

EXCAVATIONS AT CORINTH: TEMPLE HILL, 1968-1972¹

(PLATES 45-58)

THE hill which rises on the north flank of the Roman Forum in ancient Corinth (Pl. 45) is still marked by seven monolithic limestone columns standing at the southwest corner of a temple site (Fig. 1, A) which has long been associated (albeit on meager grounds) with the deity Apollo.² Excavations on the hill in modern times³ started in 1886 with Doerpfeld's clearing of most of the foundations and foundation-cuttings of the temple.⁴ In 1896, the first year of the excavations of the American School of Classical Studies on the site, R. B. Richardson began a series of exploratory trenches, at least one of which (Trench XI) tested upper levels of fill on the north side of Temple Hill. In the following years Richardson and his colleagues made further investigations which led Benjamin Powell, in publishing his article on the temple of Apollo, to write of the 1901 campaign: "The completion of the excavation of the site gave the satisfaction that nothing of importance could escape."⁵ In 1908 B. H. Hill dug three trenches on

¹ Excavations on Temple Hill were renewed in 1968 as a result of consultations between the author and Charles K. Williams, II, who, as Field Director of the Corinth Excavations of the American School of Classical Studies, is in charge of general supervision of the work. The author is much indebted to Mr. Williams and to Prof. James R. McCredie, Director of the American School, for permission to carry out the excavations under the direct auspices of the School in 1968-1970 and, in 1971-1972, under the auspices of Case Western Reserve University. During the 1971-1972 campaigns the expenses of excavation were met through a grant from the National Endowment for the Humanities and through generous gifts from friends of the University in Cleveland and elsewhere. Acknowledgment is also made to the John Simon Guggenheim Memorial Foundation, which awarded a Fellowship to the author for the academic year 1969-1970 for the purpose of studying problems connected with the Archaic temples at Corinth; to the Institute for Advanced Study, of which the author was a visiting member in 1969-1970; and to the American Philosophical Society, which in the spring of 1970 provided funds for the erection of scaffolding around the seven columns of the 6th century temple in order to facilitate the work of our architect, Joseph W. Shaw.

² R. Stillwell, *Corinth*, I, [i], *Introduction, Topography, Architecture*, Cambridge, Mass., 1932, pp. 126-134; R. Scranton, *Corinth*, I, iii, *The Monuments in the Lower Agora and North of the Archaic Temple*, Princeton, 1951, pp. 71-72; G. Roux, *Pausanias en Corinthie*, Paris, 1958, pp. 119-120.

³ The Romans of the 4th century after Christ had already made some very deep excavations on the north side of the hill; see below, p. 237.

⁴ *Ath. Mitt.* 11, 1886, pp. 297-308.

⁵ *A.J.A.* 9, 1905, pp. 53-54. Doerpfeld had previously expressed a similar assurance regarding the state of his excavations (*Ath. Mitt.* 11, 1886, p. 297).

Hesperia, 45, 3

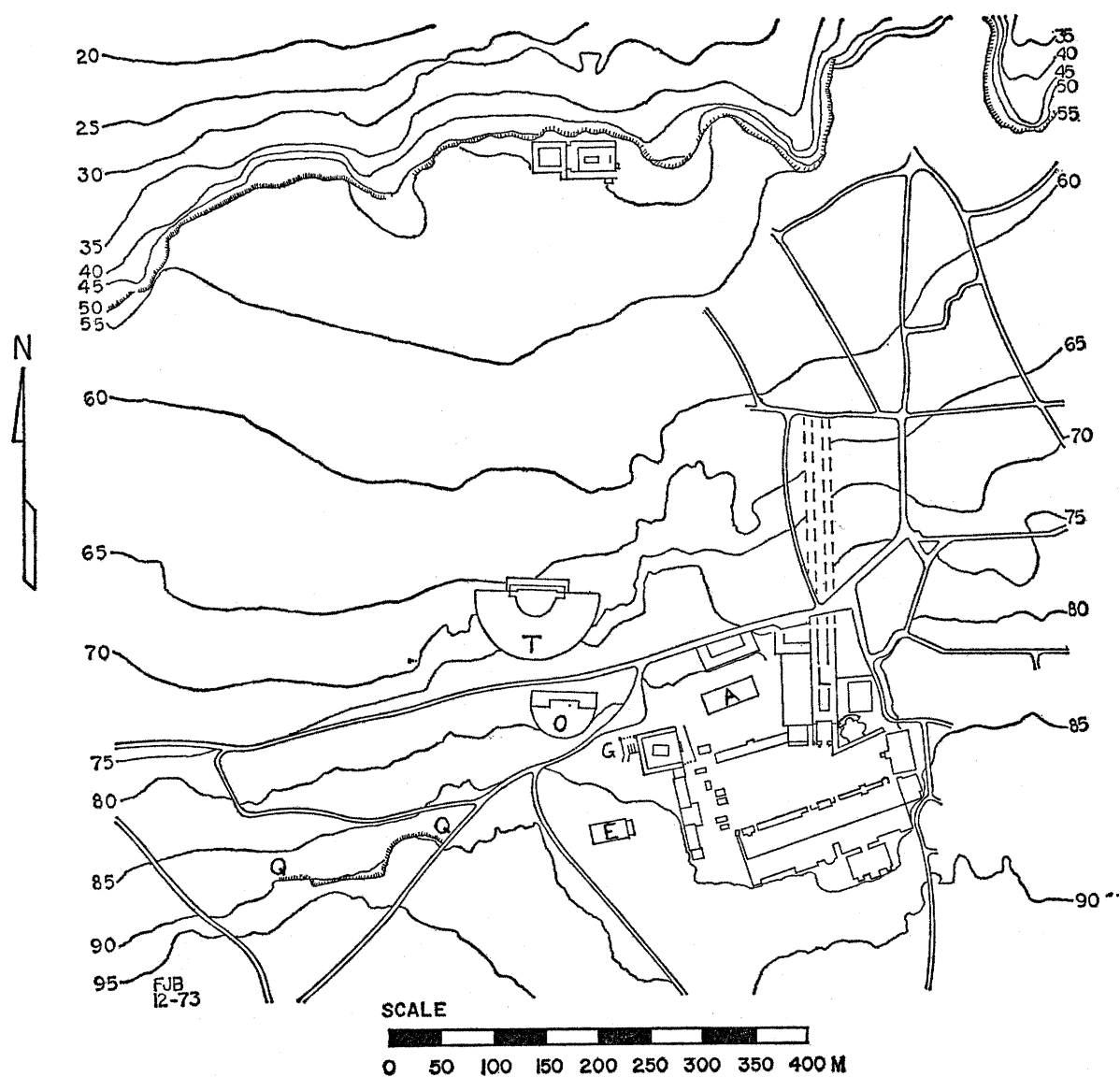


FIG. 1. Plan of central part of Ancient Corinth. A, Temple of Apollo; E, Temple E; G, Fountain of Glauke; L, Lechaion Road valley; O, Roman Odeum; Q-Q, sixth century B.C. quarry; T, Theater.

the north slope of Temple Hill in an effort to locate traces of the north and west peribolos walls.⁶ Leslie W. Kosmopoulos, pursuing researches into the prehistoric remains of Corinth, dug a number of pits on Temple Hill in 1914, 1920 and 1935.⁷ Further excavation on the hill was carried out by Hill, Blegen and Broneer in 1925-1926 and 1931, with the result that the "precinct has been cleared to the classical level."⁸ Additional investigation of prehistoric levels on the hill was made by Saul Weinberg in 1937-1938;⁹ his work resulted, incidentally, in the discovery of the remains (broken and burned building blocks and terracotta roof tiles) of an older temple and provided evidence which suggested that the Archaic temple had been constructed early in the third quarter of the 6th century B.C.¹⁰ Subsequently Carl and Mary Roebuck opened six further trenches (1954) in an effort to recover more information about the older temple and its fictile roof covering.¹¹

Figure 2 records the location of these various older trenches in relation to the temple site and demonstrates more clearly than any words the disruption of the archaeological fill within the precinct of Apollo. Figure 3 is a cross section of the surviving fillings at one point on the north side of the hill;¹² the ground level in 1968 is represented by the upper line of filling and lay at *ca.* +82.90 m. close to the temple, at *ca.* +81.85 m. at the extreme north, where the fill drops off toward the deep scarp of rock which forms the backer for the rear wall of the Roman Market. In 1908 the ground level of the hill top lay about 0.80 to 1.55 m. higher than when our current series of excavations began.¹³ Yet it seems probable that the

⁶ See Corinth Field Notebooks 45, 46. In our Figure 2 the legend H XLIIIa indicates Hill's Trench XLIIIa.

⁷ L. W. Kosmopoulos, *The Prehistoric Inhabitation of Corinth I*, Munich, 1948, pp. 16-23. In our Figure 2 the Kosmopoulos trenches, designated by her with letters, are identified as KG, KH, etc.

⁸ *A.J.A.* 31, 1927, p. 71. Cf. also Kosmopoulos, *op. cit.* (note 7 above), pp. 15-16, note 33.

⁹ *Hesperia* 6, 1937, pp. 487-492; *ibid.*, 8, 1939, pp. 191-199; *A.J.A.* 43, 1939, p. 595. In our Figure 2 the Weinberg trenches are indicated by the letter W followed by a Roman numeral.

¹⁰ *Hesperia* 8, 1939, pp. 191-199; but see footnote 36 below for a revision of this date.

¹¹ *Hesperia* 24, 1955, pp. 147-157. In our Figure 2 the Roebuck trenches are identified by the letter R followed by a Roman numeral.

¹² Elevations are given in relation to mean sea level, as measured from a bronze pin permanently fixed in the rock of the hill within the area of the cella of the 6th century temple; this pin bears the number ΑΞΚΞ 80 and lies at 83.282 m. above sea level (*Hesperia* 29, 1960, pp. 236-240). The section in Figure 3 is drawn along a line extending, at a right angle to the axis of the temple, from a point approximately 30 meters east of the northwest corner of the temple foundations. Certain details (as the Roman paving slab at +83.187 m., the hatched portions of the temple foundations, the stub of the column shaft, the floor level of the Greek Painted Building at +77.566 m.) are introduced into the section on the basis of evidence extant at other parts of the temple site.

¹³ B. H. Hill's records in Field Notebook 46 indicate that in 1908, in the southern part of his trench XLIIIa, bedrock lay 1.65 to 2.40 m. below the "modern surface." We do not know the precise positions at which he took these measurements; but bedrock at the southern end of that

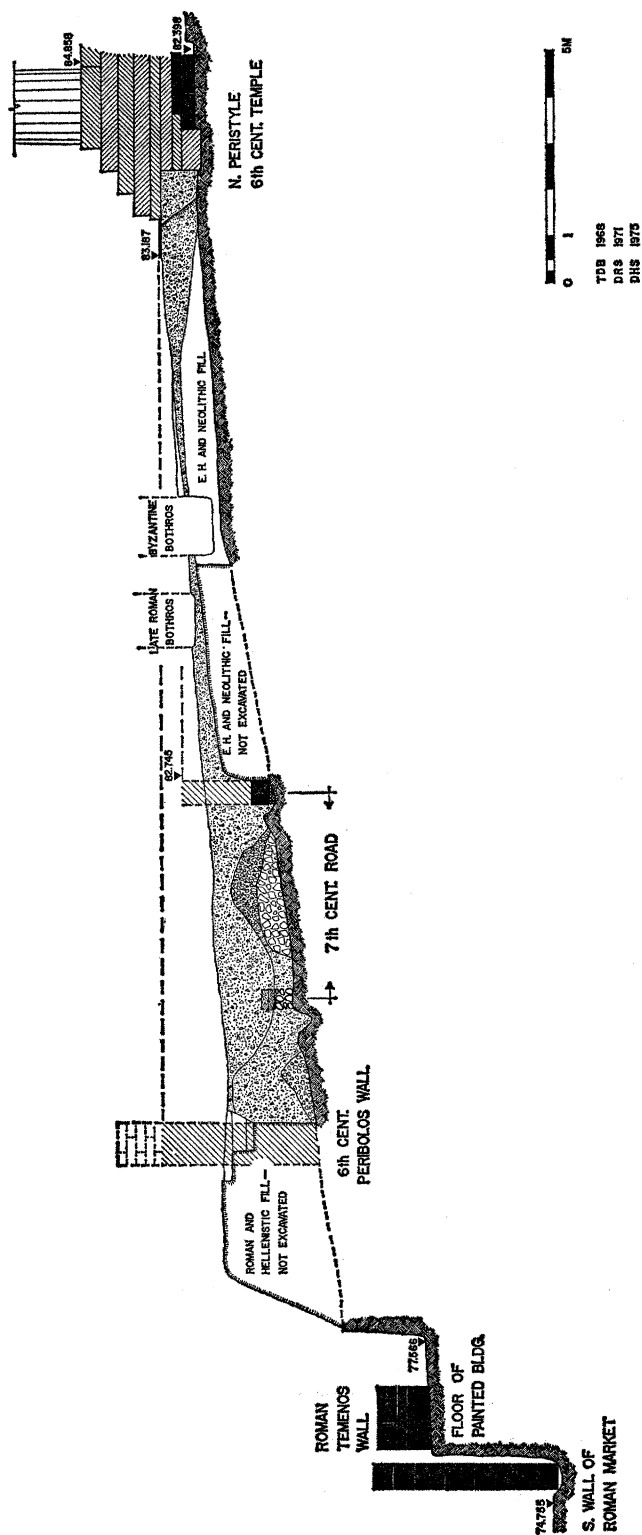


FIG. 3. North-south section of north flank of Temple Hill, looking east.

“modern surface” of the hill on the north side in 1968 was, at least in part, that of the early 19th century, for the Turkish stairway (*kalderimi*) discovered by Hill in 1908 in the north part of his trench and fully excavated in 1970, is preserved to +81.78 m. (almost to its top), a level only a few centimeters below the 1968 ground surface (Fig. 6; Pl. 48, d).

In the course of the many years of excavation and investigation at Corinth by the American School of Classical Studies, two reports on the temple have been published: one by Benjamin Powell (who in 1901 ascended to the top of the architraves by means of ladders tied together), the other by Richard Stillwell, who was present in Corinth during much of the period of the 1925-1931 excavations.¹⁴

During the several years in which he was involved in the excavations of Corinth, the author became interested in certain problems connected with the cult and the identification of the deity worshipped in the Archaic temple on Temple Hill. Discussion of these problems with Charles K. Williams, the Field Director of the Corinth Excavations, led to the decision to undertake a new investigation of such ancient fill as survives on Temple Hill in an effort to clarify, so far as possible, the history of the sanctuary, of its successive temples and of the several enlargements of the peribolos. With this study was to be included a new measuring, drawing and interpretation of the remains of the 6th century temple. As a result of this decision, excavations were resumed on the hill in August of 1968 and are continuing. We present here a preliminary report on the first five, short campaigns,¹⁵ during the

trench is now measured as *ca.* +82.60 m. just to the north of the foundation trench for the north stereobate of the temple, while nine meters further north it lies at *ca.* +81.85 m. We may thus suppose that the surface close to the temple in 1908 lay at *ca.* +84.25 m., slightly more than a meter above the Classical floor of the peribolos (at +83.187 m.). In 1968 the modern surface rose no higher than the Classical floor and attained that level only close to the north foundations of the temple. See also Kosmopoulos, *op. cit.* (note 7 above), pp. 15-16, note 33.

¹⁴ *A.J.A.* 9, 1905, pp. 44-63; *Corinth* I, [i], pp. 115-125.

¹⁵ In 1968 the excavation was supervised in the field by the author and by Rebecca C. W. Robinson; Thomas Boyd, Stevens Fellow of the American School for 1968-1969, served as architect; the excavations continued from August 5 to 30. From April 21 to June 6, 1969, the author continued the investigation, again with Thomas Boyd as architect. In 1970 Joseph W. Shaw served as architect; the season extended from April 29 to June 12. From July 5 to August 27, 1971, the author and Mrs. Robinson again supervised the field work, with the assistance of Prof. Donald Shelangoskie (Case Western Reserve University) as architect and of Peter E. Burns (graduate student of the same university) as physical anthropologist. In 1972 excavation lasted from July 4 to August 18. The author, Mrs. Robinson and Judith Bluestein (graduate student in Classics at Case Western Reserve University) supervised trenches; Donald Sanders and Demetrios Balamotis (students of Architecture, Case Western Reserve University) served as architect and draftsman; Peter Burns, this time assisted by Mrs. Burns, continued his investigation of the human skeletal remains. The summer of 1973 was devoted to study and no excavation took place. Mrs. Robinson worked on the conservation and investigation of the bronzes found in the fill over the 7th century road; the author and Irene Wanner (graduate student at the University of Cincinnati) studied the roof tiles of the earlier temple; Peter Burns continued his analysis of the

course of which we have excavated an area extending from Weinberg's Trench V (see Fig. 2) eastward for about 40 meters and from the north foundations of the 6th century temple northward for about 25 meters. In some parts of this area we have cleared to bedrock, in others only to the level of the Classical temenos or to that of prehistoric habitation. The older excavation trenches which lay within this area and which had been refilled by their excavators (Hill XLIIIa, Weinberg I, Roebuck V and VI, Kosmopoulos K, O and Q) were all cleared of their modern deposit before we undertook to investigate the adjoining strips of virgin fill.

HISTORY OF THE SITE

The remains which survive on Temple Hill point to as long and active an occupation by man as can be demonstrated for any site in the Corinthia. Various periods of building activity have altered considerably the contours and physical appearance of the hill and have probably also, through leveling operations, completely obliterated certain important phases of the settlement pattern.

In remote times (and perhaps until the early 2nd century B.C.) Temple Hill was not, in fact, a hill, but part of a long ridge of native limestone¹⁶ which extended without interruption from the Lechaion Road valley (Fig. 1, L) southwestward for more than 650 meters. The north face of that ridge is now represented, in the central part of the city, by the rock scarp north of the 6th century temple of Apollo (Fig. 1, A) and by the façade of the fountain of Glauke (Fig. 1, G). From 200 to 480 meters westward from Glauke the north face of the ridge is again visible (west and south of the Roman Odeum—Fig. 1, O).¹⁷ The water reservoirs of the Glauke fountain were dug (in the Archaic period) into the north face of the ridge. On the top of the ridge, directly above the reservoirs, cuttings in the rock point to the existence of an early construction, possibly a shrine.¹⁸ The highest level of the

human skeletal remains. Throughout the five seasons Charles Williams has been an invaluable consultant and guide and he has generously put the facilities of the Corinth Excavations and the services of its technical staff at our disposal.

¹⁶ This rock is commonly called *poros*. See B. H. Hill, *Corinth I*, vi, *The Springs*, Princeton, 1964, p. 16.

¹⁷ Within this western part of the ridge the rock face is partly obscured by earth which is now under cultivation. It appears, however, that the ridge has been cut back in quarrying operations which have removed its original north face; some of the quarry cuttings (located 140 to 180 meters due west of the northwest corner of Temple E), with which are associated numerous beam cuttings, seem likely to have been created in connection with the removal of the huge blocks required for the monolithic columns of the 6th century temple of Apollo (Fig. 1, Q-Q; Pl. 49, a). The westward part of this quarry was investigated briefly in the spring of 1928 by F.-J. de Waele for the American School; the excavation was not extensive and did not reach the quarry floor at any point; some considerable quantities of Archaic Corinthian pottery (mixed with later material) suggested to De Waele that the quarry might have been in operation in the 6th century B.C. (Field Notebook 99, pp. 78 ff.; Notebook 100, pp. 209-215).

