

## INVESTIGATIONS AT KENCHREAI

Tentative explorations of the site of Kenchreai, the port of Corinth on the Saronic Gulf, were carried out during a two-month campaign in the summer of 1963<sup>1</sup>. The results of these were to establish some of the main outlines of the archaeological configuration of the site, and to raise a number of important problems though not to solve any of them definitively. A further campaign is planned for the summer of 1964, and, after a period of study, still a third in a subsequent year. The present report is a mere outline of the results of the first year, in anticipation of a more complete preliminary report after the second season.

Investigations were undertaken at four places around the harbor: (1) at the southwest end of the harbor: Area A; (2) at the northwest end: Area C; (3) at a place about 150 m. north of the southwest end: Area B; and (4) at a place about 150 m. east of B: Area E. (P l. 110a).

The investigations at the south end of the harbor, Area A, were concerned with structures part of which are visible in the sea and part of which were covered by earth on a short promontory of the land. All of this seems to have been occupied in antiquity by a long quai or pier extending approximately southeastward, from the seaward end of which projected a mole (P l. 110 b). The parts visible in the water were examined as well as possible without any excavation. From this observation it would seem

that the quai was some 100 m. long. The parts now underwater seem to be divided into three areas. At the outermost end where the water is some three meters deep it was possible to distinguish vaguely remains of a building resembling in some respects a temple, but no close examination of this was feasible. The north side of the quai seems to have been occupied by a series of large rectangular buildings facing on an open space some 9 m. wide, each building consisting of three rows of quadrangular rooms. The buildings varied in size; the second from the end, which was the only one whose complete outline was distinguishable, was approximately 38 m. long, 22 m. deep, at the east end, and 26.50 m. deep at the west end. It had three rows of six rooms. These buildings, which may have been warehouses, appear to have been separated by corridors of roads running at right angles to the quai, connecting the space in front with a long road that ran the length of the quai behind the buildings. The remains of the buildings include various kinds of construction suggesting that they were rebuilt or extensively repaired on more than one occasion. Some of the masonry is good solid ashlar, suggestive of Hellenistic work; some is rubble concrete. In a few places where the earth around the walls could be examined in the excavated area there were indications that the preserved parts of the walls in that section had been erected in the second century after Christ.

Behind these «warehouses», to the south, there has long been visible in the water the remains of a complex of rectangular and apsidal rooms (P l. 111a - b). One of these measures about 7.50 m. in width and 9 m. in length, with an apse having a radius of 2.60 m. (All measurements on the interior). The complex of rooms has not been identified or dated except that some of the rooms block the course of the road behind the «warehouses», which was apparently in existence in the second century after Christ.

In the excavation carried out on the land at this end of the harbor there were uncovered the remains of a church and associated buildings lying over the plundered walls of the «warehouses» (P l. 111b). The church had a single nave, an apse and a narthex, similar in size, shape and construction to the large apsidal room in the water south of the «warehouses». In addition to this, a hall ran along each side of the nave. The south hall was separated from still

1. The work was done by the Departments of Art and classics of the University of Chicago and the Departments of Fine Arts, History, and Classics of Indiana University, under permission granted to the American School of Classical Studies at Athens. The professional staff included, as senior members, Robert Scranton, John Hawthorne and Elisabeth Gebhard of Chicago; Edwin Ramage and Diether Thimme of Indiana; and Laura Sumner of Mary Washington College. Graduate Students participating included Leila Ibrahim, Alice Swift and James Russell of Chicago and Anna McCann and Robert Hohlfeider of Indiana, and later Miss Laura Fahy. Mr. Joseph Shaw of Chicago served as Architect. Mr. Christos Dionysopoulos represented the Ephor, Mr. Verdelis. Mr. George Kachros of Old Corinth was technical expert, and Mr. Christos Kontoyannes of Solomos was foreman, supervising some 45 workmen.

Preparations had been made during the previous spring by Professor Oscar Broneer, who arranged for the purchase of four houses at the southwest corner of the harbor, and for a general survey of the site by Mr. I. Bantekas of Athens. Excavation began July 1 and continued until August 24, with a week's suspension of digging for photography and study toward the end. Subsequently most of the trenches were filled.

another hall along its southern side by a colonnade, the bases of which still remain in position. The marble pavement of the southernmost hall is well preserved (P l. 112 a). Whether there was a corresponding space north of the hall north of the nave remains in doubt. In any case a long transverse space — an exonarthex — extends across the front of all five rooms. In the front of the exonarthex to the west stretched a series of small rooms of highly individual interest.

