



# Maritime Archaeology in the Eastern Mediterranean

# GENERAL INTRODUCTION

Due to the depth of historical information and the extent of scholarly research, the Middle East and North Africa (MENA), are exceptionally important regions in the study of past human societies and the myriad ways they connected. Due to its geographical and environmental characteristics, the MENA region is often described as bounded by its connectivity, particularly through maritime societies that have diachronically facilitated trade and interaction. The material traces of this interaction are abundant and attest to the human presence in this region for millennia. These traces also play important roles in the formation and maintenance of local identities. They also form part of local economies (e.g. cultural tourism).



*Map showing water bodies defining the MENA region (produced on Google Maps).*

Nevertheless, like many parts of the world, the marine environment and the coastal landscapes of the MENA region are experiencing changes of an unprecedented scale and pace, related to various reasons, primarily human activities and climate change. While we are exploring these reasons and their impact in Lecture 4, in this lecture we provide a general introduction of the types of maritime archaeology encountered in this region, with greater emphasis on the Eastern Mediterranean and the North African coast.

## INTRODUCTION

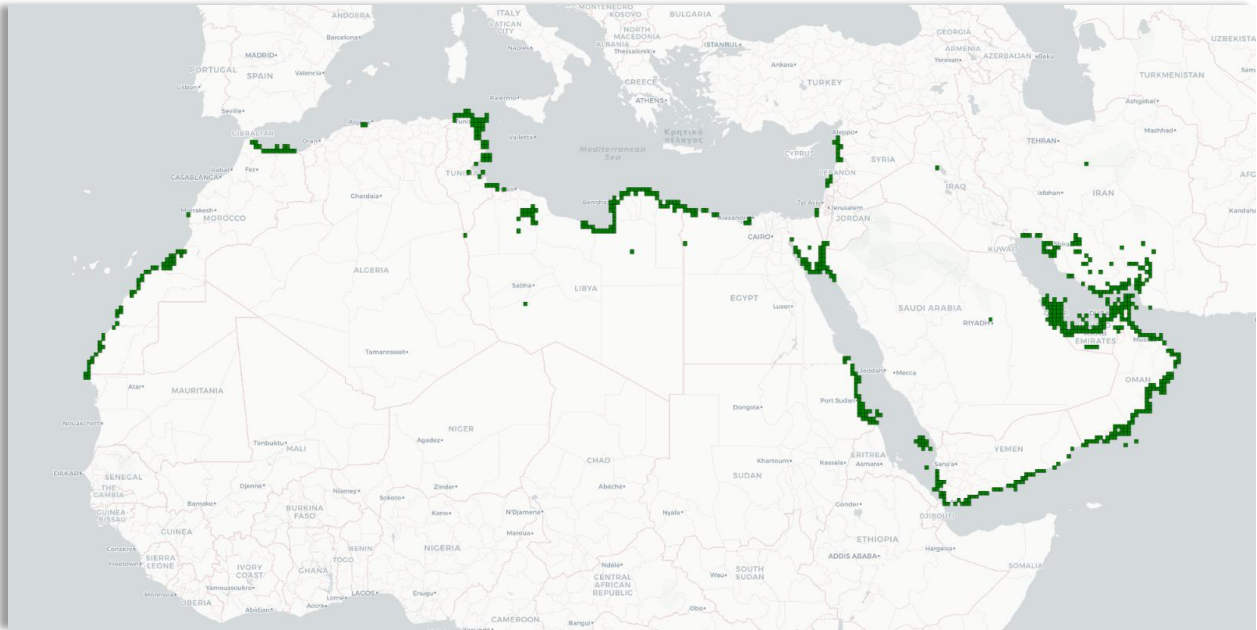
Seaborne interaction is one of the most important and extensively discussed aspects of the history and archaeology of the Mediterranean Sea. It is unsurprising then that the earliest excavations underwater were conducted in the Eastern Mediterranean - a region that has historically attracted scholarly attention due to its links to colonialism and modern religions.

The most extensively discussed maritime archaeology in the Mediterranean relates to imperial Rome, something reflected in the large number of excavated shipwrecks and harbours in the region. This is also known as the classical tradition in maritime archaeology (See Lecture 1). Like much of classical archaeology, scholarly emphasis on the maritime archaeology of the Mediterranean was disproportionately placed on the Northern coast of the Mediterranean. Moreover, in the recent years, there have been substantial attempts to develop maritime archaeological capacity and infrastructure in the Eastern Mediterranean (particularly Egypt, Lebanon, and Cyprus). At the same time many important sites from the North African coast have been documented, but to a more limited extent. The North African coast presents a unique opportunity to reflect on trade and connectivity in the Mediterranean from the perspective of its south coast and through the examination of heritage dating outside of the Roman period.

