THE AYIA TRIADHA CAVE, SOUTHERN EUBOEA: FINDS AND IMPLICATIONS OF THE Earliest HUMAN HABITATION IN THE AREA (A PRELIMINARY REPORT)

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ABSTRACT

The Ayia Triadha cave excavation project aims to explore early maritime connections in the Aegean during the Late Neolithic I and II and the Early Bronze Age. The cave lies in a strategic position close to the crossroads that connect insular regions and the mainland. We also aim to explore the manifestations of the so-called Saliagos culture of the Cyclades and the Aegean. This culture is connected to the White-on-Dark pottery horizon (late sixth to early fifth millennium B.C.) found in the cave. The Final Neolithic/LNIIa material is also present in the cave in large quantities. It is closely connected to the Attica-Kephala horizon (late fifth/fourth millennium B.C.) known from the Cyclades and the southern part of mainland Greece. Of great importance is the identification of an Early Bronze Age context, located inside a small chamber, off the main entrance corridor. In this paper we present our preliminary results from the 2007 field season and some aspects of the 2008 campaign together with research strategies we plan to apply in the future.

KEYWORDS: Aegean, Karystia, Cyclades, Neolithic, Early Bronze Age, Maritime connections
INTRODUCTION

We chose to explore the Ayia Triadha because of the earliest pottery located in the Karystia thus far, which was found in the cave during the previous surveys. It, therefore, provided an opportunity to investigate the character of the Late Neolithic (hereafter LN) horizon with White-on-Dark pottery, which is widespread throughout the Aegean. Also, this was an opportunity to examine the relation of this horizon to the Final Neolithic /LNII one (hereafter FN), which is also present in the surface collection from the cave. It is important to note that the natural shape of the cave is not similar to other cave sites that were usually in use in the Aegean during the LN and the FN periods. The part of the cave closest to the entrance consists of a narrow, dark, and steep corridor with almost no available habitation space. Our preliminary 2007 field campaign yielded stratigraphic evidence for layers with LN White-on-Dark ware, followed by thick layers containing materials related to the FN/LNII phase, and above all a unique context dated to the Early Helladic / Early Cycladic II (hereafter EH/EC) phase.

Therefore, the Ayia Triadha cave can provide data important for exploring: (1) A distinct cave use since it lacks the usual characteristics of cave sites from the LNI-II phases. (2) The Aegean LN phase characterized by the White-on-Dark pottery, which is the earliest material attested thus far in the area. (3) The problems related to the transition from the LNI to the FN/LNII and from there to the Bronze Age. (4) In many ways unique Early Bronze Age II (hereafter EBA) context with the exceptional preservation of organic materials (see below). (5) Aspects of material culture use and meaning related to the expression of social identities.

THE CAVE

The Ayia Triadha cave (Fig. 1:1) in the region of Karystos, southern Euboea (Fig. 1:2), is located at the foot of Mount Ochi, close to the village of Kalyvia (Fig.1:2).

![Figure 1](image)

Fig. 1. Entrance to the cave; the Karystia; Trench 1; Trench 2 with eastern profile drawn.

The cave got its name after a small church that lies below it. It was formed at the point where marble and schist masses meet along an underground river bed and it is the product of the chemical and mechanical action of water. The entrance to the cave is about 50m up-hill from the modern church and in the immediate vicinity of a perennial spring. The spring and the
surrounding valley have been much reduced by a recent landslide. The cave entrance is well sheltered by the configuration of the terrain and vegetation and is almost impossible to see from below. At the same time, one can easily observe all the approaches to the valley from the cave entrance as well as all the way to the sea. Accessing the cave from its current entrance one enters a narrow but high corridor. The height of this corridor is more than 8 meters at places. Several speleological groups have explored the cave; however, it is so deep that it has never been explored in its full length (e.g. Nikolaidis and Tazartes 1998).

accessible parts of the cave have been preliminarily explored by several archaeologists, most thoroughly by Donald Keller and Adamantios Sampson (for the earliest research in the area see Jacobsen 1964). D. Keller reports in his dissertation to have found prehistoric pottery (White-on-Dark) at a deep area of the cave, close to the first underground stream (Keller 1985). A. Sampson also found and published painted sherds of the White on Dark variety and other undecorated ones with characteristic lugs and handles dated to the LN I and II, which is the period more commonly known as the FN (Sampson 1984:Fig. 5, 1985:Figs. 3-5).

