

# A TRANS-ISTHMIAN FORTIFICATION WALL

## NOTES ON HELLENISTIC MILITARY OPERATIONS IN THE CORINTHIA

(PLATES 66–71)

PRIOR to the spring of 1960,<sup>1</sup> traces of three fortification walls crossing the Isthmus of Corinth had been found.<sup>2</sup> The earliest, whose line can be followed near the Isthmian Sanctuary for about one and a half miles, dates to LH IIIB, the 13th century B.C. The great wall built by Victorinus for Justinian in the 6th century after Christ is visible in part for most of its length, from the Saronic Gulf near the village of Isthmia to the Corinthian Gulf at the northeast edge of New Corinth. This line represents the shortest feasible route across the Isthmus. A stretch of a third wall, somewhat less than a mile in length, was found in 1957 by William Donovan, a member of the University of Chicago Isthmian Excavation Staff, atop the Haghios Demetrios Ridge west of the Sanctuary of Poseidon. At the time of its discovery, this

<sup>1</sup> Work on the wall was carried out in 1960 while I was a student at the American School of Classical Studies in Athens, as Edward L. Ryerson Travelling Fellow from the University of Chicago, and in the summer of 1961, aided by a grant from the Research Institute of the University of Texas. I should like to thank both institutions. The work in 1960 served as the basis for a paper read at the General Meeting of the Archaeological Institute of America in 1960 (*A.J.A.*, LXV, 1961, p. 193).

I wish to thank Professor Oscar Broneer, Director of the University of Chicago Isthmian Expedition, for having assigned me the pleasant task of excavating this wall while I was a member of the excavation staff, and for permission to publish these results. I have had the benefit of Professor Broneer's opinions and suggestions both before and during the writing of this article. Various problems connected with the wall have been discussed with several other people and my thanks to all of them for their interest and suggestions. Among these I should mention in particular Professors Michael Jameson, Henry Robinson, Eugene Vanderpool and Lucy Shoe.

The survey map of the Corinthia (Fig. 1) is the work of the late George Peschke with additions by Mr. Joseph Shaw, architect at the Isthmia in 1960; the sketch map in Figure 2 is adapted from the survey map. Figures 3 and 4 are by Mr. Shaw. The photographs for Plate 68, b, c, d, e are by Professor Broneer, the others by the author.

<sup>2</sup> For the Mycenaean and Herodotean Walls, see Broneer's reports in *Antiquity*, XXXII, 1958, pp. 80-88 and *Atti del VIIe congresso internazionale di archeologia classica*, 1961, I, pp. 243-250. The Justinian Wall is discussed in both of these articles, and a summary of earlier literature on the Isthmia is given at the end of the article in *Antiquity*. To this list should be added Broneer, *Hesperia*, XXVIII, 1959, pp. 320-321, and E. W. Bodnar, *A.J.A.*, LXIV, 1960, pp. 165-171.

Zosimos (I, xxix. *Corp. Scr. Hist. Byz.*, ed. Immanuel Bekker, p. 29) and Zonaras (XII, xxiii. *Corp. Scr. Hist. Byz.*, ed. Bekker, p. 593) mention a wall built during the reign of Valerian to ward off an imminent invasion by the Scythians, but no trace of this wall has been found. Harold North Fowler (*Corinth*, I, i, p. 55) assumes this wall was "repaired and fortified with 153 towers under Justinian," but, however likely it may be, there is no evidence that the lines of the Valerian and Justinian walls were the same. Fowler's reference (*loc. cit.*, note 3) to Phrantzes is no help,

wall was tentatively identified with the wall described by Herodotos as having been built in 480 B.C.<sup>3</sup>

In the spring of 1960 the Isthmian Excavation Staff learned of the discovery of a large construction in a field immediately north of the Kyras Vrysi-Hexamilia road, *ca.* 4.5 km. west of the Sanctuary of Poseidon. Along the crest of a low rise which cuts across the west edge of the field, a tractor-drawn deep plow had ripped up numerous large, smoothly dressed poros blocks. One nearly square block, stuccoed on five sides and bearing an inscription (Fig. 4; *infra*, p. 257), and a large, stuccoed coping stone were brought to the excavation area. At the north edge of the plowed field the corner of a cut block, apparently *in situ*, could be seen extending into the unplowed field to the north.

Permission was obtained from the Greek authorities to investigate this construction and the first trench was dug across the line indicated by the block that was *in situ*. Within an hour of digging, it had become apparent that we had found a large fortification wall, and what had begun as a short-range investigation of some blocks in one field was quickly transformed into the considerably more extensive job of tracing a hitherto unknown fortification wall across the Isthmus of Corinth (Figs. 1, 2).

The wall, though of different construction, was found to join the stretch of wall discovered earlier on the Haghiios Demetrios Ridge, and then continue down the southeast slope of that ridge to the sea at Kenchreai (Fig. 1). To the northwest of where excavations began the wall was traced to a ridge called Voukiana, opposite Gonia. Although no sections of the wall have been found *in situ* between Voukiana and the Corinthian Gulf, similar stray blocks and the configuration of the terrain indicate that the wall went almost due north from Voukiana, passing under the soldiers' barracks and New Corinth.

#### KENCHREAI TO THE HAGHIOS DEMETRIOS CREST

At the northeast point of the harbor at Kenchreai a Roman tower preserved in several courses stands guard over the rather bleak but extensive remains of the ancient port. Numerous remains of walls and wall foundations, along with a considerable amount of potsherds, are easily discernible both on the beach and offshore, as well as on the ridges of the north and northwest and in the little valley west of the harbor. Just west of where the north side of the harbor curves south a ridge rises sharply to the west, separated from the next ridge to the north by a gully. It is in the fields

since there is no mention of the Valerian Wall there. Remains of another Isthmian defense are known on the slopes of Mt. Oneion (*Corinth*, I, i, pp. 104-106). Samuel Gridley Howe, who may have seen this wall in 1829, considered it Venetian and said it was connected with Acrocorinth and the "fieldworks extending thence to the Gulf of Lepanto" (Cf. *The Journals and Letters of Samuel Gridley Howe*, ed. Laura E. Richards, Boston, 1906, p. 351). Part at least of what Howe saw must belong to the Venetian works discussed by A. Bon, *Corinth*, III, ii, pp. 268-271.

<sup>3</sup> Herodotos, VIII, 71.

just below the southern ridge, ascending its slope and along its north side that traces of the trans-Isthmian fortification wall nearest the Saronic Gulf are located (Pl. 66,a).

Although the construction at the northeast point of the harbor is Roman, it is quite possible that it was preceded by a Greek terminus for the wall. Some Greek constructions of large, poros blocks are visible immediately north of the tower, unrelated to the Roman constructions in small stones and cement which extend into the sea along the beach. Several of the blocks in the tower itself may be re-used Greek blocks.

The top of the ridge was inhabited both in Greek and Roman times and there has been considerable quarrying in the area as well.<sup>4</sup> Consequently the line of the wall along the ridge toward the west end of the gully has disappeared. In the fields west of here, however, near the road to Isthmia, several wall blocks were turned up in the spring plowing of 1960. On the side of a small gully running from the road toward the southeast slope of the Hagghios Demetrios Ridge, traces of the wall are visible and, just below the ridge at the edge of the field of Kyriakos Kionstas, both faces of the wall were cleared for a distance of 2.55 m. (Pl. 66,c).

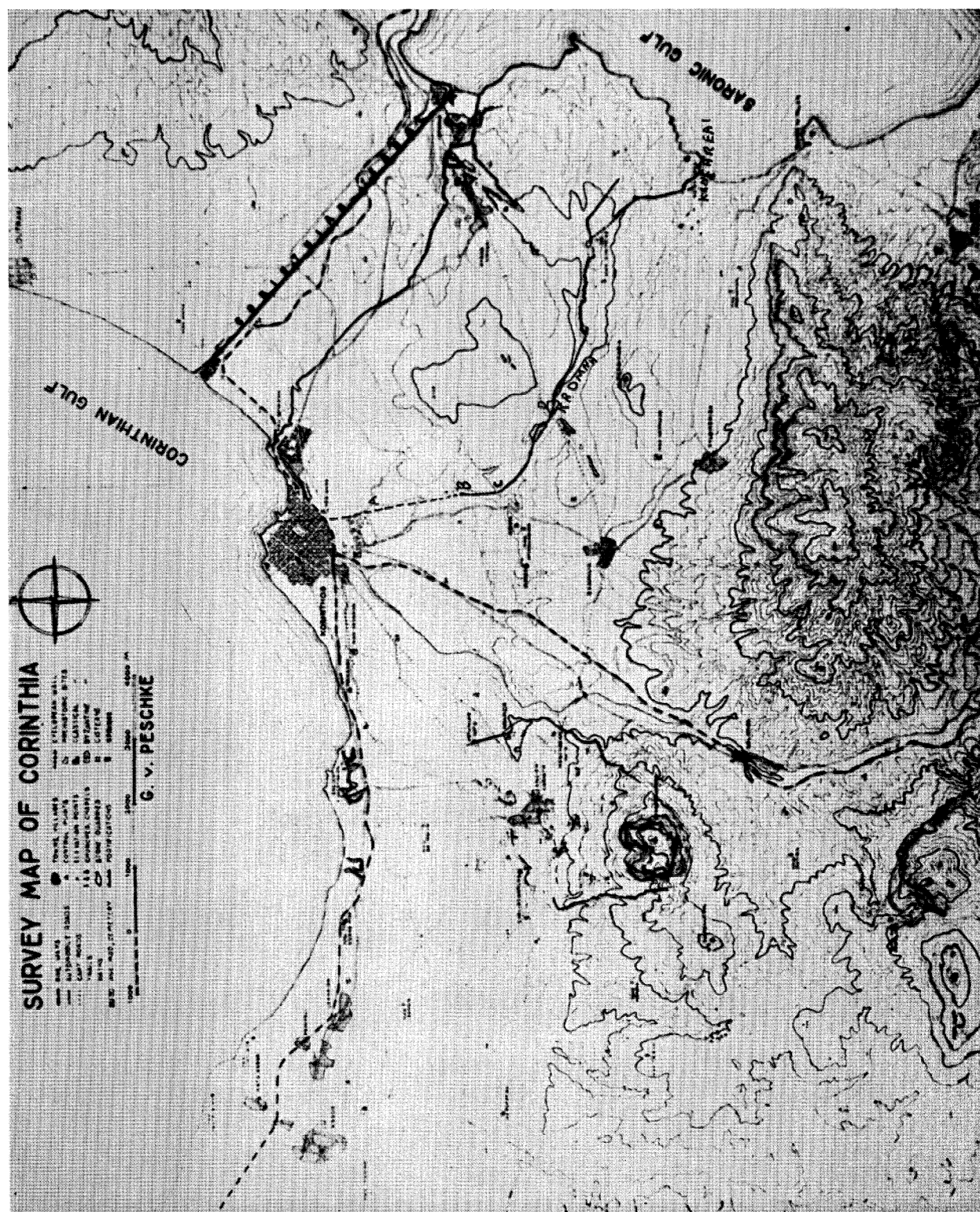
The wall here (Section 2) is made of two lines of ashlar poros (the pinkish surface weathers to a light gray) with tooled faces. The full width is 2.25 m., the interior of the wall having been filled with earth and rubble. Only the lower course of the socle is preserved at this point. The block in the outer face of the wall visible on the left in Plate 66, c measures 1.47 x 0.70 x 0.43 m.

About 60.0 m. north of this section the wall widens to 2.64 m. (Section 3) and is strengthened by a crosstie: a line of blocks within the wall at right angles to the parallel faces, which binds the two faces of the wall together. The wall continues up to the face of the ridge, which has fallen away, and is found again (Section 4) above the face (Pl. 66, b), heading up the southeast slope of the ridge.

Farther up the slope but still about a kilometer below the crest, part of a large rectangular tower, 11.74 x 10.87 m. (Section 5), and both faces of the wall where it joins the tower on the northwest were cleared among the pine trees (Fig. 3, No. 1; Pl. 66, d-f).