## MARITIME ARCHAEOLOGY OF THE MIDDLE EAST

There is presently no consensus on the definition and the geographical extent of the Middle East. When one searches for a “map of the Middle East” in various platforms, the results vary greatly. Notably, major water bodies, such as the Persian Gulf and the Red Sea are not always included. For this module, we will be briefly referring to both water bodies, while discussing the Eastern Mediterranean in greater detail.





*Sites so far documented and uploaded to the EAMENA/MarEA database by the end of 2024, showing the density of sites along the coast. Gaps in the map do not reflect a lack of sites but areas that have yet to be fully documented by the team. Source: <https://database.eamena.org/>*

## RED SEA

The Red Sea has diachronically been important in international trade and connectivity, as attested in the large number of coastal sites documented along its coastline. Nevertheless, a relatively small number of shipwrecks have been identified in the Red Sea, which is related to both its unique environmental conditions and the relatively more limited maritime archaeological research. Specifically, the region's warm waters and deep depths hinder the preservation of shipwrecks and other organic materials – something further exacerbated by a blooming recreational diving industry. Despite that, several coastal settlements and silted port sites, combined with textual/historical evidence and ethnographic research provide important insights into the Red Sea's rich maritime history.

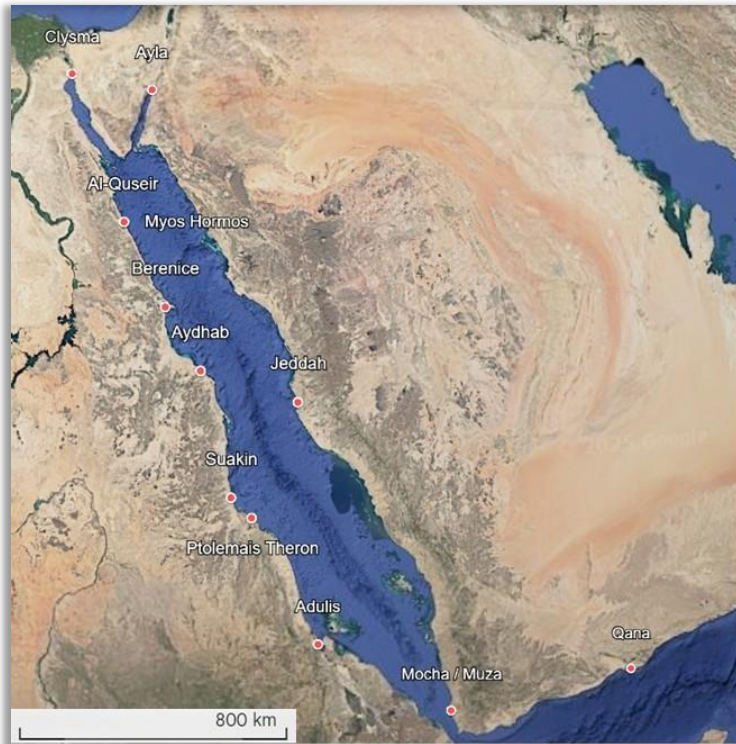
The coast of the Red Sea bears some of the earliest evidence of human coastal activity, particularly in the Buri Peninsula where early humans settled around 125,000 years ago. The early exploitation of marine resources is attested through Palaeolithic tools found in association with discarded marine molluscs at Abdur. Nevertheless, direct evidence of prehistoric maritime activities in the Red Sea is limited and is often inferred from the textual and iconographic record of the Nile valley. While physical evidence of prehistoric ships is limited, the documentation of

limestone anchors and over 40 ship planks from Wadi Gawasis on the Egyptian Red Sea have significantly expanded the material record.

