

EXCAVATIONS AT NEMEA, 1977

(PLATES 9-31)

Summary

Along the south side of the Temple, a circular structure of the early 5th century B.C. was uncovered together with evidence for a 6th century construction date for the earlier temple. A sacrificial deposit of the 5th century and traces of a prehistoric structure were found further west. The Sacred Square was further explored, and better defined by the uncovering of the north walls of the nine oikoi along the

south side of the sanctuary of Zeus. Sufficient remains of the ninth oikos were discovered to enable a tentative reconstruction of its façade. South of the oikoi, investigations were conducted in the xenon, the kiln, a ritual dining pit, and two wells. One of the latter produced material of considerable interest including a bronze hydria. Discoveries in the stadium included two more one-hundred-foot markers, and a vaulted entrance passageway which may date to the late 4th century B.C.

THE WORK at Nemea in 1977 was once again concentrated on the south side of the Sanctuary of Zeus and in the Stadium.¹ An additional feature was the recording by means of aerial photographs of the status of work at the site as of July 9, 1977, a week before the end of the season.² Those photographs include four which are presented here (Pls. 9-11, 28). Although previous reports have, in general, followed a grid-section outline,³ the discoveries of the last four years have so

¹ The staff for the 1977 season consisted of Anthony Anninos and Darice Birge of the University of California at Berkeley, Joan Connelly and James C. Wright of Bryn Mawr College, David Romano of the University of Pennsylvania and Francis M. Lazarus of Salem College as field archaeologists; Joanne Heffelfinger of the University of California at Berkeley as museum technician; Michael Abbey of Los Angeles as photographer; and Stella G. Miller as Assistant Director. The undersigned would express gratitude to all these for their long, hard, and careful work.

We are also grateful for the help which we have received in 1977 from many sources, and especially from the American School of Classical Studies and its successive Directors, Professors James R. McCredie and Henry R. Immerwahr, from the Greek Archaeological Service and its successive Inspectors-General, D. Lazarides and N. Yalouris, and from the Nauplion Ephoreia of Classical Antiquities and its Ephor, Mrs. E. Deilaki. Chancellor A. H. Bowker and the University of California at Berkeley have continued unflagging and essential support for Nemea.

Once again we are privileged to express our gratitude to the National Endowment for the Humanities for a gift-and-matching-grant in support of the operating expenses of the 1977 campaign. We are equally grateful to the more than 200 donors whose contributions, together with the National Endowment grant, have made this season possible. Although the number of our donors has increased and our ability to mention each by name has lessened, our appreciation of their support has not diminished.

² We would thank Professor and Mrs. J. Wilson Myers and David Myers for their efficient work in providing these aerial photographs.

³ For previous work at Nemea see "Excavations at Nemea, 1973-1974," *Hesperia* 44, 1975, pp. 144-172; "Excavations at Nemea, 1975," *Hesperia* 45, 1976, pp. 174-202; "Excavations at Nemea, 1976," *Hesperia* 46, 1977, pp. 1-26; and "New Problems at Nemea," *Neue Forschungen in griechischen Heiligtümern*, Tübingen 1976, pp. 63-75. In the following presentation specific biblio-

increased our knowledge of the topography of the Sanctuary of Zeus that more general divisions in the following presentation seem desirable.⁴ These more general divisions will appear below, and they will be sub-divided into grid sections where necessary.

SOUTH FLANK OF THE TEMPLE OF ZEUS

The "Nu Structure" (Sections L 13, L 14, M 13, M14)

Work during 1976 in these sections near the southeast corner of the Temple of Zeus had uncovered parts of a rectangular foundation and of the "Nu Structure". In order to gain more information about each of these and to understand more clearly their stratigraphic relationship to the Temple of Zeus, this year the baulk between L 14 and M 14 was removed, as were some seventeen fallen blocks of the Temple.⁵ As had been the case in 1976, the area was found to be littered with fragments of badly broken inscriptions such as I 32 (Pl. 12: a), and several fragments of a once larger stele: I 36, I 40, I 42, and I 43 (Pl. 12: b). Once again, dozens of fragments of bronze statuary were found of which only a few are presented here: BR 225, BR 229, BR 235, BR 244-246, BR 249, BR 250, and BR 275 (Pl. 12: c).

The earth fill beneath the fallen blocks provided another opportunity for dating the destruction of the Temple, previously suggested at *ca.* A.D. 370.⁶ Unfortunately, the pottery from this fill cannot be dated more precisely than to the general period of the 4th or 5th centuries after Christ,⁷ and thus only a general indication of the validity of the suggested destruction date is provided.

With the removal of this debris, the outlines of the "Nu Structure" became clear in their entirety (Fig. 1, Pl. 13: a, cf. Pl. 10). The construction date of the "Nu Structure" in the fourth quarter of the 4th century B.C. and its original form⁸

graphic references to previous work will be made only in the case of particularly important or argumentative points.

⁴ During the first three years of excavation, two-meter-wide baulks had been left between the twenty-meter-square grid sections. It had, however, become perfectly clear that the total height of all these baulks contains nothing more than a heavy layer produced by modern farming over a heavy layer from Byzantine-Early Christian cultivation. Thus these baulks have no value as controls for the ancient levels and they were removed in 1977. The results of their removal will be incorporated into the appropriate sections of the presentation.

⁵ In the event that it may someday be possible to reconstruct a part of the Temple, the position of each block was recorded before removal. These records are on file in the museum at Nemea and at Berkeley.

⁶ B. H. Hill, *The Temple of Zeus at Nemea*, Princeton 1966, p. 1; cf. *Hesperia* 46, 1977, p. 3.

⁷ Pottery lots M 14: 57, 58.

⁸ It has been pointed out by Professor Oscar Broneer that a monument very similar to the "Nu Structure" exists at Isthmia. This is the structure designated M⁵ by Broneer, *Isthmia*, II, *Topography and Architecture*, Princeton 1973, p. 12, and lying north of the Temple of Poseidon. The two monuments do, indeed, have a striking similarity not only of form, but also of general dimensions, despite different orientations and locations within their respective sanctuaries. Unfortunately, the Isthmia example is dated only to pre-Roman times, and its precise function is no clearer than that of the "Nu Structure" at Nemea.

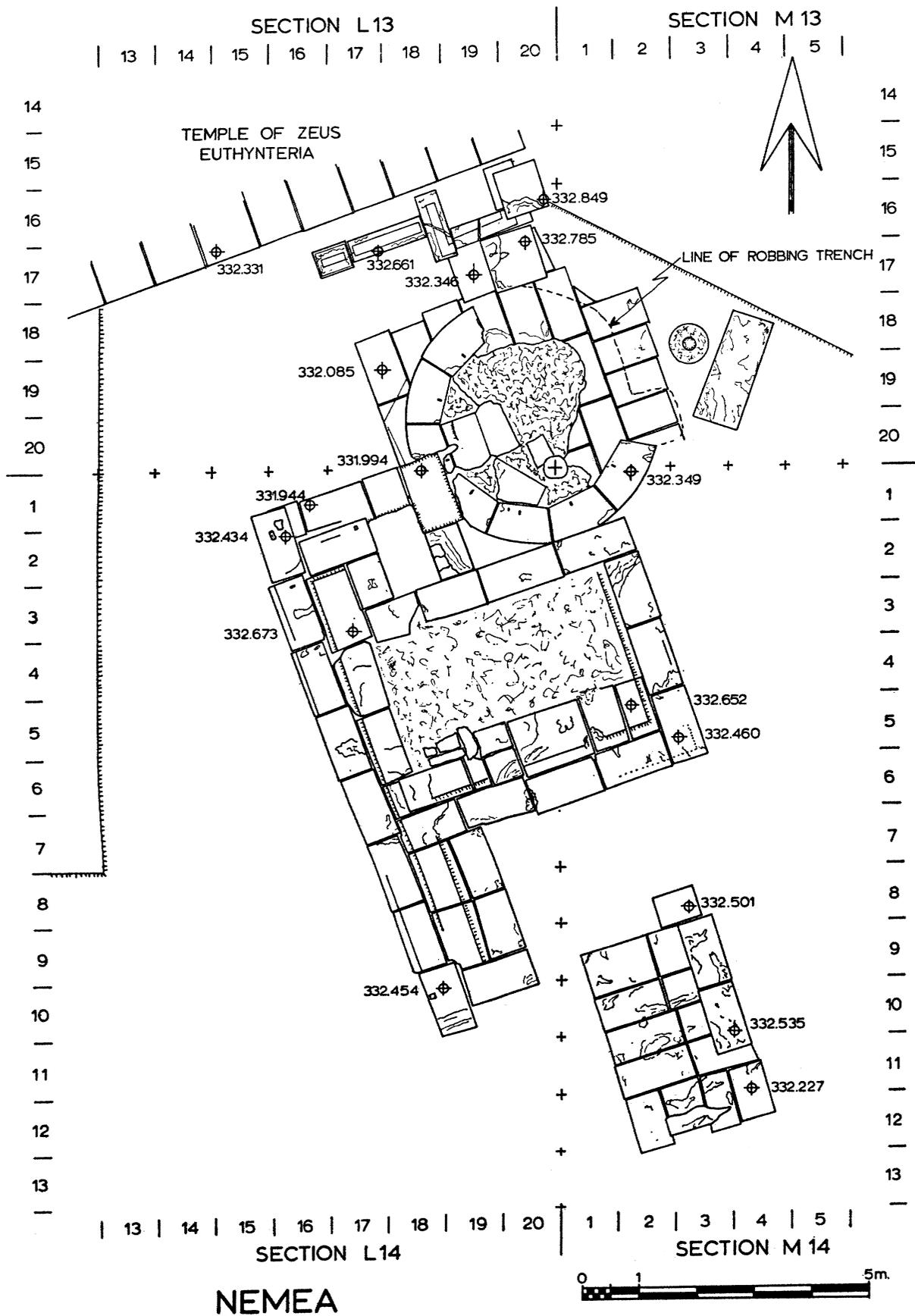


FIG. 1. Sections L 13, L 14, M 13, M 14.

were confirmed, and the nature of its later remodeling was established. In its original form, the north wing of the "Nu Structure" was wider and longer than in its later form, with a length northward from the basic rectangle of the structure of about 2.15 m. and a width of about 3.45 m. Thus the northern wing in its original phase, though even then shorter, was nevertheless wider than its southern counterpart (cf. Fig. 1), unless the southern wing has also been remodeled, for which no evidence has been uncovered so far. The evidence for the remodeling of the north wing consists of the euthynteria block, still *in situ*, for the east wall of the original wing where it joined the basic rectangle of the "Nu Structure", and of the soft poros foundations along the north and east sides (Fig. 1, Pl. 13: b, cf. Pl. 10). The poros blocks are the foundations of an earlier neighboring structure which were worked down an average of 0.09 m. to receive the euthynteria of the original north wing of the "Nu Structure". Because of earlier disturbances in this area, and a lack of pottery in the fill over these foundations, there is no evidence for the date when this remodeling of the north wing took place, nor for its purpose.

The Circular Structure

On the north side of the "Nu Structure" yet another, but earlier, monument was discovered. This is a circular structure with a diameter of 4.42 m., set upon a square foundation. Seven blocks of its circle are still *in situ* around the western and southern parts of its circumference (Fig. 1, Pls. 10, 13: b). These seven blocks are of a hard gray limestone cut into wedges with straight inner faces and a curve only along the exterior. The upper surface of each block has a pry hole near the center and close to the inner face of the block. A very fugitive weathering line on the upper surfaces indicates that a second course was set back some 0.27-0.30 m. from the exterior line of the first one. The exterior of each block is worked smooth except for a 0.08-0.09 m. high band which begins 0.05-0.06 m. from the bottom of each block. Three more blocks of this circular structure have been found scattered around this area of the sanctuary. One was in modern fill in Section L 14, another in Byzantine fill in L 15, and the third in Byzantine fill in K 15. One of these belongs to the first course just described, and the other two blocks, whose exterior surfaces are worked completely smooth and whose curves are tighter, belong to the next higher course.

Where preserved in the southwestern half of the circle, the interior has a solid core of cut, but unfitted, soft poros blocks up to the level of the circular course. Toward the northeast (i. e. in the center of the structure) these blocks give way to a mass of amorphous soft yellow poros material, apparently originally working chips and other debris which have "melted" together. No elements of the superstructure of this circular monument have been identified, nor is it clear whether it was a freestanding building with a very small open interior space, or a solid monument, although the latter seems more probable. It is clear that the principal façade

of the Circular Structure was on the east as is shown by several considerations. First, the robbing trench for the blocks on the northern side of the circle was interrupted by a layer of pre-destruction fill (cf. Fig. 1). Thus the line of the circle did not continue completely around the east side, but appears to have had a straight segment of some 1.20 m. Secondly, slightly north of the east-west axis of the structure and beginning less than 0.20 m. east of its foundations is a "doughnut" shaped deposit of hard clay with an outer diameter of about 0.70 m. and an inner diameter of about 0.20 m. The central hole of this "doughnut" was found filled with a gray-white clay and no evidence as to its purpose was recovered, although it would appear to have been a socket for a post of some kind. Whatever its purpose, it indicates a principal façade for the Circular Structure on its east side. Thirdly, a large but badly battered 0.79×1.97 m. block lies along the east side of the Circular Structure. Although the alignment of this block is oblique with respect to that of the Circular Structure and its function is not clear, it was in its present position during the 5th century B.C. and may provide another indication that the east side of the Circular Structure saw more activity than the other sides.

The Circular Structure rests upon a rectilinear foundation of soft poros blocks which probably formed a basically square platform averaging about 4.90 m. on a side, although the eastern and northern foundation blocks do not form a precisely straight line. While the southeast and southwest corners of these foundations have not been exposed, and the central area is covered by the core of the monument as explained above, it is clear that the foundations consist of six rows of blocks laid in a north-south orientation with a seventh row laid along the eastern side with their long axes in an east-west orientation. This is yet another indication of the eastern as the principal façade of the building. The northwest corner of the square platform is filled out by a full foundation block, but the northeast corner has a small triangular foundation block, barely adequate for support of the Circular Structure above. The alignment of the joints of these foundation blocks is essentially parallel to the Temple of Zeus, but since the Circular Structure is earlier than the extant Temple (see below), it would appear that its orientation was dependent upon a similar orientation for the earlier Temple of Zeus.

Since, as mentioned above, the original north wing of the "Nu Structure" cut into the Circular Structure and its foundations on the west (Pl. 13:b), and since the basic rectangle of the "Nu Structure" cut into the line of the southern side of the Circular Structure (Fig. 1, Pl. 10), it is probable that the Circular Structure was no longer standing when the "Nu Structure" was built in the last quarter of the 4th century B.C. The ceramic evidence for the robbing of the northeast part of the Circular Structure belongs in the 1st century after Christ,⁹ and is thus too late to help with dating the original destruction of the Circular Structure. It is tempting

⁹ Pottery lots M 14:70, 71.

to associate the Circular Structure's destruction with that of the earlier Temple of Zeus in the late 5th or very early 4th century B.C.¹⁰

Better evidence exists for the construction date of the Circular Structure along whose west side, and between the foundations of the "Nu Structure" and those of the Temple of Zeus, a trench was opened. The pottery which was recovered from the foundation trench of the Circular Structure, from layers through which the foundation trench was cut, and from layers which accumulated above the foundation trench and up against the Circular Structure, indicates a construction date in the first quarter of the 5th century B.C. and a life for the Circular Structure extending into at least the third quarter of that century.¹¹

Many worked blocks are set between the north side of the Circular Structure and the Temple of Zeus. Some of these are bases for statues, others are stele bases, but all are later than the Circular Structure, and some are later than the extant Temple of Zeus. Little can be said about the absolute chronology for each of these bases, but it is clear that the southeast corner of the Temple of Zeus was a popular place for dedications throughout the Classical and Hellenistic eras. Such a conclusion also emerges from the material in the 5th century levels of the trench along the west side of the Circular Structure. This material included a bronze leaf from a life-sized statue (BR 383, Pl. 12: e) and a terracotta figurine (TC 66, Pl. 12: d). A lower level, of the 6th century B.C., produced a miniature lead kouros (IL 201, Pl. 14: a). This kouros assumes an importance beyond its intrinsic interest, for the layers immediately beneath its stratum contained pottery which could not be dated more precisely than to the 6th century B.C.¹² These layers contained heavy concentrations of working chips of limestone which can belong to no extant building in the area. They are obvious candidates for the construction layers of the earlier Temple of Zeus. The kouros, which seems on stylistic grounds to belong in the second quarter of the 6th century B.C.,¹³ thus provides an indirect, and therefore not necessarily conclusive, *terminus post quem* for the construction of the earlier Temple of Zeus.

Below these construction levels, the earth fill had only meager ceramic contents

¹⁰ Cf. *Hesperia* 46, 1977, pp. 9-10. It is just possible, architecturally, that the construction of the "Nu Structure" does not presuppose the prior destruction of the Circular Structure, but that the former was "mortised" into the southwest corner of the latter. In this case, however, the subsequent remodeling of the north wing of the "Nu Structure" will have left an ugly scar in the fabric of the Circular Structure if the latter were still standing. Another possibility would be that the original north wing of the "Nu Structure" was mortised into the standing Circular Structure and that the latter was then dismantled at the time of the remodeling of the north wing. There is no evidence for such a sequence and it seems more likely that the Circular Structure was no longer standing by the latter part of the 4th century when the "Nu Structure" was built.

¹¹ Pottery lots M 14: 79, 80, 84; M 13: 20-27.

¹² Pottery lots M 14: 88-92.

¹³ G. M. A. Richter, *Kouros*, 3rd ed., New York 1970, pp. 75-89 for the Tenea-Volomandra Group. Compare and contrast the Nemea kouros with the lead kouros in Richter's Sounion Group, pp. 50-51, no. 13. The Nemea example is clearly more developed.

all belonging to Mycenaean times.¹⁴ Thus there is once again an apparent chronological gap in activity in the sanctuary which includes the whole of the Geometric period.

Section K 14

Further west along the south side of the Temple of Zeus another trench was opened in order to probe the deeper levels of the plateia in this area and, by means of a narrow northern extension between fallen blocks, the relationship of the plateia with the Temple of Zeus (Pls. 10, 14:d). However, earlier disturbances in the area of the northern trench extension had removed all evidence for the construction of the extant Temple and for its relationship with the plateia surface to the south. Nonetheless, lower levels in this trench were of considerable interest. One of these was a heavy layer of ash with tiny fragments of burnt bone and many fragments of badly broken pottery, mostly of drinking shapes (skyphoi, kylikes, etc.).¹⁵ This layer, which gradually disappears without a precise line of definition about 2.50 m. south of the extant Temple, extends out of the trench in all other directions. Although it is clearly sacrificial debris, it is also clear that no sacrifices took place directly here, at least in the area of the opened trench. In addition to the material mentioned above, this layer also produced a terracotta head (of Zeus?, TC 69, Pl. 14:b) and six silver coins of late Archaic and early Classical date (Pl. 15:a).¹⁶ The date of the deposit as a whole appears to be best given by the badly battered fragments of red figure found together with this material and of which two are presented here (P 300 a/b and c, Pl. 14:c). These should place the deposit well within the third quarter of the 5th century B.C.

At lower levels in this trench there again appeared heavy layers of working chips, also presumably from the construction of the early Temple of Zeus. Although the pottery in these layers was almost exclusively of the 6th century B.C., two fragments of ribbed ware appeared. Unless they are intrusive, they would place the construction date of the early Temple of Zeus in the second half of the 5th century B.C.¹⁷ It is perhaps better to await future probes before attempting to date the early Temple.

At the bottom of this trench there appeared a rather, at present, amorphous line of small broken stones as for packing, apparently about 2.70 m. wide and apparently running in an east-west line out of the trench near the Temple of Zeus (Pl. 15:b). Due to limits of time and space (more Temple blocks must be moved), it was not possible to define these stones more precisely, nor to gain a date for their

¹⁴ Pottery lots M 14:93, 95.

¹⁵ Deposit K 14:1; pottery lot K 14:15.

¹⁶ C 901 (Sikyon), C 902 (Praisos?, Sikyon?), C 903 (Athens), C 904 (Sikyon), C 905 (Aigina), C 906 (Phlious). I would thank Alan Walker for his advice concerning the identifications of these and others of the coins discovered in 1977 at Nemea.