¹⁸ R. Scranton, in *Corinth*, I, ii, *Architecture*, Cambridge, Mass., 1941, pp. 151-158.

rock there lies at +86.25 m.; from that point the rock crest once sloped down gradually to the east, reaching +84.32 m. at the west end of the temple site (75 meters east of Glauke) and +82.20 m. at the eastern end of the ridge (above the Lechaion Road valley). There is as yet no evidence of the date at which the ridge was cut away between the temple site and Glauke, to permit the passage of a low-level road toward Sikyon. The western part of the ridge may have been subjected to quarrying in the middle of the 6th century B.C. (see footnote 17); the part of the ridge lying closer to Glauke may have been left in its natural state until the early 2nd century B.C.¹⁹ Certainly by Roman times the rock to the east, south and west of the reservoirs of Glauke had been removed, leaving the fountain an isolated cube of rock, as it appears today.

That part of the northeast-southwest ridge that lies between the Lechaion Road valley and Glauke, and on which were built two successive temples (one *ca.* 700 B.C., the other *ca.* 560 B.C.) was, in remote prehistoric times, barren rock. To the north of the 6th century temple and within the area of the rock cuttings for its foundations were found pure deposits of Late Neolithic pottery in natural cavities of the rock surface.²⁰ Of Stone Age construction nothing was found, but that these deposits represent a period of human occupation is clear from the wholly different character of the fill which lies directly above the bedrock surface. From the north foundations of the temple northward extends a dumped filling of the Early Helladic II period; this is now preserved (Trench I) to a maximum depth of 2.00 m. (at its northern limit), and rises to an elevation of as much as +82.745 m. close to the temple foundations (Fig. 3). It may be surmised that this filling once extended far northward over the gradually sloping north flank of the hill; but, for reasons which will become apparent, this prehistoric dump now survives to a maximum distance of only 18 meters north of the temple (measuring from the northeast corner of the temple site; from the northwest corner of the temple the fill may extend only 8 meters northward). In 1937-1938 Weinberg investigated this fill in his Trenches I and V; he reported no stratification within the fill but observed "a regular progression from the bottom up," beginning with Neolithic and ending with predominantly Early Helladic sherds.²¹ Our examination of this prehistoric fill in our Trenches I and V

¹⁹ Just off the northwest corner of the peribolos of Temple E (Fig. 1, E) lie the remains of an Early Roman house built over an old quarry in the long northeast-southwest ridge. The stratification of fills here suggests that the quarrying began in the 2nd century B.C. and was resumed in the early stages of the building of Roman Corinth; the quarry was filled in by the end of the first quarter of the 1st century after Christ. See Field Notebook 293, pp. 50-111, 121-123 ("quarry cut in area of Roman Road"), Corinth Pottery Lots 2428-2433; and Notebook 257, pp. 101 ff., 176, Notebook 265, p. 42 ("Test Trench A"), Corinth Pottery Lots 1452-1485. The quarry at the northeast end of Temple Hill (below, p. 237) was both dug and filled in during this same period of Roman rebuilding.

²⁰ Corinth Pottery Lots 5661, 5663, 5678, 5680.

²¹ *Hesperia* 6, 1937, p. 492.

(to the west and east, respectively, of Weinberg's I) revealed that we have to do with a dumped fill rather than a gradual accumulation and that this fill was brought to the hill in the Early Helladic II period.²² We must assume that such an extensive terracing project was preliminary to some building activity on the hill, but of that work no traces remain. Weinberg reported fragments of walls in the southern end of his Trench I; these he associated with the Early Helladic period (see footnote 21), but we have found no comparable constructions in our trenches. In all likelihood the leveling of the top of the hill was designed to facilitate the construction of some major building which would have occupied the site later covered by the two successive Iron Age temples; the construction of those—especially of the 6th century temple, with its massive rock-cut foundation trenches—doubtless removed all traces of the Early Helladic building. One prerequisite for prehistoric settlement—the close availability of a good water supply—is met by the fountain of Peirene, just across the Lechaion Road valley from Temple Hill (Fig. 1);²³ but the fountain of Glauke, which is merely a group of rock-cut reservoirs to which water was piped from a source on the foothills of Acrocorinth,²⁴ was not in existence in the prehistoric age.

No traces of occupation of Temple Hill in the Middle and Late Helladic periods have survived; it is quite possible that these levels, like that of the Early Helladic building which we have postulated, were destroyed by the building operations of the 7th and 6th centuries B.C.²⁵

Some sherds of Geometric pottery have turned up in various fills of later date on the hill, but the oldest Iron Age *stratum* which we have yet exposed to the north of the temple site is of the end of the Geometric and the beginning of the Proto-corinthian period, *ca.* 700 B.C. This stratum occurred in our Trench V, between 8 and 11 meters north of the foundations of the 6th century temple; its upper surface sloped from + 82.99 m. at the south to + 82.14 m. at the north and its depth was about 30 centimeters.²⁶ The pottery within the stratum was mixed, containing some Neolithic and Early Helladic material together with Late Geometric and Early Proto-

²² I must express my thanks to John Lavezzi for his study of the prehistoric pottery and objects from this fill. He has pointed out that joining fragments of an Early Helladic sauceboat were found in the lowest and also in the highest levels of the fill. The pottery is for the most part of Early Helladic date, but some Late Neolithic material does occur, including the terracotta figurine MF-68-285 (Pl. 56, g, h). Field Notebook 386, pp. 103-104. Corinth Pottery Lots 5670-5677, 5679, 6428, 6429. Inventoried objects: C-68-287 to C-68-303; MF-68-285 and MF-68-288.

²³ B. H. Hill, *Corinth I*, vi, pp. 15-18.

²⁴ *Ibid.*, pp. 227-228.

²⁵ C. W. Blegen, *A. J. A.* 24, 1920, p. 3. Our recent excavations have brought to light a single fragment of Late Helladic pottery: C-71-331, a fragment from the shoulder of an alabastron of LH I date; found in a stratum primarily of Neolithic and Early Helladic material, but with intrusions as late as Geometric and 7th century B.C. (Corinth Pottery Lot 6907).

²⁶ Corinth Pottery Lots 6420, 6421, 6426.

corinthian sherds and an almost complete oinochoe (Pl. 54, c).²⁷ In addition, this stratum contained large quantities of small working chips of a fine, buff, *poros* limestone. The presence of such chips in this datable stratum makes it clear that a building of dressed limestone blocks was under construction on Temple Hill around the year 700 B.C. The building material implies a structure of some importance which we may justifiably assume to have been a predecessor of the Doric temple of the 6th century. Of the nature of this earlier temple more will be said below.

When the Late Geometric temple had been standing for some 75 years, the northern limit of the temenos associated with it was marked out by the construction of a road which led across the north slope of Temple Hill; the road apparently connected the fountain of Glauke at the southwest with that area to the northeast of Temple Hill (under the modern village *plateia*) where Charles Williams now believes the Agora of Corinth may have been located in Greek times (Fig. 5).²⁸ The road (Fig. 4; Pls. 46, a, 47, a) has now been traced from a position 10 meters north of the northwest corner of the 6th century temple (Roebuck's Trench III) eastward to the point where it is completely obliterated by the deep quarry cutting made in Early Roman times for the Roman Market (Pl. 46, a, foreground and right edge).²⁹ The road surface consists of bedrock at the east (where a few traces of wheel ruts appear), of hard-packed gravel and earth elsewhere. At the west (Trench IX) the roadbed lies at *ca.* + 81.05 m., at the east (Trench XIII) *ca.* + 78.92 m. The width of the road surface is 3.50 to 4.00 m.; in the western portion the surface slopes up slightly toward the south, thus restricting somewhat the freedom of movement of wheeled vehicles.

For the dating of this road we have small amounts of pottery from successive hard-packed strata of road metal. These permit us tentatively to place the construction of the road at *ca.* 625 B.C., its last period of use *ca.* 570 B.C.³⁰ The Corinthian engineers who designed the road made a deep cut at the east into the native rock of the hillside (Pl. 47, d);³¹ at the west, where the road level rose, the earth fill over

²⁷ C-70-81. Prof. Keith DeVries has examined this pottery and informs me that the sherds may be dated no later than 700 B.C., while the complete vessel may be as early as 720 B.C.

²⁸ *Hesperia* 39, 1970, pp. 35, 38. C. Roebuck, *Hesperia* 41, 1972, p. 102. I am indebted to Charles K. Williams for permission to use his drawing as our Figure 5.

²⁹ Roebuck's Trench III has not been reopened and for that reason the course of the road in that area does not appear in the plan, Fig. 4. The road surface is also destroyed across most of its width (at a point almost due north of the northeast corner of the 6th century temple) by the intrusion of the rock cutting for the southeast corner of the Greek Painted Building (Pl. 46, a; see *Corinth* I, iii, pp. 156-163).

³⁰ Corinth Pottery Lots 5869, 5868, 5867.

³¹ There is evidence that the road surface at the east was lowered significantly in a second (undatable) phase of its use; this reworking may have been designed to bring the eastern section of the road into more convenient relationship with some late 7th century reduction in the building levels of the Agora (?) at the northeast.

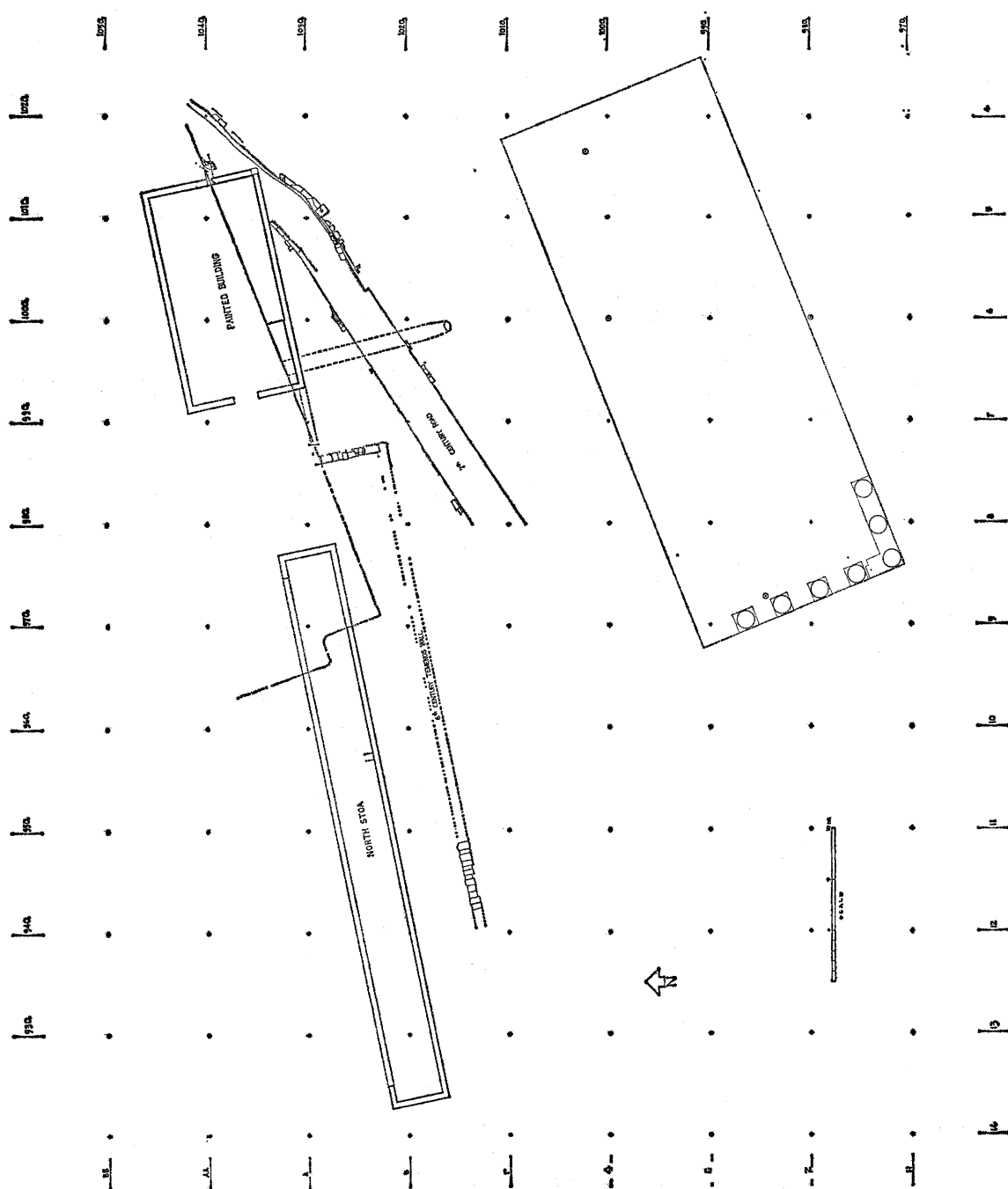


FIG. 4. Plan of Temple Hill, seventh to fifth centuries B.C.

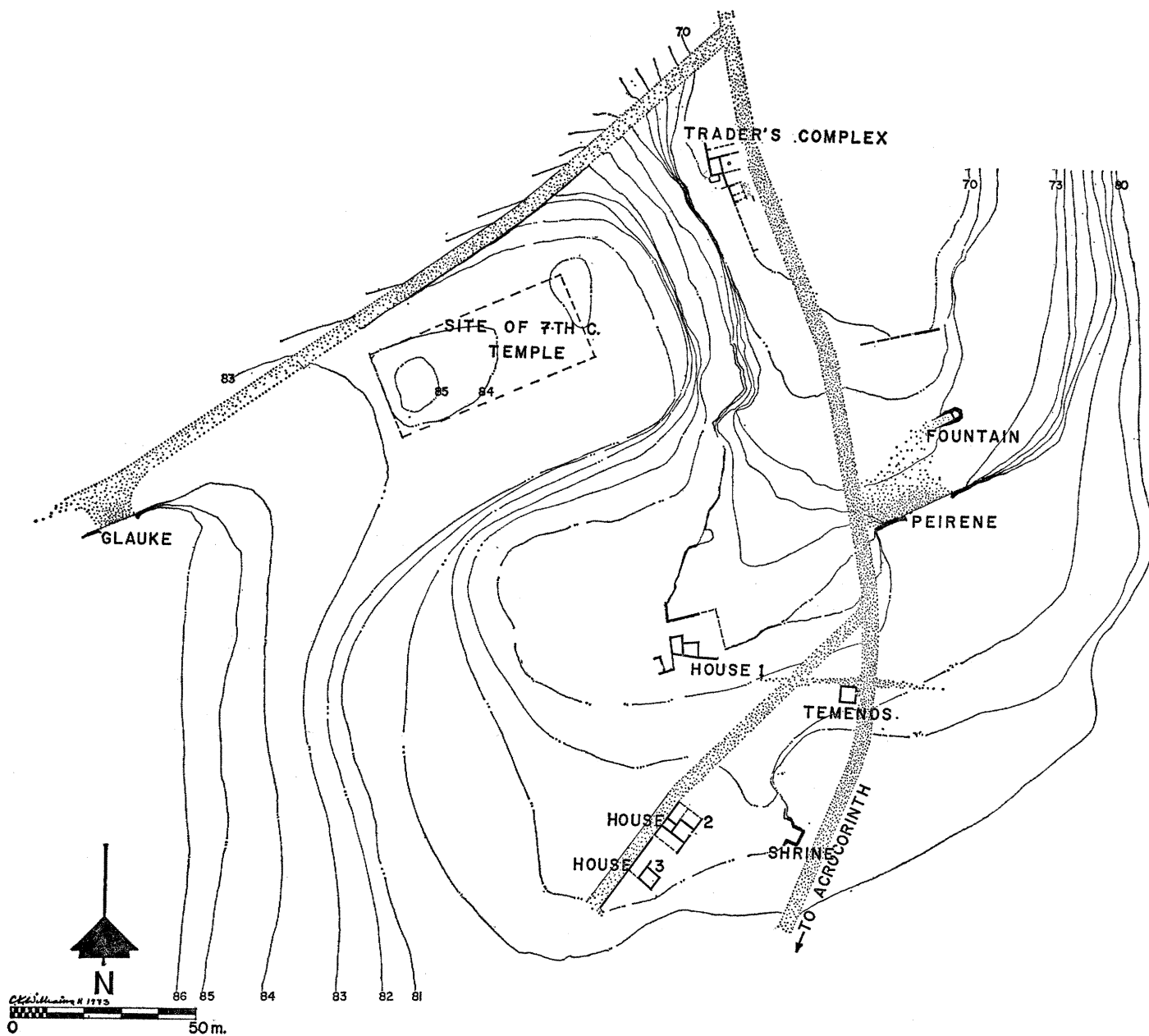


FIG. 5. Plan of Temple Hill area in early sixth century B.C.

bedrock (largely the Early Helladic dump noted above) was cut down to the level of the rock. To control the scarp of fill at the south edge of the road, a retaining wall was constructed. This was built of moderately large stones, only partly trimmed to shape. The wall must have risen, in the area opposite the mid-point of the temple site, to a minimum level of +82.745 m. (Fig. 3), that is, to the maximum preserved level of the prehistoric filling which it contained. Much of the construction of this wall was removed in antiquity (probably during the period of building of the 6th century temple), but its line is clear throughout the exposed length of the road.³² On the north side of the road, likewise, was constructed a retaining wall, probably of lesser height than that at the south. The need for the construction of the north wall is not clear, for generally speaking there was no abrupt change in levels between the roadway and the surface immediately north of it. In the western area the north wall is constructed of dressed blocks of limestone, of which a single course survives (Pl. 47, b). The road surface here lies at +81.01 m.; the preserved top of the wall is at +81.34 m.; its width is 0.25 m. We may assume that in this area the wall was a single course in height, little more than a curb. Toward the east the wall is built up of a stone socle supporting courses of mud bricks (Pls. 46, b, 47, c). One section of the brick wall (Trench V), preserved over an east-west length of only 0.90 m., lies almost due south of the southwest corner of the Greek Painted Building (Fig. 4; Pl. 46, b); here four courses of brick survive, from +80.74 m. to +81.07 m. The bricks are 0.50 m. square and 0.075 m. thick. No socle survives here, for it was removed in the course of Roman excavations made at the time of the refurbishing and enlargement of the temenos in the early 1st century after Christ. (We have inserted a modern brick construction under the ancient mud bricks to provide support: Pl. 47, a.) The absence of the socle can only mean that at this point the original socle consisted of orthostates which were of value to the Romans in their rebuilding operations. The orthostates, bedded at +79.92 m., rose from the road surface at +80.27 m. to the bottom of the lowest course of bricks at +80.74 m. At a distance of 4.50 m. east of this section of brick wall appears another stretch of the north retaining wall of the road, this one 2.80 m. in length (Fig. 4; Pl. 47, c). Here (Trench VII) the socle is constructed of small stones bedded in clay; the socle rises from the road surface *ca.* +80.12 m. to +80.505 m.; above the socle a single course of bricks survives over the eastern part of this section of the north wall.

It is striking that, immediately to the west of the longer wall section noted above, the road surface extends north *across* the line of the wall (Pl. 47, c, at left).