Starting from at least the mid-second millennium BCE, vessels navigated the Red Sea to reach "Punt" and other regions to trade for myrrh, frankincense, and various exotic goods. Following this, Phoenician, Arab, and Indian traders also embarked on voyages. Detailed accounts of these maritime activities emerged mainly from classical geographers, particularly from the *Periplus Maris Erythraei* (mid-5<sup>th</sup> century BCE). During Ptolemaic and later Roman rule, trade routes to Arabia and India expanded, significantly aided by harbours that facilitated the movement and storage of goods. Key ports included Myos Hormos and Berenice, situated on Egypt's edge, which became an essential gateway for Roman trade with the East. Relevant archaeological findings include a Roman waterfront built from amphorae and a unique wharf structure dating to the late first century BCE or early first century CE. However, by the third century CE, the harbour was abandoned due to its siltation. Similar sedimentation affected Berenice, dating between the Ptolemaic period until the sixth century CE. Excavations have revealed large coral block seawalls and quays. Today, the ancient harbour of Berenice is separated from the settlement by a sandbar, which likely contributed to its decline.

Excavations at Myos Hormos and Berenice have uncovered maritime artefacts that provide insights into shipbuilding techniques like those found in the Mediterranean, suggesting that some ships involved in Red Sea and Indian Ocean trade were built according to Mediterranean traditions. Other significant ports along the Red Sea, such as Clysma, Aila, Ptolemais Theron, Adulis, Muza, and Qana, played crucial roles in trade. Muza, linked to modern Mocha, and Aden in Yemen, which remains a major port today, are particularly notable for their historical significance in trade. Aden, described in the *Periplus Maris Erythraei* as a key meeting point for ships from India and Egypt, boasts a natural harbour still in use, while Qana has been the subject of extensive excavation, revealing sandy bays ideal for beaching boats, although no harbour structures have yet been identified.

The Red Sea played a crucial role in medieval shipping, particularly for transporting trade goods and pilgrims heading to Mecca via ports like Al-Quseir (Egypt), Aydhab (Egypt), Suakin (Sudan), and Jeddah (Saudi Arabia). However, knowledge about Islamic-era ships remains limited, as shipwrecks from this period are still rarely found.



Map of key sites mentioned in the text (produced on Google Maps).

Ethnographic research in the Red Sea has provided significant insights into boat and shipbuilding traditions, which supplement the sparse archaeological, textual and iconographic evidence. Apart from a few remaining traditional sewn boats in Yemen and some tied or lashed log rafts, the huri, a log boat or dugout, is the primary example of enduring traditional boat construction in the region, with a history spanning at least two millennia. As boat-building traditions evolve many vessels are now replaced with fiberglass.

## PERSIAN GULF

The Persian Gulf crucial role in cross-cultural interaction and trade is widely recognised, particularly as a connecting point between the Makoran Sea, Mesopotamia, the Mediterranean Sea, the Arabian Sea and the Indian Ocean. The earliest documented trade routes linking Mesopotamia and the Indus valley date to the 4<sup>th</sup> and 3<sup>rd</sup> millennia BCE and maritime activity continues uninterrupted into the important international Islamic port cities and major modern ports.

During the 3<sup>rd</sup> millennium BCE the distribution of seals, beads and ceramics across SE Iran and the Indus valley have been used to suggest the presence of a complex network of overland and maritime routes connecting the Indus Valley to Mesopotamia with overland and potentially also maritime routes. Current archaeological evidence (artefact distribution) suggests prominent trade routes along the Arabian coast; however, further research is required to map associated sites and reconstruct these maritime networks. Among the better-known maritime trading routes are those connecting the Dilmun with the SE Arabian (Makoran). Within this network Bahrain and the Failaka island stand out. Additional sites are

in the UAE (Umm an-Nar) and are all widely considered to have been part of a maritime trade network linking Mesopotamia with the Indus Valley.

Another maritime route is argued to have run along Makoran (Pakistan), where SutkagerDor and Sotka-Koh, two fortified Harappan seaports were excavated, containing material suggesting maritime connectivity with Mesopotamia. An additional route is connecting sites along the Iranian coast (Madavan, Fasa, Sarvistan, Shiraz, Behbahan, Ahwaz) with Mesopotamia.

These trade routes were fluid and adjusting to changing environmental, economic and political factors. Further excavations are needed to understand the relationships between different sites to a more detailed extent. In this respect, the Gulf presents a significant opportunity to reflect on maritime archaeology and develop large-scale documentation agendas.

## EASTERN MEDITERRANEAN

The Eastern Mediterranean, including Türkiye, Egypt, Cyprus and the Levantine coast (Syria, Lebanon, Israel, Palestine) has historically attracted substantial attention by maritime archaeologists. This is to an extent related to the establishment of early maritime research centres in Türkiye and Cyprus during the excavation of shipwrecks, such as the Uluburun in Türkiye and Kyrenia in Cyprus. It is important to note that much of the history of maritime archaeological exploration in this region is conducted by international teams, and only in the recent decades there have been serious attempts to building maritime archaeological capacity, particularly in Cyprus, Lebanon, Egypt and to some extent Palestine.

