

TERRACOTTA LAMPS

The catalogue of lamps for the season 1931 includes 317 items.¹ About one third of the lamps are complete. Of the many fragmentary lamps found, those have been entered in the catalogue which were sufficiently well preserved to admit of their being assigned to one or other of the classes established by Broneer in his study of the terracotta lamps from Corinth.² Broneer's classification, as the most comprehensive and generally satisfactory yet proposed, will be used as the basis for this preliminary study of the material found in the Agora. Any noteworthy variations from his types will be considered, and likewise any new evidence bearing on the chronology or history of the individual types. The detailed catalogue must be reserved for the final publication.

Since very little undisturbed stratification of classical Greek and Hellenistic times was cut through in the operations of this season, the lamps of those periods are comparatively few in number. Scarcely a single specimen is preserved intact, and only rarely has the context in which the individual lamp was found any value for dating. Fragments from lamps of Types I to VII, which Broneer assigns to the classical Greek period, number 51. Two of the earliest of these (L 17, L 19) are of interest because of their unbridged nozzles³ (Figs. 1, 1; 2, 1). Their bases are not set off from the walls. The rims are turned slightly in. At either side of the nozzle the rim bends outward in a well-defined angle. Both lamps are wheel-made, and are of Attic clay.⁴ The interior is covered with a good black glaze which is also carried in a narrow band around the lip of filling-hole and nozzle. The rest of the exterior is unglazed. This type, not found in Corinth, appears to have been common enough in Athens. Comparable specimens may be seen in the Akropolis Museum, and there are some close parallels among lamps found at Eleusis, which were probably made in Athens.⁵ One of our fragments was found together with Attic black-figured sherds; the other came from a disturbed context. It is probable that both are to be dated in the sixth century.

¹ The numbers preceded by L used in referring to lamps discussed in this article are the serial numbers employed in the current catalogue of the Agora lamps.

² *Corinth*, Vol. IV, Part II: *Terracotta Lamps* by Oscar Broneer, Cambridge, 1930. I am indebted to Dr. Broneer for many helpful suggestions in the study of the present group of lamps.

³ On the unbridged nozzle cf. Broneer, *op. cit.*, p. 5.

⁴ Hereafter it is to be understood that the clay is Attic unless otherwise specified.

⁵ Neither the Akropolis nor the Eleusis collection has yet been published. A lamp from the latter is illustrated in *J.H.S.* XXXI, 1911, p. 93, fig. 18.

Broneer's Type II is represented by a single fragment (L 251; Figs. 1, 2; 2, 2). It has a flat rim sloping gently inward and projecting slightly outward beyond the side wall.¹ The wick-hole encroaches on the rim. The interior, the rim, and the nozzle (both above

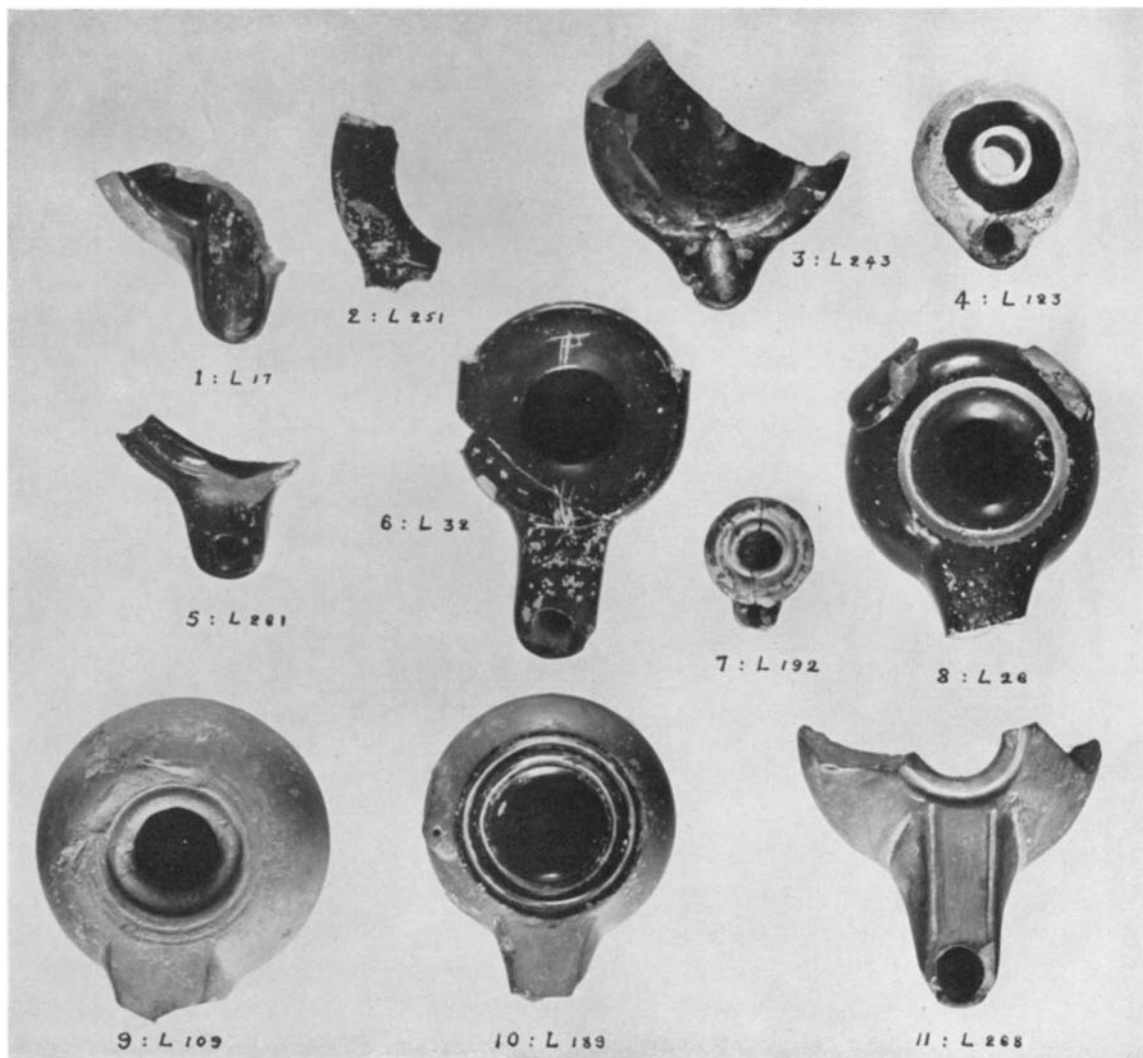


Fig. 1. Greek lamps

and below) were glazed. On the inside and on the inner half of the rim the glaze has turned red, probably because it was here cut off from air by another lamp stacked on

¹ Cf. Broneer, fig. 14, 12; Robinson, *Olynthus* II, fig. 297, nos. 1-5; *British Museum Catalogue of Lamps*, no. 174; pl. IX.

top of it in the kiln. This type is common among the lamps in the Akropolis Museum, and is dated by Broneer in the second half of the sixth century.¹

Another lamp (L 243) of unquestionably early date is illustrated in figures 1, 3 and 2, 3. The base rises slightly toward the center, but is not set off from the sides. The rim is broad and slopes gently in. The wick-hole encroaches slightly on the rim. The interior carries a black glaze which also covers the rim, except for a narrow reserved band, and the nozzle, both top and bottom. In type the lamp corresponds most closely with Broneer's Type IV. It was found in a burnt layer which underlies the foundations of the Royal Stoa, a layer which has yielded chiefly late black-figured pottery, but also