³² At the east, where the road has been cut down into bedrock, the rock ledge south of the road rises to as much as 0.88 m. above the mean road level, while the retaining wall constructed upon the ledge rises another 57 cm. higher, to +80.658 m. In this area the wall is constructed of larger, dressed blocks of *poros* (Pl. 47, d).

This fact may be explained by the presence here of an opening through the wall. The actual width of the opening cannot be ascertained because of Early Roman pillaging over the line of the wall further west; but the preserved width of the hard earth threshold is 0.75 m. North of and within the opening in the wall were found numerous aryballoi, some larger vessels which were also designed as containers for oil, and terracotta figurines (Pl. 55).³³ Many of the vases and figurines show traces of burning. In particular, an alabastron (C-71-294) and a conical oinochoe (C-71-310) have been subjected to such intense heat that the clay has fused and the fabric has split open from internal pressures (Pl. 55, a). It is likely that all the vessels and figurines found in this limited area represent sacrificial offerings at a small open-air shrine. The condition of the alabastron and oinochoe suggests that these must have been filled with oil or unguent when brought to the shrine and that they were placed directly on the altar, where the heat of the fire raised the temperature of the contents to such a degree as to cause the clay of the vessels to soften and the bodies to crack.

The pottery from this deposit represents stylistically the late Middle Corinthian and the early Late Corinthian periods and may be placed chronologically in the decade 570-560 B.C.³⁴ To this date, then, extended the liturgical activity of the shrine. Of the physical limits of the shrine to west, north and east we can say nothing; later disturbances have removed all but its south wall. Nor can we reach any conclusion as to the religious character of the shrine. An open-air shrine seems indicated by the evidence of the wall which formed its southern limit. That it was in use during the days of the early temple of Apollo is clear (see below), but there is no reason to assume a connection between the cult of Apollo, centered in the temenos south of the road, and this small sacred area to the north of that road.

At a date corresponding with that of the latest votive offerings from the shrine, the roadway was abandoned and the north slope of the hill was extended by means of an artificial fill thrown over the road and north of it. The section in Figure 3 demonstrates the character of the fill and its probable relationship to the construction of the 6th century temple. Immediately over the roadbed was thrown a dump of burned and broken building blocks of *poros* limestone and of primitive terracotta roof tiles (Pl. 50). The architectural significance of these will be discussed below; here it is sufficient to say that this material represents the debris of a temple constructed *ca.* 700 B.C. (probably on the site of the later temple of Apollo) and destroyed by fire around 570-560 B.C. With the block and tile fragments were found many bits of bronze, presumably parts of votive offerings damaged at the time of the destruc-

³³ C-71-278 to C-71-281, C-71-287 to C-71-289, C-71-294 to C-71-299, C-71-301, C-71-307 to C-71-310, C-71-313 to C-71-315, C-71-318 to C-71-329; MF-71-110, MF-71-113 to MF-71-117. Corinth Pottery Lots 6893, 7144, 7145.

³⁴ I am grateful to Dr. Patricia Lawrence for examining some of the material from this deposit.

tion of the old temple and therefore discarded. These represent several types of tripod as well as other bronze vessels and ornaments (Pl. 56, a-f).³⁵ The building debris was used almost exclusively within the width and length of the abandoned roadway in order to create quickly a four-meter extension of the temenos floor and thus a more spacious work area for the masons involved in the construction of the new temple of the 6th century.³⁶ Over the building debris and spreading south to the temple foundations, north to a new retaining wall, accumulated a thick deposit of working chips derived from the trimming of quarry blocks for use in the new temple. The *poros* limestone of these chips differs in texture and color from that of the building blocks of the older temple—the 6th century material is coarser in texture and grayish in color, while that of the older temple is fine-textured and buff in color. With the 6th century working chips we find many masons' tools of iron and stone,³⁷ together with pottery which can be dated to approximately the same time as the latest objects from the open-air shrine north of the road: *ca.* 570-560 B.C. (Pl. 54, d).³⁸ The vessels (many complete aryballoi and other small vases) from the working-chip fill do not show traces of burning as do so many of those from the shrine; the former may be presumed to be among the latest of the votive offerings at the early temple on the crest of the hill. Similar votive objects occurred in areas of the 6th century terracing where the fill consisted of earth (brought from a distance?) without working chips, mainly to the north of the roadway.³⁹

The line of the new north wall of the temenos terrace is indicated on Figure 4. This wall has not been traced in its entirety, but it seems to have had two jogs toward the north and to have constituted (through re-use in the 5th or 4th century) the line of the south wall and of part of the east wall of the Greek Painted Building (bath). If the terrace extending north from the euthynteria of the new temple was wholly level, the new terrace wall at the north must have risen to +83.187 m.

³⁵ MF-68-299, MF-71-254 to MF-71-256 and MF-71-258, MF-72-145 to MF-72-167. Most of these were found in the road fill in the area of Trench XI: Corinth Pottery Lots 6893, 6896, 7149, 72-157, 72-165, 72-166, 72-169, 72-177.

³⁶ The date of construction of the new temple has been placed shortly after 550 by Saul Weinberg on the basis of pottery found in the fill between the foundations of the north cella wall and those of the north peristyle (*Hesperia* 8, 1939, pp. 191-199): C-37-2308 and C-37-2309, C-38-540 to C-38-542 and C-38-550, C-39-1. Tests made in 1969 in the same fill suggest a date nearer to 570-560 B.C. (Corinth Pottery Lot 5662).

³⁷ Cf. *Hesperia* 24, 1955, pp. 152-153, pl. 61, b.

³⁸ C-69-153, C-69-157 and C-69-158, C-71-209, C-71-277, C-71-284, C-71-292 and C-71-293; MF-69-79 and MF-69-80. Corinth Pottery Lots 5826, 5879, 6911, 6912, 7136. I am indebted to Dr. Patricia Lawrence, who examined the pottery and proposed the dating.

³⁹ In the areas of Trenches II, III, IV and V there existed a special part of the 6th century terrace fill made up almost entirely of a hard, compact reddish earth containing primarily prehistoric sherds, with a small admixture of early 6th century material. This fill might have been dug away from the site intended for the 6th century temple. Presumably the Early Helladic dumped filling of the north side of the hill once covered also the crest of the hill.

(about 3.30 m. above bedrock) at the north (Fig. 3). In that case it would be necessary to assume that a great amount of terrace fill had been lost through erosion in post-Roman times. On the other hand, it seems certain that the terrace of the 7th century (south of the roadway) sloped down from the temple toward the road, and there is no reason to assume that the 6th century terrace was otherwise constructed.

In the area of Trench V, immediately south of the roadway, we discovered a hard floor of the early 7th century⁴⁰ which slopes upward from the road toward the temple site at an incline of 1:9.⁴¹ Immediately above this floor was found a deposit of working chips of the 6th century temple;⁴² through the lowest levels of the working-chip fill and into the floor below penetrated five post-holes which were probably intended for the vertical supports of temporary sheds under which the masons worked at trimming the blocks for the 6th century building.⁴³

The temple of the 6th century, constructed around 570-560 B.C., suffered only minor changes (see below, p. 236) during the Greek period; the temenos was not enlarged beyond its 6th century limits at the north (Fig. 4). With the destruction of Corinth by the Romans in 146 B.C. the temple must have undergone considerable damage, as did all the major buildings of the city. When Corinth was rebuilt in the early 1st century after Christ, the temple was restored (see below, p. 237). The temenos was again enlarged toward the north with the construction of a wall, parallel to the axis of the temple and about 26.50 m. north of it (Figs. 3, 6). Two and a half meters south of this wall, and opposite the central part of the temple of Apollo, were constructed at least four piers, perhaps for the support of imperial statues.⁴⁴ In Roman times it is most probable that the temenos floor was level, from the euthynteria of the temple to the limits of the precinct. The Roman temenos was paved with slabs of hard, whitish limestone such as was also used for the 1st century paving of the Lechaion Road. Of the temenos pavement only one slab survives in place, at the east end of the north side of the temple, just adjacent to the euthynteria (Fig. 3; level + 83.187). In our excavation of later fills in the upper levels on

⁴⁰ Corinth Pottery Lot 6430.

⁴¹ Over a north-south distance of 2.50 m. the surface slopes up from + 81.49 m. to + 81.76 m.

⁴² Corinth Pottery Lot 6431.

⁴³ Only a small area of this surface has been exposed and the few post-holes so far identified do not form any recognizable plan.

⁴⁴ The piers, preserved in their foundations only, are built of small stones and fragments of building blocks, without mortar. They are 1.65 m. square. On Figure 6 the outlines of the four piers are visible under the line of the Turkish retaining wall. There seem to have been no piers east of Pier I; whether further piers existed beyond IV at the west is not yet known. The piers rose at least 3.00 m. from bedrock to the level of the Roman pavement; they are set 4.50 m. apart on centers. Such spacing seems too wide for columns to support an entablature and the construction appears too unsubstantial for the support of the arches of an arcade. It is probable that the piers were intended for heavy statues.

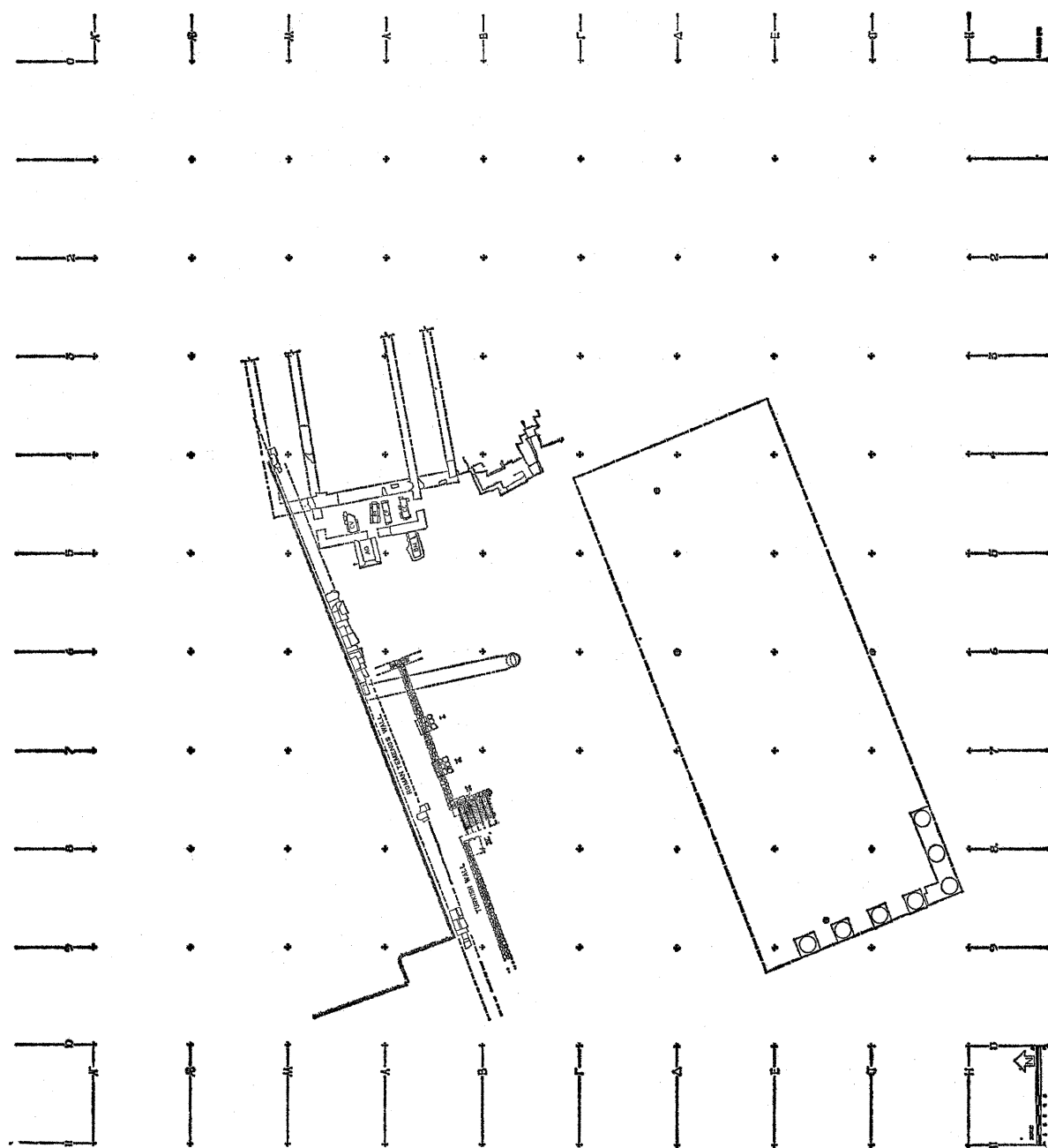


FIG. 6. Plan of Temple Hill, Early Roman to Turkish periods.

the north side of the hill we have found a few large fragments of other slabs and of half-round water channels⁴⁵ cut into blocks of similar stone. The channels probably served to direct water which fell from the roof of the temple (or onto the pavement itself) into a manhole located about 12 meters north of the temple and on a line with the fifth column from the east in the north peristyle (Figs. 4, 6). The manhole connects to a tunnel-cistern which was in Greek times associated with the Painted Building (bath), constructed just north of the temenos in the 5th or 4th century B.C.; in Roman times the cistern continued in use and served the needs of the Roman Market. The cistern must have been fed primarily from the surface of Temple Hill, through the manhole, and we may assume that via that same manhole it provided water for the uses of the sanctuary of Apollo.⁴⁶ One may imagine that with the reorganization of the temenos in Roman times and the laying of the limestone paving, an elaborate wellhead was required at the mouth of the manhole. It is tempting to suggest that the famous Dodwell puteal once stood here. That marble wellhead, seen and drawn by Dodwell at Corinth in 1805-1806, was decorated in relief with archaistic figures of ten deities. It was later transported to England (before 1830) and has since been lost from sight.⁴⁷

Between the 1st and the 4th centuries of our era Temple Hill probably suffered little change. The paved temenos precluded any change in floor level. The temple (still, in Roman times, dedicated to Apollo?) may have required repairs, especially to the roof, but of this no evidence has been recognized. In the late 4th century, however, a major change occurred when the temenos pavement was torn up. This removal was apparently designed to provide slabs of stone of convenient size for burning in a lime kiln. In the uppermost surviving levels on the north side of the hill Roman deposits of the mid-4th century contain numerous chips from such paving slabs; the chips, created by the prying up of the slabs, were too small to be of use in the kiln and were discarded. It seems likely that when the pavement was removed there were exposed at places, in the fill beneath, some of the damaged blocks of the older temple (in the area of the filling over the Archaic roadway). For at many places the 6th century B.C. dumped fill containing the debris of the Late Geometric temple has been disturbed by the Romans of the 4th century; they apparently took out some of the larger of the old *poros* limestone blocks, also for the lime kiln.⁴⁸

⁴⁵ The channel is 0.10 m. deep and probably 0.35 m. wide, as those cut into the inner edges of the Lechaion Road sidewalk. See *Corinth* I, [i], pp. 136-138, pls. X, XI, XIII.

⁴⁶ *Corinth* I, iii, pp. 160-162.

⁴⁷ E. Dodwell, *A Classical and Topographical Tour Through Greece*, London, 1819, II, p. 200; W. M. Leake, *Travels in the Morea*, London, 1830, III, pp. 264-268. Dodwell visited Corinth in 1805(?), Leake in 1806. See also Hugo Herbst, *Über das korinthische Puteal* (Programm, Altenburg), 1895; A. Michaelis, *J.H.S.* 6, 1885, pp. 46-49, pls. 56-57.

⁴⁸ Such disturbance was especially evident in Trenches III-VI: Corinth Pottery Lots 5824, 5826, 6443, 6447, 6448, 6905, 6906, 7128, 7140. Significant coins from these Lots: Constantine the

No archaeological evidence helps to illuminate the period between the end of the 4th century and the beginning of the 7th century, when a Christian church was built on the hill. Evidence for Christian worship on Temple Hill had been noted at the beginning of our recent campaigns, when the clearing of the north side for our first trenches brought to light a few fragments of worked marble which clearly belonged to an Early Christian church.⁴⁹ Other similar fragments were found in subsequent years. It was a natural assumption that at some time after the pagan use of the temple of Apollo came to an end, the building was converted into a place of worship for the Christian community of Corinth. Such re-use of pagan temples is a not unfamiliar phenomenon.⁵⁰ No trace of Christian construction had been reported among the ruins of the Archaic temple, but it was not unreasonable to suppose that the Christian structure had been demolished at least by the time of the building, within the ruins of the temple, of a Turkish farmhouse.⁵¹ From 1968 on, our excavations on the north side of Temple Hill brought to light graves of late date; as we dug further and further to the east, the graves became more abundant; some could be dated to the 7th century after Christ. We considered that these burials⁵² represented a cemetery associated with a church within the ruins of the temple. It was with some surprise, therefore, that in the summer of 1972 we recognized, in the area northeast of the temple, the narthex of an Early Christian basilica. So far (1972) only the narthex has been exposed (Fig. 6; Pl. 48, a). Built graves and an ossuary (CV) lay beneath the paved floor of the narthex, another ossuary (AO) and tiled graves outside at west and north (Pl. 48, b).⁵³ Objects found at the lowest

Great, A.D. 318-319 (Coin no. 69-291, Lot 5826); Constantius II, A.D. 351-361 (Coin no. 70-246, Lot 6448); Gratianus, A.D. 378-383 (Coin no. 70-239, Lot 6448); Theodosius I, A.D. 383-392 (Coin no. 69-268, Lot 5826). The Roman pillagers seem not to have taken much, if any, of the roof-tile fragments from the early temple. Such fragments were not useful as building material; and, in general, the tile fragments seem to have been thrown into the lower levels of the fill over the abandoned roadway.

⁴⁹ Cf. Field Notebook 386 (1968), p. 20; Notebook 521 (1971), pp. 124-125.

⁵⁰ A. Frantz (*Dumbarton Oaks Papers* 29, 1965, pp. 187-205) discusses this phenomenon and points out that if the pagan worship in the temples was given up at the time of the edict of Theodosius in the late 4th century, it was at least not replaced by Christian liturgy until the early 7th century.

⁵¹ This structure appears in many of the views left to us by the travelers of the 18th and 19th centuries: cf. *Corinth* I, [i], pp. 129-133. Archaeological evidence for the occupation of the hill in Turkish times is treated below, p. 223.

⁵² The skeletal remains of over 800 individuals have been recovered from the graves and ossuaries.

⁵³ Only a portion of the pavement survived, lying over the western end of the cover slabs of grave CF; it is of *opus sectile*—shaped pieces of white, gray and red marble set together to form a geometric pattern (Pl. 48, c). This fragment of paving has been lifted and reconstituted; it is our intention to reset it in the narthex at the close of the excavation. All the graves of the narthex and all the ossuaries had been opened and re-used in Byzantine times.

levels of ossuaries AO and CV suggest that these were first used in the 7th century of our era.⁵⁴ A number of 7th century bronze buckles of the type often called "Avar" (Pl. 57, a)⁵⁵ were found in the upper levels of both ossuaries and most probably come from the disturbed original burials.⁵⁶ The ossuaries can be shown to be structurally contemporary with the building of the church.⁵⁷ We may therefore date the church in the late 6th or early 7th century. So far (1972) none of the church proper has been excavated; and although a wall visible at the northeast, and extensions of the east narthex wall beyond the lines of the north and south walls of the narthex, suggest a three-aisled structure (Fig. 6), we cannot yet be sure of the plan. The maximum surface which now appears available for the church proper measures only 19 meters from west to east.

