

# LABRAUNDA 2008 A PRELIMINARY REPORT ON THE SWEDISH EXCAVATIONS WITH CONTRIBUTIONS BY JESPER BLID AND OLIVIER HENRY

BY

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## *Abstract*

The Swedish archaeological project at the Karian sanctuary of Zeus Labraundos celebrated, in 2008, sixty years of work. The year 2008 was very special, both because of these celebrations, but also because of the important finds that came to light during the excavation of the unusual Roman bath that was discovered in 2007. It is built in the shape of a four-leaf clover (the so-called Tetraconch), and can be dated to the first half of the fourth century AD. A large amount of finds were discovered, including superb pieces of plates in African Red Slip and Late Roman C wares, a water flask, and coloured marble pieces. In the necropolis, we excavated another 19 rock-cut tombs. The finds from these include a golden ring with a cornelian stone and 22 gold appliquéés in the shape of rosettes and palmettes. The appliquéés had four holes to fasten them to the drapery of the deceased. They are very similar to appliquéés found in the burial chamber of the Maussolleion in Halikarnassos. Two coins from before 350 BC show that the burial belongs in the early Hekatomnid period. In the excavations at the Acropolis Fortress Byzantine structures, possibly barracks, dated by the glazed Byzantine pottery to the period between the 11th and the 13th centuries were discovered. At the bottom of the trench there was a wall belonging to fourth-century BC Hekatomnid buildings. As every year, time and work were spent on architectural conservation and measures to increase the value of the site for visitors: a roof was erected over the Roman bath, a new wooden fence built at the entrance to the site, new metal shelves were installed in the storerooms, and finally, a re-excavation of the monumental original staircase up to the Built Tomb was initiated.

Labraunda is the sanctuary of Zeus Labraundos, located 14 km north of Mylasa, today's Milas, in the ancient landscape of Karia in south-western Turkey (*Fig. 1*). The project was originally initiated in 1948; the sixty years of Swedish archaeological research were celebrated in 2008 with a symposium at the Swedish Academy of Letters, History and Antiquities.<sup>1</sup> The campaign of 2008 was the fifth since the restart of the excavations at Labraunda in 2004.<sup>2</sup> The new studies in Labraunda are concentrated to three study areas that have not been the subject of investigations before: the surrounding defensive complexes, the large *necropoleis*, and the sanctuary's Roman and Byzantine periods (*Fig. 2*).<sup>3</sup> Important results have been made in all these areas of research.

## THE FORTIFICATIONS: THE ACROPOLIS FORTRESS

The recent investigations have shown that Labraunda was protected by advanced defensive fortresses and free-standing towers. The problem is that none of these defensive structures has been dated through archaeological finds and stratified contexts. This is one of the reasons why the new excavations at Labraunda are so important. The investigations last year, at the fortress of Burgaz Kale, 3 km southwest of the sanctuary (*Fig. 3*), revealed interesting finds, such as wine and water vessels, and whetstones for the sharpening of the soldiers' weapons.<sup>4</sup>

<sup>1</sup> *Labraunda and Karia. An international symposium commemorating 60 years of Swedish archaeological work at Labraunda.* The papers from 25 participating international scholars will be published in the *Boreas* series of Uppsala University. For economic support for this conference and for the 2008 campaign, I thank the Swedish Academy of Letters, History and Antiquities.

<sup>2</sup> I would like to thank all the participants in this year's successful campaign: Prof. Pontus Hellström, Ragnar Hedlund, PhD, and Gunilla Bengtsson, BA, all from Uppsala University, PhD student Jesper Blid, Stockholm University, and archaeology student Augustus Lersten, University of London, Olivier Henry, PhD from Bordeaux University, France, and Koç University in Istanbul, architect and PhD student Ayşe Henry, University of Illinois, and Kadir Baran, PhD, Muğla University, Turkey. Representing the Turkish Ministry of Culture and Museums was Mustafa Samur from the Museum of Antalya. The campaign lasted for five weeks from June 23 to July 25, 2008. The excavations were supported with grants from Åke Wibergs Stiftelse, Magn. Bergvalls Stiftelse, Helge Ax:son Johnsons Stiftelse, Gunvor and Josef Anérs Stiftelse, The Friends of the Swedish Institute in Rome, Stefan Lersten and Maggie Dan-Lersten and The Labraunda Society, Sweden, for whose contributions we are very grateful.

<sup>3</sup> The fortifications are the subject of a study by Lars Karlsson, while the necropolis is being published by Olivier Henry, PhD, and the research on Labraunda in Late Antiquity is being conducted by PhD student Jesper Blid. Henry and Blid have written their respective sections in this report

<sup>4</sup> A report can be found in Karlsson 2008.



Fig. 1. Map of ancient Karia (by O. Henry).

The archaeological finds gave us both dating evidence and pottery shedding light on the life of the soldiers on duty. A  $^{14}\text{C}$  analysis from 2008 of a carbonized wooden corner post gave a date for the Burgaz Kale in the fourth and third centuries BC (Fig. 4). Thus with great expectations, this year's work was initiated at the large fortress on the Acropolis, located 100 metres above the temple area.

The fortress has eleven towers and measures 135 m in the east-west direction and about 90 m north-south (Fig. 5). The fortress is built with very large and well-cut ashlar blocks of the isodomic type that is typical for the Labraunda fortresses. The date of these fortresses has been unknown, but since the excavations at the Burgaz Kale fortress in 2007 gave evidence for a Hekatomnid date, it seems highly probable that the entire Acropolis Fortress also dates to this period.

In the upper northeast corner of the fortress, behind the large chevron-shaped catapult tower (Tower 3 on Fig. 5), there is an inner fort, which has two towers towards the outer fort (Towers 10 and 11). The inner fort measures 51 m in the east-west direction and 19.5 m north-south. After the cleaning of the Acropolis Fortress from vegetation in 2004, it was possible to see that the area of the inner fort was completely covered with ruined structures. Many squarish rooms could be traced among the fallen masses of rocks. Large rectangular

stone blocks standing upright could be understood as door jambs, since they often stood in pairs. These blocks and traces of walls were measured and drawn in 2008 onto a plan by the architect Ayşe Henry and the land surveyors from ARI in Milas (Fig. 6).

The excavation trench was laid out in the southwest corner of the inner fort between the southern inner Towers 10 and 11 (see Fig. 6). The trench measured 10 m east-west and 7 m north-south (Fig. 7). The ruins were covered by large masses of fallen rocks, as the buildings had been built with simple, uncut rocks (Figs. 8 and 9). The fallen rocks had to be removed and dumped outside the fortress wall. This was a major job and it took several days to come down to levels with preserved walls. It is not easy to recognise whether a rock formed part of a wall and should stay, or whether it was a fallen one and should be removed. The archaeologists had to check every stone before it was removed. Eventually, an irregular room appeared, bordered by corridors on two sides (Figs. 7 and 10). We discovered a large number of roof tiles. These were lying on the level of the floor and had fallen first. Then the rocks from the walls had fallen over the roof tiles (Fig. 11). The large amount of roof-tile fragments was surprising. The buildings must have been costly and seemed to have been constructed on someone's orders in a systematic

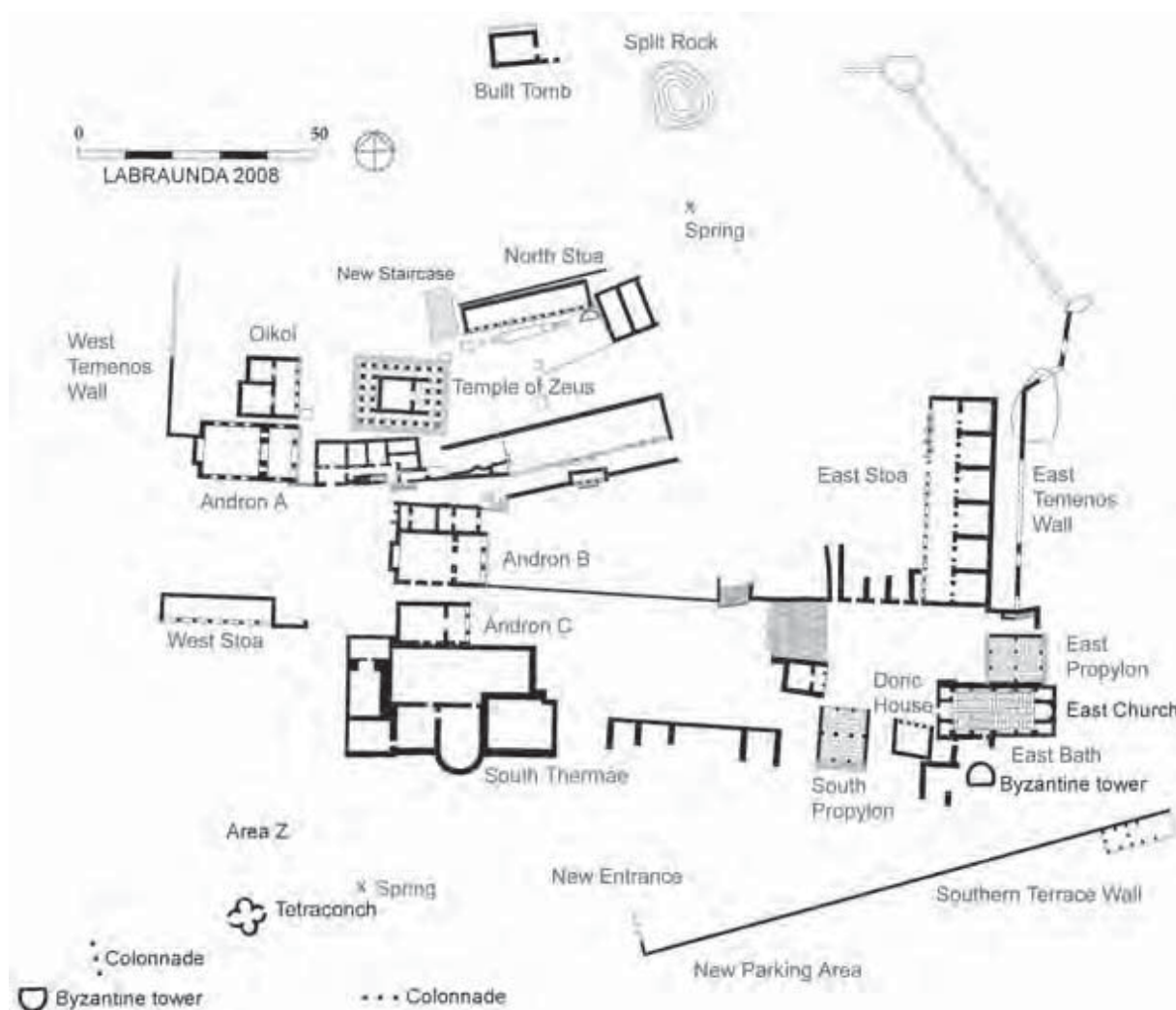


Fig. 2. Plan of the sanctuary. Note the Tetraconch in Area Z and the newly excavated staircase north of the Temple of Zeus (by J. Blid).

way: the roof tiles were not a haphazard collection of different types, gathered by peasants in a village, but seemed to indicate a tile production, under the direction of a higher authority. We found 400 broken pieces of roof tile, of which some different types were saved. The early type consisted of pan-tiles (Fig. 12) and *imbrices*; two gable-shaped *imbrex* fragments were found (Fig. 13a–b), as well as five upper-edge pan-tile fragments (as Fig. 12) and 10 side flanges. This type of tile has high side flanges and a rounded ridge placed about four centimetres in from the upper short edge. This ridge functioned to stop the tile above from sliding down. The tile is similar to tiles discovered in two fourth-century BC contexts at the Danish excavations of the Maussolleion at Halikarnassos.<sup>5</sup> It is likely that these tiles belong to the original Hekatomnid Acropolis Fortress or the barracks buildings of the inner fort. The other two types are Byzantine, and are basically of the same form. The earlier type, very carefully

shaped from compact clay, has four undulating finger lines drawn on the pan-tile's upper flat surface. These tiles have very low side flanges, almost not projecting at all above the surface of the tile. There are no *imbrices* connected with these tiles. One large pan tile could almost be put together to full size (Fig. 14a–b). The width, which was completely preserved, measures 49.5 cm, while the preserved length was 63.5 cm, with a part missing. If the ratio between width and length was 2:3, the total length would have been 75 cm. The

<sup>5</sup> See *Maussolleion at Halikarnassos* 7, 154f., pl. 27 (Context G), and 172f., pl. 34 (Context H). This is also the type described by Orhan Bingöl as discovered in the uppermost, fourth-century BC layers of Bayraklı, Old Smyrna, before the city was moved to another location by Alexander the Great: see Bingöl 1976/1977, 63. For this type from the third-century BC Heron at Pergamon, see Filgis & Radt 1986, pl. 79a.

