A small fragment of the foot and floor preserved. A scraped line at the junction of the large and small mouldings of the foot; the groove in the resting surface reserved. Profile of foot similar to that of No. 14.

Only the edge of the stamp has touched the

vase, and the center has not struck at all; the fourth petal on the right has struck twice. The impression is rather shallow, but the disposition of the petals, the shape of their tips and the form of the volutes can be exactly paralleled on No. 4. Compare Plate 66, 5 b and 4 b; compare also the modern impressions, Plate 71, i and viii.

6. Plate. Pl. 66; Fig. 2. Details, 6 b, the top palmette; 6 c, the right-hand one; 6 d, the central ornament.

Inv. P 15055. Est. diam. 0.12 m.

From the filling of a small cutting in bedrock on the north slope of the Areopagus; context of the fourth century B.C.

Complete save for the greater part of the rim. Glazed all over; the glaze on the interior and inside the foot is blue-black; on the rest of the exterior it varies from gray to chestnut and has peeled considerably.

All the palmettes have the same defect; only the edge of the stamp came into contact with the clay; the stamp was allowed to twist during its rotation, and it was not rotated through a complete circle. In consequence the palmettes have no centers; in most cases at least one of the left-hand petals is missing, and the whole left side splays outward. However, the volutes, the center petal and the petals on the right correspond exactly to those on No. 5; compare Plate 66, 6 b and 5 b. The four hooked lines at the center of the plate were made by the right-hand volute of the palmette stamp; compare Plate 66, 6 b and 6 d.

7. Plate fragment. Pl. 67; Fig. 2. Detail, 7 b, the second palmette in the inner zone.

Inv. P 8178. Max. dim. 0.193 m.

From a filling in a well near the west edge of the level area south of the Hephaisteion. Though there is a considerable amount of pottery, very few complete shapes are preserved. A few pieces from the filling are of the latest fourth century, but by far the greater part belongs to the thirty years before 350 B.C. Pre-



viously published from the same deposit: Inv. P 8174, van Hoorn, *Choes*, p. 83, No. 186 and fig. 167.

From the same context: here, Nos. 7, 10, 11, 12, 14, 15, 16, 17, 18, 19, 23, 24, 26, 27.

it was not rotated through a complete circle. As a result, all the palmettes have no centers and lack at least one of the petals on the left side. In view of the extreme shallowness of the impressions, it is probable that the vase was

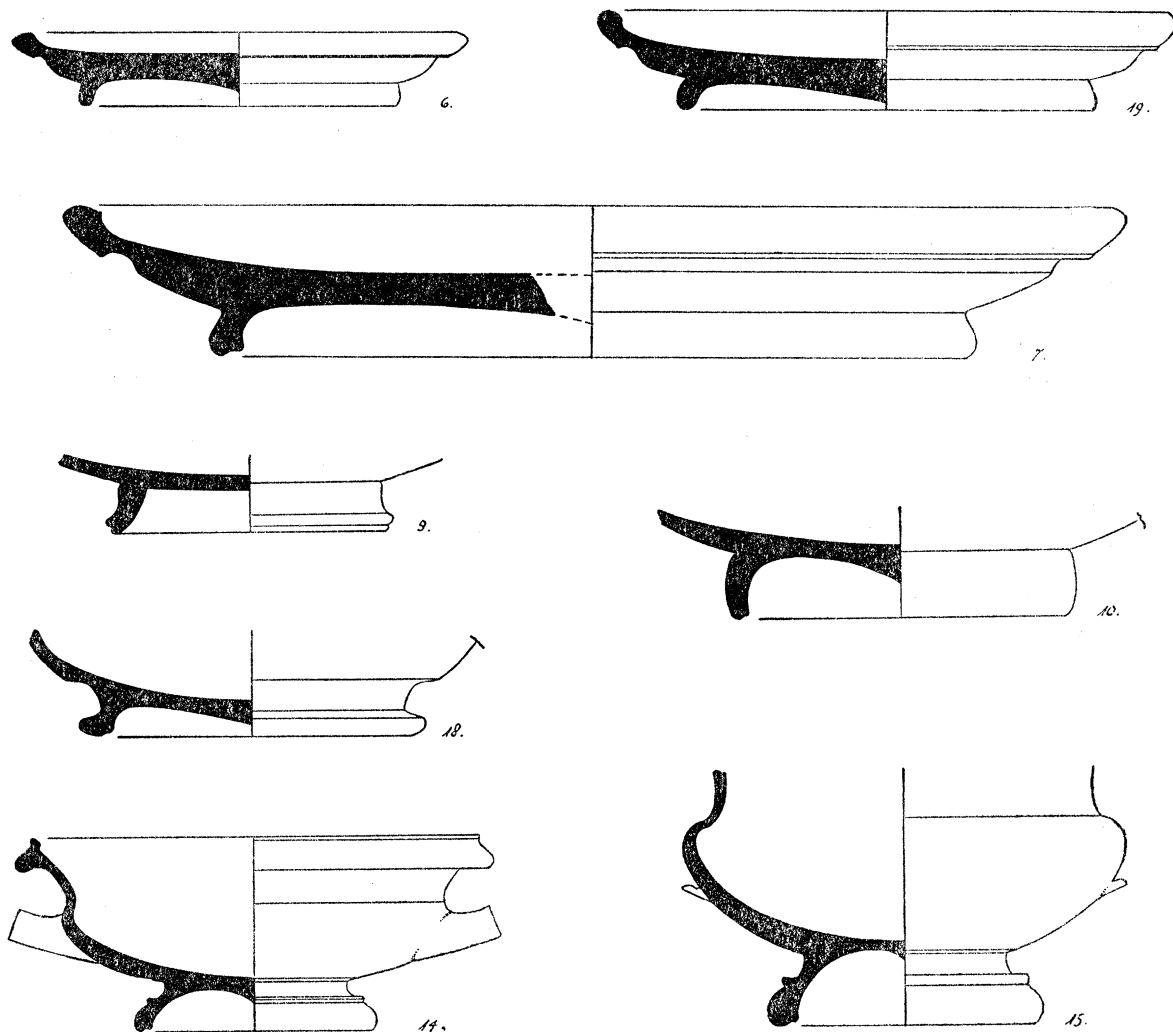


FIG. 2. Black-Glazed Vases from Workshop Group. Scale 1:2.

About a quarter of the foot and floor preserved, with part of the rim; unusually heavy ring foot with grooved resting surface. Glazed all over.

All the palmettes have the same defect; only the edge of the stamp has touched the vase, and

allowed to become too hard before it was decorated. The deepest impression on this plate should be compared with the faintest one on No. 6; it will be seen that the volutes and the petals on the right side correspond. Compare Plates 67, 7 b and 66, 6 c.

8. Bowl fragment. Pl. 67. Detail, 8 b, the second palmette.

Inv. P 22576. Max. dim. 0.072 m.

From the filling of the foundry pit, as No. 4.

