The Mediterranean Context of Early Greek History

Were the origins of the Greek city-state – the polis – a unique creation of Greek genius? Or did their roots extend much deeper? Noted historian Nancy H. Demand joins the growing group of scholars and historians who have abandoned traditional isolationist models of the development of the Greek polis and cast their scholarly gaze seaward, to the sparkling waters of the Mediterranean. The Mediterranean Context of Early Greek History reveals the role the complex interaction of Mediterranean cultures and maritime connections had in shaping and developing urbanization, including the ancient Greek city-states. Utilizing, and enhancing upon, the model of the “fantastic cauldron” first put forth by Jean-Paul Morel in 1983, Demand reveals how Greek city-states did not simply emerge in isolation in remote country villages, but rather sprang up along the shores of the Mediterranean in an intricate maritime network of Greeks and non-Greeks alike. We learn how early seafaring trade, such as the development of obsidian trade in the Aegean, stimulated innovation in the provision of food (the Neolithic Revolution), settlement organization (“political form”), materials for tool production, and concepts of divinity. With deep scholarly precision, The Mediterranean Context of Early Greek History offers fascinating insights into the wider context of the Greek city-state in the ancient world.
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Abbreviations

ATN   Anatolian trade network
BP    Before the Present (conventionally taken as indicating 1950)
DFBW  Dark-Faced Burnished Ware
EB    Early Bronze
EC    Early Cypriot
ECy   Early Cycladic
EH    Early Helladic
EM    Early Minoan
LB    Late Bronze
LC    Late Cypriot
LH    Late Helladic
LM    Late Minoan
MB    Middle Bronze
MC    Middle Cypriot
MH    Middle Helladic
MM    Middle Minoan
MYC   Mycenean
PPN   Pre-Pottery Neolithic
PPNA  Pre-Pottery Neolithic A
PPNB  Pre-Pottery Neolithic B
Introduction

The “Fantastic Cauldron” of the Mediterranean Koine

Odysseus vs. Hesiod?

In Greek culture, Odysseus personifies the seafaring life of adventure and peril, while Hesiod represents the life of the stolid farmer. But both also show the interconnectedness of these lives – Odysseus in the end goes off in search of a land that does not know the sea, presumably to settle down, while Hesiod acknowledges that it is sometimes necessary for the farmer to take to the sea – for the funeral of a king, and, more often, to exchange excess crops for necessities lacking at home – even giving advice about sailing seasons and the type of boat to use.1 But in the analysis of the early Greek polis, it has been the Hesiodic life of the farmer that has been preferred as a model. The origin of the polis is seen in the agricultural village,2 and the spread of Greek settlement over the landscape in what is anachronistically called “colonization” has been linked to excessive population growth and a “homestead model,” rather than to the spread of trading bases – the latter an interest attributed to the Phoenicians, seen by this time, not as partners, but as wily and untrustworthy predators.

Yet perhaps the most fruitful period in Greek history arose out of the essential partnership of the Phoenicians and the Greeks in creating settlements in the west in the so-called Dark Age, as they moved westward, essentially in cooperation, in a dynamic and enterprising network of maritime connections that has been called “a fantastic cauldron of expanding cultures and commerces” (Morel 1984: 150). In this melange, the two peoples often interacted at a level at which ideas as well as objects and motifs were exchanged. From the start, the fact that they moved westward more or less in tandem, sometimes perhaps even sailing in the same expedition, would have required some sharing of ideas: potential settlement sites, hopes of profits to be gained, sailing strategies. Once they had arrived at a site, it is likely that the exchange of ideas extended to practical ways of establishing and organizing the new settlement. Questions arose about how land was to be distributed and by whom; ongoing decisions affecting the whole community were to be made. For the Greeks in
particular, establishing new settlements far from home would have required a much more consciously formalized political structure than they had known at home. Some input by the Phoenicians, who had a long history of living in city-states and relatively recent experience in the creation of new settlements, seems very likely (Murray 2000: 237–8; Boardman 2001: 33; S. Morris 1992b), and has been suggested by a number of Greek historians.3

Such influences are obvious in the orientalizing style of art and in myth (Burkert 1992; S. Morris 1992a), but there is also considerable evidence that the East, and the Phoenicians in particular, had something to contribute toward political development. For example, Aristotle attests the existence of an assembly of the people at Carthage,4 and there is evidence for one at Byblos as early as 1100 BC.5 Nor was influence confined to purely Phoenician institutions. In the extended period during which the Phoenicians were under Assyrian and then Neo-Babylonian political pressures, if they were not actually subject to their rule, they were open to Assyrian and Neo-Babylonian political ideas and concepts. Recent studies of Neo-Babylonian texts (Dandamaev 1981) and of the Mesopotamian city (Van De Mieroop 1997: 133), have demonstrated that a tradition of democratic city life existed in Mesopotamia in the Neo-Babylonian period. Tens of thousands of texts from this period have been found, among which are texts that record the decisions of assemblies of citizens regarding property disputes, private offenses, temple affairs, criminal cases of theft, and leases. The assemblies included not just men of high social standing, such as officials of the city or temple, but also freeborn men of various humbler occupations: artisans, bakers, brewers, butchers, doorkeepers. Citizenship seems to have been determined by free birth to citizen parents, for alien residents did not take part in the assemblies, and all citizens were in that sense equal (although far from equal in material wealth and status). In his study of the Mesopotamian city, Dandamaev concluded that, “a characteristic feature of these cities was self-rule by free and legally equal members of society united in a popular assembly” (Dandamaev 1991).

