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# CAPITAL C FROM THE ARGIVE HERAION

## ABSTRACT

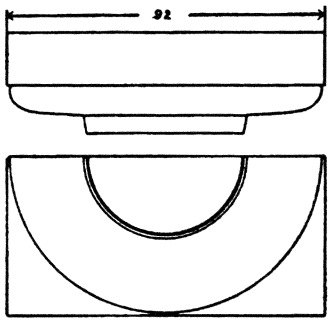
**A Doric column capital from the Argive Heraion, capital C, has been widely regarded as belonging to a very early (7th- or early-6th-century B.C.) stage in the development of the Doric capital. The author argues here from technical evidence that the capital instead dates to the Roman period and that it was created as a replacement element for a repair to the 6th-century B.C. North Stoa.**

In the original publication of the architecture of the Argive Heraion, which appeared in 1902, E. L. Tilton illustrated a Doric capital, capital C, which has an unfluted neck and broad, rounded echinus (Figs. 1, 2).[1] The circumstances of the discovery of this capital were not reported, but in light of the fact that Tilton associated the element with the North Stoa and that it is now lying within the stoa, it seems quite likely that it was found in or near that building.[2] In the past it has been assumed that capital C is of Early Archaic date because of its overall proportions and the profile of its echinus. Pierre de La Coste-Messelière, in his study of early Doric capitals, proposed placing it at—or at least near—the head of the formal development of the Doric capital, which he dated back to the middle of the 7th century B.C.[3]

1. *Argive Heraeum* I, p. 113, fig. 51. I would like to thank the Greek Archaeological Service, and especially the ephors, past and present, of the Argolid, Aikaterini Dimakopoulou, Phani Pachianni, Elisabet Spathari, Alexandros Mantis, and Zoe Aslamantzidou, for permission to carry out my work on the site. I would also like to thank Charles Williams, Nancy Bookidis, and the two anonymous *Hesperia* referees for helpful comments and corrections to the manuscript. The main arguments of this article were first presented at the 91st General Meeting of the Archaeological Institute of America (AIA) in 1989; see Pfaff 1990a. Unless otherwise indicated, all photographs and drawings are by the author.

2. In the caption of *Argive Heraeum* I, p. 113, fig. 51, capital C is included among a group of seven capitals assigned without distinction to stoa II (i.e., the North Stoa) and the West Building. That Tilton associated capital C specifically with the North Stoa can be inferred from his use of it in his restoration of a column from the stoa (*Argive Heraeum* I, p. 114, fig. 52:E). It is clear from photographs taken at the time of the excavations in the 1890s that architectural elements have tended to remain in the areas where they were found.

3. La Coste-Messelière 1963, p. 644. Earlier, Amandry (1952, p. 230) had noted the irregularity of the capital and concluded that it should be placed among the earliest-known Doric capitals, which he also dated to approximately the middle of the 7th century. Coulton (1976, pp. 28–29) associated capital C with capitals B, H, M, and N from the Heraion and