The church was adorned not only with a pavement of *opus sectile* (Pl. 48, c), but also with marble revetment, of which great quantities were found, especially in the ossuaries, where the debris of the church occurred in levels between the earliest (7th century) and the latest (early 13th century) burials. The plain revetment panels were of a variety of colors: white, gray, dark red, dark green. Some of the white marble was decorated with relief ornament, of which one especially fine example is represented in Plate 57, b.⁵⁸ In addition, there appeared numerous fragments of an *ajouré* screen of gray marble, in all probability part of an altar screen (*thōrakion*) or an *ambōn*.⁵⁹ Plate 58 provides a reconstruction of the pattern of the screen, for which good parallels exist at Christian Thebes (Nea Anchialos) and at Gaza in Israel.⁶⁰ It would be premature to attempt any detailed analysis of the church decoration until the balance of the structure has been excavated.

The reason for the construction of the church outside of the area of the pagan temple is to be sought in the supposition that the temple site was, in the late 6th century, unsuitable for re-use. Earthquakes are known to have occurred in the

⁵⁴ C-72-249, from ossuary AO, is a large fragment of an African Red Slip Ware plate of Hayes Form 105 or 106, dated in the first half of the 7th century (J. W. Hayes, *Late Roman Pottery*, London, 1972, pp. 166-171). C-72-230, from ossuary CV, is an intact, flat-bottomed jug which is very similar to jugs from Athens of the first half of the 7th century (H. S. Robinson, *The Athenian Agora*, V, *Pottery of the Roman Period, Chronology*, Princeton, 1959, Group N, pp. 121-122, pl. 35).

⁵⁵ G. Davidson, *Corinth*, XII, *The Minor Objects*, Princeton, 1952, pp. 5-6, 267.

⁵⁶ MF-72-83, MF-72-84, MF-72-112, MF-72-86: the last noted buckle (Pl. 57, a, top row, center) bears the Christian legend K - B - H (Κύριε βοήθει). MF-72-85 (Pl. 57, a, bottom), also from ossuary AO, is not of the usual Avar type.

⁵⁷ The northern part of the foundations of the west wall of the narthex formed the east end of ossuary AO and the west end of ossuary CV.

⁵⁸ A-72-8, found in ossuary AO.

⁵⁹ A-72-29, found in ossuaries AO and BN and in levels of destruction debris.

⁶⁰ Basilica A at Christian Thebes, screen of the *ambōn*, dated in the 6th century; 'Αρχ. 'Εφ. 68, 1929, p. 86, fig. 106. Gaza, altar screen in a church which is dated A.D. 508/9 by an inscription in a mosaic floor; *Israel Exploration Journal*, 19, 1969, pp. 193-198, pl. 17, B-C.

Corinthia during the 6th century;⁶¹ they may well have brought down so much of the superstructure and of the monolithic columns as to cause the Christian builders to prefer construction on a new site to the effort of clearing the temple ruins. The new church did not, however, survive for long; probably by the end of the 7th century the building had been severely damaged and the liturgies abandoned. Not until the 12th century was Christian ritual revived here, and then in what must have been a much smaller church than that of the Early Christian period. Of the Byzantine church we have found so far only fragments of fresco paintings, recovered from the upper levels of ossuary BN, which lies at the west end of the south aisle of the basilica. One of these fragments bears the letters *iota* and *omega*, possibly the first letters of the name [Haghios] Io[annis]. From the same levels of ossuary BN comes a silver-plated cross of Byzantine workmanship (Pl. 57, c).⁶² Some small deposits of pottery and a few coins indicate that the Byzantine church was in use into the Early Frankish period. From the late 13th century, however, the history of Temple Hill is a blank until the time when European travelers and antiquaries began to visit the site in the 18th century. Then Corinth was under the control of a Turkish family, of which the chief figures in the late 1700's and the early 1800's were Nuri Bey and his son Kiamil Bey. This family controlled much of the Peloponnesos, having a second residence at Tripolis. At Corinth the Bey's palace lay in the northern part of the ancient city, just above the city wall;⁶³ it is reported to have been so large that it required one half hour to walk around the perimeter;⁶⁴ if Prokesch von Osten is to be believed in this respect, we may well imagine that the 18th and early 19th century farm structures on Temple Hill, such as appear in the drawings of Stuart and Revett, Chandler, von Stackelberg and others, may have been a part of the Bey's palace.⁶⁵ These buildings (the central one of which, lying over the eastern two thirds of the site of the Archaic temple, was three stories high) were apparently demolished immediately after the liberation of Greece from Turkish domination, but some traces of their foundation walls were exposed in the American excavations of 1925-1926 and 1931. Our recent investigations have brought to light an east-west roadway of

⁶¹ The great earthquake of A.D. 522 is expressly stated to have devastated Corinth (Kedrenos [*Corpus Script. Hist. Byz.*], I, p. 638; Malalas, *Chron.* [*Corpus Script. Hist. Byz.*], XVII, pp. 417-418; Evagrius Scholasticus, *Hist. Eccl.*, IV, 8; Procopius, *Anecdota*, 18, 42-43 and *De Aedif.*, IV, 2, 23); the equally great quake of 551, which struck Boeotia and affected Naupactus and Patras, may well have been felt appreciably in the Corinthia (Procopius, *Bell. Goth.*, IV, 25, 16-23; Evagrius Scholasticus, *Hist. Eccl.*, IV, 23). See also Capelle, s. v. "Erdbebenforschung" in Pauly-Wissowa-Kroll, R.-E., suppl. IV (1924), cols. 348-351.

⁶² MF-72-122. The arms of the cross are inscribed: Κ(ύρι)ε βοή<θ>η τῆς δούλης σου *Αννας.

⁶³ For excavations in that area in 1960, see *Hesperia* 31, 1962, pp. 120-132.

⁶⁴ Prokesch von Osten, *Denkwürdigkeiten und Erinnerungen aus dem Orient*, Stuttgart, 1836-1837, II, p. 316.

⁶⁵ See *Corinth* I, [i], pp. 127-133, figs. 89-93.

the Turkish period on the north side of the hill, just behind the rear wall of the Roman Market; from this road (at *ca.* + 80.27 m.) a steep, stone-paved *kalderimi* led up to the higher terrace (at + 81.78 m.) of the farm (or "palace") area (Fig. 6; Pl. 48, d). Two similar stairways (as of spring, 1974, still unexcavated) occupy comparable positions at 16 and 31 meters respectively to the west of *kalderimi* no. 1.

THE LATE GEOMETRIC TEMPLE

The existence of this structure was first noted by Weinberg and confirmed by the Roebucks (see footnotes 9-11). Neither the previous nor the present excavators have found any certain traces of the structure *in situ*. There survive only damaged building blocks (of a fine, buff-colored *poros* limestone) and broken terracotta roof tiles, all dumped over and south of the 7th century roadway on the north slope of the hill. The debris was placed here after the destruction of the old temple and in the course of readying the hilltop for the construction of the new and larger structure of the 6th century.

It is logical to assume that the earlier temple lay on the same site as (and with the same orientation as) the later (Fig. 5). The bedrock at the crest of the hill, however, was cleared of all but some 20 cm. of prehistoric fill by the 6th century builders before they laid out the lines of the foundations for their structure.⁶⁶ Through that thin remaining layer of fill and the underlying bedrock were cut the trenches designed to provide the bedding for the foundations of the stereobate, of the cella walls and of the interior colonnades. Roebuck suggested that some irregularities in the foundation trenches might reflect comparable trenches, dug for the older temple and then all but obliterated by the deeper cuttings for the much larger 6th century building.⁶⁷ These anomalies in the 6th century foundation trenches, however, do not provide us with a plan of an earlier structure; and it is quite possible that the anomalies are the result of careless workmanship on the part of the 6th century masons.⁶⁸ The exact site and the dimensions of the Geometric temple are, therefore, uncertain.

A great deal may be learned, however, from the damaged blocks and roof tiles of this structure. Vast quantities of broken blocks were found in the dump over the 7th century road (Fig. 3; Pl. 50). No single block has been found intact. Of the larger fragments, 417 have been numbered, measured, drawn and photographed.⁶⁹

⁶⁶ Weinberg, *Hesperia* 8, 1939, pp. 192-193.

⁶⁷ *Hesperia* 24, 1955, pp. 153-154.

⁶⁸ Cf. *Hesperia* 24, 1955, pl. 61, e, where the cutting for the south cella wall of the 6th century temple can be seen to be wider at the north (at the right of the photograph) than was necessary for the cella wall foundations and also to have been left unfinished at the north, with a higher "floor" than that required for the cella wall.

⁶⁹ See Field Notebooks 427, 526, 568, 571. One hundred and thirty-six of these pieces had been found in the Roebuck and Weinberg trenches of 1937-1938 and 1954; these, left on Temple

Certain fragments of special interest (and of relatively small size) have been inventoried and are stored in the Museum.⁷⁰ The stone is a fossiliferous, oölitic limestone; it is a rather dense, fine stone, of warm buff to grayish buff color. Many of the fragments which preserve parts of an original surface show traces of darkening (blackening) of the surface to a depth of as much as 1-2 cm.; and in many cases the surface has turned white to a depth of 1-2 mm. The condition appears to be due to exposure to intense heat, which causes the surface to calcine completely, forming a "skin" which appears to the eye to differ from the basic stone, but which is shown by microscopic and X-ray examination to be of the same composition as the basic stone. The *poros* limestone consists of calcium carbonate (CaCO_3); when this is subjected to fire or intense heat, the material at the surface changes to a white color and a softer texture and is converted to calcium oxide (CaO). The calcium oxide is pure lime; but this unstable substance, after removal of the source of heat, reverts to calcium carbonate, although the white color and soft texture do not undergo further alteration.⁷¹ It is clear, therefore, that many of the *poros* blocks found discarded over the 7th century roadway have been damaged by fire; the fact that the roof tiles found in the same dump also show signs of fire damage (see below) confirms our belief that the building from which the blocks and tiles derive was destroyed by a conflagration.

One would not expect isodomic dimensions in so primitive a masonry construction. Lengths of blocks vary from 0.70 to 0.78 m.⁷² The heights of courses also varied from *ca.* 0.21 m. to *ca.* 0.24 m.⁷³ The thickness of the courses, from inner to

Hill at the close of the excavations, were subsequently placed in the courtyard of the Old Museum (at the northeast foot of Temple Hill), whence we retrieved them in 1968. It appears likely that some of the blocks from those excavations had been lost before 1968: the large block illustrated in *Hesperia* 24, 1955, pl. 62, a cannot now be located; see also footnote 74. All the numbered blocks are now laid out in temporary stone fields at the east end of the hill; it is our intention to store them permanently on Temple Hill when our work is concluded. Countless small fragments, not in themselves informative, are kept in large stone piles on the north flank of the hill and will eventually be stored underground (probably in the Early Roman quarry, after that has been fully excavated and is ready for refilling).

⁷⁰ A 727, A 816, A 842-A 846, A 946-A 948, A-69-8 to A-69-16, A-71-3, A-71-4, A-71-9, A-71-10, A-72-5, MF 9769. Some of these pieces were published (before being entered in the inventory) in *Hesperia* 24, 1955, pl. 61, c (= A 948) and d (= A 946).

⁷¹ We are much indebted to Prof. Sheldon Judson of the Department of Geology, Princeton University, who in 1970 made thermal, microscopic and X-ray tests of small samples of the *poros* blocks which the Greek Service of Antiquities and Restoration had permitted us to remove from Greece for scientific analysis.

⁷² Block no. 175, 0.745 m.; no. 326, 0.70 m.; no. 408, 0.78 m.; a block now lost, 0.78 m. (*Hesperia* 24, 1955, pl. 62, a, p. 155; see footnote 69 above).

⁷³ There is much variation in the height of the blocks, but there seem to be three major groups: 0.205-0.215 m. high; 0.22-0.23 m. high; and 0.235-0.245 m. high. Among the measurable blocks we have 26 in the first category of height, 48 in the second, 98 in the third. There are

outer face, should have been uniform, at least in the visible wall construction, above the foundations. But when fire destroyed the temple, the collapse of burning roof timbers subjected the inner wall surfaces to intense heat and perhaps defaced much

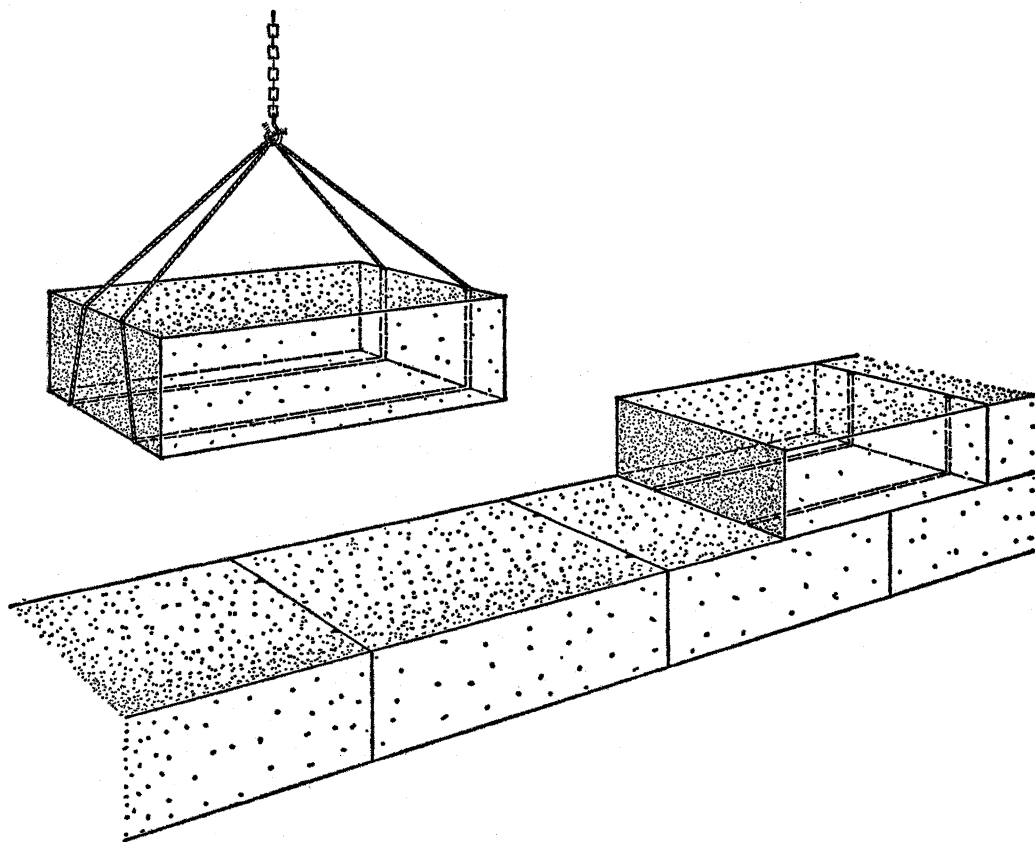


FIG. 7. Older Temple of Apollo. Method of lifting wall blocks: reconstruction.

of those surfaces. As a result, no single block survives on which the full width can be measured; the maximum surviving width is 0.65 m.⁷⁴

On every block whose state of preservation is such as to make determination possible, there are two parallel V-shaped grooves chiseled into the undersurface

smaller numbers of blocks which may reach a maximum of 0.275 m. or a minimum of 0.06 m. in height (the exceptionally shallow fragments may in fact be from the lower portions of blocks with transverse cuttings for wooden members; see below, p. 227). On the joint as well as on the exposed faces of a number of blocks have been found significant traces of yellowish clay, quite different in character from the earth of the fill in which the blocks had been discarded. This material on joint surfaces (which were not perfectly finished and had no anathyrosis) indicates the use of clay as a mortar to strengthen the masonry walls; on the exposed wall surfaces the clay may have served as a base for stucco (cf. A 946, A-72-30 and C-71-285, footnotes 83-85 below).

⁷⁴ Block no. 187. A block reported by Weinberg (*A.J.A.* 43, 1939, p. 595) to have had a width of 0.70 m. has apparently been lost.

(along the length of the block) and up *one* end. These cuttings were clearly designed to provide a hold to lifting ropes (see restored drawing of block being lifted into place, Fig. 7); as each block was set in place, the end with the rope cuttings was set up against the exposed end of the block just previously positioned. The cuttings on the undersurface and end made it possible for the ropes to be pulled free after the block was set firmly in place. There is no (fragment of a) block of which we can say with assurance that it had *no* lifting grooves. This fact, combined with the relatively light weight of the stone,⁷⁵ makes it reasonable to state that the blocks were used not for a stone socle bearing mud bricks, but for a wall constructed of masonry from foundations to eaves.⁷⁶ It is true that some quantities of collapsed mud brick have been found in the debris over the 7th century roadway, along with the building blocks and roof tiles of the older temple. The mud brick, however, was found in relatively small quantities and principally in the eastern part of the road; we imagine it to represent the partial destruction of the north wall of the roadway, which in this area was built up in mud bricks on a stone socle (see p. 215 above).⁷⁷

It would be premature to attempt here a detailed presentation and analysis of the blocks of the older temple. Suffice it to note that at least 21 of the blocks so far recovered are marked by cuttings for wooden members. These cuttings, transverse to the longitudinal axis of the stone, are always let into the upper surface of the block, presumably after the individual block was in place. The dimensions and spacing of the cuttings (two sometimes occur in a single block) indicate that the transverse timbers were as wide as 0.265 m. and generally 0.08-0.10 m. thick (high); they seem to have been arranged in horizontal pairs, the two members of each pair set 0.18-0.20 m. apart.⁷⁸ Similar cuttings have been found on some of the blocks of the older temple of Poseidon at Isthmia.⁷⁹ It seems probable that the paired transverse timbers, arranged in vertical and/or horizontal rows in the wall, served as a means of attaching wooden ties designed to strengthen the masonry.⁸⁰ A few fragments of blocks show traces of iron spikes in the upper surface (as A 948).⁸¹

⁷⁵ Although no block is complete, it can be said with confidence that none was heavy enough to prevent two men from lifting it *by hand* as much as a meter off the ground for the construction of a stone *socle*.

⁷⁶ The early temple at Isthmia (*ca.* 675 B.C.) was also constructed of masonry to the eaves: O. Broneer, *Isthmia*, I, *The Temple of Poseidon*, Princeton, 1971, pp. 3-56, esp. pp. 34-38.

⁷⁷ Broneer (*Isthmia* I, p. 36) assumes that crude bricks found at Isthmia along with the debris of the older temple had been used as backing material for wooden metopes. We have no evidence for such construction in the older building on Temple Hill.

⁷⁸ One such block is illustrated in *Hesperia* 24, 1955, pl. 62, c (= our Block no. 85).

⁷⁹ Broneer, *Isthmia* I, pp. 26-28, Group 6, blocks A48-A59a.

⁸⁰ The ties must have been surface mounted, projecting from the masonry wall faces: none of the blocks shows traces of cuttings into the plane of the wall, such as would be expected if the ties had been recessed. There is no means of estimating the number of such ties, but they must have occurred at infrequent intervals, since they left clear space for inscribing a religious text on the wall blocks adjacent to at least one corner of the structure (see below, pp. 230-231).