About a third of the foot and floor preserved. The groove in the resting surface reserved, with a heavy milto wash. A scraped line at the junction of wall and foot. Foot and underside as No. 10.

The palmettes resemble those on No. 4, but can be distinguished by the shape and setting of the first petal on either side and by the curtailment of the volutes. Compare Plates 67, 8 b and 66, 4 b; compare also the modern impressions, Plate 71, ix and xi.

9. Stemless cup fragment. Pl. 67; Fig. 2. Detail, 9 b, the second palmette.

Inv. P 22743. Max. dim. 0.069 m.

From the plundered trench of the north-south wall of the foundry; see above under No. 4. Context of the second quarter of the fourth century.

About half of the foot and floor preserved. Underside reserved and decorated with fairly neat zones and circles of glaze; reserved resting surface. A scraped line on the wall just above its junction with the foot.

On both the complete palmettes the fourth petal on the left has struck twice. The shape and disposition of the rest of the petals and the form of the volutes suffice to show that this cup was decorated with the same stamp as No. 8. Compare Plate 67, 9 b and 8 b.

10. Bowl fragment. Pl. 67; Fig. 2. Detail, 10 b, the top palmette.

Inv. P 22627. Max. dim. 0.122 m.

From the same well-filling as No. 7.

The complete foot preserved save for chips, with the start of the wall. The groove in the resting surface reserved; a scraped line at the junction of wall and foot.

The disposition of the petals resembles that of the palmettes on No. 4; but the petals themselves are broader, their rounded ends have

been cut off, and the volutes have been curtailed. Compare Plates 67, 10 b and 66, 4 b; compare also the modern impressions, Plate 71, ix and xii.

11. Bowl fragment. Pl. 67. Details, 11 b, the first palmette; 11 c, the second.

Inv. P 22634. Max. dim. 0.086 m.

From the same well-filling as No. 7.

About a third of the foot and half of the floor preserved, with the start of the wall. The groove in the resting surface reserved, but accidentally glazed at one point; a scraped line at the junction of wall and body. Foot and underside similar to No. 10.

The first palmette is complete, though rather lightly struck on the left. The others are defective on the left side, as a result of failure to rotate the stamp through a full circle, and in places their ribs are distorted through the twisting of the stamp during its rotation. The complete palmette was made by the same stamp as those on No. 10; the intact parts of the other impressions also correspond. Compare Plate 67, 11 b and c, and 10 b; compare also the modern impressions, Plate 71, i and vii.

12. Bowl fragment. Pl. 67. Details, 12 b, the top palmette; 12 c, the left-hand one.

Inv. P 22639. Max. dim. 0.081 m.

From the same well-filling as No. 7.

All of the foot and floor preserved, with the start of the wall. The groove in the resting surface reserved; a scraped line at the junction of wall and foot. Foot and underside similar to No. 10.

All but two of the palmettes are defective on the left side. The complete palmettes correspond with those on No. 10, the defective ones with those on No. 11. Compare Plate 67, 12 b and 10 b; also 12 c and 11 c.

13. Plate. Pl. 68. Detail, 13 b, the top palmette. Profile drawing, *Hesperia*, XVIII, 1949, p. 325, fig. 4, no. 153.

Inv. P 14649. Max. diam. 0.151 m.

From the filling of the foundry pit, as No. 4.

Small pieces of the rim and foot restored; glazed all over.

All the palmettes are defective in the center and on the left side, as a result of failure to rotate the stamp through a complete circle. On some of them the tips of the left-hand petals are displaced and splay outward, in consequence of the twisting of the stamp during its rotation. The correspondence between what there is of the volutes and right side of the palmettes and the equivalent portions of the impressions on No. 11 show that the same stamp was used for both vases. Compare Plates 68, 13 b and 67, 11 c.

14. Cup-kantharos with moulded rim. Pl. 68; Fig. 2. Detail, 14 b, the top palmette.  
Inv. P 8193. Diam. 0.126 m.

From the same well-filling as No. 7.

About a third of the rim, wall and foot restored. The groove in the resting surface reserved; a scraped line at the junction of the large and small mouldings on the foot. For the proportions compare *Olynthus*, XIII, pls. 183 and 191, No. 503.

The palmettes have the same defects as those on No. 13; the parts which have been correctly struck correspond to the equivalent portions on No. 11. Compare Plates 68, 14 b and 67, 11 c.

15. Cup-kantharos. Pl. 68; Fig. 2. Detail, 15 b, the top palmette.  
Inv. P 22642. P. H. 0.068 m.

From the same well-filling as No. 7.

All the foot and two-thirds of the body preserved, with the start of the wall. The groove in the resting surface reserved; a scraped line at the junction of the large and small mouldings of the foot; another just outside the junction of body and foot.

The palmettes are defective in the same way as those on No. 13 and No. 14; most of them are lightly struck, so that the petals on the right look rather thin and short, but the deepest impression can be exactly paralleled on the two

preceding vases and must have been made by the same stamp. Compare Plate 68, 15 b, 14 b and 13 b.

16. Bolsal fragment. Pl. 68. Detail, 16 b, the top palmette.

Inv. P 22660. Diam. of base 0.092 m.

From the same well-filling as No. 7.

Most of the foot and all the floor preserved, with the start of the wall. The groove in the resting surface reserved. Foot and underside similar to No. 18.

The disposition of the petals resembles that of the palmettes on No. 8 but the palmettes themselves are broader, the tips of all but the center petal and the fourth on the left have been cropped; in addition, the right-hand volute has been trimmed slightly more. Compare Plates 68, 16 b and 67, 8 b.

17. Bolsal fragment. Pl. 68. Detail, 17 b, the top palmette.

Inv. P 22661. Diam. of base 0.09 m.

From the same well-filling as No. 7.

All of the foot and floor preserved, with the start of the wall. The groove in the resting surface reserved. Foot and underside similar to No. 18.

Most of the palmettes are correctly struck, with a few minor distortions; the details correspond to those on No. 16. On the top palmette, however, all but the first of the left-hand petals are incomplete owing to failure to roll the stamp sufficiently far over in their direction. The center petal of the stamp has touched the clay twice, making one well-struck impression, over which a shallow one has been superimposed; the two do not quite coincide, so that the petal is distorted. In this instance the center petal was the first part of the stamp to touch the clay, and the rotation was clockwise. The right side of the palmette, its heart, and the volutes correspond to those of the other palmettes on the vase, and to those on No. 16. Compare Plate 68, 17 b and 16 b.

- 18.** Bolsal fragment. Pl. 69; Fig. 2. Details, 18 b, the first palmette; 18 c, the third.

Inv. P 22662. Diam. of base 0.089 m.

From the same well-filling as No. 7.

About half the foot and two-thirds of the floor preserved, with part of the wall. A scraped line in the groove of the resting surface; another at the junction of the main part of the wall and its concave lower section.

