

JUST A LONGBOAT RIDE AWAY

Maritime interaction in the southern Aegean Sea during the Final Neolithic Period

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ABSTRACT: In the last decade, abundant evidence for seafaring and interaction among Southern Aegean communities has been produced through the recovery of imported materials (mainly metals, lithics, and ceramics) in archaeological excavations dated to the Final Neolithic period (c 4th millennium BC). This article attempts to synthesise the available data on exchange networks, and to discuss the images of maritime interaction, namely the longboats depicted on FN rock carvings. It is suggested that during the 4th millennium BC maritime communication played an important role in the transfer of people, ideas and technologies. A contrast between closely interacting regions, comprised by both mainland and island areas (such as for example Attica and the Northern Cyclades), and long-range, lower intensity connections (for example between Attica and Crete) can be identified. Similar to the Early Bronze Age period, the capacity of a Final Neolithic community to provide enough men for a longboat crew would be crucial in long-distance maritime connections. The longboat could have been used in establishing social alliances among Final Neolithic communities and/or piracy and warfare.

KEYWORDS: Final Neolithic, Aegean maritime networks, prehistoric exchange, rock carvings, longboat

Introduction

The Final Neolithic, which dates roughly to the 4th millennium BC, was defined as a separate archaeological period as late as the 1970s¹. Until recently, this period was poorly understood in terms of its cultural characteristics (Pullen, 2011: 19) and it was thought to be a transitional period from the Neolithic to the Bronze Age, when metals started to be exploited more intensively and the Neolithic lifestyle centred around the Neolithic village gradually transformed to the proto-urban societies involved in trade and exchange associated with the Early Bronze Age². In the last decade, however, our knowledge of this period has greatly improved through several important studies discussing new evidence from Crete, the Cyclades, Euboea, Boeotia, Attica, the Saronic Gulf, the Peloponnese, Kythera and Antikythera (Figure 1)³. Moreover, the gap in absolute chronological data associated with the 4th millennium BC is slowly being filled (Figure 2).

¹ Renfrew (1972: 68-80). The term has caused debates in terms of its validity and chronological range, and Renfrew himself has recently revised it (2018). For a summary of the terminological debate on the Final Neolithic in the southern Aegean see Nazou (2014: 26-28).

² See Renfrew (2018) and Kotsakis (2018).

³ For Crete see Day et al (2005); Mentessana (2014); Papadatos and Tomkins (2014, 2013); Todaro (2013: 217-237); Tomkins (2014); Nowicki (2014). For the Cyclades see Televantou (2008, 2009, 2010, 2011, 2012,

It therefore seems that the label of this period as low visibility and transitional can no longer be sustained (Broodbank, 2000: 154). Instead, the Final Neolithic can now be highlighted as a dynamic period of interaction among different regions in the Southern Aegean⁴ (Figure 1). The connections seem to be strong in areas such as Attica, Southern Euboea, the Argosaronic Gulf and the Cyclades, where most distances can be covered with a small paddled canoe in one or two days without losing sight of land. The issue of long-distance travelling with longboats was considered improbable for the FN, until the discovery of longboats depicted on the rock-carvings of the settlement of Strofilas on Andros, corroborated by the identification of imported FN pottery from Attica, Southern Euboea or the Northern Cyclades at the settlement of Kephala Petras Siteias on Crete⁵.