It should be noted that many shipwrecks are believed to be located within the EEZ of different Eastern Mediterranean countries, including examples of collaboration between Cyprus and Israel for their documentation. At the same time, not all countries of the Eastern Mediterranean are signatories of UNESCO 2001, which impacts the development of regional legal frameworks surrounding the protection of submerged heritage.

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### TURKIYE

Türkiye plays a central role in the history of the development of maritime archaeology. Important shipwrecks including Uluburun, Cape Gelidonya have been



excavated by the Institute of Nautical Archaeology, which has an established research centre in Bordum in Türkiye. A substantial number of shipwrecks have been surveyed or excavated in Türkiye, including:

The Bronze Age Kumluca and Şeytan Deresi, the Classical Greek Tektaş Burnu, the Roman and Byzantine Yassıada, as well as a series of Byzantine shipwrecks looted at Yenikapı.

The southern coast of Turkey (Cilicia) has also attracted attention for the role it has played in piracy in the Eastern Mediterranean during the Hellenistic and the Roman periods. Numerous anchorages and shelters have been associated with this activity, which is documented in ancient historical sources.



*Map showing the extent and density of known maritime archaeological sites in Türkiye (produced on Google Maps using information from [Ancient ports in Turkey Asia Minor](#) | [Ancient Ports - Ports Antiques](#))*

The Aegean coast of Türkiye contains a significant number of harbours, several of which mentioned in ancient written sources and associated with prominent cities such as Miletus and Izmir/ Eurydikeia.



Like many parts of the Mediterranean, several of these harbours have been used for multiple chronological periods, including the modern era and, often, their premodern remains are difficult to discern. Nevertheless, important excavations such as the Byzantine Yenikapı offer insights into the materiality of trade in Western Türkiye. Other interesting maritime features include a Roman/Late Antique shipyard documented at Dana island off the southern coast of Türkiye

## CYPRUS:

The island of Cyprus has been central in the development of maritime archaeology as a discipline through early maritime research on the island in the 1960. Among



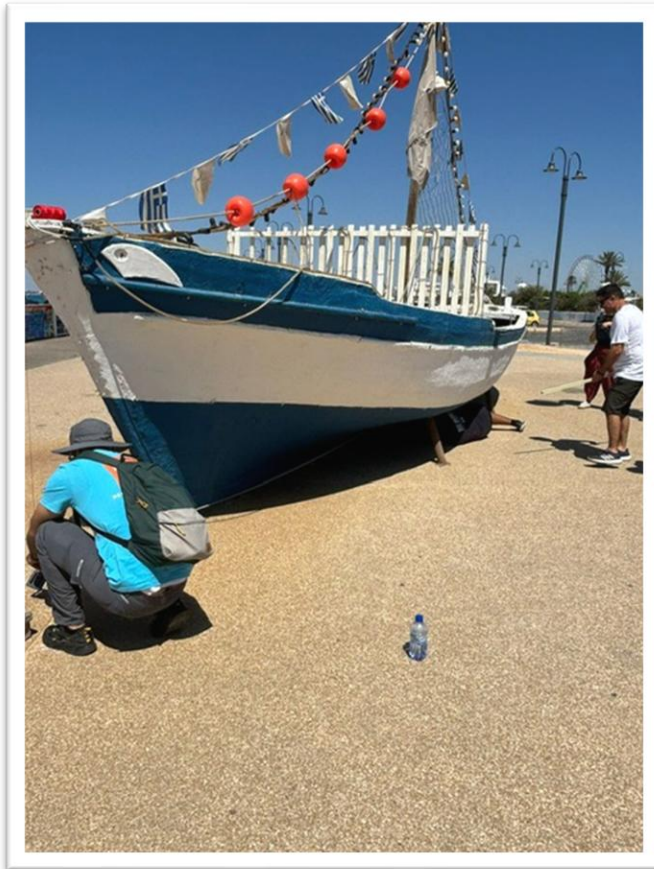
*A replica of the Kyrenia. Image: EMES - Eastern Mediterranean Experimental Seafaring Project, University of Southampton.*

the most prominent research projects is the excavations of the Kyrenia shipwreck, a 4<sup>th</sup> – 3<sup>rd</sup> century BCE shipwreck found off the north coast of the island. Kyrenia and its various replicas continue to inform maritime archaeology to date.

