AN EARLY BYZANTINE COMPLEX AT AKRA SOPHIA NEAR CORINTH

(Plates 106–111)

URING THE SUMMERS of 1982 and 1983, the Southeastern Korinthia Exploration Project carried out a systematic archaeological exploration in the area of Akra Sophia (Cape Sophia) on the Saronic Gulf immediately south of the Corinth Canal. This survey led to the discovery of several centers of ancient settlement and the ruins of what appears to have been a spacious villa of the early Byzantine period. This article presents a brief report of these discoveries, and it attempts to explain them in light of what is already known about the topography and history of the northeastern Corinthia.

It should be emphasized that this investigation involved only surface reconnaissance and that no excavation was carried out. The suggestions which this report makes should naturally be regarded as tentative, based as they are solely on surface material, which will naturally be affected by erosion, human activity, and other vagaries of survival. Evidence from the surface certainly does not exactly reflect the situation under the ground, and surface investigation cannot be expected to yield results as precise or as reliable as those of stratigraphic excavation. Nevertheless, excavation is not always possible or desirable, and surface study does as least record the evidence that can readily be seen. In addition, there is a growing body of opinion that the relationship between surface and subsurface material is significant, even though that relationship is not always simple or easy to understand.² Objections to survey archaeology are frequently based simply on mistaken ideas about what it

¹ This survey was carried out with a permit granted by the Sixth Ephoreia of Byzantine Antiquities to the American School of Classical Studies. Thanks are due to Myrto Georgopoulou and Afendra Moutzali of the Archaeological Service and to Professors Stephen G. Miller, Director of the American School, and Paul A. Clement, Isthmia Excavations (UCLA). The material and data presented have been collected in part with the support of the European Science Foundation (ESF) through its research program in the historical geography of the Byzantine Empire. Besides the author, team leaders were Harrianne Mills and Karen Knapp; architects were Charles Peirce and Karen Hutchinson.

Works frequently cited are abbreviated as follows:

Agora V = H. S. Robinson, The Athenian Agora, V, Pottery of the Roman Period. Chronology, Princeton 1959

"Argos" = P. Aupert, "Objets de la vie quotidienne à Argos en 585 ap. J.-C.," Études argiennes (BCH Suppl. VI), Paris 1980, pp. 395-457

Hayes = J. W. Hayes, Late Roman Pottery, London 1972

"Halieis" = W. W. Rudolph, "Excavations at Porto Cheli and Vicinity. Preliminary Report V: The Early Byzantine Remains," *Hesperia* 48, 1979, pp. 292–320

"Samos" = H. P. Isler, "Heraion von Samos: Eine frühbyzantinische Zisterne," *AthMitt* 84, 1969, pp. 202–230

Yassi Ada = Yassi Ada I, G. F. Bass and F. H. van Doorninck, Jr., edd., College Station, Texas 1982

² C. L. Redman and P. L. Watson, "Systematic Intensive Surface Collection," American Antiquity 35, 1970, pp. 279–291; J. W. Mueller, The Use of Sampling in Archeological Survey (Society for American Archaeology Memoirs 28), Washington 1974; A. J. Ammerman, "Surveys and Archaeological Research," Annual Review of Anthropology 10, 1981, pp. 63–88.

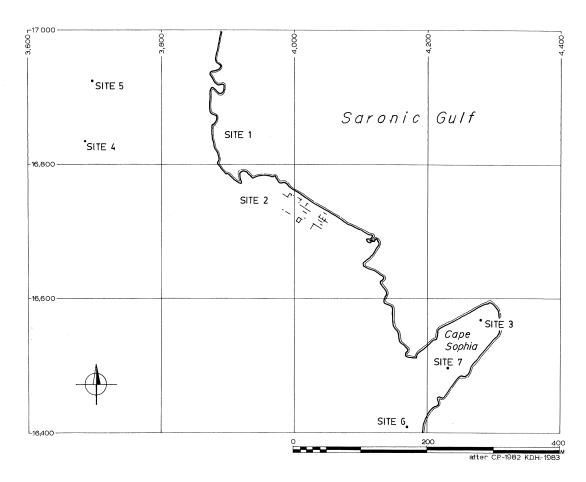


Fig. 1. Map of the area of Akra Sophia

claims to do; in fact, its objectives are rather modest and general rather than specific and detailed.³ In addition, even though the remains at Akra Sophia are still considerable, they are rapidly being destroyed by erosion and by use of the area for impromptu camping and automobile parking, and some record should surely be made of them.

The area of Akra Sophia lies between the villages of Kyras Vrysi, site of the Sanctuary of Poseidon at Isthmia, and Kenchreai, the eastern port of Corinth, and it is just to the south of the eastern termination of the Hexamilion, the early Byzantine wall across the Isthmus.⁴ The region is characterized by a coastline which forms a rough arc, marked by two inlets and terminating at the southeast in the peninsula of Cape Sophia (Akra Sophia, Fig. 1). The northern inlet (Kavo Isthmias) was formed by a watercourse which is now almost

³ A good answer to some of the objections commonly made to survey archaeology is by John F. Cherry: "Frogs Round the Pond: Perspectives on Current Archaeological Survey Projects in the Mediterranean Area," in *Archaeological Survey in the Mediterranean Area* (*British Archaeological Reports*, International Series 155), D. R. Keller and D. W. Rupp, edd., Oxford 1983, pp. 375–416.

⁴ On the Hexamilion see J. Wiseman, *The Land of the Ancient Corinthians (SIMA* 50), Göteborg 1978, pp. 59–64 and the references cited there.

completely blocked by fill from excavation of the near-by Corinth Canal and by construction of the new Epidauros road which runs some 300 meters to the west.⁵ In antiquity this inlet would certainly have been more marked, and it must have provided considerable security for ships. Between the northern and the southern inlets is a long stretch of relatively even coast-line formed by a bare limestone ridge jutting out into the Saronic Gulf.

A similar, smaller ridge extends, in a different direction, out into the sea beyond the southern inlet, forming Cape Sophia, the easternmost extension of the Peloponnesos in this area. West of the coastline the land rises gently through a series of uneven foothills toward the interior of the Corinthia.

Akra Sophia and Kenchreai provide the only usable harbors south of the Hexamilion where easy access might be made from the Saronic Gulf into the heart of the Peloponnesos. South of these two harbors the coast becomes precipitous, and steep mountains bar passage into the interior. At Kenchreai late Roman and Byzantine habitation is already well attested, and there is every reason to believe that the harbor remained a center of both commercial and military activity at least until the 15th century after Christ.⁶ Akra Sophia probably never had a major urban settlement, but the passage into the interior of the Korinthia is easier from Akra Sophia than from Kenchreai, and it is inconceivable that this area should have been ignored by ancient and Byzantine planners and builders.

Nevertheless, despite its ideal setting and the archaeological work carried out in the area over the past century, 7 no ancient remains have previously been noted at Akra Sophia. Our investigation of this area during 1982 and 1983 consisted of systematic archaeological surface survey, covering an area of approximately 160,000 sq.m., with detailed architectural and ceramic investigation where warranted. This survey was carried out by teams of individuals stationed at 5-meter intervals. The teams walked along predetermined paths looking for concentrations of ancient materials and, in certain areas, taking statistical samples at regular (usually 20-meter) spacing. 8 Archaeological artifacts, mostly pottery, are found throughout this region, and random samples produced a normal "background scatter" of less than 1.0 artifacts/sq.m. Significantly higher concentrations of archaeological material were, however, discovered in the course of the survey, and these have been characterized as "sites" and discussed below. It should be noted, however, that the designation of these areas as "sites" should not be taken to mean that they were distinct ancient settlements; instead, for the present report they should simply be regarded as convenient study areas. 9

⁵ On the fill from the canal see B. Gerster, "L'isthme de Corinthe," BCH 8, 1884, pp. 225–232.

