

LOW COST – HIGH TECH
UNDERWATER ARCHAEOLOGICAL
SURVEY IN MALTA

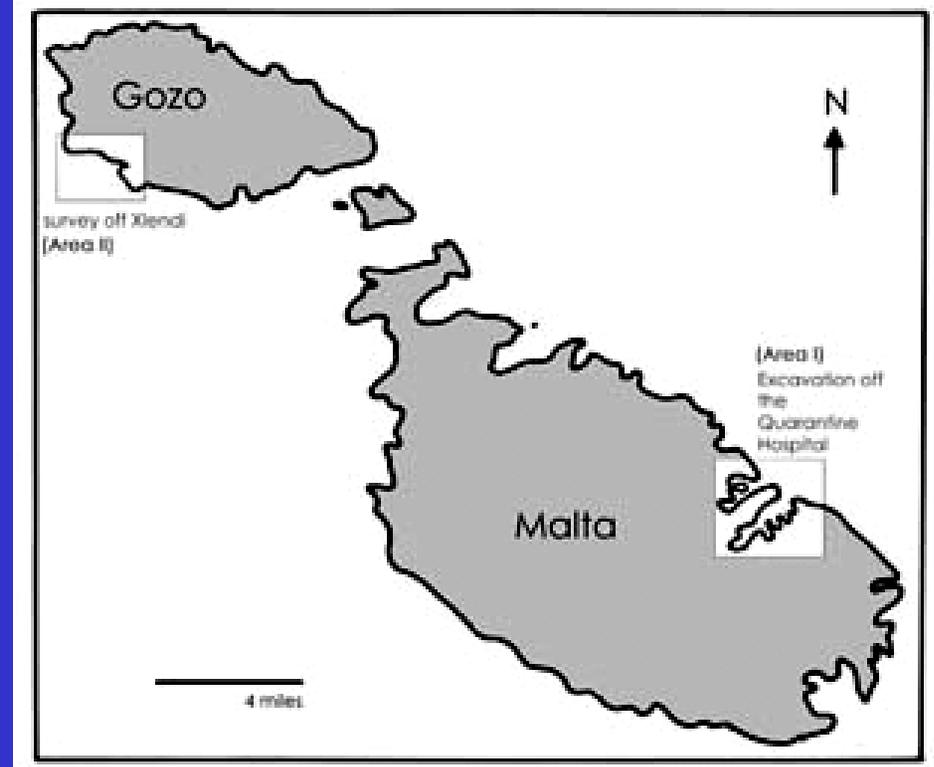
by

Ayse Devrim Atauz
Fredrik Soreide



Development of underwater archaeology is of crucial importance in Malta because:

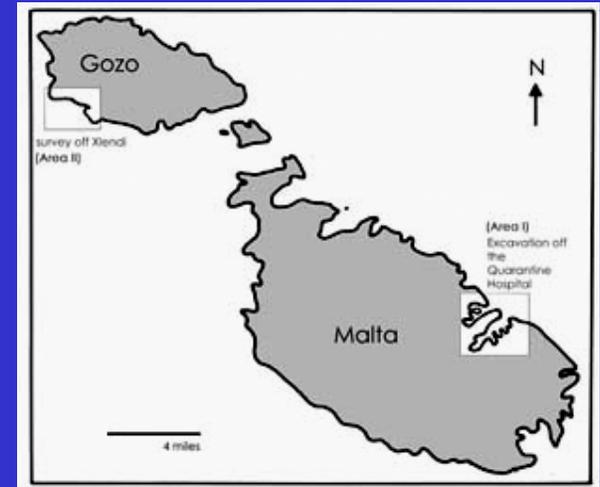
- (1) the archipelago received all of its occupants and cultural influences by the sea;
- (2) underwater material is often the only available archaeological record to survive as most of the archaeological sites have been under constant occupation since the sixth millennium BC.