¹⁷ Pottery lots K 14:24, 25.

placement. Cleaning along their northern side yielded one Early Archaic and one Early Neolithic sherd.¹⁸

THE SACRED SQUARE

Sections J 15, K 14, K 15, L 15, N 14, O 15

With the clearing of the sections listed above and of the baulks from Sections M 15 and N 15, the broad open square or plateia along the south side of the Temple of Zeus has been essentially cleared (Fig. 2, Pl. 16: a, cf. Pl. 11). Throughout these areas, the Byzantine and Early Christian disturbances had, as elsewhere, churned up many artifacts of much earlier date. Characteristic is the numismatic material of which only the silver is presented here in Plates 16: b¹⁹ and 17: a.²⁰ Individual finds from these same contexts included the nose of a lion's head waterspout of island marble (A 103, Pl. 15: c), a fragment of drapery from a terracotta statue (TC 73, Pl. 17: b), a bronze griffin's ear (BR 268, Pl. 17: c), a gold-foil relief with the face of Herakles (GJ 26, Pl. 17: d), and a hollow bronze cylinder with five rows of projecting spokes about which more will be said below (p. 73, BR 357, Pl. 17: e). It can only be regretted that material such as this has been disturbed from its original contexts. From these same disturbed layers came more evidence of the late 5th century violence in the sanctuary which was reported last year.²¹ This was again in the form of iron spear points and bronze arrowheads which can probably, but because of their context not certainly, be associated with the same violent episode in the history of Nemea (IL 174, BR 301-307, Pl. 18: a; IL 166, IL 211, IL 225, IL 232, BR 253, BR 300, BR 363, BR 385, BR 390-393, BR 410, BR 453, BR 454, Pl. 18: b).

With the removal of this disturbed fill, the hard white surface of the square was exposed throughout the area although it gradually turns to a slightly redder clay surface toward the east in Sections N 15 and O 15. More pits of the type identified in 1976 as planting pits for the Sacred Grove of cypress trees were discovered in Sections N 14 and L 15, but no traces of such pits were noted further to the east or to the west. Thus, if these pits were indeed for cypress trees, the grove was concentrated off the southeast corner of the Temple of Zeus (Fig. 2, Pls. 11, 16: a).

In the eastern part of the Sacred Square, along the northern side of Section N 15, a nearly square pillar was discovered in 1976 and identified as a possible horos stone. Such an interpretation was strengthened in 1977 by the discovery of two more such stones in the immediate area. One of these is west of the previously discovered stone

¹⁸ Pottery lot K 14: 28.

¹⁹ From the western area of the square: C 782 (Aigina), C 800 (Mende), C 820 (Aigina), C 821 (Sikyon), C 843 (Aigina), C 878 (Argos), C 925 (Athens), C 952 (Argos), C 928 (Corinth), C 927 (Argos), C 926 (Corinth).

²⁰ From the eastern area of the square: C 837 and C 894 (Sikyon), C 907 and C 974 (Corinth), C 954 (Philip II).

²¹ *Hesperia* 46, 1977, pp. 8-10.

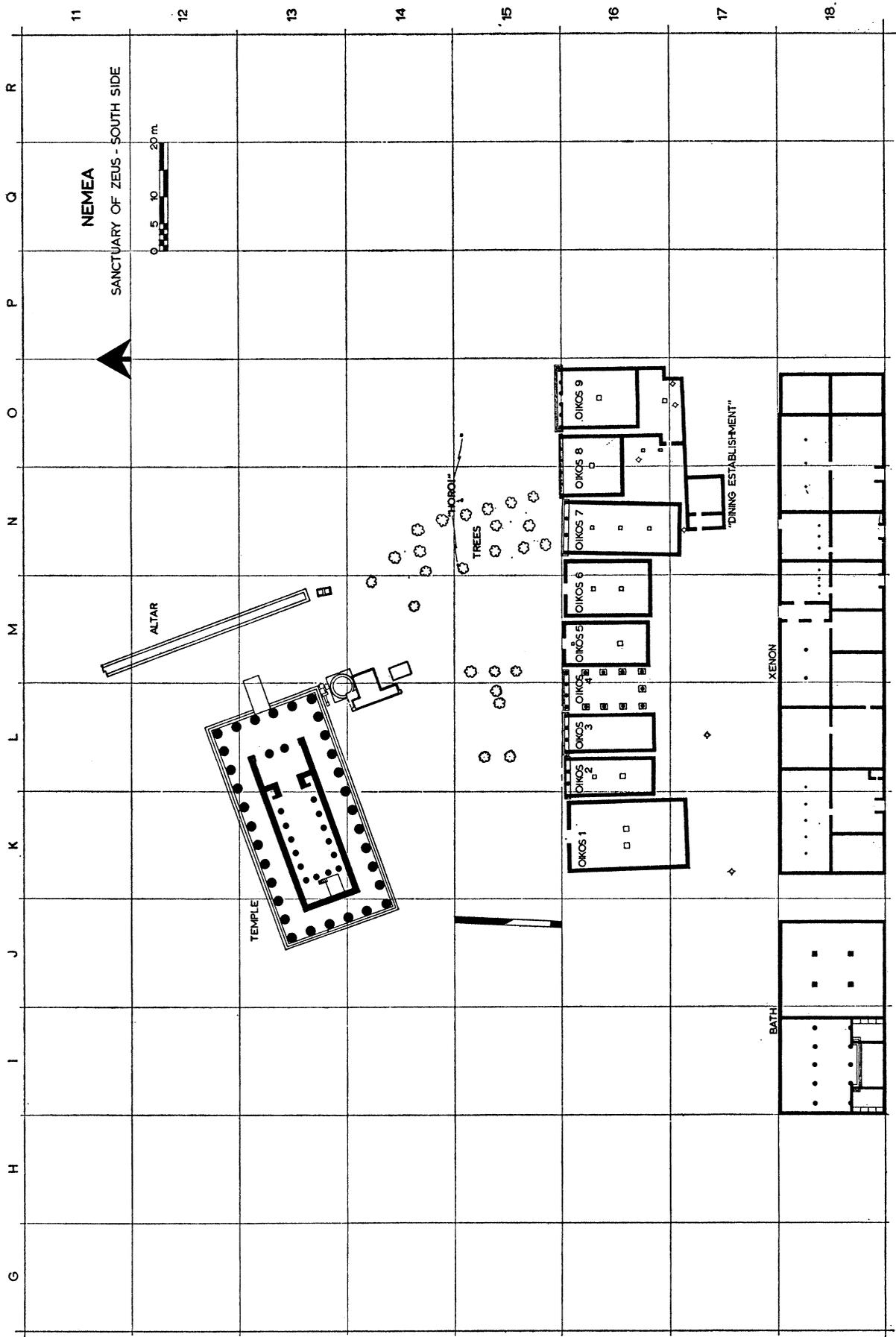


Fig. 2. Restored plan of south side of Sanctuary of Zeus, Archaic to Hellenistic periods.

in the extreme northwest corner of Section N 15; the other is to the east of the first stone in the northern part of Section O 15 (cf. Fig. 2, Pls. 11, 16: a). These three "horoi" do not form a straight line, nor are they equidistant (11.89 m. from western to center stone, 12.23 m. from central to eastern). A date is not available at present for their placement, nor are any traces of inscription preserved at their battered tops. It is to be hoped that future excavations will reveal the nature of the area which these "horoi" set off from the surrounding Sacred Square.

To the west, in Section J 15, the open square is interrupted by a long north-south wall which extends out of the grid square to north and south (Fig. 2, Pls. 11, 18: c). Although badly damaged by Early Christian farming activities which broke through the line of the wall for a distance of several meters, certain observations are possible. The wall is of a heavy rubble construction, averaging about 1.05 m. in width and re-using earlier material, facing toward the east onto the Sacred Square. Because of the farming disturbances, it was not possible to determine a date for this wall within Section J 15. Certain general indications, however, come from its relationship with the plateia surface to the east from which it would appear that the wall must be later than the 5th century B.C. The fact that the extreme north end of the wall in Section J 15 was covered by fallen blocks of the Temple of Zeus should indicate that the wall is earlier than the 4th century (after Christ) destruction of the Temple. More precise information about the function and date of this wall must await future work.

THE OIKOI

Removal of the baulks and excavation at the western and eastern ends of the line of "oikoi" (Fig. 2, Pl. 11) have supplied various details about individual buildings as well as indicating that the nine buildings previously discovered constitute the complete row in this area. It thus seems desirable to summarize the state of our knowledge at this point for each building, and to assign a number to each beginning with the largest oikos, at the west end of the row.

Oikos 1—Sections K 16 and K 17

Excavations in 1977 revealed a very hard surface with no trace of construction for a distance (as now exposed) of some 5.50 m. to the west of Oikos 1. It seems likely that this area marked an entrance to the sanctuary along the same line delineated nearly two centuries later by the Bath and the Xenon (Fig. 2, Pl. 11). Oikos 1 was first discovered during the excavations of the 1920's and was explored again in 1964.²² Its state of preservation has deteriorated badly since its discovery and even then it was preserved only in its foundations except for the northeast corner block and the eastern of the two interior bases. There are large gaps in the

²² C. W. Blegen, "Excavations at Nemea, 1926," *AJA* 31, 1927, pp. 428-429, and C. K. Williams, "Nemea," *Δελτ.* 20, 1965, *Χρον.*, pp. 155-156

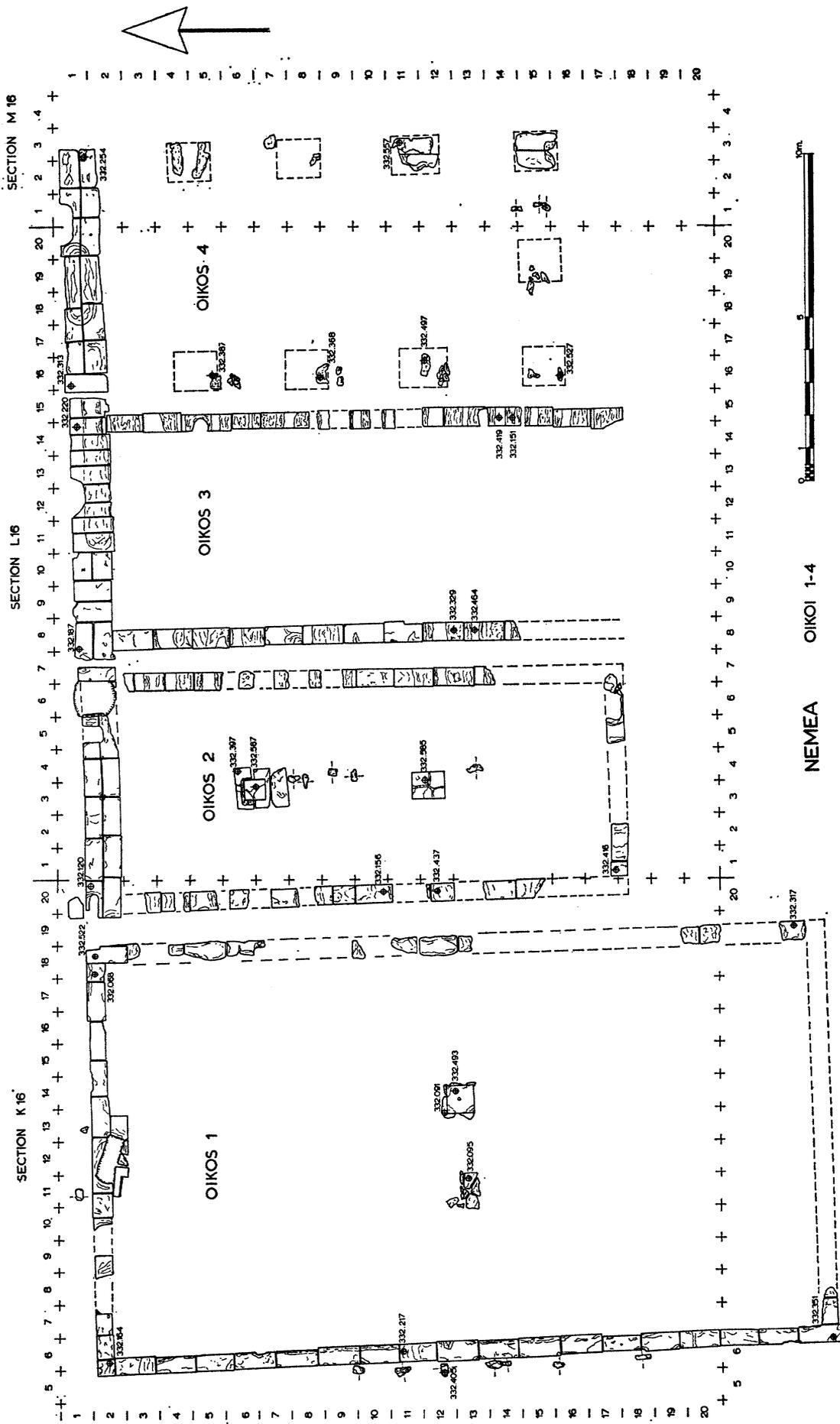


Fig. 3. Actual state plan of Oikoi 1-4.

foundations of the east wall, and very little remains of the foundations of the south wall except at its extreme western end (Fig. 3, Pl. 18: d). As reported at the time of its original discovery, Oikos 1 has an average east-west width of 13.15 m. and a north-south length of 22.40 m. Few details can be added to those previously reported (see footnote 22) although it should be noted that (*contra* Blegen) the soft poros foundation blocks cannot have been intended to be exposed. The stone disintegrates rapidly now with exposure to the weather, and there is no reason to believe that it better withstood weathering in antiquity. Near the center of the north wall, at K/12-16/2 (Fig. 3), there are the remains of a second foundation block set along the south side of the regular foundation line. This should mark the point of the entrance to Oikos 1,²³ but this block and its northern neighbor have been cut through by an Early Christian grave which also re-used two ancient blocks to line its southern side toward the west. Thus precise details of the size and nature of the entrance cannot be recovered, although its general position is obvious.

As noted at the time of discovery, there is a series of pierced but otherwise unworked stones along the west side of Oikos 1.²⁴ The notebook from December, 1926 records 17 stones in this row (including one cylindrical, worked poros stone), of which only six still remain *in situ*. The notebook also records yet another pierced stone north of the north wall of Oikos 1 and about 5.60 m. east of its northwest corner. This stone is still in place (Fig. 3, Pl. 18: d) as is another, unpierced, stone about 5.50 m. west of the northeast corner of Oikos 1. These two stones thus flank the general area of the entrance to the building. The purpose of the pierced stones, of which many more have been found during the past two years (cf. footnote 24, and below pp. 70, 71), remains as puzzling today as it was fifty years ago.

The floor level of Oikos 1 has long since been destroyed and no date has ever been proposed for its construction, but it may well be supposed that it belongs with the whole series of Oikoi in the first quarter of the 5th century B.C.

Oikos 2—Sections K 16 and L 16

Although enough of the west and north walls of this Oikos, including their southern and eastern corners respectively, was uncovered in 1964 to establish the overall dimensions of this building, it remained for the work in 1977 to uncover the rest of Oikos 2.²⁵ The width of the building averages 7.20 m. although there is a marked narrowing from north to south of 0.20 m. and the north wall extends beyond the lines of the side wall foundations to a total length of 7.65 m. The average north-south length of Oikos 2 is 16.35 m. Nothing of the walls is preserved above the level of the soft poros foundations which are badly dug through by Early Christian farming. They consist of typical blocks averaging about 0.55 × 1.10 m., and are laid

²³ As noted by Williams, *loc. cit.* This block constitutes Williams' "offset".

²⁴ Blegen, *op. cit.* (footnote 22 above), p. 428; cf. *Hesperia* 46, 1977, pp. 15-16.

²⁵ Williams, *op. cit.* (footnote 22 above), p. 156.

in a single course along the west, south, and east walls, but in a double course along the north (Fig. 3, Pl. 19: a). As noted already in 1964, this should indicate that the northern façade was the principal one of Oikos 2.

The interior of the building has two bases for roof supports, both in a relatively good state of preservation. The distance, on centers, from the north wall to the first base is 4.59 m., from the first base to the second 5.28 m. There is evidence, however, that the first base was once located about 0.50 m. further south. It has three foundation blocks, the two southern of which are of the characteristic soft poros. The southernmost of these two blocks does not support the base and has no function in the present arrangement. The northernmost foundation block is of hard limestone and was originally a finely worked euthynteria block, re-used in its present position. The southern central portion of this block's upper surface has been crudely worked down to receive the base.

Between these two bases, and in a line parallel to but slightly east of the building's long axis, are four pierced stones apparently embedded in the floor of Oikos 2. A fifth pierced stone is in this same line, but south of the second base. The holes of the first, third, and fifth stones are perpendicular to the long axis of the building, but the holes of the second and fourth are parallel to that axis. These stones are presumably contemporary with the use of the building, as was the case in Oikos 5, but future excavation will be necessary to establish this as fact as well as to give the absolute chronology of the building. For the present, there is no indication that Oikos 2 does not belong in the early 5th century B.C.

Oikos 3—Section L 16

A part of the northwest corner of this building was discovered in 1964, and more was found in 1976. Now completely uncovered, the state of preservation of Oikos 3 is poor (Fig. 3, Pl. 19: b). The foundations of the east and west walls have been badly dug through by Early Christian farming, the south wall has disappeared without a trace, and a trench of the 1920's runs through the center of the building on a north-south line. The foundations of the north wall are better preserved and show, like the neighboring oikoi, a double row of the characteristic soft poros blocks. The preserved north-south length of Oikos 3 is 16.60 m., the width varies from 7.22 to 7.09 m. from north to south, and the north wall foundations extend beyond the lines of the east and west walls to a length of 8.01 m.

Oikos 4—Sections L 16 and M 16

This building was essentially uncovered in 1976, although the north wall remained to be excavated in 1977. The foundation of that wall, like the north walls of Oikoi 2 and 3, consists of a double row of typical soft poros blocks (Fig. 3, Pl. 19: c) with a total preserved length of 7.54 m. The block at the northwest corner of the building's foundation is, however, of hard limestone. Since there is no answering block at the

northeast corner of the building, it is not clear why this corner needed particular reinforcing. As suggested in 1976, Oikos 4 had no side walls, but rather a colonnade as indicated by the foundations for freestanding bases along the east and west sides. Although these foundations are, for the most part, very poorly preserved, their spacing can be restored as about 3.50 m. on centers. The north-south length of Oikos 4 is not clear, but a cluster of broken limestone at L/18-16/15 may give the general position of a central column at the rear of the building. If this is correct, then the length of Oikos 4 would be about 15.10 m. East of this putative central column, at M/1-16/15, are three more pierced stones like those previously noted outside Oikos 1 and inside Oikos 2.

Oikos 5—Section M 16

Most of this building was excavated in 1976 and only one detail can be added to our knowledge of it. The removal of the north baulk of Section M 16 revealed that the north wall of Oikos 5 has been completely robbed out, probably in the late 4th century B.C.²⁶ The robbing trench for this wall shows that it did not have the double thickness of the façade walls of Oikoi 2-4, and that the over-all length of Oikos 5 will have been about 16.10 m.

Oikos 6—Sections M 16 and N 16

Although most of this building was uncovered in 1975 and 1976, its architectural details are much clearer as a result of the work in 1977. The foundations of the north wall have emerged as a single row of typical soft poros blocks. The over-all length of Oikos 6 is 16.25 m. and the width averages about 10.45 m. The northern of the two central interior bases is preserved only in its soft poros foundations, but the center of those foundations is 5.10 m. from the center of the north wall, and 5.11 m. from the center of the southern limestone base.

Oikos 7—Sections N 16 and N 17

Most of this building was excavated in 1974 and 1975, but once again a few details have been added to our knowledge of it as a result of the removal of baulks in 1977. Although the line of the north wall has not yet been fully excavated, it appears to have been thoroughly robbed out and the total north-south length of Oikos 7 can only be estimated as between 21.80 and 22.10 m. Another feature exists in Oikos 7 which was discovered in 1975, but whose significance was not then understood. This is a pierced stone embedded in the floor 0.46 m. east of the southeast corner of the northernmost interior base.²⁷ Thus, while Oikos 1 has these pierced stones outside its structure, Oikoi 2, 4, 5, and 7 have them, in varying quantities, inside.

²⁶ Pottery lot M 16: 60.

