

# THE INA QUARTERLY

BRINGING HISTORY TO LIGHT THROUGH THE SCIENCE OF SHIPWRECKS

## FOURNOI ARCHIPELAGO SURVEY

EIGHT NEW SHIPWRECKS FOUND  
IN THE AEGEAN SEA



**2017 ANNUAL  
BOARD MEETING**

**HIGHLIGHTS FROM  
MONTE CARLO**

**MASTER REMIGY  
DE HALUT'S GUNS**

**16TH-CENTURY  
ARMADA CANNONS**



FALL/WINTER 2017  
VOLUME 44 NO. 3/4

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**ON THE COVER: An amphora emptied of its contents after recovery during the Fournoi Underwater Survey (photo by Vasilis Mentogianis).**

# SHIPWRECK CAPITAL OF THE AEGEAN

The Fournoi Underwater Survey

PETER B. CAMPBELL AND GEORGE KOUTSOUFLAKIS

The Aegean Sea is the cradle of the ancient Mediterranean, facilitating the growth of maritime cultures such as the Minoans, Mycenaeans, and Archaic Greeks. Spread around the Aegean are great maritime cities such as Athens, Miletus, and Rhodes. It is therefore surprising that the largest known concentration of shipwrecks in the Aegean lies in a rather obscure group of islands that was never home to a Greek city-state.

Lying a short distance to the south of the famous islands of Icaria and Samos is a small collection of islands known as the Fournoi archipelago. Composed of 20

islands and islets in an area of 17 square miles, the archipelago has passed largely unnoticed by historians. When Henry Tozer sailed past the islands on route to Patmos in the 19th century, he dismissively wrote, “we sailed between groups of islands unknown to fame.” He is correct that the islands were never home to any settlements larger than small villages. Due to their size and lack of resources, the islands are rarely mentioned by ancient authors or modern researchers. The islands were known as *Korseai* in the few ancient sources that mention them. Despite their ignominy, Fournoi is central to the navigational landscape of the Aegean.



PHOTO: V. MENTOGIANIS

Divers raise a Roman North African amphora for further study.



**BACKGROUND**

Since 2015, a collaborative team from the Greek Ephorate of Underwater Antiquities and RPM Nautical Foundation has been surveying the archipelago. 22 shipwrecks were located during the first season, 23 in 2016, and 8 more in 2017, for a total of 53. With approximately 50% of the coastline surveyed and the majority of the deep-water areas remaining to be searched, the number of sites is expected to continue to grow.

**NAVIGATIONAL LANDSCAPE**

The key to understanding the number of shipwrecks at Fournoi lies in its significance within the navigational landscape. The islands are neither a ship graveyard, nor a ship trap. The ships sank fully laden with cargo, rather than stripped of anything of value and abandoned as one finds in ship graveyards. While Fournoi does have a few reefs, most sites are not found on ship traps like Yassiada, Turkey. To the contrary, Fournoi is full of deep, safe anchorages where mariners can find protection from any type of weather. According to French scientist Joseph Tournefort who visited the islands in the 17th century, the name “Fournoi” originates from the Greek word for “oven” and refers to the archipelago’s many oven-shaped bays. Instead, the number of wrecks relates to the high volume of trade passing through the Fournoi Channel, that divides Samos and Ikaria. Over time, this high volume of ship traffic led to a great number of wrecks.

The large islands of Samos and Ikaria divide the eastern Aegean in two, creating a chokepoint that is most easily navigated through the Fournoi Channel. Significantly, Ikaria and the western coast of Samos are without safe anchorage; the geographer Strabo (64 B.C. - A.D. 23)

**This page, from top:** An early medieval amphora, 9-11th century A.D., before and after cleaning. **Opposite page:** A diver examines Archaic Greek amphoras.



refers to Ikaria as *alimenos*, or harborless. Fournoi is therefore strategically situated along the major north-south trade routes, but it also acts as a safe anchorage for vessels traveling west from Asia Minor to the Greek mainland. Fournoi lies in the area of major cities in Asia Minor such as Ephesus and Erythrae to the north and Priene, Heracleia, and Miletus to the south. In order to reach these cities, one was required to sail in the vicinity of Fournoi. Indeed, the *Stadiamus Maris Magni*, a sailing guide dating to the 3rd century A.D., describes two key crossing routes originating from Fournoi.

