

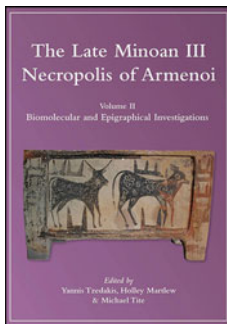
which is that of archival archaeology and openly accessible data. Published within the 'Access Archaeology' series of Archaeopress, the present volume seeks to be easily accessible to all, with a digital edition option that is free to download for personal use.

Archival archaeology as an emerging subdiscipline is a multifaceted endeavour that aims to interrogate archival data sources both to provide broader and, importantly, easier access to such, as well as to engage with legacy collections more fully. A key aim is to 're-excavate' or further assess aspects of site excavations. This commonly entails utilisation of, typically, grey-literature data (i.e. daily notebooks, journals, fieldnotes, marginalia, drawings) that exist for almost all archaeological projects, but which rarely see the light of day in publication. This avenue of inquiry has proven quite fruitful. While not an explicitly stated aim of the present volume, the results of this publication nonetheless demonstrate the benefits of an archival archaeology approach. In travelling to numerous museums and research institute archives, Metcalfe undertook significant legwork to access, find, verify, transcribe and understand the multifold pieces of data generated from the anatomical studies undertaken as part of the ASN second season, as well as adding updated details about research subsequently carried out on the human remains after their initial assessment. This effort of co-ordination, collection and concatenation, as manifest in this volume, is no small task and has resulted in a publication that will be of great use to bioarchaeological researchers with a focus on Egypt, Sudan and adjacent regions. In addition to these specifically targeted audiences, the generation of this volume will be of use to researchers interested in the integration of archival data sources into archaeological discourses.

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YANNIS TZEDAKIS, HOLLEY MARTLEW & MICHAEL TITE (ed.). 2024. *The Late Minoan III necropolis of Armenoi. Volume II: Biomolecular and epigraphical investigations*. Oxford: Oxbow; 979-8-88857-046-3 paperback £39.95.



As the largest known Late Bronze Age burial ground in Greece, the necropolis at Armenoi on the northwestern coast of the island of Crete has attracted much attention over the past few decades, both for the methods through which it was excavated and for the sheer amount and impressive condition of the material that has been recovered. Edited by Yannis Tzedakis, Holley Martlew and Michael Tite, *The Late Minoan III Necropolis of Armenoi. Volume II: biomolecular and epigraphical investigations* discusses the scientific testing and analyses conducted on the human and faunal osteological and ceramic remains excavated at the site. In addition to

providing information on the archaeological material and site layout of the Late Minoan III cemetery (c. 1390–1190 BC), this volume presents new data collected from organic residue, stable isotope and ancient genetic analyses, as well as radiocarbon dating. Together, these data provide a comprehensive background of the scientific investigations undertaken on the material from Armenoi.

The introduction supplies an overview to both the site itself and the Minoan people living in western Crete during the Late Bronze Age. It describes how a young boy's discovery of a potsherd in the field behind his family's home in 1969 led to the finding and excavation of 232 rock-cut chamber tombs containing some 1000 individuals. The remainder of the book is split into two parts: the first explains the scientific analyses undertaken on the materials found in the necropolis; and the second relates the current understanding of the 'city' of Armenoi associated with the cemetery.

The first half of the volume includes: the organic residue analyses undertaken on the ceramic and osteological material recovered; the stable isotope studies that were done on human and animal bone and enamel samples; the ancient genetic testing that was conducted on skeletal elements from 55 individuals; and the radiocarbon dating that was completed. Stable isotope studies, which detect signatures of certain isotopes—various forms of the elements of the periodic table—on organic materials, led to conclusions about the possible food sources of the Minoan people. The data indicated that much of the diet at Armenoi was terrestrial which was somewhat surprising, given the site's proximity to the sea. This analysis also suggested that four of the eight studied individuals hailed from somewhere besides Crete, and spent significant time away from the island before their deaths. Due to the poor preservation of genetic material, these exact regions and ancestral origins could not be determined.

