

# CORINTH: EXCAVATIONS OF 1980

(PLATES 1–9)

## *Summary*

The following report presents the results of the excavations of 1980, an archaeological description of the Hellenistic racecourse and its two Classical predecessors, an examination of a number of the roads of the Greek valley network, a discussion of the parabolic terrace, and, lastly, evidence for various re-uses of the upper valley after 146 B.C., including a glance at the different phases of construction that helped shape the Roman forum.

TODAY THE AREA OF ANCIENT CORINTH south of Temple Hill is a large, flat and open space; the contours that give this impression were first laid out by Roman engineers and architects in order to site here the forum of Laus Julia Corinthiensis. They were able to achieve their ends only by extensive cutting, grading, and filling of the valley south of Temple Hill and the Spring of Peirene; the impression of flatness is largely the result of Roman alteration of what had been extremely uneven terrain in Greek times.

Before the upper valley was converted into a Roman forum, the area over the cliff of Peirene had been a natural grade sloping gently upward toward the south for a distance of 30 to 40 meters from cliff edge. Thereafter the rise was more abrupt as it approached the site of the South Stoa. Over all, the difference in elevation was from about 75.70 m. at the cliff edge to over 81 meters above sea level in front of the stoa.

The long, rising bed of the valley served in the Greek period as a logical passage-way through the rocky ridge that divided the city into two levels. Thus, early on, this whole valley became laced by a network of roads which connected the lower and flatter northern city to the higher land of the southeast quarter and Akrokorinthos. In the Roman period, however, when the southern part of the valley was shaped and leveled to become the site of the forum, the new Roman Lechaion Road was terminated with an artificial rise crowned by an arch. It demarked a principal north entrance into the forum. The Romans filled the upper valley south of the arch generally to *ca.* 78.25 m. above sea level in order to give adequate room to their plateia. The area was made level up to a rocky prominence which had earlier dominated the south slope of the valley, with a Geometric burial field to its west and a rectangular hero shrine to its northeast.<sup>1</sup> The Romans cleverly disguised the outcrop by constructing around it a rectangular rostrum, and converted it into the central focus of their new forum. They designed a

<sup>1</sup>For burial ground see C. H. Morgan, II, "Excavations at Corinth, 1936–37," *AJA* 41, 1937, pp. 543–545, pl. 13, fig. 2. For temenos, see C. K. Williams, II, "Corinth, 1972: The Forum Area," *Hesperia* 42, 1973, pp. 6–12, pls. 1–5; also, J. L. Angel and P. Burns, *op. cit.*, Appendix I, pp. 32–33. For completion of temenos excavation see C. K. Williams, II, "Excavations at Corinth, 1973," *Hesperia* 43, 1974, pp. 1–6, pl. 1.

row of shops as well, to mask the slope of the valley east of the rostrum, and cut and masked the other surrounding slopes by building stoas, basilicas, and terraces to frame the forum, while maintaining the Hellenistic South Stoa as the southern limit of the redesigned space.<sup>2</sup>

## THE SPORTS COMPLEX

### THE 5TH-CENTURY RACECOURSE (Figs. 1–3; Pls. 1–3)

Although bedrock was not reached in all of the grid sections excavated this year under the east end of the forum, enough tests were carried to bedrock so that a good description can be made of the stratigraphic sequences that exist in this part of the Lechaion Road Valley.<sup>3</sup> No stratified levels earlier than the 6th century were found, although in the past earlier remains had been found in the immediate vicinity both to the east and to the west of the present excavation area.<sup>4</sup>

A thick level of broken-up marl covers bedrock on the cliff rock of Peirene, brought in, apparently, to make the area flat and horizontal. Further south under the Classical racecourse another fill, this one sandier, lies over bedrock. An earth-and-rock surface and a crust of oölitic limestone chips seal the sandy deposit. The limestone or poros crust is to be equated with the earliest preserved race-track surface and earliest

<sup>2</sup>For Roman buildings of the forum, see R. L. Scranton, *Corinth*, I, iii, *Monuments in the Lower Agora and North of the Archaic Temple*, Princeton 1951. For a detailed study of the Julian and South Basilicas and the Southeast Building, see S. S. Weinberg, *Corinth*, I, v, *The Southeast Building, the Twin Basilicas, the Mosaic House*, Princeton 1960. For the South Stoa, see O. Broneer, *Corinth*, I, iv, *The South Stoa and its Roman Successors*, Princeton 1954.

<sup>3</sup>Excavation during the 1980 excavation season was made possible because of the continued goodwill and help of the Greek Archaeological Service. For this spirit of cooperation and interest I especially thank Dr. N. Yalouris, Inspector General of Antiquities. Thanks are extended as well to Mrs. K. Krystalli-Votsi and her staff of the ephoreia of the Argolid and Corinthia. Much gratitude is due Mrs. A. Archontidou-Argyri, acting ephor during the summer of 1980, for her friendly cooperation toward achieving numerous goals that the Greek Archaeological Service and the American School at Corinth hold in common.

For continued aid and advice with things Corinthian, I am pleased once again this year to be able to thank Professor H. Immerwahr, Director of the American School of Classical Studies. I am indebted to Dr. Nancy Bookidis as well for her role in the operation of the Corinth Excavations, only a part of which is the supervision of work in the museum and maintenance of the excavation collection. Stella Bouzaki served again in 1980 as conservator, N. Didaskalou, A. Papaioannou, and G. Arberores as museum technicians, Ph. Notes as foreman. The American trenchmasters were Jane Carter, Joan Connelly and Murray McClellan. Museum study projects were completed by Pamela Russell and Charles Edwards. The results reached by Miss Russell are presented here in the appendix to the 1980 excavation report (p. 34 below). Those of Mr. Edwards will appear in *Hesperia* as a separate article.

Ioannidou and Barzioti made the end-of-season photographic records. Aerial photographs of the site in general and the 1980 excavation in detail were taken by Professor and Mrs. J. Wilson Myers.

<sup>4</sup>A description of the Greek remains under the Southeast Building is presented by Weinberg in *Corinth* I, v, pp. 4–5. The earliest well now known in the area is Late Geometric, found during excavation within the building during the summer of 1978. For a discussion of the well, see C. K. Williams, II, "A Survey of Pottery from Corinth from 750 to 600 B.C.," *ASAtene* (in press). For early remains on the site of the Julian Basilica, see *Corinth* I, v, pp. 37–39. For early remains around the Central Shops, see Scranton, *Corinth* I, iii, pp. 74–76. See also footnote 1 above.

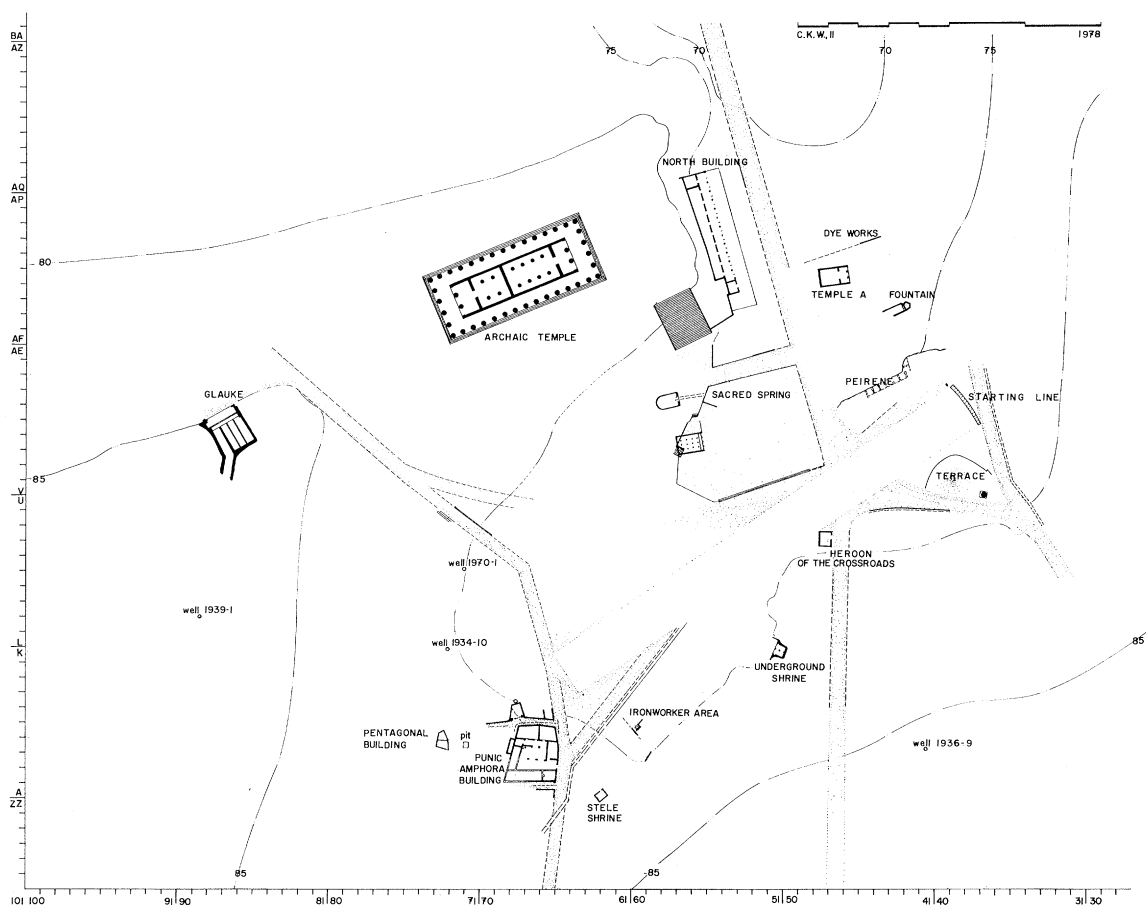


FIG. 1. Plan, central Corinth, 450–425 B.C.

starting platform yet found at the east end of the course. If another starting platform preceded the earliest one now known, all traces of it were eliminated when the track that now exists was laid out.<sup>5</sup> The preserved starting line does not, however, give the impression that it is a first essay in starting-line design.

The north end of the starting platform, with its elevation at 76.95 m. above sea level, is about 17 meters southeast of the cliff face of Peirene. At the southernmost preserved point of the platform its top surface is at +77.248 m. The platform is designed in a “free-hand” arc with a very large radius. The axis of the line that bisects the chord of this arc does not, however, coincide with the long axis of the running course, nor are the two axes oriented closely enough one to the other that the difference can be dismissed as a slight miscalculation of design.

<sup>5</sup>For the initial excavation report of the starting line and its surrounding area, see Morgan, *op. cit.* (footnote 1 above), pp. 549–550, pls. XVI, XVII.

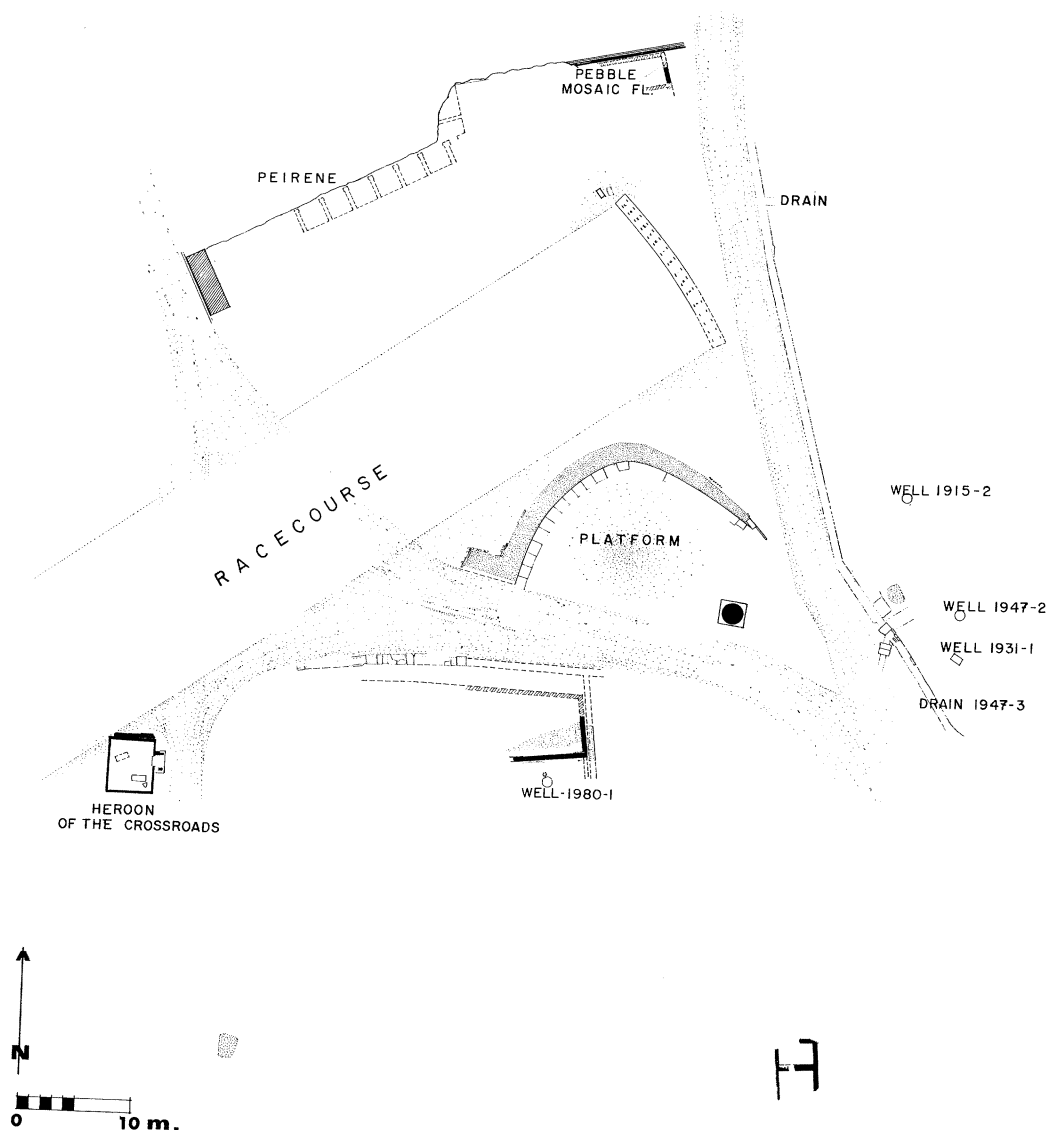


FIG. 2. Plan, east end of forum, 400–350 B.C.

The starting platform, between 1.25 and 1.30 m. wide, is constructed of a pebbly, white lime cement. Its fine top surface was frescoed a blue-black that gives the impression of smooth black limestone (Pl. 1). The black pigment was applied while the cement was wet. Because the surface of the platform is well preserved, the underlying structure of the platform is hard to analyse. Indications suggest, however, that rectangular poros (oölitic limestone) blocks were used under many of the individual starting positions with a thin cement on a cobble bed laid between the blocks. A front and a back toe groove were cut into each of the poros blocks, after which the whole line or platform

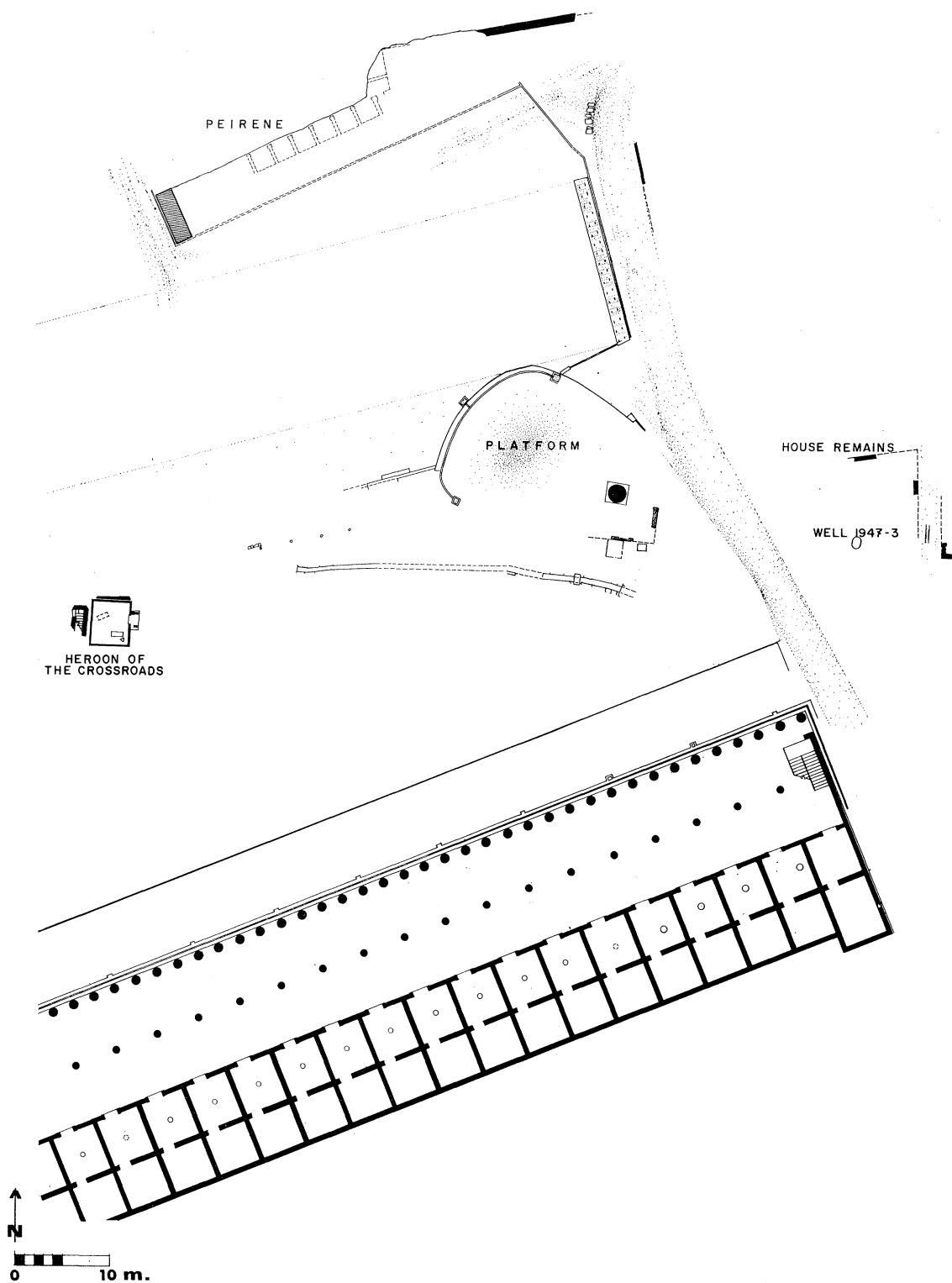


FIG. 3. Plan, east end of forum, 250-225 B.C.

