

THE ARCHAIC TEMPLE OF APOLLO AT BASSAI

CORRESPONDENCES TO THE CLASSICAL TEMPLE

(PLATES 45–52)

THE ANOMALIES of the design of the Classical temple of Apollo at Bassai are well known and have been the subject of considerable discussion.¹ Many theories have been advanced to explain peculiarities of the temple such as the north–south axis, the doorway on the east flank, the adyton, the engaged interior colonnade, and the elongated plan (6 × 15 columns). There are a remarkable number of similarities between the plan of the Archaic temple and that of the Classical temple (Fig. 1).² The so-called “anomalies” incorporated into the Classical temple preserved the conventions of the Archaic temple and deliberately maintained the architectural traditions of the sanctuary.

Excavation at the site was first undertaken in 1812, when Charles Cockerell and Karl Haller cleared the ruins of the Classical temple. They did not recognize the remains of the earlier structure.³ The first evidence of a temple that predated the Classical period at Bassai came during the 1902 excavations, when a Greek team, led by Konstantinos Kourouniotis and Panagiotis Kavvadias, excavating trenches around the Classical temple,

¹ See F. Cooper 1968, p. 105, for a review of previous discussion.

This study began in 1970 when, as a trench master for Professor Yalouris’ excavations at Bassai, I excavated a location which proved to be the center of the Early Archaic Temple. Further research produced a paper (N. Cooper 1979), a chapter of my dissertation, “Laconian Tiles from Bassai” (N. Cooper 1983), and an article (N. Cooper 1990), all published under the name Nancy K. Cooper. The present work expands my earlier publications on the roof and studies the publications of the Greek excavators for information about the Archaic temple.

I would like to thank the Townsend Fund of the Cornell University Classics Department and the Packard Humanities Institute for funding for my study. I would like to thank Professor Yalouris for giving me permission to work at Bassai and to see roof tiles from earlier excavations. I am indebted to Ms. Hatzi at the Olympia Museum and Ms. Tzachou-Alexandri at the National Museum at Athens for their kind assistance. Frederick A. Cooper and Lyon Kranak read early versions of this paper; I appreciate their many helpful suggestions. Frederick P. Hemans and Rhys F. Townsend read later versions; I especially thank them for their generous help. I would like to thank the German Archaeological Institute in Athens for supplying the photographs a and c on Plate 52 and W. W. and E. E. Myers for the aerial photographs, Plates 45 and 46.

² Some recent works which have included information on the Archaic temple: Yalouris 1960; Yalouris 1973; Yalouris 1979; Parlama 1974; *PECS*, pp. 145–146, *s.v.* Bassai (F. Cooper); Kalpaxis 1976, p. 62; Voyatzis 1990, pp. 37–43. Bergquist (1990, p. 27, note 15) calls the foundations under discussion here “a most unlikely candidate for an Early Archaic Temple.” Unfortunately, they all include some errors in their descriptions of the temple.

³ Roux (1976) published one of Haller’s copies of his original notebook and fourteen other drawings. On his plate 1, a site map, the outline of the Archaic foundations is barely visible, drawn as are the other features of the bedrock. Haller’s original notebook, *Der Tempel von Phigalia*, Tagebuch (Bibliothèque National Strassbourg, MSS. no. 2723/11), and another copy, sent to Cockerell, *Barron Haller’s own sketches of the fragments of Temple of Bassae at Phigaleia* (NB Library Book 65c, Department of Greek and Roman Antiquities, British Museum, London), do not have the drawing of the foundations. Cockerell (1860) and Otto von Stackelberg (1826) do not mention an earlier structure.

Hesperia 64.2, 1995

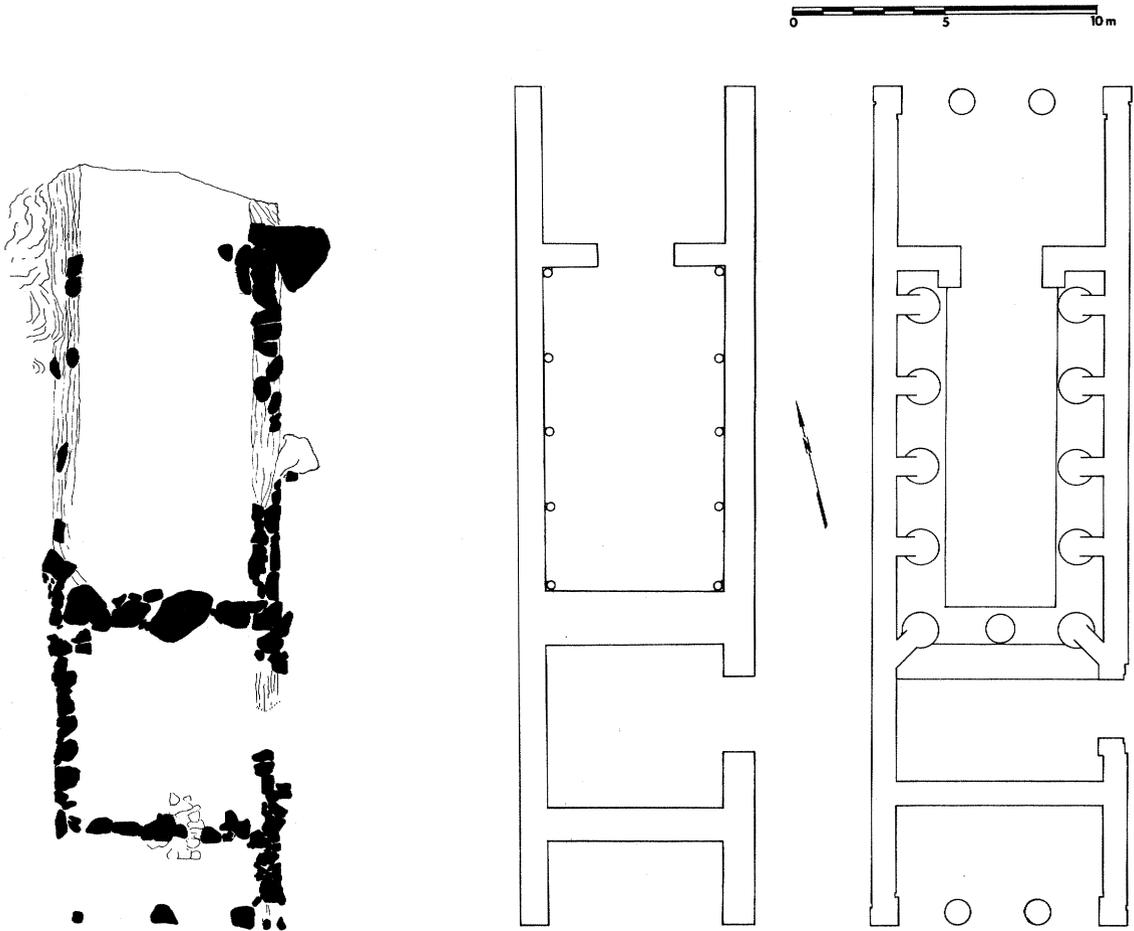


FIG. 1. Left: Actual stones of the Archaic temple of Apollo at Bassai. Center: Reconstruction of the Archaic temple. Right: Interior of the Classical temple, after F. Cooper 1968, p. 104, ill. 1

found architectural terracottas belonging to an Archaic temple, which they dated to *ca.* 625–600 B.C.⁴ These terracottas consisted of fragments of two sets of Laconian tiles, disk akroteria, and antefixes decorated with sphinxes. More terracotta fragments of the Archaic roof were found by Yalouris in his excavations in the 1950's and the 1970's.⁵

The area south of the Classical temple was partially excavated both by Kourouniotis and Yalouris (Fig. 2, Pls. 45–47:a). Neither recognized the importance of the foundations, each one selecting a different site for the location of the Archaic temple. Kourouniotis believed that the Archaic temple lay to the northwest of the Classical temple, where he

⁴ For reports of these excavations, see Kourouniotis 1903 and 1910; Kavvadias 1905; Rhomaios 1933.

⁵ Yalouris 1960, p. 108; Yalouris 1965, p. 157, pl. 134:γ; Yalouris 1973, pp. 52–53, figs. 14–16; Parlama 1974, p. 143, pl. 124; Yalouris 1979, p. 94, pl. 43.

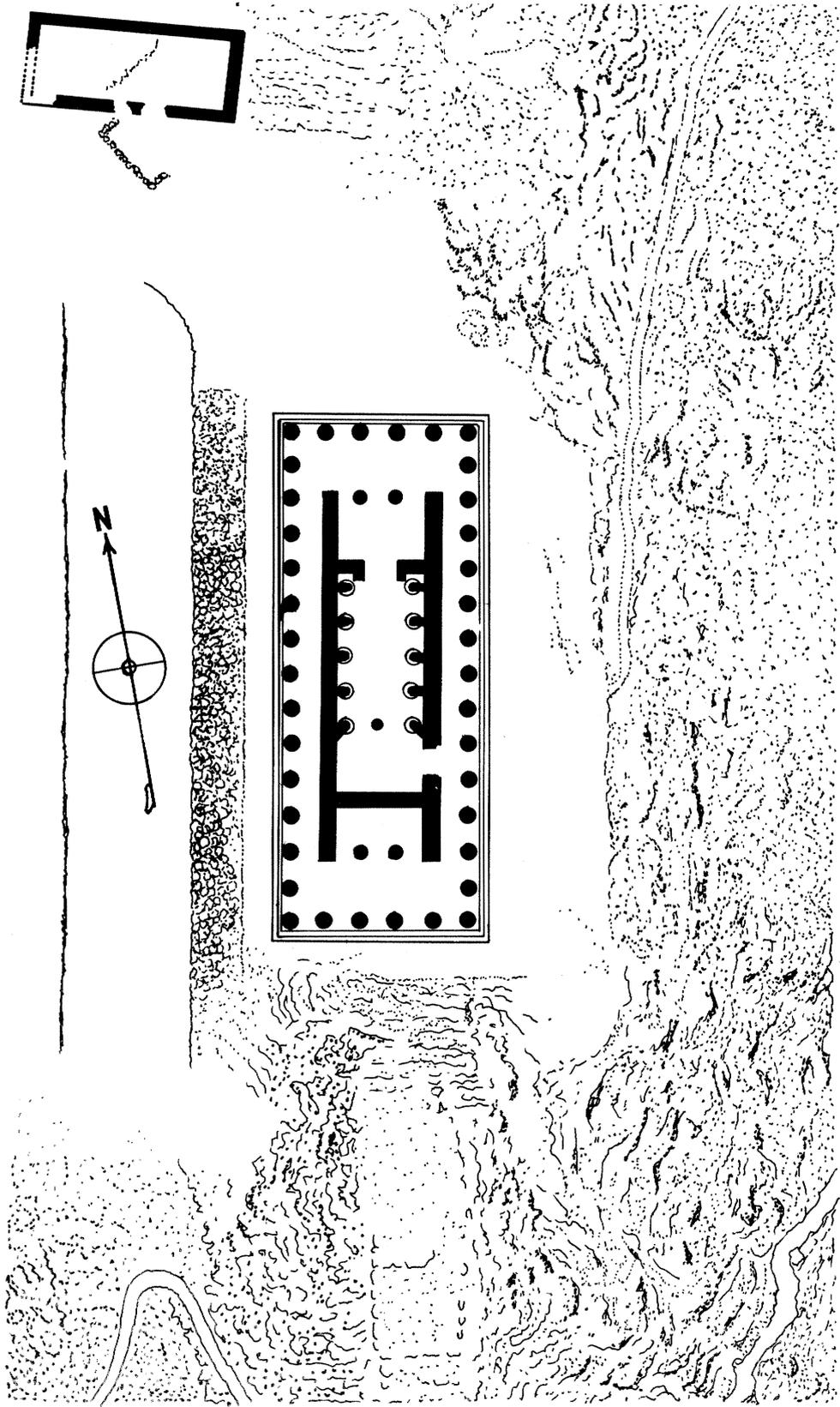


FIG. 2. Plan of the Bassai sanctuary, after Kourouniotes 1910, p. 273, fig. 2

uncovered a foundation with an east–west orientation (Fig. 2, Pl. 45).⁶ Partially standing walls were constructed of roughly shaped, limestone rubble in the dry masonry technique: the foundation, which he dated to the time of the building of the Classical temple,⁷ is drawn in solid black outline on his figure 2 (here Fig. 2). Working chips were found inside and around the foundations, leading him to identify the building as a workshop.⁸ Kourouniotis found traces of an older building under this one with a slightly different orientation, also shown on his plan. He believed that the Archaic temple should have been a small rustic structure nestled into the sheltered curve of the slopes, and so he identified the older building as the Archaic temple. He devotes only a few sentences to it.⁹ The area to the south of the Classical temple was partially excavated also. The topographer included on the plan the foundations under discussion here, but Kourouniotis does not mention them in his text.¹⁰

While Yalouris has published the foundations to the south as an Archaic building, he questioned its relationship to the Classical temple and, following a long tradition of scholarly theory, believes that the Classical adyton sits directly over its Archaic predecessor. He supports his theory with a yellow clay surface under the cella, identified as a floor, and with a wall, built of roughly hewn stones running parallel to and beneath the south end of the west pteron;¹¹ both wall and floor are identified as parts of the Archaic temple.¹²

During his study at the site in the 1970's, Frederick Cooper identified blocks used in the foundations of the Classical building as having come from an earlier structure, but he did not believe that they belonged to the foundations under discussion here and so postulated a building intermediate to the Archaic and Classical buildings, naming four successive building phases at the site Apollo I, II, III, and IV.¹³ The evidence for Apollo I and II consists of the two sets of Archaic Laconian tiles (these are the two phases under discussion here). His

⁶ Kourouniotis 1910, p. 278 and fig. 2, p. 273. See Yalouris 1979, p. 92, fig. 1 for a plan of the area to the northwest of the Classical temple in 1976, and p. 91 for a discussion of the finds in the area; his plate 38:a shows the walls of the northwest building.

⁷ Particularly within the area of this building, and also spread about the site, were found fragmentary terracotta Corinthian tiles. These are of a fine tan clay finished with a white surface. They are of a thickness that would indicate that they were of large size, meant for a substantial structure (see Fig. 16:15–21). There are no decorative elements preserved. The tiles are difficult to date precisely but have the beveled and molded edges consistent with tiles of Late Archaic to Classical dates. It is possible that they roofed this building where many of them were found.

⁸ Frederick Cooper (*PECS*, p. 146, *s.v.* Bassai) believes the building to be a workshop associated with the Classical temple. He notes that the dimensions of the foundations of the workshop are close to those of the cella of the Classical temple.

⁹ Kourouniotis (1910, p. 276) says that the old building was destroyed by the building of the terrace for the Classical temple.

¹⁰ Kourouniotis (1910, pp. 273–274) does say that many Archaic finds came from this area.

¹¹ Yalouris 1979, pp. 94–96, pl. 45:a.

¹² Yalouris first said that the building to the south was the Archaic temple (1973, p. 52), then (1979, pp. 94–96) questioned whether the foundations to the south are those of a temple.

¹³ *PECS*, pp. 145–146, *s.v.* Bassai (F. Cooper). For photos of these blocks, see Yalouris 1973, p. 43, figs. 5–7; Parlama 1974, pl. 123:a. Cooper (*loc. cit.*) believed that the foundations to the south were those of the Archaic temple but failed to see that its plan was similar to the Classical temple. He says that Apollo I was 7 × 15 m.; these are neither the inside nor outside dimensions of the preserved foundations. He does not mention a doorway in the eastern wall.

Apollo III is known from the ashlar limestone blocks (1.2 m. long and 0.8 m. wide) used in the foundations of IV; Apollo IV is the Classical temple that now stands at the site. Cooper thought that the fragments of terracotta Corinthian-type roof tiles belonged to Apollo III (see note 7 above).

There is no evidence for the plan of III and no indication of the status of III when IV was begun. Therefore, Cooper presumed that with the building of Apollo III must have come the change in location of the temple to its present site, where it was completely hidden by Apollo IV. A wider terrace was most likely needed for the addition of a surrounding colonnade. A terrace was much more easily constructed by moving the location of the temple to the north and building a retaining wall only on the east, rather than trying to build terracing on the three steeply sloping sides of the promontory on which I/II stood (see Pls. 46, 47:a, 48:a).

Cooper's Apollo III as an intermediate phase seems an unnecessary complication based on little evidence. There are alternative explanations for the material he used to postulate an earlier temple beneath the Classical one. The large blocks that Cooper claims came from Apollo III could have been used in the foundations of the Archaic temple (their width is suitable), possibly at the northwest corner. The Corinthian-type roof tiles were fragments of pan tiles and cover tiles. No decorated sima or antefix fragments were found. The tiles need not belong to a temple but could have roofed another more utilitarian building. Also, one would expect more debris from III to have been recovered.

The wall that Yalouris found under the Classical temple was built in the same manner as the other retaining walls for the terrace, runs parallel to them, and probably served as such. If the clay surface was the floor of an earlier temple, it is at a level lower than the floors of both the Classical and the Archaic temple (as identified here), which are at the same level (Pl. 47:b, c).¹⁴ It is unlikely that Yalouris' Archaic temple stood behind another Archaic building that was directly to the south and at a higher level, blocking its view. If his Archaic temple is to be the same as Cooper's Apollo III, built after the destruction of I/II, it is also unlikely that a structure of this phase between the Archaic and Classical temples was built at a lower level and then the Classical floor raised exactly to the level of the floor of the first Archaic temple.

It is impossible to know how much of the Archaic temple still stood during the building of the Classical temple. The debris from it was spread about the site as fill in the Classical terrace. The builders were certainly aware of the earlier foundations, because the north end of the Archaic temple for several meters was completely cleared down to the bedrock for the placement of the foundations of the Classical temple. Probably the entire building had been leveled previously. The interval between the dismantling of the Archaic temple and the construction of the Classical temple could have been a short one.

Until the foundations for the building previous to the Classical temple were recognized, the anomalies of the Classical temple were seen as the result of originality on the part of the architect. Scholars have postulated that there were interruptions in construction and design changes during construction.¹⁵ The exact location of the Early Archaic predecessor

¹⁴ See also F. Cooper 1992, pl. 17:a.

¹⁵ Mallwitz 1962; Dinsmoor 1933, p. 225.

remained a subject for speculation until 1970, when the author, working under the direction of Yalouris, recognized that the foundations directly to the south of the Classical temple were those of the Archaic temple.¹⁶ Even though the 1905 plan of the foundations had been included in a drawing, published with a report in German (in a French publication) and in a Greek periodical, neither the excavators nor other scholars recognized its importance.¹⁷ Now it is possible to state that the orientation and plan of the Classical temple (Apollo IV) were predetermined specifically by the plan of the earlier Archaic temple, namely Apollo I and II, even though the later building site was moved nearly 10 meters to the north.

Apollo II was probably a refurbishing phase of Apollo I, using the same foundations and walls. Both Apollo I and II (as designated by Cooper) will be considered together as far as the foundations are concerned and will be referred to here as the "Archaic Temple". A fairly detailed reconstruction of the Archaic Temple can be made from the foundations, fragments of the superstructure, and roof. Similarities to the Classical temple can then be discussed.

The Archaic Temple is a building which has not received the attention that it deserves because it has not been recognized as such. This paper does not purport to be a full publication of the building. I intend only to show that from observations at the site and study of the reports published by the Greek excavators there is enough evidence to indicate that the foundations reveal a plan similar to the Classical temple and therefore that the identification of the building as the Archaic Temple is indisputable. This discussion must be limited to the foundations which were visible during the excavations of 1970, the column bases which were found about the site, and the roof fragments. Many questions must remain unanswered.

RECONSTRUCTION OF THE ARCHAIC TEMPLE

THE GROUND PLAN

The Archaic Temple was placed on a naturally projecting outcrop of rock with a commanding view of the Messenian plain (Pls. 47:a, 48:a). The temple was oriented north-south along the ridge of rock, where a terrace had been constructed by cutting down the bedrock at the north and filling at the south (Fig. 3). All that remains of the structure are the foundations, some column bases, and fragments of the terracotta roofing. The foundations are sufficiently preserved to indicate a plan which is apteral, with a pronaos opening to the north, a sekos, a smaller secondary chamber (adyton) with a doorway in the east wall, and an opisthodomos. The preserved length is about 25 meters. The width of the building, measured on the outside, is 7.5 m. and, on the inside, about 5.7 m. (Fig. 1).

Wherever possible, the bedrock was smoothed to form the foundations for the walls of mud brick.¹⁸ The foundation for most of the pronaos sat on the bedrock (Pl. 48:b). Roughly worked blocks of local limestone of varying sizes filled in gaps in the bedrock and completed the foundations of the temple at the south and east, where the surface of the bedrock declines. The stones used in the foundation were neatly fitted together in a double-faced wall. Flat

¹⁶ Yalouris 1973, pp. 49-53; Parlama 1974, pp. 142-146.

¹⁷ See notes 3 and 4 above.

¹⁸ Yalouris' excavations of 1970 confirmed that the walls had been mud brick: the destruction debris of the building was red, decomposed mud brick.

