Recent Research Concerning the Walls at Asea

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The fortification walls of Asea Paleokastro in Arcadia have recently been studied in several different aspects. Thus, the parts of the walls which are still visible above the ground have been documented in detail. Furthermore, an attempt has been made to trace the course of the lower city walls which are covered by modern alluvium with the help of various geophysical methods. As a result we suggest that the acropolis walls should be dated to the classical period, whereas the lower city walls probably were constructed during the Kleomenic war (229/28-222 B.C.) Cleaning work done around the main gateway of the acropolis indicates that the road leading up to the acropolis originallly was constructed for carts. During the Late Byzantine period the acropolis was refortified, and some walls belonging to this phase are still to be seen at the main gateway and the summit of the acropolis. Preliminary results of the geophysical prospection finally indicate that the lower circuit wall may have had a total length of ca. 1 km, enclosing an area of about 11 ha.

Asea is a *polis* located in a small, separate valley between Tegea and Megalopolis. Archaeological excavations were carried out here for the first time in the 1930s by Erik J. Holmberg from Gothenburg in Sweden.[1] Roughly ten years ago Swedish archaeological activity was resumed at Asea by Jeannette Forsén and Björn Forsén. As we were interested in broadening our knowledge of the main site and acropolis of Asea, Asea Paleokastro, in relation to the surrounding valley, our initial work (1994-96) took the form of an archaeological survey – the Asea Valley Survey – the final report of which has just appeared.[2]

After a one-season excavation in 1997 of the sanctuary of Hagios Elias, ca. 3.5 km to the north-west of Asea Paleokastro,[3] we turned our interest anew to

1. The main publication relating to Holmberg's work is Holmberg 1944.
2. Forsén and Forsén 2003.
3. This project was conducted in collaboration with Erik Østby from the Norwegian Insti-

the acropolis in the year 2000. This time we focused our attention on the fortification walls of the site. This new project is carried out under the auspices of the Swedish Institute at Athens and with the support of the Greek Archaeological Service. In 2000 we cleaned and documented the remaining walls that were visible above the surface in collaboration with Lars Karlsson from the University of Uppsala, Sweden. The two following years we have with the help of geophysical methods tried to trace the course of those parts of the lower city walls which are covered by alluvium. This work has been conducted in collaboration with Stavros Papamarinopoulos and his team from the University of Patras, Greece.

The fortifications at Paleokastro consist of two parts; the acropolis walls and the walls surrounding the lower city to the south-east of the acropolis. (Fig. 1) Holmberg dated the ancient fortifications around the acropolis and the lower city to the 3rd century B.C., and noted that the acropolis had been re-fortified during the Late Byzantine period.[4] One reason why he dated the city walls to the 3rd century was that he believed that the settlement at Paleokastro did not develop into a town before that.[5] It has, however, been noted that the building technique of the acropolis walls differs from that of the lower city walls, and that the acropolis walls thus may be older than those walls.[6] Moreover, the Asea Valley Survey has revealed that the settlement at Paleokastro developed into a town already during the 6th century B.C., thus making an earlier date of the acropolis walls historically plausible.

The project recording the walls of Asea has four different aims:

– first, to obtain new information about the construction of the walls;

– second, to trace the full course of the lower city walls with the help of geophysical methods;

– third, to date the walls more exactly with the help of new information about the walls seen together with the results of the Asea Valley Survey,

– and finally, to collect more information about the re-fortification of the Paleokastro during the Late Byzantine period.

This paper summarizes the final results of the work of 2000 published by Forsén, Forsén and Karlsson,[7] together with the results of the geophysical work of 2001 to be published by Dogan and Papamarinopoulos.[8] In addition, some

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tute at Athens. The final publication is in preparation, but one extensive, preliminary report has already appeared (Forsén, Forsén and Østby 1999).

