Aphrodite's Kephali

An Early Minoan I Defensive Site in Eastern Crete



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Frontispiece. Pithos **77** (AK 9) from Aphrodite's Kephali. Photo P. Betancourt.

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An Early Minoan I Defensive Site in Eastern Crete

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by

Philip P. Betancourt

with contributions by

Kostas Chalikias, Heidi M.C. Dierckx, Andrew J. Koh, Evi Margaritis,
Floyd W. McCoy, Eleni Nodarou, and David S. Reese



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Preface

The conclusions based on the evidence published in this volume challenge some of the commonly held views about Crete in the third millennium B.C. This period is often called the Prepalatial period, a nomenclature based on assumptions about its character and its role in a future history of Minoan Bronze Age politics. A number of writers have suggested that Crete was populated at this time by villages with an egalitarian social structure with little social ranking and that they mainly existed at a subsistence level economically, with social stratification developing gradually during the course of the millennium (Cherry 1983, 40; Whitelaw 1983, 333–334; Branigan 1995, 39). In response to these opinions, recent research has shown that, in fact, considerable social differentiation already existed at the beginning of the third millennium B.C., and craft specialization and trade were already well advanced (Wilson and Day 1994; Day, Wilson, and Kiriatzi 1997; Day and Wilson 2002).

This volume goes further, suggesting that rather than being a precursor to a socially complex state that would arise later, early polities involving several communities probably already existed in the isthmus of Ierapetra during Early Minoan I. Advances in technology had already led to craft specialization in the production of metals, ceramics, and stone tools, and in some cases entire sites specialized, which can only be an indication of decisions that were based on regional goals. Recent excavations and studies have identified long-distance trade involving the Cyclades during the Neolithic (Zachos 2007). By Early Minoan I trade was routine, and in Crete products traveled for substantial distances and included both pottery up to the size of pithoi and also the commodities transported in ceramic

vessels. Social and economic differentiation existed on a regional, not just a local level, and decisions for mutual defense could involve collaboration by groups of workers, including the building of the watchtower that is the focus of this volume.

No evidence suggests that this situation was necessarily replicated throughout Crete. On the contrary, evidence for differences throughout the island can be found in many characteristics of the material record, including aspects of culture like burial customs that are often important social markers. Like the isthmus of Ierapetra, other regions in Crete must be considered on their own evidence.

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The staff of the Institute for Aegean Prehistory (INSTAP) Study Center for East Crete in Pacheia Ammos made many contributions to this project. Director Thomas M. Brogan and Assistant to the Director Eleanor J. Huffman offered help in numerous ways. Stephania N. Chlouveraki provided important work with conservation, ably assisted by Matina Tzari. The long and patient work of Chlouveraki and Tzari in restoring the earliest Minoan pithos makes a lasting contribution to the history of this class of storage container. Doug Faulmann drew pottery profiles, and he helped sort out the minimum number of pithoi represented by the sherds from scattered locations. Eleni Nodarou conducted the petrographic analysis at the William A. McDonald Petrographic Laboratory at the INSTAP Study Center, and she offered many valuable insights into the pottery production. Chronis Papanikolopoulos provided photographic support. Beginning

in 2006, Andrew Koh, Chlouveraki, Kathy Hall, and Michel Roggenbucke established a program for sampling pottery for organic residue analysis in the William D.E. Coulson Conservation Laboratory at the Study Center in collaboration with: Archaeochemistry Research in the Eastern Mediterranean (ARCHEM); the Museum of Cretan Ethnology Research Centre in Vori, Crete; the Department of Art History, Temple University, Philadelphia; the Foundation for Research and Technology-Hellas (FORTH), Heraklion, Crete; and the University of California, Los Angeles (UCLA). This program successfully analyzed samples from Aphrodite's Kephali, with results from 100% of the samples from this site that were tested.

Study and mapping in the field was accomplished with the contributions of: Floyd W. McCoy, Professor of Geology at the University of Hawaii; Susan C. Ferrence, Director of Publications for INSTAP Academic Press; and Stephania N. Chlouveraki, Chief Conservator for the INSTAP Study Center. Graduate students from Temple University (Judith Papit, Ariel Pearce, and Heather Hicks) and the University of Pennsylvania (Andrew Insua and Miriam Clinton) provided important assistance with documentation of the cleaning by the 24th Ephorate personnel and assisted with drawing and measuring the architecture. Andrew Insua measured the topography and the architecture for mapping purposes using a Topcon Total Station.

