ARCHAEOLOGICAL INSTITUTE *of* AMERICA

121ST ANNUAL MEETING

ABSTRACTS

VOLUME 43

■ January 2–5, 2020 ■ Washington, D.C. ■

altogether, the necessity to better nuance Antioch's multilayered nature. Drawing on new historical frameworks, key archaeological data, and reexamination of the Antioch collections at Princeton University, I address the city's continuous becoming through the lenses of select, partially investigated domestic contexts in Daphne. How this perspective sheds new light on the rise of this suburb as well as its spatial relationship with Antioch is, in particular, the thrust of my presentation.

(Paper) Points, (Pencil) Lines and Polygons at Isthmia

Jon Frey, Michigan State University

Thanks to the growing accessibility of "off the shelf" digital tools and technologies, archaeologists whose work focuses on pre-digital archaeological documentation now enjoy a wide range of options for converting their data from legacy to digital formats. At a most basic level, it is possible to scan or photograph each document, which can then be stored and shared in a digital archive. Of much greater utility is the conversion of not only the documents but the information they contain into formats that can be subjected to computational analysis. However, this more useful form of digitization necessarily involves a degree of interpretation as hand-drawn maps and field journals often lack the precision of modern recording tools.

This paper relies on one such digitization project at the Ohio State University Excavations at Isthmia to explore the problem of ambiguity in the mapping of archaeological information. Here, an effort to plot the findspots of artifacts has been hindered by the lack of a scalable site plan, the use of an obscure geographic model, and incomplete descriptions of objects of interest in the archaeological record. Most significantly, a lack of consistency among archaeologists in recording geospatial references yields ambiguities in the data that are inherently at odds with the level of precision needed for use in Geographic Information Systems. These problems have all required unique solutions, which are here presented for the benefit of other projects in similar circumstances.

Session 3E: Colloquium
Between the Mountains and the Sea: Exploring Sissi on Crete

Organizer: *Jan Driessen*, Université catholique de Louvain

Colloquium Overview Statement

The Kephali hill at Sissi is a coastal site, located 4 km east of the palatial settlement of Malia. Excavations and survey by the Belgian School at Athens since 2007 have brought to light a settlement and a cemetery within a very dynamic landscape. Strategically situated opposite the Selinari gorge—the only access to East Crete—the site was occupied from 2500 to 1200 B.C.E., mirroring that of nearby Malia. Because of a similar diachronic occupation, the site presents indeed an ideal case study to explore the relationships through time between a first-order center (Malia)—where a palace would be built from the Middle Bronze Age or the

twentieth century B.C.E. onward (if not earlier)—and a secondary site in its hinterland (Sissi). This provides an interesting test case to compare intraregional material culture—both where production and consumption are concerned—and opens interesting research avenues to explore various forms of (in)dependency through time and the implementation of emerging social and economic links. The papers in the session largely follow a chronological order with first papers on the Prepalatial settlement (Caloi) and cemetery (Schmitt and Déderix). Driessen and Devolder, respectively, concentrate on the function and architecture of the Neopalatial court-centered complex at Sissi—confirmed by the 2015–2019 excavations—which has added unsuspected angles of research and interpretation to this comparative study. A paper by Sager, Girardi, and Schmitt follows, on the funerary evidence of the Neopalatial-Postpalatial phases. There are also three specialist reports: one on the painted plaster from the settlement (Pareja), one on the micromorphological samples that allow a more refined household analysis (Magno), and one on the consolidation and outreach program that we are implementing (Claeys).

This colloquium will allow us not only to present synthetic papers on the various sectors revealed (cemetery, settlement, central building) on the site, their parallels and importance, but also to discuss to what degree the excavations have added, modified, or confirmed past ideas on Minoan civilization.

Discussant: *James C. Wright*, Bryn Mawr College

Consuming Pottery at Early Prepalatial Sissi: Preliminary Observations on the EM IIA and B Ceramic Deposits from the Settlement
Ilaria Caloi, Ca' Foscari University of Venice

During the recent 2015–2019 excavation campaigns, the Kephali hill at Sissi yielded a number of Prepalatial deposits that can be attributed to the E(arly) M(inoan) II period (ca. 2700/2650–2200 B.C.E.), offering the earliest evidence for occupation of the settlement in the Bronze Age. The aim of this paper is to present the Prepalatial deposits found in two specific areas of the Court-Centered-Building, i.e. the West wing and the North-West wing (Zone 11) as well as in two recently discovered Prepalatial buildings–Building 1 and 2–located to the West of the Court-Centered Building..