²⁷ Cf. *Hesperia* 45, 1976, pl. 34: a, b.

Oikos 8—Sections N 16, O 16, and O 17

Although the north wall of this oikos is also robbed out, the north-south length of the building can now be set at about 11.95 m. The central interior base in Oikos 8 has been discovered as a hard limestone block, 0.795 m. square. The southern part of the zigzag wall which continues south of Oikos 8, and connects it with Oikos 9 and with the "Dining Establishment" as noted in 1976, was discovered to have a 0.95 m. break in its foundations at O/5-16/20, 17/1, almost certainly for a doorway (Fig. 2). Just south and west of this doorway was discovered an unfluted (but finished and plastered) Doric capital (A 124, Pl. 19: d) which may be associated with the bases west of the zigzag behind Oikos 8.

The removal of the baulks over Oikos 8 also produced some interesting ceramic material, although unfortunately in disturbed contexts, such as a black-figure sherd (P 264, Pl. 20: a) and a tiny fragment of a red-figure face in profile; the latter was found to join a larger fragment (mended from four pieces) of the rim and beginning of the tondo from a kylix with the back of the figure's head (P 163, Pl. 20: b). The fact that the larger fragment was found in 1976 in a pit of the middle Byzantine period some 18 meters west of the find place of the smaller fragment once again bears testimony to the wretched fate of the Sanctuary of Nemean Zeus during the Early Christian and Byzantine periods. From these same disturbed contexts came a bronze spindle or pulley which is of considerable potential interest (BR 256, Pl. 20: c, see below p. 75).

As noted in 1976, Oikos 8 was taken over for a period of its history in the third quarter of the 5th century B.C. by a bronze sculptor's workshop. Removal of the baulk over the center of Oikos 8 revealed more of the casting pits which belong to this activity, although the statue molds which they produced were disappointingly fragmentary. Some of the tools and accouterments of the workshop were found, including a stone awl (ST 347, Pl. 20: e) and a large, roughly worked stone basin (ST 362, Pl. 20: d). The latter had been discovered in 1976 upside down in one of the casting pits along the east side of Oikos 8 at O/5-16/1²⁸ where the heavy wear on its (then) upper surface indicated that it had been re-used as some sort of paving stone. When the block was turned over in 1977 it was found to contain typical refuse of the casting pits including bronze slag, ash, and whitish masses formed of calcium carbonate.²⁹ A more complete understanding of the functioning of the bronze sculptor's workshop must now await further study of the material found therein.

In the area behind Oikos 8, but within the zigzag-wall area and just northwest of the southern of the two bases, there appeared what seemed to be a well which was excavated to its full depth of 4.91 m. (+ 327.10 m.), at which point virgin soil

²⁸ Cf. *Hesperia* 46, 1977, p. 15, fig. 5, and pl. 11: a.

²⁹ I would thank Dr. N. Yassoglou of the University of Athens for his identification of this material.

was encountered. This "well" was found to be filled with large quantities of rubble, tiles, and similar debris with no lining nor any trace of a period of use. If it was, in fact, ever used as a well, it was for a very short period of time and during the time of a very high water table. It is perhaps more likely that it was intended as a well, but never completed, perhaps due to a collapse during its excavation. The period of its filling can be established on the basis of the pottery found in it,⁸⁰ as well as two coins (Pl. 20: f),⁸¹ and fragments of a Doric capital of advanced profile (A 104, Pl. 21: a). All of this material points to a date in the late 4th century B.C. The suggested use of the area behind Oikos 8 as a kitchen facility is in no way contradicted by an ancient attempt to excavate a source of water in it.

Oikos 9—Sections O 15, O 16, and O 17

This is probably the final oikos in the row at the east as is indicated by the nearly two-meter (as now exposed) gap in construction east of its east wall (Pl. 21: b). The average distance between the other oikoi is 0.70 to 0.80 m. so that if a tenth oikos exists further to the east, there is an uncharacteristically wide gap between it and Oikos 9. Furthermore, a light rubble wall appears to continue the line of the back wall of Oikos 9 further to the east, although more excavation will be necessary to determine the extent, date, and function of this spur wall.

In the narrow (as now excavated) strip east of Oikos 9, in a layer of the 4th century B.C.,⁸² two curious objects were found close together (BR 456, BR 457, Pl. 21: c). These two grooved hollow bronze cylinders look very much like gears or pulleys and recall two other artifacts found in 1977 in disturbed fill (BR 357, Pl. 17: e, and BR 256, Pl. 20: c). Of these four objects, the "spiked roller" (BR 357) is of a familiar type identified as part of a snaffle bit.⁸³ The pair of "grooved rollers" from Section O 16 (BR 456, 457) are of a type which has also been identified as part of a snaffle bit,⁸⁴ but there are difficulties with such an identification. First, the horse bits which have been preserved in their entirety have only the "spiked roller," not the "grooved roller," in the appropriate place in their compositions. Secondly, both the Nemean "grooved rollers" show signs of wear within the grooves which seems unlikely to have been caused by a horse's mouth. Thirdly, the teeth on the "grooved roller" are relatively smooth and cannot have been as effective in a snaffle bit as the "spiked rollers." Finally, one of the Nemean examples (BR 456) does not have teeth, but only one row of indentations cut through the ridges between its grooves. Unless this is an unfinished example, it can hardly have served as a part

⁸⁰ Deposit O 16: 1, pottery lot O 16: 84.

⁸¹ C 842 (Phokis), C 844 (Argos, silver).

⁸² Pottery lot O 16: 88.

⁸³ G. R. Davidson, *Corinth*, XII, *The Minor Objects*, Princeton 1952, p. 337, no. 2889, and bibliography therein. Add also H. Payne, *Perachora*, Oxford 1940, p. 182, pl. 82, no. 24, and J. K. Anderson, *Ancient Greek Horsemanship*, Berkeley and Los Angeles 1961, pp. 64-78.

⁸⁴ Davidson, *op. cit.*, nos. 2887, 2888.

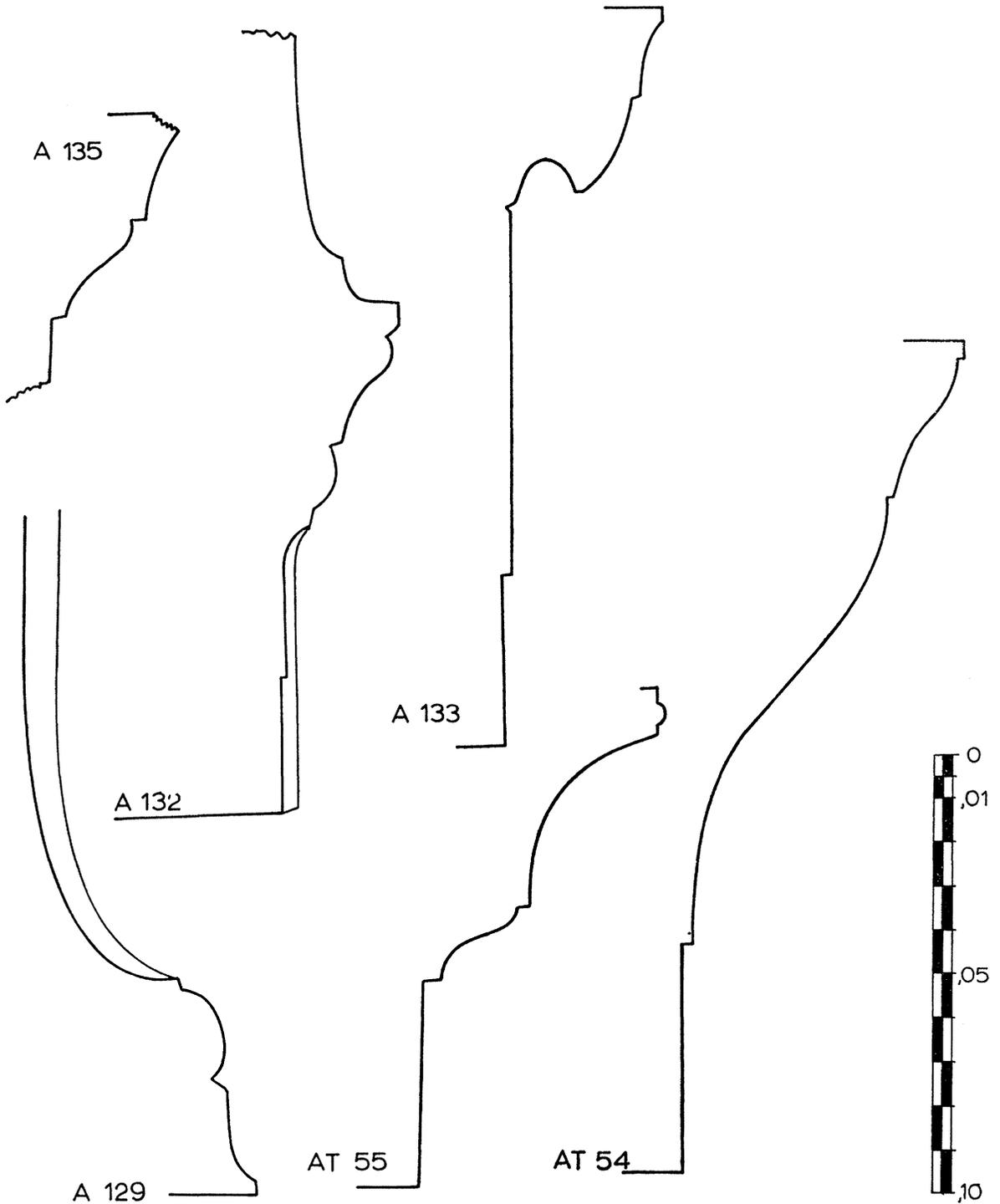


FIG. 4. Profiles of molded architectural members.

of a snaffle bit. These considerations, plus the discovery near by of the pulley (BR 256), would indicate some function other than that of a snaffle-bit part for the "grooved rollers." If the suggestion made in 1976 is correct that the early stadium of Nemea should be near by,³⁵ then perhaps it is legitimate to begin to think of the parts of the starting mechanism or *hysplex* of that stadium.

Oikos 9 has a very different history from that of the other oikoi in the row. Although constructed at about the same time as the others in the first quarter of the 5th century B.C., evidence was found in 1976 showing that Oikos 9 was destroyed in the third quarter of the same century and thus had a very short life. Additional evidence confirming this history was discovered in 1977 along the north façade wall of Oikos 9 where a large robbing trench was uncovered. This robbing trench establishes that the foundations of the north wall of Oikos 9 were of double thickness like those of Oikoi 2-4, that the north-south length of the building was about 15.65 m., and that the robbing activity took place in the late 5th century B.C.³⁶ This trench also contained many architectural elements from the façade of Oikos 9 (Pl. 21: b) which yield considerable information about the appearance of the building as it faced out onto the Sacred Square toward the Temple of Zeus.³⁷ These elements include the bases and shafts of two engaged Ionic columns with 20 flutes and with toros/cavetto bases (A 128, H. 1.644 m., and A 129, Fig. 4, Pl. 21: e), two substantial fragments of engaged Ionic columns from high in the shafts (A 130, 131, Pl. 22: c), an engaged Ionic capital with a half-round/cyma reversa echinus (A 132, H. 0.239 m., Fig. 4, Pl. 21: d), an anta capital with an ovolo-hawksbeak/cavetto crown (A 133, H. 0.167 m., Fig. 4, Pl. 22: a), a small fragment from the corner of second anta capital (A 134), and two fragments of a crowning molding consisting of a cyma reversa with a cavetto above (A 135, 136, Fig. 4, Pl. 22: b). Based upon the preserved heights of the various column elements, their diameters, and the proportions of diameter to height for other Ionic buildings of this general period, the height of the columns can be restored as between about 2.90 and 3.15 m.³⁸ The wall blocks of the two lower

³⁵ *Hesperia* 46, 1977, p. 21, and D. G. Romano, "An Early Stadium at Nemea," *Hesperia* 46, 1977, p. 31.

³⁶ Pottery lots O 15: 8, 9. The destruction of Oikos 9 will have antedated the robbing of its façade wall.

³⁷ It may be noted in the material presented below that there are associated normally disparate elements such as, for example, a Doric anta capital with an otherwise Ionic façade. It will also appear that the molding profiles for various of the elements would indicate quite different dates, some of which seem to be even later than the destruction date given above for Oikos 9. It is fair to say that, were it not for their context, one would hesitate to associate some of these elements with one another. Nonetheless, all are of the same scale, material, and surface treatment, and all were found together in the same robbing trench for whose date there is good ceramic evidence. Perhaps the explanation lies in our less than perfect knowledge of provincial architecture. Indeed, without knowing the city-state which was responsible for the construction of Oikos 9, one can only guess at the region which may have exerted a stylistic influence on the façade of the Nemea oikos.

³⁸ The proportions of diameter to height for the Ionic order in the early 5th century B.C. are not well known, but it seems doubtful that one should reckon on a higher proportion than about

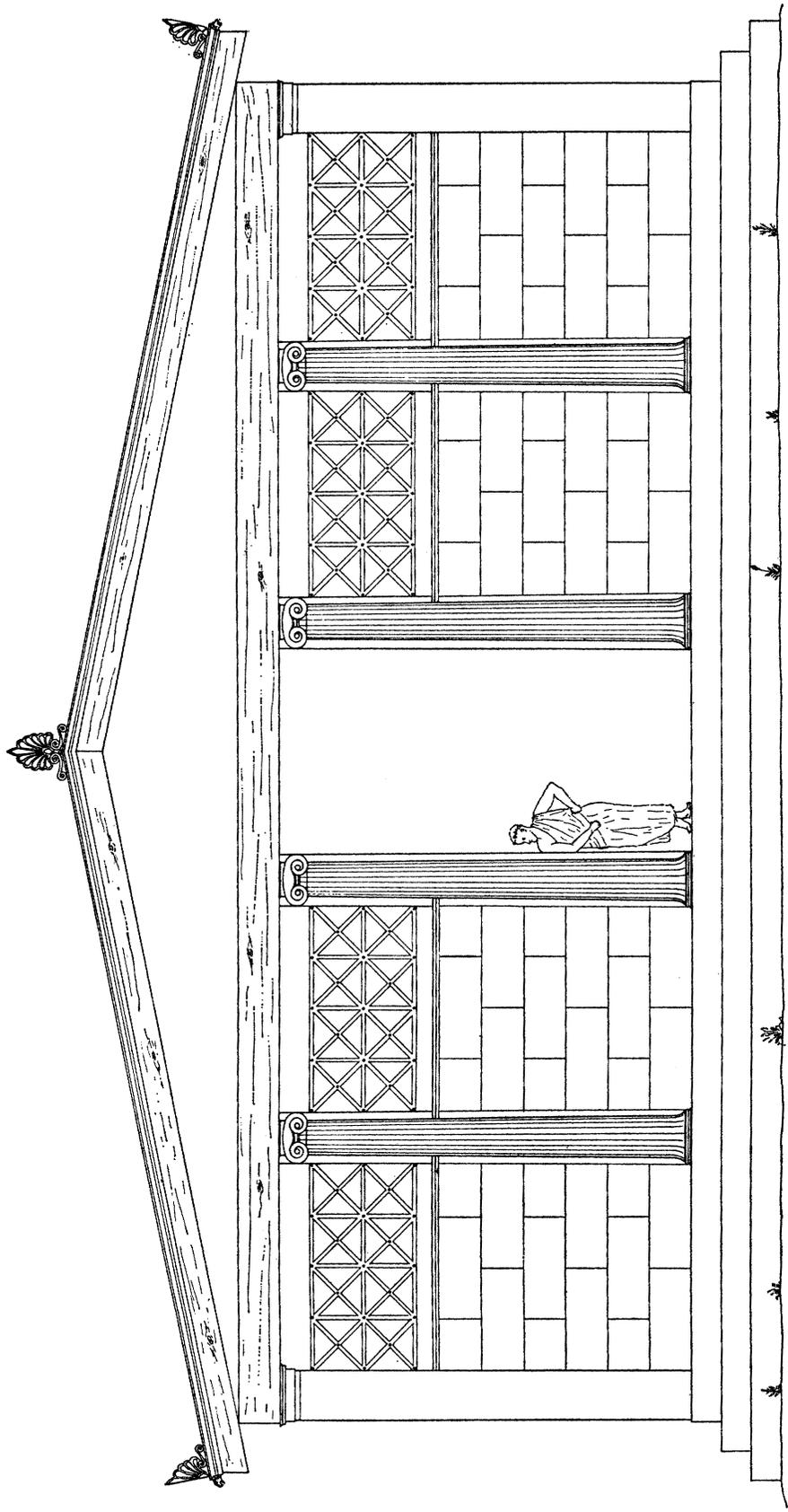
Ionic columns (A 128, 129) are only 0.173 m. thick and have anathyrosis for the wall which connected them. One of these blocks (A 128) has fine white plaster on its back surface proving that the full thickness of the wall was the same as that of the wall-block parts of the engaged columns—a very thin 0.17-0.18 m. This wall did not extend to the full height of the columns, for the sides of the wall blocks of the Ionic capital (A 132) and of one of the fragments from the upper shafts of the columns (A 131) do not have anathyrosis, but rather the same fine white plaster showing that they were freestanding above a certain height. This height (i. e. that of the connecting screen wall) cannot be fixed precisely but will have been at least 1.65 m. (the height of A 128). The top of this screen wall seems the likeliest position for the crowning molding (A 135, A 136). Above this, and between the columns and the corner antae, will have been a grill, presumably of metal, as is shown by the pair of cuttings on either side of the plastered column block A 131 (Pl. 22: c). Although both the anta capital and the Ionic capital have well-cut relieving surfaces, the whole system is so light that one might expect the entablature to have been of wood. This possibility appears to be confirmed by the heavy traces of burning on the upper surfaces of both capitals, which also indicate that the destruction of Oikos 9 included a fire in its superstructure.

The final element that can be assigned with security to the façade of Oikos 9 is a large terracotta palmette which is a good candidate for the central akroterion of the building (AT 42, Pl. 22: d). Broken in two pieces, one fragment of this akroterion was discovered in 1976 along the east side of Oikos 9 at O/15-16/10, while the other fragment was found in the robbing trench together with the other members of the façade. The general outline of the appearance of the front elevation of Oikos 9 can thus be put together as in Figure 5, although many details and specific dimensions are only estimates. The derived general impression of the structure, however, is surely correct: a decorative, but lightly constructed, building with little attention paid to the side and back walls which were of rubble with probably plastered mud brick above. The open grillwork of the façade, whether or not there were similar openings along the sides and back, will have provided an airy, shaded refuge from the sun during the Nemean Games which took place at the height of summer.³⁹ Since this building, and the other oikoi, were probably little used other than during the Games, the effect of a relatively open structure during the winter will have had little importance.

With this understanding of the nature of the façade of Oikos 9, a further generalization may be suggested for the other Oikoi. The width of the robbing

1:9 which is not attested until the Erechtheion; cf. W. B. Dinsmoor, *The Architecture of Ancient Greece*, 3rd ed., New York reprint 1975, tables between pp. 340 and 341. A shorter proportion is, in fact, rather more likely and the reconstruction in Figure 5 is, particularly in this respect, highly provisional; cf. G. Gruben in H. Berve and G. Gruben, *Greek Temples, Theatres and Shrines*, New York 1963, p. 337.

³⁹ A. Boëthius, *Der argivische Kalendar*, Uppsala 1922, pp. 1-48.