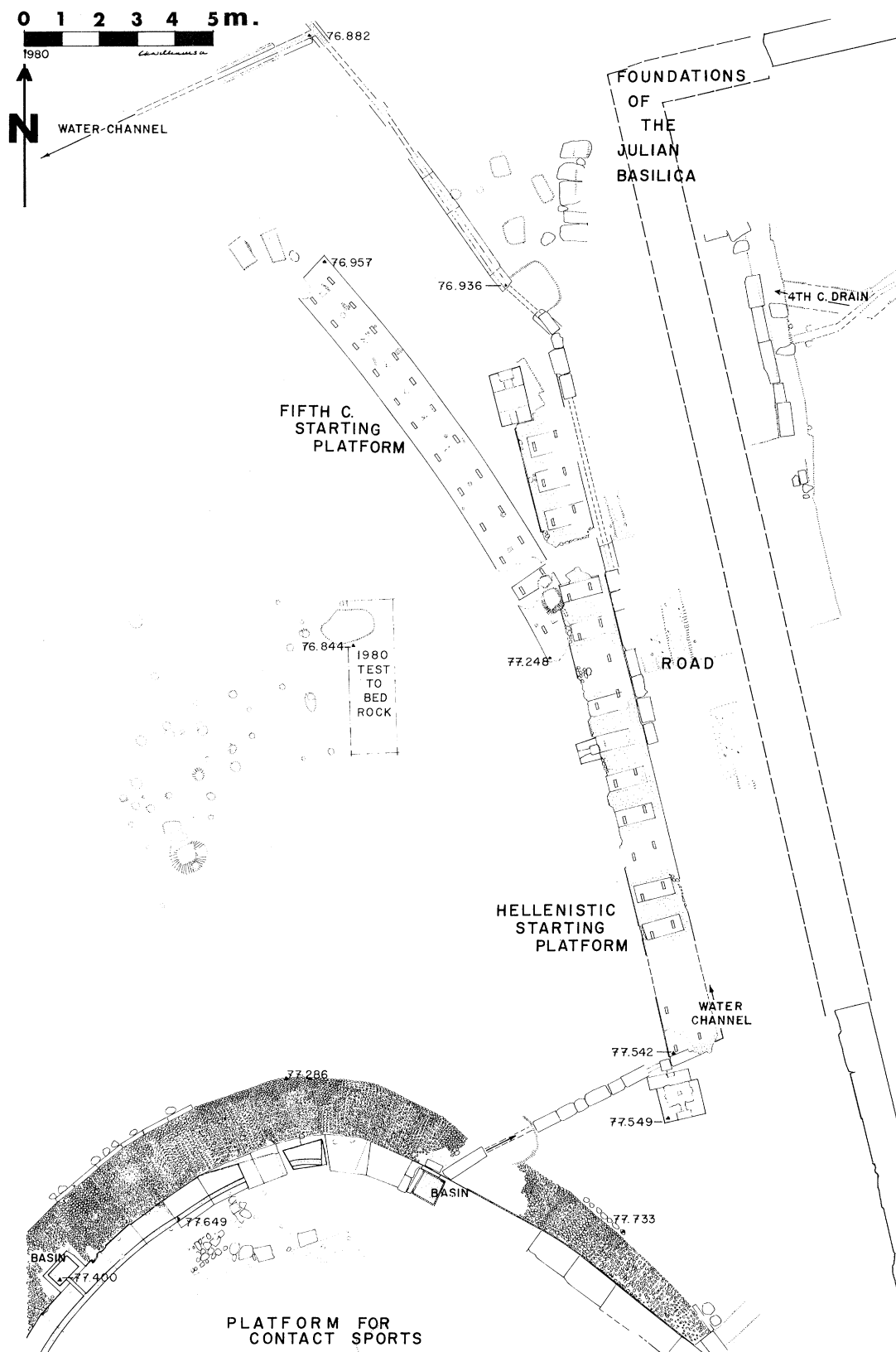


FIG. 4. Actual-state plan, northeast corner of forum, pre-146 B.C.

was given a plaster coat with added black. Thereafter a letter was painted in red between the front and back grooves at each position to identify the starter spots.

The platform was designed for 17 positions; of these, 13 are attested by the existence of pairs of toe grooves in the 12.20 m. of platform now *in situ*. The grooves are rectangular in plan and deeply V-shaped in section, their back walls being vertical. The toe grips range in length from 0.215 to 0.23 m.; generally they are 0.075 m. wide. The interval between grips ranges from 0.595 to 0.87 m., with no apparently logical reason for the random variation. Absolute precision does not seem to have been demanded. Front and back grooves are related slightly differently to each other at each starting position. For example, the front groove of the northernmost position begins 0.59 m. in from the north end of the platform, with intervals of 0.60, 0.595, 0.65, 0.74, 0.60, 0.81, and 0.87 m. for the front grooves thereafter. The back groove of the northernmost position begins 0.48 m. in from the end of the platform, with intervals of 0.695, 0.61, 0.67, 0.62, 0.68, 0.79, and 0.85 m. thereafter. Also, the front of the toe grip of each position is not always set back the same distance from the front edge of the starting platform.

The positions for the competitors are numbered from *alpha* at the south end of the platform to *pi* at the north end. The southernmost five positions, *alpha* through *epsilon*, had been destroyed by the construction of the straight Hellenistic starting platform over them. A length of *ca.* 3.80 m., at a minimum, was destroyed here, but if the starting positions had been spaced as far apart as 0.87 m. one from the other, the destroyed section would have been about 4.70 m. long.

The southernmost preserved position has a *vau* marked between the foot grooves, the next position a *zeta*.<sup>6</sup> Traces are no longer preserved of a painted letter at the next position, but the ninth position is marked by a *heta*, the one after that by a *theta* (Pl. 4:a), then a single barred *iota*, a *kappa* (Pl. 4:b), a *lambda* (Pl. 4:c), *mu*, *nu* (Pl. 4:d), *omikron*, and a *pi* on the final position (Fig. 5). *Xi* does not appear in this series after *nu*.<sup>7</sup>

Traces exist both of an original set of letters and of one repainting on the black surface of the platform. The original letters are now preserved only as ghosts, that is, as scars in the smooth cement surface where the paint has purposely been scraped away in preparation for the new letters. The best example of this is the *theta*, where red paint of the later letter is preserved around the ghost of the original. The earlier *theta* is 0.05 m. high, the later 0.077 m. high. In all cases where they can be studied, the earlier letters are small, the later ones big. One can be sure of the retouching because the red paint of the larger letters can still be seen where it seeped into scars and worn areas on the

<sup>6</sup> *Ibid.*, p. 550. Three foot grips of the earliest starting platform were cleared. The surface of the platform was described as "fine hard stucco painted dark blue . . . . Between one pair of these grooves is painted a red symbol, probably the letter A, with one half of one of the vertical bars missing." This letter, today, after 43 years of exposure, is no longer visible to the eye.

<sup>7</sup> For discussion of the Corinthian epichoric alphabet, see L. H. Jeffery, *The Local Scripts of Archaic Greece*, Oxford 1963, pp. 115–132.

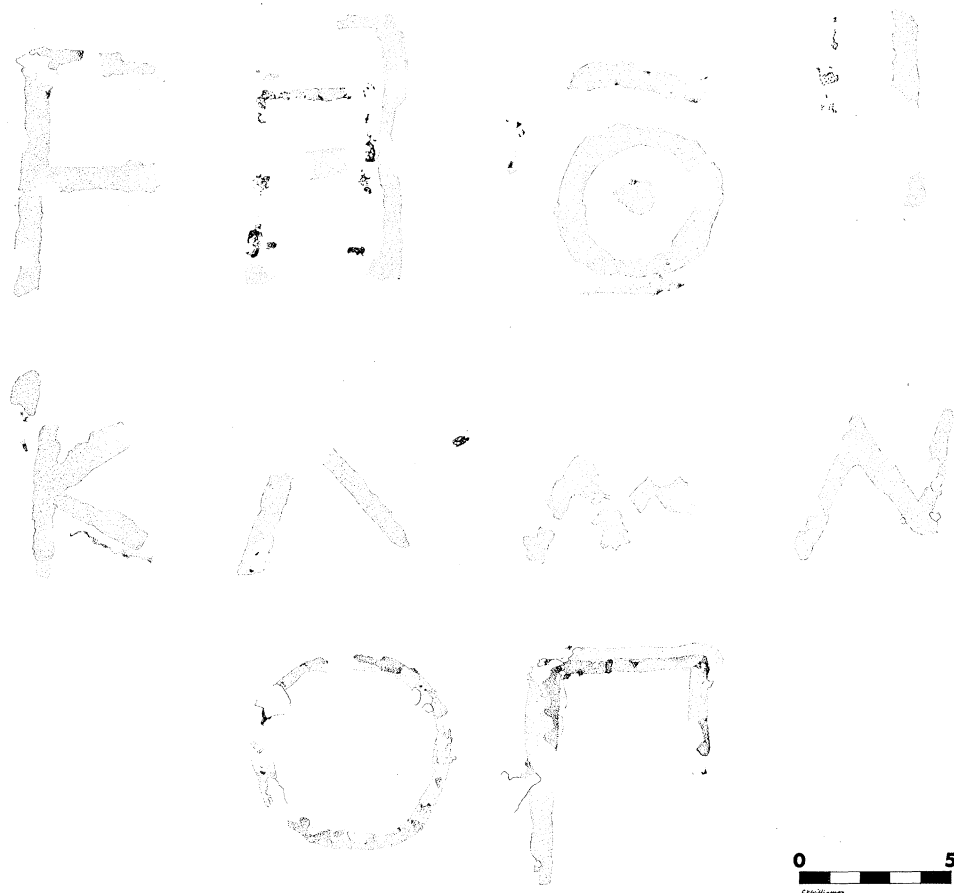


FIG. 5. Letters on the 5th-century starting platform

platform. The larger letters definitely were added only after the platform had undergone a certain amount of use.

The hard, crushed-poros running surfaces west of the starting line are preserved up to and flush with the cement 5th-century starting platform; this same crushed poros appears to have been spread throughout the area later covered by the northern half of the Roman forum.<sup>8</sup> In the vicinity of the starting line the build-up of crusts shows that this type of surfacing was used for the track continuously from the very beginning of the 5th century down to 146 B.C. In most cases, one powdered-stone fill was laid directly over its predecessor, each poros-chip level peeling off as a rock-like crust when exca-

<sup>8</sup>See below, pp. 10, 29–31. Although the earliest crushed- or pulverized-poros racing surface in the upper valley seems to have been laid by the end of the 6th century B.C., no conclusive evidence exists that the earliest starting platform and the first crushed-poros crust were laid down simultaneously. The platform in this report is referred to in general terms as 5th century in date. From the archaeological evidence now available it is possible, however, to suggest that the starting platform was constructed at the end of the 6th century B.C.



vated, separating easily from the underlying poros. Only at times of special construction activity, as during the reorientation of the course, was earth brought in to raise the level of the track.

The hard track surfaces that exist today could easily have induced shin splints in an ancient competitor. Such an observation is countered, however, by the following explanation:

Ground or pulverized poros was spread seasonally over the hard, compacted poros powder of the year before, giving the runners in the yearly competitions a new soft bed of sand about one centimeter thick on which to run. The powder would stay soft until compacted by rain and traffic into a new crust. In this way the track level built from an elevation of +77.10 to +77.32 m. year by year in the area west of the starting line. In some places along the course the build-up is even thicker.

Although the starting line uncovered this year is well preserved, its discovery does not answer all the questions concerning the course as a whole. No water channel has been found along either side of the track. This makes it difficult to define the exact width of the competition area. The southern limit of the course can be fixed approximately, however, by the position of a walled shrine, the Heroon of the Crossroads, which lies 60 meters southwest of the starting line and against the south slope of the upper Lechaion Road Valley. Because this heroon was laid out early in the 6th century B.C., well before the racecourse with its numbered starting platform existed, the track had to respect the heroon. Thus it was laid out to pass to the north of the heroon where the contours of the valley were most level. That the track passed closely by the shrine is attested by the slight abbreviation of the northwest corner of the temenos in its later phase.

The heroon was originally enclosed by a series of orthostates that were crowned by coping blocks. The north wall of the temenos was reinforced at a later date by three heavy poros blocks; the block at the east end of this line has its corner much worn from carts continuously turning around the shrine. Ruts in the roadway also indicate how closely the heavy traffic passed by the northeast corner. The west end of the three blocks also is rounded. Here the rounding is not the result of wear by vehicles; rather this corner seems to have been trimmed in order to keep the temenos from projecting into the racecourse.

At 158 m. southwest of the starting platform a rectangular post or block,  $0.20 \times 0.26$  m., projects from the lowest of the superimposed crushed-poros strata.<sup>9</sup> This post lies outside what probably is the south edge of the track, and thus would be no obstacle to the runners. At about 0.85 m. north of the post is a poros base, 0.59 m. wide along one face and 0.86 m. along the other, also found set into the crushed-poros floor. This

<sup>9</sup>Excavation in 1972 and 1973 immediately south of the Dionysion revealed the post, associated with crushed-poros surfaces similar to the surfaces around the starting platform. Pottery from below the poros is now stored in Pottery Lots 1972-8, 1973-147, 1980-124. See plan, C. K. Williams, II, "Corinth Excavations, 1979," *Hesperia* 49, 1980, p. 112, fig. 2, for rectangular post, drawn as a black square south of west end of course.

second block may not be *in situ* because, when excavated, the poros-chip floor was slightly broken and disturbed around the sides of the base; moreover, this block was not oriented in relation to the axis of the track. Although the question can be asked whether or not the base was sitting as originally placed, the smaller block or post definitely sits undisturbed in the poros chips and the fill beneath it. It stood there when the floor was being used. This post may have served as a distance marker along the south side of the track or as a marker at the west end of the course. If the latter, the rectangular poros base with cutting on its top may have been the foundation block for a turning post, similar to those excavated in the Athenian Agora and at Priene.<sup>10</sup>

The race track cannot have continued westward far past the poros post or block, and definitely no farther than *ca.* 165 m. from the starting line, for there it meets a four-meter-wide city road with central open drain. On the west side of the road, within 1.70 m. of the starting line, lies the northern neighbor of the Punic Amphora Building, a 5th-century architectural impediment to any theory that this course was of canonical Panhellenic stadium length. The poros-chip floor around the poros post is between 79.50 and 79.75 m. above sea level. At about ten meters to its southwest the ground rises to about +80.15, an elevation taken on the edge of the street drain.

The area around the stone post was examined in the 1972 and 1973 excavations. Tests then were made to bedrock. The fill between bedrock and the lowest, earliest, crushed-poros floor is dated by pottery and lamps found therein. The latest of the material should not be dated later than the end of the 6th century. See below, Catalogue, 1 through 7. Such a date is consistent with the ceramic evidence that was collected this year in the fill between the lowest poros crust of the track and bedrock. The 1980 test was made three to six meters west of the starting line. The material recovered is in poor condition and thus of less diagnostic value, as well as much less in quantity than that recovered in 1972 and 1973.<sup>11</sup> In both cases the evidence suggests, although not absolutely, that the first flat surfacing of the area was made by the end of the 6th century B.C.

#### THE SECOND CLASSICAL RACECOURSE

A starting platform of the later 5th or 4th century was constructed over the early 5th-century platform, apparently while the earlier one was still in good condition. Nothing of the second platform is preserved *in situ*. As much as one can tell, however, it occupied both the position and form of its predecessor. The reason for replacing the first platform may have been twofold, even though the original starting line was in good condition when it was replaced. First, the starting platform each year would have become more depressed in relation to its running track as a result of the annual, crushed-poros track resurfacings. A new, raised platform may have been needed to correct the

<sup>10</sup>For individual rectangular blocks designed to secure posts which separate starting positions or which are used as turning posts, see T. Leslie Shear, Jr., "The Athenian Agora: Excavations of 1973-1974," *Hesperia* 44, 1975, p. 363, pl. 82; T. Wiegand and H. Schrader, *Priene*, Berlin 1914, pp. 261-262.

<sup>11</sup>Pottery in Lots 1972-8 and 1973-147.

awkwardness of starting in a depression. A second reason for the construction of the new platform may have been the desire to correct the variant positions of the toe grips on the first platform.

The remains that attest to the existence of this second, later platform are, first, the deposits of cement on the surface of the early platform where the cement bed of the second platform still adheres to the first; second, the scars of the toe grips of the later platform in the surface of the underlying platform; third, the soft area isolated from the hard accumulation of track surfaces, traceable during excavation, that defines the position of the later platform; and, finally, the large fragments of cement with a black frescoed surface that were found in this soft area, some of which preserve platform edges and cobbles or impressions of cobbles which had been used in the bed of the platform. The recovered fragments are identical in material and workmanship with the cement platform of the earlier track.<sup>12</sup>

One gains the following information from the preserved fragments of the second starting line: The platform stood 0.027 m. higher than its packed poros-chip running surface. Although the second platform was constructed with a surface coat of black cement about one millimeter thick, two resurfacings of the platform were made in a fine, white lime cement. Apparently the black-surfaced starting platform went out of fashion and was replaced by a white platform while the second starting line was still in use.

The first race track continued in use with the second starting platform. Only with the construction of the 3rd-century track, which caused the contraction of the southern edge of the Sanctuary of the Sacred Spring, and of a new starting platform, which was backed against the north-south roadway at the east side of the valley, was the race-course reoriented.

#### THE 3RD- AND 2ND-CENTURY RACECOURSE

The Hellenistic starting line, the third for which evidence exists at the east end of the Roman forum, was constructed after 270 B.C. When this course was laid out (Fig. 4), the earlier orientation was changed into a more east-west direction, the curved design of the starting platform was abandoned for a straight line on a rectangular platform, and the platform itself was resited slightly farther to the east, overlapping only the southernmost five positions of the earliest platform. The new arrangement demanded the burying of a cobbled pavement which bordered a curved, poros terrace wall south of the track. It demanded as well the slight trimming of the northernmost extremity of this curved wall; otherwise the curved terrace would have projected onto the south edge of the new track.

The Hellenistic starting platform was excavated in the 1936/1937 season and published in 1937.<sup>13</sup> Further information concerning the track was obtained by excavation

<sup>12</sup>Fragments of the platform are stored in Lot 1980-149. One fragment with an edge and two coats of white plaster is inventoried as A-1980-8. Pottery from the fill is in Lot 1980-57; also coin 1980-88, added before 350 B.C. (M. J. Price).

<sup>13</sup>See footnote 5 above.

in 1969.<sup>14</sup> The following discussion of the Hellenistic starting platform is thus only a more detailed description of the remains previously published. No excavation was purposely conducted in 1980 for added information dealing with the Hellenistic platform.

The platform is built of cement on a cobble bed with a rectangular poros block set at each starting position. The over-all length of the platform is about 17.20 m., the width about 1.36 m. The platform was designed for 17 competitors, with each position marked by a pair of V-shaped toe grips. Like the grips of the 5th-century platform, the back side of the V is vertical. The grips are between 0.18 and 0.20 m. long and approximately 0.07 m. wide. The forward left grip of the pair is slightly to the left of the center line of the position, the back right protrudes slightly to the right. The two grips are *ca.* 0.56 m. apart. The competitor positions themselves are 1.03 m. on centers.

The southernmost position on the platform is built as one with a stuccoed water channel or drain which passes beneath, from the curved terrace wall southwest of the starting line to the east side of the starting platform. The drain then follows the east edge of the platform northward and angles diagonally toward the northwest to pass westward above the cliff of Peirene. This drain, the chronology of which is discussed below (see p. 19), was constructed at the time of the laying out of the platform: the drain fits nicely against the south side of the poros block under the first starting position, the side of the block having been cut diagonally to coordinate with the line of the drain. The drain is totally invisible where it passes under the starting platform: its cover slabs were designed as part of the platform, then covered by a thin coat of stucco which was used over all the starting line.