In the West wing, Spaces 10.8 and 10.19, although not completely excavated, produced Prepalatial assemblages dating solely to EM IIA. The deposit in Room 10.8 mainly yielded jugs, teapots, and bowls in Black-Burnished Ware but also a large collared jar and a long-spouted jug in light fabric. The deposit in Room 10.19, however, was very homogeneous and thus far comprises the earliest pottery of the Sissi settlement, which is EM IIA Early. It includes a number of fragmentary collared jars in Dark-on-Light Ware but also bowls and jugs in Black-Slipped and Semi-Coarse wares. In space 10.19, there is also a small installation made of upright slabs and the destruction layer next to it revealed several thousands of obsidian flakes (more than 4,000 pieces collected), blades, and nuclei, perhaps originally gathered in a container of some sort.

In the northern area of the Court-Centered Building, two EM IIB deposits were excavated. The first, in Room 11.1, is a large deposit that has only been preliminarily published. It comprised large amounts of pottery, which is quite similar to that of Malia, Vasiliki, and Myrtos. Most of the pottery is represented by vases of the well-known Vasiliki Ware, of a ware that imitates it, i.e., the Mottled Ware (also known as Pseudo-Vasiliki Ware), as well as in Semi-Coarse Ware. Buildings 1 and 2 have both revealed stratified EM IIA Early deposits. In particular, Rooms 10.24 and 10.25 from Building 1 have yielded a large number of juglets, which in Room 10.25 are associated with small cups, known as raki-cups.

In this paper, I first present the pottery from these various deposits dating to EM IIA and EM IIB periods, showing comparisons not only with the recently studied EM II deposits from the Palace and the high-profile Building Dessenne at Malia, but also with contemporary deposits in North-Central (e.g. Knossos) and Eastern Crete (i.e. Myrtos and Vasiliki). I will also attempt at defining the nature of the EM II occupation of the Kephali hill at Sissi.

Burying the Dead in Late Prepalatial and Protopalatial Crete: New Evidence from the Cemetery of Sissi (Zone 9)

Sylviane Déderix, Université catholique de Louvain, *Aurore Schmitt*, University of Aix-Marseille, CNRS, EFS, UMR 7268 ADES

The mortuary record of Prepalatial and Protopalatial Crete consists mostly of commingled bone assemblages that are usually taken as evidence for the practice of secondary burial. Secondary burial rites represent the final stage of double funerals and, as such, they integrate the deceased into the world of the dead while closing the period of mourning for their relatives. In addition, they represent a privileged arena for social negotiation among the living. A significant period may elapse between the moment of death and the secondary burial ceremony, thus enabling the deceased's relatives to gather resources to conduct lavish funerals matching their social, economic, and political ambitions. It has also been suggested that double funerals tend to be practiced in societies where kinship is the principal means of social organization and funerary feasts contribute to increasing the prestige of kin groups. Therefore, the identification of secondary burials has major implications for our understanding of mortuary practices, funerary beliefs, mourning processes, and, to some extent, social organization in Early and Middle Bronze Age Crete. But until recently, Minoan mortuary studies relied essentially on data sets collected during the first half of the twentieth century, in excavations that were generally carried out in a hurry and which brought to light masses of bones and artifacts that were later interpreted de facto as the result of double funerals. Yet, various anthropogenic and natural taphonomic processes other than secondary burial can produce commingled deposits. Only meticulous excavation by archaeo-anthropologists has the potential to recognize such processes and, in this way, reconstruct funerary gestures and rituals.

This paper discusses recent work in the Prepalatial and Protopalatial cemetery of Sissi, with a view to assessing the evidence regarding the practice of double funerals at the site. The cemetery, which extends on two natural terraces on the northern slope of the Bouffos hill, consists of rectangular tombs similar to those known

elsewhere in East and Northeast Crete (e.g., Malia, Mochlos, Petras). Excavations were conducted on the southwestern terrace of the cemetery (dubbed "Zone 9") in 2010–2011 and 2016–2019, following the archaeothanatological approach. Numerous mortuary deposits were thus excavated, recorded, studied, and interpreted by archaeo-anthropologists. As a result, Zone 9 has provided substantial evidence for a broad diversity of treatments of the dead during the Middle Minoan I and II periods: primary vs. secondary depositions, individual vs. multiple depositions, removal of selected body parts, burials in clay as well as perishable containers, etc. Such a diversity contrasts with the traditional and rather monolithic view of rectangular tombs as collective tombs used for secondary burials, thus adding to a growing body of evidence that urges Minoan archaeologists to reconsider burial practices in Bronze Age Crete.

