

Honor Frost Foundation

Supporting Marine and Maritime Archaeology in the Eastern Mediterranean

Mellieha Bay Field School – Honor's legacy for future generations

Report

by

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Introduction

This report covers the Field School organized by the Department of Classics and Archaeology at the University of Malta in June 2013 and supported by the Honor Frost Foundation.

The Location

A large natural bay with its entrance oriented to the north-east (**Figure 1**). On its north side are low cliffs and boulders, whereas on the south are a series of steep slopes divided by valleys. At its head is a large sandy beach that would have been good for use as a landing place. A reef in the centre of the bay poses a danger to vessels approaching the inner reaches. Otherwise, it offers good anchorage in offshore winds to vessels of all sizes. Here, a vessel could have waited for a favourable wind before proceeding on its journey elsewhere. The topography and contours of the seabed must also have changed, as attested by the presence of large *Posidonia Oceanica* meadows in the bay (see **Figure 2**). Its distance from settlements in both antiquity and the Middle Ages meant that it would not have been frequented for the purposes of trade and/or an access point for locals. However, the presence of saltpans at the head of Mellieħa Bay in the Middle Ages points to a degree of interaction between the operators of this complex and with seagoing vessels.



Figure 1. Area of study as seen from above (Image – Google Earth).

The entire bay is exposed to the prevailing winter gales that blow from the north east. The large seas that build offshore transform into large breaking waves within the bay making it a high-energy zone.

The site itself is situated to the south west of the reef in approximately 14 meters of water. It is surrounded by large meadows of *Posidonia Oceanica*. Some of these meadows grow on bedrock whereas others grow on mattes. Mattes around the site measure approximately 4 meters in height. On average, mattes grow at a rate of 1cm per year making the mattes surrounding the site at least 400 years old.



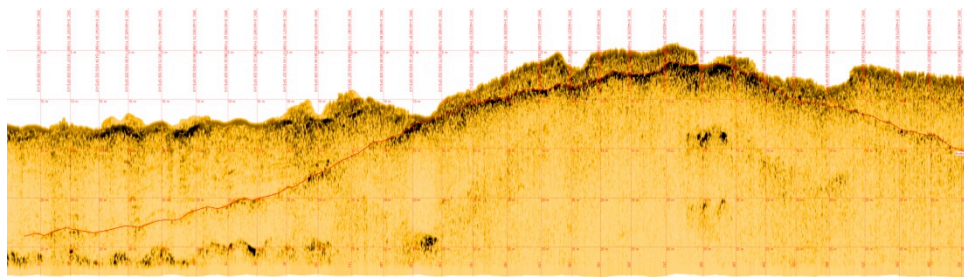
Figure 2. Team working near *Posidonia* mattes.

Past work in the area

In 1967, Honor Frost carried out a preliminary investigation of the site that was indicated to her by third parties. In a brief (two weeks) but productive project she managed to map, survey and execute a collection of objects that were laying on the surface. From the objects retrieved it is apparent that the site consists of a Roman shipwreck datable to the 3rd century AD with a mixed cargo of amphorae, mortars and glass frit. Of importance is her conclusion that the remainder (and majority) of the site is situated in areas

close to where she worked under posidonia mattes and/or buried within the sediments.

Between 2010 and 2012, a series of remote sensing surveys were carried out as part of the University's attempt to gather information about this site. Three technologies were used in the course of these surveys: a) side scan sonar; b) magnetometer and c) sub bottom profiler. In a nutshell, the main results from these three surveys point to a number of anomalies and targets in the area studied by Frost. At this stage it is not possible to determine whether the said targets and anomalies are archaeological objects (**Figure 3**).



Sample of sub bottom data from 2012 survey.

In 2012, a broad diver survey of the Mellieha site was completed by a team from the University of Malta. The main purpose of this survey was to re-locate the site and to map and survey Haddow's valley to establish whether it has undergone any major changes. It transpires that the valley is more or less intact and that cultural material is still present in the area of study (**Figure 4**).