As always, substantial work was necessary in cataloging and studying the finds and in writing reports. The work was accomplished between 2006 and 2009. Mary A. Betancourt developed the database system used for the organization of the cataloged finds, and she and her assitants cataloged the objects with advice from Heidi M.C. Dierckx on stone implements. Susan C. Ferrence and Floyd W. McCoy helped supervised some of this work in preparation for publication. David S. Reese studied the faunal remains. Heidi M.C. Dierckx studied the stone implements and drew them. Graduate students from Temple University included Lily A. Bonga, Jeannine A. Beckman, Rachael Fowler, Whitney Krukenberg, Allyson McCreary, Judith Papit, Ariel Pearce, and Sarah Peterson. Graduate students from the University of Pennsylvania included Miriam Clinton, Nurith Goshen, and Andrew Insua. Rebecca Mullin was a graduate student from University College Dublin.

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List of Abbreviations

AK	excavation accession number
AKE	petrography sample number
cc	counterclockwise
cm	centimeters
d.	diameter
DCM	dichloromethane
dim.	dimension
E	ethanol
EB	Early Bronze
EC	Early Cycladic period
EH	Early Helladic period
EM	Early Minoan period
FN	Final Neolithic period
GC-MS	gas chromatography and mass spectrometry
gm	gram(s)
h.	height
IGME	Institute of Geology and Mineral Exploration
kg	kilogram(s)
km	kilometer(s)
kPa	kilopascal
kV	kilovolt
LM	Late Minoan period
m	meter(s)
M	maximum earthquake magnitutde (Richter)
Ma	million years before present
m asl	meters above sea level
max.	maximum
min	minute(s)
ml	mililiter(s)
mm	millimeter
MM	Middle Minoan period
M_w	movement magnitude
µl	microliter(s)
µm	micrometer(s)

NAFZ	North Anatolian Fault Zone	sp.	species
pers. comm.	personal communication	TCF	textural concentration feature
pers. obs.	personal observation	th.	thickness
pres.	preserved	wt.	weight
sec	second	yr(s)	year(s)

Part I

Introduction

1

Introduction

Philip P. Betancourt

Aphrodite's Kephali is a translation of the Greek phrase *tis Aphroditis to Kephali* (της Αφροδίτης το κεφάλι). It is the local name for a small hilltop in eastern Crete where a Minoan archaeological site was excavated in two seasons of work, in 1996 and 2003. The location is named after the property owner. The word kephali (κεφάλι) is a local Cretan noun in the neuter case. It means a small rounded hillock that stands out from the surrounding landscape. The word is closely related to the feminine word for "head" (κεφάλη). As explained by Eliopoulos (1998, 301) in regard to the contrast between the two nearby sites of Kephala Vasilikis and Kephali Vasilikis, both of which are located near one another just north of Aphrodite's Kephali, the word kephala (κεφάλα) signifies a larger hillock than a kephali.

The situation of this small hill and its role in early Cretan history is a direct result of its position in the topography of the largest Aegean island. Because most of Crete is mountainous and land travel was difficult, a high percentage of the most important Bronze Age sites were situated near the northern or southern coasts where travel by sea offered a more convenient means of movement (Fig. 1.1). The largest Minoan palaces of the Middle and Late Bronze Age—Knossos, Malia, and Phaistos—were all situated where they could take advantage of travel and trade by sea. Only in the eastern part of the island where the Gulf of Mirabello cuts into the land from the north was the island easily traversed from north to south (Fig. 1.2). Here, at the isthmus of Ierapetra, a low-lying valley extended between the northern and southern coasts (Fig. 1.3). This topography created a natural route across the island from north to south. Hills and mountains were situated both to the east and to the west of this low and relatively level region. A number of Minoan and later sites took advantage of the valley and established themselves on the nearby hills with access to this natural trade route between the Aegean and the Libyan Sea. One of those sites was Aphrodite's Kephali.