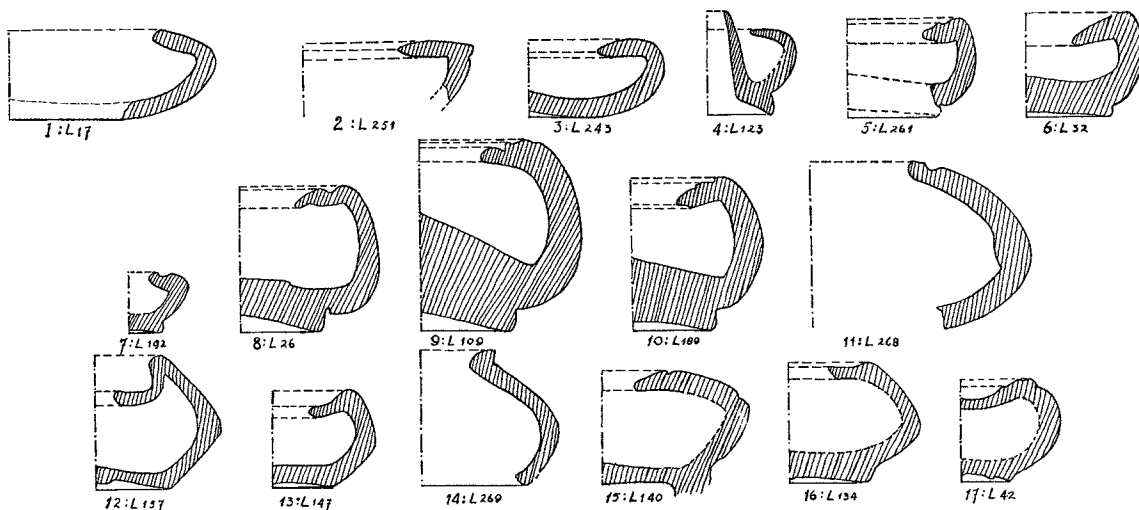


Fig. 2. Profiles of Greek and Hellenistic lamps (one half actual size)

the two Attic kylikes discussed on pp. 217ff., so that the lamp is not later than the first quarter of the fifth century. Another fragment (L 162) shows much the same profile and the same scheme of glazing.

There are eleven other fragments (L 5, 37, 117, 123, 165, 210, 250, 257, 258, 259, 260) from lamps of Broneer's Type IV, marked in general by a low, open infundibulum, a rim plain and slightly incurved, a nozzle blunt and flattened, with comparatively large wick-hole. The clay in all cases is Attic. The glaze, which regularly appears on both interior and exterior, is still good but inclined to flake. On two specimens (L 259, 260) which show an exceptionally shallow, open infundibulum the glaze is firm but is mottled black and red. Eight pieces of this group were found in contexts which yielded late red-figured and early Hellenistic pottery. This suggests that Type IV was still popular in Athens through the fourth century.²

¹ *Op. cit.*, pp. 36 and 38.

² On the dating of Type IV cf. Broneer, *op. cit.*, pp. 41ff.

One lamp of the same group (L 123) is marked by a central socket (Figs. 1, 4; 2, 4). The brown, flaky glaze on both inside and outside points to a comparatively late date for this specimen. Of another lamp (L 164), probably of much the same shape, there remain only the base and part of the socket. Its exterior is unglazed.¹

Of Broneer's Type V only four small fragments came to light (L 163, 169, 261, 262; Figs. 1, 5; 2, 5). These are distinguished by their almost straight walls, rilled rims, open infundibula, and by nozzles flat on top, pierced by comparatively small wick-holes. Two of them are covered with a rich black glaze. On the others the glaze is brown and flaky, possibly because of misfiring. None of these fragments was found in a dateable context.

One well-preserved lamp and five fragments may be assigned to Type VI (L 29, 32, 33, 82, 178, 263). They stand on well-defined bases, have comparatively straight walls, and broad, plain rims sloping gently inward. The nozzles are long and flat on top. In only one instance (L 32) does enough remain to afford a clue as to the handle. On this specimen it was a broad, horizontal band (Figs. 1, 6; 2, 6). The glaze in all cases is a firm, glossy black. That the majority of this group are late specimens of their type is indicated by the depth of their infundibula and by the comparative smallness of the filling-holes. From the evidence available at Corinth Broneer concluded that Type VI was in most common use during the second and third quarters of the fifth century.² Of our six pieces, four were found in a uniform deposit which yielded a mass of pottery. The earliest of this was red-figured ware from the end of the fifth century, the latest were "Megarian bowls" of an early type. It seems probable, therefore, that in Athens lamps of Type VI continued to be made into the early years of the fourth century. The excellent quality of the glaze on our specimens precludes for them, at least, a later date.

Another lamp (L 192), coming from the same deposit as the four above-mentioned of Type VI, is remarkable for its size, measuring only 0.015 m. in height and 0.031 m. in diameter (Figs. 1, 7; 2, 7). It stands on a raised base. The rim is broad, and marked by a deep rill. The nozzle is blunt and flattened. Inside and outside are covered with a buff-colored glaze, somewhat flaked. Such miniature lamps are frequently found attached in numbers to common supports, but this one certainly stood alone.

¹ The type of lamp with central tube was very wide-spread. Cf. Deonna, *B. C. H.* XXXII, 1908, pp. 140 ff., fig. 3; Robinson, *Olynthus* II, pp. 135 f., nos. 26-31; Broneer, p. 33. The central tube is probably the final stage in the development of the open center found so commonly in the early multiple lamps in the Akropolis Museum, and in the hundreds of so-called *kernoi* from the Sicilian sanctuaries of Demeter. Cf. for instance *Mon. Ant.* 32, 1927, cols. 369 ff., fig. 163. It is commonly supposed that such lamps with hollow tubes were intended to be set on pointed standards. But it should be observed that this would be a very unstable arrangement in the case of many broad and shallow early lamps. In one specimen of the present collection the central feature was turned solid on the wheel and pierced afterwards. The line of the aperture is so far from the vertical that were the lamp set on a peg it must have tilted at a dangerous angle. None of our specimens shows any trace of wear inside the tube, and, moreover, all are provided with perfectly good bases.

² Cf. Broneer, pp. 44 f.