NEMEA - OIKOS 9 - TENTATIVE RECONSTRUCTION OF FAÇADE

Fig. 5. Tentative restored elevation of façade of Oikos 9.

trench for the façade of Oikos 9 indicates that the foundations were originally of double width like those of Oikoi 2, 3, 4, and probably 7 and 8. The purpose of this double width, and of the extensions of the northern foundations beyond the line of the side walls, will have been to accommodate the krepidoma of a columnar, or pseudo-columnar, façade with the set-backs for one or two steps. Thus, in broad terms, the façades of Oikoi 2, 3, 4, and perhaps 7 and 8 will have been similar to that of Oikos 9. The single course of foundations for the façades of Oikoi 1, 5, and 6 should, conversely, imply the absence of columnar façades and probably indicates more simple elevations for these oikoi like, for example, that of the Treasury of the Thebans at Delphi.⁴⁰

In the kitchen area behind Oikos 9 two more unlined "wells" like that behind Oikos 8 were found. The easternmost of these, at O/14, 16-17/1, 2, was found to have a depth of only some 0.93 m. (+ 333.64-332.71) and to contain the typical dumped rubble fill and sufficient pottery to establish its date in the latter part of the first half of the 5th century B.C.⁴¹

West of the "well" described above, but still in the kitchen area behind Oikos 9, at O/10, 11-17/1, 2, another unlined "well" was excavated. It too contained large quantities of field stones and tiles, and some worked blocks as well. Its depth was some 6.80 m. (+ 332.65-325.85) and its contents included wedge-shaped kiln separators, dozens of which have been found in the kiln complex southwest of this "well."⁴² Although the pottery from this "well" indicates a closing date in the late 4th century B.C.,⁴³ there was no typical period of use pottery. Thus, once again, this must either have been a well which was used for a very brief period of time, perhaps for a single Nemean festival season, or it was an abortive attempt to open a well which collapsed during its excavation.

THE SECULAR FRINGES ON THE SOUTH SIDE OF THE SANCTUARY

The Xenon—Section O 18

During the 1964 excavations at Nemea, the xenon was found to have a total east-west length of some 86 m. with its east wall at O/12-18/1, 20 (Fig. 6).⁴⁴ In 1977 an area extending some 8.40 m. to the east of this east wall was opened. Within this area were found a series of well-built rubble walls, and robbing trenches for others, which extend the line of the Xenon 7.36 m. further east (Pl. 22: e). No finds which might suggest their use were made within the two rooms formed by this addition. Although the way in which the central east-west wall was built up against the Xenon's east wall should indicate the chronological priority of the Xenon,

⁴⁰ J.-P. Michaud, *Fouilles de Delphes*, II, *Le trésor de Thèbes*, Paris 1973, pl. 71.

⁴¹ Pottery lot O 17: 26.

⁴² *Hesperia* 44, 1975, p. 164, and pl. 40: d.

⁴³ Deposit O 17: 1; pottery lot O 17: 24.

⁴⁴ Williams, *op. cit.* (footnote 22 above), pp. 154-155.

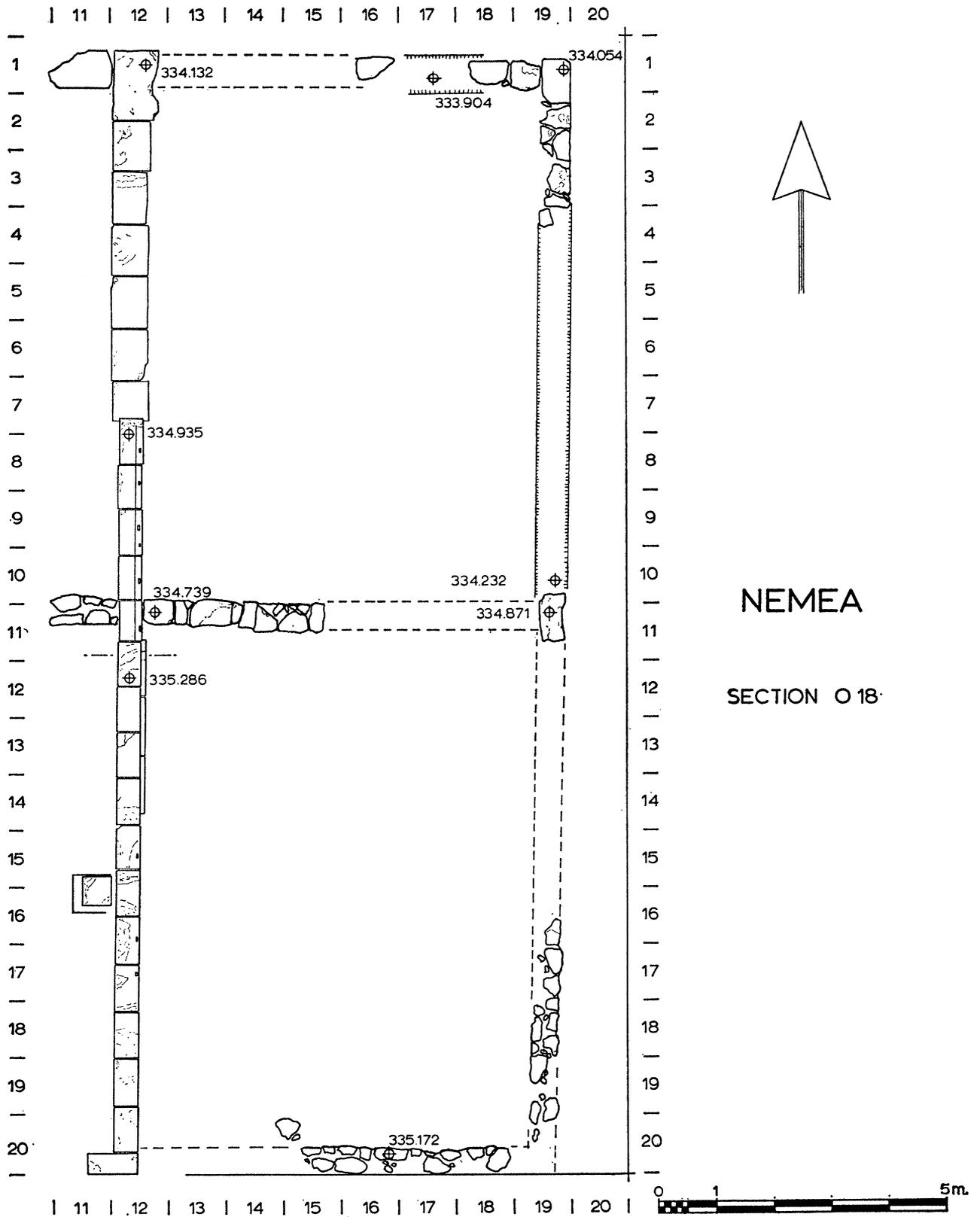


FIG. 6. Section O 18.

the pottery from earth fill against this central wall would suggest a date of construction in the 5th century B.C.,⁴⁵ which seems unlikely. The Xenon is clearly later than the kiln which belongs in the last quarter of the 4th century B.C.⁴⁶

A trench cut along the south side of the central east-west rubble wall at its point of intersection with the Xenon's east wall revealed the foundation trench of the latter. This trench did not produce ceramic or other material helpful in fixing the date of the Xenon more precisely than previously, but a peculiar feature did appear. On the east side of the second full foundation/toichobate block south of the central wall is a large incised *nu* (Pl. 23: a). This calls to mind the letter incised on a euthyn-teria block of the "Nu Structure", although the forms of the two *nus* are not precisely identical. Since these letters are, in each case, probably to be interpreted either as mason's marks or as quarry marks, and since independent evidence has suggested a construction date for both the Xenon and the "Nu Structure" in the late 4th century B.C., it may be supposed that either the same mason or the same quarry was involved in the construction of both buildings.

The Kiln—Sections M 17 and N 17

Although the Kiln Complex has been excavated in 1964, 1974, and 1975, its western limits have still not been reached, and restrictions of time prevented a complete investigation of the kiln's western area even in 1977. This was due, in part, to the excavation of a small pit north of the kiln at N/1, 3-17/6, 8 (Pl. 23: c, center bottom). This pit has nothing to do with the kiln, but is itself of considerable interest. Measuring 0.70×1.35 m, and just over a meter deep (+332.95-331.94), this pit was lined with small stones; its upper part was packed with similar stones showing a deliberate closing and sealing. The pit contained, below the stone packing, masses of ash and bone, including the jaw of a wild boar, together with large quantities of pottery, especially drinking vessels (Pl. 23: d).⁴⁷ This pit can thus be generally characterized as sacrificial in nature, although there are no traces of actual burning, nor of sacrifices, in the pit itself. Of the ceramic material, ten pieces have been sufficiently restored to be presented here. These are two skyphoi (P 308, 309), six one-handed drinking cups (P 302-307), and two lamps (L 26, L 27; Pl. 24: a). A date for this deposit in the second quarter of the 5th century B.C. is clearly indicated.⁴⁸ Since the contents of this pit might very well represent the remains of ritual dining, and since the doorway of the "Dining Establishment" is only some 6.50 m. east of this pit, perhaps its contents are to be associated with activities within the building.

As mentioned above, the excavation of the kiln complex which extends into

⁴⁵ Pottery lot O 18: 18.

⁴⁶ *Hesperia* 45, 1976, p. 188.

⁴⁷ Deposit N 17: 4; pottery lot N 17: 73.

⁴⁸ For the lamps see R. H. Howland, *The Athenian Agora, IV, Greek Lamps*, Princeton 1958, Type 21B.

Section M 17 is still not complete, but one notable feature should be reported here. The sunken kiln forechamber extends westward from the area previously excavated in Section N 17, and opening off this forechamber on the south side is the third kiln discovered within this complex. The newly discovered kiln is circular with an average diameter of about 2.00 m. and a preserved height of almost one meter. Lined with the characteristic stucco known from the other two kilns, only the stoking chamber is preserved with a narrow passageway going northwards into the sunken forechamber area (Pl. 23:b; cf. Pl. 23:c). It is not yet clear whether there is any significance to the circular form of this kiln, but it is clear that it was built later than the Xenon, for one of the layers into which the kiln was sunk extends over the top of the foundation trench of the north wall of the Xenon. This circular kiln may, then, have been the replacement for the great south kiln which was no longer serviceable after the construction of the Xenon.

Well in Section K 17

This solidly constructed well at K/6, 7-17/12, 13, some 8.30 m. due north of the west wall of the Xenon (cf. Fig. 2, Pl. 11) was first discovered and partially excavated in November and December, 1925.⁴⁹ Because of the discovery of water which could not be removed, the excavation of this well was not completed in 1926, but was in 1977. The well was found to have a total depth of 10.10 m. (+ 332.85-322.75) from the preserved mouth of the well, but there was once a wellhead which carried the height of the well upward another 0.42 m. This wellhead (A 125, Pl. 24:b) was found broken into four large pieces, in the well at depths ranging from 8.65 to 9.60 m. (+ 324.20-323.25). It was formed by re-using a wall block with anathyrosis on both ends, into which was carved a small depression with a drain channel at each of the four corners and a larger opening for the well itself (diameter 0.59 m.) in the center of the block. Below this broken wellhead was discovered a shallow layer from a period of use of the well. Relatively little pottery was found in this layer, and its date is not entirely clear.⁵⁰ Two essentially complete jugs are clearly of at least Roman date, but their precise chronology has not been established (P 279, P 289; Pl. 24:c). In the 1926 excavations of this well, eleven fragments of an inscription were found, and it has been plausibly suggested that the inscription should be dated to 229 B.C.⁵¹ Thus a late Hellenistic date, at the earliest, is indicated for the well. Further evidence emerged in the form of a fragment of a volute from an Ionic capital (A 117, Pl. 24:d). The workmanship on this volute is clearly of at least Roman date which pushes the date of the well even later. Whether it

⁴⁹ Blegen, *op. cit.* (footnote 22 above), p. 429. There is a discrepancy between the published report, which records that a depth of ca. 9.50 m. was reached in the well, and the notebook which records a depth of 8.20 m. This discrepancy appears to have resulted because the former measurement was taken from the modern ground level, while the latter was from the mouth of the well itself.

⁵⁰ Deposit K 17:1; pottery lot K 17:2.

⁵¹ D. W. Bradeen, "Inscriptions from Nemea," *Hesperia* 35, 1966, pp. 323-326.

should be placed as late as the Byzantine date which has been suggested seems, however, doubtful.⁵² The elevation of the well mouth seems too low for the Byzantine period in this area, and the alignment of the well with the west walls of both the Xenon and Oikos 1 and alongside an entranceway into the sanctuary can hardly be fortuitous. Perhaps the explanation is that an earlier well was cleaned out and re-used in the Late Roman period.

Well in Section L 17

During the excavations of 1964 a well was discovered north of the baptistry of the Early Christian basilica at L/11-17/7. This well produced, in 1964, fragments of two different inscriptions,⁵³ but the discovery of water in the well forced a stop to those excavations at a depth of 7.20 m. (+ 325.47). Excavations were recommenced in 1977 with the aid of an electric submersible pump, and the wall was cleared to its full original depth of 9.95 m. (+ 322.72). Its diameter gradually expands, as with all the other built wells at Nemea, from 0.54 m. at its preserved mouth to 1.30 m. near the bottom. It is constructed of rubble and lies in essentially the same east-west line as the "wells" in Section O 17, the well excavated in 1975 in Section N 17, and the well in Section K 17 described above. Thus there must be an underground river which was tapped at various places and at various times throughout antiquity (cf. Fig. 2).

Since the upper fill had been excavated in 1964, evidence for the date when this well was closed cannot be presented here in detail. However, since both inscriptions which were discovered in the well in 1964 date to the late 4th century B.C., it is clear that the well cannot have been closed before the very end of the 4th century at the earliest. Moreover, fragments of a wellhead were found at the beginning of the 1977 excavations in the well, and a layer of use directly below those fragments belongs to the late 4th or early 3rd century B.C. The evidence for such a date emerges from the ceramic material which includes a coarse jug and an unguentarium (P 293, P 281, Pl. 25: a).⁵⁴ Other material from this level included a large fragment of a terracotta sima with fugitive traces of a meander painted on its lower fascia, of a lotus-palmette painted on its tall cyma reversa, and of a Lesbian leaf painted on the upper cyma reversa (AT 54, Fig. 4, Pl. 25: c).

Below this level came a change in the nature of the fill, and this new layer produced a saltcellar from the last quarter of the 5th century B.C. (P 282, Pl. 25: b),⁵⁵ and three coins (Pl. 25: d).⁵⁶ There is, then, a gap of about a century in the material recovered from the well in Section L 17. There are two possible explanations for

⁵² Blegen, *op. cit.* (footnote 22 above), p. 429.

⁵³ D. J. Geagan, "Inscriptions from Nemea," *Hesperia* 37, 1968, pp. 381-385.

⁵⁴ Deposit L 17: 1; pottery lots L 17: 3, 4.

⁵⁵ Deposit L 17: 1; pottery lots L 17: 5, 6. For the saltcellar date see B. A. Sparkes and L. Talcott, *The Athenian Agora*, XII, *Black and Plain Pottery*, Princeton 1970, p. 136.

⁵⁶ C 908 (Sikyon), C 1020 (Argos, silver), C 1097 (Corinth).

such a chronological gap. Either the well was cleaned out in the late 4th century B.C. before its further use in that period, but not cleaned out all the way to the bottom, and the material from the intermediate periods of use was thus removed, or the well was simply not used during the period of the indicated chronological gap. If, as seems more likely, the latter possibility is correct, then it may be time to make a suggestion regarding the history of the Sanctuary of Zeus at Nemea. As noted already in 1976, the sanctuary was certainly severely damaged, if not destroyed, in the late 5th or very early 4th century B.C., and Argos had control of the Games after that destruction. It is also clear that throughout the Hellenistic and Roman eras the Nemean Games were frequently shifted from Nemea to Argos and back again to Nemea depending upon the political fortunes of Argos at any given time. Furthermore, it appears that shifts of the Games to Argos coincided with shifts of the control of the Games to the Argives, and shifts to Nemea with shifts of control of the Games to Kleonai.⁵⁷ The well in Section L 17 has now revealed that it was unused for a period of time which included the whole first half of the 4th century B.C. and more. Moreover, throughout the sanctuary there is no evidence of any construction, nor, indeed, is there much characteristic ceramic material of this same period. Perhaps the explanation is that, with the shift of control of the Nemean Games to the Argives for the first time in the late 5th or very early 4th century, so too were the Games shifted for the first time to Argos, and were returned to Nemea only *ca.* 340-330 B.C. as marked by the construction of the Temple of Zeus, the Bath, the Xenon, and the other buildings whose roof tiles were manufactured in the Kiln Complex. The evidence for this first physical relocation of the Nemean Games is obviously tenuous, at this time, and admittedly negative in nature, but it should be kept in mind during future excavations.

Below this level of the latest 5th century came another change in the fill of the well, marked in part by the discovery of a monolithic unfluted limestone column with a high square base (A 115, Pl. 25: e). Below this the pottery, and the date of use in the well, is to be placed in the third quarter of the 5th century B.C. as shown by the ceramic evidence including the material in Plate 26: a; a jug (P 277), a skyphos (P 278), two stemless cups (P 290, 291), a trefoil oinochoe (P 276), and a ribbed oinochoe (P 292).⁵⁸ Together with this ceramic material were found several other interesting artifacts from the lowest levels of the well. One of these was a terracotta raking sima, with the corner and the lion's head water spout from the flanking sima (AT 55, Fig. 4, Pls. 26: c, d). Except for the broken muzzle of the lion, the sima is in an excellent state of preservation; its painted decoration consists of a bead-and-reel on its bottom surface on both the raking and flanking sides, a meander on its lower fascia which also continues around onto the flanking side, a Lesbian

⁵⁷ See *Hesperia* 45, 1976, pp. 190-191 for references.

⁵⁸ Deposit L 17: 1; pottery lots L 17: 9-12. It may be possible, with further study, to subdivide this earliest period of use into periods of the third quarter and of the second quarter of the 5th century. For the present, we leave the whole assigned to the latest date shown by the pottery.

leaf on its central cyma reversa, and a lotus-palmette on its upper cavetto. The tiny crowning half-round preserves no traces of its original decoration. The top surface at the corner has an L-shaped cutting 0.188 m. along the raking side, 0.216 m. along the flanking side, 0.031-0.037 m. wide, and 0.012 m. deep. This was clearly the bedding for a corner akroterion. The underside has a slightly projecting plug, 0.04 × 0.05 m., also of terracotta but made in a separate piece and set into the larger surface. The function of this may have been to hold the sima in place on the top of a roof joist, but its extremely low projection does not allow for much holding strength. The bottom surface also has two compass-drawn rosettes, or rather two sets of intersecting circles, which were incised through the paint and must represent doodling after the painting of the sima, but whether before the construction or after the destruction of the sima's building cannot be determined. Given the date of the deposit of this sima in the well and the date of the destruction of Oikos 9 (see above, p. 75), it is tempting, but far from secure, to associate them.

From these same levels came the bases of four bronze hydriai (BR 377, 378, 380, 381, Pl. 26: b). The base of a fifth was also discovered, but together with the rest of its hydria although not attached at the time of discovery (BR 379, Pl. 27: a). The hydria has not yet been completely cleaned or restored, but certain details can be presented here. The diameter of its base is 0.149 m., of its body about 0.285 m., and of its rim 0.191 m. It has a total height of nearly 0.38 m. to its rim. The simple lines of this hydria are contradicted by its high handle the front of which holds the protome of a kore (Pl. 27: b). The kore, and thus the hydria, are to be dated to the very end of the 6th century B.C.⁵⁹ On the rim of the hydria (Pl. 27: c), which is attached to the handle by two substantial rivets (the central rivet is entirely decorative), are a pointillé *tau*, perhaps relevant to the original owner of the hydria, and a nicely cut inscription, dating from the 5th century, which clearly makes this a sacred vessel and a part of the sanctuary's wealth: **ΤΟ ΔΙΟΣ ΕΙΜΙ ΤΟ ΝΕΜΕΑΙ**.

The Stadium—Sections BB 28, CC 28, CC 29, CC 30

Excavations in the stadium during the 1977 season were concentrated upon clearing the west side of the track to the same northerly extent as the east side had been cleared in 1976 (Fig. 7, Pl. 28). The width of the racecourse has been found to expand steadily along this length of some sixty meters from a width of 23.64 m. at the starting line to a width, at the present northern limits, of 26.65 m. The earth fill directly over the track once again provided ceramic evidence for a closing date in the stadium during the last half of the 4th century after Christ.⁶⁰

⁵⁹ For a protome of similar date, although of different local style and vessel shape, see I. Kouleïmane-Vokotopoulou, *Χαλκαὶ Κορινθιογενεῖς Πρόχοι*, Athens 1975, p. 9 and pls. 10, 11. The Nemean kore would seem happiest, among Athenian maidens, in the Euthydikos group; cf. G. M. A. Richter, *Korai*, London 1968, pp. 98-108.

⁶⁰ Pottery lots STAD: 39, 43, 47.