<sup>4</sup>The account of Samuel Gridley Howe's use of blocks from the "Temple of Venus" at Aigina for repairing the harbor there is well known (*op. cit.*, p. 309). It might be wondered whether or not some like fate befell sections of the trans-Isthmian wall and other ancient constructions in the vicinity of Kenchreai during Howe's philanthropic work at his colony of Washingtonia, the modern village of Hexamilia and its environs. This, in particular, because of the following (*ibid.*, p. 358):

"I propose the name of Washingtonia for this colony. Within its boundaries is the old port of Kenchreae (now called by the Greeks Kechrees), which is nearly useless from the destruction of the old mole, and is unfrequented on account of its insecurity. I propose, during the hot months when nothing is to be done in agriculture, to employ the colonists and other poor in dragging down rocks from the hills which overhang the port, and throwing them in upon the foundations of the old mole, and then easily making it what it once was, the most important harbor in the Province of Corinth; . . ."



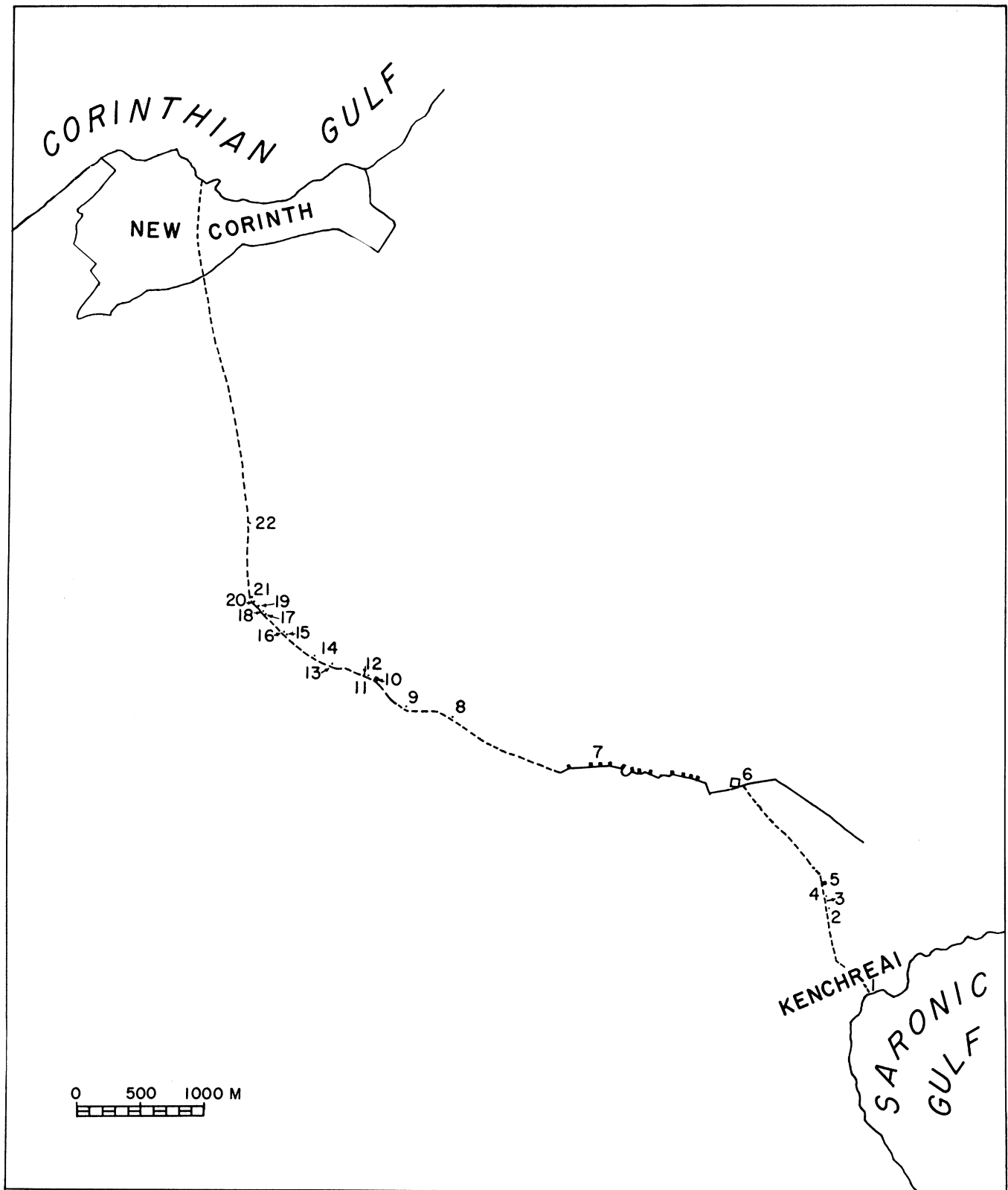


FIG. 2. Sketch map of Trans-Isthmian Wall. Numbers refer to Wall Sections.

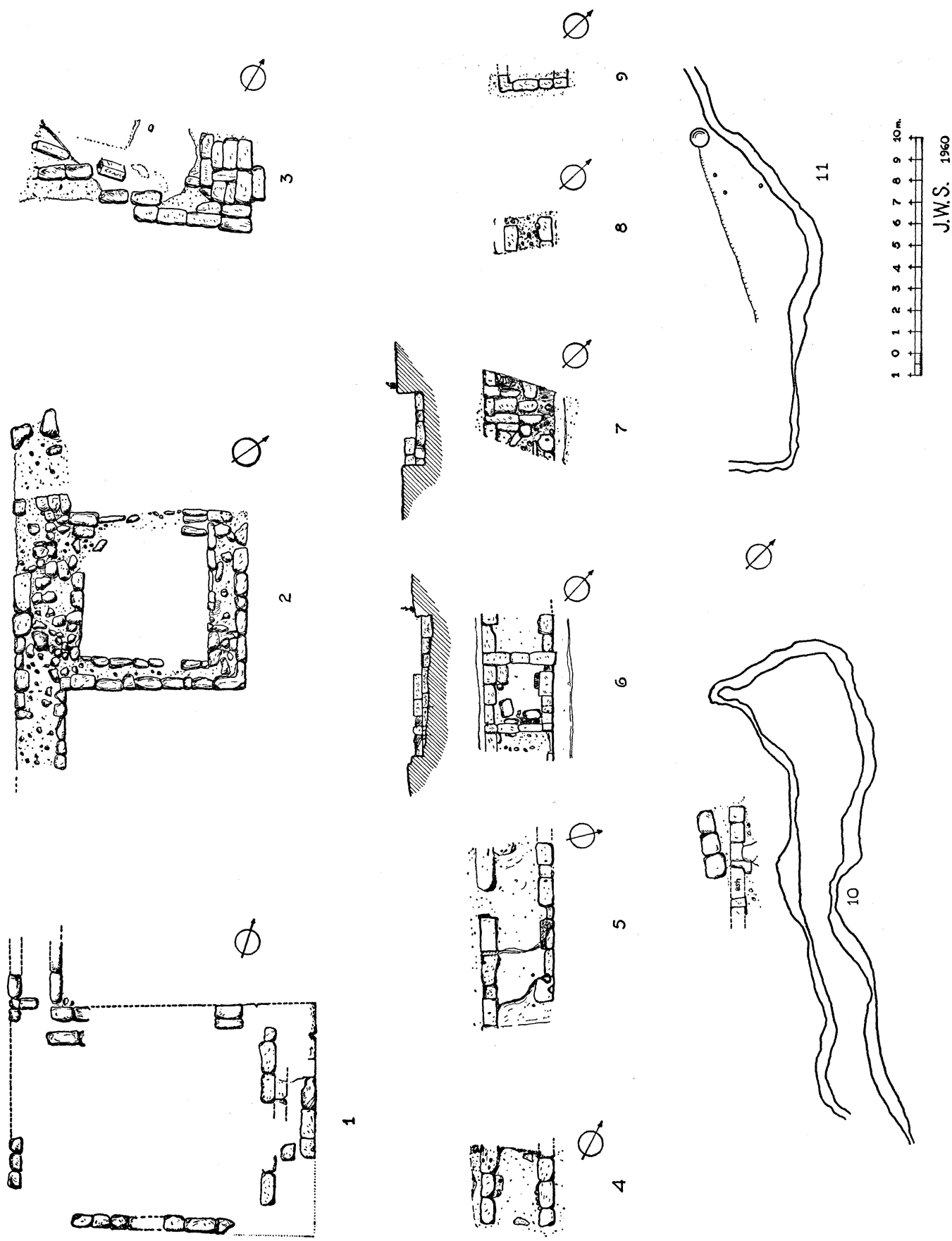


FIG. 3. (1) Tower near Kenchreai, Wall Section 5; (2) Tower on Hagios Demetrios crest, Wall Section 7; (3) part of a Tower, Wall Section 10; (4) Section 11; (5) Section 13; (6) Section 15; (7) Section 16; (8) Section 17; (9) Section 18; (10) Section 19 and Narrow Ridge approaching Main Knoll at Voukiana; (11) Cutting in Bed Rock on top of Knoll at Voukiana (Section 21); Round Cutting contained EH Pithos fragments and a Terracotta Spindle Whorl.

The material used in the construction, tooled face ashlar masonry, is the same pinkish poros described above. Only the lower course is preserved, and the blocks vary in size here, as they do throughout the length of the wall. Despite the variation among the blocks in thickness (to fit the blocks into irregularities in the bedrock), the upper surface of the line of blocks was horizontal, so that it was probably an isodomic socle that was intended. The sections where more than one course is preserved bear this out. Most of the poros blocks are 1.20-1.40 m. long and 0.60-0.70 m. wide.

The outer face of the tower is built in one line of blocks and backed, at least on the north and east sides, by a parallel line. On the east, the inner line is made of two rows of blocks (1.12 m. wide) and separated from the east face by a gap of 0.80 m. This inner line is slightly higher than the bottom course of the face of the tower, and the smaller blocks in the east row of the inner line, which must be re-used, have a coating of fine, white stucco (Pl. 66,d). The inner line on the north side was revealed where the tower joins the wall and is in only one row of blocks, 0.45 m. from the north face (Pl. 66,e,f). The width of the wall where it joins the tower is 2.50 m. Just west of the wall at this point are some blocks that are probably from the second course of the wall. One of these (1.13 x 0.70 x 0.31 m.) had been used earlier, probably to hold a stele, having a cutting in the center of its upper surface, 0.45 x 0.20 x 0.17 m.

The line of the wall may be followed easily up the slope as far as the head of a ravine which lies just east of the wall. Both faces of the wall are visible in several places between the tower and the head of the ravine. From this point to the crest of the ridge, some 300 m. away, the soil is very shallow and most of the wall has disappeared. However, a few large cut blocks along the line indicated by the wall show that the wall continued along a very low rise on this slope, ascending to the northwest.

This line reaches the crest of the Haghios Demetrios Ridge somewhere near Wall Section 6, which is *ca.* 1500 m. from the west edge of the crest. It is here that the Haghios Demetrios Ridge (oriented approximately east-west) meets the main body of the large ridge lying between Isthmia and Kenchreai. The wall abruptly changes direction here, running west along the crest of the ridge.

## OUTWORKS

Although the main line of the wall is to the west of Section 6 along the crest of the ridge, traces of a wall may be followed for more than 200 m. to the east. Here it rounds a small knoll and continues away from the crest, toward the southeast, for several hundred meters before it is lost a little west of a steep cliff overlooking the modern road between Isthmia and Kenchreai (Fig. 1).

Beyond the small knoll mentioned above the wall is still of two faces, but is only 1.55 m. to 2.15 m. wide and the blocks in the faces are much smaller than those already described, frequently being only small field stones. The material used is a conglomerate

in gray limestone, as is the rest of the wall on the Haghios Demetrios crest. This stone was quarried along the top of the ridge.

The most reasonable explanation of this section of wall is that it formed a preliminary line of defense, i. e., an outworks intended to delay and discourage the enemy rather than hold them. The need for a line of this sort can be understood from the terrain. To reach Kenchreai from the crest of the ridge it is necessary for the line of the wall to descend the southeast slope of the ridge, giving up most of its advantage of a commanding height. To continue the main line of the wall farther to the east and then southeast, like the smaller wall, would present the defenders with the impossible task of bringing the wall off the ridge and onto the plain down a high, sheer cliff. The main line of the wall does, in fact, descend to the plain at approximately the most feasible eastern point.

Thus, if the enemy should decide to attack from a northeasterly direction across the ridge, they would be met first by defenders along a smaller wall against whom they would have to expend considerable strength to force their way even to the main fortifications. By that time the fortifications in that area could have been supplied with reinforcements summoned to meet an already weakened assault.