Scientific objectives of the Malta project:

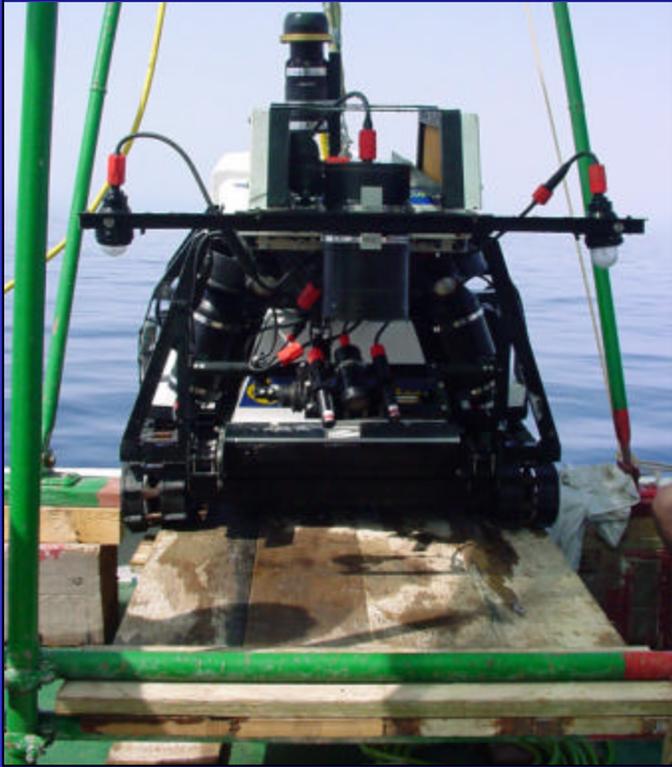
- (1) to locate underwater cultural remains (i.e. shipwrecks, anchors, submerged settlements, aircraft wrecks, and harbor structures) in Maltese territorial waters,
- (2) to document the underwater sites, and conduct excavations when warranted.
- (3) to determine the role played by the Maltese islands throughout the history of Mediterranean seafaring by answering questions such as:
 - where were the main harbors/anchorages located,
 - what products were exchanged/traded,
 - how did the major historical events in the Mediterranean effect the nature of long-distance trade and traders that frequented Malta.

