# CORINTH 

RESULTS OF EXCAVATIONS CONDUCTED BY

THE AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS

## VOLUME III, PART I

## ACROCORINTH EXCAVATIONS IN 1926

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## PREFACE

The excavations on Acrocorinth, an account of which is offered in the following chapters, were begun March 15th and continued with the usual interruption at Easter until May 26th, 1926. Of the funds required for the undertaking $\$ 200$ were generously contributed by Mr. J. M. Wulfing of St. Louis, who was especially interested in the light which might be shed by an examination of the Temple of Aphrodite on the problems of early chronology and Phoenician relations which Dr. Doerpfeld has recently been investigating; a further sum of $\$ 250$ was provided by an appropriation made by the Managing Committee in 1923 ; and these two amounts were used for the digging at the summit of the hill, where the Temple once stood. The complete exploration of the fountain of Upper Peirene was carried out by means of an appropriation from the gift of Mr. J. P. Morgan for the excavations at Corinth.

The conduct of the campaign was entrusted to the writer, who was ably supported by several members of the School. Dr. John Day, Fellow of the School, assisted at the beginning from March 15th to 17th. John Finley, holder of the Charles Eliot Norton Fellowship of Harvard University, took an active share in the supervision of the work from March 17th to April 12th; and Franklin P. Jones, also a Charles Eliot Norton Fellow, succeeded him from April 15th to April 22nd. The exploration of Upper Peirene was conducted by Richard Stillwell, Fellow in Architecture, who drew all the measured plans, not only of the fountain itself, but also of the remains brought to light at the summit of the hill.

The workmen who participated in the campaign were all from Mycenae and the neighboring villages, most of them being veterans of previous excavations conducted by the School at Zygouriés, Nemea, Phlius, and the Argive Heraeum. Their number varied from 16 to 51 , this maximum being attained during the week of April 12 th- 17 th. They were led by our experienced foreman, George Alexopoulos of Mycenae, who was present for the first three weeks and contributed much to the efficient organization of the force. Upon his departure the duties of foreman were divided between George Papadopoulos and Pantelis Christopoulos, younger men of promise. The workmen lived in the Turkish mosque on Acrocorinth, which they found a satisfactory place of residence. The members of the staff occupied quarters in the village of Old Corinth and were obliged to make the rather arduous ascent of the "kastro" each day.

We are under especial obligations to Dr. Hill, Director of the School, who gave us the opportunity to excavate on Acrocorinth and supported us heartily throughout the campaign. He paid many visits to the field of operations and gave us invaluable assistance in the planning and conduct of the work and in the interpretation of the remains brought to light.

We are also grateful to Dr. Doerpfeld, who spent a day with us, March 31st, and generously allowed us to call on his experience for help toward the solution of some of the problems which puzzled us.

The campaign of 1926 was not the first exploration to be undertaken on Acrocorinth. The late Professor Skias carried out researches here as early as 1891, and was the first to observe and call attention to the substantial remains of Cyclopean construction in the lower part of the fortification wall, especially around the southwest spur of the mountain (Шрактька́, 1892, 117 f.). After the American School had assumed the excavation of Corinth under Professor Richardson some trial trenches were also dug on the acropolis: a huge vertical scarp cut in native rock just west of the saddle which connects the two peaks of Acrocorinth was examined and found to be the limit of an ancient quarry - almost surely the source of the stone used in the fortifications of the fourth century; the supposed site of the temple of Aphrodite at the main summit was likewise tested by means of a broad cutting; and a similar trench was opened across a flat terrace a short distance below the peak to the southward (Twentieth Annual Report of the School, 1900-1901, p. 30). Nothing of importance was found in either of these trenches; and neither the time nor the means were available for a more general and complete excavation. Some further work was done in 1914, when the basis was laid for a trigonometric survey of the fortification walls; and at the same time the Cyclopean walls were carefully studied and cleared, so far as possible, to their footings in the hope that some evidence for their date might be forthcoming. Their inaccessibility, so well pointed out by Skias, unfortunately made this investigation very difficult, and nothing definite could be established.

It was not until the season of 1926, the necessary funds and staff becoming available, that it finally became possible to meet the obligation of conducting a more thorough, methodical exploration on Acrocorinth. As has already been intimated above, our operations were conducted mainly in two separate areas, namely at the summit of Acrocorinth and about Upper Peirene; but a good many exploratory trenches were dug at various points here and there about the hill, constituting a third field of activity, with which might be associated a careful study of the fortification walls carried out by Mr. Finley.

The following chapters, which are offered as a final report of the excavations on Acrocorinth, will deal separately with the divisions indicated above, and each collaborator assumes full responsibility for his contribution. The account of the excavations at the summit of the hill has been prepared by C. W. Blegen; the description of Upper Peirene is by Richard Stillwell; the inscriptions on the walls of the fountain are published by Oscar Broneer; and the coins, of which no fewer than 284 were found, have been cleaned, studied and catalogued by Dr. A. R. Bellinger. ${ }^{1}$

[^0]The topographical map of Acrocorinth and its surrounding walls (Plate VIII), which accompanies this report - the first modern survey to be made - is the work of Major Yannakopoulos, chief of the map-making section of the Greek army, who was detailed to this task by General Petritis, head of the Geographical Service of the army, through the kind offices of General Mazarakis, then Minister of War. To all of these gentlemen we are very grateful for their interest and assistance.

The following abbreviations are employed:

Ath. Mitt. ........ Mitteilungen des deutschen Archaeologischen Instituts, Athenische Abteilung.
C. I. G. ........... Corpus Inscriptionum Graecarum.
C. I. L. ........... Corpus Inscriptionum Latinarum.

Class. Phil. . ...... Classical Philology.
Denkm. ........... Denkmäler des klassischen Altertums.
Hist. Num. . ....... Historia Numorum.
I. G. ............... Inscriptiones Graecae.
I. G. R. .......... Inscriptiones Graecae ad Res Romanas pertinentes.
J. H. S. ........... Journal of Hellenic Studies.
O. G.I.S. ........ . Orientis Graecae Inscriptiones Selectae.

Carl W. Blegen

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## ACROCORINTH

# EXCAVATIONS AT THE SUMMIT 

By CARL W. BLEGEN

The eastern peak of Acrocorinth, which is the actual summit of the mountain, rises in a somewhat rugged formation, chiefly of limestone, to a height of 575 metres (about 1886 feet) above the sea. The rock is very rough and irregular, consisting mainly of much eroded ridges, often terminating in sharp vertical edges separated by deep hollows and depressions. These latter have for the most part become filled with soil, in which vegetation has taken root, and the whole area at the beginning of our operations was overgrown with small shrubs and brush. Amid this growth appeared the corner of a substantial foundation constructed in part of huge blocks of limestone, and a few metres to the eastward stood the ruined walls of a small Turkish Mosque. Along the north side of the latter could be discerned a fairly deep depression - the line of a trial trench dug here in 1899. No level space of any size appeared anywhere, and the deposit of soil seemed nowhere to be especially deep.

In the course of our digging the whole crest of the hill, measuring some 35 metres from north to south and the same distance from east to west, was cleared, native rock being reached almost everywhere. The accumulation of earth proved to be considerably greater than had been anticipated, especially in the northern part of the area investigated, where against the north side of the Tower (which will be discussed below) it attained a depth of more than two metres (Fig. 1).

The evidence brought to light by these excavations made it clear that the summit of Acrocorinth had been occupied continuously by buildings of one kind or another from very early in the Greek period down to modern times. The remains still in situ are very scanty indeed, but they represent no fewer than seven successive structures: a small building of the sixth or even the seventh century в. c.; a larger edifice, doubtless the Temple of Aphrodite, probably of the fifth century and later; an early Christian Church; a large mediaeval Tower; a Turkish Mosque surrounded by a cloister; a paved platform, presumably of Venetian times; and a small hut of miserable construction, dating perhaps from the early nineteenth century.

The earliest built structure on Acrocorinth, so far as revealed by our excavations, was a small building in the east central part of the area examined. Unfortunately only the scantiest remains of it are preserved (A-B-C on the plan, Plate I): they consist of a portion of the foundations, including a section of wall, 2.25 m . long, running from north to south, a
southeast corner, and the return of the wall 1.45 m . toward the west. This wall, made of unworked material, hard limestone similar to the native rock, in pieces of no uniform size, is 0.70 m . thick, and now stands to a height of 0.25 m . above the native rock upon which it rests. The stones are put together without mortar, and though the material is rough, the workmanship is by no means careless.

What we have is the southeast corner of a small building (the relatively slight thickness of the foundation suggests that it was not very large) oriented approximately east and west, though nothing further can be said as to its plan. No cutting appears to have been made in the rock to receive the foundations. There is no indication of the level of the floor, nor of the position of the entrance or entrances. The superstructure is entirely missing, and even its material is uncertain; the upper part of the walls may well have been of crude brick.

The only clue to its date is the character of the pottery found in the deposit about and over the wall. Among the sherds gathered in this stratum were a good many of the Protocorinthian and the Corinthian styles, and nothing that could be assigned to an appreciably later date. It is therefore likely that the building was erected at least as early as the end of the seventh century b.c.; and though no convincing evidence was forthcoming as to its nature, the conjecture that it was an early Temple of Aphrodite is an obvious one. The importance of this cult on Acrocorinth, which is so often mentioned in ancient literature, implies a fairly long history, and its establishment must certainly go back beyond the seventh century. If this identification is correct, it would appear that the shrine of the goddess was a comparatively simple and unpretentious affair in this early period; but this seems to have been the case in the succeeding centuries also, when the fame of the cult had reached its highest point.

Of the second building in the series on Acrocorinth not one stone is now left in place, but the scanty remains are sufficient to give some idea of its character and plan. Several blocks of poros cut and finished in the best style of Greek workmanship were uncovered about the summit of the hill, and a great deal more of the same kind of material came to light, built into the foundations and walls of later structures on the site. The early Christian Church was for the most part built of these blocks of poros - foundations and walls alike (Fig. 2). The Byzantine Tower also shows a good many such pieces employed in its foundations, and three or four at least appear in the substructure of the Turkish Mosque. Undoubtedly many further blocks were split up to make the small paving-stones with which the Venetian platform was paved;-they are almost all of the same kind of poros. Altogether, then, there is a fairly considerable collection of material at the summit of Acrocorinth, which on the evidence of its uniform style may with certainty be assigned to one and the same Greek building. The presence of all this material at the very top of the hill and its employment in all the later buildings erected here imply that the original edifice also stood somewhere on the same site, and continued through many periods, after its destruction, to serve as a quarry for subsequent builders. Its total demolition and removal could readily be understood if it was con-


Figure 1. General view across nave of church, showing accumulation of EARTH AGAINST NORTH SIDE OF TOWER


Figure 2. North wall of nave of church, showing re-used material
structed of well-cut blocks of poros of convenient shape and size to be utilized in all subsequent buildings at the summit. In a place so difficult of access as this, all material actually at hand, whether from an earlier monument or not, was surely seized and employed so as to reduce to a minimum the need for transporting new material. ${ }^{1}$

The material in question consists chiefly of ordinary wall-blocks, but some other parts of the structure are likewise represented. We may begin with the steps.

One large fragment (found in the northeastern corner of the Frankish or Byzantine tower), broken at the right and the back, shows the original face, top, bottom, and left end (Fig. 3). The fragment is 0.64 m . long, 0.51 m . thick, both original dimensions being incomplete; but the full height of the step is 0.284 m ., although the front part of the tread is


Figure 3. Fragment of step of greek temple
worn down about one centimetre, perhaps as a result of much use while yet in place. A rough hole, hacked through from the tread to the face, may possibly be due to a crude attempt to drain the step at some late period. The face of the riser has a characteristic profile, with three graduated fasciae along its lower edge, as shown in the drawing (Fig. 4).

The left end of the block bears a wide, carefully made anathyrosis; it apparently extended across the top of the contact surface and along the two vertical sides, with an extra

[^1]strip down the middle to permit accurate jointing along the line of the dowelling; traces of the hole for the dowel by which the step was fastened to the course below appear at the bottom edge at a distance of 0.34 m . from the face of the step; and in the top of the block is a corresponding hole for the attachment of the course above, 0.35 m . from the face of the riser and the same distance exactly from the left end. The special reason for the medial band of anathyrosis will be discussed below in dealing with the ordinary wall-blocks, which explain it very clearly.

The width of the tread is not indicated with absolute certainty, but it was probably slightly less than 0.30 m ., perhaps $c a .0 .28 \mathrm{~m}$.

A second fragment of step was found in the eastern part of the Turkish Mosque. It is very small, broken on all sides except the face and bottom, but it may be identified by the


Figure 4. Profile of step with three fasciae

Figure 5. Profile of step with one fascia
three fasciae along its lower edge. They are quite similar to those on the step just described, although the measurements in detail vary from those of the latter by one or two millimetres.

A third block of the same type is now built into the fortification wall of Acrocorinth a short distance east of the postern gate on the north side of the fortress. It is 0.283 m . high, 0.767 m . long; the thickness cannot be measured, since it extends into the solid wall. Here again we find the same profile of drafting along the bottom edge, though the separate fasciae differ slightly (from one to three mm .) in width from those of the first block mentioned.

A step with a different profile may be recognized in a very much mutilated block, built into the wall of the Christian Church at the southwestern corner of the nave. Most of its top has been cut away, and the greater part of the bottom has been sliced off diagonally, but the original height seems to have been $c a .0 .28 \mathrm{~m}$.; the length is 0.669 m. , and the preserved thickness is 0.64 m . This step had a single fascia along the lower edge of its face, a plain drafting 6.5 cm . broad and 5 mm . deep (Fig. 5).

A similar step was discovered by Finley, built into a buttress supporting the south fortification wall of Acrocorinth at a point not far eastward from the saddle connecting the two peaks of the mountain. ${ }^{1}$

[^2]The workmanship and the dimensions of these two different kinds of steps indicate without question that both come from the same monument; and in a reconstruction of the building we may be certain of at least two steps, although the probability is that it had the usual three. A variation in the number of the draftings along the lower edge of the riser, with one, two, or three fasciae, giving a slightly different profile to each of the three steps, is by no means unusual in Greek buildings.

At least 28 wall-blocks may still be identified in the foundations of the Church, the Tower, and the Mosque. Some of them are badly shattered and damaged, but in almost al instances at least one, and often two, of the original dimensions may be recovered. Representative (complete) examples are shown in figures 6 and 7 from drawings by R. Stillwell.


Figure 6. Wall block of greek temple


Figure 7. Wall block of greek temple

All these pieces are alike in workmanship, and their characteristic feature is the arrangement of the anathyrosis on the ends of the blocks: it consists of a broad horizontal band along the upper edge of the contact surface and three vertical bands, a wide one along each side and a narrower one between the two, but considerably nearer the face than the back. In this medial anathyrosis appears regularly, at one end of the block only, a vertical pourchannel running from top to bottom, $c a .1 .4 \mathrm{~cm}$. broad and 1 cm . deep, which opens below into a regular dowel hole cut in the bottom of the block. This makes it clear that the blocks were dowelled at their inner ends and that the lead was poured after the blocks had been set in place; the medial anathyrosis was necessary in order to make the pour-channel tight so that the lead might be conducted safely to its destination. It is probable, though there is not much evidence available, ${ }^{1}$ that a single dowel overlapped the joint and was thus in-

[^3]tended to hold both the adjoining blocks in place; and this would of course result in fastening every block at each of its two ends. Such a purpose would explain satisfactorily the need for the vertical channel and for pouring lead at the inner end of the block as it lay in its final position.

An exact analogy to these vertical pour-channels, which seem to occur regularly at one end of each wall block, is not known to me. An arrangement with a similar purpose, though not carried out so carefully and methodically, may be noted in the Theseum at Athens, where a shallow vertical groove appears in the contact-ends of the marble plinthoi; but there no holes were cut for a dowel at the bottom of the block, only the grooves themselves seem to have been leaded. In the Parthenon, whenever the last block to be laid in a course had to be fastened by a dowel, a vertical pour-channel was provided for leading, but these are only isolated examples and are not strictly analogous to the uniform system employed on Acrocorinth, which seems to have affected every block. Perhaps this excessive care in dowelling was due to fear of earthquakes, for the region of Corinth is certainly more subject to seismic disturbances than Athens; at any rate it shows that the Acrocorinthian builders had a peculiar style of their own.

The wall blocks are fairly homogeneous in size, though numerous slight variations within narrow limits occur. Thus, of the measurable pieces, the following heights were noted: $0.217,0.252,0.265,0.268,0.270,0.274,0.275$ (two blocks), $0.278,0.279$ (two blocks), 0.280 (five blocks), 0.281 (two blocks), 0.282 (four blocks), 0.283 (two blocks), $0.291,0.292$, 0.360 m . Sixteen of the twenty-seven blocks here listed are thus seen to have a height within 2.5 mm . of 2.805 m .; but the divergences in the other cases suggest that the wall was constructed in courses of differing height.

Some variation in length also occurs, as may be seen from the following list of the blocks preserving that dimension complete: $0.790,0.806,0.807,0.808,0.809,0.810$ (three blocks), 0.811 (two blocks), $0.812,0.831 \mathrm{~m}$. Here it may be noted, however, that ten of the twelve measurable blocks are within 3 mm . of 0.809 m . in length. The position of the pry holes and the dowel holes in the top of the blocks indicates that the wall was pretty regularly ashlar in construction.