PREVIOUS RESEARCH AND THE EARLY PREHISTORIC RECORD IN THE AREA

Accessible parts of the cave have been preliminarily explored by several
the local raw materials (Sampson 1981:145). Next to the White-on-Dark sherds there is also reference to some decorated sherds of mainland character, black burnished ones and others that exhibit LN II/FN features (Sampson 1981, 93). Sampson (1981, 93) suggests that the cave was used as a shelter or a burial place.

![Fig. 4. LNII/FN pottery.](image)

Euboea is considered of potentially major importance for the colonization of the Cyclades even before the Neolithic period (Cherry 1985:21). Many sites dating to the later part of the Neolithic, have been located in the southern part of Euboea, in the Karystia region (Keller 1985, Keller and Cullen 1992:341, Keller et al. forthcoming, Wickens pers. comm.) and the connection of this region to Attica and the northern Cycladic islands such as Andros and Kea is considered significant by many scholars (e.g. Broodbank 1999, 2000:138-140; Davis 2001:702. Potentially significant is the relation between the Karystia and the site of Strofilas on Andros, where unique finds dated to the LNII/FN have been found. Strofilas strategic position with views extending from Paros and Naxos to Attica and Euboea likely played an important if not nodal role in the network that connected south Euboea, Attica, and the northern Cyclades (see Televantou 2006). The cave of Ayia Triadha, as the location of the earliest yet attested occupation in the area is of enormous significance for this problem. The persistent field surveys of the area detected copious traces of FN and EBA occupation of the Karystia (Keller et al. forthcoming; Wickens pers. comm.; Tankosić 2008) but very little later and no earlier prehistoric evidence whatsoever. Therefore, the aim of our project is not only to explore patterns of cave use in the area but also to, possibly, shed some light on the original peopling of the region and some aspects of colonization and seafaring activities between southern Euboea and the Cyclades. As mentioned before, the White-on-Dark pottery found in the cave is related to the Aegean LN horizon. The phase with the White on Dark Ware is mostly attested in the central and eastern Aegean islands and the connections to Euboea need to be more precisely explored and specified, in the same way as the case of similar ware sherds found in the Cyclops Cave on the island of Gioura in the Sporades (Mavridis 2008a).

**EXCAVATION IN 2007**

The 2007 campaign should be considered preliminary. It lasted for one week and our aim was to investigate the character of the Neolithic use of the
cave and to explore the possibility of finding undisturbed cultural layers, especially because it was previously suggested that archaeological materials found inside the cave have been washed in (Keller 1985).

Two trenches were opened and excavated to the bedrock (Fig. 1:3). The narrow gallery at the entrance to the cave made the choice of the excavation spot difficult. We opened Trench 1 in the part of the corridor that turns left (north) from the main east-west corridor that starts at the cave’s entrance. Trench 1 produced mostly clay and silt layers with few sherds and other materials, which appeared to be transported or contaminated by water. We did not observe any distinct stratigraphic layers in this trench.

We opened Trench 2 closer to the entrance of the cave than Trench 1, at the end of the long steep entrance corridor. This trench was much more productive not only in terms of material but also because a feature was found indicating in situ layers (Fig.1:4).

Table 1. Radiocarbon dating from trench 2 (Y. Maniatis). For the calibration of dating the Radiocarbon Calibration Program Rev. 5.0 (Stuiver, M., and Reimer P.J., 1993, Radiocarbon, 35, 215-230), which incorporates the most recent set of data (Reimer et. al., Radiocarbon 46, 1029-1058, 2005).

<table>
<thead>
<tr>
<th>Lab. N.</th>
<th>Sample</th>
<th>Recovery date</th>
<th>Material</th>
<th>pmC</th>
<th>BP</th>
<th>δ 13C (%)</th>
<th>BC/AD</th>
<th>Probabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEM-1841</td>
<td>Trench 2, Layer 6 D:0,82,5</td>
<td>20/6/2007</td>
<td>Charcoal</td>
<td>45,8±0,2</td>
<td>6278±25</td>
<td>-25,11</td>
<td>5300-5220 B.C.</td>
<td>(68,2%)</td>
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<td>5310-5210 B.C.</td>
<td>(95,4%)</td>
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One radiocarbon date from that feature points towards the beginning of the 6th millennium (see table 1); however, without more samples to support it, this date cannot be accepted as accurate particularly since we did not find any archaeological material of the same or comparable date. This feature consists of a circular hard layer made of burnt clay with stone slabs and shreds used as its foundation (Fig. 2:1,2). The materials that were used as foundation were found placed horizontally giving the impression of a floor or at least of an intentional placement. From the edge of the circular feature towards the northeast corner of the trench a small platform made of flattish slabs of rock extends into the profile. Its purpose is unclear but it seems to stand in connection to the circular feature. Below the feature and the stone ‘platform’ there was a layer full of carbon and ash. Inside that ashy layer and exactly under the burnt construction there was a fragment of an anthropomorphic handle. Several shreds of this pot, which we believe belongs to an advanced stage of the LN and of another one with rope decoration were found further below (Fig.2:3,4). Our impression is that they were deliberately placed in the position where they were found. Similarly, intentionally placed items below habitation floors were found in other caves used during the LN and FN, especially during the 5th millennium BC, such as the Leontari Cave in Attica (Karali and Mavridis 2005; Karali et al. 2005; Karali et al. 2006).
FINDS AND CHRONOLOGY