In arguing the role of the complex interaction of Mediterranean maritime connections for the development of the Greek polis I join a growing group of historians who have recently advocated a focus on the broader Mediterranean and the abandonment of traditional isolationist models, turning to networks and interconnections, or the concept of “Mediterraneanzation,” for models.6 This approach began with Nicholas Purcell and is now espoused by an increasing number of scholars (Purcell 1990; S. Morris 1992a, 1992b; Purcell and Horden 2000; Raaflaub 2000; Malkin 2003; I. Morris 2003; S. Sherratt 2003a). Even the director of the Copenhagen Polis Project, Mogens Hansen, has abandoned the traditional criterion of self-sufficiency for the polis and acknowledged the vital role played by exchange of all forms to its development – not simply exchange in luxury items or staple products, but in ideas as well.7 He sees the openness of a culture to outside influences through involvement in trade and other external ventures as the spark that created variations in wealth, which in turn created social complexity and thus a need for new sociopolitical forms to embody new relationships.8

Who were the agents of change? Among the Greeks, Raaflaub (2004) has characterized them as “colonizers, adventurers, or raiders,” adding, as well, “specialists” (architects, doctors, mercenaries). As for specifically eastern influences, Davies suggests
that we should not credit “precise knowledgeable borrowings on the part of Greeks so much as the sort of awareness of institutions in Assyria or Phoenicia or Egypt which mercenaries, craftsmen, and emporoi will inevitably have gained and brought back” (Davies 1997: 33–4).

It was these ordinary people, and the disaffected aristocrats who joined them, through boredom, family strife, or hope for lucre, who made up the “fantastic cauldron” of central Mediterranean maritime interconnections in the “Dark Age.” It is to them and to their experiments in settlement structure, filtered back from overseas, that we should look for the origins of the polis, rather than to the settled farmers and the elite leaders they left behind. The essential element in the creation of these new settlements, as well as in the origin of the polis, was the mixture and interaction of such ordinary and extraordinary people – craftsmen, traders, sailors, disaffected aristocrats – in the “fantastic cauldron” of maritime interconnections. Moreover, this active network generated not simply the early polis, but also Carthage, the other overseas Phoenician settlements, and the Etruscan city-state (C.J. Smith (1997)).

Looking Back

Greek history is no longer thought to have begun with the first Olympiad or with the entrance of Indo-Europeans into Greece at the end of the third millennium BC (Thomas 1981: 22), an “event” no longer credited (Forsén 1992). In fact, no sharp line can be drawn for human activity in Greece after the first occupation of the Franchthi Cave in the Upper Palaeolithic (Jacobsen 1981).

Mediterranean seafaring began even earlier, as far back as the Pleistocene, when early humans or pre-humans, perhaps Neanderthals, took to the sea and found good hunting on nearby islands. Since animals unused to humans were easy pickings, these ventures soon died out for lack of game. One such case of the early visitation of an island for hunting is attested in Cyprus in the Mesolithic (10,800–9600 BC) when a band of some 25–50 hunters utilized a rock shelter at Aetokremnos (Simmons 2001; Simmons 1991; 1999: 208–9; Manning 1991; Cherry 1990: 163). The visitors left behind stone tools and the remains of butchered animals that attest to their presence. Simmons argues that the site was “a limited activity faunal processing locality” for Mesolithic pigmy-hippo hunters, whose activities were responsible for the extinction of the pigmy hippos. While a search for food may have been a motivating factor, there were surely more easily accessible sources of nutrition on the mainland. Curiosity, adventure, perhaps the display of prowess at hunting, or even a ritual meaning involved in hunting, must have played a role in inspiring such ventures.

At about the same time that the pigmy-hippo hunters visited Cyprus, someone took obsidian to the Franchthi Cave in the Peloponnese in Greece. Since the origins of obsidian can be determined with great accuracy, it was possible to trace the material found at the cave to the Aegean island of Melos. And since Melos was not inhabited at the time, the obsidian must have been collected on the island and taken to the cave by seafaring travelers. The small amounts found suggest that it was not the inhabitants of the cave themselves who obtained it, but that it reached them by a trade route for which it provided one terminus. The much greater amounts of obsidian found at Maroulas on
Map 0.1 The Mediterranean.
the Aegean island of Kythnos make it likely that it was a principal player in such a route. Other sources of obsidian existed in the central Mediterranean on the Aeolian islands and in Sardinia, and each source had its own trade route. A third major source of obsidian existed in the mountains of central and eastern Anatolia. From the Anatolian sources, Cilicia acted as a conduit through which obsidian passed to the coast in the area of the Amuq (plain of Antakya/Antioch). The Amuq in turn provided access to Cyprus and formed the “hinge” of a series of ongoing connections called the Levantine Interaction Sphere (Bar-Yosef and Belfer-Cohen 1989).