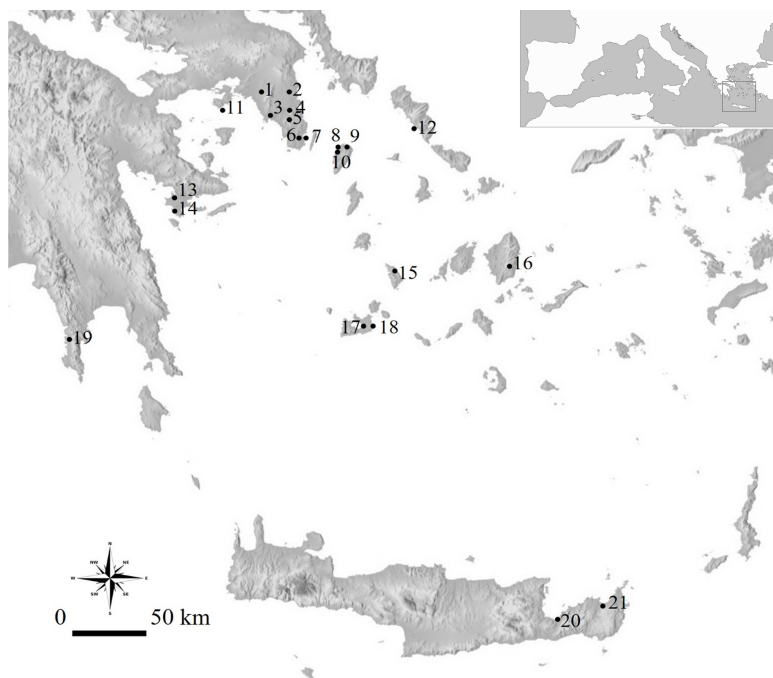


Figure 1 - Map of the southern Aegean (with inset showing the area's location in the Mediterranean Sea) showing sites discussed in the text 1. Athens Agora 2. Gialou 3. Kontra Gliate 4. Merenda 5. Ovriokastro 6. Kitsos Cave 7. Thorikos 8. Kea Kephala 9. Paouras 10. Ayia Irini 11. Cave of Euripides. 12. Strofilas 13. Franchthi 14. Halieis 15. Ayios Sostis 16. Zas Cave 17. Sta Nychia 18. Demenagaki 19. Alepotrypa 20. Chrysokamino 21. Kephala Petras. (Derived from NASA World Wind map, with additions by the author and inset map from Wiki Commons).

2013); Katsarou-Tzeveleki and Schilardi (2008); Sotirakopoulou (2008). For Euboea see Mavridis and Tancosić (2009); Tancosić and Chidioglou (2010); Cullen et al (2013). For Boeotia see Sampson (2008: 235-284). For Attica see Douni et al (2015); Kakavogianni et al (2008); Kakavogianni et al (2016); Kakavogianni and Douni (2009); Nazou (2014) and Steinhauer (2009). For the Saronic Gulf see Mari (2007) and Whitbread and Mari (2014). For the Peloponnese see Pullen (2011: 17-35); Zachos (2008). For Kythera see Broodbank and Kiriati (2007) and for Antikythera Bevan and Conolly (2013: 56-65).

⁴ For a previous discussion of the FN in Attica and its surrounding islands see Nazou (2010).

⁵ See Televantou (2008) and Papadatos and Tomkins (2013).

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Site Name & Reference	M	T	Lab. no.	Cal BC
Kitsos Cave, Attica Lambert, 1981: 101; Johnson, 1999: 324	C	R	Gif-1280 Gif-1610	4610-3970 4580-3710
Merenda, Attica Kakavogianni et al, 2016: 443	AB AT AB AB	R	Lyon-7184 Lyon-7910 Lyon-7185 Lyon-7186	3495-3348 3362-3125 3362-3102 3262-2916
Tsepi, Attica Facorellis, 2016: 383-384	C	R	GrA-59798	3635-3520
Kephala, Kea Coleman, 1977: 110; Johnson, 1999: 324	S	R	P-1280	3710-3380
Strofilas, Andros Liritzis, 2010: 1	O SW	OH L	n/a	3520±540 3400±200
Zas Cave, Naxos Facorellis, 2013: 69	W S G	R	OxA-7471 OxA-7599 OxA-7407	3330-2920 4229-3971 4236-3991
Markiani, Amorgos Housley, 2006	B	R	OxA-3297 OxA-4003	3400-2700 3130-2880
Sarakenos Cave, Boeotia Sampson, 2008: 48	C	R	DEM-672	3757-3640
Halieis, Argolid Pullen, 2000: 184; Johnson, 1999: 234	Sh	R	P-1379	4040-3710
Franchthi Cave, Argolid Jacobsen and Farrand, 1987: Plate 71; Farrand, 2000: 76-77, Table 6.1.; Johnson, 1999: 324	C	R	P-1659 P-1660	4220-3780 4240-3960
Ayios Dimitrios, Triphyllia Zachos 1987, 305; Johnson, 1999: 324	C	R	HD-10163	4330-3990
Kouveleiki Cave A, Laconia Facorellis, 2013: 69-70	C	R	DEM-263 DEM-262	4370-3370 5220-3820
Kouveleiki Cave B, Laconia Facorellis, 2013: 70-71	B C C C	R	DEM-604 DEM-397 DEM-396 DEM-398	3960-3670 4240-3800 4232-3979 4321-4000
Agia Triada, Euboea Maniatis et al, 2016: 50	C	R	DEM-2095 Lyon-7637	3978-3801 3966-3710
Skoteini Cave, Euboea Sampson, 1993: 285; Johnson, 1999: 324	C	R	DEM 93-104	3691-3389
Knossos, Crete Tomkins, 2007: 38, 44	C	R	BM-716 OxA-13420	4050-3500 3360-3020

Figure 2 - Table of FN radiocarbon dates for the Southern Aegean.

(M=Material, T=Technique, C=Charcoal, R=Radiocarbon, AB=Animal Bone, AT=Animal Teeth, S=Seed, Sh=Shell, O=Obsidian, OH=Obsidian Hydration, SW=Stone Wall, L=Luminescence, W=Wood, G=Grain, B=Bone)

Seafaring connections among FN mining and metallurgical communities

In the discussion of FN maritime interaction, metals hold a central place, since specialised knowledge is required for practising metallurgy. Metal objects are rare compared to other types of material culture and they are usually considered as valuable items exchanged over considerable distances. In order to reconstruct the complex network of miners, metallurgists, traders and consumers, the archaeological evidence for the production and exchange of metals in the FN period is discussed below.