The first palmette, unlike its neighbours, has only eight petals; this defect is due to an error in manipulation. The center petal of the stamp was the first part to touch the clay; the stamp was rotated clockwise, and during its rotation it was allowed to twist, so that the left-hand petals converge toward the top. At the end of the rotation, the fourth petal on the left obliterated all save the tip of the imprint made by the center petal, while the center petal touched the vase a second time, distorting the tip of the fourth petal on the right. See Plate 69, 18 b. The left-hand petals on the third palmette are short and shallow, owing to failure to roll the stamp well over to the upper left during its rotation; the broken line of the ribs on the right side is due to movement of the stamp. See Plate 69, 18 c. Despite these peculiarities, the coincidence of the properly-struck parts of these and of the other palmettes on this vase with the equivalent portions of the impressions on No. 16 shows that all were made by the same stamp. Compare Plate 69, 18 b and 18 c with Plate 68, 16 b.

- 19.** Plate fragment. Pl. 69; Fig. 2. Detail, 19 b, the third palmette.

Inv. P 8179. Diam. of foot 0.110 m.

From the same well-filling as No. 7.

Rather more than half the foot and floor preserved, with part of the rim; glazed all over.

All the palmettes are lightly and carelessly struck, and in most cases the center of the stamp has not touched the clay at all. In making the third palmette, the operator has also failed to roll the stamp over to its outer limit during its rotation, and as a result the petals are thin and

short; the left-hand ones, however, correspond so exactly to those of a defective impression on No. 17 that they must have been produced by the same stamp. Compare Plates 69, 19 b and 68, 17 b.

- 20.** Bolsal fragment. Pl. 69. Detail, 20 b, the first palmette.

Inv. P 22606. Max. dim. 0.076 m.

From the filling of the foundry pit, as No. 4.

About a quarter of the foot and floor preserved, with the start of the wall. The groove in the resting surface reserved; the glaze on the exterior fired chestnut. Foot and underside similar to No. 18, save that the foot is thicker.

The palmette is not fully struck at the center. Its most distinctive features are the way the volutes meet at the middle without leaving any stem to the heart, the extreme width of the first petal on either side, and the slight defect at the start of the first rib on the right.

- 21.** Bolsal fragment. Pl. 69. Detail, 21 b, the only surviving palmette.

Inv. P 22605. Max. dim. 0.106 m.

From the filling of the foundry pit, as No. 4.

About a third of the foot and floor preserved, with part of the wall. A scraped line in the groove of the resting surface; another just below the junction of the main part of the wall and its concave lower section. Foot and underside similar to No. 18, save that the foot is thicker.

The fourth petal on the right has struck twice; the individual petals and volutes correspond to those on No. 20. Compare Plate 69, 21 b and 20 b.

- 22.** Bowl fragment. Pl. 69. Detail, 22 b, the first palmette.

Inv. P 22579. Max. dim. 0.075 m.

From the filling of the foundry pit, as No. 4.

About a quarter of the foot and floor preserved, with part of the wall. The groove in the resting-surface reserved; a reserved line at the junction of the wall and the foot. Glaze fired

chestnut in places on the exterior. Foot and underside similar to No. 10.

The petals and the left-hand volutes are abbreviated as a result of failure to roll the stamp over to its edge during its rotation. In

**23.** Stemless cup fragments. Pl. 69; Fig. 3. Detail, 23 b, the second palmette.

Inv. P 22666. P. H. of largest fragment 0.039 m.

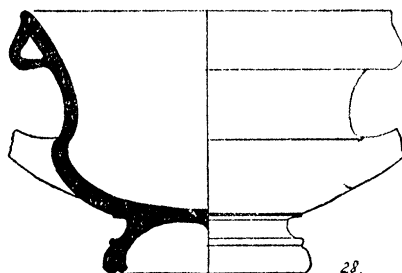
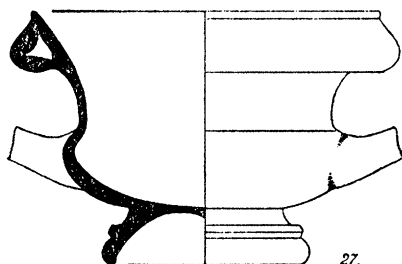
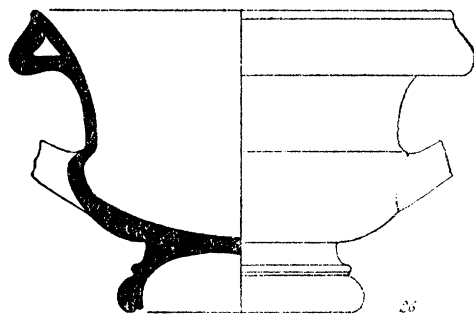
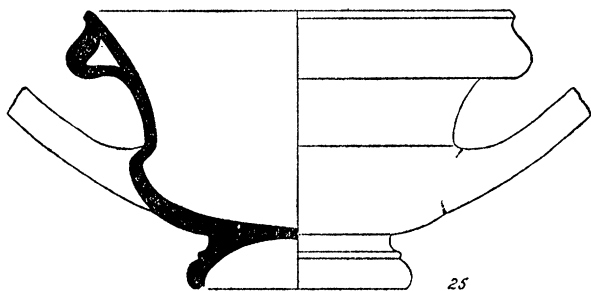
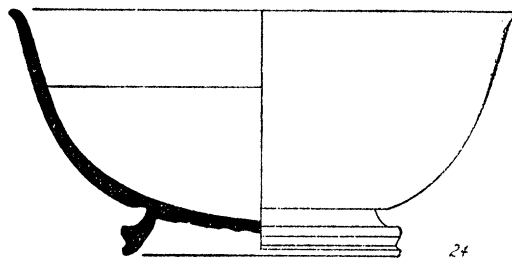
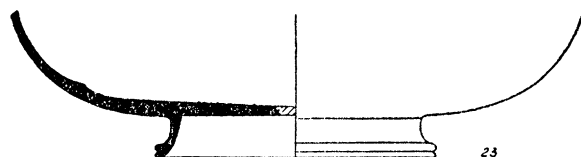


FIG. 3. Black-Glazed Vases. Scale 1:2.

their inner details, however, the palmettes correspond to those on No. 20 and No. 21, and were therefore made by the same stamp. Compare Plate 69, 22 b with 21 b and 20 b.

From the same well-filling as No. 7.

The largest fragment gives about half the foot and floor and part of the wall. Two other non-joining pieces, which are not illustrated,

give more of the floor and part of the rim. Underside reserved, with neat glaze zones and circles; reserved resting surface; a scraped line around the wall near its junction with the foot.

The palmettes are all badly struck, with gaps and extra petals; even so, the correspondence between the details and their equivalents on the three preceding vases shows that this cup, too, was decorated with the same stamp. Compare Plate 69, 23 b with 22 b, 21 b, and 20 b.

24. Light cup-kotyle. Pl. 71; Fig. 3. Detail, 24 b, the left-hand palmette; 24 c, the right-hand one.

Inv. P 8191. H. 0.065 m.

