# THE ARCHAIC TEMPLE OF ZEUS LABRAUNDOS*

**Abdulkadir BARAN**

**Anahtar Kelimeler:** Karia • Labraunda • Zeus Tapınağı • Arkaik Dönem • Mimarlık
**Keywords:** Caria • Labraunda • Zeus Temple • Archaic phase • Architecture

**Abstract**

The aim of this paper is to discuss the existence of the Archaic phase of the Temple of Zeus in the Labraunda Sanctuary. Previously, the earlier temple in antis was brought to light by the technical details which were discussed by Hellström and Thieme. Then Thieme published a short article about the architectural elements from the sanctuary and made much clear the connection of the architectural elements and the temple in antis. In spite of these studies the existence and the construction date of the temple in antis is still controversial. It is aimed in this paper to investigate all the evidences including previous research, existing remains, architectural elements and historical sources for the earlier temple. For this scope, not only the published ones but also some new unpublished architectural fragments will be fully investigated and dated by the previously dated parallel examples. The architectural fragments consist of a column drum with 36 flutes, a column neck fragment, an Ionic capital fragment, 2 complete and 6 fragments of the crown blocks and 8 dentil blocks. Although, the architectural fragments, except the Ionic capital, are suggested very strongly as belonging to the Archaic temple of Zeus Labraundos, the historical sources for the temple is lacking: the terms hieron used by Herodotus and xoanon by Strabo are strong evidence for the existence of the temple. This investigation suggests that all the evidence indicate that there was a temple to Zeus Labraundos from the late Archaic period and that was enlarged during the Hekatomnid dynasty.

The sanctuary of Labraunda[1] (Figs. 1-2) located in a mountainous region 13 km. northern east of Milas, is one of the most important sanctuaries of the Karia region and it also plays an important role for our understanding of the period of Heka-

* This article is a part of my Ph. D. thesis "Karian Architecture before the Hekatomnids" prepared under the direction of Prof. Orhan Bingöl at Ankara University; I am very grateful to him for his leading and all helps. I would also like to express my thanks to Prof. P. Hellström, T. Thieme and L. Karlsson from the Labraunda team for their all helps and revising my text.

1 Although, it is very disputatious to pronounce as Labraunda, it is the most acceptable one, see Hellström 1992, n.1.

tomnids. The pottery[2] found during the Swedish excavations since 1948[3] indicates an activity at sanctuary from the middle of the 7th century B.C., but the evidence for the architectural construction before the Hekatomnids is rare. Some of the walls and building remains especially on the temple terrace (Fig. 3) could be dated to the pre-Hekatomnid period with the help of pottery finds. The remains of a corner which might belong to a house, was dated to the 6th century B.C. but secure evidence is still lacking[4]. The remains of walls 1-4, 6 a-b, 7-10 were dated to the beginning of the 5th century B.C. and defined as house remains[5]. The similarities of the wall techniques with later examples and the limited excavations conducted in the area inhibit further definitions of the remains[6]. The possibility of the existence of a pre-Hekatomnid altar[7] in the sanctuary was also mentioned, but there is no solid evidence for it.

The existence of a phase with a temple *in antis* was first proposed by A. Westholm[8] and he dated it into the 5th century B.C. He pointed out that this temple *in antis* should be the one mentioned by Herodotus (V.119) and he dated it into the 5th century B.C. Westholm[9] in a later publication holds this view and he connected a couple of column-drums[10] with 36 flutes with the temple in antis.

P. Hellström and T. Thieme[11] in their detailed publication suggested two possibilities for the earlier phase of the temple, it could either be from the late 6th century or from the early 4th century B.C. For the first possibility, they noted that although the sanctuary was very active during the end of the 6th century B.C., but it was interrupted by Ionian Revolt. They concluded that with the existing evidence this possibility was mainly related to the translation of the term "*hieron*" used by Herodotus (V.119) as a temple or a sanctuary. For the second possibility, the reign of Hekatomnos during the early 4th century B.C. was proposed and the authors concluded that the early 4th century B.C. is the most probable date for the early temple[12]. The reasons for this are the existence of the name Hekatomnos in the first inscription of Labraunda[13] and the excavation finds at Labraunda which indicate no relation with other regions during the 5th century B.C.

This view was changed in Thieme's[14] 1993 publication of the Archaic material. It was stated that the clamp holes have more accentuated swallow tails than the

2 For the Archaic pottery, see Jully 1981, 9 ff.
3 For the excavations history and bibliography see Hellström 2003, 244 ff.
4 Westholm 1963, 30, 87, 92, 105, Fig. 15, wall number 5.
5 Westholm 1963, 30-31, 88, 92, 105-106, Fig. 15.
6 Hellström 1991, 297.
7 Hellström – Thieme 1979, 6.
8 Westholm 1963, 90-92, 105-106.
9 Westholm 1978, 544.
10 Only a single example of these column drums could be found in the sanctuary.
11 Hellström – Thieme 1982, 42.
12 Hellström – Thieme 1982, 42, noted that the different direction of the temple than the other Archaic buildings supports a later dating. On the other hand, especially if the temple took its root much earlier than the Archaic buildings, a definite connection between the temple's and the other remains' directions can not be expected. It should also be taken into consideration that the dates of the other buildings' remains still are uncertain.
13 Crampa 1972, 27-28 (Nr. 27).
14 Thieme 1993, 50, Fig. 8.

Hekatomnid examples and that parallel examples can be dated around 520 B.C. As a result, the archaic fragments were proposed to belong to a temple in antis built between 520-500 B.C.

## ACTUAL REMAINS

The technical details which indicate an earlier phase for the Zeus Temple have been observed on the actual remains (Fig. 4) by Hellström and Thieme[15]. The first of these details is the difference in method of tying the cella corner to the northwest anta toichobate at the opisthodomos (Fig. 5). The looseness of this connection between the walls when compared to other parts of the temple, indicates that the northern cella wall do not belong to the original 4th century layout. The clamp cuttings also differ from those employed on other parts of the building. The toichobate block is tied to the cella corner with a simple clamp in a straight cutting which differs from the practice used on other parts which employ dove-tailed clamps. The different clamp types used in the building thus indicate to the different phases. The dove-tailed clamp cuttings of type 1 and 2 are seen on all toichobate blocks except on the northwest anta toichobate, and on the blocks of the row below. The dove-tailed clamp cuttings which have bronze clamps can be seen between the marble blocks of the krepis. Another clamp type used in the building is the simple clamp placed in straight cuttings and these can be seen frequently between the marble blocks on the invisible parts of the entablature. With the help of the clamp cuttings it can be stated that the simple clamp on the northwest anta toichobate corner is contemporary with the entablature, and that the dove-tailed clamps of type 1 and 2 differ from those used on the other parts of the building.

Another technical detail is the absence of horizontal clamp cuttings on the wall-foundation course No. 8 in the opisthodomos of the temple (Figs. 5-6). This could be explained as having been chiseled of this wall-foundation course due to later replacement[16].

The stone types used in the building also indicate different phases[17] (Fig. 5). While gneiss of types B and C were used for the cella, pteroma and peristyle foundations, type A gneiss was used for the visible parts of the euthynteria. Gneiss type A, which can be easily shaped, was used for the cella wall foundation (row 7 of foundation and toichobate), but these parts are covered by marble paving blocks and walls of the peripteral temple.

The most interesting of these technical details, which indicate two different phases of the temple, is the chiseled off clamp cuttings on the foundation of the rear cella wall. Conclusively then; stone choices, attaching way of opisthodomos anta, differences of types and horizontality of the clamps indicate that the first phase building consisted of only a cella building. The plan has been suggested to be distyle in antis without opisthodomos (Fig. 6). It was also proposed that the visible euthynteria projected 41 cm from

15 Hellström – Thieme 1982, 18, 40, Fig. 4, Pls. 8.3, 28-31, 38-39.

16 Hellström – Thieme 1982, 40, Pl. 30.

17 Hellström – Thieme 1982, 40-41, Pls. 30-31.

the walls and the blocks were clamped with visible dove-tailed clamps. As a result, the dimensions of the temple could be calculated as 12.07 x 8.88 m. between the euthynteria corners and 11.26 x 8.06 m. between the wall corners. The internal dimensions of the temple were assumed to be the same as the 4th century temple[18] (Figs. 6-7).

Although these technical details definitely indicate the existence of an earlier phase of the temple, no finds could be uncovered during the excavations. The dove-tailed clamp type was compared to examples of the late 6th century B.C. by Thieme[19], but the prevalence of this type in different periods as pointed by Nylander[20] prevents us from using this as the only dating criterion.

## ARCHITECTURAL ELEMENTS

### 1. Column Drum with 36 flutes

The column drum of white marble (Figs. 8a-b) has been found 1.5 m. east of the temple at euthynteria level[21]. It is badly preserved and has a full height of 67 cm, but the bottom diameter can be calculated as 72.5 cm[22]. The apophyge with a 1 cm inclination indicates that it is a top or bottom drum[23]. The flutes start 24.5 cm above the bottom and have width of 5 cm and depth of 1.1 cm. Flat fillets with a 1 cm width separate the flutes. Only 18 of the flutes have been preserved but a completed drum would have had 36 flutes (Fig. 14e). There are square empolion holes with the width of 5 x 5 cm and a depth of 5.3 cm on the top and bottom.

The only dating criteria of the drum are the number of the flutes and the flat fillets because this drum has no direct connection with a dated building or any stratigraphic finds. When the existing Archaic drum examples investigated[24], it is

18 Hellström – Thieme 1982, 41, Pl. 38.

19 Thieme 1993, 50.

20 Nylander 1966, 143, Fig. 6.

21 Westholm 1978, 544; Hellström – Thieme 1982, 41, D.53, Fig. 12, Pl. 50j.

22 Hellström – Thieme 1982, 41: The diameter of the drum has been calculated between the inner sides of the opposite flutes as 66.5 cm, but we have added the depth of the flutes and the apophyge.

23 Hellström – Thieme 1982, 41: It was published as a bottom drum but it seems difficult to say because of its bad state of preservation whether it is a top or a bottom drum.