As far as the metal sources are concerned, it is very likely that the Lavrion mines were exploited for silver, lead, and most likely also copper (Gale et al, 2009; Georgakopoulou, 2005, 44). Mine 3 at Thorikos is the largest prehistoric mine in the Southern Aegean. The beginning of its exploitation was dated to the EB II period by the excavators (Spitaels, 1984: 171). It has recently been re-examined for possible exploitation during the FN-EB I, due to the presence of a substantial quantity of FN-EB I pottery excavated from the mine, which could be associated with open-pit mining before the gallery was dug into the mountain in the EB II period (Nazou, 2014: 241-243). Another mine in eastern Attica where FN pottery has been found is Ovriokastro (Kakavogiannis and Kakavogianni, 2001: 56-57). On Siphnos, some FN sherds near the mines of Ayios Sostis could indicate early extraction (Broodbank, 2000: 80; Gropengiesser, 1986, 1987).

Though archaeological evidence for the (lack of) control over access to the mines is scarce in this early stage, if the mining of metals involved processes similar to stone and/or obsidian quarrying, it is likely that the mines would not have been controlled.⁶ Communities living near the mines would benefit from their location, but people may have travelled across the Southern Aegean to obtain ore and/or metallurgical knowledge. In such a process, access to coastal mining sites such as Thorikos and Ayios Sostis would have been easy by boat. Inland mining sites, for example in the Lavrion mountains, would be connected through overland trading routes. Though most known southern Aegean mines are located next or near the sea, FN metallurgical communities such as, for example, Kephala on Kea and Chrysokamino and Kephala Petras on Crete, are not located near the mines; this is suggestive of a chain of connections and/or exchange between miners and communities practicing metallurgical activities. To investigate the exact processes of this metallurgical network requires careful analytical studies and consideration of micro-provenancing in order to assess the capacity of these early communities to transfer the ore by sea and by land⁷. But it is equally important to pay attention to the numbers, types and contexts of metal finds. For example, Sherratt (2007) has highlighted the increase in the actual numbers of Late and Final Neolithic metal finds, as well as in the range of types, especially towards the end of the Neolithic. Contrary to what was thought by earlier scholarship, she suggests that by the Final Neolithic metal use was well established among Aegean communities (ibid: 247-248). She also notes that the deposition of metals in cave contexts is a widespread social practice, much different than the association of metal objects with discrete graves in the Early Bronze Age II period.

Recent archaeological evidence from Attica highlight this region as an important centre of southern Aegean metallurgy; FN litharge and copper slag has been recovered by rescue

⁶ Torrence (1982) has convincingly shown that access to the obsidian quarries on Melos was not restricted during the Neolithic.

⁷ A good example for the Early Cycladic period is Georgakopoulou et al's (2011) study of the copper slag heaps from Seriphos.

excavations at Merenda in securely dated deposits (Kakavogianni et al, 2016: 445-447). Litharge has also been excavated from FN deposits at the settlement of Gialou at Spata (Douni et al, 2015). These metallurgical activities are of small scale and took place within or in the immediate vicinity of the settlements.

The settlements of Kephala and Paouras on the nearby island of Kea have also yielded important evidence for copper metallurgy (Coleman, 1977: 113-114; Georgakopoulou et al, 2016). It is yet unclear whether the ore was transferred to Kea from Lavrion. To the west of Attica, the island of Salamis on the Saronic Gulf has access to finished metal artefacts and a FN silver pendant and its suspension loop have been reported from the cave of Euripides (Demakopoulou, 1998: 64; Lolos, 1997: 299, 320).

Two sites in the Cyclades stand out in terms of their wealth in finished metal artefacts. Thirty-three copper artefacts as well as a gold bead are reported from Strofilas on Andros but no evidence for metallurgical activities has yet been reported from the site (Televantou, 2009: 135; 2010: 121). In a recent publication on the metal finds from Late Neolithic Ftelia on Mykonos, Maxwell et al suggest that the most likely source for gold finds in the Neolithic Aegean is the Balkans; however, they do not exclude the possibility of exploitation of local gold sources in the Aegean, though no archaeological evidence for gold mining has been recovered (2018: 166-168). In the central Cyclades, the FN strata of Zas Cave on Naxos have produced 11 copper artefacts of a wide repertoire, some of which have been linked through analysis to the sources of Lavrion (Zachos, 2007: 173, 180).