⁶ See A. Bon, Le péloponnèse byzantin, Paris 1951, p. 161, note 1; R. J. Hohlfelder, Kenchreai, III, The Coins, Leiden 1978; B. Adamschek, Kenchreai, IV, The Pottery, Leiden 1979.

⁷ See H. N. Fowler, *Corinth*, I, [i], *Introduction*, *Topography*, *Architecture*, Cambridge, Mass. 1932, pp. 18–114, and Wiseman, *op. cit.* (footnote 4 above).

⁸ This procedure was essentially that used for the Ohio Boiotia Expedition. See T. E. Gregory, "Ohio Boiotia Expedition: Field Seasons 1979–1980," *Teiresias. Archaeologica*, 1980, pp. 31–41; *idem*, "The Ohio Boeotia Expedition Exploration of the Thisbe Basin," in *Archaeological Survey in the Mediterranean Area* (footnote 3 above), pp. 245–247; and *idem*, "Intensive Archaeological Survey and its Place in Byzantine Studies," *Byzantine Studies/Études Byzantines*, forthcoming.

⁹ See R. C. Dunnell and W. S. Dancey, "The Siteless Survey: A Regional Scale Data Collection Strategy," *Advances in Archaeological Method and Theory* 6, 1983, pp. 267–287.

SITE 1

This area comprises the northern inlet, whose shoreline alternates between a sandy beach and a hard limestone outcrop that runs up to the water's edge (Fig. 1, Pl. 106:a). Virtually nothing can be found immediately west of the seafront, in the fields beyond the coastal road, and all trace of ancient material has been obscured by the considerable alluviation which has apparently occurred in this area since antiquity. Immediately along the waterfront there is a stretch of material which may represent the mortar foundations of a large structure. This material is very worn by wave action, and it may, in fact, be nothing more than a natural cementing effect of the local limestone; no cut blocks are preserved *in situ*, although several pieces of 6th–7th-century (after Christ) pottery are cemented into the "mortar" just at the edge of the water. This area of apparent foundations is *ca.* 18 meters long, running roughly north–south, and *ca.* 2 meters wide. If this is, in fact, the remains of a manmade structure, it may have been either a dock or some other harbor work. The pottery from Site 1 was almost entirely late Roman/early Byzantine in date (4th–7th century; cf. 37).

SITE 2

Site 2 is a roughly rectangular area to the southeast of Site 1 (Fig. 1, Pl. 106:b). It includes a relatively straight shoreline approximately 200 meters long, above which the land rises rather steeply from the sea. This area is severely eroded, and the limestone bedrock is visible on the surface, especially near the shore; there is no regular beach, and the sea is very deep immediately offshore.

Wherever the soil is preserved over the bedrock large quantities of pottery lie scattered about, much more than was visible at Site 1, and the foundations of walls can be seen throughout the area (Pls. 106:c, d, 107:a). In most places only the foundations of walls survive, but in the south-central part of the site (Pl. 107:a), the walls stand to a meter or more above the modern surface. These walls are of uneven width, ranging from ca. 0.30 to ca. 0.60 m., and they are constructed of rubble set in a lime mortar mixed with large pebbles and having a distinct purplish color. This color is common in ancient mortared structures near enough to the sea to have been frequently inundated; it is probably not caused by intentional tinting but is rather the result of marine organisms. A similar coloration is seen, for example, in many of the walls at near-by Kenchreai. As far as can be determined, the method of construction of all the walls is the same. As mentioned above, there has been considerable erosion in this area; walls close to the sea are particularly poorly preserved, while those in the south are commonly buried by accumulated fill. Only rarely was it possible to delimit all the walls of a single room. Nevertheless, it is clear that these walls represent a structure or structures of considerable size and complexity. A sketch plan of the walls as they appear today is shown as Figure 2.

The central area of the site is ca. 80×35 m., with the long axis running along and almost exactly parallel to the shore. Although erosion has carried away many of the wall foundations, the walls appear to join in many places, which suggests that the complex may once have been a single building, made up of many rooms. Nearly all the walls are either

parallel or perpendicular to the apparent long axis of the structure. No definite exterior walls could be identified; indeed it was clear that on all sides the walls must have continued beyond what was possible to measure and include on the plan, so that the structure must have been appreciably larger than what is shown in Figure 2.

Part of the site is either densely overgrown or covered with mounds of earth and tiles from the collapse of walls in the area. These mounds are particularly prominent in the south-central area of the site (Pl. 107:b). Along the western side of the preserved section of the complex (but undoubtedly still inside the original walls of the building) is a round depression ca. 0.80 m. in diameter, which may have been a well. In the extreme northwest corner a series of walls was built over another wall running in a slightly different direction (Pl. 107:c). The upper walls follow the general orientation of the rest of the complex, while the lower wall does not; the latter presumably represents an earlier building phase, either of the complex as a whole or possibly a smaller building which preceded the larger structure. At the far east end of the preserved section of the complex are two walls which are built up against each other. These may also represent two phases of construction although the orientation of the two walls is the same, which suggests perhaps an addition rather than a rebuilding.

Only excavation would allow for full restoration of the plan of the complex at Akra Sophia. The hypothetical restoration shown in Figure 3, however, is in accord with the remains that are visible today. In some cases the restoration is certain, as in Room XIV where all the walls are preserved in situ, and in Room I where three of the four corners are preserved. In most cases, however, the extant walls have simply been projected, as shown by the dotted lines on the plan, to points where they intersect. Nearly all the walls shown on the restored plan are documented by in situ remains, but the walls of Rooms III–VI are entirely hypothetical, and one might imagine other restorations here, as well as at several other places. Likewise, Room IX has been shown as the largest open space in the complex. This area is located on relatively flat land, and absolutely no trace of walls has been found there. The natural lay of the land in Room IX allows the negative evidence slightly more weight than it might have elsewhere, and we are probably correct in suggesting that this was a single large room or perhaps an open courtyard.

Many polychrome mosaic tesserae were found in Room VIII of the complex (Pl. 109:d). They are ca. 0.008×0.009 m. to 0.015×0.009 m. Some are small cubes of white marble, while others were made of brilliant blue, green, yellow, and red stone. None apparently were made of glass. All the tesserae were found detached from their bedding, but they all appeared within the confines of Room VIII and therefore probably came from a mosaic which graced that room. It is obviously not possible to say much about the mosaic from the detached tesserae, but their size and color indicate a work of considerable detail and splendor, possibly of the 5th or 6th century after Christ. Many pieces of white marble

¹⁰ The size and material of the tesserae do not provide a good guide to date, but on the basis of comparison with the latest mosaics of Basilica A at Nea Anchialos, the Akra Sophia mosaic is not likely to be after A.D. 600. See G. Soteriou, «Aἱ Χριστιανικαὶ Θῆβαι τῆς Θεσσαλίας», ᾿Αρχ Ἑφ, 1929, pp. 1–158; J.-P. Sodini, "Mosaïques paléochrétiennes de Grèce," BCH 94, 1970, pp. 699–753.

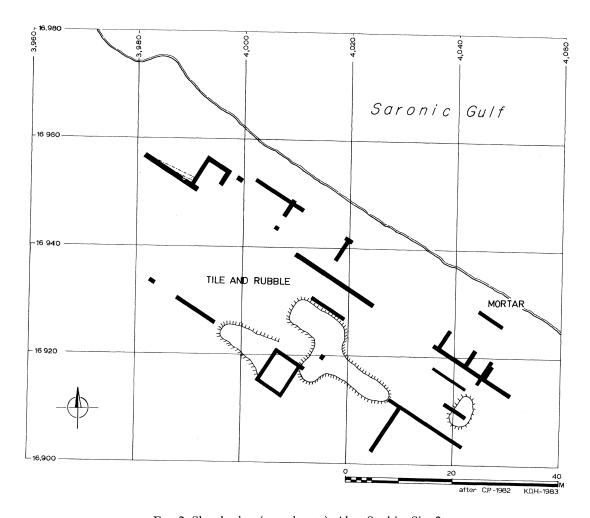


Fig. 2. Sketch plan (actual state), Akra Sophia, Site 2

revetment and fragments of window glass were also found in the vicinity of Room VIII, suggesting that the walls as well as the floor of the room were splendidly decorated and that the room must have been an important one.