Following the division of the island in 1974 and the ongoing occupation of its north third, maritime archaeology continued at a slower pace in the South. In addition to important maritime archaeological surveys that traced evidence of human connectivity with the sea, an important submerged harbour was excavated at Amathus. Additional sites attesting to the wealth and diversity of maritime archaeology on the island include:

**Shipwrecks:** Particularly the Mazotos shipwreck with a substantial cargo of amphorae dating to the 4<sup>th</sup> century BCE, as well as the currently documented Ottoman Nissia shipwreck off the East coast of the island.

**Anchorage:** Identified through the distribution of maritime material evidence (e.g. fragmentary maritime transport containers, anchors etc.) in locations such as the 2<sup>nd</sup> millennium BCE Maroni Tsaroukkas and Tochni Lakkia along the south-central coast of the island.



**Traditional boats** and other evidence for ship building technologies documented among fishing communities, particularly around the village of Zygi.

**Production and distribution infrastructure** related to the transportation of carobs around the coast of the island, e.g.

**Submerged breakwaters**, such as the one documented at Akrotiri dreamers Bay, providing important evidence for sea level change.

*Traditional fishing boat in Cyprus.  
(Image Lucy Blue)*

## EGYPT AND THE RED SEA

Direct evidence for prehistoric maritime activity in the Red Sea is scarce. Much of the evidence comes from Nile Valley sources, including inscriptions and reliefs depicting expeditions to Punt, a trading hub likely in the southern Red Sea. Hatshepsut's temple at Deir el-Bahri (circa 1473–1458 BCE) provides detailed depictions of ships and trade goods.

From at least the mid-second millennium BCE, ships navigated the Red Sea to Punt and beyond, transporting myrrh, frankincense, and other goods. Later, Phoenician, Arab, and Indian seafarers followed similar routes, but detailed accounts emerge only in the Periplus Maris Erythraei (mid-first century CE), describing Red Sea trade under Ptolemaic and Roman rule. Trade with Arabia and India expanded,

facilitated by key harbours like Myos Hormos and Berenice, which linked the Mediterranean to the Indian Ocean.

Founded by Ptolemy II Philadelphus in the third century BCE, Myos Hormos and Berenice became vital Roman trade hubs. Strabo noted that over 120 ships departed annually from Myos Hormos to Arabia and India. Excavations at Myos Hormos (modern Quseir al-Qadim) uncovered a Roman waterfront (first century BCE–third century CE). The harbour likely silted up by the third century CE, contributing to its abandonment. Berenice also suffered from harbour silting.

Egypt's northern coast has received focused attention since the 1930s, and between the 1960s and the 1980s key underwater archaeological sites were documented by local divers, including Qait Bey Fort and Abu Qir Bay. The 1990s saw an influx of underwater missions led by various European and American institutions, which contributed to the creation of the Department of Underwater Antiquities (DUA). Since then, the DUA has carried out numerous surveys and excavations across Egypt's coastal regions and the Nile.

**Shipwrecks:** The Fury Shoals wreck, a Roman vessel, lies in 7–10 m of water north of Ras Banas, Egypt, likely sunk after striking a coral reef, much of its cargo has been lost. The site contains Dressel 2–4 amphorae, dating it to the first century CE. No hull remains are visible.

Excavated between 1994–1998, the Sadana Island wreck (18th century CE) lies in 28–40 m of water off Safaga, Egypt. Over 3,500 artifacts were recovered, including Chinese porcelain, coffee, frankincense, and copperware. The vessel featured oak and pine hull timbers, iron fastenings, and three decks.

Islamic-era shipwrecks in the Red Sea are rare, but planks recovered from Quseir al-Qadim (12th–15th century CE) suggest sewn-boat construction. These timbers, possibly non-native hardwood, were fastened with coconut coir and bitumen, a technique protecting stitches from wear.

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#### CASE STUDY: THE NORTH-WEST EGYPT COASTAL SURVEY (NWECS)

This project, conducted by MarEA in collaboration with the Alexandria Centre for Maritime Archaeology & Underwater Cultural Heritage (CMAUCH) and funded by the Honor Frost Foundation (HFF), investigates the little-studied coastal stretch between Marsa Matruh and Sidi Barrani. This historically significant yet understudied region lies between Cyrenaica to the west and the Nile Valley to the east, forming a key crossroads for trade and movement. This project challenges the



perception of the Marmarican coast as an empty landscape, revealing a dynamic, interconnected coastline that played a crucial role in ancient trade and settlement.

