CHAPTER 1

INTRODUCTION

Cyprus has long held a strategic position in the protracted prehistory and history of the Mediterranean world, and during that time had major cultural and economic impacts throughout the region. Over the past three decades, an extraordinary amount of information stemming from new archaeological fieldwork (excavations and surveys) on the island, and from new research on individual classes of material (including single artefacts), has been published. And yet, with two recent exceptions (Bolger 2003; Steel 2004a) that follow very different research agendas, nobody has attempted to integrate all this new work and information into a comprehensive, theoretically informed presentation of Cyprus's prehistoric and protohistoric past.

In the extant archaeological literature on Cyprus, there is a tendency to see the island's political, economic and even artistic developments as the result of invasions, migrations, colonisation, diffusion or other external factors, whether Near Eastern or Aegean (or both) in origin. Steeped in culture history, such an approach to the long-term history of Cyprus is not only inadequate but also tends to render the indigenous inhabitants of Cyprus mute and invisible, all this at a time when multivocality and a local (vs. global) perspective invigorate and structure both historical and social scientific practice.

This book situates Cypriot archaeology in its wider context by examining various issues that confront archaeologists working elsewhere in the Old World (Europe, the Mediterranean, the ancient Near East) or indeed throughout the world. In presenting this new study of Cypriot prehistory and protohistory, at times I refer to but fully reformulate some of my own, earlier work on the Cypriot Chalcolithic and Bronze Ages (e.g. Knapp 1990a; 1993a; 1994; 2001; 2003; 2006; 2008). I also consider critically how new information on both earlier (Late Epipalaeolithic to Chalcolithic) and later (earliest Iron Age) periods may be assessed in a thematic and integrated manner, in particular with respect to the following, interrelated issues: seafaring and the earliest visits of people to the island; migration, colonisation and hybridisation; insularity, mobility and connectivity; distance and the exotic; gender and social identity; social complexity; community and polity; production and consumption. I examine how factors such as spatial organisation, subsistence regimes, monumental architecture, gendered representations, mortuary practices, ritual and feasting, production and exchange, and the adoption of a written script (Cypro-Minoan, from the late Middle Bronze Age onward) impacted on island society and island identity.

Throughout this work, I focus on issues of materiality, and attempt to show how people used material 'things' consciously to fashion an insular identity (or identities) and to establish distinctive, island-specific, social, economic and political practices. By drawing out some of the tensions between different ways of thinking about insularity and connectivity, mobility, migrations and hybridisation, community and polity, gender and island identities, I seek to place some key theoretical concepts on a firmer archaeological footing. Thus I engage certain interpretative approaches in archaeology in order to illuminate various social, material and ideological aspects of Cyprus's past, and where relevant I attempt to integrate such approaches through the comparative analysis of material data and documentary records.

Amongst various questions that frame and guide the writing are the following:

- How did the people of ancient Cyprus fashion their world and establish their identities?
- How do shared social practices imprinted in Cypriot material culture – ranging from chipped stone industries to monumental architecture – contribute to expressing identity?
- What kind of material and social factors are involved in intercultural contacts?
- How did mobility and 'connectivities' between Cyprus and overseas polities – changing noticeably through time – impact on the development of more complex social systems?
- How do we integrate research stemming from site excavations or landscape studies into a broader view of social interactions on ancient Cyprus?
- How can we best consider the nature and diversity of the Cypriot islandscape, and in turn examine how island communities form, interrelate and endure?
- How can archaeologists integrate historical evidence in their attempts to (re)construct mobility and migrations, materiality and identity?

To begin, it is necessary to establish some basic environmental and climatic parameters, features that form the backdrop to the suite of Cypriot sociocultural, economic and material developments discussed at length in this study.

Figure 1. View southeast from Hala Sultan Tekke *Vyzakia* to the Larnaca Salt Lake, possibly the site's harbour during the Late Bronze Age. Photograph by A. Bernard Knapp.