4. Holmberg 1944, 138, 142 and 181.

5. Holmberg 1944, 172.

6. Valmin 1949, 139, and Pikoulas 1988, 181.

7. Forsén, Forsén and Karlsson 2002.

8. Dogan and Papamarinopoulos 2003.

preliminary results of the geophysical work done in 2002 as well as some new general conclusions are presented.[9]

Let us begin with the acropolis walls. Here we cleared two square towers (the West and North-West towers) and a short piece of the curtain wall. Just to the north of the West Tower there is a gap between the curtain wall and the tower, which we think could be interpreted as the remains of a small postern gate. The wall and towers are constructed of rather small stones, seldom larger than 50 x 50 cm, and stand on a projecting footing course. (Fig. 2) The width of the wall is 3.10 m. All over the surface of the better preserved North-West Tower we found rocks and blocks indicating that the tower was solid.

Already a first glimpse at the lower city walls reveals that they are built in a totally different way from the acropolis walls. The lower city walls are built in a polygonal technique employing very large blocks (frequently measuring up to ca. 1.5 x 1.0 m). Furthermore the walls, which have a width of 3.30 m, stand directly on the rock without any footing course. An interesting feature is the existence of a masonry chain in the southern spur wall. (Fig. 3) The characteristic pattern of the masonry chain is formed in the wall face by the ends of transverse walls running perpendicular to the wall face, through the inside of the wall, thus connecting the two wall faces. The function of these transverse walls is to anchor and hold the two wall faces together, preventing the earth fill inside from pushing out the wall faces.[10]

Also the towers of the lower city walls have distinct features which differ from those of the towers of the acropolis walls. Thus, there are at least three round towers along the southern spur wall. Round towers are unusual, and usually occur only in connection with gates.[11] It is also quite possible that the three round towers in Asea have framed one of the main gates, the important gate towards Megalopolis. That not all towers of the lower city walls were round is evidenced by the fact that the only surviving tower along the northern spur wall is square. This tower is of special interest because there exists an inner wall face which shows that it was not filled with rubble and earth, but must have had an inner room just above ground level. Furthermore we found blocks laid out as a pavement through the curtain wall, just to the north of the square tower, clearly indicating the existence of a postern gate at this spot.

Today the only visible parts of the lower city wall are the two spurs which run down the slopes of the acropolis to the north and the south. (Fig. 1) The rest

9. The final results of the geophysical work conducted in 2001-02, combined with archaeological and historical comments, will be published by Forsén, Forsén and Papamarinopoulos in a forthcoming volume of *OpAth*.

10. Karlsson 1992, 67-95.

of the circuit has been covered by a thick layer of alluvium brought by the Alpheios. The second aim of our project was to trace the course of the city wall with the assistance of ground-penetrating equipment. This work began in 2001, when Meliha Dogan conducted a multi-electrode resistivity image survey of the areas covered by alluvium mainly along the northern spur wall. To measure the electrical resistivity of the soil has proved to be a suitable method when looking for walls, cavities and other buried features at different depths. During the resistivity image survey a total of 13 tomographical sections (sections 1-3 and 13 along the southern spur wall and sections 4-12 along the northern spur wall) were drawn at spots where we considered it likely that the wall would run.

Which results did we get from the resistivity image survey? The three clearest profiles were obtained from sections 4-6, all from the area just below the visible end of the northern spur. In these profiles the wall is very clearly visible as a ca. 3-3.3 m wide structure reaching down to a depth of ca. 1.3-1.5 m below the surface.[12] Although the wall was not as clearly visible in all 13 sections, the work done in 2001 still gave us a fairly good idea of the course of the wall, at least of its northern part. Just after coming down the northern slope of the acropolis the wall seems to turn towards the east and south-east, finally following the Panaitsa ravine.

The geophysical prospection continued in 2002, this time close to the modern village of Kato Asea just below the end of the southern spur. This time a different method was applied in order to find the wall. 16 squares, all measuring 19 x 19 m apart from one that was only 9 x 9 m in size, were set out in fields where the vegetation made it possible; one of the squares was positioned to the west of the Megalopolis – Tripolis highway, the rest between the highway and the railroad. First a general geo-electrical mapping was conducted with an accuracy of 400 points of measurement for each of the large squares and 100 for the small one. After this, geo-electrical tomography with a geo-electrical resistivity meter as well as georadar with the Sir-10 system and 500 and 100 MHz antennas, were applied selectively to the squares of largest interest.