The high volume of trade passing by

**Fournoi is therefore strategically situated along the major north-south trade routes, but it also acts as a safe anchorage for vessels traveling west from Asia Minor to the Greek mainland.**

Fournoi is evidenced by the flourishing of piracy in the islands. Joseph Georgirenes, the Bishop of Samos and Ikaria, described Fournoi in 1678 as “three miles distant from the Island [Ikaria], on the south-side towards Patmos, lye some small islands uninhabited; but know[n] by the name of Furny, and furnish’d with good harbours, capacious enough for all sorts of vessels. Here the Corsairs of Malta,

and other Christians, us’d to lay in wait for ships that trade from Scio [Chios] to Rhodes.” Piracy thrives on brisk commerce, which existed around Fournoi.

**COMMUNITY APPROACH**

The Fournoi Underwater Survey was prompted by the project directors’ conversations with sponge divers and fishermen. Sponge divers from Kalymnos

reported spotting shipwrecks 30 years ago during the heyday of the sponge industry. Local free divers and fishermen reported clusters of broken ceramics on the seafloor. Using this ethnographic approach, the project directors located a number of sites, and followed with systematic diver-based survey. The project team continues to work closely with the local community to locate and docu-

PHOTOS, THIS PAGE: A. BEI; OPPOSITE PAGE: V. MENTOGIANIS



PHOTOS: V. MENTOGIANIS; SITE PLANS: K. YAMAFUNE

ment shipwrecks. This community-based approach increases protection of the underwater cultural heritage, as it is not possible to monitor this remote location through any other means than reliance upon the local community.

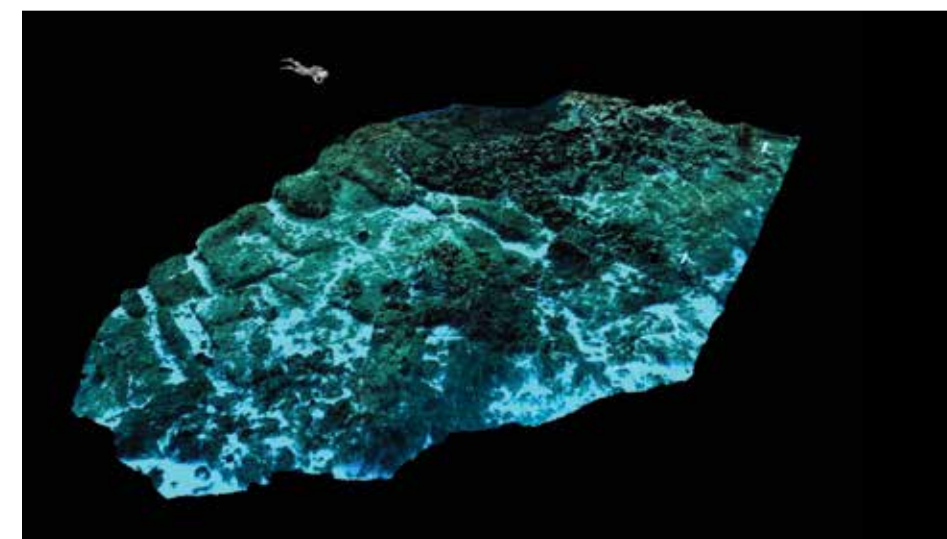
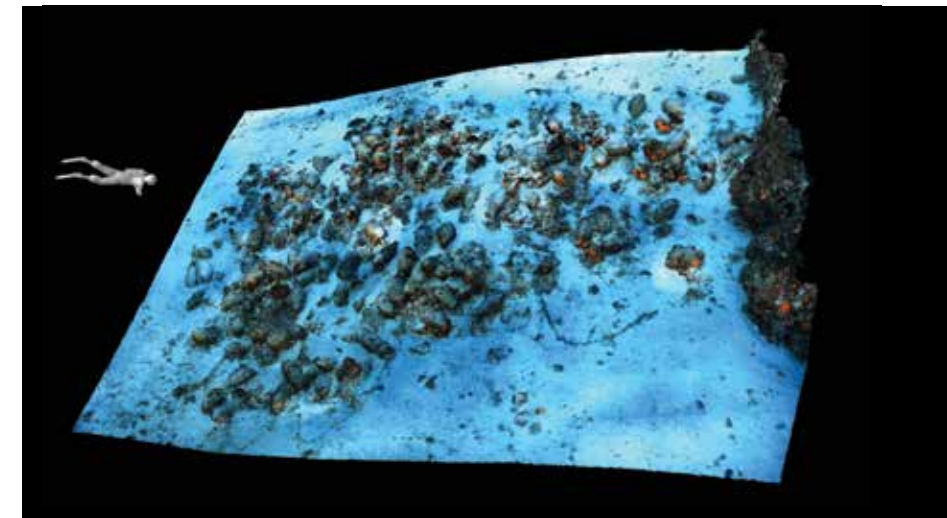
**FINDINGS**