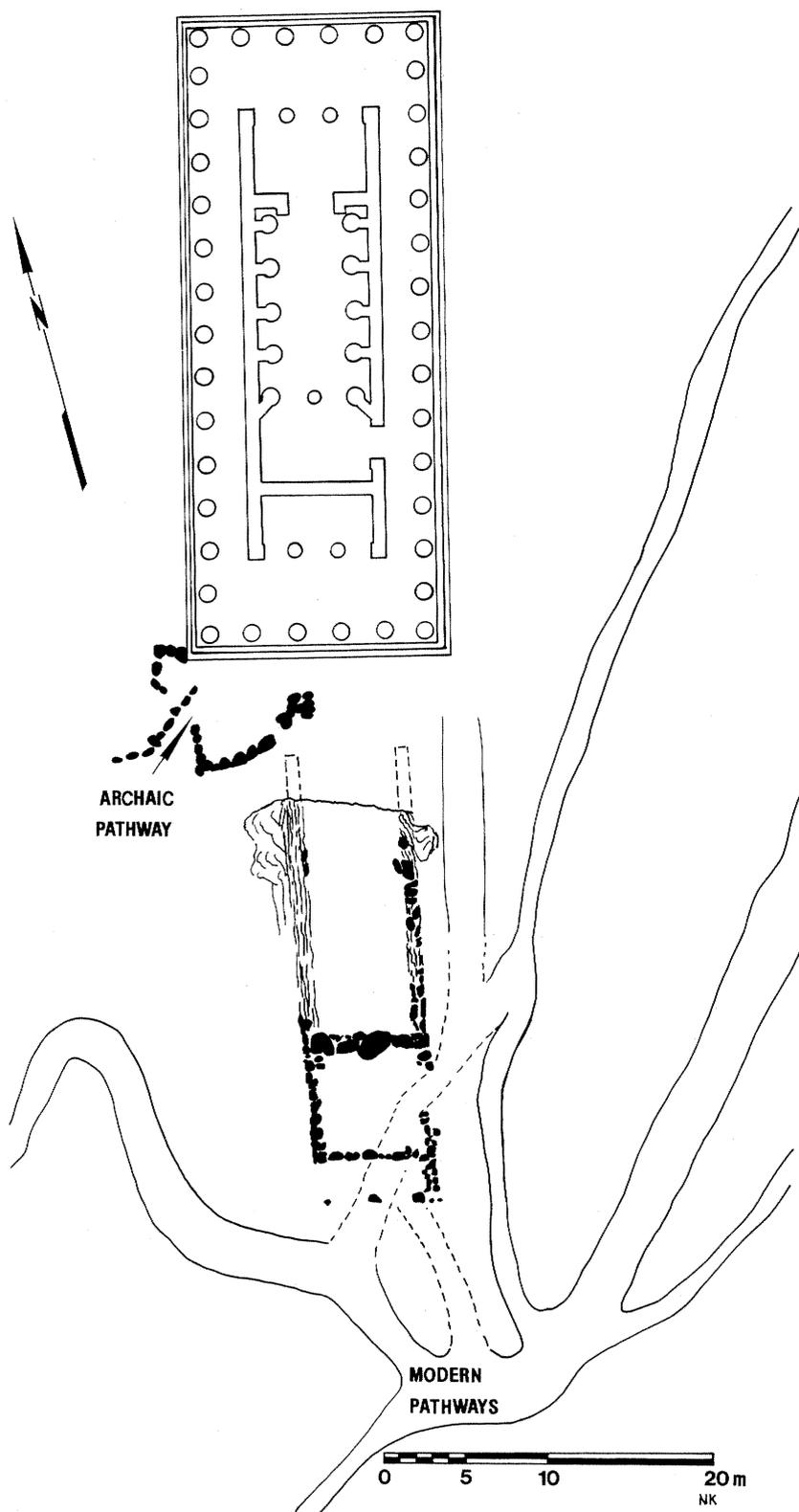


FIG. 3. Modern and ancient pathways, Bassai sanctuary, based on the topographic plan, F. Cooper 1992, IV, pl. 5

faces of the stones were used on the exterior and interior faces of the wall; backs were left irregular (Pls. 48:c, d, 49:a). The foundations for the outside walls are about 0.9–1.0 m. wide; the foundation crosswalls are thicker.

At the southeast and southwest corners of the sekos, stones were laid across the full width of the wall forming a strong corner construction and bonding the crosswall foundation to the side-wall foundation (Pl. 49:a). The southeast and southwest corners of the adyton were constructed in the same way (Pl. 49:b). By contrast the side walls of the adyton are not bonded into the side walls of the sekos, and the side walls of the opisthodomos are not bonded into the side walls of the adyton. The method of foundation-wall building used in this temple could be seen as “additive”: pronaos and sekos built as one unit, adyton added on as another unit, and opisthodomos added to adyton.

The foundation walls of the temple are not preserved at the northern end of the building. It is obvious that part of the foundation wall is missing at the northeastern corner, and the northwestern corner may be missing also. Either the bedrock declined here, or it was cut away for the placement of the south end of the foundations of the Classical temple.

The foundations for the side walls of the temple are well preserved in the sekos. The western wall rested almost entirely on a socle cut from the bedrock. The addition of a large stone, 1.0 × 0.8 m., was required where the bedrock declined at the southwest corner of the room. On the east, the socle was built of limestone blocks in some areas. At the northeast corner of the sekos, two large blocks, 1.0 × 1.5 m. and 1.2 × 0.8 m., formed the socle (Fig. 1). The natural bedrock rose to a height sufficient for the socle only for a distance of 0.8 m. at the midpoint of the wall, and the remaining stretch of foundation wall and the southeast corner were built of limestone blocks (Pl. 49:a).

The foundation across the south end of the sekos is the best-preserved feature of the temple and its most massive. Although double-faced walls were used for the socle in other parts of the building, larger stones that spanned the width of the wall were used here. In the center of the foundation and as the central focus of the temple was a massive boulder, 2.5 × 1.5 m., of irregular shape, which had been dressed to a level top (Pl. 47:a; the boulder is in the middle of the photograph). The stones in the foundation wall on either side of the boulder are approximately 1.0 × 1.0 m. The stones rest on bedrock, each one almost 1.0 m. high, and the foundations form a retaining wall separating one chamber from the other (Pl. 49:c, upper center; the tree grows from the southeast corner of the adyton). Both this foundation across the width of the building and the more southerly one are built as strong terrace retaining walls rather than as foundations for thinner interior crosswalls. Their function was dual: to retain the fill needed to level the floors on a steeply sloping site and to provide the foundations for the superstructure.

The foundation walls of the adyton are built entirely of rough-hewn stones. The outside face of the western wall is preserved for the depth of the adyton; there is no inner face (see Pls. 49:d, 50:b). Both inner and outer faces of the eastern wall are preserved. The southern crosswall foundation of the adyton is preserved except for the central section, where the wall was dismantled and a crude step built to provide access to the Classical temple.¹⁹ The

¹⁹ The path ran through the Archaic Temple, entering the south end and ascending into the adyton by the two steps that were added to the middle of the south crosswall foundation. Where the path met the large boulder which was the mainstay of the division between the rooms, it veered to the east and exited through the east doorway of the adyton to continue along the eastern side of the foundations.

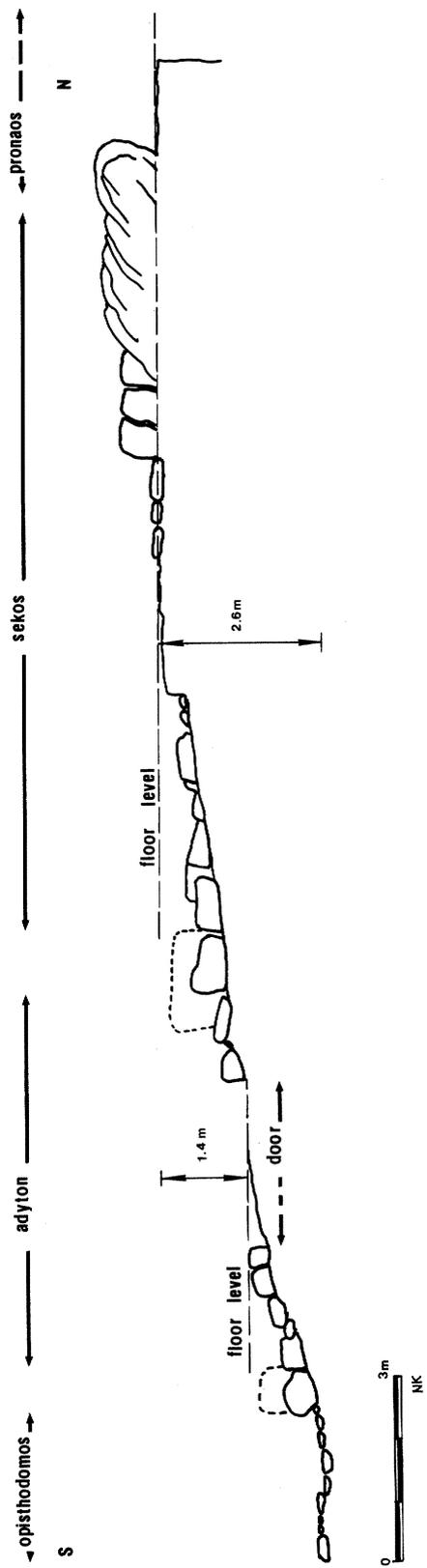


FIG. 4. Outside face of the east wall

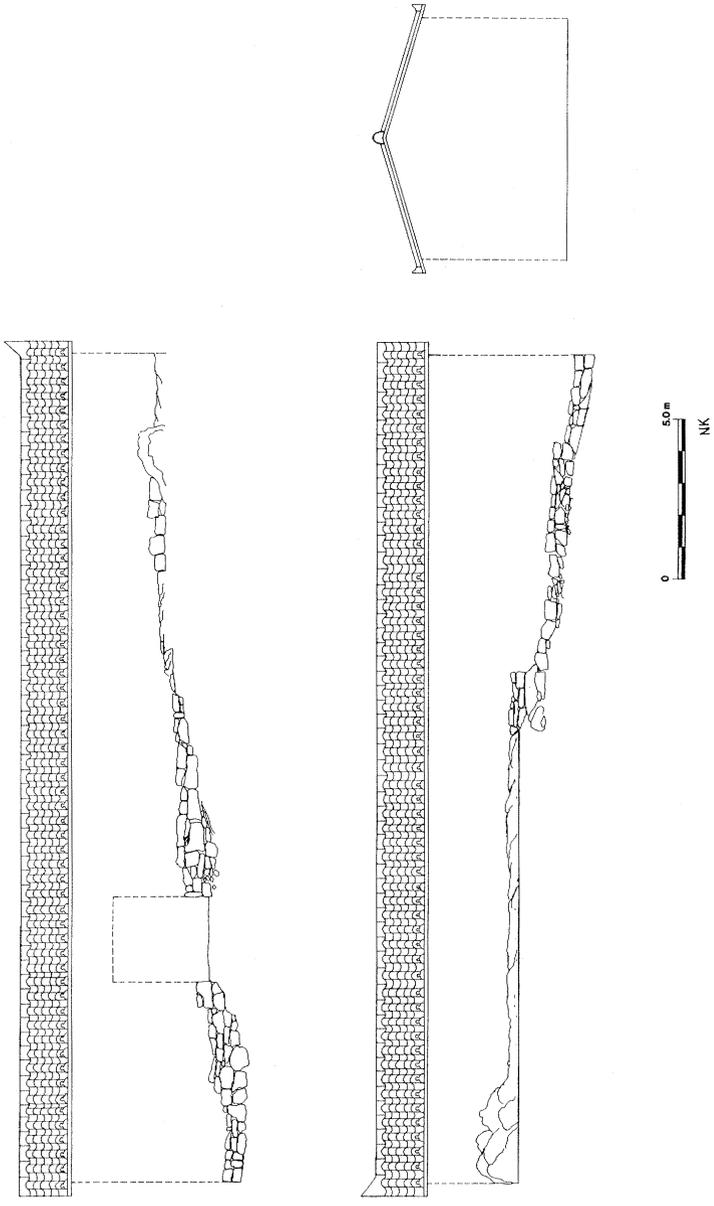


FIG. 5. Reconstruction of the Archaic Temple, exterior

modern footpath, for tourists coming up from the road, followed the natural topography and passed through the center of the adyton (see Fig. 3, Pl. 49:c).²⁰ The southern crosswall was built with the same purpose as the middle one: to act as a retaining wall for the fill used to level the floor on the sloping ground. The wall is not so substantial as the middle crosswall, because the ground did not slope so steeply and less fill was required to level the floor (Fig. 4).

No mud-brick walls were preserved above the foundation courses in any part of the temple (Figs. 4, 7). In some places, the top course of the foundation wall was removed as well, possibly so that the blocks could be reused in the later building foundations.

EXTERIOR APPEARANCE OF THE TEMPLE

The temple was a long narrow building, 7.5 m. wide and about 28 m. in length. It sat firmly on its stone socle of bedrock and large rough boulders (Fig. 5, Pl. 48:b). There was a doorway into the adyton on the long eastern side, and there probably was an entrance into the sekos at its northern end. There were probably columns in antis at both ends of the temple, but the number and arrangement remains obscure. The exterior walls were constructed of mud brick and probably had a covering of some type of plaster. No traces of any decorative elements for the exterior have been found except for the roof, which can be completely restored. Along most of the western side, the ground level dropped off quickly, making the temple appear to be standing on a podium of rock (Pl. 48:a). There does not appear to have been any provision for a person to walk around close to the exterior of the temple; passage was blocked by the outcrops of bedrock that were left in place at the west. Outside the west and east walls at the northern end of the building, the bedrock was not cut away. Outcrops of stone projected on the exterior of the temple and were presumably considered decorative. The temple would have appeared to be rooted within the bedrock and firmly anchored to it (see Pls. 47, 48:b).

BUILDING PHASES

Whether all building took place at one time only or whether additions were made as separate phases is not certain. Cooper has proposed that the construction of the opisthodomos side walls, which are not bonded to the adyton side walls, indicates that the opisthodomos was added to the temple at a later date. It would be convenient to say that the opisthodomos was added during a remodeling, since there are two roof phases. But if this is accepted, then the same would hold true for the adyton, that it was added to the temple; the side walls do not appear to be bonded into the side walls of the sekos, making three phases of building for the foundations. It is more likely that the foundations were built in only one phase, and that the technique used is a method of constructing the interior-division foundation walls as retaining walls in a building which adapts to sloping ground along its length.²¹

²⁰ With the excavation of the Archaic Temple in 1970, the Greek Archaeological Service rerouted the path outside the temple; see Yalouris 1979, fig. 1.

²¹ The foundations of Temple II at Halieis were drawn by Frederick Cooper as "cribbing", that is, a series of "bins" which held a fill of stones and dirt. This temple is sited across the slope, so that the fill occurs all along the long west wall and the ground slopes across the width of the building, not the length. The Apollo temple at Halieis sits on more level ground and therefore has a more usual construction of bonded crosswalls; clearly all the foundations for the series of rooms were constructed in the same building program. For Cooper's

Floor levels are ill defined throughout the temple. The building was deliberately leveled to the ground and its superstructure dispersed by the later temple builders, because any part that stood above the foundation level would have blocked the view towards the south from the Classical temple. It is unclear if the southern end of the sekos was partially excavated in the 1900's. At the south end of the temple, the modern tourist path contributed to the destruction. At the north end, the debris was probably excavated in the early 1900's and the area used for cement mixing for the conservation of the Classical temple. In the 1970's it was one of the few areas which did not contain a jumble of heavy blocks from the Classical temple, and ground level was nearly at the surface of the bedrock.

The floors in the sekos and adyton were probably not at the same level (Fig. 4). A foundation even more massive than the middle crosswall foundations would have been needed at the south in order to retain the amount of fill required to bring the adyton floor level up to that of sekos. The south wall foundation is more lightly built than the middle crosswall foundation. It retained only the fill needed to level the floor in the adyton, which was about 1.4 m. lower than the floor of the sekos and smaller in area. Also, the cut-down bedrock for the threshold of the door in the east wall indicates that the position of the floor level in the adyton was lower than the floor cut from the bedrock in the sekos.

The floor level of the opisthodomos is not known. The present ground level is nearly at bedrock, and this area was not excavated (see Pl. 49:c; the large stone at the bottom of the photograph may be bedrock). There is no evidence of a retaining wall at the south end of the temple. The south end is close to the modern dirt road that curves around the Archaic Temple (see Pls. 46, 50:b), and it is possible that stones were taken away for retaining walls along the roadway. Erosion would have carried away any fill in the opisthodomos.

CORRESPONDENCES BETWEEN THE ARCHAIC AND CLASSICAL TEMPLES

When the plan of the Archaic Temple is superimposed on that of the Classical, with the Corinthian column of the Classical temple positioned above the large flat-topped boulder of the Archaic, it is apparent that the details of the plans are remarkably similar (see Fig. 6). The arrangement of rooms in both temples is identical, and the interior sizes of the rooms are nearly the same. Not only did the Classical temple follow the same north-south orientation as the Archaic Temple, the central axis is almost on the same line. Moreover, the floor level of the Classical temple is at the same elevation as the floor at the north end of the Archaic Temple. In order to place the floor at this level and no higher, the bedrock was cut down at the north end of the Archaic terrace for the foundations of the Classical temple (Pl. 47:b).

plans of these two buildings, see Jameson 1974, p. 293. On the acropolis of Sparta, in what is called the "early sanctuary" (between the retaining wall of the Chalkioikos sanctuary and the back wall of the cavea of the Roman theater), is a building whose location, date, roof revetment, and wall construction are similar to those of the Archaic Temple at Bassai. Unfortunately, the foundations were so cut into and destroyed by later building on the site that the excavators can only estimate its size as 4.9 × 9.4 m. by using the limits of a votive deposit. Over the 9.4 m. length, the change in level is 0.5 m., but not enough of the lower wall remains to indicate whether it retained fill to level the floor. The walls, which have a height of 0.6 m., are constructed with large, roughly trimmed blocks at the corners: Woodward 1926/1927.

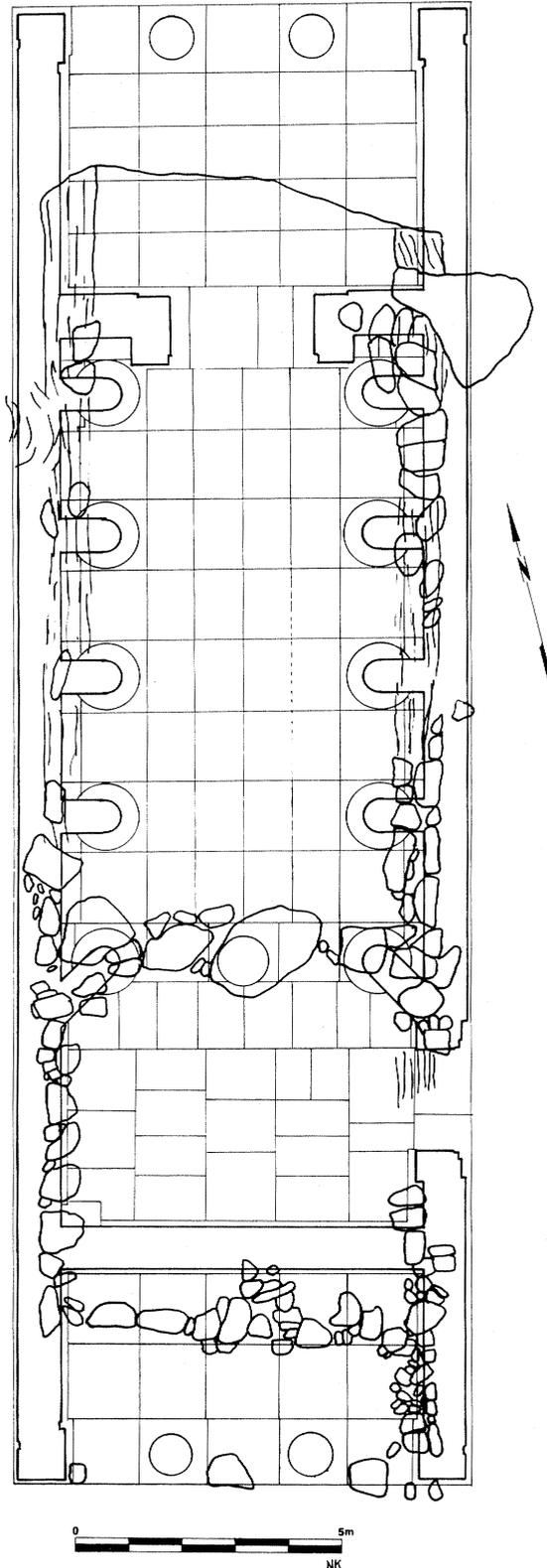


FIG. 6. Plan of the Classical temple, after F. Cooper 1968, p. 104, ill. 1, superimposed on the actual ground plan of the Archaic temple

Lengths and widths of the rooms in the Archaic plan are so similar to those of the Classical temple as to be virtually identical. Enough of the foundations remain to permit a discussion of each of the chambers of the Archaic temple, comparing it to the corresponding part of the Classical temple.

OPISTHODOMOS

It is not certain that the southwest corner of the Archaic Temple was ever excavated, as neither Parlama nor Yalouris indicate anything on their drawings of the ground plan. There is no trace of the western foundation wall visible on the ground beyond the southernmost crosswall foundation except a stone of substantial size which could have been part of the anta at the southwest corner, 2.5–3.0 m. to the south of the crosswall foundation along the line of the western wall. This stone is partially obscured by shrubbery in Plate 46, is at the bottom in Plate 50:a, and can be seen along the line of the wall near the edge of the roadway in Plate 50:b. In the southeast area, a trench uncovered an extension of the eastern side wall of the temple that continued 3.0 m. beyond the crosswall foundation; it was only excavated for a length of 2.0 m. The line of stones continued on the surface, ending at a larger stone slightly to the west of the line of the wall. The south end of the eastern wall shows clearly in the aerial photo (Pl. 46). In the unexcavated south end of the temple there are no traces of a crosswall foundation. A roughly shaped stone can be seen on the ground approximately where a foundation for a column or columns in antis would be expected. Part of this stone shows clearly in the aerial photo (Pl. 46) and is at the center bottom of Plate 49:c. It is close to the center line of the temple but not exactly centered; it raises the possibility that there could have been one central column in antis. Yalouris' plan shows a trench in this area; it did not extend so far as the stone, which is 2.5–3.0 m. from the southern crosswall foundation.²² The stone is not drawn on any of the plans published by Yalouris or Parlama. The part which is visible could be bedrock, and it could extend in any direction. A photo taken from the west looking east along the line of these large stones shows that they are not just three random rocks (Pl. 50:a). They are in a straight line and probably mark the boundary of the south end of the temple, about 3.0 m. from the south crosswall foundation.

With the plans of the two temples superimposed, the distance from the Corinthian column to the south end of the opisthodomos of the Classical temple corresponds exactly with the distance from the center of the flat-topped boulder to the south end of the opisthodomos of the Archaic Temple (Fig. 6). The opisthodomos of the Archaic Temple is shallower than its Classical counterpart; it measures 3.0 m. from the wall between adyton and opisthodomos to the end of the antas. The Classical opisthodomos measures about 4.2 m. This difference exactly balances the difference in the measurements of the two adyta, where the Archaic was deeper than the Classical, thus permitting the two temples to correspond at the south end.

ADYTON

North of the opisthodomos, the interior of the adyton was 5.7 m. in width and 6.0 m. in length. Along the western wall, Yalouris' excavations uncovered part of a floor made of thin limestone flagging (Pls. 46, 50:b). Excavation stopped at this floor, barely under the modern

²² Yalouris 1979, p. 92, fig. 1.

ground level. Hellenistic and Roman sherds were found on the floor, and the excavator did not believe that it belonged to the first phase of the building.²³ The area of the Archaic Temple was leveled during the building of the Classical temple, the area cleaned, and the debris used in the fill of the terraces, but the flagged floor may have been left exposed. The floor level at the preserved flagging is some 1.2 m. lower than the top of the middle crosswall foundation and 1.4 m. lower than the floor carved from the bedrock at the north end of the sekos. Therefore both adyton and opisthodomos were at a lower level than the sekos and pronaos (Fig. 4).

The eastern wall is pierced by a doorway 2.5 m. wide. The northern jamb of the doorway is well preserved. The edge of the southern jamb is less clearly defined; the bedrock sloped away too low to form the corner of the jamb (see Pl. 49:b, where the north edge of the doorway is at center bottom and the two small stones at right center are lying on modern ground level. The wall continues at center top, and the southeast corner of the adyton is at the very top center of the photograph; see also Fig. 4). The doorway may have been less wide than the present 2.5 m. gap; it was off the center line of the nearly square room.²⁴ The aerial photograph taken after excavation (Pl. 46) clearly shows the northern edge of the doorway, with no stones filling the width of the opening, nor were any in the doorway before excavation. The two earlier drawings, Haller's in 1812 and Kavvadias' in 1903, only show the outlines of the Archaic Temple as part of the topography, but there is enough detail to make it clear that there were no large stones or double-faced wall in the area of the doorway. Haller's drawing shows the doorway clearly and has two parallel lines drawn close together across the opening. If these lines represent a row of narrow cut blocks, the blocks are approximately one-fourth the width of the foundation walls and not like the stones used in their construction. The lines may also represent the smoothed bedrock. In either case, it is likely that they represent the threshold. Kavvadias' plan shows the doorway opening with a small black dot in the center, possibly representing a very small stone, and the wall is drawn as discontinuous in the area of the doorway (Fig. 2).