24 Naksos Oikos (580-550 B.C.): 24, 28, 32 36 flat flutes (Gruben 1991, 69, Abb. 12-13.); Delphi Naxians column (570-550 B.C.): 44 flutes (Amandry 1953, 15 ff.; Boardman 1959, 199); Naucratis Apollo (570-560 B.C.): 25 flutes with arris (Petrie et al. 1886, 12-13, Pl. III; Pryce 1928, 172, B.392, Fig. 211; Dinsmoor 1973, 126); Samos Heraion 1st dipteros (560-550 B.C.): 40 flutes with arris (Buschor 1930, 30, Bei. xxxii.1; Amandry 1953, 15; Dinsmoor 1973, 125); Ephesos Artemis (560-550 B.C.): 40, 44, 48 flutes with arris (Wilberg 1906, 234, Figs. 204-205; Gruben 2001, 387, 400.); Myus Dionysos (560 B.C.): 32 flutes with arris (Gruben 1963, 112, n.61; Akurgal 1995, 398; Weber 2002, 246-254, Abb. 33); Aigina (600-550 B.C.): 36 flutes (Amandry 1953, 17); Didyma Apollon (550-540 B.C.): 27 flat flutes, 32, 36 flutes with arris (Gruben 1963, 108-117; Gruben 2001, 400; Schneider 1996, 79, Abb. 4); Phokaia Athena (c. 530 B.C.): 31, 33 with flat fillets (Akurgal 1956, 36-37; Serdaroğlu 1967, 37); Samos Heraion 2. dipteros (after 530 B.C.): 36, 24 flutes with flat fillets (Gruben 2001, 361, 426); Magnesia Artemis (late 6th early 5th century B.C.): 32 flutes with flat fillets (Humann et al. 1904, 46-47, Abb. 33; Boardman 1959, 184, n. 4; Dinsmoor 1973, 136; Gruben 2001, 426); Syracusa Apollon Temple (510 B.C.): 28 flutes with arris, 32 flutes with flat fillets (Gentili 1967,73-74, Figs. 14-16; Costabile 1997, 22, Tav. IIb.); Milet (500 B.C.): 30, 32 flutes with arris (Koenigs 1979, 190, Abb. 9, Taf. 61.2; Koenigs 1986, 114); Khios (early 5th century B.C.): 28 flutes with double fillets (Boardman 1959, 181-5, Pl. 26e.); Metapontum D (500-475 B.C.): 20, 24, 32 flutes with flat fillets (Adamesteanu et al. 1975, 35.; Mertens 1979, 105, 107, n. 3).

seen that the numbers of the flutes are quite variable. On the other hand, with the help of existing examples it is possible to conclude that the numbers of the flutes decrease and the use of flat fillets increase with the late 6th century B.C. Only after the beginning of the 5th century B.C., 24 flutes separated by flat flutes became common in Ionic architecture[25]. There is not a known example of more than 24 flutes after this period. The parallel examples of 36 flutes are the drums of the Temple of Apollo at Didyma[26] and a votive column from Aigina[27] from the middle of the 6th century B.C. and poros columns of the first phase of the second dipteros of the Temple of Hera at Samos[28] dated after 530 B.C. Samian examples are similar to Labraunda one also as having flat fillets. The second early examples of flat fillets are from the Archaic Temple of Artemis at Magnesia[29] dated to the end of the 6th century B.C.

Although, previously Westholm[30] connected the drum with the *in antis* phase of the Temple of Zeus at Labraunda which he dated to the 5th century B.C., Hellström and Thieme[31], in the publication of the Classical Zeus Temple, established that the drum should belong to a votive column probably erected after the Classical temple. Their argument was that drums of 36 flutes and flat fillets did not exist during the Archaic period. Thieme[32] has continued this view and has not given any attention to this drum in his later publication on Archaic architectural elements.

On the other hand, as mentioned above, the examples from Samos and Magnesia dated after 530 B.C., are the closest parallels and support a similar dating for the Labraunda column drum. The decreasing of flutes' numbers after the 5th century B.C. also supports a similar dating. As a result of these parallels it can be proposed that Labraunda column drum with 36 flutes and flat fillets might be dated around the end of the 6th century B.C.

## 2. Column-Neck

An architectural member from white marble (Figs. 9a-b) found 5 m east of the temple during the 1948 excavations was inventoried as D.80[33] in the excavation notebook, but because its description was unclear, it was not published by the excavation team. On the other hand P. Pedersen[34] included it in the catalogue of his article on column necks[35]. The col-

25 Lawrence 1957, 137; Dinsmoor 1973, 135; Lehmann – Spittle 1982, 92; Pedersen 1983, 92-93; Gruben 2001, 361, 426. On the other hand there are examples with fewer flutes as Xanthos Nereid monument with 20 flutes (Fedak 1990, 68) and Olympia Philippeion with 22 flutes (Dinsmoor 1973, 236).

26 Gruben 2001, 400.

27 Amandry 1953, 17.

28 Reuther 1957, 47, Z.32; Gruben 2001, 361 and 426.

29 Boardman 1959, 184, n. 4. (late 6th century B.C.); Dinsmoor 1973, 136. (early 5th century B.C.); Gruben 2001, 426 (Late 6th century B.C.).

30 Westholm 1978, 544, noted there were a couple of column drums with 36 flutes, but no other example could be identified in all our research at the site.

31 Hellström – Thieme 1982, 41, n. 1.

32 Thieme 1993, 47 ff.

33 Labraunda Excavation Notebook 1948, IV.29.

34 Pedersen 1983, 101 and 114.

35 The column neck fragment is known to be transported to the Bodrum Underwater Archaeology Museum and was seen by Hellström in 1991. But in our recent research as excavation team it could not be rediscovered. It is quite possible that it was unrecognized because it has little ornamentation and was evaluated as rubble.

umn neck fragment[36] has the measurements 17 x 27 x 18 cm and only 3 flutes with a 5 cm width have been preserved. Although it is badly preserved, it can be established that the flutes are separated by flat fillets with a width of 1 cm. The slight traces of ornamentation starts after a plain part above the flutes and have been identified as an egg-and-dart moulding and also noted in the excavation notebook with this description. The existing traces that could be recognized on the picture which are the bottom parts of two round ornaments and a dart-like ornament between them, might be an egg-and-dart moulding. On the other hand, it is possible to be the bottom parts of the horizontal or vertical S-spirals below the anthemia as seen on many column necks. Pedersen[37], too, suggested that the traces of the ornaments belong to lower section of an anthemion.

Although there is little evidence for dating because of the scanty remains of ornaments, it is possible to compare the 5 cm wide flutes and the 1 cm wide flat fillets with the known buildings in the sanctuary. The width of the flutes is 10 cm on Andron A and B drums, and 8 cm on the Zeus Temple drums[38]. It is also known that there were no column necks on the Oikoi[39] and Propylaia[40] buildings because the columns could be restored completely. Except these buildings, it is also noteworthy that there are no votive or any possible building columns with similar widths of the flutes in the sanctuary. By these comparisons it can be safely said that the column-neck fragment does not belong to any known building in the sanctuary. On the other hand, the width of the flutes and the flat fillets of the late Archaic column with 36 flutes (Figs. 8a-b, 14e) are similar and a connection can easily be proposed.

Although it was published without a picture by Pedersen[41], as belonging to one of the Androns, there is no possibility for this connection as mentioned above. Especially, the widths of the flutes make this kind of connection impossible. In spite of this, there is no certain evidence. It seems very probable to suggest a connection between the column-neck fragment and the column drum with 36 flutes and to date it into same period and the same building from the late 6th century B.C.

### 3. Ionic Column Capital

A fragment of an Ionic column capital of white marble (Figs. 10a-d) was found on the Temple Terrace[42] and now it is kept in the excavation depots. The width is 64.8 cm, the height is 19.1 cm, the depth of top surface is 43.3 and the diameter is 43 cm. The capital is highly corroded due to be kept under the sun to recent times[43]. Both sides and front cymation of

36 The possibility of being an echinus part of an Ionic column capital was not evaluated because it doesn't seem possible to us and also there is no example of this practice at Labraunda in the later periods.

37 Pedersen 1983, 101.

38 Hellström – Thieme 1982, 65.

39 Hellström 1984, 159, Fig. 8.

40 Jeppesen 1955, Pl. XIII.

41 Pedersen 1983, 101 and 114: This suggestion was made in line with the main theme of his article, which was based on the connection between column necks and polster decorations.

42 Thieme 1993, 47 and 49, Figs. 1-2, Pl. IX.1-2.

43 While it was exhibited in front of the Northern Stoa, it has been recently transported by us into the rooms under the Temple Terrace which serves as the excavation depots.

the capital are broken and the rear face is completely cut off, most probably for transforming it into a rectangular wall block in later periods. The volutes are bordered by half round bands on the convex front and only the upper parts of volutes and canalis are preserved. The canalis band, which is more carelessly shaped than the volutes' bands, in an uncommon way does not connect to volutes' bands but ends above the volutes with a little inclination upwards. The corner palmettes and front cymation are completely missing. The bottom (Fig. 10b) has egg-and-darts which only 11 of them preserved but it can be completed with 20 eggs. The round empolion hole which is 4.4 cm in diameter and 3 cm in depth is surrounded by an irregularly shaped 10 cm wide anathyrosis. The outer 7-8 cm wide joint surface is fine worked but has some chisel cuttings.

It is not possible to trace the form of the bolster because only a small part is preserved. For this reason there is no trace of ornamentation on it. The top surface of the capital is arranged as a carrying surface by the raised side ends. Although there is no empolion hole on the top surface, which is shaped by a pointed chisel there is a 2 x 3 cm clamp hole near the side which is most probably connected with a later usage.

The non-existence of an empolion hole on the top surface was the reason why Thieme[44] suggested that the capital was not intended to carry an architrave. On the other hand, a votive capital from Biga[45] dated around 500 B.C. and the capital of the Temple of Athena at Sounion[46] dated in the middle of the 5th century B.C. with lacking of empolion or dowel cuttings on the top surfaces, indicate that is not possible to connect empolion or dowel holes with the functions of the capitals.

The dimensions are not easy to determine but when it is completed the proportions can be calculated as the width of the capital to width of the volutes' interval 0.335, width to depth 1.882, bottom diameter to width 1.89. However, the use of the completed proportions for dating purposes can be questioned, these proportions are possible to compare with the late Archaic capitals[47]. Although there is no evidence for the form and eye of the volutes on this convex capital, Thieme completed the volutes without eyes[48]. On the other hand a capital from Halikarnassos[49] and also many other capitals[50] indicate the existence of vo-

44 Thieme 1993, 49.

45 Koenigs 1989, 291, Abb. 1, Taf. 32.

46 Orlandos 1975, Pl. 35-36; Meritt 1996, Fig. 25.

47 Theodorescu 1980, Tableau 1; Kirchhoff 1988, Tabelle 1.

48 Thieme 1993, Fig. 2.

49 Bean – Cook 1955, 169-171, Fig. 15, Pl. 12 a-b; Boardman 1959, 206, n.3; Martin 1959, 65-76, Pl. 1-2; Gruben 1963, n.166; Alzinger 1972, 179-80, Abb. 10; Alzinger 1978, 514; Theodorescu 1980, Nr.14; Meritt 1982, 87; Kirchhoff 1988, 53, Kat. 36.