⁸¹ *Hesperia* 24, 1955, pl. 61, c.

On one such fragment (A 727: Fig. 8; Pl. 51, d) and on a few others on which spikes do not survive, the upper surface is oblique to the bottom surface. It is tempting to suggest that these belonged to the wall plate or epikranitis and that to their upper surface was fastened the lower end of a wooden rafter. The angle (9.5°) between the two surfaces of the block A 727 would imply a very low gradient (1.7:10) in the roof of the old temple (Fig. 8, lower right). On another block (no. 218) the angle is lower still (5.0°). Neither slope seems appropriate for a roof of such heavy tiles as this (see below, pp. 233-234); but neither would the high pitch customary in thatched roofs be suitable for a roof of clay tiles. The two different angles suggested by these blocks might correspond to the slope of the long sides of the roof and to the (lesser or greater) slope of the hips.

The temple probably consisted of no more than a cella;⁸² the walls were of masonry, the wooden rafters of the roof were covered with heavy terracotta tiles. The interior faces of the cella walls were stuccoed and painted, apparently in rectangular panels of solid colors (black and red) separated by narrow horizontal and vertical reserved bands (Pl. 51, e).⁸³ A fragment of stucco which was found separated from its wall backing may have formed part of a special decorative border (Pl. 51, b, left).⁸⁴ On a small fragment of a terracotta pinax, which may have served as decoration of the interior of the temple, appears a pattern which seems to represent a tree, its bare branches executed in dark brown against a lighter brown background (Pl. 51, b, right).⁸⁵

There have been found also two small fragments of painted moldings of *poros* which should perhaps be associated with the Late Geometric temple (Fig. 8, left).⁸⁶

⁸² No stylobate blocks have been recognized. A few fragments of fluted column shafts have been found in the early 6th century filling over the roadway. These are of the fine, buff, *poros* limestone from which the blocks of the old temple were cut; but they are of small diameter and probably could not have served as structural supports; they may have held votive offerings, perirhanteria, or the like. Cf. A 816, A-71-5, A-71-13, A-71-14.

⁸³ A 946 (*Hesperia* 24, 1955, p. 155, pl. 61, d), A 947, A-71-10, A-72-5, A-72-13. A 946 has the stucco (ca. 0.002 m. thick) applied over a layer of yellowish clay (ca. 0.002 m. thick); the same technique is observable in many other fragments. The other four pieces noted above have a thinner coating of stucco (0.001-0.0015 m.) applied directly to the stone.

⁸⁴ A-72-30. In this piece the backing of yellowish clay is ca. 0.0175 m. thick; imbedded in the clay are the imprints of numerous bits of straw. Over the clay is laid a thin (0.001 m.) coat of yellowish buff stucco. The painted decoration is executed in gray and black with narrow reserved bands of yellowish buff. The pattern seems to have consisted of spirals of gray, separated below by black ornaments in the form of triangles with concave sides.

⁸⁵ C-71-285. Pres. H. 0.04 m.; Pres. W. 0.035 m. The *pinax* is not well fired; on its rear surface appears an accretion of unfired clay which might have served as an adhesive to attach the tablet to a wall surface.

⁸⁶ A-69-8 and A-71-9. Neither can be associated directly with the pure early 6th century dump of old-temple debris; but the material (a fine, compact, light buff limestone) is clearly identical with that used in the old temple.

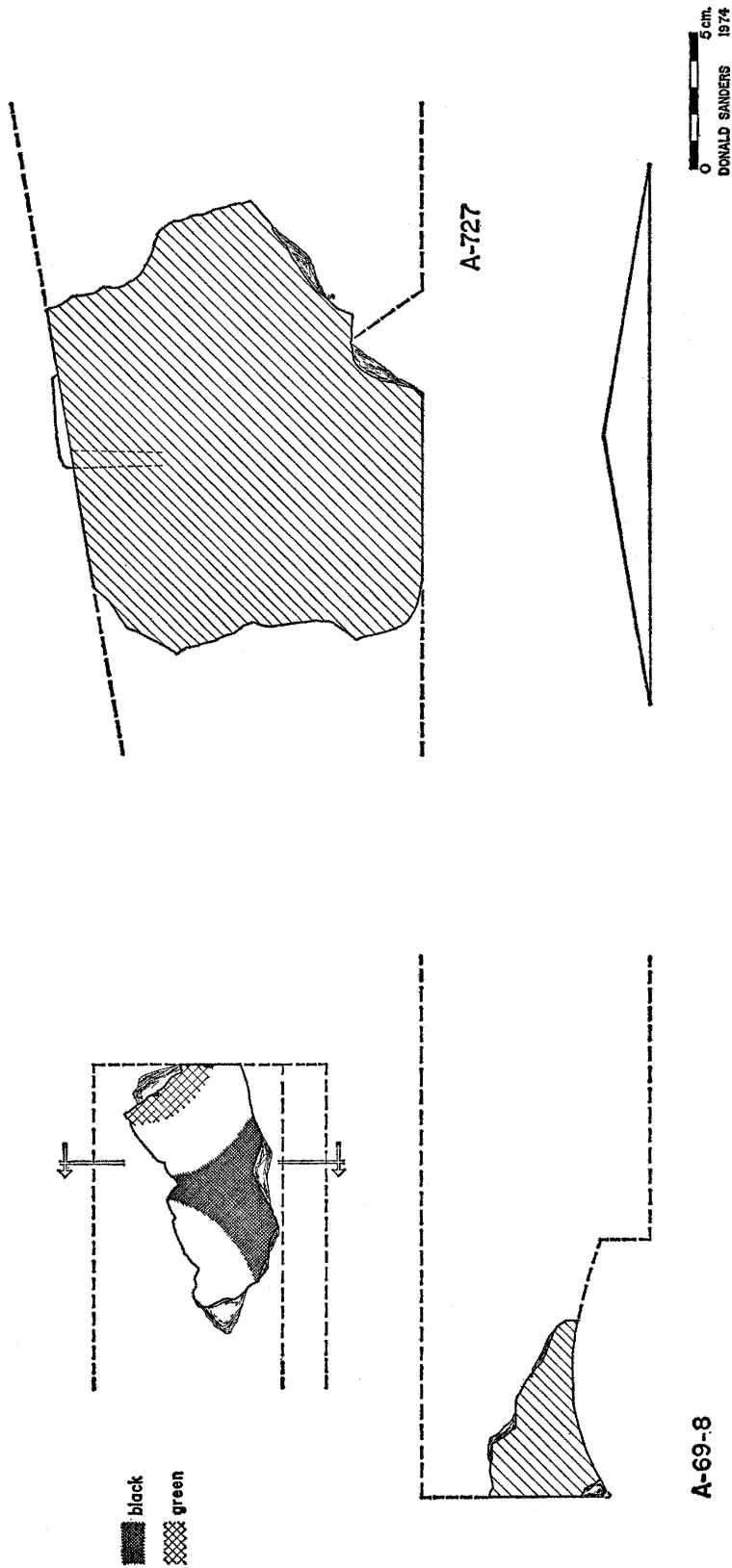


FIG. 8. Blocks of older Temple of Apollo.

They appear to represent a cornice or at least a crown molding, both soffit and fascia of which were decorated with painted patterns rendered in black, green and perhaps red. The various elements of the ornament were first outlined in red or black and then filled in with solid color applied directly to the stone. On the fascia of the larger fragment (A-69-8; Fig. 8, Pl. 51, c) an original joint surface is preserved at the right; the joint *bisects* what may be the "egg" of a primitive egg-and-dart pattern. It is clear, therefore, that the painted ornament continued on other blocks of this same molding course. The soffit is marked by a pattern consisting of a black triangle with concave sides (cf. the fragment of painted plaster, A-72-30: Pl. 51, b, left; see footnote 84).

For the original condition of the exterior face of the walls we have almost no evidence. One fragment of *poros* wall block which appears to derive from the older temple is decorated with a pattern incised on the surface of the stone (Pl. 51, a).⁸⁷ It is possible that this form of ornament occurred on the exterior walls when the temple was built. At a later time, however, parts of the external wall surfaces were used for the carving of an inscription, a religious calendar of sacrifices.

In 1898 there had been found on the hill a fragment of a corner block of *poros* limestone, inscribed on two adjoining faces with large letters in *boustrophedon* arrangement (Pl. 52, d).⁸⁸ The text was shown to contain (Face A) the name of a Corinthian month, Phoinik[aios],⁸⁹ and a reference to (the sacrifice of) four pigs; the letters surviving on Face B elude interpretation. The stone on which this text is inscribed was called by Meritt a "stele," by Dow "a block [which was] squarish, part of a large monument." In 1970, while excavating the dumped filling of the early 6th century B.C. over the line of the old roadway, we found, among many fragments of blocks and roof tiles of the older temple, an inscribed fragment of the same text (Pl. 52, e).⁹⁰ The material, letter forms and sizes correspond between the two pieces;

⁸⁷ A-72-6. The surface has turned gray as a result of exposure to heat or to fire. No stucco or paint is visible on the stone; but at one edge an incised line sets off a band, at least 0.04 m. wide, on which appear three incised concentric diamond patterns, arranged as though in three vertical, staggered rows.

⁸⁸ I 1. Published by B. D. Meritt, *Corinth*, VIII, i, *Greek Inscriptions, 1896-1927*, Cambridge, Mass., 1931, no. 1, pp. 1-2. See also: S. Dow, *A.J.A.* 46, 1942, pp. 69-72; L. H. Jeffery, *The Local Scripts of Archaic Greece*, Oxford, 1961, p. 131, no. 18 (cf. p. 128).

⁸⁹ For the significance of the name Phoinikaïos see: Dow, *op. cit.*; Sontheimer, Pauly-Wissowa-Kroll, *R.-E.*, s. v. *Phoinikaïos*. Sontheimer associates the name with the cult of Apollo (he cites the stream Phoinix adjacent to the mantic shrine of Apollo at Tegyra). It seems appropriate to call attention also to the fact that the Corinthian tyrant Kypselos dedicated a bronze palm tree (*phoinix*) at the sanctuary of Apollo Pythios in Delphi (Plutarch, *De Pyth. Orac.*, 12, 399E and *Sept. Sap. Conv.*, 21, 164A; W. Déonna, "L'ex-voto de Cypsélos à Delphes," *Rev. Hist. Rel.* 139, 1951, pp. 162-207, and 140, 1951, pp. 5-58).

⁹⁰ I-70-4. Of fine *poros* limestone; most of the block has a grayish color and the right side has been blackened by exposure to fire; some carbon still adhered to the back of the block when it was found. Dimensions: Pres. H. 0.30 m.; Pres. W. 0.089 m.; Pres. Th. 0.10 m. Two joining

but they do not join. Corinth I 1 may now with certainty be linked to I-70-4; and the latter, in view of its place of discovery, is most likely to be from one of the wall blocks of the older temple. Corinth I 1 will be from an exterior corner block of that building. I-70-4, furthermore, can be shown to have been set adjacent to a wood-framed door or window opening. The text, presumably a calendar of sacrifices, must have extended over (parts of) two wall surfaces of the building.⁹¹ Miss Jeffery (see footnote 88) had dated the text of I 1 "c. 575-550?"; but since the building on which the text was inscribed was destroyed by 570 B.C., it seems likely that we should put the date of the inscription back to around 600 B.C. at least.

Of perhaps greatest interest in the material associated with the older temple is the mass of roof-tile fragments, many of which show traces of ash adhering to the surface. These were found in the destruction debris over the road in the excavations of Weinberg and Roebuck as well as in our own of 1968-1972.⁹² The tiles represent a roof system (Fig. 9; Pl. 52, a) similar to that at Isthmia⁹³ but of slightly more archaic pattern. Where the eaves pan-tile at Isthmia has a small ornamental peak rising at the mid-point of the lower edge, our eaves pan-tile at Temple Hill reveals an uninterrupted, shallow, concave profile at the lower edge, extending across the full width of the pan to the cover. The tiles consist of cover and pan in a single piece, the cover convex, the pan concave; in the eaves tile the convexity of the cover element at the upper end becomes angular toward the lower end, so that at the eaves the cover terminates in two shallow concave surfaces rising toward a peak at the center (Fig. 9).⁹⁴

fragments, found on June 4 and June 11, 1970; the larger fragment was in fact found in a Late Roman disturbance of the road filling. The letters on the face (0.04-0.045 m. high) represent parts of three lines, inscribed *boustrophedon* and reading ...ατρεποντ... ..τ.... As in the case of I 1, the letters at the end of one line and the beginning of the next are set radially to a "turning point," so that the lines of writing are in fact wholly continuous and it is difficult to say exactly where the upper line ends and the following line begins. No traces of paint survived in the incisions of the letters, although on the corner fragment I 1 red paint can still be noted. I-70-4 is marked by two iron nails driven into the face of the stone, one above the second letter of line 1, the other directly below and slightly to the left of the only surviving letter of line 3.

⁹¹ It has been suggested by David Rupp, who is making a study of Greek altars, that the two inscribed fragments from Temple Hill may derive from the early altar rather than from the temple proper. The altar, however, would probably not have suffered so much, from the fire which destroyed the temple, that it, too, had to be demolished and its material discarded.

⁹² Mary C. Roebuck is preparing a publication of the terracotta roof tiles and revetments from the excavations at Corinth through 1954 and will include in her study some of the material found on Temple Hill in more recent years.

⁹³ Broneer, *Isthmia* I, pp. 40-53, figs. 59-64. Two fragments of such tiles were found many years ago at Perachora and were brought to the Museum at Ancient Corinth (now Inv. nos. FC 102, FC 103). Comparable tiles have been found at Delphi, where they may have been associated with the treasury built by Kypselos: Ch. le Roy, *Fouilles de Delphes*, II, Div. 2, *Les terres cuites architecturales*, Paris, 1967, pp. 21-38.

⁹⁴ The reconstruction of the roof in Figure 9 was drawn by Piet de Jong in 1954-1955, on the basis of the tiles found in the Weinberg and Roebuck excavations. Some modifications of

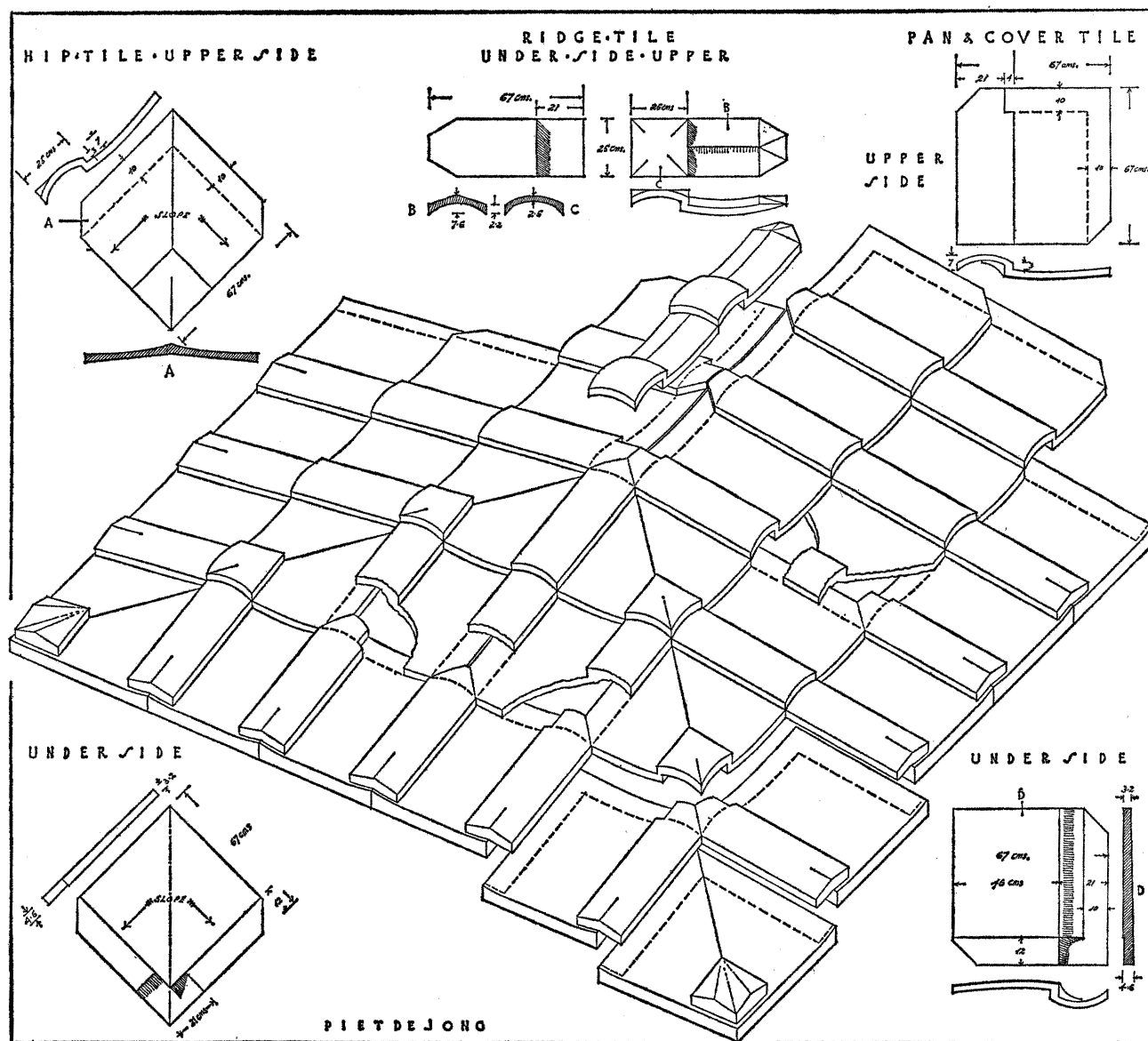


FIG. 9. Older Temple of Apollo. Roofing system: partial reconstruction.

The regular pan/cover-tiles measure 0.67×0.67 m.; each complete tile weighs about 29.5 kilograms (*ca.* 65 lbs.). The regular tiles occur in left-hand and right-hand varieties (i. e., with the cover element at the left or at the right of the pan element, as the tile is seen from its lower edge). We may assume that the left half of each sloping roof surface was covered with left-hand tiles, the other half with right-hand tiles. At the center of each roof surface, where the series of left-hand tiles abutted against the series of right-hand tiles, there must have been an exposed joint where two pan elements came in contact; this joint was covered by simple cover-tiles (without attached pan element), and these, because of their lesser weight, were held in place on the rafters by iron spikes driven through holes cut into the upper (concealed) end of the cover-tile (Pl. 52, c).⁹⁵ The ridge tiles are a special form, designed also with a cover and pan element in each tile; and these, too, because of their exposed position, were anchored by iron spikes. All the tiles are constructed with lugs and notches which create a perfectly interlocking system (Fig. 9).

The most difficult problem presented by the roof tiles is the nature of the roof at the two narrow ends of the building. That a hip existed at one end is clear, for hip cover-tiles survive (Fig. 9). No tiles have yet been recognized which might have served to form raking eaves along the two sloping lines of a pediment. A few small fragments of tile which are of obscure form may prove, upon further study, to have been associated with an eaves course at a pediment. In the roof there were, in any case, four points at which wholly exceptional tiles must have been used—the four corners at the eaves. So far we have identified only two such corner tiles, both designed for a hip; the discovery of even a small bit of a third such tile would demonstrate clearly that the building had a hip at either end.