The threshold level of the doorway is the same as that of the flagging, confirming the approximate floor level of the room. The floor flagging level is about 0.2 m. above the top of the wall between adyton and opisthodomos, indicating that at least one course of the foundation wall is missing (see Fig. 4: the stones drawn in dashed lines are part of the crosswall foundations on the center line of the building).

Although the adyton floor in the Archaic Temple is at a lower level than the floor of the sekos, the Classical temple has only one floor level throughout the interior. There are other peculiarities of the Classical floor, however, which reflect the details of the Archaic Temple. In the Classical temple, the paving of each space (pronaos, sekos, and opisthodomos) is a grid pattern of blocks, although the grid has different intervals in each area (Fig. 6). The

²³ Parlama 1974, p. 143, pl. 124, bottom.

²⁴ Parlama published a drawing of the plan of the temple foundations which shows the doorway (1974, p. 144, fig. 2:2), but in figure 2:1 there is no doorway. Yalouris shows the doorway filled in with stones (1973, p. 50, fig. 5). These were clearly added later by a hand other than the one that originally drew the plan. Voyatzis published a plan (1990, fig. 6:a) following Parlama, showing the foundations with no doorway in the east wall of the adyton. Kalpaxis (1976, p. 62) and F. Cooper (*PECS*, pp. 145–146, *s.v.* Bassai) both fail to mention the east doorway.

stylobates along the walls of the sekos are differentiated from the rest of the floor paving by the slightly greater width of the blocks, but the block joints fall on the grid lines. The regular pattern of the temple paving is only broken in the adyton, where the blocks are not arranged in a grid pattern, at the doorway between pronaos and sekos, and for the stylobate under the Corinthian column and the engaged diagonal columns. The strip of paving under the columns that separate adyton from sekos has a pattern that differs from both the adyton floor and the sekos floor. The stylobate for the Corinthian column and the oblique attached columns has different jointing intervals. Although the actual stylobate for the Corinthian column is only 1.1 m. wide, the bases of the engaged columns require a wider stylobate; there is a second strip of paving behind the Corinthian column with a jointing pattern that is aligned more with the floor in the sekos (the long axis of each block parallel with the long sides of the temple, as opposed to the pattern in the adyton, where the long sides of the blocks are parallel to the short sides of the temple). The pattern formed by the paving stones is a double strip approximately 2.4 m. wide, extending across the width of the sekos/adyton. The illusion is that there is a wide zone which divides sekos from adyton, analogous to the wider foundations that divide sekos from adyton in the Archaic Temple. Only here in the foundations of the Archaic Temple is the wall wider than the 0.9–1.0 m. of all the other walls. The heavier foundation wall has a function in the early temple, that is, to retain the fill needed to level the floor of the sekos. In the Classical temple there is no visible reason for the second strip of paving behind the Corinthian column other than to mark off the area as a double-width strip. The floor pattern also creates the illusion of shrinking the size of the adyton floor space in a room already smaller than its counterpart in the older temple.

The adyton of the Archaic Temple has both differences and correspondences with its counterpart in the Classical temple. There is a difference in size, while there is a correspondence in the placement of the doorway. It is not known if there was a wall between the adyton and the sekos, and one cannot be assumed because of the difference in floor levels of the two areas. If a wall is presumed to have existed, there is an additional problem of how thick it may have been. The Archaic adyton was 6.0 m. deep, while the Classical can be considered from 3.4 m. to 5.65 m. deep, depending on where the measurements are taken. There is no wall dividing sekos from adyton in the Classical temple, and therefore no perfectly clear point to end a measurement of the depth of the room. The paving patterns provide several choices. From the southern crosswall one can measure to the north edge of the doorway, for a depth of 3.3 m., thereby including only the area delineated by the adyton floor paving, or to the point where the oblique columns jut from the wall, for a depth of 3.8 m. (a place not marked by any change in the paving), or to the center line of the Corinthian column, for a depth of 5.2 m., or to the northern edge of the stylobate of the Corinthian and oblique columns, 5.65 m., which seems to be extending the measurement too far into the sekos. It is this last choice, however, which marks the point where the end of the sekos of the Classical temple occurs, if its length is to be equal to the length of the sekos of the Archaic Temple. By considering the double strip of paving under the Corinthian and oblique columns to be representative of the massive foundation crosswall of the Archaic Temple, and then measuring the Classical adyton as only the space marked off by the adyton paving, the Classical adyton becomes much more shallow than its Archaic counterpart. On the other hand, by ignoring the fact that the double strip of paving represents the width

of a wall, and by measuring the Classical adyton from the point where the sekos ended, i.e., the edge of the stylobate to the north of the Corinthian column, the depth measurement of the two adyta correspond more closely, 6.0 m. and 5.65 m. The architect of the Classical temple has provided visual puzzles for us or perhaps for him solutions to the problems of recreating Archaic spaces.

This discrepancy in the sizes of the two adyta is enigmatic unless it is connected with the dramatic effect of the rays of the rising sun reaching the cult image. Although the adyton in the Archaic Temple may be deeper, the location of the doorway in its east wall shows the same off-center placement as the doorway in the Classical temple, at least at the north jamb which is preserved. The east doorway, as placed in the Classical temple, was designed so that the rays of the rising sun would illuminate the southwest corner of the adyton and perhaps, as Cooper still believes, to illuminate the cult image on a particular feast day. There were also adjustments in the intercolumniations of the surrounding peristyle to permit this effect.²⁵ The positioning of the east doorway and its effect were again not an original innovation by the Classical architect but a faithful reproduction of a physical feature of the Archaic Temple in order to accommodate the beam of sunlight. The width of the doorway in the Classical temple was slightly less than 2.0 m. The doorway of the Archaic Temple cannot be measured exactly; the gap that now exists is 2.5 m. but could have been smaller originally.

SEKOS

The interior of the Archaic sekos measures 5.7 × 11.5 m., the length from the well-preserved crosswall foundation in the middle of the building to the north crosswall at the large stone left jutting from the eastern wall (see Fig. 1, left). The floor was cut from the bedrock at the northern two-thirds of the sekos; to the south, where the ground began to slope, a packing of stones and earth fill leveled the area. Small chips were mixed with earth to fill the hollows in the bedrock, and small flat stones were fitted over the fill. The Archaic fill began at the modern ground level and was only about 0.3 m. thick in some areas of the Archaic Temple before bedrock was reached. Modern ground level is already below the original Archaic floor level in the sekos. The top of the crosswall dividing sekos from adyton is about 0.2 m. below the bedrock at the north end of the temple. The smoothed bedrock determined the floor level of the sekos. The middle crosswall foundation must have had another thin course laid on it to bring its level up to that of the floor level at the north end of the room (Fig. 4).

At first glance, the interior space of the sekos of the Archaic Temple seems narrower at 5.7 m. than the Classical temple, which measures approximately 6.8 m. wall to wall. The nearly 1.0 m. width of the socle of the Archaic Temple, however, may not have been totally taken up by the mud-brick wall, and the socle could have projected into the interior as a ledge as much as 0.4 m. wide along both sides of the room. The Archaic interior space then would have measured about 6.3 m. wall to wall (Figs. 7, 8). Comparing the length of one sekos to the other presents more of a congruence. Both are about 11.2 m. in length, but this is only true if the measurement is taken in the Classical temple from the edge of the stylobate of the Corinthian column to the crosswall between the sekos and pronaos. The floor pattern

²⁵ F. Cooper 1968, p. 104, ill. 1. Penrose (1896, p. 383) mentions the sunrise effect.

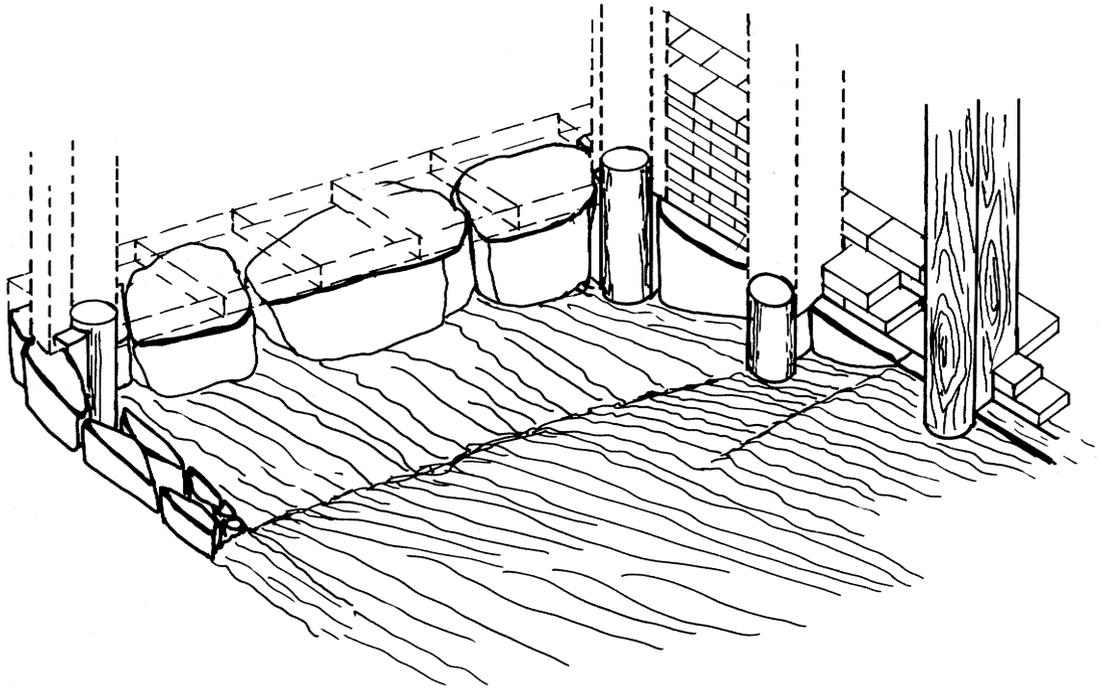


FIG. 7. Reconstruction of the interior of the sekos of the Archaic Temple at the crosswall

of the sekos and the extra spurs on the crosswall which project into the sekos would seem to limit the sekos length to about 10.7 m. (Fig. 6). The Classical architect has added the required length with the strange little corner niches to either side of the entranceway.

INTERIOR COLONNADE

Four limestone column bases could belong to the Archaic temple. Cl 6, Cl 14, and Cl 65 retain the numbers assigned to them during Cooper's architectural study (see Figure 9 for drawings of three of them. One more [Pl. 51:b] lies at the site, its number lost).²⁶ All are roughly worked and of different heights. All have roughly picked areas which protrude from the surface of the cylindrical shape. Cl 6 is slightly different from the other two: Only half of it is preserved; it has been split across its diameter. The more finished part at the top has a diameter of 0.3 m., while the rougher, wider area at the bottom is 0.36 m. in diameter. Its preserved height is 0.28 m. (see Fig. 9). Cl 14, the best preserved, has a height of 0.39 m. and a diameter of 0.316 m. (Fig. 9, Pl. 51:a, c [left]). It has a flat projection at the back, 0.248 m. wide, which protrudes from the shaft 0.05 m. Cl 65 is 0.6 m. high, has about two-thirds of its circumference preserved, and has a diameter of about 0.27 m. (Fig. 9, Pl. 51:c [right]); there

²⁶ The fragments were numbered according to conventions used by F. Cooper at the site, Cl for column, with inventory number following and a coordinate number for the findspot. They will appear in a catalogue of drawings in F. Cooper's monograph, *The Temple of Apollo Bassitas*, vol. III. They were all placed on the terrace in front of the guard's house in 1984.

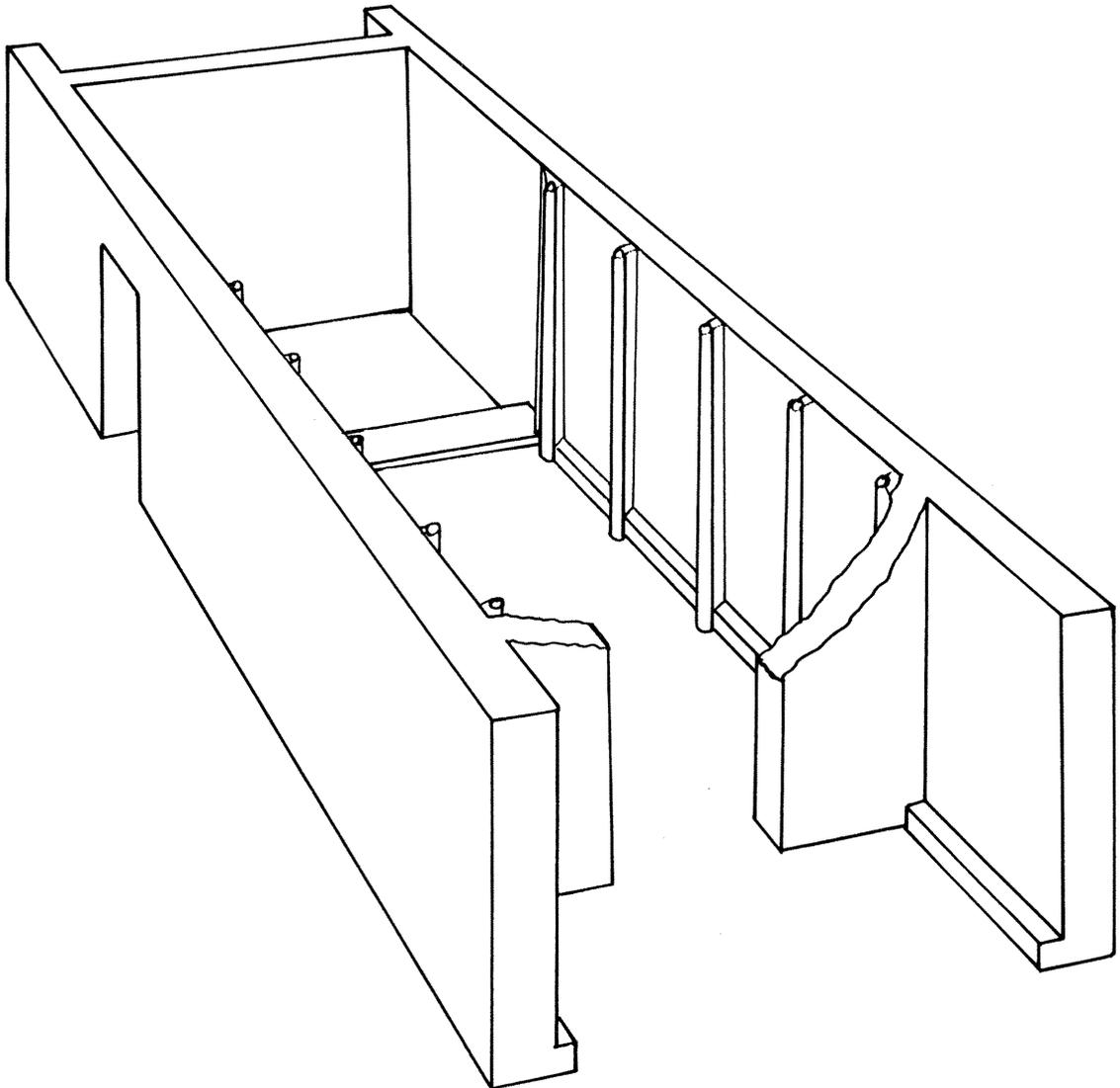


FIG. 8. Reconstruction of the interior of the Archaic Temple

are two projections on its surface. Cl 6 and Cl 14 have relatively flat bottoms, while Cl 65 is either broken off or cut off at a slant (the surface is badly weathered). The unnumbered base is about the same diameter and height as Cl 65 and has one flat projection (Pl. 51:b). All the examples have a flat, level, circular top. Shallow holes in the tops of the bases may represent cuttings for dowels. The projections all began some distance down from the top (0.02–0.08 m.). The lack of finish on the bases indicates that they never were intended to remain visible. They probably were sunk below the floor with only the more finished circular tops visible. It is likely that wooden columns, which must have been circular, stood on the tops of the bases. The projections on Cl 14 and the unnumbered base indicate that they

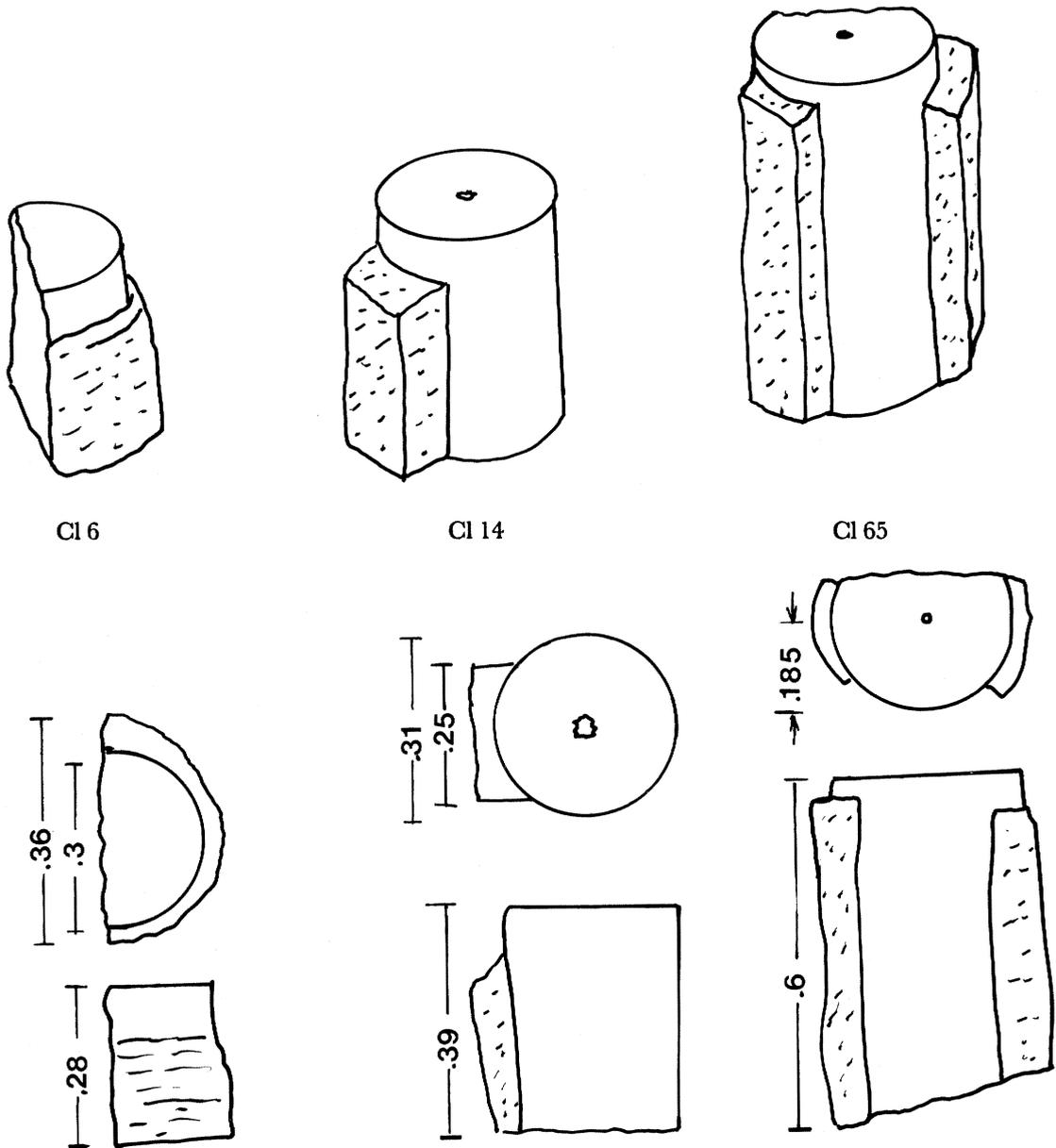


FIG. 9. Column bases from the Archaic Temple

stood against the foundation wall and were bonded to it. The wooden columns above the bases were probably connected to a rectangular wooden buttress in the mud-brick wall. This could also be true for Cl 65, which stood in an inside corner connected to two walls (Fig. 7).

The most likely place for the column bases would have been along the inside long walls of the sekos.²⁷ A colonnade probably ran the length of the sekos along both walls (Fig. 8). Since the column bases were sunken below floor level, they were only needed in the southern part of the sekos, where the bedrock declines and the floor had to be brought up to the level of the northern end with fill. This would account for the fact that the column bases are of varying heights (Fig. 7). Cl 65, with a height of 0.6 m., could only have been sunken in the fill of the southern end of the sekos, where the fill was the deepest. The floor would have been about 0.8 m. above the modern ground level at both the southeastern and the southwestern corners of the sekos, more than enough depth to accommodate both Cl 65 and the unnumbered base. At the northern end of the sekos, the wooden columns could have stood directly on the bedrock at floor level. Bases would not have been needed here, which would explain why there are so few remaining examples of them. If the missing half of Cl 6 was identical to the preserved half, the projecting area continuous around the circumference, it could have supported a freestanding column, perhaps along the central axis of the temple. If this were the case, there may have been a central row of columns also, but since only half the circumference of the base is preserved, it is risky to assume that there was a central row of columns.

While the reconstruction of an interior colonnade along the side walls of the sekos is conjectural, the column bases do exist and could have been used for such a purpose. Mud-brick wall construction needed the additional support of vertical engaged members. An interior colonnade attached to them could also have served to shorten the more than five-meter span across the width of the building and to support a framework of rafters for a tile roof. A central row of wooden posts could have been used to further shorten the span by supporting the roof beams.²⁸ The small diameter of the column shafts is paralleled at other sites.²⁹

The foundations do not provide any indication of the location of the columns, so that the total number of columns used is unknown. Other than Cl 65 and the unnumbered base, which have to be placed at the southern end of the sekos because of their height, the reconstruction of the number and placement of the column bases is a guess based on the Classical temple. No specific provenience exists for any one of the bases; none were noted in excavation reports. Three were found on the surface: Cl 6 halfway along the east side of the Classical temple, Cl 14 at the northeast corner of the Archaic Temple, Cl 65 in front of the Archaic Temple near the northeast corner. The findspot of the unnumbered column is unknown. They had all probably been moved several times by the various scholars who

²⁷ Other Archaic temples had columns along the interior walls. The Heraion at Olympia also had spur walls to which some of the columns may have been joined: Mallwitz 1972, p. 139, fig. 109. At Halieis, semicircular stone bases were found against the walls of the sekos of the Temple of Apollo. They presumably held wooden half-columns. For a plan of this building, see Bergquist 1990, p. 26, fig. 3. In the South Temple at Kalapodi there are poros bases along the inner walls: Felsch 1987, p. 15.