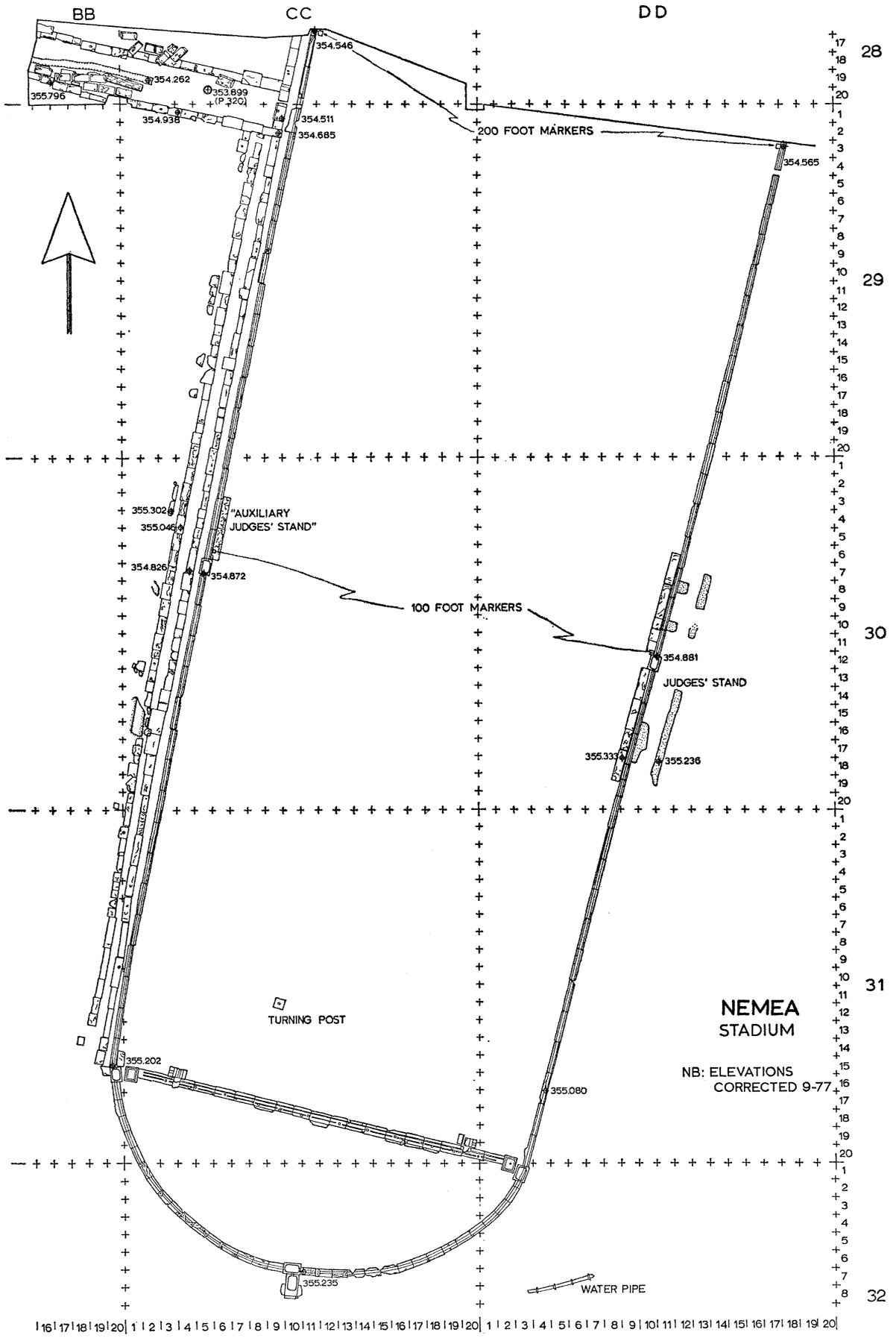


FIG. 7. Southern third of Stadium.

Once again, this closing fill contained many earlier artifacts such as a terracotta figurine (TC 72, Pl. 29: a) and yet another lead tablet inscribed with a personal name: [KA] ΛΛΙΣΤΡΑΤΟΣ (IL 170, Pl. 29: b).

The removal of the closing fill along the west side of the track revealed that the double row of re-used blocks which made up a sidewalk and a proedria continues to the north with a third row of blocks (i. e. a second row of seats) preserved in some places (cf. Fig. 7). It also became clear that the lower area between the sidewalk and the water channel had the function of a storm drain to carry off rain water.

The water channel, consisting of blocks averaging 0.30×1.77 m., also continues in a good state of preservation along the west side of the track. At a distance 28.30 m. north of the starting line a settling basin was found in the line of the water channel. Measuring about 0.60×0.89 m., the basin has a heavy layer of hydraulic cement preserved in the lower part of its interior. At the northeast corner of this basin are two large limestone blocks set alongside the east face of the water channel (Pl. 29: c). These blocks average 0.47×1.78 m. in size and have a maximum preserved height above the track floor of 0.31 m. Although the east faces of these blocks preserve traces of a stucco covering, the upper surfaces are badly worn. Nonetheless, the upper surface of the southern block near its south end preserves the remains of a 0.28 m. square cutting with an average depth of 0.065 m. The center of this cutting is 29.63 m. distant from the first groove of the starting line and thus is a good candidate for having held the marker for the first 100 feet of the track just as is the case with a cutting in the similar blocks found directly across the track in 1976. It has been suggested that those blocks along the east side of the track served as the foundations for a judges' stand. It is unclear whether that suggestion is to be regarded as confirmed or denied by the two blocks newly discovered along the west side. Are the latter to be considered as an auxiliary judges' stand? Evidence which has some bearing on this question was found in the center of the track where an area of red earth resembling decomposed mud brick was uncovered. This red earth is embedded in the gray-green clay floor of the track and is, as discovered, level with the floor surface although it may originally have extended to a greater height than the surrounding floor. The red-earth area measures 0.70×8.20 m. and is parallel with the sides of the track, essentially in the center of the track, and opposite the judges' stand on the east side of the track. This should be considered as the sub-structure for some construction relevant to the functioning of one or more events in the Nemean Games. Although the precise nature of that function is not immediately apparent, the position of the red earth does lend weight to the identification of both sets of blocks on the opposite sides of the track as having to do with judging activities.

In 1976 it was suggested that the length of the foot used in the Nemea stadium was $0.296 +$ m. Additional confirmation for that foot length has already been presented in the form of the cutting in the blocks of the "auxiliary judges' stand". Further north along the west side of the track more evidence was discovered

in the form of a pillar 0.28 m. square and preserved to a height of 0.50 m. above the race track floor (Pl. 30: a). The top surface of this pillar has a depression measuring about $0.04 \times 0.04 \times 0.04$ m., and the pillar is clearly a mate for the one discovered along the east side of the track in 1976. The distance from the center of the cutting in the "auxiliary stand" to the center of the cutting in the newly discovered pillar is 29.67 m. This pillar is, then, the 200 foot marker along the west side of the race track, and the Nemean stadium foot of $0.296 +$ m. can be regarded as established.

At a point some 53.40 m. north of the starting line, the sidewalk and the proedria along the west side of the track are interrupted by a constructed passageway going off to the west perpendicular to the line of the track (Pl. 30: a). Although limitations of time halted excavation in this passageway at a distance of some fifteen meters west of the water channel of the track, it is quite clear that this will have been a vaulted entrance into the stadium which will have ultimately connected the stadium with the sanctuary. The entranceway is 2.08 m. wide and is provided, where preserved at its eastern mouth, with flat, sloping, coping blocks which will have originally followed the slope of the seating area back sufficiently far to the west for the height to allow the beginning of the vault. Although the eastern mouth of the entranceway is clear, many fallen blocks litter the way further to the west (Pl. 30: a). These include voussoir blocks, but it is not clear at present whether their place of discovery marks the original beginning of the vault. The eastern mouth of the entranceway is provided with a threshold which continues the line of the sidewalk from the south. The western sides of the water channel blocks opposite this threshold have been cut down for the receipt of slabs (one of which, although broken off along the west, is still *in situ*, Fig. 7, Pl. 30: a) which will have provided for a small bridge over the storm drain.

The floor of the entranceway was found littered with dozens of fragments of one or more bronze statues. These include a large fragment from the side of a hip of a life-sized nude (male?) statue (BR 417, Pl. 30: b), two small fragments of hair (BR 474, 477), two eyelashes with flanges for the eyeball (BR 475, 483),⁶¹ and a substantial fragment of a wrist or ankle (BR 467). Although the original positions of the statue or statues to which these fragments once belonged is not known, their location at the time of discovery calls to mind the Zanes at the entrance to the stadium at Olympia.

Embedded in the floor of the entranceway, 4.00 m. west of the threshold, and 1.35 m. north of the south wall, was a large amphora (Pl. 31: a). When this amphora had been removed and restored (P 320, P.H. 0.66 m., Pl. 31: b), it became evident that the neck and handles had been cut off deliberately and that "windows" had been cut into opposite sides of the amphora at slightly different levels. In association with this amphora, although no longer *in situ*, were discovered several rectilinear

⁶¹ Compare those eyelashes found on Samothrace, J. R. McCredie, "Samothrace: Preliminary Report on the Campaigns of 1965-1967," *Hesperia* 37, 1968, pl. 72: a.

terracotta water channels (TC 81, 82, 83; L. 0.63 m., Pl. 31: c). The amphora was therefore re-used as a settling basin, and elevations in the floor of the entranceway as well as the difference in heights of the "windows" in the sides of the amphora show that the direction of water flow was from west to east. This explains the rough cutting through the threshold block at the mouth of the entranceway as allowing the water to flow into the storm drain alongside the sidewalk (cf. Pl. 30: a). This does not, however, explain an analogous rough cutting through the water channel itself. The date of this activity appears to be in the first half of the 2nd century after Christ.⁶² Since the Nemean Games had been firmly established at Argos long before that time, this activity is perhaps to be associated with an apparently short-lived winter revival of the Games at Nemea by Hadrian.⁶³

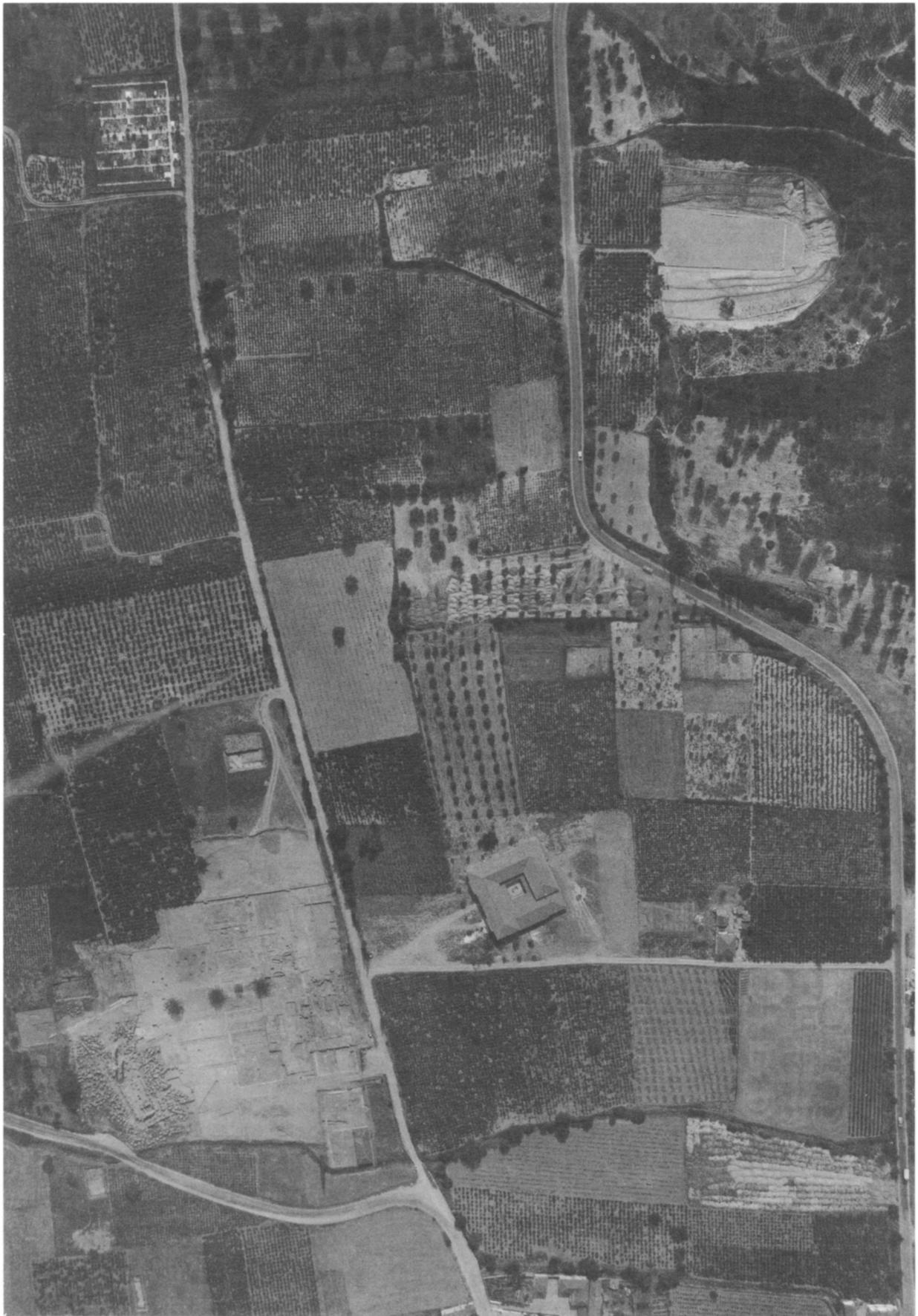
No evidence was uncovered in 1977 to help establish more securely the date for the stadium construction as a whole, but an examination of the relationship of the sidewalk blocks and the southern wall of the entranceway (cf. Pl. 30: a) makes it clear that both were constructed at the same time. Fragments of two skyphoi were also found in a context which may be the foundation trench for the sidewalls of the entranceway, although the nature of the excavation prevented establishing their context definitively. Both of these skyphoi (P 315, 316, Pl. 31: d) belong in the second half of the 4th century B.C., and the later of the two (P 315) would date the entranceway, and thus the sidewalk, and thus perhaps the whole of the stadium to the last quarter of the 4th century B.C.

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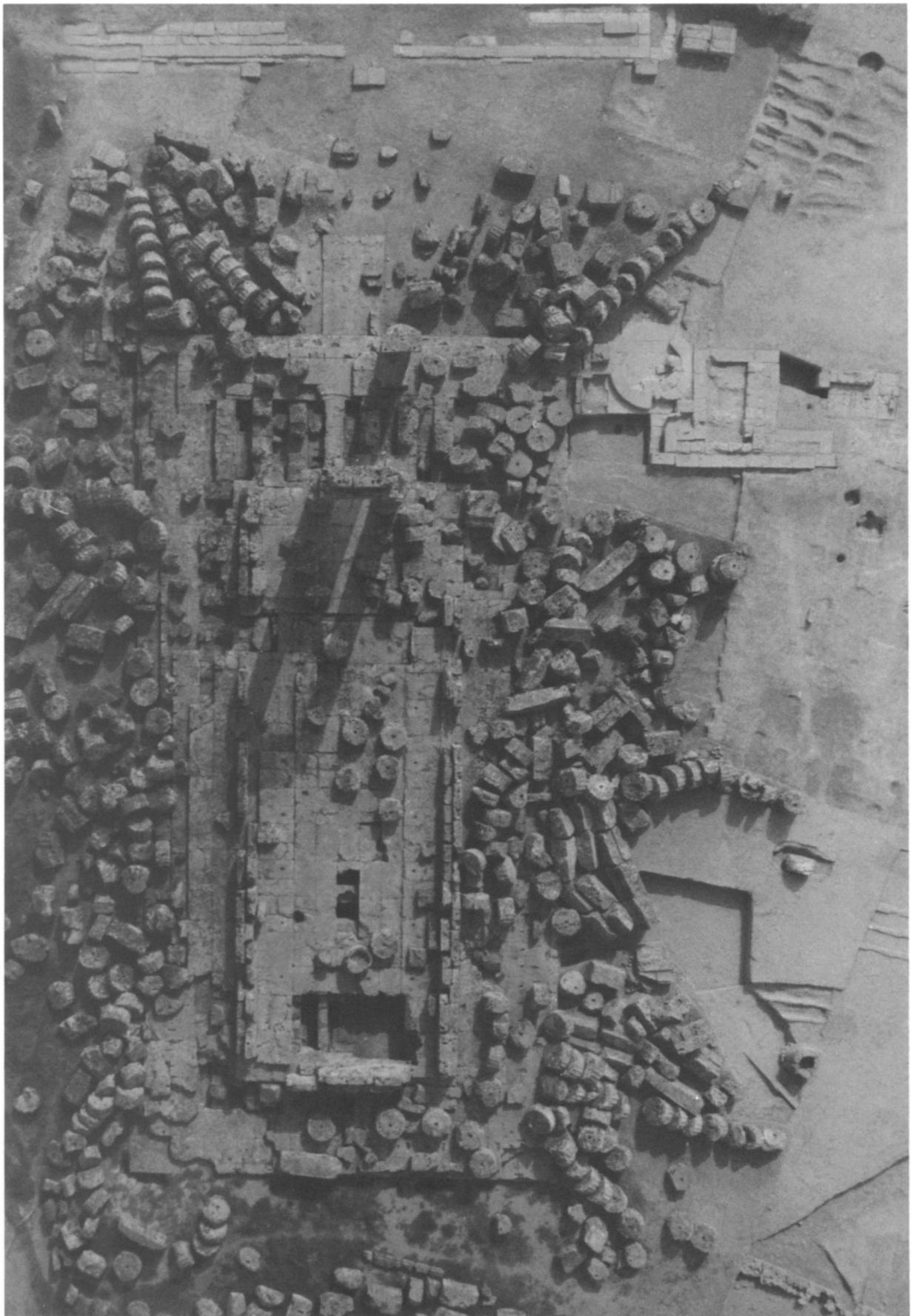
⁶² Pottery lot STAD: 55.

⁶³ Pausanias, II.15.3 and VI.16.4.