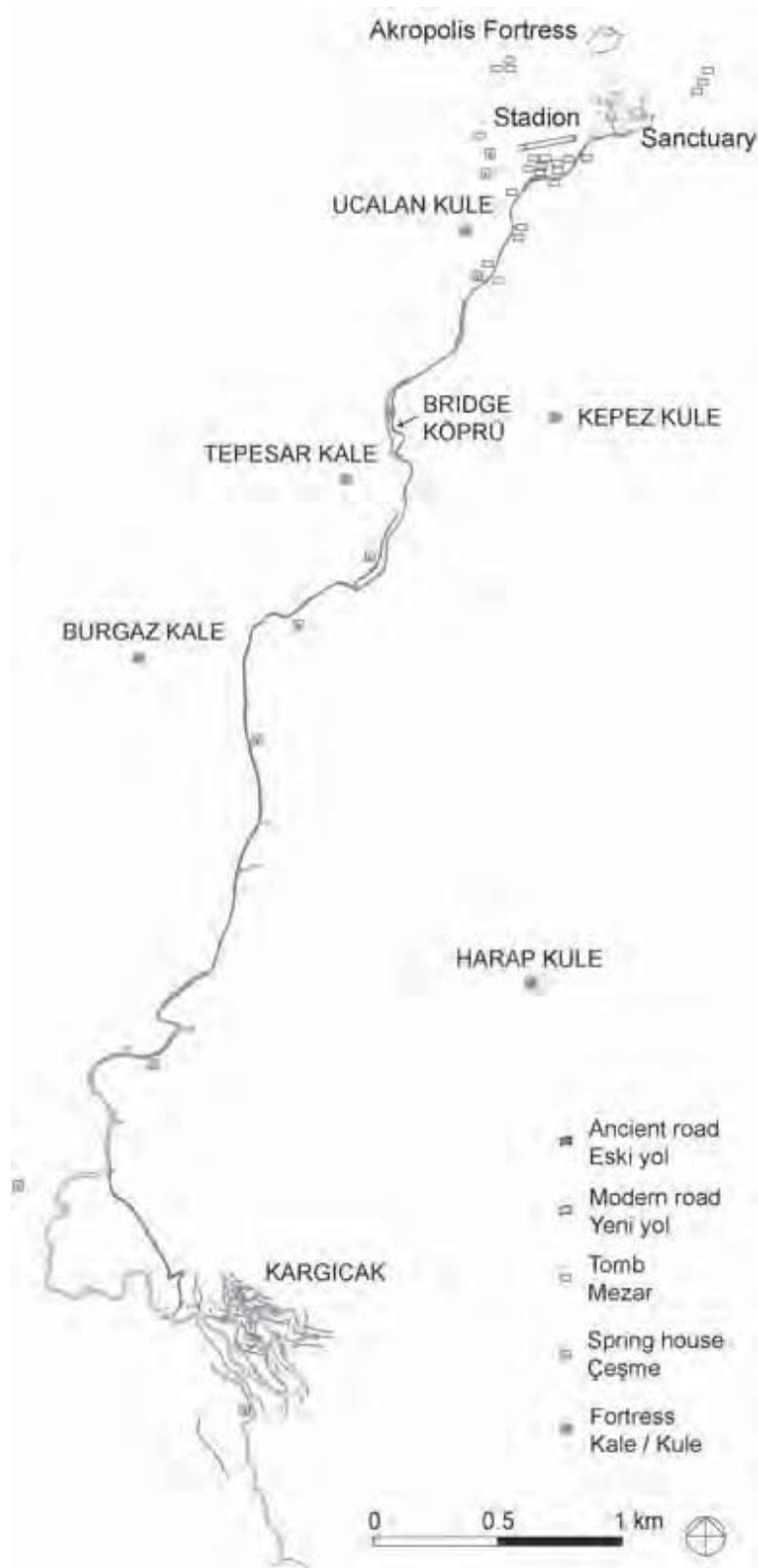


Fig. 3. Drawing of the Sacred Way with the forts and the spring houses. Burgaz Kale is on the west side of the road (by J. Blid).



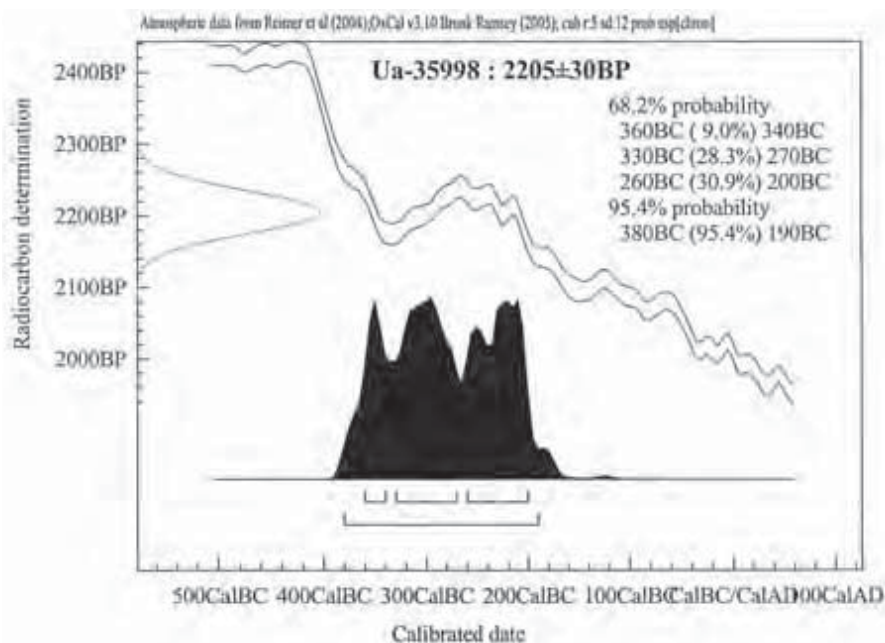


Fig. 4.  $^{14}\text{C}$  result from the Burgaz Kale.

pan-tiles are very large and must have been heavy on the roof. The third group of pan-tiles is a deterioration of the former group. The tile is not well fired, has an uneven red-black colour and the clay contains large amounts of inclusions. The finger-drawn lines are shallow and uneven and the side flanges are very sloppily executed. These seem to be restoration pieces.

The room that slowly appeared in the centre of the excavation had a rather irregular rectangular plan, on average measuring  $4.0 \times 3.4$  m (west side 4.2, south side 3.05, east side 3.8 and north side 3.4 m) (Fig. 7a). The interior measures about  $2.85 \times 2.3$  m. The house walls had a thickness of about 63 cm and were built with smaller rocks which were held in place by larger rectangular blocks standing upright. There were also larger blocks in the corners as well as in the door jambs (Figs. 15–17). The house was bordered on the west and south sides by corridors (Fig. 7b) 1.2 m in width. In the southwest there was a door (Fig. 7c) that led into the corridors, from which you could turn left or right, or walk straight ahead. If you did that you entered the excavated house. A large block (Figs. 7d and 17) in the floor of the corridor outside the house probably functioned as a threshold for a wooden door, thus forming a small vestibule outside the house. The door in the southwest (Figs. 7c and 17) must have led out from the corridor to a space between our excavated building and the fortress walls, which were located only 2.5 m apart (see Fig. 6).

If you turn right from the door of the corridor, you come to two leaning door jambs, which led into an irregular room

(Fig. 7e). The room measures 2.75 m north-south and 1.5 m east-west. It had a rounded northern wall. The room led on to another pair of door jambs, still standing *in situ* (Fig. 7f). The next room was not excavated. In this latter irregular room (Fig. 7e) we discovered an even layer of fallen roof tiles, which were left in place (Fig. 18). The roof-tiles were of the good Byzantine type with finger-drawn lines (as Fig. 14). Obviously, these roofs must have fallen at one and the same time, possibly in a later earthquake, since so many roof tiles were found in place. If the buildings had fallen little by little, the roof tiles would have been found scattered in many levels, and not as now, concentrated in one layer.

In the upper layers were found 20 fragments of Byzantine glazed pottery from the eleventh to the thirteenth centuries (Fig. 19). Three of the pieces have broken decorations of a bird: on one fragment the bird's head with an eye and the beak is very clear (AK08-9) and on another (AK08-8), one sees the rounded parts of the body with four schematic feathers. Both of these are only painted, without incised lines.<sup>6</sup> On the third bird fragment (AK08-10x), the feathers are incised with a

<sup>6</sup> See *Corinth* XI, 70–80, where the earliest glazed pottery groups are the “green and brown painted wares”. The Labraunda pieces, which are both painted with green lines, seem to belong to groups II or III, dated in the 12th century. This group is dated by Dark 2001, 129f. to the 11–12th centuries; see also Papanikola-Bakirtzi 1999, 25–29, and *Saraçhane* II, 30f.

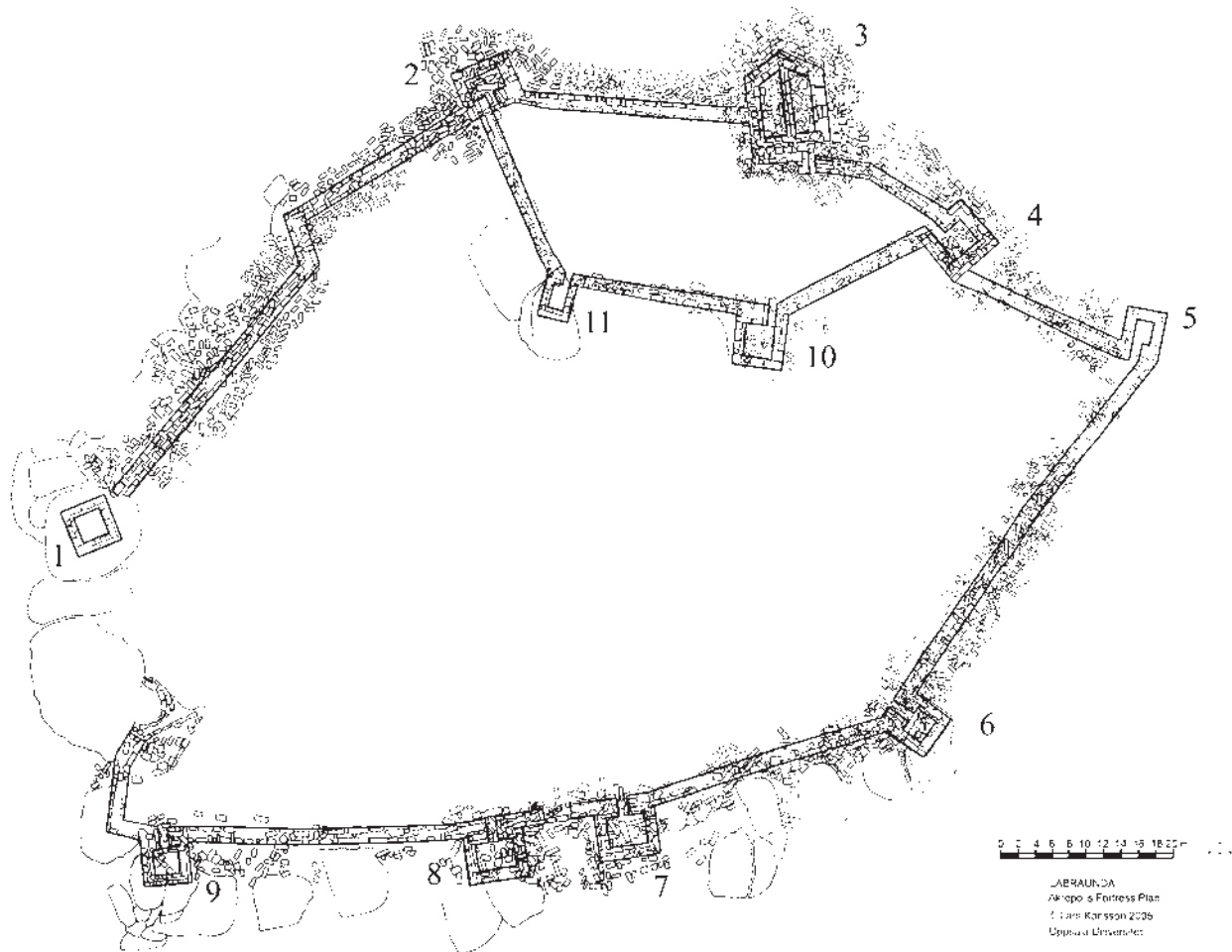


Fig. 5. Plan of the Acropolis Fortress (by L. Karlsson).

wavy line in the pottery (Fig. 20a–b). The body of the bird is painted with a thick brown line, similar to an example from Pergamon.<sup>7</sup> This group is called “Painted Fine Sgraffito”, and two further rim fragments from the Labraunda excavations (AK08-5 and AK08-6, Fig. 21a–b) are very similar in profile to bowls of this group. There are also several fragments with only a whitish undecorated glaze. Our fragments belong to the less advanced of the Byzantine glazed pottery groups indicating that they belong in the eleventh to thirteenth centuries.

In the layers with the fallen roof tiles, especially in the south corridor, were found large numbers of a Byzantine “white-ware” pottery. The pottery clay is white and it is made from white sand, common in the mountains of Labraunda, which indicates that it is locally made. Many of the vessels have traces of external fire showing that they were vessels for cooking (Fig. 22a–c). We found 41 bottoms, 34 handle fragments, 2 rim fragments and 310 body sherds (Fig. 23). The only find that is not a vessel was a small terracotta bread stamp, used to stamp sacred loaves for church services (Fig.

24). It is formed like a cone with a mushroom-shaped lower end. The upper end is decorated with an incised cross, and in the four segments there is a single dot.<sup>8</sup> What was the purpose of a bread stamp up here? Does this indicate the existence of a small chapel in the inner fort?

<sup>7</sup> Spieser 1996, colour plate 2 and plate 4 (cat. no. 54), and p. 53: dated in the 13th century. Similar wavy feathers can be seen in *Corinth* XI, pl. 43d (cat. no. 1211), dated to the middle of the 12th century. Here it is a sign of the Sgraffito Wares, group II, named the “Spiral Style”; *Corinth* XI, 120–123 (cat. nos. 1012, 1018 and 1028). Since it has a brown painted line it is part of the group called “Painted Fine Sgraffito”, dated by Papanikola-Bakirtzi 1999, 81, to the second half of the 12th century. Two rim fragments are very similar in profile to bowl no. 160 in the same group; Papanikola-Bakirtzi 1999, 83f. and 191; see also *Saraçhane* II, 46.