²⁸ The Temple of Apollo at Halieis used both a central row of posts and posts set along the walls. Coulton (1988, pp. 62–63) says that posts on base slabs were used in the temples of Hera at Samos and Artemis Orthia at Sparta and that both these buildings had posts set on stone slabs along the walls as well as down the center.

²⁹ At Samos, exterior wooden columns are restored as having a diameter of 0.35 m.: Coulton 1977, pp. 31–32, 36. At Halieis (Temple of Apollo), the diameter of the interior columns was 0.35–0.37 m.: Bergquist 1990, p. 26, fig. 3. At Isthmia, the Archaic temple of Poseidon has a series of holes cut into bedrock on the central axis of the temple; the diameter of the holes is 0.30–0.35 m.: Gebhard and Hemans 1992, p. 30.

worked at the site. The Classical temple has its own interior colonnade of engaged columns. The Classical columns are tall and thin and are set on strange bases, presumably recreating the effect of the interior design of the Archaic Temple. At two places, on both ends of the colonnade, the placement of the columns is odd. Those at the northern end are so close to the spur wall projecting into the sekos from the doorway as to make awkward corner niches, and those at the southern end are attached to the walls with diagonal buttresses. The latter placement could be reflecting the position of Cl 65, which was connected to two foundation walls in the Archaic Temple.

PRONAOS

Enough of the north end of the Archaic Temple is preserved to call this area the pronaos. The bedrock socle of the western wall can be measured as extending 2.5 m. and the socle of the eastern wall, 1.5 m., to the north beyond the crosswall at the northern end of the sekos (see Pl. 46: the western socle is clearly shown, the eastern is under shrubbery). The walls were placed on the smoothed floor of bedrock between the outcrops of rock that rose approximately 1.5 m. on the west side of the building and slightly lower on the east side (see Pl. 48:b: the arrows mark the smoothed bedrock). Obviously, the eastern wall was at least as long as the western, and perhaps both were longer than they are now. The loss of some of the northern end of the temple was due to the construction of the Classical building. The Classical temple is only about 10 m. to the north of the preserved end of the Archaic Temple (Pl. 47:b). The foundation trench for the later building extended some meters into the Archaic structure. Either the whole chamber floor and wall socle of the Archaic pronaos were cut from the bedrock, in which case they were cut away during the building of the Classical temple, or if the bedrock declined, stones were used to build up the foundation at the north end of the Archaic Temple. It is likely that part of the northwest and the northeast foundation walls of the Archaic pronaos were built of blocks which have been moved. Perhaps the blocks reused in the southwest corner of the Classical temple were taken from the foundations at the north end of the Archaic Temple and were efficiently moved only a very short distance to their new position.

Another clue exists to aid in the determination of the original length and construction of the pronaos. Yalouris' excavations found part of an Archaic stairway at the southwest corner of the Classical temple (Fig. 3). The stairway veered away from the Archaic Temple, to the north, suggesting that a straighter path was blocked by the wall of the Archaic Temple that has now disappeared. The position and elevation of the stairway also suggests that the bedrock fell off sharply here. The remains of the stairway are about two meters lower than the Archaic Temple floor. The ridge on which the building stood probably did not continue uninterrupted at the same elevation to the north end of the temple, and therefore foundations to hold the Archaic Temple had to be built.

The stairway also indicates that the entrance to the Archaic Temple was at its north end. A path coming into the sanctuary from the southwest (the direction of Phigaleia) passed alongside the foot of the western outcrop of the terrace, curved around the northwest corner of the Archaic Temple, climbing up the steep side of the terrace on which the temple was placed, and led to the north end of the temple. Some indication of the topography in the

early 1900's is given on Kourouniotis' plan of the sanctuary (Fig. 2). A loop of the path coming up from the southwest is shown (this pathway by-passes the Archaic Temple, curving around its southern end and continuing to a small village), and the Archaic stairway is drawn as a series of lines between the northwest corner of the Archaic Temple and the southwest corner of the Classical temple. Yalouris excavated this area; on Figure 3 the stairway is drawn from the photo and plan published by Yalouris.³⁰ Since the northern end of the temple cannot be precisely located, the length of the pronaos cannot be recovered. It may be, however, that the unusual length of the pronaos in the Classical temple (5.5 m. interior measurement) followed the precedent set by the Archaic Temple. Assuming that the total length of the pronaos of the Archaic Temple was equal to the length of the Classical pronaos, then only 3.0 m. of the foundation wall is missing. The sum of the preserved length of the Archaic Temple (25.0 m.) with the 3.0 m. that was cut away equals 28.0 m., approximately a hundred ancient feet.³¹ The point here is not to try to prove that the temple was exactly one hundred feet, but to show that it was not a rustic shrine. It was planned and executed as a monumental building.

THE ROOF

The roof of the Archaic Temple is important for several reasons. From it, a range of dates and phases for the structure are known. The roof can be correctly associated with the foundations and provide details about the function and appearance of the structure. And by comparing the roof to other Laconian roofs, the development of the Laconian style of roof can be better understood.³² The site at Bassai is not a complex sanctuary with many buildings and fragments of many different roofs. No other Archaic terracotta roof revetment has been found at the site, and no other Archaic building foundations. The details of the roof can be reconstructed without fear of mistakenly combining revetment from different buildings or periods.³³

The Archaic Laconian roof at Bassai is one of the few examples of which enough remains to reconstruct its design almost completely (Figs. 10, top, and 11). The roof was canonical Laconian in type: tiles of pure Laconian shape, antefixes at the lateral edges, and a

³⁰ Yalouris 1960, p. 107, fig. 111, and 1965, p. 156, fig. 1.

³¹ The ancient foot was variable between 0.29 m. and 0.33 m., according to de Waele (1990, p. 4). But F. Cooper (in Boyd and Rudolph 1978, p. 340, note 11) gives a length of 0.273 m. for the foot used at the Halieis Sanctuary of Apollo. In terms of such a small foot measurement, the length of the Archaic Temple of Apollo at Bassai would be nearly equal to a hundred ancient feet.

³² The development of the Laconian roof style is a subject which is beyond the scope of this paper; I discuss it in an article in preparation, "The Development of Laconian Roof Revetment."

³³ Part of an antefix was found in the Kotilon sanctuary at the summit of the mountain, one exactly like type B from the Temple of Apollo (Fig. 20:44), but this does not necessarily mean that either of the temples at the summit was decorated with antefixes. One and only one was found. The two roofs could have used plain Laconian tiles with no decoration, and the buildings were probably not Archaic in date. Kourouniotis (1903, pp. 184–185) said that the temples were in use in the 5th century and that coins from the 4th century and nothing later than the 3rd century B.C. were found. The one antefix fragment was his oldest find. Clearly, these temples were of secondary importance in the sanctuary, or if the Kotilon sanctuary was completely separate from the Apollo sanctuary, it never had equal importance.

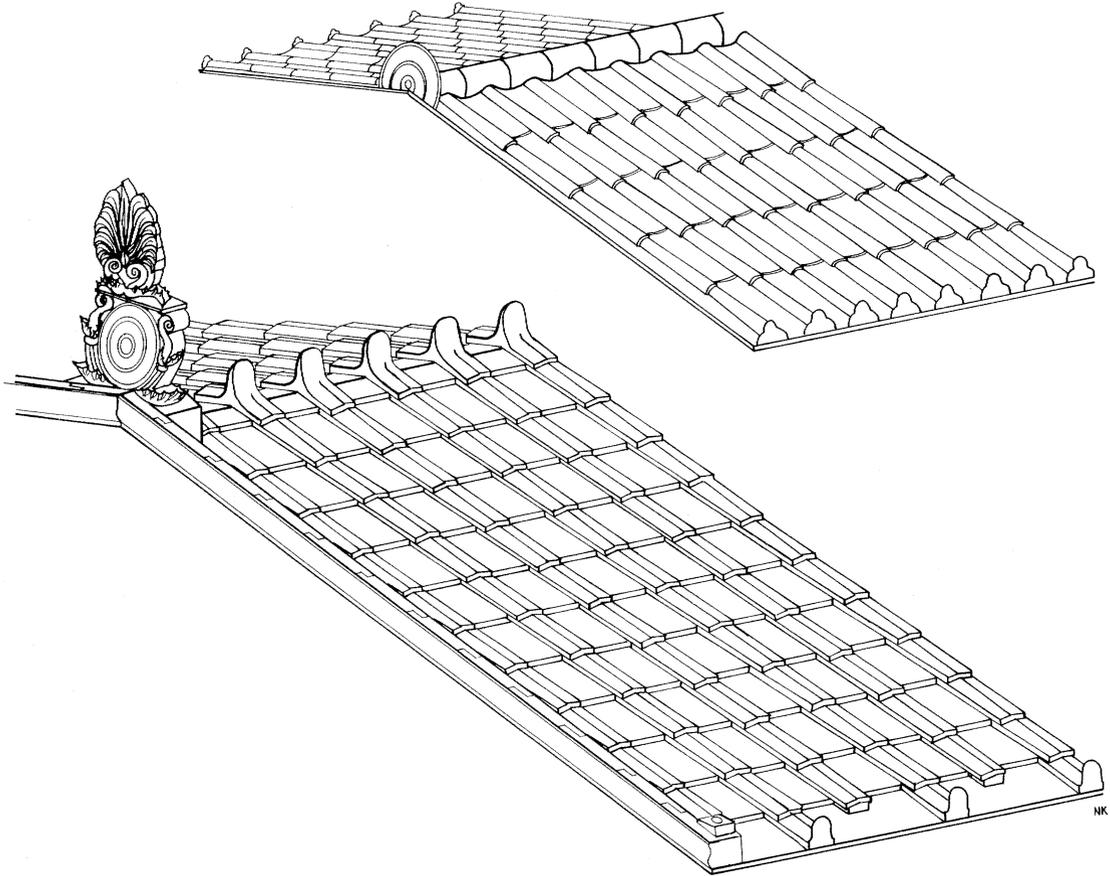


FIG. 10. Top: Reconstruction of the roof of the Archaic Temple
 Bottom: Reconstruction of the roof of the Classical temple

conventional disk akroterion at the peak of the gable (Figs. 10, top, and 14). The antefixes, however, added a palmette, used here for the first time on a Laconian roof (cf. Fig. 12).

The existence of a disk akroterion indicates that the temple had a gable on at least one end, with the akroterion at the peak of the roof over the main entrance of the temple. A series of curved ridge tiles beginning behind the disk akroterion covered the ridge pole. A terracotta geison course sat directly under the first row of tiles at the eaves. An antefix capped each row of cover tiles, each antefix sitting on the geison course (Fig. 11).

Thousands of fragments of Archaic Laconian terracotta roof revetment were recovered during the excavations. Tiles, ridge cover tiles, antefixes, and disk akroteria have all been found; many were badly burned, and most were broken into small pieces. The plain tiles were probably deliberately broken, because they were used as fill in the terrace that was built for the Classical temple. Two sets of terracotta revetment which both belonged to the Archaic Temple are still easily identified from the many fragments. The design and dimensions of both sets of tiles and decorative elements were similar. The two sets differ

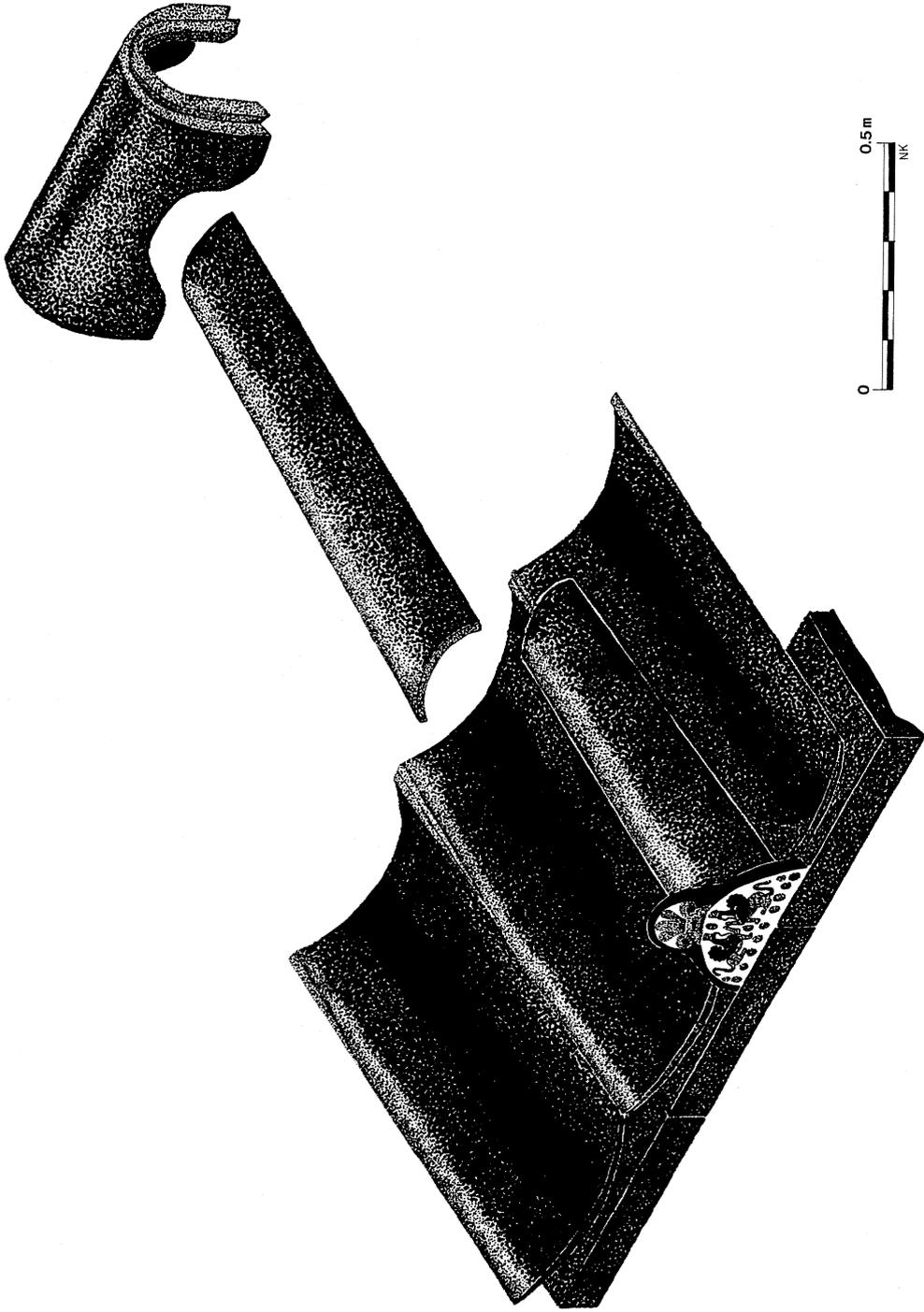


Fig. 11. Reconstruction of roof tiles, Archaic Temple

in the type of clay used; they will be referred to as “A” and “B”, following the designation of Rhomaios.³⁴ Tiles of type A are made from clay of much better quality than that of B.

Tiles

Normal pan and cover tiles are the well-known Laconian type with no unusual variation. Tile fragments at the site are so small that it has not been possible to piece together one whole tile preserving both length and width. Only the width for the upper edge of one pan tile has been recovered: **5** has been joined from fragments and measures 0.435 m. in width (Fig. 15:5); the length remains unknown.

Sixty-two pan tiles would be required along each horizontal row, if each had a width of approximately 0.45 m. If a length of about 0.8–0.9 m. can be assumed, five rows would cover each slope of the roof, for a total of 620 pan tiles and an almost equal number of cover tiles. The longest fragment is **1**, at 0.44 m. The upper or overlapped edge of one cover tile, **7**, preserves the full width of 0.21 m. (Fig. 16). Of a required 124 antefixes, only 22 fragments were found (as of 1975). Of the approximately 60 ridge tiles needed, only a single small fragment, **22**, was positively identified (Fig. 17).

The outer surfaces of the tiles were covered with a wash or glaze in two colors, red and black.³⁵ Color is well preserved on **2, 4, 8, 9, 13, 22, 29, 31, 32,** and **33**. It cannot be determined whether the tiles were each a single color and laid in a checkerboard pattern of red and black or if bands of red tiles decorated the eaves edge of the roof.³⁶ The two colors were never found on the same fragment, but the tiles are so fragmentary that even this possibility should not be excluded. The one identified ridge cover-tile fragment, **22**, is black but is only a small portion of the whole tile (Fig. 17).³⁷ Many tiles show traces of burning; since several of these were deeply buried at the site, it appears that the temple burned.³⁸

Antefixes

The antefixes are an unusual Laconian type with two-tiered decoration (Fig. 12). Both tiers are decorated in low relief with details painted black and red. On the lower part, two sphinxes are seated face to face wearing a high polos, one front paw upraised. Their wings curve back towards their heads. On type B, the area around and between the sphinxes is

³⁴ Rhomaios (1933) published antefixes and disks from the 1902–1908 excavations. Fragments were also published by Kourouniotis (1903, p. 164, fig. 4; 1910, pp. 276–278, figs. 4, 5; Van Buren 1926, pp. 18–19, 135 [nos. 6 and 7], 179–180, 182, figs. 59, 60; Yalouris 1965, pl. 134:γ; 1973, figs. 14–16; 1979, pl. 43:b [antefix] and c [disk reconstruction]; Parlama 1974, pl. 124; N. Cooper 1989, pp. 100–111; 1990, pp. 65–93. No mention was made of Archaic terracottas in the 1812 excavations by Haller *et al.* (see note 3 above).

³⁵ Van Buren (1926, p. 60) says that the tiles from the Temple of Artemis Orthia at Sparta were red and black.

³⁶ A complete eaves tile would be needed to determine if this were the case; eaves-tile edges would not narrow to overlap and rest on another tile and could be identified from the greater width of the lower edge, but none could be pieced together.

³⁷ Ridge cover-tile fragments, when small, are difficult to distinguish from regular tiles. Two diagnostic features are the arched cut-out edge that fits over the regular cover tiles and the edge that overlaps the next ridge tile in the row. No painted designs have been found on any tile fragments; at other sites the ridge cover tile carries painted decoration.

³⁸ I have seen shepherds gather tiles to serve as a hearth, and they have probably been doing this for centuries, but of course these are found on the surface, not deeply buried in Classical layers.

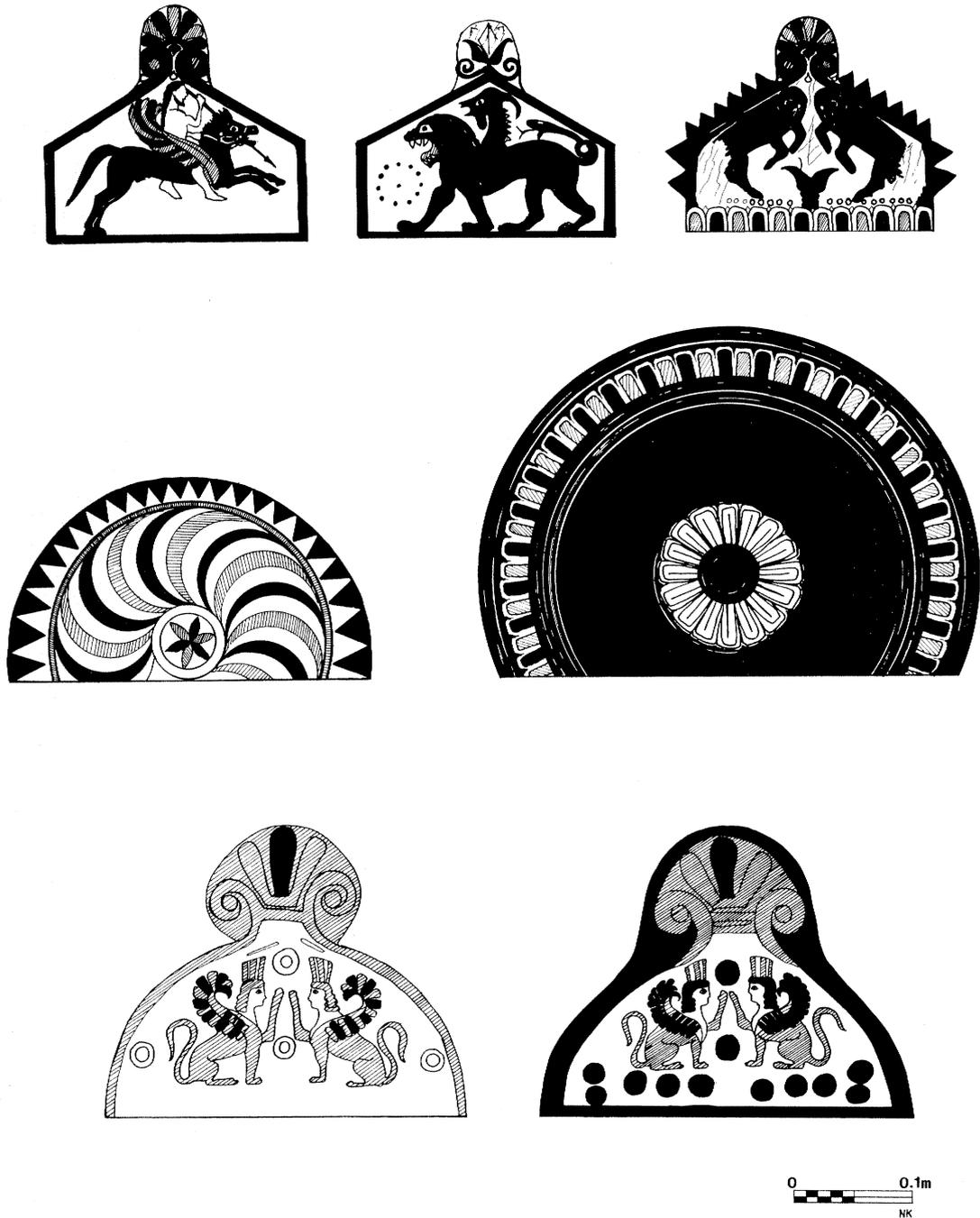


FIG. 12. Top: Antefixes from Thasos. Middle: Antefixes from Amykleion, Sparta (left) and the Temple of Hera, Olympia (right). Bottom: Antefixes "A" and "B", Archaic temple of Apollo, Bassai

filled with roundels, one between their poloi, one between their bodies, and a row across the bottom of the antefix with a double roundel at both lower corners. On type A, hollow “wreaths” were used instead of roundels, in the same position between the poloi and the bodies and also behind each tail; they are lacking across the bottom of the antefix. On type B, the background is covered only with a fine slip the same color as the body of the clay. Color is better preserved on type A. The background color of the bottom part of the antefix face was a white-cream slip. On **33** (Fig. 19), the poloi were decorated with three wide vertical stripes of red.³⁹ The bodies of the sphinxes were painted red, as were the wreaths and roundels. The faces of the sphinxes were the white color of the background, their eyes and hair red; the red is now a dark reddish brown.