SURVEY OFF XLENDI BAY, GOZO



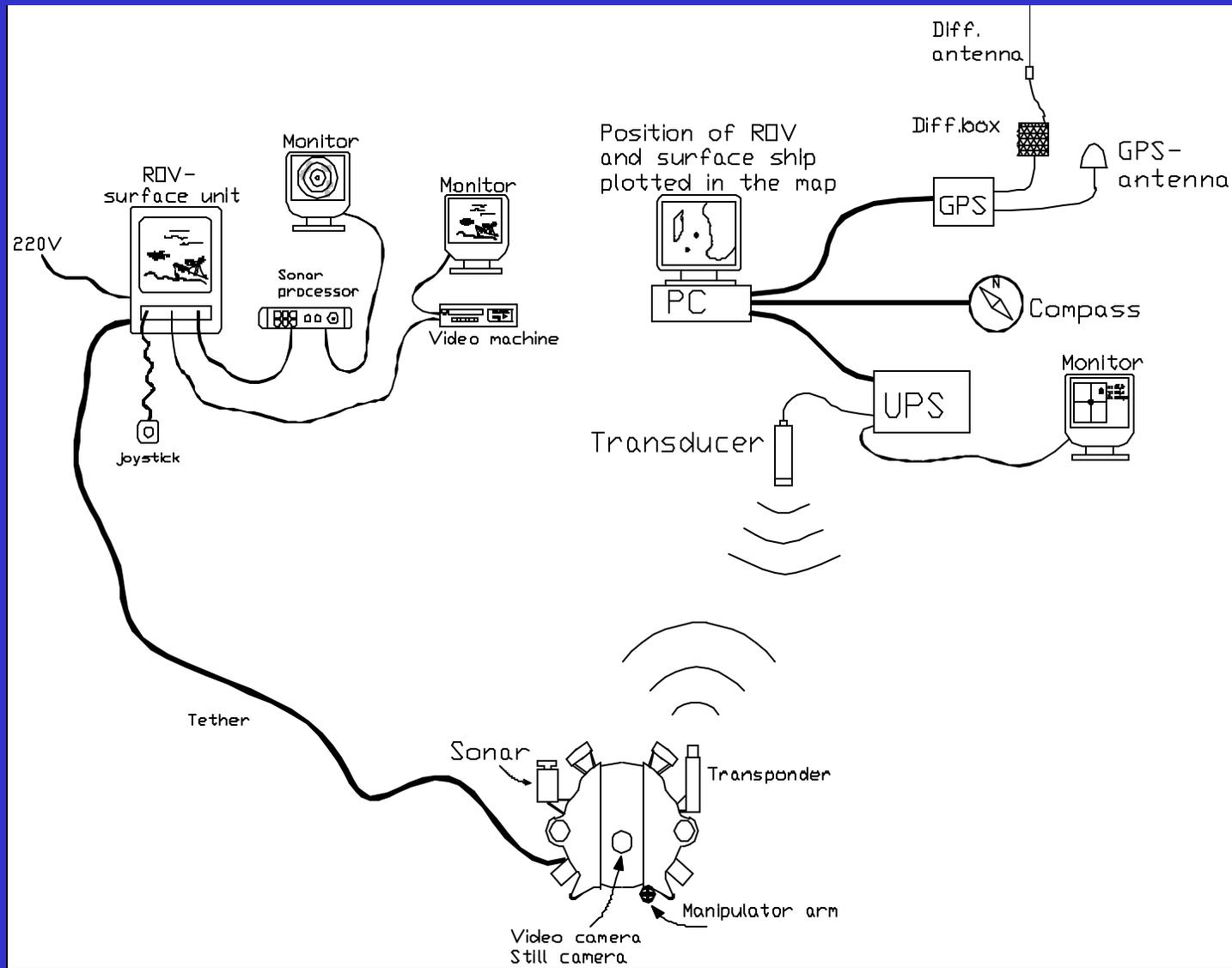
Survey of Xlendi: Why did we go there?

- This inlet is the major “natural” harbor on the island of Gozo.
- The entrance to the inlet is obstructed by two reefs, making it a possible shipwreck location.
- Local reports from the fishermen about the hazardous nature of this particular location.
- Reports provided by the National Museum of Archaeology in Malta regarding individual amphora finds in the general area.
- Small side scan sonar targets detected in shallower water in the previous seasons.
- Reports concerning two “Roman” shipwrecks within the bay, completely looted in the early 1960s.