<sup>8</sup> A very similar bread stamp, dated to the Byzantine period, was found at Metropolis, according to Meriç 2004, 140, and another one in Hierapolis; Arthur 2006, 162f. and fig. 85; see also *Corinth* XII, 331f. and pl. 135.

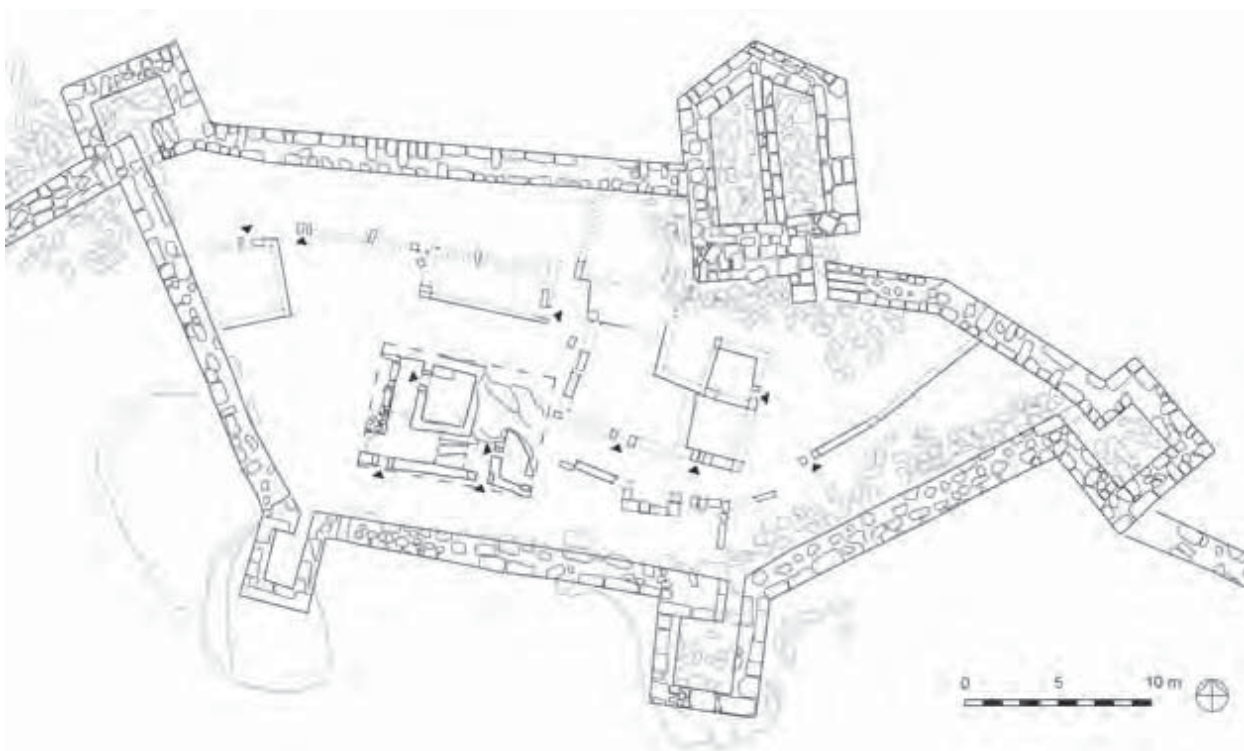


Fig. 6. Plan of the inner fort with the trench and other registered wall structures (by A. Henry).

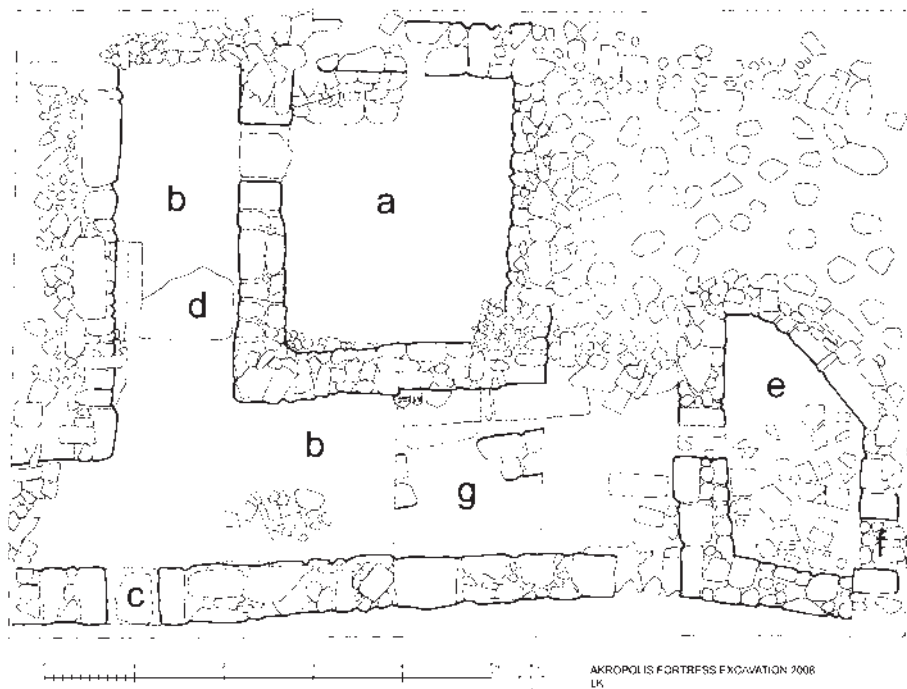


Fig. 7. Plan of the 2008 excavation trench (by L. Karlsson).





Fig. 8. View from southwest of the excavated area before the start of the work.



Fig. 10. View from southwest of the excavated area after the completion of the work.



Fig. 9. View from northeast of the excavated area before the start of the work.



Fig. 11. View of the west corridor with a wall fall in the northern continuation of the corridor.



Fig. 12. A fourth-century BC pan-tile (AK08-23).





Fig. 13. a) Two *imbrex* fragments (AK08-24 a-b); b) drawing of *imbrex* (AK08-24a) (by L. Karlsson).

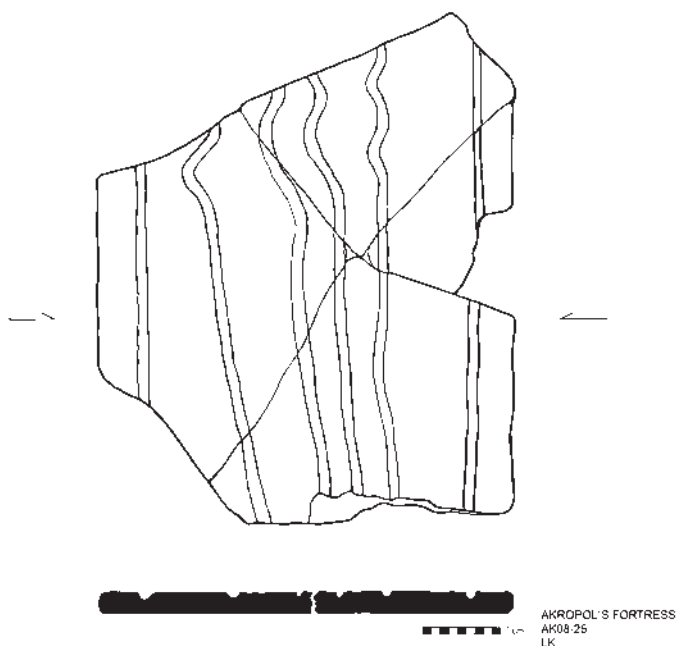
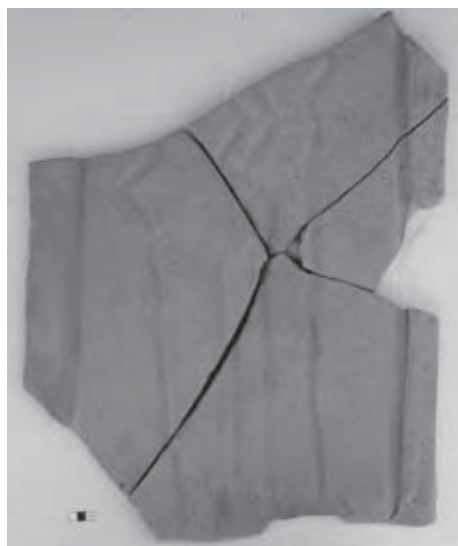


Fig. 14. a) A large pan-tile with three original edges (AK08-25) (by L. Karlsson); b) drawing of the pan-tile (AK08-25) (by R. Hedlund).

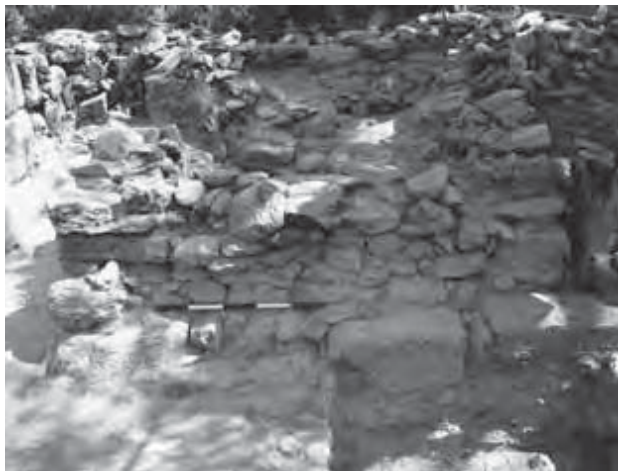


Fig. 15. Exterior of the south wall of the Byzantine room from the south.



Fig. 17. The west corridor from the northwest. The threshold block is visible in the centre.

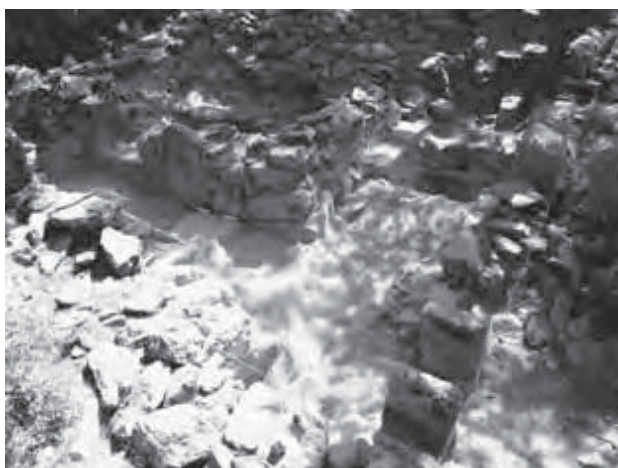


Fig. 16. View from the southwest towards the west and south corridors. The deep sondage can be seen in the south corridor to the right.

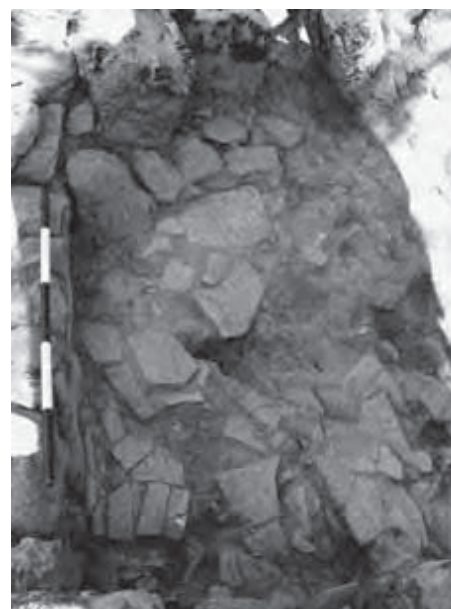


Fig. 18. A layer of fallen roof tiles in the east room.

The excavations were continued, going deeper in order to find traces of the barracks of the Late Classical fortress that we were originally searching for. Crossing the south corridor, between the house wall and the south corridor wall, a deep sondage was opened up, measuring  $1.9 \times 1.55$  m (see Fig. 7g). The depth was 1 metre and at the bottom we found bedrock and a wall standing on it (Fig. 25). The wall measures 65 cm in width and the bedrock had been dressed to form setting-beds for the wall blocks. This was clearly a wall from the Late Classical fortress and in this layer we discovered a fourth-century BC black-glazed pottery fragment, as well as several early Hellenistic pieces. The excavation was finished here, since we had discovered traces of the barracks buildings that stood inside the fourth-

century BC fortress, albeit a very small section. This deep trench was expanded in 2009. Furthermore, the investigations indicated that the original, well-built ashlar walls of the Hekatomnid inner fortress were rebuilt in a very disorderly way. This fact strengthens the idea that the structures up here were built inside the inner fortress for protective reasons, using and rebuilding the old fortress walls. Thus surprisingly, the excavations had shown that Labraunda played an important role as a military outpost and protection fort during the troubled Byzantine period between the 11th



Fig. 19. Middle Byzantine glazed pottery from the higher levels of the area.

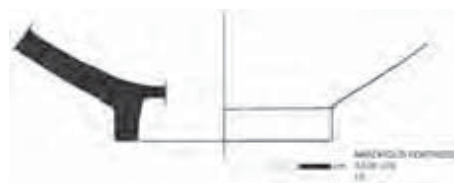


Fig. 20. a) A Byzantine glazed ring-foot with bird feathers (AK08-10x); b) drawing of the ring-foot (AK08-10x) (by L. Karlsson).

to the 13th centuries. During these centuries Anatolia was being taken over by Turkish groups. Until now, no remains from this late period have been discovered in Labraunda.