Keeping up with the Joneses? The Central Building at Sissi
Jan Driessen, Université catholique de Louvain

Following the abandonment of the Protopalatial cemetery on the Kephali hill at Sissi, a monumental complex around a Central Court was constructed in the Middle Minoan IIIA period. For at least a period of a hundred years, this complex existed at the same time as the major palace that stood at nearby Malia, less than 4 km away. It was abandoned at the time of the Santorini eruption. While on the island, there are several other examples of major centers that are located close to each other, the Malia-Sissi case, however, is the first where central courts are attested at such close proximity. This begs for a reconsideration of the role of such court-centered buildings. In this paper, I first address the layout peculiarities and preliminary architectural phasing of the Sissi complex before listing the evidence for a ceremonial and ritualized function and the absence of features of production, storage, and administration. I use this to propose a more varied hypothesis of what we understand as a Minoan "palace."

Palatial Neighbors: Comparing Elite Architectural Features in the Palace at Malia and the Court-Centered Building at Sissi
Maud Devolder, Université catholique de Louvain

The recent discovery on the Bronze Age site of Sissi of a monumental edifice exhibiting the main features of a Minoan palace, i.e., elaborately built structures coherently surrounding a large central court, only few kilometres away from the Palace at Malia, has left scholars puzzled about its function. The contemporaneity of use of the two palatial buildings during the Late Bronze Age excludes the possibility that power was transferred from one coastal settlement to the other, but this duplication made it doubtful to some that the main edifice at Sissi should even be considered a palace. In this paper, the author wants to take the opportunity of her recent architectural study of the long-excavated Palace at Malia and of her participation to the excavation of the Court-Centered Building at Sissi to explore the architectural features shared by both edifices and most characteristic of elite palatial architecture on Minoan Crete. The presentation will highlight the specific material and technical choices that contribute to define both structures as palatial.

Furthermore, the possibility that skilled—and perhaps non-local—builders participated in their construction and thus the spreading of elite architecture on the island will be explored, and the way in which the monumental buildings were incorporated in the history, topography, and urban network of each site will be examined. The material features of both edifices will be considered in the broader framework of the Minoan Palaces, in order to address the architectural fundament of the palatial phenomenon.

Building 18 at Sissi: A Neopalatial House Tomb?
Tia Sager, University of Toronto, *Aurore Schmitt*, CNRS, University of Aix-Marseille, and *Chloé Girardi*, University of Aix-Marseille

At the coastal site of Sissi, the cemetery in Zones 1 and 9 on the northern slope of the Kephali has provided extensive evidence of the burial practices at Sissi during the Prepalatial and Protopalatial periods. Prior to the start of MM IIB, the cemetery of the lower terrace falls out of use and evidence for burials and burial customs from MM IIB onwards seems to disappear at Sissi, as it does on much of the island. In 2017, our team began excavations on the northern slopes of the 'Middle Terrace' at Sissi (Zone 18) where we expected to find the continuation of the Neopalatial domestic quarter (Zone 2). Instead, we found the first evidence for Neopalatial burial at the site. Zone 18 is located directly to the north of the Prepalatial and Protopalatial cemetery (Zone 1 and 9), and our hypothesis is that it was in use as a burial area likely from MM III, after the lower cemetery falls out of use, until LM IB. The excavation of Zone 18 during the 2017–2018 seasons has yielded evidence of a large rectilinear building surrounded by a pebble court. The building resembles the house tombs of the earlier cemetery, however, its construction is larger and of higher quality. Much of the building has been damaged from possible earthquake damage, and likely due to modern plowing activity on the hilltop. Throughout the 2017–2018 season, we discovered several primary and secondary burials tentatively dating to ca. MM IIIB-LM I inside the building with evidence of new burial practices, as well as a large ritual deposit containing smoker vessels, a large number of juglets and incense burners dating to LM IA inside a central room. Surrounding the building, we discovered a pebble courtyard area that underwent several phases of repaving, with large ceramic deposits placed directly on the surface of each consecutive pebble floor. Our hypothesis is that the building is a possible house tomb that was used primarily during the Neopalatial period for primary and secondary burials, with an area for the ritual preparation of the dead. This paper will present the results and preliminary conclusions of the 2017–2018 excavations in Zone 18, with a focus on the burials contexts and ceramic deposits found within and surrounding Building 18.

Observations on Sissi Plasters: Zones 4 and 5
Marie Nicole Pareja, University of Pennsylvania

Since the start of excavations at Sissi in 2007, thousands of plaster fragments have been recovered and stored for conservation and study. Initially, the dirty

fragments appeared to be mostly white lime plaster. During the 2017 and 2018 field seasons, a plasters specialist and conservator team inspected and cleaned several plaster samples from across the site, revealing that more than half of the samples examined preserve indications of painted surfaces.