This same deposit yielded eight of the twenty lamps which are to be assigned to Broneer's Type VII (L 26, 110, 116, 119, 181, 182, 188, 189). In the other cases the context afforded no definite chronological evidence. These twenty pieces are to be divided into two groups. Those of the First Group, eleven in number (L 6, 26, 116, 119, 158, 161, 188, 264, 265, 266, 267), are covered inside and outside with a lustrous black glaze (Figs. 1, s; 2, s), while those of the Second (Figs. 1, s; 2, s), numbering nine (L 81, 109, 110, 166, 181, 182, 189, 190, 214), are glazed on the inside only, save in one instance (Figs. 1, 10; 2, 10), where the rim, too, is covered. This type is perhaps the best known of all Greek lamps, and has been well discussed and illustrated in the publications both of Corinth and of Olynthus.¹ The lamps stand on well-defined bases rising slightly in the centre, the resultant upward projection often forming a cone of considerable height inside. In the earlier specimens the walls rise comparatively straight; in the later they show a marked inward inclination towards the top. In the First Group the rim is regularly marked by a single groove, the bottom of which is reddened with miltos. The filling-hole is surrounded by a round shoulder. In the lamps of the Second Group the side wall terminates at the edge of the rim in a low square shoulder within which a round shoulder surrounds the filling-hole. Two or three shallow grooves were run on the wheel around the outer shoulder. One specimen of the Second Group (L 189) has two rills on its rim and this rim, as noted above, is glazed. After the glaze had been applied it was scratched away in the bottoms of the grooves, leaving exposed the buff color of the clay. The nozzles in the two groups are similar, and resemble those of Type VI: long, straight-walled, flat on top, with small wick-holes. The handles of the First Group, in the instances where the pertinent part is preserved, were of the horizontal strap variety. Three specimens of the Second Group (L 81, 181, 182) were provided with handles of the same form. On two others (L 189, 190), minus handles, there is a pierced knob on the left side, which possibly served as a support for the index finger.² Another specimen (L 109) had neither handle nor knob. The clay of the First Group is the familiar red Attic, regularly covered both inside and outside with a firm, lustrous black glaze. In the Second Group was used a fine, non-micaceous clay, buff in color. The unglazed exterior in some instances probably received a light self-slip, and the surface was then polished. The result was a distinctive and pleasing finish. The evidence from the context in which our pieces were found, scanty as it is, agrees with Broneer's conclusion that "Type VII began in the fifth century and continued to be produced throughout the fourth."³ Our Second Group is probably later, in general, than the First. This is indicated by the appearance in the Second Group of the side knob, a common feature in types which are certainly later. It is also illustrated by the comparative numbers of the two groups found at Olynthus. While lamps of our First Group form the most

¹ Cf. Broneer, pp. 45 f.; Robinson, *Olynthus* II, pp. 137 ff.

² On the purpose of this knob cf. Broneer, pp. 6 f.

³ *Op. cit.*, p. 46.

numerous class of lamps found on that site, only two specimens of our Second Group came to light in the first campaign.¹ The Olynthians, at this period, seem to have been importing practically all their lamps from Athens. Our Second Group must have been a comparative novelty on the market at the time of the destruction of Olynthus in 348 B.C. Hence we may conclude that it began to be made at Athens around the middle of the fourth century. Its subsequent popularity is proven by the numbers of such lamps found in the recent excavations on the Pnyx.² The excellent glaze found on practically all specimens does not commonly appear on Attic pottery later than the fourth century.³

Broneer's Type IX is represented by the front part of a single lamp (L 268; Figs. 1, 11; 2, 11). This is of interest as being the earliest mould-made lamp in our collection. It was a large, handsome specimen, measuring ca. 0.085 m. in diameter. The body is watch-shaped, and the side walls terminate in a low ridge surrounding the filling-hole. The nozzle is deep; its top is flat, and is marked by a shallow groove along each side. Only the interior is glazed. Indeed, in clay and finish this lamp strongly recalls the Second Group of Type VII. The context in which it was found is of no value in fixing its date. Broneer placed the type in the early part of the third century.

Some nine lamps (L 145, 147, 157, 170, 179, 191, 269, 270, 271) may be placed together in a group which in its general features approximates the earlier specimens of Broneer's Type XVI, and finds parallels in many of the lamps discovered in the Esquiline Cemetery at Rome.⁴ They agree in their general features, and are undoubtedly closely contemporary. The fabric in all cases is the familiar red clay of Attica. The glaze resembles that commonly found on pottery of the period. It is thin, usually has a metallic sheen, frequently it has turned brown or red in the firing, and has almost invariably flaked to some extent. It was generally applied both to the inside and the outside. But in shape and profile this group exhibits a variety which could not be paralleled in a similarly contemporary group from earlier times. Thus, in pairs of lamps otherwise practically identical, we find that one stands on a high, sharply-profiled base, while in the other the side wall continues in an unbroken line to the bottom, leaving no separate base. The infundibulum is generally watch-shaped, but the side walls show a variety of profiles, some being sharply angular (L 157; Figs. 2, 12; 3, 1), others rounded (L 147; Figs. 2, 13; 3, 2). The rim is flat, and surrounded usually by an abrupt shoulder formed by the upward continuation of the side wall. The filling-holes vary in diameter from 0.015 to 0.02 m. The nozzles have still, in most cases, a flat top, but their sides are curved, and no longer perpendicular as in Types VI and VII.

¹ *Olynthus* II, p. 143, nos. 89 and 90.

² Cf. *Hesperia* I, 1932, pp. 183 f. The lamps will be included among the other small objects from this excavation to be published shortly.

³ Lamps of Type VII, Group 2, have been found also at Aegina (Thiersch, *Aegina*, p. 469, 16; pl. 130, 9) and at Lindos in Rhodes (Blinkenberg, *Fouilles et Recherches*, 1902-1914, Berlin, 1931, pp. 743 f., nos. 3198, 3199; pl. 151).

⁴ Dressel, *Annali dell'Istituto*, 1880, pp. 265 ff., pl. O; *C.I.L.* XV, ii, pp. 782 ff.

Of seven lamps enough is preserved to prove the original presence or absence of a handle. Four of these show no trace of a handle. The remainder were provided with broad, vertical loop handles. The side knob has now become a common feature, appearing six times. In three instances it is found on lamps which certainly had no