Only nine blocks were sufficiently well preserved to allow the thickness to be measured, and they gave the following results: $0.790,0.800,0.806,0.820,0.821,0.837,0.843,0.881$, 1.022 m . There seems accordingly to be greater diversity in this dimension than in the other two.

The cuttings for the dowels are very uniform and cleanly made; they are $c a .0 .11 \mathrm{~m}$. long, 0.05 m . deep, and 0.015 m . wide. They usually occur at a distance of $c a .0 .30 \mathrm{~m}$. from the face of the wall (extreme points noted: 0.275 and 0.355 m .). In many blocks, but certainly not in all, clamp cuttings also appear: they are of the T shape, and a typical example measures $c a .0 .12 \mathrm{~m}$. in length, with a cross bar of 0.09 m .; the cutting is $c a .0 .015 \mathrm{~m}$. wide and reaches a depth of $c a .0 .039 \mathrm{~m}$. The clamps seem to occur regularly at a distance of $c a$.
0.10 m . to 0.15 m . farther from the face of the wall than the dowels. Pry holes in the top of the blocks and shift holes in the ends are also very regular. All these cuttings together indicate that the building was constructed with that meticulous care and attention to details so characteristic of Greek architecture of the best period. This may likewise be seen in the neat repair of a broken edge of one block through the insertion of an exactly fitted wedge-shaped patch (Fig. 7). Apparently most, if not all, of the blocks were originally provided with lifting bosses, which have with few exceptions been chiselled away,


Figure 8. Wall block of greek temple, with boss
leaving only scanty traces. In a few instances the bosses still remain: a typical example (Fig. 8) is 0.11 m . long, 0.09 m . wide, and projects ca. 0.02 m . from the face of the stone; it is equidistant from the two ends of the block, and slightly nearer the bottom than the top.

A small fragment of an anta was recovered beneath the floor of the Christian Church, in the southern part of the nave, where it had been used to form one side of the cist of a Byzantine grave (Fig. 9). It is unfortunately only a narrow slice, split off lengthwise from the original block, but it preserves some valuable evidence (Figs. 10, 11). The full length of the block is 0.81 m ., the height 0.256 m .; the thickness is lost, since our slice measures only 0.12 m . through. The left half of the fragment gives us clearly the total projection of the parastas and anta from the cross wall; the other half bears a good anathyrosis for the joint with a contiguous block of the cross wall, to which it was fastened by a double T clamp; and the right end is similarly dressed for contact with the next block of the lateral wall. The parastas projected only 0.075 m . from the cross wall, this measurement being taken from the limit of the anathyrosis; a vertical fascia, marking the return of the anta, indicates that the latter was 0.33 m . deep, and this dimension presumably also supplies the approximate width of the triglyph. The cross wall seems to have been $c a .0 .405 \mathrm{~m}$. thick, if the breadth of the anathyrosis may be taken as a criterion.


Figure 9. Byzantine cist-grave made of re-used material, including fragment of anta


Figure 10. Fragment of anta


Figure 11. Fragment of anta

The importance of this small fragment consists, apart from its evidence for the details, in its demonstration by the short projection of the side wall beyond the cross wall that the building to which it belonged was a prostyle edifice in plan; for the parastas is certainly not long enough to permit the placing of columns in antis. The identification of the fragment as part of an anta seems certain, ${ }^{1}$ and, if this is correct, there are only two places in the building to which it can be assigned, namely on the inner side of the left anta at the front of the


Temple, or in the corresponding position at the other end, if the structure was amphiprostyle.

No remains of columns which can with certainty be attributed to the Temple were found. One small and much battered fragment of Doric fluting may possibly belong to it; but, if so, it must have been roughly redressed at a later period, in preparation for receiving a coat of stucco. It is of the same kind of poros as the wall-blocks described above. The piece is so small and so much damaged that nothing can be said with safety, but the original diameter of the drum or shaft may be calculated as approximately 0.443 m .

The drum shown in figure 12, with two rude torus mouldings at its base, is from a plain Ionic or Corinthian column of very bad workmanship, probably from the early Christian Church. It is 0.438 m . high, with a lower diameter of 0.447 m ., including the mouldings, and an upper diameter of 0.424 m . The material is the same poros as that of the wall blocks, and the condition of the surface suggests that the piece may have been cut down from a larger drum belonging to an earlier structure, although no trace of flutings now appears. In the top of the drum are what seem to be traces of a rectangular cutting for an empolion or

[^4]dowel, ca. 9 cm . square and 3 cm . deep, which has been roughly gouged out at a later period. The shape of the original cutting (if these traces have been correctly interpreted), which is the usual one in classical times, is not so common in late Roman and Byzantine architecture, and its survival here may possibly also point to a previous use of the drum.

Two Doric capitals, in fragmentary state, were found. One (Fig. 13) is of the right material to belong together with the wall blocks discussed above, and cannot be ruled out on


Figure 13. Fragment of a doric capital


Figure 14. Fragment of a doric CAPITAL
account of its scale, although it seems rather small for the exterior order, and of later style than one might expect. ${ }^{1}$ The surface is now in bad condition, and not much of the original finish survives, but it is clearly of Greek workmanship. The profile of the echinus is fairly well preserved, suggesting a date in the fourth century. There are three annuli around the neck (Fig. 14).

[^5]The other capital (Fig. 15) is a very small one, and can hardly have belonged to the building. ${ }^{1}$ It may be from the columnar support of a votive offering of some kind, and it probably dates from the latter part of the fourth century, if it is not still later.

No remains of an epistyle were recognized among the architectural fragments found at the summit; and of the frieze nothing came to light that can certainly be associated with the steps and the wall blocks. A short distance west of the small postern gate on the north side of


Figure 15. Small doric capital
the mountain, a fragment of triglyph appears, built into the lower part of the fortification wall, which is here of mediaeval date. The triglyph is made of poros, of dimensions which seem to be appropriate for our building, and the workmanship may be of a period as early as the fifth century. The fragment preserves almost the complete breadth of the triglyph and part of the adjoining metope to the left, both cut from one block of stone. Only the extreme right edge of the triglyph has been broken away; it seems to have overlapped slightly the contiguous metope on this side. The complete width of the triglyph was $c a .0 .36 \mathrm{~m}$.; it had a plain taenia, 0.095 m . high, along its upper edge. The total preserved height of the fragment, measured from the fracture at the bottom, is only 0.32 m . The glyphs appear to have been somewhat undercut at the top.

Only one insignificant fragment of cornice was brought to light in the course of the excavations. It is a badly mutilated piece of the corona (Fig. 16), preserving one via, and part of one mutule on which only traces of the guttae may now be observed, although there appear to have been originally the customary three rows of six. ${ }^{2}$ The via is 0.066 m . wide, 0.019 m . deep. The full width of the mutule was $c a .0 .37 \mathrm{~m}$., indicating of course the di-

[^6]mension of the triglyph below it. The corona is 0.17 m . high at its outer face, which was crowned by a moulding, 0.06 m . high, now roughly hacked away. ${ }^{1}$ The total overhang was $c a .0 .24 \mathrm{~m}$. Owing to the damaged condition of the fragment, not much of the original finish appears, but the style is certainly Greek (Fig. 17).

Two fragments of sima were recovered, one of rather fine, the other of somewhat coarser poros, both in a badly damaged state. The finer piece (Figs. 18 and 19) is 0.217 m . high,


Figure 16. Fragment of a cornice


Figure 17. Fragment of a cornice
0.48 m . long (broken at both ends), ${ }^{2}$ and 0.21 m . thick on the bottom. The profile shows a plain narrow band at the top, 0.017 m . wide, above a broad and rather flat cyma recta, which is bordered below by a recessed fascia, a plain band 0.05 m . wide. There is no trace of an opening through the sima for the escape of water from the roof, and if there were spouts they have left no indication of their form. The surface is rough, weather-worn, and hacked, possibly for plaster; but the bottom exhibits a good Greek finish.

The other piece (Figs. 20, 21) is 0.46 m . long, fractured at both ends, $0.247 \mathrm{~m} . \mathrm{high}$, and 0.21 m . thick, measured on the bottom. It is coarser and heavier than the foregoing piece, though the greater roughness of the surface may be due to reworking in a late period. The bottom of the block was dressed with a toothed chisel. The profile is also different from that of the preceding example, since the chief moulding is a very flat and badly executed

[^7]cyma reversa; ${ }^{1}$ it is by no means certain, however, that this was its original form; this too may be the product of later tampering. It is of course possible that two different types of sima were employed in different parts of the same building; but the association of the two fragments in question with each other and with the Temple to which the steps and wall blocks belonged cannot be regarded as certain.

From the remains discovered about the summit it is clear that all the various covered buildings which successively stood here were roofed with tiles of terracotta; at any rate no


Figure 18. Fragment of sima


Figure 19. Fragment of sima
fragments of marble tiles came to light. The terracotta examples included specimens of Greek, Roman (or early Christian), and mediaeval date, chiefly of the latter two. Not a great many Greek tiles were found; but two types were represented, showing, so far as one can judge from small fragments, the same large substantial shapes, but differing in fabric. One type, undoubtedly the earlier, is distinguished by its smooth surface, coated with a fine, greenish yellow, lustrous slip, which recalls the technique of good Corinthian pottery. No pieces decorated with painted patterns were recovered. The second type is also well made,

[^8]

Figure 20. Fragment of sima


Figure 21. Fragment of sima
but it lacks the glaze-like slip and is often somewhat porous in texture. This type is almost identical with that found in great abundance above the vault of Upper Peirene, and is presumably to be attributed to the third or even the fourth century b.c.

We thus appear to have evidence for two well made roofs of Greek times at the summit of Acrocorinth. They may perfectly well come from two separate independent structures;


Figure 29. Northernmost line of bed-cutting in rock
or, and perhaps this is more likely, they may represent two successive periods in the roofing of a single building.

Such are the scanty architectural remains available for consideration in a study of the building which seems to be the second in the series on Acrocorinth. From the character of the masonry it is clear that the structure was a Greek work of the fifth century b.c. As already remarked, it must surely have stood somewhere at the summit of the mountain, where all this material was found. Its exact position, however, is not so easy to determine. Here and there about the summit, bed-cuttings appear, where native rock was levelled for the laying of foundations, but unfortunately these are not sufficient or clear enough to make the exact situation, size, and plan of the building certain.

The bed-cuttings are not continuous as they are in the case of the temple of Apollo in the lower town, where the complete ground plan of the temple is patent from the smooth
lanes cut in the rock. Here on the mountain the building was much smaller, and it was apparently not considered necessary to hew out a continuous bed in the hard limestone. The configuration of the ground is also very irregular, and the abrupt differences in level would make such a continuous cutting difficult to carry out without quarrying on a rather large scale. Accordingly, wherever the rock was found to be fairly flat or suitable to give a footing for the foundations of the building, it seems to have been left in its natural state; but here and there, along the line of the construction, where it rose up in a sharp ridge or edge or presented a steep slope, a horizontal bed was carefully fashioned; no more was cut away, however, than was absolutely necessary for the width of the foundations.

These cuttings occur mainly in the southern part of the area excavated about the summit, and traces of such chiselling to make a more or less horizontal bed may be observed at some sixteen different points. In some instances the rock was only slightly hammered to flatten out a projection, but in at least ten cases one side or the other of the bedding is sharply defined by a deeply cut straight line. These lines give some, but unfortunately very meagre, evidence for the orientation and the plan of the building. As may be seen in Plate I, it is possible to recognize four roughly parallel lines of bed-cutting running from east to west (D-E, H, L, M-N on the plan, Plate I), crossed by two others extending from north to south (D-G, J on the plan, Plate I). At the northwest corner of the whole system, where the north and the west lines meet, the angle is very clearly marked in the rock beneath the foundations of the southeastern corner of the Byzantine or Frankish Tower (D on the plan, Plate I).

Of the lines running from east to west three are perfectly clear and certain (Fig. 22), the fourth (the second counting from the north, H on the plan, Plate I) somewhat less obvious. They are approximately symmetrical in their spacing and look as if planned for the foundations of a building marked off by two interior divisions into three parts, somewhat like a basilica. The northernmost and the southernmost lines of cutting are $c a .10 \mathrm{~m}$. apart, and this measurement presumably gives roughly the width of the building. The central space or "nave" has about twice the breadth of the lateral spaces or "aisles."

As mentioned above, the northwest angle is perfectly clear, and the west edge of the bed-cutting here is continued southward for about three metres (D-G on the plan). This undoubtedly fixes the west limit of the building. The next sharply cut line running from north to south appears at a distance of almost 10 m . to the eastward ( J on the plan); and we thus have an indication that our building, or some part of it, was approximately square, measuring about 10 m . on a side, and had its interior divided into three aisles like the cella of a Greek temple.

Farther to the eastward no clear lines were found, but some scanty traces of hammering ( K on the plan) suggest that the building extended a short distance at least in this direction. The north line of cutting is continued eastward by a wall of large rough stones ( $\mathrm{E}-\mathrm{F}$ on the plan), $c a .3 .40 \mathrm{~m}$. long, 0.70 m . thick, one or two courses, $c a .0 .40 \mathrm{~m}$., high. This wall is only
a foundation, resting on earth and stone chips. It is possibly an original Greek construction, but no evidence was found to establish its date with certainty.

To the west of the square "cella" the rock drops off rather steeply and offers no distinct evidence, but a projection in this direction too is of course possible.

The net conclusions which we are justified in drawing from a consideration of this tantalizingly meagre evidence are not very satisfactory. The bed cuttings may have been made for the foundations of a small temple-like building, perhaps of the prostyle type, with a colonnade along the east front, and possibly even amphiprostyle, with a corresponding colonnade at the west end. If this conjecture is correct, the outside dimensions of the structure must have been some 10 by 13 metres, perhaps 10 by 16 , though the original length is problematical, and there could almost certainly have been no peristyle.

But these cuttings in the southern part of the area excavated may possibly have served rather for the foundations of a stepped approach leading to a building in the northern part of the area. For on this side too, although no regular lines of bed-cutting appeared, the outcrop of rock had clearly been hammered here and there to a level surface. It was this side that was later occupied by the Christian Church, and the latter may well have been the successor of a classical sanctuary on the same spot. The space available here is large enough for an edifice of considerable dimensions, but the traces of levelling of the rock give no clue to a plan.

If the evidence for the form of the building is so disappointingly insufficient as we have seęn, we tread on surer ground at least when we come to consider its character and identification. There can indeed be no doubt that it was the noted Temple of Aphrodite on Acrocorinth. This is in fact made certain by the very clear statement of Strabo, based on autopsy: ${ }^{1}$ "The summit is occupied by a small temple of Aphrodite; beneath the summit is the spring Peirene, which has no outflow, but is always full of clear water, good to drink." ${ }^{2}$

The description of Pausanias, though not quite so clear as that of Strabo, is not inconsistent with the latter. Pausanias says: ${ }^{3}$ "On the summit of the Acrocorinth there is a temple of Aphrodite. Her image represents the goddess armed, and there are images of the Sun, and of Love, the latter bearing a bow. The spring behind the temple is said to have been a gift of Asopus to Sisyphus. . . I I have heard say that this spring is Pirene and that the water in the city flows from it underground." Pausanias's remark that the spring Peirene lay behind the temple might be thought to cause some difficulty; for Peirene is certainly identified with the spring on the terrace a long distance below the temple toward the south. But if the temple was oriented from north to south, which is by no means impossible, Peirene could properly be designated as lying behind it, in spite of the considerable distance separating the two. Even though we assume the temple to have faced eastward, however,

[^9]the spring would naturally be regarded as behind it as viewed from the town of Corinth itself; ${ }^{1}$ and it was doubtless in the lower city that Pausanias obtained his topographical information. Indeed one may wonder if he actually climbed the mountain; his account is not so worded as to compel the belief that he is writing from personal observation. He may well have made his inquiries in the lower town, using local guides and perhaps even written sources, and may have considered it unnecessary to undertake the rather arduous ascent of Acrocorinth itself.

No evidence came to light in the course of the excavations to show when and how the Temple of Aphrodite was destroyed. The absence among the blocks found at the summit of architectural material which could be definitely identified as of Roman date suggests that the Greek building still continued to stand in the days of Strabo and Pausanias. It must have been demolished, however, by the fourth or fifth century a.D., when it was succeeded by an early Christian Church, constructed in large part of stones taken from the Temple.

The Church, occupying the northern part of the area about the summit, as already mentioned, was evidently in its original form a simple basilica, although the remains brought to light comprise only the nave, with its small apse, and the northern aisle (plan, Plate II). Practically all traces of the southern aisle had disappeared; the rising surface of the rock toward the west shows that this southern aisle in any event could never have been symmetrical with the other. A short distance to the south of the presumed exterior wall of the south aisle a small circular area, paved at the centre with a square slab of poros, and in its outer part with placques of terracotta, was uncovered. This was no doubt part of the font of the baptistery of the Church ( O on the plan, Plate II).

The Church had an extreme length of 19.10 m . from east to west, or 18.20 m . excluding the shallow apse. The nave had an interior width of 4.80 m .; the north aisle 2.30 m . Except for a small section of wall in the southwestern portion of the nave only the foundations of the building are preserved. They are substantially built, in large part of fragments of poros, or indeed whole blocks, taken from the Greek Temple, laid in mortar of good quality (Fig. 2).