Limited evidence survives from Zones 4 and 5 for the application of lime plaster as early as the Early Minoan Period. Its application levels areas where the bedrock is exceedingly uneven, and it serves a purely structural function. The majority of the remaining plaster dates to the Protopalatial period, during which the earliest painted lime plaster becomes widely employed throughout Crete. Of significance is the fact that these fragments carry almost the full range of pigments, as well as evidence for the planning of the composition of the image (snap lines and incision marks). Some of these early plasters are continuously applied from the walls to the floor with no division between planes: no seams or edges separate the plastered walls and floor. As such, this type of treatment provides an opportunity to increase the understanding of the early and experimental phases of painted plaster. Neopalatial material survives as well, although it is neither as much nor as well preserved as the Protopalatial fragments. Nevertheless, scant evidence for large-scale, possibly figural imagery survives, and parallels between identified motifs and comparanda from the broader Aegean are proposed for select fragments when possible.

The lengthy, nearly continuous habitation at Sissi provides an outstanding opportunity for the study of the experimentation with and development of plaster use and technology through the Bronze Age. As a site uniquely located nearest the natural gateway to East Crete, its inhabitants would have direct access to trade, technology, goods, and artistic trends from both north central and eastern Crete. As plaster studies continue at Sissi, the relationship with not only Malia, but with the rest of Crete and the broader Aegean will continue to be explored.

Investigating Cultural Sediments at Sissi through Microarchaeology

Laura Matilde Magno, Université catholique de Louvain

Cultural sediments being produced and altered by humans are a valuable source of information on site occupation practices. Microarchaeological techniques such as micromorphology and Fourier transformed infrared spectroscopy (FTIR) are used at Sissi to investigate some of the surfaces identified in the recent excavation campaigns such as plaster and tarrazza floors. The geological samples selected for this study were collected during the last seven years and are representative of the new structures uncovered since 2011. The sampled areas included open spaces such as the central court and the lower hill terraces, inside spaces from the main complexes such as building CD, E, F, and Area 8, samples from areas with possible ritual function or related to water management such as Area 16, samples from the main processional road leading to the central court, and samples related to possible destructive events such as burnt sediments or volcanic ash connected to the Santorini eruption.

This contribution mainly focuses on the behavioral and technological information that can be identified through the study of the microstratigraphy of surfaces. Micromorphology analysis at Sissi provided information on the use of different

surfaces and, in some areas, identified floor sequences, allowing a better understanding of behavior in both a spatial and a diachronic way. Micromorphological study was complemented by FTIR analysis that focused on the study of calcium carbonates. This technique identified the technological processes related to the making of the plaster used to build some of the surfaces at Sissi and also provided data on the source of the raw materials incorporated into the general sediments across the site.

The Sissi Preservation Program: An Integrated and Participatory Approach for a Stronger Synergy between Archaeology, Preservation, and Presentation
Thérèse Claeys, Université catholique de Louvain

Culminating at about 25 m above sea level, the Kephali hill is located east of the modern village of Sissi in Crete. The coastal hill has revealed the remains of an organized settlement occupied throughout the Minoan period, between ca. 2600 to 1200 B.C.E. Considering the fragility of the Minoan architecture combined with the peculiar coastal environmental constraints accelerating erosion processes and increasing flooding risks, the urgent duty of preserving the uncovered ruins in Sissi soon arose. Alongside these short-term preservation imperatives, both presentation and awareness-raising strategies also had to be reflected upon, due to the limited visibility of the remains and the systematic retrieval of moveable finds, in order to ensure the long-term safeguarding of the site. This paper first proposes a retrospective appraisal of the solutions undertaken so far within the Sissi Preservation Program to tackle the aforementioned three challenging axioms (preservation, presentation, education). Since the efficiency of the preservation measures can only be assessed in the long run, systematic and reliable methods will have to be adopted to conduct such assessments. The potentialities of Geographical Information Systems (GIS) have already been applied for more than two decades now in the field of archaeological research and cultural heritage management. In addition to examining the obvious benefits of GIS for future preservation monitoring purposes at Sissi, the second section of this paper intends to present an on-going pilot study demonstrating how GIS can also be used in innovative and participative ways, by processing visitors' spatial behavior data recorded with GPS tracks, to inform decision-making processes for the presentation of the Sissi remains. Building upon the Sissi case study, this paper eventually seeks to emphasize the role of GIS as a digital solution for fostering the collaboration between the different specialists involved in the valorization of the Minoan heritage.