The finds of this short campaign consist mainly of pottery, few animal bones, one bone tool, one barbed and tanged obsidian point, and a very small number of obsidian blades and flakes. Pottery is mainly dated to the LN I and II phases, i.e. the end of the LN and the FN. The LN is represented by the White-on-Dark ware (Fig. 3:1-6). This ware from the cave is characterized by decoration applied on the surface of the vessels after burnishing. In several cases decoration has flaked off and only the negative of the paint is visible. This pottery is thin walled with reddish well-fired often micaceous clay that contains very little other inclusions. Surfaces are dark in color in shades of dark grayish brown and brown and sometimes black. The hemispherical closed bowl with white painted lines that start from the rim and an anthropomorphic handle is a very characteristic find. The head of the handle is reminiscent of similar artifacts from Kephala (Coleman 1977, Fig.5). Its face is in the shape of a rounded triangle and the nose is emphasized, while the head has a general inclination to the back producing an upturned face. At the back of the head there is a large horizontal notch or a trough. Several marble EC II folded arm figurines have the same characteristics of the head design and the same emphasis of the nose. Many Neolithic parallels can be found for the long neck of the Ayia Triada example—e.g. human figures made on a vessel from Tharrounia (Sampson 1993, Fig. 202) and some Ftelia examples (Sampson 2002, Figs. 145, 148). However, the shape of the back of the head, regardless of its intended use or meaning, is a rare element.

Traditionally, the White-on-Dark ware is placed at the beginning of the 5th millennium BC (Sampson 1984:239). However, the already mentioned single radiocarbon date from the cave gave evidence for the end of the 6th millennium. Nonetheless, most of the pottery from the cave seems date to the LN I b-II phases. Our White-on-Dark ware is characterized by a closed spherical bowl with the characteristic anthropomorphic handle, the typological features of which can be dated to an advanced phase of the LN. Other shapes include a hemispherical bowl, two straight sided bowls, one vessel that has vertical walls and three vessels with everted rims. The motifs include zigzag and wavy lines and concentric lozenges; however, multiple chevrons in many different arrangements seem to represent the most characteristic pattern. The shapes are characteristic of the Saliagos cultural stage at sites such as the Antiparos Cave (Mavridis 2009a), Akrotiri on Thera (Mavridis 2009b), Saliagos near Antiparos (Evans, Renfrew 1968, Fig. 35), and many others.

The decoration of the few examples from the cave is exclusively rectilinear. The multiple lozenges suggest complicated motifs. This motif is very well known from Saliagos (Evans, Renfrew 1968, Fig. 39:4, Fig. 49:5,9, Fig. 55,8,11,12 ), Kalythies on Rhodes (Sampson 1987, Fig. 57:626, Fig. 61:682, 683), and in a lesser extent from the Antiparos Cave and Akrotiri on Thera (Mavridis 2009a, Fig.6:14, 49, 89, 138, Mavridis 2009b, Figs. 14,15). Multiple chevrons constitute the most common decorative motif. This motif is found on
Saliagos (Evans and Renfrew 1968:Figs. 49-6, 33-5), Akrotiri on Thera (Sotirakopoulou 1999, Fig. 3:Ξ341; Mavridis 2009b, Fig. 14:45), south and eastern Aegean islands such as Daskalio cave on Kalymnos (Furness 1956, Fig. XIX, 11-12) or Tigani on Samos (e.g. Felsch 1988, Figs. 54, 74). Regarding the shapes of the White-on-Dark ware, there are fluctuations in the presence of certain types which seem to be of chronological importance (Sotirakopoulou 1999, 90-91; Mavridis 2009a, b). The well represented straight sided bowls at Ayia Triadha show a slight increase at the upper Saliagos layers (Evans and Renfrew 1968,37). At Akrotiri, spherical bowls and bowls with S-profiles, similar to the ones found in Ayia Triadha by Sampson can be considered a characteristic of the sites which are later in date than the Saliagos settlement (Sotirakopoulou 1999; Mavridis 2009b). The material from Aghia Triada seems to be close to the one from the Tas Cave where bowls with S profile and the ones with straight and flaring rims were found (Zachos 1999:153). The Tas Cave is usually considered to be later than Saliagos or even Grotta, where S-profile and rounded bowls have also been found (Hadjianastasiou 1988:17). This horizon should be dated to the period around the second half of the 5th millennium. Therefore, it seems that the White-on-Dark pottery of the Ayia Triadha cave features a late stage of this ware’s presence on the Aegean islands, at least in relation to the Cycladic sequence. However, these assumptions are inconclusive, since a very small number of sherds are excavated so far.