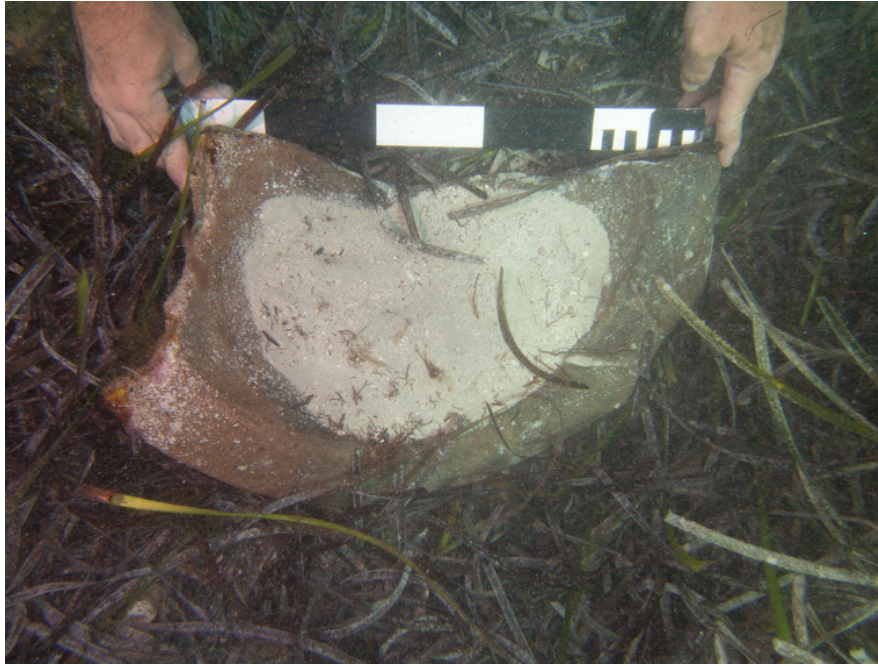


Figure 4. Mortar similar those excavated by Frost.

Project Dates

The Field School ran from Monday 3rd June to Saturday 22nd (both days inclusive).

Research questions

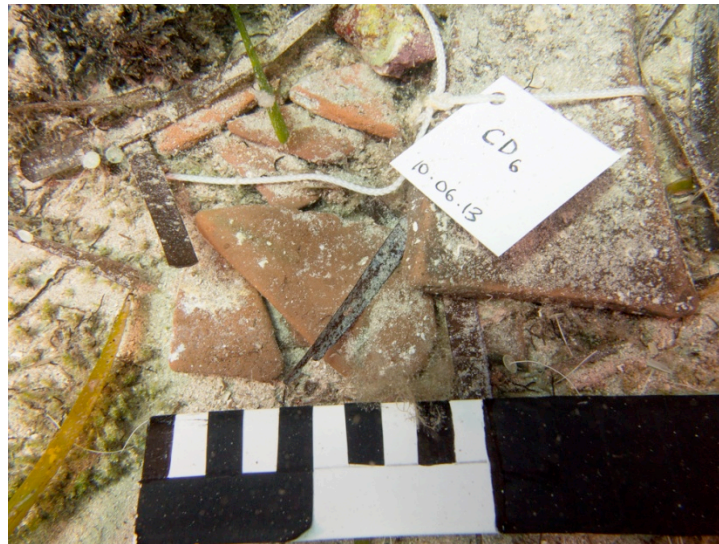
Given that the field school was organized on a real archaeological site it was pertinent to have a number of research questions that we planned to investigate throughout the three weeks of fieldwork. These were:

- to establish the extent to which the Mellieha Bay site is still intact.
- to determine whether any artefacts were still present in the area of study.
- to attempt to identify targets and anomalies from the remote sensing projects.
- to determine the affect of high-energy wave action on the site.

Methodology

In order to achieve these objectives the following actions were planned and executed:

- 1) a general mapping phase included the laying of a series of baselines throughout the area of study so as to map the site.
- 2) through the use of offsets we mapped all objects present on the seafloor as well as those visible in section. Numerous objects were noticed on the seabed. These were individually labelled and photographed in situ. Once surveyed and mapped all objects were bagged and lifted (**Figure 5**).



Objects labelled on seabed.

- 3) a series of 2x2 meter grids were laid out in the northern part of the area of study. This area was selected due to Frost's comments on its potential. All squares were excavated to bedrock which, at its maximum extent was measured at less than minus one meter below the seabed. No rich archaeological deposits were encountered in this area. The few fragments discovered Any archaeological material uncovered were recorded in situ prior to being recovered (**Figure 6**).