#### HAGHIOS DEMETRIOS CREST

The wall along the crest of the Haghios Demetrios Ridge, most of which was known but unexcavated in 1957, is readily visible on the surface from the west edge of the ridge as far as the so-called "barracks" area, about 1400 m. to the east (the "barracks" area is indicated by a quadrilateral figure in Fig. 2). The "barracks" area stretches north down the ridge onto a saddle formed by the junction of the east-west ridge with the main body of the ridge rising from near the Sanctuary of Poseidon. There were several constructions in this area that must have been connected with the wall since the wall continues on the east side, although its line is difficult to follow. Near one block at the northeast edge of this area was found an early 5th century B.C. loomweight<sup>5</sup> (Pl. 70,b, 1).

Wall Section 6 is located *ca.* 90.0 m. east of the "barracks" area, and it is in this vicinity that the main fortifications turn to the southeast. Section 6 is poorly preserved but does show the outer face of the wall and where it joins a tower.

The Haghios Demetrios stretch of wall is built, like the outworks farther east, of the readily available conglomerate in limestone. The blocks are large but finished much less smoothly and regularly than the blocks in the wall from Kenchreai to the crest, combining polygonal with irregular ashlar, most of them having quarry face (Pl. 67,a,b). The wall varies in thickness, 2.20-2.50 m., and was strengthened with 11 large, rectangular towers.

The third tower from the west end of the ridge crest and 4.0 m. of the wall on

<sup>5</sup> Inv. No. IM 3015. Cf. G. Davidson, *Corinth*, XII, p. 150, fig. 23 (profile V, no. 1076).

either side of the tower (Section 7) were cleared in spring, 1960 (Fig. 3, No. 2; Pl. 67,c). The tower corners are not quite true right angles, so that the sides vary slightly in length. The length of the east side is 8.30 m. while the west side is 8.21 m. The whole tower is 8.25 m. wide. The west wall of the tower, much destroyed, is 1.95 m. thick while the north and east sides are 1.72 and 1.30 m. respectively. There is a gap just over 2.0 m. wide in the wall immediately west of the tower which may have been a gate. This might explain the greater thickness of the west wall of the tower. The north wall of the tower is preserved in two courses.

The thickness of the wall varies on either side of the tower, being 2.38 m. on the east and 2.48 m. on the west, but increasing to 3.20 m. where it backs the tower (Pl. 67,d).

There is one small block (0.37 x 0.28 m., width could not be measured) of tooled-face ashlar poros, like the blocks at Kenchreai, in the lower course of the west tower face (Pl. 69,f). The block was probably taken from some other construction when the wall was built.

Few pottery sherds were found during the digging, and most of these were undecorated, undistinguished fragments of coarse ware. The few painted sherds were all classical. A few other sherds were picked up from the surface along the wall bearing a fine black glaze (Pl. 71,a).

#### HAGHIOS DEMETRIOS CREST TO VOUKIANA

From the west edge of the Haghiios Demetrios crest the ground slopes away sharply to the northwest, the wall following the line of the slope (Pl. 68,a). Both faces of the wall are preserved (Section 8) along the lower ridge at a point 418 m. southeast of the Kyras Vrysi-Hexamilia road, measured from the crossroads near Section 10. Only one block of each face is preserved here and the wall is 3.43 m. thick. Both blocks are again of pinkish poros, ashlar with tooled faces; this is true of the rest of the wall sections found to the northwest. The builders seem to have made consistent use of the most readily available stone, since here and near Kenchreai the most available stone is poros while the Haghiios Demetrios crest is of the conglomerate in limestone found in the wall there. The wall along the Haghiios Demetrios crest is also much narrower, but, after all, there the enemy must make his way up a steep incline before even reaching the fortifications, so a particularly thick wall is not as necessary there as here below the ridge and toward the northwest.

That all these stretches of wall, however, comprise one fortification line is obvious from the orientation of the various sections and the line indicated by them on the map.

On the northwest side of the lower ridge near the road at the crossroads, two blocks of the outer face and fragments of blocks from both faces were found (Section 9). Our work on the wall began in the field across this road to the northwest.

The first trench was dug at the northwest edge of this field (Fig. 3, No. 4; Pl. 68,c). Both faces of the wall (3.33 m. thick) are *in situ* in one course (Section 11). The inner face had suffered more damage than the outer, and two blocks only were uncovered, the line being extended by poros fragments. In the outer face three complete blocks were found. The lengths varied from 1.21 to 1.25 m. and the widths were 0.65-0.68 m. The blocks here, as elsewhere, were cut to accommodate the slope of the bedrock, so that thicknesses varied from 0.23 to 0.45 m. However, in some places parts of the blocks rested on a thin layer of small stones and earth.

It was realized early in the season that what we had found was a trans-Isthmian wall and that the field where the first stretch was uncovered was a particularly well fortified area, perhaps with towers. We therefore decided to search about in the chaos created by the tractor to see if some part of a tower had escaped the devastating plow. Part of the bottom course of a rectangular tower (Section 10) was found, its top deeply scarred by plow marks and most of the north wall knocked out of place (Fig. 3, No. 3; Pl. 68,b).

The exact length of the tower could not be determined, since the wall itself is completely destroyed where the tower should join it. The computed line of the wall indicates that the tower was probably 8.17 m. long. Its preserved width is 4.42 m., but it must have been wider, perhaps about the size of the tower in Section 7.

Bedrock protrudes into the center of the tower and was shaved off at the top level of the blocks. Cut blocks, some consequently of irregular shape, fill gaps in the bedrock in part of the central area and, since the bedrock slopes to the northeast, that end of the tower is solid masonry. The unbroken blocks that form the outer line of the tower vary in length, 1.20-1.96 m., and in width, 0.50-0.70 m. Many of the stray blocks in the area were obviously re-used, and one of those in the lowest course of the south side of the tower. There are five irregularly spaced holes cut into the south face of the block which could have no function in the fortification.

The coping stone and inscription already mentioned (*supra*, p. 249) were found among the upturned blocks immediately west of the tower. They must have been used either as fill or actually built into the wall itself. The inscribed block is covered by a fine, white stucco on its top and four sides and has a convex moulding, almost completely obliterated, around its base.<sup>6</sup> The inscription itself was cut into the stucco on one of the sides (Fig. 4) and identifies a certain Agathon, a native of Kromnoi, or Kromna. The inscription should be no earlier than *ca.* 325 B.C., nor later than the early 3rd century B.C. Its original use was probably as a gravestone or as part of a dedication.

Many sherds dating from the late classical period into Roman times were found here, but in earth that had been considerably disturbed by the plow. One of the

<sup>6</sup> Inv. No. IS 484. H. 0.527 m.; L. 0.456 m.; W. 0.428 m. The date of the inscription was assigned by Professor Jameson who is preparing the inscriptions from the Isthmia for publication.

earliest datable sherds is part of a nozzle of a Greek lamp, made of red Attic clay and covered with a black glaze, slightly brownish in spots. The nozzle was rather long, more than 0.04 m. from the rim to the tip. It could belong to a lamp of either Broneer Type VI or VII, but the glaze indicated the later date (late 4th century B.C.).<sup>7</sup> It should be emphasized, however, that this is not undisturbed context and a late Roman lamp fragment with an unperforated, fin-like handle (Broneer Type XXXI) was found near by.



4. Drawing of inscription (IS 484) found near Tower, Wall Section 10.

Another Greek lamp fragment was found in Wall Section 13 (*infra*), unfortunately again in disturbed context. Part of the rim and part of the nozzle are preserved here. The clay is Attic and covered with a black glaze, and there is a deep groove around the edge of the rim; the sides are slightly convex. Many lamps of this type are known both from Corinth (Broneer Type VII) and the Agora in Athens (Howland Type 25A).<sup>8</sup> The date indicated is either the late 4th or early 3rd century B.C.

About 20.0 m. northwest of Section 11 the wall turns slightly more westerly.

<sup>7</sup> O. Broneer, *Corinth*, IV, ii, pp. 45-46, pl. III, no. 120.

<sup>8</sup> R. H. Howland, *The Athenian Agora*, IV, pp. 67-69, pl. 38.

Here (Section 12) only three small blocks of the outer face were found *in situ*, cut to fill in gaps in the bedrock to form a smoother bedding for the blocks that must have been superposed. The soil here is very shallow.

A rather large (8.49 m.) section of the wall (No. 13) was uncovered some 530.0 m. farther to the northwest (Figs. 2, 3, No. 5; Pl. 68,d). Two courses of wall blocks are preserved in some parts and traces of a third course were found. Several blocks had been broken up and taken out by the owners of the field in an attempt to plant a tree (an attempt which they abandoned), but blocks in both faces remained and the line here is quite clear. The wall thickness is 3.39 m. The sizes of most of the blocks here are comparable to those found farther to the south and are, in fact, standard for the sections found below the Hagios Demetrios ridge.

At least two of the blocks here are re-used. One, in the second course of the inner face, is of a harder, light gray poros and more smoothly finished than any other block found. Its measurements are 1.49 x 0.74 x 0.30 m. Another block in the bottom course of the outer face has a curved surface (facing the attackers). A similar block with the same curved surface had been noted near by earlier in the spring. They are both from a circular construction which had a diameter of 2.60 m.

At the east end of this section the ground slopes upwards, so that the level of the second course of blocks (all of which are missing in the outer face) at the west end would be at the level of the first course of the east end. Atop two of the blocks at the east end are some block fragments. If these indicate a continuous course, then the wall socle would have been at least three courses high at the west end of the section.

A poorly preserved stretch (Section 14) of the outer face was located farther west in the grove of Hellenis Nikolaos, beyond which the wall turns again more toward the north. The best preserved wall section (No. 15, Pl. 68,e) was found northwest of this grove, *ca.* 440.0 m. from Section 13.

The outer face here (Fig. 3, No. 6; note elevation) is preserved in two courses at its southern end and another block from the second course was found just outside the line of the wall. The wall width is 3.35 m. and strengthened by two cross-ties located 2.77 m. apart.

There are three conspicuous instances of re-used blocks here. One of these has drafted edges on its northeastern face, one (the beginning of the north cross-tie) preserves a small taenia at the top on all four sides, and the block which had fallen from its position in the second course has drafted and bevelled joints (Pl. 68,f).

The line of the wall may be followed easily for some 40.0 m. to the northwest where another section (No. 16) was cleared, this showing a rather unusual construction (Fig. 3, No. 7). The whole thickness of the wall (3.35 m.) is solid masonry. The east face is two-coursed, the top of the second course being level with the top of the lower course (the only one preserved here) of the west face. Much of the second course is now in fragments.

Among several stuccoed poros fragments found in front of the east face of the wall here, where part of the second course was broken up, is part of a parapet cornice (Pl. 71,c). There is a sloping concave above a fascia-crowned cyma reversa. Part of the soffit is preserved with the beginning of the drip. Several fragments of a similar parapet cornice, differing only in having a hawksbeak instead of a fascia-crowned cyma reversa, were found in the spring, 1961, Isthmian excavations in the West Foundation.<sup>8a</sup> The context there, as well as the date indicated by the moulding, is the third quarter of the 4th century B.C.

Between Section 16 and the cart road lying south of the knoll at Voukiana, no section of the wall was found having both faces preserved. However, north of the cart road, partly in the gully on its north side, a small section (No. 17) only 2.21 m. thick (Fig. 3, No. 8) was uncovered. It is possible that one or the other of the two lines here does not represent a face of the wall, but considering that the lines are parallel and that similar wall widths were found near Kenchreai, this is improbable. In any case, just 20.0 m. farther to the north, another section (No. 18) was found with a thickness of 3.30 m. (Fig. 3, No. 9). Another crosstie is located in this section.

The Peloponnesian face of the wall (Section 19) runs into the northern edge of a narrow ridge that rises quickly from the cart road, ascending toward the north and the knoll on Voukiana. The outer face of the wall disappears and the narrow ridge was apparently used in its place (Fig. 3, No. 10).