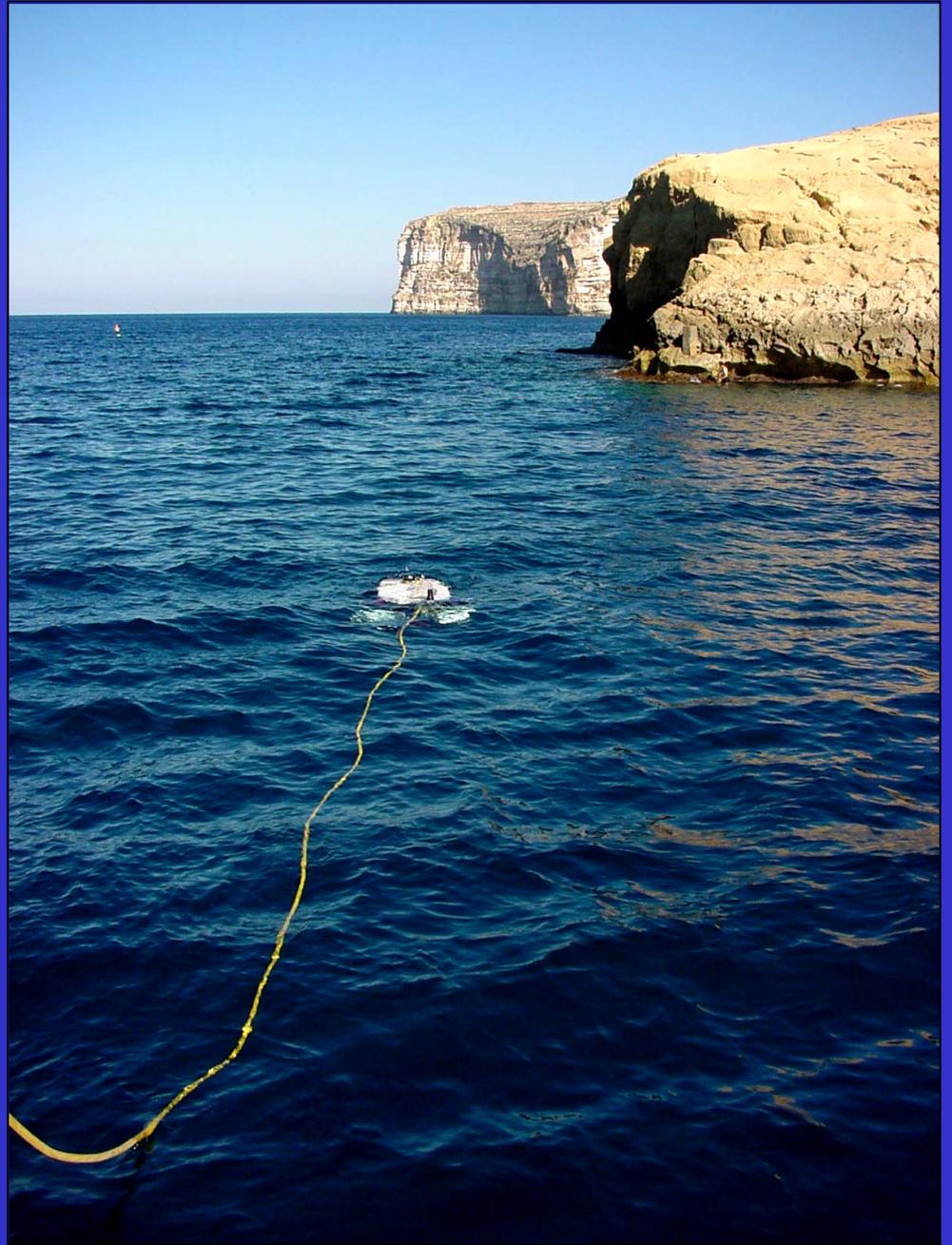


- The survey was carried out using a small work-class ROV capable of accomplishing complete advanced documentation of the wreck site and even sampling.
- In addition to the scanning sonar and video cameras that were used to locate and document artefacts, the ROV was equipped with an underwater positioning system that was used to position the ROV and objects located relative to the survey vessel.
- The equipment also included a laser based underwater measurement system, which was used to measure artefacts located on the site.

