

Crete, Archaeology of



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State of Knowledge and Current Debates

The Production of Archaeological Knowledge on Crete

The archaeological remains of Crete first reached a wide audience through the accounts and drawings of Renaissance-era travelers, such as the Italian Cristoforo Buondelmonti. Later explorations built upon these works with, for example, Robert Pashley, Capt. Thomas Spratt, and Victor Raulin writing about the island's botany, geology, peoples, and ancient ruins in the eighteenth and nineteenth centuries (early travelers are summarized in Pendlebury 1939). The large-scale excavations of the English archaeologist Sir Arthur Evans at the site of Knossos early in the twentieth century (following on from the oft-overlooked preliminary work by Minos Kalokairinos in the late 1870s) propelled Cretan archaeology into European, if not global, consciousness. Since then, over a century of continuous fieldwork has resulted in Crete becoming one of the best-explored islands in the Aegean region. Although it is most famous for the Bronze Age "Minoan" civilization, named for the mythical king Minos who ruled from Knossos, the island has a long

history of settlement, conquest, occupation, and resistance, leading to numerous chronological and material specializations within Cretan archaeology.

The archaeological fieldwork carried out on Crete traditionally has focused on specific areas, in particular Knossos and its environs, the Mesara, and the Gulf of Mirabello. This has been dictated primarily by the investigation of Minoan "palaces," towns, and their hinterlands. In more recent times, the under-explored landscapes of western, southeastern, and upland regions have yielded equally important discoveries, populating the diverse Cretan landscape widely since early prehistory. Surface survey has played an important part in increasing our knowledge of the island's past since the 1980s, both by encompassing large swathes of land and by considering occupation and activity at a diachronic level (e.g., surveys of Vrokastro, Kavousi, Gournia, Knossos, western Mesara, Ayios Vasilios, Lasithi, Sphakia, and Chania, to name a few). These projects tend to combine artifactual and site typologies with studies of geology, geomorphology, environment, ancient literary references, and ethnoarchaeological inquiries, all painting a valuable picture of the island over time. They also serve to counter the early predominance of Bronze Age archaeology above that of all other periods (Table 1). Internationally, archaeology on Crete punches above its weight, thanks to the heavy burden that the Minoan culture bears as the first "European" society. Features like flushing toilets

Crete, Archaeology of,**Table 1** Chronology of main archaeological periods on Crete (all prehistoric dates are approximate)

Neolithic	7000–3200
Bronze Age	3200–1200
Postpalatial	1200–1050
Iron Age	1050–700
Archaic	700–480
Classical	480–323
Hellenistic	323–67
Roman	67 BCE–400 CE
First Byzantine	400–828
Arab	828–961
Second Byzantine	961–1210
Venetian	1210–1669
Ottoman	1669–1898

and Art Deco-style frescoes contribute to making this strange past into something familiar, and myths of the labyrinth and Minotaur are deeply embedded in western society. It is no coincidence that the emergence of archaeology proper on Crete correlated with the aim of union with Greece in the late nineteenth century – the antiquities demonstrating that Crete too could play a role in the imagination as home of western civilization. Political exploitation of the past is not restricted to Crete, of course, but for an island with multiple, complex narratives of occupation, archaeologists, Cretans, and the general public alike have been highly selective in the past they choose to prioritize.

Since Evans, archaeologists from many countries have played an important role in uncovering Crete's past, working under permits issued to the foreign archaeological institutes based in Greece. Close cooperation with their counterparts in the relevant branches of the General Directorate of Antiquities and Cultural Heritage (itself a branch of the Greek Ministry of Culture and Sports) is essential. Oversight of archaeology on Crete is divided among four main, regional ephorates (Chania, Rethymnon, Heraklion, and Lasithi) alongside those responsible for certain subcategories of material such as caves and underwater sites. These units also undertake year-round rescue excavations as necessary. The somewhat colonial division of Cretan fieldwork by region and nationality (e.g., American projects in the east of the island, Italians in the Mesara, British at

Knossos) so prominent during the earlier twentieth century is shifting in the new millennium. International collaboration between scholars is now standard, although the permit system means that officially projects will continue to run under the auspices of specific foreign institutes. Smaller foreign institutes are now following in the steps of the more established ones and also organizing Cretan projects: Sissi is a Belgian expedition, while Priniatikos Pyrgos is Irish-led. The majority of these archaeological projects occur during June–August, when academics and the student volunteers have time off from university. The process of excavation is changing too, moving from the once predominant Wheeler box-grid system to the single context, open area excavation methods developed in contract archaeology and espoused on recent projects like Priniatikos Pyrgos and Azoria. Digital recording technologies are embedded in many projects from their inception, and the digital and/or online presentation of data facilitates speedy sharing of results. Indeed, the provision of Open Access publications and data online is often a requirement of grant awards, although the extent to which these replace traditional monographs remains to be seen.

The economic crisis of recent years has impacted seriously on archaeology in Greece in general. Funding cuts have slashed the number of people employed by the Ministry of Culture and Sports at all levels, leading to reductions in museum and site openings, delays in processing

of permits and applications, and deferral in research and publication of results (Howery 2013). Increased looting at archaeological sites and museums is directly related to this reduction in personnel, although both looting and forging Cretan antiquities for international markets are not a new phenomenon (e.g., Butcher and Gill 1993).