In the original plan of the Church the lines of division between the nave and the aisles seem to have been marked on each side by a continuous foundation, supporting a row of Ionic or Corinthian columns. Two bases of these columns, set with an axial distance of 1.90 m ., were discovered in situ along the south side of the nave. Each was made from a block of poros borrowed from the Temple, cut down and converted into a base with mouldings (Figs. 23, 24). The workmanship is crude, and in one case the original vertical pour-channel, betraying the source from which the block was obtained, is still visible; the exposed surfaces of the column base were doubtless meant to be coated with stucco. The top of the base had a diameter of $c a .0 .50 \mathrm{~m}$. The unfluted drum of an Ionic or Corinthian column already mentioned (Fig. 12) is of the right size to fit on these bases, agrees with them

[^10]in its crude workmanship, and is certainly to be assigned to this first period of the Church. No traces of the upper drums or of the capitals came to light.

In a second period, not necessarily much later in time, these bases of poros were replaced with marble. The new marble bases were much smaller than their predecessors ${ }^{1}$ and were superposed directly upon the latter (Fig. 23). Two of them were uncovered in situ. No re-


Figure 23. Ionic base of "poros" with marble base superposed


Figure 24. "Poros" base
mains of the corresponding columns could be identified, but they must have been made of marble to agree with the bases. In this period the open colonnades between nave and aisles were still retained.
${ }^{1}$ The base consists of a square plinth below, divided into two fasciae, above which is a columnar section marked by a deep scotia, surmounted by two roughly cut tori. Diameter of the plinth, 0.39 m .; of the top, 0.29 m .

In a third stage in the use of the Church a solid wall was built along the line of the southern colonnade (Fig. 25); the northern was presumably also treated in the same way, although no evidence of this has survived. A portion of the south wall was found standing to a height of $c a .0 .62 \mathrm{~m}$., but the original height could not be determined. The earlier column bases of both periods were left in place, and the wall was laid around and over them (thus ensuring their preservation). The inner face of the wall toward the nave was coated


Figure 25. Wall constructed over southern colonnade of nave, northeast corner of TOWER IN BACKGROUND
with plaster of excellent quality, smoothly finished. It may be that both north and south aisles were abandoned at this time, and that the Church henceforth consisted of a small structure covering the earlier nave alone.

A fourth period in the history of the Church is marked by a further change in the plan, the west end of the nave being walled off from the eastern part, apparently to form a small narthex. The cross wall was built up against the plastered face of the longitudinal wall, thus indicating clearly that the remodelling is of later date. A broad doorway now led from the new narthex into the nave. Two Ionic column bases of white marble (almost exactly similar to the bases in the open colonnade along the south side of the nave in the second period, but set at a lower level) show that the doorway was divided by columns into three passages (Fig. 26).

A fifth, and final, period saw yet another change: by means of an extension of the cross wall from the north side the doorway connecting the narthex and the nave was narrowed so as to consist of two passages only, with a single column between (Fig. 26). The north wall
of the nave was also apparently reconstructed in order to make the west end of the room, at least, symmetrical with the new door. At the same time the existing pavement of the narthex was laid down, and the floor of the nave, of which only a little has been preserved, seems to be contemporary. The pavement of the narthex consisted of placques of terracotta, levelled rock, flat stones, and bits of marble. Among the latter were some fragments of slabs bearing carved ornament in the Byzantine style probably of the twelfth century, a fact which gives


Figure 26. Doorway between nave and narthex
the chronological terminus post quem for the final reconstruction of the Church. The pavement was laid slightly too high to fit the column bases of the earlier door; the one still left in the door opening continued nevertheless to be used as it stood (Fig. 26).

There was no specific evidence to determine exactly when the final destruction of the Church took place. It can, at any rate, hardly have survived the first Turkish occupation.

The modification of the plan of the Church in its fourth period was probably necessitated, and certainly followed, by the erection of the great Tower immediately to the southwest. The Tower, built with immensely strong walls ( 2.60 m . to 2.85 m . thick), was rectangular in plan, with a length from east to west of $c a .12 .70 \mathrm{~m}$. and a width of $c a .12 .05 \mathrm{~m}$. (Plate III). Its northeastern corner projected into the area previously occupied by the west end of the Church (Fig. 25). The walls of the Tower, founded on rock, were made chiefly of roughly worked limestone blocks, some of huge size, set with smaller stones in durable mortar; but they contained also a number of blocks and many fragments of poros from the Greek Temple. The interior of the Tower was divided by a comparatively narrow wall into an eastern and a western compartment, the former slightly smaller than the latter. The
eastern compartment was at some time utilized as a cistern, its floor and walls being coated with fine waterproof stucco.

The greatest preserved height of the wall was 2.17 m ., on the north side; but the thickness of the foundation suggests that the Tower was originally a rather lofty one. No direct evidence for its date was secured, but it may probably be attributed to the early part of the thirteenth century.

Little need be said about the subsequent buildings constructed at the summit of Acrocorinth. Two small Turkish Mosques seem to have succeeded in turn the Christian Church, both erected in the area south of the nave of the latter and east of the great tower. The first was very small, and only a portion of its foundations have survived. The second, almost directly overlying the first, was square in plan, measuring about six metres on a side. Remains of the mihrab were still preserved in the middle of its southeastern wall, as shown in the plan (Plate III). This second mosque seems to have stood within a walled court, with a cloister-like series of rooms along its northern border. All these buildings had been erected with free use of poros material from the Greek Temple.

The same remark is true of another construction which now rose against the north side of the great tower. This was a fairly broad platform, carefully paved with regular, squared stones of small size, chiefly of poros and surely cut from ancient blocks that had once belonged to the Temple. The pavement is very much like that found here and there about the circuit walls of Acrocorinth, marking the gun-emplacements of Venetian date. It seems likely that the platform at the summit was also prepared for a battery, which might be very effective in this high commanding position.

The latest building on the spot appears to have been a small house or hut placed above the gun-platform in the eighteenth or the nineteenth century (plan, Plate III). Only the foundations of the walls and partitions remained, and they are worth mentioning merely because some of the material used in their construction seems still to have been derived from the ruined Temple of Aphrodite.

The whole area about the summit had been utilized for a long period of time as a cemetery. Numerous graves were found in the plot surrounding the Christian Church, and many persons had also been buried within the building itself, in cists constructed beneath the floor. Some of these graves contained single interments only; others were ossuaries, filled with human bones (Fig. 27). Among these burials were not a few of pre-Frankish times, but most of them belonged to the thirteenth century and later. One skeleton, which lay with the two legs crossed below the knees, may possibly have been that of a crusader (Fig. 28).

After the destruction of the Church the cemetery still continued in use, and many skeletons came to light about the Turkish Mosque. One grave of this latter period was interesting on account of its position; it was a simple unlined trench crossing the curve of the apse of the Church, and it had been hewn directly through the heavy foundations laid in hard mortar (Fig. 29). No objects of any consequence were found in these graves.

Apart from the architectural remains already described, and the coins discussed by Dr. Bellinger (pp. 64 ff .), very little was brought to light in the excavations about the summit.

Only three nondescript fragments of sculpture in marble were recovered. One, from a figure probably somewhat larger than life size, is part of a left leg from below the knee to the ankle, 0.25 m . long, and 0.13 m . thick at the top. Traces of an attachment, possibly to a


Figure 27. Ossuary-cist of byzantine period
tree trunk, appear on the outside of the leg. The workmanship does not show much inspiration. The second piece, from a small statuette of crude style, is also a portion of a leg, from above the knee to the ankle; it is 0.035 m . long. The third fragment is merely a small bit of drapery.

Inscriptions were still more rare, only one mutilated example being found. It is a shattered piece of marble, 0.24 m . long, 0.12 m . high, and 0.22 m . thick, bearing parts of two lines of writing in Greek letters of late Roman date:

The letters of the first line are 3.5 cm . to 3.9 cm . high; we seem to have here the ending of a noun in the genitive case (or of an adverb) followed by some form of the verb кор'́vvvu. The letters of the second line, which were slightly smaller, are preserved only in their upper half; they apparently contain a reference to Sisyphus, suggesting that the composition was of the archaizing versified type so frequently employed in late times. The fragment is probably from a grave monument, or from the base of a statue; at any rate it evidently preserves part of the middle of the couplet.

A considerable amount of pottery was found, consisting, however, except for two pots from a late Byzantine grave and a large jar which had been buried beneath the floor of the


Figure 28. Skeleton, with FEET CROSSED


Figure 30. Jar buried beneath the FLOOR OF THE CHURCH


Figure 29. Grave in a trench hewn through the FOUNDATIONS OF THE APSE

Church (Fig. 30), only of shattered fragments. The earliest ware recovered was of the Geometric style: some good specimens were unearthed at various points about the summit, chiefly in the lowest layer of deposit and in crevices in the rock. Almost all were from small vessels, neatly painted with geometrical designs in a shiny, brownish black glaze; one fragment bore a row of long-necked birds. In the same context occurred two fragments of figurines, descended from the Mycenaean type, and a small bronze fibula.

The Protocorinthian and the Corinthian styles were also fairly well represented, small sherds appearing almost everywhere in a thin layer of brownish earth, lying directly on native rock. These fragments belonged mainly to small vessels of an offertory type, and were no doubt remnants of votive offerings that had once been deposited in the Temple.

The immediately superposed layer of earth, where undisturbed, produced fragments coated with good black glaze of the fifth century. There were also a number bearing stamped patterns, assignable to the fourth century and later.

The great bulk of the pottery brought to light about the summit belonged, however, to coarse unpainted ware of late Roman and Byzantine times, and no further description need be given here.

It must be admitted that the yield of ceramic material was, as a whole, very disappointing, and that it included nothing possessing any special value of its own. This pottery is nevertheless of prime importance for the history of the site, since it shows unmistakably that the earliest occupation of Acrocorinth dates from the Geometric Period.

## EXPLORATORY TRENCHES

By CARL W. BLEGEN

A short distance to the east of the summit is a depression or hollow from which a little valley descends southward toward the terrace occupied by the spring Peirene. Beyond the depression the rock rises again in a ridge to form the easternmost mass of Acrocorinth. Trial trenches were dug in the hollow, on the sides of the "valley," and on the level ground bordering the eastern ridge. No ancient remains came to light in this region, but almost everywhere traces of mediaeval and Turkish occupation were revealed.

Not far below the highest peak of the mountain, toward the south, a high vertical cutting in the rock forms the northern border of a broad terrace. This extensive artificial scarp and a few ancient squared blocks lying near it had long ago attracted attention, and some trial trenches were dug in 1899. The results were negative; no vestige of an ancient building was found. Several further trenches were opened in the same region in 1926, but, apart from the discovery of a number of mediaeval graves, the results were the same as those of the earlier campaign. There can hardly be a doubt that a building of some kind occupied this favorable position in ancient times; it is not unlikely indeed that some of the subsidiary structures necessary in connection with the worship of Aphrodite were erected here. If such was the case they have, like the Temple itself, been completely demolished, and not a single stone is left in situ.

Two long exploratory trenches were dug to investigate the broad hillside sloping down from this terrace southward toward the spring Peirene. The whole area proved to be a vast cemetery, containing numerous simple graves. No objects were found by which these graves could be safely dated, but since they differed somewhat in arrangement from the usual Christian burials, they may probably be assigned to the Turkish period. No ancient remains were discovered on the hillside.

A trial excavation, conducted in 1914, on the saddle connecting the eastern and the western peaks, brought to light nothing that could be attributed to the classical or Roman periods, and no further digging was attempted here in 1926.

The great quarry not far to the west of the saddle, as already remarked, was investigated in one of the early campaigns at Corinth under Professor Richardson; the only remains to appear here were the chips and débris left by the ancient stone-cutters.

Three terraces below the northern. declivity of the rocky ridge of the western peak of Acrocorinth were examined in 1926, two lying some distance above the path which winds
upward from the main gateway toward the saddle, and one just beside the path itself, where it passes a ruined minaret, the last remnant of a still more ruined Mosque. The pottery and the coins found on the two upper terraces were all of mediaeval date, and there was no trace of anything more ancient. The extensive terrace below the minaret and ruined Mosque is of artificial construction. The greater part of it is really a flat roof covering a vast subterranean storage cistern or reservoir, massively built of brick in a series of huge barrel vaults. Two periods of construction may be distinguished, the earlier resembling Roman work. Some small pits opened here failed to unearth more definite chronological evidence. Our trial trench across the west end of the terrace, beyond the reservoir, revealed nothing that could be recognized as earlier than the Frankish period.

Explorations were also carried out in a spacious area just inside the northern fortification wall, to the west of the small postern gate, which has already been mentioned in another connection. Here too was found abundant evidence of intensive occupation in post-classical times, but objects of earlier date were entirely lacking.

The trial trenches reviewed in the foregoing paragraphs, together with the larger excavation at the summit, and the digging about Peirene have exhausted almost all the possibilities on Acrocorinth. The survival of Greek remains in situ at other points, which did not look so obviously favorable for building-sites as to encourage trenching, is certainly not precluded; something further might yet be found if the whole of the vast area within the walls could be still more carefully combed. But the work done, which was undertaken to meet one of the obligations assumed in the task of excavating ancient Corinth, has been more than a fair test. The results seem to justify the conclusion that the constant activity of the successive later occupants of Acrocorinth has demolished beyond hope of recovery any other major monuments of antiquity which they may have found on the site.

## III

## UPPER PEIRENE

By RICHARD STILLWELL

"When one has climbed Acrocorinth, there is a temple of Aphrodite...they say that the fountain which is behind the temple was given by Asopus to Sisyphus. I have even heard people say that this is Peirene and that the water runs down thence to the city." So says Pausanias. ${ }^{1}$ Strabo ${ }^{2}$ tells us that, "under the summit is the water-basin (кр $\dot{\eta} \nu$ ) of Peirene; it has no outlet but is always full of sweet and limpid water. They say that the water-basin at the foot of the mountain is fed from this one and from other subterranean sources."

Many travellers have visited the spot, climbing the long steep path that ascends to Acrocorinth and making their way over the jagged ridge that separates the southern terrace from the main part of the rocky summit. We have a number of accounts of this spring, but none is complete. Göttling ${ }^{3}$ gives a fairly accurate account of the outer part so far as it could be seen by one who did not wade through the water into the inner chamber, but his account of the rest does not agree with the facts.

A rough interior survey of the spring in 1925 showed that a careful examination was to be desired, and accordingly on March 20, 1926, work was begun, shortly after the digging on the summit of Acrocorinth had started. The excavation was carried on at first from the outside of the spring, and the cleaning of the interior was left to the last. It was not until May 25 that the work was completed.

Before the work began the condition of the spring was as follows (Fig. 31). Access was by a modern iron stairway, which led from an opening through a vault about 1.50 m . underground to a rough platform of stones from which a steep ramp of earth and débris sloped downward toward a double opening crowned by a pediment. The chamber that contained this ramp was vaulted and had walls of polygonal masonry, some of the blocks of which bore inscriptions. Beyond the screen was a second chamber, oblong in shape, 2.30 m . by 4.87 m . This was covered by a barrel vault that had, remaining on it, a considerable quantity of very hard, fine, white stucco. At the rear of this chamber was a well whose mouth opened at ground level in the midst of a square platform of masonry laid without mortar. The inner chamber was filled on an average to within three metres of the springing of the vault by stones that had been thrown in through the well, apparently in an effort to fill the the place up and prevent it from being used as a source of water supply. Nevertheless, the

[^11]water had risen over the stones, and at the time that we began work there was a depth of as much as two metres in some spots. The extreme clearness of the water, as remarked by earlier travellers, was quite apparent, so much so that on several occasions visitors stepped into it before they were aware. A square hole near the north end of the outer chamber indicated another well. This was opened so as to afford more light for subsequent operations. Throughout the campaign, the workmen residing on Acrocorinth used the spring as their source of water supply.

A survey made the year before had determined the position of the walls of the spring. Accordingly three trenches were opened, one running from north to south immediately east of the two chambers, one to the south and one to the west of the outerchamber (Plate IV).

## The South Pit

The South Pit, about three by four metres in size, was carried down to a depth of 5.10 m ., where we came upon limestone rock, apparently unworked. One to two metres below the surface we passed foundation walls of rough stone, bricks, and tiles. There was little to indicate their date, but, judging from their construction and comparatively shallow depth, they were probably of late mediaeval or Turkish origin. The outer side of the south wall of the inner chamber presented a mass of loosely piled rough stones, such as would be caused by filling in a cutting in the earth after the construction of the wall within. Three metres below the surface we came on a column drum, upright, 0.30 m . in diameter, and 1.12 m . high. Badly weathered and unfluted, it stood on earth with no apparent artificial stratum connected with it. Near the base of the column was a coin of the deified Claudius, 261-270 A.d. Below the column were Hellenistic sherds.

## The West Trench

A study of the plan indicated a former entrance near the southwest corner of the outer chamber. The southernmost part of this chamber was covered by a segmental vault, whose crown ran east and west. A small pit was opened up, and as there proved to be no wall at the western end of the vault, this served as a working entrance to the interior. Subsequently we removed the iron ladder that had formed the previous means of access and utilized it for the work in the excavation above the inner chamber.