One chapter examines Tomb 159, which held at least five individuals identified as four adult males and an unsexed foetus. It commanded special attention because it was by far the largest of the tombs at the necropolis and included a staircase with 25 steps, a propylon, a limestone stele and a male protome. As tomb 159 is one of the most elaborate Minoan burial plots ever uncovered on Crete, it was especially unfortunate that the DNA preservation of the five interred persons was insufficient for analysis. The final chapter in this section summarises the site's archaeological material to provide a comprehensive overview of the necropolis at Armenoi.

The second half discusses the ancient 'city' of Armenoi, most of which is beneath the remains of a Venetian settlement, atop which the modern town of the same name sits. Because of this, excavations cannot be conducted at much of the site. Inferences based on what is known from the architectural and archaeological material that has been uncovered have led to the term 'city' being used to describe the settlement. The original Minoan name for the 'city' of Armenoi is believed to be "*da- *22-to*". It was derived from Linear B texts and tablets found at the site and nearby Knossos, as well as archaeological and architectural evidence correlating the ancient name with its modern one. Studies of its environs and raw-material deposits suggest that there were indeed enough resources to support an independent settlement during the Late Bronze Age. The volume closes by discussing the 'city' of Armenoi's relationship with Kydonia to the northwest, and Pylos, a Mycenaean stronghold in the Peloponnese.

This volume emphasises the biomolecular and epigraphical studies conducted at the necropolis and 'city' of Armenoi. The organic residue analysis was particularly revolutionary because it inspired other archaeological directors across Greece to conduct this testing on

osteological material from their own sites. The contributors of this work clearly and concisely explain the intentions and methods behind the scientific testing techniques employed in their studies, which is especially beneficial for readers unfamiliar with these kinds of analyses. Furthermore, in describing their sampling approaches for each scientific analysis, they emphasise their employment of minimally destructive methods, highlighting their concerns for the ethical study of human remains.

Despite these explanations and successes, there were several points of concern.

First, the authors took a few liberties with the current understanding of the history of Minoan Crete. For example, they operate under the assumption that the Mycenaeans from mainland Greece invaded the island and became the central power during the end of the Bronze Age, regardless of the fact that their own, admittedly sparse, ancient genetic data—and that of other studies (Lazaridis *et al.* 2017; Clemente *et al.* 2021; Richards *et al.* 2022)—contradicts this claim. Models of Mycenaean influence are highly debated, which should have been better explained.

Second, the volume's chapter layout was not well organised. This seems to be in part because information on any given scientific analysis or tomb was provided throughout the book, rather than all together in one section. This issue is particularly evident in the first half of the volume and was rather confusing. Perhaps it may have been more accessible if the results and implications of each scientific testing method were discussed independently of each other, then followed with a closing or conclusive chapter interpreting all the data together. As it is written, readers have to piece together the findings themselves. While the methods are well-described, the contributors' conclusions are at times esoteric.

Overall, this volume is an informative and intriguing review of the bioarchaeological work undertaken at the necropolis of Armenoi. One section lists questions for further research, including who wrote the tablets found at the site and how, during the site's 200-year history, did some seven generations of people produce the material culture that was uncovered? These inquiries suggest avenues of future scholarship for both emerging and expert scholars in the field and hint to the reader that while a robust picture of the site of Armenoi has been drawn—*isotope analysis indicates foreigners were visiting or moving to the site, architectural and archaeological evidence suggest an ample population size, and Linear B tablets demonstrate Mycenaean influences—the image is certainly not complete.*

References

CLEMENTE, F. *et al.* 2021. The genomic history of the Aegean palatial civilizations. *Cell* 184: 2565–86.
LAZARIDIS, I. *et al.* 2017. Genetic origins of Minoans and Mycenaeans. *Nature* 48(7666): 214–18.

RICHARDS, M. *et al.* 2022. Finding Mycenaeans in Minoan Crete? Isotope and DNA analysis of human mobility in Bronze Age Crete. *PLoS ONE* 17(8): 1–22.

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