These early island visits did not result in long-lasting occupation, but the possibility of permanent settlement grew as people learned to cultivate plants for food and to domesticate or manage animals (including keeping animals for the hunt) in the Neolithic Revolution. Both Cyprus and Crete saw such permanent settlement in the Neolithic.

Very early human history thus attests to some fundamental motivations for seafaring—curiosity and adventure; the pursuit of new hunting, for food, status, magic/ritual; the acquisition of more effective tools; the use of trade to multiply available resources; and settlement to exploit new environments. As human settlement and activity spread across the Mediterranean over the millennia these motives continued to operate and to shape history. Human groups grew in size and complexity, giving their members the opportunity to discover and profit from their special abilities, and the social and economic variations that occurred as a result brought new ways of organizing communities. This in turn led to the development of political forms such as the village, the small city-state (Greek polis, Levantine city-states), and the large empire (the Persian Empire, the empire of Alexander). Large portions of this history are known only fragmentarily while other periods are overwhelming in the amount of evidence available and the academic debates they inspire. Considering the overall pattern will, however, bring a better background for approaching the individual parts. “Greek history” is one such part that should be seen in its wider context as being important but still, essentially, only one element in the much wider and longer-ranging history of human life in the Mediterranean.

Notes

1 The Mediterranean as a koine, a collection of interactive cultures, has been suggested by Seybold and von Ungern-Sternberg (1993); K. Raaflaub (2000).
2 Thomas and Griffith (1981), quoting L. Mumford (1966: 36), the polis arose from the “village raised to a new level of self-consciousness”; Thomas and Conant (1999); Thomas and Donlan (1993); Donlan (1997); V.D. Hansen ([1995] 1999).
3 Oliver (1960); Liverani (1975); Drews (1979); Snodgrass (1980: 32–4); Bernal (1993); Davies (1997); Gschnitzer (1988, 1993); Raaflaub (2000); contra Thomas (1981: 42): the polis is “an anomaly in the context of the larger Mediterranean and Near Eastern worlds.”
4 Aristotle, Politics 1273a, 4–9.
5 Wenamon XXXI, see J.A. Wilson, (1945): for discussions of the assembly in Phoenicia, Carthage, and the Carthaginian overseas settlements, see Bondi (1995) and Tsirkin (1990); the denial by Davies (1997: 33–4) of knowledge of the assembly of citizens, which he sees as almost impossible to detect in the East, provides good evidence for the “calamitous
cleft” between Graeco-Roman studies and Ancient Near Eastern and Semitic studies that he sees as hindering study of such interconnections.

6 I. Morris (2003); one result was the occurrence at conferences of panels dealing with these questions, such as “Mobility and connectivity in the Archaic Mediterranean: Explaining Mediterraneanization,” which was given at the conference of the Classical Association at Cardiff University, April 2010.

7 Hansen, Mogens Herman (2000a: 18–9 and n.16): “instead of economic self-sufficiency it is now economic interaction between the city-state [sic] which I take to be an essential characteristic of a city-state culture.”

Chapter 1
Seafaring in the Mesolithic Mediterranean

Obsidian Acquisition as Evidence for Seafaring

The Aegean

While seafaring is attested in the Pacific with the arrival of human beings in Australia some 40,000 years ago (O’Connell and Allen 2004), the earliest evidence of Mediterranean seafaring dates to the tenth to ninth millennium BC: obsidian found in Mesolithic levels in the Franchthi Cave in the Greek Peloponnese (Broodbank 2006). Analysis has identified with great precision the source of obsidian as the Cycladic island of Melos (Tykot 1996; Tykot and Ammerman 1997). Since Melos had never been attached to the mainland during the Holocene, the obsidian must have been brought by sea.

According to Perlès, a specialist on the Franchthi Cave and obsidian, the quantities found are too small – at most 1 percent of the total lithic material – to have been the result of regular maritime expeditions to Melos by the occupants of the cave, and she suggests occasional collection or very sporadic acquisition through exchange routes (1990a: 30; 2003a: 81). Later, in the Upper Mesolithic, the amounts of obsidian increased thirtyfold, but they were still quite small: obsidian made up only 3.15 percent of the total lithic material (Perlès 1990a: 48). At that time, the material was imported in unworked blocks and worked on the site.

According to Perlès, the acquisition, working, and distribution of Meli obsidian carried out by individual users who traveled to acquire their own supplies, or came upon it as a side benefit during fishing trips. Rather, she argues it was collected and distributed by specialists (Perlès 1990b; 1992). Her reasoning is that obtaining the obsidian would have required a long trip by both land and water, expert knowledge of the location of the source and of the best route there, access to a boat, expertise in navigation, and time away from other tasks to undertake the long trip. This would have precluded all but a few determined venturers. She suggests, therefore, that the bearers of obsidian to
Franchthi were specialized seafaring groups who pre-formed the obsidian into cores on Melos for transport. Because great skill was required in knapping, and this was unlikely to have been a skill acquired by a householder for his own production – one man could produce far more blades than a single household, or even a small village, required – Perlès suggested that the obsidian gatherers also acted as itinerant “middlemen,” moving from village to village, knapping the obsidian as required. The amounts found at Franchthi seem to preclude any great activity on the part of the inhabitants of the Franchthi Cave in this “industry” of acquisition, transport, and production.