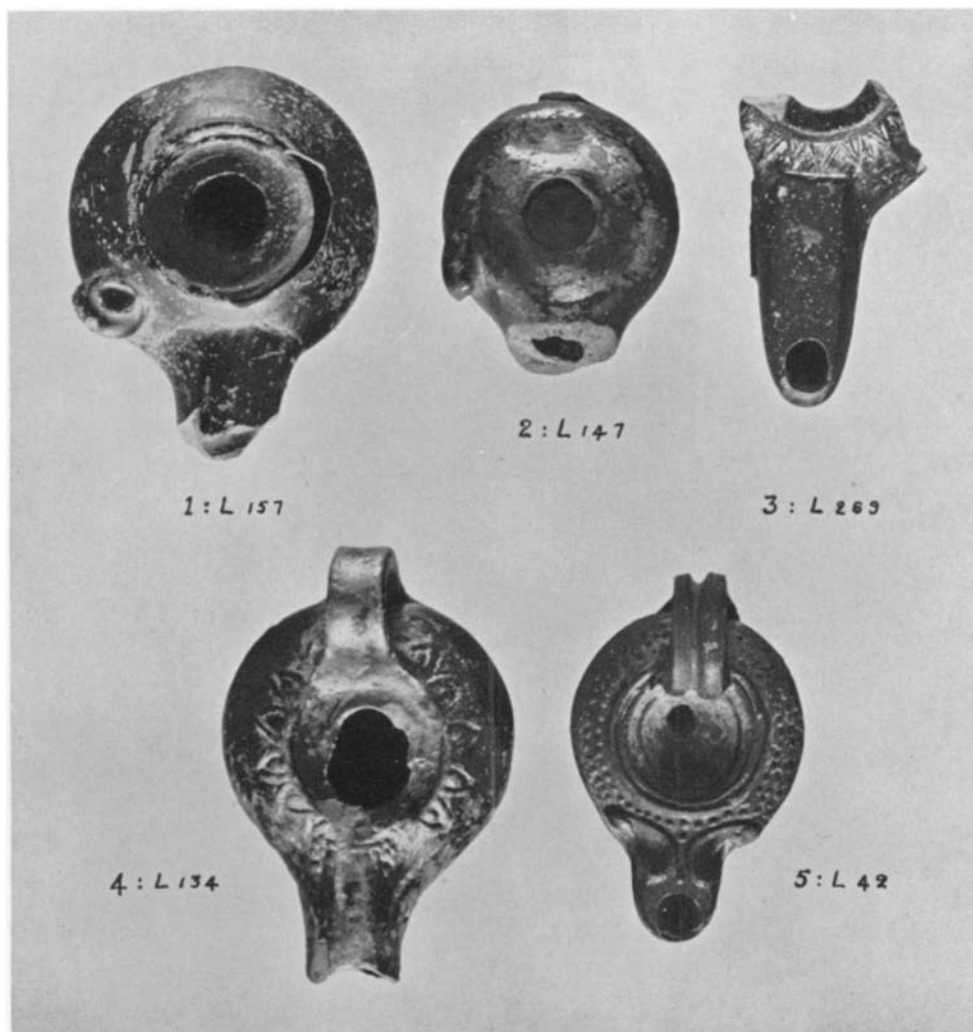


Fig. 3. Hellenistic and Early Roman lamps

handles, and here it is regularly pierced. Two of the lamps with handles carry small knobs unpierced.¹ A fragment from a distinctive lamp included in this group (L 269) is illustrated in figures 2, 14; 3, 3. The side wall is angular. The rim consists simply of

¹ This suggests that at least one purpose of the knob may have been to facilitate the suspension of the lamp while on sale in the shop.

the high shoulder formed by the upward continuation of the side wall. It is surrounded by a double band of triangular scales in low relief. The nozzle is long and pointed, flat on top, curving on the sides.



Fig. 4. Hellenistic lamp on standard (L 140)

Of the nine specimens, four (L 145, 147, 157, 170) were made on the wheel, five (L 179, 191, 269, 270, 271) in moulds. This shows that we are now at the turning point between these two methods of manufacture; a fact well illustrated by a pair of lamps (L 147, 191) almost identical in size and shape, one of which carries wheel marks, the other the finger prints of the moulder.¹ Six of the ten lamps (L 145, 147, 157, 170, 179, 269) were found in a deposit of Hellenistic times which yielded much fragmentary pottery. The bulk of this appeared to be of the second century B.C., although admittedly the chronology of the pottery of that period is far from being definitely known. The coins, almost without exception, were corroded to illegibility.

The later Hellenistic types are scantily represented. Four fragmentary lamps (L 47, 80, 184, 231) may be assigned to Broneer's Type XVIII. Three of these have ribbed rims; the rim of the fourth is plain. On one of the three the rim is surrounded by a raised flange, not moulded, but applied separately. The nozzle of this specimen is long and rounded. The other two nozzles which are preserved are triangular. The clay in all cases is pale red; the glaze thin and brownish.

A lamp which conforms most closely to Broneer's Type XVIII was provided with a

¹ Broneer placed this change of technique in the time of his Type XVIII, regarding as exceptional mould-made lamps of earlier types (cf. his *Terracotta Lamps*, p. 61). But the number of mould-made lamps in the group under discussion makes it probable that in Athens, at any rate, moulds were in common use at a somewhat earlier date.

tall standard (L 140; Figs. 4; 2, 15). The lamp proper is of normal size (0.10 m. long, 0.07 m. wide). The total preserved height of lamp and stand is 0.208 m. The side wall is angular, and the resultant broad shoulder above is decorated with alternating conventional wreaths and pear-shaped pendants in moulded relief. The rim proper is narrow, and set off from the shoulder by a single groove. The nozzle is long, with a rounded nose. Its top is flat, and shows a shallow groove along either side. The lamp was moulded in two pieces. Its support, likewise moulded in two pieces, consists of a hollow column, which exhibits a marked diminution from bottom to top. Its flaring base is broken away. On the front it is decorated by a shallow reeding which terminates toward the top in two horizontal raised bars. Above these is a transverse band of leaves and pear-shaped lobes, alternating. From either end of this band a single volute springs up to support the base of the lamp. The panel between the volutes is filled by a figure in relief, possibly a winged gorgoneion. Only the left side of the head is preserved.



Fig. 5. Rim patterns on lamps of Type XIX

The clay is buff in color, and covered, save for a broad band around the middle of the column, by a thin glaze mottled black and brown.¹

Of Type XIX, the so-called "Ephesus Type," there are three fragments (L 134, 272, 273). The best preserved is illustrated in figures 3, 4; 2, 16. It stands on a well-defined base; its side walls are sharply angular in profile; the rim is plain; the nozzle long; the handle of the vertical strap variety. The shoulder is decorated by a band of ovules terminating on either side of the nozzle in a cluster of dots (Fig. 5, 1). On the base are the moulded characters $\text{IA}\Phi\text{H}$ (Fig. 11, 1). The clay is dull red; the glaze thin, with a pronounced metallic sheen. The other two fragments show the more familiar ash-gray clay. Their shoulder decorations are illustrated in figure 5, 2 and 3.

Two lamps perfectly preserved, and four others, fragmentary, belong to the familiar Type XX (L 40, 42, 45, 212, 274, 275). The infundibulum is small and comparatively deep, and marked by close-set globules (Figs. 3, 5; 2, 17). The narrow rim is set off by two or three raised lines from a plain, concave discus punctured by a single small filling-hole. The round-nosed nozzle is joined to the infundibulum by a double volute on either side of the throat. In the five instances where the handle, or some trace of

¹ For other examples of Greek lamps set on high standards cf. Deonna, *B. C. H.* XXXII, 1908, p. 143, fig. 5; *B. M. Catalogue of Lamps*, no. 137, fig. 25; no. 1411, fig. 337; no. 1412; Robinson, *Olynthus* II, p. 136, fig. 299, no. 99; Broneer, nos. 151-153, fig. 24.

it, has been preserved, it is of the vertical strap variety, marked by a single longitudinal groove. On the base of each lamp appears a large *alpha* with heavy apices within two raised rings (Fig. 11, 2). The clay is brick-red, and usually rather coarse; the glaze is thin and purplish red. This type has been recognized as being of Athenian manufacture, and its provenience is further confirmed by the discovery in the Agora of a fragment of a lower mould used in its manufacture (L 249, Fig. 6). The mould is coarsely made of the same red clay which appears in the lamps. The base is marked by the familiar *alpha*, and the walls by the punctures designed to produce globules on the lamp.¹ Broneer concluded that Type XX "belongs chiefly to the reign of Augustus, but may



Fig. 6. Fragment from a lamp mould
(L 249)

have continued in use throughout the first half of the first century A.D."² Only ten specimens appear in the Corinth catalogue. Broneer rightly inferred that these Athenian lamps could not, in Corinth, meet the competition of the imported Italian types of the first century A.D. which are represented there by scores of lamps and fragments. This speaks eloquently for the predilection which the new Corinthian settlers evinced for the products of their fatherland. The situation in Corinth is made still more striking by the fact that not a single specimen of such Italian lamps has come to light in the first season of the present excavation in Athens. It is clear that the Athenian potters were able to hold the home market, at any rate. This they probably did

by continuing to produce the cheap and not unattractive Type XX throughout the first century. The late survival of this type in Athens is proven by the discovery of two specimens (L 40, 42) in a layer of ashes overlying a tile-covered grave in Section E. In this same layer were found three lamps of Type XXVII, while a fourth of the same type had been placed inside the tomb. These lamps of Type XXVII can scarcely date before the close of the first century A.D., and their association with lamps of Type XX indicates that the latter type continued in use up to that time.³

Of Type XXVII we can show but seven specimens; four certainly from Class 2, and one from Class 3. Those of Class 2 (L 43, 44, 125, 135; Fig. 7, 2) have rays on their discs, grape clusters and vine tendrils on their rims. The handles in all cases are fully pierced and triply grooved. Of these four, two are large (0.078 m. wide) and two small (0.064 m. wide). Of the two larger, both the upper and lower parts were made in the

¹ For another mould of this type from Athens cf. *B. M. Catalogue of Lamps*, no. 1401, pl. XXXVII. A fragment of a similar mould was found in the recent excavation on the Pnyx.