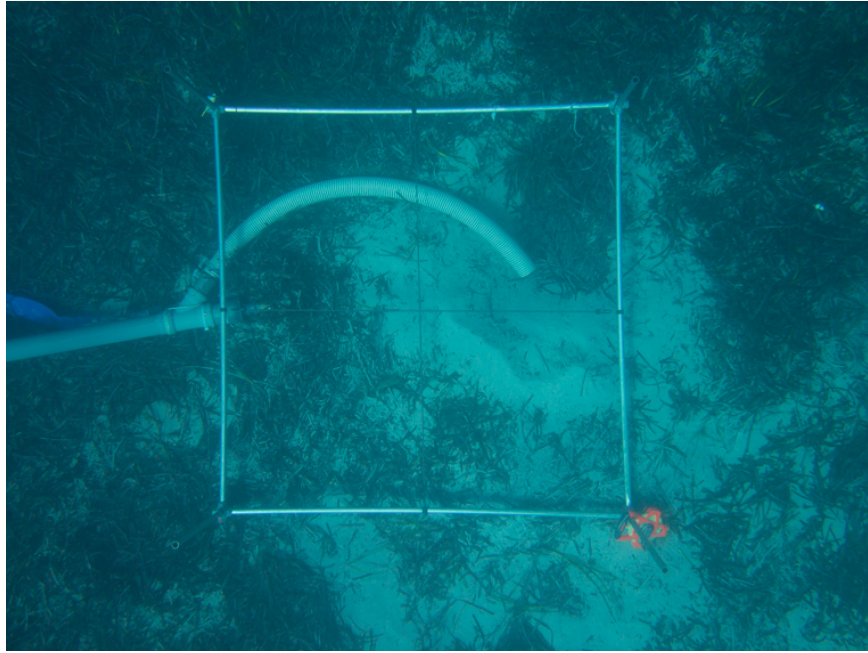


Figure 6. 2x2 meter grid on seabed.

4) a series of swim-searches were conducted around the main site. This was done to establish the presence/absence of archaeological material in the environs. In one area (to the east of the main site) a small concentration of archaeological material was noted. Using the same techniques described above the team proceeded to map and retrieve the material.

5) a series of swim line searches to the west of the area of study across a zone that contains the most promising signals obtained through the remote sensing survey. The presence of deep mattes in this zone prevented us from confirming the presence/absence of archaeological material in this area.

Conservation

All objects raised are currently being desalinated at the Department of Classics and Archaeology at the University of Malta.

Documentation

Objects raised will be documented by students from the Department of Classics and Archaeology as part of their training in documentation techniques for archaeology.

Project management

- 1) a team briefing was held – during this meeting the day’s objectives were described and all tasks were assigned.
- 2) a generic dive log was kept on the raft to record dive time, air in/out etc.
- 3) all dives were logged by individual divers.
- 4) individuals not diving undertook the cataloguing of objects and other documentation duties.
- 5) dive logs contained a description section to include tasks executed.
- 6) a de-briefing was held at the end of diving operations to discuss the day’s achievements.

Training

This project was used to train young archaeologists in the methodologies and techniques used in underwater archaeology. Local and visiting students used Frost’s 1967 as a base map to which they compared and contrasted their measurements and work. Furthermore, participants garnered first hand experience on a genuine archaeological site.

List of participants:

Students

- 1) Robin Batah – Lebanon (supported by HFF)
- 2) Ahmed Ghamoud – Tunisia (supported by HFF)
- 3) Stephanie Said – Malta (supported by HFF)
- 4) Tony Burgess – United Kingdom
- 5) Pashala Yates – USA

Technicians:

- 1) John Harkins – dive master/videographer
- 2) Doug Gossage – dive master

- 3) Greg Mattson – photographer
- 4) Mike Spiteri – representative from the Superintendence of Cultural Heritage
- 5) Elaine Azzopardi – archaeologist and dive technician (supported by the National Facility for Scientific Diving)

Tutors:

- 1) Timmy Gambin
- 2) Jeremy Green (supported by Australian High Commission and University of Malta).

