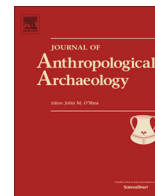




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Middle Pleistocene sea-crossings in the eastern Mediterranean?

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ABSTRACT

Lower and Middle Palaeolithic artifacts on Greek islands separated from the mainland in the Middle and Upper Pleistocene may be proxy evidence for maritime activity in the eastern Mediterranean. Four hypotheses are connected with this topic. The first is the presence of archaic hominins on the islands in the Palaeolithic, and the second is that some of the islands were separated from the mainland when hominins reached them. A third hypothesis is that archaic hominin technological and cognitive capabilities were sufficient for the fabrication of watercraft. Finally, the required wayfinding skills for open sea-crossings were within the purview of early humans. Our review of the archaeological, experimental, ethno-historical, and theoretical evidence leads us to conclude that there is no a priori reason to reject the first two hypotheses in the absence of more targeted archaeological surveys on the islands, and thus the latter two hypotheses should be tested by future research.

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1. Introduction

The possibility that humans reached the Mediterranean islands in the Palaeolithic has been the subject of discussion for decades (e.g., Cherry, 1981, 1990; Bednarik, 1999b; Broodbank, 2006; Simmons, 2014). Until recently, the consensus has been that seafaring—narrowly defined—did not emerge until the Terminal Pleistocene, ca. 12,000 BP (Broodbank, 2006, 2013: 148–156; Ammerman, 2010; Ammerman, 2013: 9–30), a consensus challenged, at least for the Greek islands, by the discovery of early Palaeolithic stone tools on Alonnisos in the Northern Sporades (Panagopoulou et al., 2001), Gavdos and Crete in the southern Aegean (Mortensen, 2008; Kopaka and Matzanas, 2009; Strasser et al., 2010, 2011; Runnels, 2014; Runnels et al., 2014a, 2014b), the western Ionian islands of Kephallonia and Zakynthos (Kavvadias, 1984; Tourloukis, 2010; Ferentinos et al., 2012), and Melos and Naxos in the Cyclades (Chelidonio, 2001; Carter et al., 2014).

If one assumes that some of these islands were separated from the mainland during much if not all of the Pleistocene, Palaeolithic hominins would have made open sea-crossings to reach them. These recent Palaeolithic discoveries have suggested to some scholars that maritime activity in the Mediterranean began in the Middle Pleistocene (Bednarik, 1999b, 2001, 2003, 2014;

Simmons, 2014: 203–212). Nevertheless, the distances to be crossed are difficult to calculate, ranging from as little as 5 to as much 30 or 40 km (Ferentinos et al., 2012; Simmons, 2014: 63, table 3.2), and near-shore islands may have been extensions of mainland home ranges, visited perhaps as part of a subsistence strategy that included aquatic resources in coastal environments. For some scholars, this “triggered a slight ‘stretching’ of behaviour” (Broodbank, 2006: 205), but for others the suspicion is that deep-water ‘oceanic’ islands required the use of watercraft to reach them (Runnels, 2014).

The evidence for Palaeolithic sites on the Greek islands, and the degree of separation of these islands from the mainland, have been discussed elsewhere (e.g., Broodbank, 2014; Leppard, 2014; Runnels, 2014; Simmons, 2014), and here, for purposes of discussion, we accept as working hypotheses that there are Palaeolithic sites on the islands, and that some of the islands may have required watercraft to reach them. From this, other hypotheses emerge. Were archaic hominins in possession of cognitive and technological abilities sufficient for the construction of watercraft and the planning of open sea-crossings that, amongst other actions, would have required at least rudimentary wayfinding or navigational skills? Whilst some scholars hold that these abilities are manifested only by anatomically modern humans (AMH) ca. 45–35,000 BP (e.g., Davidson and Noble, 1992; Leppard, 2015), the hypothesis that these abilities were present amongst pre-*sapiens* hominins is manifestly speculative. To develop this hypothesis, we draw on experimental evidence for tool-making and cognition, ethno-historical data on the construction and use of watercraft,