² Broneer, p. 73.

³ These deductions regarding the history of Type XX are confirmed by the evidence from the Pnyx. Cf. also F. Miltner, *Gnomon*, 1932, p. 489,—a review of Broneer's *Terracotta Lamps*.

same or identical moulds. The upper parts of the two smaller also came either from one mould or from moulds derived from the same original. The lower moulds, however, were certainly different, and suggest that the lamps were made by different persons, for the base of one carries in *raised* characters the inscription ΕΛΠΙΔΗΦ[Ο[Ρ]ΟΥ, whereas on the base of the other, while the clay was still soft, was *incised* the signature ΕΥΚΛ[ΕΙΔΟ][Υ (Fig. 11, 4 and 5). The one specimen of Class 3 (L 41; Fig. 7, 1) has a broad



Fig. 7. Roman relief lamps

rim interrupted by panels. On the discus, in relief, is a leopard walking toward the right, bearing on its back a figure, probably Dionysus, who reclines, resting his left elbow on the beast's head, while with his right hand he grasps the drapery covering his lower limbs. On the bottom is an illegible inscription. A sixth lamp of this type (L 136) has a plain rim divided by two raised lines from a discus decorated by conventional leaves springing from the filling-hole as centre. Along with the two more perfectly preserved specimens of this type found in the ashes overlying the above-mentioned grave was a base (L 46) having the usual form of Type XXVII. On the little which remains of its side walls are traces of brown glaze. On the bottom, within a single

circular groove, is a signature, scratched while the clay was still soft: $\Delta\text{ION}|\Upsilon\Sigma\text{IOY}$ (Fig. 11, 3). The clay of this group varies in color from greenish-yellow to pinkish buff—precisely the range of shades which one finds in the many lamps of this type discovered in Corinth. The fabric in all cases is thin, light, and unglazed. Broneer regards Type XXVII as a Corinthian product, and it is altogether probable that our specimens were imported from Corinth. According to Broneer, lamps of this type were being made throughout the second century A.D.¹ The present excavation has provided no evidence of chronological value.

Of all the lamps found this season, over two-thirds (214) belong to Broneer's Type XXVIII. But since our collection presents few novel features, it may be treated summarily in this preliminary notice. For a more detailed consideration of this type the reader is referred to Broneer's discussion, and to the impending publication by Dr. Karl Kübler of the specimens found in the excavations in the region of the Dipylon.²

Type XXVIII is a development of Type XXVII. In our collection, however, there is a considerable gap between the two types, inasmuch as our specimens of Type XXVIII are late examples of their kind. Both in artistic conception and actual workmanship they fall far short of the lamps of the earlier type.

The rim patterns, for instance, show little affinity with those found in Type XXVII. The most obvious survival is a wreath of leaves, sometimes intermingled with clusters of grapes, reminiscent of the Second Class of Type XXVII. This motive occurs twenty-one times. In some sixteen instances the rim is divided into panels by transverse bands of herring-bone, replacing the raised knobs of the earlier type (Fig. 8, 3 and 5). Where this panelling occurs, the plain surface is sometimes further ornamented by small, impressed circles, or, in one example, by a row of double spirals. The rims of five lamps are marked by two or three rows of concentric dots. The wavy line pattern covers twenty-seven rims (Fig. 8, 1). But by far the most common motive (sixty-nine instances) is a band of incised herring-bone, usually set between two deep grooves (Fig. 8, 2 and 6).³

One quarter of the discs present a plain concave surface, usually round, occasionally almond-shaped. A couple of them are square. The most frequent discus ornament is the simple rosette, which occurs sixty-three times (Fig. 8, 1). Its petals vary in number from eight to nineteen. Occasionally their tips are pointed, and sometimes they are twisted to produce a spiral effect. Rays, either straight or similarly twisted, appear nine times. A more attractive alternative is the pecten shell, but it is limited to two

¹ Broneer, pp. 95 f.

² I am greatly indebted to Dr. Kübler for the opportunity of examining the material from the German excavations, and of discussing our common problems with him.

³ For the rim patterns of Type XXVIII cf. Broneer, pp. 104 f., fig. 48. In the great number of lamps of this type found in the cave at Vari, the herring-bone pattern occurs on the rims of about one-half the specimens. The next most common motive is the wavy line pattern. Cf. Bassett, *A.J.A.*, 1903, pp. 342 f.