ENVIRONMENT, LANDSCAPE AND CLIMATE

With a territorial extent of 9,251 km^2, Cyprus is the third largest Mediterranean island, after Sicily and Sardinia. Isolated in the Mediterranean's northeast corner, Cyprus is situated some 70 km south of Turkey, 95 km west of Syria and 400 km north of Egypt. The Aegean world, starting at the Dodecanese island of Rhodes, lies nearly 500 km west. Several natural harbours indent Cyprus's coastline, while some of the island's best known Late Bronze Age sites (Enkomi, Maroni, Kition, Hala Sultan Tekke) (Figure 1) may have had inner harbours accessible by navigable river mouths or embayments that have since dried up or been silted in (Nicolaou 1976; Gifford 1985; Collombier 1988; Morhange et al. 2000).

In geological terms, Cyprus's orogenesis is complex, and most research treating it has focused on the formation of the ophiolite complex in the Troodos mountains, the island's main structural and topographic feature (Constantinou 1982: 13–15; Robertson 2000; Mart and Ryan 2002) (see below, Figure 2). The ultrabasic core of the Troodos is ringed by gabbros and an extensive diabase, with an encircling pillow lava series, seldom more than 5–7 km wide. The Troodos ophiolite complex is important in cultural and social terms as well because the massive copper sulphide deposits – whose ores have formed at least one major prop of Cyprus's economy over the past 4,000 years – are embedded in its pillow lavas.

Gass (1968) proposed that the Troodos massif was originally formed on a mid-Tethyan oceanic ridge and subsequently was exposed when the Afro-Arabian plate thrust beneath the European plate; in such a scenario, the present-day Troodos would represent the heavily eroded remnants of this volcanic activity. More recent geological research indicates that the ophiolite developed as part of an early island arc development in a subduction zone (Rautenschlein 1987) rather than in a spreading mid-oceanic ridge (Robertson and Woodcock

Figure 2. Cyprus satellite image. Source: *NASA, The Visible Earth – http://visibleearth.nasa.gov/*

1980; Moores et al. 1984; King et al. 1997: 17–20). In this scenario, the formation of the Troodos is closely linked to a destructive collision between the Afro-Arabian macro-plate and the Turkish micro-plate in the eastern Mediterranean basin (Held 1989a: 69).

At least as important for archaeological purposes is that ongoing geological and geophysical research has demonstrated conclusively that no land bridge existed between Cyprus and the Asiatic mainland at any point after the Miocene epoch (Stanley Price 1979a: 1–5: Held 1989a: 66–69; Robertson et al. 1995). The Miocene ended some five million years ago, not long after the Messinian Salinity Crisis, when the Mediterranean Sea evaporated and became partly or completely dry (Hsü 1972). Once the salt water of the (current) Atlantic Ocean had again breached the Straits of Gibraltar after the Messinian Event, and the Mediterranean Sea was formed more or less as we know it, Cyprus was never connected to any mainland. Both the Adana Trough, which separates Cyprus from Anatolia, and the Latakia Basin, which separates it from the Levant, range down to 1,500 m in depth (Swiny 1988: 1–2, fig. 1; Mart and Ryan 2002: 120). Taken together, these factors demonstrate that, at least since the Pliocene, Cyprus has been an island (Held 1989a: 67–69, 71, fig. 4).

Internally, Cyprus's main physiographic features are the Kyrenia (or Pentedaktylos) mountain range in the north, and the Troodos mountains that extend over much of the southern and southwestern parts of the island (Figure 2). Separating the two is the central lowland plain (Christodoulou 1959: 12), commonly known as the *Mesaoria* ('between the mountains'), whose western reaches are also referred to as the Morphou Plain. The geomorphology of these central lowlands is quite simple: it varies in elevation – from sea level to 230 m – and in make-up, with alluvial deposits, silt and a central limestone plateau, topped in its eastern sectors with a hardpan calcrete (*kafkalla*), the last covered locally by thin layers of terra rossa soils. Rainfall and perennial springs ensure that the coastal strip north of the Kyrenia range, at no point more than 5 km wide, remains relatively green and fertile. To the east of this range lies the Karpass, a long, finger-like peninsula beginning at the northern end of Famagusta Bay and pointing towards the Bay of Iskenderun in modern-day Turkey.