Geography and Economy

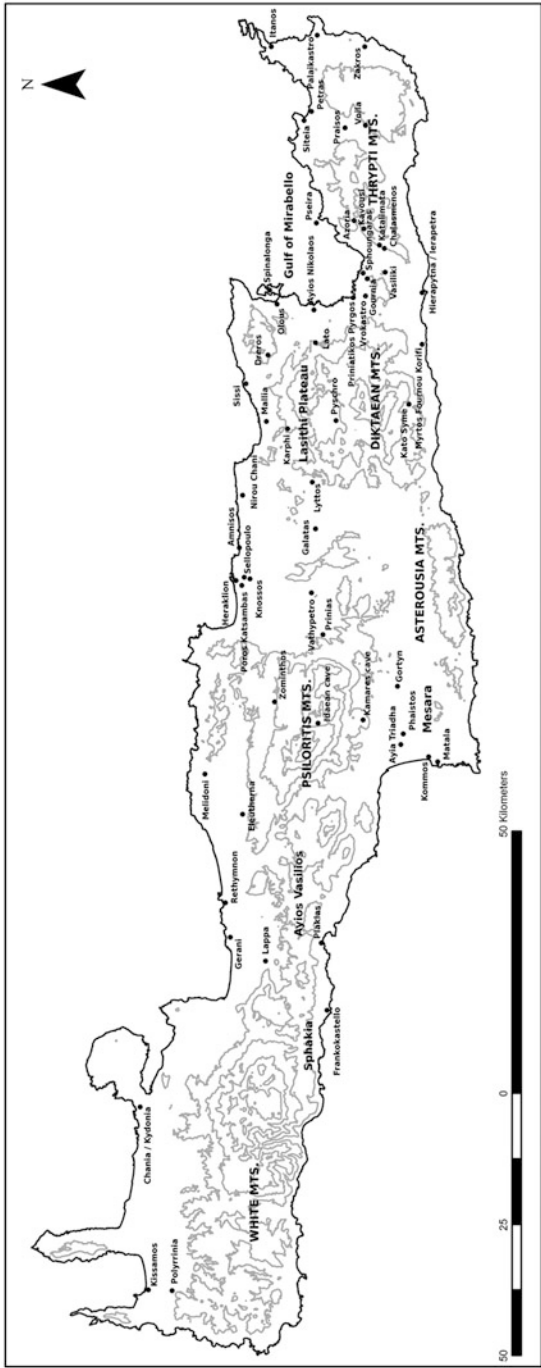
The island of Crete is the southernmost and largest of the Greek islands, 245 km long but only 50 km across at its widest, with a total area ca. 8300 km² (Fig. 1). Situated at the collision point of the Eurasian and African tectonic plates, the landscape is dominated by mountain ranges (some, such as the western White Mountains, over 2000 m.a.s.l.) and dramatic deep gorges (Fig. 2). Unsurprisingly, seismic activity has affected the island and its inhabitants: earthquakes have caused occasional serious disruption, and coastline levels have changed. Geologically, limestones and the phyllite-quartzite family predominate (Rackham and Moody 1996: 15). Settlement has usually focused along the coastal zones or cross-island communication routes, as well as near fertile land. Upland plateaus like the Lasithi and coastal plains such as the southern Mesara provide good soils for agriculture, while the mountainsides have been terraced since antiquity to extend the cultivable land. The varied Cretan landscape gives rise to a range of ecological niches, encouraging a diversity of botanical and animal life, and the island is home to over 100 endemic plants (Rackham and Moody 1996: 53–73). The current Mediterranean climate of hot, dry summers and mild, wet winters has not always persisted, and data from deep sea, ice, and pollen cores as well as flood deposits sheds light on Crete's climate throughout the Holocene (Rackham and Moody 1996: 33–40; Moody 2005). Agriculture has long been the dominant industry, with olives, viticulture, and sheep rearing especially important, and the related food products remain primary exports. Its strategic location on cross-Mediterranean shipping routes has led to a recurrent role in trade networks and military strategy. Tourism is now of great

economic importance too. Knossos is the second most visited site in Greece after the Athenian Acropolis, and archaeology must strike a balance between supporting this industry, monitoring development, and ensuring best-practice site preservation, all the while on increasingly smaller budgets.