50 A capital fragment from Kyzikos dated around 500 B.C. (Alzinger 1972, 184, Abb. 14; Kirchhoff 1988, 55, Kat.38.), A capital from the Giardino Spagna nekropol in Syracuse dated around 480 B.C. (Kirchhoff 1988, 102, Kat.68; Costabile 1997, 23, Tavola Syracusa VIIc.), Capital of Apollo Temple D at Metapontum dated to the first quarter of the 5th century B.C. (Adamesteanu et al. 1975, 35, Pl. 5; Mertens 1979, 107, Taf. 16-17.), Lokroi capitals dated around 470 B.C. (Petersen 1890, 161 ff., Abb. 13-14; Kirchhoff 1988, 103-105, Kat.70; Costabile 1997, 30 ff, Tavola Locri XIX-XXIII) and a capital

lutes' eyes on the convex-shaped capitals too. For this reason it seems not possible to determine the exact shape of the volutes. The most interesting point of the preserved front of the capital is the arrangement of the canalis band which is unconnected to the volutes. The closest parallels of this practice can be found on the convex fronts of the Neapolis-Kavalla capitals[51] dated to 500-475 B.C. In spite of being highly corroded, the form of the cymation supports this dating. The triangle shape of the eggs and the separation degree of the dart-like ornaments from the eggs can be compared to the late Archaic examples. The echinus cymation of the capitals from Ephesos[52] and Didyma[53], dated to the beginning of the 5th century B.C. can be shown as the closest parallels.

The appearance, proportions and the details of the Labraunda capital, with the support of the above-mentioned parallels, indicate a date in the late Archaic period. For this reason, a date around 500 B.C., which was suggested by Thieme[54], seems very acceptable.

## 4. Crown Blocks

After our investigations at the sanctuary and in excavation archives five more fragments of marble crown blocks with an Ionic cymation (Figs. 11d-h) have been discovered[55]. They are similar to the previously published[56] three crown blocks (Figs. 11a-c) found around the Temple of Zeus and the Oikoi[57]. All these new fragments and the previously published ones make a total of eight crown block fragments (Figs. 11a-h). They belong to at least five different crown blocks.

The first of these blocks[58] (Fig. 11a), which was found in the northeastern part of the temple, is now kept in the Museum of Underwater Archaeology at Bodrum. It preserves 7 full and 1 half eggs above the bead-and-reel moulding. There are dove-tailed clamp cuttings on the upper sides and two straight clamp cuttings on the upper rear side. The bottom, top and side faces have been worked with a pointed chisel. The side contact surfaces are well worked. The rear side is very irregular and it is most probably the original surface.

The second block[59] (Fig. 11b) has been found in the same area as the first one, 30 cm above euthynteria level. It preserves seven full and two half eggs above

in Poland dated around 470 B.C. (Mikocki 1986, 138 ff., Pls. 1-3; Gruben 1997, 369 ff., Abb. 51.).

51 Bakalakis 1936, Eik. 16, 17 and 23.

52 Bammer 1972, 440 ff., Abb. 1-29; Alzinger 1972, 175 ff, Abb. 6b-g; Kirchhoff 1988, 92-94, Kat. 58-61.

53 Alzinger 1972, 171, Abb. 2; Kirchhoff 1988, 100, Kat.66.

54 Thieme 1993, 49.

55 These newly determined fragments indicate the possibility of finding more Archaic elements in future excavations of the sanctuary. The crown blocks 1 and 3 are exhibited in the Museum of Underwater archaeology at Bodrum and the others are kept in the excavation depots.

56 Hellström – Thieme 1982, 41-42, Figs. 13-14; Thieme 1993, 47 ff., Figs. 3-4, 7, Pl. IX.3-5.

57 The find spot is not secure information about which building it belonged to, because it is known that a lime kiln was established in Oikoi in later periods and many marble pieces were carried here.

58 Hellström – Thieme 1982, 41, Fig. 13; Thieme 1993, 48, Fig. 3, Pl. IX.4 : Excavation Inv. Nr. D140: H. 23.5 cm, W. 1.26 m, Depth 28.5.

59 Hellström – Thieme 1982, 41, Fig. 14; Thieme 1993, 48, Fig. 4, Pl. IX.5 : Excavation Inv. Nr. D138: H. 22.2 cm, W. 1.381 m, Depth 27 cm.

the bead-and-reel moulding. However the block has its original dimensions, its front and bottom faces are much corroded from being kept in the open air. It has the same arrangement as the first block except, some small differences in measurement. The biggest difference in measurement is the depth which is 10 cm less than the first one. Because of this it has 4 clamp cuttings instead of 2 on the rear top edge and one of them is placed on the broken side. Block has 2 dove-tailed clamp cuttings like the first one on the sides of the top surface and scanty remains of iron and lead is visible here.

The third block[60] (Fig. 11c) is a fragment found in the Oikoi, now kept in the Museum of Underwater Archaeology at Bodrum. It has an arrangement similar to the previous ones and belongs to left side of a similar block. It preserves one full, two half eggs and four beads. It has a dove-tailed clamp cutting on the unbroken top corner.

The fourth example[61] is also a block fragment (Fig. 11d). It has been discovered in the Labraunda archive and was noted to be found on the temple terrace during 1949 excavations. It could not be identified on the site, but its appearance and measurements fit the previous examples. This badly preserved fragment belongs to the left side of a crown block and preserves one half and two full eggs above the bead-and-reel moulding.

The fifth example[62] is also a fragment (Fig. 11e). It was found during our investigations around the temple. This badly preserved example preserves slight remains of two eggs but it has measurements similar to the others. It also preserves two cuttings for straight clamps on the top surface. The measurements and bead-and-reel moulding fit to the previous examples.

The sixth example[63], (Fig. 11f) also was discovered around the temple, preserves the lower parts of two eggs above the bead-and-reel moulding. It is also an end fragment and belongs to the left side of a crown block.

The seventh example[64] (Fig. 11g) is a very small piece which preserves only the upper part of an egg. It is also an end fragment. It preserves a clamp cutting on the top surface and the measurements fit the previous examples.

The eighth fragment (Fig. 11h) is documented only in the excavation notebooks where it is noted to have been found during 1949 excavations in Oikoi. However the measurements are not given and only very little of the decoration is preserved. But its general appearance let us put this fragment into this group.

The first and second of these eight examples of crown blocks preserve their full measurements. The third, fourth and seventh are left end fragments and by these it is certain to belong to different blocks. The fifth, sixth and eighth fragments can not be classified into any of

60 Thieme 1993, 47, Pl. IX.3: Excavation Inv. Nr. NA5: H. 23.5 cm, W. 42 cm.

61 Excavation Inv. Nr. B-1-129: H. 24 cm, Depth 27 cm.

62 H. 25 cm, W. 26 cm.

63 H. 8 cm, W. 21 cm.

64 H. 10 cm, W. 18 cm.

the groups. As a result we can conclude that these eight examples indicate at least five different crown blocks from the same building. Thieme[65] placed them in an acceptable way under the dentil course with the help of axial harmony, but it is not certain that they crowned a normal frieze or architrave.

The shape of the cymatia helps us in dating. The eggs of the cymatia have sharp bottoms, oval tops and triangular deep shapes which are separated from the egg-frames. The dart-like ornaments start around the middle of the eggs and are placed between the reels. The eggs fit the width of two beads and two reels. The slight angled arrangement of the egg frames and dart-like ornaments are visible on the well preserved examples.

The above-discussed features of the Ionic cymation point to a date in the end of the 6th century B.C. and many dated parallel examples are present. The shape of the Ionic cymation can be compared with the crown blocks from the following sites : Siphnian Treasury at Delphi[66] from 530 B.C., Burg Temple on Paros[67] and the Hekatompedos Temple on Naxos[68] from 524 B.C., crown blocks from Teos[69] and crown blocks originally from Myus found in the Miletos theater[70], dated around 530 B.C., a crown block fragment from Didyma[71] dated to the end of the 6th century B.C., a crown block from Torrhebeia Limne in Ovacık plateau around Sardeis[72], echinus capital A.606 of the Samian Hera Temple[73], lintel and crown blocks of the so-called andron in Daskyleion[74] dated around 500-480 B.C., frieze blocks from Beçin[75] dated around 500 B.C., round altars in the Milas Museum[76] which has Akbük origin[77] and at Didyma[78] dated to the end of the 6th century B.C.

The slightly angled arrangement of the egg frames seen on the Labraunda examples is visible on the examples from Myus[79], Didyma[80], Daskyleion[81] crown blocks, the echinus capital of Samos[82] and the frieze blocks of Beçin[83]. However, the possible existence of this arrangement on the above-mentioned examples can not be traced anymore because of their preservation conditions.

65 Thieme 1993, 47.
66 Shoe 1936, VII.3, Pl. B.10; Gruben 2001, Abb. 277.
67 Gruben – Koenigs 1968, 716, Abb. 23b; Gruben 1982b, 215 ff., Abb. 14.
68 Gruben – Koenigs 1968, 716, Abb. 23a.
69 Karaosmanoğlu 1997, Kat. 33, published as from Nysa, but in the museum inventory one of the exactly similar blocks is registered as from Nysa (most probably by mistaken) and the other from Teos.
70 Koenigs 1981, 143-7, Taf. 51.
71 Tuchelt 1984, Taf. 54.2.
72 Bengisu 1994, 43, Fig. 3.
73 Reuther 1957, 50, Z44, Taf. 24.2, dated the capital to later in the Archaic Period and Rumscheid 1994, 302, 347, Kat.330, Taf. 174.2, dated it to the Hellenistic phase of the temple. On the other hand, it seems very probably to be dated in the Archaic period and for this reason the dating should be reconsidered.
74 Ateşlier 1999, 59 ff.; Ateşlier 2001, 150 ff., Figs. 13-19; Bakır 2003, 8, Res. 4, 7.
75 Baran 2004, 25-26, Res. 18-22.
76 Baran 2004, 27, Res. 29.
77 I was informed on the Akbük origin of the altar by F. Rumscheid, for which I am grateful to him.
78 Tuchelt 1991, 52, Abb. 84.
79 Koenigs 1981, 143-7, Taf. 51.
80 Tuchelt 1984, Taf. 54.2.
81 Ateşlier 1999, 59 ff.; Ateşlier 2001, 150 ff, Figs. 13-19; Bakır 2003, 8, Res. 4, 7.
82 Reuther 1957, 50, Z44, Taf. 24.2 (Archaic Period); Rumscheid 1994, 302, 347, Kat.330, Taf. 174.2 (Hellenistic Period).
83 Baran 2004, 25-26, Res. 18-22.

Another feature seen in the Labraunda cymatia is the placing of dart-like ornaments between the reels. The earliest occurrence of this practice can be seen on a crown block from the North Agora at Miletos [84], however, it differs in cymation form and is dated around 540-530 B.C. The other examples are seen on the crown blocks from Teos[85], Myus[86], Didyma[87] and Torrhebeia[88], round altars from Milas[89] and Didyma[90] and frieze blocks from Beçin[91]. A round altar from Miletos[92] and anta capitals of an Altar in Paros [93] dated around 500-490 are different in the cymation forms, but they are the latest examples of this practice.