Through the Kyrenia range, three main passes (Panagra, Kyrenia and Lefkoniko) lead southward to a series of still-barren hillocks that form a backdrop to the predominantly alluvial *Mesaoria*, important today for agricultural and especially grain production. To the south and west of the central lowlands, the peaks of the Troodos massif rise anywhere from 700 to 2,000 m, dominating the landscape and restricting travel throughout the region. In the far southwest, the Paphos region is defined in some places by its narrow coastal strip, in others by outliers of the Troodos that plunge directly into the sea. In the southeast, the region around modern-day Larnaca forms part of Cyprus's southern chalk plateaus: here, a few deeply incised river valleys cut through low, gentle slopes that descend gradually to the seashore, with its raised coastal beaches or, in a few places, narrow coastal plains (Stanley Price 1979a: 5–7).

The development of soils on Cyprus's somewhat rough and rocky terrain is constrained by the island's lithology, its sharp relief and a rainfall pattern that varies from about 300 mm per annum in the lowland plains to 1,100 mm per annum in the highest reaches of the Troodos. The rough topography tends to produce soils that are thin, full of small stones and pale brown in colour, excepting the reddish Quaternary sediments that blanket some slopes and valley floors. Studies of the Quaternary record have demonstrated a progressive weathering of soils from recent to ancient surface sediments, noted consistently among stony slopes, valley alluvia and pediment fanglomerates (concretions of individual rocks) (Gomez 1987; Poole and Robertson 1998; Devillers 2004). Today, soil cover has almost completely disappeared from limestone bedrock on the island, leaving hill slopes barren of both soil and vegetation (King et al. 1997: 49). Soils form a dynamic – albeit very vulnerable – aspect of the landscape, part of a *chaine opératoire* that links land cover, surface water and people in a complex process that silently underpins the daily life, yearly seasons and *la longue durée* of agricultural and industrial production alike.

In their review of fieldwork related to Cyprus's complex surface sedimentary record, Butzer and Harris (2007) suggest that there were cyclic alternations between periods of soil stability and soil formation, and other eras of soil instability, when slope erosion and sediment mobilisation accelerated. Considering their suggestion in the light of fluvial activity, however, presents another possibility. The pronounced gradient of rivers whose valleys cut deep into the steep slopes of the Kyrenia and Troodos ranges alike has resulted in considerable erosion; significant deposits of vegetal soils and stony detritus are spread across wide lowland flood plains within which the rivers tend to meander. The slow, steady erosion caused by perennial streams is rare on Cyprus compared to the rampant erosion that occurs in river torrents following sudden downpours: one striking case was the destructive, late-autumn floods of the Pedhaios River in 1567, 1859 and 1888 (Butzer and Harris 2007), or the 192 mm of rain that fell in four hours and inundated the Larnaca region during the autumn of 1981 (King et al. 1997: 7).

Despite the seasonal or episodic nature of stream flow, Holocene river courses on Cyprus seem to have remained fairly constant, and other geomorphological work (discussed in Stanley Price 1979a: 7–9) indicates that riverine-induced erosion and deposition were not necessarily cyclic, but often concurrent. Cyprus has an arid to semi-arid landscape dominated throughout human occupation by flashy discharge, that is, episodic downpours and short-duration high-stream flows leading to a broad range of contrasting sediment and landform features (Devillers 2004). Alluvial deposition, shore-side sedimentation and/or sand-blown dune formation gradually filled in the Morphou (west) and Famagusta (east) bays at either end of the *Mesaoria*, as well as the Akrotiri and Larnaca salt lakes, respectively in the south and the southeast of the island (Gifford 1985; Morhange et al. 2000).

Although the relationship between (alternating or concurrent) erosional and depositional sequences and Holocene climate remains problematic, our concern here is with climatic effects on the inhabitants and landscape of prehistoric and early historic Cyprus (Wasse 2007: 47–50). Because Cyprus is situated at an extreme point within the nearly landlocked Mediterranean basin, and is protected from low-pressure extremes by the mountainous regions of southern and southwestern Turkey, its climate is notably affected by continental influences (Stanley Price 1979a: 9). Moreover, the global climatic shifts of the past 25,000 years (Rossignol-Strick 1995; 1999; Robinson et al. 2006) must always have had some impact on Cyprus; increasingly, it is acknowledged that much of the archaeological record of Cyprus was laid down within the context of dynamic and recurrent environmental and climatic change (Wasse 2007: 48).