Pottery sherds were plentiful over the whole area occupied by the complex, and the artifact scatter extends considerably to the east, beyond the last visible walls, up to the first deep indentation of the eastern inlet. Some of the heaviest pottery concentrations, in fact, occur just to the east of the easternmost walls marked on Figure 3. Whether the walls in this area have simply disappeared or whether the pottery in this area represents a dump of ancient materials is presently impossible to determine. One fragment of particular importance was found imbedded in the mortar of the foundations of the north side of the north wall of Room VII (Pl. 108:a). The mortar is the typical purplish fabric used in the other walls, and it is laid directly on the bedrock. The pottery fragment is a piece of an amphora with combed decoration, rather thin walled, fired reddish at the core and brownish at the

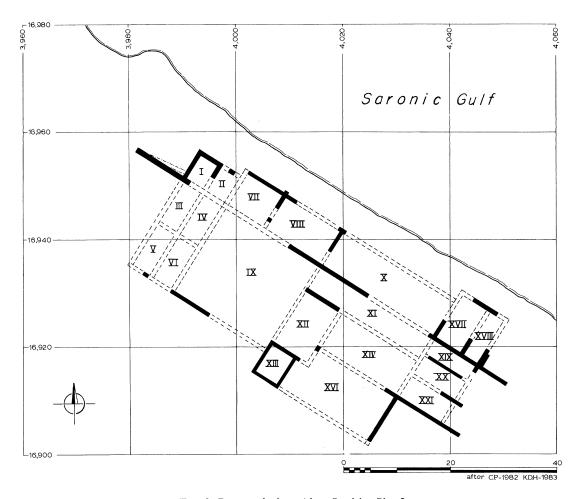


Fig. 3. Restored plan, Akra Sophia, Site 2

surface, with large lime inclusions. This fragment provides a *terminus post quem* for construction of the structure, or at least the wall of Room VII. Amphoras of this type have been found commonly throughout the Aegean in late 6th- and 7th-century contexts. ¹¹ Surface pottery found throughout Site 2 generally confirms this date. Typical are 1 and 3 in the catalogue that follows, which can be dated from the mid-6th into the 7th century. Some slightly earlier pottery, however, was also found in this area, for example 2, dated to the late 5th century, and 21, dated A.D. 510–540. These may be survival pieces, or perhaps they represent the earlier construction period suggested in the area west of Room I. In addition, pieces such as 14 and 31 show that there was some earlier habitation or use of this site, but it has left no other trace, and even the ceramic evidence of such phases is extremely slight.

About 63 meters east of the complex there is a small rounded structure built around an

¹¹ Cf. "Halieis," pp. 301–302, 308–313; *Yassi Ada*, pp. 157–160; and J. Barnea, "L'incendie de Dinogetia au VIe siècle," *Dacia*, n.s. 10, 1966, pp. 237–259.

inlet along the shore (Fig. 1, Pl. 108:b). This construction is only imperfectly preserved, but it would appear to be a small harbor work or perhaps some kind of bathing establishment associated with the larger complex. Surviving remains include three rectangular cut blocks set in mortar in a shallow cutting in the limestone bedrock just above sea level. These blocks, which are roughly one meter long and half a meter wide, were probably not originally cut for this purpose since they do not fit perfectly into the circular cutting in which they have been laid. The mortar in their bedding, however, is exactly the same as that used in the construction of the larger complex, and so the circular structure is probably contemporary with it. At one time there were certainly more blocks, as the cutting in the rock forms a semicircle ca. 2.5 m. in diameter and extends beyond the point where the last preserved block is situated. Just to the west of this structure is another small indentation which may also have been lined with blocks in the same manner, but all trace of them has disappeared. The water in these two small inlets is over two meters deep, and the sea bottom drops off precipitously to the north at this point. To the south of these inlets is a cutting ca. 1.7 m. long east-west and ca. 0.7 m. north-south; this is presumably a grave, and other indentations in the surface suggest further graves near by.

There can be little doubt that the complex at Site 2 was a large and sumptuous villa of early Byzantine date. It is true that the walls are nowhere preserved to a height much above one meter and that the exact form of the complex must remain hypothetical. On the basis of what is preserved, however, there is no reason to associate it with any other possible architectural form: in particular, the mosaic in Room VII seems to rule out a commercial or military function. A single fragment of a hypocaust brick (28) suggests the presence of a small bath which is otherwise unattested in the surviving architectural remains.

Recorded Roman or Byzantine villa sites in southern Greece are extremely few in number, especially in a rural context. Villas, of course, have been identified in cities such as Corinth and Argos, ¹² and in the Corinthia several other rural villas have been identified, but these have not been recorded or studied in any detail. ¹³ An exception to this is a complex at Lechaion, the port of Corinth on the Corinthian Gulf, which may or may not have been a private villa. ¹⁴ This building, excavated first by Philadelpheus early in the century and then by Stikas in the 1950's, is dominated by long, narrow rooms; it has a plan very similar to

¹² Corinth: Stella G. Miller, "A Mosaic Floor from a Roman Villa at Anaploga," *Hesperia* 41, 1972, pp. 332–354; T. L. Shear, *Corinth*, V, *The Roman Villa*, Cambridge, Mass. 1930. Argos: G. Åkerström-Hougen, *The Calendar and Hunting Mosaics of the Villa of the Falconer in Argos*, Stockholm 1974.

¹³ Wiseman, *op. cit.* (footnote 4 above), pp. 88 (villa southeast of the city), 100 (bath, which probably signifies a villa near Agios Charalambos), and 110 (villa of the 2nd–3rd centuries near Spathovouni). According to A. G. McKay (*Houses*, *Villas and Palaces in the Roman World*, Ithaca, N.Y. 1975, pp. 211–212), "There is a strikingly meager record of housing [in Greece] in Greek and Roman times. Apart from Corinth, Philippi in the north, and some areas of Western Greece and the Peloponnese, the number of excavated and adequately published Roman houses and villas is amazingly small given the proximity of Greece to Italy and the Eastern provinces and the reasonably good conditions for agriculture. Serious study of the surface remains is desperately needed along with a careful compilation and examination of earlier finds."

¹⁴ Å. Philadelpheus, «'Αρχαία ἐπαυλὶς μετὰ νυμφαίου ἐν Λεχαίω τῆς Κορινθίας,» Δελτ 4, 1918 (1921), pp. 125–135; Ε. Stikas, «'Ανασκαφὴ ρωμαϊκοῦ νυμφαίου καὶ παλαιοχριστιανικῆς κρηνῆς παρὰ τὸ Λέχαιον τῆς Κορινθίας,» Πρακτικά 1957 (1962), pp. 89–94.

that of the complex at Akra Sophia, except that it includes a large nymphaeum. Stikas dated the original construction to the 3rd century after Christ, with a substantial rebuilding in the 6th century.