The Hellenistic starting platform was changed in design at least once after it was put into operation. The major alteration came with the installation of an elaborate starting mechanism, at which time a large rectangular block was added at each end of the platform.<sup>15</sup> The northwest corner of the platform was damaged because of the positioning of the northern block during this alteration; two-phase construction is less easily discernible around the southern end of the platform. These two later blocks are cut with similar but not exactly mirror-image sockets on their top surfaces, probably designed to anchor some sort of wood frame at the ends of the platform.<sup>16</sup> A smaller rectangular block, 0.54 m. wide, protrudes 0.30 m. from the west edge of the starting line, precisely in front of the ninth starting position, or at 18.73 m. from the north end of the platform. This block has a deep, rectangular cutting,  $0.21 \times 0.22$  m., in its top surface, with

<sup>14</sup>C. K. Williams, II, "Corinth, 1969: Forum Area," *Hesperia* 39, 1970, pp. 1-12.

<sup>15</sup>Discussed by O. Broneer in *Isthmia*, II, *Topography and Architecture*, Princeton 1973, p. 141, pl. 98. The complete mechanism of the Corinth line was not presented in this discussion; only the blocks at the ends of the starting platform were recorded. The rectangular block at the mid-point of the line should be considered as part of the same installation. This block was added at the expense of the ninth starting position on the platform, an addition that goes with the end blocks which were put in place after the platform had been finished and was in use.

<sup>16</sup>The drawing, *ibid.*, pl. 98, does not show all the details of trimming within the stone sockets. It seems probable that not one stone block but a combination of heavy wooden planks was set into the cuttings.

a narrower channel, between 0.14 and 0.18 m. wide, west of the deeper cutting. Because of the introduction of this block against the platform, starting position nine had to be abandoned. Here the toe grips were plastered over, leaving thereafter only 16 slots for competitors. The platform remained in this form until 146 B.C., at which time the course was, apparently, totally abandoned.

### THE RACES

Although the physical remains of the Corinth racecourse are well preserved, the specifics of how the course was used are open to a great deal of interpretation.<sup>17</sup> The conclusions which seem securely supported by the preserved remains are the following:

1. Neither the earliest Classical nor the 3rd-century track was designed for competitors running in parallel lanes. The Corinthian runners apparently converged to turn around a single post or marker at either end of the stadium. The parallel-lane theory, that each person ran down the course in a separate lane, back in the adjacent lane, is not consistent with the physical evidence. The 5th-century course has a curved starting platform, an illogical design for competitors running parallel with one another. The 3rd-century track, however, is laid out with positions in a straight line. It has, as does its predecessor, 17 lanes, but no room for an extra side lane. Neither platform seems to have been laid out with any consideration for design in pairs of lanes. Moreover, the straight, Hellenistic platform has no system of rectangular sockets between the starting positions. In other stadia sockets along the grooves of the starting line are used as evidence for turning posts as well as starting gates.

2. The stance of the starter on the Corinth track is not that apparently used elsewhere in Greece: at least, no starting line yet known has the widely spaced toe grips of the Corinth line.<sup>18</sup>

3. A system of elaborate starting mechanisms was not installed on the Corinth course until the Hellenistic period, and then perhaps not until after the mid-3rd century. The number of competitors was reduced from 17 to 16 with the introduction of a starting-gate mechanism.

Because of the above points one is inclined to consider the Corinth track as built to serve a set of conditions unique to the competition held on the site. The peculiarities of design, especially in the starting line, exclude the course from use as a training ground for athletes competing elsewhere.<sup>19</sup> Moreover, the lettered starting platform suggests that positions were assigned or drawn by lot. Position would have been a matter of

<sup>17</sup>For the latest discussion of the problems, see Stephen G. Miller, "Turns and Lanes in the Ancient Stadium," *AJA* 84, 1980, pp. 159-166, pl. 25.

<sup>18</sup>See O. Broneer, *Isthmia*, I, *The Temple of Poseidon*, Princeton 1971, pp. 174-181, discussion of length of canonical track; *idem*, *Isthmia* II, pp. 47-66, general description of Isthmia stadia and comparative material, and esp. pl. 97. For general discussions concerning starting lines and positions, see H. A. Harris, *Greek Athletes and Athletics*, London 1964, pp. 64-77, esp. pp. 65-69; also, E. N. Gardiner, *Athletics of the Ancient World*, Oxford 1971 (rev. ed.), pp. 128-143.

<sup>19</sup>This suggestion was made in 1969 in consideration of inscriptions found in the area, which record victories at Isthmia. See Williams, *Hesperia* 39, 1970, p. 39.

great importance in competition, less so, if at all, when practising. Finally, if gates and parallel lanes were used for certain types of races, such as the stade or the diaulos, the Corinth track was designed without consideration for those races. Perhaps the Corinth course was not an all-purpose track, but was, rather, designed for a very specific type of race.<sup>20</sup> Even when the track was completely rebuilt in the Hellenistic period, the basic

<sup>20</sup>The wide stance is not portrayed in red-figure representations of runners at the starting line. See, generally, J. Jüthner, *Die athletischen Leibesübungen der Griechen II*, Vienna 1968, for starting positions of athletes.

For the traditional, close foot position at the start, agreeing well with archaeological evidence as interpreted from the cuttings on starting lines at Greek stadia, attested already in art by 500 B.C., see a statue base with athlete, no. 3476, National Museum, Athens (Jüthner, pl. XIII). Even so, the close-foot starting position is disputed in different cases by various authorities. Compare a bronze youth in the Metropolitan Museum, New York, which Harris (*op. cit.* [footnote 18 above], fig. 5:a) identifies as a runner awaiting the start; Jüthner, pl. XIV, considers the significance of the position unclear. Compare, also, a youth on an Attic red-figured krater in the Louvre, which Jüthner, pl. XXXIV, identifies as a starter, Gardiner (*op. cit.* [footnote 18 above], fig. 90 of p. 145) as a jumper in a "competition for a standing jump without weights, of which we know nothing." For a second such example in the latter book, see fig. 110. The Paris krater illustrates the youth on a raised platform, probably portraying the raised starting line in a stadium.

For the close foot position at the start of the race in armor, see a kylix in the manner of the Epeleios Painter in Palermo (Jüthner, pl. XI:d); a kylix in Baltimore (Jüthner, pl. XXV:a); also, a bronze statuette in Tübingen (Jüthner, pl. XXI).

A second type of start for the race in armor may be for men carrying the javelin; this start is illustrated with athletes in a widely spaced foot position. See a kylix by Epiktetos from Vulci in Paris (Jüthner, pl. XXVII:a); also, a kylix by Pheidippos in New York (Jüthner, pl. XXXII:c). This type of start would fit well with the arrangement of toe grips preserved on the Corinth platforms.

For other competitions in which the wide foot spacing is used but with the back foot turned outward, see javelin hurling: a kylix by the Painter of Cambridge 72 from Vulci in Berlin (Jüthner, pl. LIV:c, also illustrated in Gardiner, *op. cit.*, fig. 144); an amphora by the Bowdoin Eye Cup Painter from Vulci in London (Jüthner, pl. XCV). Such a foot position on the Corinth platform would mean that the toes of the right (back) foot would not use the back position as a toe grip but that the side of the foot would be braced in the V-shaped slot. The cutting is uncomfortable and ill designed for such use. For javelin throwing with the foot not turned, perhaps an early convention to represent the stance, see a bronze discus from Aigina in Berlin (Jüthner, pl. LXVIII) and one in London (Jüthner, pl. LXIX).

For the wide foot position used in discus throwing, see the Berlin discus (Jüthner, pl. LXX) and the London discus (Jüthner, pl. LXX:i). For other representations: a kylix, manner of the Epeleios Painter from Vulci in Rome (Jüthner, pl. LXXXV); a Panathenaic amphora, manner of the Berlin Painter from Vulci in the Vatican (Jüthner, pl. LXXXVIII); an amphora by Euthymides from Vulci in Munich (Jüthner, pl. LVI); an amphora from Vulci in Bonn (Jüthner, pl. XCIV).

With both the discus and the javelin the athlete must step during the throw; thus the foot grips would serve as the starting point of the throw. The question can be asked quite logically whether or not it is practical to throw from a slightly raised platform with one step in the throw carrying the athlete off the platform. Was the starting regulation perhaps not more like what it is at present, with the athlete having a free starting position, but not being allowed to have his feet pass over a line at the end of the throw?

Note, for the relay torch race, the use of the wide foot position by persons receiving the torch on the Spina volute-krater, in this case in a race toward an altar (Jüthner, pl. XL:b). This starting stance shows the back foot spread sideways, also illustrated on a kylix (Jüthner, pl. LIV).

This report does not solve the problem of interpretation of use or uses of the Corinth starting platform, but it is meant to suggest various possibilities. Certain things, however, are sure. First, the 5th-century platform is designed primarily for runners; otherwise the arc-shaped line makes no sense. Lettered positions for javelin throwers or discus throwers are not necessary; for a runner, position is important. The

peculiarities of its design were maintained, making no accommodation to the starting-line design that was popular and common in the stadia of Greece. For these reasons it seems best to assume that a special type of race or races was conducted here, with unique requirements demanded at the starting platform. For example, although one is not sure of the starting position in a torch race or in a race with armor, one might imagine that, with one arm encumbered, the persons participating in either or both of these races might have their feet widely spaced to balance themselves when starting.

#### THE RING FOR WRESTLING, BOXING AND THE PANKRATION (Figs. 1–3, Pls. 2, 3)

The architectural configuration south of the starting platform is fashioned out of the natural slope of the hillside. Here the bedrock is very soft, sandy and reddish, easily cut into but also quick to erode. The main feature of this slope is a terrace, its parabolic limit defined by a low wall of ashlar blocks, with a cobbled “walkway” at its base. Both the east and the west ends of the terrace wall return southward and end against the rising natural slope. Set back at the very southeast limit of the terrace is a large, free-standing monument composed of a circular poros drum supported on a rectangular foundation. At the west end of the terrace a projecting flight of steps, with three levels of treads, descends toward the west. The steps are parallel to the long axis of the later racecourse, but the cobbled “sidewalk” that follows along the base of the parabolic wall goes off more to the northwest, in an acute angle. The orientations of stairs and cobbled paving have no relation to each other (Pl. 4:e). This complex of architectural remains is known from the excavations conducted in 1936/1937 and earlier.<sup>21</sup>

possibility also exists that the back toe grip was designed to be used in certain starts or competitions, but not in others. In early lines a single toe grip is sometimes used on tracks, as at Isthmia and in the gymnasium at Delphi.

<sup>21</sup>For the circular monument: A. N. Skias, “Ἀνασκαφαὶ ἐν Κορίνθῳ,” Πρακτικά, 1891, pp. 122–123, report of the clearing of part of the drum in 1892. R. Richardson excavated the drum to the bottom of its foundations, reported in “The Excavations at Corinth in 1896,” *AJA*, ser. 2, 1, 1897, p. 469. He states that two drums were eliminated by the villagers with blasting powder for building purposes. The half of the monument previously buried under a road was cleared in 1934. See O. Broneer, “Excavations in Corinth, 1934,” *AJA* 39, 1935, p. 54, fig. 1. For publication of the monument, see Scranton, *Corinth* I, iii, pp. 79–85. For a variant opinion upon the restoration of the monument, see O. Broneer, “Hero Cults in the Corinthian Agora,” *Hesperia* 11, 1942, p. 154, where it is restored as the unmolded, tapering shaft pictured on Antonine coins of Corinth; illustrated is one of Lucius Verus, fig. 9. W. B. Dinsmoor, in “Note on a Circular Monument in the Corinthian Agora,” *Hesperia* 11, 1942, pp. 314–315, equates the monument with one drawn by Ittar in 1802, but insists that one drum, not two, was removed by the villagers. (The Corinth drawings are in volumes II and V of the five volumes by Sebastiano Ittar made for Lord Elgin, 1799–1803, now in the British Museum, Department of Greek and Roman Antiquities.) Scranton, in *Corinth* I, iii, p. 82, suggests that the now missing segment of drum illustrated by Ittar was in two sections, joined at the molding, thereby opting for the Dinsmoor hypothesis. The possibility of construction of the circular monument in the Classical period is nowhere discussed.

For the curved terrace with retaining wall and cobbled pavement: Morgan, *op. cit.* (footnote 1 above), pp. 550–551. For discussion of the trimming back of the extremity of the terrace wall for chariot racing, see Broneer, *Hesperia* 11, 1942, pp. 146–147. Many of the wheel ruts appear to be from traffic that cut across the track on non-festival days. Note line of wheel ruts in Broneer, *op. cit.*, fig. 6. This course may have been forced upon the traffic by the construction of the stairway on the west side of the terrace,

Among the details of this area that had been noted by the early excavators is the water channel that is cut into the top course of the parabolic wall. At the beginning of excavation in 1980 this lay exposed, from the stairway at the west end of the terrace to a rectangular basin constructed within the terrace wall. A second basin, fed by the channel, was built against the face of the wall between the first basin and the steps, slightly less than seven meters north of the stairway.

The basin that was built within the terrace wall was designed to collect water to a depth of 0.22 m., with the overflow carried off to the northeast by a channel set into the cobbled sidewalk. This channel is a western segment of that which passes under the south end of the Hellenistic starting platform (see p. 12 above).

Practically the only ceramic evidence recovered in the early excavations that is usable for dating any phase of the drain is a deposit of pottery and figurines found inside the water basin built within the parabolic terrace wall. The figurines were dated around the mid-3rd century, but the later third quarter of the century might be a safer chronological estimate.<sup>22</sup> The figurines are late horse-and-rider types, shields, and other terracottas appropriate to a hero.

From excavation this year it is clear that the drain went out of use sometime before 146 B.C. This fact was established during the excavation of two segments of the drain north of the starting platform. The drain was in use for less than one hundred years.

The 1980 excavation south of the joint between terrace wall and steps has produced some crucial supplementary information concerning the water channel. It is now known to extend southward from the west end of the parabolic wall onto the bedrock of the terrace. There it bends slightly toward the east, with a rectangular water basin at about three meters from the end of the terrace wall. The basin is set into bedrock, its interior bottom cement lining at an elevation of +77.85 m.; the floor of the water channel is at an elevation of +78.15. This arrangement allowed water to stand in the basin to a depth of 0.30 m. at times when water was not flowing through the channel. Unfortunately, no traces of the supply channel are preserved. Moreover, Roman paving activity on the terrace and on the slope south of the terrace has eliminated evidence of any continuation of the drain south of the basin.

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which would have blocked the earlier route. Broneer cites wear, rather than purposeful cutting back of the extremity of the parabolic terrace, and the presence of ruts near the starting line as evidence for chariot racing here.

<sup>22</sup>For the initial report of the figurines from the basin: Morgan, *op. cit.* (footnote 1 above), p. 551. This is Deposit X of G. R. Davidson, *Corinth*, XII, *The Minor Objects*, Princeton 1952, p. 18, pl. 143:a. See also Broneer, *Hesperia* 11, 1942, pp. 145, 149–150, fig. 7, where he dates the deposit in the 240's B.C. He also assumes that the deposit was made within the basin while the water channel was still in use, thus explaining the soft condition of some of the figurines. Davidson dates the material by parallels in Deposits II and VI, *Corinth* XII, p. 20, to about 250 B.C. Deposit VI has in it two coins of Antigonos Gonatas and one of Ptolemy III, which puts the material within the third quarter of the century, and not necessarily quite so early as the 240's. See G. R. Davidson, "A Hellenistic Deposit at Corinth," *Hesperia* 11, 1942, pp. 105–106 for a discussion of Deposit VI.



The discovery of the third basin very much changes the interpretation of both the function and the design of the terrace and of the water channel associated with it (Fig. 3). Previously the channel and its basins were considered to have served the athletes participating in and the spectators watching the track events.<sup>23</sup> The position of the newly found basin on the terrace and its water channel which continues the curve of the parabolic wall, although somewhat more abruptly, defines an oval area on the terrace. One now can imagine that this basin was meant to be used by spectators on the terrace watching competitions there as well as the track events. The position of the newly discovered basin virtually excludes use of its water by spectators standing along the track.

Since its initial excavation the terrace has been identified as a viewing stand or a stand for judges presiding over foot races.<sup>24</sup> The full clearing of the 5th-century starting line now shows that the terrace is an inconvenient design for such a use and at an inconvenient distance from the track with which it is contemporary. One wonders why the design of the elaborately constructed terrace was not more closely related to the track. Moreover, the cobbled sidewalk at the base of the terrace is without specific need or meaning if the terrace is a judges' platform; it is paralleled nowhere else in Greek stadium design.

A test trench 1.50 m. wide was made this year on top of the terrace to determine what remains exist there from the Classical period. One narrow foundation trench, *ca.* 0.30 m. wide, was found to have been cut shallowly from east to west in the soft bedrock. The fill within the cutting, now robbed of its stones or blocks, was Roman; thus its construction date is unascertainable, but the cutting probably should be considered of the Early Roman period. A very casually laid line of rubble forms a second foundation not quite parallel to and about four meters north of the first, at the north edge of the terrace. This also should be considered of Early Roman date. Elsewhere the soft bedrock is smoothed level and is without signs of early cuttings, while along the northern extremity of the terrace, where the bedrock starts to slope downward, the flat level of the terrace is maintained by the addition of a hard-clay and pebble floor.

Three fragments of Classical cement with cavetto molding have been recovered from fills unrelated to the terrace but in its vicinity. These are curved in plan, with dimensions that allow them to find positions along the curve of the parabolic wall. The cement of the moldings is similar to that which is painted red on the vertical face of the wall. The fragments, A-1980-5–A-1980-7, are restored now as part of a Classical cement

<sup>23</sup> Morgan, *op. cit.* (footnote 1 above), pp. 550–551.

<sup>24</sup> *Loc. cit.*, where it is suggested that the terrace supported grandstands for spectators. The terrace is considered a place for spectators and judges of the games in J. L. Caskey, *Ancient Corinth. A Guide to the Excavations*, 6th ed., [Athens] 1954, p. 47. M. Sakellariou and N. Faraklas, in *Ancient Greek Cities, III, Corinthia-Cleonea*, Athens 1971, call it an exedra for judges (p. 98, fig. 57). The post holes used as evidence for scaffolding for grandstands have been sunk into the walls of the water channel on the terrace, into steps, and into the terrace in general, without respect for the shape of the terrace itself. One hole was found lined with the neck of an Apulian amphora, a shape that is late enough to be Early Roman rather than Greek. In fact, the over-all pattern of holes strongly suggests that the holes which have been thought to be Greek are, rather, to be associated with levels that are *post* 146 B.C.

coping of the terrace wall in its early phase (Fig. 6). One of the fragments was found in modern fill; the other two were recovered from strata dated within the 3rd century B.C. One might imagine, therefore, that a crowning molding of cement on the terrace wall was destroyed and discarded when the water channel and basins were added to the terrace. This alteration of the terrace is considered to have been made with the construction of the Hellenistic starting line, i.e., after the mid-3rd century B.C. (see below, p. 18).