System setup

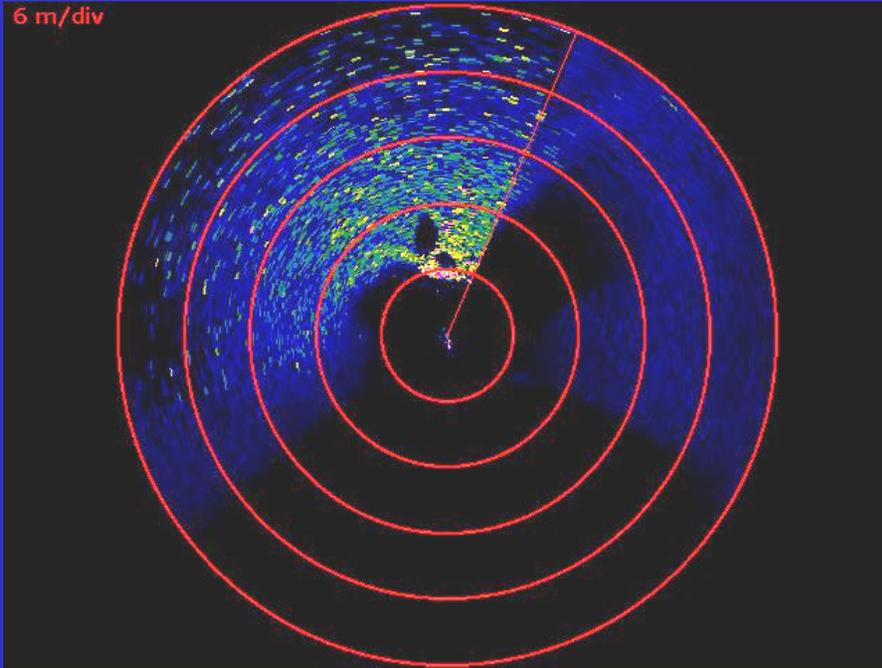




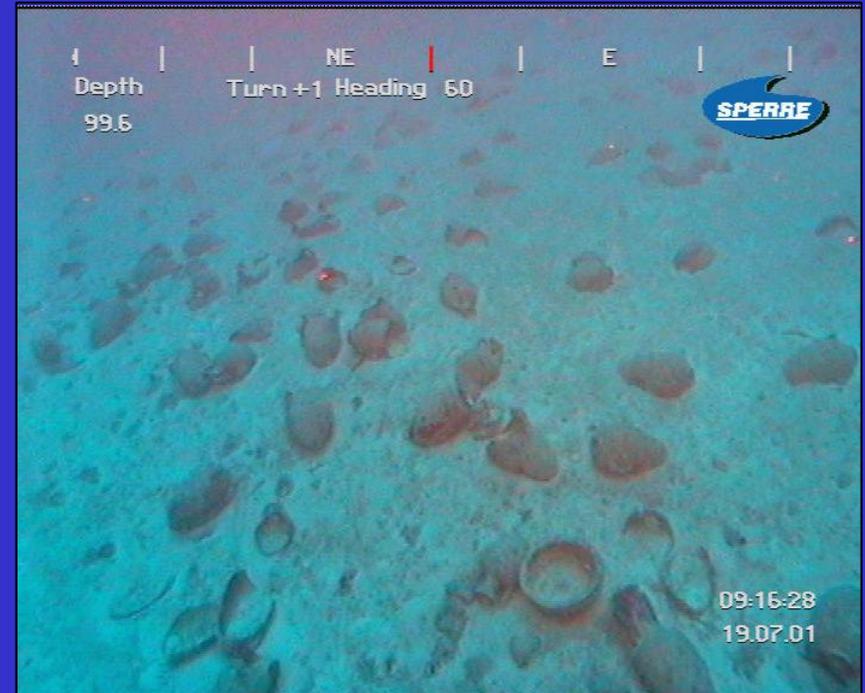
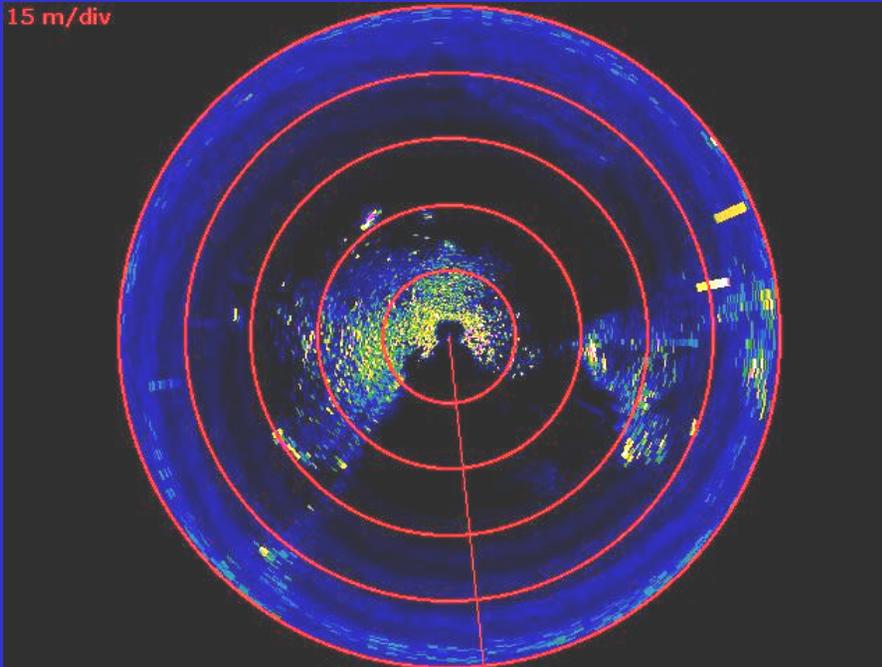