## THE TETRACONCH EXCAVATION (BY JESPER BLID)

This year the project *Labraunda in Late Antiquity*, initiated in 2005, conducted an excavation in the recently discovered Tetraconch. This edifice is situated in the south-western corner of the sanctuary, in an area that has not earlier been surveyed or studied in detail, called Area Z (see Fig. 2). In the vicinity of

the Tetraconch there are visible traces of walls belonging to several different buildings. After last year's preliminary survey, it was apparent that Area Z was settled principally in Late Antiquity and during the early Medieval period.<sup>9</sup> This assumption was based on the late-antique architectural appearance of the Tetraconch and by the discovery of a sixth-century marble *ambon* just south of the building.<sup>10</sup> The discovery of Christian

<sup>9</sup> No finds of the Classical or Hellenistic period were discovered during this survey.

<sup>10</sup> Of the common Karian type, see Karlsson 2008, fig. 25; cf. Ruggeri 2005.

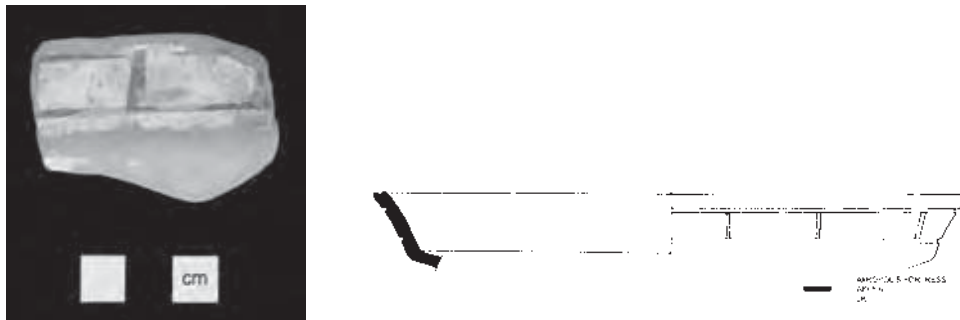


Fig. 21. a) A Byzantine glazed plate rim (AK08-6); b) drawing of the plate rim (AK08-6) (by L. Karlsson).

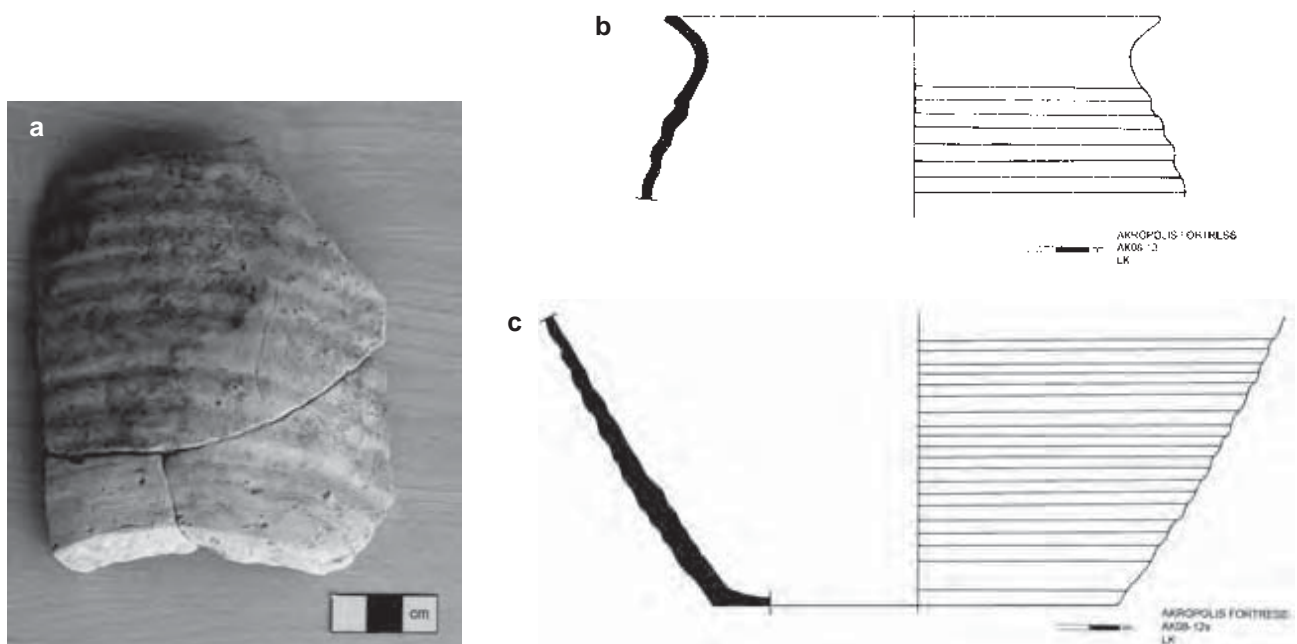


Fig. 22. a) Cooking ware bowl (AK08-12x); b) drawing of the cooking ware bowl AK08-13 (by L. Karlsson); c) drawing of cooking ware bowl AK08-12x (by L. Karlsson).

liturgical furniture made us speculate whether possibly the area had been a Christian centre during Late Antiquity. Perhaps the Tetraconch was a baptistery, considering its shape. Next to the East Propylon of Labraunda, the East Church had been erected already at the end of the fourth to early fifth centuries. But it was deserted, however, after only about 150 years of use. We therefore suspect that the Christians of Labraunda chose to erect a new church in the south-western area of the sanctuary along with other necessary buildings. The terrace just south of the Tetraconch, where the *ambon* was found, is occupied by several low walls, possibly belonging to this not yet confirmed sixth-century church. In order to understand the function and chronology of the area better, we initiated an excavation in the best-preserved structure, i.e., the Tetraconch, whose northern semi-dome is preserved to a height of five metres (Fig. 26).

The building is architecturally put together by four horse-shoe-shaped apses, in *opus quadratum*, oriented along the cardinal axes (Fig. 27). The apses encircle an octagonal central bay that was covered by a cupola or vault, constructed of ashlar blocks of local gneiss (Fig. 28). This cupola/vault had collapsed and could easily be studied after the removal of the topsoil (Fig. 29a and b). The construction technique employed is identical to that used in the preserved semi-dome in the northern apse (Fig. 30). The centre is built of six ashlar blocks, placed like spokes in a wheel. Small stones, imbedded in *cocciopesto*,<sup>11</sup> fill up the triangular

<sup>11</sup> *Cocciopesto* is the Italian term for a cement-like floor covering which is made up of lime mortar and crushed pottery and tiles, thus giving it a reddish colour.





Fig. 23. Probably local Byzantine "white ware" pottery from the excavated area.



Fig. 25. Photograph of the northern side of the deep sondage with the bedrock at the bottom and the southeast corner of the square room.



Fig. 24. Byzantine bread stamp.



Fig. 26. View of the Tetraconch from the south.

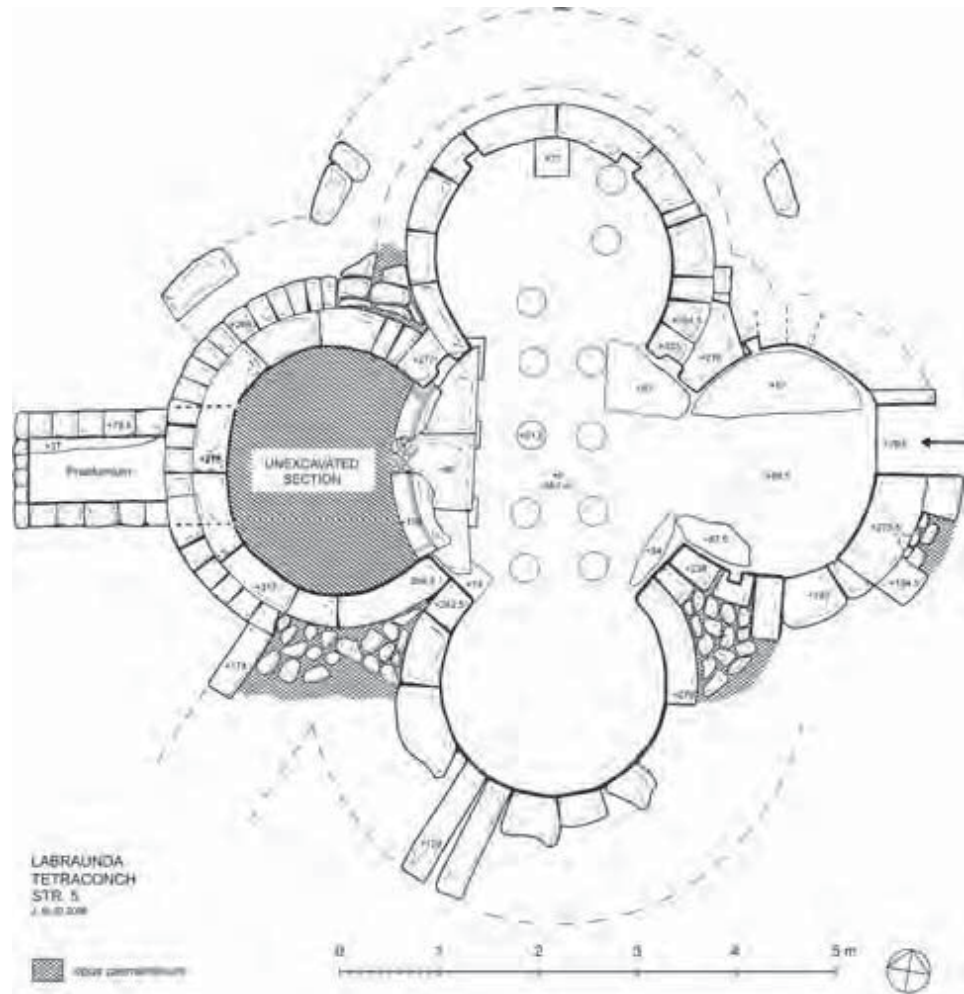


Fig. 27. Stone plan of the Tetraconch (by J. Blid).

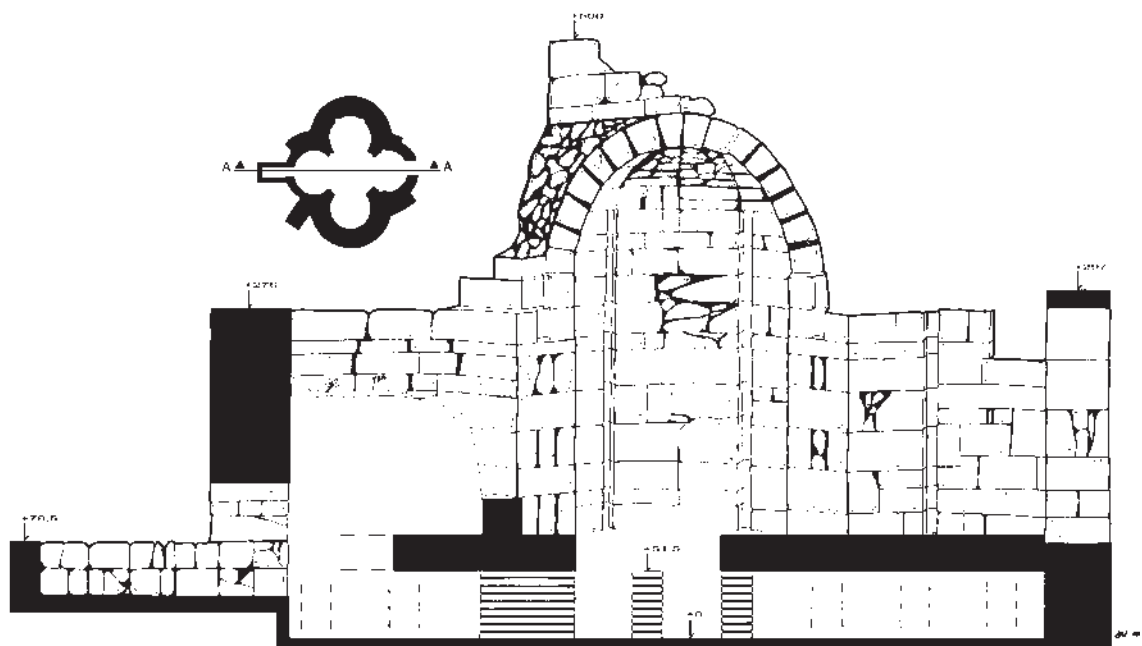


Fig. 28. Section through the Tetraconch in an east-west orientation.

