

# THE LEON RECANATI INSTITUTE FOR MARITIME STUDIES FIRST ANNUAL MEETING

The Leon Recanati Institute for Maritime Studies is proud to announce its first annual meeting, in which institute members will present their most recent research achievements.

Wednesday, June 14, 2023 | 17:00 to 20:00 (Israel Time)/10AM to 1PM (EST)



Zoom: <https://t.ly/bMDG>



YouTube Live: <https://t.ly/wY-i>

## WELCOME AND GREETINGS

Assaf Yasur-Landau, Head of the Leon Recanati Institute for Maritime Studies

## FIRST SESSION

Chairperson: Nimrod Marom

### Provenancing Bronze Age Stone Anchors

Sara Macke, Assaf Yasur-Landau, Ehud Galili, Nadya Teutsch and Ruth Shahack-Gross

### Rediscovering the Phoenician Sanctuary of Makmish (Tel Michal)

Eran Arie

### Caesarea SubMaritima

Gil Gambash and Ehud Arkin-Shalev

### The Role of Art and Artists in Egyptian Society (First Millennium BCE): The Evidence from Polychrome-Painted Coffin Lids in the Israel Museum

Shirly Ben-Dor Evian

Break 15 minutes

## SECOND SESSION

Chairperson: Meir Edrey

### The History of Ports and Anchorages in the Carmel Coast, 2000 BCE–1000 CE

Assaf Yasur-Landau and Thomas E. Levy

### Neolithic Coastal Settlements and Responses to Environmental Dynamics: A Pioneering World Lost beneath the Mediterranean Sea

David Friesem, Ehud Galili, Isaac Ogloblin, Elle Grono and Roni Zuckerman-Cooper

### In the Shadow of Caligula's Magnificent Barges: The Embankments of Lake Nemi

Emmanuel Nantet

### When Fish Are Not Silent: The Bronze and Iron Age Fish-Bone Assemblages from Hazor

Shlomit Bechar and Omri Lernau



Photo: Marko Runjajić

### Provenancing Bronze Age Stone Anchors

Sara Macke,<sup>b</sup> Assaf Yasur-Landau,<sup>a,b</sup> Ehud Galili,<sup>a,c</sup> Nadya Teutsch<sup>d</sup> and Ruth Shahack-Gross<sup>a,b</sup>

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<sup>d</sup> The Geological Survey of Israel, Jerusalem

Many stone anchors from the Bronze Age (ca. 2000–1200 BCE) have been found throughout the eastern Mediterranean, including a large number along the coast of Israel. Stone anchors of the Middle Bronze Age (MBA) and Late Bronze Age (LBA) were typically made of carbonate rocks and aeolianites, which are common along the eastern Mediterranean coasts but cannot be distinguished macroscopically to determine their specific geographic origins. To address stone anchor provenance in light of this complex geological setting, we recently published a multi-analytical methodology that synthesizes petrographic and geochemical techniques. Laboratory analyses conducted on groups of stone anchors from the Carmel Coast in comparison to references from carbonate rock formations and aeolianite/beachrock outcrops from various coastal regions of Israel showed that most carbonate rock anchors of the MBA and LBA align with Israeli chalky limestones of the Arqan and Isfiye Formations found in Mt. Carmel. All stone anchors, besides one, align with aeolianite references rather than beachrock, and probably originate from the Carmel coast and north of Israel. This presentation will focus on new results of elemental compositions pertaining to stone anchor provenance, as well as the biography of some Byblian-type stone anchors. Elemental compositions of all (but one) chalky limestone anchors studied thus far group closely with each other and with several Arqan and Isfiye Formation references, supporting the previous provenance proposal. Future research will seek chalk and limestone references also from Cyprus, to test whether outlier compositions may originate there. Byblian-type anchors display two widths of chisel marks seen on the items, at different states of preservation, lending information to the biography of the studied objects.

### Rediscovering the Phoenician Sanctuary of Makmish (Tel Michal)

Eran Arie

Leon Recanati Institute for Maritime Studies, University of Haifa

Department of Cultural Heritage, University of Haifa

The Persian period Phoenician sanctuary of Makmish (Tel Michal, Israel) was excavated during two short seasons in 1958 and 1960. Although more than sixty years have passed, only two short preliminary reports were published, and the sanctuary with its rich artifact assemblage appears to have been forgotten. The archival material of the excavation and most of the finds were recently located after countless efforts, and they are now studied in preparation for a final report.

The paper will present a preliminary study of the stratigraphy, architecture and finds from the sanctuary. The most surprising discovery was that of more than two-hundred clay figurines, of which only about fifteen were published in the past. Though it is located on the southern margins of Phoenicia, the good preservation of the sanctuary, its well-established plan and the rich figurative and ceramic assemblages make Makmish one of the best laboratories for the study of Phoenician cult during the Persian period.

## Caesarea SubMaritima

Gil Gambash<sup>a,b</sup> and Ehud Arkin-Shalev<sup>b</sup>

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Exciting new technologies and methodologies allow us to revisit the submerged harbor of Sebastos in Caesarea Maritima, most recently surveyed and excavated during the last decade of the previous century. Our understanding of the harbor's construction, function and decline stands to benefit from such an endeavor, which should be launched, however, through the production of a high-resolution GIS-referenced 3D photogrammetric model of the harbor, as of yet unavailable. This talk will portray briefly the main precepts of the project and present some results from an initial proof-of-concept campaign recently conducted in collaboration with the University of Malta.