Historical Summary

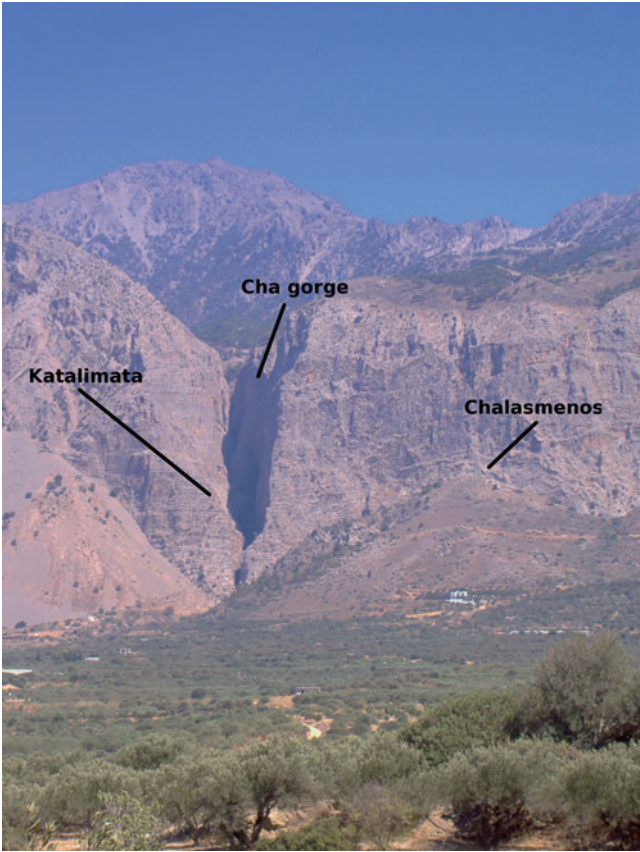
Archaeological survey results from the Plakias region in the south of the island suggest Lower Paleolithic (ca. 130,000 B.P.) and Mesolithic (ca. 11,000–8000 B.P.) occupation on Crete (Strasser et al. 2010), contradicting the long-held belief that human activity only began there early in the Neolithic period. Acheulean lithic artifacts suggest Middle Pleistocene activity in this part of the island at least (Runnels et al. 2014), while stratified microliths from excavation at Damnoni cave in the same area attest to a Mesolithic presence (Strasser et al. 2015). For evidence of more permanent occupation, the earliest Neolithic (ca. 7000 BCE) must still be the starting point. These early farmers brought with them animals and crops typical of the contemporary Neolithic lifestyle of the Near East and Anatolia. An initial aceramic phase at Knossos was the beginning of 4000 years of Neolithic activity there, creating a tell site. No other sites on the island exhibit such a long sequence of early human activity, but Knossos was by no means the only inhabited place. Late Neolithic sites included caves and open-air settlements like Gerani and Sphoungaras, while in the Final Neolithic, site numbers and types increased and included upland defensible locations also such as Monastiraki Katalimata (Fig. 2) (Tomkins 2008).

The transition to the Bronze Age is placed around 3200 BCE (Table 2), and during the following millennium, settlement numbers continued to rise, accompanied by changes in material culture. It is possible that at least some of these social transformations were driven partly by newcomers from overseas, with the Cyclades, the Dodecanese, and Anatolia potential points of origin (Betancourt 2008: 93–94). By the mid-third millennium BCE, sizeable villages had developed



Crete, Archaeology of, Fig. 1 Map of Crete with sites mentioned in text. Map made by J. Day

Crete, Archaeology of, Fig. 2 The Cha gorge in eastern Crete, with two nearby archaeological sites. Photo J. Day



Crete, Archaeology of, Table 2 Bronze Age chronology. Minoan chronology is still much debated, and the dates used here follow Dickinson 1994. All dates are approximate and are BCE

3200–1900	Early Minoan I–Middle Minoan IA	Prepalatial
1900–1700	Middle Minoan IB–Middle Minoan IIIA	Protopalatial
1700–1450	Middle Minoan IIIB–Late Minoan IB	Neopalatial
1450–1200	Late Minoan II–Late Minoan IIIB	Final Palatial (also known as Third Palace period)
1200–1050	Late Minoan IIIC	Postpalatial

in association with fertile land and natural communication routes (e.g., Vasiliki, Myrtos Fournou Korifi). Distinctive Early Bronze Age ceramics, such as Vasiliki Ware and Fine Gray Ware, and divergent burial practices suggest strong local identities, despite the evidence for interregional movement of goods.

The Middle and Late Bronze Age (or Middle and Late Minoan periods) was the time of the so-called palaces, most famously Knossos, Malia, Phaistos, and Zakros. These complex

structures were initially considered to be royal residences, but archaeologists now believe that they were multifunctional. Extending around a central court, they provided a place for ritual and commensal events. Areas were also dedicated to storage and craft manufacture (Fig. 3). Two main phases of development, divided by an earthquake ca. 1700 BCE, have been accepted by scholars, leading to the terms Protopalatial and Neopalatial for the First (ca. 1900–1700 BCE) and Second (ca. 1700–1450 BCE) Palace periods. Thriving

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Fig. 3 Storage magazine at
 Knossos. Photo J. Day



towns emerged, some adjacent to “palaces” (e.g., Knossos, Malia, perhaps Gournia) (Fig. 4), others as separate settlements (e.g., Kommos, Palaikastro). Neopalatial “villa” sites like Vathypetro, Nirou Chani, and Ayia Triadha shared certain palatial architectural features (e.g., pier-and-door partitions that allow control over the light and air entering rooms; well-carved blocks of ashlar masonry) and were probably also associated with the elite. An administrative system is evidenced by two undeciphered scripts, Cretan Hieroglyphic and Linear A, which occur mainly on clay tablets and sealings. High-quality ceramics, frescoes, faience, metalwork, and ivory and stone carving proliferated, aided by technological developments like the potter’s wheel and a wide-ranging network of overseas contacts (see Shelmerdine 2008 for numerous papers on Minoan Crete).