The only monument associated with the design of the parabolic terrace stood at the very southeast limit of the space, with the central area itself kept free and unencumbered. In fact, the free area appears to have been defined by the water channel and basins encircling the terrace. It is here suggested that the terrace was designed in this form for athletic events, such as the pankration, wrestling, and boxing. The majority of the spectators would have stood or sat on temporary bleachers erected over the race track. There they would have watched the competitors as they fought on the open terrace, which rises 0.70 to 0.80 m. above the track. Other spectators would have clustered at the south side of the ring, which is here defined by the channel and newly excavated basin on the terrace. From that side they would have witnessed the events from the slope above the terrace.

If the parabolic platform is considered to have been used as a ring for athletic competitions, the post holes sunk into the race track north of the platform can be explained as having been used for the temporary bleachers. Post holes were found at every level and at almost every place within the limits of the 1980 excavation. Many at high levels used Apulian amphora necks to reinforce their sides. These holes are different in a number of ways from the holes cut into the track surfaces. All of those at the track level are of Classical and, probably, Hellenistic date and were exposed during the clearing of different levels of running surface. These holes appear each to have been used only once, thereafter filled and frequently plugged with a cobble or two. The holes were not all used at the same time, for different sets of holes were sealed under different crusts of poros. Unfortunately, roots of weeds and flowers have penetrated and softened many of the running surfaces since the excavations of 1937. As a result the precise pattern of posts at each poros level could not be isolated within the few grid sections of running surface that were cleared this year (Pl. 3). To judge from the excavation of 1980 the holes do not appear to exist farther north than 13 meters from the parabolic terrace. If temporary stands or *ikria* had been erected around the terrace for spectators to witness physical-contact sports, then the cobbled paving at the base of the terrace wall was used as a walkway similar to that which is found between the orchestra circle and the cavea of the usual Hellenistic theater.

The steps that project westward from the west end of the terrace wall lie parallel to the axis of the Hellenistic track and appear to date from the period when the early track and starting line were reoriented. Numismatic evidence recovered during the excavations of 1970 in the Sacred Spring indicates that the change in orientation of the track came sometime after 280 B.C. This year, the fill behind the stairs, a homogeneous dump

of earth laid down with the building of the steps, was excavated. It contained no mold-made relief bowls, yet it had in it examples of kantharoi, bowls, and plates that should be dated within the second and third quarters of the 3rd century.<sup>25</sup> The fill and the steps might best be dated within the third quarter of the century.

That the steps had an earlier phase, however, is indicated by the orientation of the west arm of the cobbled walk that surrounds the terrace wall. This segment of cobbling and, probably, an early flight of steps that rose from along the south side of this pavement, but is now removed, had extended at a more acute angle from the terrace than do the stairs built in the 3rd century (Pl. 4:e). The original angle was determined by the course of a road that rose from the lower Lechaion Road Valley and turned above the cliff of Peirene to pass south of the terrace. This road is discussed more fully below as part of the general network of streets of the southeastern valley (see p. 22).

The precise chronological history of the parabolic terrace cannot be documented. Because the terrace wall that surrounds the platform is built into the bedrock of the sloping hillside, no construction fill was recovered by which to date the initial phase. One small test trench at the west end of the cobbled walkway provided some sherds. These indicate a date of the late 5th–early 4th century B.C. for the laying of the cobbles and their surrounding poros curbing.<sup>26</sup> One knows as well from two other facts that the cobbled paving predates the Hellenistic race track: First, the cobbled walk was buried by the laying of the Hellenistic earth track. Second, the northernmost part of the terrace was trimmed back so that the terrace wall would not project into the southernmost lane of the Hellenistic track.<sup>27</sup>

The water channel that runs along the top of the terrace wall appears to be an alteration of the original fabric of the terrace, made, probably, when the Hellenistic track was laid out. The one basin of the system that sits against the terrace wall does not bond with that wall. In fact, the cement wall coat, painted red at this point, is still preserved on the wall behind the basin. The water channel, once past the terrace, is seen to be built into the Hellenistic starting platform (see above, p. 12). Thus it might be deduced that the channel was laid simultaneously with the construction of the Hellenistic track, probably in the third quarter of the 3rd century B.C.

<sup>25</sup>For the numismatic evidence, see C. K. Williams, II and Joan E. Fisher, "Corinth, 1970: Forum Area," *Hesperia* 40, 1971, pp. 16–51, esp. p. 22; p. 43, no. 139.

For the material associated with the steps, see Pottery Lots 1980-128 and 1980-129. The upper level, Lot 1980-128, apparently was slightly disturbed by Roman levels of the forum; the fill contains one sherd from an Eastern Sigillata A hemispherical bowl and one from an imbricated molded relief bowl. The fill contains four coins: 1980-126–1980-129. The uncontaminated fill behind the steps, Lot 1980-129, contains no molded relief bowls but has in it one West Slope plate with offset rim, nine stamped amphora handles, and 16 coins: 1980-132, 1980-134–1980-137, and 1980-141–1980-150.

<sup>26</sup>Pottery Lot 1980-139.

<sup>27</sup>Morgan, *op. cit.* (footnote 1 above), p. 551, where the cuttings are said to be for the redesigned racecourse. See Broneer, *Hesperia* 11, 1942, p. 14, for the opinion that the trimming was made by wear from chariots. The straightness of the cutting back of the wall and the lack of wheel marks anywhere close to the wall make the second interpretation less attractive than the first.

## THE CIRCULAR MONUMENT (Pls. 2, 5)

A large circular drum, set upon four courses of rough ashlar foundations, dominates the southeast extremity of the parabolic terrace (Pl. 5:a). The diameter of the drum is 2.10 m., its height 1.35 m. The monument has been considered Roman, with its initial construction dated *ca.* 15 B.C.<sup>28</sup> Because of the excavation into Classical levels which was done this year, it is now considered probable that the monument is Greek and of the 5th century B.C. None of the following conclusions, however, invalidates the Roman phases of the monument as published by Scranton.

The rectangular podium of foundation blocks upon which the drum sits is in no way oriented to agree with the walls of the neighboring Roman buildings, neither the Central Shops building, the terrace behind it, the Julian Basilica, nor the Southeast Building. Indeed, all of these Roman buildings are later in date than the circular monument; but the Romans expended much effort to disguise the rectangular foundation that supported the drum once they started to build in this part of the forum. The podium is not even oriented in respect to the Early Roman stoa above the cliff of Peirene (see below, p. 27, also Pl. 2), nor to the 4th-century B.C. South Stoa.

The position of the podium of the circular monument is related to the arm of the early Classical Lechaion Road Valley thoroughfare that turns toward the southeast and passes south of the parabolic terrace and the circular monument (see below, p. 22, also Figs. 1, 2). Its orientation is almost parallel to the 5th-century built drain that defines the south side of that road and to the 4th-century built drain that replaced the earlier one. There is also a direct relationship between the orientation of the podium and the western arm of the cobbled paving that is associated with the parabolic terrace upon which the monument stands. All seem to be contemporaneous and should be dated before the Hellenistic race track and the South Stoa had established the new orientation for the architecture of this area, which was also followed in the Roman period.

With the possibility in mind that the circular monument is Classical in date, one might well reconsider the Ittar drawing of a *pedistallo in Corinto*.<sup>29</sup> Dinsmoor associates the drawing with the circular monument in question; and a comparison of measurements on the drawing with the dimensions of the monument itself seems to bear out the conclusion. Although drawing and monument have been associated in previous publications, there has been no discussion concerning the molding recorded in the Ittar drawing but missing on the monument itself. The molding would have been on the drum of the monument, which was broken up by villagers hungry for building material. The drawing shows a hawksbeak above a simple fascia. The hawksbeak is pre-Hellenistic in profile, with a groove dividing molding from fascia. The height of the hawksbeak is greater than its projection, and, although not paralleled by other published moldings, it may well be a profile peculiar to Corinth, with its quick concave turn under the projec-

<sup>28</sup>See above, footnote 21.

<sup>29</sup>See footnote 21 above.

tion.<sup>30</sup> All in all, the molding does not look to be any later than the last quarter of the 5th century, and probably is earlier. Certainly the molding, as recorded, cannot be Hellenistic or Roman, unless the base was erected as a copy of a Classical original.

If the circular monument is accepted as Classical, then the terrace wall 3.50–3.80 m. to its south also should be considered Greek rather than Roman, along with the two smaller poros foundations, apparently for monuments, at the south side of the wall. All are oriented similarly, and neither the tooling nor the construction techniques suggest a Roman date.

The above evidence suggests that a large circular monument, supporting tripod or statue, stood on a rectangular base, only the core of which is still preserved, at one edge of the parabolic terrace, probably with a series of monuments or dedications set along the terrace wall and roadway that run south of the terrace.

## CONCLUSION

Sparta supplies a parallel for the Corinthian complex of combat ring, racecourse, sanctuaries of gods and heroes, and an assortment of monuments and statues. Pausanias mentions the Spartan racecourse as “the place where it is the custom for the young men even down to the present day to practice running.”<sup>31</sup> Near the course was the Platanistas, apparently a circular, or at least not rectangular, combat area surrounded, however, by a moat. Among other things, the Platanistas was used for a festival which was celebrated with a mass pankration-like competition. Pausanias notes various heroa and sanctuaries in the area, close to the track and the Platanistas. The whole complex was distant from the agora of the Lakedaimonian city, apparently more so than are the Corinthian track and platform for physical-contact sports from the Corinthian agora, assuming, of course, that the Corinthian agora lies somewhere north or northeast of Temple Hill.

The Spartan example is here cited as an illustration of a possibly parallel complex in a non-central position within a city. The existence of an open athletic area within the city of Corinth need not imply the coexistence there of the city’s agora.<sup>32</sup>

## THE ROAD SYSTEM OF THE SOUTHEAST VALLEY

(Figs. 1–3)

Because only scattered information is available concerning the topography of the Classical city beyond the central excavation zone, it is difficult to understand the full significance of the various roads that radiate from the Lechaion Road Valley. The thoroughfare that disappears from the southeast corner of the excavation zone, the second

<sup>30</sup> Compare the Ittar drawing with hawksbeak profiles from epikranitis and monument crowns in L. T. Shoe, *Profiles of Greek Mouldings*, Cambridge, Mass. 1936, pp. 116–129, pls. LVI–LXI.

<sup>31</sup> Pausanias, III.14.6–15.2. I thank D. G. Romano for having brought this parallel to my attention.

<sup>32</sup> Williams, *Hesperia* 39, 1970, pp. 32–39.

that extends south toward Akrokorinthos from the southwest corner of the archaeological zone, and the one between those two, which continues southward as an extension of the main north-south artery of the Lechaion Road Valley, all were important routes for the circulation pattern of the city and were in use by the early Classical period, if not earlier. The extension southward of the central route of the Lechaion Road Valley beyond the Heroon of the Crossroads, although established early, was terminated with the construction of the South Stoa, a long building which eliminated north-south communication across most of the south slope of the upper Lechaion Valley after the third quarter of the 4th century B.C.

A diagonal road, which branches to the southeast above the cliff of Peirene and rises along the slope immediately south of the parabolic terrace, connects the north-south artery of the Lechaion Road Valley with the road at the east side of the excavation area. This branch was laid in the 5th century B.C. but probably had a predecessor, all evidence of which has been eliminated by the grading of bedrock. The construction of an elaborate poros conduit along the south side of this diagonal road is one with the cutting down of the slope. The conduit served not only as a water channel but as a terrace wall for the stabilization of the very soft, sandy bedrock at the south side of the road.

The conduit was built with a floor of large, thin slabs, laid almost as a sidewalk (Pl. 5:b). The blocks range in thickness between 0.07 and 0.20 m., in width between 0.43 and 1.28 m., in length between 0.87 and 1.00 m. Along either side of the slabs runs a flat, chisel-dressed bed, upon which were set narrow side walls of poros, leaving an open drain-bed width of about 0.60 m. The south side of the drain was fitted snugly against the cut-back bedrock of the hillside. Poros slabs probably spanned from side wall to side wall at a height that would not have protruded above the top of the slope but, rather, would have been flush with it.

Only the floor slabs of the conduit or drain are preserved. These have been deeply eroded by water in some places, worn by wheeled traffic in others. The fill of gravel and washed sherds in the eroded areas of the paving suggests a 5th-century date. This material probably is from the period of use of the conduit. The wheel ruts worn into the stone slabs and their associated road metal suggest that the drain was dismantled by the end of the century.

A new drain almost parallel to the earlier one but two or three meters south of it supplanted the 5th-century conduit (Pl. 5:c). The new channel is cut into the soft bedrock of the slope. Its bottom is lined with poros blocks about 0.80 m. long and between 0.56 and 0.85 m. wide. The sides are coursed ashlar, with the blocks beveled along one side and the top. The cover slabs, buried under ground, are *ca.* 0.25 m. thick. The drain itself has a clear width of 0.57 to 0.60 m. and a clear height of 0.69 m. The portion with cover slabs still in place south of the parabolic terrace is as it was built; but where the drain passes under the Roman Central Shops and where it emerges immediately north of the shops, the fabric is either Roman or very much altered Greek.

The changed position of the drain allowed the southeast-northwest roadway to extend its southern limit; immediately south of the road and the drain was erected at least one new building, of which now only a large stretch of cement floor, a well, and foundation trenches are preserved.

The existence of a building sited along the south side of the roadway and drain vividly illustrates the fact that the open part of the upper valley, at least above Peirene, was limited to the vicinity of the racecourse and to the north side of the road. Houses apparently built in city blocks occupied the area south of the road. This pattern of land use was maintained here until the second half of the 4th century when the South Stoa was constructed and a general change was made in the area. Only then was the open space around the racecourse expanded beyond the limits of the southeast-northwest road.

Little new excavation was undertaken this year to clarify the form of the city blocks south of the road or the plan of the building itself. In fact, little new excavation has been done here since the discovery of the structure in the 1933 excavation season.<sup>33</sup> At that time a pebble-aggregate cement floor was uncovered behind rooms 4–7 of the Roman Central Shops, but the north side of this floor and the north façade of the building had been destroyed by the Roman shops, as had its northwest corner. The south side of the Classical building still lies under unexcavated fill.

The pebble-cement floor originally abutted the east wall of the structure and now is preserved for an uninterrupted length of a little under seven meters toward the northwest. The floor lies at an elevation between 78.72 and 78.77 m. above sea level. Along the eastern edge of the floor are preserved traces of what had been a bench 0.45 m. wide, originally built against the west face of the east wall of the building. The southern limit of the cement floor is defined by a cutting in bedrock for the foundations of a wall. At about 1.20 m. south of the cutting is a well shaft, also cut into bedrock, along with a Classical lekane set in the earth for water drawn from the well.<sup>34</sup> The well, 1980-1, had been discovered by the end of the 1933 excavation season. No record has been located that describes its contents.

Among the other visible remains associated with the building is a small poros drain, running at surface level toward the north and, probably, flowing into the large drain in the 4th-century road. The small drain runs parallel to the east wall of the building; this arrangement, which serves to lead off water from between houses, is commonly found within Corinth city blocks.<sup>35</sup>

The construction of this second large drain is part of a general redevelopment of the area south of the parabolic terrace. No stratigraphic evidence, however, exists from excavation this year to indicate whether or not this reconstruction was undertaken in

<sup>33</sup>The only published mention of the building is in Scranton, *Corinth I*, iii, p. 75, where it is referred to as Greek floors behind Shop VII of the Central Shops; it is not on plan J of that volume.

<sup>34</sup>Deep lekane C-1980-161, with ring foot, horizontal rim, bands in red and brown-black, triangles on rim.

<sup>35</sup>Compare with the arrangement between Buildings I and II, II and III. See plan in C. K. Williams, II, "Corinth, 1971: Forum Area," *Hesperia* 41, 1972, p. 166, fig. 5.

the late 5th or in the early 4th century B.C. In related areas at the east end of the racecourse a general change seems to be indicated for the early 4th century B.C. (see below, p. 24; also p. 26).

One definite statement that can be made about the chronology of the building, however, is that it was abandoned, as were Buildings I–IV at the west end of the racecourse, by the time the South Stoa was inaugurated, for the cobbled pavement that is associated with the occupation level of the stoa and the open space north of it covers the building with the cement floor and Well 1980-1.

The road that rises above the cliff of Peirene to pass behind the parabolic terrace and on toward the southeast corner of the excavation joins an important north-south road which runs along the east slope of the valley. These roads meet just southeast of the circular monument on the parabolic terrace. The north-south road appears to be a determining factor for the siting of at least two important monuments of the upper Lechaion Road Valley.

The starting platform of the Classical racecourse was built as close as possible to the west edge of the north-south road (Pl. 6:a). This was in order to fit the maximum length of track between the starting line and the north-south road at the west side of the valley without impinging on either of these thoroughfares. When the orientation of the track was changed in the Hellenistic period, the new starting platform was built against the west side of the road on the east slope and parallel to it. With a terrace wall defining the east side of this road, only the width of the road itself was available as a run-over for competitors at times when the starting platform doubled, if it ever did, as the finish line (Pl. 6:b).

More important, the road established the limit for the east end of the South Stoa, since the construction of the building was not allowed, apparently, to cut circulation on this route. Thus the length of the stoa was determined by the amount of space available between the road and a stele shrine which stood from the 6th century onward along the north-south road at the west side of the valley. The stele shrine apparently fixed the position of the west end of the stoa, for the shrine was not dismantled completely with the construction of the stoa. Instead, the shrine was preserved in abbreviated form and partially rebuilt against the west wall of the stoa itself.<sup>36</sup>

The north-south roadway at the east side of the valley marks the division between the open area of the racecourse and the built-up city blocks east of the road. The evidence for continuous Classical and Hellenistic domestic use east of the road is not indisputable, for the trimming down of bedrock by the builders of the Julian Basilica has eliminated most of the traces of earlier occupation on the site. In earlier excavation only six wells and one cistern of the pre-Roman period were found, all within the southern half of the basilica.<sup>37</sup>

<sup>36</sup>C. K. Williams, II, "Corinth, 1977: Forum Southwest," *Hesperia* 47, 1978, pp. 5–12, pls. 1, 2.

<sup>37</sup>Well of the first half of the 6th century B.C.: 1915-1; well of the second half of the 5th century B.C.: 1915-12; Hellenistic wells: 1914-3, 1914-4, 1915-3, possibly also 1915-5; Hellenistic cistern: 1914-1, top of



This year, one pebble-cement floor and traces of a house were found under the northwest corner of the basilica. The floor of the house was drained by a channel cut in bedrock, which showed two phases of use. The second phase terminated in the early 4th century, probably around 370 B.C. The abandonment of this drain is contemporary with the filling in of a public drain which had run along at least 54 meters of the east side of the north-south road. At least one other house, the remains of which lie within the north end of the portico of the Southeast Building, had been served by this public drain.<sup>38</sup>

Once the drain was abandoned, the cutting was used as a foundation trench for a socle which carried on it a series of thin poros slabs or orthostates. Fill was packed against the east side of the orthostates, and thus, after the first quarter of the 4th century, a low terrace wall, not a drain, defined the east edge of the road (Pl. 6:b). No Hellenistic building relating to the terrace has been found that, at the moment, suggests why the change was made.