Archaeological evidence from Bates Island suggest maritime trade during the Late Bronze Age, particularly with Southern Crete. However, early Egyptian influence was minimal until Ramesses II established the fort at Umm-El Rakham, Egypt's westernmost outpost. This fort served to secure trade routes, defend against hostile Libyan tribes, and control movement along the coast. During the Ptolemaic and Roman periods, the region became increasingly integrated into wider trade networks, eventually forming part of Libya Inferior under Diocletian's administrative reforms. Evidence from the Marmarican plateau suggests agriculture and pottery production flourished, supporting both local consumption



and exports.

*Sites visited and documented during the NWECS 2023/24.*



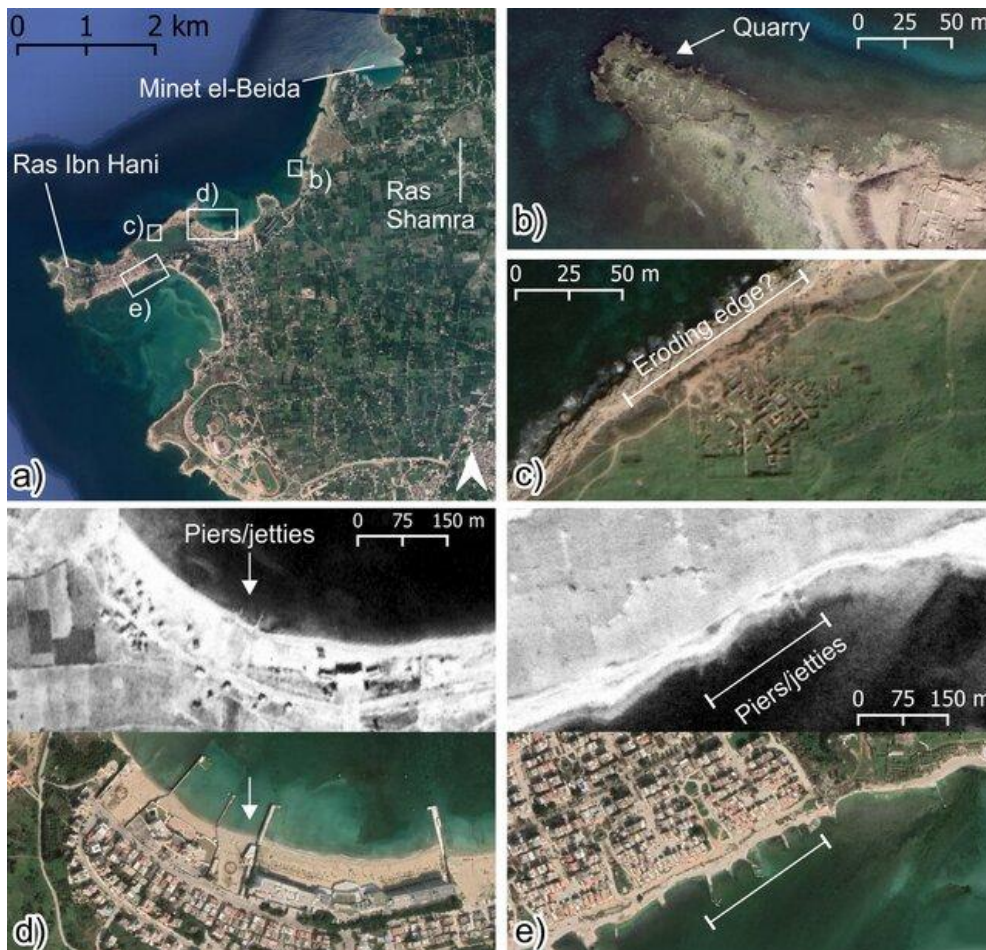
*Example of the remains of a small coastal settlement along the N-W coast of Egypt. Image: NWECS*

So far, the NWECS, identified over 100 sites, including fortified production centers, settlements, potential harbors, and anchorage locations. Many sites contained kilns, pottery waste heaps, and waterproof basins, indicating significant pottery and agricultural production. Future research, including underwater surveys, will further illuminate the historical significance of this region.