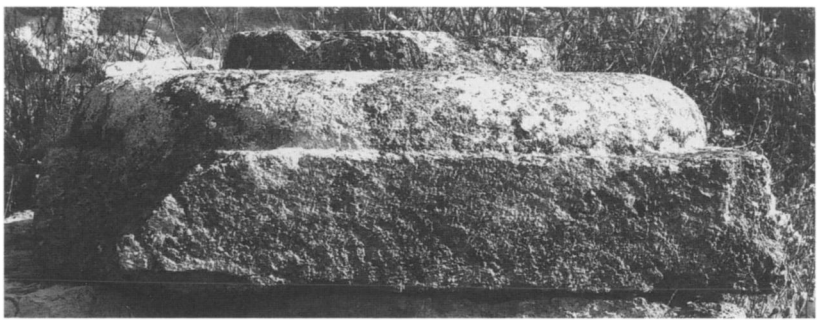


**Figure 1** *(above, left)*. **E. L. Tilton's drawing of capital C.** After *Argive Heraeum* I, p. 113, fig. 51

**Figure 2** *(above, right)*. **Capital C**

A comparison of the profile of capital C (Fig. 3:B) with that of one of the capitals of the early (ca. 570 B.C.) Temple of Aphaia on Aigina (Fig. 4) would indeed seem to support an Early Archaic date for the Heraion capital.[4] The echinus of capital C is flatter and wider than that of the capital of the Aphaia Temple, which could be interpreted as evidence that capital C is less developed, and hence earlier than 570 B.C. In addition, the absence on capital C of a groove at the top of the echinus, or annulets or other type of decorative zone at the bottom of the echinus, gives the impression that the capital belongs to a very primitive stage of development before such features had become a general characteristic of Doric capitals.[5]

Despite the apparently early characteristics of capital C, however, two details have been overlooked that indicate that the capital is much later than previously thought. The first is the tooling of the surfaces of the capital. Although these surfaces are now somewhat weathered, the distinctive marks of a claw chisel can be seen on the sides of the abacus and on the echinus (Fig. 5).[6] My examination over the years of hundreds of architectural elements in the Argolid and Corinthia indicates that the claw chisel was not used in the northeast Peloponnese until the latter half of the 6th century,[7] and that it was not used for carving varieties of soft

observed that their profiles suggest "the period around 600 B.C." Schwandner (1985, pp. 114–115, with nn. 155, 157) included capital C among examples of early stone capitals with metal necking-ornaments; he did not assign a specific date to capital C, but according to his developmental scheme, such capitals should precede the Archaic capital at Tiryns and the capitals of the earlier Temple of Aphaia on Aigina (ca. 570 B.C.). Hoffelner (*Alt-Ägina* II.4, p. 18) assigned a date of 590–580 B.C. to both capital C and capital H without discussing them specifically. Wesenberg (1971, p. 60) did not give a specific date for capital C, but he clearly regarded it as early and suggested that the capital's lack of annulets reflected a pre-monumental form of capital that also gave rise to the Tuscan capital.

4. For the date of the Temple of Aphaia, see Schwandner 1985, pp. 128–129.

5. Wesenberg (1971, p. 58, n. 277, p. 60, n. 288) notes both the lack of a groove at the top of the echinus and the lack of annulets or other type of decorative zone at the base of the echinus (see above, n. 3). Capital C is the only example he cites of an Archaic capital that lacks the groove. The only other capitals that he mentions as having a similar lack of annulets or decorative zone are three of the capitals from the Temple of Hera at Olympia (North 5, 6, and 8). I would argue that the lack of annulets on those capitals is due to the difficulty of carving fine details in the shelly limestone used for the capitals; when annulets appear on other Archaic capitals from the temple, they are unusually coarse (see, e.g., *Olympia* II, pls. 22, 23). Barletta (2001, p. 60) attributes the lack of annulets on capital C to the diversity of Early Archaic design.

6. The marks can be seen most clearly in raking sunlight in the morning or evening.

7. At the Argive Heraion the use of the claw chisel is not attested for the earliest buildings: the Archaic Temple (second half of the 7th century B.C.?) and the North Stoa (second quarter of 6th century B.C.). It is attested for the West Building (third quarter of the 6th century B.C.) and later buildings, such as the South Stoa (middle to third quarter of the 5th century B.C.) and the Classical Temple (last quarter of the 5th century B.C.), but the use of the tool is restricted to the carving of hard limestone or marble elements. Claw chisel marks do not appear on any original soft limestone elements on the site.