The sphinxes and wreaths fit within the lower half of the antefix, which takes the normal Laconian semielliptical shape. On the backs of some fragments, the shape of the cover tile to which the antefix was attached can be seen. The outline of the antefix followed the contour of the cover tile and was wider by approximately 0.027 m. on each side. A reconstruction of the B type from fragments is 0.31–0.33 m. wide and 0.245 m. high. This height includes the smaller semielliptical shape attached at the top, which is decorated with a three-leafed palmette above two spirals linked together by two horizontal bars (Fig. 12). Red and black petals probably alternated on the palmette; the central petal could have been red or black since each antefix did not have to be colored exactly the same. All palmettes did not necessarily have the same number of petals. There is a smaller red, painted petal between the relief petals and the top of the spiral on **33** (Fig. 19), giving the effect of a five-petaled palmette. The eyes of the spirals were red. The whole back of the antefix was black. A narrow band of red outlined the shape of the antefix (Fig. 19:33). Type B has a slightly recessed border all around the outer edge of the antefix, 0.02–0.027 m. wide, while A is flat and has a narrower painted band of reddish brown. The paint continues over the edge and marks off a narrow band 0.005 m. wide, on the side surface as well as the resting surface (Fig. 19:32).

Disk Akroteria

Fragments of two disk akroteria have been found in deep pits in the bedrock and in trenches under the foundations of the Classical temple.⁴⁰ The disks, labeled A and B (Rhomaïos’ designation), are of the same two types of clay used for the regular tiles and antefixes.⁴¹ A is much better preserved than B. The fragments are not catalogued here, as they were catalogued and published by Rhomaïos and Van Buren, with elaborate descriptions and reconstruction drawings.⁴² There were nine fragments of disk B (Pl. 52:b) and eight

³⁹ Kourouniotis (1910, cols. 276–277, fig. 4) described the painted decoration, but the photograph did not show it adequately.

⁴⁰ See Yalouris 1979, pp. 95–96 for the findspots in the 1970 excavations. Rhomaïos only gave general locations: east side (of the Classical temple) and 30 meters from the southeast corner of the Classical temple; he does not say in which direction, but this would encompass the area of the Archaic Temple.

⁴¹ Rhomaïos 1933, pp. 1–12.

⁴² Rhomaïos 1933, p. 8, fig. 3, pl. 3. No measured drawings have been published; no scale is given in the photographs. Rhomaïos gave some measurements of fragments in the text and diameters for both disks: 1.06 m. for A (height 0.815 m.); 1.08 m. for B. Van Buren also published fragments of the roof (1926, pp. 18–19, 179–180, 182, figs. 56–58).

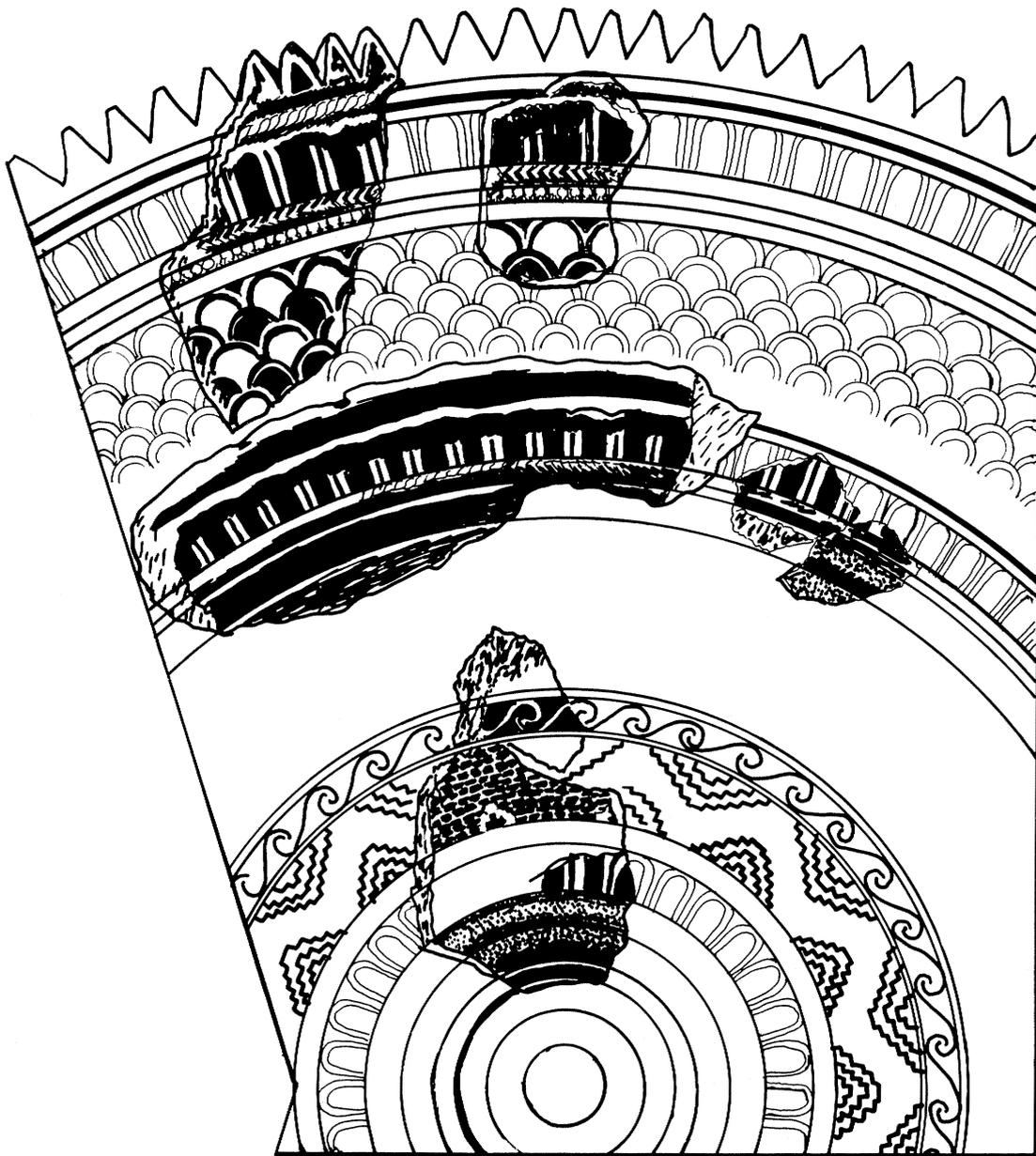


FIG. 13. Bassai, akroterion disk A, fragments (Rhomaïos 1933, pl. 2)

from disk A (Fig. 13). Rhomaïos concluded that the disks were almost the same size and belonged to one building, which had a disk only on one end, but that they were not used at the same time. He dated B later than A.⁴³

⁴³ Rhomaïos 1933, pp. 9, 17.

Unlike the antefixes, the disks are of a more common and generally known design. Both were molded, incised, and painted in concentric bands of color; black, red, and white were used (see Fig. 14). Geometrical patterns covered flat and molded zones. Alternating black and red Doric leaves were outlined in white, and scale pattern and double guilloche were used. White chevrons and slanted lines decorated the toroi. A string of white pomegranates decorated one narrow zone.⁴⁴

Yalouris reconstructed disk A incorporating additional fragments that were found in his excavations. His new reconstruction⁴⁵ differs from the older drawings in that the width of the zone with scale pattern is increased to include more rows of scales (five more, for a total of ten) and a previously unknown double guilloche is added at the inner edge of the scale zone. Large joining fragments preserve the decoration in every zone from the top of the guilloche to the sawtoothed rim at the outer edge of the disk. He has also changed some of the other inner zones. Yalouris does not provide a measurement for the diameter of the disk.

The questions could be asked: why are there only fragments of two disks at the site? Did the Laconian roof have only one, or were there disks at both ends? It would be expected that, if two disks were used simultaneously and one (or both) was damaged and replaced, there would be fragments of three (or more) disks at the site. Models seem to show that there could be a disk at the top of each pediment, at the front and back of the temple. A model from Skillous (Mazi) which is clearly a representation of a Laconian roof has a disk at the end over the doorway as well as a disk on the back end.⁴⁶ Another model from Skillous is less clearly Laconian; it has a broken-off projection which could be a disk over the door and a clear representation of a disk on the back end.⁴⁷ The models do not provide much detail, for example, whether the disk was flat bottomed and sat on a plinth or was cut away at an angle and sat directly over the peak of the roof.⁴⁸ Whether the Archaic Temple at Bassai had akroterion disks at both ends of the roof cannot now be determined.

Dating of the Roof

The area in and around the Archaic Temple was cut away at the north end, leveled, and generally made clean and neat for the Classical temple that replaced it. The material taken from the Archaic Temple was used to fill in the terrace built for the newer structure, thus destroying the stratigraphy of the older building. The excavators dated material coming from their trenches around the Classical temple by saying, "the cult was established in the late geometric and continued without interruption through the following centuries."⁴⁹ This is obviously "mixed fill". Many fragments of the roof were also found in the excavations

⁴⁴ For these designs, see Rhomaïos 1933, pls. 1, 2 and Yalouris 1979, pl. 43:c. I illustrate the disks here only to give the reader an idea of their appearance; I have not attempted to reproduce the intricacy of the designs or the color. Figure 14:A is a composite, drawn from the figures provided by Yalouris and Rhomaïos.

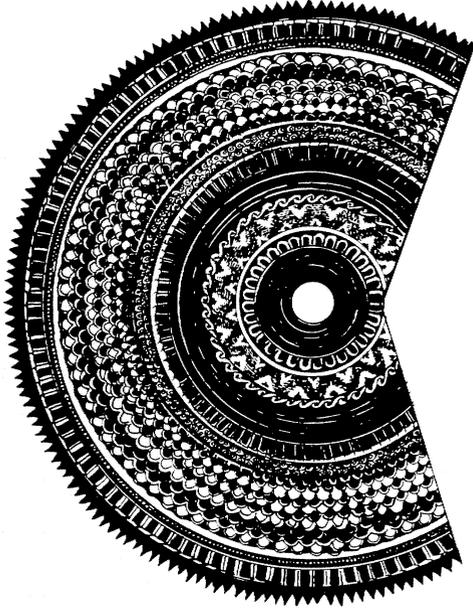
⁴⁵ Yalouris (1979, pl. 43:c) published a photo of the reconstructed disk (with no scale). He plans a fuller publication.

⁴⁶ Athens, N.M. no. 11120: Schattner (1990, no. 47, p. 91, pl. 25) dates it to the third quarter of the 6th century B.C. and gives bibliography.

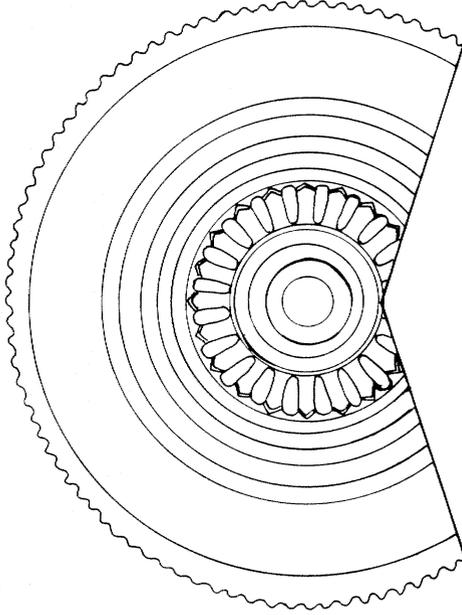
⁴⁷ Olympia Museum, BE 803 2553: Schattner (1990, no. 48, pp. 91–92, pl. 26) dates it to the Archaic period.

⁴⁸ Yalouris 1972, pp. 92–93, pls. 41–43. His captions label the models "from Babes".

⁴⁹ Yalouris 1979, pp. 91, 94.



Disk B



Disk A

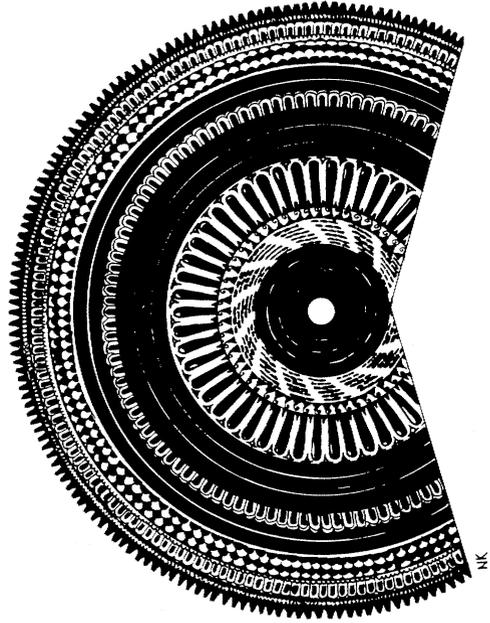


Fig. 14. Top: Akroterion disk B from the Archaic temple (Rhomaïas 1933, pl. 3). Akroterion disk A from the Archaic temple (Rhomaïas 1933, pl. 2, and Yalouris 1979, pl. 43-c). Bottom: Akroterion disk from the Heraion, Olympia (Yalouris 1972, pl. 1)

of the 1970's in the Archaic Temple foundations. It is unlikely that any of these were in pockets of undisturbed destruction debris; they provide no help in dating the roof.

Rhomaïos and Van Buren used comparanda to date the roof: Laconian vase painting and the other known disk akroteria, mainly those from Sparta and the disk of the Heraion at Olympia. Both really only dated the A roof, saying that the B roof came later. Rhomaïos rightly dated disk A to the same time as the Heraion disk but wrongly dated disk B after it, perhaps following Van Buren, who divided disks into two categories, the Heraion type, dated to the middle of the 7th century B.C., and the "coarse" type. She put disk B from Bassai into the latter category and dated it to the end of the same century. Disk B from Bassai has little in common with Van Buren's "coarse" category; it is closer in design to the Heraion disk. Although the latter is two and one-half times the diameter of the Bassai B disk, when it is reduced to the size of disk B, the similarities in structure become apparent (see Pl. 52:a and b). Both disks A and B from Bassai date to the same time as the Heraion disk. Rhomaïos was troubled because he thought that antefixes that were used with disk A should look like those from the Heraion; by dating disk B later, he could pair the different-looking sphinx antefixes with it (he dated the antefixes to about 550 B.C.). He thought that all the antefixes, types A and B, were used with disk B, while some other antefixes (still missing) were used with disk A. At Olympia, the antefixes used with the disk akroterion are almost simplified miniatures of it. A molded rosette was in the center, a wide flat band next, and at the outer edge, instead of the saw-toothed band, was a Doric-leaf zone bordered by half-round toroi (Fig. 12, middle, right). The only Laconian element of the Bassai antefixes is the semielliptical shape of the lower half, while the palmette added at the top is foreign (Fig. 12, center left and bottom). On a canonical Laconian roof, only for the Heraion at Olympia and for the Apollo Temple at Bassai can antefixes be paired with akroterion disks, which are similar even though the antefixes of these two roofs are very different.⁵⁰ No antefixes of other design have been found at Bassai.

Rhomaïos and Van Buren saw that the combination at Bassai of figural antefixes with an akroterion disk was similar to the elements of the roof at Neandria,⁵¹ but they failed to look at the construction of the rest of the roof. The Neandria roof was the Hybrid type, while the Bassai roof was canonical Laconian, as was the Heraion roof. The Laconian roof has curved pan and cover tiles and a curved ridge tile. The Hybrid roof used the same Laconian curved cover and ridge tiles with flat pan tiles. The canonical Laconian roof went out of fashion before 550 B.C., replaced by the Hybrid, at least for important architecture.

No Laconian roof similar to that of Bassai has been found in the Peloponnese. The roofs of the Bouleuterion at Olympia and the roof of the Temple of Athena at Alipheira had semielliptical antefixes with the face of a gorgon in low relief, but not enough is known about the tiles to decide whether the roof was canonical Laconian or Hybrid. On a roof at Bigla (Asea) that was clearly Hybrid, a small palmette antefix was used. The palmette resembles the one on the top tier of the Bassai antefix.

The Bassai roof has parallels to the roofing found at the Herakleion on Thasos. There, several types of antefixes were recovered mixed with fragments from two akroterion

⁵⁰ At Sparta, many antefixes and disk akroteria have been found, but no restorations have been made which link one type of antefix to a disk akroterion. No two-tiered antefixes similar to the Bassai type have been found at Sparta. Figure 12, center left, represents a typical Laconian antefix; see Buschor and Von Massow 1927.

⁵¹ Van Buren 1926, p. 19.

disks.⁵² It is unclear how all the fragments are to be reconstructed. The akroterion disks are similar to Bassai disk A and were probably used with a Laconian antefix decorated with a gorgon's face (molded in low relief and painted), surrounded by a Doric-leaf zone set off by half-round toroi and edged with sawteeth. The outer part is almost an akroterion disk in miniature. The Thasos roof shows that the combination of molded figural antefixes with an akroterion disk could have been used at another site. Other antefixes (Corinthian type) from Thasos have figures in the lower part and a small palmette between spirals perched at the top, similar to the two-tiered arrangement of the Bassai antefix (Fig. 12, top).

The roofs at Bassai and Olympia were canonical Laconian; the Heraion roof had traditional Laconian antefixes, Bassai did not. From the excavators' descriptions, the roofs at Thasos were not canonical Laconian. Other roofs from Asia Minor that have antefixes with molded figural decoration (but not palmettes) which have been compared to the Bassai antefix are from the Hybrid-type roof.

When the Bassai antefixes are compared to Laconian semielliptical antefixes from other sites, it is quickly apparent that the palmette at the top (Fig. 12, center left, for a Laconian antefix of usual shape and size) is an element foreign to the Laconian style. The type used at Bassai showed the beginnings of great changes in the Laconian roof. After the introduction of the palmette as decoration, the flat pan tile was adopted also. Some conclusions about how the Bassai antefix fits into the chronology of the development of Laconian roof revetment can be made, but only the shortest summary will be given here.⁵³

The Laconian antefix (although having a face of roughly semielliptical shape instead of angular) seemed to follow the same general course of development as that taken by Corinthian antefixes: from the earliest minimal flat face conforming to the size of the cover tile behind, in later phases its size was increased, until it stood out beyond the sides and top of the cover tile. The decoration was at first a flat surface of monochrome, then decorated with incised and painted designs, and then with painted moldings and with figures and anthemia in relief. It always retained its semielliptical shape except at Bassai. After the adoption of the palmette as decoration came a change in overall roof design from the canonical Laconian roof to the Hybrid type with flat pan tiles instead of curved. The Bassai roof, because of the use of the palmette as decoration on the antefix, although the tiles are still of the canonical Laconian type (curving pan tiles), can be put near the end of the use of the canonical Laconian roof on temples.

All the decorative motifs that were used on the disk akroteria and antefixes from Bassai are devices common to Laconian vase painting. The first attempts to date the roof were made on the basis of comparisons of the painted designs with Laconian pottery, placing the roof into a range of dates. Although they failed to recognize the foundations of the Archaic Temple for what they were, the excavators knew that the roof fragments were proof that such a temple had existed on the site. Rhomaios dated the first phase of the temple to 620–600 B.C.,⁵⁴ since he dated disk A to 620–600 B.C. from the hallmark of the painted

⁵² *Thasos I*, pp. 36–48, pls. 8–10.

⁵³ For a longer treatment, see N. Kelly, "The Development of the Laconian Antefix," in preparation.

⁵⁴ Rhomaios 1933, p. 16.

pomegranate frieze compared with Laconian II pottery decoration; the sphinx antefixes he said could possibly be as low as 550 B.C.⁵⁵ There is only one antefix, however, which could be dated this late, **32** (Fig. 19); it is probably a repair. Recent redating of Laconian II by Boardman places the style between 620 and 580 B.C.⁵⁶ This is the dating range for the two roofs, with A tiles later than B.

Even the plain tiles can add information about the Archaic Temple. Since there are two sets of tiles with almost identical features, repairs to the roof can be postulated. Traces of severe burning on some tiles indicate disaster followed by replacement of part of the roof. Probably only a partial repair was made; this is indicated by the count of tiles at the site. So many more of the B tiles than the A were found in and around the Archaic Temple (in the excavations of 1970), and the B tiles are so weather-beaten, it seems that they were the original roof and that the A tiles repaired and replaced only some of the B tiles (unless further excavation uncovers larger quantities of A tiles). As was the case with the tiles, the A disk was better preserved than the fragments of disk B, which were so worn that not much painted decoration was visible even to Rhomaios (Pl. 52:b). The replacement antefixes are of at least two types, one which could date to about 550 B.C. The tiles have shown the correct sequence of the two roofs and, as a result, the correct sequence of the akroterion disks, the B disk preceding the A.

This conclusion is based on an accumulation of evidence that was not available to Rhomaios, as he did not excavate the foundations of the Archaic Temple and study the undecorated fragments of the roof. He did not know how large the roof was, and so could not make a judgment on the amounts of tiles of each type that would be required to construct two full roofs. He attempted to prove that A tiles were imported. The only Archaic tile that he published, **23**, a pan tile (Fig. 18), was found in the excavations of the early 1900's and published along with stamped tiles dating not earlier than the end of the 4th century B.C.⁵⁷ Rhomaios presented this one fragment (now in the Olympia Museum storerooms) as Archaic because he believed that it was the same as type B. The letter alpha is inscribed on it (not stamped). The thickness is nearly the same as the tiles of type B, but although the color is nearly the same, the composition of the clay seems different; it is less coarse. The alpha could be the result of accidental scratches made by a plow or other sharp farming tool. If I follow his reasoning correctly, he thought that the Archaic and 4th-century tiles came from a local bed of red clay used from Archaic times through the 3rd century and that the tiles, antefixes, and disk made of tan clay were imports.⁵⁸ He believed that this

⁵⁵ Much of the confusion seems to come from one antefix, **32** (Fig. 19), which Van Buren compared to antefixes from Asia Minor. It especially resembles one from Pazarli (see Åkerström 1966, p. 172, pl. 87), where the beasts are molded and painted.

⁵⁶ Boardman 1963, pp. 2-4. At the Heraion at Olympia, recent attempts to date the temple, and presumably the roof also, provide a range of dates from 600 to 570 B.C.; see Felsch 1990, p. 312, note 35.

⁵⁷ Rhomaios 1933, p. 16, fig. 8. Rhomaios published five of the fifteen stamped tiles that are in the Olympia Museum storerooms: inv. nos. BE 1136(a-i) p 3314(a-i).

⁵⁸ Tile stamps do not mean that the tiles were manufactured locally; see Felsch 1979 and 1990. An additional problem for Rhomaios' argument is that the akroterion disk of the Heraion of Olympia is made of red clay similar to disk B at Bassai and that there are tiles found at Sparta which are made from red clay; both the A and

local red clay would have been used to imitate the imported (presumably Spartan) tan clay set, replacing it, and on this basis he dated the B tiles after type A.