The FN/ LN II pottery from Ayia Triadha has features typical of the Attica-Kephala cultural horizon. It is similar, in broad terms, to the one found at Kephala on Kea (Coleman 1977, 9-12), the Kitsos Cave in Attica (Karali 1981, 349-371) and, Plakari in the Karystia (Keller 1982, 47-67), which is located just a few kilometers south of the cave. The typical FN/LNII pottery from Ayia Triadha includes pithoid vessels with strap handles and plastic rope-like decoration, tapering strap handles with a horn-like protrusion on top, red-slipped and burnished vessels of various but generally open shapes, straight-sided bowls with horizontal strap handles, and incised and pointillé decoration which is sometimes encrusted with white paste (Fig. 4:1-7). Finally, there is a small but interesting fragment decorated with a thick curved plastic band which has three incisions on its end which resemble either a human hand or an animal paw. Exact parallels for this piece exist at Kitsos Cave (Karali 1981, Fig. 248). Pithoid vessels with rope-like decoration are quite common in this period and can, for example, be found at the Kitsos Cave (Lambert 1981, Fig. 245), Kephala (Coleman 1977, 12), Lerna (Vitelli 2007, 226-227), Tharrounia (Sampson 1993, Figs. 158-161) and, recently, in the Schisto Cave at Keratsini (Mavridis 2008b; Mavridis et al. 2008). Horned strap handles are one of the defining features of the Attica-Kephala assemblages. The red-slipped and burnished pottery is another common Attica-Kephala occurrence with parallels on most sites dated to this period. Our examples are the most similar to the ones from Plakari in Karystia (Keller 1982, 47-67), not only in surface finish but in fabric as well. Finally, pottery with incised and incised
and pointillé decoration filled with white paste is known from the Kitsos cave (Lambert 1981, Pl. XXX), Klenia (Phelps 2004, Fig. 47:29-31), the Agora (Immerwahr 1971, Pl. 8), and Keratsini cave (Mavridis 2008b; Mavridis et al. 2008). At Kitsos this type of decoration is dated to the end of fifth or the very beginning of the fourth millennium BC by Lambert (1981, 279).

The EBA pottery forms a small but distinct group in the 2007 Ayia Triadha assemblage (Fig. 5:1-5). The 2008 field season changed this picture entirely since much material was found. Detailed study of the specific context is of great importance for understanding aspects of social identities expressed through material culture characteristics, in relevance to the analyses conducted for the EBA pottery of the Aghia Irini open air settlement on the island of Kea (see Wilson 1987, 1999) or of the material culture of EBA Cretan sites (Day, Wilson 2002). Several types of scientific analyses are in progress to help us understand the specific EBA context. The 2007 EBA pottery assemblage consists of characteristic fragments of sauceboats, closed bowls with incurving and thickened rims, large yellowish-buff-slipped jars or amphorae with wide strap or ribbon handles, and fine shallow open bowls or plates. There is one very small fragment of painted pottery (yellowish-red on white base) that could also be dated to the EBA period. The clay of the EBA pottery is fine and micaceous with few other inclusions. It appears that it can be dated to the EBA II (EH/EC II) and it bears distinct Helladic features, while EC ones were found during the 2008 excavation. The parallels for this pottery exist throughout the EBA II central and southern Greece (e.g. Lerna [Wiencke 2000], Ayia Irini [Wilson 1999], Rafina [Theocharis 1951-1954]) but it resembles the most the material dated to this period from other sites in the Karystia—e.g. Ayios Georgios, Pelagitissa, and Akri Rozos (unpublished material stored at the Archaeological Museum of Karystos).