Two metres below the surface we cut through a water-collecting stratum of lime, and found a wall 0.60 m . wide, two to three courses in height, of large roughly-laid stones. The east end of this wall made an acute angle with the western part of the outer chamber, but was not bonded with it (Plate IV). The southwest corner of the chamber was built up with stones, blocks, and tile fragments, laid in dirt to about the same level as the wall. The whole area thus far bore the mark of much haphazard rebuilding, caused doubtless by the changing level of the ground outside. All indications were that we had not yet reached a level ante-


Figure 31. Drawings of upper peirene, showing condition
before the excavation
dating mediaeval times, and the wall and fill in the chamber were cleared away. The removal of a row of blocks forming the top step of a flight of stairs that led down to the screen which divides the south from the north chamber, revealed a well-built platform. It was of limestone cobbles of irregular shape, laid in and partly covered by a hard cement which was turned up at the east and south of the platform against large stones which continued the polygonal wall construction of the sides of the chamber.

Extending over the western third of this platform was a flight of nine or possibly ten steps. They were of dressed blocks and stones roughly laid and levelled up with fragments


Figure 32. Roman water
BASIN


Figure 33. Roman water basin showing NORTH WALL AND PART OF ORIGINAL retaining wall of greek entrance
of tile. Dirt mixed with clay was the only binder. Behind these steps to the west we dug down, finding late Roman pottery in great quantities, and at the proper level came once more upon the platform. It extended westward to a wall built of re-used blocks and fragments of Corinthian roof tiles. At the base of this wall there was a sill not quite parallel to the wall. A drain had been cut in the sill. This drain continued up into the wall. It measured 0.12 m . wide by 0.25 m . high and had at some time been filled up from the outside. The hard cement waterproofing of the platform turned up very slightly at the sill, and from the disposition of the cement it appeared that the drain had been cut subsequent to the laying of the sill. The platform made an ell ( $\lrcorner$ ) with the outer chamber, and the walls of the short arm of the ell continued the polygonal construction of the sides of the chamber
though the size of the blocks was somewhat less. The cement was turned up against the base of these branch walls to a height of 0.10 m ., just as it was about the remainder of the platform.

We then extended the excavation north, south, and west of the original pit and uncovered a set of foundation walls about 2.50 m . below ground. Beneath these the earth was stratified as though by the washing down of dirt during successive rainy seasons. These walls belonged to the same system as the wall that was uncovered and removed slightly below the lime stratum mentioned above. Beneath the gravel strata were Roman coins


Figure 34. East wall of roman water basin. Vault over inner chamber can be seen in background
ranging from 260 to 350 A.D. and a number of fourth century Roman lamps. The transverse wall at the west end of the platform proved to be the eastern wall of a square water basin of Roman construction (Figs. 32, 33, 34). All four walls were intact to a height of 1.00 m . and had been waterproofed by at least two coats of rather poor stucco with bevelled corners and a stucco floor. This was much softer than the floor of the platform inside the outer chamber, and the level was 0.10 m . lower. Below this floor was a filling, about 0.30 m . thick, of broken stones lying on earth that contained Hellenistic sherds.

Part of the east wall of this cistern was taken down, and an investigation showed that prior to the construction of the cistern the north and south walls of the platform extended to the face of the sill and then branched out so as to form retaining walls on either side of
the entrance. The plan of the Roman cistern shows one corner bevelled off (Fig. 32, Plate IV), and we were able to determine that in its construction the south wall was built up to the earlier retaining wall and the whole then stuccoed over.

Within the cistern was a large pithos placed there after the cistern was no longer in use.
The sill at the west end of the platform was built of two blocks of hard poros. It was not worn as though it had been a threshold, and it was impossible to tell whether it had supported another slab that had served as such. The height of the sill, however, only 0.15 m ., would have permitted another block to be placed above and form a step. The construction shows that the sill was certainly contemporary with the platform and probably also with the main flight of steps leading down to the screen (Plate VI).

In clearing the agglomeration of masonry above the east wall of the cistern we found several column drums, ranging from 0.30 m . to 0.45 m . in diameter. Three were of the Greek Doric order.

## The East Trench and the Excavation above the Inner Chamber

The trench dug east of the inner and outer chambers revealed at the depth of 2.00 m . to 3.00 m . the lower part of a wall whose western face, toward the chambers, was covered with a double coat of lime stucco (Fig. 35). The coats were not of the same composition, and ceased at a point roughly 0.50 m . above virgin soil. The wall was of large, unfaced stones, roughly polygonal in fashion, and ran nearly parallel to the axis of the inner chamber. Another wall, built of small stones and a large amount of brick and tile fragments, used the eastern half of this wall as a foundation, but was not quite parallel with it.

West of the stuccoed wall was a layer of roof tiles of good classic pattern, yellow in color and very hard. As it was evident that the layer extended westward and probably covered the area over the inner chamber, work on the trench was suspended and the entire area laid bare. The presence of the well at the north end and the poor condition of the curtain wall above the screen, hindered the work and for a time rendered progress slow.

One and one-half metres below the surface, to the west, we came on some Byzantine foundations dating from the twelfth century. North of the manhole was a Byzantine grave (Fig. 36) built of blocks of stone and covered with slabs of stone that rested on a course of blocks and a layer of tiles that was corbelled out from the edges of the grave. Within were two skeletons. The arms of one were crossed. The head lay toward the west. The other skeleton was smaller and seemed to have been disturbed. Two rough bronze rings were the only things found in the grave beside the skeletons.

West of the manhole was a wall identical in construction with the wall first discovered at the east side. A small platform of earth, faced with tiles and stucco, and two large blocks laid on the earth indicated a small entrance (Fig. 37).

Directly above the inner chamber, 1.90 m . below ground, and 2.30 m . south of the well, was the skeleton of a man on his back, with the knees slightly bent to the left. The feet


Figure 35. East wall of building over spring


Figure 36. Byzantine grave


Figure 37. Vault from the east, showing west wall of building above spring
rested against a small stone slab. The hands were at the throat, and the whole attitude, and the absence of any apparent grave, indicated that he had met his end by violence or perhaps had been buried alive.

The layer of roof tiles proved to extend across the entire area between the two walls and as far north as the trench was dug (Fig. 38). They lay in a manner that indicated the collapse or burning of the roof. The layer averaged two tiles thick, and there were no gaps or heaping up of the tiles anywhere in the entire area. Many of the tiles were almost intact, and when the pieces were fitted together they gave the size and shape of the tiles, which measured 0.65 m . to 0.68 m . in length and 0.56 m . to 0.57 m . in width. The thickness at


Figure 38. View of a section of the layer of roof tiles. Taken from above
the bottom edge of the tile was 0.07 m . tapering to 0.05 m . at the top. The tiles and covertiles were of the type commonly used in Greece prior to the Hellenistic period.

Beneath the tiles was a layer of very hard clayey soil 0.30 m . thick containing practically no sherds. In places, from 0.15 m . to 0.30 m . below the tiles, were traces of carbonized wood. Below the hard earth the soil was somewhat darker in color, and softer.

This layer of hard packed soil, which coincided with the lower edge of the stucco on the east and west flanking walls, indicates perhaps an earth floor existent at the period of the collapse of the roof. The coins found just above the tiles date from 350 b.c. to 90 a.d., and as no coins later than these were found below the tiles, the inference is that the roof survived until the destruction of Corinth by Mummius, or perhaps on into the period of the Roman reconstruction. If this was the case, it is possible that the traces of wood mentioned
above represent the cooking fires of guards or wanderers during the period when Corinth lay deserted. A new dirt floor would then have been laid at the rebuilding of the city, and the roof, for some cause, may have collapsed very shortly afterward. I think it more probable, however, that the roof fell in at the time of the destruction under Mummius and that it was already lightly buried when the Romans colonized the city.

Not very far ( 0.60 m .) below the tiles we reached the crown of the vault. Before excavating I had assumed that the vault would be of Roman construction or possibly later, but of its real nature no one had any suspicion. When found, near the crown, the exterior presented a hard, smooth, yellow surface, much the same color as the roof tiles that we had


Figure 39. Vault seen from south
found above it (Figs. 39, 40). On being cleared, the surface continued smooth and unbroken by any joints, save by two longitudinal cracks caused by settling. At the springing of the vault the yellow covering ran horizontally for about 0.40 m . and was then turned up against a retaining wall, of polygonal masonry (Fig. 41), which ran the length of the vault and abutted against the blocks that formed the north wall of the chamber beneath. The height of the wall was almost exactly that of the crown of the vault. We found, however, that on the west side the stucco of the gutter did not turn up against the wall, but passed beneath it, and that the retaining wall itself, although of the same type of construction, was composed of smaller stones (Fig. 42). It is possible that the wall on this side may have been rebuilt not long after the first construction, or that it may have been the work of different hands, but no evidence was found that threw any light on the question.

The construction may best be understood by reference to the drawings and photographs. I shall discuss the actual composition of the vault later.

In order to clear the vault, and to avoid undue strain by unequal loading, we next proceeded to take down the well at the north end. At ground level there was a platform of Turkish origin, one course thick. Below was a marble curb 0.70 m . high and 0.49 m . in
inside diameter, deeply grooved by rope marks (Fig. 43). The top and bottom were moulded. The thickness of the die tapered from 0.07 m . at the bottom to 0.05 m . at the top. The curb, although complete, was badly cracked and had to be removed in sections. The base rested on a ring of tile fragments that overhung the sides of a well, built of cobbles laid in dirt and pointed on the inside with a hard cement. The curb had been surrounded for a distance of 0.60 m . to 0.85 m . from its rim with dressed blocks, irregularly laid, some in dirt and some in lime mortar. About 0.20 m . above the base of the curb on the east side was a semicircular platform of small irregularly cut stones about 0.35 m . thick. These were


Figure 40. Vault seen from north. At the near end of the vault may be seen the lower part of the mediaeval well
laid in a crumbly lime mortar. This platform seemed to have been built at the time of the setting of the curb in order to provide a sound floor for people to stand upon when they drew water. That it did not exist to the west of the well seems due to the presence of the mediaeval foundations that were already there and ensured a solid base on that side.

The well itself, pierced through the crown of the vault near the north end, is slightly off centre, to the east of the axis of the vault. It was evident that the well had been sunk at a time when the ground level had risen to within 1.00 m . or 1.50 m . of the present surface. Around the well was a loose fill of stones and débris, including a large stagshorn. Around this fill the earth was stratified and hard, as over the entire area. The layer of roof tiles had been cut through, and we found where it stopped sharply all around the edge of the fill. The disposition of stones and earth showed that the Byzantine grave had been touched at its


Figure 41. East retaining wall


Figure 42. West retaining wall
south side, but it does not seem to have been otherwise disturbed at that time. There was a cracked slab on top of the grave, but the crack may have been caused by some robber long before the sinking of the well.

## The Vault

In clearing the vault, great care was taken to preserve any fragments of pottery or coins so as to learn all that might be of value in dating the construction. There were not many sherds, but such small fragments as we found were all Hellenistic. The evidence of the coins was more conclusive. Following is a list of coins found below the roof tiles.

| Corinth Autonomous, 400-300 в.c. (2) | West side of vault in space below level of crown and <br> top of west retaining wall. |
| :--- | :--- |
| Antigonus Gonatas, 251-237 в.c. | 0.10 m. below level of crown of vault near western <br> retaining wall. <br> Below roof tiles, slightly above retaining wall S. E. <br> of manhole. |
| Ptolemy III, 247-221 в.c. | In gutter between vault and east retaining wall, <br> 1.40 m. below top of retaining wall (close to <br> floor of gutter.) Near south end of vault. |
| Corinth Autonomous, 400-300 b.c. |  |

Antigonus Gonatas, 251-237 в.c. (3) Near eastern stuccoed wall below level of tiles.
There were also two bronze nails and three or four coins too badly corroded to be legible, but apparently of the same style and fabric as the coins listed above.

## The Construction of the Vault

At the south end, where the vault abutted against the back of the screen separating the two chambers, it was possible by probing to ascertain that the thickness amounted to 0.21 m . From the careful construction it is fair to take this as representing the average thickness. Interior and exterior examination showed that the shell was composed of an agglomerate of sea sand and pebbles, held together by a binder the analysis of which shows a strong admixture of lime.

The vault and gutters sloped about 0.07 m . from the south downward to the north. There was no provision for water to escape, therefore the vault must have been buried after its completion or else roofed over.

The stuccoed east and west walls represent a springhouse over the cleft in the igneous rock from which the water flowed, and the rebuilding of the walls of the spring, and its vaulting over, may have been carried out under the shelter of the old springhouse. Whether or not the vault was covered at once is hard to say. Probably, to judge from its careful finish, this was not the case, but in the earth that we removed from the west side, we came on small crumbled bits of yellow binder rather like that which covered the vault. Such a condition might have been caused by the scraping up of the builders' materials, and the mixture of them with the earth thrown in to cover the vault. On the other hand, there exists across the northern face of the curtain wall above the screen a strip of plaster or stucco


Figure 43. Well curb and earth SURROUNDING MANHOLE


Figure 45. Screen seen from outer chamber, SHOWING THE UPPER PART OF CHAMBER WALL and the remaining courses of the ROMAN BRICK VAULT


Figure 44. Wall of outer chamber, SHOWING ONE OF THE INSCRIPTIONS


Figure 46. The screen
similar to the débris in the earth. This may indicate another origin for the stucco found in the earth, and therefore the vault may have remained unburied for a number of years. It is needless to say, however, that the whole vault must have been well covered when the tile roof fell in.

## The Interior

The interior or underground part of Upper Peirene consists of two chambers placed end to end and oriented a little west of north by east of south. For convenience I shall speak of the sides and ends as though the orientation were simply north-south. The southern chamber, or outer chamber as I have called it, measures 6.00 m . by 2.60 m . The walls are not exactly four square and the long sides are slightly bowed inward by the pressure of the earth outside (Plate V).

At the southern end is a landing or platform 1.80 m . wide running 2.50 m . west of the prolongation of the west side of the chamber, and giving a plan the shape of a reversed ell ( $ل$ ). As described above there is a flight of roughly built steps in the short western arm of the ell. From the north edge of the platform a flight of 25 steps leads down to and half way into the north or inner chamber. At the eighteenth step there is an architectural screen consisting of an entablature and pediment carried on a central pillar and two antae. The steps, though badly worn, were well built of blocks of varying length, averaging 0.20 m . to 0.25 m . high, and of uncertain width. They are laid so as to give a tread of 0.30 m . to 0.32 m . The joints are close, without mortar or clamps. I was unable to find any that showed anathyrosis. The side walls are built of large unfaced stones cut so as to give a roughly polygonal jointing (Fig. 44). Most of the joints at the lower part of the wall have been cemented up with an exceedingly hard cement so as to prevent an escape of water, should it rise to that height.

The steps either extend beneath the side walls or abut against them. The upper part of the walls is built of blocks of smaller size than the lower, and a careful study indicates that toward the north, where they come against the screen and pass above the angle of the pediment, they are continuous and contemporary with the polygonal retaining walls to east and west of the vault over the inner chamber (Fig. 45). Above this construction are from three to eight courses of Roman brick with square beam holes for centering. Apparently in Hellenistic times, or earlier, the side walls were retaining walls merely and did not support a roof. As the surface rose, the Romans, probably toward the end of the second century, placed a vault over the chamber. This was replaced later by a rather loosely built vault, whose date, judging from the construction, seems to be late mediaeval or possibly Turkish.

This vault runs north and south to above the edge of the landing. There the bottom of the ell is covered with a segmental vault running from east to west. The wall that supports the southern springing of the vault and seals its eastern end, is of small cobbles
laid without mortar. Only at the base of these walls does the construction of the large polygonal walls run around. The northern springing of this vault is against the south end of the north-south vault over the main part of the chamber.

The north wall of the arm of the ell, whose continuation, as mentioned above, was found west of the smaller flight of steps, has been concealed by later construction contemporary, I believe, with the building of these same steps.

We were unwilling to clear the top and sides of the outer vault on account of its bad condition, as we feared a total collapse should the hard packed dirt that bound it from the outside be taken away. The results would have thrown no light on the earlier construction of the spring, and it is doubtful whether, in view of the many later rebuildings, anything of importance could have been learned.

## The Screen

At the eighteenth step from the top of the flight stands the architectural screen mentioned above, rebuilt from fragments of some earlier construction. The antae and pier have very neat capitals which, from a comparison with the Hellenistic screens of Lower Peirene, might be dated in the early part of the fourth century b.c. (Figs. 46, 47). The architrave does not fit the openings but extends beyond on either side. There is no frieze. A cornice, consisting of a small cyma recta moulding and a corona which was originally crowned with another small moulding, extends across the top of the architrave, and a raking cornice, of the same members plus a sima about eight centimetres high, forms a pediment. At either extremity of the pediment are blocky acroteria. The construction can be seen readily, by referring to Plates VI and VII.

A cutting where the joint of the architrave occurs above the pier indicates a missing tablet. There are two holes which served to fasten the tablet in place.

The interior face of the architrave is of especial interest. It is crowned by a taenia with regulae and guttae of a shape


Figure 47. Capital of anta. Scale, 1:2 that resemble work of the fifth or early fourth century b.c. The length of the regulae is 0.332 m . and that of the space between is 0.465 m . The joint over the pier divides the centre regula in half, and if we add the length of two regulae and two spaces we get a distance of 1.594 m . for the centre to centre distance of two units. The centres of the antae are about 2.08 m . apart and hence have no relation with the spacing of the Doric entablature.

It seems, therefore, that the architrave must have been borrowed and built into the screen at the time of the construction of the vault.