From the same well-filling as No. 7.

About half the wall, a third of the foot and a small piece of the floor restored. The underside was completely glazed and then divided into zones by four concentric scraped circles. Reserved resting surface; a scraped line round the wall just above its junction with the foot; another between the two mouldings of the lower part of the foot.

The sides of the left-hand palmette splay outward, the fourth petal on the left is unduly broad, and its tip is out of alignment with the center petal; these defects are due to the stamp being allowed to twist during its rotation. In the right-hand palmette the stamp has struck twice on the right-hand side, distorting the outline and partly obliterating the right volute. In combination, however, the two palmettes provide well-struck impressions of all parts of the stamp.

25. Cup-kantharos with moulded rim. Pl. 70; Fig. 3. Detail, 25 b, the top palmette.

Inv. P 1090. H. 0.073 m.

From a deposit lying over a cobbled floor in a building on the lower north slopes of the Areopagus. Some Hellenistic and later disturbance was noted, but the bulk of the pottery belongs to the second and third quarters of the century, with the lower limit well before the end of the third quarter. Previously published from

the same deposit: Inv. P 1095, *Hesperia*, IV, 1935, p. 522, no. 116 and p. 502, fig. 20; Inv. P 1096, *ibid.*, p. 522, no. 117 and p. 485, fig. 8; Inv. SS 368, *Hesperia*, III, 1934, p. 210, no. 1; SS 369, *ibid.*, no. 2; SS 367, *ibid.*, no. 3.

About half of the rim and a quarter of the wall restored. The groove in the resting surface reserved; a scraped line at the junction of the two mouldings of the lower part of the foot. For the proportions of this vase, and of Nos. 26 to 28, compare *Olynthus*, XIII, pls. 183, 187 and 189, Nos. 505 and 506.

The center of the top palmette is lightly struck; the rest of the details are clear, and correspond to the equivalent parts of the top and bottom palmettes on No. 24. Compare Plate 70, 25 b with Plate 71, 24 b and 24 c.

26. Cup-kantharos with moulded rim. Pl. 70; Fig. 3. Detail, 26 b, the top palmette.

Inv. P 8192. H. 0.08 m.

From the same well-filling as No. 7.

About half of the rim, wall and foot restored. The rim is not horizontal. The resting surface reserved.

The details of the palmettes correspond to the equivalent parts of those on No. 24. Compare Plate 70, 26 b with Plate 71, 24 b and 24 c.

27. Cup-kantharos with moulded rim. Pl. 70; Fig. 3. Detail, 27 b, the top palmette.

Inv. P 22656. H. 0.068 m.

From the same well-filling as No. 7.

About half of the rim, wall, body and foot restored. The resting surface reserved; a scraped line at the junction of the two mouldings of the lower part of the foot.

The four palmettes in the interior have been set so close together that their volutes overlap and are partly obscured. The petals correspond to the equivalent parts of the palmettes on No. 24. Compare Plate 70, 27 b with Plate 71, 24 b and 24 c.

28. Cup-kantharos with moulded rim. Pl. 70; Fig. 3. Details, 28 b, the right-hand palmette; 28 c, the left-hand one.

Inv. P 3708. H. 0.07 m.

From the filling inside the foundations of the Temple of Zeus Phratrios and Athena Phratria (*Hesperia*, VI, 1937, plan, pl. III, II, pp. 84-90, 104-105); a context of the second quarter of the fourth century. Previously published from the same deposit: Inv. P 3711, *Hesperia*, IV, 1935, p. 522, no. 115, p. 485, fig. 8 and p. 502, fig. 20; *Hesperia*, VI, 1937, pp. 88-89, fig. 46, a-f.

About half of the rim, wall and body restored. The groove in the resting surface reserved; a reserved line round the body just above its junction with the foot.

All the palmettes are defective. On the right-hand one the left side is missing, owing to failure to rotate the stamp through a full circle; the excessive distance between the tip of the center petal and the base of the volutes is due to displacement of the stamp during its rotation. On the left-hand palmette most of the left side and center is missing; moreover the volutes are badly out of alignment, as a result of allowing the stamp to twist during rotation. Where the details are properly struck, however, they correspond to the equivalent parts of the palmettes on No. 24. Compare Plate 70, 28 b and 28 c with Plate 71, 24 b and 24 c.

MODERN IMPRESSIONS. Pl. 71, i-xii.

Nos. i to ix are by the same stamp; Nos. x to xii are by three other stamps made with the same mould.

i. The stamp was rotated through a complete circle, and rolled over to its outer edge during rotation, thus producing a correctly struck impression.

ii. The center petal of the stamp was applied to the clay, and the stamp was then rotated in a clockwise direction. It was allowed to twist during its rotation, so that the fourth petal on the left overstruck the imprint left by

the center petal, leaving only the tip of it undisturbed.

iii. The center petal of the stamp was applied to the clay, and the stamp was then rotated in a clockwise direction. It was allowed to twist during its rotation, so that the petals on the left-hand side splay outward. At the start of the operation the fourth petal on the left was inadvertently allowed to touch the clay, so that the palmette has an extra petal.

iv. The right side of the stamp was applied to the clay. The stamp was then rotated, but not rolled over to a sufficient degree toward the top of the palmette. As a result the center petals are short and thin.

v. The fourth petal on the left was applied to the clay; the stamp was then rotated in a clockwise direction, and allowed to twist during its rotation. In consequence the petals on the left were displaced, thus leaving room for the fourth petal on the left to make a second imprint.

vi. The stamp was not rolled sufficiently far to the left during its rotation, so that the left-hand petals are thin and short.

vii. The center petal of the stamp was applied to the clay; the stamp was then rotated in a clockwise direction, but was not carried through a full circle. In consequence the third and fourth petals on the left are extremely faint.

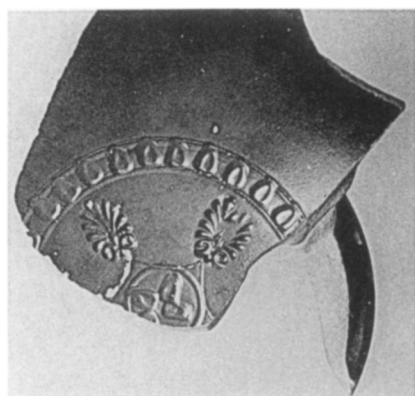
viii. The tip of the center petal of the stamp was applied to the clay; the stamp was then rotated in a clockwise direction, but was not rolled in toward the center, so that only its outer edge came into contact with the clay.

ix. By the same stamp as No. i.

x. By a stamp from the same mould as No. i. Note the displacement of the first petal on the right.

xi. By a stamp from the same mould as No. i. The volutes are curtailed, and the fourth petal on the left does not extend to the heart.

xii. By a stamp from the same mould as No. i. The volutes are curtailed, and the tips of all the petals have been cropped.