The missing element in this picture – people who do seem to have been involved in the acquisition, transport, and distribution of obsidian – may be provided by the recently excavated Mesolithic island site of Maroulas on Kythnos, whose occupation is contemporary with the Franchthi Cave (Sampson 1998; Sampson et al. 2002). Obsidian from Melos has been found at Maroulas in large quantities, amounting to 16.87 percent of the total lithic assemblage (as compared with 3.15 percent at Franchthi). Cores were found, indicating that obsidian was worked on the site, although, according to the excavators, the large proportion of obsidian tools (36.36 percent) may mean that some were imported as finished products (Sampson
et al. 2002). The occurrence of obsidian at Maroulas adds substantially to the evidence of Franchthi Cave for Aegean seafaring in the Mesolithic, and it also suggests a possible explanation for the small amounts of obsidian found at Franchthi: that site lay near the end of an obsidian transport route that ultimately led to the Argolid: Melos, Kimolos, Siphnos, Seriphos, Kythnos, Keos, Attica, Argolid.

Maroulas is also the only Aegean island site to have provided evidence of occupation in the Mesolithic in the form of dwelling remains and burials (Sampson et al. 2002). Three circular flagstone floors more than 3 meters in diameter and bordered with small and large stones have been found, as well as three flagstone constructions in irregular ellipsoid form that have not been so well preserved. Under the surface of one of the circular floors, an adult burial was discovered under a large slab. Another burial was that of a child interred with the bone of a dog. In all, nine burials were found, most were only partly preserved; other burials appear to have been destroyed by sea erosion. The burial customs (inhumation under the floors of houses, and burials associated with dogs), and the use of circular dwellings, have parallels in the Natufian culture of Syria and Palestine, dated 12,500–10,200 BP, and are thus in the same time frame as the early finds of obsidian at Franchthi Cave (Davis and Valla 1978; Valla 1998: 187; Davis 1991). People, presumably families, were living on Maroulas for at least part of the year, although they may have incorporated their stays into a seasonal travel pattern in order to maximize their resources.

How did these earlier obsidian carriers cross the sea? For this date, there are no preserved remains of boats in this area, and reed vessels seem to be the likeliest possibility. To test this, in 1988, a group of archaeologists and students used a reproduction of a double-prowed papyrus vessel propelled by oars on a test voyage from Laurion in mainland Greece to Melos (Tzala 1995), a route perhaps similar to that taken by the carriers of the Franchthi obsidian, had they gone part of the way overland. The modern trip involved a full-time crew of six, with an additional rower occasionally used, and required seven days (not counting delays caused by adverse weather). Reed boats were in use in Corfu in the 1960s (Sordinas 1970: 31–4 and plates 1, 2), and papyrus or reed boats are still used in Sardinia at the regatta festival of fishermen held annually in August (“Is Fassonis”) at Santa Giusta, in the vicinity of Monte Arci, the principal Sardinian obsidian source.

Another Aegean island site that has yielded Melian obsidian in Mesolithic levels as evidence of maritime visits is the Cyclops Cave on Youra, one of a group of islands (the “Deserted Islands” – Kyra Panagia, Youra, P moutha) in the Northern Sporades (Sampson 1998; Broodbank 2000: 116; Sampson, Kozlowski, and Kaczanowska 2003). Other small Mesolithic sites have been found in the island group, and Sampson (1998: 20) reports three submarine cavities that are likely sites and await investigation.

Fifteen obsidian artifacts, including seven microlith tools, were found in the upper levels of the Cyclops Cave, but the absence of obsidian cores suggests that the tools were brought to the site ready to use. Identical obsidian microlith forms are known from the Antalya region of Anatolia and from the Öküzümi Cave on the Cilician coast (Sampson et al. 1998; Sampson, Kozlowski, and Kaczanowska 2003: 128), as well as at Belbidi, and Pinarbasi in central Anatolia. Although no direct connections can be traced between the Aegean cave and Anatolia, it is probable that the people from Mesolithic sites on the Aegean islands had contacts with western Anatolia, to which the Northern
Sporades from a natural island bridge (van Andel and Shackleton 1982; van Andel 1990; Cherry 1990: 192–4). The fact that some artifacts from the cave were made from local siliceous rocks suggests that the island also had links with the Mesolithic of mainland Greece. It may even have been connected to the mainland, or been within very close “stepping stone” range of it, within human history (see Map 1.1) (Cherry 1990: 165–7).