For example, following the Last Glacial Maximum (ca. 25,000–18,000 Cal BP), the combination of higher rainfall and warming temperatures during the Bølling-Allerød interstadial (ca. 15,000–13,000 Cal BP) probably resulted in the development from open woodland to full forest conditions on Cyprus. With the onset of the Younger Dryas episode (ca. 12,800–11,600 Cal BP), precipitation lessened, the mean annual temperature became markedly lower and woodlands therefore must have contracted alongside any bodies of water that may have emerged on the island during the climatic amelioration of the preceding Bølling-Allerød. Bromage et al. (2002), in fact, attribute the extinction of pygmy hippopotamus on Cyprus around the Pleistocene–Holocene boundary to the desiccation of small pools on which these animals may have depended (discussed further in Chapter 3). Thus it seems clear that quite dramatic climatic and environmental conditions existed on the island at the very time that people began to exploit its faunal, floral, aquatic and other resources (discussed below in *Coastal Adaptations, Climate and Seafaring*). But this does not mean that sociocultural developments or change necessarily can be imputed to climatic change.

For example, despite minor fluctuations throughout the eastern Mediterranean, today's climate is thought to be more or less comparable to, if somewhat drier than, that of the earliest Holocene (Butzer 1975; 2005: 1774; various papers in Bintliff and Van Zeist 1982). It is likely that the more humid phase of the early Holocene (ca. 10,000–8000/7000 Cal BP, following the Younger Dryas episode) had begun to break down by about 8000 Cal BP, perhaps as part of the so-called 8200 Cal BP 'cold event' (e.g. Staubwasser and Weiss 2006: 378–379; Weninger et al. 2006). This event brought on a process of aridification that became well established by about 6000 Cal BP, leading to the pattern of prolonged summer drought and irregular winter rain so typical of the Mediterranean today. Although this process of aridification and a concomitant reduction in woodlands seems clear in a range of evidence from the eastern Mediterranean generally (e.g. Frumkin et al. 2001; Casana and Wilkinson 2005: 33), it is not always straightforward to distinguish between climatic and human-induced impacts on the palaeoenvironmental record. In any case, we should no longer be trying to link directly severe or abrupt changes in climate with differing episodes of social complexity or collapse (Brooks 2006). As Maher et al. (2011: 2–3) suggest, 'the correlations between archaeological phenomena and palaeoclimatic events should be treated as probability statements'. In particular, they argue that the 8200 Cal BP cold event cannot have caused the abandonment of PPNB sites in the southern Levant, as it occurred almost a full millennium too late (Maher et al. 2011: 17–18).

One crucial climatic factor for anyone living on Cyprus is that all the island's freshwater sources (including springs in the Kyrenia range) stem from autumn or winter rainfall and from winter snows in the Troodos. As already implied by reference to flooding and sudden downpours, fluctuations in rainfall can be extreme, and most rain falls during storms from late October through March. Nowadays at least, the island's major rivers are active in winter but become mere rivulets during the summer. Recent records from Cyprus show extreme annual variation in rainfall, such that it is always unreliable and often inadequate in lowland areas. As a result, rainfall has a very limited impact on Cyprus's hydrological regime, which is further exacerbated by high evaporation rates (up to 87% of total precipitation – Stanley Price 1979a: 11). Although little is known with certainty about the configuration or extent of standing bodies of water during the earlier Holocene, lacustrine resources are limited and in any case would have had restricted usage because of their high salinity and propensity for infestation by malarial mosquitoes.