Aphrodite's Kephali is located on the western side of this isthmus, 7 km north of the Libyan Sea and 5 km south of the Gulf of Mirabello (Fig. 1.4).



Figure 1.1. Map of Crete.

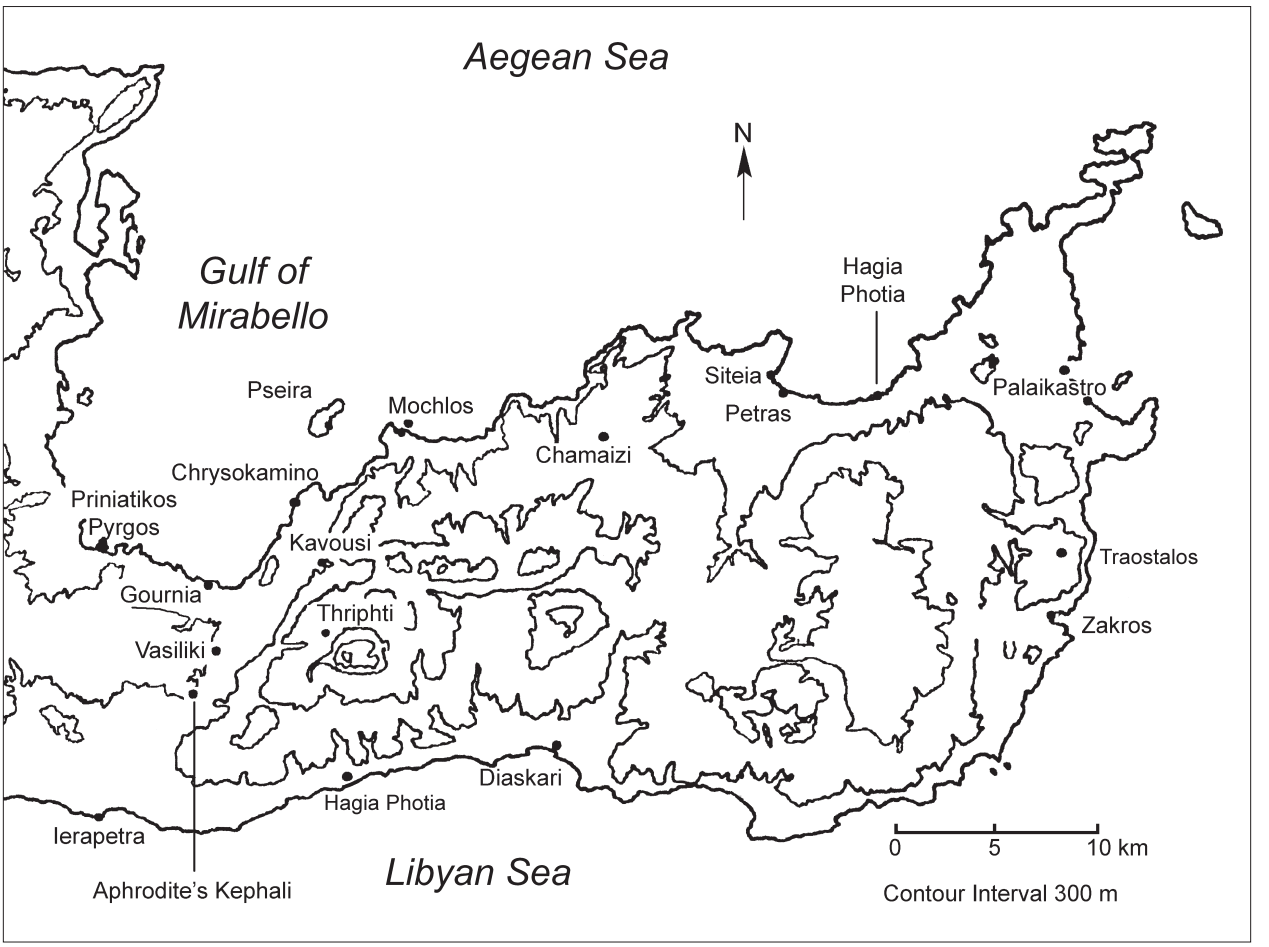


Figure 1.2. Map of eastern Crete.