Another striking feature of the 7th century roof tiles from Corinth is their color. About five sixths of the tiles were covered with a fine yellowish to creamy yellow slip such as characterizes the unpainted areas of the best Corinthian terracotta sculpture. The other sixth of the tiles was provided with an intentional black "glaze," achieved by reduction firing in the kiln. Although the dark color may range from a good, firm and solid black to a reddish brown, the quantity of such tiles is too great for one to assume that they represent misfirings. Most of the black fragments are from normal pan/cover-tiles, a few from eaves pan/cover-tiles; no hip tiles or ridge tiles of black color have been recovered. It would appear, therefore, that the roof

detail will be necessitated when the more numerous fragments from the current excavations are fully studied. I am indebted to Mrs. Roebuck for permission to use the de Jong drawing, which was prepared to illustrate her forthcoming volume on the architectural terracottas of Corinth.

⁹⁵ FC 96, FC 98. Broneer (*Isthmia* I, p. 49) assumes that all the tiles on one long side of the older temple at Isthmia were left-hand tiles, while all tiles on the other side were of the right-hand variety; this arrangement, however, requires different methods of joining the extreme pan/cover-tiles to the hip tiles at the two ends of the building. Apparently no simple cover-tiles (without attached pan element) were found at Isthmia.

of the temple was bichrome (Pl. 52, b) and that the pattern consisted of vertical rows of yellow tiles (from eaves to ridge) alternating with vertical rows of black tiles; presumably there were about five rows of yellow to each row of black tiles.⁹⁶

Among the tiles *so far* recovered at Corinth we have identified a *minimum* of 64 right-hand pan/cover-tiles of yellow color and 14 of black. The numbers of left-hand tiles are smaller (56 yellow, 9 black), but as the numbers of left-hand and of right-hand tiles must originally have been equal in each color, we are justified in concluding that *at least* 128 yellow tiles and 28 black tiles were employed in the structure. If we assume these 156 tiles to have been distributed (*exempli gratia*) in five horizontal rows of 16 tiles on each long side ($5 \times 16 \times 2 = 160$), and if we add a lower row of 16 eaves tiles, we may calculate that we have enough tiles to cover an area about 9.10 m. \times 3.50 m. on each side (a total of 63.7 sq. m.); this would represent less than one third of the roof area of the long sides of the *cella* of the Archaic temple at Isthmia. Obviously the tile fragments recovered in our excavation are only a portion of the original material employed in a structure which can hardly have been less important or less large than the *cella* of the peripteral temple of Poseidon at Isthmia, built only 25 to 50 years after that on Temple Hill. The minimum number of tiles postulated above for the temple at Corinth would have weighed almost five and one half tons; for an original roof having three times the area postulated, we may calculate a weight of tiles exceeding sixteen tons, resting on the wooden roof beams and rafters!

This very early temple is surely an incunabulum of Greek masonry architecture; yet, since no stone of the building still survives *in situ*, we entertained little hope, at the inception of our work, of ascertaining the date of construction. The fortunate discovery, noted above, of a datable fill containing working chips from the blocks of the older temple has enabled us to set the time of construction of the building at around 700 B.C. The fragments of the Early Protocorinthian jug from the filling (Pl. 54, c) ⁹⁷ were exposed over a period of three successive days in successively lower levels of a single restricted area of the working-chip fill. It seems almost certain that this vessel—the only nearly whole vessel found within the stratum—must have been buried while still complete and standing upright, for the first fragments discovered belonged to the neck and shoulder, the last to the base. The jug may well have been brought to the hill with his day's supply of water or wine by one of the masons who were dressing the blocks for the early temple; while that mason was momentarily absent, a co-worker must have accidentally dumped over the jug a load of working chips which was being used to level out the working area. We

⁹⁶ For the polychromy of the roof there is ample precedent in the Late Geometric temple models from Perachora and the Argive Heraeum. See H. Payne, *Perachora, The Sanctuaries of Hera Akraia and Limenaia* [I], Oxford, 1940, pp. 34-51, pls. 8-9.

⁹⁷ C-70-81. See footnotes 26-27 above. The forward lobe of the trefoil lip is missing, as are parts of the body; the lip might have been broken before the final damage to the vessel.

imagine that this excellent vessel, once a distinguished ornament of the workman's home, had been damaged and therefore was demoted to humble use at the working site. Such a sequence of events might readily explain the discrepancy between the date of the jug (*ca.* 720 B.C.) and that of the balance of the fragmentary pottery in the same filling (*ca.* 700).

THE SIXTH-CENTURY TEMPLE

A full review of the architecture and history of the 6th century temple is one of the goals of our current excavation. Here we can present only a few comments resulting from the investigations to date. Those familiar with the temple site will recall that because of the damage to (and restoration of) the stylobate where it survives at the west end of the temple, and because of the extensive pillaging of the foundation blocks over the rest of the site, it has been impossible to ascertain with complete accuracy the original orientation of the structure. The irregular nature of the edges of the foundation trenches cut into bedrock makes it difficult to determine the precise axis of any line of wall or stylobate; the seven surviving columns are much weathered and some have shifted from their original positions as a result of earthquake damage. In examining the foundation trenches for the north wall and for the east door-wall of the cella, Joseph Shaw observed upon several of the "risers," which separate one level of foundation trench from another, engraved vertical lines which, when surveyed, clearly established an east-west and a north-south axis which lie at a precise 90° angle to one another. The long axis was observed to fall 67° 32' east of magnetic north (as of June 16, 1970). These lines must have been engraved as a guide to the masons in laying the blocks of the foundations; one must assume that the lines were marked in relation to some permanent set of base lines laid out beyond the perimeter of the temple, but of such base lines no trace (in rock cuttings) has yet been detected.

The erection of scaffolding around the seven columns of the temple in 1970 enabled us to make accurate observations and measurements of the superstructure. Joseph Shaw detected a horizontal curvature, rising to a maximum of 0.02 m. over the center two columns, at the level of the tops of the column shafts on the west end of the structure. This curvature seems to have been absorbed in the capitals of the columns and does not reappear in the architrave. Although most of the original stucco of the architrave blocks has disappeared, traces of some, painted deep red, can be found on the soffit of the taenia. Holes for iron pins have been identified on the central vertical axis of the outer face of each of the three surviving exterior architrave blocks (one on the west side, two on the south). These would appear to have served for the attachment of votive objects, possibly shields.⁹⁸

⁹⁸ Such votives would presumably have been installed at some date later than the time of construction of the temple. They were placed on the architrave, as were the shields on the Par-

Of the frieze course and cornice no more is now known than was published by Stillwell.⁹⁹ Of the architectural terracottas we have recovered fragments of eaves tiles (with antefix) and of the raking sima, including one piece from a lower corner (Pl. 53, a, b).¹⁰⁰ In addition, we have parts of two ridge palmettes, one of which is original to the 6th century construction, the other a Hellenistic replacement (Pl. 53, c).¹⁰¹ Most important is a terracotta sphinx in very fragmentary condition, which may well have been an acroterion of the temple, although the modeling of the throat and neck seems perhaps too far advanced for the date of construction of the 6th century temple (Pl. 54, a, b).¹⁰² Of pedimental sculpture or of painted or sculptured metopes nothing has yet been recovered.¹⁰³

The Hellenistic replacement ridge palmette noted above indicates clearly that the temple of the 6th century underwent some repairs prior to 146 B.C. The extent of the damage to the temple at the time of the Roman sack under Mummius has never been clear; nor can one say of any of the Greek buildings at Corinth just how

thenon, a gift from Alexander after the Battle of Granicus in 334 B.C. (Arrian, *Anabasis* I, 16, 2; Plutarch, *Vit. Alex.*, 16), while those which Mummius sent to Olympia after the sack of Corinth in 146 B.C. were there placed on the metopes of the exterior order of the Temple of Zeus at east and south (Pausanias, V, 10, 5).

⁹⁹ *Corinth* I, [i], pp. 121-123.

¹⁰⁰ Antefix, FA 543 (Pl. 53, a); raking sima, FS 1052 (Pl. 53, b), FS 1057.

¹⁰¹ FR 102 represents the original ornament: it is of fine, compact, buff clay with a yellowish buff slip and with painted ornament in black and red. FR 101, a, b is the later replacement; it is of coarse, pinkish clay with yellowish buff slip; the painted ornament is designed to reproduce the colors and pattern of the original, but the artisans of the Hellenistic age, more accustomed to the relief patterns of contemporary architectural revetments, failed to achieve on the flat surface of these palmettes the clarity and sureness of line of the 6th century prototype.

¹⁰² SF-72-3. The surviving fragments suggest a sphinx slightly larger than that published in *Hesperia* 26, 1957, pp. 314-315, no. 33, pl. 72; the latter, as restored, is 0.627 m. high to the top of the wing.

¹⁰³ The familiar, and much debated, passage in Pindar (*Olymp.* XIII, 29) on the "twin eagles" which were devised for temples in Corinth, if it does in fact refer to an actual building in Corinth and to a building practice of which Pindar was cognizant, would doubtless apply to the peripteral temple of Apollo of the mid-6th century (for this passage, see: Le Roy, *op. cit.* (note 93 above), p. 27, note 6; S. Marinatos, "Ἀετός," *Χαριστήριον εἰς Ἀναστ. Ὁρλάνδον*, Athens, 1964, I, pp. 12-22). That structure had two normal pediments (*aetōmata*); it seems possible that Pindar's "eagles" on the temple at Corinth may have reference not to the shape of the pediments, but to the decorative subject matter of one (or both) pediment compositions. Could the Corinthian architect-sculptor have chosen to portray in the pediment the twin eagles which Zeus released from the opposite ends of the world that they might fly toward one another and at the point of their meeting (Delphi) designate the center (omphalos) of the earth and the location of the sanctuary of Pythian Apollo? For this legend, see: Pindar, frag. 54, ed. Snell³, *ap.* Strabo, IX, 3, 6, p. 419; and possibly Pausanias, X, 16, 3. For flying eagles on Protocorinthian vases of the early 7th century, see H. Payne, *Necrocorinthia*, Oxford, 1931, p. 76, and R. M. Cook, *Greek Painted Pottery*², Oxford, 1972, pp. 50-51, pl. 9, b; see also two eagles flying toward one another on the back of a Caeretan hydria in the Louvre (E 701): P. E. Arias and M. Hirmer, *A History of 1000 Years of Greek Vase Painting*, New York, n. d. (ca. 1962), pl. 79.

much damage is attributable to Mummius' soldiery and how much to the gradual debilitation of the ruins during the century and a half of abandonment prior to the first major period of Roman rebuilding (in the early 1st century after Christ). We do now, however, have some reason to believe that when the Roman building program began, the temple of Apollo had been damaged, at least at one point, down to the level of the frieze course or below.¹⁰⁴ Stone for the repairs to the temple was acquired in the most economical manner possible by excavating a quarry at the northeast corner of the hill (Fig. 6; Pl. 49, b). It seems likely that this particular quarry, which lay so close to the temple site, was designed to provide material for the repairs to the temple alone, and that the quarry was abandoned and filled as soon as the material necessary for those repairs had been excavated. It was from the Early Roman refill of this quarry¹⁰⁵ that we recovered the fragments of architectural terracottas mentioned above. In addition, the refill contained much Neolithic and Early Helladic pottery, debris of the 7th century temple (blocks and roof tiles) and Hellenistic pottery. It appears that the Roman masons left around the quarry site piles of the earth fill which was dug up as they cleared the site to bedrock. At the termination of the quarrying operation, this same earth, together with debris left from the sack by Mummius (146 B.C.), was shoveled back into the quarry in order to restore the floor level of the temenos in its northeast corner.

A significant change in the temple in the Early Roman period was the removal of the Doric interior columns of the original 6th century structure. These columns, monolithic like those of the peristyle, were then re-used to form a colonnade at the southwest corner of the Agora.¹⁰⁶ There have not been found on the hill any fragments of columns of Roman date (either in limestone or in marble) of sufficient size to suggest their use in a new, Roman interior colonnade for the temple. It is probable

¹⁰⁴ In the excavation of the Early Roman terrace fill at the north edge of the hill (Trench V) there were found several quarry blocks, abandoned in the first third of the 1st century after Christ. It is reasonable to assume that this fill (Corinth Pottery Lots 6440, 6441), which was thrown down to the south of the new Roman north retaining wall of the sanctuary of Apollo, antedates the construction of the Roman Market further north (cf. *Corinth* I, iii, pp. 180-194). Hence it would appear most probable that the abandoned quarry blocks had been intended for the repair of the only large monument nearby, the 6th century temple of Apollo. The largest of these blocks (not completely preserved) measures $1.30 \times 0.80 \times 0.53$ m. These dimensions, even when allowance is made for loss of size in final trimming, would seem too large for a cornice block, but might have been appropriate for triglyph, metope, epistyle or wall block of the temple.

¹⁰⁵ Corinth Pottery Lot 72-175. Date: first third of 1st century after Christ.

¹⁰⁶ In the Hadrianic period these columns served to support an aqueduct (O. Broneer, *Corinth* I, iv, *The South Stoa*, Princeton, 1954, p. 155). The possibility of the association of the columns with the interior order of the temple of Apollo had been recognized by Heermance (*A.J.A.* 8, 1904, p. 439) and Broneer (*loc. cit.*); excavations of 1961 on the west side of the present stylobate of the columns indicated that the re-use of the columns could be dated in the first half of the 1st century after Christ (Field Notebook 238, pp. 22-39; Corinth Pottery Lots 5007-5009, 5013).

that the cella, whose internal width was *ca.* 9.20 m., was roofed by the Romans with wood beams in a truss construction or with a vault.¹⁰⁷

The final destruction and abandonment of this great pagan temple was presumably caused by earthquake in the 6th century of our era (see footnote 61). After that time the collapsed columns were broken up and re-used (as in the south wall of the Early Christian basilica) or were burned for lime. The cella walls were probably destroyed at an early date, while the foundations of the peristyle were protected from pillage only at those points where columns remained erect in position. In the time of Cyriacus of Ancona (1436) only 13 or 14 of the original columns survived; Stuart and Revett (1766) recorded 11 columns of the peristyle and one of the opisthodomos in place. Clarke (1801) reports the sad tale that the last four columns to disappear before his visit had been blasted with gunpowder and the fragments used by the Turkish governor for building a house.¹⁰⁸

The final disturbance of the temple site (except for archaeological excavation) occurred before 1829, when the northeast corner of the foundations was covered by a portion of the two-story barracks building which has commonly been called the Capodistrias schoolhouse.¹⁰⁹ This building apparently lost its roof in the great earth-

¹⁰⁷ The Early Christian rubble-concrete vault of the Hephaisteion in Athens still stands, but it covers a free space only about two thirds as wide as the cella of the temple at Corinth.

¹⁰⁸ Stillwell, *Corinth* I, [i], pp. 126-130.

¹⁰⁹ The name of Capodistrias has been associated with the building since the time of Doerpfeld (*Ath. Mitt.* 11, 1886, p. 301), although Benjamin Powell expressed the view that the schoolhouse "was begun in 1858 and left unfinished when the earthquake destroyed the village in that year" (*A.J.A.* 9, 1905, p. 53; *Corinth* I, [i], p. 132 and p. 126, note 1). Doerpfeld's identification, made in 1886, the first year of excavation at the site, was doubtless based on local, oral tradition; it could conceivably have been derived from elder citizens who had had personal experience of the village's elementary school in 1829 and the immediately following years. (We must remember, however, that Corinth was so seriously damaged by earthquake in 1858 that most of its population moved away to the site of New Corinth; many of the inhabitants who settled in subsequent years in the ruins of the old village were newcomers to the area: see H. N. Fowler in *Corinth* I, [i], p. 17.) More reliable information seems to have become available with the recent publication of documentary sources dealing with the state of education in Greece in the years 1821-1831 (A. B. Daskalakis, *Κείμενα-Πηγαί της Ιστορίας της Έλληνικής Έπαναστάσεως, Σειρά Τρίτη, Τὰ περὶ Παιδείας*, I-III, Athens, 1968). From some of these documents it appears that in 1829 Capodistrias himself visited Corinth and gave encouragement to the establishment of an elementary school (*ἀλληλοδιδασκτικὸν σχολεῖον*—i. e., mutual or monitorial) by the appointment of a teacher, Georgios Kontopoulos. In the month of May or June of that year a public ceremony was held in Corinth to celebrate Capodistrias' initiative and, apparently, to open the school. The building is thus described: 'Ο κατὰ τὴν ὀγδόην πλατείαν τοῦ σχεδίου τῆς πόλεως κείμενος στρατῶν ἐπισκευασθεὶς ἐχρησίμευσεν ὡς σχολεῖον (*ibid.*, III, document 142A, pp. 2103-2105). It appears likely that the former barracks was the building of which we know on Temple Hill; but we have not seen the city plan of that period which might enable us to identify precisely the 8th "plateia" (grid square?) of Corinth. A document of December 24, 1829 lists 48 pupils in the school at Corinth and notes of the school building: ἡ οἰκοδομὴ τοῦ σχολείου ὠκοδομημένη ἐκπαλαι (*ibid.*, I, doc. 300, pp. 651-653). In July, 1830, the schoolteacher was discharged by the Superintendent of Academic Institutions, I. Kokkonis

quake of 1858, but remained standing on the site for almost 50 years (Pl. 45, b) until it was demolished in the winter of 1906-1907 by the Greek Service of Antiquities.¹¹⁰ The demolition was not, however, complete. The walls of the schoolhouse, where they were laid across the rock cuttings for the foundations of the 6th century temple, were removed in their entirety; but to the north of the temple site, where the builders of the 1820's had to dig down to the floor of the Early Roman quarry to lay their foundations, the walls of the school building were removed only to the contemporary ground level. In 1972 we came upon these foundations in our Trenches XII and XIII and completed the demolition begun 66 years before.

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(*ibid.*, II, doc. 634, pp. 1375-1376, and cf. doc. 631, pp. 1371-1372), and the school was closed. In August of that year a proposal was made to transfer the elementary school to the more heavily populated Vocha (near Zevgolateio) and to utilize the elementary school building in Corinth to house the secondary school (*ἐλληνικὸν σχολεῖον*) which had been operating in Corinth with no roof over the heads of the pupils (*ibid.*, II, doc. 586, pp. 1291-1292 and doc. 600, p. 1317). The *ἀλληλοδιδασκική* method of instruction was a Greek copy of Sarazin's French version of the monitorial system of teaching introduced in the early years of the 19th century in England by a Quaker educator, Joseph Lancaster. The system gained great (though short-lived) popularity in England and on the continent, where one of its exponents was Sarazin (author of *Manuel des écoles élémentaires, ou exposé de la méthode d'enseignement mutuel*, Paris, L. Colas, 1829—the first name of the author seems not to have appeared on the title page, nor is there a record of it in the catalogue of the Bibliothèque Nationale). Sarazin must have been known to some of the Greeks who had come from Paris to the homeland at the beginning of the movement for independence. His system was certainly familiar to Capodistrias and to Moustoxydis and was preferred by them to other (unidentified) systems of monitorial instruction. On February 17, 1830, Capodistrias approved the recommendation of the Committee on Elementary Education for the translation of Sarazin's *Manuel* into Greek and for its distribution to the elementary schools throughout the country (*ibid.*, II, doc. 359, pp. 791-792; II, doc. 521, pp. 1100-1102; II, doc. 527, pp. 1109-1110; II, doc. 529, pp. 1123-1124; and *passim* [*v. indices, s. n. Σαραζίνος*]).