When all the existing parallel examples, dated between 530-480 B.C. are taken into consideration it is possible to suggest a dating. The more round shape of the eggs compared to the Siphnian examples[94] indicates that they are not early as them. The wide forms and the sharpening degree of the eggs indicate that they are not as late as the Paros altar[95]. As a result, a dating between 520-500 B.C. seems very appropriate for the crown blocks of Labraunda.

84 Koenigs 1986, 113, Taf. 11.1.

85 Teos example differs in the extension of the egg frames into bead-and-reel moulding, but this is a unique feature with no parallel example.

86 Koenigs 1981, 143-7, Taf. 51

87 Tuchelt 1984, Taf. 54.2

88 Bengisu 1994, 43, Fig. 3.

89 Baran 2004, 27, Res. 29.

90 Tuchelt 1991, 52, Abb. 84.

91 Baran 2004, 25-26, Res. 18-22.

92 Koenigs 1996,145, Taf. 28.6.

93 Gruben 1982a, 184 ff., Abb. 25 ff.

94 Shoe 1936, VII.3, Pl. B.10; Gruben 2001, Abb. 277.

95 Gruben 1982a, 184 ff., Abb. 25 ff.

## 5. Dentil Blocks

Eight dentils which are single blocks comprising only one dentil and one interstice from white marble[96] (Figs. 12a-b, 14a) have been discovered around the Temple of Zeus and the Oikoi[97]. Although they have similar heights, their widths differ and they can be collected in two different groups. The general arrangement and similar heights show that they were part of the same structure, but most probably decorated different sides. The difference between the interstice orientation which is left in the first group and right in the second group is also connected with different placement of the dentil courses.

The first group[98] consists of three blocks with a height of 21-22 cm. The widths of the dentils are 15-17 cm, the widths of the interstices are 15.5-16.5 cm, the depths of the dentils are 23.5-24.5 cm and the depths of the blocks are 44-54 cm. The second group[99] consists of five

96 They are protected by placing into the excavation depots.

97 D1.1: Hellström – Thieme 1982, 41-42, Fig. 15; D1.1-2 and D2.1-3: Thieme 1993, 49-50, Figs. 5-6, Pls. IX.6-7; D1.3 and D2.4-5 were not published previously.

98 D1.1: Excavation Inv. Nr. NA 21: length of dentil face 16.5 cm, length of interstice 16.5 cm, depth of dentil projection 24-24.5 cm, height 21.5-22 cm, depth of block 44 cm.
D1.2: Excavation Inv. Nr. NA 3: length of dentil face 16.5-17 cm, length of the 1st interstice 3-4 cm, length of the 2nd interstice 16-16.5 cm, depth of dentil projection 24 cm, height 21.5-22 cm, depth of block 47 cm.
D1.3: length of dentil face 15-15.5 cm, length of interstice 15.5-16 cm, depth of dentil projection 23.5 cm, height 21-21.5 cm, depth of block 53 cm.

99 D2.1: Excavation Inv. Nr. NA93, Z-D9: length of dentil face 14.5-15 cm, length of interstice 14-14.5 cm, depth of dentil projection 17.5 cm, height 22 cm, depth of block 46 cm.

blocks are similar to the first group with the heights of 21.5-22 cm, but they differs with the other measurements. The widths of dentils are 14-15 cm, the widths of interstices are 13-15 cm, the depths of the dentils are 17-17.5 cm and the depths of the blocks are 46-57 cm. There are some diagonal irregularities on the blocks such as the bottom widths of the dentils are 14.5-15 cm and the upper widths are 15-14.5 cm. These irregularities might be connected with their state of preservation or with insufficient caring of the details while they were cut.

The general consistency (Figs. 12a-b, 14a) among the dentil blocks is quite visible, but there are also some differences between them. There is a 5 cm deep and 15 cm high cutting on the side of the dentil block 1.1 and it is the only example of this on the existing blocks. The inner side of the cutting is chiseled roughly and the function must be connected with the woodwork of the roof. The roof beam, with a similar cutting on the next block probably tied the dentil blocks and roof. The depths of the dentil blocks are around 55 cm which seems to be sufficient for the stabilization of them under the geison blocks. The blocks 1, 2 and 4 in the second group have cuttings on the top surfaces measuring 5 x 1 x 1 cm, but these are not suitable for being clamps' cuttings because of their irregular placements and small dimensions. They are most probably pry cuttings.

The visible faces of the blocks which are dentil faces, interstices and front part of the bottom surfaces have been worked with the fine claw chisel and the invisible parts have been just chiseled with a broader chisel (Figs. 12a-b). The top surface of dentil 2.1 has been worked out with fine claw chisel and it differs from the others. It may be explained by a change of direction during the construction. All dentil blocks have the proportion of 1:1 between the interstices and dentils. They include an interstice and a dentil face (Figs. 12a-b, 13a) except the dentil 1.3 which differs with having small part of second interstice. This arrangement may be explained as a compromise to the different orientations of groups 1 and 2.

Although the dentil blocks were found around the temple, the lack of an exact connection with the building, limits the dating of them. On the other hand the axial correspondence with the crown blocks gives a dating (Fig. 13). This correspondence was determined by Thieme[100] and it can be proven for the first group of dentil blocks. 16.5-17 cm interval between the dart-like ornaments corresponds with dentil widths of 15-17 cm and interstice widths of 15.5-16.5 cm of the first group of dentil blocks. Dentil widths of 14-15 cm and interstice widths of 13-15 cm in the second group of den-

D2.2: Excavation Inv. Nr. NA 68: length of dentil face 14.5-15 cm, length of interstice 14-14.5 cm, depth of dentil projection 17.5 cm, height 22 cm, depth of block 46 cm.
D2.3: Excavation Inv. Nr. NA 94: length of dentil face 14.5-15 cm, length of interstice 14.5-15 cm, depth of dentil projection 17 cm, height 22 cm, depth of block 55 cm.
D2.4: length of dentil face 14.5-15 cm, length of interstice 13.5-14 cm, depth of dentil projection 17 cm, height 21.5-22 cm, depth of block 57 cm.
D2.5: length of dentil face 14 cm, length of interstice 13-14 cm, depth of dentil projection 17.5 cm, height 21.5-22 cm, depth of block 57 cm.

[100] Thieme 1993, 50, Fig. 7.

til blocks are quite close to the first group and it can be accepted as belonging to the same arrangement[101]. Another similarity with the crown blocks is that they have similar heights of 22 cm. This correspondence of the measurements let Thieme to suggest that crown blocks were placed under the dentil course[102] (Fig. 13).

With the help of these similarities it may be suggested that dentil blocks and crown block belonged to the same building and that the dentil blocks are dated to the late Archaic period as the crown blocks. On the other hand, evidence on using dentil courses in the Archaic period is very scarce. Especially on the monumental buildings there is no evidence for dentil courses. The proposed drawings of monumental Archaic buildings with dentil courses were mainly based on the study of proportions of the entablatures[103].

One of the few examples of dentils from Archaic period is an andesite dentil block found inside the filling of cistern at Larisa[104]. There are three dentils preserved on this end block which has a reversa profile on top and the right side is cut off. The dentils are not an exact quadrangle and the sides become narrower below. The only criterion for dating is the find situation in the filling which has only Archaic and Classical architectural elements. This dentil block has been dated into the late Archaic period and are attributed to the "Southwest Building" [105].

Two dentils from Delos are the other examples from this period. The first has a square form and preserves 3 dentils and 2 interstices[106]. The other is a single block similar to the Labraunda examples and has a dentil and an interstice[107]. It was proposed that it may come from Andronios Oikos from late Archaic period[108], but were not definitely attributed to any building. It was also found unusual to call single block a dentil[109] but as the above-mentioned Labraunda examples indicate that is the correct interpretation.

The unfinished dentil course cuttings from Kyros Tomb at Pasargadae, dated around 530 B.C.[110] and the dentil course of the Polyxena Sarcophagus from 520-500 B.C. found at Çanakkale-Gümüşçay[111] are other dentil examples from Archaic period. The last examples are the unpublished dentil blocks which were mentioned as belonging to a small Archaic building on Samos[112], but we have not more information about them.

101 It is already known that there are not certain measurements of similar architectural elements of a same building in the Archaic period, see, Bammer 1968, 89-92.

102 Thieme 1993, 50, Fig. 7.

103 Wesenberg 1996, 1 ff.; Bingöl 1990, 101 ff. For the suggestions on that dentil courses were not employed on monumental peripteral buildings because it was not a structural necessity; see, Bingöl 2001, 32-33.

104 Boehlau – Schefold 1940, 128, Taf. 24.c, 42.1; Wesenberg 1996, 13, Abb. 13.

105 Boehlau – Schefold 1940, 162.

106 Vallois 1966, 266-267; Hellmann – Fraisse 1979, 50, Fig. 46; Fraisse – Llinas 1995, Fig. 481; Wesenberg 1996, 13, Abb. 14.

107 Vallois 1966, 266-267; Hellmann – Fraisse 1979, 50; Fraisse – Llinas 1995, Fig. 482.

108 Vallois 1966, 267.

109 Hellmann – Fraisse 1979, 50.

110 Nylander 1970, 92, 95, Fig. 32.

111 Sevinç 1996, 251 ff., Fig. 8.

112 Gruben 1963, n.123.

More examples of dentils come from the Classical period. The earliest dentil dated with its building is around 480 B.C, It is an Andron from Satrap's Palace at Daskyleion[113]. The axial correspondence with cymation and the existence of a bead-and-reel moulding on upper edge like the architrave blocks make its belonging to the building clear. The dentil course has a square form and the dentil and interstice widths have 1:1 proportion.

Three buildings with dentil courses are known from this period in southern Italy and Sicily. The first is Apollo Temple D at Metapontum [114] dated to the first quarter of the 5th century B.C. Small fragments and a big block with five dentils has been found. They have a Lesbian cymation ornament on the bottom edge and the proportion of dentil and interstice widths is 3:2. The second example from southern Italy is the Marasá Temple at Lokroi[115] dated around 470 B.C. Only a small end fragment of the dentil course was found and it has a bead-and-reel ornament on the upper edge like the Daskyleion example. The proportion of the widths of the dentils and interstices is 1:1. Temple G at Selinus on Sicily[116] is another building with a dentil course. Although it is in the Doric style, Ionic dentils are placed on the inner entablature of the eastern facade. The dating of the dentils is disputatious, because it is not known that belong whether to the first phase from 520 B.C. or to the second phase dated before 409 B.C. which the construction of the temple stopped. In any case, it is similar with the previous examples as having 1:1 proportion of the widths of the dentils and interstices[117].