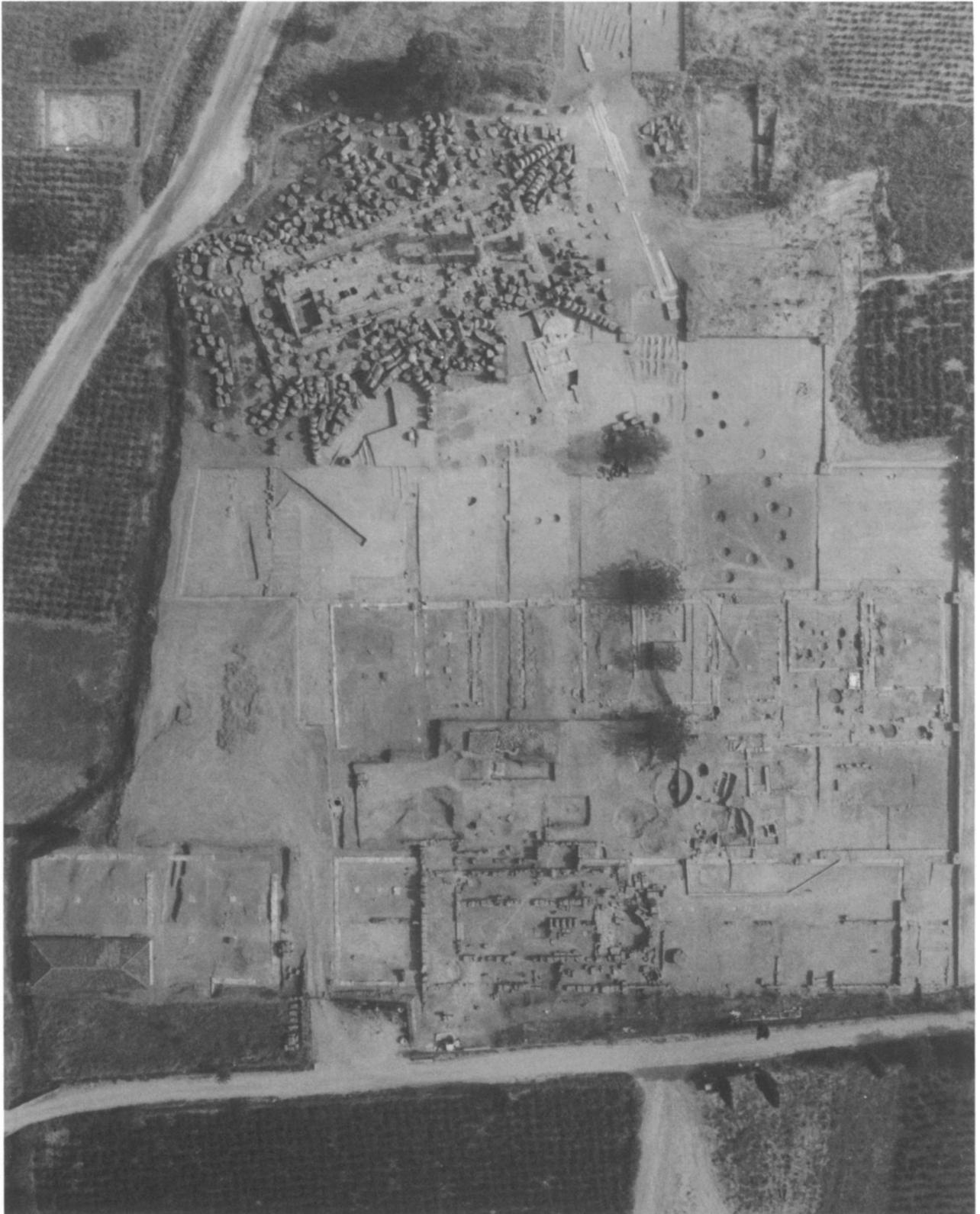
Aerial view of Sanctuary and Stadium

STEPHEN G. MILLER: EXCAVATIONS AT NEMEA, 1977



Aerial view of the Temple of Zeus

STEPHEN G. MILLER: EXCAVATIONS AT NEMEA, 1977



Aerial view of the south side on the Sanctuary of Zeus

STEPHEN G. MILLER: EXCAVATIONS AT NEMEA, 1977

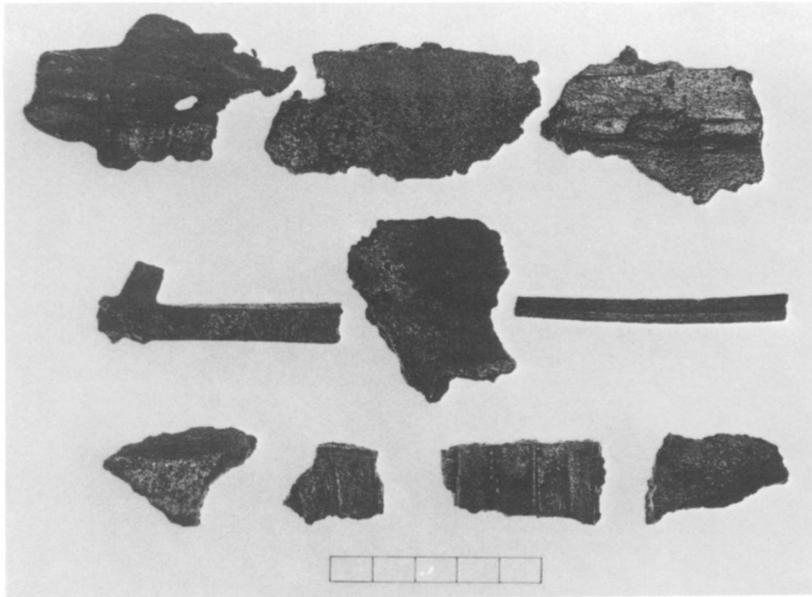
PLATE 12



a. I 32



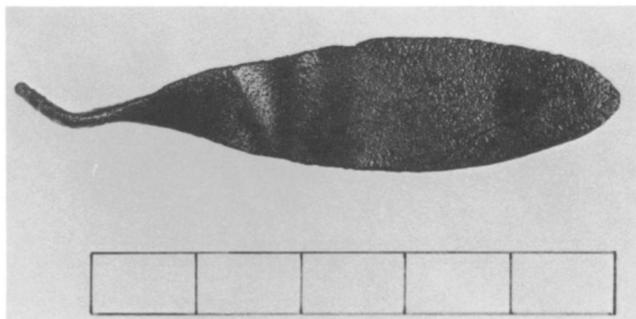
b. I 36 I 42 I 40
I 43



c. BR 235 BR 246 BR 275
BR 249 BR 250 BR 244
BR 229 BR 245 BR 225 BR 234



d. TC 66



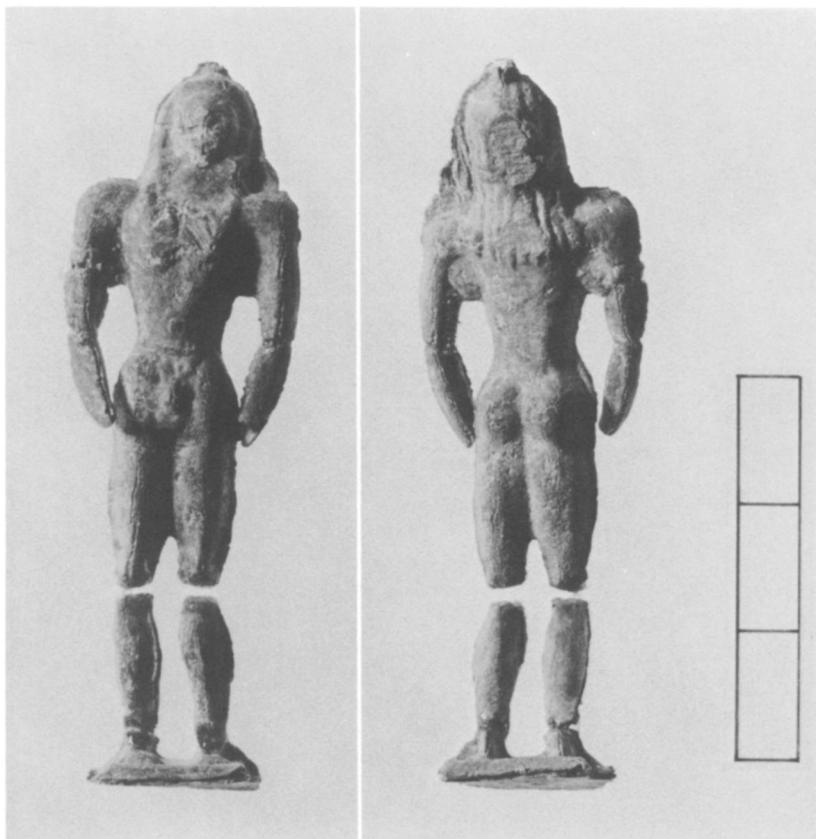
e. BR 383



a. "Nu Structure" from south



b. Circular Structure and "Nu Structure" from northwest



a. IL 201, front and back



b. TC 69



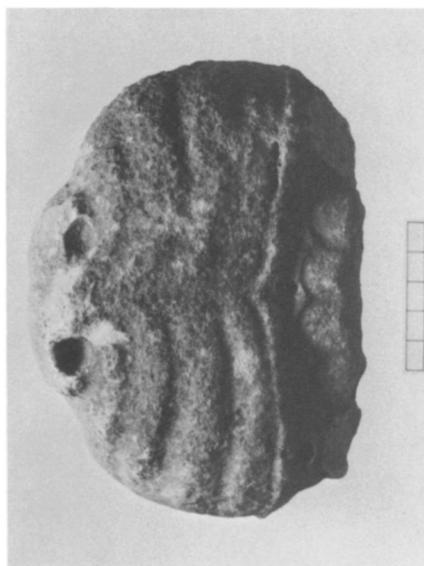
c. P 300 c and a/b



d. Trench in Section K 14,
from south



b. Northern extension of trench in Section K 14, from north



c. A 103



a. C 901 C 902 C 903
C 904 C 905 C 906
(obverses above)



a. Sacred Square from southeast, Oikos 9 in left foreground



b. C 782 C 800 C 820 C 821
C 843 C 878 C 925
C 952 C 928 C 927 C 926



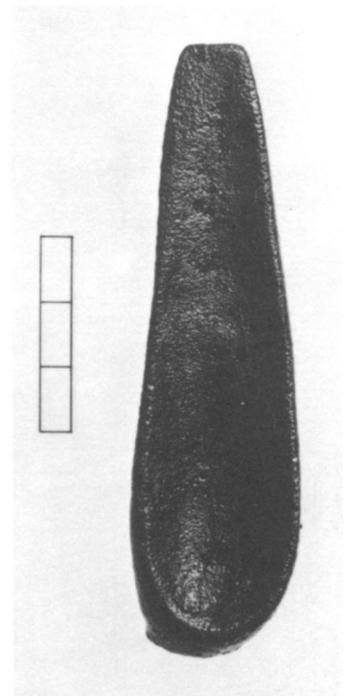
c. Same, reverses



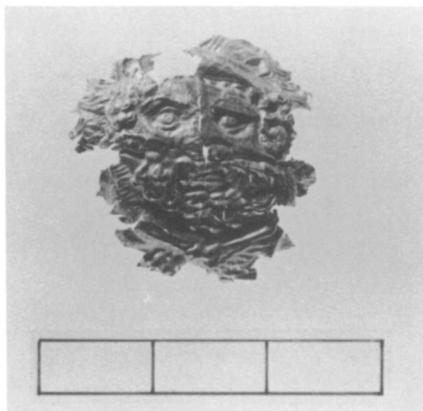
b. TC 73



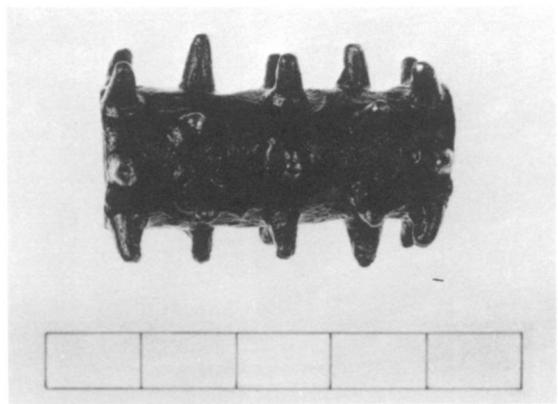
a. C 837 C 894
C 907 C 974 C 954
(obverses above)



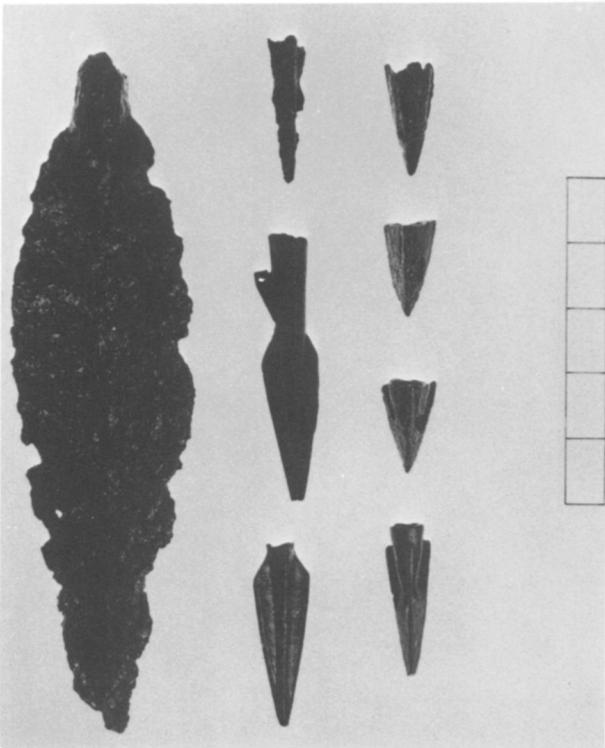
c. BR 268



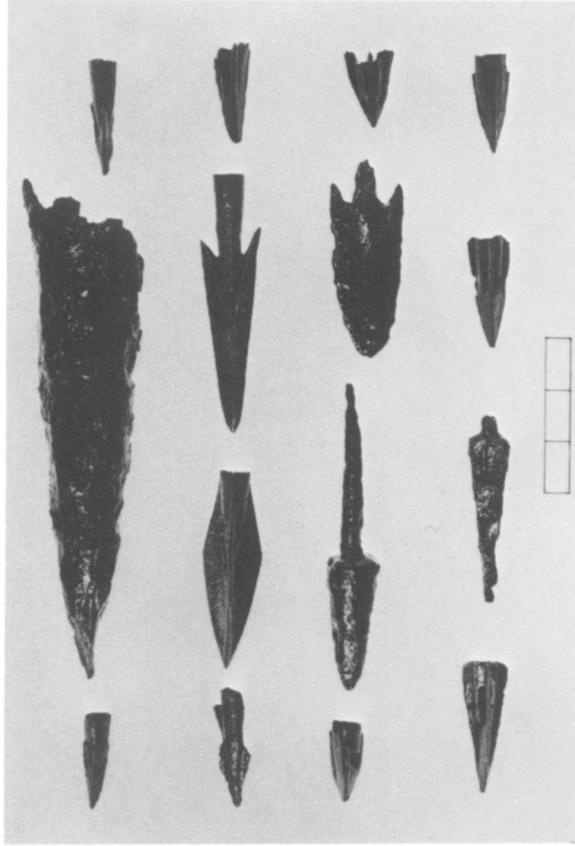
d. GJ 26



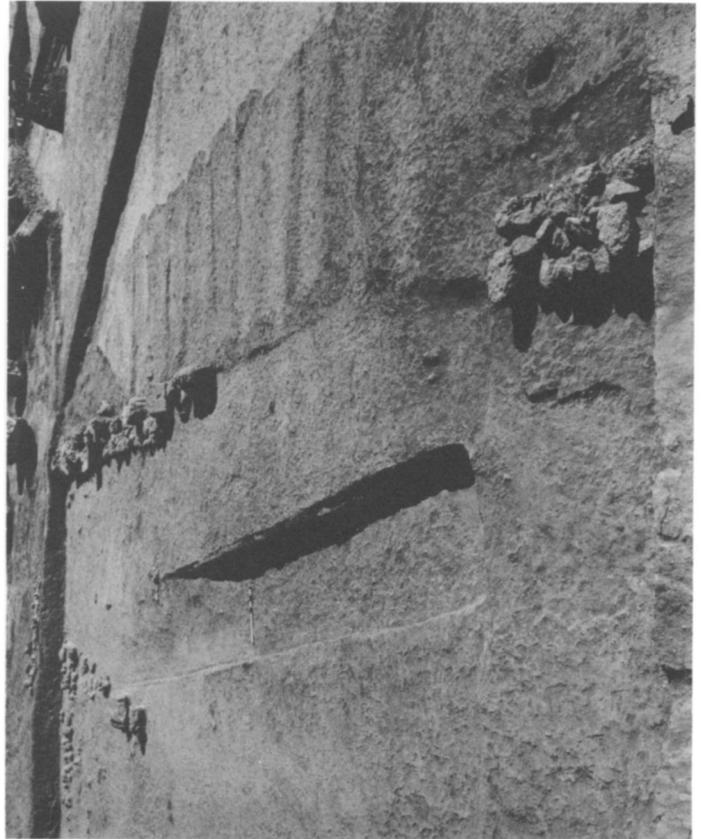
e. BR 357



a. IL 174
BR 301-BR 303
BR 304-BR 307



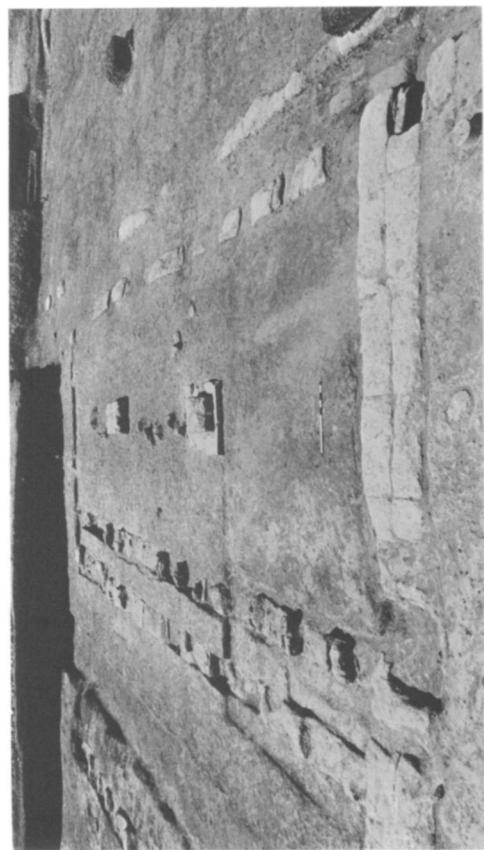
b. BR 393 IL 225 BR 454
BR 392 BR 300 BR 253 BR 410
BR 391 IL 166 IL 211 BR 390
BR 453 IL 232 BR 385 BR 363



c. Section J 15 from south



d. Oikos 1 from north



a. Oikos 2 from north



b. Oikos 3 from north



c. Oikos 4 from north

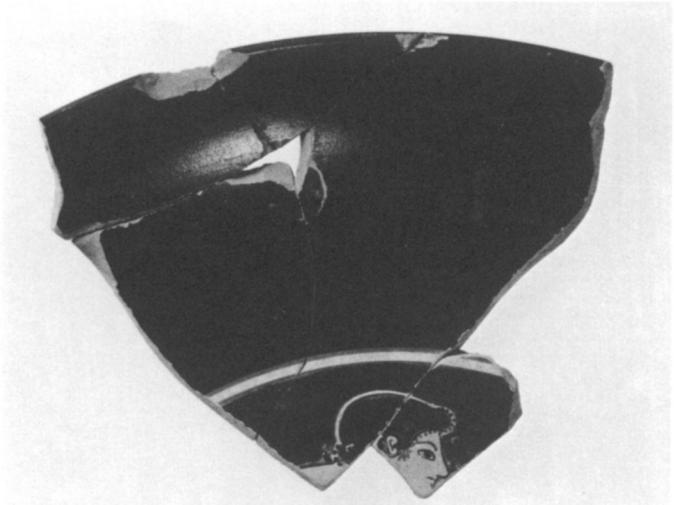


d. A 124

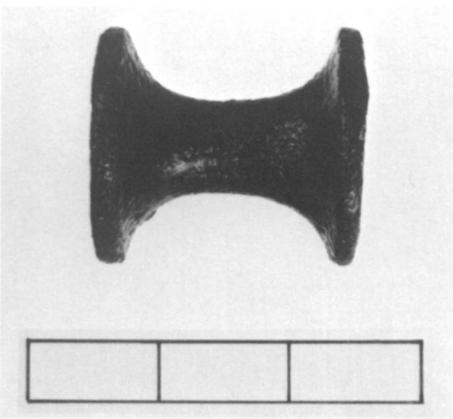
PLATE 20



a. P 264



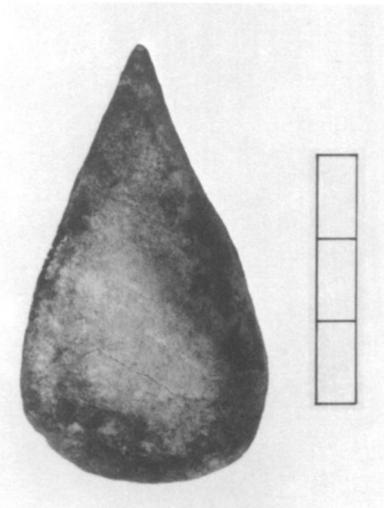
b. P 163



c. BR 256

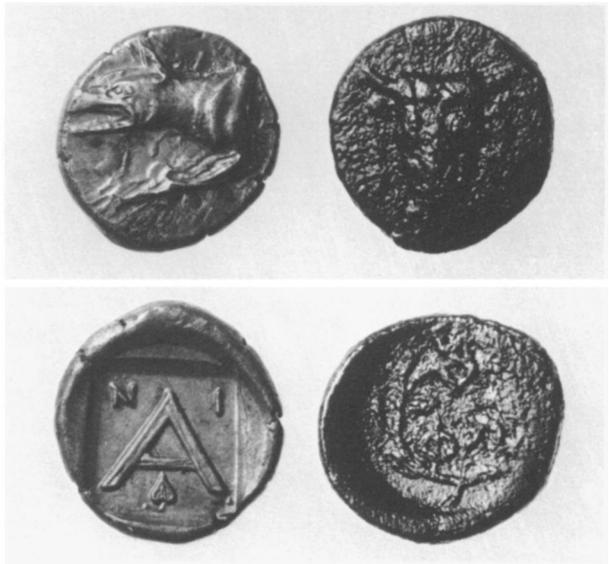


d. ST 362



e. ST 347

(obverses)
f. C 844 C 842
(reverses)