In the Peloponnese, at the cave of Alepotrypa, the excavated copper masses indicate that some metalworking or metallurgical activities were taking place at the site, which has also produced one of the largest collections of FN copper tools and daggers so far (Papathanassopoulos, 2011: 46-47, 153). The excavated silver objects have been sampled for lead isotope analysis, which points to a Lavrion source (Papathanassopoulos, 1996: 227-228; Kayafa, 1999: 103-104, 450). The large spherical tools from iron ore are a unique FN find (Papathanassopoulos, 2011: 103-108). Though the exact provenance of the metal artefacts deserves further investigation, the large variety of metal objects at Alepotrypa suggests that a diversified metal industry, which most likely included inter-regional maritime interaction, was already in action during the FN.

It is reasonable to suggest that FN Cretan silver finds from tombs and burial sites near or on the northern and southern coasts of the island should be associated with the sources of Lavrion and/or the island of Siphnos (Vassilakis, 2008: 77). The data from Eastern Crete is particularly intriguing in terms of the existence of a long-distance maritime link among Cretan 'gateway' communities (ie regional entrepôts) such as Kephala Petras and eastern Attica and/or Kea. This process would secure preferential access of the Kephala Petras community to metals and metallurgical knowledge, creating a monopoly in the Siteia region (Tomkins, 2014: 357). Analytical studies have suggested that the ores smelted at Kephala Petras were from various copper deposits, thus raising the possibility of access of Kephala Petras to ore from more than one mine (Catapotis et al, 2011: 70). The same picture emerges from the activity-specific coastal site of Chrysokamino on the Gulf of Mirabello, where copper ores from Lavrion, Kythnos and Seriphos were also transported by boat to the workshop (Stos and Gale, 2006).

To sum up, the mining and metallurgical evidence discussed above is suggestive of short and long-distance maritime exchange networks of metal technologies and artefacts in the FN southern Aegean. It can be suggested that ores from Lavrion and the Cycladic islands

were being transferred to the Peloponnese and Crete in order to be processed there by communities practising metallurgy and in the case of Kephala Petras there is evidence for efforts to benefit from and/or restrict access to maritime exchange of ores. The metal exchange network was only one aspect of the multi-directional maritime network among FN communities in the southern Aegean; several other kinds of material exchanges are discussed below.

The well-established stone tool maritime network

In earlier studies of FN stone tool industries, much focus was placed on Melian obsidian; this volcanic material from sources at Sta Nychia and Demenagaki on the island of Melos is not only one of the most frequently recurring artefacts in regional surveys and excavations in the Southern Aegean but also provides concrete evidence for prehistoric seafaring and exchange. It is generally accepted that during the FN there was open access to Melian obsidian, achieved either through special voyages or as one function of a trip where other activities such as fishing were performed, with a down-the-line reciprocal exchange taking place (Torrence, 1982: 220).

The FN is a period of technological 'de-specialisation' in the working of obsidian, and more people were involved in tool manufacture in the Southern Aegean than in previous Neolithic periods through the technological innovation of blade manufacture by indirect percussion as opposed to pressure flaking (Carter, 1998: 19). It seems, however, as in the case of metals, that some sites benefited from and/or tried to control obsidian production and exchange. For example, the picture that seems to emerge from the Hermionid is that some sites are more extensively involved in obsidian procurement and processing than others (Pullen, 2000: 179). At Halieis, while obsidian tools outnumber by far flint or chert tools from local materials available in the Hermionid, the obsidian was not worked locally at any scale and the assemblage is heavily dominated by blade production (ibid: 171-179). The same is observed at FN Franchthi and Alepotrypa, where obsidian arrives at the site in an advanced stage of the *chaîne opératoire* (Kourtesi-Philippakis, 2011: 81; Perlès, 2004: 138). On Crete, the northern part of the island was more open to the obsidian exchange network, with limited penetration into the south, where local chert resources were exploited (Georgiadis, 2008: 102); an exception is the Vrokastro region (Hayden, 2003: 42). Kephala Petras again stands out, as it seems to have privileged access to obsidian in raw nodule form (Papadatos and Tomkins, 2014: 335). Even at the remote island of Antikythera, obsidian is present during the FN; it was entering the island in a modified state, and was recycled and re-used until repair was no longer possible. Local tools from chert, basalt and quartz were also used in fewer quantities (Bevan and Conolly, 2013: 56-58).

FN chipped stone tools from obsidian from Antiparos and Yali and other materials, such as quartz, chert and flint, are understudied, but this has slowly changed in the last decade (Georgiadis, 2008). Yali obsidian was imported to the Cyclades, Crete and the Peloponnese; it is suggested that the access to the source was controlled as opposed to Melian obsidian (ibid: 107, Figure 2, 112). Obsidian from Antiparos was imported to Crete (ibid: 104, Figure 1). In spite of their heaviness, andesitic millstones were also exchanged by boat in the FN (Runnels, 1985: 33-34). In Attica, andesitic millstones from the east coast of Aegina were imported in the Agora of Athens and at the Kitsos Cave, high up in the mountains of Lavrion (ibid; Cohen and Runnels, 1981). The occurrence of a larger number of andesitic and other volcanic tools at Alepotrypa in the Peloponnese is indicative of the high participation of this community in maritime networks (Katsipanou-Margeli, 2011: 94-119).