Except the dentils of the Temple of Apollo D at Metapontum and the Polyxena Sarcophagus, the proportion of 1:1 is seen on other dentil examples. It may be used as a dating criterion[118] and in fact, when the other examples are investigated[119], it is seen that the widths of the interstices become narrower after the middle of the 5th century. The proportion of 3:2 becomes dominant after the middle of the 4th century B.C. As a result, it can be stated that 1:1 proportion of the Labraunda dentil blocks show similarity with the Archaic examples.

The use of the single blocks comprising with one dentil and one interstice is paralleled in the Archaic period only by the Delos example[120], but Maussolleion at Halikarnassos is the single dated building which has a dentil course comprising from single dentil units. There are 26

113 Ateşlier 1999, 67 ff.; Ateşlier 2001, 149 ff., Fig. 12-13, 16, 21; Bakır 2003, 9, Res. 7.

114 Mertens 1979, 108-109, 114, Abb. 3-5, Taf. 19.2; Adamesteanu et al. 1975, 35, Pl. 7.36.

115 Gullini 1980, Tav. 11, 13; Barletta 1999, 214; Costabile 1997, 37 ff., Tav. Locri XXVb.

116 Mertens 1993, Taf. 83.1; Barletta 1999, 212-3, 215.

117 Barletta 1999, 215, states that employing dentil courses on these buildings were inspired from Ionia. Although it is not a definite conclusion, it seems that using dentil is not their invention.

118 Roos 1976, 103 ff., concluded after the investigations on the proportions of dentils that the proportions between dentil width, dentil height and interstice width are not helpful for dating. The examples on his table with 1:1 proportions are Larisa dentil, Persepolis Artaxerxes tomb and five rock-cut tombs from Pasanda and Kaunos in Karia. Although the tombs are from later dates it must be remembered that architectural comparisons between buildings and rock-cut tombs often give unreliable conclusions.

119 Gruben 1982c, n. 18; Roos 1976, 103 ff.

120 Vallois 1966, 266-267; Hellmann – Fraisse 1979, 50; Fraisse – Llinas 1995, Fig. 482.

dentil blocks found on the site and K. Jeppesen[121] explained this practice as cheap workmanship. On the other hand, the Labraunda dentil blocks indicate a possible architectural tradition in the region.

As a result it can be stated that all these parallel examples and evaluations support a date of the dentil blocks around 520-500 B.C. just as the crown blocks.

## CONCLUSIONS

The publications discussed above indicate that the discussions on the date of the early Temple of Zeus Labraundos emerge from the lack of datable materials and a confusion rising from the interpretations of ancient sources.

Only Herodotus (V.119) mentions early Labraunda and tells us after that the defeat by the Persians in 497/6 or 496/5 B.C., the Karian survivors gathered in the Labraunda sanctuary. However, the term "ἱρον = ἱερον" used by Herodotus[122] has caused a confusion because it has been translated as sanctuary or temple[123]. For example, in a Turkish version it is translated as the Temple of Zeus[124], but in English versions it is translated as the precinct of Zeus[125]. After this translation it can be understood that there was no temple at the time of Herodotus and that the sanctuary consisted of sacred plane-trees[126]. On the other hand, Strabo[127] mentions an old naos housing a *xoanon*[128]. It may be evidence for early period of the Labraunda sanctuary. To call the Classical peripteral Temple of Zeus a naos may indicate to the long history of the temple. Another point is that the mentioned *xoanon*[129] might refer to an Archaic wooden statue and to a temple for its' necessary protection shelter.

With the help of these passages it may be suggested that Strabo's text may fill the gap in the passage of Herodotus in this way it is possible that there was an Ar-

---

121 Jeppesen 2002, 126-131, Figs. 13.10-11.

122 Herodotos V.119: "…ἐνθεῦτεν δὲ οἱ διαφυγόντες αὐτῶν κατειλήθησαν ἐς Λάβραυνδα ἐς Διὸς στρατίου **ἱρόν**. μέγα τε καὶ ἄγιον ἄλσος πλατανίστων…."

123 Liddell and Scott's Greek-English Lexicon[7], Oxford 1989, 377.

124 Herodotos, *Herodot Tarihi* (1991). Çev. Müntekim Gökmen).

125 *"…of them who escaped were driven into the precinct of Zeus of Armies at Labraunda, a large and a holy grove of plane-trees…"* Herodotus, Histories (Translated by A. D. Godley), Cambridge. Harvard University PRes. 1920. "…*The Carian survivors shut themselves up at Labraunda, in the great grove of sacred plane-trees known as the precinct of Zeus of the Army*…" Herodotus, Histories (Translated by J. Marincola), Penguin Boks, 2003.

126 Hellström – Thieme 1982, 42; Hellström 1991, 297

127 Strabon 14.2.23: "*The former is in the city, whereas Labranda is a village far from the city, being situated on the mountain near the pass that leads over from Alabanda to Mylasa. At Labranda there is an ancient shrine and statue of Zeus Stratius. It is honored by the people all about and by the Mylasians; and there is a paved road of almost sixty stadia from the shrine to Mylasa, called the Sacred Way, on which their sacred processions are conducted."*

128 Strabon 14.2.23, "…ἐνταῦθα νεώς ἐστιν ἀρχαῖος καὶ **ξόανον** Διὸς Στρατίου..."

129 The term *xoanon* in ancient quotations is used for early wooden statues or later statues which remind the early ones with their techniques. (Donohue 1988, 9 ff.; Mark 1993, 93-98) For this reason the term *xoanon* used by Strabo might have referred to Archaic statue or its renewed copy. Donohue 1988, 81, n.198, mentions the probability that Strabo referred to Archaic style Zeus Stratios statue. The Mylasan coins from the Roman Imperial period with Zeus Labraundos statues which resemble xoanon may support this idea see, Akarca 1959, Pl.IX, 75-76. On the other hand, Price 1984, 176, suggested that the term *xoanon* was used in Roman Imperial times for various kinds of statues and actually was referring to polished surfaces of the statues.

chaic temple dedicated to Zeus Labraundos. Additionally, it seems more probable to us that Herodotus' term *hieron* was referring to the temple rather than only a precinct[130].

Although it is not certain, the proportions of the existing remains may be used as supporting evidence for the mentioning of an old naos by Strabo. The proportional analyses[131] on the temple clarified the definite role of using proportions in the Classical temple. The foot used on the temple is 32.25 cm and it consists of 16 units of 2.016 cm. It was also discovered that this unit was based on the measurements of the temple cella, which is known to be exactly similar to the early temple in antis phase (Figs. 6-7). It was suggested previously that while constructing the Classical peripteral temple, the old in antis temple (which was probably destroyed by an earthquake) was removed down to toichobate level and the new temple constructed on these remains[132]. On the other hand it seems more reasonable to imagine that the temple in antis existed until the period of the Hekatomnids, when the intensive construction work was executed in the sanctuary and the temple was improved by the addition of a peripteros. By this way, probably the magnificence of the temple in the sanctuary has survived, because the construction of the monumental androns might have given shade to its magnificent. If this were correct, because the old temple and possible old statue of god might have been preserved inside the Classical temple, then it may be understandable why Strabo used Archaic naos and *xoanon* at Labraunda. As a result it seems that the ancient texts do no limit the existence of an Archaic phase of the Temple of Zeus Labraundos, but without further evidences, it is not possible to have a definite conclusion based on these ancient passage.

None of the examples of architectural elements investigated above (Fig. 14) are securely attributed to the Archaic temple of Zeus Labraundos. On the other hand, after our investigations the numbers of them increased and their possible connections with the temple and with each other are strengthened. The only connection with the late Archaic column drum with 36 flutes (Figs. 8a-b) can be established with column neck fragment (Figs. 9a-b) with the help of flutes' widths. This connection is the only criterion for us to date the column neck. The crown blocks and fragments with an Ionic cymation point to five different blocks as mentioned above. The heights of the blocks are 22-25 cm, but when the corrosions of the blocks and to be usual small differences in the same building are taken into consideration, it seems that the differences are not important for assigning them to the same building. The form of cymation of these crown blocks is the same on all blocks and it is datable to around 520-500 B.C. The dentil blocks (Figs. 12a-b, 13, 14a) have similar heights but with different orientations of the dentils and the interstices and different widths are collected in two groups. The

130 The term hieron were translated in many other parts as a temple, see Herodotus, with an English translation by A. D. Godley. Cambridge. Harvard University Press. 1920, 1.144.1, 2.42.6, 2.55.3, 2.56.1, 2.113.2, 2.122.1, 4.149.1, 8.37.1, 9.97.1.

131 Hellström – Thieme 1982, 47; Thieme 1989, 81.

132 Hellström – Thieme 1982, 42-43.

differences can be explained by the fact that they were placed on different sides of the building. Although there are few examples, the 1:1 proportion which are seen on early dentils and the axial correspondence with the crown blocks help us to date them to the same period with the crown blocks. Although it is datable into the late Archaic period, the small measurements of an Ionic capital (Figs. 10a-d) limit the connection with the other architectural elements. On the other hand, as this study shows, the amount of Archaic material may be increased with further studies and it will help us to understand the connection.

As a result, both the remains and historical passages indicate the existence of the temple in antis in the Sanctuary of Labraunda. The architectural elements (Fig. 14) found around the temple with their date and harmony with each other and with the temple in antis indicate that they belong to the Archaic phase of the temple of Zeus Labraundos.