![Fig. 5. EBA pottery.](image-url)

**CONCLUSIONS**

The extent of the excavations in 2007 was too restricted to allow any definite inferences. Nonetheless, some tentative and very preliminary interpretations are possible. First of all, we located in situ cultural layers, which was our original goal. This justified the continued work in the cave, which in 2008 brought to light very important finds. Trench 1, which did not produce any stratigraphic information, is still significant because all of the identifiable pottery extracted from it dates to the
Attica-Kephala phase. Beside the aforementioned feature, Trench 2 produced pottery dating to three distinct periods—LN, FN, and EBA. It has also yielded the earliest documented archaeological material in southern Euboea. This material (pottery) belongs likely to an advanced phase of the White-on-Dark ware in the Aegean. If the earliest pottery found in southern Euboea can be dated to the later part of the White-on-Dark phase and if this phase was mostly dominant in the southern part of the Cycladic zone (something that still needs to be conclusively confirmed), then it seems obvious that the bearers of the earliest southern Euboean Neolithic maintained extensive relations with the rest of the Aegean area at this time. Moreover, this poses some interesting questions about the place of origin of the earliest Karystian settlers. Whichever the case, it is likely that there was a reciprocal, two-way, process of contacts during this advanced phase of the LN (LNIb) between Euboea and the Aegean islands. The role of the eastern Aegean islands in this phase also needs to be better defined. The character of the cultural developments in southern Euboea from this earliest stage on is not yet very clear, especially since the next phase discernible in the archaeological evidence is clearly connected to the LN II period as found at sites in Attica, at Kephala on Kea, Strofilas and other sites on Andros, and Zas cave in Naxos. The stratigraphic sequence in Trench 2, restricted as it is, shows separation between layers that contain White-on-Dark wares and the ones above it, where mixed FN and EBA materials are present. The significance of this for establishing the chronological sequence in the cave will be further examined in combination with the 2008 evidence. It is important to note that the suggestions we offer in this paper should be regarded as hypotheses in need of further testing through continued work at the Ayia Triadha cave.

THE 2008 CAMPAIGN

The 2008 field campaign changed our perceptions on the prehistoric use of Ay. Triadha. The reason were a substantial stratigraphic sequence datable to the FN/LNII period and the unique finds dated to the EB II period. They are located in a small chamber situated south off the main entrance corridor. Unfortunately, by the time we have to conclude the 2008 season we were still not able to clarify the relationship between the LNI and II (FN) phases, since archaeological evidence dated to either of the phases was found in separate trenches.

The research at the Ayia Triadha cave has so far produced undisturbed occupation layer, which are atypical for the Neolithic period. Also, the EBA remains are not usually attested inside caves at least in mainland Greece (Mavridis et al. 2009). Furthermore, the presence of the White-on-Dark pottery that is a characteristic of the Cycladic Saliagos horizon is important since it represents the earliest known evidence from the area. Therefore, the Ay. Triadha cave represents a key site for understanding relations between different chronological phases and seafaring activities of the early Aegean populations. Systematic excavations of the Ayia Triadha cave will shed new light on the use and meaning of cave sites in the area, aspects of continuity,
material culture use and meaning, and its relations to the expression of social identities, since it is located in an area that lies at crossroads connecting mainland Greece, the Cyclades, and other parts of the Aegean. The important finds unearthed during the 2008 field season changed our excavation objectives towards a systematic exploration approach, which aims to incorporate all available analytical techniques in order to achieve the highest research standards that will in turn produce the best results. For example, a detailed radiocarbon and AMS dating program is in progress. There are also plans for applying clastic and chemical sediments dating (OSL and ESR) as well as hydration dating. Micro-morphological analysis of sediments is already underway in order to form a better idea about the formation processes and changing cave uses. Analysis of organic materials is also in progress as well as a systematic program of flotation in order to study all possible environmental parameters (e.g. seeds, charcoal, micro-fauna, etc.) together with phytolith and pollen analysis. Since the character and especially the provenance of our artifacts is of major importance in understanding production, circulation, and consumption strategies we plan also to incorporate petrographic and SEM analyses of pottery, chemical composition, micro-structure in relation to metal objects, chemical and other techniques related to the characterization of the obsidian provenance, use-ware analysis of lithic artifacts, etc. Undoubtedly, the Ay. Triadha cave is a veritable gold mine of data waiting to be excavated and analyzed.

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NOTE

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