The preservation of the guttae is excellent, but they retain no traces of color.
In clearing the exterior of the vault, we found the ends of the Doric backers of the architrave projecting east and west past the vault (Fig. 48). The yellow vaulting compound extended over the top of the pediment, whose apex came at very nearly the same level as


Figure 48. End of architrave backers SEEN FROM OUTSIDE OF VAULT the crown of the vault. At one place the forward half of the pediment was a little lower than the rear, and I was able to ascertain that the covering was neatly turned down over the angle thus formed and extended forward to the edge of the sima. There was even a break in the covering showing where the eastern of the two acroteria had originally stood.

That the vault and at least the upper part of the screen are contemporary seems quite evident from the excellent joint that the ends of the architrave make with the return of the two retaining walls next to the vault, which in turn are only to be explained by their function in relation to the vault itself. It would be impossible for the vault to antedate the screen, and although there might be a chance of the screen preceding the vault, I do not believe that this was the case; save of course that in the actual construction the screen was placed before the vault.
The central pier, exclusive of the cap, is in two pieces. The upper, 1.20 m . long, has a hole through it at a point 0.50 m . from the top. The lower piece, 2.42 m . long, has a drafting along one edge, and has the appearance of having served as a beam before it was placed in its present position. The manner of placing the pier on the steps can be seen from the drawings.

The antae are interesting, as they raise the question as to whether they date with the construction of the side walls of the inner chamber. The drawing shows that the faces of the antae have vertical joints at about every other course. These joints are in line with the plane of the walls of the inner chamber. Although the unjointed blocks of the antae do not course with the walls of the chamber, they are, nevertheless, bonded in. In bonding them it was necessary at times to cut rebates in the anta blocks in order to make them fit. Towards the base of each anta the construction, possibly on account of erosion, is somewhat rougher in appearance than at the top. There is a chance, however, that the lower part of
the walls of the inner chamber antedated the placing of the screen and the vault, and at the time of the alteration the lower parts of the antae were fitted somehow, and the upper parts actually built with the wall, but in order to keep the courses of the antae about equal, it was necessary to do some fitting into the irregular building of the inner walls.

## The Inner Chamber

The walls of the inner chamber are of a random ashlar type using both faced and unfaced blocks of stone. The faced blocks are poros and the unfinished ones are of limestone such as is found in the fourth century fortification walls. This limestone was quarried on Acrocorinth. So far as it was possible to see, there was no trace of anathyrosis in the construction (Figs. 49, 50).

At the top of the wall, on either side, were three roughly shaped corbels, and above them a levelling course of blocks, re-used, one of them bearing an inscribed name, Dionysi . . ., upside down. Some of these blocks have traces of a fine moulding at the top. They were about 0.25 m . in height and averaged 1.20 m . in length. The purpose of the corbels is somewhat obscure, but it seems quite possible that they were the supports for the beams of a wooden roof that preceded the construction of the vault. Their height, which is considerably below the soffit of the screen, seems to show that they are not contemporary with the screen, and the fact that they were never removed may be explained by their having served as the supports of the wooden centering that was necessary for the construction of the vault. The more usual later method of leaving holes in the wall, which was employed in the outer chamber, was clearly never used in the inner chamber, and it seems altogether likely that the corbels served this purpose.


Figure 49. Upper part of back wall of inner chamber. Note the corbels


Figure 50. Lower part of back wall of inner chamber, showing entrance to THE NORTH WATER CHANNEL

## The Water Channels

The north channel going downward at an angle of about 40 degrees, has walls built of squared poros and limestone blocks. It is of the same style as the lower part of the walls of the chamber from which it leads. The roof is a succession of stone beams, laid at an angle, and also slightly stepped. It is clear that the construction was carried on from within, the walls being built up on either hand and a wedge-shaped block of stone forcing the beam up to the position that it was to occupy and holding it there. The passage ends in a cave in the rock, which, on being carefully bailed out proved to contain no remains of any kind. Evidently the spring was kept clear and in repair until its abandonment by the Turkish garrison.

The west channel is not lined with stone save for a short distance at its entrance. The level rises very slightly, not more than half a metre from the opening to the end of the channel.

The east channel is lined with stone for about two metres from the chamber, and then there is a break that shows the native rock. The stones of the first part of the channel bond in with the wall construction of the chamber. Beyond the break, the channel is walled and roofed with slabs of stone, one of which, at the extreme end of the channel, shows the same fine bead moulding that can be observed on a block at the top of the north wall, outside of the vault. Furthermore the walls of the channel are pointed with the same quality of yellow plaster that appears in the construction of the vault. The joints in some cases are struck. Hence we are led to assume that the construction of this arm must have been coincident with that of the vault. The presence of the break near the entrance and the slab-like character of the lining indicate that although the channel may have existed before the vault and been contemporary with the north passage, it was, in the middle of the third century b.c. extended and sealed in against possible collapse of the rock.

The level, as in the western channel, rises slightly to the end, and the channel terminates in a smaller chamber in the natural rock, down the face of which flows a thin trickle of water.

The lintel over the door of the north channel shows grooves made by ropes when people lowered their buckets through the mediaeval well and swung them into the mouth of the channel. Immediately beneath the well the rock was scooped away so as to form a collecting pocket.

The history of the spring seems to have been as follows.
There was first a natural cleft in the rock, into which water oozed and collected and thence found its way out by fissures at a higher level. For the purpose of drawing water a flight of steps was installed, and retaining walls built up originally at the upper part of the steps so as to prevent the earth and friable rock from slipping in and filling the reservoir. This retaining wall was then extended and returned so as to form a rectangular basin. Channels were cut to collect more water from the water-bearing vein, and the northern
channel sunk downward also to find a more abundant supply and to provide a collecting pocket for a prolonged period of dry weather. Perhaps this channel followed the trend of a natural fissure. To protect this reservoir a building was erected, the east and west walls of which appear on the plan. It was roofed with the tiles which were found in the layer a little above the vault. The inner chamber may also have had a flat roof. Then, at the time of the occupation of Acrocorinth by Antigonus Gonatas, it was decided to repair the reservoir and put a vault over it. The outer approach, between the polygonal walls, still remained open. When Corinth was destroyed by the Romans under Mummius, the roof of the old building collapsed. The level of the ground having risen, and more material being constantly washed down the steps, the Roman reconstructors established a vault over the approach, which thus became an outer chamber. In the second century of our era, perhaps because of a rise in the water level, a cistern was installed at the west end of the platform described above. This fell into disuse toward the end of the fourth century, and when it was filled up there was installed a rough flight of steps which led down to the platform inside of the line of the cistern. These steps may have been put in at a comparatively late date.

Access to the spring becoming difficult, and the ground level always rising, the well at the north end of the inner chamber was sunk, and this became the means for drawing water.

The Roman vault over the outer chamber was rebuilt, in the form that we see today, a square well was left in the top of it, probably for light (as there are no signs of rope marks, and the water level would have to be very high to allow water to be drawn through it), and lastly the part over the old platform was rebuilt and vaulted in.

Sometime in the nineteenth century, when the Acrocorinth was abandoned, a great quantity of stones and débris was hurled down the well, the square light well having been closed, and the spring of upper Peirene became practically inaccessible. A late mayor of Corinth had an iron ladder placed in a hole that was made in the vault over the platform, and in that condition the spring awaited the excavators in 1926.

# THE INSCRIPTIONS FROM UPPER PEIRENE 

By Oscar Broneer

The inscriptions from Upper Peirene have been known since the time of Cyriacus of Ancona, who visited the place early in the fifteenth century and published two of the inscriptions. Later archaeologists have from time to time added to this number and republished those first read by Cyriacus. ${ }^{1}$ But the darkness and the great amount of water have rendered the place difficult for study, consequently in most of the earlier publications the inscriptions have been very inaccurately read. Those who have copied them have not been provided with ladders and candles but have had to stand at a distance and read whatever appeared in the meagre light coming from the manhole of the inner chamber and from the entrance at the south end. But in 1893 Skias, assisted by two workmen and provided with candles, copied all the inscriptions which he could reach without entering the water. He commented, however, on the difficulty of the task and added that it would be highly desirable at some future time to have the whole spring carefully studied and all the inscriptions accurately copied. This has now been made possible through the excavation which the American School undertook in the spring of 1926.

1. ${ }^{'} \mathrm{E} \mu \nu \eta^{\prime} \sigma \theta \eta \sigma(a) \nu$


 нар $\mu$ ад́ $\rho \stackrel{\text { lo. }}{ }{ }^{2}$


Entrance, left wall, $c a .1 .50 \mathrm{~m}$. above the fourth step below the platform at the top of the stairs. The height of the letters varies from 0.025 to 0.060 m .

[^12]Ross, followed by Keil and Goettling, read $\dot{\epsilon} \mu \nu \dot{\eta} \sigma \theta \eta \sigma a \nu$ in the first line but made Ev́izopos genitive and emended àd $\delta \lambda \phi o \hat{v}$ to $\dot{\alpha} \delta \epsilon \lambda \phi i \delta o v$. Skias rejected $\bar{\epsilon} \mu \nu \dot{\eta} \sigma \theta \eta \sigma a \nu$ because he said there was no letter before the $\mu$; then, reading $\mu$ instead of $\nu$ at the end of the word, he amended it to $\mu \nu \eta \sigma \theta \dot{\eta} \sigma o \mu a l$, which reading Fraenkel followed in the Corpus. Skias remarked that the last three lines have no grammatical connection with the preceding two but simply give the names of the stonecutters who made the inscription for Euporos. The incorrectness of this interpretation is shown by the following three inscriptions, made by the same group of three. Besides, both the initial E and the final $\nu$ appear plainly on the stone, but the letter preceding the last $\nu$ is an omicron open at the top, and not an alpha. The last omicron of Eürooos in the second line is omitted (cf. No. 3). The last four letters of the same line, which Skias did not see, are smaller than the rest and show less clearly on account of the roughness of the stone. The two lambdas of 'A $\pi \in \lambda \lambda a \hat{s}$ are run together so as to look like an M . Skias suggested that the $\psi$ in $N \dot{\eta} \psi i \delta o s$ was written by mistake instead of $\phi$, but the same spelling appears in No. 4 , which he did not see. ${ }^{1}$ Foucart, apparently without seeing the inscription, emended correctly the reading given by Ross and Keil and explained the syntax. The three names in the nominative are all subjects of the verb, and the genitives are dependent on ${ }_{\epsilon}^{\epsilon} \mu \nu \dot{\eta} \sigma \theta \eta \sigma a \nu$. Mapua $\alpha$ áıo must be taken with all three names in the nominative. It is a late word for $\lambda a \tau \dot{u} \pi o s$, found mostly in inscriptions of Roman date. ${ }^{2}$ The letter a sometimes has the straight crossbar, sometimes the pointed one, and both forms appear in the same word.
2. $\Phi \iota \lambda \omega \nu \hat{a} s$
$\Delta$ lovéiou
$\dot{\epsilon} \pi^{\prime} \dot{a} \gamma \alpha \theta \hat{\varphi}$
$\dot{\epsilon} \mu \nu \dot{\eta} \sigma \theta$
$\eta .^{3}$


Figure 52. Greek inscription no. 2

Entrance, left side, 1.80 m . above the eighth step below the platform. Height of letters, $0.025-0.045 \mathrm{~m}$.

[^13]3. ${ }^{\mathrm{E}} \mu \nu$
$\dot{\eta} \sigma \theta \eta$
Eứtopos
$\tau 0 \hat{\text { à }} \delta \epsilon \lambda \phi o \hat{v}$
$\dot{\epsilon} \boldsymbol{\pi}^{\prime}{ }^{\prime}{ }^{2} \gamma a \theta \hat{\varphi}$
${ }^{\prime}$ E $\rho \mu$ iou. ${ }^{1}$


Figure 53. Greek inscription no. 3
Entrance, right side, 1.10 m . above the third step below the platform. Height of letters, $c a .0 .02 \mathrm{~m}$. The form of the letter $\Gamma$ is unusual but may be due to the roughness of the stone.
4. 'A $\pi \epsilon \lambda \lambda a \hat{s}$

N $\eta \dot{\psi} \psi \delta o s$ ${ }_{\epsilon}^{\epsilon} \mu(\nu) \dot{\eta} \sigma(\theta \eta)$.


Figure 54. Greek inscription no. 4
Entrance, right side, 3.25 m . above the twelfth step below the platform. Height of letters, $0.015-0.025 \mathrm{~m}$. This inscription is not given in any of the earlier publications. The letters are all well preserved, but the last word was not finished.

These four inscriptions form a group by themselves, having been made at the same time by the three stonecutters Euporos, Apellas, and Philonas. Numbers 2 to 4 are partial repetitions of number 1. They are all written on the rough polygonal stones of which the walls of the entrance are built, a hard limestone, found in great quantities on Acrocorinth. The surface of these stones, though rough, is so well preserved that in no case is there any doubt about the forms of the letters.
5. a. $\mathrm{Z} \dot{\omega} \sigma \tau \mu \mathrm{s}$ (?) $\mathrm{M} \nu \tau \eta \lambda \hat{\eta} \nu \eta(\mathrm{s})$
b. 'Е $\mu \nu \dot{\eta} \sigma \theta \eta$ Г $a \iota$. . . A
c. 'Е $\mu \nu \eta^{\prime} \sigma \theta \eta \mathrm{M}$. . .


Figure 55. Greek inscription no. $5 a, b, c$
On the front face of the architrave to the left of the central pier. Height of letters, $c a$. 0.050 m .
${ }^{1}$ Ross, loc. cit., 61c; Goettling, loc. cit.; Keil, loc. cit.; Pittakis, loc. cit., 2646; Le Bas-Foucart, loc. cit., II, 95a.c; Skias, op. cit. p. 119, 6「'; I. G., IV, 377.

The name $\mathrm{Z} \omega \sigma \tau \mu \mathrm{os}$ is rather uncertain, but the letters of the second name are all clear. The first $\eta$ probably stands for an $\iota$ and a final $s$ may have disappeared. ${ }^{1}$ In $b$ and $c$ the word $\dot{\epsilon} \mu \nu \dot{\eta} \sigma \theta \eta$ appears plainly in both lines, but of the names that followed only faint traces are visible.
6. ${ }^{'} \mathrm{E} \mu \nu \eta{ }^{\prime} \sigma \theta \eta \mu \nu \eta \sigma \tau \eta \mathrm{g}$.


Figure 56. Greek inscription no. 6
On the front face of the architrave to the right of the central pier. Height of letters, $c a .0 .040 \mathrm{~m}$. The letters in the second and third lines seem to make no sense.
7. a. ${ }^{\prime} \mathrm{E} \mu \nu \dot{\prime} \sigma \theta \eta \mathrm{O}^{2} \dot{\delta} \eta \sigma^{2}$. . .
b. LUCRIO $^{3}$

V ID(US) A(PRILES) ${ }^{4}$
c. P]HILERO[S ${ }^{5}$ A(NTE) D (IEM) III ID]ỤS (?) SEP(TEMBRES) ${ }^{6}$
d. MUSSIUS

XII K(ALENDAS) A(PRILES) or A(UGUSTAS). ${ }^{7}$
e. $\Phi \iota \lambda \omega \nu a ̂ s$
$\mathrm{Z} \omega \sigma^{i} \mu \eta$
Nıкоть入ıs (?) ${ }^{8}$
f. ('E) $\mu \nu \dot{\eta} \sigma \theta \eta{ }^{\prime}$ ' $\mathrm{A} \boldsymbol{\lambda} \epsilon \hat{0} \sigma \tau o s .{ }^{9}$


Figure 57. Greek and latin inscriptions no. 7, $a-g$

[^14]The screen, unlike the walls of the entrance, is made of soft poros originally covered with stucco, most of which has disappeared. The entrance to the spring must have remained open to the sky for a very long time, and that accounts for the weathering on the front surface of the whole façade. There may have been some other inscriptions which have disappeared entirely.

On the left anta facing the central pier there are several Latin inscriptions in large letters, and one Greek inscription appears on the capital. The anta is built with every other block extending into the wall, the rest having only the thickness of the anta itself. Two of the latter, the third and the fifth from the top, have fallen out, and on the wall behind the third block some Greek inscriptions were cut after the removal of the stone. The other block, which had been removed at a later period, was found in the fill when the spring was excavated, and in the drawing I have put the inscription which it carries in its proper place.
(a) On the capital of the left anta. Height of letters, 0.030 m . The last five letters are not certain. The scratches that appear below the first line on the projecting band of the capital seem to have been made unintentionally when the letters were cut above.
(b) On the second block from the top. Height of letters, $0.10-0.12 \mathrm{~m}$.
(c) Fourth block from the top. Height of letters, $0.08-0.10 \mathrm{~m}$.
(d) On the fifth block from the top, not in situ. Height of letters, 0.10 m . This inscription is given by Schmidt but not by Skias, hence the block must have fallen out at some time between 1881 and 1893. The surface of the stone is well preserved, and the letters are deeply cut. Since there are no traces of letters on the next block below, what we have here must be the whole inscription. Judging from that we may conclude that the two inscriptions above are also complete, each containing one name, the month and the day, but not the year in which it was cut.
(e) On the wall behind the missing block. Height of letters, $0.035-0.050 \mathrm{~m}$. There seem to be three names here, but the form of the last one is not certain.
$(f)$ On the same block as $e$ but farther in toward the inner chamber. Height of letters, $0.025-0.040 \mathrm{~m}$. The initial epsilon of the first word is omitted. Fraenkel restores it to М $\nu \eta \sigma \theta \dot{\eta} \sigma о \mu a \iota ~ ' А \lambda \epsilon о \hat{v}, ~ \ddot{\epsilon} \tau о s . .$. , but if that is correct the inscription was left incomplete, for there are no traces of letters below. Skias suggested $\mu \nu \eta \sigma \theta$ ein for the first word. The form $\mu \nu \dot{\eta} \sigma \theta \eta$, apparently with the force of an optative, is common on Christian tombstones, ${ }^{1}$ but does not appear elsewhere among the inscriptions from Peirene.
(g) On the low course above the corbels close to the anta is a large single R. ${ }^{2}$ Height 0.20 m .