Dr. Abdulkadir Baran
Muğla Üniversitesi
Fen-Edebiyat Fakültesi
Arkeoloji Bölümü
48000 Kötekli-MUĞLA
kadirbaran@yahoo.com

**List of the figures**

**Figure 1.** The Model of Labraunda Sanctuary (Hellström 1991, Fig. 2).

**Figure 2.** The Plan of Labraunda Sanctuary (L. Karlsson).

**Figure 3.** The Building Remains of Labraunda Sanctuary dated to the Pre-Hekatomnid Period (Westholm 1963, Fig. 64).

**Figure 4.** Labraunda Zeus Temple, actual remains (Baran).

**Figure 5.** Different blocks employed in the foundation Labraunda Zeus Temple (Hellström – Thieme 1982, Pl. 31).

**Figure 6.** Labraunda Zeus Temple, plan of the in antis phase (Thieme 1993, Fig. 8).

**Figure 7.** Labraunda Zeus Temple, plan of the Classical phase (Hellström 1994, Fig. 1).

**Figure 8a-b.** Column Drum with 36 flutes (Baran).

**Figure 9a-b.** Column Neck Fragment (Labraunda excavation archive).

**Figure 10a-e.** Ionic Capital (Thieme 1993, Figs. 1-2, rearranged).

**Figure 1ll-h.** Crown Blocks 1-8 (drawings a-c Thieme 1993, Figs. 3-4, the others by Baran).

**Figure 12a-b.** 1st and 2nd Group dentil blocks, top and bottom surfaces (Baran).

**Figure 13.** Axial correspondence between dentil and crown blocks (Thieme 1993, Fig. 7).

**Figure 14.** Drawings of the Archaic Architectural elements from Labraunda sanctuary in the same scale (Baran).

## KAYNAKÇA / BIBLIOGRAPHY


| | |
|---|---|
| Adamesteanu et al. 1975 | D. Adamesteanu – D. Mertens – A. De Siena, "Metaponto Santuario di Apollo. Tempio D (Ionico) Rapporto Preliminare", *BdA* 60, 1975, 26-49 |
| Akarca 1959 | A. Akarca, *Les monnaies grecques de Mylasa* (1959) |
| Akurgal 1956 | E. Akurgal, "Foça Kazıları ve Kyme Sondajları", *Anadolu /Anatolia* 1, 1956, 32-42 |
| Akurgal 1995 | E. Akurgal, *Anadolu Uygarlıkları*[5] (1995) |
| Alzinger 1972 | W. Alzinger, "Von der Archaik zur Klassik zur Entwicklung des ionischen Kapitells in Kleinasien während des fünften Jahrhunderts v. Chr.", *ÖJh* 50, 1972-73, 169-211 |
| Alzinger 1978 | W. Alzinger, "Athen und Ephesos im fünften Jahrhundert vor Christus", *The proceedings of the Xth International Congress of Classical Archaeology, Ankara-İzmir 23.-30.IX.1973* (1978) 507-516 |
| Amandry 1953 | P. Amandry, *Fouilles de Delphes.T. 2, Topographie et architecture. Le sanctuaire d'Apollon. [Fasc. 6], La colonne des Naxiens et le portique des Athéniens* (1953) |
| Ateşlier 1999 | S. Ateşlier, *Daskyleion Buluntuları Işığında Batı Anadolu`da Akhaemenid Dönemi Mimarisi*, (Ege Üniversitesi, Yayınlanmamış Doktora Tezi, 1999) |
| Ateşlier 2001 | S. Ateşlier, "Observations on an Early Classical Building of the Satrapal Period at Daskyleion", *Akhameneid Anatolia, Proceedings of the First International Symposium on Anatolia in the Achaemenid Period, Bandırma 15-18 August 1997* (2001) 147-168 |
| Bakalakis 1936 | G. Bakalakis, "Νεάπολις-Χριστούπολις-Καβάλα", *AÉpigr* 1936, 1-48 |
| Bakır 2003 | T. Bakır, "Daskyleion (Tayaiy Drayahya) Hellespontine Phrygia Bölgesi Akhaemenid Satraplığı", *Anadolu/Anatolia* 25, 2003, 1-26 |
| Bammer 1968 | A. Bammer, "Zum Durchmesser jonischer Säulen", *ÖJh* 49, 1968-71, 88-92 |
| Bammer 1972 | A. Bammer, "Beobachtungen zur ephesischen Architektur, Archaische Kapitelle", *AA*, 1972, 440-457 |
| Baran 2004 | A. Baran, "Beçin, Zeus Karios (?) Tapınağı", *I.-II. Ulusal Arkeolojik Araştırmalar Sempozyumu, Anatolia /Anadolu* Ek Dizi 1 (2004) 19-38 |
| Barletta 1999 | B.A. Barletta, "Ionic Influence in Western Grek Architecture: Towards a Definition and Explanation", in: F. Krinzinger (Hrsg.), *Die Ägäis und das westliche Mittelmeer. Beziehungen und Wechselwirkungen 8. bis 5.Jh. v. Chr., Akten des Syposions, Wien 1999* (2000) 203-216 |
| Bean – Cook 1955 | G. E. Bean – J. M. Cook, "The Halicarnassus Peninsula", *BSA* 50, 1955, 85-169 |
| Bengisu 1994 | R. Lou Bengisu, "Torrhebeia Limne", *ADerg* 2, 1994, 33-43 |
| Bingöl 2001 | O. Bingöl, "The Frieze and Dentil on Early Ionic Column Architec- |

ture", in: C. Özgünel – O. Bingöl – V. İdil – K. Görkay – M. Kadıoğlu (derl.), *Cevdet Bayburtluoğlu için yazılar / Essays in Honour of C. Bayburtluoğlu. Günışığında Anadolu / Anatolia in Daylight* (2001) 32-34

Boardman 1959 — J. Boardman, "Chian and Early Ionic Architecture" *AntJ* 39, 1959, 170-218

Boehlau – Schefold 1940 — J. Boehlau – K. Schefold, *Larisa am Hermos 1: Die Bauten* (1940)

Buschor 1930 — E. Buschor, "Heraion von Samos. Frühe Bauten", *AM* 55, 1930, 1-99

Costabile 1997 — F. Costabile etc., *L'Architettura Samia di Occidente Dalla Cava al Tempio, Siracusa, Locres, Caulonia*, Vol. hors commerce publié à l'occassion de l'exposition d'Athènes, 1997. Rubettino Editore, Soveria Manneli (1997)

Crampa 1972 — J. Crampa, *Labraunda. Swedish excavations and researches, Vol.3.2. The Greek inscriptions 13-133* (1972)

Dinsmoor 1973 — W. B. Dinsmoor, *The Architecture of Ancient Greece*[2] (1973)

Donohue 1988 — A.A. Donohue, *Xoana and the Origins of Greek Sculpture* (1988)

Fedak 1990 — J. Fedak, *Monumental Tombs of the Hellenistic Age. A Study of Selected Tombs from the Pre-Classical to the Early Imperial Era* (1990)

Fraisse – Llinas 1995 — P. Fraisse – C. Llinas, *Documents d'Architecture Hellénique et Hellénistique, Délos* 36 (1995)

Gentili 1967 — G. V. Gentili, "Il Grande Tempio Ionico di Siracusa, I Dati Topografici e Gli Elementi Architettonici Roccolti Fino al 1960", *Palladio* 17, 1967, 61-84

Gruben 1963 — G. Gruben, "Das archaische Didymaion", *JdI* 78, 1963, 78-182

Gruben 1982a — G. Gruben, "Naxos und Paros, Vierter vorläufiger Bericht über die Forschungskampagnen 1972-1980, I. Archaische Bauten", *AA* 1982, 159-195

Gruben 1982b — G. Gruben, "Der Burgtempel A von Paros, Naxos-Paros, Vierter vorläufiger Bericht", *AA* 1982, 197-229

Gruben 1982c — G. Gruben, "Naxos und Paros, Vierter vorläufiger Bericht über die Forschungskampagnen 1972-1980, II. Klassische und hellenistische Bauten", *AA* 1982, 621-689

Gruben 1991 — G. Gruben, "Anfänge des Monumentalbaus auf Naxos", *DiskAB* 5, 1991, 63-71

Gruben 1997 — G. Gruben, "Naxos und Delos, Studien zur archaischen Architektur der Kykladen", *JdI* 112, 1997, 261-416

Gruben 2001 — G. Gruben, *Griechische Tempel und Heiligtümer*[5] (2001)

Gruben – Koenigs 1968 — G. Gruben – W. Koenigs, "Der 'Hekatompedos' von Naxos", *AA* 1968, 693-717

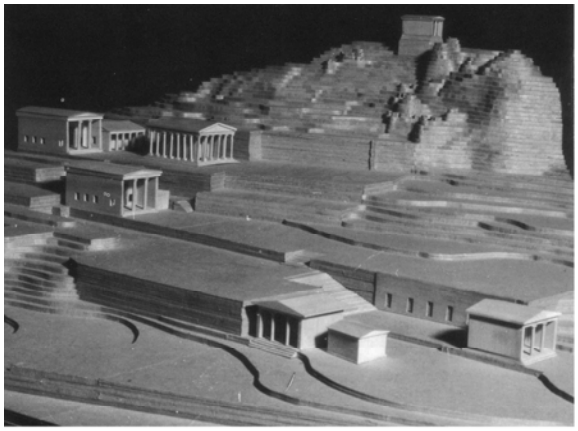
Gullini 1980 — G. Gullini, *La cultura architettonica di Locri Epizefirii, Documenti e interpretazioni* (1980)

Hellmann – Fraisse 1979 — M.C. Hellmann – P. Fraisse, *Le monument aux hexagones et le portique des Naxiens*, *Délos* 32 (1979)

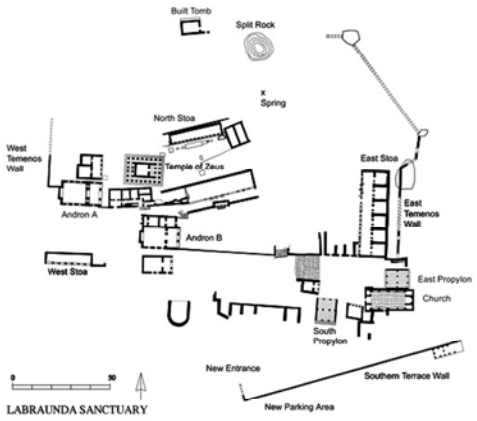
| | |
|---|---|
| Hellström 1965 | P. Hellström, *Labraunda. Swedish Excavations and Researches, Vol.2.1: Pottery of Classical and Later Date, Terracotta Lamps and Glass* (1965) |
| Hellström 1984 | P. Hellström, "Dessin d'architecture hécatomnide á Labraunda", *Le dessin d'architecture dans les sociétés anciennes. Université des sciences humaines de Strasbourg, Centre de recherche sur le Proche-Orient et la Grèce antique, 26-28 janvier 1984, RA* 1984, 153-165 |
| Hellström 1991 | P. Hellström, "The Architectural layout of Hecatomnid Labraunda", *RA* 1991, 297-308 |
| Hellström 1992 | P. Hellström, "Labraynda 1990", *KST* 13, 27-31 Mayıs 1991 (1992) 155-158 |
| Hellström 1994 | P. Hellström, "Architecture. Characteristic building-types and particularities of style and techniques. Possible implications for Hellenistic Architecture", *Halicarnassian Studies I: Hecatomnid Caria and the Ionian Renaissance* (ed. J. Isager) (1994) 36-57 |
| Hellström 2003 | P. Hellström, "100 Years of Swedish Excavations in Turkey and a Bibliography", *Acta Bibliothecæ Regiæ Stockholmiensis* 69, 2003, 237-252 |
| Hellström – Thieme 1979 | P. Hellström – T. Thieme, "The Temple of Zeus at Labraunda. A Preliminary note" *Svenska Forskningsinstitutet i İstanbul Meddelanden* 4, 1979, 5-26 |
| Hellström – Thieme 1982 | P. Hellström – T. Thieme, *Labraunda Swedish Excavations and Researches, Vol.1.3: The Temple of Zeus* (1982) |
| Humann et al. 1904 | C. Humann – J. Kohte – C. Watzinger, *Magnesia am Maeander, Bericht über die Ergebnisse der Ausgrabungen der Jahre 1891-1893* (1904) |
| Jeppesen 1955 | K. Jeppesen, *The Propylaea, Labraunda Swedish Excavations and Researches, Vol.1.1* (1955) |
| Jeppesen 2002 | K. Jeppesen, *The Superstructure, A Comparative Analysis of the Architectural, Sculptural and Literary Evidence. The Maussolleion at Halikarnassos. Reports of the Danish Archaeological Expedition to Bodrum*, vol. 5 (2002) |
| Jully 1981 | J. J. Jully, *Labraunda Swedish Excavations and Researches, Vol.2.3 Archaic Pottery* (1981) |
| Karaosmanoğlu 1997 | M. Karaosmanoğlu, *Başlangıcından Klasik Dönem Sonuna kadar Lotus-Palmetçiçek ve Yumurta Boncuk dizisinin Gelişimi*, (Yayınlanmamış Doçentlik Tezi Erzurum 1997) |
| Kirchhoff 1988 | W. Kirchhoff, *Die Entwicklung des ionischen Volutenkapitells im 6. und 5. Jhs. und seine Entstehung* (1988) |
| Koenigs 1979 | W. Koenigs, "Archaische Bauglider aus Milet: I. Ionische Kapitelle", *IstMitt* 29, 1979, 187-198 |
| Koenigs 1981 | W. Koenigs, "Bauteile aus Myus im Theater von Milet", *IstMitt* 31, 1981, 143-147 |
| Koenigs 1986 | W. Koenigs, "Reste archaischer Architektur in Milet", *Milet 1899-1980, Ergebnisse, Probleme und Perspektiven einer Ausgrabung Kolloquium Frankfurt am Main 1980*, *IstMitt* Beiheft 31 (1986) 113-119 |
| Koenigs 1989 | W. Koenigs, "Zwei Säulen aus Biga", *IstMitt* 39, 1989, 289-295 |