Lying just outside the wall here and 0.10 m. below the top of the wall blocks was found part of a stuccoed poros block (IA 759; Pl. 70,f). The fine, white stucco, which had been applied in a very thin layer, is preserved on all smooth surfaces. There is a small (0.22 m. high) projecting moulding having a cavetto above a cyma reversa. The fragment is probably from a jamb or lintel, re-used in the construction of the wall, and dates to the first half of the 4th century B.C.<sup>9</sup>

Here also, but above the top level of the wall blocks and apparently belonging to the time of a later construction that cuts across this wall section, were found many fragments of a Roman lamp, Broneer Type XXVII, Group 1.<sup>10</sup> This type of lamp was in use throughout the 2nd century after Christ.

The narrow ridge mentioned above is the result, at least in part, of quarrying and is separated from the main knoll—also much quarried—by a gap of 8.0 m. (Fig. 3, Nos. 10-11; Pl. 69,b). A trench was dug across this gap and a layer of small stones was found at a level of 0.20 m. below the surface (Section 20). Below this (beginning 0.45 m. below the surface) remains of a sanctuary area (*infra*, pp. 273-275) were found, dating from the late 6th through the 5th and perhaps into the early 4th century B.C. The gap between the narrow ridge and the knoll was evidently used as

<sup>8a</sup> O. Broneer, *Hesperia*, XXXI, 1962, p. 17.

<sup>9</sup> The date was supplied by Miss Lucy Shoe, who examined the moulding in the summer of 1961.

<sup>10</sup> *Corinth*, IV, ii, p. 90, pl. XI, nos. 556, 551.

a gate at the time of the wall, and the small stones, which were also found at the same level in a trench dug west of the gap, may indicate the road paving.

Atop the knoll itself (Fig. 1,C) the soil is either very thin or non-existent, and no large blocks of any type are preserved. Along the north edge, however, a line cut in the bedrock (Section 21; Fig. 3, No. 11; Pl. 69,c) is very likely the bedding for the inner face, although the possibility exists that it is a quarry line. The line disappears over the edge which has been quarried away.

#### VOUKIANA TO THE CORINTHIAN GULF

From Voukiana to its north (or west) terminal, the wall might have followed one of three routes: 1) west to Gonia or the low limestone ridge just north of it, thence to Arapiza and the walls of Corinth; or 2) across the plain to Korakou and beyond to Lechaion; or 3) the shortest route, north across the plain and under the soldiers' barracks and New Corinth (Fig. 1; Pl. 69,d).

All three areas were searched several times during the spring of 1960 and the summer of 1961, the first two routes producing no trace of the wall. Investigations along the third possible route indicate that this is the course taken by the wall, although no sections were found *in situ* that could be identified with certainty as part of the trans-Isthmian wall.

In a field belonging to Spiros Tsamandas (Fig. 1, B; Pl. 69,d), some 630.0 m. north of Voukiana knoll, a stretch of wall 1.50 m. long was uncovered (Section 22). It comprised a single line and included many broken pieces of poros. Another trench was dug (5.0 m. long) 15.0 m. to the south of this, cutting across the line indicated. There were many stray fragments of poros, but nothing *in situ*. However, along the edges of this field, particularly the west edge and running the whole length of the field, are large numbers of poros blocks, most of them broken into several pieces. The owner said they had been taken out of his fields (he also owns the one adjoining on the west) over a period of many years, one or two at a time, and that, consequently, he could not recall their location or their orientation.

The field in which Section 22 is located lies at the bottom of a low slope and should, therefore, be a less likely spot for the line of the wall than the field adjoining on the west. A trench 17.0 m. long running up the slope in this field, however, was dug to bedrock in the summer of 1961 and no trace was found of the wall.

Between these fields and the Voukiana ridge there was a considerable settlement and cemetery both in the Greek and Roman periods, as indicated by the surface sherds, sarcophagi and some walls which have been found. It is also in an area of rich farmland which has been much cultivated over the centuries, as has the entire area between Voukiana and New Corinth. This could explain the lack of wall blocks still *in situ*. In any case, between Voukiana and the Tsamandas fields, several large

poros blocks of the type found in the trans-Isthmian wall were found in the spring of 1960 and summer of 1961.

In the field immediately south of the house on the Tsamandas property, owned by Giorgios Vlachos, is an ancient well at the top of which are two blocks obviously not cut for the well; having no curved surfaces, they jut conspicuously over the contours of the blocks below. Farther west and just off the cart road are two large ancient blocks built into a modern wall. These, along with many stray blocks lying at the edges of fields, or even in the fields themselves, are probably from the wall.

Immediately south of the soldiers' barracks is a modern open cistern (*ca.* 90 years old) and a well in the field of I. Kaiapha (Fig. 1, A). Both are constructed of re-used ashlar poros and conglomerate blocks with tooled faces, but bound with mortar and cracks and interstices filled with brick and mortar (Pl. 69,e). The building is 7.90 x 7.85 m., containing three courses (1.33 m. high) of blocks. A typical block measures 1.25 x 0.60 x 0.42 m. They are certainly from a large, ancient Greek construction and could well be from the wall.

North of the soldiers' barracks are extensive quarries and clay pits and no trace of anything ancient was found. But a bit farther to the north, in the cut between the two railroad tracks alongside an unnamed street connecting Dherbenakion and Vasilissa Sophia Streets, traces of two lines of wall (3.50 m. thick) were found. Only one block of medium size was found here (only partly visible; runs under tracks), and that is in the western line, the rest being small stones. The walls are oriented north-south. Directly north and on the opposite side of the street, in the basement of House No. 80, owned by Sophia Phoupha, is part of a wall, probably connected with the wall by the tracks, which belonged to a Byzantine construction (part of a brick arch is visible beneath the whitewash that covers this and a Byzantine capital was found there also). Some of the blocks here, however, appear to be more ancient.

In the large yard behind the next two houses on the west are some reworked Greek poros blocks and, behind the Phoupha house, a trench was dug on the advice of neighbors who had seen "large stones" in pits dug for latrines. The trench was dug between the former latrine pits and just northeast of the present latrine for house No. 82. At a depth of 0.46 m. many fragments of roof tiles (late Roman or Byzantine) began to appear and below them, at a depth of 0.63 m., was found part of a large, well-cut poros block. The preserved length is 0.80 m. and it is 0.25 m. thick. The full width was not revealed by the trench, but it is more than 0.45 m. wide. There is a cutting on top (0.07 m. wide, 0.03 m. deep) running the length of the block. There are no adjoining blocks nor is there another block beneath.

During the Byzantine period, then, in the area of the Phoupha house and the immediate vicinity, a large building was erected and some large poros blocks were taken from a near-by ancient construction. It may have been the trans-Isthmian wall, since there was no known Greek settlement on the site. A few other ancient blocks were also found built into walls between the Phoupha house and the sea.

## DATING

The construction of the wall, taking all sections into account, is rather anomalous. The stretch of wall on the Hagios Demetrios crest is irregular ashlar combined with polygonal and few blocks show any dressing beyond the faces received when cut from the quarry. Its width is 2.20-2.50 m., comparable to the sections toward Kenchreai, but almost a meter narrower than the sections of wall excavated northwest of the ridge. We might disregard the difference in material on the Hagios Demetrios crest (mostly conglomerate in gray limestone), since this is the most readily available stone there, but there is still little to indicate a date later than the early 5th century B.C. for its construction. The single block with the carefully tooled face is either a repair or re-used from a monument, in which case its surface dressing need not indicate a later date. The few potsherds and the loomweight, scant evidence as they may be, also point to the early 5th century.

The ashlar masonry with carefully tooled faces and flush joints of the sections of the wall southeast and northwest of the Hagios Demetrios crest point to a later, if not well-defined date.<sup>11</sup> There are occasional blocks with drafted edges and one with drafted and bevelled joints, hardly standard 5th century treatment for fortification walls. But this point we may hold in abeyance for a moment.

What remains of the wall is only the socle; the wall was probably carried up by a curtain of sun-dried brick, if it was finished at all. This is not deduced from remains of brickwork found on top of any wall sections, for there was none. However, along most stretches of the wall—the great exception is the stretch on the Hagios Demetrios crest—there were many fragments of terracotta tiles whose only function in connection with a fortification wall could be to shelter the brickwork. The tiles are of the yellowish green Corinthian clay, rather pure and well-baked, and have a long history in the Greek period, covering at least the 5th and 4th centuries B.C.<sup>12</sup>

Wall construction with a stone socle and sun-dried brick curtain is known in many walls and its use is not restricted to any one period. The Peisistratid wall at Eleusis uses mudbrick on a socle of Lesbian masonry;<sup>13</sup> the Themistoklean fortification southwest of the Sacred Gate in the Athenian Kerameikos (479/8 B.C.) uses a polygonal socle,<sup>14</sup> as does the city wall of Mantinea that was destroyed in 385 B.C.;<sup>15</sup> the Periklean peribolos at Eleusis has a socle of quarry-faced ashlar,<sup>16</sup> and, again in

<sup>11</sup> 460-330 B.C. R. Scranton, *Greek Walls*, p. 122.

<sup>12</sup> E. g. the tiles belonging to the spring house over the early reservoir of Upper Peirene on Acrocorinth. R. Stillwell, *Corinth*, III, i, pp. 38-39, 48-49.

<sup>13</sup> W. Wrede, *Attische Mauern*, p. 7, pl. 11. The examples listed here are only selections and by no means intended as an exhaustive list of walls having stone socles and sun-dried brick curtains.

<sup>14</sup> *Ibid.*, p. 10, pl. 23.

<sup>15</sup> *Greek Walls*, pp. 57-59, fig. 11. Cf. also Pausanias, VIII, 8,5 for an account of the destruction of this wall by diverting the river Ophis, as well as for a statement on the general value of brick walls.

<sup>16</sup> *Attische Mauern*, p. 16, pl. 63.

Athens, the Kononian socle west of the Sacred Gate in the Kerameikos (390 B.C.) has a broached polygonal socle, while in Corinth the contemporary fortifications have a coursed polygonal socle.<sup>17</sup>

These examples carry us from the late 6th to the early 4th centuries, but the addition of the fortifications at Sparta, sun-dried brick on a stone socle, carry us into the 2nd century B.C. (183 B.C.).<sup>18</sup>

Returning to the treatment of the wall blocks, we have seen that we would expect a fortification wall of tooled ashlar, at least aiming at isodomic, to have been constructed between the Persian War and about 330 B.C. But the builders were certainly familiar with drafted edges and bevelled joints, and these techniques in fortification walls belong to the late 4th century B.C. and Hellenistic times. Scranton lists 14 examples of drafted work on this type of masonry, only four of which are 5th century; none of the work with bevelled joints is earlier than 325 B.C.<sup>19</sup> Of these, we might mention in particular the drafted work in the Asty Gate and part of the south wall on the Akte peninsula in Piraeus (339 B.C.) and the blocks with bevelled joints, also at Akte (307 B.C.).<sup>20</sup> The isodomic ashlar with bevelled joints in the fortifications at Corinth belong almost certainly to the extensive work instigated by Demetrios Poliorketes in 303 B.C.<sup>21</sup> This wall also may have had a curtain of sun-dried brick. Yet, we must not rely heavily on the drafted and bevelled edges and joints for a date for the trans-Isthmian wall, since such treatments exist not throughout, but on occasional blocks, probably re-used. They are likely to have been re-used not from another fortification wall, but from some other type of construction, and we find that decorative treatment of blocks in other than fortification walls in evidence earlier than even the 4th century B.C.<sup>22</sup>

Fortunately, we have a bit more than the wall construction to help us. There is a re-used block bearing a late 4th or early 3rd century B.C. inscription, as well as block fragments with 4th century mouldings. A 5th century sanctuary area, which may well have been in use into the 4th century B.C., was discovered beneath the line of the wall. All this points to a *terminus post quem* of sometime late in the 4th century B.C. If we assume a one to two generation lapse for the loss of some of the significance for the building or monuments to which the inscription and mouldings belonged (which would

<sup>17</sup> *Ibid.*, p. 31, pl. 76; R. Carpenter, *Corinth*, III, ii, pp. 54-55.

<sup>18</sup> G. Säfliund, *Opusc. Arch.*, I, 1935, p. 183.

<sup>19</sup> *Greek Walls*, pp. 129-134, 179-181.

<sup>20</sup> *Ibid.*, pp. 116-120; *Attische Mauern*, pp. 22-23, 29, pl. 54, 69-70. The dates followed here are Scranton's, who associates the drafted work with the repairs mentioned in *I.G.*, II<sup>2</sup>, 244, and the bevelled work with the great rebuilding of the walls by Demetrios Poliorketes in 307/6 B.C., recorded in *I.G.*, II<sup>2</sup>, 463. On the latter inscription and its date, see also B. D. Meritt, *Hesperia*, IX, 1940, pp. 66-72.