## The Role of Art and Artists in Egyptian Society (First Millennium BCE): The Evidence from Polychrome-Painted Coffin Lids in the Israel Museum

Shirly Ben-Dor Evian

Leon Recanati Institute for Maritime Studies, University of Haifa

Department of Cultural Heritage, University of Haifa

Two polychrome-painted anthropoid wooden coffin lids were donated to the Israel Museum in the early 1980s by Wilma and Lawrence Tisch, purchasers of the Dayan Collection. A preliminary description of the lids, as well as their obscure provenance, will be detailed in this paper. Their materials and technology and the conservation and restoration procedures are the subject of an ongoing analysis funded by the Israel Science Foundation, in an effort to shed light on the owners of the coffins and on the artists who created them. The coffin artists—masters of woodworking and decorative arts—have been widely underscored by modern research, but a materiality-based approach to the study of wooden coffins promises to bring forth their social significance.

## The History of Ports and Anchorages in the Carmel Coast, 2000 BCE–1000 CE

Assaf Yasur-Landau<sup>a,b</sup> and Thomas E. Levy<sup>a,c</sup>

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Excavations, surveys and geoarchaeological studies conducted as part of the University of Haifa and UC San Diego collaboration in 2018–2023, supported by the Koret Foundation, enable to present a new and exciting history of 3,000 years of anchorages along the coast of the Carmel. The study of sea level changes, combined with paleoenvironmental reconstructions, coastal settlement patterns, harbor remains and evidence for maritime activity, provides a unique picture of the *longue durée* of human adaptation to Mediterranean coastal conditions. Most notably, the results of this study show that a nonlinear, non-evolutionary model for the development of harbors should be adopted.

## **Neolithic Coastal Settlements and Responses to Environmental Dynamics: A Pioneering World Lost beneath the Mediterranean Sea**

David Friesem,<sup>a,b</sup> Ehud Galili,<sup>a,c</sup> Isaac Ogloblin,<sup>a,b</sup> Elle Grono<sup>a,b</sup> and Roni Zuckerman-Cooper<sup>a,b</sup>

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Here we present our new project aimed at studying the relations between environmental change and cultural change in coastal and wetland ecosystems, which were vital to the development of Mediterranean complex societies during the Neolithic period. Even though coastal societies must have held a significant place in Mediterranean history, many of their earliest trajectories are archaeologically obscure due to a rise in sea levels since the end of the Last Glacial Period. In this project we focus on microscopic and chemical analysis of sediments cored at 'Atlit-Yam, the earliest known permanent coastal settlement, presently submerged in the east of the Mediterranean Sea, off the Carmel Coast. We explore the paleoenvironmental record in relation to the deposition history of archaeological remains, to better understand how people interacted and responded to environmental changes in the highly dynamic Coastal Plain about 10,000 years ago.

## **In the Shadow of Caligula's Magnificent Barges: The Embankments of Lake Nemi**

Emmanuel Nantet

Leon Recanati Institute for Maritime Studies, University of Haifa

Department of Maritime Civilizations, University of Haifa

Lake Nemi is well-known for the immense boats built by Caligula that were discovered in it. Scholars have focused considerably less on numerous embankments that surrounded the lake, although they present a rare example in this environment type of concrete formworks built using Roman technology. The latter were explored from 1928 to 1932, when the lake was drained to recover the two magnificent imperial ships, and later interpreted as concrete-filled formworks, though their precise date requires clarification. A few timbers emerging from the water around the lake may be remnants of these structures, so our team carried out an operation in 2021 to document the embankments further. The project relies on a reappraisal of the excavation archives, especially the photos taken during the recovery of Caligula's barges, to check whether these timbers may be identified as part of the Roman formworks. The presentation will propose to compare the data collected during the recent operation to the descriptions written by the excavators and published by Guido Ucelli. Although the wood piles were poorly preserved, the study will provide additional information about the wooden formwork, especially its fastening system. The poster offers a plan of the posts that we studied, specifying the tree species. It also delivers the results of the radiocarbon analyses and the dendrochronological study used to provide a more accurate dating of the embankments. Further, it suggests these structures were related either to the flourishing of the sanctuary of Diana, the construction of an ancient emissary used to drain the lake or Caligula's huge boats. These interpretations, in turn, enable to better understand the various stages of the development of the lake by the Romans.

## When Fish Are Not Silent: The Bronze and Iron Age Fish-Bone Assemblages from Hazor

Shlomit Bechar<sup>a,b,c</sup> and Omri Lernau<sup>c</sup>

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Tel Hazor is the largest and most important second-millennium BCE urban center in the southern Levant and continued to be an important center in the first millennium BCE as well. The site is located in the Upper Galilee, about 15 km north of the Sea of Galilee and on the southern shores of the ancient Hula Lake. This talk will focus on the fish bones that were found at Hazor from both the Late Bronze and Iron Ages. First, we will describe the different contexts from which fish bones were retrieved. We will follow this by a presentation of the differences and similarities in the identification of fish found in different contexts from different periods. The talk will focus on the small amount of non-local fish at the site, which stands in sharp contrast to assemblages from other southern Levantine sites. We will offer several possible explanations for this phenomenon at Hazor, focusing on dietary habits and social implications.