[^15]8. a. ${ }^{\prime} \mathrm{E} \mu \nu \dot{\eta} \sigma \theta \eta^{1}$

$a$. On the central pier facing the left anta. Height of letters, $c a .0 .045 \mathrm{~m}$. In the space above this word one line has been erased, probably containing the name of the person who wrote the inscription.
b. Lower down on the same side of the pier. Height of letters, $c a .0 .080 \mathrm{~m}$.

Figure 58. Greek inscription no. 8, $a, b$
9. a. E. . EPICONṢ(?) ET LUCIU S [ET] CRATINUS. ${ }^{2}$
b. "A $\nu \theta o{ }^{3}{ }^{3}$
c. $\Phi i \lambda \iota \pi \pi o(s)^{4}$

$a$. On the central pier facing the right anta. Height of letters, first line 0.040 m ., second line 0.050 m . These are probably three names connected by et, but the form of the first name is uncertain. Skias read the whole first line E PICOMENIUS. b. On the same side of the pier lower down. Height of letters, $c a .0 .060 \mathrm{~m}$.
c. Lower down on the same block. Height of letters, 0.070 m .

Figure 59. Greek and latin inscriptions no. 9, $a-c$

[^16]10.


Figure 60. Greek inscription no. $10, a, b$
$a$. On the right anta facing the central pier. In the first line are only two letters, probably Greek $\Sigma T$, and below is the Roman numeral III and two or three letters. The next line below has $\epsilon \mu \nu \dot{\eta} \sigma \theta \eta$ and part of another word beginning with epsilon. In the following four lines only the phrase $\dot{\epsilon} \pi$ ' aj $\gamma a \theta \hat{\omega}$ can be read with certainty. The smaller letters seem to be of a later date than the rest.
$b$. On the third block from the top. Height of letters, 0.040 m . This inscription must have been cut after the stone was already badly weathered, since the letters are not run into the rough part.

## 11. $\operatorname{\Delta uvuriov}$

## Figure 61. Greek inscription no. 11

In the inside chamber, left wall, top course, about three metres from the left anta. This name, which is now upside down, must have been written before the block was in its present place.

On the walls of the water channels to the east and west are some letters of an early date, apparently mason's marks.
12. $\ddagger$ East channel, right side, first stone from the entrance to the channel, about 1 m . high. Height of letter, 0.10 m . This can only be an Argive lambda retrograde, or, more likely, turned upside down, which seems to be the case with No. 13.
13. И Same place as No. 12 on the next block farther in. Height of letter, 0.115 m .
14. B West water channel, left wall, about 5 m . from the entrance into the channel. Height of letter, 0.10 m . Farther along in the channel are some circles, 0.033 m . in diameter, stamped in the plaster. They do not seem to be letters.

At first glance these inscriptions appear to be nothing more than records of travelers who had the habit of scratching their names on the monuments they visited, as some travelers of to-day leave similar records of themselves wherever they go, but closer observation soon shows that this is certainly not their character. The inscriptions we are considering follow a regular formula repeated several times and known from other inscriptions in differ-

[^17]ent parts of the Graeco-Roman world. It is given by Plutarch in De curiositate 11 (quoted by Keil, Philologus, 1853, p. 168) : $\dot{\epsilon} \mu \nu \dot{\gamma} \sigma \theta \eta \dot{o} \delta \epsilon i v a ~ \tau o \hat{v} \delta \epsilon i \nu o s ~ \dot{\epsilon} \pi$ ' á $\gamma a \theta \hat{\varphi}$. The fact that Plutarch knew this formula exactly as it is found in Peirene shows that inscriptions of this type were perfectly familiar in his day. But if they have no more significance than mere names of travelers and of their friends and relatives, why should a distinct formula be adhered to? In order to find the meaning of this formula it will be necessary to compare the inscriptions from Peirene with others of a similar kind.

On the island of Syros, near the northern promontory, a great number of inscriptions have been found close to the sea, most of them dating from Roman and early Christian times. ${ }^{1}$ Among these are some similar to those from Peirene except for the omission of the phrase $\dot{\epsilon} \pi{ }^{\prime}{ }^{\prime} \gamma \alpha \theta \hat{\varphi}$, which, however, is once found by itself (No. 8). On a cliff ( $\sigma \kappa о \pi \dot{\eta}$, mentioned in No. 17) there was a sanctuary of Serapis in which prayers for safe voyage were offered by sailors and their friends. In one of these inscriptions (No. 17) the name of Serapis is mentioned, and in another (No. 22) he is referred to simply as the god ( $\pi a \rho \dot{\alpha} \tau \hat{\varphi} \theta \epsilon \hat{\varphi}$ ). No. 25
 than a conventional bon voyage is shown by the adjective $\phi \iota \lambda o \sigma \epsilon \rho a \pi \iota$ and by the fact that it is recorded here among other inscriptions in which the god is mentioned by name. It is apparently a prayer offered to Serapis for Julianus by one of his friends. That it is not written by Julianus himself before starting on his journey may be inferred from the other inscriptions with a similar content (e.g., No. 28), in which the pronoun $\sigma o c$ is used of the person whose safe journey is desired.

In volume Il of C.I. G. Boeckh records two inscriptions from Epirus (Nos. 1826 and 1827), ${ }^{2}$ in which the $\epsilon \mu \nu \dot{\eta} \sigma \theta \eta$ formula without $\dot{\epsilon} \pi$ ' $\dot{a} \gamma a \theta \hat{\varphi}$ is used. One of these reads: 'E $\mu \nu \dot{\eta} \sigma \theta \eta$
 have been found on an epistyle block from the Temple of Poseidon ${ }^{3}$ at Sunium, and another (Cf. Wide, 'A $\rho \chi$. 'E $\phi ., 1910$, p. 51; C.I. G., 508; and Philologus, 1848, p. 313) in the monastery at Daphne, but originally, no doubt, from the temple of Aphrodite beside the Sacred Way to Eleusis. ${ }^{4}$ Another example of the same kind from Pompeii reads: 'E $\mu \nu \dot{\eta} \sigma \theta \eta$ Ө $\theta$ ' $\phi \iota \lambda$ os B $\epsilon$ ó $\rho \eta s$ $\dot{\epsilon}^{\prime}{ }^{\prime}$ á $\gamma \alpha \theta \hat{\varphi} \pi \alpha \rho \dot{a} \tau \hat{\eta} \kappa v \rho i a^{5}$ (i.e., Domina Isis, see Not. degli Scavi, 1896, p. 429). On a herm, dedicated by some Athenian ephebi to Hermes, god of the ephebi, and to Heliodoros, the kosmetes, Archimedes, one of the young men whose names appear on the herm, added below the list of names: ' $\mathrm{E} \mu \nu \dot{\eta} \sigma \theta \eta$ 'A $\rho \chi \iota \mu \dot{\eta} \delta \eta s \tau \omega \bar{\omega} \phi^{\prime} \lambda \omega \omega \nu \kappa a i \quad \sigma \nu \nu \epsilon \phi \dot{\eta} \beta \omega \nu$ (I. G., III, 1, No. 1102).

[^18]Where this inscription was set up is not known, but the fact that it was dedicated to Hermes is sufficient to show its sacred character.

But by far the greatest number of inscriptions of this kind have been found in Egypt, carved on the legs of the Vocal Memnon ${ }^{1}$ near Thebes. ${ }^{2}$ Among these are also some Latin inscriptions. ${ }^{3}$ It will not be necessary here to discuss the phenomenon of the vocal statue which aroused so much attention during the first and second centuries of our era and drew crowds of superstitious travelers from all over the world, among them the emperor Hadrian and his wife Sabina. Were it not for these numerous inscriptions, which the visitors carved on the statue and which record in some cases the very hour when the voice was heard, we should know but little about this wonder-working statue. Here we find in the Greek inscriptions a formula similar to that given by Plutarch but usually with $\dot{\epsilon} \pi^{\prime} \dot{a} \gamma a \theta \hat{\varphi}$ omitted and with the verb ( $\mathfrak{\epsilon} \mu \nu \dot{\eta} \sigma \theta \eta \nu$ or $\mathfrak{\epsilon} \mu \nu \eta \mu \dot{\partial} \nu \in v \sigma a)$ in the first person. No. 4750 in C. I. G. reads:
 another formula is also used, as in No. 4811, which reads: . . каi тò $\pi \rho \rho \sigma \kappa i v \eta \mu a ~ \grave{\epsilon} \pi o i \eta \sigma a ~ \tau \eta ̂ s$ $\sigma v \mu \beta i o v \kappa a i \tau \hat{\omega} \nu \tau \epsilon \in \kappa \nu \omega \nu .{ }^{4}$ There can be little doubt that the two formulas have practically the same meaning. Heliodoros of Caesarea during his visit to Egypt also went to the shrine of Isis on the island of Philae and there too he made mention of the same two brothers but
 his coming to Egypt, whether as a soldier in the Roman army or in some other capacity, he made use of this opportunity of worshiping at the famous shrines of the country and repeated the proskynema on behalf of his brothers who were not there to do it for themselves.

Another place where several inscriptions of the same type have been found is the cave or Royal Tomb at Thebes, ${ }^{5}$ which was believed to have been the burial place of Memnon (Cf. C. I. G., Nos. 4771 and 4789). Here too the two formulas are used side by side as on the statue of the Vocal Memnon.

The phrase $\dot{\epsilon} \boldsymbol{\pi}^{\prime} \dot{a} \gamma \alpha \theta \hat{\omega}$ is frequently used by the classical authors in its literal sense, "with good intention" ${ }^{6}$ or "for the good" of some one. ${ }^{7}$ In later Greek it appears often in inscriptions with varying shades of meaning, depending on the context in which it is found. It is very common in dedicatory inscriptions with such words as à $\begin{aligned} & \hat{\epsilon} \theta \eta \kappa \epsilon \nu, \kappa a \tau \epsilon \sigma \kappa \epsilon \dot{v} a \sigma \epsilon \nu \text {, }\end{aligned}$ à $\omega \rho \theta \omega \omega \sigma \epsilon$, etc. Dittenberger, speaking of the phrase, says: "Formula in titulis Aegyptiis usitatissima, respondens fere illis Latinorum 'Quod bonum felix faustumque sit' vel Graecorum


[^19]With words like á $\boldsymbol{\nu}^{\prime} \theta \eta \kappa \epsilon \nu$ the meaning can only be "with good will" toward the person or deity honored, and that seems to be the force it has in these ${ }_{\epsilon} \mu \nu \dot{\eta} \sigma \theta \eta$ inscriptions.

An objection to this interpretation of the inscriptions from Peirene may seem to arise from
 the passage is read in its context it becomes clear that he is not speaking of the things contained in the inscriptions as being useless or harmful per se; he is only giving examples of writings which are not profitable to the reader. His real objection is expressed at the close of the passage, where he says that the harm comes from a desire to look into $\tau \dot{\alpha} \mu \grave{\eta} \pi \rho o \sigma \dot{\eta} \kappa о \nu \tau a$, things that do not concern us. It is from the point of view of the reader he is speaking throughout the whole passage; to those who were actually concerned with the inscriptions they might well have been important.

We have seen, then, that the inscriptions from Peirene are written according to a wellknown formula, that this formula as used in inscriptions from Egypt and elsewhere seems to imply a vicarious act of worship on behalf of those whose names are "remembered," and further that all the inscriptions of this type whose provenience is known are found at or near some shrine. Unless the same formula has a different meaning in different places, which seems unlikely, we are led to the conclusion that Peirene was considered a sacred place itself or was closely connected with some other sanctuary, and literary records indicate that such was the case.

Several tales connect the hero Bellerophon with the spring Peirene. According to one account Pegasus was drinking from the spring when Bellerophon caught him, ${ }^{2}$ and he is so represented in art; ${ }^{3}$ another story was that the spring originated when Pegasus struck the rock with his hoof and water gushed forth. ${ }^{4}$ In the city of Corinth one of the famous temples, that of Athena Chalinitis, commemorated the event of the bridling of Pegasus by Bellerophon with the aid of Athena, and on coins of Corinth the helmeted Athena on the obverse and Pegasus on the reverse both recall the story of Bellerophon. Professor Blegen has kindly let me read an unpublished paper of his, in which he has collected all the ancient literary references to Peirene. In it he has shown that the name Peirene, although it occurs frequently in the Greek authors, in no case before the time of Strabo was applied to the spring on Acrocorinth. In Greek mythology the lower spring alone was called Peirene. After the restoration of Corinth by Caesar the local traditions, partly forgotten during the hundred years that had elapsed since the destruction of the city, ${ }^{5}$ were reëstablished; and

[^20]the myths about Peirene were confused through a close association with the spring Hippocrene on Mt. Helicon, which also was connected with the Pegasus myth. Both were known as sources of poetic inspiration. In Roman times, through the influence of the Latin poets, Upper Peirene became the more important, and the Pegasus myth, which formerly had been connected with the lower spring alone, was transferred to the spring on Acrocorinth. An explanation was then invented in the story that the upper and the lower springs were in reality one, being connected by a subterranean channel. ${ }^{1}$ This tradition became firmly established through its acceptance by Strabo. After Upper Peirene had become known in literature as the place where Bellerophon, the national hero of Corinth, performed his most famous exploit, it is only natural to suppose that it would be regarded as a shrine; and the inscriptions, which all seem to date from Roman times, point to the same conclusion. ${ }^{2}$

In determining the dates of the inscriptions we are left largely to conjecture. There is nothing in the contents that indicates definitely to what period they belong, and the forms of the letters are of little help in this respect. The ordinary capital and uncial forms are used throughout, but in writings of this kind the lettering does not, of course, follow the forms used in monumental inscriptions. The characters are very much like those of the inscriptions from Egypt referred to above, and since the latter are definitely dated between the time of Nero and the reign of Septimius Severus, the probabilities are that those from Peirene also fall within this period. The formula used in both seems to have been most common about the time of Hadrian, ${ }^{3}$ and the fact that Plutarch mentions it shows that inscriptions of this kind were common in his day. These points of evidence, would lead one to believe that they were written at some time during the second century a. D.

[^21]
## V

## THE COINS

By Alfred R. Bellinger

Under the Greek tiles that cover the vault of Upper Peirene, and immediately above them, were found a number of the small bronze pieces of Corinth and Sicyon, showing Pegasus and a trident, and a dove and a wreath, respectively, which are loosely dated in the catalogues as b.c. $400-300$. With them, two under and four over the tiles, are six pieces bearing the monogram $\mathcal{N}$; four having on the obverse the head of Athena helmeted, on the reverse Pan erecting or crowning a trophy, and two with the head of young Heracles wearing a lion's skin on the obverse, a rider crowning his horse on the reverse. There were also two coins with the monogram $\boldsymbol{P}$ and a prow on the reverse, the head of Athena helmeted on the obverse. There were several pieces too much corroded to be legible, whose fabric showed that they might have been of one of the foregoing types, and, also under the tiles, a coin bearing the bust of a man, right, and, on the reverse, an eagle, left, on a thunderbolt, and the inscription, barely legible, TTONEMAIOY BAミI^Eת乏. Although the coin is in bad condition, there can be no doubt that it belongs to Ptolemy III, Euergetes, $247 / 6-221 / 0 .{ }^{1}$ The tiles, therefore, cannot have been put down before $247 / 6$. The two pieces with the monogram P have been identified by Mr. E. T. Newell ${ }^{2}$ as an issue of Demetrius Poliorcetes, struck probably in Caria, though they are frequently found in Greece, the monogram being that of the issuing magistrate. Demetrius became king of Macedonia in 294 b.c. and remained titular king until 283, a prisoner of Seleucus in Syria. His body was brought back to Corinth by his son Antigonus, and an elaborate funeral was celebrated there before it was sent to Demetrias for burial.