Currently, modern development threatens this heritage. With most of Marsa Matruh's archaeological sites already lost, ongoing urban expansion and tourism projects are erasing the archaeological remains still present along the coast.

## SYRIA

Syria's coastal and nearshore areas hold a valuable, yet under-explored, record of maritime cultural heritage that spans from prehistoric times to the modern era. This is evident not only in the scarcity of underwater research but also in the insufficient study of important onshore maritime locations like ports and harbours. Along the Syrian coast, archaeologists have documented a wide range and variety of maritime archaeology including Palaeolithic, Bronze and Iron Age sites, as well as structures from the Crusader and Ottoman periods. The northern Levantine coast has diachronically played a central role in Mediterranean Seafaring with important sites such as Ugarit being among the most extensively studied in the archaeology of the Eastern Mediterranean. At Ugarit a coastal port and its submerged components (piers and jetties) have been documented and found in association with a large number of maritime transport containers.



*Maritime archaeological features at Ras Ibn Hani / Ras Shamra (near Ugarit), one of the most important Bronze and Iron Age harbours in the Eastern Mediterranean (figure from Westley et al. 2022: 364, fig.6)*



A number of **shipwrecks** have also been documented, of which a small number date between the Classical period and the 12-13<sup>th</sup> centuries. The remains of these shipwrecks are largely their cargo (not intact structures). In some cases, more recent shipwrecks from the 19<sup>th</sup> and 20<sup>th</sup> centuries were noted in shallower areas and were also visible through satellite imagery. It is likely that more shipwrecks lie on Syria's seabed, but their identification and documentation require the development of further maritime archaeological capacity and access to a suitable amount of funds.



Map showing the extent and density of known maritime archaeological sites in Syria (produced on Google Maps using information from [Ancient ports in Turkey Asia Minor](#) | [Ancient Ports - Ports Antiques](#) and the EAMENA database).

Financial constraints combined with politico-economic instability pose significant challenges in the monitoring and protection of Syria's heritage. However, remote assessment of archaeological sites using satellite imagery has produced a significant benchmark study (citation), which enables a lower-cost and more sustainable management of actively deteriorating sites, as, for instance [Benchmarking the Maritime Cultural Heritage of Syria - 2017 - Honor Frost Foundation](#)

## PALESTINE:

Presently the most vulnerable maritime heritage in the Middle East is found in the Gaza Strip. Up until 2023, conflict, economic poverty, restricted access to sites, systematic damage and destruction, demographic pressures and associated building development, lack of funds, limited capacity and expertise and limited public awareness were key identified factors impeding the documentation, monitoring and management of Gaza's MCH. Since 2023 the unprecedented in scale and intensity destruction of Gaza's coastal and inland infrastructure and landscapes has impacted directly or indirectly the entirety of the known record of archaeological

sites. Important sites in Gaza include the now destroyed Anthedon harbour, known for the large-scale exportation of Gaza type amphorae, found as far as England.

Additional sites include the Byzantine harbour of Maioumas and Gaza's historical harbour, both of which are destroyed. Recent research since 2021 has systematically documented less known, but important Iron Age sites along the coasts of Deir el Balah and Khan Yunis. These include the maritime landscape of Tell Ruqeish, Tell Qatif and Tell Ridan.



*Density of archaeological features documented along the coast between the Iron Age Tell Ruqeish (Deir el-Balah) and Tell Ridan (Khan Yunis).*