Toward the end of the Late Bronze Age, the island likely experienced a period of domination

by the Mycenaeans of mainland Greece. Certainly Linear B tablets from Knossos and Chania were written in the same language (an early form of Greek) and suggest a similar administrative system to that which occurred contemporaneously on the mainland at places like Pylos and Mycenae. Other mainland-style artifacts and symbols replaced or merged with Minoan ones (Preston 2008 on the “Mycenaeanization” of Crete), but this adoption of new practices and things was not necessarily the result of military conquest and could also indicate the movement of people and ideas.

Like other complex societies of the Eastern Mediterranean, Crete experienced major upheavals around 1200 BCE, the causes of which are uncertain but may have included natural catastrophes, overseas raiders, systems collapse, or internal strife. The society that emerged in the Early Iron Age (ca. 1050–700 BCE) was very different from its predecessor. Many sites were



Crete, Archaeology of, Fig. 4 Minoan town of Gournia. Photo J. Day

abandoned or destroyed, and settlement generally withdrew from coastal zones to upland, relatively inaccessible locations in the twelfth and eleventh centuries BCE. Excavations at Vrokastro, Karphi, Kavousi Kastro, and Kavousi Vronda, for example, show the typical stone-built agglomerative housing of this period; social differentiation is perhaps recognizable in certain features (monumental thresholds) or house size (e.g., Great House at Karphi) (Fig. 5). Other characteristics such as the disappearance of writing, the development of Geometric-style pottery, and the rise in cremation are shared across the wider Aegean world during these “Dark Ages” (Wallace 2010: 23). Growing complexity is evident once again from the tenth century as trade with the east increased, later leading to the “Orientalizing” style in the arts (Wallace 2010: 213).

Nucleation and expansion of some settlements and corresponding abandonment of others characterized the Archaic period (700–480 BCE), during which the foundations for the emergence of the city-state (the *polis*) were laid, often with an associated harbor town (e.g., Lato and its port at Lato Pros Kamara, modern Ayios Nikolaos) (Fig. 6). Some communities seem to have had close links with Egypt, attested by Egyptianizing dedications in sanctuaries and tombs, as well as

with the Phoenicians for whom Crete probably served as a stopping point on voyages to their western colonies (Erickson 2005: 625; Wallace 2010: 219). Contact with mainland Greece in this period is attested predominantly by ceramics, such as Laconian kraters, Corinthian aryballoi, and Attic black figure vessels. A proposed period of decline (the “sixth-century gap”) based on the lack of textual and archaeological information has been contradicted by recent work at thriving sixth-century settlements such as Azoria and Eleutherna. Even at the site of Knossos, long thought to be devoid of sixth-century BCE activity, the results of the Knossos Urban Landscape Project show that this period witnessed continuous occupation (Trainor forthcoming). Archaic Cretan society probably favored oligarchies, and public display of law codes on civic buildings, most famously at Gortyn, is a tangible reflection of social organization at the time.

Crete did not play an important role in the major conflicts of the fifth-century BCE Greek world, the Persian and Peloponnesian wars, and has often been considered somewhat isolated from the commercial, intellectual, political, and military developments of mainland Greece (Erickson 2005: 622). The island was, however, an important node in pan-Mediterranean trade

Crete, Archaeology of,
Fig. 5 View across saddle
 of Karphi. Photo J. Day



Crete, Archaeology of,
Fig. 6 Civic center of Lato.
 Photo J. Day



networks at this time. Coinage using a common standard was first issued by prominent city-states in 470 BCE (Wallace 2010: 361), and ceramic imports from the Peloponnese and Attica, in particular, confound the impression of inactivity. Classical and later Hellenistic times saw increasing conflict on the island, as city-states tried to expand their territory. Larger states like Knossos,

Gortyn, and Hierapytna swallowed up smaller *poleis*, occasionally leading to total destruction, such as that which befell Lyttos when it resisted Knossian conquest ca. 220 BCE. Transport amphorae indicate Hellenistic trade with the Dodecanese, Egypt, and the Black Sea (Vogeikoff-Brogan 2004), and ancient texts refer

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Fig. 7 Aqueduct at
 Gortyn. Photo J. Day



to Cretan mercenaries serving overseas at this time (Chaniotis 1999: 183).

Crete had been sporadically involved in Roman affairs since the early second century BCE, but it was fully incorporated into the Roman world after 67 BCE, when it was conquered by Metellus. United with Cyrene as a province, its capital at Gortyn acquired the trappings of a Roman city; theaters, temples, baths, a circus, and an amphitheater can still be seen across the 200 ha. site today (Fig. 7). In the early Roman era, settlement expanded into the countryside through small farms and villages, while the cities of Asia Minor influenced its art and architecture (Sanders 1982: 30, 135). The rise of Christianity led to the construction of basilica churches across the island, and large country villas appeared later in the fifth and sixth centuries CE, a time of prosperity and peace.

Arab expansion around the Mediterranean in the seventh century CE caused increased military activity, and eventually Crete was conquered in the ninth century, bringing an end to the first Byzantine period (ca. 400–828 CE). Little is known about the ensuing Arab rule, and apart from pottery and coins, only one building has thus far been attributed to this phase (Warren and Miles 1972). The island soon returned to the Byzantine empire following the capture of the stronghold at Khandax (now Heraklion) by general

Nikephoros Phokas, commencing the second Byzantine period (961–1210 CE). Close ties with Constantinople characterize this prosperous era when Crete became a “theme” (province) with its own governor, although urban settlements were outnumbered by small rural villages (Tsougarakis 1988: 136).