1a



1b



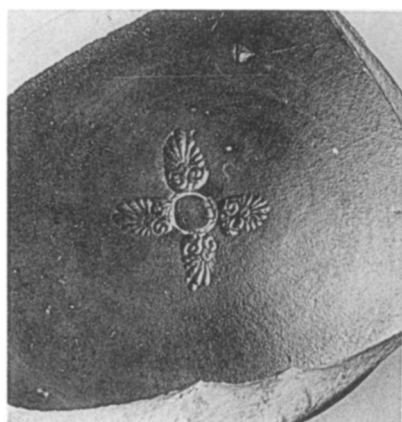
1c



2b



2a



3a



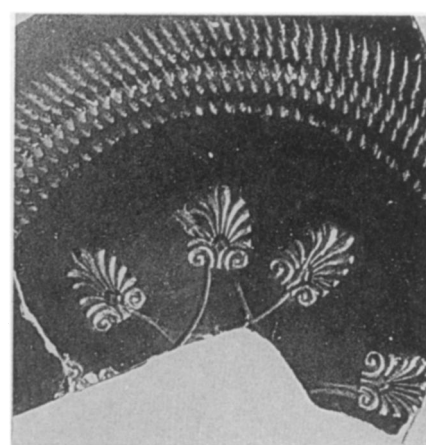
3b



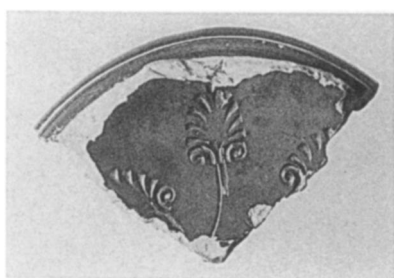
3c



4b



4a



5a



6b



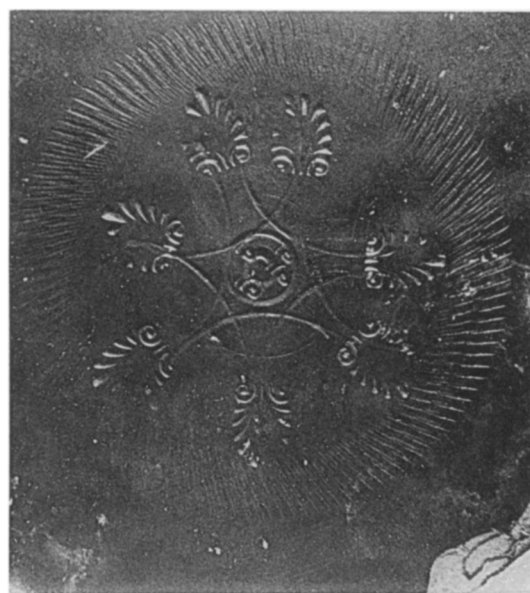
5b



6d

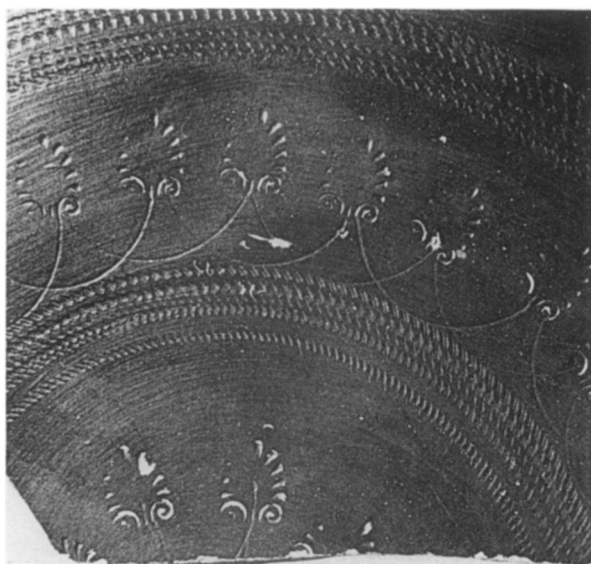


6c



6a





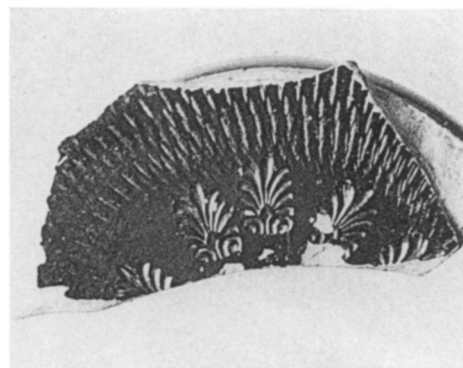
7a



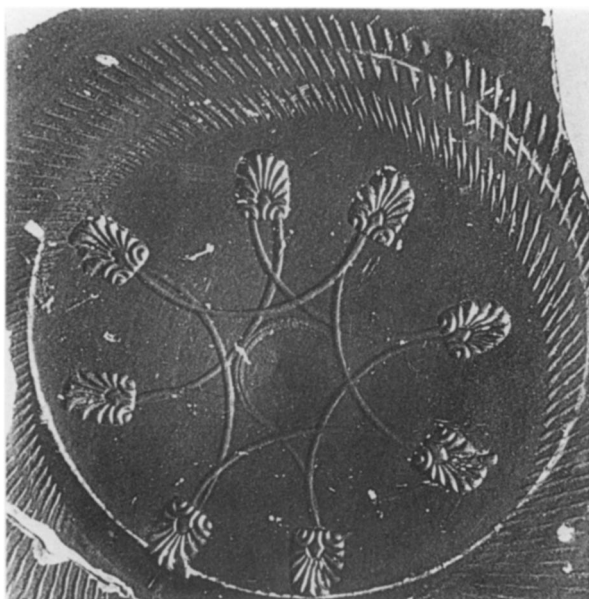
7b



8b



8a



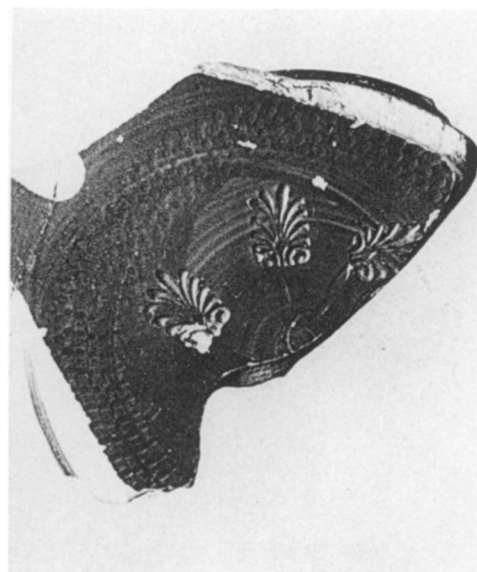
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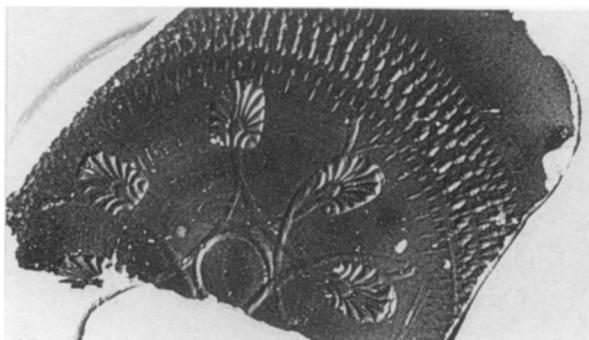
10b