Stroulia (2010) makes the interesting point that the small number of andesite ground tools at Franchthi were imported to the site through an exchange system that did not aim at satisfying specific technical needs (which could be covered by local ground tools); instead, she suggests that the exchange network of andesite tools existed in order to enhance contact among groups throughout the Peloponnese and beyond (ibid: 126-127).

To conclude, there is already sufficient evidence to suggest that some sites in the southern Aegean received unworked stone cores and have a degree of a reduction sequence, while others only receive finished products. A detailed yet synthetic study of FN Southern Aegean stone tool networks inclusive of different stone tool types, which would reveal whether different materials and tool types cover a range of site needs, remains to be pursued.

Maritime ceramic exchange and its impact on technological traditions

Ceramic exchange in the FN Southern Aegean is well attested, and our knowledge of regional and inter-regional exchange has been increasing in the last decade. While some fabric recipes are widely shared in regions with the same geological characteristics, creating a difficulty in distinguishing site-specific fabrics without detailed analytical studies (eg the case of Attica, southern Euboea and the northern Cycladic islands), other fabrics easily stand out and provide good evidence for ceramic exchange. Volcanic fabrics, most likely from the Saronic Gulf islands, occur at Kontra Gliate, the Agora and the Kitsos Cave (Nazou, 2014: 299). Several imports from Aegina have been identified in the Cave of Euripides in Salamis (Whitbread and Mari, 2014: 86-87). The production centre of the talc fabric in the Cyclades has been suggested to be Siphnos, and talc ware was imported to FN Kephala and Ayia Irini on Kea (Coleman, 1977: 9; Wilson, 1999: 18 and Broodbank, 2007: 126). However, Palamari on Skyros and Poros in the Saronic Gulf have also been highlighted as possible production centres, something that complicates talc ware circulation in the Southern Aegean (Hilditch, 2013: 474; Sotirakopoulou, 2016: 15-17; Konsolaki-Giannopoulou, 2007: 128 and Parlama, 1984: 92).

On Crete, pottery circulated across the north and southern coasts of the island via overland routes during the FN (Day et al, 2005: 182-183). The most importance evidence on the impact of long-distance ceramic exchange on local technological traditions, which also suggests a developed process of transfer of technological knowledge, is the FN IV non-Cretan style vessels made in the local Grog fabric at Kephala Petras (Papadatos and Tomkins, 2013: 357-359, Figure 5). It is suggested that pottery was an important part of social practices and group identity; the replication of non-Cretan shapes into local fabrics could represent an effort to replicate and/or transform exotic material culture. Alternatively, we may be seeing the presence of non-Cretan potters who use local materials to produce the shapes they are familiar with from the Attic-Cycladic region. This possibility could be further explored through direct comparisons of pottery-making techniques between the different regions.

The depiction of longboats on the FN Strofilas rock carvings

Broodbank has long highlighted the social power and prestige acquired by the Early Cycladic communities that could spare enough men to crew a longboat (2000: 247-275; 2013: 327-329). Based on the study of iconography of boat depictions on the so-called “frying pans” of the Early Cycladic II period, as well as ethnographic parallels from Maori canoes in the Pacific, he has suggested the number of 25 people as the minimum crew for a

longboat (1989: 329). Thorough demographic calculations were necessary in order to suggest that most communities in the Cycladic islands during the Early Bronze Age were small in size and could not afford to spare men for a longboat crew; only the largest villages or alliances of several communities could engage in longboat activity (2000: 256). The operation of longboats has been argued to be important for long-distance exchange in the southern Aegean also during the FN (Papadatos and Tomkins, 2014: 337-339). Moreover, the rock carvings from FN Strofilas suggest rituals associated with longboat activity. The site, whose size is estimated to minimum 2 hectares, is one of the largest investigated FN settlements in the southern Aegean (Televantou, 2008: 44). The preserved fortifications are impressive, indicating central planning and the ability to mobilise significant manpower (ibid). Similarly, the apsidal and rectangular houses are well-built and with several phases of construction, indicating a prosperous and long-lived community. The contrast with the short-lived settlement of Kephala on nearby northern Kea is evident. Kephala preserves a much more modest architecture and was only inhabited for a century or so; people most likely decided to leave and settle at a more favourable location (Coleman, 1977: 111).