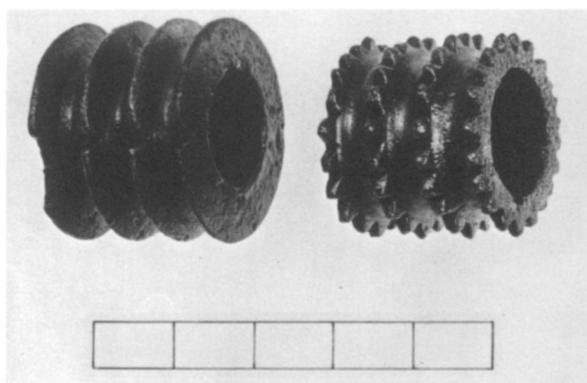




a. A 104



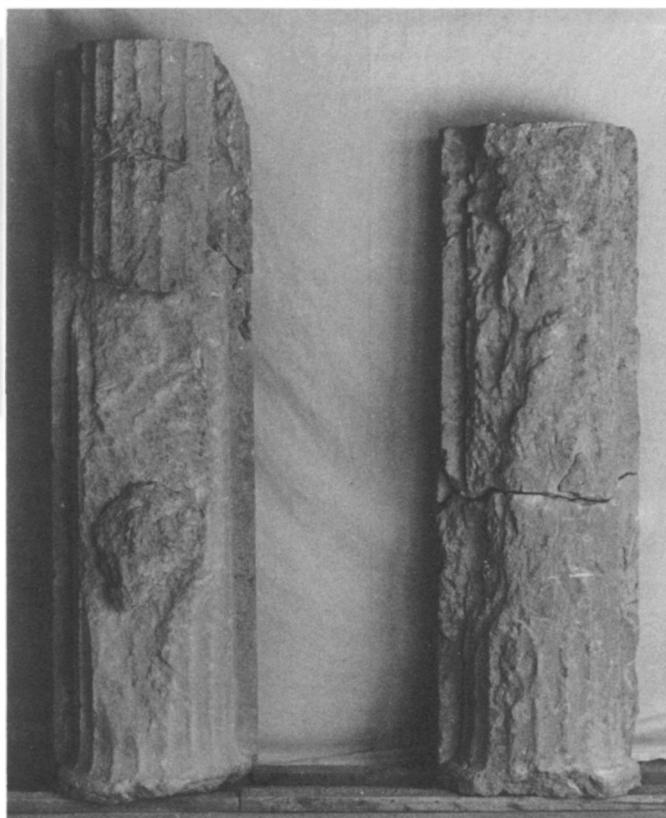
b. Oikos 9 from north



c. BR 456 BR 457

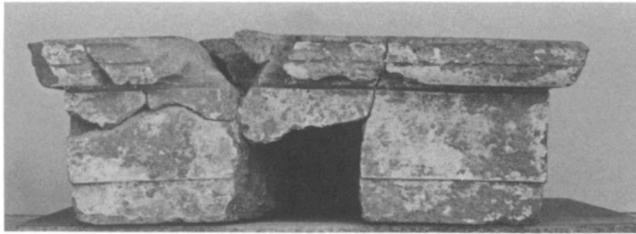


d. A 132

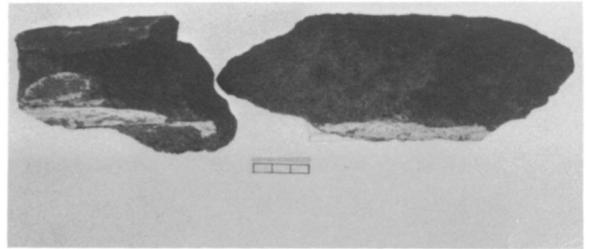


e. A 128 A 129

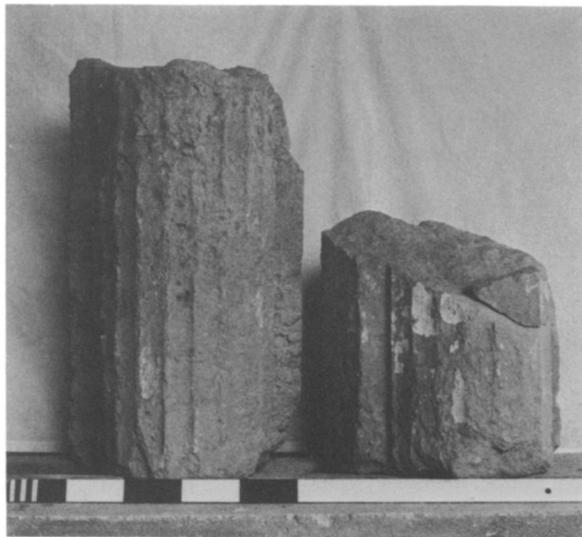
PLATE 22



a. A 133



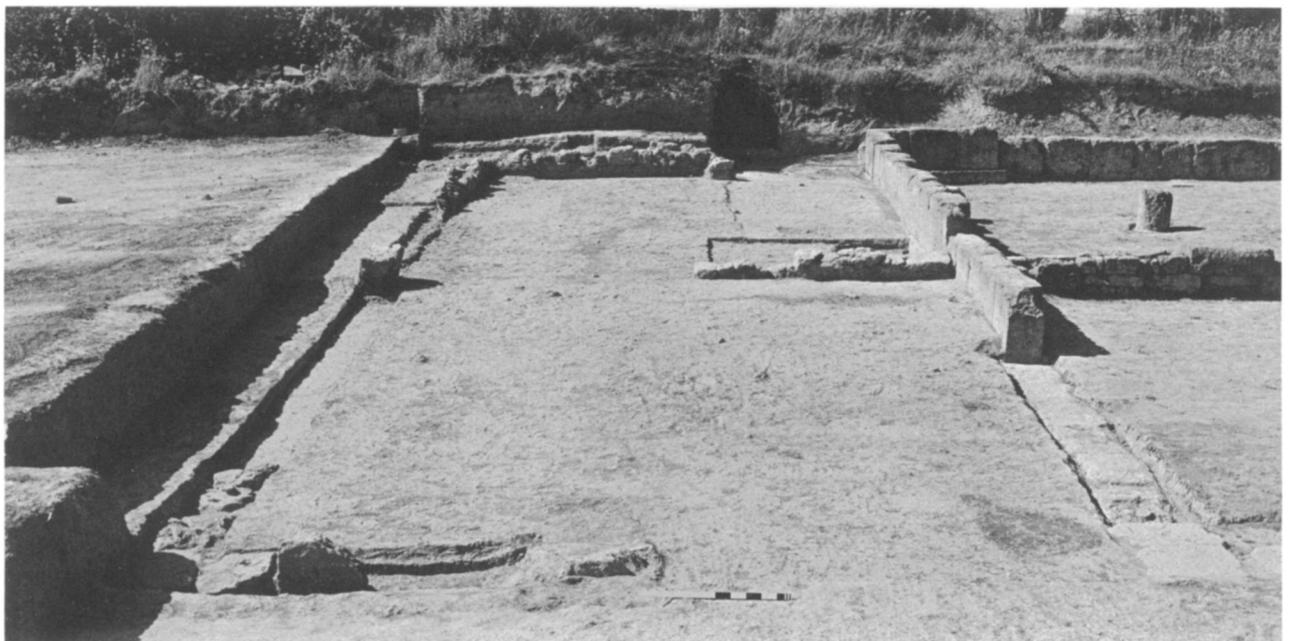
b. A 135 A 136



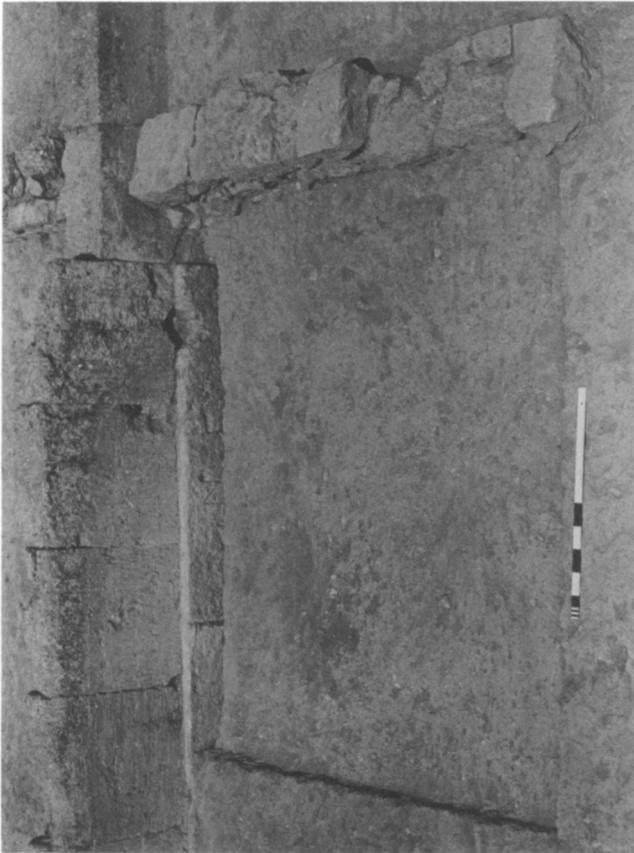
c. A 130 A 131



d. AT 42



e. East end of Xenon (Section 0 18) from north



a. East wall of Xenon from east



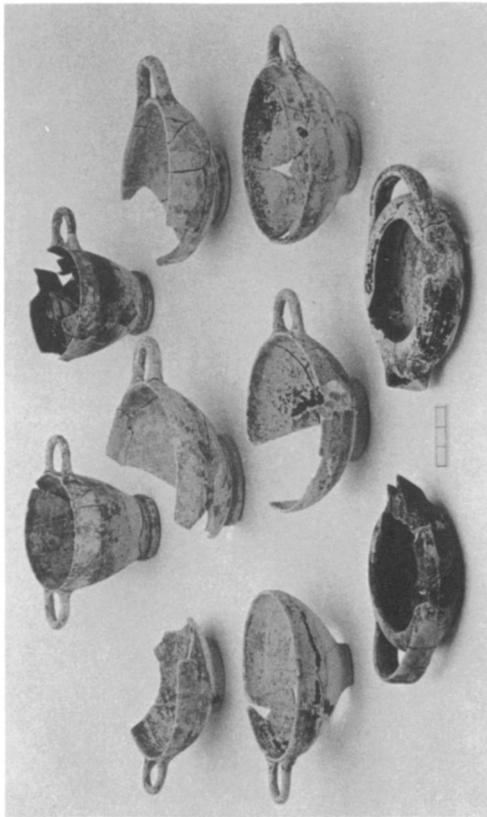
b. Kiln Complex from north



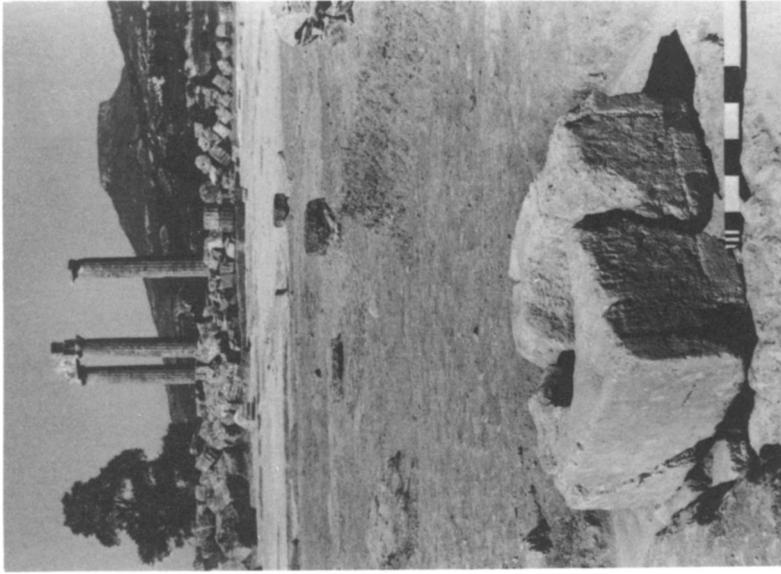
c. Circular kiln in Section M 17, from north



d. Pit in Section N 17 during excavation, from east



a. P 308 P 309
P 305 P 307 P 306
P 304 P 303 P 302
L 26 L 27



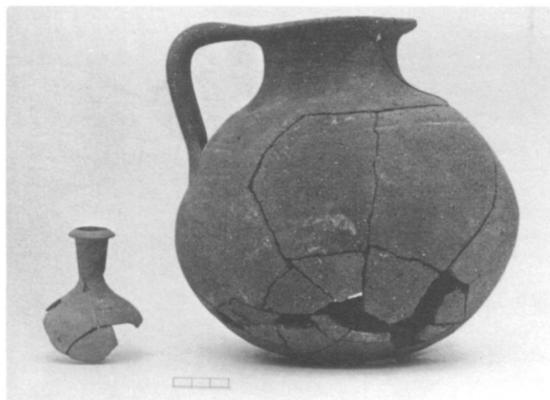
b. A 125 restored
over mouth of
well in Section
K 17, from
southwest



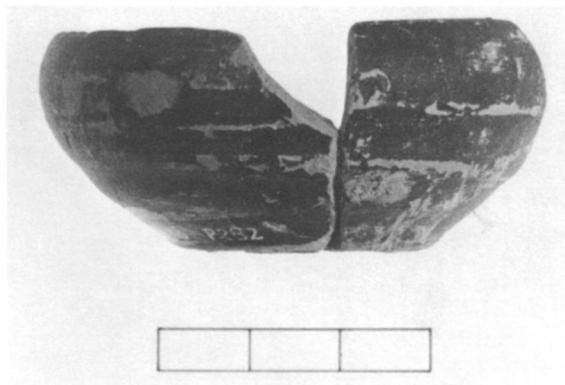
c. P 279 P 289



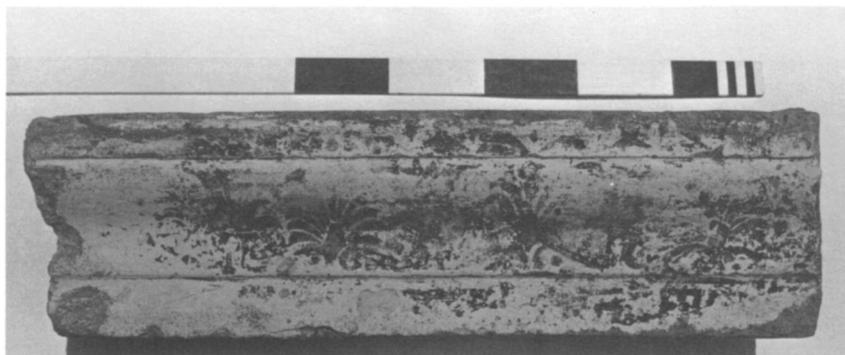
d. A 117



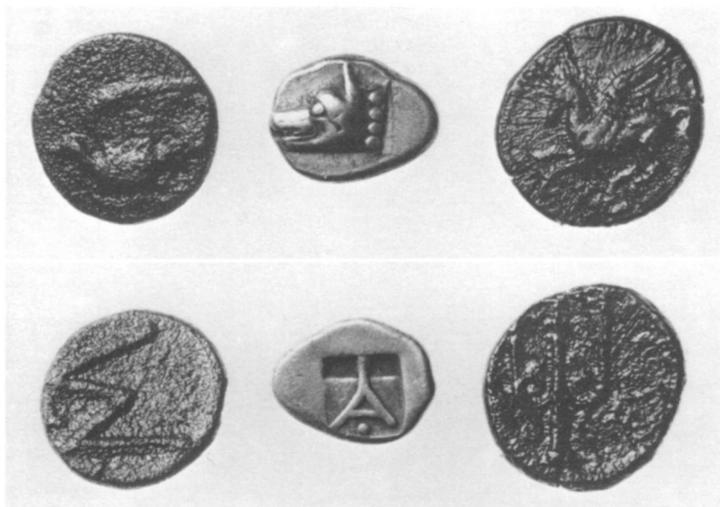
a. P 281 P 293



b. P 282



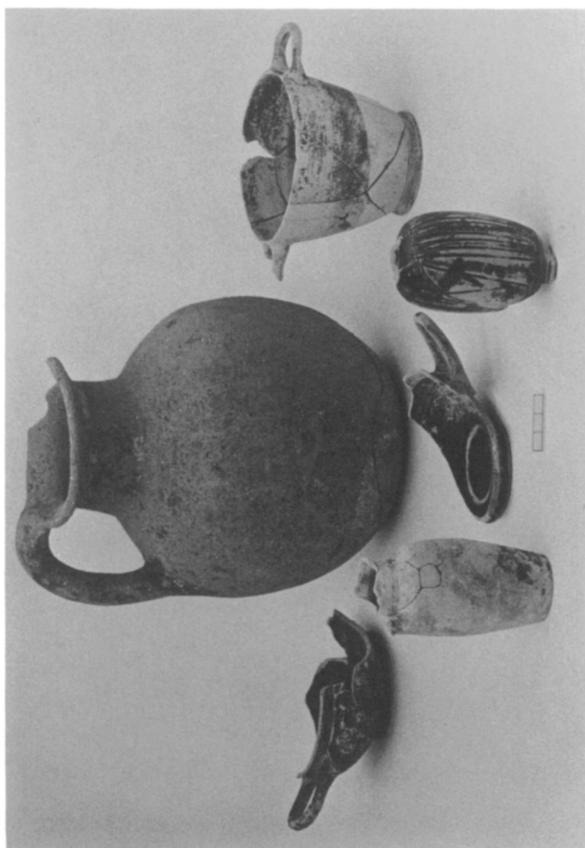
c. AT 54



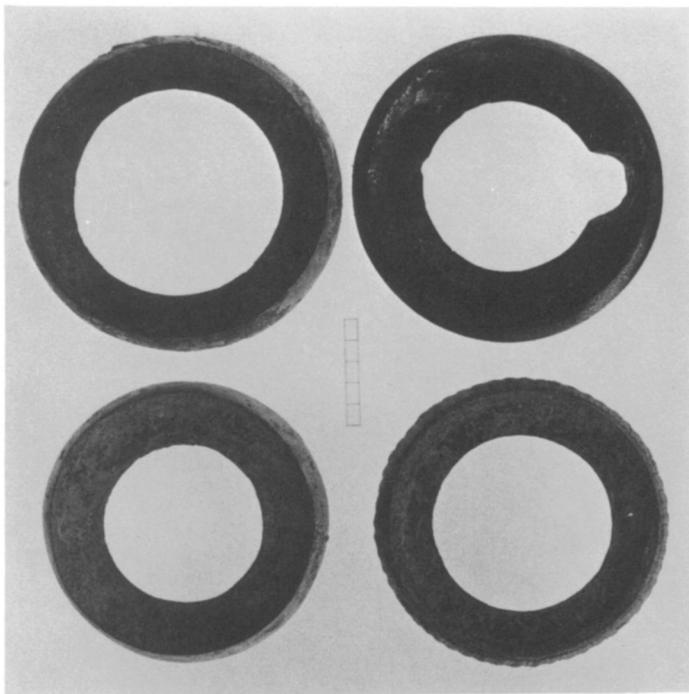
d. C 908 C 1020 C 1097
(obverses above)



e. A 115



a. P 291 P 277 P 278
P 276 P 290 P 292



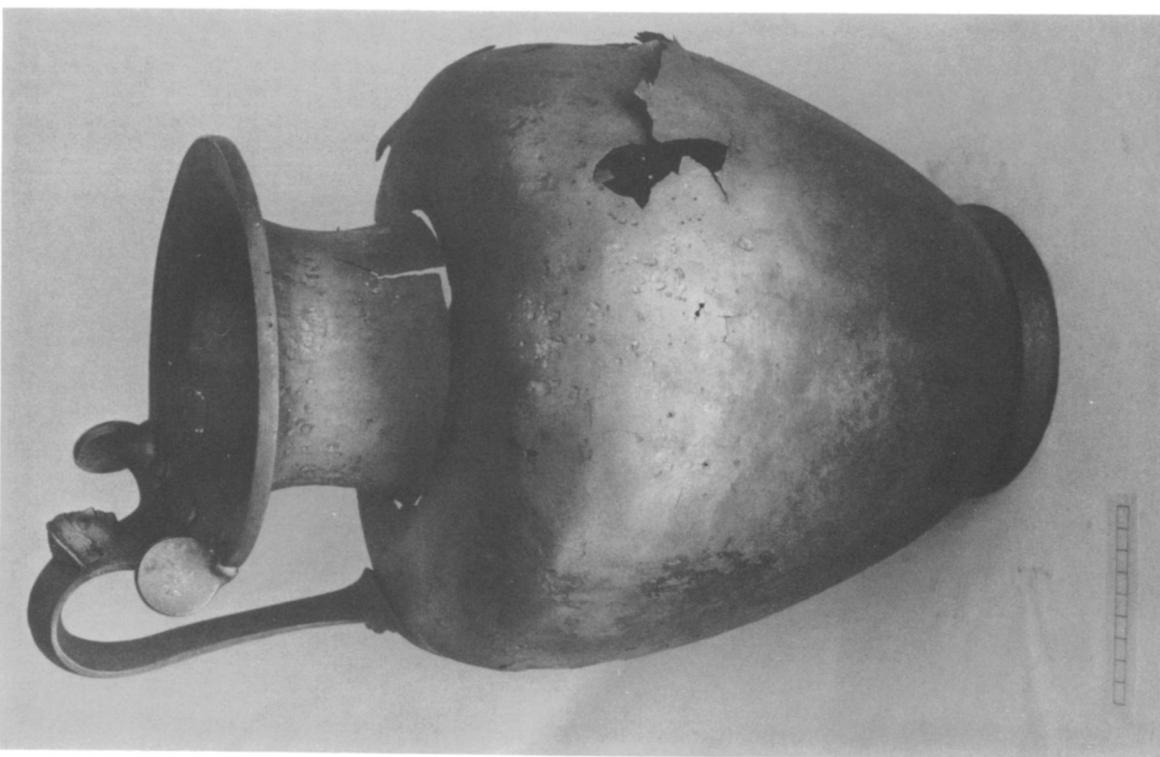
b. BR 378 BR 377
BR 380 BR 381



c. AT 55
(top)