The results obtained by this method are more reliable than those reached in 2001, because we now get the full stretch of the wall when and if it crosses through the squares. The results of the work are still being processed by Papamarinopoulos' team, but it is clear that the wall after the last round tower, Tower III, seems to turn slightly and continues in east-southeast direction. No investigation has so far been conducted to the east and south-east of the Panaitsa ravine, but as it seems that the northern spur turns and follows the ravine, we

11. For round towers, see Winter 1971, 216-7; Adam 1982, 62-3.

12. Dogan and Papamarinopoulos 2003.

assume that the southern spur wall does the same and that the two spur walls meet at some point along the Panaitsa ravine. If this indeed is the case, then the course of the wall may have looked like Fig. 4, *i.e.*, it would have had a total length of about 1 km and would have enclosed an area of ca. 11 ha, a figure which should be compared to the ca. 2.5 ha surrounded by the acropolis walls. But it needs to be stressed that these are only preliminary results, and further geophysical work is needed in order to establish the exact course of the lower city wall.

Having thus described some of the main differences in construction between the acropolis and the lower city walls and the question concerning the course of the lower city wall, we proceed to the third question, how to date the walls. Let us start with the acropolis walls. Several of their characteristics described above seem to indicate a classical date, but because of their very weathered condition it is difficult to suggest a more exact date. However, there can be no doubt that they ante-date the lower city walls. Yanis Pikoulas has in his doctoral dissertation suggested an early 4th century date for the acropolis walls,[13] and we see no reason to disagree with him, although we want to point out that there may have been several different construction phases.

There is more to say about the date of the lower city walls. The rustic polygonal technique points towards the 3rd century B.C. However, the walls of Asea clearly ante-date the polygonal technique without any kind of such horizontal arrangements that developed around 220 B.C. Another important chronological feature of the lower city wall is the existence of an inner room in the ground floor of the square tower. Inner rooms like this were used for placing catapults at the foot of the wall and are not common until the advanced Hellenistic period. Although no clear date can be given for the first time when such inner rooms appeared, we probably have to get down to the 3rd century before they become common.[14] Stylistically the lower city walls thus seem to date to the second or third quarter of the 3rd century, with a *terminus ante quem* ca. 220 B.C.[15]

To the discussion of the date of the lower city walls the fact can be added that they seem to have been built under strong pressure of time. Thus the well-known archaic Agemo-statue was originally found built into one of the round towers. It is said that another inscription, which unfortunately was not preserved, was found while the same tower was dismantled in search of stones for building

13. Pikoulas 1988, 181.

14. Some of the earliest towers of this type can be found in Aigosthena, dated in the late 4th or early 3rd centuries, see Marsden 1969, 163. Towers with interior rooms were also discovered by us during a visit to Alea. For the walls of Alea, see Meyer 1939.

15. For another neighbouring wall of this period, in Dimitsana to the north of Megalopolis, see Pikoulas 1986, 99-123.

purposes.[16] Apparently any stones found were used in building the wall, which gives the impression that it was constructed in haste during a period of war.

Building city walls is no small enterprise. As an example, 60,000 peasants and 6,000 pairs of oxen were in 401 B.C. needed to construct a 6 km long wall within 20 days in Syracuse.[17] Consequently 10,000 men and 1,000 pairs of oxen would have been needed to build the lower city wall at Asea within 20 days. Still the adult male population of Asea could hardly have exceeded 1,000.[18] Thus, in order to be able to build the walls within a short period Asea must have received a considerable amount of support from allies.

Thus, to put it in another way, we probably have to look for a period of war when Asea had reason to feel extraordinarily threatened, but when it had strong allies which could be counted on to support the construction of walls at Asea. Historically the most plausible date for such circumstances is to be found during the Kleomenic War 229/28-222 B.C. During this war the Spartans under Kleomenes waged an aggressive and very destructive war against the Achaian League, to which most of Arcadia belonged. Megalopolis had joined the Achaian League in 235 B.C. and may have been followed by Asea at the same time.[19] The Achaian League would definitely have been interested in supporting the construction of new city walls in Asea as a bulwark against Sparta, and would of course have had the means to support such a project. The interest of the Achaian League in such a project must have been strong during the Kleomenic War. Therefore we suggest that the lower city walls most likely were constructed with the support of the Achaian League at some stage of the Kleomenic War.