Following the sack of Constantinople by crusaders in 1204, Crete became the property of Genoa, briefly, and then Venice in 1210. The Venetians faced a strong local resistance to their harsh taxation regime which funded military exploits, although the settlers from Venice received many privileges. Another unpopular move was the restriction on Orthodox Christianity, which was seen as a uniting force for the native Cretans. Venetian remains are some of the most impressive to be seen on Crete today and include fortresses (e.g., Rethymnon, Ierapetra, Frangokastello) (Fig. 8), ship sheds or *arsenali* (Heraklion), Latin churches (e.g., St. Francis in Chania, which has housed the city’s archaeological museum), and deserted villages (e.g., Voila). A gradual blending of Cretan and Venetian cultures fostered a distinct artistic environment by the sixteenth and seventeenth centuries, which included skilled fresco and icon painting (El Greco was a Cretan) and literature, most famously the verse romance *Erotokritos*.



Crete, Archaeology of, Fig. 8 Venetian fortress in Heraklion harbor. Photo J. Day

The island remained under the control of La Serenissima (Most Serene Republic of Venice) until 1669 when, with the exception of a few strongholds like Spinalonga, it was finally conquered by the Ottoman Empire following a lengthy siege at Candia (Heraklion). The subsequent *Tourkokratia* (period of Ottoman rule) lasted over 200 years, but the only remains visible of this era today are occasional fountains and mosques. Numerous rebellions during this period sought to gain Cretan freedom, most famously those of 1770 led by Daskalogiannis, of 1821–1830 triggered by the Greek War of Independence, and the Cretan Revolt of 1866–1869 (Detorakis 1994: 278–346).

It was not until 1898 that Crete finally became autonomous, aided by the Great Powers of Europe. The next goal was *enosis*, or union with Greece, which was achieved in 1913. Crete's history from this point onward is closely intertwined with that of the rest of Greece. The forced removal of Cretan Muslims in a population exchange with Turkey in the early 1920s was a traumatic event for the island (Koufopoulou 2003). During World War II, Allied-controlled Crete was subject to an airborne invasion by Nazi Germany in May 1941, the "Battle of Crete." Despite the bravery of the Cretans and Allies alike (including archaeologists

like J.D.S. Pendlebury whose detailed knowledge of the island was put to strategic use), the defending troops were evacuated, leaving the island occupied by German and Italian forces. The resistance movement fought on until the end of the war, and exploits such as the kidnapping of General Kreipe meant that the Germans enacted brutal reprisals on the civilian population. The rapidly disappearing material traces of the invasion and resistance belong to a recent past that deserves more systematic archaeological investigation than has thus far been attempted.

Current Debates

The results of over a century of intensive archaeological fieldwork on Crete and paradigmatic shifts within the discipline are impressive: detailed information is available on artifact typologies, settlement patterns, site types, chronology, and diachronic changes in society. Bronze Age archaeology has emerged from the shadow of Classical archaeology, to be recognized and practiced as the study of a distinctive prehistoric society. This is tied to a change in emphasis more generally within the archaeology of the ancient Mediterranean, now a field less focused on iconography (as exemplified by studies of Classical figural pottery) and more on social and ideological

processes. The international makeup of archaeologists working on Crete means that research is subject to the influences of different academic traditions. In the 1980s, inspired by New Archaeology and its processual methodologies, many archaeologists on Crete embraced advances in archaeobotany, faunal studies, survey methodology, and sampling strategies. The influence of post-processual thinking is also evident, albeit mainly within Bronze Age archaeology, as issues like gender, commensality, and ritual practice are considered. On the other hand, a claim that Greek archaeologists adhere firmly to Classical training and reject modern methodological and theoretical changes (Kardulias 1994: 375) may still be applicable to some in an older generation of scholars. Yet as archaeology becomes more reflexive, past and present research agendas are being re-evaluated. For example, the term “Minoan” has been problematized as a modern construct, laden with the baggage of Evans’s Edwardian worldview (see various papers in Hamilakis 2002). Similarly, periods outside the Bronze Age that for so long were eclipsed by Minoan-centric studies are now receiving attention. Crete’s rich Byzantine heritage, its Venetian cultural mix, and the Archaic-Classical periods are becoming clearer. Five current debates that cross temporal boundaries within the discipline are outlined below.

Origins

The discovery of Paleolithic and Mesolithic artifacts on the island has renewed interest in the question of when Crete was first settled, as well as in the wider implications of such occupation. Potential Miocene tetrapod footprints with hominin-like characteristics recently have been identified at Trachilos, in the west of the island (Gierlinski et al. 2017). Should this surprising find be accepted by the academic community (and this is by no means guaranteed at the time of writing), it would indicate either a very early presence (just over 5.6 Ma) of hominins in the area now known as Crete or a previously unrecognized primate (Gierlinski et al. 2017). While Miocene visitors would have had access via the Greek mainland which was connected to Crete until ca. 5 million

years B.P., the Paleolithic arrivals must have come across the sea. If they arrived on the island by boat from the north, the east, or Africa, this is of great significance in understanding the capabilities of early humans for seaborne travel and for hominin arrival and dispersal in Europe (Strasser et al. 2010). Crete’s distinctive Pleistocene fauna, including dwarf hippos and elephants, did not survive into the Holocene epoch (Rackham and Moody 1996: 47–48); can their extinction be linked to these first peoples?