Among the impressive finds from Strofilas, the rock carvings stand out in terms of their abundance and unique state of preservation. They are preserved in three main areas: between the terrace wall and the fortification wall, along the fortification wall leading to the entrance of the settlement and inside the settlement at a large hall or 'sanctuary' (ibid: 127). A few rock carvings are also preserved in other buildings of the settlement, such as Building C (ibid: 125). A possible interpretation for the location of the rock carvings outside and at the entrance of the settlement may be related with an effort to reaffirm communal identity to the inhabitants of Strofilas and also to display its power and prestige to visitors.

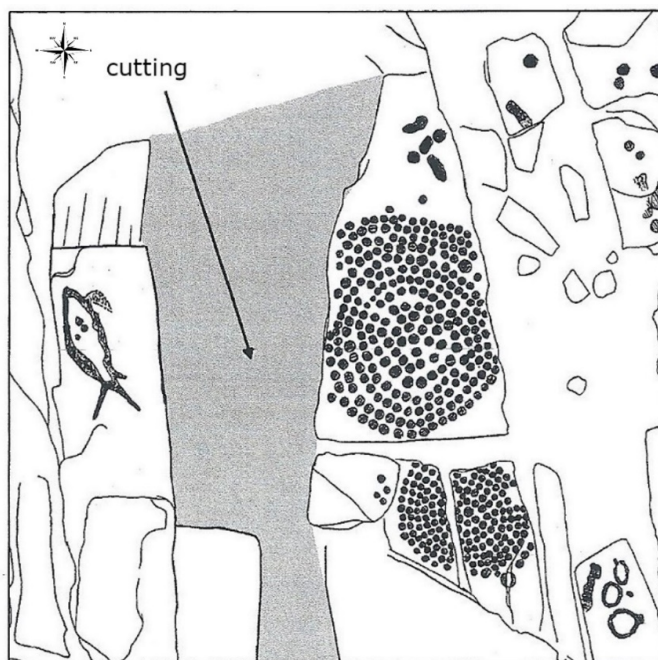


Figure 3 – Rock carvings from the floor of the 'sanctuary' of Strofilas (after Televantou, 2009, Table 89 α-β with orientation symbol and translations from Greek by the author).

The Strofilas rock carvings elements represented along the fortification include animal husbandry, hunting of wild animals (deer, wolves, jackals) and maritime activities (navigation, fishing and the loading of animals into boats). Bodily parts such as human footprints, pubic triangles and the phallus are also present (Televantou, 2012: 112). The naturalistic motifs are combined with pecked spirals and representations of ring idols (Televantou, 2008: 47). Within the settlement, a central enclosed hall, which is referred to as a possible sanctuary, is divided into two distinct spaces. The smaller, more elevated space has a large circular construction in the middle and a stone bench, whereas the larger lower space preserves a large rock-art composition around a large oblong cutting in the floor, where organic substances may have been burned (ibid: 48). There were also smaller cavities, perhaps for offerings, around the cutting. The rock-art composition (Figures 3 and 4) comprises pecked spirals and other motifs, such as a large fish, boats, the foot sole, and the ring idol (ibid: 49).

It is tempting to compare and contrast the Strofilas rock carvings with other rock carvings created by seafaring communities worldwide. An exhaustive discussion cannot be offered here, but some examples are very similar in the depiction of maritime activities. The example of Late Neolithic Malta is especially relevant. Grima's insightful analysis of the Malta monuments within the islands' landscape highlights the performative elements of Malta's megalithic architecture and offers new insights into the relief carvings of the so-called "temples" (Grima, 2005). Similarities of the Maltese rock carvings to Strofilas are abundant. Low relief panels at Malta also represent animals, the sea and fish, and each representation is grouped separately in a meaningful order (Figure 5) (ibid: 228-232). Another similarity is technique: the pitted or drilled holes or pecked decoration is used to create spirals, which most likely represent the sea (Grima, 2001: 54; Televantou, 2008, 47). Finally, the burning of organic substances is also documented at Malta, perhaps as part of a ceremony (Grima, 2001: 62).