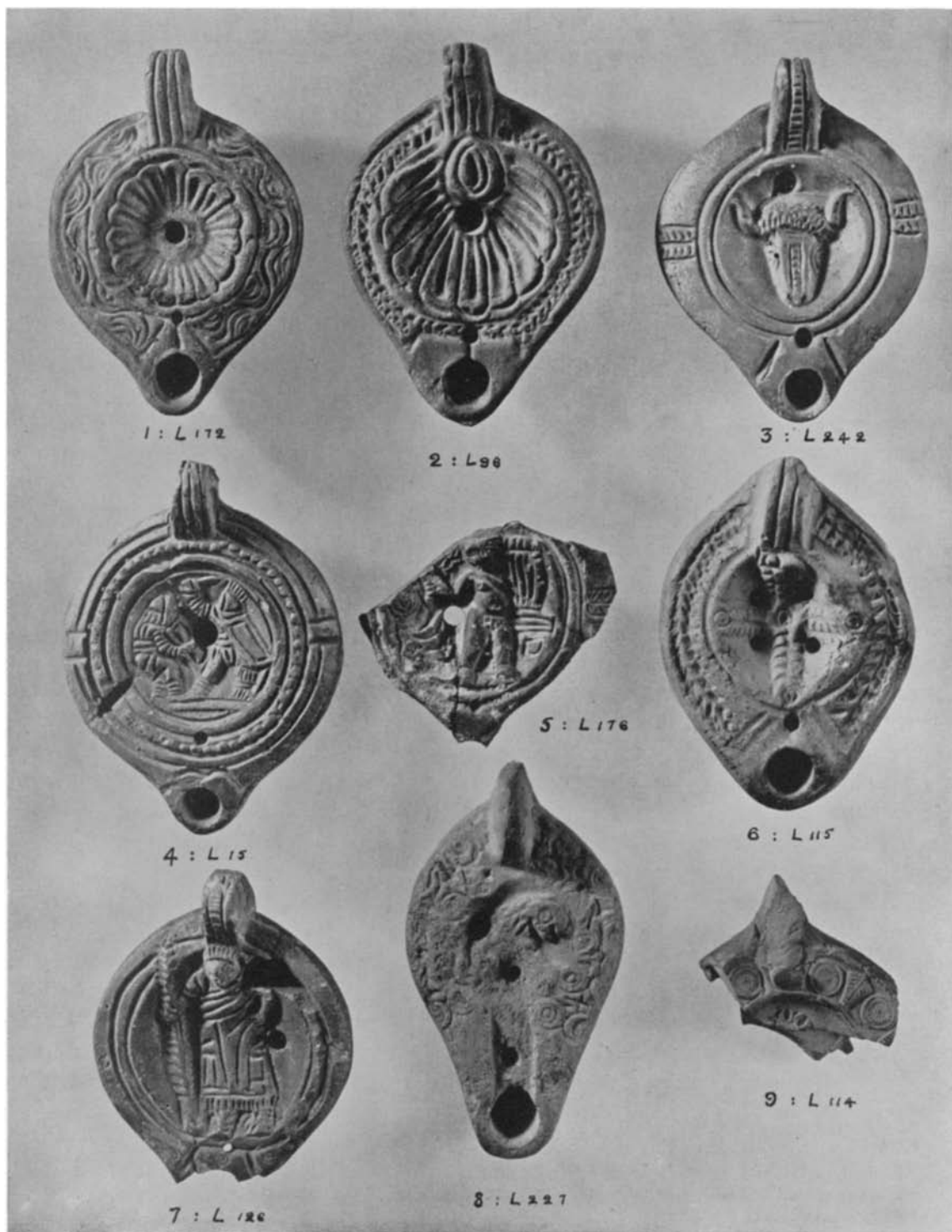


Fig. 8. Late Roman lamps

specimens (Fig. 8, 2). About one-fifth of the discs are ornamented with figures in relief other than the Christian symbols. In most cases these figures are executed in the crudest possible manner. The outlines became more and more indistinct as the process of making new moulds from lamps was repeated time after time. This necessitated the retouching of the features in the mould, while its clay was still soft. Hence the figures are either dim to illegibility, or else are marred by the ridiculous distortion resulting from the deep incisions of the retouching tool. Of mythological subjects, Eros was the favorite. He appears eleven times, on four occasions with a lyre (Fig. 8, 5),¹ twice with Pan's pipes.² One discus is occupied by a standing draped figure, probably male, facing front, holding in the right hand a tall palm branch which rests on the ground (Fig. 8, 7). The left hand is held to the hip. Features and dress are rendered very crudely. The palm branch probably indicates that the figure represents a Christian martyr.³ The gladiatorial combat, so popular on lamps of Type XXVII, occurs only once (Fig. 8, 4). On another discus, two figures seated facing each other are engaged in some game, perhaps chess. In three instances the entire discus is occupied by a mask. Perhaps the most successful motive was the boukranion, which, in the schematic form employed, lay more within the capabilities of the artist potter (Fig. 8, 3).⁴ There are ten examples. Of other animals, the bear appears five times, once accompanied by the inscription $\Phi\Theta\Theta\text{Σ}$;⁵ the lion four times. There is one pair of fish, and one single fish; a bird, and two amphoras. In four instances the filling-hole is bordered by a raised crescent. Eleven discs are marked by the Christian cross, of which the bars are plain, jewelled, or hatched. In ten other instances the symbol is converted into the monogram of Christ by the addition of the bow of a *rho* to the top of the vertical member (Fig. 8, 6).

The nozzle shows little variety. It is ordinarily blunt and rounded, and set off from the rim by one or two incised lines on either side.⁶ The air hole in the throat is an almost unailing feature. In some late examples it attains the size of the filling-hole. Usually a single filling-hole appears in the middle of the discus; occasionally it is supplemented by two to four others placed around it.

The handle was regularly moulded with the upper part of the lamp. It is decorated by two or three deep grooves, and occasionally by a band of hatching on its front. In only one instance is it completely pierced; in several cases partially. Ordinarily it appears merely as a heavy knob.

The bases show the usual markings of the type: one or two concentric circles occasionally punctuated by small impressed circles. Sometimes the bounding lines are heart-shaped. In some thirty-five instances a palm branch is incised within the line or

¹ Cf. Broneer, no. 1124; pl. XV.

² *Idem*, nos. 1134-1147.

³ I am indebted for this suggestion to Mrs. Grace Hollis of Princeton.

⁴ Cf. Broneer, nos. 1301-1307, 1411.

⁵ Cf. *idem*, no. 1250; Bassett, *A.J.A.*, 1903, p. 344.

⁶ Cf. Broneer, fig. 49, nos. 1-4.

lines. A cross appears twice. Thirty-eight bases carry lettered signatures, reproduced below in the list of inscriptions.

The clay is the typical variety used in the Athenian Kerameikos in later times. It is identical with that found in lamps of Type XX, an Athenian product, and in factory discards of Type XXVIII found in the German excavations at the Dipylon. The color varies from a pale buff to a brick red. The clay was not well washed, and so contains many particles of grit and soil. Very seldom does a particle of mica appear. Defective firing often resulted in a mottled red and black effect. The majority of the lamps are covered by a thin red glaze, which has frequently assumed a purplish sheen.

The great majority of the lamps of this type were found in the lowest stratum overlying the ruined foundations of the Royal Stoa. This same stratum also yielded a great number of coins, almost exclusively of the fourth century A.D., and chiefly of Constantius II or later. Consequently it would appear that the Stoa was dismantled in whole or in part in the course of the fourth century, and the lamps were the property of the private families which settled on its site. Broneer concluded that Type XXVIII "continued in use from the middle of the third century until the beginning of the fifth."¹ It would appear, then, that our lamps must be late specimens of the type. This is certain on the evidence of the lamps themselves: the unpierced handles, the degenerate and carelessly executed discus reliefs, the frequent occurrence of the Christian symbols. The inscriptions, too, point in the same direction. There is a notable absence of signatures of known potters, e.g. Preimos, Naumachios, and Eutyches, who were producing while the type was still young.² Our commonest signatures: KY, CT, and XIONHC, are also the commonest on the lamps from the cave at Vari, which are dated by the coins found with them to the fourth century.³ It follows that the majority of our group belong to the same century, and to its later part.

Two large suspension lamps, such as those which Broneer has grouped together in Type XXX, Class 2, deserve a word of notice. One of them (L 244; Fig. 9, 1) has two nozzles set on opposite sides of the infundibulum.⁴ From the centre of the discus rises a pierced, vertical handle, triply grooved. The slight depression surrounding it is punctured by a filling-hole on either side. Bounding this depression is a narrow band of herring-bone design. Each of the throats is marked by a pair of double volutes, and an air hole. In the other lamp (L 129; Fig. 9, 2), twelve nozzles are set about a round infundibulum.⁵ A pierced, vertical handle with four grooves rises from a central depression. On either side of it is a filling-hole. Around the depressed area is a broad band of herring-bone, and a narrow, plain, raised band. Resting on this band as base is a group of three incised semicircles bounded by a tangent on either side, placed between each pair of

¹ Cf. Broneer, p. 114.

² Cf. Broneer, pp. 111 f.

³ Cf. Bassett, *A.J.A.*, 1903, pp. 346 ff.; 335 ff.