Let us now turn to the final aim of our project, *i.e.*, to collect more information about the medieval re-fortification of the Paleokastro. Holmberg in his book very briefly refers to such a re-fortification in connection with the main gateway to the acropolis. He also mentions the existence of a Medieval-Early Modern chapel on the summit of the acropolis. One reason for our interest in these late remains was that we did not find any Medieval-Early Modern pottery on the acropolis during the survey. In order hopefully to clarify this lacuna in our knowledge we partially cleaned the main gateway and the chapel.

According to Holmberg the width of the main gateway to the acropolis was reduced during the Late Byzantine period by building a new wall, placed in front

16. Koumanoudis 1874; Foucart and Le Bas 1870, no. 334 d. See also the discussion of the find circumstances in Forsén and Forsén 2003, chapter II.

17. Diod. Sic. 14.18. See also the discussion by Camp 2000, 46-7.

18. According to a study of the maximum number of people the territories of south-east Arcadian *poleis* could have supported, Asea could at most have supported 2,000-3,000 persons. See Forsén 2000, 50.

19. For the historical circumstances see Forsén and Forsén 2003, chapter VIIc.

of the ancient wall-line. According to him the ancient road was furnished with low steps, as seen on a drawing from his publication.[20] (Fig. 5) The cleaning work revealed that the ancient road-bed had been 3.7-4.0 m wide, *i.e.* had been built for the access of carts. Holmberg's Late Byzantine wall is constructed of stones embedded in coarse mortar on top of a 0.10 m thick layer of debris. None of Holmberg's steps were recovered during the cleaning operation, but as seen in Fig. 5, none of them had a width exceeding the width of the medieval gateway, and the lowest step is indicated as parallel to the doorpost stone, which in its turn was connected with the Late Byzantine wall. Steps like these are common in ascents and descents of Medieval-Early Modern *kalderimia*, which were built for pack animals and not for carts.[21] Consequently Holmberg's steps most likely belong to the Late Byzantine re-fortification of the Paleokastro.

On the summit of the acropolis Holmberg mentions a chapel and some other later walls, partly located on top of what he describes as a Hellenistic temple.[22] The walls of the chapel are built by large, reused limestone blocks, some of which may originate from the city walls, whereas others, such as one with two holes for a lifting device, seem to belong to the foundation of an ancient building. The building technique of the chapel is similar to that of the Late Byzantine wall in the main gateway – ancient blocks have been reused and put together with smaller natural stones by coarse mortar. This is also the case with the other later walls on the summit that seem to form two enclosures around the chapel.[23] The function of these walls is unclear, but taking their thickness (ca. 1.5 m) into account, they may have served as some kind of inner fortification on the acropolis, inside which the small chapel was located.

The pottery collected during the cleaning operation on the summit finally deserves a short mention.[24] Apart from prehistoric, mainly Early Helladic pottery, three Geometric sherds (one Protogeometric/Early Geometric), and some medieval pottery was found. To the medieval finds belong a piece of a loom-weight as well as a matt painted sherd datable to the 13th-14th centuries. Some further idea of the date of the Late Byzantine re-fortification is also given by a coin minted by John VIII Palaiologos that Holmberg found next to the main gateway.[25] There are no historical sources mentioning a re-fortification of the Paleokastro, but it could have been part of an effort to block the frequent

20. Holmberg 1944, 138-9, figs. 127-30.

21. For *kalderimia* see *e.g.* Pikoulas 1999a, 254-5, or Pikoulas 1999b, 245-58.

22. Holmberg 1944, 144-7.

23. Holmberg 1944, pl. 6; Forsén, Forsén and Karlsson 2002, fig. 29 and with comments on p. 99.

24. For a more detailed discussion see Forsén, Forsén and Karlsson 2002, 103.

25. Holmberg 1944, 181; Varucha-Christodulopoulos 1944, 171, no. 53.

Ottoman raids in the Peloponnese during the 14th-15th centuries which headed down to Messenia through the Asea valley.

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BIBLIOGRAPHY

Adam, J.-P. 1982. *L'architecture militaire grecque.* Paris.

Camp II, J.McK. 2000. "Walls and the *Polis.*" In P. Flensted-Jensen, Th.H. Nielsen and L. Rubinstein (eds.), *Polis & Politics. Studies in Ancient Greek History Presented to Mogens Herman Hansen on his Sixtieth Birthday, August 20, 2000:* 41-57. Copenhagen.