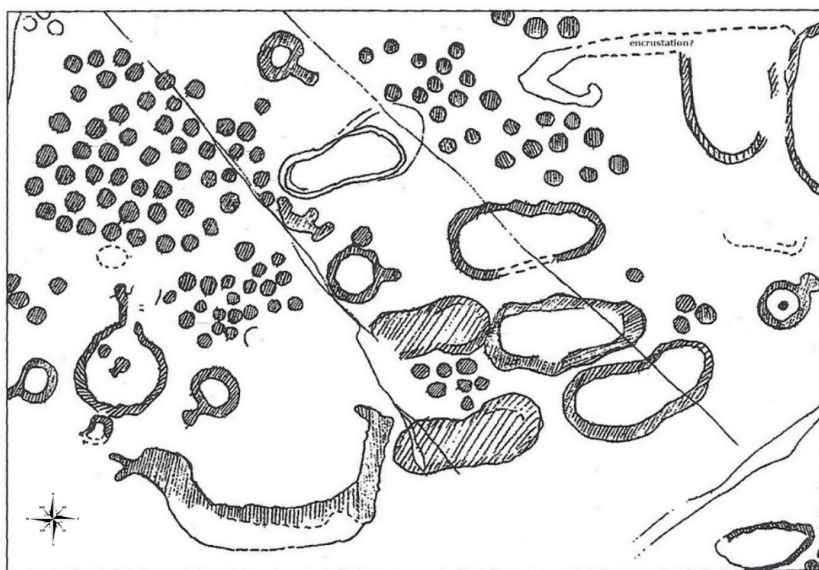


Figure 4 - Rock- carvings from the floor of the 'sanctuary' of Strofilas (after Televantou 2009, Table 90 α-β with orientation symbol and translations from Greek by the author).

Outside the Mediterranean, in Sweden, at the site of Järrestad near the Baltic coast, there are rock carvings of boats, spirals and foot soles (Figure 6) (Coles, 1999). Their chronology is uncertain; some scholars suggest a date in the Bronze Age while others argue that they should be dated to the Iron Age (Coles 1999, 178-179; Scoglund, 2013). Coles makes a convincing interpretation of the Järrestad carving as a single scene depicting boats associated with the coast (or the sea) and their structural opposite, the foot sole, symbolising inland space (Coles, 1999: 184). It is possible that the combination or juxtaposition of boats with the foot soles may be associated with the experience of seafaring and island hopping, which is a linear succession of terrestrial preparation, embarkation on one shore, the maritime crossing, and disembarkation on another shore (Grima, 2005: 247). More specifically, foot soles may be associated with the experience of stepping on the sand at the beach. In other rock carvings from sites in Sweden such as Aspeberget, and especially Tumlshed, which has recently been dated to the late Stone Age, the boat seems to be among the most common motifs and central to the cosmology of these early maritime communities (Cabak Rédei et al, 2019; Schulz Paulson et al, 2019).

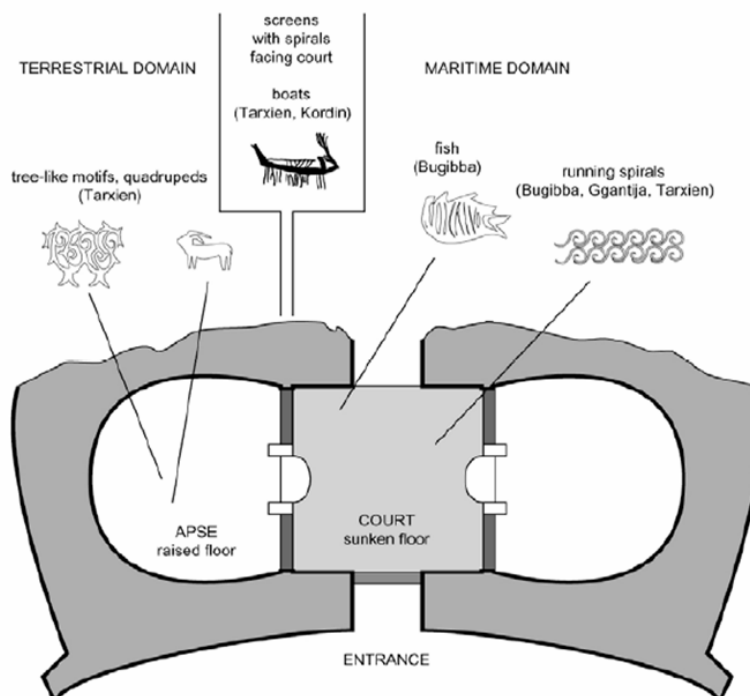


Figure 5 - Schematic plan of a Maltese temple structure showing location of various motifs from different sites (after Grima, 2001: 60, Figure 6).



Figure 6 – Rock carvings at Järrestad depicting boats, the spiral and footsoles (Rubbing: Swedish Rock Art Research Archives/Österlens museum, 2008. Source: Swedish Rock Art Research Archives id: 276, also illustrated in Skoglund 2013: 690, Figure 4).

In order to make convincing arguments on the meaning and activities that may have been associated with the Strofilas rock carvings one must await full publication of the finds. Moreover, each rock carving discussed above should be placed within the context of the archaeological finds associated with it. However, one can already highlight that in the Aegean we lack megalithic monuments similar to these of Malta; the Maltese communities made great efforts to embody the islandscape in monumental architectural forms. The location of the Strofilas rock carvings on the fortifications of the settlement and the central hall suggest a communal use of the rock carvings in the settlement, perhaps in public ceremonies, and this may be a further similarity to communal rituals associated with the sea at Malta.

Knapp has suggested that islanders attempt to establish a specific social identity revolving around issues of competition and power within an insular context (2007: 43) and he also argues that “the possession or use of seafaring craft... may well have conferred prestige or status on their owners” (ibid: 46). The Strofilas rock carvings most likely highlight the importance of the longboat in seafaring in the southern Aegean during the FN; it is by far the most recurrent symbol in the rock carvings (Televantou, 2018: 45).