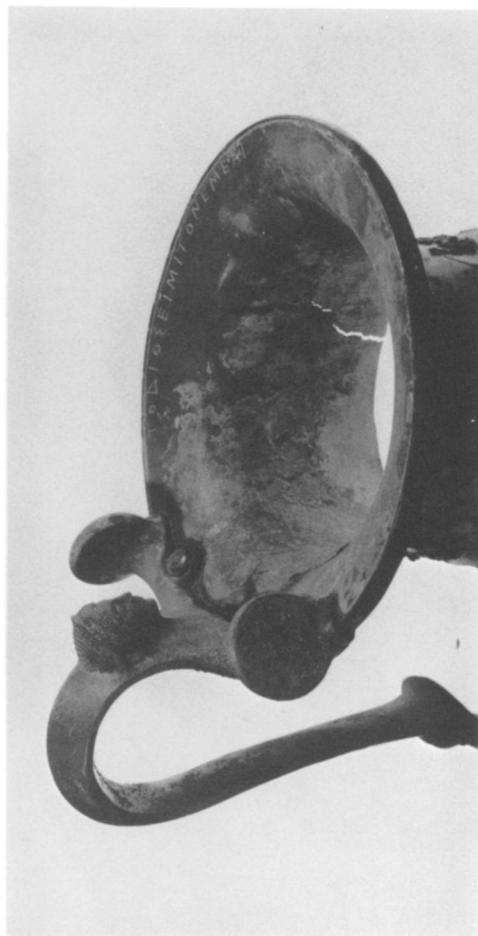
d. AT 55
(bottom)



a. BR 379

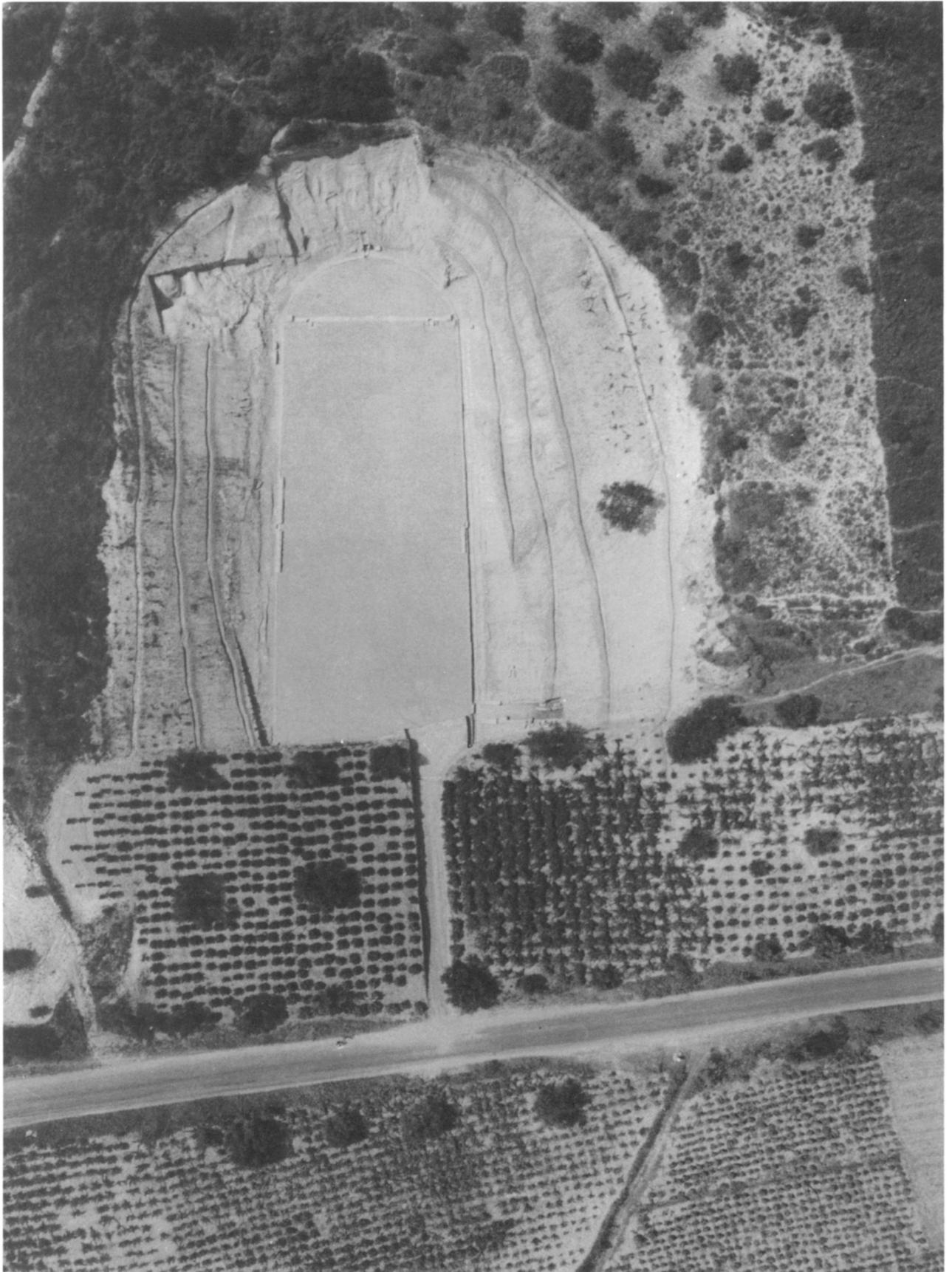


b. BR 379,
detail of
kore's head



c. BR 379, rim with inscription

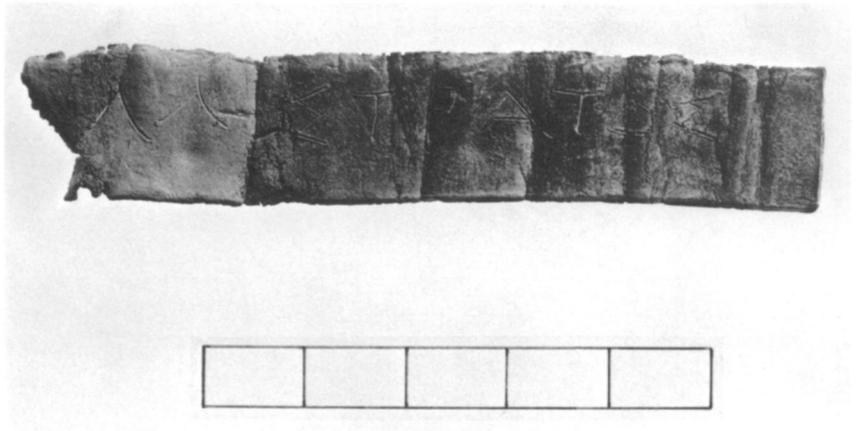
STEPHEN G. MILLER: EXCAVATIONS AT NEMEA, 1977



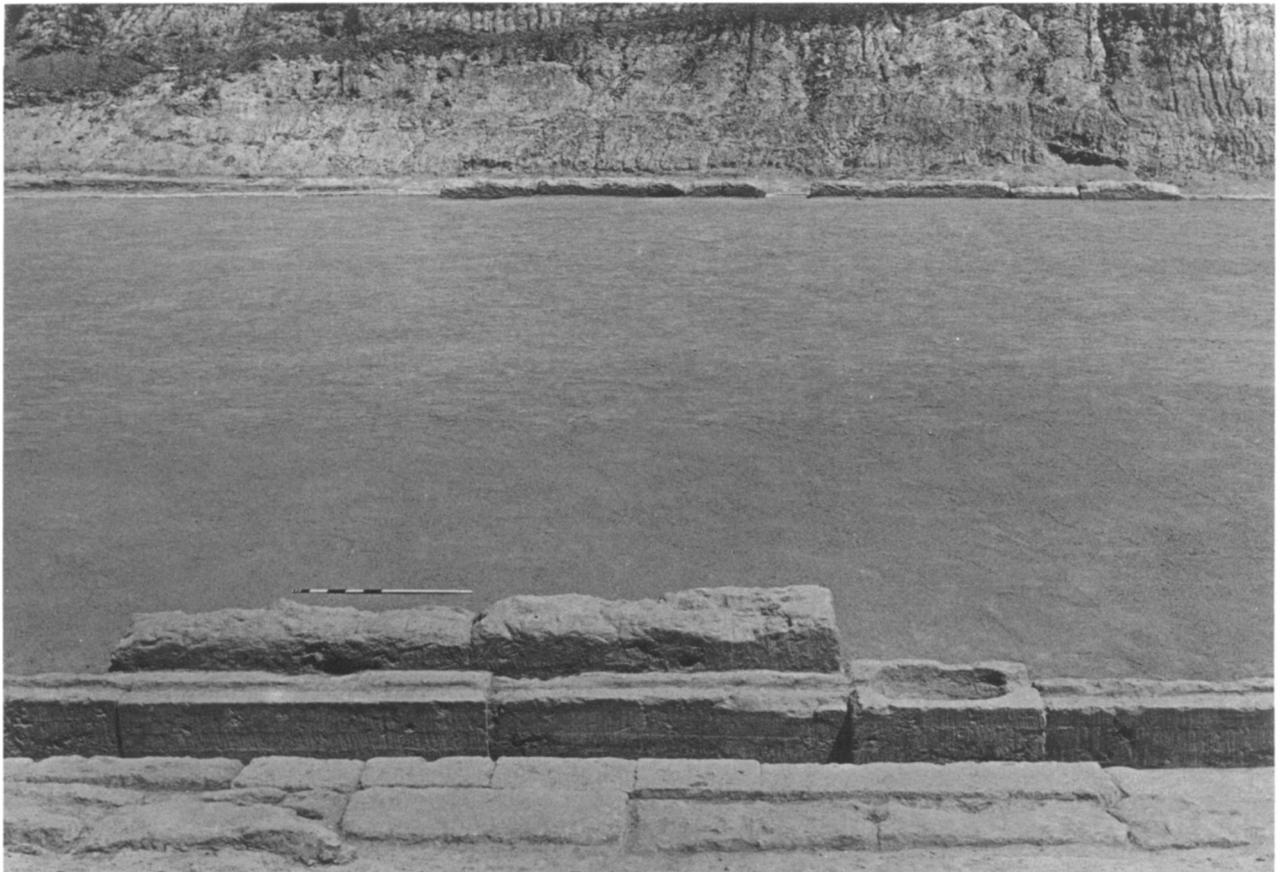
Aerial view of the Stadium



a. TC 72



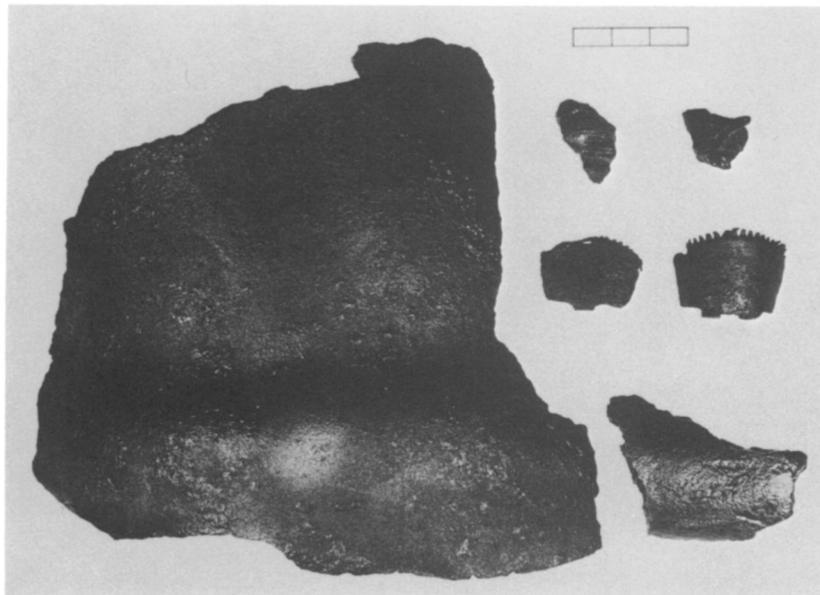
b. IL 170



c. "Auxiliary Judges' Stand" from west

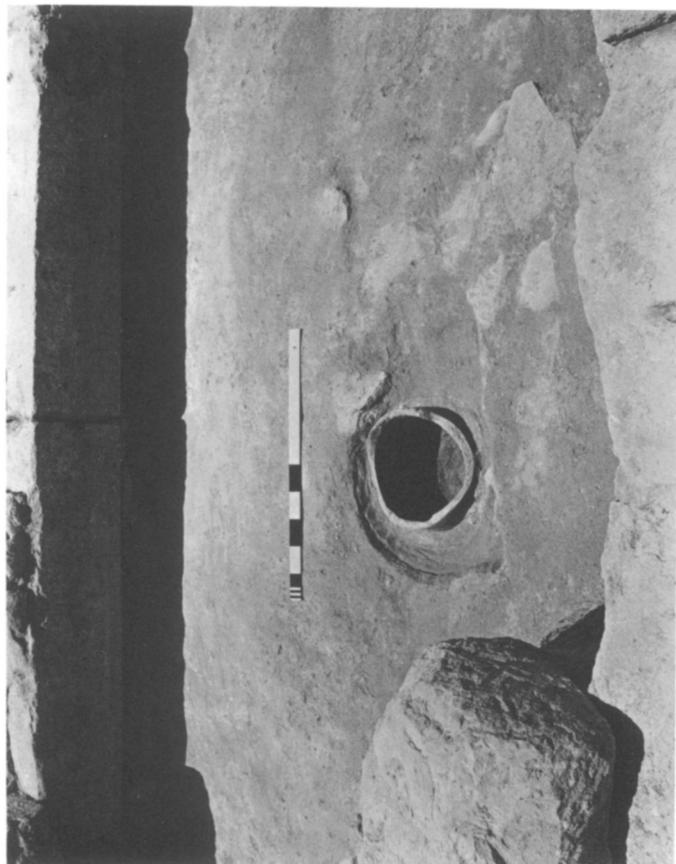


a. Stadium entranceway from east, 200-foot marker at lower right

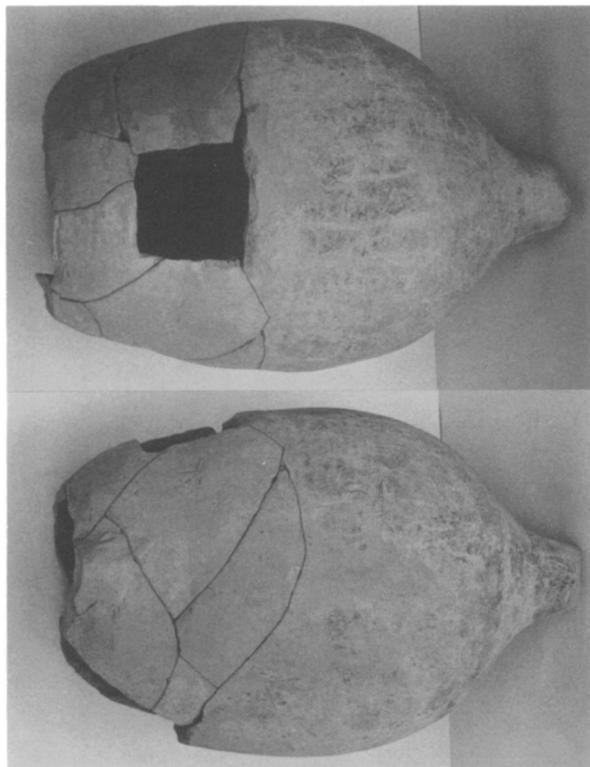


b. BR 417

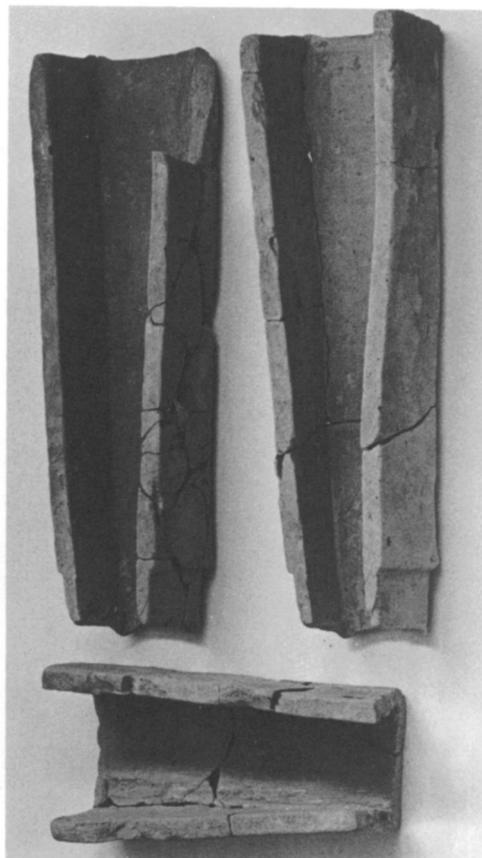
BR 474 BR 477
BR 483 BR 475
BR 467



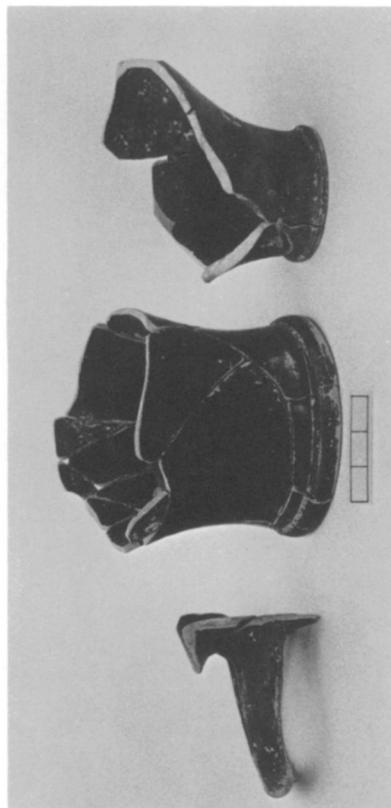
a. P 320 *in situ*, from north



b. P 320, two views



c. TC81 TC82
TC83



d. P 316 b P 316 a P 315