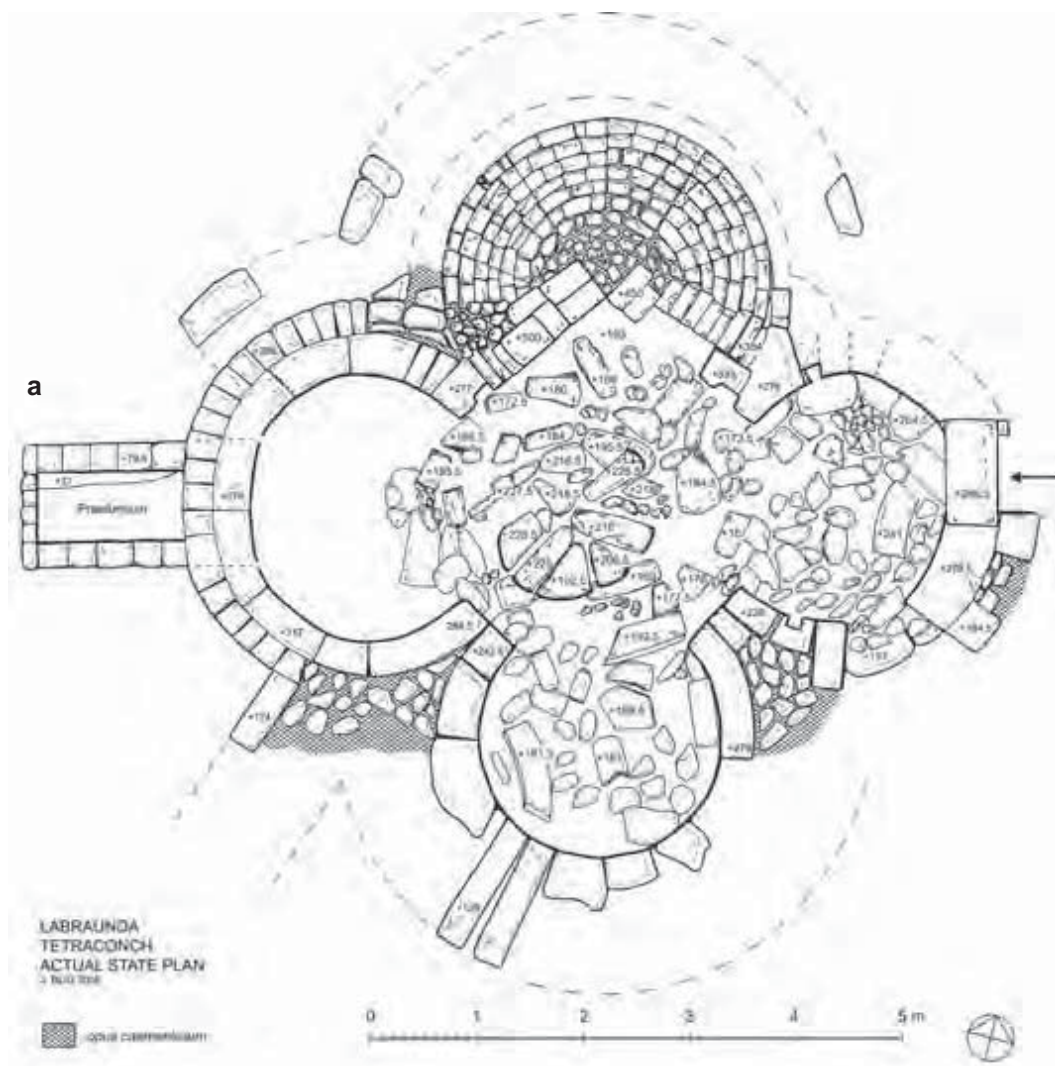


Fig. 29. a) Plan of the actual state with crown of vault *in situ*; b) the crown of the vault above the central space *in situ*.





Fig. 30. The preserved vault crown over the north apse.

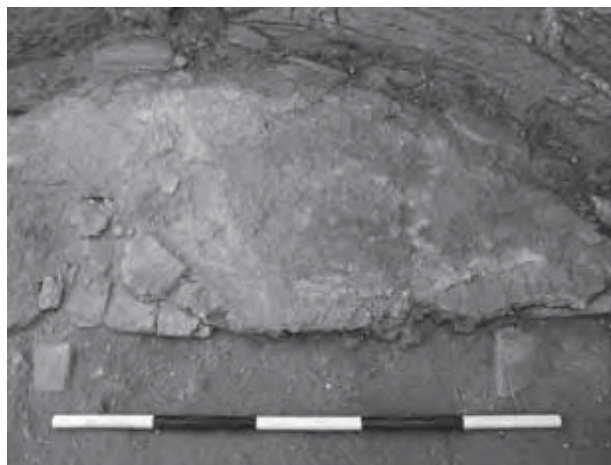


Fig. 32. The preserved section of the *cocciopesto* floor in the east apse.



Fig. 31. View over the excavated central space and the north and east apses.



Fig. 33. Drawing of cooking-ware jar (TC08-37) (by J. Blid).



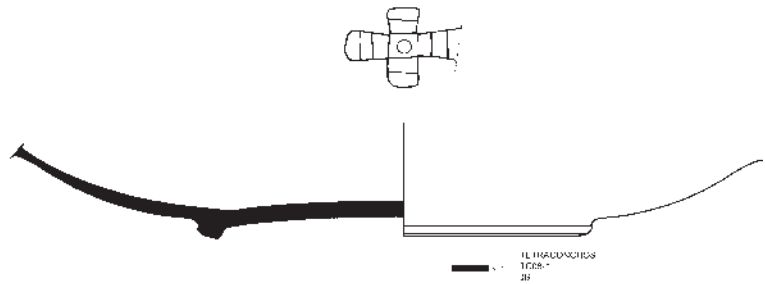


Fig. 34. a) Late Roman C plate with a cross (TC08-1); b) drawing of the plate (TC08-1) (by J. Blid).



Fig. 35. Murex shell from the excavation.

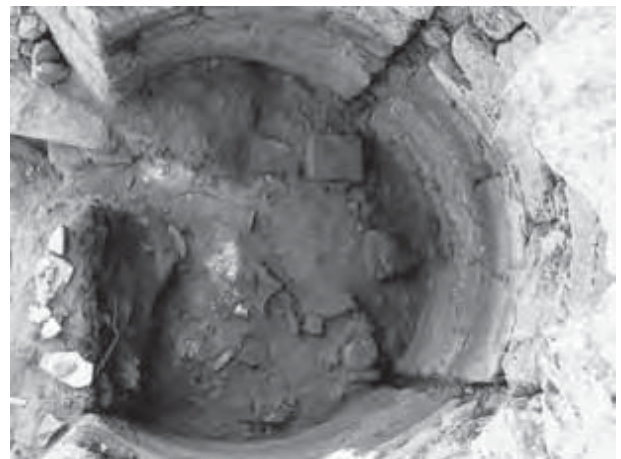


Fig. 36. The excavation in the north apse.



Fig. 37. Patterns of ashlar masonry drawn in the preserved mortar in the north apse.



Fig. 38. Two marble blocks with circular cutting in the opening towards the west apse. Note the traces of masonry pattern in the mortar to the left.



Fig. 39. View of the hypocaust in the central space.



Fig. 40. View of the hypocaust and the east apse from the east.

spaces between these blocks. In order to reconstruct the part of the central cupola between the centre and the cornice, one must again turn to the preserved northern semi-dome. Here, ashlar blocks are placed horizontally, one on top of the other, forming five non-bonded sections. The construction method employed in the semi-dome of the northern apse is to join five independent arches to create two-thirds of a cupola. In the central bay many ashlar blocks of similar dimension were noted: therefore, it feels fairly safe to suggest a similar construction there, though it did of course originally cover the entire space of the central bay.



Fig. 41. View of the hypocaust and the east apse with its door opening from the west.

Beneath the fallen cupola (at a level of 67 cm above the floor in the eastern apse) were found pieces of what is believed to be a regional imitation of the Byzantine Zeuxippos Ware, a manufacture of the late 12th century.<sup>12</sup> This find forms the *terminus ante quem* for the total find sequence. The date might therefore give us an approximate suggestion for the collapse of the superstructure of the Tetraconch. Approximately 60% of the building was unearthed in 2008. We excavated the central bay and also the northern and eastern apses (Fig. 31). In the eastern apse was found the main entrance to the structure and also a window oriented towards the south. This apse has a well-preserved, secondarily-made, *cocciopesto* floor that is resting on large bricks (Fig. 32). The floor measures 35 cm in thickness. Directly on the *cocciopesto* floor, we discovered a well-preserved cooking-ware jar<sup>13</sup> (Fig. 33), as well as a plate of Late Roman C Ware. The plate

<sup>12</sup> For further information on Byzantine glazed pottery, see Böhlen-dorf-Arslan 2004.

<sup>13</sup> Turnovsky 2005, 641, 645.





Fig. 42. The *praefurnium* from the west.



Fig. 43. Plates of Late Roman C and African Red Slip wares.

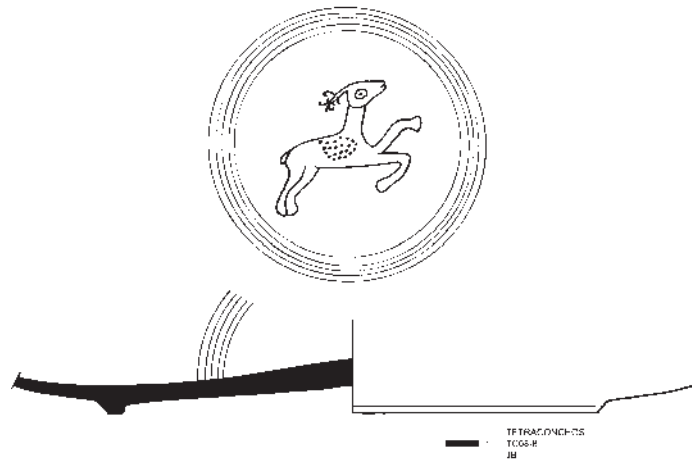


Fig. 44. Drawing of Late Roman C plate with a stag (TC08-8) (by J. Blid).



Fig. 46. Drawing of African Red Slip plate with a palmette (TC08-3) (by J. Blid).

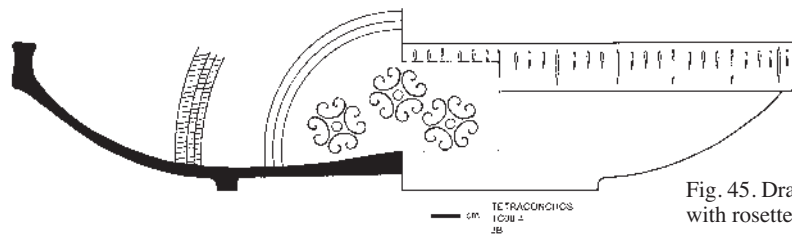


Fig. 45. Drawing of Late Roman C plate with rosettes (TC08-4) (by J. Blid).



Fig. 48. a) Water flask (TC08-49); b) drawing of the water flask (TC08-49) (by J. Blid).

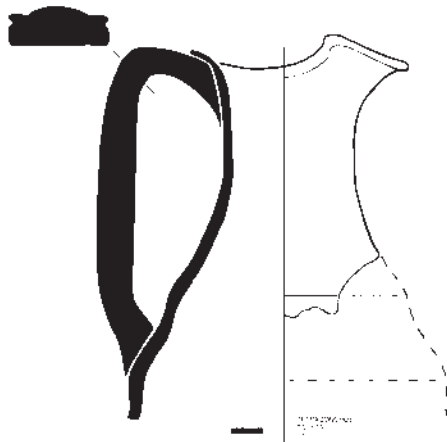


Fig. 47. Drawing of jug with three-foiled mouth (TC08-35) (by J. Blid).

has a stamped cross, which is commonly dated to the late part of the fifth century<sup>14</sup> (Fig. 34a–b). Another interesting find was a fully preserved murex shell, possibly brought from the sea below Labraunda<sup>15</sup> (Fig. 35).

In the northern apse, which is still preserved to its full height, the strata were disturbed causing a mixture of the chronology of the finds (Fig. 36). It is when reaching the floor level that the undisturbed stratigraphy appears. Directly on the floor a secondary hearth had been constructed of four Byzantine roof tiles forming a square. J. Hjohlman found

similar pan-tiles in an excavation at Pyrgouthi in the north-eastern Peloponnese and dates them to the sixth/seventh centuries AD.<sup>16</sup> No datable pottery or small finds were found in the close vicinity of the hearth and thus we must wait for the <sup>14</sup>C analyses of charcoal to confirm the dating of this stratum. For now, we can only certify that it is after the period of Late Antiquity. As mentioned previously, the walls of the semi-domes are constructed of *opus quadratum* and in the northern apse one can see preserved mortar covering the joints of the ashlar blocks (Fig. 37). This was surely painted with marbling, imitating real marble blocks.<sup>17</sup>

In the central bay, at a height of 32 cm above the *cocciopesto* floor of the eastern apse, we excavated a circular socle or threshold, consisting of two blocks of white marble (Fig. 38). The blocks show traces of *anathyrosis*, which in-

<sup>14</sup> See pl. VII, shape g, in Doğer 2007, 113.

<sup>15</sup> Similar murex shells were also found at Amorium, where they were dated to 6th–11th century; Lightfoot 2007, 41. One of these was also found in a bath, the others were out of context (Lightfoot, personal communication).

<sup>16</sup> The building was destroyed in the first half of the seventh century; Pyrgouthi, 226, fig. 90 (cat. nos. 281–282) and p. 206 (cat. no. 210). The pan-tiles are either undecorated or have three parallel finger lines on the short side.

<sup>17</sup> For comparative Late Antique marbling, see Ruggiu 2007, 221–229.