9b



9a



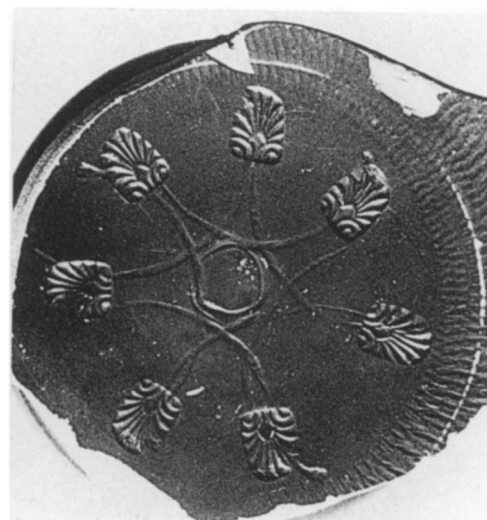
11a



12b



12c



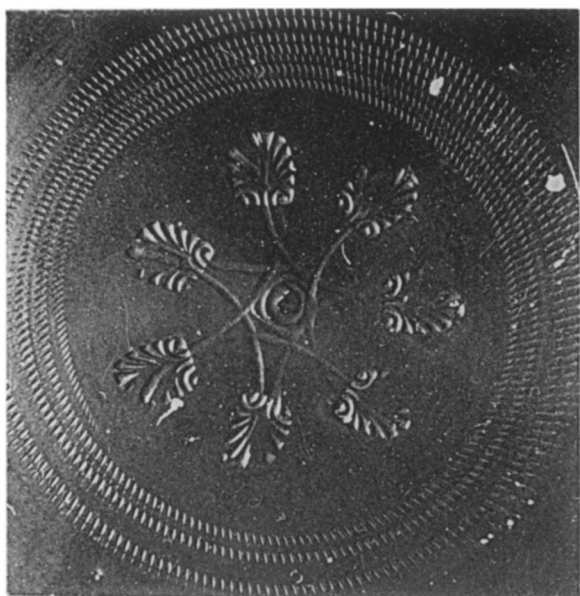
12a



11b



11c



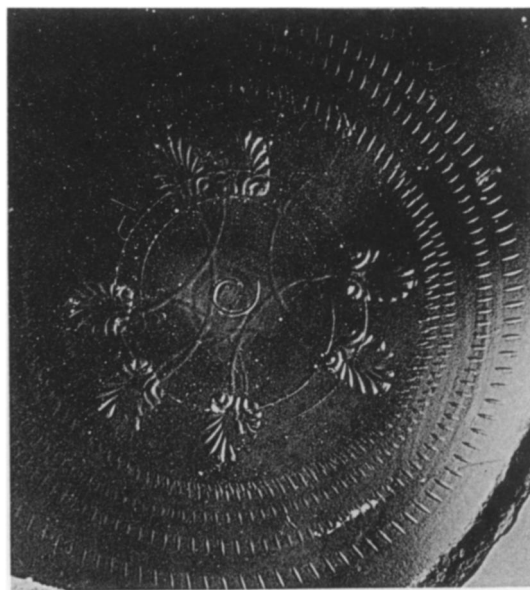
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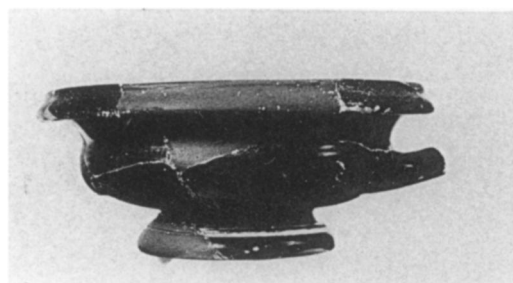
13b



15b



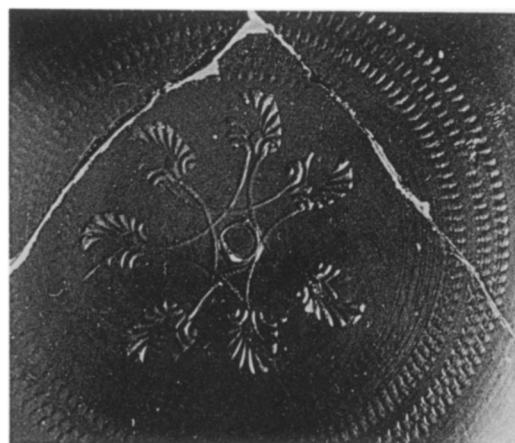
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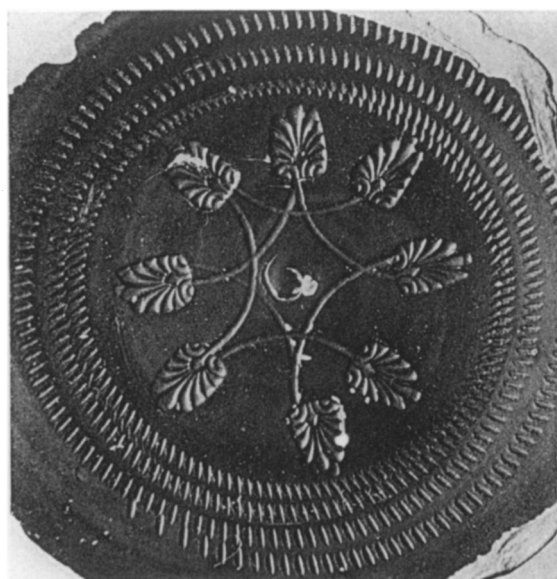
14c



14b



14a



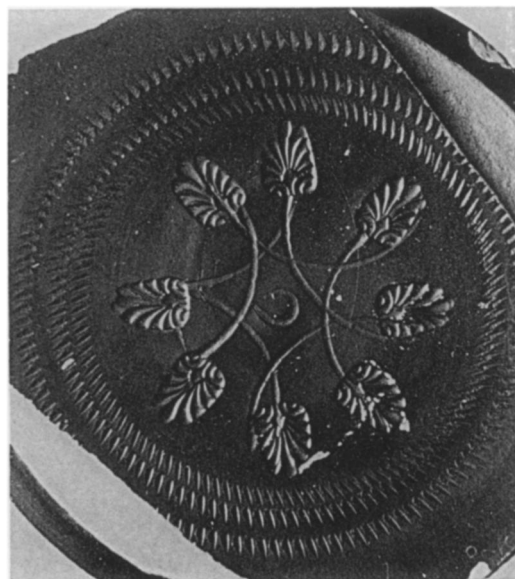
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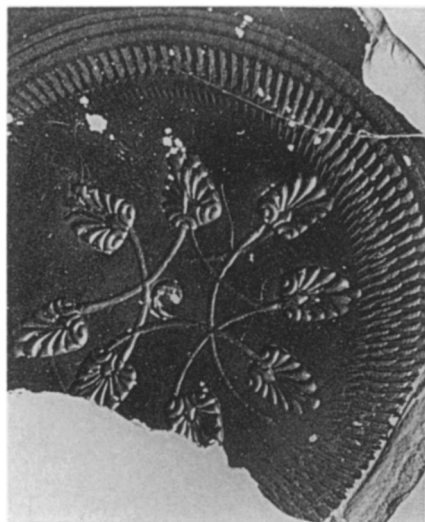
16b