The 53 shipwrecks discovered during

the survey represent a significant new dataset. The earliest shipwrecks date from the Archaic period (6th century B.C.). One was carrying amphoras from Samos, another amphoras from Miletos, while the third was transporting an unidentified Aegean amphora type. One of the more complete sites is a cargo of Hellenistic amphoras from Kos, which are still

stacked neatly in rows, though the site has been disturbed by fishing nets. Of particular interest are three Roman-era cargoes of Black Sea amphoras, the first examples from this region known in the Aegean. One Late Roman ship was transporting a cargo of decorated tableware. While many of the cargoes originated in the eastern Mediterranean, one of the

While many of the cargoes originated in the eastern Mediterranean, one of the largest and best-preserved was comprised of North African and Iberian amphoras.



From left: An archaeologist systematically photographs a wreck to create a 3D site plan; 3D site plans of wreck 15 (top) and wreck 4 (bottom); Hellenistic amphoras lie in rows almost completely buried by sediment.



PHOTOS: V. MENTOGIANIS

largest and best-preserved was comprised of North African and Iberian amphoras. Dating to the Late Roman period, it is the deepest shipwreck found at Fournoi and one of the most intriguing.

The survey has also documented anchors dating from the Archaic through medieval periods and the submerged foundations of an early Christian village. Several Archaic stone stocks, two of which are nearly 2 m in length, are among the oldest objects our team has discovered.

The 2017 season lasted three weeks in June. While the two previous seasons had been focused on identification of sites, the aim of the 2017 season shifted toward documentation. The team used the latest methods such as orthographic photomosaics and 3D photogrammetry to map the sites, while additional artifacts were raised as samples for analysis and study.

The team continued to survey large sections of the coastline, locating eight new shipwrecks. One of the most interesting was transporting a cargo of amphoras from Chios dating to the Classical period. Deep-water survey was carried out from RPM Nautical Foundation's research vessel *Hercules* by using its remote sensing equipment and ROV to recover amphoras from the deep-water site. The current dataset of 53 shipwrecks may continue to grow as new areas are surveyed.

**CONCLUSION**

The small islands of the Fournoi archi-

pelago did not have large settlements, but they do tell the story of maritime connectivity in antiquity. The islands served as anchorages and navigational points for ships navigating the eastern Mediterranean. The quantity of shipwrecks at Fournoi is, therefore, more a reflection of a high volume of trade than it is a reflection of Fournoi's role as a trade destination or navigational hazard.

An Ottoman map attributed to Piri Reis depicts a fleet passing through the Fournoi Channel, suggesting that this was the preferred route between Samos and Ikaria. The map also shows the large islands of Fournoi and Thymina, as well as Agios Menas, where the main concentration of shipwrecks has been located. Two sailing vessels are shown at anchor in locations that still correspond to safe anchorages identified in the modern *Mediterranean Pilot*. Even today, Fournoi serves as a safe anchorage for ships in bad weather.

The Fournoi Underwater Survey is revealing the importance of eastern Mediterranean trade networks in every time period. These networks connected the Black Sea and Aegean to Cyprus, the Levant, and Egypt. Some of the shipwrecks identified at Fournoi originated even farther afield, with cargoes from Italy, North Africa, and Portugal. How many shipwrecks remain to be found in the archipelago is anyone's guess, but the current data are already contributing to our understanding of the past.

**ACKNOWLEDGEMENTS**

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**FOR MORE INFORMATION** about the survey, check the project pages at <https://nauticalarch.org/projects/Fournoi-underwater-survey/>, <https://rpmnautical.org/> and <http://www.korseai.com/EN/>.



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