The evidence thus suggests not only considerable seafaring but also the existence of a “complex network of trade activities and large-scale movements in the Aegean and the Greek mainland, extending to Anatolia and indirectly even to the Levant, in the ninth millennium BC” (Sampson 1998: 20–1; see also Renfrew and Aspinall 1990). This is in keeping with the Mesolithic lifestyle, which was generally one of seasonal migrations in search of a variety of resources, with the same campsites being visited repeatedly in an annual cycle. In fact, Broodbank (2000: 115) suggests that part of the Mesolithic population of the islands spent periods of the year moving around the Aegean, likening them to those who “colonised the sea” in early Melanesia (Gosden and Pavlides 1994). In such a situation, sites are difficult to recognize archaeologically: they are “spots on the landscape to which people return regularly,” within the context of continual movement within the larger maritime area, and such “occupants” are unlikely to leave many traces behind them (Gosden and Pavlides 1994: 169). Yet the occupants did leave behind traces of a network of exchange focused on obsidian, which included other worked stone and stone-working methods, and surely other, ephemeral materials. Perhaps most important, it would have served as a network of information.

Central Mediterranean Obsidian Sources and Routes

While Melos was the main source of obsidian in the Aegean, other important sources of obsidian existed in the central Mediterranean. Perhaps the best known of these sources was Lipari, one of the Aeolian islands. At about the same time that people from the Franchthi Cave first acquired obsidian from Melos, people seeking obsidian visited (but did not settle) the Aeolian Islands, especially Lipari, perhaps attracted by the fiery displays of its volcano (Leighton 1999: 28, 33–4, 72–3). Obsidian would have been easily collected, and there is evidence that reduction into pre-cores occurred on the island long before any settlement took place (Leighton 1999, 75). In the Tyrrenhenian Sea, the earliest evidence currently comes from Capri, where from the Middle Neolithic (end of fifth and early fourth millennium) finds of Lipari obsidian have been made in the Grotta delle Felci, the local sanctuary. These are especially significant since they suggest that early exchange may have taken the form, not so much of “trade,” as of “dedications” by visitors to holy sites.

Some prospectors at Lipari surely came from nearby Sicily, which was not a true island and had been continuously inhabited since the Palaeolithic. The earliest exported Lipari obsidian there was discovered in a Mesolithic context (Aranguren and Revedin 1996: 35) and is thought to have been the result of exploration and possibly sporadic exchange rather than systematic exploitation.

At the end of the fifth millennium settlement on the Aeolian islands began when people from Sicily established themselves at Castellaro Vecchio on Lipari and
subsequently at Contrada Rinicedda on Salina (Cavalier and Bernabo Brea 1993–4: 987–8; Castagnino Berlinghieri 2003: 45; 51, 121). Both these sites have provided strong evidence for the working of obsidian, which suggests that it was the motivation for their establishment. The large numbers of flakes found in all the Aeolian settlements, from the most ancient (Castellaro Vecchio) up to the final Eneolithic, assure that the local population directly controlled the operations of extracting and working the obsidian (Nicoletti 1997: 260). Obsidian from Lipara was carried regularly to the Italian coast by sea, where the Calabrian Acconia project has demonstrated its reduction and distribution to a number of settlements of the Middle and Late Neolithic (Ammerman 1985; Malone 2003: 283). Obsidian from Lipari also reached southern France, perhaps by way of Corsica, and from there it was carried to central and northern Italy and Croatia (Robb and Farr 2005: 36). The data from Lipari suggest that the height of obsidian extraction and working occurred toward the end of the Neolithic (the period called the Diana factory), with a subsequent progressive decline in the Chalcolithic and total disappearance at the beginning of the Bronze Age.

Map 1.2 Central Mediterranean obsidian. Adapted from Ammerman 1985.
In the central Mediterranean, in addition to the Aeolian islands, Sardinia and the small islands of Pantelleria and Palmarola (one of the Pontine Islands) were sources of obsidian, and they show similar patterns of late settlement (Tykot 1996). The largest and most heavily exploited of these sources was Monte Arci in Sardinia. The obsidian from that site was of the highest quality, and it was widely distributed to Corsica, central and northern Italy, and southern France (Tykot 1996: 61; Walter 2000: 145). It was probably the presence of obsidian that attracted settlers to the island in the sixth millennium. The sources of obsidian found at the small islands of Palmarola and Pantelleria were less heavily utilized. The obsidian from Palmarola is not of high quality, but the island was easily accessible from the mainland, and obsidian could be picked up on the beach; some was found on the Tyrrhenian coast of Italy at the site of La Marmotta (Walter 2000: 143). To the south, the island of Pantelleria, which lies 200 kilometers southwest of Sicily, played a subordinate and localized role in the distribution of obsidian by the middle of the sixth millennium, with material from the island being carried to the tiny neighboring island of Lampedusa, and to Sicily, Malta (150 km distant), and Tunisia (113 km distant) (Camps 1986: 40, 41, 44; Trump 1963; Nicoletti 1997; Vargo, Tykot, and Tosi 2003).6

Anatolian Sources Of Obsidian

Another major source of obsidian lay inland in Anatolia, where it occurs principally in two volcanic areas: in the Lake Van region in eastern Anatolia, and in Cappadocia in south central Anatolia (Renfrew, Dixon, and Cann 1966: 35). The travels of Anatolian obsidian also provide important evidence for trade networks and cultural contacts, although these were mostly by land.