6 m/div



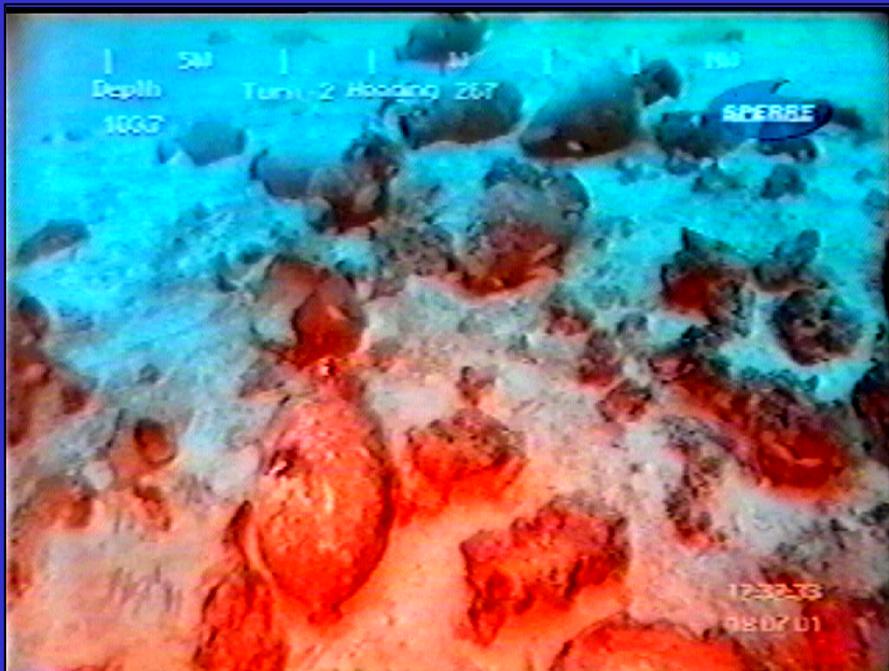
15 m/div



Approximate location of the "Wreck" is about 6 km off the coast and next to the entrance of the Xlendi inlet at 100-130 meters of depth.