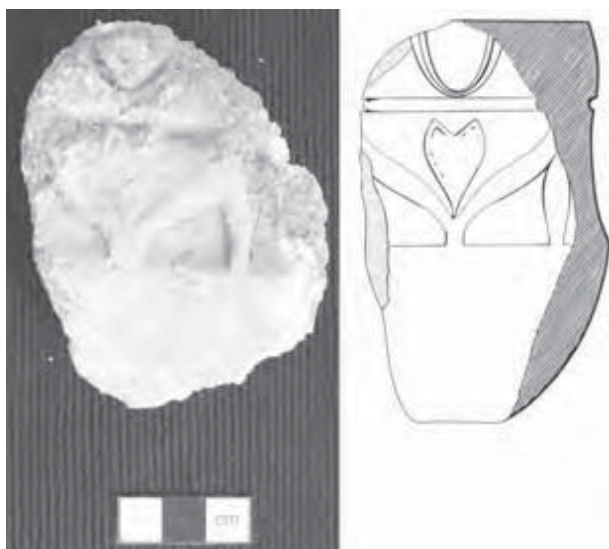


Fig. 49. Photograph and drawing of marble cornice profile (by J. Blid).

dicates that there were covering slabs placed on top of them. The marble blocks rest on three gneiss slabs. Just east of these slabs we continued to excavate beneath the level of the *cocciopesto* floor of the eastern apse. Eight brick *pilae* belonging to a hypocaust (Figs. 39–41) were discovered. We also managed to identify the *praefurnium* at the outside of the western wall of the western apse (Figs. 27 and 42). The stratigraphic sequence, measuring approximately 50 cm down to the lowest floor level of the hypocaust, is very rich, but chronologically homogeneous. Over forty plates of high-quality Late Roman C Ware were found (Fig. 43). Among them were an example with a stag and another with rosettes in a *tondo*, belonging to Hayes' groups II and III<sup>18</sup> (Figs. 44 and 45). An African Red Slip plate (Fig. 46) with a palmette is dated by Hayes to AD 410–470.<sup>19</sup> The excavation also revealed very well-preserved common wares, such as a jug with a three-foiled mouth (Fig. 47) and a water flask<sup>20</sup> (Fig. 48a–b). In this stratum were also found a broken washing bowl of marble and a piece of the marble cornice decorated with Ionian and Lesbian *kymai* (Fig. 49). Furthermore, several objects of metal were extremely well preserved, especially a pair of scissors for sheep shearing. Many fragments of marble revetment slabs were also found along with mouldings of string courses. If we presume that the marble originates from the first phase of the Tetraconch, it had an interior colour scheme of red, white and violet. The marbles identified are *Marmor Phrygium*, *Marmor Iassense* (or *Marmor Carium*, Fig. 50), and the white marble of Mount Sodra at Milas. The archaeological material of this stratum is exceptionally well preserved, due to the dynamic and protective ash layer produced by the furnace of the hypocaust. Through this rich material we can now, with great-

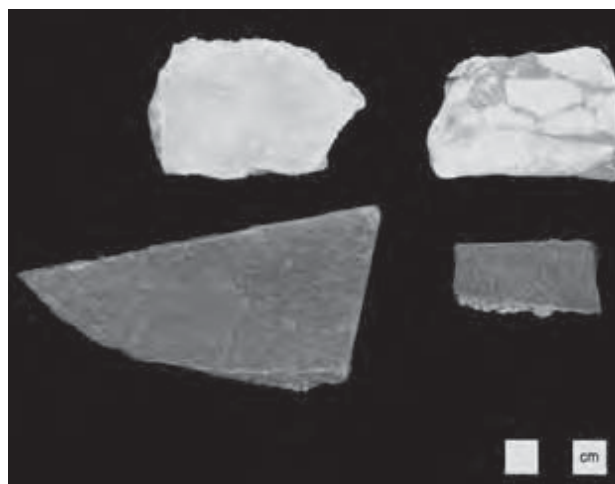


Fig. 50. Marble fragments from *Marmor Iassense* and *Marmor Phrygium*.

er certainty, comment on the different phases of the Tetraconch. In a secondary phase, the hypocaust was filled with discarded pottery and other waste, which means that the heating function of the edifice was no longer used. The *suspensura*<sup>21</sup> was then rebuilt in a manner similar to its original construction. This change in the edifice's function probably occurred in the very late fifth or early sixth century.

In conclusion, the Tetraconch was initially constructed as a Late Roman bath (Fig. 51). Due to its insignificant size it was with certainty a private establishment, possibly aligned with other non-heated rooms. The four horseshoe-shaped apses, covering two-thirds of a circle, were surely designed for individual practises.<sup>22</sup> One of the marble washing bowls that belonged to the edifice later broke and was placed in a second phase fill, when the *suspensura* was rebuilt in the early Medieval period. Evidence that the material under the floor is a fill, placed at a specific time, is the homogeneous chronology there. It still remains to determine the function of the

<sup>18</sup> Using the dating evidence of Hayes 1972, 347; stamp motives groups II & III, AD 440–580.

<sup>19</sup> Hayes 1972, 218f.; category Aiii, dated to c. AD 410–470.

<sup>20</sup> It is similar to the water flask/ampulla, pl. 1:0, in *Saragane* II, 97, though I suggest a slightly earlier date, the second part of the fifth century/early sixth century AD, due to the chronology of the surrounding finds.

<sup>21</sup> *Suspensura* is the Latin term for a suspended floor, i.e., a floor supported by small pillars (*pilae*).

<sup>22</sup> Follow the discussion of Yegül 1995, 346.

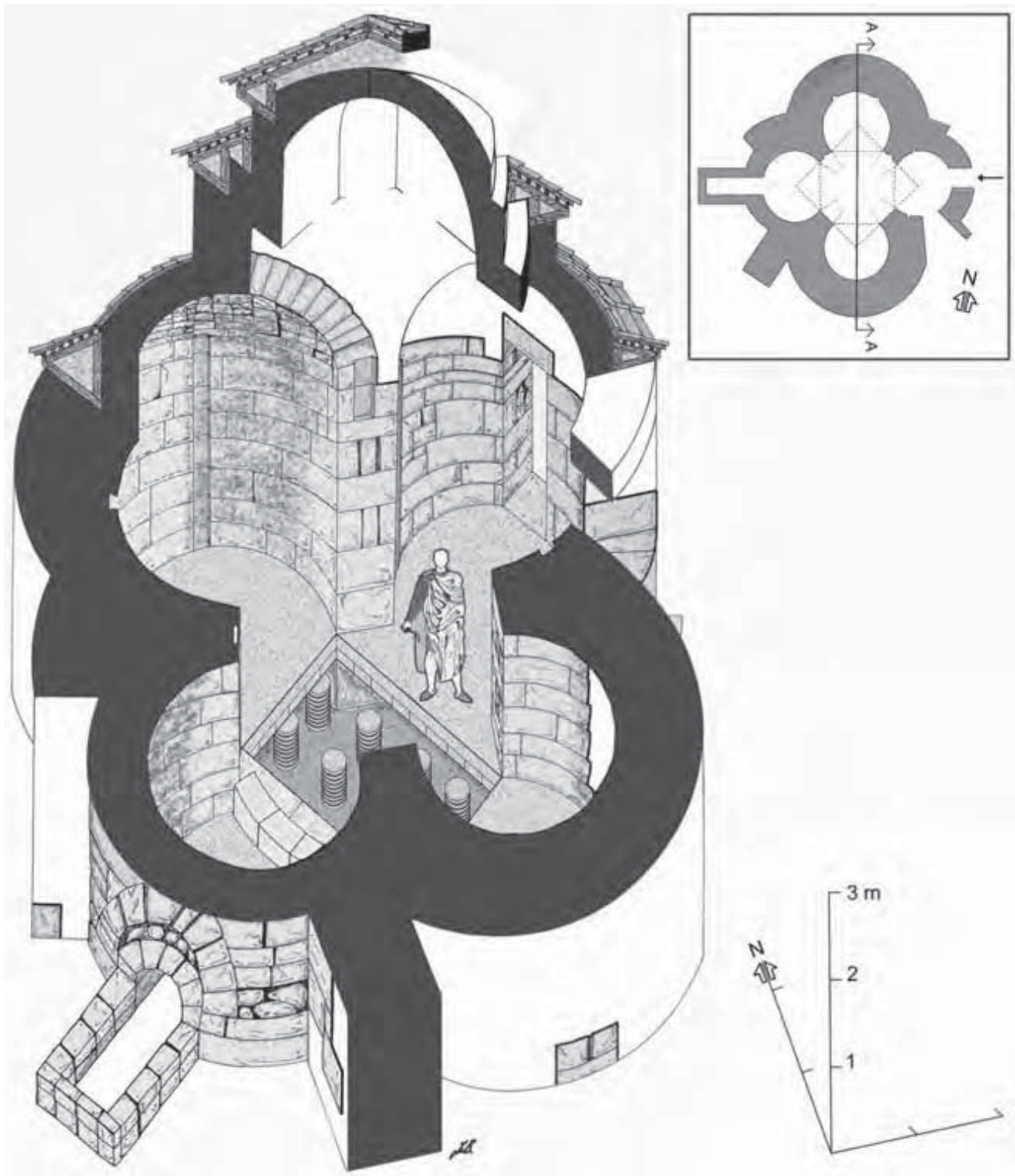


Fig. 51. Restored isometric view of the Tetraconch (by J. Blid).

building during its second phase; only the *cocciopesto* floor of the eastern apse is well preserved. However, recapitulating the initial part of this report, if a newly erected church occupied the terrace just south of the Tetraconch at the beginning of the sixth century, this fits chronologically well with the re-shaping of the Tetraconch. Could the Tetraconch have been a part of that Christian complex from the beginning of the sixth century? Future excavations will surely give us the answer to that question.

Because the excavations were considered very important and it was considered desirable to preserve the archaeological levels, it was decided to cover the building with a protective metal roof, which will be described below.

## THE NECROPOLIS EXCAVATIONS (BY OLIVIER HENRY)

We concentrated this year's work on two areas located south and southwest of the Stadion (*Fig. 52*). The objectives were the same as last year: first, conducting a survey in order to complete the map of the necropolis, done by architect Ayşe Henry and the survey company ARI of Milas; second, carrying on the systematic excavations of the tombs. Although we did not find any intact tombs, not less than 19 newly discovered tombs and burials T62 to T80 could be added to the map, bringing the total amount of known graves to 80 (*Fig. 53*). All of the new tombs belong to the "simple rock-cut pit" type, i.e., a simple rectangular pit carved in the rocky soil and covered by a series of slabs buried under a thin layer of soil.<sup>23</sup>

The most interesting point of these new discoveries is the high density of the graves. Southwest of the Stadion we discovered seventeen tombs (only one of them was already known) placed close to each other. The surface occupied by these burials does not exceed 450 m<sup>2</sup>. Up until now the map of the necropolis showed only isolated or small groups of burials consisting of three to four graves. This year's results clearly indicate that areas with high density of burials must have been common and that many more tombs are to be discovered around the sanctuary. Furthermore, the fact that these new tombs belong to the same simple rock-cut pit type reveals that this kind of tomb might be more widespread and more frequently represented in the necropolis than we first thought.

This year we excavated 19 tombs: two rock-cut sarcophagi and seventeen tombs of the simple rock-cut pit type, bringing the total amount of excavated tombs to 41.

### Rock-cut sarcophagi

This group represents the most widespread type in the necropolis with a total of 47 tombs, each consisting of a rectangular, stepped cavity with an intermediate ledge carved into

a high outcropping and covered by a massive gabled lid.<sup>24</sup> On the short and long sides of the lid one finds square bosses, probably used as lifting devices when the burial was being closed. The dimensions of both the pits and the lids are often impressive. The average size of the pits is c. 2.0 m in length, 85 cm in width and c. 85 cm total depth. The lids are between 2.15 and 2.70 m long, with a width over 1.35 m and a thickness of c. 55 cm. Although they are particularly concentrated along the Sacred Way, they still appear as isolated tombs, with no common orientation, randomly cut into the available boulders or rock outcrops.

One of the two rock-cut sarcophagi excavated in 2008 (T14) is located along the road leading to the Stadion. It has an unusual shape as it contains two rectangular, twin, rock-cut pits (*Fig. 54*). Its lid has disappeared and there is no trace of it. The material found in this tomb was relatively poor, including many fragments of roof tiles, one pithos fragment and a part of a local jug rim. The material can be dated to the Roman period, but does not offer a more precise dating.

The second tomb (T16) is located on the south side of the Sacred Way leading to the sanctuary. It shows the usual characteristics of the rock-cut sarcophagus: a rectangular pit carved in a flat surface on the top of a boulder and covered by a large gabled lid (*Fig. 55*). On the top of the lid there is a rectangular shelf, which is pierced in the centre by a socket. The lid also carries two projecting bosses on all four sides. The material discovered in that grave was rich and numerous. Beside the usual fragments of big pots, roof tiles and pithoi, we found a large amount of fine ware ceramics, including two skyphoi from the second century BC (*Fig. 56a–b*),<sup>25</sup> a glass bead and a bronze coin. The latter was unfortunately lying in the mud collected in the pit and could not be read. On the other hand, the fine wares provided us with a precise chronological sequence, starting in the late Hellenistic period and finishing at the end of the second century AD. The amount and the variety of the finds indicate many phases in the use of the tomb. This point is supported by the large amount of human bones found during the excavation. We could safely distinguish at least three different burials: one cremation and two inhumations, an adult and a young man/woman. The bones have been brought to Uppsala University for a full analysis by Anne Ingvarsson-Sundström.

<sup>23</sup> This tomb type is not to be mistaken with the "cist tomb type" made of four vertical slabs placed in a pit dug in the ground. Although the simple rock-cut pit graves seem to be closely related to the rock-cut sarcophagus type (below), both of them being made of a rock-cut pit, their geographical and topographical location, as well as their size, cutting technique and architectural features lead us to separate them into two different kinds of burials.

<sup>24</sup> For further information on this tomb type largely widespread in Karia, see Henry 2009, 33–39.

<sup>25</sup> Although our finds are of local production, a comparable example can be found in Papanicolaou & Friis Johansen 1971, 20, fig. 8, 80.



Fig. 52. Localisation map of the necropolis (by O. Henry).