## CASE STUDY: TELL RUQEISH, GAZA STRIP

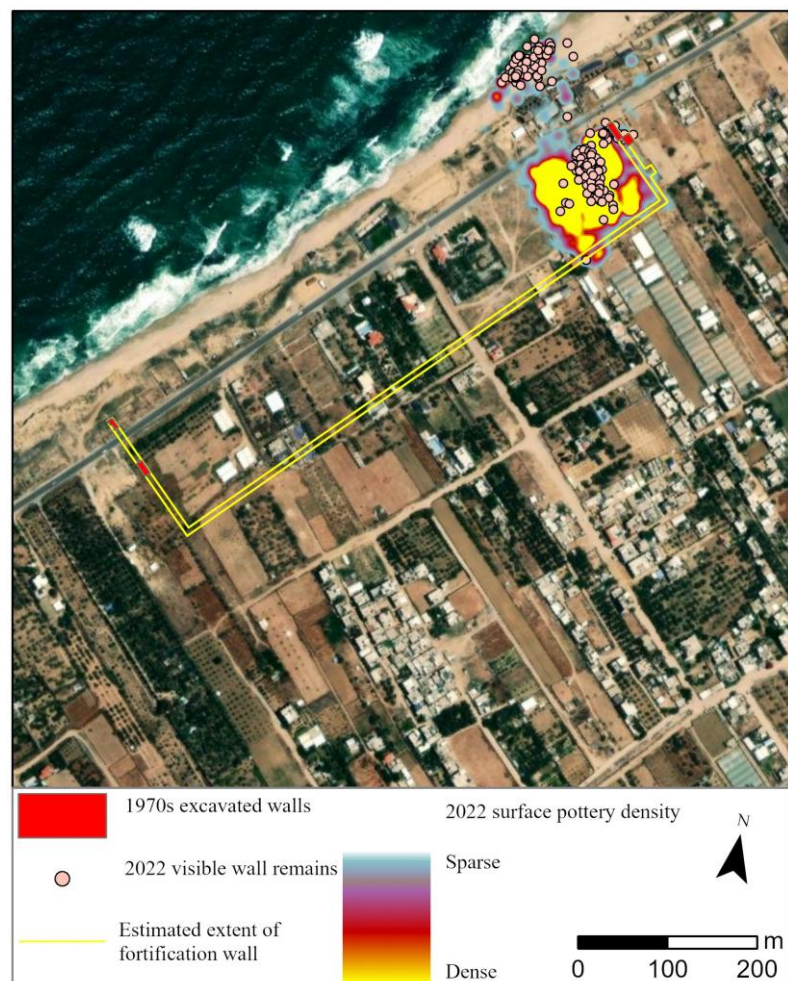
Tell Ruqeish is an Iron Age site located at the coast of Deir el-Balah. Excavations at Tell Ruqeish began in the 1940s, originally focusing on an Iron Age cemetery with cremation burials in urns, known as "Ruqeish vessels." In the 1970s, further excavations uncovered a fortified settlement, including a large wall and two towers, as well as Iron Age pottery and Greek imports. Most of the site's material remains



date from the mid-8th to the mid-7th centuries BCE, with later evidence from the Roman period.

The fortified citadel dating to the Iron Age is estimated to cover about 1.5 km<sup>2</sup>, while the broader region around Tell Ruqeish has revealed significant archaeological remains also from the Iron Age (see image above). The main site features a large fortification system, a coastal zone approximately 1 km long, and a cemetery situated 500 meters south. The site's western segment has been largely eroded due to sea level rise and possibly quarrying activities (kurkar). Submerged features, such as a ridge, carved stones, and unfinished cut stones, suggest quarrying activities. These features are likely not part of a harbour, which is probably located further offshore and covered by sediment. Tell Ruqeish appears to have engaged in extensive maritime trade, evidenced by imported artifacts found both on land and underwater, along with textual sources mentioning coastal markets in the region during this period. Moreover, the site's location between Gaza and Rafah, along with its proximity to Assyrian expansion, indicates its importance in understanding trade dynamics between the Mediterranean and the Near East.

Since the excavation of the site in the 1970s (during the occupation), no archaeological activity has resumed in this area, due to various factors, largely Gaza's humanitarian, economic and environmental crisis. Part of the site has been fenced for protection and the excavated materials were illegally



*Density of archaeological features documented along the coast between the Iron Age Tell Ruqeish (Deir el-Balah) and Tell Ridan (Khan Yunis).*



transported to Israel. In 2022 and 2023 Tell Ruqesh formed one of the case studies examined by the Gaza Maritime Archaeology Project (GAZAMAP, Andreou et al. 2024). The survey focused on the fenced section of the Tell and its adjacent beach. Surface finds included fragmentary pottery and stone tools, while mudbricks suggested the remains of fortification walls. A maritime survey identified submerged architectural features, including cut stones and possible quarrying tools, further indicating the site's maritime role. Underwater footage revealed potential harbour structures, including a possible anchor, although the thick sand deposits complicate visibility.

The protection of the site is crucial, and it largely relies on regular monitoring and detailed surveys to map out the underwater and coastal features in greater detail. Unfortunately, like other archaeological sites in Gaza, Tell Ruqesh has been impacted by the 2023-2024 war. Part of the site has been damaged by fire and the area has been used as a refuge for displaced Gazans.

**Disclaimer:** The materials and information presented in these lectures have been compiled from a range of academic sources, which are listed in the Bibliography and Further Reading section of this course.