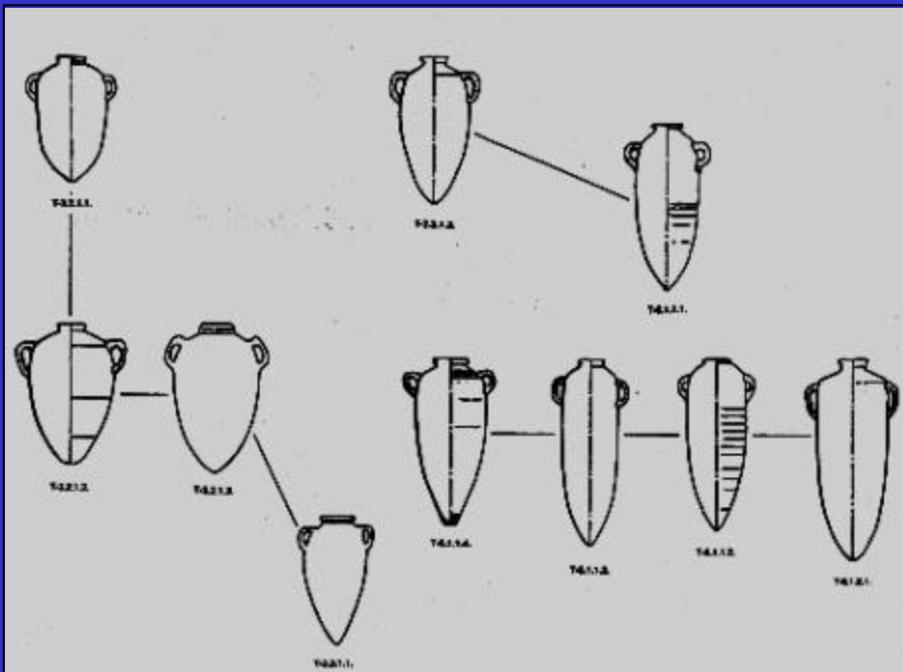
- Approx. 6000-10,000 amphorae representing at least 10 different types.
- Flat, sandy bottom
- Single large shipwreck or a multiple wreck-site.

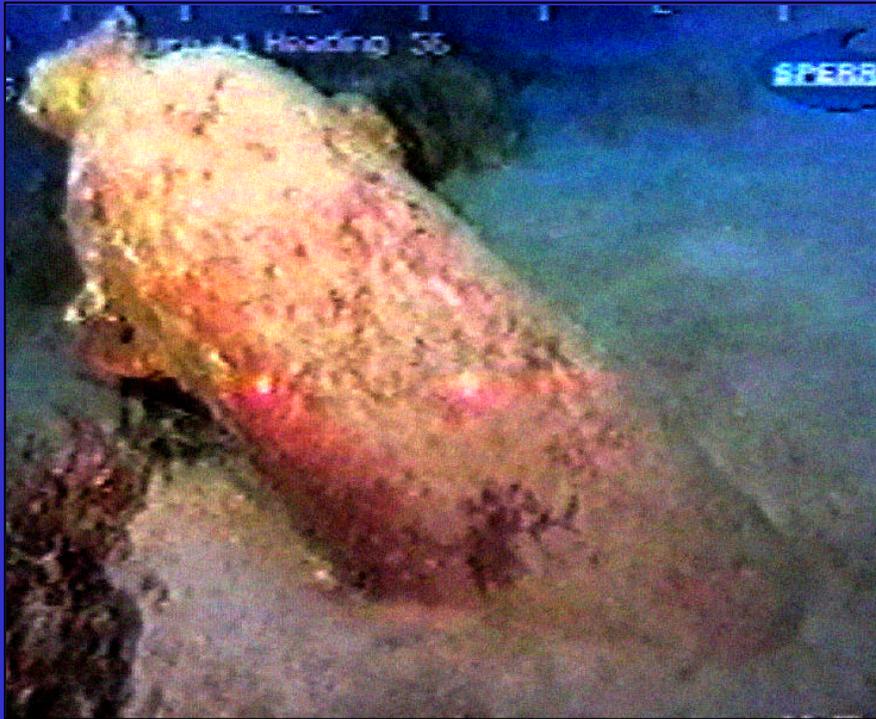




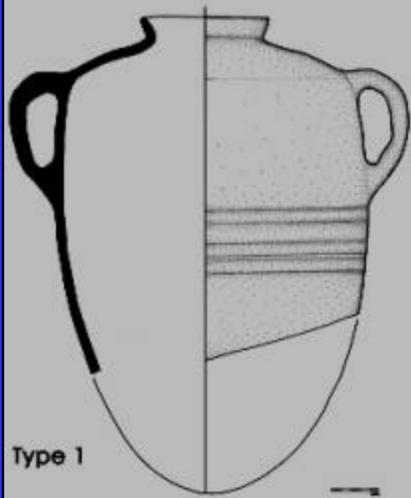


The ovoid Punic amphora has a very wide distribution pattern in the Mediterranean and was found in sites from the Atlantic coast of Spain, the Balearic Islands, near Carthage and also in Punic tombs in Malta.