<sup>21</sup> *Corinth*, III, ii, p. 126; *Greek Walls*, pp. 132-133.

<sup>22</sup> E. g., the Tomb of the Lakedaimonians in the Kerameikos (*Attische Mauern*, pl. 49), with drafted edges. See also Scranton's comments, *Greek Walls*, pp. 12-13.

permit their demolition), we would expect the wall to have been constructed, at the earliest, sometime in the early 3rd century B.C.

A Roman date for the wall is inconceivable. There is no date between the destruction of Corinth in 146 B.C. and the barbarian invasion of A.D. 253 when such a wall would have been necessary. Nor is there any trace of mortar anywhere in the wall, despite the use of re-used material. The care taken to insure flush joints by careful cutting of the blocks would indicate that the builders belong in the Greek tradition of mortarless wall building. Lastly, the identifiable Roman pottery sherds found in connection with the wall were all found above the level of the wall blocks, including the lamp of the 2nd century after Christ (above, pp. 257, 260).

A wall across the Isthmus of Corinth must be constructed with the full accord, if not directly under the leadership, of the garrison of Acrocorinth. This is obvious; no army could hope to man a wall against invaders from the north and east while its rear is completely exposed to hostile forces from the south and west. The strategic importance of Acrocorinth is paramount and was certainly recognized throughout antiquity. This was particularly true of the Hellenistic period, and in the time of Philip V Corinth became known as one of "the fetters of Greece."<sup>23</sup>

But for the defense of such a wall even the command of Acrocorinth, though a prerequisite, is not enough. Without the cooperation of at least most of the strong Peloponnesian states the line is still untenable. The tremendous enterprise of a trans-Isthmian wall is not likely to have been undertaken at a time when the Peloponnesos might be in league with the northern invaders.

Another point to be considered is the uselessness of a trans-Isthmian wall against invaders possessing a fleet. To be sure, the wall of the 5th century B.C. was put up against the Persians in spite of this, but the absurdity of the reasoning here is well pointed out by Herodotos.<sup>24</sup>

The occasions, then, when the wall might have been built should be restricted to times when the Acrocorinth garrison and most of the Peloponnesian states would have been united against invaders, who, presumably, did not command the sea. The evidence of the other trans-Isthmian walls bears this out. The Justinian Wall in the 6th century after Christ and the Valerian Wall in the 3rd century were both constructed against northern barbarians, common enemies of the Greeks;<sup>25</sup> the Mycenaean Wall

<sup>23</sup> Plutarch, *Arat.*, XVI, 4-5; Polybios, XVIII, 11; Livy, XXXII, 37, 3.

<sup>24</sup> VII, 139.

<sup>25</sup> On the Valerian Wall, see above, note 2. On the Justinian Wall, Prokopios, *De Aedif.*, IV, 2, 27-28. Phrantzes (I, xxxiii. *Corp. Scr. Hist. Byz.*, ed. Bekker, p. 96) adds that Justinian built this wall not of necessity, but only because ἐφάνη αὐτῷ καλόν. But this is hardly accurate: Justinian's empire was threatened daily by the barbarian tribes of the north and the wall at the Isthmus backed up the huge network of defense lines, castles, and even other long walls built in an effort to block off everything north of a line "from the Adriatic to the Black Sea." See, e.g., G. Finlay, *History of Greece*, I, p. 210.

of the 13th century B.C., against the Dorians. The Herodotean Wall, too, was built to oppose a common enemy of the Peloponnesians, who may have been relying on the Athenians, virtually alone, to hold the Persians off by sea.

From the time of the accession of Philip II to the throne of Macedon in 359 B.C. the Peloponnesos was divided, probably more on the basis of hostility toward Sparta than any great friendship with the Macedonians, but divided nonetheless. The Argives, Arcadians and somewhat later the people of Elis were pro-Macedonian almost from the beginning of Philip's reign. After the battle of Chaironea in 338 Philip garrisoned Acrocorinth, and virtually the whole Peloponnesos (Sparta and its few allies were the notable exceptions) was in the Macedonian camp.<sup>26</sup> Indeed, the Hellenic League was organized the same year with its capital at Corinth and was active as such until the death of Alexander in 323 B.C. There could certainly have been no united defense in the Peloponnesos against the Macedonians and, after Chaironea until the death of Alexander, a wall separating Corinth and the Peloponnesos from the rest of the Hellenic League is, of course, out of the question.

With the Macedonians in command of Corinth, there was no opportunity for the fortification of the Isthmus during the Lamian War. Polyperchon, disputing the succession of Antipater's regency with Cassander, made his base at Corinth, allying himself first with Antigonos, then later becoming reconciled with Cassander. Cassander had invaded the Peloponnesos twice before 308, and Antigonos' general, Telesphoros, once by sea.<sup>27</sup> The important operation here is Cassander's capture of Kenchreai and "two fortresses" in 315;<sup>28</sup> there is no hint of the existence of a trans-Isthmian wall. Ptolemy acquired Acrocorinth that year (308), apparently while Polyperchon was in Macedonia carrying out his farce in first promoting the cause of Herakles, pretender to the throne, and then murdering him on behalf of Cassander.<sup>29</sup> But there was no battle; Kratesipolis, Polyperchon's daughter-in-law, simply handed both Corinth and Sikyon over to Ptolemy. He made peace with Cassander, however, shortly thereafter and relinquished the garrisons to Cassander, whose general Prepelaos apparently took command.<sup>30</sup> Five years later Demetrios, fresh from his successes in Athens, arrived at the Isthmia and the Peloponnesians flocked to him, with the exception of Sparta and Messenia; Corinth, once again, changed hands without a battle.<sup>31</sup>

Demetrios did have the city walls of Corinth rebuilt at this time, as we have seen, but defensive actions were hardly uppermost in his mind; by 302 he was moving into

<sup>26</sup> Pausanias, VII, 11,2; VIII, 6,2; VIII, 27,10.

<sup>27</sup> Diodoros Sic., XIX, 74,2.

<sup>28</sup> *Ibid.*, XIX, 63,3-5.

<sup>29</sup> Justinus, XV, 2,3 and prologus XV; Diodoros Sic., XX, 28, 37, 1-2; *C.A.H.*, VI, pp. 492-493.

<sup>30</sup> He was, at any rate, in command by 303 when Demetrios arrived at the Isthmus. Cf. H. Bengtson, *Die Strategie in der hellenistischen Zeit*, I, pp. 145-147.

<sup>31</sup> Diodoros Sic., XX, 103,1-2; Plutarch, *Demet.*, XXV.

Thessaly in the last prelude to the great battle at Ipsus. Following the defeat of the Antigonids at Ipsus, Demetrios returned to Corinth to find his garrisons elsewhere being expelled and the Hellenic League he had reformed in 303 falling to pieces.<sup>32</sup> Demetrios set about bringing things under his control again, both in the north and in the Peloponnesos, and in 297, at the death of Cassander, he entered the intrigue which was to make him King of Macedonia.

During this time the only opportunity for the fortifying of the Isthmus would have been in 303 when the city walls were re-fortified. But it should be remembered that Sparta, Messenia and Mantinea were not allies of Demetrios and there were factions in the other states not sympathetic to the democratic policies of Demetrios. With most of his army in his own company in Thessaly and later in Asia, the garrison he left behind could hold Acrocorinth, but could hardly man a wall across the Isthmus, particularly when the possibility of hostilities from Sparta or her allies could mean an attack from the rear. That the garrison did not attempt to man a line across the Isthmus at that time is indicated by the fact that Cassander invaded the Peloponnesos during the Ipsus campaign and penetrated as far as Argos without an engagement on the Isthmus.<sup>33</sup>

Corinth was not threatened again until the Spring of 280 when Areus of Sparta, in league with Antiochos, attempted to expel Antigonos Gonatas from Greece. This alliance, which was to strip the Antigonid power of all but Corinth and a few other garrisons, could hardly have been affected by a trans-Isthmian wall when almost all of Antigonos' allies in the Peloponnesos were deserting him.

Early in 279 B.C. Macedonia was invaded by the Gauls and by late autumn, after plundering the country, one body of the invaders under the leadership of Brennus had reached Thermopylai and was poised for an attack on Greece proper. Here is an event that could unite the Greeks. Areus was already out of the picture following his defeat in Aitolia, and Antiochos and Antigonos concluded a peace treaty and contributed 500 mercenaries each to the army assembling at Thermopylai to meet the barbarians.<sup>34</sup> But from the Corinthia and the whole Peloponnesos there was not one soldier. Pausanias<sup>35</sup> tells us why:

"The expedition to Thermopylai against the army of the Gauls was disregarded (by the Achaians) and in like manner by all the Peloponnesians. For since the barbarians did not have ships, they expected to suffer nothing terrible from them if they walled off the Isthmus of the Corinthians from the sea at Lechaion to the other sea at Kenchreai. Now this was the resolution of all the Peloponnesians at that time; but when the Gauls had crossed over into Asia in ships somehow or other, the affairs of the Greeks at that time were as follows: . . ."

<sup>32</sup> Plutarch, *Demet.*, XXXI, 1-2.

<sup>33</sup> *C.A.H.*, VII, pp. 76-77; Pauly-Wissowa, *R.E.*, s.v. Kassandros, vol. X, p. 2310; W. S. Ferguson, *Hellenistic Athens*, p. 124.

<sup>34</sup> Pausanias, X, 19, 4-20, 3. W. W. Tarn discusses the date of the treaty between Antigonos and Antiochos in *J.H.S.*, XL, 1920, p. 148. See also *C.A.H.*, VII, pp. 99-101.

<sup>35</sup> Pausanias, VII, 6, 7-8.

The Peloponnesians may not have been willing to unite against one or the other of the Macedonian kings, but against barbarians a common war, if only on a defensive scale, was certainly possible. Another reason for making this stand at the Isthmus instead of farther to the north with the rest of the Greeks might have been mutual distrust of their neighbors. The Messenians and Megalopolitans, at any rate, gave as a reason for not marching to Thermopylai that they feared the Spartans would invade their territory during the absence of the armies.<sup>36</sup>

Heretofore, with no material remains of a wall that might date to this period, the possibility of a trans-Isthmian wall against the Gauls has been lightly treated. Arthur Parsons<sup>37</sup> felt that the line Pausanias mentioned must have been the same one used against Epaminondas in 369 B.C., that is, trenches and palisades along Oneion to Acrocorinth. However, Pausanias uses the verb ἀποτειχίζειν, which means "wall off," not dig trenches and put up palisades. H. N. Fowler<sup>38</sup> comments that the Peloponnesians thought of building a wall at that time but expresses no opinion about the carrying out of the project. W. W. Tarn<sup>39</sup> said the Peloponnesians trusted to Antigonos to hold Corinth and "perhaps" he drew lines across the Isthmus. W. W. How and J. Wells<sup>39a</sup> felt that a wall was probably built.

From the passage in Pausanias there is no doubt that the construction of a wall across the Isthmus<sup>40</sup> was planned; but was it carried out? Considering the state of affairs in the Peloponnesos, the resolution could have hardly been adopted before the late summer or early autumn of 279, just before the Gauls reached Thermopylai. By this time drastic measures are necessary. The Greeks to the north are marching to meet the Gauls at Thermopylai; Antigonos and Antiochos are signing a truce and dispatching token mercenaries to join the northern expedition. If the pass were not held, only the plundering of the country south would delay the dreaded Gauls in reaching the Isthmia, and much more than a *bouleuma* to build a wall would be necessary then. The logical assumption is that the wall was begun sometime before the battle at Thermopylai. Whether or not it was completed Pausanias does not tell us. If the wall had not been completed by the time of the defeat of the Gauls at Delphi, the project was probably abandoned, since the anti-Macedonian states would no longer have had any reason to continue cooperating with Antigonos.

<sup>36</sup> Pausanias, IV, 28,3; VIII, 6,3.

<sup>37</sup> *Corinth*, III, ii, p. 115.

<sup>38</sup> *Corinth*, I, i, p. 55.

<sup>39</sup> *Antigonos Gonatas*, pp. 150-151.

<sup>39a</sup> *A Commentary on Herodotus*, II, p. 259.