There are clear indications of at least three successive apses. The earliest of these would appear to be represented by remains imbedded in the footing of the apse of the main period of the church — the more easterly of the two which show prominently in the plan of the nave — and may be part of a simple remodeling of the rear rooms of the «warehouse», whether for ecclesiastical purposes or otherwise is not certain. The second apse, lying on top of this, belongs to the main period of the church, which was built over the leveled ruins of the «warehouse», at a slightly different orientation. The third apse effected a constriction in the size of the nave of the main period.

Few clear remains of the floor of the developed church were identified, the earth having been much disturbed by late graves and trenches from the last war. There were a few bits of mosaic flooring in the nave, and in the exonarthex were extensive remains of mosaic, much repaired in places with re-used marble slabs or large terracotta tiles (P l. 112 b). Among the rooms west of the exonarthex was one paved with marble slabs; another with a fine mosaic of elaborate pattern. One had a sloping floor of marble slabs, the joints and edges having been sealed with waterproof cement; at one end are the foundations for some structure such as a pedestal or basin.

The room with the plain marble floor and that with the fine mosaic present a particular problem in that their orientation is slightly different from that of the church, and their masonry is of a different character. They may actually belong to some phase of the «warehouse», earlier than the church. The walls of the mosaic room were decorated with elaborately painted plaster of which some remains still exist on the lowest course of the wall still *in situ*, and many other fragments were found in the debris filling the room. Among the last

is a complete ashlar block, 0.55 m. long, 0.43 m. high and 0.34 m. thick, on which was well preserved a fragment of fresco depicting the waist and thighs of a man and beside him the arms, torso and head of a figure falling headlong. The falling figure is portrayed with a distorted face and crossed arms and with what seem to be masses of blood; in some ways it suggests a Christian saint in agony or ecstasy. The standing figure, however, and the other preserved traces of painting, appear to be more Roman than Christian.

Among the debris covering the building were found several smoothly finished columns, some mullion capitals and imposts, and a considerable number of carved slabs of a type associated with templon screens and similar early Christian church furnishings. All of these seem to be early rather than late, and combining them with the evidence of the pottery associated with the building, which has not yet been completely studied, one would suspect that the main period of the church belongs to the fourth century.

On some of the slabs were inscriptions :  $\text{C}\Omega\text{T}\text{H}\text{P}\text{I}\text{A}\text{C}\ \text{A}\text{Y}\text{T}\Omega\text{N}\ \text{E}\text{K}\text{A}\Lambda$  and  $\text{A}\text{M}\text{H}\text{N}$  in a style of lettering which also suggests an early period; on one of the columns was an inscription  $\text{O}\ \Gamma\ \text{M}$  which so far has not been convincingly explained, but it bears no obvious relation to any Christian context.

The problems of the area are thus obvious and important. It is highly desirable to know more about the «warehouses» and other remains in the water, and their relation to the church, and the relation of any of these to the sanctuary of Isis and Asklepios (or the one of Aphrodite) mentioned by Pausanias as at one end of the harbor.

At the other end of the harbor, Area C, remains of a mole and other structures are also clearly visible in the water but were not closely examined in this campaign. On the land, extending for a distance of about 50 m. north of the extremity of the point, a series of trenches produced a considerable amount of information about a number of buildings (P l. 113 a) Of these the largest and best understood is a brick-walled structure running along the eastern shore and extending some distance into the water. The part on land which was examined by excavation consists apparently of two main sections: one, to the west, a great hall or series of large rooms measuring about 30 m. north and south

and 15 m. east and west; and, second, a series of narrow rooms about 2.50 m. wide and 6 m. long, partly eaten away by the action of waves on the sea-cliff. Perhaps the most interesting element of the building so far is the widely preserved mosaic at the north end, of which some 50 square meters have been preserved (P. I. 113b). In the narrow rooms to the east the floor was paved with white marble *tesserae* without pattern. The fragmentary remains of the rooms in the beach and in the water still farther east indicate that some of these had fine floors supported on thick concrete, and that in some of the rooms the walls as well as the floors were lined with marble revetment.

Beneath the narrow rooms the sea-cliff ran through the concrete foundation a well-built tunnel, 1.00 m. high and 0.66 m. wide, lined with tile and with a curved roof. From this tunnel there were outlets under the floors of the adjoining rooms to the east. The purpose of the tunnels is not clear; they suggest hypocausts, but the floors above are too thick to make this convincing. They may perhaps more likely have been water conduits bringing fresh water to fountains or pools in the rooms now in the sea. Beside the building, in the debris, was found a length of lead waterpipe 4.50 m. long, consisting of two complete and two fragmentary sections still welded together, the longest single section being 2.65 m. long. Each section bore the impressed name ΕΠΑΓΑΘΟΥ. This too suggests special provision for fresh water.