In the Upper Palaeolithic small amounts of Anatolian obsidian traveled substantial distances – from Van some 400 kilometers to Shanidar Cave in the foothills of the Zagros Mountains of Kurdestan in Iraq, and from Cappadocia some 350 kilometers to Antalya on the southwest Anatolian coast. In the Mesolithic Anatolian obsidian continued to travel, providing information about potential routes. Small amounts reached as far south as Jericho in the eighth millennium BC (a period called the Pre-Pottery Neolithic A (PPNA)).

By the seventh millennium the pace of obsidian transport had stepped up dramatically. Large amounts were found at the Turkish site of Çatal Hüyük (6300–5500 BC) (Renfrew, Dixon, and Cann 1966), where the excavators suggest its working was a specialization. The craftsmen themselves probably fetched the material from the source (approximately 200 km distant), or sent others, who then can be called traders, “in the strict sense that they were specialists in the transport and exchange of materials for gain” (Renfrew, Dixon, and Cann 1966: 52)

These travels of obsidian in the Pre-Pottery Neolithic East occurred within, and did much to create, a cultural interaction sphere that linked sites from southeastern Anatolia, the uplands of the Tigris and the Euphrates, the Levantine Corridor (the passage from the northern Negev through the Jordan (Rift) Valley to southern Anatolia (see Simmons 2007 and Map 1.2), and extending as far south as the Sinai (Braidwood and Braidwood 1940: 222–6; 1957; de Contenson 1977, 1983: 61–2; Bar-Yosef and
Belfer-Cohen 1989; Gopher 1989; Cauvin 1991; Garfinkel 1993; Steadman 1996: 147–8; Bar-Yosef and Meadows 1995; Bar-Yosef 1998; Peltenburg et al. 2001b: 55–6; Por 2004; Finlayson 2004). These interconnections were first noted by Braidwood, who suggested the terms “co-tradition” or oikoumene to indicate the cultural similarities: food-plants and food-animals, housing forms, types of flint and ground stone tools, obsidian bladelets, and, eventually, pottery, all made in much the same general way, and clay figurines of the “mother-goddess” type (Braidwood and Braidwood 1957: 79; see too Gopher 1989). The sphere also encompassed the earliest metallurgy – the cold working and annealing of native copper – which occurred in eastern Anatolia in the eighth millennium at the agrarian site of Çayönü Tepese (Muhly 1989a; Muhly, Stech, and Maddin 1998), and at the site of Aşıklı in central Anatolia, where the economy was based on hunting (Esin 1995). The oikoumene goes by various names, as the “aire culturelle” (Stordeur 2003: 370), and, perhaps most widely, the “Levantine Interaction Sphere” (Bar-Yosef and Belfer-Cohen 1989).
The sea was also used for the transport of Anatolian obsidian from very early times, although to a much lesser extent than the land routes. In the seventh millennium, after the widespread development of settled farming communities on Cyprus, obsidian reached virtually all the excavated settlements on the island, becoming a useful indicator of significant seaborne connections. During the seventh to sixth millennium, in the Early to Middle PPNB, large quantities of Cappadocian obsidian, including over a thousand worked blades, were found at Akanthou-Arkosyko on the northern coast of Cyprus, possibly exchanged for picrolite, an attractive, easily carved stone used for figurines and ornaments (Sevketoglu 2002).

The seaborne transport of obsidian is also reflected in finds along the Levantine coast (Renfrew, Dixon, and Cann 1966; Yener 2005: 195): at Mersin and at Byblos, dated to ca. 6000 BC (Renfrew, Dixon, and Cann 1966); at Ras Shamra dated to ca. 6410 BC (Schaeffer 1962: 158); and at Tabbat al-Hammam, dated to ca. 6000 BC (Hole 1959). The maritime distribution of Anatolian obsidian even reached Minoan levels at Knossos on Crete (Panagiotaki and Evans 1998; Renfrew, Dixon, and Cann 1966: 48).

Island Occupation/Visitation by Sea as Evidence of Seafaring

Evidence for Mesolithic seafaring can be traced not only in the travels of obsidian but also in the witness of human activity on previously unoccupied islands to which access must have been gained by sea. Several such cases have been argued, although with varying degrees of credibility.

The Mesolithic visitation of Cyprus

The earliest and best attested case of human visitation and use of islands in the Mesolithic involves Cyprus (Simmons 2001; Simmons 1991; 1999: 208–9; Manning 1991; Cherry 1990: 163). At about the same time that humans first visited Melos and the Aeolian Islands for obsidian (10,800–9600 BC), there is evidence of Mesolithic presence for at least short periods of time at a rock shelter at Aetokremnos, on the southern coast of Cyprus, at the time probably near but not on the sea. The group perhaps consisted of a hunter/gatherer band of some 25–50 individuals, although Simmons (1999: 322) believes it likely that far more individuals were involved in order to provide a sustainable population. There is no evidence for the presence of women or children; however, they may not have been included if the camp was occupied only seasonally by transient hunters.