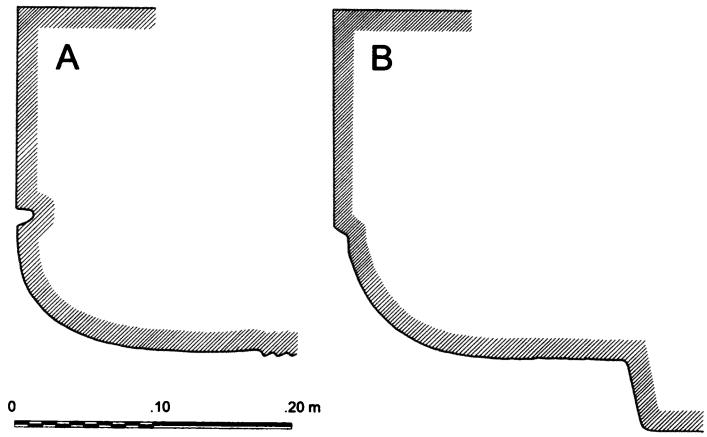



Figure 3. Profiles of an original capital from the North Stoa (A) and of capital C (B)

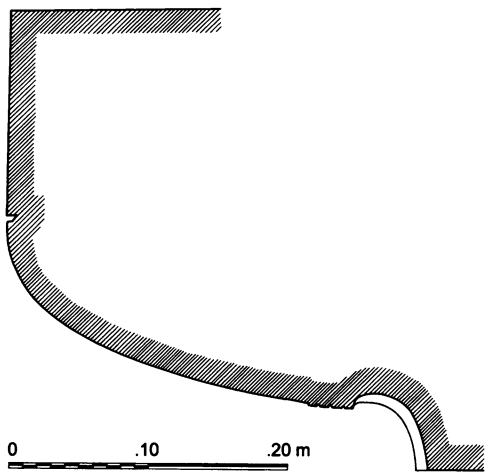



**Figure 4. Profile of the exterior column of the Early Archaic Temple of Aphaia on Aigina.** After Schwandner 1985, p. 114, fig. 72