Riverine streamflow in low rainfall areas like Cyprus is also affected by the nature of local geology, forest cover and ecological variables such as xerophytic or mesophytic vegetation. This vegetation cover also acts as a check on soil erosion in a country wracked by heavy winter rains and erratic summer storms. In today's hot and dry lowlands, garrigue species (grass, rock, dwarf-shrub steppes) and xerophytic weeds dominate the vegetation, but are supplemented by broadleaf cactus and juniper maquis, as well as carob, olive and date palm. The hilly flanks surrounding the Kyrenia and Troodos mountains also support garrigue and maquis, along with carob, fig, almond and pistachio trees. Along the Kyrenia range grow isolated stands of cedar and cypress, while in the southern and southwestern hill slopes of the Troodos, grapevines and fruit orchards dot the landscape. Deciduous hardwood trees can only be found today in zones above 1,200 m in the Troodos, where they are heavily outflanked by conifers or evergreens: pine, cedar, wild cypress and evergreen Cyprian oak. During the 18th century, the Troodos were described as being heavily wooded with black pine, arbutus and live oak, while the valleys were carpeted with maple, poplar, willow, alder and plane trees (Cobham 1908: 329–331, Butzer and Harris 2007: 1938).

Myres (1914: xxvii) long ago divided the prehistoric landscape of Cyprus into lowland marsh, intermediate parkland and upland coniferous forest, while Holmboe (1914: 1–3; Merrillees 1978: 6) isolated three vertical phytogeographic zones (lowland, hill, mountain), to which must be added at least a fourth, alpine zone (only above 1,600 m on Mt. Olympus in the Troodos). Meikle (1977: 4–8) divided the Late Holocene vegetation of Cyprus into eight phytogeographic regions, similar to the Evergreen Oak Belt Formation found in the coastal regions of southern Anatolia and the northern Levant, but with most of the Troodos ecozone forming part of the Sub-Humid Belt Formation; this formation is also found in the Lebanon and Anti-Lebanon mountains and in the lower reaches of the Amanus and Taurus mountains (Held 1989a: 107). The climax vegetation of the early Holocene is thought to have consisted of Mediterranean evergreen sclerophyllous forest, dominated by oaks, juniper and cypress (Jones et al. 1958: 24; Stanley Price 1979a: 13). In the more arid parts of the island, however, such as the middle parts of the *Mesaoria* and in the east and south, maquis is more likely to have been the climax vegetation (Adams and Simmons 1996a: 19–20, 22–23). *Pinus Brutia* (Aleppo pine) has been identified already in the Early Aceramic Neolithic (EAN) archaeological record (Thiébault 2003), and was certainly widespread by the Bronze Age; it was the most common species identified in charcoal samples from the archaeometallurgical site of Politiko *Phorades* (M. Ntinou, in Knapp et al., n.d.).

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Although the 8200 Cal BP 'event' may have resulted in aridification, including a reduction in the extent of forest cover, it is widely assumed that human activities led to the progressive deforestation of Cyprus after its early Holocene climax state: from secondary forest to maquis, garrigue and finally batha (Meiggs 1982: 134–137, 397–399; Held 1989a: 107). This assumption is largely based upon the present-day situation, reinforced by classical authors such as Strabo (*Geographia* 685), who stated that the *Mesaoria* was at one time heavily forested; if true, and as already noted, this is likely to have been dense maquis rather than true forest (Stanley Price 1979a: 13–14). To be sure, human settlement, plant cultivation and stock grazing have contributed much to the present-day severely eroded landscape (Miksicek 1988: 470). Moreover, although the process of deforestation at times may have been offset by natural afforestation, a slow and uneven process (excepting the endemic Aleppo Pine, or *Pinus Brutia Ten* – Meikle 1977), historical accounts of the Venetian and Ottoman periods, at least, indicate there was no obvious degree of deforestation on the island at that time (Butzer and Harris 2007: 1938–1939; cf. Christodoulou 1959: 227, who argues for several phases of deforestation).

Fauna and Flora

Recent zooarchaeological and palaeobotanical studies shed further light on Cyprus's early Holocene environment. Turning first to the faunal record, remains of some of the dwarf elephant and pygmy hippopotamus that evolved on Cyprus during the Pleistocene (Davis 1985) were recovered from a controversial archaeological site – Akrotiri *Aetokremnos* – whose excavator and zooarchaeologist believe these mini-megafauna were hunted to extinction nearly 12,000 years ago (Simmons 1999). Other archaeologists and faunal specialists are less sanguine about such an interpretation (e.g. Bunimovitz and Barkai 1996; Binford 2000; Grayson 2000; Davis 2003: 258–259; Ammerman and Noller 2005). I consider this issue further below (*Late Epipalaeolithic: The Earliest Visitors*), but whatever the fate of these two species may have been, their demise left Cyprus with no mammalian herbivore larger than the mouse (Croft 2002: 172; Cucchi et al. 2002).