Simmons (2001: 5) argued that the site was “a limited activity faunal processing locality” for Mesolithic pigmy-hippo hunters, whose activities were responsible for the extinction of the pigmy hippos on the island (Ammerman and Noller 2005; Simmons and Mandel 2007). The situation is not entirely clear, however (Bunimowitz and Barkai 1996; Vigne 1999). The site contained four major levels, separated by only brief intervals, only two of which provided evidence of human activity. Stratum 4 contained the majority of the finds of animal bones (over five hundred pigmy hippos of various ages, three dwarf elephants, and a few other birds and animals); about 30 percent of the bones had been burned, most of them severely, which has been interpreted as evidence
of human activity. Stratum 4 also contained eleven “cultural features,” most of which were “casual hearths.” The majority of the artifacts (over a thousand chipped stone artifacts, stone and shell beads, and a few ground implements) were found in Stratum 2. Stratum 1 was a mixed context, and Stratum 3 was sterile. Thus there seems to have been little if any overlap between levels with evidence for human activity and the level with animal remains.

Whatever the reason for their presence, the visitors were unlikely to have lived at the shelter, which was not large enough for a person to stand upright; however, the distance from the mainland practically guarantees that they spent some time on the island, for daily “commuting” would have been impossible. That a base site nearby is probable, but it has not been discovered.

What drew these visitors to Cyprus is a matter of speculation. Harsh conditions on the mainland – the cold and dry period called the Younger Dryas – following the period known as the Early Natufian in which benign conditions that had fostered a population explosion (Bar-Yosef and Valla 1991), may have forced a search for new resources and provided the incentive for people to seek out the island’s resources known from earlier reports of adventuring. There are no obsidian sources on the island, and Held (1989) described Aetokremnos as a “difficult colonization ‘target’” especially for a largish group using very basic craft.

The mainland origin of the visitors is not known, but it must have been in the Cyprus-facing coastal areas of southeast Turkey or the Levant. The stone tools at the site have some similarities to materials in both of these areas, but they are a selective assemblage, unique to Cyprus, and probably reflect a specialized adaptation to local conditions (Simmons 1999: 319–20), reinforcing the idea that their arrival had been preceded by previous visits or exploration. Simmons (1999: 319–20) favors a Levantine origin on the basis of the site’s location on the south coast of the island, and the lack of any contemporary sites on the island’s north coast, which offered the closest access from Anatolia. Moore’s list of more than a dozen potential sites in the Levantine coastal area in Mesolithic 1 and 2 (1978: figures 5 and 6), may provide some support for a Levantine origin: the evidence cited for the use or brief occupation of the site of Byblos, possibly in the Mesolithic, demonstrates the ephemeral nature of such evidence (p. 330).

In the Amuq Valley, which provides access to the sea across a generally mountainous and forbidding area, stray evidence for Paleolithic activity has been found on the hillsides. Such sites would have been attractive to Mesolithic hunters and may have offered temporary shelter to groups who made visits to Cyprus. For example, Upper Paleolithic remains were found at Üçagızlı Cave, about 15 km south of the mouth of the Orontes River (Minzoni-Deroche 1992), an area with many caves and rock shelters and with access to the Mediterranean through a ravine to the Adana Plain and to the north via the Karasu and Orontes rivers to the open sea (Garrard, Conolly, Moloney, and Wright 1996). Looking to the southwestern Anatolian coast, the cave at Öküzini provides evidence of prolonged occupation by a well-established group at a site near the coast and suggests another possible home base for the adventuresome hunter-gatherers (Otte et al. 1995).

The site of Aetokremnos was utilized for a few hundred years at most, and the variety of evidence supporting different sites of origin for the visitors may simply reflect the fact that no one group visited the island, but that it was subject to repeated visits by groups
from various locations. In the end, Simmons argues, the visitors abandoned the site. He saw no evidence that they remained on the island, or that their descendants contributed to the later Neolithic settlements on Cyprus that are dated from ca. 8200 (Simmons 1999: 322, 323). However, new discoveries have begun to fill this apparent gap in island habitation, suggesting that, even if not permanent occupation, at least sporadic contacts were maintained with the mainland (McCartney 2005; McCartney and Todd 2005; Peltenburg et al. 2003: 96–7).

The remains of two Mesolithic campsites on the island, at Nissi Beach (Ayía Napa) and Aspros, that date between 10,000 and 9000 BC (Ammerman et al. 2006), demonstrate that the occupation/use of Aetokremnos was not an anomaly. At Nissi Beach, some 230 stone tools were found. These campsites, which reflect an extensive familiarity with the Cypriot coast, were probably occupied seasonally and only for short periods, as the rocky territory of their sites is not suitable for long-term occupation. They offer more evidence for seafaring on a regular basis in the eastern Mediterranean from an early date, at more or less the same time as the evidence from Franchthi. At least 20 more such sites are thought to lie submerged because of the sea incursion that occurred at the end of the last Ice Age; their underwater remains still await discovery.

**Seaborne Mesolithic occupation in the Adriatic**

Mesolithic occupation by sea has been attested in the Adriatic at Sidari, on the eastern coast of Corfu, in the late seventh to early sixth millennium. These people appear to have lived on shellfish, creating a shell midden. They made very primitive microliths using flint that they apparently brought with them (Sordinas 1969; 1970). The lithic assemblage has little in common with the stone tools of the Greek mainland, and Sordinas has proposed that after the island of Corfu became separated from the mainland in the sea regression at the end of the Palaeolithic people began island hopping along the Adriatic coast in small reed boats – similar to those still in use in the 1960s by lobster fishermen on the island – bringing contact with the cultures of the Italian mainland (1977; 2003: 96; 1970: 31–4 and Plate 1, 1), a situation also suggested for the Franchthi Cave. The settlers were succeeded by Neolithic inhabitants, but only after a break in occupation.