<sup>40</sup> We should not press too much the terminal points of the wall—Lechaion and Kenchreai—that Pausanias mentions. Diodoros (XV, 68,3) says the fortifications against Epaminondas went from Kenchreai to Lechaion, although we know more reliably from a contemporary, Xenophon (*Hell.*, VII, 1,15), that the line was along Oneion and would have extended to Lechaion only by means of the Long Walls. Pausanias may, then, have had in mind only "sea to sea," when he listed the two most well-known topographical points on the coasts of Corinthia.

The autumn of 279 B.C., then, is one possible date for the construction of the wall under discussion.

In the next year Antigonos invaded Macedonia, leaving his half-brother Krateros in command at Acrocorinth. The "common cause" that had briefly united the Peloponnesians was quickly forgotten and by 275 Antigonos held nothing south of Corinth. Pyrrhos, invited into the Peloponnesos by the ambitious Kleonymos, marched south in 272 vowing to rid Greece of Antigonos once and for all,<sup>41</sup> but he was actually aiming at Sparta. There was no encounter at the Isthmia (no line, of course, could have been held by the Macedonians there at that time), and Pyrrhos was shortly thereafter engaged in hostilities with the Spartans. This brought about the unlikely coalition of the Macedonians and the Spartans, under Areus. Pyrrhos, quailing before such a combination, moved towards Argos (and his death) in response to the invitation of Aristeadas who was opposed to Aristippos and his pro-Macedonian party.

During the Chremonidean War (265-261 B.C.) that followed, Corinth was attacked from the south by Areus of Sparta, now allied with Athens. Antigonos' commander at Corinth, Krateros, drew up his lines at the Isthmus against him, and later (264 B.C.) Antigonos defeated and killed Areus in a battle near Corinth.<sup>42</sup> In both encounters, the attackers were from the south, attempting to reach their allies in Attica; there could be no use for a wall here from gulf to gulf whose battlements face the north and east.

Krateros remained Antigonos' commander at Corinth until his death and was succeeded by his son, Alexander, who immediately revolted (253/2 B.C.) and proclaimed himself King of Corinth and Euboea. With Antigonos powerful at sea and several Peloponnesian states, outside the Achaian League, in the power of pro-Macedonian parties, a trans-Isthmian wall during the reign of the tyrant of Corinth would be of little use. The citadel fell into the hands of Antigonos again at the death of Alexander in 247/6, through deception,<sup>43</sup> and he lost it again in 243 to Aratos and the Achaian League, again with no engagement in the Isthmus.<sup>44</sup>

During the succeeding 19 years of Achaian control there was no opportunity for the construction of a trans-Isthmian wall. Aratos and his Achaian League were busy attempting to bring the other Peloponnesian states into their league and warring sporadically with the Aitolians, as well as keeping a wary eye on the Macedonians. With possible hostile forces on all sides, a trans-Isthmian wall would be utterly futile.

In 224 Kleomenes of Sparta took the lower city of Corinth, besieged the citadel and prepared to meet the forces of Antigonos Doson, invited by Aratos to enter the

<sup>41</sup> Plutarch, *Pyrr.*, XXVI, 8-9.

<sup>42</sup> *C.A.H.*, VII, pp. 707-708; Justinus, prologus XXVI; B. D. Meritt, *The Athenian Year*, pp. 225-226.

<sup>43</sup> Plutarch (*Arat.*, XVII) gives an amusing account of the deception of Nikaia, Alexander's widow, and Antigonos' short-lived delight at having recovered the citadel.

<sup>44</sup> Plutarch, *Arat.*, XVIII, 2-XXII.

affair. Kleomenes' defense against Antigonos was a line along Mt. Oneion to Acrocorinth, since he relied on the Long Walls to Lechaion to prevent (as they did) Antigonos from passing on north of Corinth. That the line was not a wall across the Isthmus is well attested by both Polybios and Plutarch.<sup>45</sup> The line failed and the Macedonians once again were in control of Acrocorinth.

Although the Macedonians lost Acrocorinth again, for the last time, in 197/6 B.C.,<sup>46</sup> it was 78 years before invaders would enter the Peloponnesos from the north opposed by any semblance of a unified defense. This was in 146 B.C. when the Romans under Lucius Mummius overran the Greek defenders and sacked Corinth. Pausanias' description of the battle and the flight of Diaios and the Achaian cavalry precludes any defense based on a trans-Isthmian wall at that time.<sup>47</sup>

From this summary survey of military affairs in the Isthmia, only two dates stand out as good possibilities for the construction date of the wall: 303 B.C., when Demetrios Poliorketes was rebuilding the fortifications of Corinth, and 279 B.C., when the Peloponnesians were preparing to defend themselves against the invading Gauls. The latter date is by far the more probable. The invasion threat of 279 B.C. seems to fulfill all the requirements: the date is certainly in accord with the archaeological evidence; Pausanias tells us that the construction of such a wall had at least been decided upon; the Gauls had no ships, and the fear of the Gauls was certainly enough to bring about some alliance among the various hostile factions (e. g., the treaty between Antigonos Gonatas and Antiochos.).

But what of the 5th century appearance of the stretch of wall on the Hagghios Demetrios crest? It was certainly a part of the line of our Hellenistic wall. Perhaps the best answer is that it is a part of the Herodotean Wall, as was suggested when this stretch was discovered, and that in 279 B.C., when the Peloponnesians were once again threatened by barbarians and felt themselves in urgent need of a wall, this wall was repaired wherever necessary, but largely rebuilt.

This leaves us with two related problems: why did the builders not take the shortest route across the Isthmus (as the Justinian Wall) and why does it exclude the Sanctuary of Poseidon? There are perhaps no good answers to these questions. The line adopted does take somewhat more advantage of available height (at least along the Hagghios Demetrios crest) than the later Justinian Wall, but it still must cross a fair expanse of plain to the north before reaching the Corinthian Gulf. There was, too, a readily available supply of building material all along the line of the wall, perhaps more so than in the immediate vicinity of the Justinian Wall.

<sup>45</sup> Polybios, II, 52,5; Plutarch, *Cleom.*, XX.

<sup>46</sup> Philip V ceded Acrocorinth to the Romans following his defeat by Flaminius at Kynoskephalai. There was no engagement at the Isthmus (Polybios, XVIII, 45). The Romans held the citadel until the summer of 194, at which time Flaminius handed it over to the Achaians and evacuated Greece with his soldiers (*C.A.H.*, VIII, p. 192).

<sup>47</sup> Pausanias, VII, 16, 1-8.

Even more difficult to understand is why the wall left the Isthmian Sanctuary to the enemy. The sanctuary was certainly of considerable importance both in 480 B.C. and 279 B.C. The answer may lie in a committing of the sanctuary to the care of Poseidon, based on some political or economical expediency of which we are as yet unaware. This would be analogous to the Delphians' entrusting their sanctuary and the sacred treasure there to the care of the god, at the approach of a Persian or Gaulish contingent.<sup>48</sup> According to the Themistokles inscription, the Athenians entrusted their city to the care of Athena.<sup>49</sup>

### CORINTHIA: INCIDENTAL OBSERVATIONS

During the fieldwork on the trans-Isthmian wall several topographical observations were made which may prove useful for future work in the Corinthian Isthmus. The miscellaneous finds listed below were discovered either in fields where they had been turned up by deep plowing or in trenches dug in connection with work on the trans-Isthmian wall.

#### KROMNA

This settlement, in existence at least from the early 5th century B.C., is located about halfway between Kenchreai and the Kenchraian Gate of Corinth, probably on the main road connecting the port with the city (Fig. 1). Its identification as Kromna is based on the inscription IS 484 (*supra*, p. 257), re-used in a near-by section of the trans-Isthmian wall, and on a statement by Tzetzes that Kromna is a town on the Corinthian Isthmus.<sup>50</sup>

Cemeteries near the cart road on the southwest side of the low ridge at Section 9 (Fig. 1, D), at the southeast edge of the ridge which slopes up sharply to the Haghiios Demetrios crest, and a few hundred meters south of the first quarry west of Section 9 mark the extent of the settlement. Eleven wells and two cisterns are located in this area, and great quantities of cut poros blocks, roof tiles and other habitational debris are scattered about the fields. The cemeteries are indicated by large amounts of

<sup>48</sup> Herodotos, VIII, 36; Pausanias, X, 22, 13. This analogy was suggested to me by Professor Jameson.

<sup>49</sup> M. H. Jameson, *Hesperia*, XXXI, 1962, pp. 310-315; see esp. p. 311, the first six lines of the inscription. Herodotos (VIII, 41), however, says that the Athenians felt the gods had abandoned the city.

<sup>50</sup> Tzetzes, sch. on Lykophron, 522, ed. E. Scheer, p. 188. Cf. also Callimachus, *Σωσιβίου Νίκη*, line 12 (Pfeiffer, *Callimachus*, vol. 1, *Epica et Elegiaca Minora*, Frag. 384, pp. 311 ff., esp. p. 312 and Pfeiffer's commentary). Professor John Hawthorne called my attention to the fragment of Callimachus. It is interesting to note that Callimachus writes of a "Kromnitian" area in connection with Lechaion as if the two sites marked the terminals of the Isthmus on the Corinthian and Saronic Gulfs. Lechaion is often mentioned in such context in ancient literature, but Kenchreai is generally given as the site on the Saronic Gulf.

broken sarcophagi. In the cemetery near Section 9 an unfluted, tapered colonette (1.56 m. high) was found, and across the cart road to the southwest, beside a heavy poros foundation, was found part of an octagonal faceted colonette.<sup>51</sup> Part of another unfluted colonette, this one stuccoed and carved from one block with a low square base, was found in the southeast cemetery.<sup>52</sup> All of the following are surface finds.

IM 3036 Miniature terracotta altar. Pl. 70, c.

H. 0.135 m.; L. at top, 0.245 m.; W. at top, 0.126 m. Kromna Settlement area, south of cart road, in field *ca.* 500 m. southeast of Wall Section 9.

Light buff clay on the surface, reddish inside and rather coarse. Part of top at front and one back corner missing. Bottom hollow. Top rimmed by a raised, rounded band (0.02 m. wide) on three sides; on sides, this band crowns a hawksbeak above an astragal. Vertical incised lines and traces of red paint preserved below the beak. The three side panels below the astragal 0.088 m. high.

Many similar altars are known from Corinth and elsewhere; the origin is apparently Corinth. These small altars, perhaps household altars,<sup>53</sup> are discussed by O. Broneer, *Hesperia*, XVI, 1947, pp. 214-223, and XIX, 1950, pp. 370-375, with bibliography of earlier articles on the subject. To this list should be added the work by Nilsson; G. Davidson, *Corinth*, XII, pp. 130-131, and A. Stillwell, *Corinth*, XV, ii, pp. 281-282, pl. 59, nos. 65-68.

The altars fall into two general types, one with a moulding at the top and painted figures on three sides, the other with mouldings at top and bottom and painted relief figures on three sides. Both begin in the 6th century B.C., although the altars with reliefs seem to begin slightly later than the other type, and run into the 5th century, the second category lasting longer. Some altars with reliefs are known also from the Hellenistic period (*Corinth*, XII, p. 131, nos. 889-891). The new altar belongs to the first category, although no trace of figured

decoration is preserved on the panels. The decoration of the moulding must have been an incised tongue pattern like that on an altar found in 1949 (*Hesperia*, XIX, 1950, pp. 370-375, fig. 3, pl. 110).

Late 6th or early 5th century B.C.

IM 3021 Lower half of mouldmade standing Kore, Spes type. Pl. 70, a, 2.

H. 0.062 m.; base 0.029 m. Kromna Settlement area, in field across the cart road from the field in which IM 3036 was found.

Light buff clay; preserved to just above the waist. Rectangular base, with small piece broken off. Back of the figurine slightly concave. Feet bare, four toes only indicated on each foot. Chiton falls to the base, curving over the insteps of the feet; long central pleat in three folds between legs and oblique folds running into central pleat on either side. Part of himation folds below right arm; drapery on left side, gathered at bottom, would have been held by left hand. Cf. *Corinth*, XV, ii, pp. 86, 90, pl. 14, nos. X, 8-10.

5th century B.C. (second half?)

IM 3017 Conical loomweight. Pl. 70, b, 2.