South of the Julian Basilica the terrain was much less drastically altered. As a result, remains of wells, house walls and wall trenches, drains, and a cement floor of the pre-Roman period have been found within the foundations of the Southeast Building. The debris and fills associated with those remains testify to continuous inhabitation there from as early as 740 down to 146 B.C.<sup>39</sup>

Evidence exists for a roadway along the north side of the racecourse, its use datable from the time of the construction of the Hellenistic track down to the time when it was discontinued, apparently with the destruction of the city in 146 B.C. Simultaneous with the construction of this track, its starting platform, and drain was the laying of a hard, limestone-boulder curb at the junction between this road and the one at the east end of the track. The row of boulders now is smooth from wear, but shows light ribbing from wheeled vehicles crossing east-west over it. The main wear from vehicular traffic, however, is in the north-south direction: there is a wheel rut at least 0.16 m. deep along the east edge of the stones. Clear evidence of rutting is visible on the north-south road wherever its road metal is preserved (Pl. 6:a).

As seen from this description, roads are attested on all sides of the Classical and Hellenistic race track. No evidence exists, however, for the restoration of a wall around the course which might ensure even a minimal degree of privacy or control. The openness of the area is, in fact, an argument for considering the track to be part of a festival ground rather than a practice area associated with a gymnasium.

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which has one Roman coin, from alteration of basilica? The northernmost of the wells, 1915-4, within the central block of foundations of the basilica, is Tiberian in date.

<sup>38</sup>Weinberg, *Corinth* I, v, p. 4 with pl. I: "In the early part of the fourth century B.C. the slope seems to have been well settled, for within the area there are two wells, one circular and one rectangular, which belong to this period, and also the remains of a paved floor which probably was in the court of a house . . . ."

<sup>39</sup>For a description of the pre-Roman remains, see Weinberg, *Corinth* I, v, pp. 4-5; to this add Well 1978-4, filled ca. 720, or slightly later. For the well, see Williams, *op. cit.* (footnote 4 above).

## THE AREA NORTH OF THE STARTING PLATFORM

(Figs. 1–3, Pl. 2)

The conglomerate cliff of Peirene runs across the Lechaion Road Valley from east to west, dividing the valley into the upper level with its racecourse and the lower level with the Spring of Peirene and Temple A. The cliff face east of the spring now is covered from view by a heavy, coursed-ashlar wall (Pl. 7:a). The purpose of this wall was neither to extend the area around the starting platform of the racecourse northward, for the wall is built close to the cliff edge and extends the space northward for no more than one meter, nor was the wall meant to secure the natural rock of the cliff from collapse, for the fabric of the wall is constructed totally independent of the rock and offers no support. Excavation this year above the cliff edge and immediately south of the ashlar wall in question revealed the fragmentary remains of a Classical building. It is largely destroyed but yet enough preserved to permit the assumption that the wall that masks the cliff of Peirene was designed and built as one with the building on the cliff.

The wall is preserved for seven courses, with foundations of at least four more. The toichobate course is 0.46 m. high, with the individual blocks ranging in width from 0.38 to 0.58 m. The wall blocks are laid in courses between 0.37 and 0.46 m. high, each course set back from the one below by 0.025–0.06 m. The blocks themselves range in length from 0.72 to 1.35 m. Each has a reveal along its bottom and right vertical edges. The reveals are smoothly cut, while the faces of the blocks still retain clear marks of a flat chisel. In other words, the wall is a heavy, solid construction, well built, but rusticated. The surface treatment is that of a terrace wall, and a terrace wall it is when viewed from the lower valley around Peirene and to the north.<sup>40</sup> It is also the foundation for the north, or back, wall of a building on the terrace above, whose floor level lay above any wall course still preserved.

Little of the building that stood on the terrace now remains, the consequence of intense building activity in the Early Roman period along the top of the cliff over the spring of Peirene. What does remain is a segment of north-south wall and, abutting it, a segment of pebble-mosaic pavement which slopes from an elevation of +76.86 at the east to +76.72 at the west; it is designed as an over-all white background with black pebbles laid in diagonal lines across it, dividing the floor into diamonds or lozenges (Pl. 7:b). No border is used between the pattern and the wall. The wall itself is preserved as a low course of poros, rising to an elevation of +77.07, with waterproof cement on its western face. Above this course the wall probably was constructed in mud brick, for a heavy debris of red clay had collapsed directly upon the mosaic.

Pottery debris from under and within the mud-brick debris dates the destruction of the building to the end of the first quarter of the 4th century, or, perhaps, as late as 370 B.C. No evidence exists for a structural replacement in the Greek period over the ruins associated with the mosaic floor. Only after the refounding of Corinth by the Romans was a stoa erected on the site.

<sup>40</sup>B. H. Hill, *Corinth I*, vi, *The Springs*, Princeton 1964, fig. 28 on p. 51.

## MUMMIAN DESTRUCTION AND THE ROMAN COLONY

At the north and northeast of the latest starting platform, a heavy strosis of roof tiles was found covering the highest level that can be associated with the Hellenistic racecourse. The tiles were spread over the ground in such a manner as to suggest that they were part of a fall rather than purposely dumped fill. A number of fragments have been mended as whole tiles or large segments thereof. This tile debris should be equated with the destruction of the city by Mummius.

Over the fallen roof tiles are levels of mud brick, additional fragments of roof tiles, and some stone architectural debris. In this fill was found a fragmentary terracotta lion-head spout, **8**, which matches those spouts that decorated the roof of the South Stoa. Thus one sees that not all of the debris piled here after the destruction of Corinth in 146 B.C. is from the immediate vicinity. Rather, some or perhaps all of the material from this upper stratum was dumped as part of a minimal reorganization by squatters. Other noteworthy fragments recovered from this fill include a bearded head, **11**, and two fragments of late Archaic Doric capitals (see **10**).

The dumped fill, 0.35 m. thick, was sealed by an occupation level with some rudimentary walls of re-used blocks, along with some other, specially cut blocks, apparently a door jamb and a threshold. The floor level here is 77.70 m. above sea level. The threshold block is at +77.78 m.

The squatter level was buried by the activities of the Early Roman colonists. First of these was the construction of a long east-west stoa on the cliff of Peirene, its west end close to the north-south road west of the fountain.<sup>41</sup> The easternmost extent of the southern foundation for this stoa is traceable until it disappears into unexcavated fill immediately north of the northwest corner of the Julian Basilica. This foundation, no wider than 0.80 m., sometimes even narrower, was laid as a packing of stones and fragments of Greek architectural members within a trench dug through the levels that cover the racecourse (Pls. 2, 3 top). Although narrow, the foundation probably carried a leveling course of cut blocks which, in turn, carried a colonnade. The north or back wall of the colonnade was built between 3.70 and 4.00 m. north of the southern foundation. It is preserved only at foundation level, where it also is constructed of re-used blocks and rubble piled in a trench. Projecting north from this foundation are a series of fragmentary north-south rubble foundations, of which three were distinguished this year. These were covered with a thin leveling course of tile and small rubble fragments in earth mortar. The spur foundations apparently supported dividing walls for rooms behind the colonnade and provide the evidence for restoring a series of rooms a little over three meters wide by 2.5 m. deep behind the colonnade.

<sup>41</sup> *Ibid.*, p. 69. For other mention of this early stoa, see Scranton, *Corinth* I, iii, pp. 136–139. Scranton describes the colonnade of the stoa as about four meters south of the façade of Peirene and presents the possibility that a concrete foundation on the cliff over Peirene is the back wall of the stoa. This foundation, however, appears to be of a later date. Rather, the back wall of the Early Roman stoa is on the line used by the back wall of the second stoa and is now distinguishable only in a few places.

The back wall of the stoa was built along the cliff edge of Peirene. Since it was designed to hold back the earth fill under the floor of the stoa, that is, to serve as a retaining wall along the face of the cliff, as well as to support the back, north wall of the stoa, it was constructed more carefully than the two foundations to its south. The remains show that it was built of large, squared poros blocks that were joined by swallow-tailed clamps. Such clamping was also used elsewhere, in the Early Roman fabric of Peirene.

As of the moment almost nothing of the superstructure of the stoa has been identified. A fragment of poros Doric column capital is one candidate for a place in the building. Now in its second use, the fragment is buried among the re-used blocks in the foundations of the east end of the second stoa built over Peirene. The simple, straight echinus and claw-chisel work are typically Roman, as is the type of plaster finish that still clings in places to the capital. Since there must have been little Roman building debris available for re-use so early in the Roman city, there is good likelihood that this finished capital came from the first stoa when it was dismantled to make room for its replacement. If this is assumed, one can then probably assume as well that the first stoa was completed and used, rather than abandoned in the process of construction.

The first stoa had a short life. Perhaps its walls on poorly constructed foundations demanded almost immediate repair, or an over-all change in the urban plan demanded a new design. In any case, the Early Roman stoa was dismantled, its foundations were pilfered for re-usable blocks to a depth that made further stone removal difficult. The empty trenches were then filled with earth from the trenches being dug for the new stoa. What was left of the earth was spread generally over the area, raising the level by 10 to 15 centimeters. From this fill were retrieved not only Hellenistic wares dug up from the Hellenistic and squatter levels, but also Roman material that had probably been used in the rooms of the first stoa. The Roman pottery and lamps recovered from this level can be dated within the first years of the 1st century after Christ. For the latest material from this fill, see the Appendix.

The foundation trench for the front, or south, façade of the second stoa was laid out about 1.70 m. north of the façade of the earlier stoa. The new portico was designed to be about 4.50 m. broad with the back, or north, wall of the building on the line of the back wall of the first stoa. No line of rooms behind the portico was planned, however, for the new structure. Perhaps the successors to the rooms of the first stoa are the Central Shops, 36 to 40 meters south of the second stoa.<sup>42</sup>

<sup>42</sup>The Central Shops building, in the form in which it now is preserved, dates from *ca.* A.D. 40–50 (Scranton, *Corinth* I, iii, p. 126). Earlier foundation cuttings in bedrock parallel to the front and back walls indicate the existence of an earlier building, suggested by Scranton to be a stoa (p. 76), probably existing even before the erection of the South Stoa (p. 124).

Such a conclusion seems difficult to maintain with the evidence gathered this year. First, the building with cement floor immediately south of Central Shops rooms 5, 6, and 7 would occupy the same site at the same time. The system of drains and Classical roads in this area also cannot co-exist with such a stoa. If

The construction of the first stoa can be dated contemporary with, or slightly earlier than, the Second Roman phase of Peirene. The demolition of this stoa appears to have been achieved in the beginning of the 1st century after Christ, with the construction of the second stoa following immediately thereafter.

## CATALOGUE

### FILL BETWEEN BEDROCK AND FIRST CRUSHED-POROS LEVEL

Presented below as 1–7 is material recovered from under the lowest crushed-poros floor associated with the stone post 158 m. west of the Classical starting line (see above, p. 9). These have been selected as the most chronologically diagnostic pieces from the fill. Other material of interest was also recovered, including a fragmentary lydion, C-73-367, probably of East Greek fabric; a number of imported bowls, including four in gray East Greek fabric, C-73-351–C-73-354; and an unglazed, one-handled cup, C-73-349. One fragment of a foot from an Attic cup, C-73-12, with an inscription mentioning sacrifice, will be published separately.

- |  |       |   |
|--|-------|---|
| 1. Siana cup.<br>C-73-14. Max. pres. dim. 0.058 m.<br>Attic, reddish tan clay, added purple.<br>Two joining fragments. | Pl. 8 | On body satyr going l., holding kantharos at chest in r. hand. Body outlined by incision; tail, nipple in added purple. Trace of incised beard. Inside of cup glazed. |
|--|-------|---|

the stoa was built in the Hellenistic period rather than earlier, it cannot have been constructed before the change was made in the orientation of the steps west of the parabolic terrace, i.e., not earlier than the third quarter of the 3rd century B.C. when the race track was reoriented. The foundations that run parallel to the Central Shops could be for a bank of stone seats rather than for a stoa, constructed parallel to the Hellenistic race track. This might explain the extraordinarily narrow interval, about 1.70 m., between the two parallel foundations. Scranton mentions that the stoa may well continue eastward past the east end of the Shops. The foundations cannot go much farther eastward, however, for bedrock rises abruptly east of the Shops to support the circular monument (Scranton, *op. cit.*, fig. 46). It seems most likely that the eastern limit of these foundations is close to if not on the same line as the east end of the later Shops.

That these foundation cuttings are for stone bleachers seems unlikely, however. Such a deep back or southern foundation for seating here seems unnecessary. Usually seats or steps are constructed with one course resting on the next with no need for a deep back foundation, that is, if the seats or steps are on a natural hillside, e.g., the seats in the stadium at Epidauros, in the theater at Corinth, and the steps west of the parabolic terrace in this very area. Only when stone bleachers are constructed on flat ground is a heavy back wall needed, for then the wall must retain fill under seats or steps. See the earlier stadium at Isthmia (Broneer, *op. cit.* [footnote 15], pp. 52–55). At Corinth the seats could have been laid out on fill and bedrock without the use of a heavy back wall. Also, a line of bleachers on the site of the Central Shops would have put spectators at quite a distance south of the track.

It seems best, therefore, to assume that the cuttings were for foundations supporting a narrow, simple building, perhaps similar in design to the Central Shops building itself. Such a theory is mentioned by Scranton (*op. cit.*, p. 77, no. 7), but rejected. The cuttings would thus have been for an early phase of Roman shops or offices. The existence of such a building would explain the need for the early squaring off of the west side of the circular podium of the circular monument, an alteration otherwise inexplicable. See the restored plan of the circular monument, second phase, ca. A.D. 15 (Scranton, *op. cit.*, p. 84). The construction of Early Roman shops and the alteration of the podium may, perhaps, have been made at the same time as the construction of the second Roman stoa over Peirene.

No matter what sort of structure was built within the early cuttings under the Central Shops, that structure was not erected before the mid-3rd century B.C.

Heidelberg Painter (identification by H. A. G. Brider), 565–550 B.C.

2. Band cup. Pl. 7

C-73-16, a–d. Est. D. of lip 0.230 m.  
Four non-joining pieces from one cup.  
Attic clay similar to 1, added purple.

Handle rises to just below lip; almost no division between body and rim; start of concave rim at top of handle zone. Reserved band 0.006 m. wide on lower body; handle zone 0.024 m. wide decorated with panthers r., alternating with grazing deer l.

560–530 B.C.

3. Attic lamp, Howland<sup>43</sup> Type 16A. Pl. 8

L-73-4. H. 0.022. D. of rim 0.09 m.  
Fine, dark reddish tan clay (slightly darker than 2.5YR 6/6), slight sparkle. Reddish brown glaze.

Wheelmade lamp broken away at base; almost horizontally flaring lower body, carinated to almost vertical upper wall; thick disk, projecting inside and out; long nozzle with wick hole starting at edge of disk. Unglazed body, wide glaze lines at either edge of disk with sloppy single line between. Nozzle dip glazed to disk.

Cf. Howland, no. 79, late 6th-century B.C. fill.

4. Lamp, Howland Type 12 Variant. Pl. 8

L-73-1. H. 0.026. D. of base 0.062 m.  
Sparkling tan clay (5YR 7/5), reddish brown to black glaze.

Wheelmade lamp with base, conical center. Sides rise with slight flare to sharp angle at disk. Disk overhangs on inside only. Disk 0.015 m. wide. Body unglazed, interior and exterior edges of disk glazed, interior totally glazed.

Profile close to Howland, no. 79; lip pattern close to Howland, no. 81. Late 6th century B.C.

5. Corinthian lamp, Howland Type 16A. Pl. 8

L-73-39. H. 0.025. Est. D. of disk 0.982 m.  
Fine, compact clay, no inclusions (4YR 7/5 core to 10YR 7/2 surface).

Wheelmade lamp with rounded bottom, wall curving to maximum diameter at 0.01 m. below top of disk; above maximum diameter, body turns in. Disk 0.018 m. wide overhangs inside and out. Outside of body unglazed, inside edge of disk glazed, top decorated with three lines, band, three lines; interior floor glazed.

Second, similar Corinthian lamp in Lot 1973-147; one without glazed floor in Lot 1972-8.

Pattern like Howland, no. 92, early 6th century to well into third quarter. The same profile is found in Corinthian lamps from 1937 well (M. Campbell, "A Well of the Black-Figured Period at Corinth," *Hesperia* 7, 1938, pp. 609–610, nos. 229, 230), except that these are solidly glazed and are later. Well has material descending to ca. 480 B.C.

Into last quarter 6th century B.C.

6. Lamp, Howland Type 12A. Pl. 8

L-73-3. H. 0.021. Max. D. 0.069 m.  
Clay light reddish brown to tannish gray (4R 6.5/2 core, 7.5YR 6.5/4 surface), much mica, few gold mica flecks; lackluster black glaze.

Wheelmade lamp with bridged nozzle and thick wall. Wall rises from bottom to maximum diameter at 0.013 m. below top of disk. Disk overhangs both inside and out, with raised lip along outer edge. Unglazed body; inside edge of disk glazed, also band on disk along inside of raised lip. Dipped nozzle, floor of lamp glazed.

Close to Howland, no. 71, but wall not so heavy. With band of glaze on disk, also limited to floor, gold mica; lamp probably not Attic.

7. Lamp, no Howland parallel. Lakonian? Pl. 8

L-73-2. Max. body D. 0.078 m.  
Clay dull, slightly gritty, grayish brown (6YR 5/2.5), slight sparkle to clay and glaze; glaze without any luster, crackled and spalled.

Wheelmade lamp with flat ovoid body rising to filling-hole in continuous profile without articulation; vertical strap handle at back; squared, bridged nozzle. Totally glazed inside and out.

<sup>43</sup>Howland = R. H. Howland, *The Athenian Agora, IV, Greek Lamps and Their Survivals*, Princeton 1958.

## DEBRIS (POST 146 B.C.) NORTH OF STARTING LINE

## 8. Lion-head water spout. Pl. 8

FS-1071. Max. pres. L. 0.0198 m.

Corinthian buff clay, core with mudstone inclusions (10YR 8/4).

Right half of upper head, two locks of mane preserved. Mouth open, cone-shaped side teeth; flabby, scalloped maw; three deep lines on side of muzzle, three across bridge of nose. Lumpy brow bulging against nose; full, wide eye with round eyeball, incised iris, punched pupil. The two pointed locks of mane preserved are antithetically curved, each incised with three deep lines.

Maw red, brown-black along scalloped edge; brown-black dots on muzzle, snout, pupil and upper eyelid; yellow-ocher mane.

Cf. Broneer, *Corinth* I, iv, pls. 19:1, 20:1 and 2.

## 9. Pan-cover tile with antefix. Pl. 8

FA-561. W. of antefix 0.181 m.

Corinthian, greenish buff clay; core with mudstone inclusions. 5Y 8/2.

Combination Corinthian tile with antefix. Cover behind antefix has sides 0.04 m. high, sloping surface between 0.085 and 0.087 m. wide. Antefix with lotus, S-shaped tendrils and nine-leaf palmette, very low relief. Below: drop with three leaves between two blade-leafed lotus leaves; lotus tied by horizontal band, two eyes; S-shaped tendrils around eyes and hanging down. Above: nine-leaf palmette with spade-shaped heart; leaves curve slightly down, with rounded ends.

Decoration light on dark; eyes, drop, and heart red; red also on whole side face of palmette.

## 10. Early Classical Doric capital. Fig. 6

A-1980-3. Restored L. of abacus 0.436 m.

Oölitic limestone.