ROOF CORRESPONDENCES

Although the roof of the Classical temple was Corinthian in type and the shift of type from Laconian to Corinthian and of material from terracotta to marble is a large one,⁵⁹ the change in roof type was moderated by the retention of the Archaic character of the overall design. The Classical roof had a row of antefixes along each of the eaves (Fig. 10, bottom), which parallels the arrangement on the roof of the Archaic Temple. The design of the roof of the Classical temple does not conform to the usual design of its period, and its archaism can also be explained as a preservation of architectural conventions at the site. For its period, *ca.* 420 B.C., the Classical temple roof should have a lateral sima at the eaves. Even a summary and incomplete list of temples built in the last half of the 5th century indicates lateral simas on the Hephaisteion, the temples of Poseidon at Sounion and Ares at Athens, the Propylaia (although not a temple), and the temples of Nemesis at Rhamnous, Apollo on Delos, Hera at Argos, and Nike at Athens. Even earlier, the Temple of Zeus at Olympia had a lateral sima. Fourth-century temple roofs had a lateral sima with “rampant” antefixes (which are elevated to sit on top of the lateral sima); these include the temples of Asklepios at Epidauros, Athena Alea at Tegea, Zeus at Nemea, the Philippeion at Olympia, and the Tholos at Delphi. The Old Athena Temple on the Akropolis at Athens had a lateral sima with rampant antefixes. Two 5th-century uses of marble antefixes without lateral simas were on the Parthenon and the Erechtheion. Another marble roof which has antefixes instead of a lateral sima is the Temple of Athena at Alipheira, dated to 500–490 B.C.⁶⁰

The central akroterion of the Classical temple at Bassai was floral, not figural, perhaps also a departure from the prevailing style and in imitation of the Archaic predecessor. Several badly mutilated fragments of the tendrils have been found at the site.⁶¹ The central motif probably was a disk shape with raised toroi such as those marble akroteria from Sparta and the surrounding area catalogued by Lauter-Bufé.⁶² The disk shape echoed the terracotta disk akroterion of the Archaic Temple (see Fig. 10, bottom). There was no figural sculpture on the Classical pediment, either. Pedimental sculpture was not used with disk akroteria, and the imitation of an Archaic-looking roof and pediment could also have been furthered in the Classical temple with the absence of sculpture.

B tiles at Bassai, or the clay for them, could have been imported. No studies have been made to identify types of clay used in the tiles other than by visual inspection.

⁵⁹ When temples were rebuilt, the change in roof design from Laconian to Corinthian was a common one, as was the change from Corinthian terracotta tiles to marble. A re-creation of Laconian terracotta tiles in marble is more unusual but did occur on Delos; see *Délos* XXXII, pp. 75–90. Marble Laconian tiles were also found on the Akropolis at Athens (Wiegand 1904, pp. 179–181; Ohnesorg 1988) and at the Demeter Sanctuary at Sangri on Naxos (*Délos* XXXIII, no. 4, pl. 58). These are all Archaic examples. Laconian tiles were not used on temples in mainland Greece in the Classical period.

⁶⁰ Orlandos 1968, pp. 73, 86–87, figs. 54, 55. Of course, buildings with roofs of *terracotta* that used the antefix instead of the lateral sima continued throughout the ancient period.

⁶¹ These will be included in F. Cooper’s catalogue of blocks in *Bassitas* III. I believe that some marble fragments with concentric raised half-round moldings were also found but catalogued as miscellaneous.

⁶² Lauter-Bufé 1974, esp. A 2, p. 206, pl. 79:2.

TERRACOTTA GEISON

Some terracotta corner fragments of thick, flat, plaquelike tiles with no indications of being overlapped or overlapping other tiles were found at the site. Any corner fragments of regular pan tiles would have had edges which identified them as such. Two or three small fragments, about 0.05 m. square, had one corner preserved; they were probably from the back edge of the geison. The fragments were of the B type of clay. No front edges of the geison fragments were found. When laid on the roof, the geison tiles would have provided the level surface on which the bottom edge of the antefixes rested (Fig. 11).⁶³ If the plaques are not geison tiles, they could have been terracotta triglyphs, as at Thermon, or ceiling tiles, as the excavators at Kalapodi propose for their plaques.⁶⁴ The Bassai fragments were too small to be assigned a function with certainty. Terracotta geisa would be expected on a canonical Laconian roof.

CONCLUSIONS

Because the later temple of Apollo at Bassai was not built exactly on top of the Archaic temple, the plan of the earlier building has been recovered. Careful study has revealed that the Archaic temple was conceived and built as a monumental structure approaching a hundred ancient feet in length. Part of the foundation is carved from the bedrock, part is made of huge boulders, and sections of carefully laid double-faced walls fill the gaps. The interior of the temple was divided into areas as was necessary for the functioning of the cult. Even though the temple was oriented north-south, it had a doorway in the adyton which faced the rising sun. Columns may have stood against the sekos walls, as is shown by the form of the stone bases. Both columns and projecting members were probably of wood, bonded into mud-brick walls.

Much information about the exterior appearance of the Archaic temple is missing: for example, the arrangement of the façades on both the north and south ends of the temple remains uncertain. If there was a column (or columns) in antis, no trace remains. Only the fragments of tiles provide information about the exterior of the building. The roof was one of the most important elements of the appearance of the temple. It was lavishly decorated with antefixes molded and painted with exotic figures and large akroterion disks painted with geometric designs, which stood out against the sky.

⁶³ Many fragments were found of the terracotta geison for the Laconian roof at Halieis (N. Cooper 1990, figs. 1, 12, 14). Fragments of terracotta geison were found at the Sanctuary of Artemis Orthia at Sparta; they are reported as having traces of an oblique black band on their outer faces (George and Woodward 1929, figs. 100 and p. 141, no. 36, p. 132, fig. 99). The roof at Olympia is drawn as if such fragments also existed there: *Olympia* II, p. 169, Tafelband II, pl. XCVIII:3-4; also, Benndorf 1899, p. 8, fig. 7. Mallwitz in a more recent publication (1972, p. 143, fig. 114) retains this construction at the eaves. The terracotta geison from Olympia may not have been decorated with other than black color. Also from Olympia is a terracotta geison with a cavetto painted with Doric leaf, bordered at top and bottom by narrow flat bands; the top band carries pendent Doric leaf and the bottom a sawtooth design (Durm 1910, p. 199, fig. 173). There are two fragments of a terracotta geison 0.84 m. high from Alipheira. The face is a molded cavetto decorated with raised Doric leaf; at the top of the face is a narrow flat band: Orlandos 1968, p. 115, fig. 88.

⁶⁴ Hübner 1987, p. 81. The Kalapodi plaques are too large to be triglyphs (some are fully preserved).

The temple was positioned on a ridge dominating the sanctuary with a view towards the east, west, and south. Recovery of an ancient stairway at the northwest corner of the building indicates that the temple was approached from this direction. Part of the western wall was placed against an outcropping of bedrock at the edge of a steep drop, making the temple impassable on the west, while there was a narrow passageway on the east and probably a wider open area at the north.

All the information about the Archaic temple that was recovered can be used to explain some of the more puzzling features of the Classical temple. The orientation, floor level, and arrangement of interior rooms were faithfully reproduced. The elongated plan of the Classical temple and its Archaic peristyle of six by fifteen columns no longer can be seen as an early stage in a multi-phased building program gone awry. The design was necessary in order to add the surrounding peristyle to an interior structure which was dictated by the Archaic predecessor. The Classical temple was sited only about ten meters to the north of the Archaic temple, where a wider terrace could be accommodated as needed to support a surrounding colonnade. It followed the same north–south orientation. The east doorway into the adyton was placed in a position corresponding exactly to the doorway in the Archaic temple. Even the roof of the Classical temple shows archaisms which can be traced to the design of the Laconian-type roof of the Archaic temple.

The similarities of these two buildings are so striking that if the later did not directly copy the earlier, and a phase (or phases) intervened between them, then the power of religious conservatism at the site must be seen as the controlling factor in the design of each successive phase of rebuilding the Temple of Apollo. Any rebuilding or updating of the temple was based on the original plan of the Archaic temple. There is not sufficient evidence to support the theory that there were four successive temples to Apollo. It is more likely that an Archaic temple was partially destroyed by fire and repaired. When the Archaic temple was finally demolished and the Classical temple built, the location of the temple was moved only slightly.

CATALOGUE

TILES

All the fragments catalogued here were broken; measurements are given for the maximum preserved dimensions. The widths of **5** and **7** are the only measurements taken on the full width, made up of joining fragments.

Laconian Tiles

The Laconian tiles are of two types. The clay of type A is fine, compact, and tan in color, Munsell 2.5YR 6/6; that of type B is coarser and heavier, has gritty inclusions, and is an orange-red color, Munsell 7.5YR 6/6 and 7/6 to 5YR 7/7. From four fragments found in trench T11 in 1970, **5** is a complete upper or overlapped edge of a type B pan tile.⁶⁵ It is 0.435 m. wide, tapering toward the overlapping lower edge (Fig. 15). The concave

⁶⁵ For the location of this trench and others, see Yalouris 1979, p. 92, fig. 1 and 1973, p. 39, fig. 1; Parlama 1974, p. 144, no. 1 (γενικόν τοπογραφικόν).

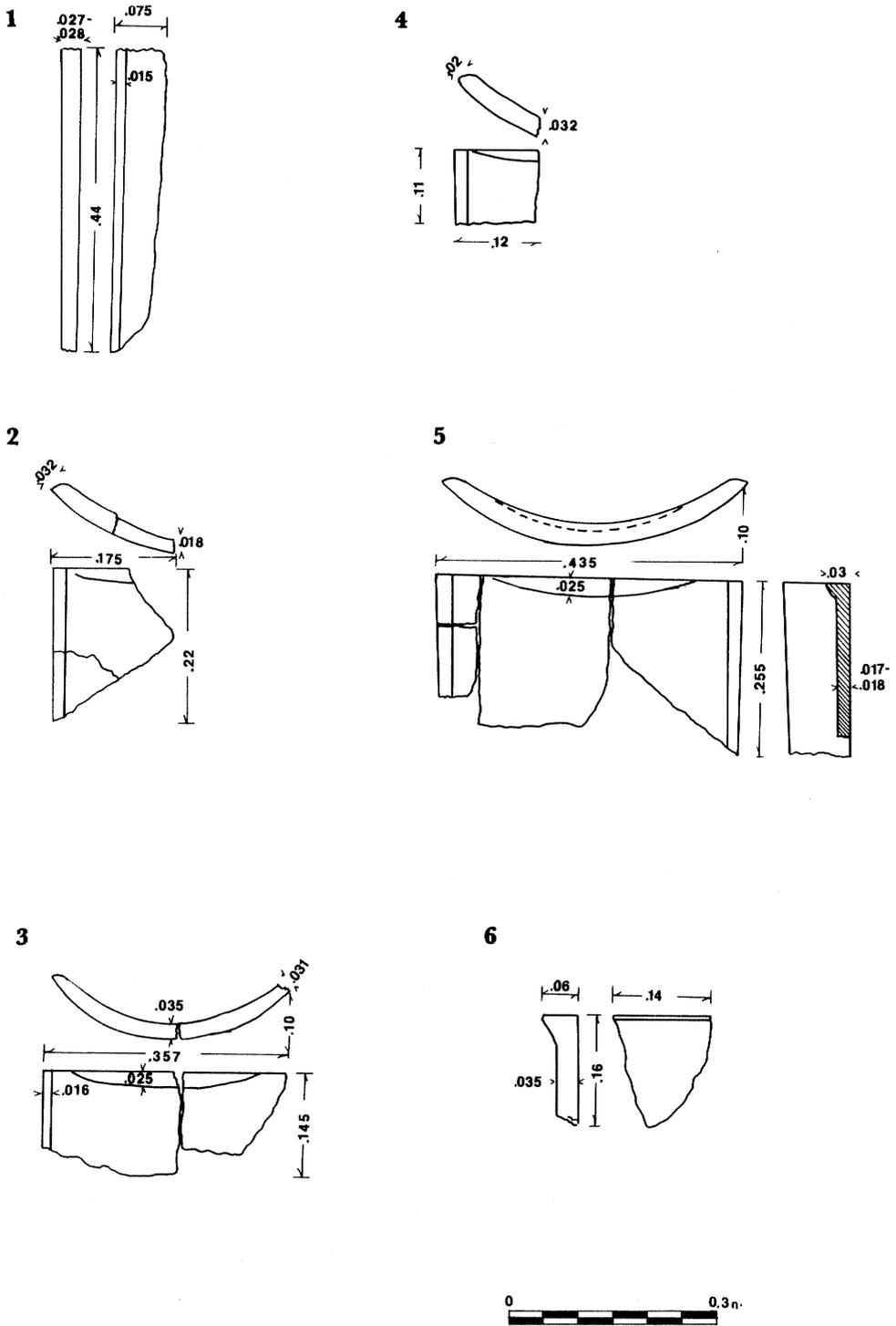


FIG. 15. Pan tiles

center of the tile is some 0.11 m. lower than the edges. A lip is molded on the surface of the overlapped edge; it is 0.02 m. wide and 0.03 m. high at the center of the tile and tapers off at the side edges. The purpose of the lip was to keep wind-driven rain from entering between tiles where they overlapped. Along the length of the tile each edge has a flat surface 0.025 m. wide at the upper end, which tapers and disappears at the lower edge. The width of the lower, or overlapping, edge can be estimated, since the overlapping edge fitted between the bands along the side edges of the tile beneath it. The narrower or overlapping lower edge of the pan tile should therefore be about 0.05 m. less in width than the upper edge, or approximately 0.40 m.

No complete cover tiles were recovered, but one fragment, **7**, preserves the height of the tile, 0.06 m., and the total width of the upper edge, 0.21 m. Thickness of the pan and cover tiles varies from 0.016 to 0.025 m. (Fig. 16:7–9, 11–13). No length for either pan or cover can be reconstructed. The two colors, red and black, were never found on the same fragment, but the fragments are too small to exclude this possibility. The type B tiles were much more weather-beaten than the type A tiles. Many tiles had been charred a dark gray and are now thin and brittle. There is no difference in the profiles of tiles of types A and B.

One ridge cover fragment was found, **22** (Fig. 17) of type A, from the bottom of the cover where it arched over the regular cover tile. Its outer surface is painted black, with no other decoration visible. Whether the curving top of the ridge cover had other colors or designs is uncertain. The ridge cover is reconstructed for convenience with a single opening and completely black, not double length with two openings. There is no evidence from the fragments at Bassai that favors one reconstruction over the other.⁶⁶

Rhomaïos was unaware of fragments of the ridge cover and was only able to measure the back of the disk where he thought the first ridge cover tile began.⁶⁷ He described the section of the cover at the back of the disk as greater than a half-circle, having an outer diameter of 0.69 m. and, at the base, a width of 0.55 m. He thought that the diameter of the regular ridge cover tiles would be the same or slightly smaller.⁶⁸ The ridge cover was considerably smaller, probably less than 0.3 m. in either height or width. He must have measured at some point on the back of the disk at an interior projection where struts connect front to back before the exterior surface narrowed to the size of the ridge cover, perhaps at the point where it divides into two separate plates, because his measurement of more than 0.5 m. conflicts with his calculation that the center of the disk stood 0.14 m. above the top of the pediment. The struts that are preserved on the back of the disk from the Heraion at Olympia illustrate how he could have mistakenly measured his diameter at a strut of larger dimension (see Pl. 52:c). Rhomaïos illustrated in his figure 1 the bottom edge of disk A where it rested on the pediment of the temple astride the peak. From the angle of the intersection of

⁶⁶ The Olympia ridge cover is shown with a length equal to one pan-tile width by Benndorf (1899, p. 8, fig. 7) and Boettischer (1883, p. 196, fig. 39). The Orthia ridge cover is restored to a length equal to the width of two pan tiles: George and Woodward 1929, figs. 100 and 105. The authors said that they based their reconstruction on the Gela specimen; see Orsi 1906, col. 284, fig. 211, pl. XXIV:2. The Gela example, however, is only equal to one pan-tile width.

⁶⁷ It is not apparent how Yalouris (1979, pl. 43:c) arrives at the placement of the center of the disk in relation to the preserved fragments in his reconstruction. There is no published photograph of the back.

⁶⁸ Rhomaïos 1933, p. 2.

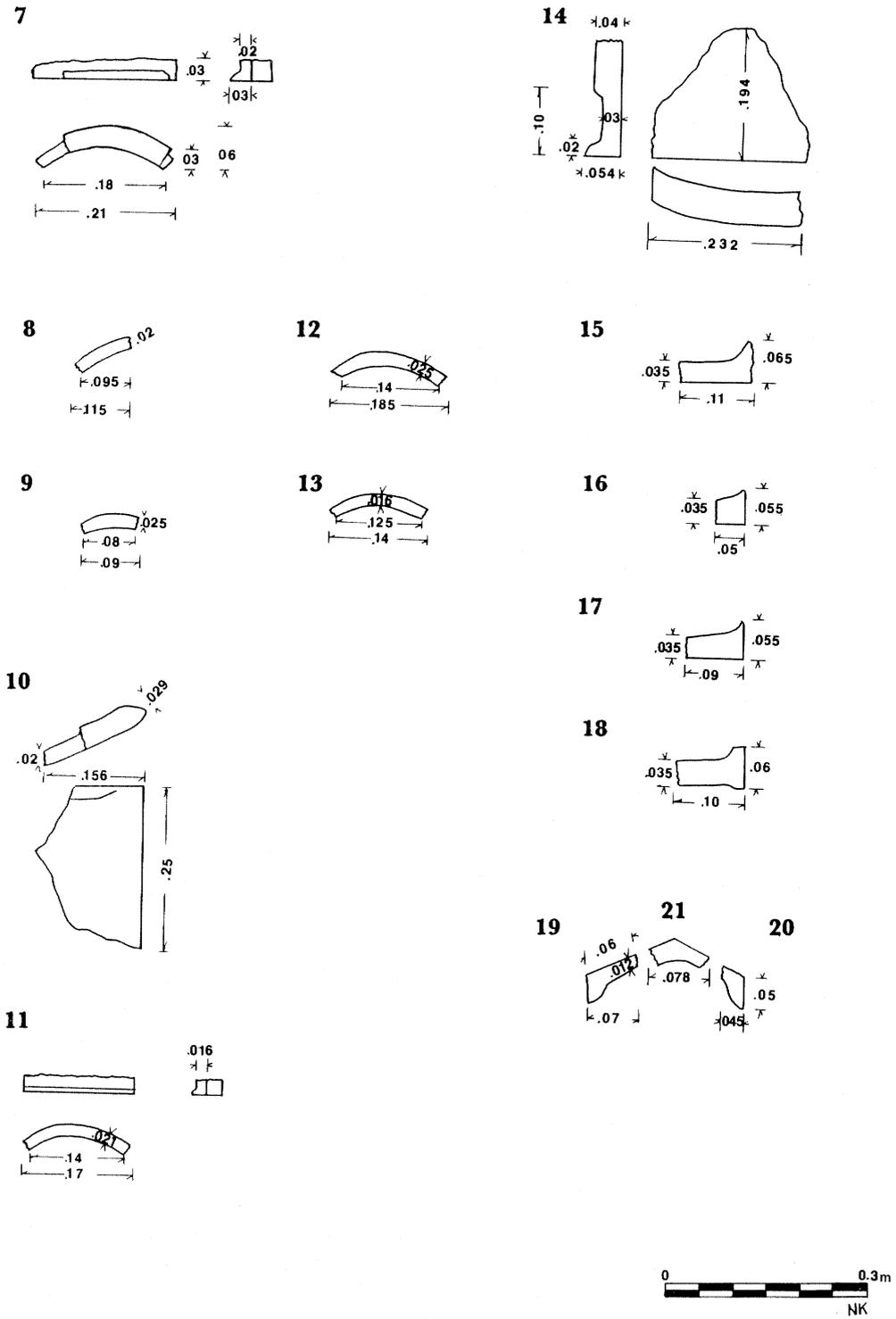


FIG. 16. Cover tiles

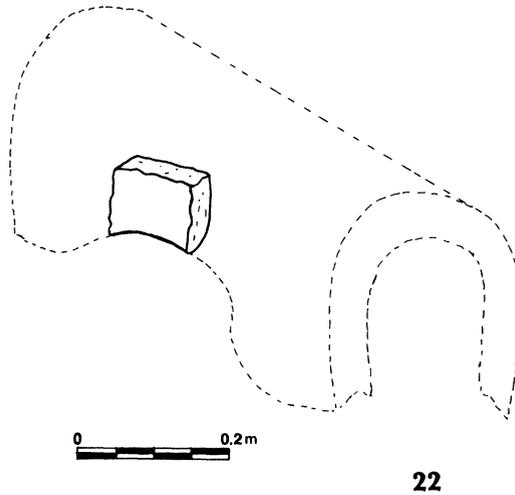


FIG. 17. Ridge cover-tile fragment

the finished bottom with the concentric rings of the decoration, he calculated that the slope of the roof was approximately 1:3.4 and that the center of the akroterion was 0.14 m. above the apex of the roof.⁶⁹ The diameter of the ridge cover should correspond to about twice this, or 0.28–0.3 m., assuming that the center of the face of the disk marked the center of the ridge cover. This would give the ridge cover a height of about 0.3 m. instead of 0.55–0.69 m.⁷⁰ Whether there were decorative moldings where ridge covers joined is unknown. At other sites, among ridge covers of a comparable size and date, some had moldings, others did not.⁷¹

⁶⁹ Rhomaios 1933, p. 2.

⁷⁰ This puts it in the size range of known ridge covers from similarly sized buildings, for example the Temple of Artemis Orthia, where from a much larger fragment than any found at Bassai the ridge cover is restored to 0.36 m. wide and 0.24 m. high, arched but not strictly semicircular (George and Woodward 1929, figs. 100, 105). At Kalydon, a ridge cover tile was published by Rhomaios, drawn as 0.42 m. wide and 0.24 m. high (Rhomaios 1937, p. 309, fig. 4, pl. 2:4). For a clear picture of how the ridge tile connects to the back of the disk from the Heraion at Olympia, see Plate 52:c. The ridge cover tile from the Esquiline, as restored by J. Durm (Benndorf 1899, pp. 1–51; p. 39, fig. 42), is shown as 0.3 m. high and 0.56 m. wide.

⁷¹ The ridge cover at Halieis had no moldings along the overlapping edge, which is preserved in several large fragments; see N. Cooper 1990, figs. 1, 13. A ridge cover from the Sanctuary of Artemis Orthia at Sparta had a decorated band of four toroi and a row of Doric cymation, plus a broken zone which is restored as another larger toros, applied to the overlapping end of the cover. The toroi are black, the tongues alternately black and red; the tile itself is described as having a light buff slip. The Olympia ridge cover is shown by Benndorf (1899, p. 8, fig. 7) with some toroi at the overlapping ends, but in a more recent reconstruction of the same roof, no toroi are shown: Winter 1990, p. 14, fig. 1.