Dogan, M., and S. Papamarinopoulos. 2003. "Geoelectric Prospection of a City Wall by Multi-electrode Resistivity Image Survey at Asea (Southern Greece)." *Archaeological Prospection* 10: 241-8.

Forsén, J., B. Forsén and E. Østby. 1999. "The Sanctuary of Agios Elias – Its Significance, and Its Relations to Surrounding Sanctuaries and Settlements." In Th.H. Nielsen and J. Roy (eds.), *Defining Ancient Arkadia.* Acts of the Copenhagen Polis Centre 6: 169-91. Copenhagen.

Forsén, B. 2000. "Population and Political Strength of Some Southeastern Arkadian *Poleis.*" In P. Flensted-Jensen (ed.), *Further Studies in the Ancient Greek Polis.* Papers from the Copenhagen Polis Centre 5. *Historia* Einzelschriften 138: 35-55. Stuttgart.

Forsén, J., B. Forsén and L. Karlsson. 2002. "The Walls of Asea." *OpAth* 27: 83-104.

Forsén, J., and B. Forsén. 2003. *The Asea Valley Survey. An Arcadian Valley from the Palaeolithic Period until Modern Times. SkrAth* 4°, 51. Stockholm.

Foucart, P., and P. Le Bas. 1870. *Inscriptions grecques et latines recueillies en Grèce et en Asie Mineure,* vol. II. *Mégaride et Péloponnèse.* Paris.

Holmberg, E.J. 1944. *The Swedish Excavations at Asea in Arcadia. SkrRom* 4°, 11. Lund and Leipzig.

Karlsson, L. 1992. *Fortification Towers and Masonry Techniques in the Hegemony of Syracuse, 405-211 B.C. SkrRom* 4°, 49. Stockholm.

Koumanoudis, S.A. 1874. "Τρία γλυπτὰ ἀρχαϊκά." *ArchEph*: 480.

Marsden, E.W. 1969. *Greek and Roman Artillery. Historical Development.* Oxford.

Meyer, E. *Peloponnesische Wanderungen. Reisen und Forschungen zur antiken und mittelalterlichen Topographie von Arkadien und Achaia.* Zürich and Leipzig.

Pikoulas, Y.A. 1986. "Ὁ ἀρχαῖος οἰκισμὸς τῆς Δημητσάνας." *Horos* 4: 99-123. (Reprinted in *id.* 2002, *Ἀρκαδία. Συλλογὴ μελετῶν:* 183-216. Athens.)

Pikoulas, Y.A. 1988. *Ἡ Νότια Μεγαλοπολιτικὴ χώρα, ἀπὸ τὸν 8ο π.Χ. ὡς τὸν 4ο μ.Χ. αἰώνα.* Ph.D. diss., University of Ioannina. Athens.

Pikoulas, Y.A. 1999a. "The Road-network of Arkadia." In Th.H. Nielsen and J. Roy (eds.), *Defining Ancient Arkadia.* Acts of the Copenhagen Polis Centre 6: 248-319. Copenhagen.

Pikoulas, Y.A. 1999b. "Ἀπὸ τὴν ἅμαξα στὸ ὑποζύγιο καὶ ἀπὸ τὴν ὁδὸ στὸ καλντερίμι (Δρόμοι καὶ μεταφορὲς στὸ Βυζάντιο καὶ τὴν Τουρκοκρατία)." *Horos* 13: 245-58.

Valmin, N. 1949. Rev. of E.J. Holmberg, *The Swedish Excavations at Asea in Arcadia,* Lund and Leipzig 1944. *Gnomon* 21: 139-43.

Varucha-Christodulopoulos, I. 1944. "The coins." In Holmberg 1944, 167-71.

Winter, F.E. 1971. *Greek Fortifications.* London.