Doric capital with unfluted necking zone, top of which sets back to echinus. No annulets. Echinus rises at 30° for 0.072 m., then curves in to meet abacus at acute angle. Vertical height of echinus, 0.07; vertical height of plinth 0.07 m. Top horizontal surface of plinth raised 0.001 at 0.065 m. in from plinth edge; sign of burning on raised area.

Second fragment A-1980-2, perhaps from same capital. Restored length of abacus 0.45; vertical

height of echinus 0.065; vertical height of plinth 0.07 m. Trace of one coat of fine white plaster. Sign of burning on raised area.

## 11. Terracotta handmade bearded head. Pl. 9

SF-1980-1. Max. pres. H. 0.11 m.

Missing: left side of head from middle of left eye, most of lower beard. Broken from body at neck under beard.

Corinthian clay (2.5Y 7/4 to 2.5Y 8/3) with pinkish core (2.5YR 6/7), mudstone inclusions; second and outer layers are fine, well-levigated Corinthian buff without inclusions.

Hollow head, two-fifths life size, built up in at least three layers of clay. Broad, squarish, bearded head with detailed modeling achieved by sharply articulated planes. Face framed by hair drawn over forehead to ear in six parallel layers of crimped waves below fillet; traces of same crimped hair above fillet. Low, triangular forehead, arch of brow over eyes articulated only as change in planes. Thin-lidded, large eyes with proper left eye closer to nose than right; upper and lower lids in asymmetrical curves to meet without overlap in outer corner, tear duct at inner corner; eyeballs slightly convex. Straight nose, narrow nostrils. Straight mouth, trace of smile on proper left side; sharply articulated, sensitive lips. Heavy, rounded cheeks sharply articulated from beard. Moustache is sharp, plastic ridge drooping down onto beard; beard and moustache executed as smooth surfaces. Right ear is raised oval surface unarticulated by any anatomical detail. Because fillet and crimped hair decoration are not continued behind right ear, because ear is not finished in detail, and because oval shape of head becomes faceted at 0.018 m. behind ear, head was probably meant to be seen from three-quarter view or in left profile.

White slip used, but poorly preserved on face and hair. Yellow ocher applied directly to clay on underside of beard and hair.

The Corinth head has an affinity with that of the bearded warrior from the Temple of Aphaia, no. 1938 of the National Museum, Athens (D. Ohly, *Die Aegineten*, I, *Die Ostgiebelgruppe*, Munich 1976). The Aeginetan head, if judged by its more V-shaped mouth and less naturally shaped

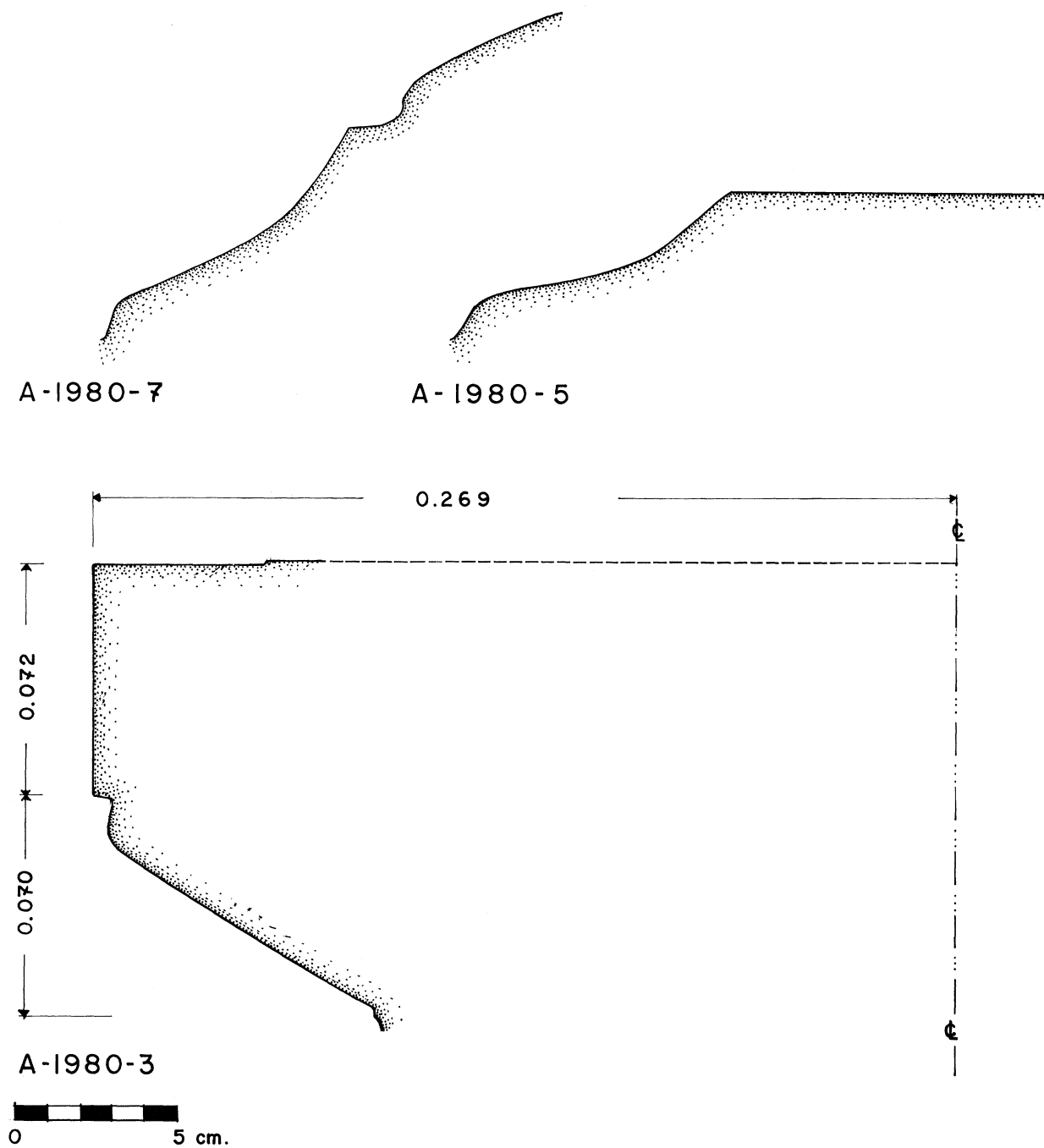


FIG. 6. Profiles: cement coping, Doric capital



eyes, is slightly earlier in date. Close in style of head, but with wider eyes, perhaps because they had been inset, is the bronze Poseidon from Livadostro, Athens National Museum no. 11761 (illustrated in E. Langlotz, *Fruehgriechische Bildhauerschulen*, Nürnberg 1927, no. 29, p. 32, pl. 94:e). See, also, the bronze head of a warrior from the Athenian Akropolis, National Museum no. 6446 (W. H. Schuchhardt, *Die Epochen der griechischen Plastik*, Baden-Baden 1959, fig. 27) and a similar head in stone from Olympia (E. Curtius and F. Adler, *Olympia* III, Berlin 1894, pl. 6). These heads, although close to that of Corinth, are both of a head type that is broader at the temples.

The use of the crimped hair running horizontally across the forehead is slightly surprising, being found, usually, among young ladies, such as the Athenian Akropolis korai. A good example of the crimped hair as found in male coiffure is the Theseus of the Apollo Daphnophoros group (F. Gerke, *Griechische Plastik*, Berlin 1938, pl. 63). See, also, a male youth from the Aigina pediment, Athens National Museum no. 1933. The device can be used for beards; see the head of Dionysos from Ikaria, Athens National Museum no. 3072 (S. Karouzou, *National Archaeological Museum, Collection of Sculpture*, Athens 1968, p. 18, pl. 11:a).

Ca. 490–475 B.C.

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## APPENDIX

## EARLY ROMAN THIN-WALLED WARES AND LAMPS

## (PLATE 9)

The excavations of the 1980 season in the northeast corner of the forum uncovered several levels associated with the Mummian destruction of Corinth. Although a few of the lowest levels may represent actual destruction debris left in place, most levels appear to be the result of a postdestruction dumping of destroyed material. Some of the uppermost levels are clearly such "clean-up" layers which were disturbed in a later period (see above, p. 27). All of the levels yielded large amounts of Hellenistic and Early Roman pottery. In the following study the Early Roman thin-walled wares and the lamps have been singled out for detailed examination since these two categories seem the most chronologically sensitive for determining the dates of the strata that immediately overlie the latest running surface of the racecourse.

## ITALIAN THIN-WALLED WARES

Just under one hundred fragments of thin-walled wares were retrieved from the Mummian destruction levels. As is to be expected from the fragile nature of these wares, the shapes are represented by small sherds only. No complete profile is preserved. The most common form is a beaker with dotted or vegetal decoration in barbotine technique. Also represented are sherds of thorn ware, beakers with low carination, and rouletted wares.<sup>44</sup>

## 1. Beakers with dot-barbotine decoration.

The fabric of this form is extremely thin (*ca.* 0.002 m.) and often gritty in texture. There are few visible inclusions except for scant mica. The fabric varies in color from gray to orange red. The unglazed surface is usually dark gray brown but occasionally is mottled to pink or orange. Small lime eruptions have created tiny bumps on the surface of the clay in many examples.

The sherds with dot-barbotine decoration all seem to come from a single shape: a beaker or "situla" with a flat base, gradually widening sides, inturning shoulder and an articulated rim.<sup>45</sup>

These beakers are decorated about 0.02 m. below the rim with a horizontal double row of barbotine dots from which hang festoons of dots. These festoons continue down the body wall to the foot. The sherds show that two main patterns are used: one has broad, flat swags, and the other has deeper, more tightly arranged swags forming a design similar to fish scales.

Very little of this ware has been published from Greek sites. At Corinth thin-walled, dot-barbotine ware is rather rare in the inventoried collection. The lower body of a beaker from the Demeter Sanctuary, C-70-350, is decorated with festoons of

<sup>44</sup>The following abbreviations will be used for works frequently cited:

Broneer I = O. Broneer, *Corinth*, IV, ii, *Terracotta Lamps*, Princeton 1930

Broneer II = O. Broneer, *Isthmia*, III, *Terracotta Lamps*, Princeton 1977

Howland = R. H. Howland, *The Athenian Agora*, IV, *Greek Lamps and their Survivals*, Princeton 1950

Mayet = F. Mayet, *Les céramiques à parois fines dans la péninsule ibérique*, Paris 1975

Moevs = M. T. M. Moevs, *MAAR*, XXXII, *The Roman Thin Walled Pottery from Cosa (1948-1954)*, Rome 1973

<sup>45</sup>Moevs, Form I, pp. 49-58. Mayet, Form I, pp. 24-26.

the broad, loosely arranged form. Fragments from South Stoa Well X, C-34-1644, in pale orange fabric, preserve parts of the scale festoon pattern.<sup>46</sup> Other fragments of dot barbotine were found along the south side of the South Stoa.<sup>47</sup> Two small pieces have been published from the Athenian Agora. One piece from Thompson's Group D is decorated with horizontal rows of dots, and fragments from Robinson's Group F have a spiral pattern.<sup>48</sup>

Many more examples of dot-barbotine beakers are known from western Mediterranean sites. In Italy parallels are to be found at Cosa, Ostia, and other sites. Seven examples are known from the Iberian peninsula.<sup>49</sup>

The distribution of this vessel type indicates a central Italian production center.<sup>50</sup> The beaker shape owes little to Hellenizing forms and is thought to derive from metal situlae of the Italic Iron Age. The source of the dotted decoration in barbotine is also to be sought in the realm of Italic metalwork.<sup>51</sup>

The fragments of thin-walled beakers with dotted decoration from Cosa have been dated between 175 and 50 B.C. with a noticeable rise in popularity after 150 B.C.<sup>52</sup> These dates have been examined more closely by F. Mayet in her study of the type in the Iberian peninsula. Having noted the striking homogeneity of form, profile, decoration, and fabric among the examples, Mayet concluded that the type came from a single Italian workshop with a production span of one or, at most, two generations. Mayet also found that the

earlier dates for the type occur at sites closer to central Italy and that the imported examples in the Iberian peninsula have dates from the last third of the 2nd century to the first third of the 1st century B.C.<sup>53</sup>

In the absence of more secure chronological information from Greece, it is perhaps best to apply the dates given the Iberian imports to the imports found at Corinth. A date somewhere between 130 and 70 B.C. for the Greek examples is probable.

49 fragments (9 rims, 5 bases, 35 body sherds).

Inventoried: C-1980-110, C-1980-111.

## 2. Beakers with cord-and-leaf barbotine decoration.

The fabric of these sherds is identical to that of the dot-barbotine pieces. These bear the more elaborate barbotine designs of incised leaves and cord patterns. Such designs are extremely rare in comparison to the dotted decoration. Two fragments are known from Cosa where they are dated between the second half of the 2nd century and the first quarter of the 1st century B.C. Only two parallels from Etruria and Latium are cited for the Cosa pieces.<sup>54</sup>

4 fragments.

Inventoried: C-1980-112.

## 3. Thorn ware.

Thorn ware, named after the short, thin, wedge-shaped, vertical barbotine decoration, is made of fine, thin, gray fabric and is unglazed.

<sup>46</sup>G. R. Edwards, *Corinth*, VII, iii, *Corinthian Hellenistic Pottery*, Princeton 1975, Deposit 102, p. 228; the fragments presumably come from the Roman fill at the top of the well.

<sup>47</sup>J. W. Hayes, "Roman Pottery from the South Stoa at Corinth," *Hesperia* 42, 1973, under no. 185, p. 461; fragments from south of shops XXV and XXVI.

<sup>48</sup>H. A. Thompson, "Two Centuries of Hellenistic Pottery," *Hesperia* 3, 1934, p. 392, D 79. H. S. Robinson, *The Athenian Agora*, V, *Pottery of the Roman Period: Chronology*, Princeton 1959, F 24, p. 13.

<sup>49</sup>Cosa: Moevs, nos. 1-12, pp. 50-52, pls. 1, 2, 55. Ostia: A. Carandini, E. Fabbricotti, *et al.*, *Ostia III*, ii (*Studi miscellanei*, 21), Rome 1973, p. 347, fig. 712. Unknown Italian provenance (Terme Museum): G. H. McFadden, "A Tomb of the Necropolis of Ayios Ermoyenis at Kourion," *AJA* 50, 1946, pl. XLIX. Iberian peninsula: Mayet, p. 26.

<sup>50</sup>Mayet, p. 126, map 1.

<sup>51</sup>Moevs, pp. 49-50.

<sup>52</sup>Moevs, nos. 1-12, pp. 51-52, 261-262. See, also, Carandini, Fabbricotti, *et al.*, *op. cit.* (footnote 49 above), pp. 347, 653.

<sup>53</sup>Mayet, p. 25.

<sup>54</sup>Moevs, nos. 20, 21, pp. 57, 263.

This ware most commonly appears in ovoid shapes.<sup>55</sup>

One example of a thorn-ware beaker is known from the South Stoa wells.<sup>56</sup> The walls of this beaker are more full and rounded than the dot-barbotine form. A jug with thorn decoration is included in Robinson's Group C.<sup>57</sup>

This thin-walled ware seems to be slightly later in date than the dot-barbotine ware. At Cosa the examples range in date from the second half of the 2nd century B.C. to the Augustan period.<sup>58</sup> Imports to the Iberian peninsula of the ovoid beaker with thorn decoration date in the last quarter of the 1st century B.C.<sup>59</sup> At Tarsus a few sherds of thorn ware are dated in the early years of the 1st century after Christ.<sup>60</sup> As in the case of the dot-barbotine beakers, the Italian examples seem to date earlier than the exported pieces. A date early in the Augustan period is possible for the pieces from Corinth.

3 fragments.

#### 4. Beakers or cups with low carination.

Four examples have a gritty red fabric, one an orange fabric with a gray core. The form represented is a cylindrical beaker with low carination. The raised base of this shape has one or two grooves at the edge of the undersurface. In each example the point of carination has been articulated by a groove. In one case this has been further emphasized by two bands of black paint. Both at

Cosa and in the Iberian peninsula this shape is typical of the Augustan period.<sup>61</sup>

5 fragments.

#### 5. Rouletted wares.

Two sherds made of a fine, thin, gray fabric similar to that of thorn ware are decorated with rather worn, wide bands of careless rouletting. One of these has a thin, brown slip. Two other sherds have a very fine, brick-red fabric. One is decorated with overlapping low ridges, each of which is rouletted. This sherd shows two surface colors resulting from stacking in the kiln. The other has simpler rouletted rows of tiny wedge-shaped nicks.

Parallels for this decoration at Corinth come from the Gymnasium, C-67-140, and from the area south of the South Stoa.<sup>62</sup> Robinson's Group F includes three rouletted beakers.<sup>63</sup> At Cosa roulette-decorated sherds do not become common until the end of the 1st century B.C. and are most popular after that date.<sup>64</sup>

4 fragments.

#### 6. Unclassified fragments.

Of the remaining 31 fragments 22 are body sherds from unidentifiable shapes. There are two low ring bases in a gray fabric. Seven rims of various forms are preserved.

31 fragments.

Of the five or more types of Italian thin-walled wares represented, only the barbotine wares, which are the earliest, are concentrated in the lower undisturbed layers of the fill. Other later thin-walled types, the thorn ware, the beakers with low carination, and the rouletted wares, tend to come from the uppermost strata of the fill. From this evidence it is clear that the destruction-debris fill was deposited after the beginning of

<sup>55</sup>Moevs, Forms IV and VII, pp. 68-69.

<sup>56</sup>O. Broneer, "Investigations at Corinth, 1946-1947," *Hesperia* 16, 1947, p. 240, pl. LX:16.

<sup>57</sup>Robinson, *op. cit.* (footnote 48 above), G 2, p. 23.

<sup>58</sup>Moevs, pp. 59, 66; discussion of date of Greek examples (not before 146 B.C.), pp. 68-69.

<sup>59</sup>Mayet, Form IIIa, pp. 29-30; p. 128, distribution map.

<sup>60</sup>*Excavations at Gözli Kule, Tarsus, I, The Hellenistic and Roman Periods*, H. Goldman, ed., Princeton 1950, pp. 189-190.

<sup>61</sup>Moevs, Form XXXIII, pp. 102-104. Mayet, Form XII, p. 50; p. 133, distribution map.

<sup>62</sup>Hayes, *op. cit.* (footnote 47 above), pp. 460-461, esp. no. 182.

<sup>63</sup>Robinson, *op. cit.* (footnote 48 above), F 20-F 22, p. 13.

<sup>64</sup>Moevs, Form X, pp. 72-73; Form XXXII, p. 101; Form XXXVI, pp. 107-109.

the importation of dot barbotine to Corinth, perhaps *ca.* 100 B.C. or later. The other wares were added to the fill at a later date, perhaps not far from the turn of the era.

## LAMPS<sup>65</sup>

### 1. Type IX lamps.

The single example of this type of lamp is made of pale buff Corinthian clay. The slightly concave base is string cut; the profile is biconical with a rounded junction between the two halves; a groove surrounds the central filling-hole; the nozzle flares slightly at the end. This example has an unpierced lug on the left shoulder. A dull black glaze covers both interior and exterior.

Inventoried: L-1980-10.