H. 0.08 m.; base diam. 0.048 m. Kromna Settlement area, in field adjoining the cemetery near Wall Section 9.

Light buff clay, well refined; tip broken off. For the shape, see *Corinth*, XII, p. 149 (profile VIII, no. 1093), pl. 74, nos. 1100, 1116.

450-400 B.C.

IP 2657 Skyphos fragment. Pl. 70, d.

H. 0.050 m.; base diam. 0.043 m. Found in cemetery near Wall Section 9.

<sup>51</sup> Inv. No. IA 751.

<sup>52</sup> Inv. No. IA 753. H. 0.420 m.; base W. 0.217 m.; colonette diam. 0.180 m.

<sup>53</sup> M. P. Nilsson, *Opuscula Selecta*, III, 1960, pp. 265-270.

Base and lower part of body preserved. Clay light buff, covered with a thin black glaze, weathered to brown in spots, both inside and outside. Low foot ring; body curves out to what would be a bulging shoulder. For the shape, see O. Broneer, *Corinth*, I, iv, p. 95, pl. 24, 1 and 3, upper right. These skyphoi from below the South Stoa are dated to the mid-fourth century B.C., but the shape continues to the end of the century (H. Thompson, *Hesperia*, III, 1934, p. 319, fig. 5, no. A 26). The quality of the glaze on the Kromna fragment indicates a date somewhat later than the South Stoa skyphoi.

Late 4th century B.C.

IA 761 Stuccoed coping stone. Pl. 70,e.

L. 0.825 m.; H. 0.445 m.; W. 0.445 m. Re-used in Section 10 of the trans-Isthmian wall, and found with inscription IS 484 (*supra*, pp. 249, 257).

Top rounded, crowns a plain face on one side, and a projecting moulding (no original surface preserved) over two fasciae on the other side. Cuttings for Hellenistic hook clamps (cf. W. B. Dinsmoor, *Architecture of Ancient Greece*, p. 175) on the top. Stucco covered the rounded surface and two sides.

IM 3016 Conical loomweight, half preserved. Pl. 70,b, 4.

H. 0.087 m.; base diam. 0.043 m. Found southeast of the Kromna Settlement area on Perdikaria ridge where Mycenaean remains have been known since 1906 (C. W. Blegen, *Corinth*, I, i, p. 112); there was a small settlement here both in Greek and Roman times.

High bevel, light buff clay, not well-refined. Cf. *Corinth*, XII, p. 150, fig. 23 (profile IX, no. 1137), pl. 74, no. 1151.

400-350 B.C.

## VOUKIANA

EARLY HELLADIC SETTLEMENT (Fig. 1, C; Pl. 69,a). An Early Helladic settlement covered the top of the main knoll at Voukiana, and some EH remains (sherds, obsidian and chalcedony blade fragments) were found below the knoll immediately to the south, below the shrine area (see below). Several holes had been cut into the bedrock atop the knoll, some for the placement of pithoi. A cutting for the trans-Isthmian wall (Wall Section 21) crosses one of these (Pl. 69,c) and part of the pithos in the hole was removed during excavation. A carinated, terracotta spindle whorl was found in the same hole (Pl. 71,h). Traces of walls made of small stones and earth bedded in cuttings in the surface of the knoll were found, and several other cuttings apparently to channel water into small pits were noted.

The sherds collected represent the earlier stages of the EH period: red-slipped and polished ware, a few Urfinis, and several fragments of gritty, micaceous, brown coarse ware (Pl. 71,g). No pottery bearing painted decoration was found. The extent of the settlement is unknown, but was probably connected with the settlement on Gonia (the ridge immediately west of Voukiana), which was inhabited from Neolithic times through the Late Helladic period.<sup>54</sup>

"GATE" SHRINE (Pl. 69,b). The finds listed below are from two trenches, one dug across the "gate" area of the trans-Isthmian wall (*supra*, p. 260), and the other running west from the "gate" along the south side of the main knoll. One figurine

<sup>54</sup> C. W. Blegen, *Met. Mus. Studies*, III, 1, 1930, pp. 55-80.

fragment and a great many sherds, including several complete or nearly complete votive cups, were found here at a depth of 0.45-0.60 m.

IM 3022 Upper half of terracotta standing Kore. Pl. 70,a, 1.

H. 0.075 m.

Mouldmade; orange clay; with concave back; preserved to just below waist. Wears polos and chiton, stands in completely frontal pose; holds a bird in right hand at breast and in left hand a small fruit. Face narrow and oval; fold below right elbow very narrow. Cf. *Corinth*, XV, ii, p. 92, pl. 16, no. X, 22; also pl. 15, no. X, 23, pl. 17, no. X, 20, but fold beneath right arms here is wider.

5th century B.C. (middle?)

#### MINIATURE VOTIVE CUPS

The following miniatures are all wheelmade, with swirl marks readily observable on the bases. Each has two, useless, attached "handles." Among the uninventoried sherds are fragments of several other small cups, two of which would be slightly larger than those listed here, one having a poor black glaze, the other having a glaze varying in color from black to reddish brown.

The best parallels for these cups are found in the unpublished pottery from the Potters' Quarter in Corinth.<sup>55</sup> Among these may be mentioned in particular Inv. nos. KV 51, 775, 1061, 1142, 1152. Large numbers of similar miniatures, as well as examples of most of the other types found in the "Gate" shrine, are known from the Potters' Quarter, many in dated deposits, such as Stelai Shrine A and the near-by Aphrodite deposit.<sup>56</sup> The style is Late Corinthian "Conventionalizing" ware and most of the pottery (Pl. 71,d) belongs to the first half of the 5th century B.C. and the late 6th century. Among the uninventoried sherds in Plate 71,d is part of a skyphos base with vertical, careless lines in brown glaze above the foot (lower left)<sup>57</sup> and another skyphos base (bottom row, middle) with more widely spaced rays, both

IP 2653 Miniature votive cup. Pl. 71,e, 4.

H. 0.017 m.; base diam. 0.013 m.

Clay, greenish buff, covered inside and outside with poor black glaze; outplaying rim, carinated shoulder, and a concave curve to the base.

IP 2654 Miniature votive cup. Pl. 71,e, 3.

H. 0.02 m.; base diam. 0.012 m.

Clay, red; glaze, which covers entire cup, varies from black to dark brown. Shape like IP 2653 but with a sharper carination. A piece of the rim and body missing.

IP 2656 Miniature votive cup. Pl. 71,e, 2.

H. 0.021 m.; base diam. 0.017 m.

Light buff clay; unpainted; body straight from the rim with a concave curve to the base. Small chip of rim missing.

IP 2658 Miniature votive cup. Pl. 71,e, 1.

H. 0.019 m.; base diam. 0.015 m.

Light buff clay, covered with a black-brown glaze; outplaying rim with slight carination below and a concave curve to the base.

<sup>55</sup> Professor J. L. Benson, who is completing Mrs. Stillwell's study of the pottery from the Potters' Quarter for publication, has kindly granted me permission to refer to some of the unpublished pottery.

<sup>56</sup> A. N. Stillwell, *Corinth*, XV, ii, pp. 22-23.

<sup>57</sup> Cf. C. H. Morgan, *Hesperia*, XXII, 1953, p. 135, pl. 46 a,1, and M. T. Campbell, *Hesperia*, VII, 1938, p. 589, figs. 15 and 16, Nos. 89-100. For skyphoi with more widely spaced rays, Campbell, *op. cit.*, nos. 101-114.

typical of this style. The sherd at the upper left is from a miniature skyphos; the wavy line at the rim and the alternating dark and light bands are common motives of this style.<sup>58</sup> Part of the base of a thick-walled vessel, covered with a white slip on the outside, is shown in Plate 71,b. All or part of seven holes are preserved in the base. It was perhaps used for making cheese.

IP 2652 Miniature skyphos fragment. Pl. 71,f. H. 0.039 m.

Light buff clay; slightly raised base ring.  
 Decoration in horizontal bands of dark brown

glaze applied rather unevenly. Below the rim a band of careless vertical lines. Interior covered with dark brown glaze.

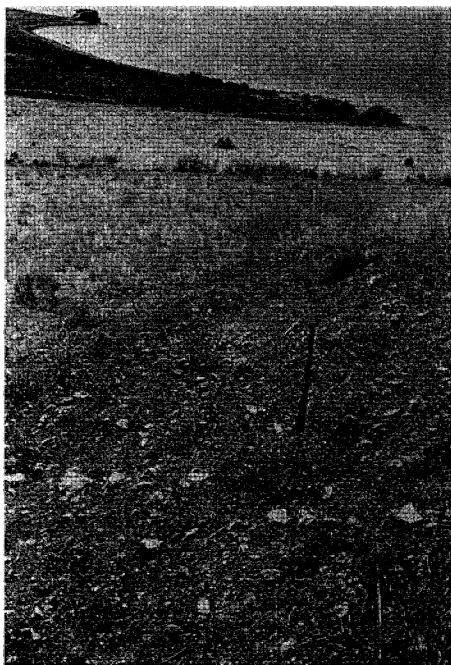
Late Corinthian "Conventionalizing" Ware.

SETTLEMENT. North of Voukiana knoll in the plain and extending at least as far as the next cart road north of the Tsamandas house (Fig. 1, B; Pl. 69,d), and lying between the paved road and the north-south cart road was a settlement of fair size dating from at least the 5th century B.C. There are at least five ancient wells in this area, and large numbers of sherds, roof tiles, and fragments of poros blocks and sarcophagi were found in the fields. Parts of three house walls were found and a Doric column drum (Pl. 71, i). The drum, located in the field of Pavlos Tsamandas beside the telephone pole, is 1.54 m. high, diam. 0.66 m., with an empolion cutting (0.08 x 0.08 x 0.06 m.) in one end, of good workmanship, cut from gray poros. The drum has been exposed in the field for many years and several persons have carved on it, either recording their names or making whimsical scratches and holes. Part of a loomweight (IM 3018, Pl. 70,b, 3) with a slightly concave base was found in the next field south, near the Tsamandas house among some fragments of poros blocks; it is similar to the one described above (p. 272) from the Kromna settlement and probably contemporary (middle of 5th century B.C.)

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<sup>58</sup> *Hesperia*, VII, 1938, pp. 591-592, fig. 15, nos. 120-127. There are also several similar skyphoi from Stelai Shrine A, e.g., Inv. No. KV 733.



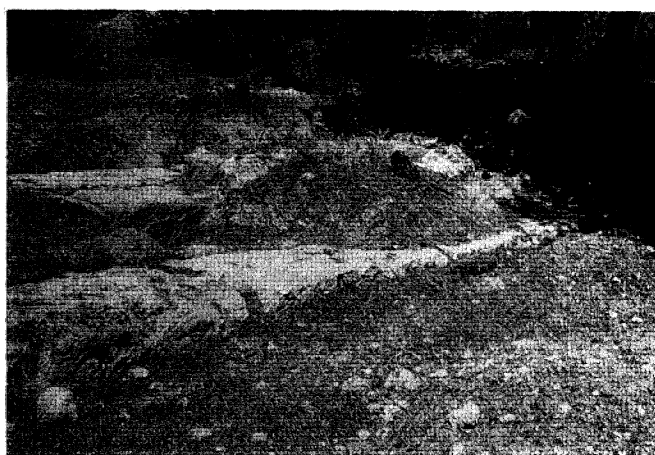
a. Harbor at Kenchreai, with Remains of Roman Tower at Point, Upper Left. Line at Center Marks Wall Section 1.



b. Wall Section 4 from North.



c. Wall Section 2 from North.



d. Wall Section 5. East Face of Tower from East.



e. Wall Section 5. North Wall of Tower at Junction with Wall from South.



f. Wall Section 5. South Wall of Tower at Junction with Wall from East.