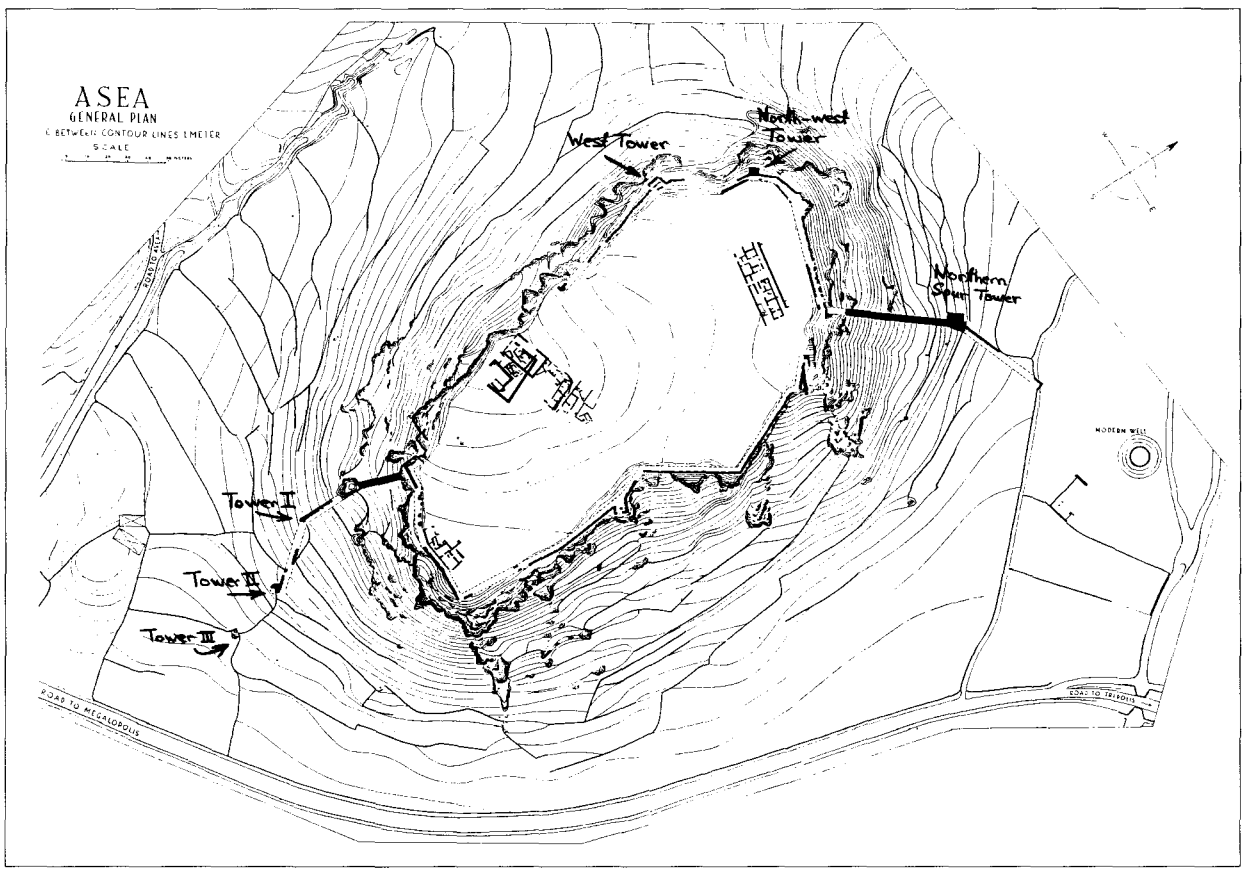

Fig. 1. Plan of the ancient walls and towers of Asea. (After Holmberg 1944, pl. 5.)

Fig. 2. The north-west tower with its projecting footing course seen from the north. (Photo: authors.)

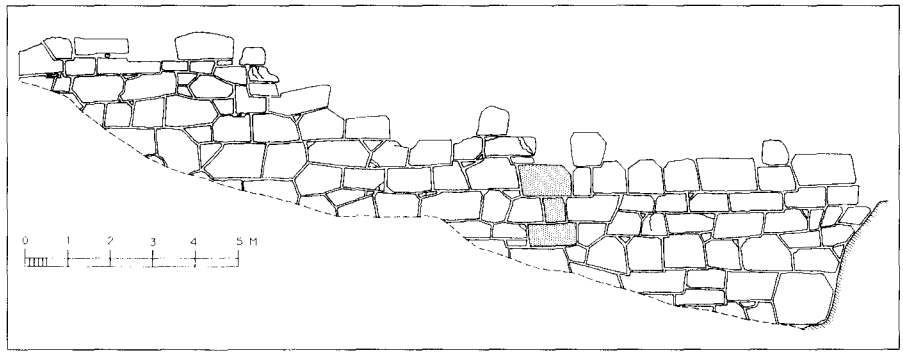

Fig. 3. The outer wall face of the southern spur wall with the masonry chain marked. (Drawing: L. Karlsson.)