Other parallels, both in terms of chronology and position, are two villas in the Argolid. One of these is at Phourkari, in the far southeastern corner of the Argolic Akte, east of Hermione. 15 Like the villa at Akra Sophia, this complex was located along the sea and was dated to the late Roman or early Byzantine age. Similarly, at Halieis a large seaside villa has been identified, with a period of efflorescence apparently in the mid-6th century. 16

The seaside villa was, of course, a favored type of building in Roman republican and imperial times, and the palace of Diocletian at Split and similar less pretentious structures, as well as the Boukoleon palace at Constantinople itself, show that the form continued to enjoy popularity well into the Byantine age.¹⁷

Aside from the complex at Lechaion, however, it is difficult to find good parallels for the building at Akra Sophia. In part, this is because of the paucity of well-published rural villas from the East in this period, but it is also probably because of the development of distinct regional architectural styles at this time. Purely in terms of size, the villa at Akra Sophia is far smaller than palaces such as those at Split and Thessaloniki and the Piazza Armerina, but it is also much larger than most rural provincial villas even in the Roman imperial age. Thus, while the Akra Sophia villa is at least 85 meters long, rural villas elsewhere are rarely longer than 40 meters, and many are much smaller. 18

In terms of style, it is very difficult to place the villa at Akra Sophia as one of the conventional types by which Roman villas are usually categorized. This may be because the restored plan of the villa is incorrect or incomplete, or it may be a result of the idiosyncracies of the building and the collapse of traditional forms in the early Byzantine age. Thus, on the basis of the restoration suggested here, the complex was not a traditional corridor villa, although one might imagine an east—west corridor running north of Rooms I—XVIII along the sea. Perhaps more reasonably, we might propose that Room IX was, in fact, a courtyard and that the villa was generally of the courtyard "type". Such a reconstruction is supported by the mosaic in Room VIII and the possible identification of that room as a triclinium,

16 "Halieis"; see also Δελτ 27, 1972, Χρονικά, pp. 212–215 (Nemea) and 215–218 (Ligourio).

¹⁵ F. J. Frost, "Phourkari. A Villa Complex in the Argolid (Greece)," *The International Journal of Nautical Archaeology and Underwater Exploration* 6, 1977, pp. 233–238. Although Frost dated the villa to the age before Alaric (i.e., before A.D. 396), on the basis of the pottery he presents, a date in the 5th or more likely the 6th century seems preferable.

¹⁷ J. B. Ward-Perkins, Roman Imperial Architecture, Harmondsworth 1981, pp. 454–466; W. Müller-Wiener, Bildlexikon zur Topographie Istanbuls, Tübingen 1977, pp. 225–228; see also the comments of Kurt Weitzmann (The Joshua Roll, Princeton 1948, p. 61) on the representations of villas in early Byzantine art. Seaside villas may also be shown on the 4th-century panels from Kenchreai, although these all seem to be placed in an urban setting: L. Ibrahim, R. Scranton, and R. Brill, Kenchreai, II, The Panels of Opus Sectile in Glass, Leiden 1976, fig. XVI, pls. 80, 81, 84.

¹⁸ Some examples from Pannonia (E. B. Thomas, *Römische Villien in Pannonien*, Budapest 1964): Sumeg, 40×40 m. (p. 112); Eisenstadt, 40×40 m. (p. 138); Pandorf, 40×40 m. (p. 180); Csucshegy, 40×15 m. (p. 217); Tac-Fovenypuszta, 45×60 m. (p. 303).

¹⁹ On types of villas see J. Percival, *The Roman Villa*, London 1976, pp. 51–105; McKay, *op. cit.* (footnote 13 above), pp. 100–135, 165, 183–184.

which would naturally have faced onto a courtyard. The apparent presence of a well just west of Room III suggests that this area may have been used as a kitchen or bathroom, so that we might think that the western end of the complex was the residential area, while the larger rooms of the eastern end were perhaps for storage, industrial, or agricultural use.

Architecturally, perhaps the closest parallels for the Akra Sophia villa are to be found in the late antique houses at Ostia and those of northern Syria.²⁰ It shares with these examples a lack of concern for symmetry and traditional arrangement of rooms. In addition, if our identification of Room VIII as a triclinium is correct, Akra Sophia may share with these other villas an emphasis on that room of the house. For a view of how our villa might have appeared, we can compare the villas at Serdjilla and El Rabah (5th century), although both these buildings had two storeys and it is doubtful that Akra Sophia had more than one, since the relatively narrow width of the walls would probably not have supported a second floor.

On the basis of available evidence it is impossible to say more about the appearance or the use of the villa. The owner may have been an imperial military official concerned with the defense of the near-by Hexamilion; the location and its admirable view of the coast of the Saronic Gulf favor such an opinion. Alternatively, the owner may have been a wealthy shipowner of Corinth who built a sumptuous seaside villa near the harbor at Akra Sophia. The agricultural land in the immediate vicinity of the villa is adequate, although not outstanding, and, as we shall see below, there are several additional foci of ancient land use in the area. The Akra Sophia villa, however, need not have been a functioning agricultural unit but rather simply a retreat for a wealthy individual of the period.

Density Sampling, Site 2

Because of the large quantity of archaeological material at Site 2 and the obvious importance of the surviving remains, it was determined to carry out a density-sampling survey.²¹ This was done to arrive at a quantified measure of the amount of material on the surface, which could then be compared with similar figures for other areas of Greece. Obviously this procedure will not yield results that can be interpreted as estimates of ancient population or give any such direct correlation; rather, the process simply makes the observation of surface material more precise and systematic.

Observation was carried out using a systematic sampling procedure based on a pedestrian survey with team members spaced 5 meters apart and sampling points every 20 meters. Sampling was begun at the western end of the site and proceeded to a point near the eastern harbor works. In this way an area of 4000 sq.m. was systematically surveyed, and samples were taken at 27 locations, each 1 sq.m. in area, for a sampling fraction of 0.7%. This procedure yielded 237 artifacts (nearly all ceramic), for a mean artifact density of 8.78

²⁰ Ostia: G. Becatti, "Case Ostiensi del Tardo Impero," *Bollettino d'Arte* 33, 1948, pp. 102–128, 197–224; Syria: G. Tchalenko, *Villages antiques de la Syrie du nord: le massif du Belus à l'époque romaine*, Paris 1953; Ward-Perkins, *op. cit.* (footnote 17 above), pp. 210–212, 325–328.

²¹ On sampling see J. W. Mueller, *Sampling in Archaeology*, Tuscon 1976, and Ammerman, *op. cit.* (footnote 2 above).

artifacts/sq.m. This figure is remarkably high compared with the following mean densities from other surveys carried out by the author:²²

Eastern Korinthia (1980)	0.35/ sq.m.
Thisbe Plain, Boiotia (1981)	1.68
Kouveli Island (1981)	2.39
Kenchreai (1980)	7.90
Akra Sophia, Site 2 (1982)	8.78

Of these areas, the first two were predominantly rural in antiquity, and their mean artifact densities are correspondingly low. Only the figure for Kenchreai comes close to that for Akra Sophia, and Kenchreai was, of course, one of the ports of Corinth and an important urban center. This is naturally not to claim that Akra Sophia (Site 2) had a population similar to or larger than that of Kenchreai. Rather, these figures suggest that the density of habitation or land use at Site 2 is more closely comparable to that of Kenchreai than to the interior of the Korinthia or rural Boiotia. The implication is that Akra Sophia is a site which witnessed considerable intensity of activity in the late Roman and early Byzantine periods.

In terms of the distribution of artifacts throughout the survey area, the density of finds seems reasonably consistent from east to west, with some greater concentration toward the western end (e.g., a total of 94 artifacts in the two westernmost samples compared to 5 in the two easternmost samples). The only other anomaly is the concentration of material in the center of the survey area. This fact, however, is to be partly explained by the considerable ground cover in the southern part (away from the sea) and the almost complete absence of soil in the northern (near the shore), so that few artifacts were visible in either of these areas.