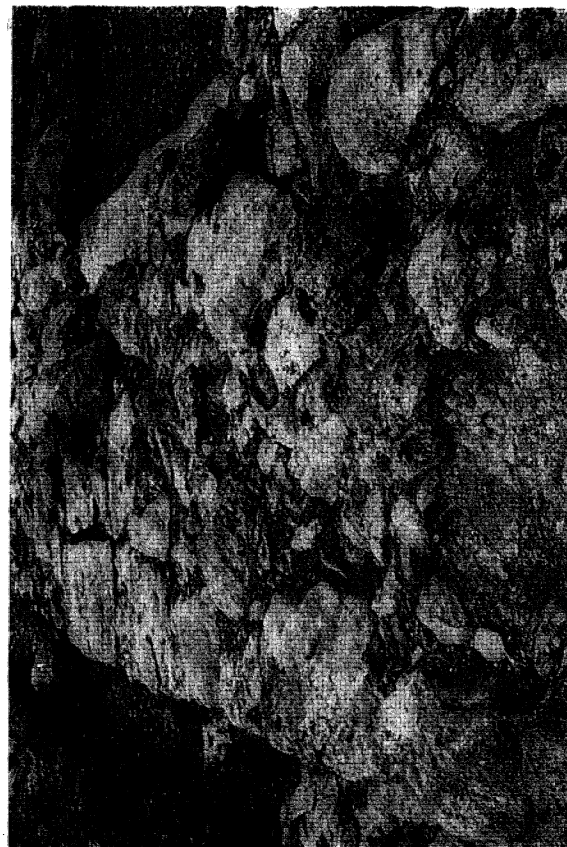
a. Unexcavated Tower Face on Hagios Demetrios Ridge, between "Barracks" Area and Wall Section 7.



b. Unexcavated Section of Wall on Hagios Demetrios Ridge between "Barracks" Area and Wall Section 7.



c. Wall Section 7. Tower from West.



d. Wall Section 7. Wall backing Tower from East.

JAMES R. WISEMAN: A TRANS-ISTHMIAN FORTIFICATION WALL



a. View to Northwest from Haghios Demetrios Crest at point where Wall begins Descent to Plain. Inked Line marks Edge of Lower Part of Ridge on which Sections 8 and 9 are located.



b. Wall Section 10. Tower from West.



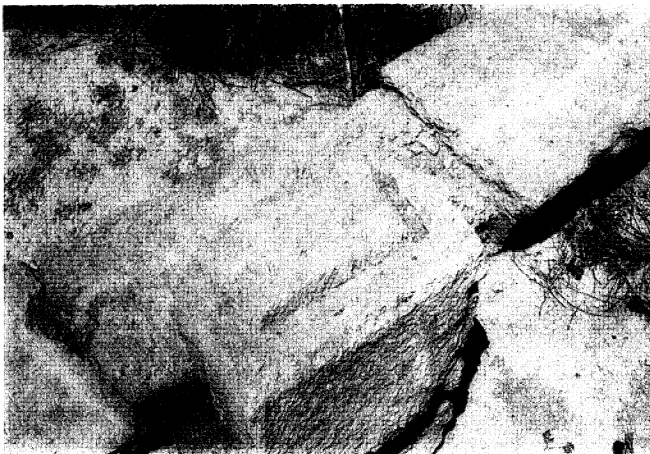
c. Wall Section 11.



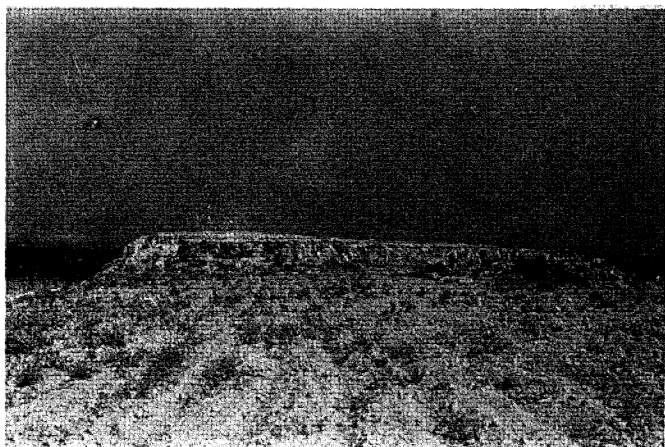
d. Wall Section 13 from Southeast.



e. Wall Section 15 from Northeast (Outer Face of Wall in foreground).



f. Wall Section 15. A Re-used Block.



a. Voukiana Knoll from South.



b. Voukiana Knoll and "Gate" from Northeast.



c. Wall Section 21. Cutting in Bedrock.



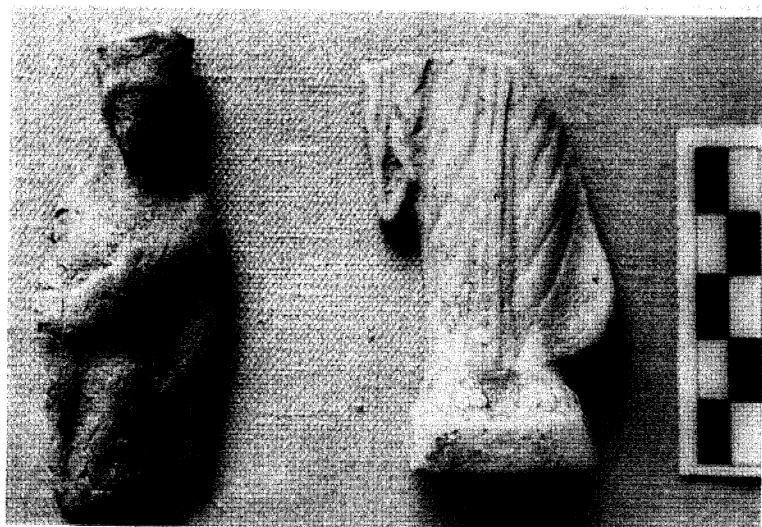
d. View to North from Wall Section 21. B marks the Tsamandas Fields.



e. Section of Cistern Wall in Kaiapha Field.

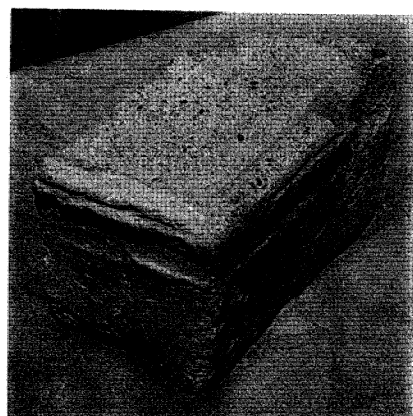
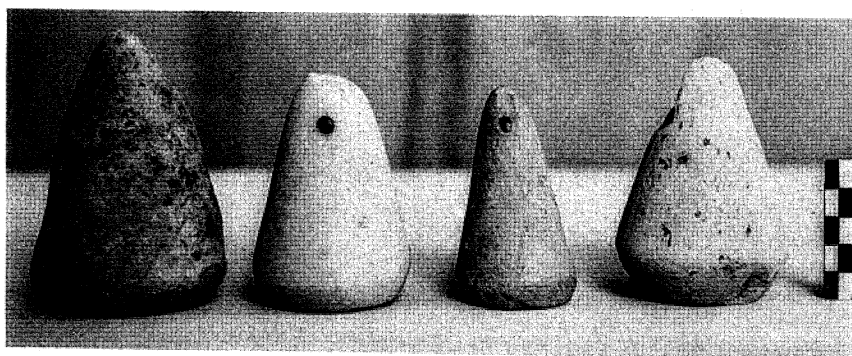


f. Wall Section 7. Tooled Block in West Tower Face.



a. Mouldmade Figurines. 1. Voukiana (IM 3022); 2. Kromna (IM 3021).

b. Loomweights. 1. Hagios Demetrios Crest (IM 3015); 2. Kromna (IM 3017); 3. Tsamandas Field (IM 3018); 4. Perdikaria (IM 3016).



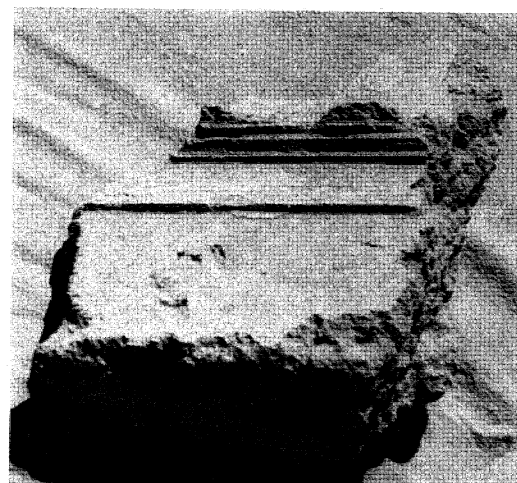
c. Terracotta Altar from Kromna.



d. Skyphos Fragment from Kromna.



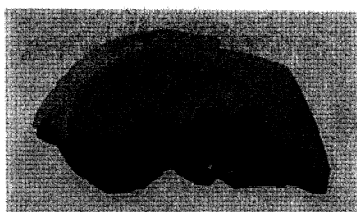
e. Stuccoed Coping Stone found near Wall Section 10.



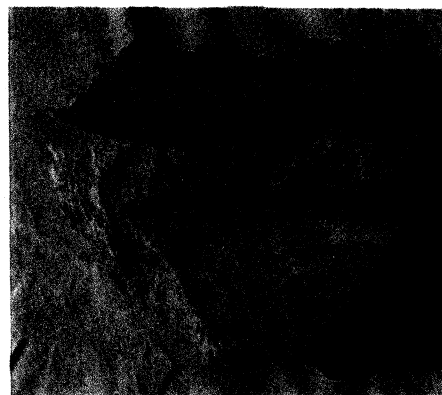
f. Stuccoed Poros Fragment (IA 759) from Wall Section 19.



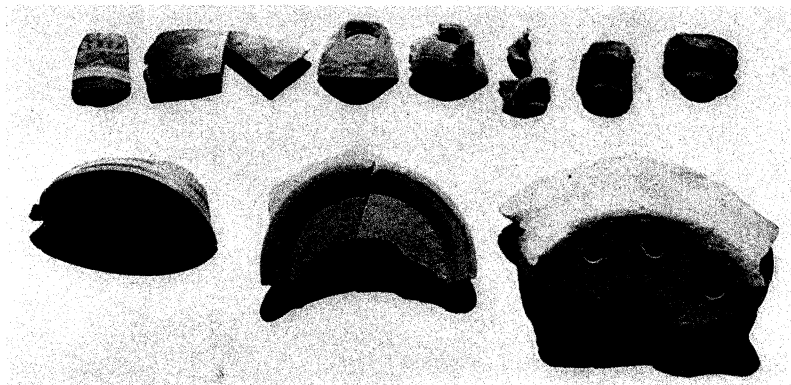
a. Sherds with Black Glaze from Haghios Demetrios Crest.



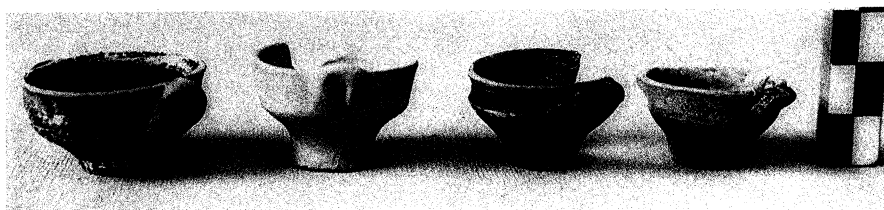
b. Base Fragment of a Vessel for making Cheese (?).



c. Fragment of Parapet Cornice from Wall Section 16.



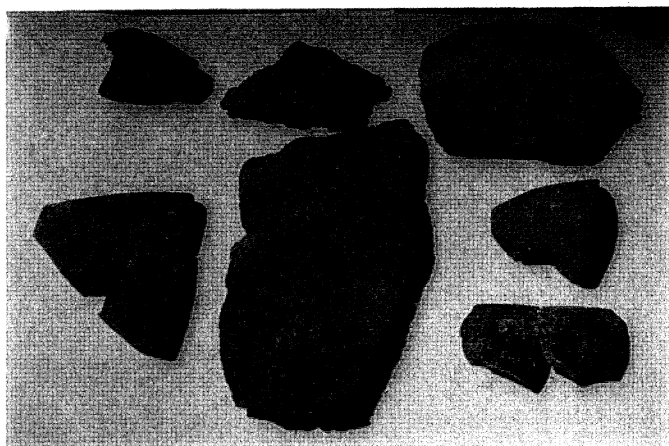
d. Sherds from "Gate" Shrine.



e. Votive Cups from "Gate" Shrine.



f. Miniature Skyphos Fragment from "Gate" Shrine.



g. EH Pottery from Voukiana.



h. EH Spindle Whorl and Blade Fragments from Voukiana.



i. Doric Column Drum in Tsamandas Field.