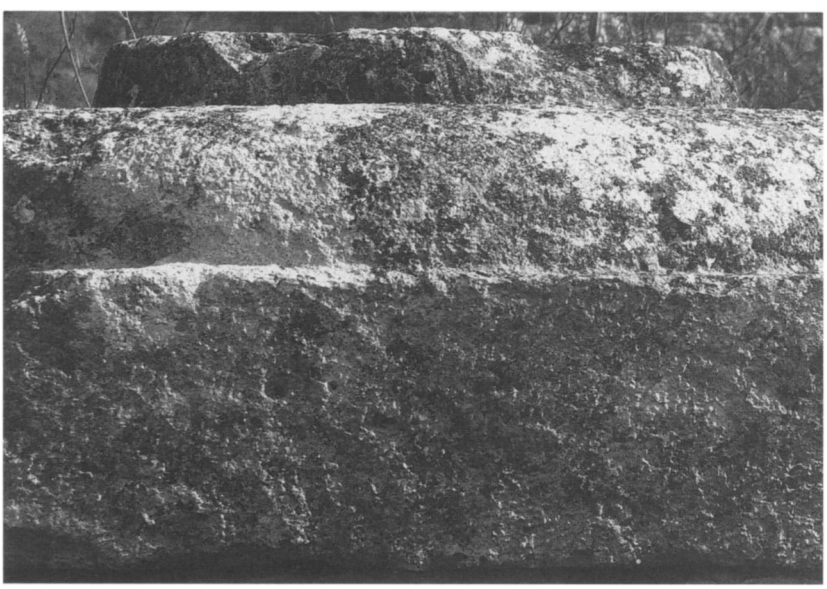


Figure 5. Detail of capital C showing claw chisel marks

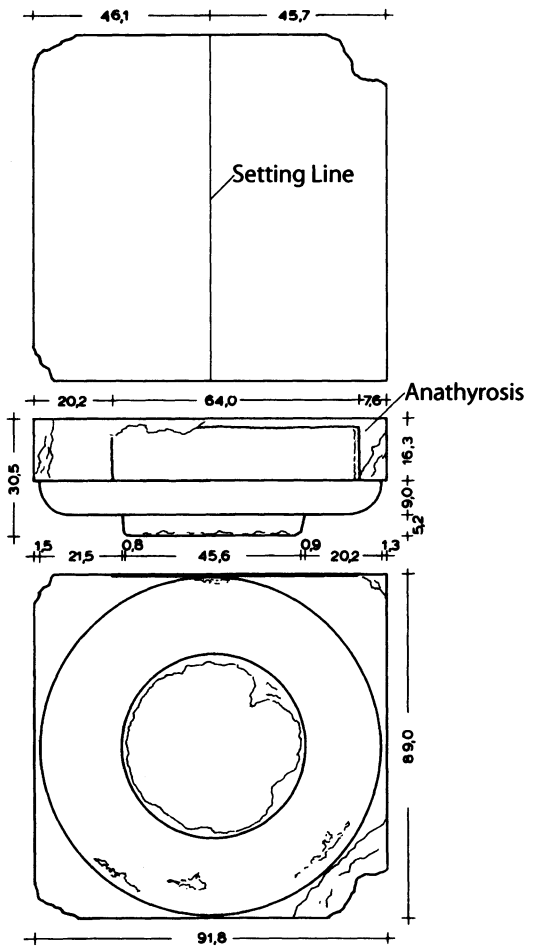



Figure 6. Capital C

limestone (poros) until Roman times.[8] The presence of claw chisel marks on capital C, which is made of poros, would seem to indicate, therefore, that this capital was carved, or at least reworked, in the Roman period.

The other detail that supports a late date for the capital is the anathyrosis carved on one side of the abacus (Fig. 6). Anathyrosis, which is intended to assure a tight joint between adjacent blocks, would have served no purpose on the side of this capital; it must, therefore, relate to an earlier

8. Poros architectural elements with claw chisel or claw hammer marks are especially abundant among the ruins of Roman buildings at Corinth, whereas earlier poros elements in the Corinthia show no such claw marks. When I first presented this observation in my AIA paper (Pfaff 1990a), Elizabeth Gebhard objected that blocks assigned by Oscar Broneer to a 4th-century B.C. repair of the Temple of Poseidon at Isthmia have claw marks. We subsequently examined those elements together on the site, and she was convinced that they belong to an extensive Roman repair; see Gebhard and Hemans 1998, pp. 10–12.

Whether or not the claw chisel was used for carving soft stones such as poros as early as the Archaic period elsewhere in the Greek world remains to be clarified. Casson (1933, p. 127) claimed that "the claw is nowhere used in soft-stone carving, mainly no doubt because the traditions in such work were those of the carpenter and woodworker." More recently, however, Beyer (1974, p. 651) has claimed to have found claw chisel marks all over the poros Archaic architectural elements used on the Athenian Acropolis. Nylander (1991, p. 1046) reports claw hammer and chisel marks on the limestone foundations of the Archaic Ionic temple at Syracuse, but he concludes that for Archaic Sicily this use of tools is exceptional. Among all the 6th-century architectural elements in the Syracuse Museum that he examined for tool marks, only the Ionic sima from Megara Hyblaia, which was carved from marble rather than limestone, had claw chisel marks; Nylander 1991, p. 1048, n. 10.

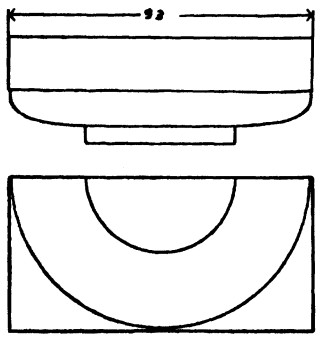


**Figure 7. E. L. Tilton's drawing of capital H.** After *Argive Heraeum* I, p. 113, fig. 51

use of the block of stone from which the capital was carved.[9] Originally there was probably anathyrosis on the opposite side of the block as well, which was removed when the block was recarved into the form of a capital. Apparently the original block was not quite long enough to allow the anathyrosis to be trimmed away on both sides (as it is, the abacus is nearly two centimeters shorter when measured from the side with the anathyrosis). The fact that this capital was carved from a reused block—moreover, a block that would not allow the capital to be properly finished on all sides—indicates that the capital was made in a time of lowered standards of craftsmanship. Taken with the evidence for the use of the claw chisel, this observation points strongly to a Roman date for the capital.[10]