### 2. Blister-ware lamps.

Six fragments lack the typical orange blister-ware surface. Three have an ash-gray surface close to the color of the core. Two have a thin brown slip over the surface. The remaining example has a surface mottled brown to black. The fabric of this last piece also differs by having a dark gray core between brick-red layers, not an unusual blister-ware variant.

The lamps of this group conform in shape to Broneer Type XI. The round base is flat or slightly concave. The profile is biconical with a sharp angle between the two halves. The central filling-hole is framed by a groove. One fragment preserves a trace of a lug on the left side. This lamp type is also equipped with a centrally grooved, vertical ring handle. The nozzle, roughly oval in section, tends to be long and tapers toward the end.

20 fragments.

Inventoried: L-1980-7.

### 3. Type X lamps.

The predominant type of lamp from the Mummian destruction levels has a simple form, lacking handle and lug. These lamps, classified by Broneer as Type X, are all of a fairly consistent shape, having a small diameter and short spout. Carelessness in manufacture is a trait shared by all examples. All are probably Corinthian products, although the

fragments show some variation in fabric. The fragments can be subdivided into three groups:

#### *Group 1*

The Type X lamps of this largest subdivision are made of a reddish to yellowish buff clay, frequently having a burnt-orange cast. The biscuit has small voids, a few black and white inclusions, and some mica.

The lamps are small, squat, simple, and wheelmade. The round base is flat and may be slightly raised; it is string cut from the wheel. In some cases the string marks have been summarily smoothed away or are obscured by clay which adhered when the newly thrown lamp was set down. The body has a small diameter. The profile is usually quite rounded, with the maximum diameter just below the median. Sometimes, however, there is a distinct carination at the point of maximum diameter. In a few cases, the profile is baggy with the maximum diameter very near the base. The shoulders are always rounded with no clear division of the sides from the top. The lamps lack both lugs and handles. A groove incised before glazing frames the filling hole. The nozzle of this type is short and usually rather carelessly applied. Often it covers part of the groove around the filling-hole and is frequently left very rough underneath. The nozzle flares slightly at the end, forming slight flukes. The tip is either rounded or bluntly triangular.

The color of the glaze ranges from red to dark brown. Most pieces show some degree of luster; a few have a high metallic sheen. The glaze covers the entire exterior and the inside of the nozzle. The interior may be either completely or partially coated with glaze.

99 fragments.

Inventoried: L-1980-1-L-1980-3.

<sup>65</sup>Two main classification systems are used here in the discussion of the lamps. The types defined by O. Broneer are discussed in Broneer I and Broneer II and are designated by roman numerals. The Athenian types defined by R. H. Howland are discussed in Howland and are designated by arabic numerals. See footnote 44 above.

*Group 2*

The fabric of Group 2 is the easily recognized Corinthian clay. This very pale, cream-buff fabric has small voids, tiny black and red inclusions, and a little mica. One example has a pink-orange core. The clay feels soft and almost powdery to the touch.

The fragments of Group 2 are for the most part extremely small and little can be deduced about details of shape. In all but one case the base is flat and very slightly raised, with string marks on the undersurface. The exception is concave and has a surrounding groove. Significant portions of the body profile are preserved in only four examples. Of these, two have a more angular profile and a higher point of maximum diameter than the preceding group. The other two have the usual rounded, low-slung form. Two fragments preserve the filling-hole, which in both cases is framed by a groove. Of the 11 nozzle fragments, ten are very similar in form to those of Group 1. The eleventh has a straight blunt end, a broad, flat upper surface, and better defined flukes.

The glaze on lamps of this group is very poorly preserved. Most of the fragments show traces of black glaze, although seven pieces carry a brownish red glaze. None of the fragments have the metallic glaze that appears on some of the lamps of Group 1.

24 fragments.

Inventoried: L-1980-4, L-1980-5 a, b.

*Group 3*

All the members of Group 3 have a gray fabric with mica, some black inclusions, and tiny voids. It is possible that some of, if not all, the pieces are differently fired members of Group 1. The one fragment which preserves a complete profile fits well with the examples from that group; the three preserved bases show the characteristic careless treatment. All pieces have a gray glaze; one bears a slight metallic sheen.

8 fragments.

## 4. Type XVII lamps.

Type XVII lamps are made of cooking fabric. The clay is very coarse and ranges in color from brick red to brown to gray. It contains many me-

dium-sized inclusions (including grains of sand) as well as mica. There are also a number of small voids in the clay. The surface is unglazed and has a gritty texture.

In general the shape of this lamp type is similar to that of Type X. The slightly raised flat base is string cut. The point of maximum diameter is well below the median and in one case is quite sharply angled. The shoulders are rounded. The lip around the filling hole is depressed; there is no surrounding groove. The nozzles are short and have rounded, blunt ends. A single example has distinct flukes.

6 fragments.

Inventoried: L-1980-6.

## 5. Various types of lamps.

*Group 1 (Attic types)*

The following types, based on the Howland typology, are represented: Type 23C, flat rims, tall closed bodies (base only preserved); Type 25A, globular bodies and thick bases (base fragment, rim and nozzle fragment, nozzle fragment); Type 23B Prime, globular bodies and thick bases, pierced lugs added, unglazed (nozzle and body fragment preserving lug).

5 fragments.

*Group 2 (Corinthian types)*

There is one example of Broneer Type IV (Howland Type 21C); only its incurved rim with depressed lip is preserved. The sherd has a black glaze.

An unglazed nozzle fragment of light clay probably comes from a Corinthian version of a lamp of the Attic Howland Type 25A Prime (Broneer Type VII).

A small fragment in a fabric similar to that of Broneer Type X, Group 1, having a worn red glaze with rounded sides, narrow, flat rim, wide filling-hole, and close-set semicircular nozzle, may be related to Howland Type 27A.

Finally one fragment of a tubular lamp, preserving the raised base, lamp floor, and part of the central tube, has marks on the floor, from which one can restore three nozzles. The clay is nearly identical to that of Type X, Group 1. The glaze is dark brown and flaking.

4 fragments.

*Group 3 (Unclassified)*

There remain to be discussed six sorry sherds. Either their fragmentary nature or their fabric prevents them from being included with the previous types. Three grooved rim sherds have enough of the shoulder preserved to show that the profile was sharply angular. Two of these are of the fabric of Type X, Group 1, and the other is of typical Corinthian buff clay. If more were preserved they might be classified under either Type IX or Type XI.

The other three are nozzle fragments, all rather long and oval in section. All are covered with a thin brown-to-black glaze. One piece has a brownish fabric with a gray core, the second has a fine rose fabric, and the last a gritty brown-gray fabric. These fabrics do not fit well into any of the previously mentioned types.

6 fragments.

## 6. Type XIX (Ephesus Type) lamps.

Type XIX lamps are made of a gray clay. At Corinth two variations can be distinguished. The first clay is hard, dark gray and very micaceous. The second is softer, lighter gray often with a greenish tinge, and less micaceous. Of the first type three small fragments are preserved. It is likely that this darker clay is an Asia Minor product. The second type, of which there are two fragments and a relatively complete example, is a Corinthian imitation of the eastern fabric.

Type XIX is the earliest moldmade type in the 1980 destruction fill. Only L-1980-8 is sufficiently well preserved to allow detailed discussion. The oval base is slightly raised and the body biconical with a decorated shoulder; relief dots form the shoulder pattern. The discus has a round filling-hole with a slight ridge around it. Surrounding the discus is a separately attached raised collar. Between the collar and the filling-hole are two drain holes. A vertical ring handle with two vertical grooves is attached at the rear. Two additional fragments preserve ends of nozzles. One (of imported fabric) has a rounded tip and the other (of local fabric) has a triangular form.

The dark gray clay is glazed with a fine, black, lustrous glaze which is well preserved. The glaze

on the local imitations is less well preserved and is gray. The two preserved bases in the local fabric seem only partially glazed.

6 fragments.

Inventoried: L-1980-8.

## 7. Type XVI lamps.

Two fragments are made of typical Corinthian fabric, pale buff in color and powdery to the touch. A third fragment is of cooking ware identical to the fabric used for Type XVII.

The three fragments of this wheelmade type provide evidence for the form of the base, walls, and nozzle. The two base fragments are flat with string marks visible. On one example in the Corinthian clay there is a slight groove around the base. The walls flare gently and then rise almost vertically. The type has a recessed, flat discus but none of the fragments preserve this part of the lamp. The nozzle is short and square at the end. The wick hole occupies much of the nozzle length. One fragment preserves traces of the vertical handle at the rear.

Only the two fragments in Corinthian clay bear traces of glaze. The glaze is preserved only in very small patches and is matt black.

3 fragments.

## 8. Early Roman moldmade lamps.

The first example, L-1980-9, has a moldmade discus with a shell pattern. The small filling hole is off center near the nozzle. At the back of the lamp is a vertically grooved ring handle. The fabric of this piece is brown and rather gritty in texture.

Example two is a very small fragment of the discus from a Type XXII lamp. The clay is red in color with a dark red glaze. Only the ridged edge and part of the nozzle volute are preserved.

The third fragment is part of the bottom half of a moldmade lamp with a raised base, straight walls, and a notched pattern ringing the missing discus. The fragment includes the beginning of the nozzle. It is made of a hard, orange fabric with a red glaze.

3 fragments.

Inventoried: L-1980-9.

About 90% of the lamp fragments retrieved from the Mummian clean-up levels are of Hellenistic date. Less than 4% of the sherds are pre-Hellenistic and just over 6% are Early Roman. The bulk of the Hellenistic examples seem to be of local manufacture, while the preceding and following periods have more imports.

*The 4th-century B.C. Types*

Of the five Attic types represented (No. 5, Group 1) the earliest is Howland Type 23C, dated in the first half of the 4th century B.C. At Corinth the type (Broneer Type VI) was a common import.<sup>66</sup> Also represented are Howland Types 25A and 25B Prime; these are roughly contemporary and date from the middle of the 4th century to the first quarter of the 3rd century B.C. The base fragment of the Type 25A lamp may be a late example, since the glaze runs over onto the base. The 25B Prime fragment has the good quality, creamy slip of the early examples. Both types are very common at Corinth, and it is not surprising that they appear in the clean-up debris.<sup>67</sup>

Only two very small fragments of pre-Hellenistic date are Corinthian (No. 5, Group 2). A small, glazed rim fragment comes from an Attic Type 21C lamp. This type was frequently made in Corinthian fabric from the end of the 5th century to the end of the 4th century B.C.<sup>68</sup> The second fragment, preserving the nozzle, is probably part of a Corinthian imitation of the Attic Type 25A Prime or 25B Prime. Although less common than the Attic imports, the Corinthian version of this unglazed lamp is well represented at Corinth and also at Isthmia.<sup>69</sup>

Although there is only a handful of pre-Hellenistic lamp fragments from the Mummian fill over the racecourse, the pattern they suggest is supported by the Corinth Museum lamp collection as a whole. The only certain Attic imports in the deposit date from the 4th or early 3rd century B.C. During this same period the Corinthian examples are heavily influenced by Attic types. This strong reliance on Athens decreases sharply in the following centuries when the number of local types increases, and Athens occasionally imports Corinthian products.<sup>70</sup>

*Types of the Hellenistic Period*

In the 3rd and 2nd centuries B.C. the lamps at Corinth tend to be rather small and unpretentious. A common form in the Corinth collection is Broneer Type IX. Only one example of this type was excavated from the clean-up fill in 1980 (No. 1, L-1980-10). The normal form has a biconical, angular body; the more rounded profile of the 1980 specimen suggests a date quite late in the course of the type's development. Other indi-

<sup>66</sup>Howland, p. 59. Broneer I, p. 43.

<sup>67</sup>Howland, pp. 67, 74. Broneer I, Type VII, pp. 45-46.

<sup>68</sup>Howland, p. 48. Broneer I, Type IV, pp. 39-42.

<sup>69</sup>Howland, pp. 70, 74. Broneer II, Type VIIC, p. 16.

<sup>70</sup>Compare the presence of Corinthian types in Athens at the end of the 6th and in the early 5th century B.C. (Howland, pp. 28-30).



cations of a late date include the hastily applied lug and the untrimmed base. A probable date for this lamp is at the end of the 3rd or beginning of the 2nd century.<sup>71</sup>

The blister-ware fragments (No. 2) take the form of Broneer Type XI, a descendant of the early biconical form of Type IX. The distinctive blister-ware fabric is known from the 5th century B.C. but only in the Hellenistic period does it begin to be used for lamps.<sup>72</sup> The sharply angular body profile of this lamp type suggests a date in the 3rd century B.C. for the period of greatest popularity. At Corinth these lamps appear commonly in Hellenistic levels as well as in the Mummian debris of the South Stoa wells. At Isthmia, too, numerous examples were recovered from contexts of the 3rd century.<sup>73</sup>

This type was exported to other cities, presumably because the hard, non-porous fabric was widely appreciated. Examples are known from the Athenian Agora where they are assumed to be Corinthian imports and are dated in the 3rd century.<sup>74</sup> Several examples were also found in the Athenian Kerameikos where they are again associated with Corinth. There they are dated in the late 3rd century.<sup>75</sup> At Argos excavation has also produced a number of Corinthian blister-ware lamps.<sup>76</sup> The biconical profile and the evidence in care of manufacture of this type may suggest that production stops before the mid-2nd century B.C. when most lamps have a more rounded form and are less well made.<sup>77</sup>

Type X is another descendant of Type IX, with which it shares such features as a grooved rim and lack of handle. Type X is further simplified by its lack of a side lug. In its early form it preserves the angular profile of the majority of Type IX lamps. Two of the 1980 examples in the typical Corinthian clay (No. 3, Group 2) have this more biconical form. As the type develops, however, the point of maximum diameter drops and the profile becomes more baggy. The great majority of the fragments under study exhibit this later profile.<sup>78</sup>

Lamps of Type X come from a range of dated contexts at Corinth. Broneer mentions early examples which date in the middle of the 3rd century B.C. from the "Athena Chalinitis" trenches. North Cemetery grave no. 498, dated in the second half of the 3rd century, contains a Type X lamp.<sup>79</sup> Two examples from relatively recent excavations (L-69-7 and L-76-14) are from "Hellenistic/pre-146 B.C." deposits. Another example, closely parallel to the 1980 fragments, comes from an interesting context in the Asklepieion, namely the fill which accumulated on the ramp and in Lerna court between the

<sup>71</sup>Broneer I, p. 32, fig. 14; the profile of the 1980 example falls between profiles 38 and 39. Pp. 47-49 for type description. See also Broneer II, p. 21.

<sup>72</sup>Edwards, *Corinth* VII, iii, p. 145.

<sup>73</sup>Broneer II, pp. 23-24.

<sup>74</sup>Howland, Type 28B, p. 93.

<sup>75</sup>I. Scheibler, *Kerameikos*, XI, *Griechischen Lampen*, Berlin 1976, nos. 581-583, pp. 94-95.

<sup>76</sup>A. Bovon, *Études péloponésiennes*, V, *Lampes d'Argos*, Paris 1966, nos. 125-134, pp. 29, 31-32.

<sup>77</sup>Edwards, *Corinth*, VII, iii, p. 144, note 4.

<sup>78</sup>Broneer I, pp. 49-51, fig. 14, profile 40.

<sup>79</sup>Broneer I, p. 50. C. W. Blegen, H. Palmer, R. S. Young, *Corinth*, XIII, *The North Cemetery*, Princeton 1964, p. 294.

years of the sanctuary's abandonment, 146 B.C., and its rebuilding in the Early Roman period. The fill includes material from the mid-1st century after Christ, but most is Hellenistic. The fill is interpreted as a sanctuary clean-up deposit laid down before the construction of the Roman building over the ramp.<sup>80</sup> Many Type X lamps with the late baggy profile, virtually indistinguishable from the 1980 fragments, were discovered in the South Stoa wells. The greatest percentage of these lamps come from well levels designated "Early Roman Mummian clean-up" by G. R. Edwards in his analysis of the contents of the wells.<sup>81</sup> Another parallel piece, L 4520 from the road south of the Apsidal Shrine, was found in an Early Roman context. Ten examples of Type X are published from Isthmia; the earliest are dated in the middle of the 3rd century. Broneer states that the type is "obviously pre-destruction" and dates it down to 146 B.C.<sup>82</sup>

Outside Corinth and Isthmia the type is rather rare. One example is illustrated from Delphi but is without context.<sup>83</sup> Only one lamp from the Athenian Agora collection seems to be a good parallel. It is classified as Type 39: globular lamps with small raised rims around filling holes. The date given to this lamp, which is a member of Thompson's Group E, is the last quarter of the 2nd century.<sup>84</sup> The Athenian Kerameikos excavations produced one good parallel. The author assumes a Peloponnesian origin for this lamp and suggests Corinth as a specific source.<sup>85</sup> The largest number of published parallels outside the Corinthia are from Delos. Based on their findspot in the House of the Comedians they are dated in the last half of the 2nd century B.C.<sup>86</sup>

From the context information at Corinth and Isthmia it seems clear that the production of Type X lamps began in the second half of the 3rd century. The question which remains to be answered is when the production stopped. The evidence from Corinth is not very helpful. The lamps appear in Early Roman levels but in contexts which may represent clean-up from the 146 B.C. destruction and which, therefore, contain much Hellenistic material. Outside Corinth, the contexts of the few parallel examples seem to suggest that the production of this type continued until the end of the 2nd century B.C.

It is important for the resolution of this problem to determine the production source of these lamps. The fabric of the majority of Type X lamps from the 1980 excavation (No. 3, Group 1) is not the usual, well-known, pale powdery clay of Corinth. This year's identification of two relief bowls as made from the same mold provides significant information. One of these bowls (C-1980-10) is made of the typical Corinthian fabric; the other (C-37-2425) is made of the fabric of Type X, Group 1 lamps. This strongly suggests that both bowls are Corinthian products and that both fabrics are

<sup>80</sup>C. Roebuck, *Corinth*, XIV, *The Asklepieion and Lerna*, Princeton 1951, pp. 80–81.

<sup>81</sup>Unpublished notes in the archaeological museum, Ancient Corinth.

<sup>82</sup>Broneer II, pp. 22–23.

<sup>83</sup>P. Perdrizet, *Fouilles de Delphes*, V, *Monuments figurés, petits bronzes, terres-cuites, antiquités diverses*, Paris 1908, no. 492, p. 186, fig. 789.

<sup>84</sup>Howland, p. 124. Thompson, *op. cit.* (footnote 48), p. 411, E 88, fig. 98.

<sup>85</sup>Scheibler, *op. cit.* (footnote 75), no. 579, pp. 93–94.

<sup>86</sup>P. Bruneau, *Délos*, XXVI, *Les lampes*, Paris 1965, nos. 275, 279–287, p. 26.

Corinthian. The sheer number of lamps of this fabric at Corinth and the scarcity of this lamp type elsewhere also argue favorably for a local origin.

If the fabric is Corinthian, is it possible that these lamps were produced after 146 B.C. at Corinth? Perhaps. The lamps are simple objects of no great sophistication and could be products of a squatter workshop. Unfortunately the evidence is not strong enough to solve the problem conclusively.

It seems safe to suggest that the Type X lamps of Group 2, those of typical Corinthian fabric, are slightly earlier in date than those of Group 1. The bulk of the 1980 Type X fragments, made in the late Hellenistic, Corinthian Group 1 fabric, seem to date to the two or three decades immediately preceding 146 B.C. It cannot yet be determined whether or not some of the examples might date later in the 2nd century.