The building went through many periods of remodeling. A brick wall visible in a hole through the mosaic at the north end suggests that it was once not so long as it is now; in several places the original wall surfaces are covered by later walling. At the south end what seems to have been the original floor was covered by about a meter of earth on top of which are indications of violent burning, suggesting, as do indications elsewhere, that the building suffered a catastrophic destruction by earthquake and fire. The evidence, so far as it has been studied, suggests the possibility that the structure dates originally from the second century after Christ and was essentially destroyed in the sixth.

Between the brick building and the southernmost point of land, now occupied by a late tower massively built of ashlar blocks and concrete, there is a complicated but ill-preserved

series of remains. Of these, the earliest would seem to include several lines of brown poros blocks. One of these is pierced by a drain built parallel to the shore and now exposed on the beach for a distance of some 18 m. On it were found fragments of several amphorae and inside quantities of pottery which appear to date around the time of Christ. The brown poros wall, then, and the complex of which it is a part, may well be Hellenistic.

Lying over the brown stone complex is a variety of concrete foundations. Just south of the brick building there is a large drain or sewer extending away from the shore in a northwesterly direction (P. I. 114 a). South of this are two heavy concrete foundations with a similar orientation, possibly representing a building 7 m. wide. Between them are traces of parallel heavy concrete foundations, which are only partially uncovered, but so far as exposed at least would be consistent with the plan of a Roman temple. Thus they could conceivably represent the Temple of Aphrodite mentioned by Pausanias, though that temple might have been on the mole or on higher ground to the north.

West of the brick building, near the north end are substantial remains of a heavy gravel road running up the hill to the north. West of this, about 30 m. from the east shore, lies a heavy concrete wall apparently closing off the whole end of the promontory. West of this wall, in turn, the northernmost trench cut through an intricate complex of walls and floors. Of these the earliest remains would seem to belong — possibly — to a Hellenistic structure; several sections of a cobble or large-pebble pavement may be only a little later. Most, however, belonged to Roman buildings dating from the time of Christ and remodeled or replaced through the next four centuries or so.

At the western end of Area C — some 50 m. from the eastern shore and 15 to 20 m. in from the shore of the harbor, there was found a rather uneven surface of earth and gravel with heavy traces of burning on it. Some 80 m. west of this, in the trench constituting Area E, a similar surface was discovered, extending perhaps 40 m. in from the shore. This suggests the existence of a large open area along the north side of the harbor. Remains of heavy walls about 40 m. from the shore, and paralleling the shore, were also found in Area E, suggesting the existence of massive though not necessarily

monumental buildings, but the closely limited operations in this area made it impossible to clarify these suggestions this season.

About 40 m. northeast of the heavy foundations mentioned above another trench did bring to light remains of substantial structures of Roman imperial date and others of the early Christian period, but they were not extensively examined.

Some 150 m. west of this, in Area B, at the deepest part of the harbor, a series of trenches revealed remains of what may have been commercial establishments, represented by walls showing many repairs and modifications throughout their history (P l. 114b). It seems possible to suggest the existence of one structure measuring approximately 20 m. along the waterfront and 15 m. in depth, subdivided into two rows of four rooms each, with perhaps similar structures to right and left, and others behind. Between them run large sewers constructed of concrete. The earliest construction would seem to be at least as early as the time of Christ, and parts at least of the buildings were in use even into the Byzantine period, but there would appear to have been a violent destruction around the sixth century.

Among the notable features of the building are two inscriptions. One exists on a block still *in situ*, consisting of the monogram  $\text{ΑΒ}$ ; the other was found on a block re-used to cover a drain, consisting of the monogram  $\text{ΓΑ}$ . Another is the style of construction of one period, in which cleanly cut blocks the size of a large brick were employed; in one place the pattern of such brick-blocks was engraved on the face of a fine ashlar block.

In front of the building the quai apparently extended at least 14 m. to a line of poros blocks now visible in the water, and a brief investigation of the expanse between revealed a long series of successive surfaces of hard packed gravel or earth or pebbles.