⁴ Length 0.181 m.; width 0.108 m.; height 0.048 m., height with handle 0.074 m.

⁵ Diameter 0.217 m.; height of infundibulum 0.059 m.; total height 0.083 m.

nozzles. Each nozzle, too, has its individual air hole. On the bottom, within three deep, concentric grooves, is a large letter *alpha*, with broken bar and apices (Fig. 11, ²⁷). This lamp, like the other, is made of red Athenian clay, covered by a thin, red glaze. Close similarity in general form and technique make it clear that these lamps are contemporary with those of Type XXVIII.

Broneer's Type XXXI is represented by two complete lamps and three fragments (L 114, 148, 223, 227, 313). These exhibit the characteristics noted by Broneer: broad

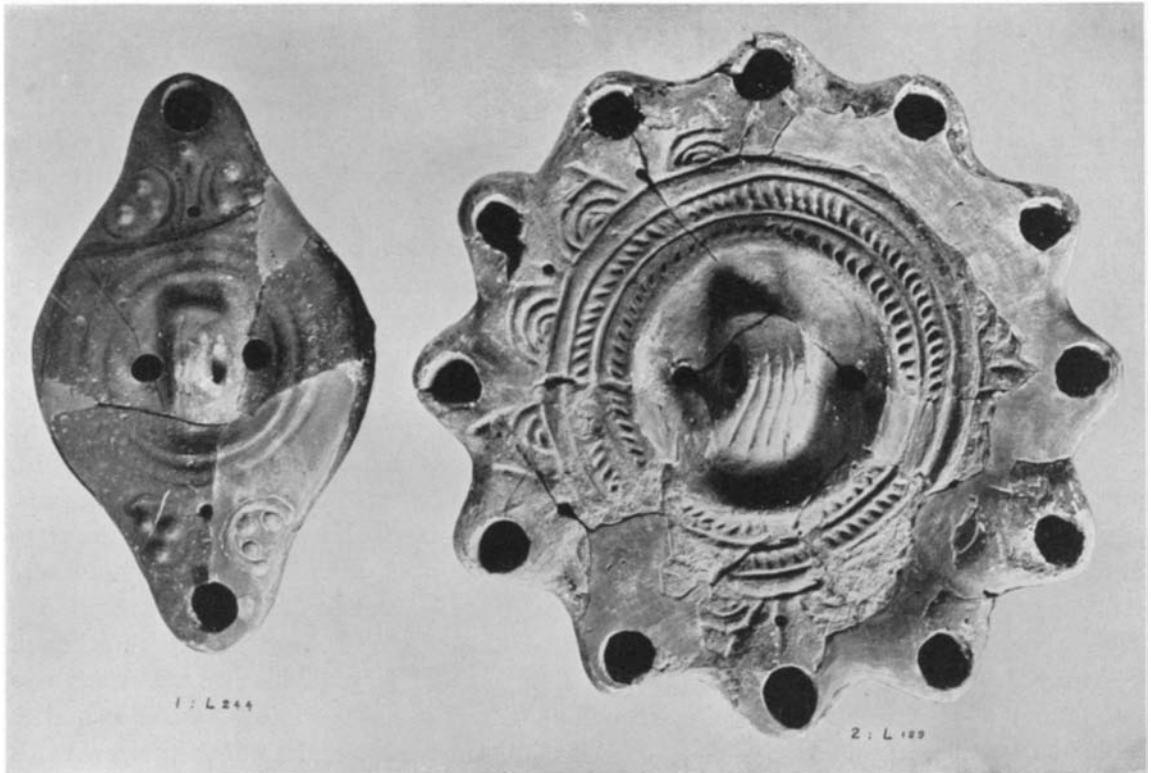


Fig. 9. Two late Roman suspension lamps

rim with intricate decoration, thin handle, unpierced and ungrooved, elongated nozzle, with a shallow channel connecting discus and wick-hole. One of the complete specimens (L 148) carries a Christian monogram in the shape of a Latin cross with a bow on the vertical bar. On the other is a seated lion facing right (L 227; Fig. 8, ⁸). This lamp is of interest inasmuch as it is one of the few of Type XXXI to be inscribed. The signature *XIONHE* stamped on its base (Fig. 11, ²⁸) is also one of the commonest names appearing on late lamps of Type XXVIII. The two complete lamps, and one of the fragments, are of the typical Athenian clay so common in Type XXVIII, and these were undoubtedly of local manufacture. All three are unglazed.

The clay of one of the remaining fragments (L 114; Fig. 8, 9) is a bright red in color, and is covered with a thin, red glaze. It shows evidence of more thorough washing and better baking than the clay of the other specimens, or of the average lamp of Type XXVIII. Unfortunately, only the back part of the lamp survives. It stood on a low base ring from which a raised band ran up the back of the infundibulum to the base of the handle. The handle, as usual, was thin and solid. The rim is decorated with alternating circles and triangular leaves in low relief.¹ In the making of the mould these figures were probably impressed by individual stamps. The discus, too, carried some relief of which there remain only three miniature horseshoes opening outward, set on the arc of a circle.

The superior execution of the decoration, combined with the peculiar quality of the clay, suggests a foreign origin for this specimen. This probability is increased by the presence of the base ring, a feature which does not appear on lamps of Type XXVIII, nor on the certainly Athenian-made specimens of Type XXXI. It is altogether unlikely that the use of a base ring was revived by the local potters at this late date. Similar differences of clay and technique in lamps of this type are apparent in the collections found in various places, e.g. Corinth, the Athenian Kerameikos, Syracuse, Alexandria. The typical features of the specimens from these widely separated points are so constant as to make it probable that the type originated at some one place from which the lamps were exported widely, soon to be copied in an inferior style by the local craftsmen of various parts. So many lamps of this class have been found in North Africa that the term "African lamp" has been applied to them in general, but it is not at all certain that the type originated in North Africa. That region appears to have imported the greater part of its lamps, and lamp moulds have rarely been found there.² A considerable number of lamps of this type have been and continue to be found in and around Alexandria.³ In this connection it is significant that the one imported specimen of the present collection seems identical in clay and glaze, and in the technique of its ornamentation, with a late variety of pottery well represented in the Agora excavations, and recently identified as of Egyptian origin by Dr. Karl Kübler.⁴ On the other hand, a serious objection to regarding Alexandria as the distributing centre for the whole Mediterranean region must be admitted in the absence of lamps of this type at other Egyptian sites.⁵ But it is probable that the lamp-making industry was highly localized in Egypt, each district supplying its own wants. Nor is it likely that exportation from

¹ For the combination of circles and triangles as rim decoration on lamps of this type cf. *Fouilles de Delphes* V, p. 193; figs. 843, 849, and 852.

² Cf. Doublet and Gauckler, *Musée de Constantine*, Paris, 1892, p. 60; Durry, *Musée de Cherchel*, Paris, 1924, p. 46.

³ Cf. Breccia, *Le Musée Gréco-Romain au Cours de l'Année 1922-23*, Alexandria, 1924, pp. 25 ff.

⁴ *Ath. Mitt.* 56, 1931, pp. 75-86.