17b



17a



18a



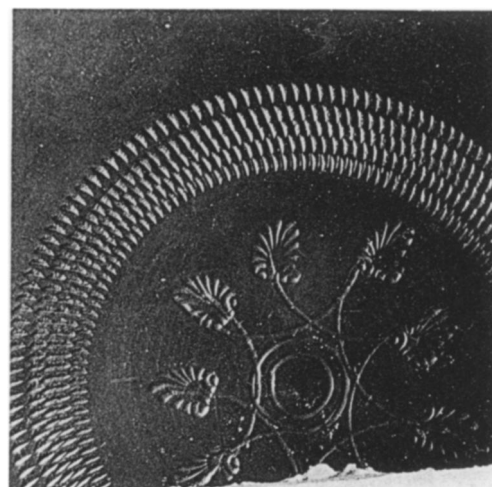
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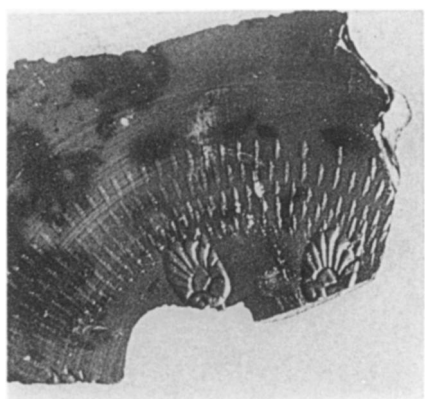
18c



19b



19a



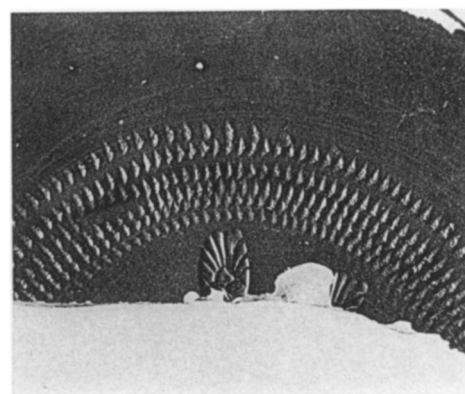
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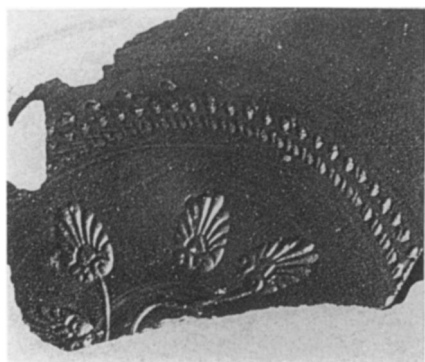
20b



21b



21a



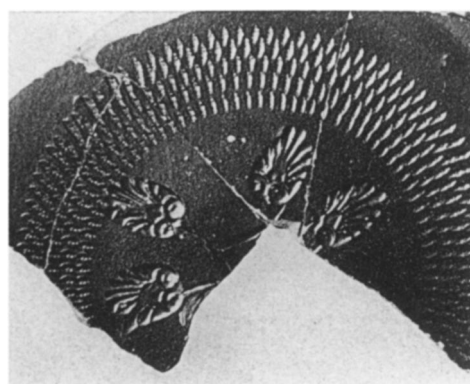
22a



22b



23b



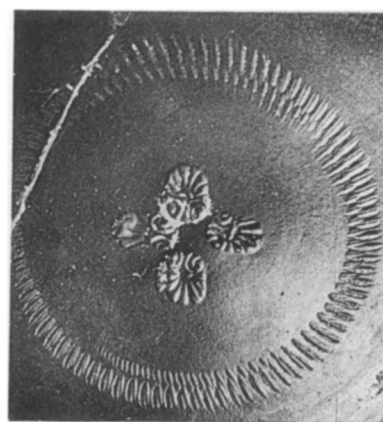
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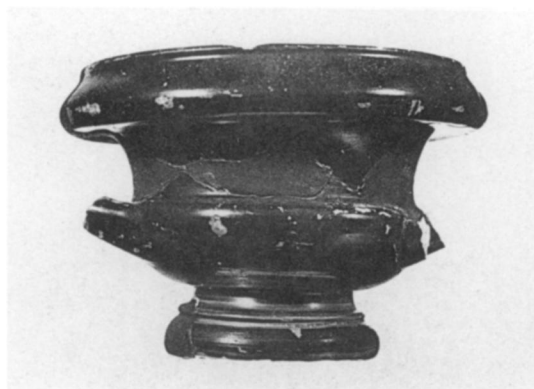
25c