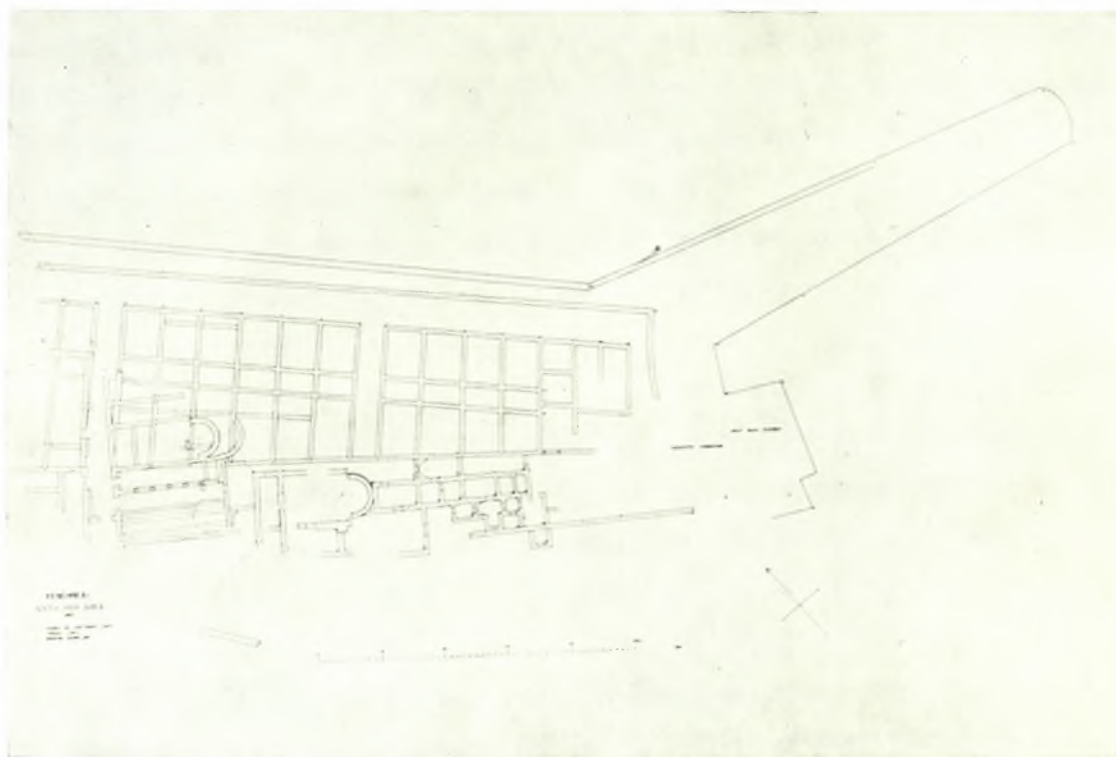
It is perhaps worth observing that at almost no point did the investigation penetrate undisturbed deposits earlier than the period of Augustus. In places at a distance from the shore, Roman foundations and cellars went down generally to the level of ground water, and close to the shore Roman floors lay at sea level, so that it was impractical to dig lower. This, combined with the presence of foundations in the sea itself, shows clearly that the ground level

of today is considerably lower than it was in the time of Christ: by the most reasonable calculation, perhaps, some six to ten feet lower, though this figure may have to be revised.

With reference to the objects discovered during the season the following statements might be made. There were found in all 1017 coins, including two lots that for practical purposes might be considered hoards — one numbering 114 coins and one, 97, from the fourth and fifth centuries after Christ. Among several notable examples were a silver coin of Augustus, a fine bronze of Gordianus and another of Maximianus, and five silver coins of Basil II. A considerable number of Roman lamps were found, including several with remarkable plastic representations. Among these were a lamp with its stand in the form of a winged cupid, of the third century; another with a fine bearded head on the discus, one from the second century depicting a wounded centaur, and another with the sacrifice of Isaac by Abraham. A figure of Aphrodite wearing a pointed cap has considerable interest from the point of view of cult, and a molded head of Dionysos from a situla, of the second century after Christ, is fairly remarkable (P l. 114c). A fragment of a marble portrait head of late Roman date is the most notable of the few bits of stone sculpture. Few inscriptions were found in the excavation, but one late classical dedication by one Γ.  $\text{Ἦιος Ἀγαθήμερος}$  and his wife in behalf of their daughter, who was a  $\text{λικνηφόρος}$ , was brought in from a nearby farm. Perhaps the most important category of small finds was the collection of glass, which has not yet been analyzed, and there are vast amounts of Roman pottery which may prove on study to be valuable typologically.

A thorough search of the whole area of the city was made in the effort to locate surface remains that would offer suggestions as to the extent of the community and the position of various kinds of buildings. In this process there were found some 800 m. north of the harbor near the east coast significant remains of a temple of good Classical period. The remains include substantial foundations and numerous fragments of marble in the fields around. The position of the temple suggests the hypothesis that it may be the sanctuary of Artemis mentioned by Pausanias on the road from Isthmia to Kenchreai.