Participants covered the following basic facets and skills:

1. Project management.
2. The setting up of a raft (including preparation and laying of mooring lines).
3. Laying of baselines.
4. Mapping techniques through the use of offsets.
5. Mapping techniques through the used of 3D photography.
6. Setting up of grid.
7. Setting up of water dredge.
8. Manning of pump (for dredge) on surface.
9. Use of water dredge underwater.
10. Labelling and recording objects underwater.
11. Recording of objects in situ.
12. First aid conservation of archaeological objects.
13. Excavation techniques and Keeping a personal notebook covering daily activities.
14. The setting up and running of swim line searches.
15. Teamwork.



Figure 7. Participants building the raft (and a great team).



Figure 8. Training in low-cost 3D photography.



Figure 9. Learning mapping skills.



Figure 10. Using the water dredge.

Participants attended the following lectures:

- 1) Posidonia Oceanica – Malta’s submerged meadows – Dr J. Borg
- 2) Maritime Archaeology and The Maritime Museum of Western Australia – J. Green
- 3) 3D photography for mapping archaeological sites – J. Green
- 4) Technical diving and underwater archaeology – Dr M. Montebello
- 5) Exploring ancient shipwrecks in the Mediterranean – Dr T. Gambin
- 6) It’s not all sharks and shipwrecks: the management of underwater cultural heritage Down–Under – J. Green
- 7) Clay Tobacco Pipes from an underwater context – Mr J. Wood
- 8) The ancient ceramics from the Xlendi Bay wrecks – Ms E. Azzopardi
- 9) Aviation archaeology underwater: an introduction – Mr T. Burgess
- 10) An introduction to archaeological illustration – Mr D. Cardona
- 11) An introduction to underwater photography – Mr M. Farrugia
- 12) Remote sensing and the management of underwater cultural heritage – Dr T. Gambin
- 13) The use of magnetometers in maritime archaeology – Mr D. Gossage
- 14) The recording of traditional boats – Ms S. Said
- 15) The Queen Anne’s Revenge – an overview – Ms P. Yates



Figure 11. Lecture delivered by Mr J. Wood



Figure 12. Lecture delivered by Dr J. Borg.

Participants attended the following site visits:

- 1) The Malta Maritime Museum
- 2) The historic waterfront of Birgu, Malta
- 3) The National Museum of Archaeology
- 4) The silted port of Burmarrad
- 5) The Roman Villa of San Pawl Milqi
- 6) The neolithic temple of Tal-Qadi
- 7) The catacomb complex of Salina Bay
- 8) The neolithic temple of Ggantija, Gozo.
- 9) The ancient citadel, Gozo.
- 10) The Gozo museum of archaeology
- 11) Xlendi Bay
- 12) The World Heritage Site at Dwejra



Figure 13. Visit to Maritime Museum

Outreach

During the field school two public lectures were organized: 1) Exploration of Ancient Shipwrecks in the Mediterranean presented to the diving community by T. Gambin at Aquaventure Dive Centre as part of World Ocean Day (Saturday 10th June); 2) “It’s not all sharks and shipwrecks – the management of underwater cultural heritage Down-Under” presented to the general public by J. Green at the Malta Maritime Museum (Monday June 12th). A talk on the project and field school will be delivered to the general public through the Malta Archaeological Society and the Gollcher Foundation some time in the Autumn/Winter 2013/14.

Publicity

- 1) The project/field school were featured on Malta’s National TV station.
<http://tvm.com.mt/news/2013/06/ghadira-findings/>
- 2) Updates on on the project/field school were regularly posted on the Department’s facebook page.
- 3) An article is currently in preparation by journalist Christina Chetcuti for the Sunday Times of Malta.
- 4) An article is currently in preparation by Edward Ducafor the University of Malta’s magazine – THINK.
- 5) Campus FM will transmit a 30 minute interview with T. Gambin about the HFF field school – to be transmitted in October 2013.

Future Work

It is envisaged that the 2014 the field school will return to the Mellieha Bay site in order to accomplish the following:

- 1) To continue to train young maritime archaeologists
- 2) to map an extensive sandy area to the north of Haddow’s Valley
- 3) to excavate at least two areas that coincide with the magnetometer/sub bottom anomalies
- 4) to map artefacts in the terraces between the main area and the reef
- 5) to explore other areas of archaeological potential within Meliieha Bay