SITE 3

The third area where ancient remains were identified is on the tip of Cape Sophia itself (Pl. 108:c). The site is an ideal one with a clear view of Kalamaki Bay and the inlet of the modern canal; to the east and south the site has a good view into the Saronic Gulf, toward Aigina and beyond and down the eastern coast of the Peloponnesos. An observer at Site 3 would have an unobstructed view of any attacker approaching the Hexamilion along the Isthmus from Megara and would at the same time notice any naval approach from the Saronic Gulf. This ideal position was not missed by military engineers during the Second World War, and the ruins of an Italian anti-aircraft installation now dominate the site (Pl. 108:d). Construction of these fortifications destroyed all trace of earlier structures in the area, but pottery and roof tiles lie scattered everywhere, and most of this material can be dated to the same period as that at Site 2 (4th–7th century after Christ, 7–10). The area strewn with pottery in this region is quite small, and it is unlikely that there was anything

²² Boiotia and Kouveli are briefly discussed in the studies mentioned in footnote 8 above; the other surveys are presently unpublished.

here other than a lookout station, lighthouse, or similar structure, almost certainly connected with the larger complex at Site 2.

SITES 4 and 5

As mentioned above, there is no evidence of habitation or ancient land use in the area immediately west (inland) of the harbor at Site 1. At a point ca. 200 meters west of Site 1, however, and just east of the new road to Epidauros, there is a concentration of late Roman/early Byzantine pottery, and this area has been designated Site 4 (Pl. 109:a). Ca. 92 meters north of Site 4 there is a similar concentration of pottery, and this location has been designated Site 5 (Fig. 1). In the middle of each of these concentrations is a rock-cut cistern or well. At Site 4 the well is at least five meters deep and ca. 2.70 m. in diameter. It is almost perfectly cylindrical and is cut through ca. one meter of topsoil and ca. 1.5 m. of stone mixed with soil, while the rest of the shaft is cut in the solid limestone bedrock. The bottom of the cistern is covered with modern debris (although it had been partially cleaned out not long before our investigation in 1982), and so the ancient bottom cannot be explored. The cistern or well at Site 5 is almost identical to that at Site 4, except that the accumulation of modern debris makes this cutting much more difficult to investigate. In neither case is there any indication of a cover or of any mechanism to bring water to the surface, nor is there any evidence to date the well/cisterns, although they should be compared to the similar (though larger) Archaic pit excavated at near-by Isthmia.²³ The pottery in this area was all of late Roman/early Byzantine date (11, 23, 36), and it is possible that the wells were dug to serve the settlements of that period. Sites 4 and 5 are located in a long depression which runs roughly east-west but whose course is now obscured by the north-south Epidauros road. This depression once brought water down to the sea from the surrounding hills, and the well/cisterns might have been a satisfactory source of water for the near-by settlements.

SITE 6

Site 6 is an area nearly 200 meters south of Site 3, facing onto the coast of the Saronic Gulf (Pl. 109:b). No traces of ancient structures were identified in the survey, but there was a very high concentration of pottery in an area about 20 meters in diameter. None of this pottery (24–27, 38, 39) is fine ware, but included are a wide diversity of amphora fragments, cooking pots, and fragments of ceramic beehives (38, 39). All the material from this area seems to date from the late Roman/early Byzantine period; on the basis of the type of pottery found, the site was probably used for agriculture and apiculture. The absence of any remains of architecture makes it impossible to determine whether anyone actually lived on the site or whether the workers lived somewhere else, perhaps at Site 2, the ceramic remains being only the result of day use.

SITE 7

Site 7 is a roughly defined area south of Site 3 but north of Site 6 (Pl. 109:c). There is no clearly defined concentration of ancient material in this area, but preliminary investigation

²³ O. Broneer, *Isthmia*, II, *Topography and Architecture*, Princeton 1973, pp. 22–24. This "Circular Pit" is five meters in diameter and 19.75 m. deep.

suggested that the artifact density here was higher than that in the surrounding countryside. A systematic stratified sampling procedure, similar to that used at Site 2, was therefore carried out in this region. Proceeding southward from the southern boundary of Site 3, samples were taken at regular intervals until, at a point some 20 meters south of Site 6, the artifact density declined to the "background scatter" of the surrounding countryside. Sampling, therefore, included both Sites 6 and 7. In all, 60 samples were taken (area 60 sq.m.) and 127 artifacts recovered, producing a mean artifact density of 2.12/sq.m. Within the area of Site 6 the mean artifact density was 4.5/sq.m. (45 artifacts in 10 samples), and so the mean density in the rest of the survey area (excluding Site 6) was 1.64/sq.m. (82 artifacts in 50 samples). These figures suggest a degree of intensity of ancient use within Site 7 much less than what we saw at Site 2 but still noticeably higher than the rural area of the surrounding countryside (cf., for example, the 0.35/sq.m. of the Eastern Korinthia mentioned above, p. 421). Pottery in this area is very worn and difficult to distinguish, but among this material are the usual sherds of late Roman/early Byzantine date and several pieces which seem to be Classical or Hellenistic. In addition, this area produced large numbers of fragments of worked obsidian including several bladelets; whether these are prehistoric or more recent is impossible to say.

Conclusions

These preliminary investigations in the area of Akra Sophia reveal a pattern of settlement of considerable complexity. Most interesting, of course, is the large structure at Site 2, almost certainly a luxurious Byzantine villa. Aside from this structure, however, there are several other foci of ancient habitation or use, all of them with significant components of the same early Byzantine date. Obviously this area was intensively utilized during the period from the 4th to the 7th century after Christ. The exact form of this utilization is difficult to determine, and, on the basis of the present evidence, it is not possible to characterize the relationship between the six smaller sites and the villa. We should like to know, for example, whether the settlements in the vicinity reflect an agricultural settlement system prefiguring that of the isolated and self-sufficient mediaeval manor. Or was the villa only one component in a much more diversified settlement system, characterized by the villa and a number of independent or semi-independent habitation units?²⁴ Present evidence does not allow an answer to these questions, but further survey work, of the kind described here, should help to provide solutions and shed important new light on the end of antiquity and the beginning of the Middle Ages.

²⁴ See my comments on "Cities and Social Evolution in Roman and Byzantine South East Europe," in *European Social Evolution*, J. Bintliff, ed., Bradford 1984, pp. 267–276.

CATALOGUE

All dimensions are in meters.

1 (Site 2, AS-1). Rim, Imitation Late Fig. 4 Roman C

P.L. 0.043, p.H. 0.025, Th. wall 0.007, est. diam. 0.240. Coarse, reddish brown clay with small amounts of quartz and many inclusions including lime. Worn reddish slip.

Heavy rim from large bowl. Vertical rim, pointed at the top, small ridge on bottom of rim. Hayes, pp. 333–335, Imitation of Late Roman C, Form 3F (second quarter 6th century); Argos, p. 127 (A.D. 525–550).

2 (Site 2, AS-2). Rim, Imitation Late Fig. 4 Roman C

P.L. 0.046, p.H. 0.022, Th. wall 0.003, est. diam. 0.260. Coarse, orange-brown clay, hard and evenly fired with some lime inclusions.

From large bowl. Vertical rim with nearly flat top and concave exterior; groove under rim. Hayes, pp. 332–333 (cf. no. 25), Imitation of Late Roman C, Form 3D or E (late 5th century).

3 (Site 2, AS-3). Rim, Late Roman C Fig. 4
P.L. 0.021, p.H. ca. 0.015, Th. wall 0.003, est. diam. 0.300. Coarse, reddish brown clay with many small dark and some white inclusions. Red slip inside and out, fired dark on exterior of rim.

Rounded, knoblike rim. Hayes, pp. 343–344 (cf. no. 7), Late Roman C, Form 10B (late 6th—early 7th century).

4 (Site 2, AS-4). Amphora rim Fig. 4 P.W. 0.040, p.H. 0.039, est. diam. of rim 0.100. Reddish brown clay, very coarse with many white inclusions, voids, and explosions, some quartz; fired red at core and brown at surfaces.