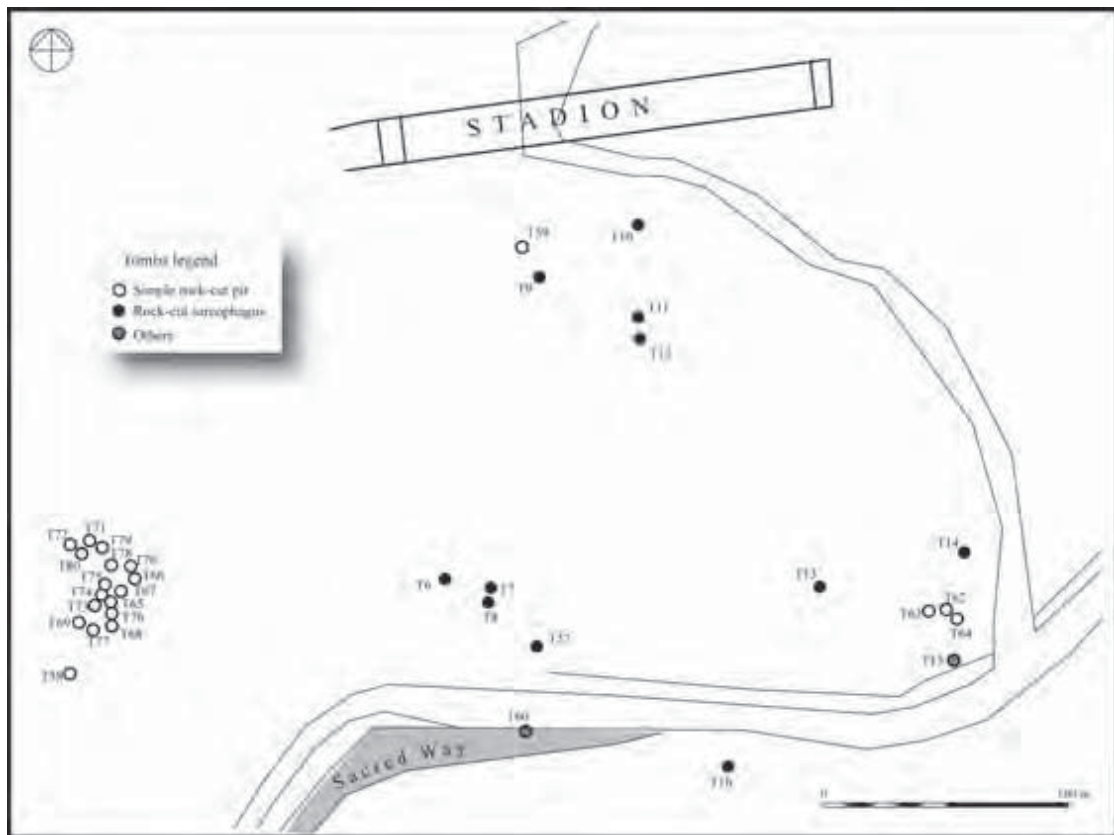


Fig. 53. Detailed map of the tombs excavated in 2008 (by O. Henry).





Fig. 54. Twin grave T14.

### Simple pits

Although all these tombs offer the same conception scheme, we noticed a large variation in their dimensions. The pits vary in width from 24 cm to 48 cm, and in length from 1.5 m to 2.0 m. The pottery found in the pits was surprisingly rich, considering the fact that all of them were plundered. Nonetheless, it seems that the robbers did not complete the excavation of the tombs, allowing us to discover some material *in situ* (Fig. 57). As a result, we collected many fine pieces, including not only high-quality fragments of fifth- and fourth-century black-glazed pottery, but also complete vessels, such as an amphoriskos, unguentaria and water jugs (Fig. 58).<sup>26</sup> One of the tombs was particularly rich, as it offered a large collection of jewellery, comprising a set of 22 golden dress-decoration pieces with 10 rosettes<sup>27</sup> and 12 complex leaf motifs (Fig. 59), a ring made of a large cornelian stone held by thick golden tubes (Fig. 60), and a long necklace containing cornelian beads alternating with crafted, golden, granulated cylinders (Fig. 61). In the same grave we also found two silver coins, probably minted by the Karian city of Kasolaba and dated to the period of 400–350 BC.<sup>28</sup>

### Conclusion

After two years of excavations, we can start elaborating a typology of the tombs. The earliest ones consist of simple rock-cut pits (Fig. 62). They seem to appear in the second half of the fifth century BC and are used until the end of the

fourth century BC. The material found in these graves indicates that the deceased had a certain degree of wealth and, although it should be confirmed through further excavations, we can safely assume that people buried around the sanctuary belonged to the élite of the society.<sup>29</sup> An important shift occurs at the very beginning of the Hellenistic period. Around the end of the fourth century or the beginning of the third, the simple rock-cut pit type is abandoned in favour of a new kind of tomb: the monumental rock-cut sarcophagus. Due to their ostentation and their accessibility, most of these graves have been emptied by plunderers and it is rare to find any material. Nonetheless, the few fragments that could be recovered and the monumentality of the tombs themselves indicate a continuity of the high social

<sup>26</sup> Similar to one jug already found during the 2007 excavations in Burgaz Kale and comparable to material discovered in Olynthos: no. 843 in *Olynthos* V, 228 and pl. 174, dated to the late fifth or early fourth century BC.

<sup>27</sup> The same type of rosettes was discovered in the burial chamber of the Maussolleion at Halikarnassos; see *Maussolleion at Halikarnassos* 4, 124 and 132 (cat. no. 8b), and Jeppesen 1993, 17.

<sup>28</sup> See Konuk, forthcoming.

<sup>29</sup> See for example the Karian Princess Tomb type, discovered in Bodrum (1989), made of a sarcophagus inserted in a pit. Although the tomb was small and of a simple type, the jewellery discovered during the excavations led many scholars to identify the dead with Ada I, sister of Maussollos; see Özet 1994.

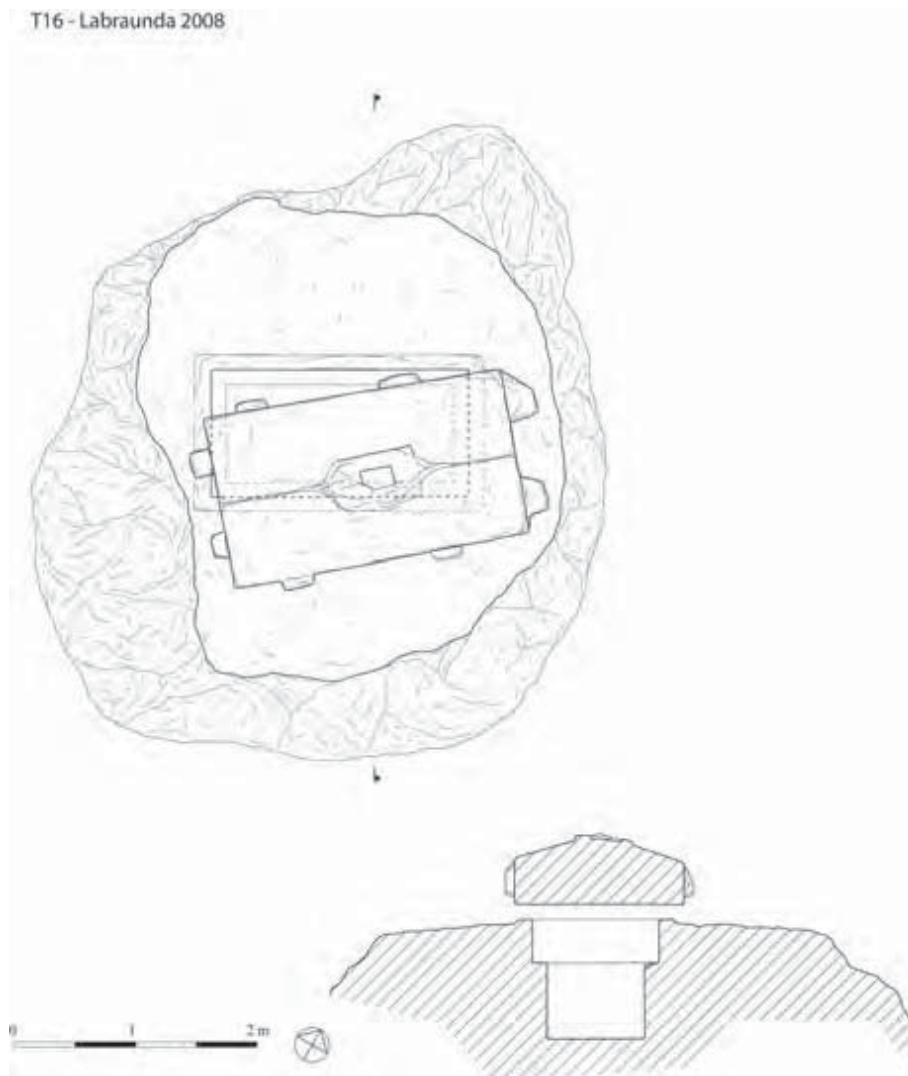


Fig. 55. Plan and section of tomb T16 (by O. Henry).

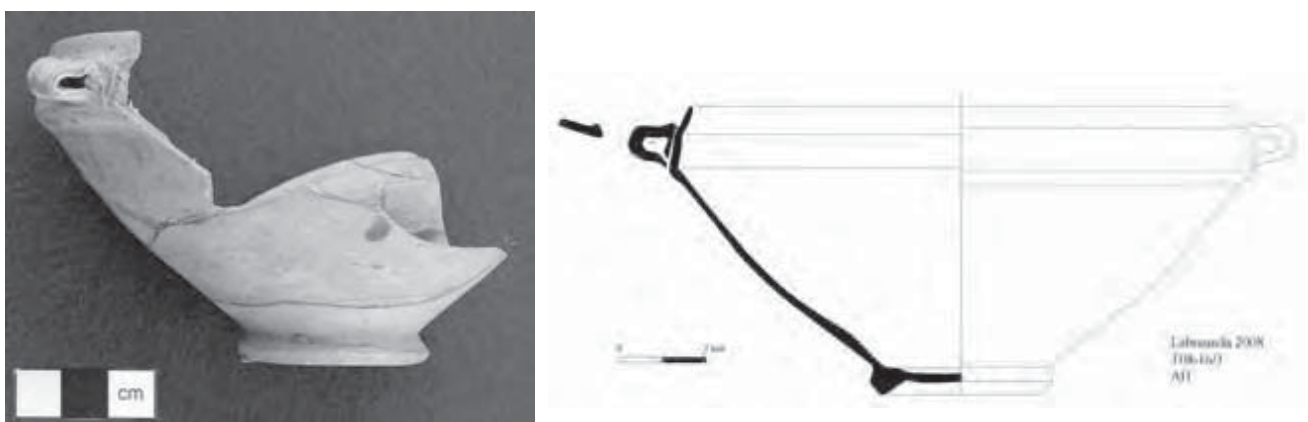


Fig. 56. a) A skyphos from tomb T16 (by A. & O. Henry); b) drawing of the skyphos from tomb T16 (by A. & O. Henry).



Fig. 57. Vase *in situ* in tomb T72.



Fig. 58. Water jug from tomb T71.

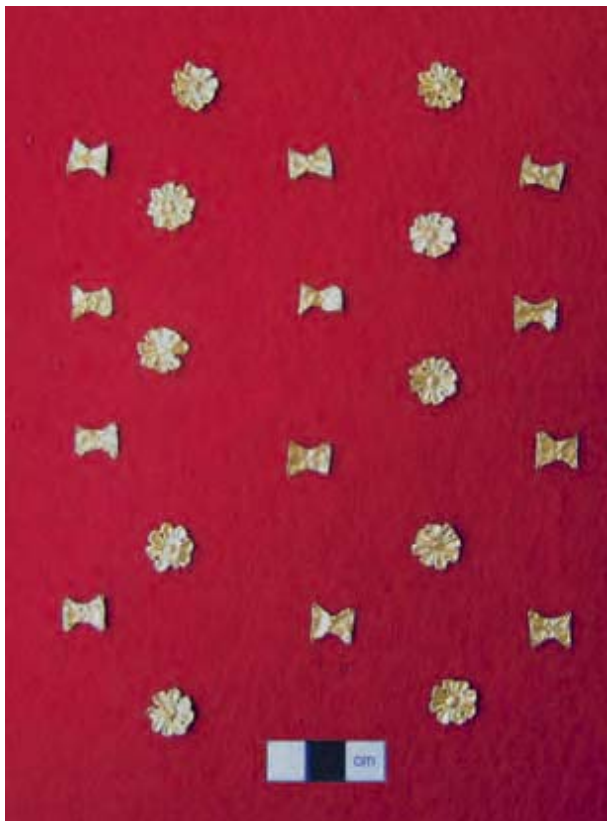


Fig. 59. Gold appliques from Tomb T78.



Fig. 60. Gold ring with a cornelian stone from Tomb T78.



Fig. 61. Necklace of gold rings in granulation technique and cornelian pearls from tomb T78.



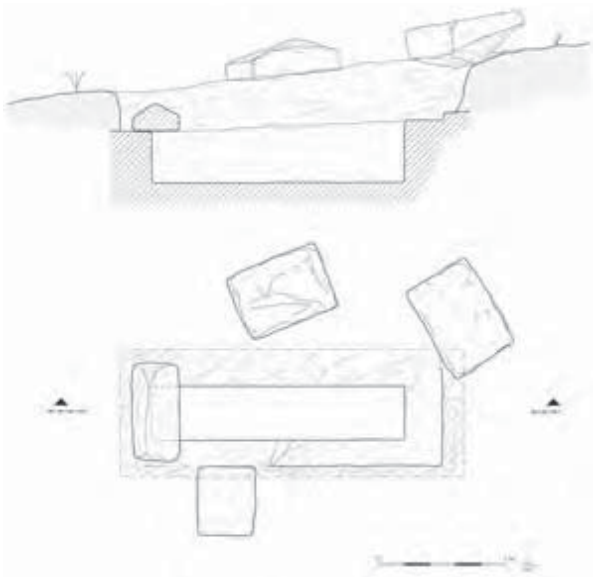


Fig. 62. Plan and section of T78 (by O. Henry).