¹¹⁰ See "Annual Report of the Director of the American School of Classical Studies, 1906-1907," *A.J.A.* 11, 1907, suppl., p. 20.



a. Temple of Apollo from the east

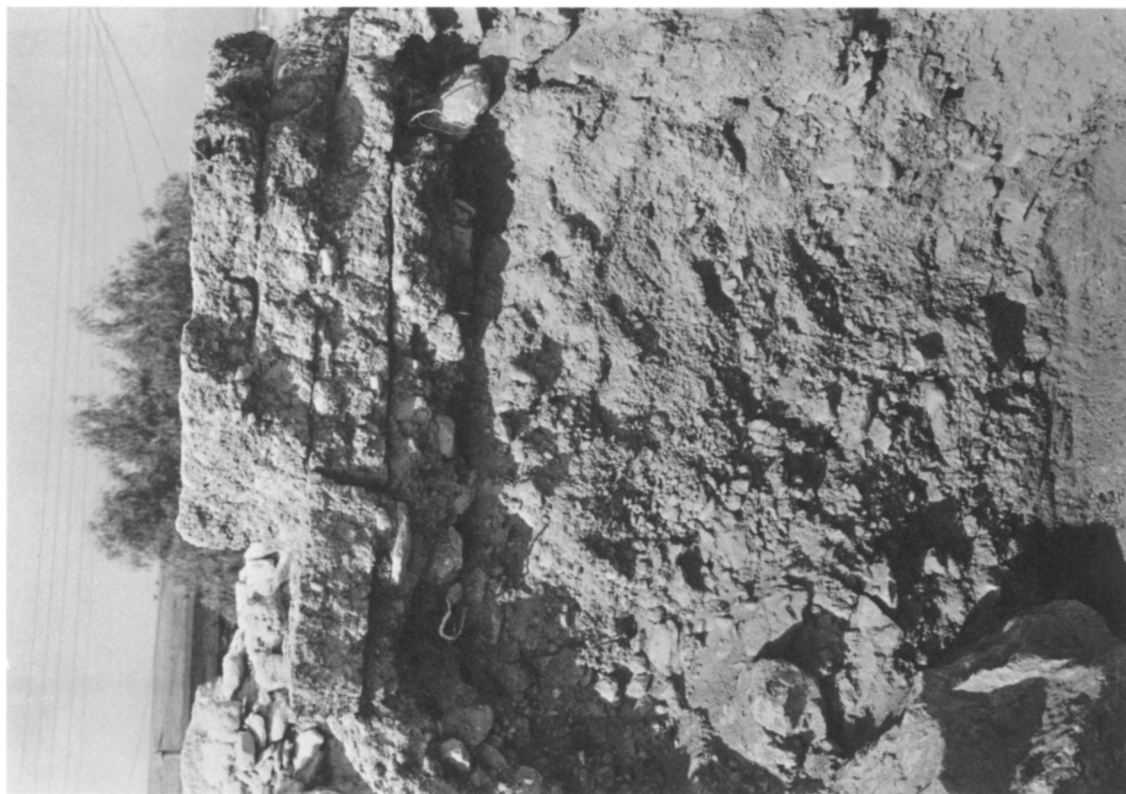


b. Temple of Apollo in 1901, from west. In background, Capodistrias schoolhouse

HENRY S. ROBINSON: EXCAVATIONS AT CORINTH: TEMPLE HILL, 1968-1972



a. Seventh-century B.C. road from northeast



b. North wall of road, western section of mud bricks, from south

HENRY S. ROBINSON: EXCAVATIONS AT CORINTH: TEMPLE HILL, 1968-1972



a. Seventh-century B.C. road from southwest



b. North wall of road, at west, from southeast



c. North wall of road, eastern section of mud bricks, from southwest

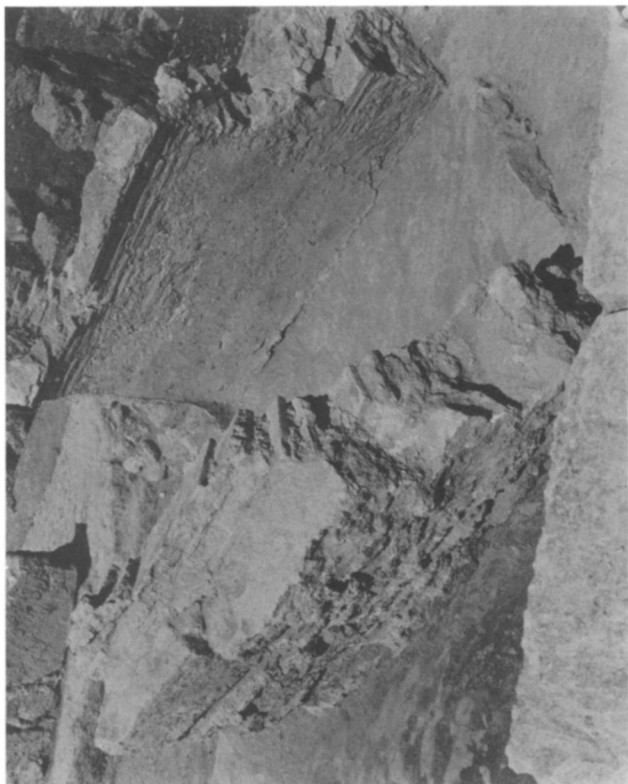


d. South wall of road, at east, from northwest

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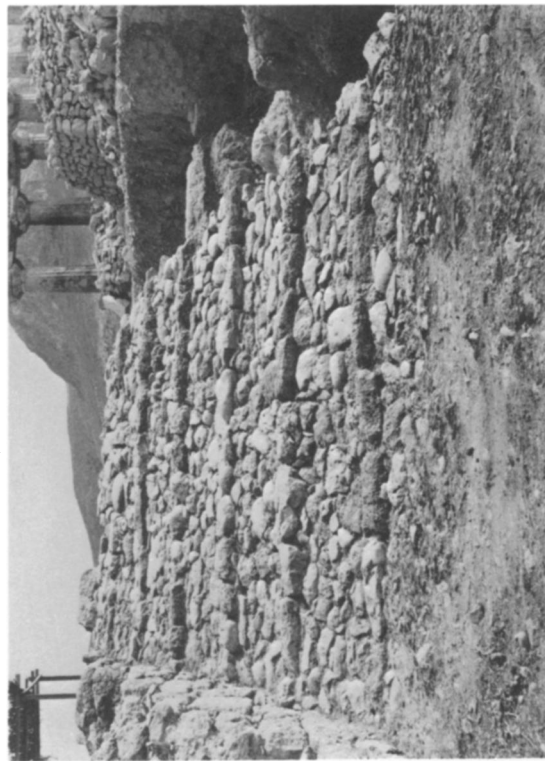
a. Early Christian Basilica. South end of narthex, from east, after removal of Ossuary AO



b. Osuary AO from southeast



c. *Opus sectile* from floor of narthex, after removal and consolidation. Scale 1:12



d. Turkish stair (*kalderimi*) No. 1 from north

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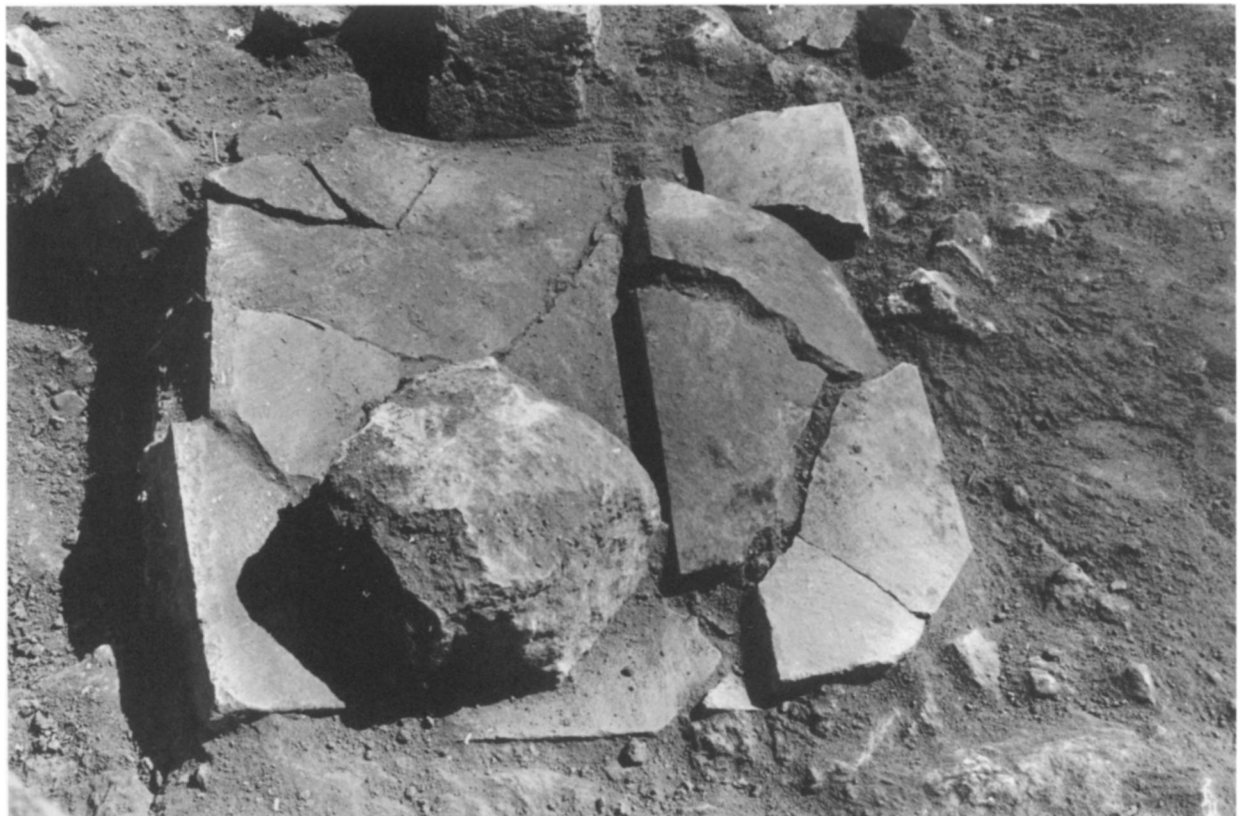
a. Sixth-century B.C. quarry from north



b. Early Roman quarry from east (1974)



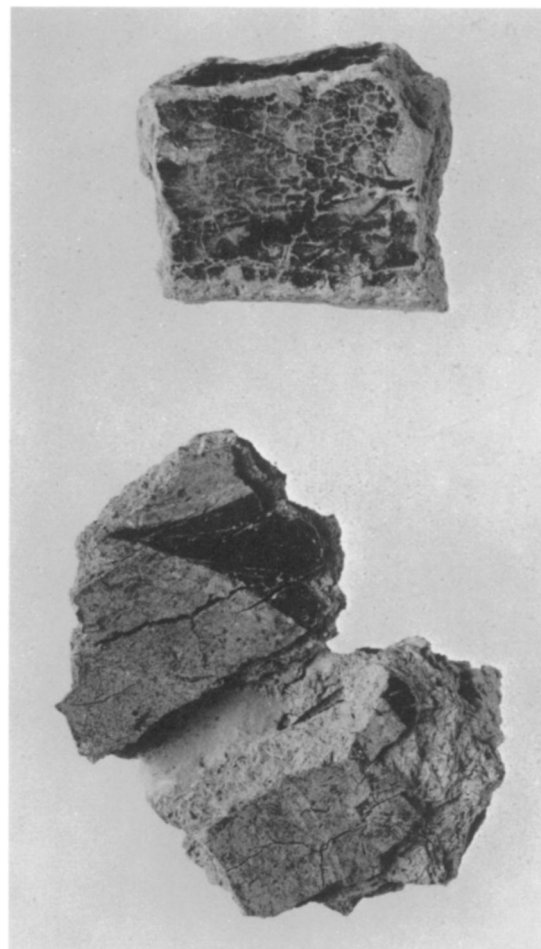
a. Building debris of the Old Temple, as found over the road, from northeast



b. Roof tile and building block of the Old Temple, as found over the road



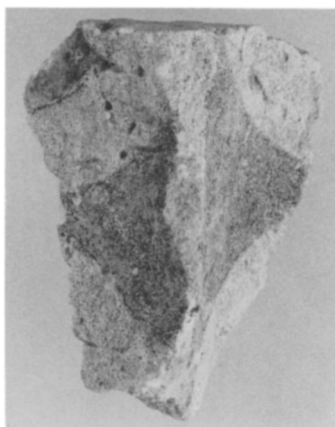
a. A-72-6. Scale 1:2



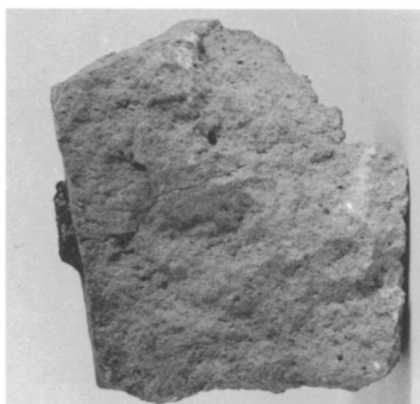
b. A-72-30

Scale 1:1

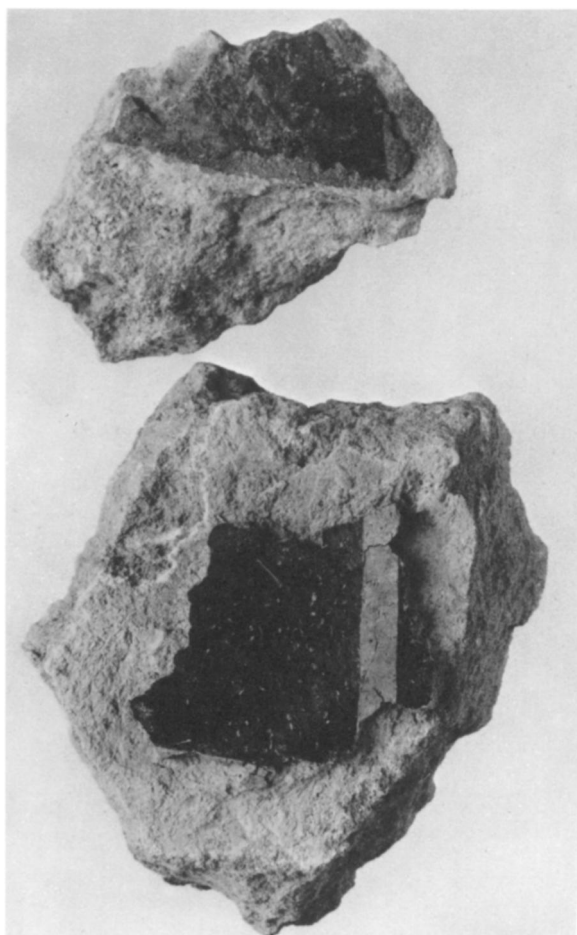
C-71-285



c. A-69-8. Scale 1:2



d. A 727. Scale 1:3



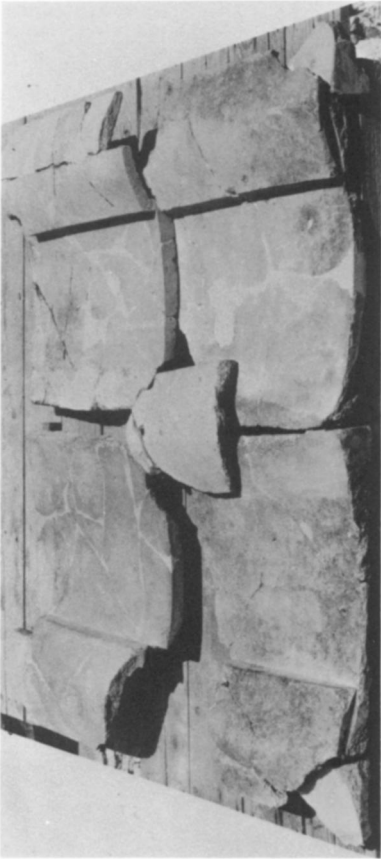
e. A 946

Scale 1:2

A-72-5

Blocks and Wall Decoration of the Old Temple

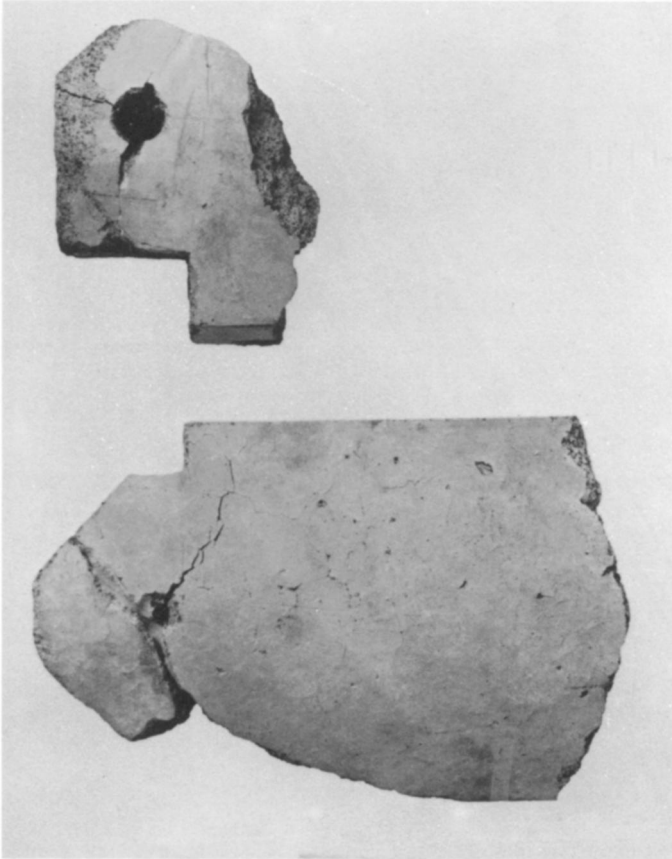
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a. Roof tiles arranged as at center of long side. Scale 1:12