Rounded, slightly flaring rim of typical round amphora, late 4th—7th century. Cf. *Agora* V, M 272 (late 4th century) and P 4129, pl. 40; "Halieis," pp. 301–302, 308–313, nos. 1–9, 11, 12, pl. 80:b (late 6th—early 7th century); type 2 amphoras from *Yassi Ada*, pp. 157–160 (mid-7th century); and "Argos,"

III,18,7, pp. 440–441, nos. 325, 325a, fig. 46 (late 6th century).

5 (Site 2, AS-5). Rim of large basin or bowl Fig. 4 P.W. 0.023, p.H. 0.032, Th. wall 0.009, est. diam. 0.220. Hard, reddish brown clay with some quartz and medium white inclusions, evenly fired. Large vessel with straight flaring sides and round-

Large vessel with straight flaring sides and rounded plain rim.

6 (Site 2). Combed body sherd

P.L. 0.039, p.W. 0.026, Th. 0.005. Brown clay, rather fine, hard, and evenly fired with some quartz and white inclusions.

From amphora or other closed vessel. Combed wave pattern on exterior. Cf. especially type 2b amphoras from *Yassi Ada*, pp. 157–160 (mid-7th century).

7 (Site 3, AS-7). Rim, cooking pot Fig. 4 P.W. 0.068, p.H. 0.028, Th. wall 0.003, est. diam. 0.220. Very coarse, brown clay with many stones, fired unevenly gray.

Thick rim, rounded on interior and pointed at top.

8 (Site 3, AS-8). Base Fig. 4
P.H. 0.089, p.W. 0.091, Th. wall 0.009, diam. base 0.100. Coarse, buff clay with white inclu-

sions and voids, fired evenly light green.

Flat base, slightly offset, flaring rounded sides. From a closed vessel such as an amphora or jug. Smooth on the exterior, wheel ridged on interior. Cf. "Samos," pp. 208–209, figs. 10, 11, pl. 84:3, 90:4 (mid-6th century); "Halieis," p. 315, no. 40, fig. 10 (late 6th—early 7th century).

9 (Site 3, AS-9). Rim of large basin Fig. 4 P.L. 0.056, p.W. 0.023, Th. wall 0.009, est. diam. 0.340. Soft, coarse, buff clay with some quartz and small stone inclusions, evenly fired.

Flat, horizontal, plain rim with slight concavity on exterior; vessel with flaring sides. Cf. *Agora* V, M 352, pl. 71 (late 6th century).

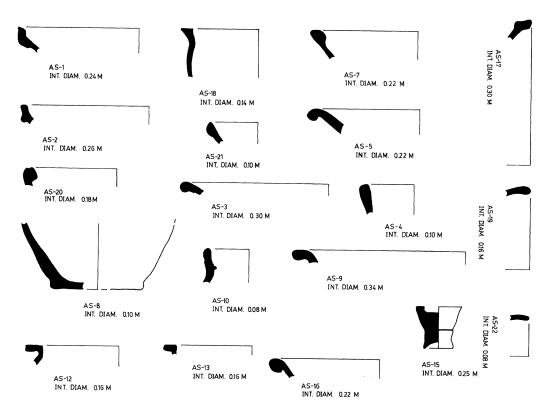


Fig. 4. Profiles: 1-22. Scale 1:4

Fig. 4

10 (Site 3, AS-10). Rim

P.H. 0.024, p.W. 0.029, est. diam. 0.80. Coarse, reddish brown clay with many inclusions and some quartz, fired gray at core, nearly buff at surfaces.

Flaring rim, probably from small amphora, rounded at top with rim on interior at point where neck begins to taper. Cf. *Yassi Ada*, pp. 176–177, P 47, P 48 (mid-7th century).

11 (Site 4). Rim, cooking pot Pl. 110

P.H. 0.029, p.W. 0.089, Th. wall 0.003, est. diam. 0.240. Very coarse, brown clay, fired mostly gray, with some stone inclusions.

Rounded, vertically thickened rim, profile similar to 7 but larger.

12 (Site 2, AS-12). Rim

Fig. 4

Fig. 4

P.H. 0.022, p.W. 0.031, Th. wall 0.004, est. diam. 0.160. Coarse clay with many stones, fired unevenly red, brown, and gray.

Coarse vessel with rounded sides and plain, flat, horizontal rim. Cf. "Samos," p. 210, fig. 19 (mid-6th century); "Argos," pp. 424–425, no. 190, fig. 39 (late 6th century).

P.H. 0.011, p.W. 0.019, est. diam. 0.160. Hard, coarse clay with white stone inclusions, fired gray and brown; smooth on surface.

Flaring sides, plain, flat, horizontal rim. Cf. "Samos," p. 210, fig. 18 (mid-6th century).

14 (Site 2). Handle

P.L. 0.022, max. diam. 0.011. Soft, fine, brown clay.

Handle, round in section, possibly from a kylix; traces of black glaze. Classical-Hellenistic.

15. (Site 2, AS-15). Amphora toe Fig. 4, Pl. 110 P.H. 0.043, Th. wall 0.008. Highly micaceous brown clay fired reddish at core; many white inclusions.

Toe, concave on bottom, sides flaring, horizontal groove around middle of toe. Micaceous water jar. Cf. *Agora* V, M 277, pl. 29 (late 4th century) and M 307, pl. 31 (early 5th century); "Argos," pp. 441–442, no. 327, fig. 46 (late 6th century).

16 (Site 2, AS-16). Rim Fig. 4

P.H. 0.024, p.W. 0.049, est. diam. 0.220. Red clay with much quartz, many voids, and small inclusions; fired buff on surfaces, red at core.

Large vessel with flaring straight sides, rounded rim with a deep groove on exterior under rim.

17 (Site 2, AS-17). Rim, Imitation Fig. 4, Pl. 110 Late Roman C

P.H. 0.032, p.W. 0.040, est. diam. 0.300. Highly micaceous, orange-brown clay, evenly fired; thin red slip inside and out.

Bowl with flaring straight sides, thick vertical rim pointed on top. Hayes, pp. 332–333 (cf. no. 10), Imitation of Late Roman C, Form 3C (A.D. 460–475).

18 (Site 2, AS-18). Rim Fig. 4

P.H. 0.046, p.W. 0.055, est. diam. 0.140. Soft, orange clay with some quartz and many small stones.

Pitcher or jug with sides tapering to vertical, slightly flaring rim, vertically thickened, flat on top. Wheel ridges on exterior. Cf. "Samos," p. 211, fig. 25, pl. 92:8 (mid-6th century); *Agora* V, N 2, N 3, pl. 35 (7th century).

19 (Site 2, AS-19). Rim Fig. 4

P.H. 0.023, p.W. 0.048, est. diam. 0.160. Reddish brown clay with many small voids and small inclusions.

Bowl or similar vessel with flaring sides; vertical, plain rim. Cf. *Agora* V, [M 353], pl. 33 (late 6th century).

20 (Site 2, AS-20). Rim, cooking pot Fig. 4 P.H. 0.021, p.W. 0.032, est. diam. 0.180. Coarse, reddish brown clay with many small inclusions.

Slightly tapering walls; large, vertically thickened, knobby rim with a groove along the top.

21 (Site 2, AS-21). Rim, African Red Slip Fig. 4
Ware

P.H. 0.023, p.W. 0.028, est. diam. 0.100. Hard, orange-red clay, with small white inclusions.

Deep bowl with flaring straight sides and vertically thickened rim; red slip inside and out. Hayes, pp. 152, 154 (cf. no. 22), African Red Slip Ware, Form 99A (A.D. 510–540).

22 (Site 2, AS-22). Rim Fig. 4

P.H. 0.022, p.W. 0.021, est. diam. 0.080. Hard, reddish brown clay; red slip inside and out.