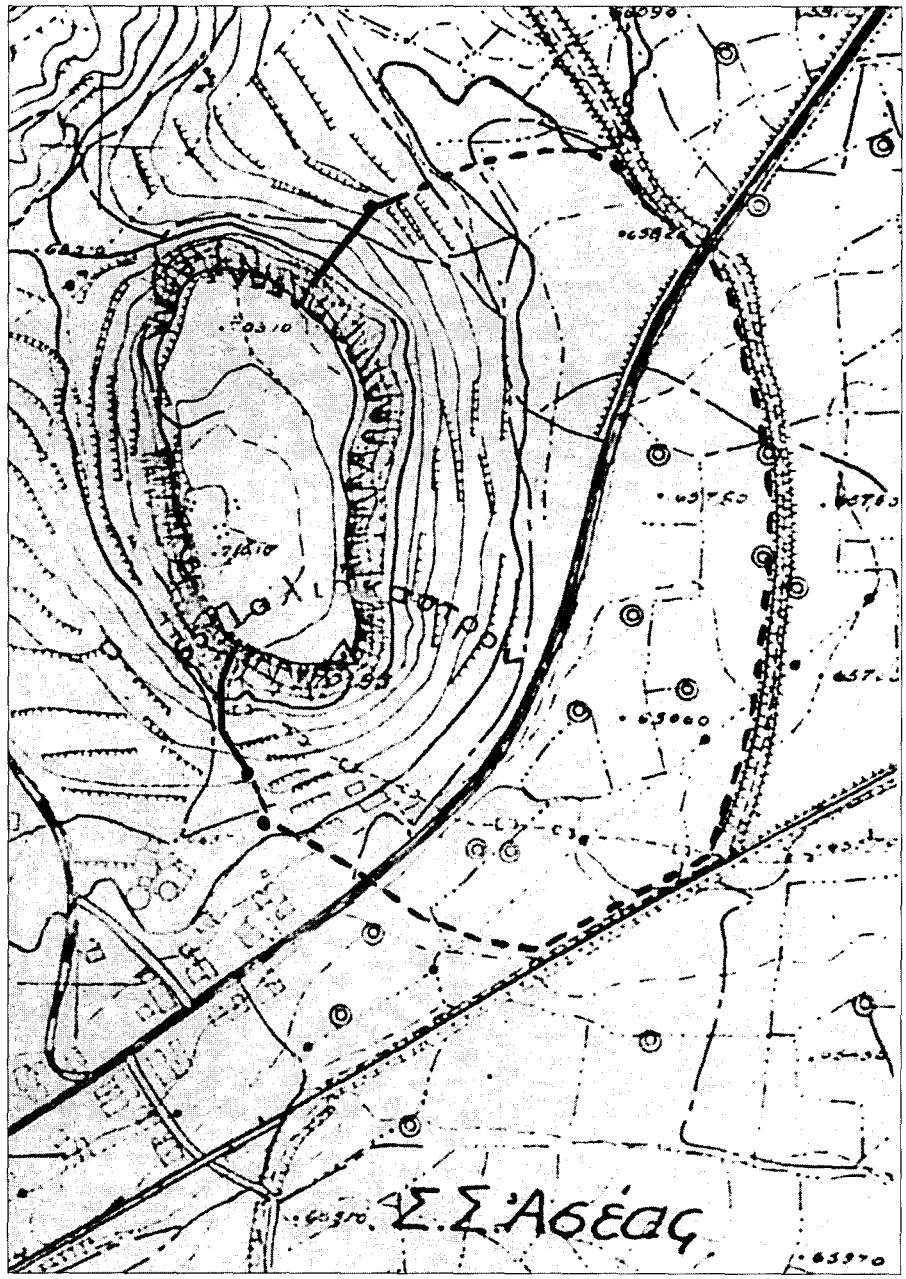

Fig. 4. The approximate stretch of the lower city wall. (Prepared by the authors.)