If this capital was, indeed, made in the Roman period, how is it to be explained? Why would a pseudo-Archaic capital have been produced in that period, and where would it have been used? To answer these questions it is useful to begin by determining whether capital C belonged to a votive column or to an architectural support. That this capital was used in an architectural context is suggested by the axial setting line on top of its abacus, which would have been appropriate for centering the pairs of beams that comprised the epistyle (Fig. 6). Moreover, capital C was not unique, which also indicates an architectural function; at least one other capital at the Argive Heraion was nearly identical to it. This capital, capital H, is no longer on the site, but it too was recorded in a drawing by Tilton (Fig. 7).[11] Although there is no description of this capital and no record of the

9. That the anathyrosis does not pertain to a later reuse of the column capital is evident from the fact that the anathyrosis margins at each side of the abacus have very different widths. In all likelihood, they originally had the same width, but subsequent trimming associated with the carving of the capital removed a substantial portion of the right margin. The broad anathyrosis margin at the untrimmed left side is similar to that found on blocks of the Classical buildings at the site (e.g., the Classical Temple and South Stoa). As I can attest from having measured hundreds of these blocks, the anathyrosis margins on their joint surfaces are of generally consistent width along the sides and top. Therefore, the fact that the anathyrosis margin at the top of capital C is much thinner than that of the left margin suggests that the original top of the block was also trimmed down when the element was reworked into a capital.

10. While I do not wish to denigrate Roman architecture in general terms, the evidence of nearby Corinth makes plainly manifest that the level of craftsmanship in the carving of poros architectural elements was much lower in Roman times than it was in the Archaic through Hellenistic periods. Efficiency was obviously more important to the masons of the Roman period than achieving high quality. Moreover, poros elements were often covered with thick stucco in Roman times, which would have encouraged less precise carving of details. It is possible that capital C was originally covered with such a stucco and that some minor details, such as annulets, were executed in the stucco. There is, however, no trace of stucco now preserved on any part of the capital.

11. *Argive Heraeum* I, p. 113, fig. 51.

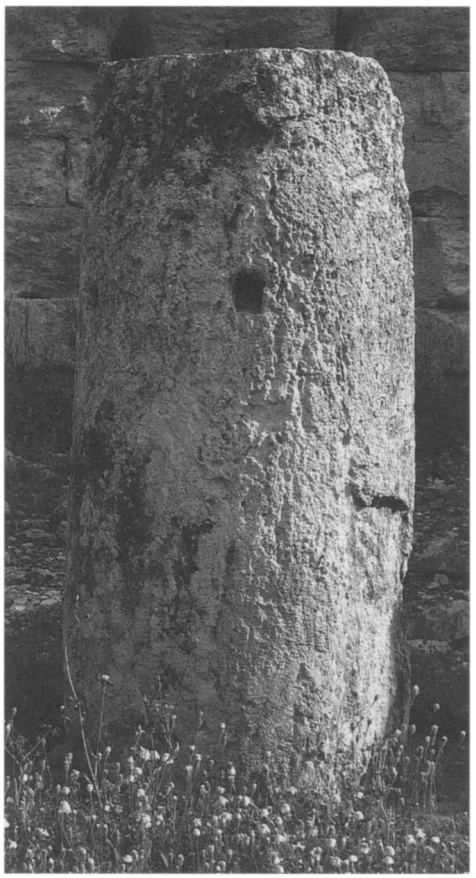


**Figure 8. Unfluted column drum near the east end of the North Stoa**

circumstances of its discovery, its similarity to capital C strongly suggests that it was intended to match capital C in an architectural context requiring multiple columns.