Perhaps the most controversial issue of the rock carvings at Strofilas is the interpretation of the depictions of ships in terms of FN boat technology. From the available evidence we can suggest with caution that the Strofilas rock carvings could indicate the existence of the longboat already from these early times. Their schematic representation is reminiscent of

Maori war canoes (*waka tau*), consisting of a main hull formed from a single hollowed-out log, along with a carved upright head and tailboard (Figure 7) (McGrail, 2001: 322-324). The tools needed to build this boat would be available in the Neolithic period (ibid: 322-323). The repetition of the boat in the rock carvings is most likely related to its use as a recurrent symbolic element in the compositions rather than the existence of a longboat fleet. As discussed above, Broodbank has estimated that EBA communities were small and could only afford to spare men for the crew of one longboat (2000: 256); this would most likely be valid for the FN. Still, from the number of representations of the longboat at Strofilas it is safe to conclude its importance in community rituals and identity, and perhaps especially to specific groups within the community who were involved in maritime activity.

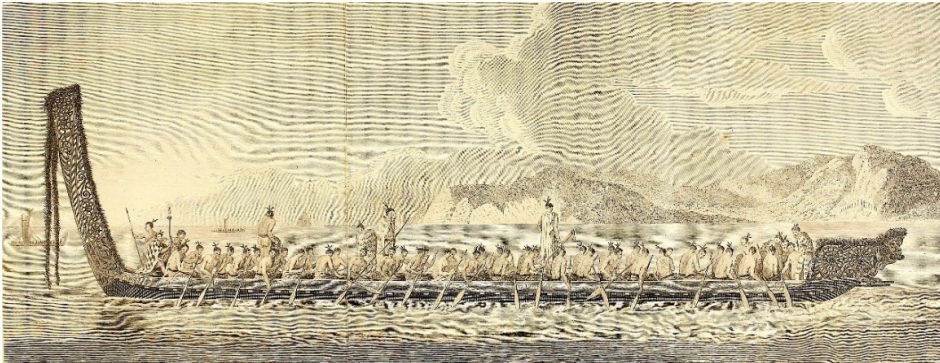


Figure 7 - Drawing of a traditional waka, 1773. (Wiki Commons).⁸

Conclusions

This article synthesised the archaeological evidence from the southern Aegean in order to reconstruct the intensity and nature of maritime interaction of Final Neolithic communities. A contrast between closely interacting regions, comprised by both mainland and island areas (such as for example Attica and the Northern Cyclades), and long-range, lower intensity connections (for example among Attica and Crete) can be identified. In this pattern the site of Kephala Petras is outstanding in terms of the intensity of long-range connections with the Attic/Cycladic region. The current data suggests that closely interacting regions shared common technologies; technological traditions were most likely diffused through inter-village marriages, which could be the result of social alliances, but also raids. Broodbank has suggested that the association between female genitals and longboats on Cycladic frying pans could be indicative of raiding or long-range navigation and biological reproduction or sexual gratification (Broodbank, 2000: 253). For the LN-FN there is also evidence for endogamy from Stavropodi's bone study at Tharrounia, reminding us the necessity to broaden gene pools for the physical well-being of these communities (Stavropodi, 1993). Together with people, artefacts travelling further away, being products of different technological traditions could have been used on board, or exchanged and consumed as exotica. The case of Kephala Petras is of course an exception;

⁸[https://en.wikipedia.org/wiki/Waka_\(canoe\)#/media/File:An_account_of_the_voyages_undertaken_by_the_order_of_His_present_Majesty_for_making_discoveries_in_the_Southern_Hemisphere,_and_successively_performed_by_Commodore_Byron,_Captain_Wallis,_Captain_\(14796336363\).jpg](https://en.wikipedia.org/wiki/Waka_(canoe)#/media/File:An_account_of_the_voyages_undertaken_by_the_order_of_His_present_Majesty_for_making_discoveries_in_the_Southern_Hemisphere,_and_successively_performed_by_Commodore_Byron,_Captain_Wallis,_Captain_(14796336363).jpg)

an argument for the movement of potters, who transferred their non-Cretan pot-making traditions into the Kephala Petras repertoire, can be made with the existing data.

After presenting and discussing archaeological evidence, it has become evident that during the 4th millennium BC maritime communication played an important role in the transfer of materials, knowledge and technologies. There is abundant evidence for interaction among Southern Aegean communities through the recovery of imported materials (mainly metals, lithics, and ceramics) in archaeological excavations. This attempt to understand how maritime interaction contributed to a sharing of technologies and lifestyles among FN communities showed the complex web of interaction among people, materials and ideas that is so characteristic of Mediterranean island communities.

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