| | |
|---|---|
| Koenigs 1996 | W. Koenigs, "<Rundältare> aus Milet", *IstMitt* 46, 1996, 141-146 |
| Lawrence 1957 | A.W. Lawrence, *Greek Architecture* (1957) |
| Lehmann – Spittle 1982 | P. W. Lehmann – D. Spittle, *Samothrace 5, The Temenos* (1982) |
| Mark 1993 | I. S. Mark, *The sanctuary of Athena Nike in Athens, Architectural stages and chronology*, American School of Classical Studies at Athens (1993), (Hesperia, suppl. 26) |
| Martin 1959 | R. Martin, "Chapiteaux ionique d'Halicarnasse", *RÉA* 61 (1959) 65-76 |
| Meritt 1982 | L.S. Meritt, "Some Ionic Architectural Fragments from the Athenian Agora", *Studies in Athenian Architecture Sculpture and Topography, Presented to Homer A. Thompson*, Hesperia Supplement 20 (1982) 82-92 |
| Meritt 1996 | L. S. Meritt, "Athenian Ionic Capitals from the Athenian Agora", *Hesperia* 65, 1996, 121-174 |
| Mertens 1979 | D. Mertens, "Der ionische Tempel von Metapont ein Zwischenbericht", *RM* 86, 1979, 103-137 |
| Mertens 1993 | D. Mertens, *Der alte Heratempel in Paestum und die archaische Baukunst in Unteritalien* (1993) |
| Mikocki 1986 | T. Mikocki, "Un Chapiteau Grec Ionique en Pologne", *BCH* 110, 1986, 138-143 |
| Nylander 1966 | C. Nylander, "Clamps and chronology, Achaemenian problems", *IrAnt* (1966) 130-146 |
| Nylander 1970 | C. Nylander, *The Ionians in Pasargade: Studies in Old Persian Architecture* (1970) |
| Orlandos 1975 | A.K. Orlandos, "Το κιονοκρανον του ναου της Σουνιαδος Αθηνας Ε.Μ.4478 και η Συλλογη του Καντακουζηνου", *AÉpigr* 1975, 102-112 |
| Pedersen 1983 | P. Pedersen, "Zwei ornamentierte Säulenhälse aus Halikarnassos", *JdI* 98, 1983, 87-121 |
| Petersen 1890 | E. Petersen, "Tempel in Lokri", *RM* 5, 1890, 161-227 |
| Petrie et al. 1886 | W. M. F. Petrie – E. A. Gardner – B. V. Head, *Naukratis Part I, 1884-5*, *Third Memoir of The Egypt Exploration Fund* (1886) |
| Price 1984 | S. R. F. Price, *Rituals and Power, The Roman Imperial Cult in Asia Minor* (1984) |
| Pryce 1928 | F.N. Pryce, *Catalogue of Sculpture in The Department of Grek and Roman Antiquities of the British Museum*, Vol.1.1 (1928) |
| Reuther 1957 | O. Reuther, *Der Heratempel von Samos, Der Bau Seit der Zeit des Polykrates* (1957) |
| Roos 1976 | P. Roos, "Observations on the internal Proportions of the Ionic Dentil in the Aegean", *RA* 1976, 103-110 |
| Rumscheid 1994 | F. Rumscheid, *Untersuchungen zur kleinasiatischen Bauornamentik des Hellenismus* (1994) |
| Schneider 1996 | P. Schneider, "Neue Funde vom archaischen Apollontempel in Didyma", *Säule und Gebälk. Zu Struktur und Wandlungsprozeß griechisch-römischer Architektur, DiskAB* 6, 1996, 78-83 |

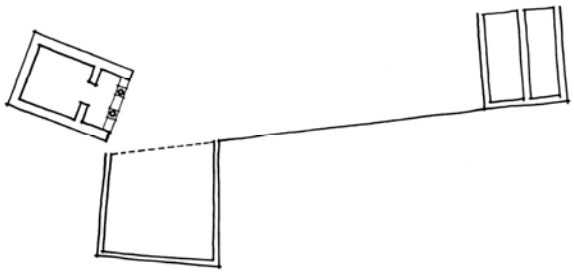
| | |
|---|---|
| Serdaroğlu 1967 | Ü. Serdaroğlu, "Foça Kazılarında Bulunan Arkaik Devir Mimarlık Eserleri", *VI. TürkTK* 1967, 35-40 |
| Sevinç 1996 | N. Sevinç, "A New Sarcophagus of Polyxena from the Salvage Excavations at Gümüşçay", *Studia Troica* 6, 1996, 251-264 |
| Shoe 1936 | L. T. Shoe, *Profiles of Greek Mouldings* (1936) |
| Strabo | Strabo, *Geography* (eds. H.C. Hamilton – W. Falconer, M.A.) London. George Bell – Sons (1903) |
| Theodorescu 1980 | D. Theodorescu, *Le chapiteau ionique grec* (1980) |
| Thieme 1989 | T. Thieme, "Metrology and Planning in Hekatomnid Labraunda", *Architecture and Society in Hecatomnid Caria, Proceedings of the Uppsala Symposium 1987* (ed. T. Linders) (1989) 77-90 |
| Thieme 1993 | T. Thieme, "The Architectural Remains of Archaic Labraynda", *Varia Anatolica III*, *Les Grands Ateilers d'Architecture Dans Le Monde Egeen du VIe Siecle av. J.-C., Actes du Collogue d'Istanbul 23-25 Mai 1991,* (eds. J. Courtils – J. Moretti) (1993) 47-55 |
| Tuchelt 1984 | K. Tuchelt, "Didyma. Bericht über die Arbeiten der Jahre 1980- 1983", *IstMitt* 34, 1984, 193-344 |
| Tuchelt 1991 | K. Tuchelt, "Branchidai-Didyma. Geschichte, Ausgrabung und Wiederentdeckung eines antiken Heiligtums, 1765 bis 1990", *AW* (1991) Sondernummer, 1-54 |
| Vallois 1966 | R. Vallois, *L'architecture hellénique et hellénistique à Délos jusqu'à l'éviction des Déliens 166 av. J.C., 2, 1. Grammaire historique de l'architecture délienne* (1966) |
| Weber 2002 | B.F. Weber, "Die Säulenordnung des archaischen Dionysostempels von Myus", *IstMitt* 52, 2002, 221-271 |
| Wesenberg 1996 | B. Wesenberg, "Die Entstehung der griechischen Säulen- und Gebälkformen in der literarischen Überlieferung der Antike", in: E.-L. Schwandner (Hrsg.), *Säule und Gebälk. Zu Struktur und Wandlungsprozeß griechisch-römischer Architektur, Diskussionen zur archäologischen Bauforschung 6,* 1996, 1-15 |
| Westholm 1963 | A. Westholm, *Labraunda. Swedish Excavations and Researches, Vol.1.2: The Architecture of the Hieron* (1963) |
| Westholm 1978 | A. Westholm, "Labraunda", *The proceedings of the Xth International Congress of Classical Archaeology, Ankara-Izmir 23.-30.IX.1973* (1978) 543-547 |
| Wilberg 1906 | W. Wilberg, "Der Alte Tempel", *Ephesos I* (1906) 221-34 |