Corinthian Tiles

Corinthian tiles **6** and **14** are of red clay, and **15–21** are of tan clay with a fine cream slip on the surface (Figs. 15, 16).⁷² The red-clay examples have no slip. No decorative parts (antefixes or simas) that could have been used with these tiles were found. The pieces are from pans and covers only, so fragmentary that no estimation can be made as to the original length and width. The tiles show all the flanges and beveled edges that are common from Late Archaic to Classical times.⁷³ Examples of the corner of a pan tile and more than half the width of a fragment of a cover tile of tan clay from the 1970–1975 excavations and a fragment of a red-clay pan tile from the 1959 excavations are preserved in the Olympia Museum storerooms. It is possible that the building to the northwest of the Classical temple was roofed with Corinthian tiles.

- 1. Laconian pan tile** Fig. 15
L. 0.44, W. 0.075, Th. 0.27–0.28 m. Notebook 2, p. 2. Fabric: type B clay. 1970 excavations.
Side edge of longest Laconian pan-tile fragment seen at site. Max. W. of border along side edge 0.015 m.
- 2. Laconian pan tile** Fig. 15
L. 0.22, W. 0.175, Th. 0.032 m. Side edge Th. 0.03, max. W. of border along side edge 0.02, W. of lip along top edge 0–0.02 m. Fabric: type B clay. Trench 3b, basket 5. Notebook 1, p. 13. 1970 excavations.
Two joining fragments, upper left corner. Traces of black color.
- 3. Laconian pan tile** Fig. 15
L. 0.145, W. 0.357, Th. 0.031–0.035 m. Max. W. of border along side edge 0.016, W. of lip along top edge 0–0.025 m. Fabric: type B clay. Trench 3e, basket 14. Notebook 2, p. 9. 1970 excavations.
Two joining fragments, upper left corner.
- 4. Laconian pan tile** Fig. 15
L. 0.11, W. 0.12, Th. 0.02–0.032 m. Max. W. of border along side edge 0.02, W. of lip along top edge 0–0.02 m. Fabric: type B clay. Trench 3b, basket 5. Notebook 1, p. 13. 1970 excavations.
Upper left corner. Many traces of black color.
- 5. Laconian pan tile** Fig. 15
L. 0.255, W. 0.435, Th. 0.03 (top edge), Th. 0.017–0.018 m. (side edge). Max. W. of border along side edge 0.027, W. of lip along top edge 0–0.025 m. Fabric: type B clay. Trench 11a, layer 1. Notebook 2, p. 12. 1970 excavations.
Four joining pieces provide full width of overlapped edge, with raised lip in center section of top edge.
- 6. Corinthian pan tile** Fig. 15
L. 0.16, W. 0.14, Th. 0.035–0.06 m. Fabric: red clay. Trench 11d, layer 1. Notebook 2, p. 15. 1970 excavations.
No corners preserved. Edge of tile with apex of raised border broken off. Similar fragments, notebook 3, p. 32.
- 7. Laconian cover tile** Fig. 16
L. 0.20, W. 0.21, Th. 0.023–0.03 m. W. of lip along top edge 0.01 m. Fabric: type B clay. 1970 excavations.
Fragment of overlapped edge with raised lip. Full width preserved.
- 8. Laconian cover tile** Fig. 16
W. 0.115, Th. 0.02 m. Fabric: type B clay. 1970 excavations.
Fragment of overlapping edge. Red color on top surface of tile.
- 9. Laconian cover tile** Fig. 16
W. 0.09, Th. 0.025 m. Fabric: type B clay. 1970 excavations.
Fragment of overlapping edge. Black color on top surface of tile.

⁷² See N. Cooper 1989, pl. 55 for profiles of some of these tiles.

⁷³ N. Cooper 1989, pp. 48–51.

- 10. Laconian pan tile** Fig. 16
L. 0.25, W. 0.156, Th. 0.02–0.029 m. W. of lip along top edge 0.02 m. Fabric: type A clay. Trench 11b. Notebook 2, p. 2. 1970 excavations.
Upper right corner fragment, overlapped edge.
- 11. Laconian cover tile** Fig. 16
L. 0.20, W. 0.17, Th. 0.016 m. W. of lip along top edge 0.01 m. Fabric: type A clay. 1970 excavations.
Fragment of overlapped edge preserving raised lip.
- 12. Laconian cover tile** Fig. 16
W. 0.185, Th. 0.025 m. Fabric: type A clay. 1970 excavations.
Fragment of overlapped edge, nearly complete width.
- 13. Laconian cover tile** Fig. 16
W. 0.14, Th. 0.016 m. Fabric: type A clay. 1970 excavations.
Fragment of overlapping edge. Black color on top surface of tile and on exposed edge.
- 14. Corinthian pan tile** Fig. 16
L. 0.194, W. 0.232, Th. 0.04–0.054 m. Flange in overlapping edge, L. 0.10 m. Fabric: heavy, coarse red clay. Trench 16a 3, layer 2. Notebook 2, p. 13. 1975 excavations.
Fragment of overlapping edge. Black color on top surface of tile. Similar to tiles made of type A clay. An example with the overlapping flange broken off has a thickness of 0.047 m., and the side edge rises to 0.074 m.: Olympia Museum, from trench B, cut B of the 1959 excavations.
- 15. Corinthian pan tile** Fig. 16
W. 0.11, Th. 0.035–0.065 m. Fabric: fine tan clay. Trench 5d, layer 1. Notebook 2, p. 14. 1970 excavations.
Fragment of side edge. White slip on top surface of tile.
- 16. Corinthian pan tile** Fig. 16
W. 0.05, Th. 0.035–0.055 m. Fabric: fine tan clay. Trench 11. Notebook 2, p. 5. 1970 excavations.
Fragment of side edge. White slip on top surface of tile.
- 17. Corinthian pan tile** Fig. 16
W. 0.09, side edge Th. 0.055, body Th. 0.035 m. Fabric: fine tan clay. Trench 11. 1970 excavations.
Fragment of side edge. White slip on top surface of tile.
- 18. Corinthian pan tile** Fig. 16
W. 0.10, Th. 0.035–0.06 m. Fabric: fine tan clay (greenish). Trench 10b, layer 1. Notebook 1, pp. 39–40; notebook 3, p. 11. 1970 excavations.
Fragment of side edge with thinner part of flange broken off. White slip on surface. Similar fragments found in trenches 3, 10, 11, and 16. Similar fragment (of red clay) found in 1959 excavations, trench B, cut b, now in Olympia Museum storerooms.
- 19. Corinthian cover tile** Fig. 16
W. 0.07, Th. 0.012–0.05 m. Fabric: fine tan clay. Notebook 3, p. 26. 1975 excavations. Same as notebook 2, p. 5, trench 11, 1970 excavations.
Fragment of beveled side edge. White slip on surface.
- 20. Corinthian cover tile** Fig. 16
W. 0.045, Th. 0.05 m. Fabric: fine tan clay. Notebook 2, p. 5. 1970 excavations. Same as notebook 3, p. 26, 1975 excavations.
Fragment of beveled side edge. White slip on surface. Similar fragments found in trench 11, basket 2, 1970 excavations. Similar fragments from Bassai in Olympia Museum.
- 21. Corinthian cover tile** Fig. 16
W. 0.078, L. along slope preserved at right 0.07, and left 0.04, Th. 0.02–0.03 m. Fabric: fine tan clay. Trench 3b, basket 5. 1970 excavations. Notebook 1, p. 24. Similar fragments in notebook 3, pp. 4–5, 9–11, 17, 26, 30, 1975 excavations.
Fragment of peaked top. White-slip top layer, peeling off in sheets. Similar fragments from basket 2, also near surface layer. Similar fragments in Olympia Museum.
- 22. Laconian ridge cover** Fig. 17
W. 0.10, H. 0.085, Th. 0.025 m. Fabric: fine tan clay. Found in tile pile, 1988.
Fragment of cut-out portion of ridge cover where it fits over cover tile. Tile tapers to sharp edge at cut-out portion. Only part of opening preserved, broken all

around. Black color well preserved, extending over cut-out edge and onto back surface for 0.001 m.

23. Laconian pan tile Fig. 18

Olympia Museum BE 1136(a) p 3314(a).

W. 0.162, L. 0.011, Th. 0.02–0.22 m. Fabric: coarse red clay. Found in 1902–1910 excavations.

Upper edge of pan tile with possible alpha scratched into upper surface at upper edge. Incision wedge-shaped and 0.002 m. deep; letter height 0.085 m., width 0.065 m. (bottom). Two small pick marks on either side of letter, and another off-center below. Published: Rhomaios 1933, p. 16, fig. 8.

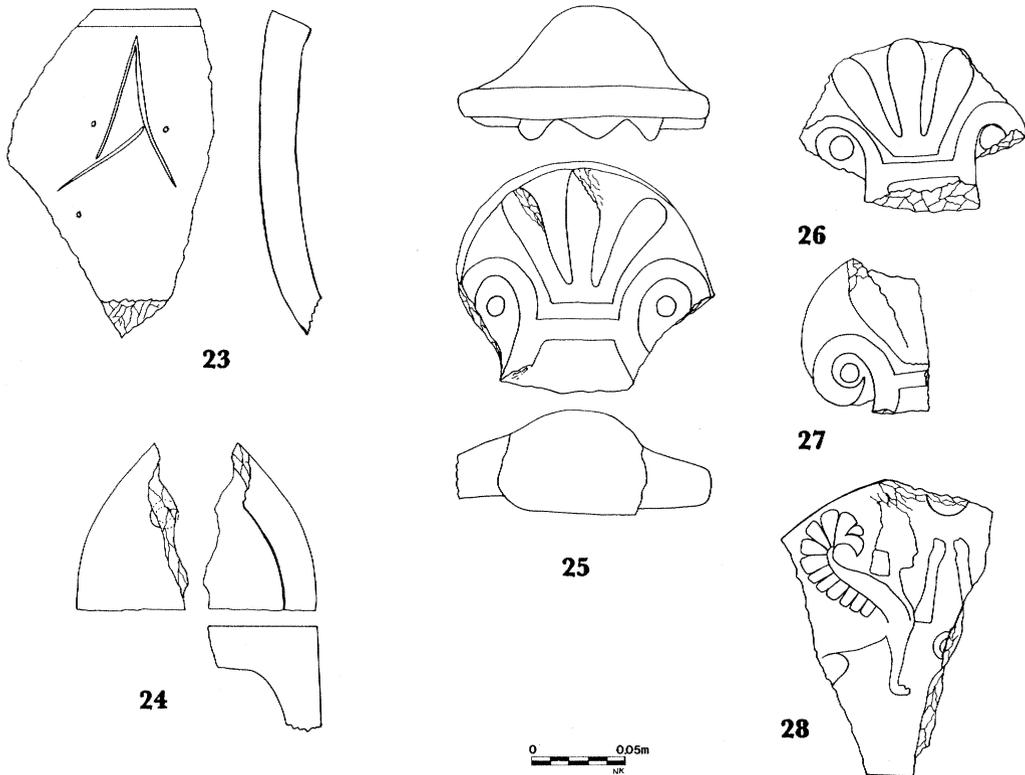


FIG. 18. Pan tile and type A antefixes

ANTEFIXES

The antefixes catalogued are those published by Rhomaios, Kourouniotis, Parlama, and Yalouris, except for **24**, **30**, and **36–39**, which are published here for the first time. All except one are of two types, labeled A and B by Rhomaios from the two distinct types of clay. The total reconstructed size is 0.31–0.33 m. wide and 0.245 m. high. The most completely preserved example is **45** (Fig. 20). It is type B; joining fragments preserve the full height of over half the antefix bottom, and the top is complete.

While decoration of the two types is essentially the same, there are slight differences in size and spacing of the decorative elements. Not all came from the same mold. The most striking similarities are in the lower corners of **41–45** (Fig. 20). These five may be from the same mold. All show traces of the cover tile that was attached behind.

Antefix **32** is different in many details (Fig. 19). The clay is not exactly the same as either A or B. The relief is not so high, and the feet of the sphinx are not raised from the surface at all but only painted on. On this example the paint is best preserved. A fine white-cream slip covers the surface. The body of the sphinx is painted with stripes of reddish brown with the white showing between, in a pattern perhaps representing the ribs of the animal.⁷⁴ Along the bottom edge, under the sphinx, a wavy line is painted in reddish brown, and there is an additional dark reddish line marking the bottom edge. The color continues on the under surface marking a band on the resting edge. There is a red painted dot in the center of the hollow wreath behind the tail of the sphinx. The decoration along the bottom of the antefix does not appear on other examples. It is possible that **32** was a much later replacement for a broken antefix.

- 24. Antefix** Fig. 18
H. 0.098, W. 0.06, Th. 0.03–0.054 m. Fabric: fine tan clay, type A. Trench 15, 18-XI-75, box 114. 1975 excavations.
Lower left corner of antefix, bottom surface preserved. Decoration preserved, edge of wreath. Trace of cover-tile attachment on back, for a tile 0.022–0.027 m. thick.
- 25. Antefix** Fig. 18
Athens, N.M. 18369e
H. 0.106, W. 0.128 m. 1902–1908 excavations.
Palmette from top of antefix. No border, or border broken off. Decoration preserved: both spirals, horizontal bar, three-leafed palmette. Published: Kourouniotis 1910, col. 277, fig. 4.
- 26. Antefix** Fig. 18
H. 0.95, W. 0.117 m. Trench 6. 1970 excavations.
Palmette from top of antefix. Decoration preserved: both spirals, one horizontal bar, three-leafed palmette. Published: Yalouris 1973, p. 53, fig. 16; Parlama 1974, pl. 124:b.
- 27. Antefix** Fig. 18
H. 0.082, W. 0.065 m. Fabric: fine tan clay, type A. 1902–1908 excavations.
- Left side of top palmette. Decoration preserved: left spiral, one palmette leaf 0.055 m. long, one horizontal bar. Published: Van Buren 1926, fig. 60, left, pl. 18.
- 28. Antefix** Fig. 18
H. 0.105, W. 0.09 m. Fabric: fine tan clay, type A. 1902–1908 excavations.
Central portion, broken at top and both sides, small section of bottom edge and left curving side edge preserved. Decoration preserved: left-hand sphinx, head, wing, and front legs; face and polos broken away. Foreleg of right-hand sphinx, left half of wreath between sphinxes, lower half of upper wreath. Traces of attached cover tile on back, of a diameter slightly smaller than face of antefix. Published: Rhomaios 1933, pp. 13–14, fig. 6, center; Van Buren 1926, fig. 59, right, pl. 18.
- 29. Antefix** Fig. 19
H. 0.10, W. 0.10 m. Fabric: fine tan clay, type A. 1902–1908 excavations.
Left side of antefix, bottom surface, curving side edge preserved, corner broken off. Decoration preserved: body, hind foot, and tail of left-hand sphinx, one wreath behind sphinx (Diam. 0.15 m.). Traces of curving cover tile preserved on back, of a diameter slightly smaller than face of antefix, covered with

⁷⁴ Kourouniotis 1910, cols. 277–278; Rhomaios 1933, p. 14, note 1.

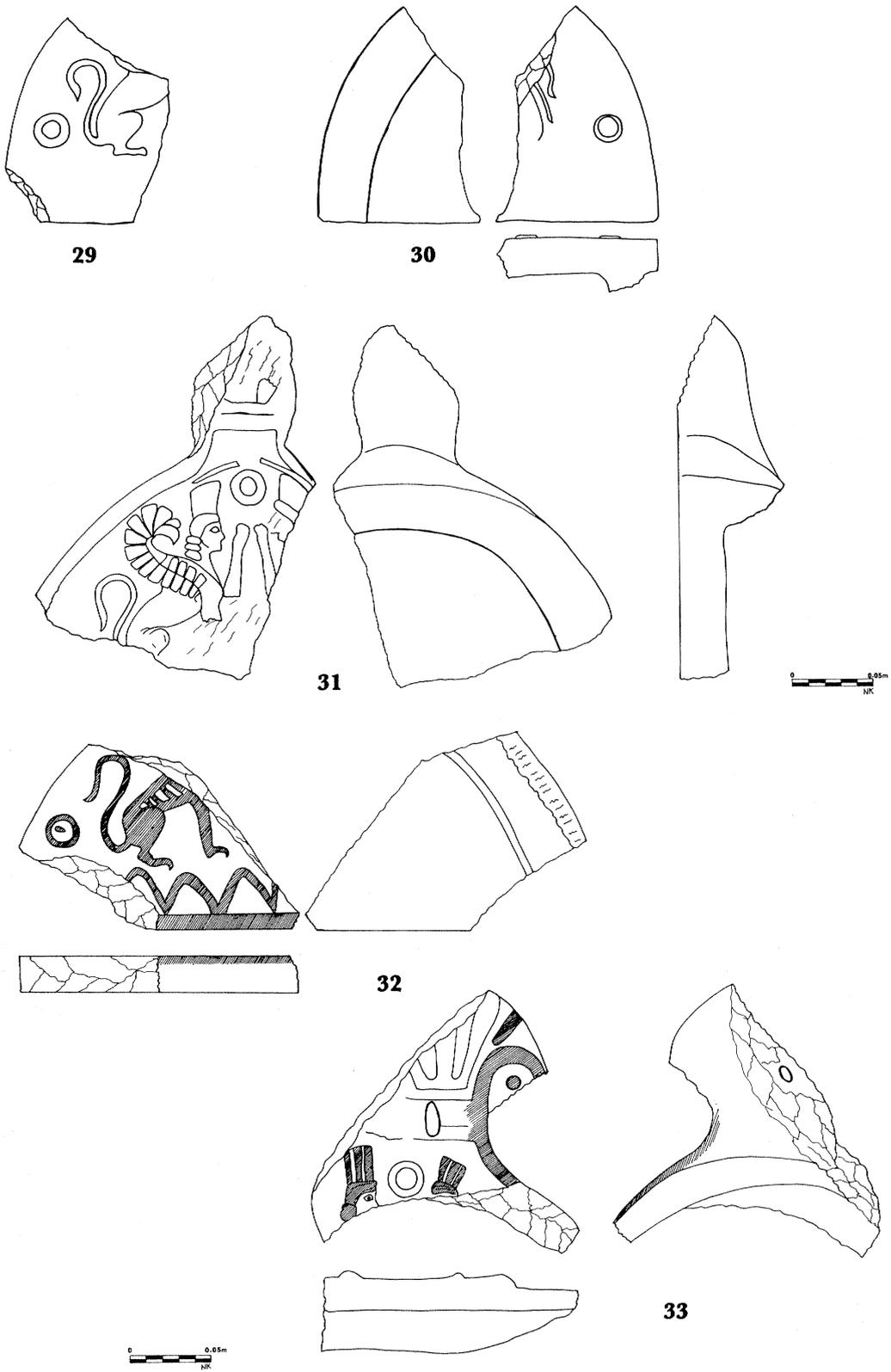


FIG. 19. Type A antefixes

black color. Published: Rhomaïos 1933, pp. 13–14, fig. 6, right; Van Buren 1926, fig. 59, left, pl. 18.

30. Antefix Fig. 19

H. 0.13, W. 0.10, Th. 0.023–0.03 m. Fabric: fine tan clay, type A. Trench 15, 10-IX-75, box 104. 1975 excavations.

Lower right corner of antefix, bottom edge and curving side preserved. Decoration preserved: rump and tail of right-hand sphinx, one wreath behind sphinx (Diam. 0.02 m.). Traces of attachment of curving cover tile on back, Th. 0.03–0.035 m.

31. Antefix Fig. 19

Athens, N.M. 13869 α

H. 0.225, W. 0.17, Th. 0.035 m. Fabric: fine tan clay, type A. 1902–1908 excavations.

Left central portion of antefix, curving edge of left side preserved. Center bottom of palmette with bottom horizontal bar. Face, polos, wing, tail, body, and upraised forepaw preserved of sphinx on left; feet broken off. Polos and upraised forepaw of sphinx on right partially preserved, as well as wreath (Diam. 0.02 m.) between poloi. Traces of red color around eye, black on back of palmette, whole surface covered by reddish incrustation. Slight indication of outside border (W. 0.01 m.). Traces of curving cover-tile attachment on back protruding 0.04 m. Published: Kourouniotis 1910, col. 277, fig. 5; Rhomaïos 1933, pp. 13–14.

32. Antefix Fig. 19

Athens, N.M. 13869 γ

H. 0.115, W. 0.172, Th. 0.025–0.027 m. Fabric: pinkish clay, inclusions up to 0.003 m., white surface. 1902–1908 excavations.

Left lower central portion, bottom edge, and part of curving side edge preserved; corner broken off. Decoration preserved: left-hand sphinx, body and tail, beginning of wing, one wreath behind sphinx, painted wavy line resting on 0.01 m. strip of paint along bottom edge. Paint continues under resting edge of bottom. Dark reddish brown paint. Body of sphinx painted in stripes as if to mark its ribs. Height of relief less than in other examples; feet not raised at all but painted only. On back, shallow finger-made groove marks curving trace of cover-tile attachment. Clay is not typical type A. Published: Kourouniotis 1910, col. 277, fig. 4; Rhomaïos 1933, p. 14, note 1.

33. Antefix Fig. 19

Athens, N.M. 13869 β

H. 0.13, W. 0.12 m. Fabric: fine tan clay, type A. 1902–1908 excavations.

Central portion of antefix, sections of right edge preserved. Decoration preserved: central wreath (Diam. 0.02 m.), polos and hair of sphinx on right, polos, hair, and part of face with eye of sphinx on left. Poloi painted with three broad vertical bands of red; hair and eye red. Right-hand leaf of three-leaved palmette preserved full height, part of spiral. Between petal of palmette and spiral, another petal painted in red, not molded. Hole poked through antefix at center of horizontal bars under palmette. Published: Kourouniotis 1910, col. 277, fig. 4; Rhomaïos 1933, pp. 13–14.

34. Antefix Fig. 20

No dimensions. 1902–1908 excavations.

Right half of top palmette. Decoration preserved: traces of three-leaved palmette and beginning of right-hand spiral. Surface broken away. Published: Van Buren 1926, fig. 60, right, pl. 18.

35. Antefix Fig. 20

H. 0.085, W. 0.123 m. 1902–1908 excavations.

Top palmette. Decoration preserved: three-leaved palmette, trace of horizontal bar, beginning of right-hand spiral. Surface broken away at both sides. Published: Rhomaïos 1933, pp. 13–14, fig. 6, left; Van Buren 1926, fig. 60, center, pl. 18.

36. Antefix Fig. 20

H. 0.08, W. 0.075 m. 1970 excavations.

Left central portion, broken all around. Decoration preserved: body, wing, and tail of left-hand sphinx; face broken away. Published: Yalouris 1973, p. 52, fig. 14; Parlama 1974, pl. 124.

37. Antefix Fig. 20

H. 0.055, W. 0.13 m. Fabric: coarse red clay, type B. 1970 excavations.

Central portion, broken all around except for part of right curving edge. Decoration preserved: head of right-hand sphinx, wearing polos.