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Kenchreai: a. Map of Site of Kenchreai, b. The Southwest end of the Harbor—outline Plan

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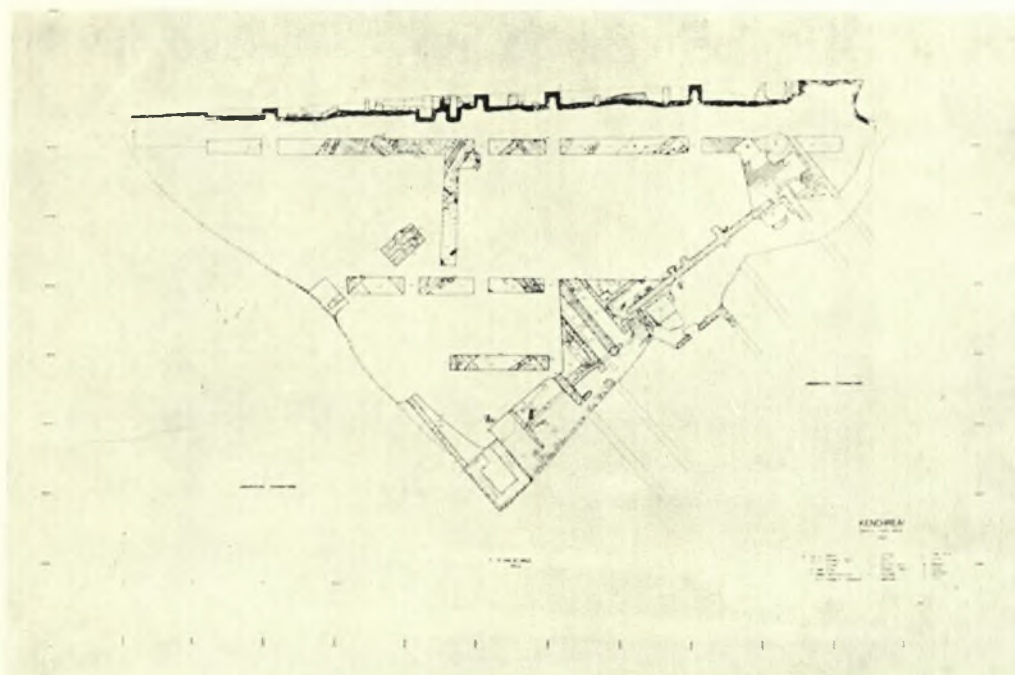
Kenchreai: a. Part of the early Christian church with walls of building on the pier visible in the water beyond, b. The Southwest end of the Harbor; detailed plan of excavated area and associated remains in water

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Kenchreai: a. The Southwest end of the Harbor; view of marble-paved hall south of Church, b. The Southeast end of the Harbor; view of Exonarthex of Church

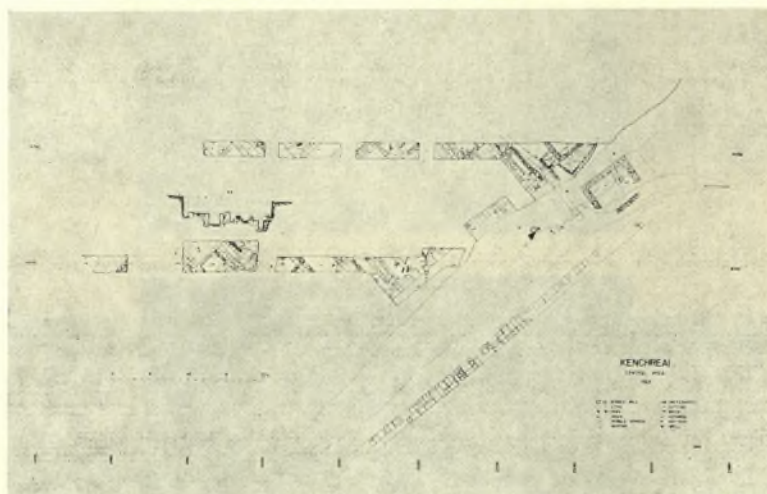
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Kenchreai: a. The Northeast end of the Harbor; detailed plan of excavations, b. The Northeast end of the Harbor; mosaic floor in north corner of Brick Building

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Kenchreai: a. The Northeast end of the Harbor; remains south of the Brick Building, b. The Inner Corner of the Harbor; detailed plan of Excavation, c. Terracotta Head of Dionysos from a situla

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