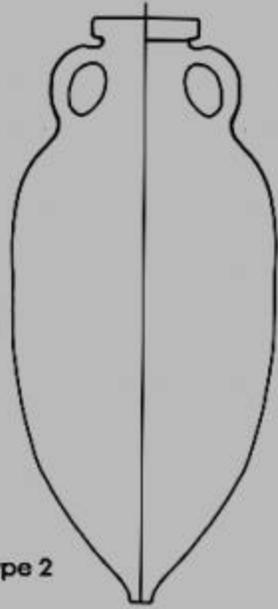




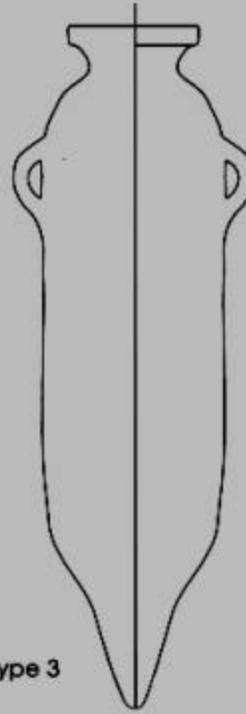
- Greco-Italic type (Type MGS II), a product of Sicily between the fifth and the fourth centuries BC.
- Types dating to the first century AD.
- Local products of a workshop yet to be discovered



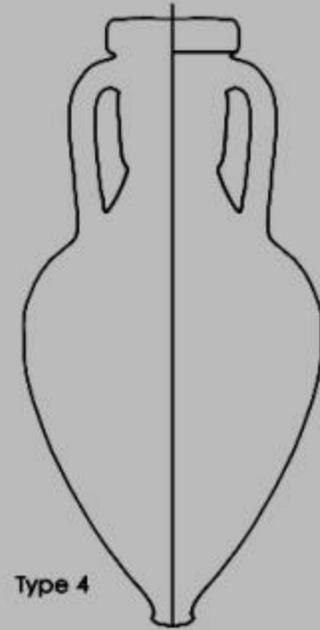
Type 1



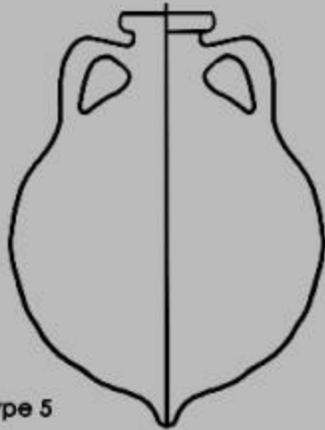
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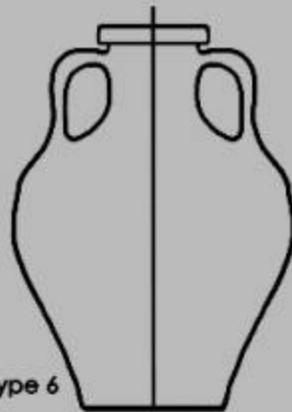
Type 3



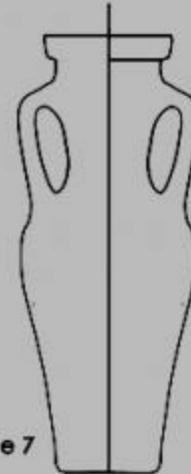
Type 4



Type 5



Type 6



Type 7



Historical context:

- Punic Wars: 264-146 BC
- Conflict between the capitalist merchants (Carthage) and landed aristocracy (Rome).
- Carthaginian economy based on the control of the sources of gold and tin in the Mediterranean.
- Roman economy based on agricultural exploitation.
- Whoever who controlled the sea-lanes controlled the course of the war.



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PARTICIPATING ORGANIZATIONS:

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- PROMARE