The first type of the pieces with $\mathbb{A}$ is a common one generally attributed to Antigonus Gonatas, king of Macedonia 277-239, though Head ${ }^{3}$ puts it under the combined heading of Antigonus Gonatas and his nephew Antigonus Doson, b.c. 229-220, saying, "It is not as yet possible to distinguish from one another the coins of these two kings." Macdonald, ${ }^{4}$ also admits the alternative: "Some of the bronze and possibly some of the silver may belong to the reign of Antigonus Doson." Now the facts about these two rulers in regard to Acrocorinth are these: the fortress was left in possession of Antigonus Gonatas when his father, Demetrius, surrendered to Seleucus in 287, and it remained in his hands continuously until $253 / 2$, when Alexander, the son of his half-brother Craterus, who held it as his viceroy, re-

[^22]volted and proclaimed himself king of Corinth and Euboea. ${ }^{1}$ In 248 Antigonus won the fortress back from Alexander's widow Nikaia, by a trick, and held it until 243, when Aratus of Sicyon took it for the Achaean League. ${ }^{2}$ Aratus ceded it back to Antigonus Doson in $224^{3}$; Doson held it until his death in 220. Now if these coins were struck by the later Antigonus, one would expect to find also pieces of the Achaean League, his ally and predecessor in control for nineteen years. But none such occur. It is very unlikely that there would be coins of the two Antigoni but none from the intervening years, so that the most probable conclusion is that both types are those of Antigonus Gonatas. In that case the presence of the Ptolemaic piece proves that the construction must have been done during the second tenure of the citadel, 248/43, a conclusion that fits the other indications admirably. One may go farther and assign possible dates for the origin of each type. The one with Pan and a trophy has been referred to the great victory of Antigonus over the Gauls at Lysimachea. ${ }^{4}$ There is a tetradrachm of his with a head of Pan on the obverse which is generally accepted as being of that date, reference being made to the tradition that Aratus of Soli wrote for the marriage of Antigonus and Phila a hymn to Pan celebrating the panic he had spread through the Celtic army. ${ }^{5}$ It seems only natural to suppose that if Pan on the silver coin commemorated this victory, so did Pan on the bronze. But there is an objection raised. Imhoof-Blumer ${ }^{6}$ remarks that the uncertain symbol which appears on the bronze pieces is found also as an attribute of Tyche and Astarte on coins of Syria and Phoenicia. As there it replaces definitely marine symbols, he concludes that it is itself of some marine significance. Following this reasoning, Tarn ${ }^{7}$ argues that the coin should celebrate a naval victory, and, since he attributes the silver piece mentioned below to the battle of Cos, he would have these others celebrate that of Andros. Ferguson ${ }^{8}$ accepts the reasoning without specifying the battle, and dates the coins in 246 when he puts the founding of the Paneia. But, against this assignment it must be urged: (1) that the marine nature of the symbol is only a conjecture and, though a natural, not a conclusive one; (2) that Imhoof-Blumer mentions its connection with these coins only incidentally. He is remarking principally on its occurrence on coins of the type with the head of Heracles on the obverse, the horseman crowning his horse on the reverse, which no one ever thought of referring to a naval battle; (3) even if the symbol be nautical, surely it would be appropriate enough as commemorating the victory of Lysimachea, where the Celts were annihilated by an attack from the rear as they were assaulting the ships drawn up on shore; ${ }^{9}$ (4)comparison of the trophy with that on Aetolian silver pieces, ${ }^{10}$ which certainly represent Celtic arms, and with that on Locrian and Boeotian coins ${ }^{11}$ clearly indicates that Celtic arms with the

[^23]big shield are intended instead of Greek arms with the small shield; (5) the great frequency of these pieces (they are much the commonest of the bronzes attributable to Antigonus) makes it very unlikely that they were first struck so late as 246 (which is Tarn's date as well as Ferguson's). They certainly continued to be struck after the year of their original issue, and so the farther back we put that year the better we can explain their numbers. To these points may be added (6) a much more conjectural argument. One of the coins of this type found on Acrocorinth is countermarked on the helmet of Athena with a bearded head, right. There is another such in the Hunterian Collection; a third is in the possession of Mr. Newell. As, by hypothesis, our countermarked coin must have been buried before Antigonus's death, the countermarking cannot be that of Demetrius II, his successor. But it is tempting to think that it might have been done by Alexander, the ephemeral king of Corinth and Euboea, who has left no coinage of his own but must have used some, and who would have had that of Antigonus available to be signed with his countermark and made coin of the realm. Altogether, the arguments in favor of Lysimachea seem much stronger than the single objection, and we may with confidence date this type from 277 b.c.

The second Antigonus type has a head of Heracles and a horseman, both familiar devices long established in Macedonian currency. Like the other, it has the monogram $\mathbb{A}$ and the letters $B A$ for $B A 乏 I \wedge E \Omega \Sigma$. I should assign this to the beginning of Antigonus's reign. Tarn ${ }^{1}$ has shown that he probably held the royal title from the death of Demetrius in $284 / 3$, seven years before he came to the throne of Macedonia, which was his only after the battle of Lysimachea. It is unlikely that he struck no coins in the meantime. His possession of Demetrias, Chalcis, and Piraeus, as well as Corinth, brought him a large revenue, and his continual activity with a view to establishing himself in Macedonia made it necessary for him to have large forces and to pay them. Doubtless he continued to strike silver of the types his father had used, and perhaps earlier ones, but it would be natural for him to put out small money under his own name and with the familiar Macedonian figures. As the coins are less frequent than those with Pan, we must assume that the latter type, as peculiar to Antigonus, supplanted the earlier, which he shared with previous rulers. If the unexplained symbol be actually marine, we must invent some new reason for its presence, for it will surely be granted that Heracles and a horseman make as unlikely a pair as one could find to celebrate a sea-fight.

A third type for Antigonus, not found on Acrocorinth, is that with a head of Poseidon and a prow. ${ }^{2}$ It would be most natural to connect the bronze with the tetradrachm showing a head of Poseidon and Apollo seated on a prow, left, with the inscription BAミINE $\Omega \leqslant$ ANTIrONOY. This is connected with the defeat of the Egyptians at Cos by Imhoof-Blumer, ${ }^{3}$ Head, ${ }^{4}$ Hill, ${ }^{5}$ Macdonald, ${ }^{6}$ Tarn ${ }^{7}$ and Ferguson. ${ }^{8}$ But this refreshing unanimity is a specious

[^24]advantage, for Imhoof-Blumer and Macdonald date Cos in 265, Ferguson in 256, Head and Hill in 253, and Tarn in 246! A. J. Evans ${ }^{1}$ adds to the confusion by denying that any naval battle is implied. He holds that the prow expresses merely the general naval strength which Antigonus inherited from Demetrius, and would assign it on grounds of style to the early part of his reign, perhaps 280. To enter into a discussion of the vexed chronology, Delphic and Athenian, on which the dating of the battle depends would lead much too far afield, and a few brief comments must suffice. Evans' argument is hardly tenable. (1) We know from Athenaeus (v, 209 e) that Antigonus dedicated his flagship to Apollo. Here we have Apollo bestriding a prow and, as Hill remarks, "it is rejecting the best gifts of Providence to ignore the passage of Athenaeus." (2) It was in 280 that Antigonus was beaten at sea by Ptolemy Ceraunus, and he was not the man to continue striking pictures of a ship after that on the strength of his father's navy. (3) The comparative frequency of the two tetradrachms shows that this was struck later than the one with Pan's head. The natural place to put the bronze prow is with the silver one. True, Apollo does not appear on the bronze, but Poseidon and the prow are enough to connect the coins. These bronzes are rare and therefore probably belong late in the reign. One may adopt Tarn's argument, mentioned above, that the silver commemorated Cos, the bronze, Andros, but, as he dated both battles in the same year, it makes little difference. On the whole, I am inclined to agree with his theory and date the coins in 246 . It is possible that Peirene was covered in $247 / 6$, before they were struck, and, as it must have been covered by 243 , the absence of this type is most natural if we suppose it to have been struck late. We shall then have three kinds of bronze provided for three stages in Antigonus' career, and I suggest that the fourth type bearing the same monogram with a Macedonian shield and a Macedonian helmet ${ }^{2}$ be given to Antigonus Doson, who would then be supplied with one type for a reign of nine years as against three for his uncle's reign of forty-four - a reasonable enough proportion.

The finding of autonomous Corinthian and Sicyonian coins with these others further strengthens the presumption raised by their places of finding in the excavation at Corinth, that the little pieces continued to be struck long after 300 . It is much to be regretted that on none of these coins close enough to the tiles to be reasonably dated is the symbol legible. The evidence in hand cannot prove it, but it is likely that their issue continued even down to Roman times. They were found on Acrocorinth in all parts of the excavations. One badly worn Corinthian drachma of the fourth century, with the Pegasus and the head of Aphrodite on it, was also found. The other autonomous Greek coins were a very much corroded Arcadian piece, of the League, 370-280, two Argive coins of $350-228$, two of Opuntian Locris, 338-300, one of Megara, 307-243, and two little Athenian pieces (bronze, like all the foregoing) of 406-393 - a strange time for Athenian money to find its way to Corinth! However, Athenian coins might well have been brought to Corinth at some later time.

[^25]From the Roman imperial period there are a few interesting coins, showing that fondness for copying important monuments which has been so useful in giving us an idea of lost buildings and statues. There is an Athenian piece of uncertain date showing Athena, armed, holding out a patera and seated, left, beneath an olive tree. ${ }^{1}$ There are three from Argos: one, of Antoninus Pius, with Demeter standing, right, holding in both hands ears of corn and poppies, the second, of Lucius Verus, with Hera seated, left, holding a sceptre and pomegranates, which is probably a copy of the statue by Polyclitus, ${ }^{2}$ and the third, probably of Caracalla, with Tyche standing, left, holding a sceptre and cornucopiae. From Corinth itself there are four pieces of the time of Augustus, bearing his head on the obverse; on the reverse of three of them are the heads of Gaius and Lucius, face to face, perhaps commemorating their adoption in b.c. $17 .{ }^{3}$ The reverse of the fourth is illegible. There is one with the head of Caligula and an awkward Roman Pegasus, and, probably from the time of Domitian, a coin with the head of Poseidon and two naked boxers, one of an interesting series showing scenes from the Isthmian Games. ${ }^{4}$ The seventh coin from the mint at Corinth has the head of Hadrian and Bellerophon on Pegasus slaying the Chimaera, while the last, particularly appropriate as found in this place, has a head of Caracalla and, on the reverse, a statue of Aphrodite, right, half nude, holding before her the shield of Ares, which, as Imhoof-Blumer has shown, ${ }^{5}$ is the type of the statue which stood in the temple on Acrocorinth. The figure was a favorite subject with Roman die-cutters and is found on coins of at least seven emperors, but the present piece differs from all published examples in two important respects. Aphrodite is here facing right instead of left, and before her is a nude male figure with right arm raised, bearing on the other what appears to be a torch. He looks rather like Hermes, but one is tempted to identify him as the Sun, a statue of whom Pausanias mentions associated with Aphrodite and Eros on Acrocorinth. ${ }^{6}$ As for Eros, who frequently appears with this Aphrodite on coins, he may perhaps be the little figure between the two, which would be right both as to position and size, but it is so worn that at present it looks like nothing in particular.

The Roman coins require little comment. There are no new types and none earlier than a much battered piece of Marcus Aurelius. Salonina, wife of Gallienus, Fausta, wife of Constantine I, Marcian, Leo I, and Zeno are the less common rulers represented. As in the excavations in the lower city, there is evidence of the great activity of Constantius II, son of the first Constantine, particularly frequent being the type of a soldier in fury piercing with a spear an enemy who has fallen from his horse, with the quaint legend, FEL TEMP REPARATIO. Almost as common (16 against 18) are the coins of Arcadius, son of the great Theodosius and first emperor of the East. Altogether there are 65 imperial Roman coins before the beginning of the Byzantine series.

[^26]The first noticeable thing about the Byzantine coins is the numbers from Heraclius and his family and Constans II and his family, respectively 7 and 24 . Among the 1300 identifiable coins excavated at Corinth in 1925 there are none of Heraclius and only 3 of Constans, and other years have yielded them very rarely. This difference cannot be accidental, and is in fact connected with one of the most remarkable features of the Corinth excavations. No coin has ever been found which could be dated between the death of Constans in 668 and the accession of Nicephorus I in 802. The explanation must be sought in the inundation of Slavs which for that century and a half overwhelmed the Greek civilization of Corinth. Comparison of the coins from above and below shows that, in the face of the Slavic menace, the Byzantines withdrew to Acrocorinth, or at least that they maintained themselves there for a few years after the plain was lost. It also indicates the converse, though not so strikingly. Coins of Theophilus and of Basil I are found below in small but regular numbers, but, from the citadel, there is nothing until Leo VI, who came to the throne in 886. Apparently, as is very natural, Acrocorinth was the last thing regained in the period of the Greek restoration. Basil II, 976-1025, is represented by 6 coins, Alexius I, 1081-1118, by 5 , and, as in all this region, Manuel I, 1143-1180, is prominent, with 10 pieces. There are two small scyphate fragments which may belong to Andronicus II and Michael IX, 1295-1320. The style and fabric is of that period, though the inscriptions are illegible and the figures by no means clear. If they are to be so identified, they are the first Byzantine coins from the time after the fall of the Latin Empire of Constantinople that I have seen among the finds at Corinth.

The only kind of Latin coin of which more than one occurs is that with a cross and the inscription GPACCAIE on the obverse, on the reverse a castle gate and CORINTI. There are 24 of these. There is one with a fortress and CORINTUM on the reverse, the obverse being a variation of the others. These two types are common also in the excavations below, where in 1925 there were 23 of the first kind as against 48 of the second. This difference in proportions appears to show that they were not contemporary issues. The inscription is that of Geoffrey or William Villehardouin, Prince of Achaea. Schlumberger, the most important authority on the numismatics of the time, assigns them both to William in the years between his accession in 1245 and the founding of the mint at Clarenza in $1250 .{ }^{1}$ But it seems as though five years were a very short time to allow for two different types as common as these. Marino Sanudo reports how Louis IX conferred upon William the right to strike deniers tournois of the type and weight of the royal coinage of France when William went to meet him at Cyprus in 1250. "E dicendo egli al Rè: 'Signor Sir, tu sei maggior Signor di me, e poi condur gente dove vuoi e quanta vuoi senza denari: io non posso far cosi,' il Rè li fece gratia, che'l potesse battere Torneselli della Lega del Rè, mettendo in una libra tre onze e mezza d'argento." ${ }_{2}$ The implication is that Achaea had previously been

[^27]without coinage. But Schlumberger is clearly right in dating these pieces before that year, for it is unlikely that the Prince would maintain two mints at the same time, and after the beginning of coinage at Clarenza there is no time when the mint might have been returned to Corinth. Probably William's request, then, concerned only bilion tournois, which, being of the French type, would be particularly fitting for a Frankish Prince, and his money of convenience had previously been supplied by these pieces of Corinth, which are copper. But Schlumberger's dating, while it gives William two types in five years, leaves the reign of the active and important younger Geoffrey, who preceded him, entirely without money, though he admits that one or other of the Corinth types might belong to Geoffrey. As a matter of fact the Chronicle of the Morea records that in 1218 the Emperor Robert con-
 $\delta \eta \nu \epsilon \rho i \omega \nu ;{ }^{1}$ "de faire batre monnoye de petiz tornoys en son pays." ${ }^{2}$ There are several serious anachronisms in the Chronicle's account, and Rodd, Miller and Schlumberger reject the whole episode as fiction. To be sure the copper coins are not tournois, but there may be in the Chronicle's story some lingering memory of a right to coin which was actually conferred on Geoffrey. We now have some further evidence. The type with CORINTUM, which is the commoner at Corinth, may be assigned to the earlier and longer reign, 12181245. But it is William who is mentioned as having carried on the building and repairs on Acrocorinth ${ }^{3}$ and it is therefore reasonable to suppose that the CORINTI type with the gate - which may perhaps have represented a gate, since replaced, erected by him which so far preponderates on Acrocorinth, is the one struck from 1245-1250.

There is one billon coin of Louis IX, 1226-1270, one of Guy de la Roche, Duke of Athens from 1225-1263, and one struck by Philip of Tarentum at Lepanto as Despot of Epirus from 1294-1331. They are all well-known varieties. There is also a piece of Nicholas Campobasso which has always been a puzzle. His coins are found only in Achaea and in Naples. They are not excessively rare, but of the man himself nothing whatever is known. De Saulcy, in discussing them ${ }^{4}$ commits himself only regarding the date: "Ils sont très certainement du XIVe siècle, et ne peuvent en aucune façon être considérés comme des produits de l'art monétaire du XVe siècle." In spite of this flat prohibition. Schlumberger, ${ }^{5}$ dismissing them from the coinage of Achaea, assigns them to Nicolas de Monteforte, Comte de Campobasso, 1450-1462. The present piece can add nothing to our knowledge of the man, but it does strongly confirm the opinion of De Saulcy, for, after the middle of the fourteenth century, Frankish coins on Acrocorinth are entirely replaced by Venetian. The earliest French coin found was one struck, presumably under Philip Augustus, 1165-1223, at Saint Martin of Tours before the ordonnance of $1204 .{ }^{6}$ There is a stray piece of Spanish silver, badly cut down, which seems to belong to Philip V in 1721. And there is a more interesting piece: a silver penny of the type with a short cross, initiated by Henry II and

[^28]struck successively by Richard, John, and Henry III until 1248. Probably, though one would like to attribute it to Richard, it is to be assigned to Henry III, for another specimen found in Corinth was in the company of two pennies with the long cross with which Henry III replaced the earlier type in 1248.

Venice is well represented. There is a continuous series of ducal pieces, all but the last bronze, coins struck especially for the Levant, which covers ninety years. Two of Antonio Contarini, 1367-1382; eleven of Antonio Venerio, 1382-1400; four of Michael Steno, 14001413; one of Thomas Mocenigo, 1413-1423; and a silver soldino of Francesco Foscari, 14231457. Then, there are the anonymous gazzetti and soldi of the late 17 th and early 18th centuries, bearing the legends, ISOLA ET ARMATA, DALMATIA ET ALBANIA, ARMATA ET MOREA, and CORFU CEFALONIA ZANTE. And, oddly enough, the last piece is a gold sequin of Ludovico Manin, 1789-1797, the last Doge.