Further evidence for the architectural function of capital C may be provided by a poros column drum that now stands next to it in the North Stoa (Fig. 8). As Tilton seems to have concluded, this drum was probably associated with capital C.[12] Its diameter is suitable for a capital of the size of capital C and its unfluted form matches the unfluted necking of the capital. Additional evidence for the association of these elements that has not been previously noted is that the surface of the drum, like that of the capital, is worked with a claw chisel. That this drum served as an architectural member is beyond doubt, for cuttings on its side show that it originally supported a fencelike parapet.

Since this drum and capital C are both now located in the North Stoa, it is reasonable to conclude that they, as well as the missing capital H, were used in this building. They cannot, however, belong to the original construction of the stoa, for various features of the design of the building, such as the one-to-one relationship of the columns of the interior and exterior colonnades, point to an Archaic date, and fragments of genuinely Archaic column capitals in the building (Fig. 3:A) point more specifically to the second quarter of the 6th century.[13] There is, however, evidence for renovations to this stoa on probably more than one occasion. One renovation, already noted by Hans Lauter, is the addition of two steps below the

12. Tilton does not argue the point, but he combines capital C with the unfluted drum in his restored drawing of a column from the North Stoa (n. 2, above). Amandry (1952, pp. 231–232) remains undecided about the association of the capital and drum.

13. The Archaic features of the stoa are noted in Coulton 1976, p. 29. For discussion of the date of the capital fragments, see Pfaff 1990b, p. 155.

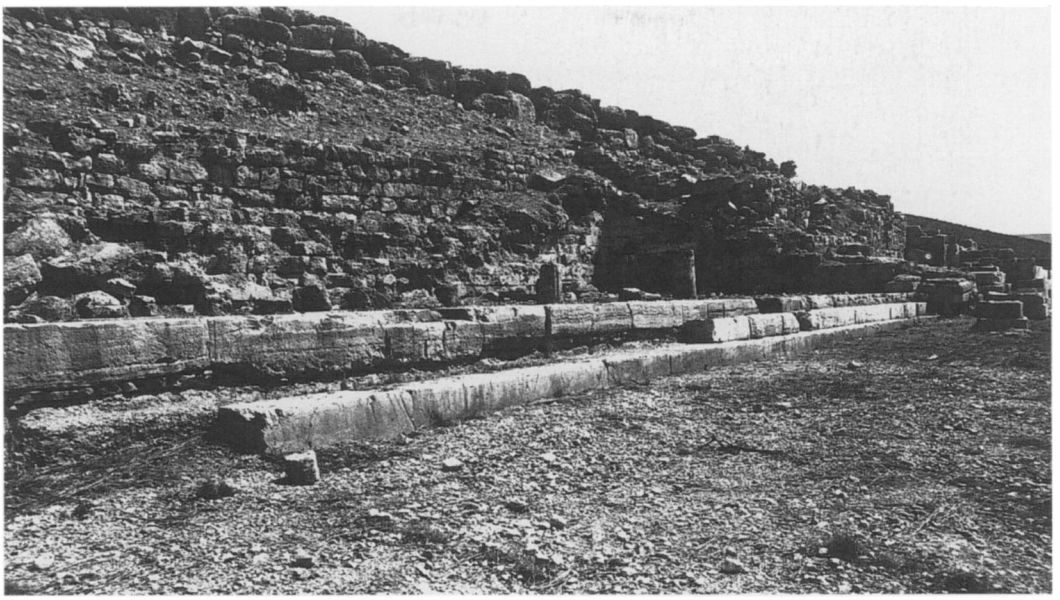


**Figure 9. Stylobate of the North Stoa with two later steps added below, from the southwest**

original stylobate (Fig. 9).[14] This addition cannot be dated with confidence, but it might be associated with a leveling of the terrace south of the stoa when the Classical Temple was constructed in the late 5th century.