**Possible Mesolithic occupation of Sardinia and Corsica**

Possible early human occupation by sea, going back even to the Palaeolithic, has been argued in the case of the large islands of Sardinia and Corsica. This, however, is a contested issue. It is, however, generally agreed that firm evidence for human occupation on these islands comes from the beginning of the Mesolithic, ca. 8000 cal. BC (Tykot 1999: 69). This is based on the discovery of human bones in the Corbeddu Cave on Sardinia and evidence for human occupation at several rock shelters on Corsica, which was separated from Sardinia by an easily crossed strait (Tykot 1999: 69). The remains have morphologies “outside the range of modern human variation and [are] probably due to endemism in an isolated population” (Spoor and Sondaar 1986 citing Tykot 1999: 69) These Mesolithic settlers must have reached the islands by sea, but this need not have entailed a significant sea-crossing since Corsica was separated from the
Italian mainland by only a brief span of water before the glacial meltdown. Mesolithic people on Corsica and Sardinia, do not appear to have been attracted to, had access to, or have exploited the obsidian resources on Sardinia (Tykot 1999: 69). Broodbank (2006: 207) suggests that the visitors’ stay was brief and temporary, possibly a refuge occupation, with no evidence for continuing contact through the exchange of artifacts between the mainland and the islands or for the subsequent development of a Neolithic economy, Vigne and Desse-Berset (1995) argue that, in that it involved built structures and a burial, the occupation of Corsica was a true colonization and that it was continuous. They also see Mallorca as providing evidence for true colonization, with artifacts that differ from those of the nearest mainland, supporting a classification as Insular Pre-Neolithic, rather than Mesolithic, culture.

**A Mediterranean Interaction Sphere?**

It has been noted that the maps tracing obsidian distribution show little overlap between networks operating in the western Mediterranean, the Aegean, and the Levant. Tykot (1996: 61; 1999) even suggests that these networks might have acted, through prolonged distances and difficult maritime conditions, not as systems of common interaction and information flow, but as cultural or ethnic boundaries. But obsidian does not provide the full story. Other, less easily traceable items also traveled – marble, marine shells, ochre, and greenstone (picrolite) for ornaments and (possibly) ritual objects. Some of these were carried along with obsidian, but others had their own networks of distribution. The most important evidence for the crossing of these supposed boundaries, however, consists in the Neolithic expansion of settlement across the Mediterranean, beginning with settlement on Cyprus in the ninth millennium, for which expeditions to obtain obsidian probably provided the cognitive map. If there were boundaries, they were porous.

**Notes**

1 For a useful discussion of claims – and evidence – for very early use of the sea by humans, or their predecessors, see Broodbank (2006).
2 Obsidian was also found in the Aegean on Nisyros and on Antiparos in the form of small round pebbles, but these sources were not widely used either, see Evans and Renfrew (Evans and Renfrew 1968 Appendix IV). There was also a source on the island of Giali that was used for stone vases in the Late Neolithic; however, it was not of good quality for other uses and had a very limited distribution (nearby Kalymnos, Kos, and Rhodes; Saliagos on Greater Paros; and Crete) (Cherry 1985: 15). See web site: http://www.fhw.gr/chronos/01/en/intro/obsidian.html (accessed May 19, 2011).
3 All dates are wide estimates, but the “present” of BP was fixed for analytical reasons at a single point, the year AD 1950, see Wikipedia, “Before Present.”
4 Small amounts of unworked obsidian of lesser quality were found at Antiparos; obsidian from Giali was used to make vases in the Neopalatial Period (Betancourt 1997a).
5 The problem of the continuous existence of the strait throughout the Pleistocene is a matter of debate. Paleontologists maintain that the evidence for mammalian fauna of the final
Pleistocene is so abundant that they could not all have reached the island as a result of hazardous crossings or by chance; on the other hand, opportunities for access must have been brief and restricted, for the horse, ibex, chamois, and wolf never made the crossing (Mussi 2001: 89–90, 200–2).


7 Any evidence from valley lowlands would probably have been buried under later natural sediments, cultural deposits, or large mounds, which would have completely obscured any earlier use of the area.

8 Claims: Hofmeijer and Sondaar (1992, with refs); recently, Melis and Mussi (2002) have argued for an Upper Palaeolithic occupation on the basis of a “controlled stratigraphical position” of tool types that fit well into this period; this suggestion has not as yet received independent evaluation, although Broodbank (2006: 206) sees the tools as “further confirmation” of human presence. Palaeolithic occupation is disputed by Cherry (1990: 175–8; 1992); Vigne (1990); Tykot (1992; 1999: 68–9).

9 Evans and Renfrew (1968: 105) cite finds of a few pieces of Anatolian obsidian (from Çiftlik) in Crete.