Finally, the Turkish coins, kindly identified by Halil Bey, Director of the Ottoman Museum at Constantinople, are almost all late silver paras either from Stamboul or Cairo. The Sultans represented are Suleiman II, 1690, Achmet III, 1705, Abdul Hamid I, 1775, Selim III, 1791, and Mohammed II, 1810. There is also one piece of Suleiman I, struck in 1522 at Sidrekapsi in Bosnia, and one copper coin on which only the date 719 can be made out. If the reading is correct, this would belong to the year 1322.

A 1 lepton piece of 1830 was the only modern Greek coin found.

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## PLATES



PLAN OF EXCAVATIONS AT THE SUMMIT


PLAN OF EXCAVATIONS AT THE SUMMIT INCLUDING THE CHURCH


PLAN SHOWING MEDIAEVAL AND TURKISH WALLS







## OKOPINOOY



deg cuarrauioworlas



TOPOGRAPHICAL PLAN OF ACROCORINTH



[^0]:    ${ }^{1}$ The discussion of the walls, which was written by John Finley, will be incorporated in a more complete discussion of the walls of Corinth by Professor Rhys Carpenter. This will form Part 2 of Volume III of the publication of the results of American excavations at Corinth. - H. N. F.

[^1]:    ${ }^{1}$ A good many further blocks of the same type were observed built into the fortification wall of Acrocorinth just east of the small postern gate on the north side of the enceinte. Owing to their inaccessible position in the wall above a precipitous declivity, almost none of these blocks could be measured, but they were easily recognizable by reason of their style and by their characteristic anathyrosis. The place where they were thus re-used is not far from the summit of the hill, from which the material could easily have been brought down at the time this section of the wall was reconstructed. Yet another block, the step mentioned in the text, was discovered built into a buttress supporting the wall on the south side of Acrocorinth.

[^2]:    ${ }^{1}$ Height, 0.272 m. ; length, 0.75 m. , broken at the right end, left end original; 0.48 m . thick, but broken at the back. The left end has anathyrosis along the top and the sides, and there is also a medial strip. A pour-channel in the latter leads to a dowel hole at the bottom of the block.

[^3]:    ${ }^{1}$ The dowel hole in the lower edge of the end of the block runs back only ca. 5.5 cm ., whereas the complete dowel holes preserved on the upper surface of the blocks are 11 cm . long. It would thus appear that the dowel projected beyond the joint into a corresponding cutting in the contiguous block. No block with such a cutting was, however, observed.

[^4]:    ${ }^{1}$ So far as the shape and the dressing of the block, as well as the cuttings for the T clamp, are concerned, the piece could also conceivably be regarded as a fragment of an interior transverse buttress, similar to those which appear in the Heraeum at Olympia; but this seems very unlikely, presupposing, as it does, a building of considerably greater size than the evidence appears to warrant at the summit of Acrocorinth. It is not, however, impossible.

[^5]:    ${ }^{1}$ Height (bottom broken), 0.23 m .; height of echinus, 0.075 m ., of abacus, 0.07 m .; width of abacus, not recoverable; lower diameter, $c a .0 .38 \mathrm{~m}$.

[^6]:    ${ }^{1}$ Height, 0.192 m .; height of abacus, 0.075 m ., of echinus, 0.06 m . ; height of neck, 0.057 m .
    ${ }^{2}$ The guttae seem to have had a diameter of $c a .0 .034 \mathrm{~m}$.

[^7]:    ${ }^{1}$ The mutule was set in 0.02 m . from the face of the corona.
    ${ }^{2}$ A small bit of the original right end is preserved.

[^8]:    ${ }^{1}$ The upper plain band is 6.2 cm . wide; the cyma reversa, 13.6 cm .; the lower band, 4.9 cm .

[^9]:    ${ }^{1}$ Strabo, 379. "I myself ascended and saw the ruins of the circuit." Strabo's mention of the magnificent view from the top of Acrocorinth also indicates autopsy.
    ${ }^{2}$ Strabo, 379. The translation is my own.
    ${ }^{3}$ Pausanias, ii, 5, 1, Frazer's translation.

[^10]:    ${ }^{1}$ Herodotus's reference (viii, 53) to the north side of the Acropolis at Athens as "the front side" is a good parallel. See Frazer's edition of Pausanias's Description of Greece, II, 167.

[^11]:    ${ }^{1}$ Paus. ii, 5.
    ${ }^{2}$ Strabo, 379.
    ${ }^{3}$ Gesammelte Abhandlungen aus dem classischen Alterthume. I, pp. 132 ff .

[^12]:    ${ }^{1}$ A complete list of references to the earlier publications is given below under each inscription.
    ${ }^{2}$ Cyriacus of Ancona, Epigrammata, p. xviii, 127; Muratori, Nov. thes. inscr., II, p. cmlvi, 6; Boeckh, C. I. G., 1107; Ross, Inscr. Gr. ined., I, 61a; Goettling, Gesammelte Abhandl., I, p. 132; Keil, Philologus, 1853, p. 168; Pittakis, 'A $\rho \chi$. 'E $\phi ., 1855,2644$; Le Bas-Foucart, Voyage Archéol., II, 95, $a$; Skias, 'A $\rho \chi$. 'Eф., 1893, p. 118, No. 6A'; I. G., IV, 375.

[^13]:    ${ }^{1}$ N $\boldsymbol{\eta} \psi \boldsymbol{\iota}$ is given as a masculine name in Pape's Griechische Eigennamen, III, 2, p. 998, but without reference to the source.
    ${ }^{2}$ See Ross, loc. cit. and cf. I. G., XIV, 1443; also Cagnat, I. G. R., I, No. 168.
    ${ }^{3}$ Ross, loc. cit., 61b; Goettling, loc. cit.; Keil, loc. cit.; Pittakis, loc. cit., 2645; Le Bas-Foucart, op. cit., II, 95ab; Skias, loc. cit., 6B'; I. G., IV, 376 .

[^14]:    ${ }^{1}$ For the construction $c f$. a similar inscription from Egypt, Dittenberger, O. G. I. S., II, 687.
    ${ }^{2}$ Skias, loc. cit., $6 \Delta^{\prime}$; I. G., IV, 378.
    ${ }^{3}$ For this name cf. C.I. L., II, 5531.
    ${ }^{4}$ J. Schmidt, Ath. Mitt. VI, 1881, p. 355; Skias, loc. cit., 6E'.
    ${ }^{5}$ A Latin form of the Greek Фı $\lambda$ '́ $\rho \omega$. See Pape, op. cit., III, 2, p. 1618.
    ${ }^{6}$ J. Schmidt, loc. cit., b; Skias, loc. cit., 65'.
    ${ }_{8}$ Cyriacus of Ancona, op. cit., No. 126; J. Schmidt, loc. cit., c; C. I. L., III, 540.
    ${ }^{8}$ Skias, loc. cit., 6Z'; I. G., IV, 379.
    ${ }^{\circ}$ Skias, loc. cit., 6H'; I. G., IV, 380.

[^15]:    ${ }^{1}$ Cf. W. K. Prentice, American Archaeological Expedition to Syria, Greek and Latin Inscr., Nos. 121 and 336.
    ${ }^{2}$ Skias, loc. cit., $6 \mathrm{H}^{\prime}$.

[^16]:    ${ }^{1}$ Skias, loc. cit., 6 ${ }^{\prime}$; I. G., IV, 381.
    ${ }^{2}$ Skias, loc. cit., 6, IA'.
    ${ }^{3}$ For the use of this word as a proper name see Pape, op. cit., III, 1, p. 91.
    ${ }^{4}$ Skias, loc. cit., 6, IB'; I. G., IV, 383.

[^17]:    ${ }^{1}$ Skias, loc. cit., 6, I'; I. G., IV, 382.

[^18]:    
    ${ }^{2}$ Boeckh takes these inscriptions from Cyriacus of Ancona, op.cit., p. xxi. Muratori, op.cit., p. lxvi, 7, quotes one of them from Cyriacus but gives Corinth as its provenience.
    ${ }_{3}$ The Corpus of course calls it the Temple of Minerva. Bruno Snell has republished these inscriptions from Sunium in a recent article (Ath. Mitt., LI, 1926, pp. 159 ff .), in which he calls them 'Zeugen eines weitverbreiteten sentimentalen Naturempfindens aus dem spätern Altertum.' But the examples of similiar inscriptions from Egypt and elsewhere, which I have given below, show that they are not always found in places of beautiful natural scenery.
    ${ }^{4}$ For these and other similar inscriptions see also Le Bas-Waddington, Voy. Archéol., I, 666-669; and I. G., III, 2, Nos. 3823-3827; Larfeld, Handbuch d. gr. Epigraphik, II, p. 866.
    ${ }^{5}$ Cagnat, I. G. R., I, 460.

[^19]:    ${ }^{1}$ For a discussion of the Vocal Memnon see Roscher's Ausführliches Lexicon der griech. u. röm. Mythologie, article by R. Holland; J. A. Latronne, La statue vocale de Memnon; and Edinburgh Review, July, 1886.
    ${ }^{2}$ C. I. G., III, 4719-4761. ${ }^{3}$ C. I. L., III, pars I, 30-66.
    ${ }^{4}$ A similiar formula is used in letters from Egypt, dating from the second and third centuries A. D. $\rightarrow$ Winter, Class. Phil., XXII, 1927, pp. 240, 243; Grenfell, Hunt, and Hogarth, Fayŭm Towns and their Papyri, pp. 284, 286.
    ${ }^{5}$ See C. I. G., III, Nos. 4762-4821; and Dittenberger, O. G. I. S., 408.
    ${ }^{6}$ See Thucydides, i, 131; v, $27 . \quad{ }^{7}$ Thucydides, ii, $17 . \quad{ }^{8}$ Dittenberger, O. G. I. S., 699.
    ${ }^{9}$ For other inscriptions in which the phrase occurs see Dittenberger, op. cit., Nos. 704, 710, 713; Cagnat, op. cit., Index, p. 653, etc. An early example of $\dot{\epsilon} \pi^{\prime} \dot{a} \gamma a \theta \hat{\varphi}$ with the verb $\mu \iota \mu \nu \dot{\eta} \sigma \kappa о \mu a \iota$ is found in Delos, Dittenberger, op. cit., 771. It is dated $172 / 171$ в.с.

[^20]:    ${ }^{1}$ The passage reads in translation as follows: "First of all, then, let us begin with matters of the most trifling and unimportant sort. For what difficulty does it involve when we are traveling along the roads to refrain from reading the inscriptions on tombs? Or what inconvenience do we incur if, when we are walking about, we skim with the eyes the things written on the walls, saying to ourselves: 'Those things are neither profitable nor entertaining, but ${ }^{\boldsymbol{\varepsilon}} \mu \nu \dot{\eta} \dot{\sigma} \theta \eta$
     to be no obvious harm in reading these things, and still they are harmful because they instil a desire of inquiring into things that do not concern us."
    ${ }^{2}$ Strabo, viii, p. $379 . \quad{ }^{3}$ See Baumeister, Denkm., p. 300, Fig. 317.
    ${ }^{4}$ Dio Chrys., Orat., xxxvi, 450 M ; Statius, Theb., iv, 60 ff .
    ${ }^{5}$ That the traditions of the old Corinth were not all continued by the new colonists is pointed out by Pausanias, ii, 3,6 .

[^21]:    Note. Professor P. V. C. Baur has kindly sent me the following note: "The formula $\mu \nu \eta \sigma \theta \hat{\eta}$ occurs in Dura early in the third century A. D. See Rostovtzeff, The Excavations at Dura-Europos(Preliminary Report of First Season, Spring 1928), p. 33, R. 2, 3; p. 34, R. 5; p. 35, R. 6, 7; p. 37, R. 10, 11; p.38, R. 12, 14; p. 41, C. 8; see also pp. 45 ff., 55 and note 1. R. 3 for example reads: $\mu \nu \eta \sigma \theta \hat{\eta}$ ' $A \nu \tau \omega \nu \epsilon i \nu o s ~ \beta \epsilon \nu \epsilon \phi \iota \kappa \epsilon \dot{\alpha} \rho \iota o s ~ \tau \rho \iota \beta o u v \nu o v . "$

    I was unable to obtain a copy of the Preliminary Report before the final proof of this chapter was sent to the printer, but some of the inscriptions I know from copies kindly shown to me by Mr. Jotham Johnson and Dr. Clark Hopkins. They were all of the same kind as those published by Franz Cumont in Fouilles de DouraEuropos, pp. 395-398, Nos. 39-43. In these the word $\mu \nu \eta \sigma \theta \hat{\eta}$ is abbreviated to $\mu \nu$, the $\nu$ being written within the $\mu$. As a rule each inscription contains only this abbreviation followed by one name in the nominative and one in the genitive. The latter, however, is often lacking, and when it occurs it probably refers to the father of the man whose name appears in the nominative. In the inscription quoted by Professor Baur above, the word $\tau \rho \iota$ ßoívou can hardly be anything but a name (cf. Pape, Eigennamen, p. 1549), since it occurs without the article.

    Whatever is the correct interpretation of these inscriptions the formula is not the same as that used in Peirene. It is rather like that found on Christian tombstones (see p. 54, note 1). Cumont (op. cit., p. 396, under No. 40), however, writes: 'Tous ces noms - paraissent appartenir à un groupe de pèlerins qui était venu faire ses dévotions au temple de Doura.'
    ${ }^{1}$ Strabo, viii, p. 379; Pausanias, ii, 5, 1.
    ${ }^{2}$ There is also the possibility that the spring had some connection with the worship of Aphrodite or of some other divinity, but since there is nothing, so far as I have found, either in literature or in art that points to such a connection, it seems unlikely that it existed.
    ${ }^{3}$ The ephebic inscription mentioned above is dated in the early second century A. D. Cf. I. G. III, 1, p. 280, No. 1102.

[^22]:    
    ${ }^{2}$ Newell, The Coinages of Demetrius Poliorcetes, p. 149, No. 162; cf. pp. 152 ff.
    ${ }^{3}$ Hist. Num ${ }^{2}$., pp. 231 ff. ${ }^{4}$ Cat. Hunterian Coll., I, 341.

[^23]:    ${ }^{1}$ Tarn, Antigonus Gonatas, p. 355. ${ }^{2}$ Tarn, op. cit., pp. 373 and 396.
    ${ }^{3}$ Niese, Geschichte der griechischen und makedonischen Staaten, II, 332.
    ${ }^{4}$ Usener, Rh. Mus. XXIX, 1874, pp. 44, 45, so also, tentatively, Macdonald, op. cit., p. 340.
    ${ }^{5}$ Cf. the fourth Life of Aratus. $\quad{ }^{6}$ Monnaies Grecques, p. 130.
    $\rightarrow$ J. H. S. XXIX, 1909, pp. 273 f. $\quad \rightarrow$ Ibid. XXX, 1910, p. 196, n. 36.
    ${ }^{9}$ Tarn, Antigonus Gonatas, p. 165. $\quad{ }^{10}$ E. g., British Museum Catalogue Thessaly to Aetolia, pl. XXX, 7.
    ${ }^{11}$ Brit. Mus. Cat., Central Greece, pl. n, 2, and pl. vi, 2.

[^24]:    ${ }^{1}$ Antigonus Gonatas, p. 112, n. 3.
    ${ }^{2}$ Head, Hist. Num. ${ }^{2}$, p. 232.
    ${ }^{3}$ Monnaies Grecques, p. 128.
    ${ }^{4}$ Doubtfully, op. cit., pp. 231 ff.
    ${ }^{6}$ Cat. Hunterian Coll., l. c.
    ${ }^{5}$ Historical Greek Coins, pp. 129-130.
    $\rightarrow$ J. H. S. XXIX, 1909, p. 274.
    $\rightarrow$ Ibid. XXX, 1910, p. 197, n. 36.

[^25]:    ${ }^{1}$ The Horsemen of Tarentum, p. 150, note 188.
    ${ }^{2}$ Head, l. c.

[^26]:    ${ }^{1}$ Svoronos, Trésor des Monnaies d'Athènes, pl. 87, No. 33.
    ${ }^{2}$ Pausanias ii, 17, 4. Imhoof-Blumer and Gardner, Numismatic Commentary on Pausanias, p. 34.
    ${ }^{3}$ Earle Fox, Journal Internationale d'Archéologie Numismatique, II, p. 95.
    ${ }^{4}$ Fox, ibid., VI, p. $10 . \quad{ }^{5}$ Monnaies Grecques, p. $158 . \quad{ }^{6}$ Pausanias ii, 5, 1.

[^27]:    ${ }^{1}$ Numismatique de l'Orient Latin, p. 313.
    ${ }_{2}$ Hopf, Chroniques Gréco-Romanes, p. 102.

[^28]:    ${ }^{1}$ Ed. Schmitt, H, line 2608.
    ${ }^{3}$ Arragonese Chronicle, 216.
    ${ }^{5}$ Op.cit., p. 357, n. 4.
    ${ }^{2}$ Ed. Longnon, p. 65, No. 185.
    ${ }^{4}$ Numismatique des Croisades, p. 169, pl. XVIII, 6.
    ${ }^{6}$ Dieudonné, Mélanges offerts à M. Gustave Schlumberger, pp. 328 ff .