Neolithic and Early Bronze Age studies have also been revitalized within the last 10 or 15 years. Cretan Neolithic chronology has been revised to bring terminology into line with that used for the Greek mainland (Tomkins 2008) and the continual discovery and publication of Neolithic era sites means there is now a significant body of material to draw upon. The Knossos-centric approach to the island’s first farming communities is diminishing in the face of this emerging evidence for widespread Neolithic occupation. These were not isolated communities; the distribution of nonlocal materials such as ceramics and stone tells of intraisland interaction from earliest times (Tomkins 2008: 28). By the Final Neolithic period, in the late fourth millennium BCE, some communities such as Kephala Petras demonstrate considerable overseas links too, attested by obsidian from Melos, non-Cretan ceramics, copper, and *Spondylus* shell (Papadatos and Tomkins 2014). These goods and technologies were not just valued in themselves as new materials but for the symbolic and political capital they brought to communities and to individuals within them.

The ensuing Early Minoan period is no longer viewed simply as an uneventful predecessor of the palatial periods but as a millennium worthy of study for the complexity demonstrated by technological, social, and economic changes (Betancourt 2008). The tensions between “households” and “communities” in relation to social development have been fruitfully explored for this period, recognizing the variety of dwelling and experience covered by each of these broad terms (Schoep and Tomkins 2012: 13–14). Unsurprisingly, the Early Minoan period has been scrutinized for the origins of the famous Minoan “palaces” of the Middle and

Late Bronze Age. Traditional opinion purports that these complexes first appeared on Crete ca. 1900 BCE, perhaps inspired by overseas models in the Near East, but it now seems that they may have roots in the indigenous, large structures of the Early Bronze Age (e.g., at Malia) or even at Neolithic Knossos.

Throughout its history, Crete has hosted continual waves of newcomers, each leaving distinctive marks not only in the archaeological record but also in the islanders' identities. Whether the use of Linear B to write Greek indicates a mainland Greek identity or origin for at least some of the islanders during Late Minoan IIIA–IIIB remains debated (Preston 2008). Conversely, Archaic inscriptions from east Cretan *poleis* are written in Greek script but the language is not Greek. This language has been linked to the Eteocretans (“true Cretans” – perhaps descendants of the Bronze Age populations), who were associated with the Praisos region in Classical literature. The mingling of Latin and Greek peoples and cultures that occurred during Venetian rule (McKee 2000) and the deserted Muslim villages serve as reminders of just how mutable island society has been.

Palaces, Poleis, Pashas

The varying nature of regional and island control throughout Crete's settlement history is another key research theme. It has long been thought that the Minoan “palaces” functioned as regional administrative centers, although the extent of their ritual, economic, political, or ideological dominance is unclear. This interpretation is based on the Mycenaean system and hence may have limited applicability to earlier times. Other ways of understanding the complexity of palatial era society without using an anachronistic or top-down approach have been sought (e.g., peer-polity interaction). The “palaces” as entities still demand explanation, however, and it is not only their function(s) that remains uncertain, but so too the very definition of what exactly is, or was, a “palace.” Recently discovered court-centered complexes at Galatas and Petras, for example, add to the growing number of sites given this appellation, and debate continues about the

Gournia “palace” also. It is becoming clearer that “palaces” had varying construction and occupation histories and that exact parallels in function between Protopalatial and Neopalatial complexes are unlikely. Moreover, Crete in the Bronze Age was a land of regional diversity (as it still is), and seeking overarching explanations for any kind of social transformation is redundant.

Moving into later periods, Crete was referred to by ancient sources as being a land of 100 *poleis*. Archaeological exploration of these early city-states permits consideration of the development of urban centers, the links between these centers and their hinterland, and the political economy of the island during Archaic times (Haggis et al. 2004: 345). Unlike the tyrannies that emerged elsewhere in Greece, in Cretan *poleis* power rested in the hands of councils (*kosmoi* and *gerontes*) made up from elite clans (Wallace 2010: 358). Planned urban development at Archaic sites such as Azoria and Dreros included city walls and public buildings with ritual and political functions, revealing cities as materializations of their civic identity (Haggis et al. 2004: 393).

Knowledge of administration of the island in Byzantine, Venetian, and Ottoman times is based primarily on textual sources and suffers from being understudied in comparison to the earlier periods. Much of this work is published in Greek or Turkish, which has also impacted on the international impact of such research. In particular, economy, taxation and land usage are popular fields of study for these periods, and archaeological surveys often include these later eras in their studies of diachronic landscapes (Brumfield 2002 combines both approaches). Catalogues of archaeological remains like Ottoman tombstones (Fig. 9) and other monuments (*The Ottoman Centuries* by FORTH) or studies of Byzantine ceramics (e.g., Klontza-Jaklova 2015) are all contributing to slowly broadening our understanding of the later periods of Cretan administrative history.