Similar chronological problems exist for Type XVII (No. 4). In shape the type is modeled after the late form of Type X. The use of cooking-ware fabric for lamps, however, is not paralleled until the Early Roman period.<sup>87</sup> As with Type X, Type XVII lamps come from pre-146 B.C. and Early Roman levels at Corinth.<sup>88</sup> A couple of examples are known outside the Corinthia. At Delos there is one Type XVII lamp from the House of the Comedians dated to the last quarter of the 2nd century.<sup>89</sup> From Argos comes one which is dated in the 2nd through 1st centuries.<sup>90</sup>

The situation is the same as for Type X; the Corinthian evidence is ambiguous while the external evidence seems to point to a date around 100 B.C. As before, more evidence is needed to determine if any of these lamps were produced at Corinth after 146 B.C.

### *Types of the Early Roman Period*

The majority of the Early Roman lamps from the 1980 fill above the racecourse are moldmade. Although Hellenistic moldmade lamps are known from Corinth, none are represented in the group under study.<sup>91</sup> The earliest moldmade example is of Type XIX, the so-called Ephesus type (No. 6), which began to be manufactured in Asia Minor in the early 2nd century. It does not seem to have been imported into Greece until the end of that century and not into Corinth until after the refounding of the city in 44 B.C.<sup>92</sup> Broneer has speculated that this type was the first to be used by the new settlers. The three small imported fragments from the 1980 excavations probably date within the last half of the 1st century B.C. Type XIX was also locally produced at Corinth. This can be deduced not only from the differences in clays among the examples at Corinth but also from the presence of molds for Type XIX lamps found at the Asklepi-

<sup>87</sup>Broneer I, pp. 60–61. Broneer II, p. 35.

<sup>88</sup>C. K. Williams, II, "Corinth 1976: Forum Southwest," *Hesperia* 46, 1977, pp. 71–72, nos. 23 and 26 (L-76-17 and L-76-18), pl. 25; these and L-74-14 from "pre-146 B.C." levels. L-1977-3 from an Augustan fill. Many examples also from the South Stoa wells.

<sup>89</sup>Bruneau, *op. cit.* (footnote 86), no. 267, p. 26.

<sup>90</sup>Bovon, *op. cit.* (footnote 76), no. 187, p. 35.

<sup>91</sup>Broneer I, Type IX, p. 48, Type XVIII, pp. 61–66.

<sup>92</sup>Howland, p. 166. Broneer I, pp. 69–70.

eion.<sup>93</sup> These lamps were also imitated at Athens in the 1st century after Christ, but far less successfully. At Corinth attempts were made to imitate the original gray clay while at Athens a light-brown clay was used. The Corinthian examples show a wide variety of shoulder patterns compared to the very limited repertory at Athens.<sup>94</sup> The almost complete Corinthian example (L-1980-8) and two fragments from the past season probably date within the 1st century after Christ.

The only wheelmade type of lamp to coexist with the Early Roman moldmade lamps is Broneer Type XVI (No. 7). This exclusively Corinthian lamp evolved from local Hellenistic ancestors and was not much influenced by imported moldmade types. The initial date of production of Type XVI has not yet been determined with precision, but it coincides with the decrease of importation of the eastern Type XIX and the beginning of local production. The late 1st century B.C. or early part of the following century is the most likely time for the appearance of the Type XVI lamp which is known to last throughout the 1st century after Christ. It was manufactured in three fabrics: Corinthian clay, cooking ware, and gray clay. Only the first two are represented in the 1980 group. The variety which uses pale Corinthian clay may slightly antedate the cooking-ware version, but certainly the three groups are for the most part contemporary.<sup>95</sup>

During the 1st century after Christ imports from Italy gradually supercede the imports from the East. The 1980 fill yielded three small fragments of Italian moldmade lamps (No. 8). All appear to be of a date relatively early in the century, and all were discovered in the uppermost layers of the destruction fill. The first fragment, a discus with a shell pattern (L-1980-9), is probably related to the popular class with scallop-shell decoration, of the early 1st century after Christ.<sup>96</sup> A small fragment of a Type XXII lamp found this year also dates in the 1st century.<sup>97</sup> The third Italian lamp fragment has a crimped pattern around the discus and an elongated form.

All but one of the 12 Early Roman lamp fragments discovered in 1980 come from the top layers of the Mummian destruction fill. They date from a period when imported Type XIX lamps were being replaced by local imitations, when Italian types were becoming the dominant import, and when Type XVI lamps were produced in the local, mass-production workshops, a period perhaps not far from the turn of the era.

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<sup>93</sup> Roebuck, *Corinth* XIV, pp. 81, 90.

<sup>94</sup> Broneer I, p. 67, fig. 29. Howland, pp. 169–170.

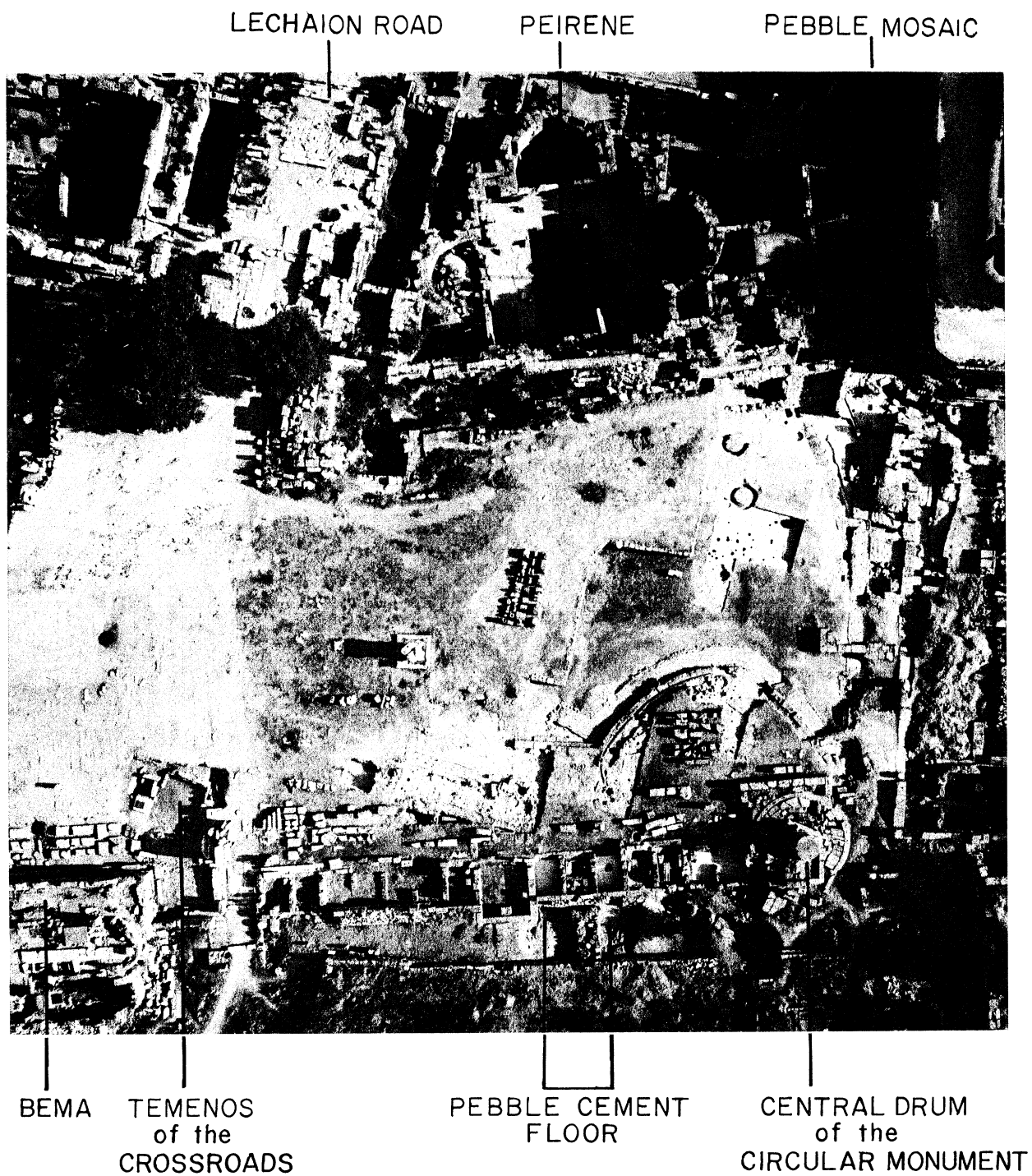
<sup>95</sup> Broneer I, p. 57.

<sup>96</sup> D. M. Bailey, *A Catalogue of Lamps in the British Museum*, II, *Roman Lamps Made in Italy*, London 1980, discus scene type IV (d) iv, p. 84.

<sup>97</sup> Broneer I, pp. 74, 76–78, fig. 34, profile 3. See, also, Bailey, *op. cit.*, Type Aiii (Loeschke shoulder form I or IIa), pp. 137–141, pls. 3, 4.

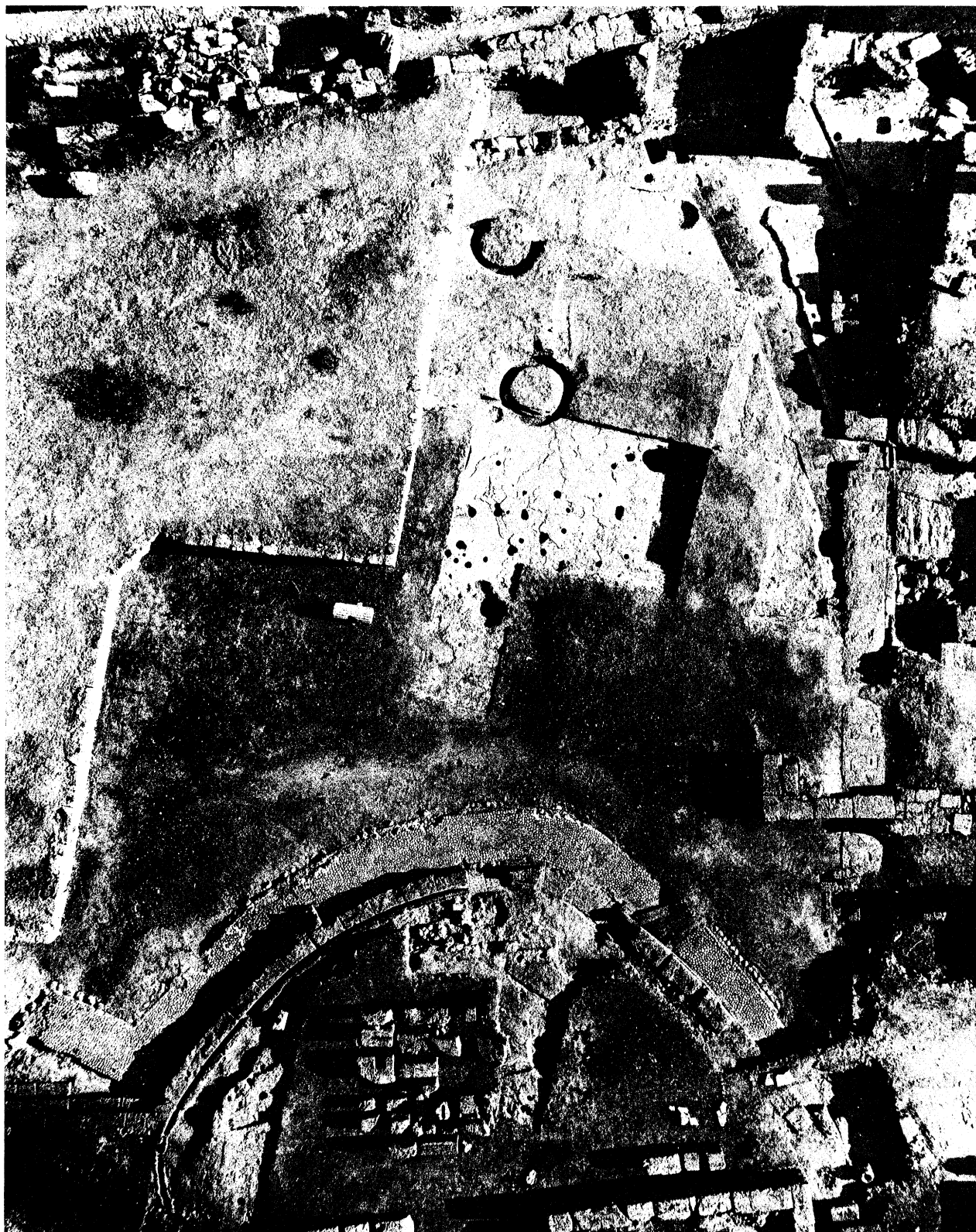


View of 5th-century starting platform, from north



Aerial view: east end of forum

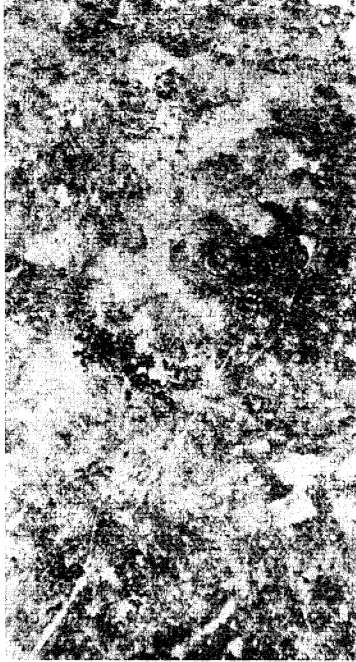




Aerial view: starting platforms and terrace



a. Θ



b. K



c. Λ



d. N

Letters on 5th-century starting platform



e. Cobble pavement around terrace, from west





a. Circular monument from east



b. Road and 5th-century drain west of circular monument, from west



c. Fourth-century drain south of circular monument, from northwest



a. Hellenistic starting platform and road at its east, from south



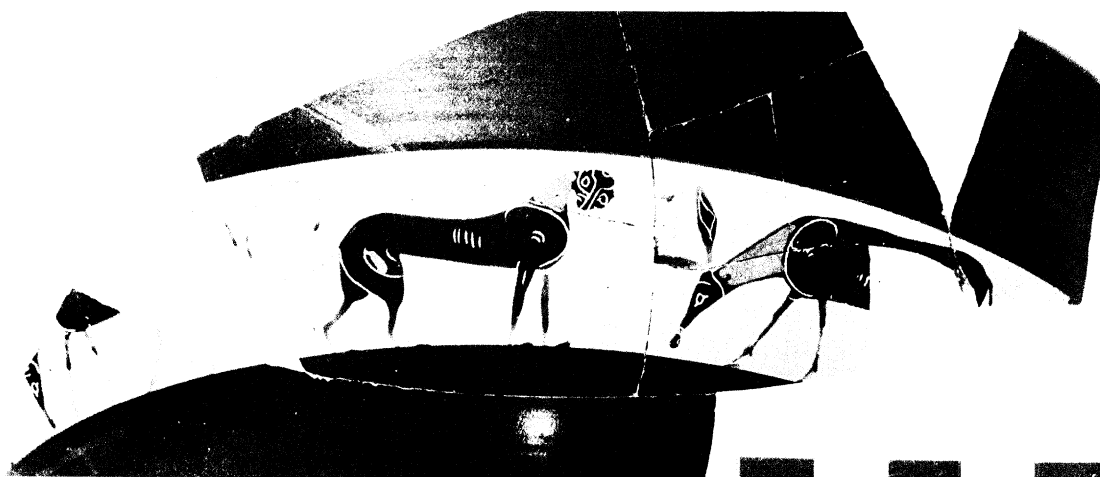
b. Foundation for terrace wall, terrace fill in place, from south



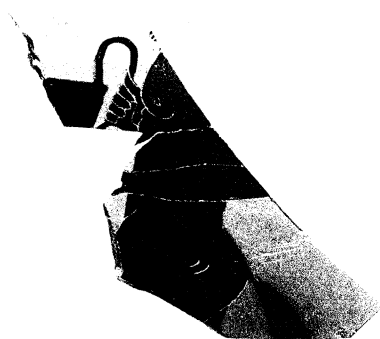
a. Terrace wall against cliff of Peirene, from north



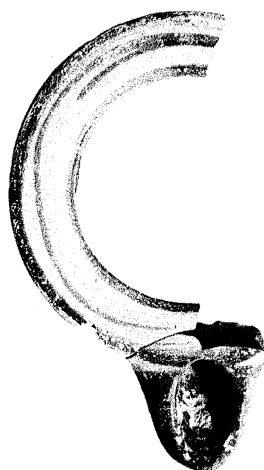
b. Mosaic floor in building on cliff over Peirene



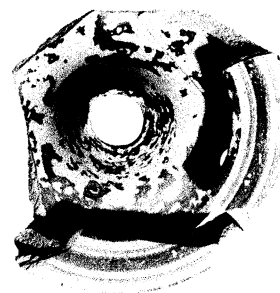
c. Band cup 2



1. Siana cup from under earliest crushed-poros running surface



3



4



5

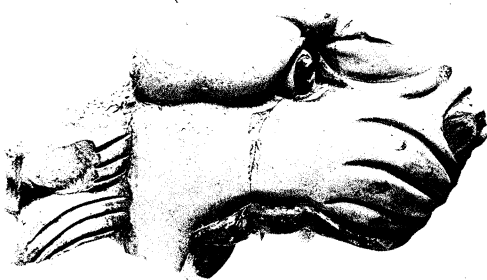


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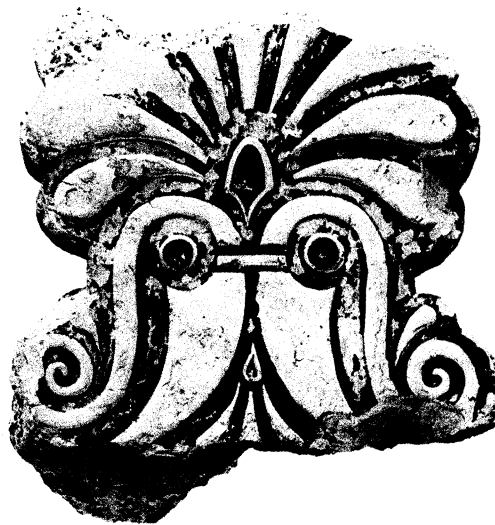


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3-7. Lamps from under earliest crushed-poros running surface



8



9

8,9. Architectural terracottas from fill *post* 146 B.C.



11. Terracotta head from fill *post* 146 B.C.



C-1980-110



C-1980-111



C-1980-112



L-1980-8

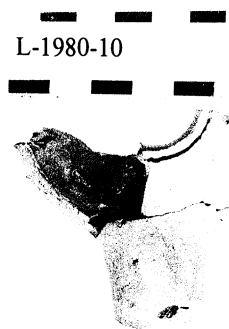
Italian thin-walled wares and lamps from levels  
*post* 146 B.C.



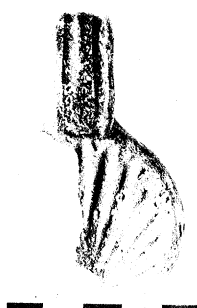
L-1980-1



L-1980-6



L-1980-7



L-1980-9