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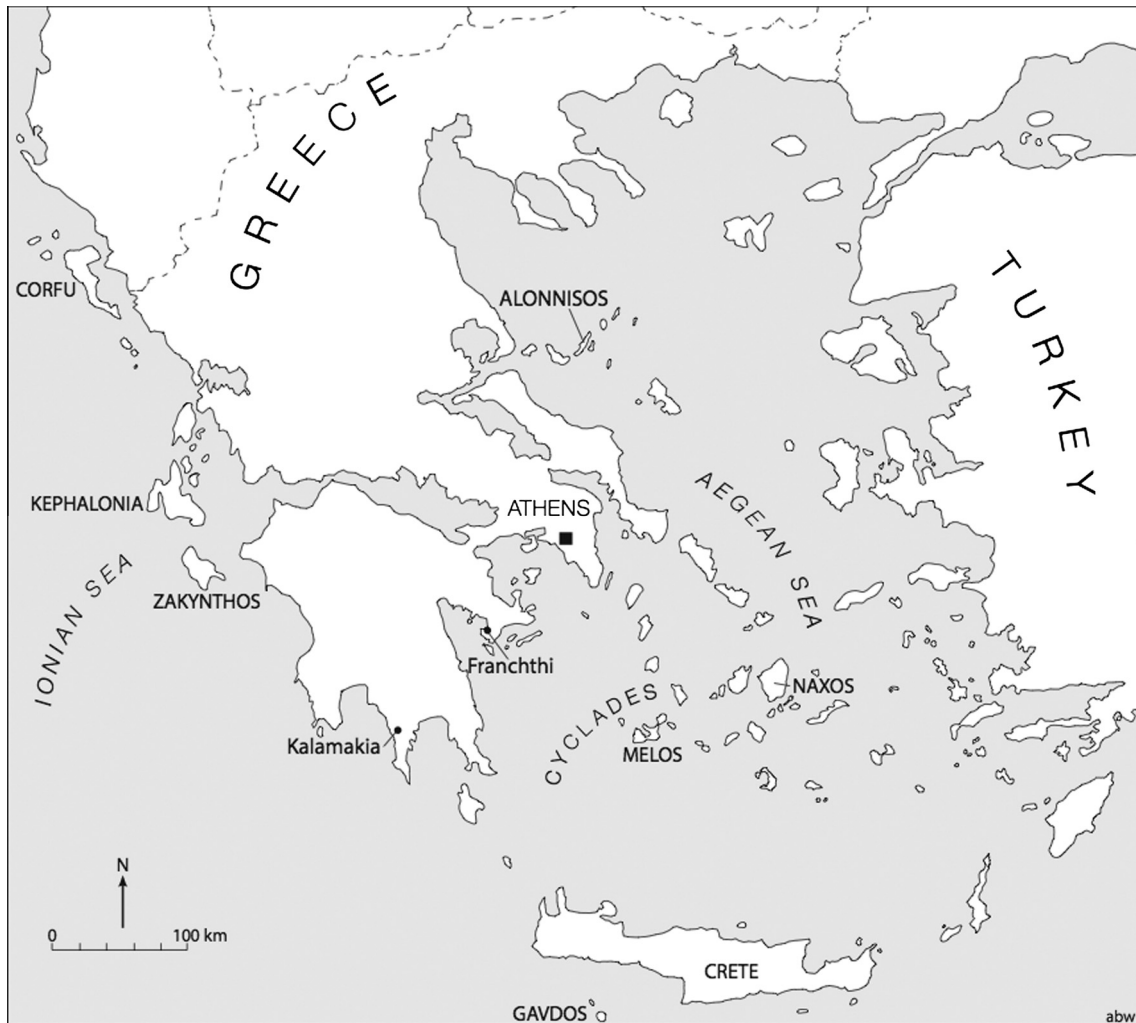


Fig. 1. Map of the Aegean showing places mentioned in the text (Map: Al B. Wesolowsky).

and theoretical considerations of archaic hominin cognitive abilities. Such speculative hypothesis-building is fraught with uncertainties, and here we do not specify which hominin species were involved, nor do we attempt to address the timing of the putative sea-crossings beyond the limits of the ‘Middle Pleistocene’, ca. 790–130,000 BP. Even the terminology applied to maritime activity is vexed (Broodbank, 2006: 200; Simmons, 2014: 205), and we have selected the term ‘sea-crossing’ to refer to the construction of watercraft, wayfinding, and planned efforts to reach offshore islands. Our focus is on the Greek islands (Fig. 1), but our findings may be applicable to the Mediterranean as a whole.

2. Coastal resources and maritime adaptations

The first question must be whether there is evidence for the exploitation of aquatic (marine and freshwater) environments by archaic hominins. It appears that there is a long history of such behaviour (e.g., Bailey and Carrion, 2008). The earliest evidence comes from Olduvai Gorge in East Africa during the Early Pleistocene, ca. 1.9 mya to 800,000 BP, where hominins caught and ate freshwater fish, including airbreathing catfishes (Stewart, 1994: 235–242; Broadhurst et al., 1998; Erlandson, 2010: 129). Although the sample is small, and coastal foraging and fishing, even for large pelagic species such as bluefin tuna, do not necessarily require the use of boats (Bailey and Carrion, 2008; Anderson, 2010: 5, *contra* O’Connor, 2010: 50), we can assume that aquatic resource

exploitation was part of the cognitive and technological capability of Middle Pleistocene hominins.

In the western Mediterranean, hominins foraged the coastlines for inter-tidal shellfish at Terra Amata (400,000 BP) and Grotte du Lazaret (250,000 BP) in southern France (Villa, 1983; de Lumley et al., 2004), and by the early glacial, ca. 128–60,000 BP, Neanderthals were collecting shellfish from sites in Italy (Stiner, 1994), Spain (Cortés-Sánchez et al., 2008; Zilhão et al., 2010), and Portugal (Bicho, 2004; Bicho and Haws, 2008; Haws et al., 2011). In the Upper Palaeolithic, it is probable that coastal resources played a larger role in AMH subsistence strategies along the maritime littoral of the Mediterranean (e.g., Kuhn and Stiner, 1998; Pettitt et al., 2003), but how important were these resources for archaic hominins? Most of the evidence relates to Neanderthals, and there is considerable ambiguity concerning its interpretation. Direct isotopic evidence for the Neanderthal diet suggests that they were ‘top-level’ carnivores deriving most of their dietary protein from terrestrial game (see Richards and Trinkaus, 2009; Erlandson, 2010: 130), but at Gorham’s Cave in Gibraltar Neanderthals consumed bluefin tuna—a pelagic species of fish that inhabits both inshore and offshore environments—bream, and large marine fauna such as monk seals and dolphins (Garrod et al., 1928; Waechter, 1951; Waechter, 1964; Stringer et al., 2008). The archaeological evidence suggests that marine resources, including mussels, limpets, pelagic fish, and marine mammals played an important part in their diet, perhaps

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