Trade, Economy, and Overseas Interaction

Thanks to its location between North Africa, Europe, and the Near East, the island has long been an important transshipment point on sea

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Fig. 9 Ottoman-era tombstones outside the Stratigraphic Museum, Knossos. Photo C. Trainor



voyages, as well as a destination in its own right. Crete and the Cycladic islands to its north have had a close relationship since the Mesolithic – finds of obsidian microliths at Damnoni attest to ninth millennium BCE links with Melos. This contact increases during the Final Neolithic and Early Bronze Age, with so-called gateway communities along the north coast of the island such as Kephala Petras, Mochlos, and Priniatikos Pyrgos receiving not just obsidian but ceramics and copper, some of which was then traded or exchanged to the southern Cretan coast (Papadatos and Tomkins 2014). Indeed, during the Early Minoan period, some sites appear to have had very close ties with the islands to the north of Crete (leading to suggestions of Cycladic settlers in early publications), such as the cemetery of Hagia Photia with its Cycladic-style burial customs and material culture and actual Cycladic imports mixed in with indigenous products and technologies.

During the Late Bronze Age, Cretan elites participated in an Eastern Mediterranean exchange network of prestige goods such as ostrich eggs, copper ingots, faience, perfumed oils, and spices. The nature of this interaction is unclear: to what extent was the movement of goods due to gift exchange or trade, and what was the role of traveling craftworkers or iconographic and ideological transfer in the spread of material culture? Certainly, the theory that a Minoan thalassocracy, or sea empire, was

responsible for the Minoan-style material culture at places like Akrotiri on Santorini, Ayia Irini on Keos, and as far afield as Tell el-Dab'a in the Egyptian Delta has been replaced by more nuanced levels of interaction.

The location of Crete's main overseas partners changed after the Bronze Age. Some communities developed close ties to Cyprus and Phoenicia, and eastern imports like bronzes and ivories increased during the Iron Age. Unlike many mainland Greek states, Cretan *poleis* had no colonies to form natural trading partners, and the sixth century saw a decline in Orientalizing motifs and a swing toward relations with the west. It is thought that the eastern and western ends of the island now favored trade with different parts of Greece; the west formed links with the Peloponnese, as attested by finds of Laconian and Argive pottery at Eleutherna, Lappa, and Kydonia, while the east looked to the Cyclades, as indicated by finds at Olous, Azoria, and Itanos (Erickson 2005: 630–631). The lack of imported ceramics dating from 460 to 400 BCE is puzzling and may reflect a cessation of overseas trade, perhaps caused by Athenian pressure during the Peloponnesian War (Erickson 2005: 656). From Classical through Roman times, the island exported agricultural produce including wine, oil, wood, fish (evidenced by rock-cut coastal fish tanks, e.g., at Siteia), and murex. The southern ports became important stopping points on the grain route from Egypt to Rome. In return, imports from

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Fig. 10 The entrance to the Kamares cave. Photo J. Day



around the Roman Empire flowed into the island, such as granites from Egypt and ceramics like Phocaeen Red Slip Ware. Cretan sweet wine was exported in great quantities during the Venetian era, apparently at the expense of grain production; under the Ottomans, the opposite occurred, but olive oil became the dominant export crop (Brumfield 2002: 42–43).

The identification of harbors and shipwrecks is an important aspect of the study of Cretan trade. Archaeology and textual sources combine to identify harbors around the coast, such as the Bronze Age sites of Kommos, Poros-Katsambas and Gournia (where Minoan ship sheds have been recently discovered), or Hellenistic Lato Pros Kamara. Roman prosperity in particular encouraged the growth of coastal towns at the expense of those inland – e.g., Polyrrinia dwindled while its port at Kissamos flourished (Sanders 1982: 31). Undersea exploration augments our knowledge of Cretan trade throughout the ages, and shipwrecks provide unique snapshots of interconnections at discrete moments in time. Middle Minoan II ceramics in the sea near Pseira may indicate a wreck once lay here, but the wooden hull has not survived its long immersion; this is a persistent problem when seeking prehistoric shipwrecks, which, combined with sedimentation from the dynamic seabed and bottom trawling, makes the likelihood of any intact Cretan finds slim.

A second potential Minoan shipwreck has been reported at Koulenti, off the coast of Laconia, but publication is pending at the time of writing. Later wrecks around the island are attested by their cargo too; for example, several Roman and post-Roman wreck sites have been identified around the island of Dia, just north of Heraklion.

Ritual Practices and Places

Today the Cretan countryside is dotted with small chapels, but the close link between ritual practice and landscape goes back millennia. The use of caves for rituals probably dates to Neolithic times and is a more plausible explanation of the earliest skeletal and ceramic finds than their use as dwellings, stores, or refuges. In the Bronze Age, subterranean deposition of bronze figurines and fine ceramics occurred (e.g., the Kamares and Psychro caves) (Fig. 10). Some caves continued to be visited for ritual purposes into historic times; the Idaean cave, high in the Psiloritis range, has produced offerings including seventh-century BCE bronze shields. The dedication of such goods in sanctuaries enhanced the prestige of the giver and was a common practice across Greece at this time. Cave chapels can still be found; some of these, such as Melidoni (the site of a siege between Ottomans and Cretans in 1823), should be linked to their prior use as places of refuge.