b. Black and yellow tiles (FP 155, FT 224). Scale 1:11



c. Cover tiles with iron spikes (F 96, FC 98). Scale 1:5



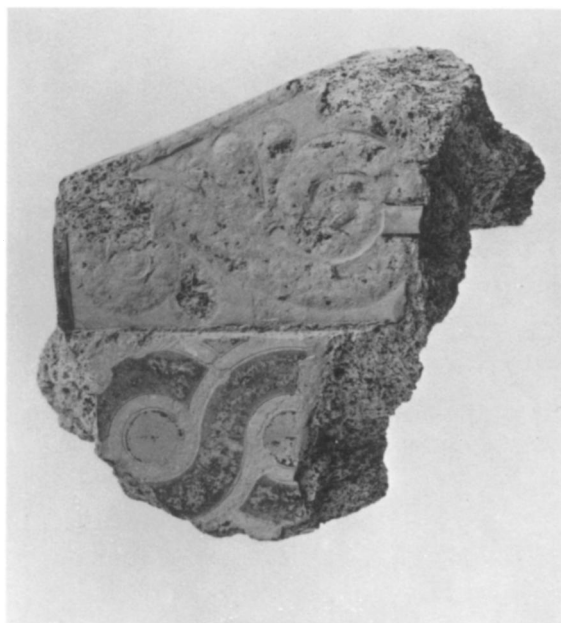
d. I 1, Face A. Scale 1:4



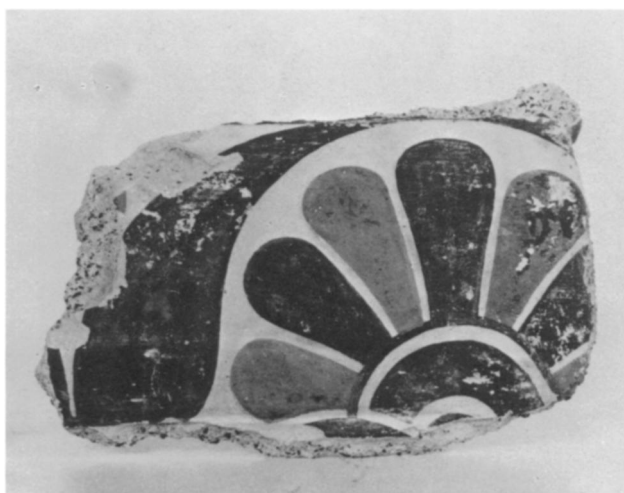
e. I-70-4. Scale 1:4

Roof Tiles and Inscriptions from the Old Temple

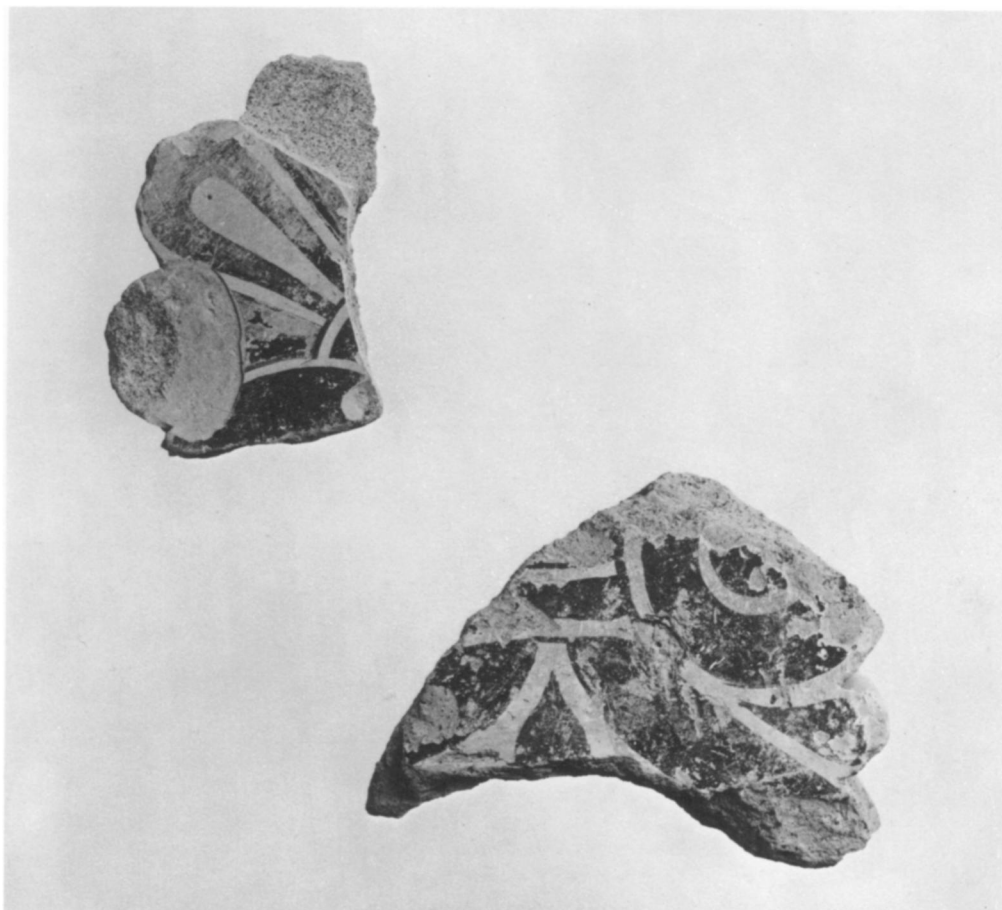
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a. Antefix (FA 543). Scale 1:3



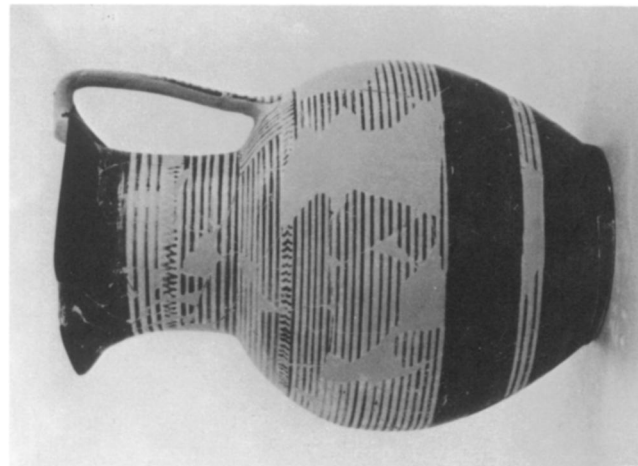
b. Raking-sima fragment (FS 1052). Scale 1:3



c. Ridge-palmette fragments: original above (FR 102); Hellenistic replacement below (FR 101a). Scale 1:3

Architectural Terracottas of the Sixth Century Temple

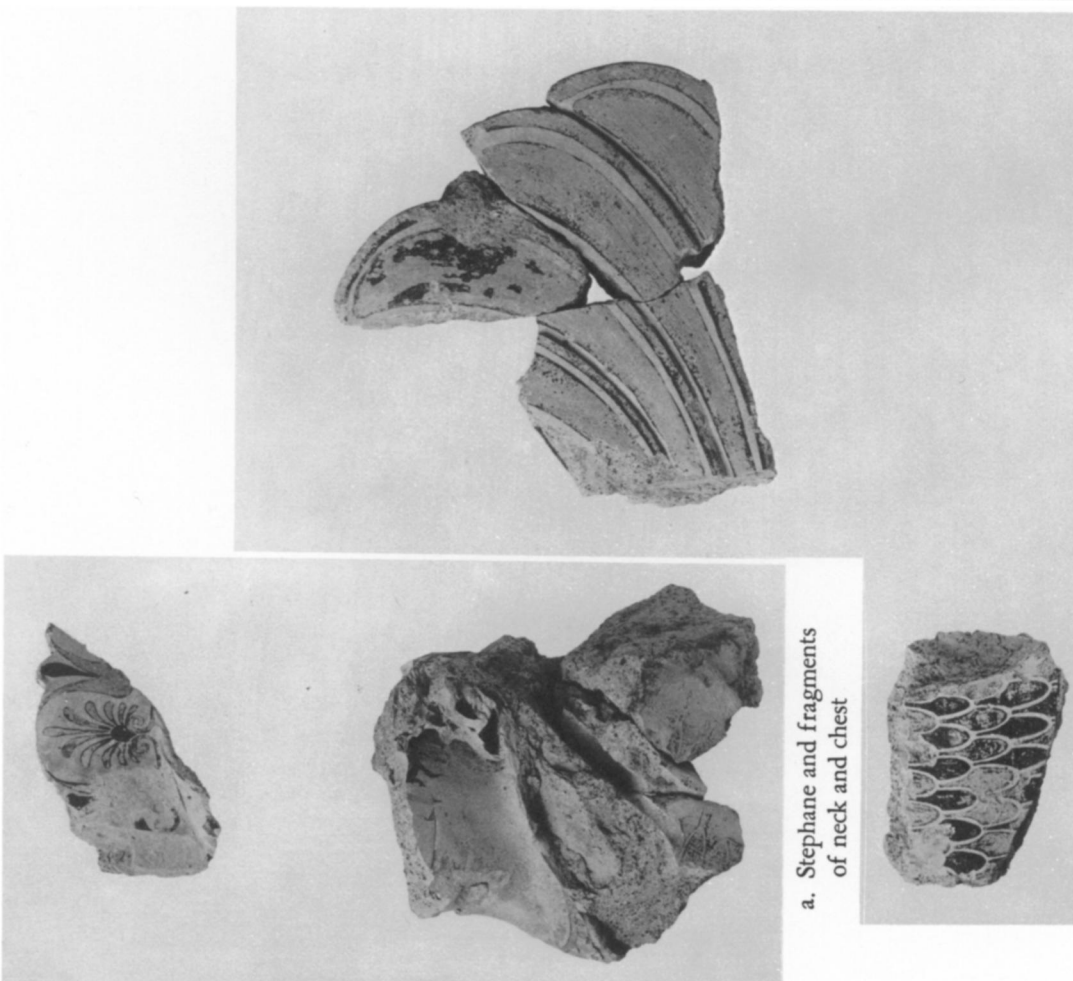
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c. C-70-81. Scale 1:4



d. C-71-292 Scale 1:3 C-71-293

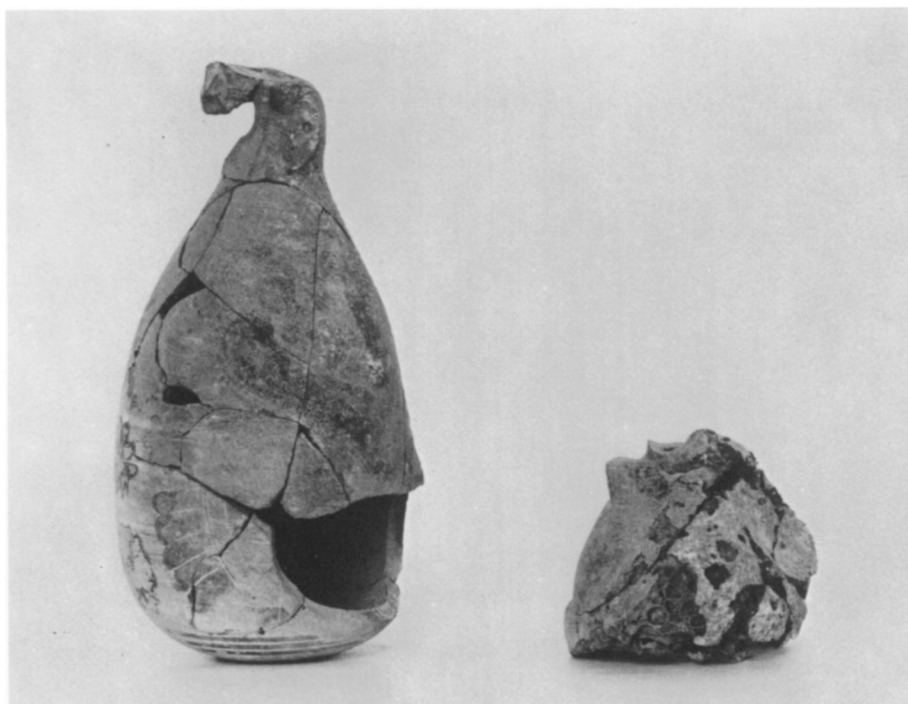


a. Stephane and fragments
of neck and chest

b. Fragments of breast and wing

a, b. Fragments of terracotta sphinx (SF-72-3). Scale 1:4

HENRY S. ROBINSON: EXCAVATIONS AT CORINTH: TEMPLE HILL, 1968-1972



a. C-71-294 Scale 1:2 C-71-310



C-71-288

C-71-281

C-71-298



b. Front and base views of three aryballoi. Scale 1:2



a. MF-71-255
Scale 1:1



b. MF-72-148. Scale 3:4



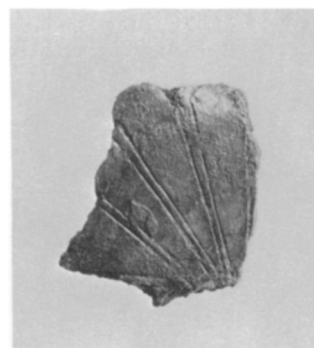
c. MF-72-163. Scale 1:1



d. MF-72-165
Scale 1:1



e. MF-72-145. Scale 1:1

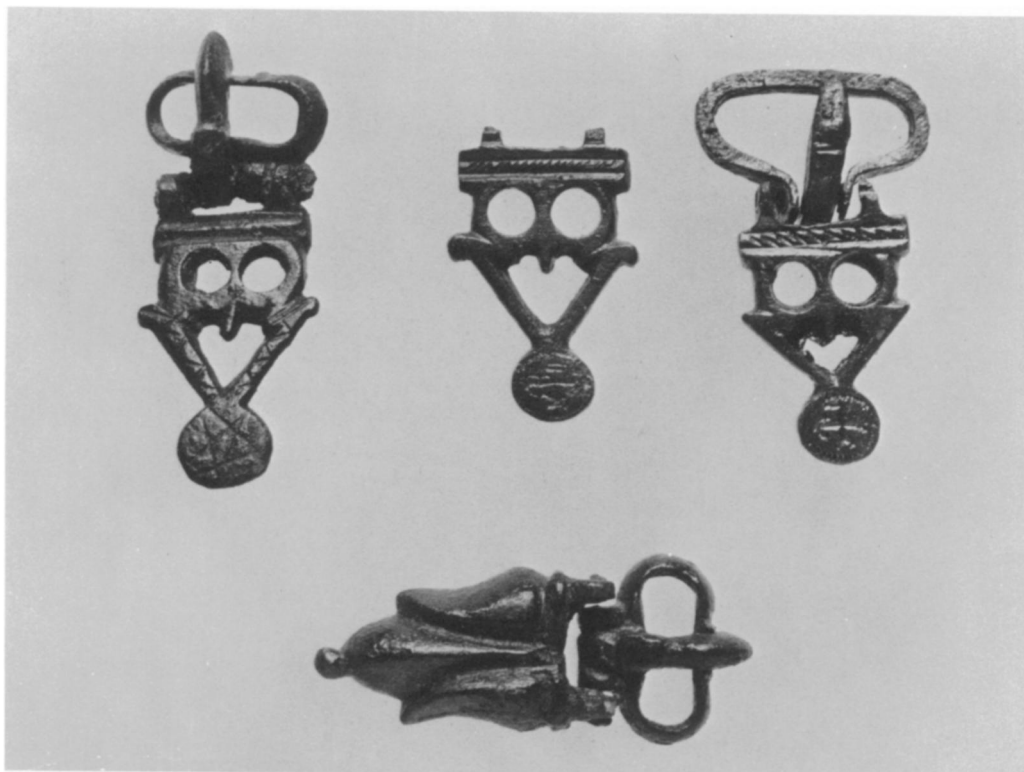


f. MF-71-254 Scale 1:1

Bronze Votive Offerings from the Road Fill



g, h. Neolithic figurine (MF-68-285), front and back views. Scale 1:1



a. Bronze buckles from Early Christian burials.

Top: MF-72-84, MF-72-86, MF-72-112.

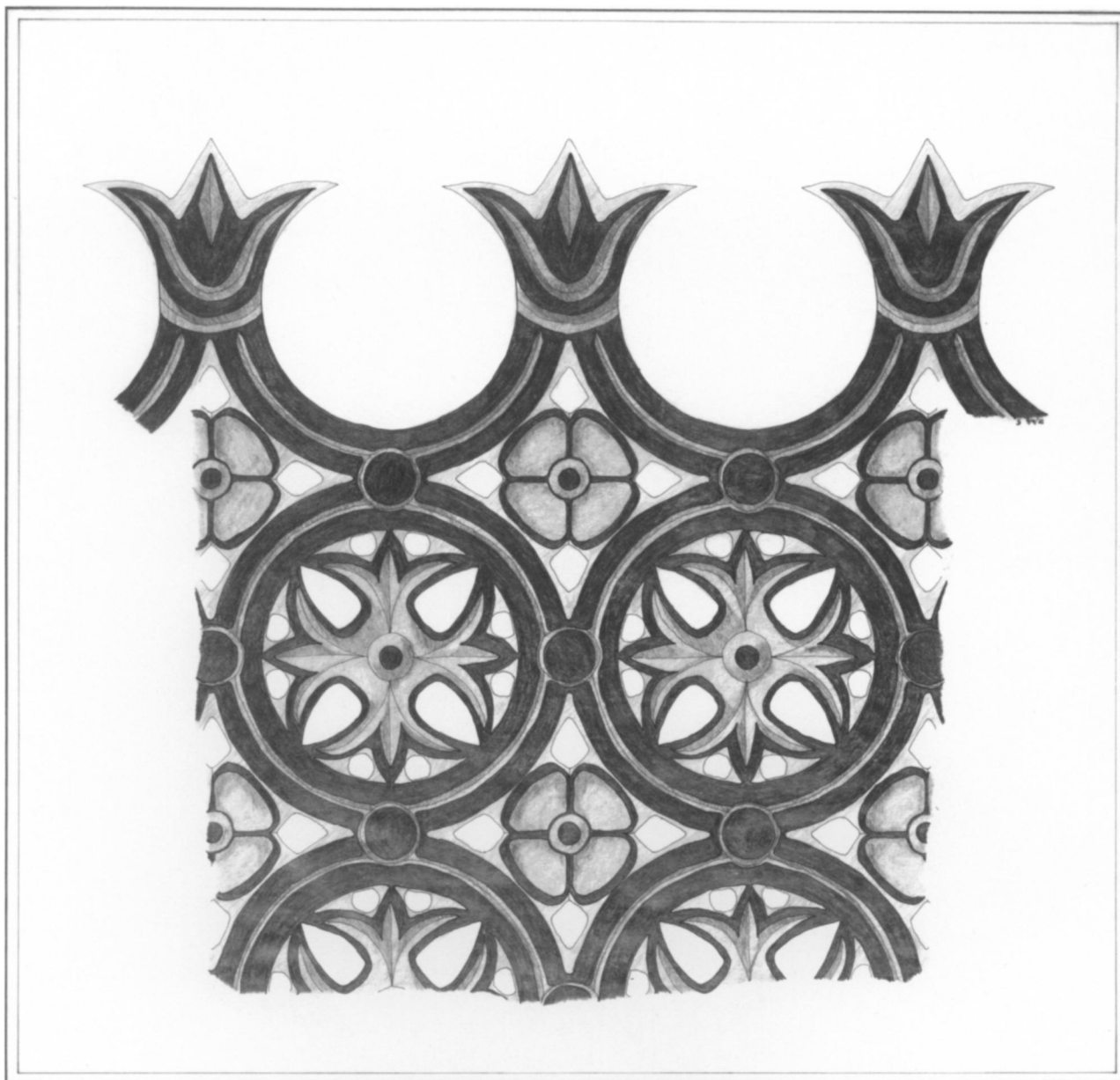
Bottom: MF-72-85. Scale 1:1



b. Marble revetment from Early Christian Basilica (A-72-8) Scale 1:4



c. Silver-plated cross (MF-72-122). Scale 3:2



Reconstruction of Early Christian altar-screen design

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