25b



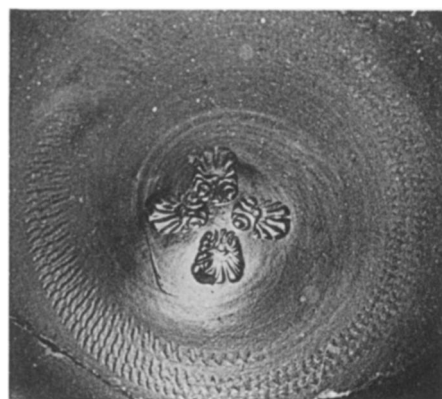
25a



26c



26b



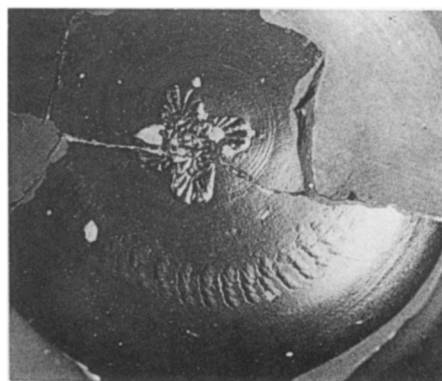
26a



27c



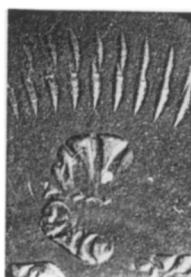
27b



27a



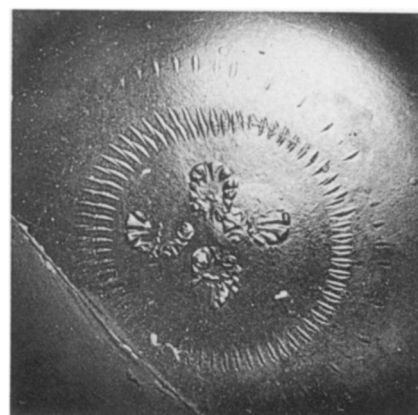
28d



28c



28b



28a





24d



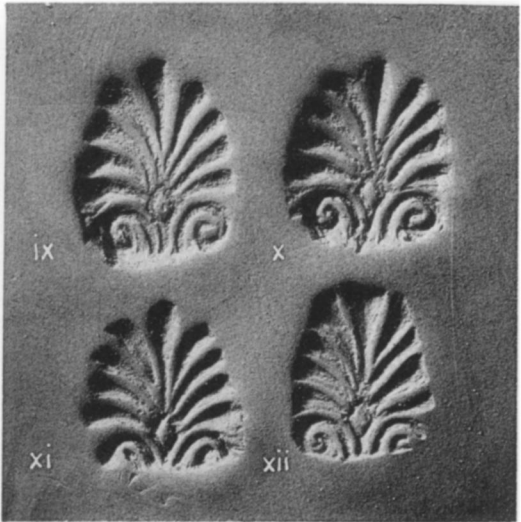
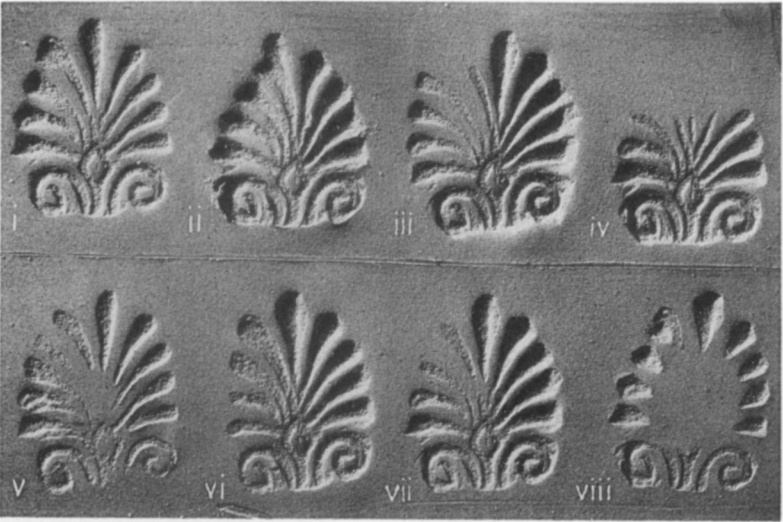
24c



24b

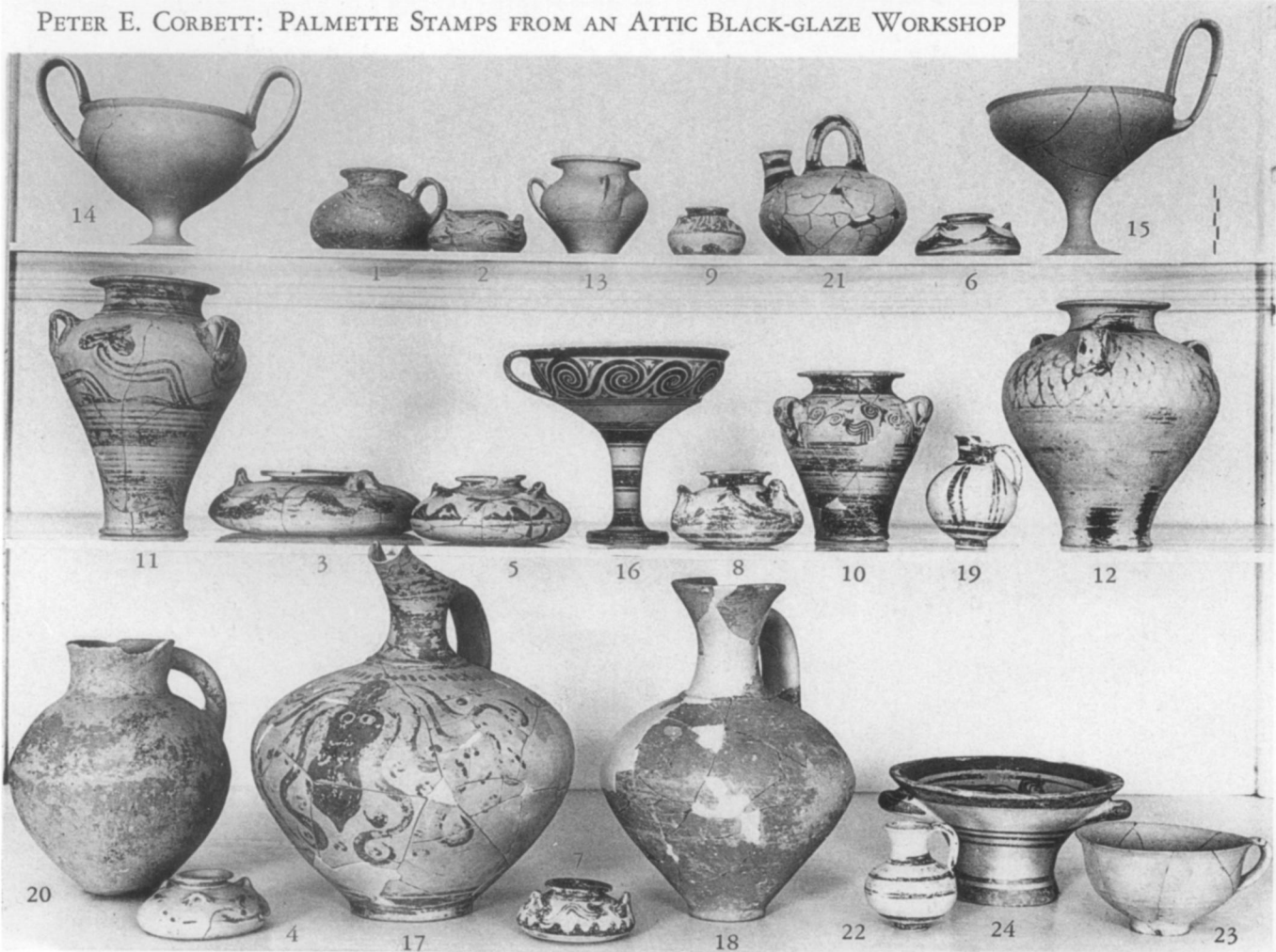


24a



Modern Impressions i—xii

PETER E. CORBETT: PALMETTE STAMPS FROM AN ATTIC BLACK-GLAZE WORKSHOP



EMILY D. TOWNSEND: A MYCENAEAN CHAMBER TOMB UNDER THE TEMPLE OF ARES