Plain, nearly vertical rim, from small bowl; cf. African Red Slip Ware, Form 17 (Hayes, pp. 42–43, late 2nd—early 3rd century).

23 (Site 5, AS-23). Rim of amphora Fig. 5 P.H. 0.042, p.W. 0.043. Coarse, orange clay.

From amphora with slightly flaring neck, vertically tapering to pointed rim. Cf. 4 (4th–7th century).

24 (Site 6, AS-24). Rim of amphora Fig. 5 P.H. 0.049, p.W. 0.057. Hard, reddish brown clay, fired lighter at the surfaces, with many voids and small-to-large white inclusions.

From amphora with tapering neck and vertical, vertically thickened, rounded rim. Cf. 4 (4th-7th century).

25 (Site 6, AS-25). Rim of basin Fig. 5, Pl. 110 P.H. 0.06, p. W. 0.133, est. diam. 0.38. Four joining and two non-joining pieces preserve full profile of rim. Hard, very coarse clay with many light stone inclusions and surface voids, fired brown on surfaces, reddish on interior.

Straight, nearly vertical sides to plain vertically

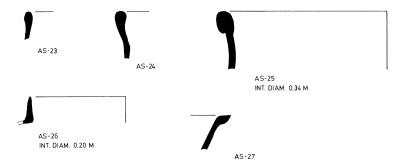


Fig. 5. Profiles: 23-27. Scale 1:4

thickened rim, flattened on top, with a shallow groove under rim on exterior.

26 (Site 6, AS-26). Rim of cooking pot Fig. 5

P.H. 0.030, p.W. 0.045. Very coarse, reddish brown clay with many small stone inclusions.

Rounded sides and high, pointed vertical rim. Cf. Yassi Ada, p. 178, P 55 (mid-7th century).

27 (Site 6, AS-27). Rim of basin Fig. 5

P.H. 0.043, p.W. 0.032. Hard, brown clay with some small dark inclusions, many voids, and some mica.

Vessel with straight flaring sides, plain, offset, horizontal rim, rounded on lower surface; dark slip inside and outside.

28 (Site 2). Brick

Pl. 110

P.L. 0.071, p.W. 0.055, Th. 0.032, est. diam. 0.14. Hard, reddish brown clay with many large inclusions; rather sandy fabric.

Broken fragment, preserving approximately one quarter of a circle, probably a fragment of a hypocaust brick.

29 (Site 2). Rim, cooking pot

P.H. 0.017, p.W. 0.040, est. diam. 0.38. Coarse, red fabric with white and dark inclusions and some quartz.

Nearly vertical sides, simple rolled rim.

30 (Site 2). Base

P.H. 0.025, p.W. 0.036. Very coarse, brown clay with many inclusions.

Fragment of flat base; straight sides, probably from a closed vessel.

31 (Site 2). Body sherd

P.L. 0.024, p.W. 0.020, Th. 0.005. Hard, pinkish brown clay with a few white inclusions.

Good, reddish brown slip on interior, thinner on exterior, possibly Çandarli Ware; cf. Hayes, pp. 316–318 (2nd–4th centuries).

32 (Site 2). Body sherd

Pl. 110

P.L. 0.060, p.W. 0.027, Th. 0.003. Brown clay with some mica, small brown inclusions and voids, rather sandy fabric.

From large vessel such as an amphora; wheel marks on interior, deep wheel ridges on exterior. Cf. *Agora* V, [M 333] (early 6th century).

33 (Site 2). Body sherd

Pl. 111

P.L. 0.042, p.W. 0.038, Th. 0.006. Brown clay, evenly fired with some quartz and many small stone inclusions.

From large vessel such as an amphora; deep wheel grooves on exterior. 5th–6th centuries.

34 (Site 2). Body sherd

Pl. 111

P.L. 0.056, p.W. 0.023, Th. 0.007. Reddish clay, evenly fired with many small white inclusions and a little quartz.

From large vessel, probably an amphora; deeply, spirally grooved on exterior. 5th-7th centuries.

35 (Site 2). Body sherd

Pl. 111

P.L. 0.046, p.W. 0.044, Th. 0.009. Very hard,

reddish brown clay with some quartz and many lime inclusions, fired brown on exterior.

From large vessel, probably an amphora; deep spiral grooves on exterior in two bands, with large horizontal space in between. Cf. *Yassi Ada*, type 2b amphora, pp. 159–160 (mid-7th century).

36 (Site 4). Body sherd

P.L. 0.036, p.W. 0.021, Th. 0.006. Reddish brown clay with small stones and large white inclusions, fired buff at surface, reddish at core.

From large vessel, probably an amphora. Horizontal combing on exterior. Typical 6th-century fabric and decoration.

37 (Site 1). Body sherd, beehive ware

P.L. 0.050, p.W. 0.045, Th. 0.007. Reddish brown fabric with quartz and large lime inclusions.

Body sherd of large vessel, plain on exterior, horizontal and vertical combing on interior; worn by sea action. Cf. E. Crane, *The Archaeology of Beekeeping*, London 1983, pp. 45–51, for a general

discussion of beehive ware; see also A. J. Graham, "Beehives from Ancient Greece," *Bee World* 56, fasc. 2, 1975, pp. 64–75; and J. E. Jones, A. J. Graham, and L. H. Sackett, "An Attic Country House below the Cave of Pan at Vari," *BSA* 86, 1973, pp. 355–452. John E. Jones ("Hives and Honey of Hymettus: Beekeeping in Ancient Greece," *Archaeology* 29, 1976, pp. 80–91) has an example of an early Byzantine beehive from near-by Isthmia. Cf. 38 and 39.

38 (Site 6). Body sherd, beehive ware Pl. 111 P.H. 0.029, p.W. 0.041. Hard, reddish brown clay with some lime inclusions and many voids, unevenly fired reddish.

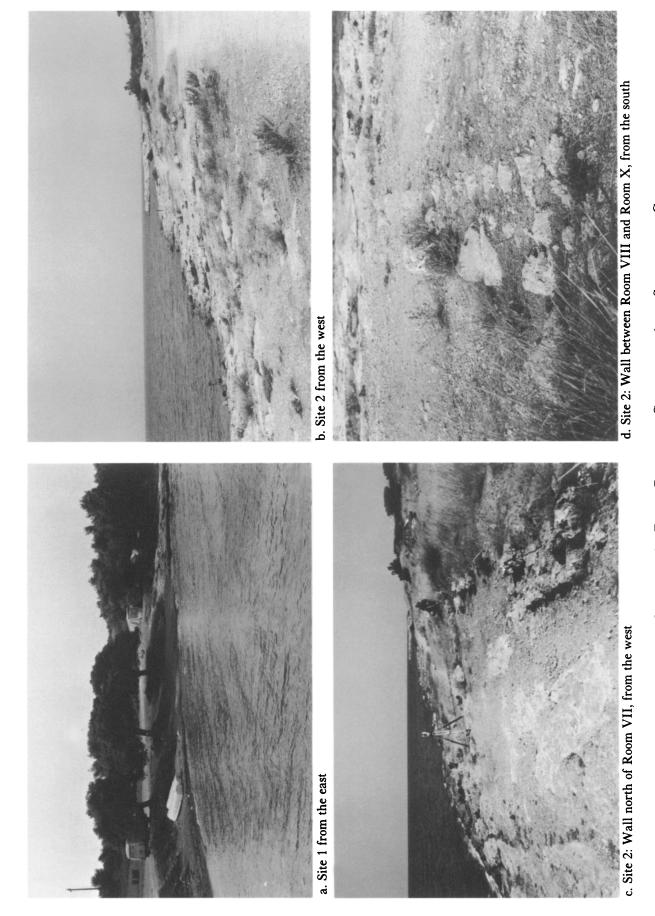
Body sherd of a large vessel with horizontal and vertical combing on interior. Cf. 37 and 39.