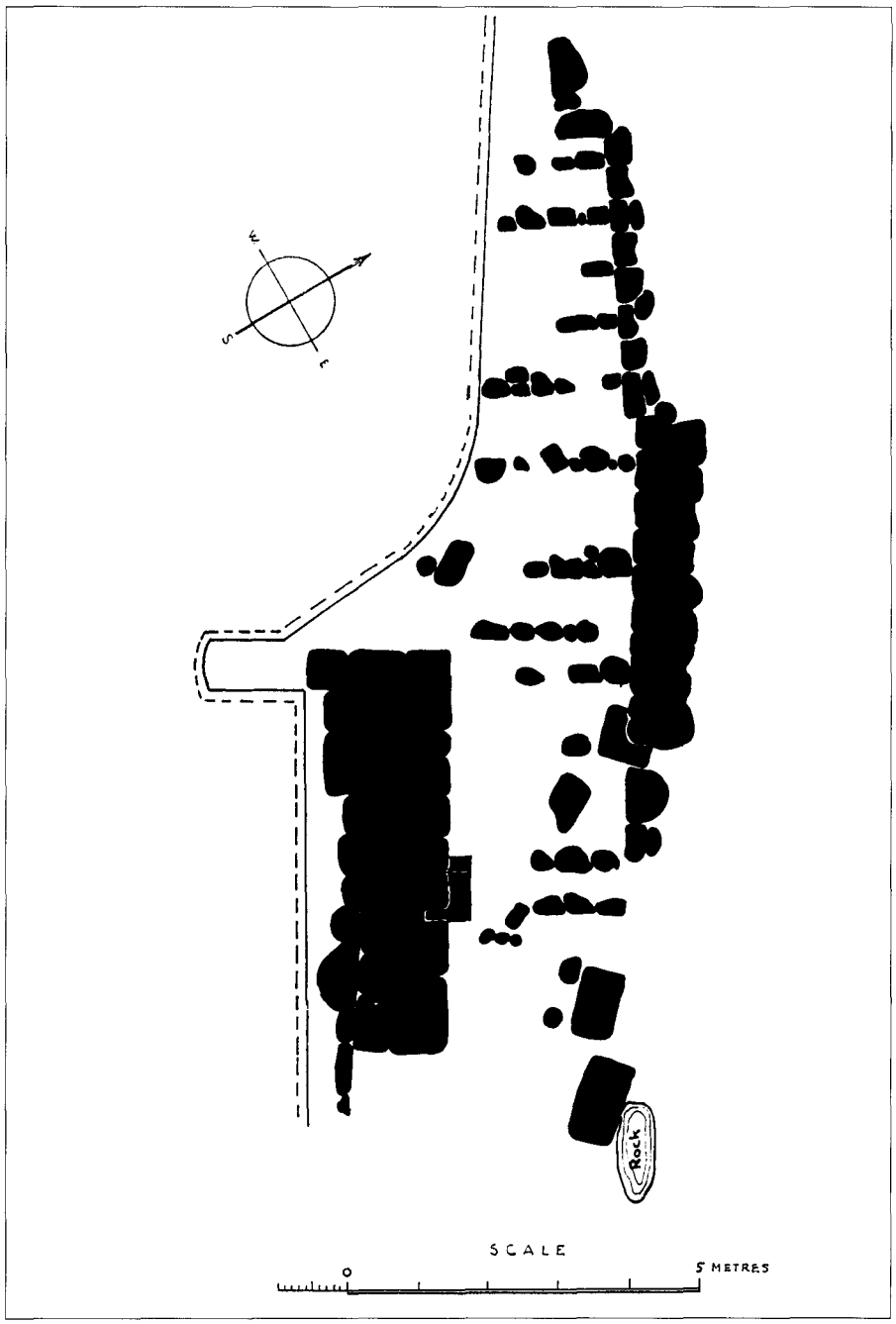

Fig. 5. The main gateway to the acropolis with Late Byzantine additions (new wall and steps). (After Holmberg 1944, fig. 128.)