Subsequently, after about 10,500 years ago during the Early Aceramic Neolithic (EAN – for the chronological periods, see below Table 2; Appendix, Table A2), the first permanent settlers of the island brought with them the following animals: fallow deer (*Dama mesopotamica*), cattle, sheep, goat and pig (unless it arrived earlier – Vigne et al. 2009), along with fox, the domestic dog and at least one, possibly domesticated cat (*Felis silvestris*, the wild cat from which domestic cats descended – Vigne et al. 2004). The larger fauna all appear in the earliest phase of occupation at Parekklisha *Shillourokambos*, an EAN 1 site near the south-central coast of Cyprus (Vigne 2001; Vigne et al. 2003; 2009). From EAN 1 levels at Kissonerga *Mylouthkia* on the southwest coast, a deep well shaft (Well 116) has produced an important microfaunal assemblage and scant remains of caprine and pig, while another (Well 133), dated almost 1,000 years later (EAN 3), contained the complete carcases of 23 caprines – 9 sheep and 14 goats – as well as some deer and pig (Croft 2003a: 271–274; Peltenburg 2003a).

Croft (2002: 174–175) hinted that the pig and cattle introduced to Cyprus were somewhat smaller than their wild variants, that the caprines became smaller in size once they had arrived on Cyprus, and consequently that the cattle, pig, goat and sheep introduced to Cyprus were domesticated from the outset. Horwitz et al. (2004: 43–44) maintained that with the possible exception of pigs, all other animals found in the earliest Neolithic assemblages on Cyprus conform in size and shape to their wild variants. In their view, it was only later, during subsequent 'colonising events', that domesticated variants of sheep, goat and possibly pig were introduced, while cattle slowly went out of use. Vigne (2001: 56–57) originally suggested that, at *Shillourokambos*, only the pig was domesticated, while cattle, sheep and goat were seen to be 'pre-domesticates'.

More detailed analyses of all the faunal remains from *Shillourokambos* have vindicated some of Croft's hints. Vigne et al. (2003: 248–251) abandoned the term 'pre-domestic' and argued that, by the second phase ('B') of occupation at *Shillourokambos* (here, EAN 1), deer and goat were feral, pigs were both domestic and feral, and cattle and sheep were domesticated. Their argument for feral populations is complex, based on an assumption that people brought domesticated (or at least herded) pig, goat and deer to the island at a time after the Akrotiri phase (ending about 9000 Cal BC) but before the EAN (beginning about 8500 Cal BC) (Conolly et al. 2011: 542). More recently, however, Vigne et al. (2009) have demonstrated the presence of two small-sized pigs at *Aetokremnos* around 9500 Cal BC. They argue that these pigs were introduced to Cyprus from the Near East more than 1,000 years before the earliest known morphological changes attributable to domestication in that region (e.g. at PPNA Cayönü and Nevali Çori in eastern Anatolia; Ervynck et al. 2001; Peters et al. 2005; Conolly et al. 2011: 542–543). The dominance of pig in the faunal record at PPNA Ayia Varvara *Asprokremmos* (ca. 9100–8500 Cal BC, discussed further in Chapter 3) and in the earliest EAN phases at Parekklisha *Shillourokambos* (ca. 8300 Cal BC – Vigne et al. 2003: 240–245, table 1) indicate that pig continued to be a major food resource in the coming millennia.

The value and utility of morphological markers – including size reduction – for determining the 'domestic' status of fauna increasingly has come under scrutiny (e.g. Redding 2005; Vigne et al. 2005). Some would now argue that the reduction in body size, once seen as a marker of initial domestication in animals, instead should be attributed to differences in the culling strategies of herders (i.e. where the faunal record is dominated by bones of smaller females slaughtered after their prime reproductive years) versus the killing strategies of