Other renovations, not previously recognized as such, are of Roman date. One is the addition of three rectangular reservoirs at the west end of the stoa (Figs. 10, 11). Tilton mentions these reservoirs in his publication, but gives no indication as to whether he believed them to be original components of the building or later additions.[15] Their method of construction, which makes use of tile and mortar walls coated with thick, gritty waterproof cement (Fig. 11), points to a Roman date. A fourth reservoir connected to a tunnel at the back of the stoa may also have been built, or at least altered, in Roman times (Fig. 10).

In addition to the installation of reservoirs, repairs to the essential fabric of the stoa were also undertaken in the Roman period. Clear evidence of rebuilding can be seen at the southeast corner of the stoa, where the short segment of the front wall is still in situ. The most obvious sign of repair is at the west end of this segment of wall, where the block employed at the bottom of the wall was too short for the lowest course, and so required a number of small stones and tiles to be shoved under it to bring it up to the proper level (Fig. 12). One of the other reset blocks of the wall preserves traces of claw chisel marks (Fig. 13), reinforcing the impression that this crude repair was undertaken in the Roman period.

In light of this evidence for one or more Roman renovations of the North Stoa, it is reasonable to conclude that capitals C and H and the unfluted drum were made as replacement elements for such a renovation. Because their dimensions match those of original elements of the building that survive, the capitals and drum could have been integrated within the building without disturbing the original design. The Archaizing form of the replacement capitals shows that an attempt was made to harmonize the new elements with the old, but as can be seen in the comparison of profiles (Fig. 3), the attempt did not produce a faithful copy of the prototype. The

14. Lauter 1973, p. 176.
15. *Argive Heraeum* I, p. 112.

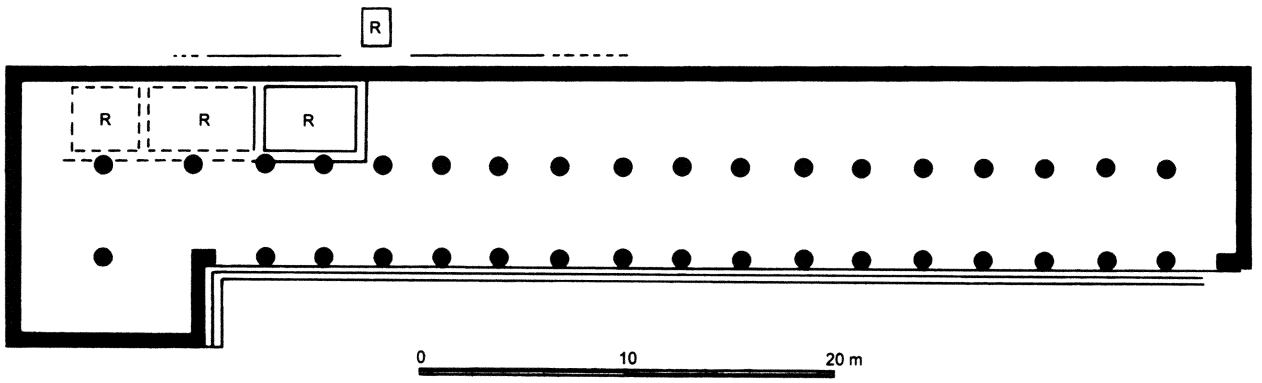



**Figure 10** *(top)*. **North Stoa, plan showing Roman reservoirs**

**Figure 11** *(bottom)*. **Reservoir near the west end of the North Stoa, from the north**

fluted necking, annulets, and groove at the top of the echinus of the original capitals were not replicated.

In a modern restoration project, such a simplification of form might be adopted out of a concern for distinguishing replacement elements from authentic elements, but there is nothing, to my knowledge, to suggest that this was a concern at any time in antiquity. It seems much more likely, especially given the likelihood that the capital was created from a reused block, that economy was the motivation for the simplification of the design. By eliminating the finer details of the Archaic prototypes, the masons responsible for renovating the colonnade of the stoa would surely have reduced both the time and cost required to produce the necessary replacement elements.