38. Antefix Fig. 20

H. 0.12, W. 0.16, Th. 0.02–0.55 m. Fabric: coarse red clay, type B. Trench 15, box 101. 1970 excavations.

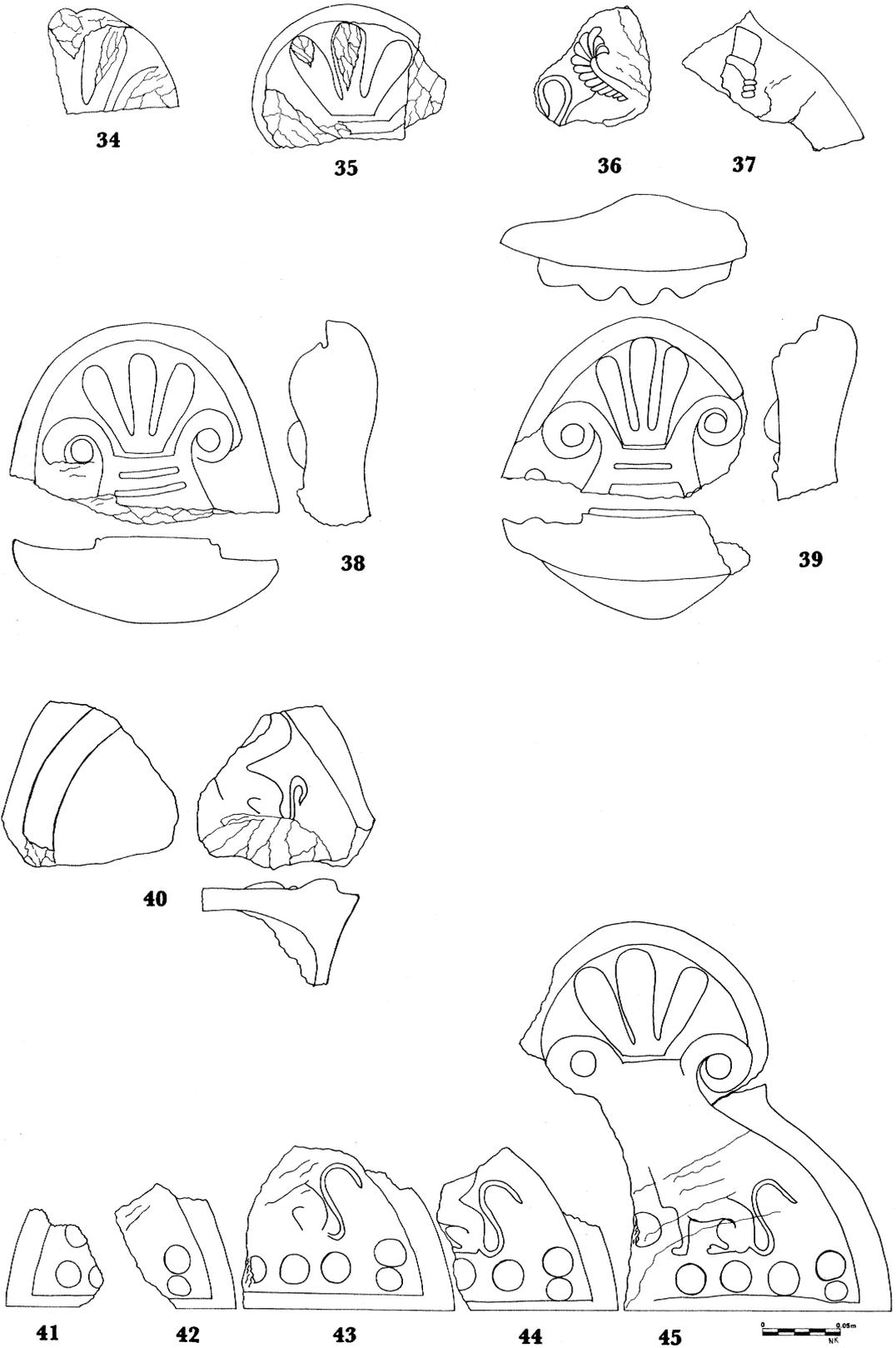


FIG. 20. Type B antefixes

Top palmette. Decoration preserved: both spirals, both horizontal bars (W. 0.008 m.), three-leaved palmette, leaves (L. 0.055–0.06 m.), eyes of spirals (Diam. 0.017 m.). Border around outside edge 0.01–0.015 m. wide.

39. Antefix Fig. 20

H. 0.12, W. 0.16, Th. 0.04–0.75 m. Fabric: coarse red clay, type B. Trench 15, 18-IX-75, box 114. 1975 excavations.

Top palmette. Border around outside edge (W. 0.01–0.15 m.). Decoration preserved: both spirals, both horizontal bars, three-leaved palmette.

40. Antefix Fig. 20

H. 0.115, W. 0.11, Th. 0.02 m. Fabric: coarse red clay, type B. Trench 15, 19-IX-75, box 114. 1975 excavations.

Right central portion, fragment broken all around. Decoration preserved: body, tail, wing of right-hand sphinx. Traces of cover tile attached to back, preserved for length of 0.06 m.

41. Antefix Fig. 20

H. 0.06, W. 0.06 m. Fabric: coarse red clay, type B. 1902–1908 excavations.

Lower left corner, bottom edge, and curving side edge preserved. Decoration preserved: one roundel and parts of two others. Full roundel, Diam. 0.015 m. Outside border, W. 0.016 m. at side, 0.007 m. at bottom. Published: Rhomaios 1933, p. 15, fig. 7.

42. Antefix Fig. 20

H. 0.08, W. 0.075 m. Fabric: coarse red clay, type B. 1902–1908 excavations.

Lower right corner, bottom edge, and curving side edge preserved. Decoration preserved: two roundels one on top of other, touching. Bottom sphere, Diam. 0.015 m.; top, Diam. 0.018 m. Border at side, W. 0.015 m.; at bottom, W. 0.006 m. Published: Rhomaios 1933, p. 15, fig. 7.

43. Antefix Fig. 20

H. 0.15, W. 0.132 m. Fabric: coarse red clay, type B. 1970 excavations.

Lower right corner, bottom edge, and curving side edge preserved. Decoration preserved: hindquarters of body and tail of sphinx, three and one-half roundels along bottom in row, at corner one roundel stacked on top of another: top, Diam. 0.02 m., bottom, Diam. 0.015 m. Border, W. 0.01 m. at bottom, 0.017 m. at side edge. Published: Yalouris 1973 p. 53, fig. 15; Parlama 1974, pl. 124.

44. Antefix Fig. 20

H. 0.15, W. 0.113 m. Fabric: coarse red clay, type B. 1903 excavations, Kotilon.

Lower right corner, bottom edge, and curving side edge preserved. Decoration preserved: hindquarters of body and tail of sphinx, beginning of wing, two and one-half roundels along bottom in row, Diam. 0.02 m.; at corner one sphere stacked on top of another: top, Diam. 0.018 m., bottom, Diam. 0.015 m. Published: Kourouniotis 1903, col. 164, fig. 4.

45. Antefix Fig. 20

H. 0.25, W. 0.235 m. Fabric: coarse red clay, type B. 1959 excavations.

Right half of bottom of antefix and palmette and both spirals of top of antefix preserved. Bottom edge and curving side edge preserved. Decoration preserved: body and tail of right-hand sphinx, resting feet and upraised paw; four roundels along bottom in row, Diam. 0.02 m.; at corner one sphere stacked on top of another: top, Diam. 0.018 m., bottom, Diam. 0.015 m. Part of sphere between bodies of sphinxes preserved. Border, W. 0.012 m. at bottom, 0.019 m. at side. Published: Yalouris 1965, pl. 134:γ; 1979, pl. 43:b.

BIBLIOGRAPHY

- Åkerström, Å. 1966. *Die architektonischen Terrakotten Kleinasiens*, Lund
- Benndorf, O. 1899. "Über den Ursprung der Giebelakroterien," *Öjh* 2, pp. 1–75
- Bergquist, B. 1990. "Primary or Secondary Temple Function: The Case of Halieis," *OpAth* 8, pp. 23–37
- Boardman, J. 1963. "Artemis Orthia and Chronology," *BSA* 58, pp. 1–7
- Boettischer, A. 1883. *Olympia, das Fest und seine Stätte*, Berlin
- Boyd, T., and W. Rudolph. 1978. "Excavations at Porto Cheli and Vicinity, Preliminary Report IV: The Lower Town of Halieis, 1970–1977," *Hesperia* 47, pp. 333–355

- Cockerell, C. 1860. *The Temples of Jupiter Panhellenius at Aegina and of Apollo Epicurius at Bassae near Phigaleia in Arcadia*, London
- Cooper, F. 1968. "The Temple of Apollo at Bassai: New Observations on Its Plan and Orientation," *AJA* 72, pp. 103–111
- . 1980. *PECS*, 1980, pp. 145–146 (Bassai)
- . 1992. *The Temple of Apollo Bassitas IV*, Princeton
- Cooper, N. 1979. "The Archaic Sanctuary at Bassai" (lecture, Boston 1979), abstract in *AJA* 84, 1980, p. 202
- . 1989. *The Development of Roof Revetment in the Peloponnese* (SIMA-PB 88), Jonsered
- . 1990. "Archaic Architectural Terracottas from Halieis and Bassai," *Hesperia* 59 (*First International Conference on Archaic Greek Architectural Terracottas*), pp. 65–93
- Coulton, J. 1977. *Greek Architects At Work*, London
- . 1988. "Post Holes and Post Bases," *MeditArch* 1, pp. 58–65
- Délos XXXIII* = P. Courbin, *L'Oikos des Naxiens (Exploration archéologique de Délos XXXIII)*, Paris 1980
- Dinsmoor, W. B. 1933. "The Temple of Apollo at Bassai," in *MMS IV*, New York, pp. 204–227
- Durm, J. 1910. *Handbuch der Architektur: Die Baukunst der Griechen*, Leipzig
- Felsch, R. 1979. "Boiotische Ziegelwerkstätten archaischer Zeit," *AM* 94, pp. 1–40
- . 1987. "Kalapodi 1978–1982," *AA* [*JdI* 102], pp. 1–99
- . 1990. "Further Stamped Roof Tiles from Central Greece, Attica, and the Peloponnese," *Hesperia* 59, pp. 301–323
- Gebhard, E., and F. Hemans. 1992. "University of Chicago Excavations at Isthmia, 1989: I," *Hesperia* 61, pp. 1–77.
- George, W. S., and A. M. Woodward. 1929. "The Architectural Terracottas," in *The Sanctuary of Artemis Orthia at Sparta* (Society for the Promotion of Hellenic Studies, Supplementary Paper 5), R. M. Dawkins, ed., pp. 117–144
- Hübner, G. 1987. "Kalapodi. Bericht über die Grabungen der Artemis Elaphebolos und des Apollo von Hyampolis 1978–1982: Dach und Decke," *AA* [*JdI* 102], pp. 76–82
- Jameson, M. 1974. "The Excavation of a Drowned Greek Temple," *Scientific American* 231.4, pp. 110–119, repr. in *Avenues to Antiquity*, ed. B. Fagan, San Francisco 1976, pp. 289–298
- Kalpaxis, A. 1976. *Früharchaische Baukunst in Griechenland und Kleinasien*, Athens
- Kavvadias, P. 1905. "Der Apollotempel von Phigaleia," in *Comptes rendues du congrès international d'archéologie*, Athens, pp. 171–179
- Kourouniotis, K. 1903. «'Ανασκαφή ἐν Κωτίλω», *ΕφΑρχ*, pp. 151–188
- . 1910. «Τὸ ἐν Βάσσαϊς ἀρχαιότερον ἱερὸν τοῦ Ἀπόλλωνος», *ΑρχΕφ*, pp. 271–332
- Lauter-Bufé, H. 1974. "Entstehung und Entwicklung des kombinierten lakonischen Akroters," *AM* 89, pp. 205–230
- Mallwitz, A. 1962. "Cella und Adyton des Apollontempels in Bassai," *AM* 77, pp. 140–177
- . 1972. *Olympia und seine Bauten*, Munich
- Ohnesorg, A. 1988. "Ein naxisches Marmordach auf der athener Akropolis," in *Bericht über die 34 Tagung für Ausgrabungswissenschaft und Bauforschung vom 7–11 Mai 1986 in Venedig* (Koldewey-Gesellschaft), Karlsruhe, pp. 11–16
- Olympia II = Die Baudenkmäler von Olympia*, E. Curtius and F. Adler, eds., Berlin 1892
- Orlandos, A. 1968. Ἡ ἀρχαϊκὴ Ἀλιφεΐρα καὶ τὰ μνημεῖα τῆς, Athens
- Orsi, P. 1906. "Gela, scavi del 1900–1905," *MonAnt* 17, cols. 1–758
- Parlama, L. 1974. «Βάσσαϊ, Ναὸς Ἐπικουρίου Ἀπόλλωνος», *Δελτ* 26, 1971, Β' 1 [1974], pp. 142–146
- Penrose, F. C. 1896. Letter in "Nouvelles et correspondance," *BCH* 20 [pp. 379–400], pp. 383–385
- Rhomaïos, K. 1933. «Ἐκ τοῦ ἀρχαιότερου ναοῦ τῆς Φιγαλείας», *ΑρχΕφ*, pp. 1–25
- . 1937. «Ὁ χέραμος τοῦ Λαφριαλοῦ τῆς Καλυδῶνος», *ΑρχΕφ*, pp. 300–315
- Roux, G. 1976. *Karl Haller von Hallerstein, Le Temple de Bassae*, Strasbourg
- Schattner, T. 1990. *Griechische Hausmodelle: Untersuchungen zur frühgriechischen Architektur* (*AM Beiheft* 15), Berlin
- Thasos I* = M. Launey, *Le sanctuaire et le culte d'Héraklès à Thasos (Études thasiennes I)*, Paris 1944
- Van Buren, E. D. 1926. *Greek Fictile Revetments in the Archaic Period*, London

- Von Stackelberg, O. 1826. *Der Apollotempel zu Bassae in Arcadien*, Rome
- Voyatzis, M. 1990. *The Early Sanctuary of Athena Alea at Tegea* (SIMA-PB 97), Göteborg
- de Waele, J. 1990. *The Propylaia of the Akropolis in Athens: The Project of Mnesikles*, Amsterdam
- Wiegand, T. 1904. *Die Porosarchitektur der Akropolis zu Athen*, Athens
- Winter, N. 1990. "Defining Regional Styles in Archaic Greek Architectural Terracottas," *Hesperia* 59 (*First International Conference on Archaic Greek Terracottas*), pp. 13–32
- Woodward, A. M. 1926/1927. "Excavations at Sparta," *BSA* 28, pp. 37–48
- Yalouris, N. 1960. «Φιγαλεία Βάσσαυ», *Εργον, pp. 106–109
- . 1965. «Δοκιμαστική άνασκαφή εις τόν Ναόν του Έπικουρίου Άπόλλωνος Βασσών 1959», Πρακτικά 1959 [1965], pp. 155–159
- . 1972. "Das Akroter des Heraions in Olympia," *AM* 87, pp. 85–98
- . 1973. «Άνασκαφαι εις τόν έν Βάσσαυς Φιγαλείας ναόν του Έπικουρίου Άπόλλωνος», *AAA* 6.1, pp. 39–55
- . 1979. "Problems Relating to the Temple of Apollo Epikourios at Bassai," in *Greece and Italy in the Classical World (Acta of the XI International Congress of Classical Archaeology, London 3–9 September 1978)*, J. M. Coldstream and M. A. R. Colledge, eds., London, pp. 89–104

NANCY KELLY

CORNELL UNIVERSITY
 Greek Epigraphy Project
 726 University Avenue, No. 210
 Ithaca, NY 14850



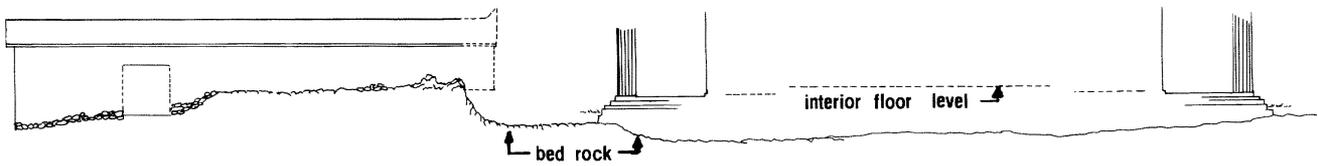
Aerial photo of Bassai sanctuary. North at upper left corner



Aerial photo of Archaic foundations. North at top



a. The foundations of the Archaic temple, looking south



b. Relationship between Archaic (left) and Classical (right) temples



c. North end of Archaic temple foundations (left) and south end of Classical temple (right)

PLATE 48



a. The Archaic temple terrace from below, looking east



b. The Archaic temple terrace looking northwest. Arrows mark the bedrock dressed for floor



c. Double-faced foundation wall construction of sekos. East foundation wall



d. Double-faced foundation wall construction of sekos. Crosswall foundation



a. Southeast corner of sekos



b. Southeast corner of adyton



c. Center: crosswall of adyton. Upper center: large blocks of crosswall of sekos, looking north



d. Western foundation wall of adyton, looking south

PLATE 50



a. Three stones *in situ* marking south end of Archaic Temple, looking east



b. Southwestern corner of adyton, floor flagging at bottom center



c. Column bases from Archaic Temple. Left: Cl 14. Right: Cl 65



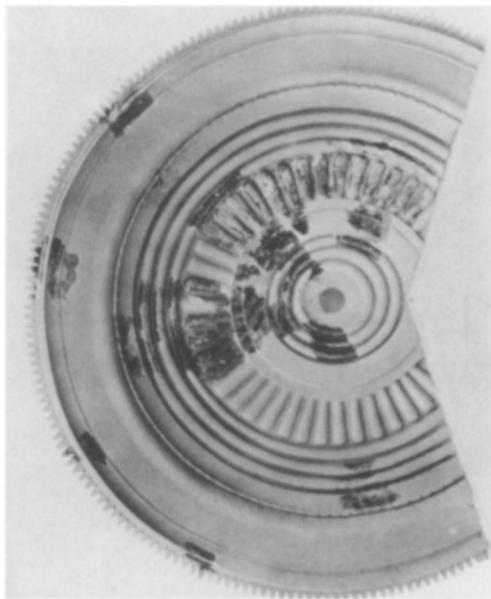
a. Column base from Archaic Temple: Cl 14



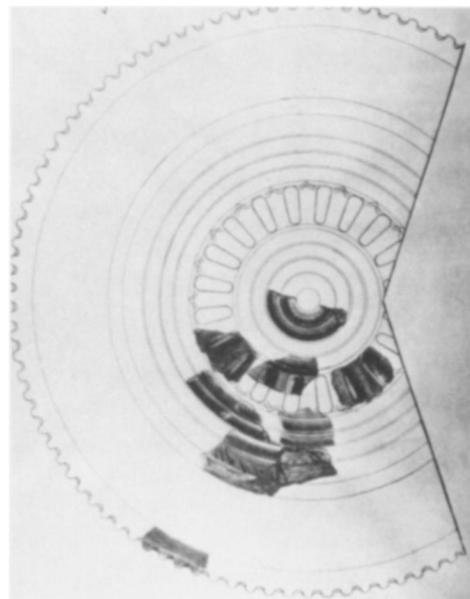
b. Column base from Archaic Temple (unnumbered)



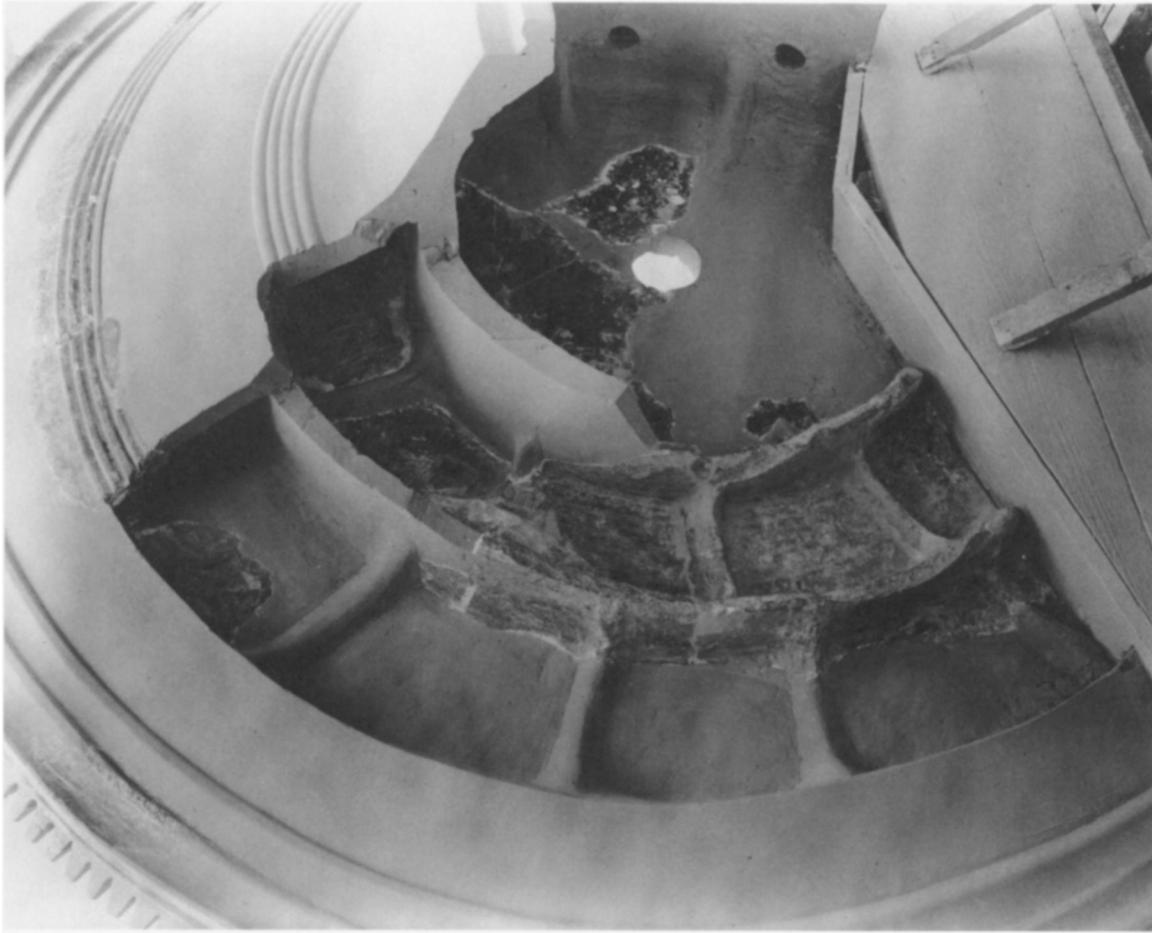
c. Column base from Archaic Temple. Left: Cl 14. Right: Cl 65



a. Heraion at Olympia, fragments of akroterion disk
(Photo DAI Athens neg. 69/270)



b. Bassai, fragments of akroterion disk B
(Rhomaïos 1933, pl. 3)



c. Heraion at Olympia, akroterion disk, back (Photo DAI Athens neg. 69/271)