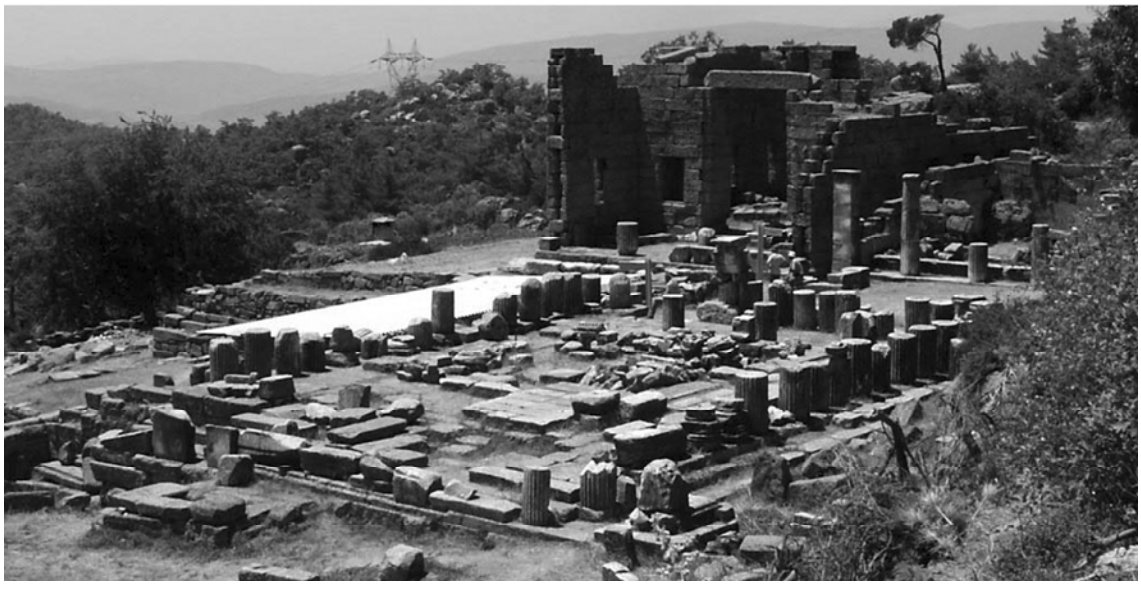
Resim / Figure 1



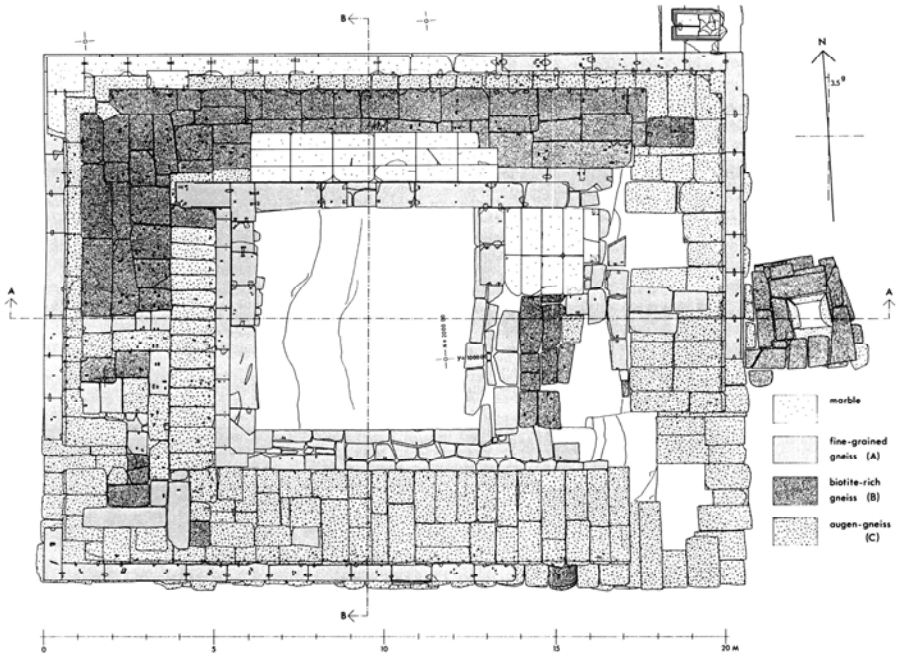

Resim / Figure 2



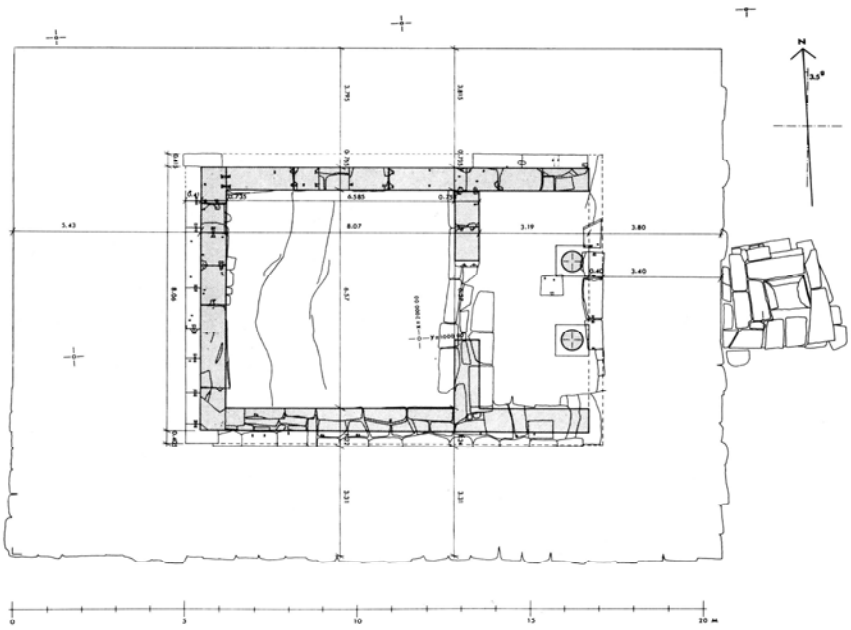
Resim / Figure 3



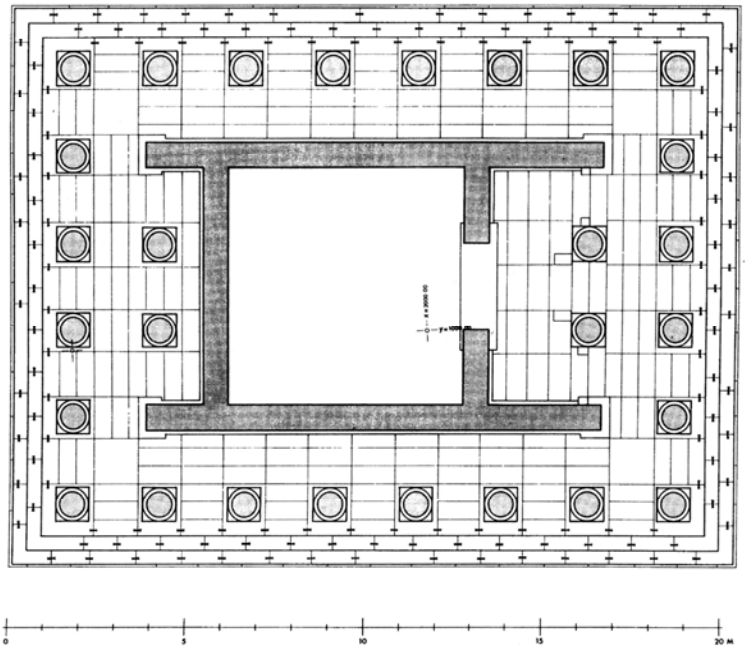
Resim / Figure 4




Resim / Figure 5

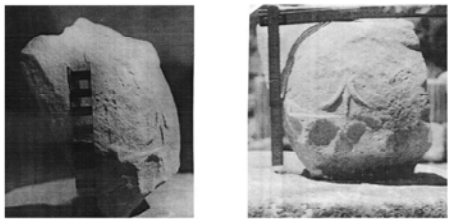



Resim / Figure 6

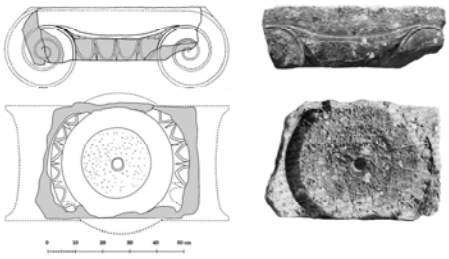


Resim / Figure 7

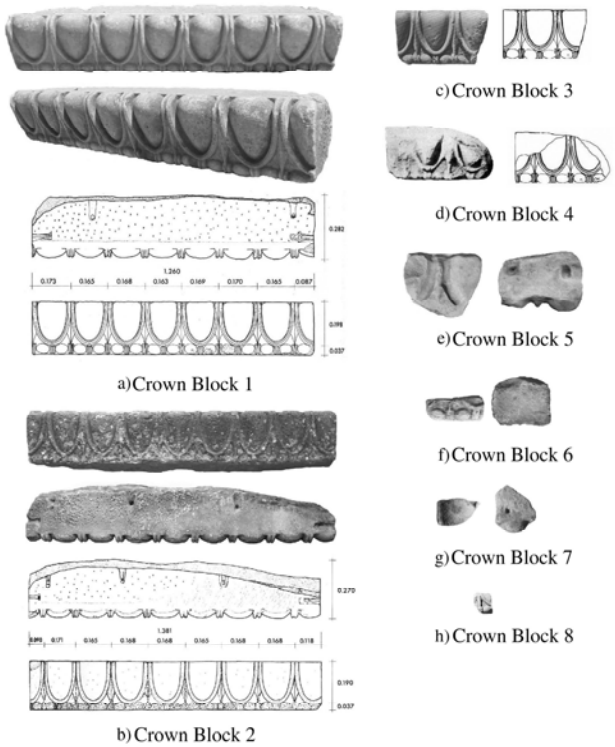
Resim / Figure 8



Resim / Figure 9

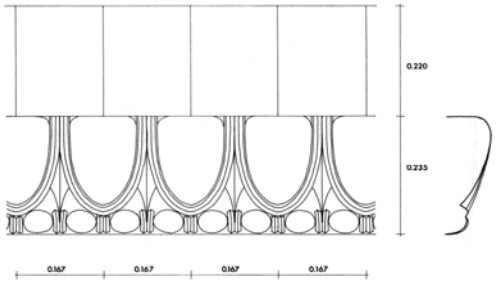


Resim / Figure 10

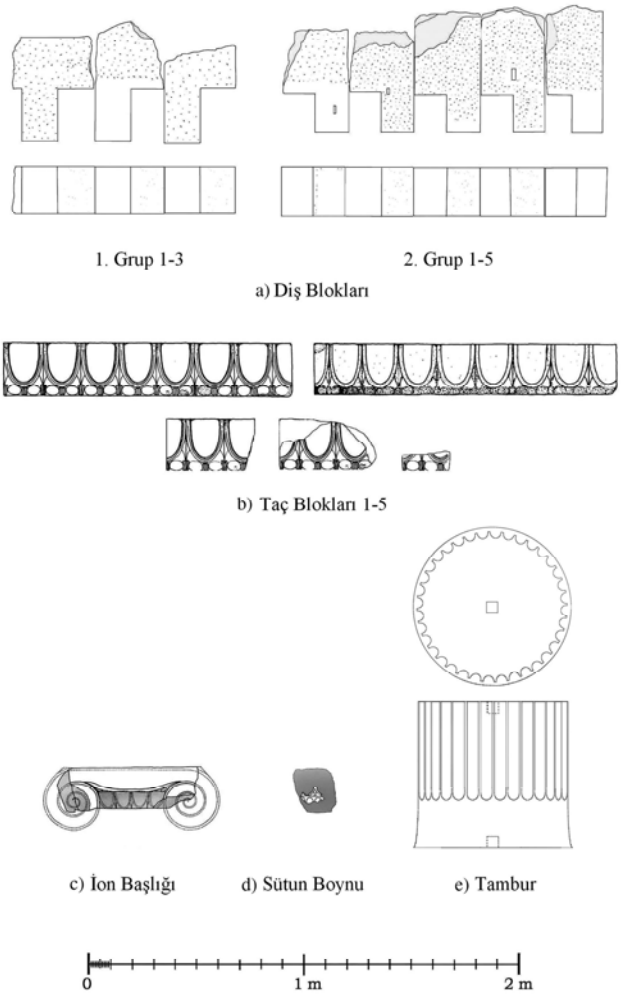



Resim / Figure 11

Resim / Figure 12




Resim / Figure 13




Resim / Figure 14