The consequences of identifying capital C as part of a Roman replacement column of the North Stoa are significant to our understanding of two separate issues: the early development of Doric capitals and the later history of the Argive Heraion. By recognizing that capital C is Roman, we can now see that the inclusion of this element in the corpus of Archaic capitals may have distorted our understanding of the range of variation in their design. As other studies have shown,[16] variations are abundant among

16. Coulton 1979, pp. 85, 97–98, 103; Wesenberg 1971, pp. 52–61; Barletta 2001, pp. 60–63.

**Figure 12. Spur wall at the southeast corner of the North Stoa, from the west**

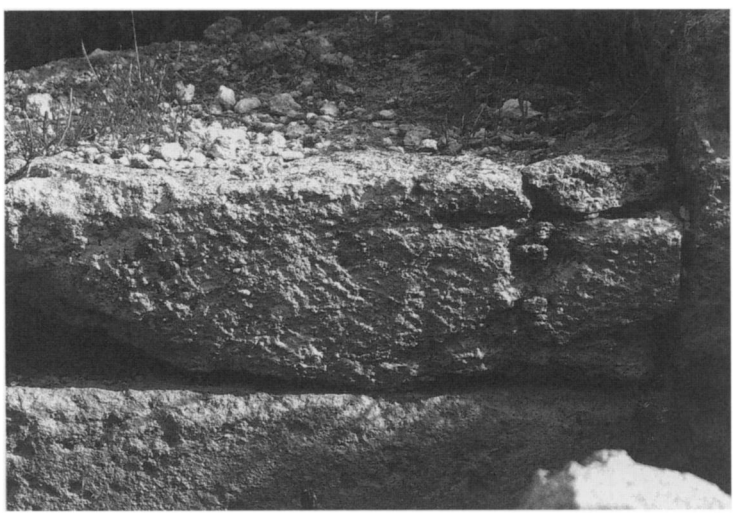


**Figure 13. Detail of the spur wall at the southeast corner of the North Stoa showing claw chisel marks on the south face of one block**

genuinely Archaic capitals, but with the elimination of capital C there is reason to doubt whether such a simple design, devoid of both a groove at the top of the echinus and annulets (or other decorative zone) at the bottom of the echinus, ever existed among monumental Doric capitals.[17]

In terms of the later history of the Argive Heraion, capital C is important for calling attention to the refurbishment of the sanctuary in Roman times. Although this subject has not yet been examined comprehensively, there are clear indications that a number of buildings at the Argive Heraion, including the Classical Temple and the Northeast Building, were repaired, renovated, or replaced in the Roman period.[18] We have no evidence as

17. To my knowledge, only the early capitals from the Temple of Hera at Olympia mentioned earlier (n. 5) approach this kind of simplicity; in contrast to capital C, however, they do have a kind of groove articulating the top of the echinus. In response to one *Hesperia* reviewer's comment, I would like to add here that I believe that these capitals from Olympia are genuinely Archaic, since the demonstrably later capitals of the Temple of Hera follow the styles of the periods in which they were erected. As stated above (n. 5), the early capitals at Olympia are a special case, in that the simplification of their design was at least in part the result of the poor quality of the stone from which they were carved.

18. For discussion of Roman repairs to the Classical Temple, see *Argive Heraion* I, pp. 197–198. Renovation of the Northeast Building, which includes the addition of cross-walls made of spolia, is discussed in Amandry 1952, pp. 235–238; Lauter 1973, p. 177; Mason 1979, pp. 414–418.

yet to provide specific dates for these projects or to indicate if any of the projects were connected with specific people or events (such as an imperial visit). Capital C, however, provides clear testimony to continued interest and activity in the sanctuary into the time of the Roman Empire. In the renovation of the colonnade of the North Stoa, the quality of the work did not meet the high standards of the original Archaic construction, but the attempt to replicate, at least in its general lines, the forms of the Early Archaic capitals shows that care was taken to preserve the period style of what must, by Roman times, have been one of the oldest surviving buildings in Greece.

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