⁵ For example at Ehnasya (cf. Petrie, *Roman Ehnasya*, London, 1905, pp. 4-14); or at Canopus (cf. Breccia, *Monuments de l'Égypte Gréco-Romain I: Le Rovine e i Monumenti di Canopo: Teadelphia e il Tempio di Pnephros*, Bergamo, 1926, pp. 72-77).

the common centre, wherever we place it, continued for long. The local potters soon copied the advantageous features, and so recovered the market for themselves.

The small number of Byzantine lamps found this season is in keeping with the paucity of Byzantine coins and pottery. The fragmentary lamps discovered are of a fairly



Fig. 10. Fragments of Byzantine lamps

uniform type: all were equipped with a tall standard rising from a saucer-like base, and the majority were provided with a vertical loop handle attached above to the bowl of the lamp, and below to its standard. In five instances (L 149, 186, 218, 316, 317) the upper part is preserved, in two (L 314, 315) the lower (Fig. 10). In all cases the oil reservoir is open, and the wick rested simply on a pinched-in part of its wall. At least three of the lamps had superimposed bowls. From the centre of the lower bowl a stout, column-like support rose to carry the upper. The standards are very heavy, and regularly have only a slender hollow in their middle. The clay is a yellow buff in color, extremely

coarse, and full of grit and soil. Only the interior of the oil reservoir is glazed, though the glaze has sometimes splashed down over its exterior as well. One of the lamps carries a rich, brown glaze; two others a pleasing green. In these three cases the glaze was applied over a thick coat of white sizing. Three other lamps show inferior black and brown glaze. This group approximates Broneer's Type XXXVI, which he dates after the tenth century.¹ It is probable that such lamps continued in use into Turkish times.

The most striking impression gathered from this rapid survey is, perhaps, the success with which the Athenian potter held the home market throughout the centuries. We have noted only an occasional import in the Hellenistic period. Again, in the late first and early second centuries A.D., the Athenian product yielded the market to a Corinthian lamp of exceptionally high quality. In the fifth century, also, it would seem that the Athenians imported a few finer lamps than could be bought at home. But in general the skilful work of the Athenian craftsman, and his ability to produce new and better types, guaranteed the popularity of his product at home, a popularity which was established throughout Greece, as has been shown by excavations outside of Athens from Leukas to Aegina, from Corinth to Olynthus. It is hoped that the continued excavation of the Agora will gradually reveal the full story of the lamp industry in Athens.

SIGNATURES

The signatures are reproduced in actual size in figure 11. Where the identical signature occurs on several lamps of the same type, only one representative specimen is illustrated.

Type XIX	L 134	ΙΑΦΗ	in raised characters.
Type XX	L 40	A	
	42		
	45		in raised character.
	212		Cf. <i>B. M. Catalogue of Lamps</i> , no. 771;
	274		Broneer, nos. 372-381.
	275		
Type XXVII	L 46	ΔΙΟΝΥΣΙΟΥ	Cf. <i>B. M. Catalogue of Lamps</i> , no. 1207.
	L 125	ΕΛΠΙΔΗΦΟ[Ρ]ΟΥ	Cf. <i>Ath. Mitt.</i> 26, 1901, p. 58;
			<i>B. M. Catalogue of Lamps</i> , no. 1210;
			a lamp in the Louvre, no. E. D. 1739
			(quoted by Broneer, p. 249).
	L 44	ΕΥΚΛΕΙΔΟΥ	Cf. Broneer, no. 1379.
Type XXVIII	L 11	A	
	48		
	65		Cf. <i>A. J. A.</i> , 1903, p. 349, no. 24;
	68		Broneer, <i>Index of Inscriptions</i> , s. v.
	96		
	305		

¹ *Op. cit.*, pp. 124 f.



Fig. 11. Lamp signatures

Type XXVIII	L 92	ΑΓΑ	Cf. <i>Eph. Arch.</i> , 1906, p. 113: ΑΓΑΠΙΟΥ; Broneer, no. 1374: ΑΓΑ[ΘΟΥ.
	L 77	Δ	Cf. <i>A. J. A.</i> , 1903, p. 349, no. 25; Broneer, nos. 799, 986, 1049, 1375.
	L 138	ΕΥ	Cf. <i>A. J. A.</i> , 1903, p. 346, no. 5; Broneer, <i>Index of Inscriptions</i> , s. v.
	L 57	ΕΥΔΩ(ΡΟΥ)	Cf. <i>A. J. A.</i> , 1903, p. 346, no. 6; Broneer, no. 1020.
	L 155	ΕΥΚΑΡΠΟΥ	Cf. <i>A. J. A.</i> , 1903, p. 346, no. 7 b; <i>Eph. Arch.</i> , 1906, p. 113; Broneer, no. 979.
	L 241	ΘΕΟΔΟΥΛΟΥ	Cf. <i>Eph. Arch.</i> , 1906, p. 113; Broneer, <i>Index of Inscriptions</i> , s. v.
	L 8	ΙΑΡΟΥ	
	L 56	Κ	Cf. <i>A. J. A.</i> , 1903, p. 349, no. 27; <i>Eph. Arch.</i> , 1906, p. 114; Broneer, <i>Index of Inscriptions</i> , s. v.
	L 13	ΚΥ	Cf. <i>A. J. A.</i> , 1903, p. 347, nos. 11, 12 (ΚΥΡΑΚΟΣ); <i>Eph. Arch.</i> , 1906, p. 113; Broneer, <i>Index of Inscriptions</i> , s. v.
	67		
	276		
	L 34	ΝΕ	
	L 69	ΣΤ	Cf. <i>A. J. A.</i> , 1903, p. 348, no. 17 a; <i>Eph. Arch.</i> , 1906, p. 114; Broneer, <i>Index of Inscriptions</i> , s. v.
	73		
	280		
	284		
	L 304	ΣΤΡΑΓΟΛ[Α]ΟΥ	Perhaps an orthographic error for the following name.
	L 277	ΣΤΡ[Α]ΤΟΛ[ΑΟΥ	Cf. <i>A. J. A.</i> , 1903, p. 348, nos. 17 b and c: ΣΤΡ and ΣΤΡΑ; Broneer, nos. 946, 1133, 1397: ΣΤΡ.
	L 144	ΣΩΤΗΡΙΑ	Cf. <i>A. J. A.</i> , 1903, p. 348, no. 20: ΣΩΤΗΡΙΑΣ; <i>Eph. Arch.</i> , 1906, p. 113: ΣΩΤΗΡΙΑΣ and ΣΩΤΗΡΙ; Broneer, no. 953: ΣΩΤΗΡ.
	L 113	ΣΩ	Cf. Broneer, <i>Index of Inscriptions</i> , s. v.
	L 101	Τ	Cf. <i>A. J. A.</i> , 1903, p. 349, no. 29; <i>Eph. Arch.</i> , 1906, p. 114; Broneer, <i>Index of Inscriptions</i> , s. v.
	104		
	L 72	Υ	
	L 14	ΦΗ	Cf. <i>A. J. A.</i> , 1903, p. 348, no. 22; Broneer, no. 1032.
	L 1	ΧΙΟΝΗΣ	Cf. <i>A. J. A.</i> , 1903, p. 348, no. 23; <i>Eph. Arch.</i> , 1906, p. 113; Broneer, <i>Index of Inscriptions</i> , s. v.
	115		Perhaps ΣΤ preceded by a palm branch.
	L 215	ΥΥ	
Type XXX	L 129	Α	
Type XXXI	L 227	ΧΙΟΝΗΣ	