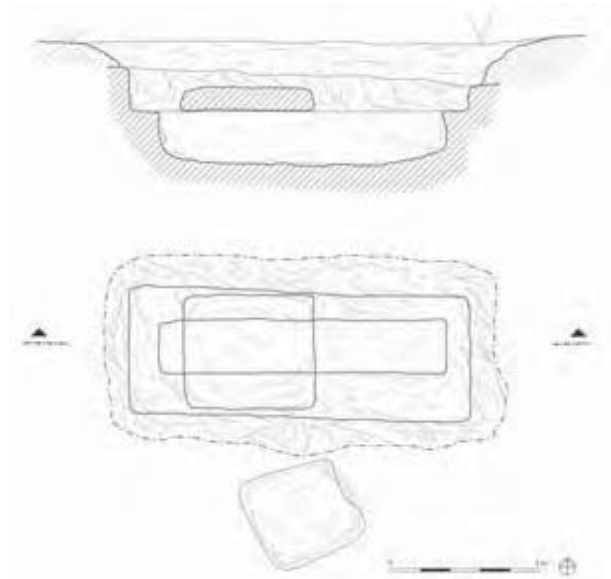


Fig. 63. Plan and section of T66 (by O. Henry).



Fig. 64. A section of the new metal shelves with architectural marble fragments.



Fig. 66. The new excavated staircase with thirteen steps.



Fig. 65. The new wooden fence at the entrance to the site.

rank of the buried individuals. Moreover, while the simple rock-cut pits were clearly intended for a single burial, the uninterrupted chronological sequence offered by the buried material of the sarcophagi, as well as their architectural features (i.e., bosses on the lid used as lifting devices), clearly reveal that these burials were meant to be used for multiple burials. Furthermore, the accumulation of skeletons, as shown by T16, indicates that a cleaning of the previous skeleton did not precede new inhumations. Such respect for the earlier burials might indicate some sort of (familial?) relationship between the dead. Finally, we noticed that both inhumation and cremation could occur in the very same sarcophagus.

The next shift in burial practices appears toward the end of the Hellenistic period. At that time, although the rock-cut sarcophagi are still used, and reused, the simple rock-cut pit type appears again, after a chronological gap of 200 years. Their characteristics (location, shape, topography and closing system) are very close to the fourth-century ones (Fig. 63). The major difference shown by these pits lies in the dimensions of the burials. Indeed, even though their length is comparable with the earlier tomb pits (from 1.5 to 1.9 m), their width is much narrower (< 40 cm). One can hardly explain why individuals were buried in pits that hardly offered enough space for their shoulders. One of the explanations might be the apparent poverty of the buried people, revealed by the low quality of the burial goods: digging a narrow pit allowed a reduction of the price of the grave. Also, the way people were buried in these pits could have been different. Indeed, in two cases we could recover some pieces of iron nails from fourth-century BC pits. Therefore, we can suspect the presence of wooden coffins, necessitating greater width in the early pits. This point might also be supported by the fact that early pits offer a very regular rectangular plan and a perfectly flat bottom, while the Roman pits often have a rough rectangular shape and an irregular, curved bottom.<sup>30</sup>

## PUBLICATION WORK

The above-mentioned three projects will be presented in separate volumes in the series called *Labraunda. Swedish Excavations and Researches*, published by the Swedish Institute in Istanbul. The publications will be 1) *The Forts and Fortifications of Labraunda*, 2) *Labraunda in Late Antiquity*, and 3) *The Necropoleis of Labraunda*. For the publication of Andron A and Andron B, Pontus Hellström this year made supplementary studies of the buildings and completed the documentation of walls and marbles with additional drawings, photographs and descriptions.



Fig. 67. The new staircase leading up to the Built Tomb.

## MEASURES FOR SAFE-GUARDING THE SITE AS WELL AS INCREASING THE VALUE OF THE SITE FOR VISITORS

During the past summer some very expensive activities were carried on, which can be seen as investments for the future. Three units of metal shelves were installed in our storerooms, partly paid by the Labraunda Society in Sweden as the old wooden shelves had started to lean forward and were threatening to fall. Furthermore, for many years, Swedish archaeologists had been depositing small and well-preserved architectural marble fragments in the storerooms, especially from the temple and the *andrones*, to protect these fragments from the weather but also from being stolen by tourists. Ultimately, these fragments completely covered the floor-space of the storerooms, hampering any and all work and movement inside the storerooms. The new shelves are completely made of metal and the marble fragments could be laid up on them according to which building they came from (Fig. 64). In our second storeroom, where two units of shelves were installed, we put all the pottery boxes from the old excavations and all the marble fragments. In the first storeroom we keep only the pottery excavated and collected since 2002, as well as the photographic equipment and drawing material. The work in the storerooms was very successful and the floors were freed from marble fragments.

Over the very exciting remains of the Roman bath build-

<sup>30</sup> In three cases, fourth-century pits have been reused during the Roman period. Except for the rock-cut sarcophagi, the pits seem to have been cleaned up (just a few fragments of Classical pottery were found) before they were reused.

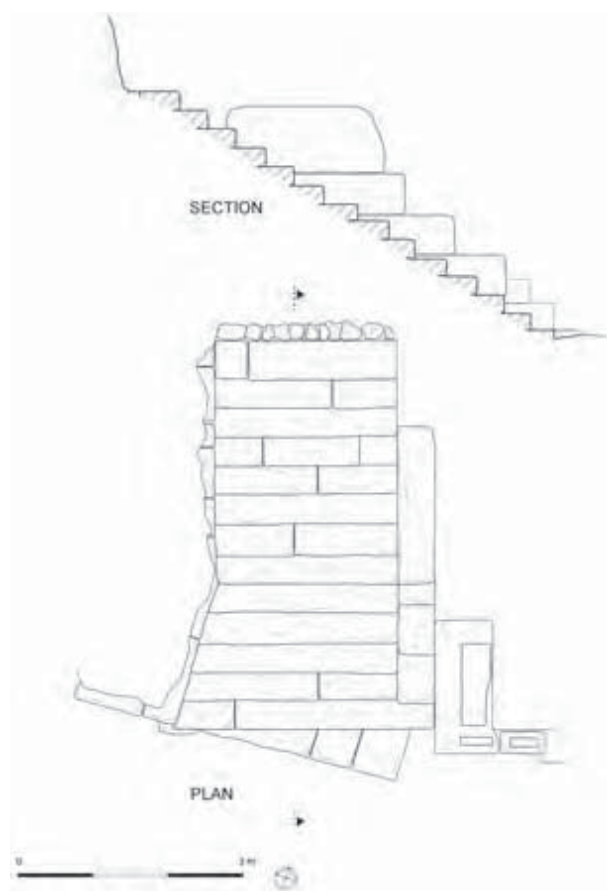


Fig. 68. Plan and section of the staircase excavated in 2008 (by A. Henry).

ing, the Tetraconch in Area Z, a metal roof was erected. In order to create as little disturbance as possible to the ruins, a roof was built on four 10 × 10 cm-large posts, with the posts dug into the ground outside and in between the four apses of the building. The roof is extended outwards to cover the area of these apses, supported on metal crosspieces soldered into the four posts: in this way only four ground supports are necessary. The roof is covered with corrugated sheet-metal. Since Labraunda is known for its heavy winter and spring rains, we wanted to build this roof immediately to preserve not only the sensitive excavation baulks of the excavation trenches and the finds still therein, but also the building itself, with its still-standing vault over the north apse.

A new wooden fence was erected at the entrance to the archaeological zone, to prevent cows from entering the site, but also to enclose the parking area, and thus channel the path for tourists visiting the excavations (Fig. 65).

During the early years of excavation, the Swedish archaeologists uncovered the lowest steps of an original monumental staircase leading from the Temple Terrace up to the monumental Built Tomb. Because the local village path crossed the

area at this point the archaeologists refrained from uncovering the staircase. Today, when this path is not used anymore and the entire sanctuary is a protected archaeological zone, this path can be completely closed off. Thus, the huge task of clearing away the accumulated soil and gneiss blocks covering the staircase was initiated, in order for visitors to be able to pass from the Temple Terrace up to the Built Tomb in the same way as the ancient pilgrim would have done. This task proved to be very difficult. Several very large blocks were blocking the passage and a great amount of soil had to be removed. It was realized that the time at our disposal allowed us to take this excavation only half-way up the slope and finish it with a temporary staircase leading up to the right (Figs. 66–68). However, thirteen of the original staircase blocks were revealed, worn down and made shiny by the shoes of centuries of pilgrims. It is interesting to note that this staircase seems to be the most carefully built of all the staircases so far discovered in Labraunda. The large boulders that had fallen down onto the staircase, and which were good ashlar blocks, were taken down and placed on their side in a ring in front of the temple, so that visitors can use these as a sitting area, with a block in the centre functioning as a table.

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## BIBLIOGRAPHY

- |                        |  |
|------------------------|--|
| Arthur 2006            | P. Arthur, <i>Byzantine and Turkish Hierapolis (Pamukkale)</i> , Istanbul 2006.  |
| Bingöl 1976/1977       | O. Bingöl, 'Die Dachziegel von Bayraklı (Alt-Smyrna)', <i>Anatolia</i> 20, 1976/1977, 63–81.   |
| Böhlendorf-Arslan 2004 | B. Böhlendorf-Arslan, <i>Die glasierte byzantinische Keramik aus der Türkei</i> , 3 vols., Istanbul 2004.  |
| Corinth XI             | C.H. Morgan, <i>Corinth. Results of excavations conducted by the American School of Classical Studies at Athens</i> 11. <i>The Byzantine pottery</i> , Cambridge, Mass. 1942.  |
| Corinth XII            | G.R. Davidson, <i>Corinth. Results of excavations conducted by the American School of Classical Studies at Athens</i> 12. <i>The minor objects</i> , Cambridge, Mass. 1952.  |
| Dark 2001              | K. Dark, <i>Byzantine pottery</i> , Gloucestershire 2001.  |
| Doğer 2007             | L. Doğer, 'Byzantine ceramics: excavations at Smyrna Agora (1997–98 and 2002–03)', in <i>Late Antique and medieval pottery and tiles in Mediterranean archaeological contexts</i> (BYZAS, 7), eds. B. Böhlendorf-Arslan, A.O. Uysal & J. Witte-Orr, Istanbul 2007. |
| Filgis & Radt 1986     | M.N. Filgis & W. Radt, <i>Pergamon. Die Stadtgrabung 1. Das Heroon</i> , Berlin 1986.  |



- Hayes 1972 J.W. Hayes, *Late Roman pottery*, London 1972.
- Jeppesen 1993 K. Jeppesen, *The Maussoleion at Ancient Halicarnassus*, Ankara 1993.
- Karlsson 2008 L. Karlsson, 'Labraunda 2004–2007. A preliminary report on the Swedish excavations, with contributions by Olivier Henry and Jesper Blid', *IstMitt* 58, 2008, 109–133.
- Konuk forthcoming K. Konuk, 'Kasolaba, a new mint in Karia?', in *Essays in Honor of Ioannis Touratsoglou*, eds. S. Drougou & E. Ralli, Athens forthcoming.
- Lightfoot 2007 C. & M. Lightfoot, *Amorium: A Byzantine City in Anatolia – An Archaeological Guide*, Istanbul 2007.
- Maussoleion at Halikarnassos* 4 K. Jeppesen, *The Maussoleion at Halikarnassos* 4. *The Quadrangle. The foundations of the Maussoleion and its sepulchral compartments*, Aarhus 2000.
- Maussoleion at Halikarnassos* 7 L.E. Vaag, V. Norskov & J. Lund, *The Maussoleion at Halikarnassos* 7. *The pottery, ceramic material and other finds from selected contexts*, Aarhus 2002.
- Meriç 2004 R. Meriç, *Metropolis, City of the Mother Goddess*, Istanbul 2004.
- Olynthos* V D.M. Robinson, *Excavations at Olynthos V. Mosaics, Vases and Lamps at Olynthos found in 1928 and 1931*, Baltimore 1933.
- Özet 1994 A. Özet, 'The tomb of a noble woman from the Hekatomnid period', in *Hekatomnid Caria & the Ionian Renaissance* (= *Halicarnassian Studies* I), ed. J. Isager, Odense 1994, 88–96.
- Papanicolaou 1971 A. Papanicolaou & C. Friis Johansen, *Hama. Fouilles et recherches 1931–1938* III:2. *Les poteries hellénistiques et les terres sigillées orientales*, København 1971.
- Papanikola-Bakirtzi 1999 D. Papanikola-Bakirtzi, *Byzantine glazed pottery in the Benaki Museum*, Athens 1999.
- Pyrgouthi J. Hjohlman, A. Penttinen & B. Wells, Pyrgouthi. *A rural site in the Berbati Valley from the Early Iron Age to Late Antiquity. Excavations by the Swedish Institute at Athens 1995 and 1997* (ActaAth-4°, 52), Stockholm 2005.
- Ruggieri 2005 V. Ruggieri, *La Caria Bizantina: topografia, archeologia ed arte*, Catanzaro 2005.
- Ruggiu 2007 A.Z. Ruggiu, 'Regio VIII, insula 104. Le strutture abitative fasi e trasformazioni', in *Hierapolis di Frigia I. Le attività delle campagne di scavo e restauro 2000–2003*, eds. F. D'Andria & M.P. Caggia, Istanbul 2007, 221–229.
- Saraçhane II J.W. Hayes, *Excavations at Saraçhane in Istanbul II. The pottery*, Princeton, N.J. 1992.
- Spieser 1996 J.-M. Spieser, *Die byzantinische Keramik aus der Stadtgrabung von Pergamon* (= *Pergamenische Forschungen* 9), Berlin 1996.
- Turnovsky 2005 P. Turnovsky, 'The morphological repertory of Late Roman/Early Byzantine coarse wares in Ephesos', in *LRCW* 1. *Late Roman coarse wares, cooking wares and amphorae in the Mediterranean: archaeology and archaeometry*, eds. J.M. Gurt i Esparraguera, J. Buxeda i Garrigós & M.A. Cau Ontiveros, Oxford 2005, 635–654.
- Yegül 1995 F. Yegül, *Baths and bathing in classical antiquity*, Cambridge, Mass. 1995.