39 (Site 6). Body sherd, beehive ware Pl. 111 P.H. 0.038, p.W. 0.043. Hard, brown clay with some mica and many voids.

Body sherd of large vessel with horizontal and vertical combing on interior. Cf. 37 and 38.

TIMOTHY E. GREGORY

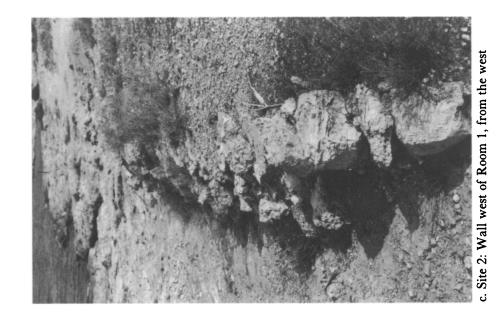
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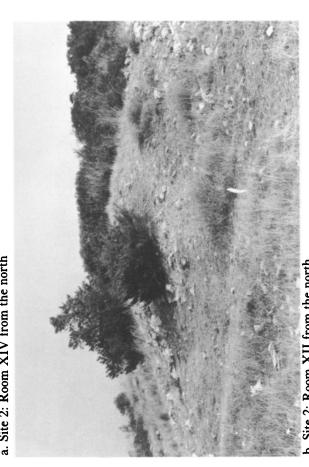
TIMOTHY E. GREGORY: AN EARLY BYZANTINE COMPLEX AT AKRA SOPHIA NEAR CORINTH



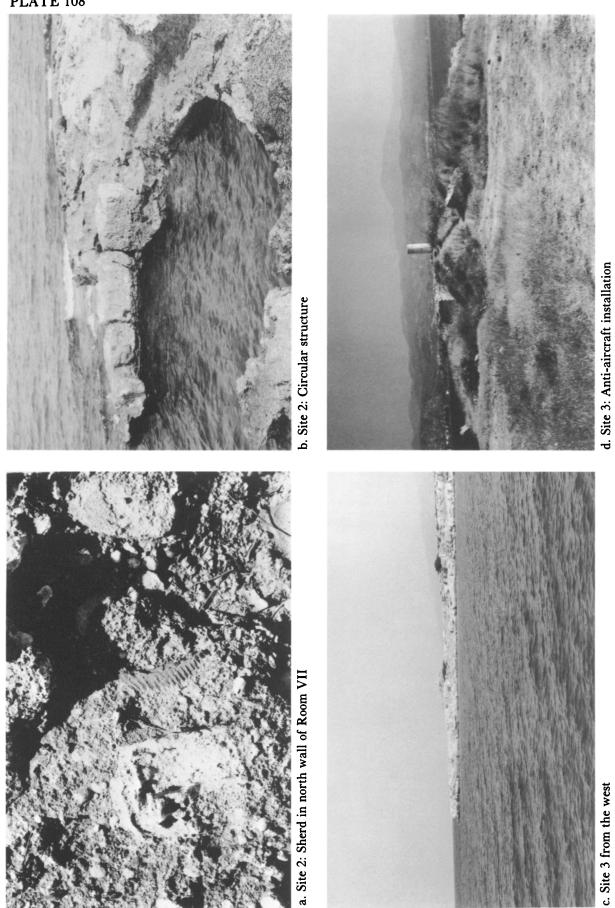
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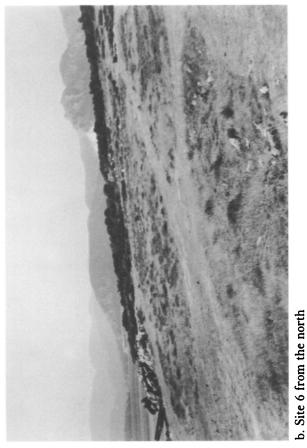




b. Site 2: Room XII from the north



TIMOTHY E. GREGORY: AN EARLY BYZANTINE COMPLEX AT AKRA SOPHIA NEAR CORINTH



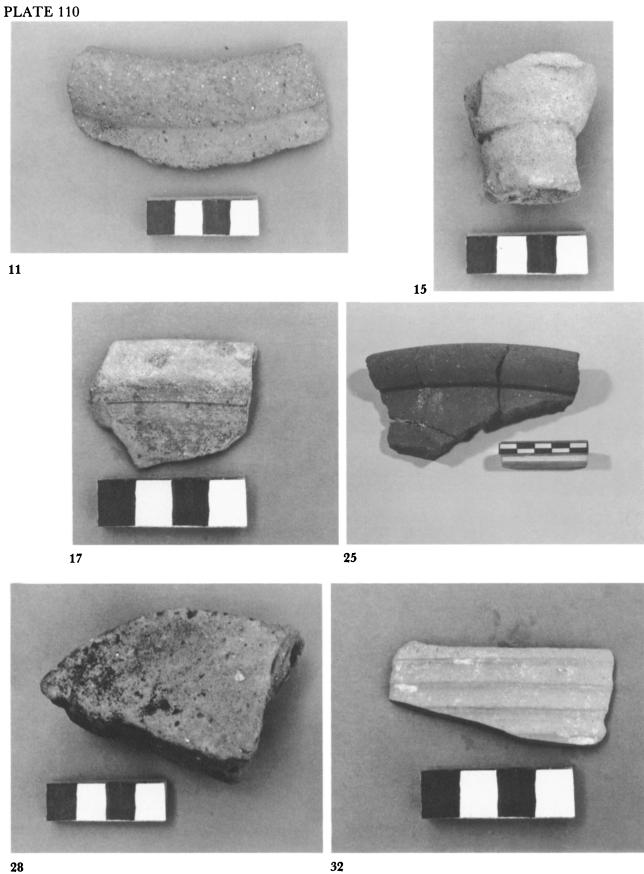


d. Mosaic tesserae from Site 2, Room VIII

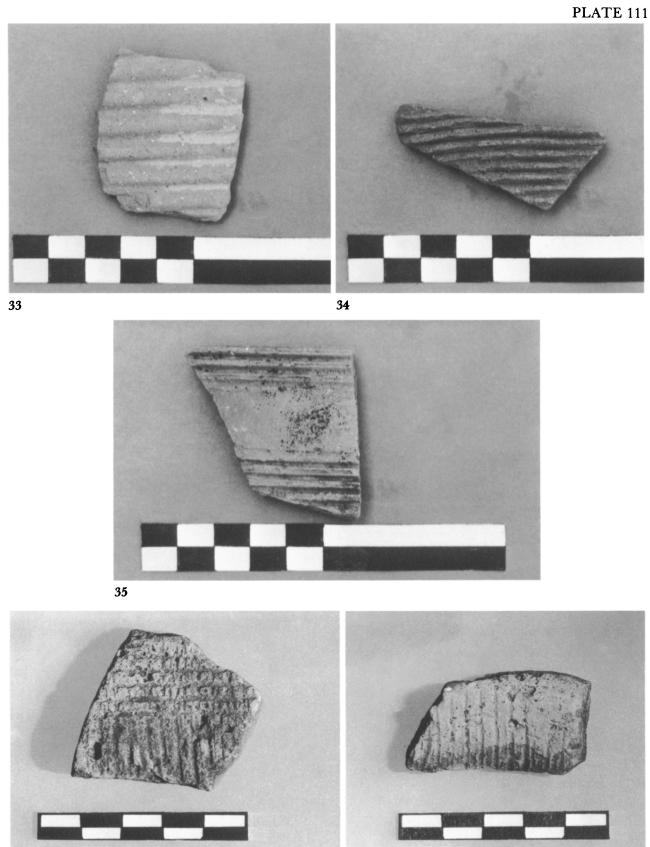


c. Site 7 from the south (Site 3 in background)

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