Minoan-era communities worshipped at mountain shrines also, leaving votives of human and animal figurines and making offerings of food or feasting there. These peak sanctuaries have been poorly served by academia, however, with few being both fully excavated and fully published (Haysom 2015: 94). Nevertheless, at Kophinas and Vrysinas, for example, careful analysis of ceramics is allowing a clearer understanding of the chronologies of and activities at these sacred places. Architectural features of the “palaces” like lustral basins and pillar crypts suggest that rituals were carried out there too, some perhaps deriving from those that occurred in the natural environment, e.g., pillar crypts standing in for caves in an urban environment. Despite a wealth of iconographic and material remains, the actual deities worshipped and beliefs held by the Bronze Age Cretans are unknown. Linear B includes the names of Mycenaean divinities (e.g., Poseidon, Zeus), but whether there was any similarity with the later Classical gods beyond a shared name is unclear.

Extra-urban sanctuaries were used in later periods too, such as that of Hermes and Aphrodite at Kato Symi. By Archaic times, however, worship in Crete mainly occurred in the temples familiar from the wider Greek world. The small eighth-century BCE temple at Dreros is one of the earliest free-standing temples in the Greek world, while seventh-century Temple A at Prinias is the earliest such building with sculptural decoration. A contemporary potential Phoenician tripillar shrine at Kommos suggests that foreigners (settlers or passing traders?) may have worshipped at this port town. Epigraphic, numismatic, and literary sources show that Roman Imperial cult came to Crete, but of greater significance for archaeology of religion was the emergence of Christianity. Following the appointment of Titus as the first bishop of Crete by St. Paul during the first century CE, Early Christian basilicas replaced temples to the Olympian deities. Excavations of these buildings are rare, but surviving examples dating mainly from the fifth and sixth centuries suggest that simple three-aisled

structures with a nave and narthex were customary (Sanders 1982: 89).

Funerary rituals also provide food for thought. The Early Minoan stone tholoi of the Mesara are among the most impressive tombs on the island. These monuments for communal burial would perhaps have served as markers of territory and identity, while the periodic cleaning events brought kin groups or communities together. Fewer burials of Palatial-era Minoan society have been discovered, although chamber tombs, some with weapons among the grave goods, were in use by Late Minoan IIIA, indicating a change in beliefs (e.g., Sellopoulo). The iconography of Late Minoan clay *larnakes* is intriguing and may provide glimpses of belief in an afterlife. The North Cemetery at Knossos has yielded over 100 Early Iron Age graves, many with rich grave goods. Archaic and Classical burial practices varied, with interments in *pitthoi*, pits, cists, and rock-cut tombs. Christian inhumation practices were diverse, too, and include rock-cut *loculi* tombs at Lappa and Matala that were inhabited by hippies in the 1960s.

Consuming, Remembering, and Sensing

Recent archaeological engagement with food consumption is reflected in the studies of the diachronic social roles of feasting. Faunal assemblages and sets of elaborate drinking and serving vessels from throughout the Bronze Age indicate the importance of eating and drinking events, arguably as venues for negotiating social position. In the Early Iron Age, communal dining is again suggested by archaeology, ranging from large tripod cooking pots at Chalasmenos (Fig. 2) to sizeable buildings such as Kavousi Vronta’s “Big House,” which perhaps hosted communal events. Ancient texts describe the Archaic and Classical *syssition*, a combination of a shared meal and political institution, as a distinctive feature of Cretan *poleis* (Erickson 2011). These daily meals for the urban elite, financed by taxes and personal contributions, occurred in large, purpose-built structures or *andreion* such as that excavated at Azoria (Haggis et al. 2004:

387–390). Distinguishing between *andreion* and early temples can be problematic, and undoubtedly overlap existed between the social, religious, and political functions of these buildings. More easily identifiable is the later *Prytaneion* at Lato, where city officials dined (Fig. 6, *Prytaneion* at the top left of the central staircase).

The continued occupation and rebuilding at certain Cretan sites such as Knossos has been interpreted as fostering a deliberate link between past and present, perhaps at key cosmological centers or seats of power. Ruins of older structures would have been visible at such palimpsestic sites and in some cases received special attention. For example, Early Iron Age cult was practiced at older Bronze Age remains at numerous sites (e.g., Knossos, Phaistos, Amnisos, Palaikastro), while ninth-century BCE Knossians imitated and reused large Bronze Age chamber tombs (Prent 2003). These conscious attempts to associate themselves with the past were perhaps integral to legitimizing the authority of a rising aristocracy (Prent 2003: 91). The curation of heirloom objects may be another manifestation of this interest in memory across different periods, and Classical era coins from Knossos bore a labyrinth, stressing the long, mythical past of the site.

Feasts, rituals, and funerary ceremonies in ancient Crete have all been reconsidered in terms of the creation and manipulation of sensory, bodily experiences to create embodied memories with political and social significance. Indeed, the sensory turn in arts, humanities, and social sciences of the last 20 years has filtered through to Cretan archaeology more broadly, and artifacts and monuments have been approached through this new lens with stimulating results, at least for the Bronze Age. Hamilakis' (2014) exploration of Minoan Early Bronze Age tholoi and later "palaces" using concepts such as "sensorial assemblages" and "sensorial flows" highlights how the human body and the world around it are an unpredictable blend of materials, movements, and memories. It remains to be seen whether his call for a paradigm shift in how we do archaeology materializes any time soon.

Cross-References

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