UNDERWATER SURVEYS IN NORTHERN MENORCA: MATERIAL ASSEMBLAGES AND SHIPWRECKS

Jacob Roberts

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Overview

- Purpose
- Situation and sketch of the island
 - *Geology and geography*
- Methodology
- Data and material assemblages
 - *Medieval anchor, indeterminate and amphorae handles*
- Discussion, analysis and results
- Future study and suggestions
- Question period

Purpose

- To explore shipwrecked material culture and its significance to Roman imperial Mediterranean trade patterns
 - *Investigation via survey in Northern Menorca*
 - *Analysis of material assemblages to interpret climatological trends*
- Methodology focused on:
 - *Visual search methods*
 - *Artifact analysis*

Sketch of Menorca

- Division of the island and geologic dualism
- Geography of Menorca
- Overview of military history

Study Area

- Background research and significance of Tirant Bay study site
 - *Relevance of the Benil*
- Sanisera as an ancient destination, the coastline inversely acts as both a:
 - *Geographic hazard*
 - *Maritime safety net*

Methodology

- Pre-disturbance survey
 - *Installation of control points*
 - *Focus on visual search techniques:*
 - Linear (swim-line) and circular (radial)
- Ancient sources
- Limitations
 - *Project planning based on practicality*

Bathymetric Profiles

- Varied bathymetry alters the methodology of survey and further excavation

Data Collection and Archaeological Datasets

- Marker 1: 16th – 19th C. Iron Anchor
 - *Post-Medieval provenance*
 - *Discovered in limestone ravines*
 - *Significance of spatiality and discovery of anchor*

Indeterminate/no shape – African, Italic amphorae (markers 2,3)

- Bright orange matrix
- Likely a piece of weathered body characteristic amphorae
- Keay 61: A, B, or D variants

Intact Handles, Rim and Neck from the Port de Sanitja

- Outside study area, within Sanisera and harbor area
- Interpretation: Dressel 1
 - *Concaved neck*
 - *Space between neck and handles*
- Discovery acting as indicator of:
 - *Imperial trade networks*

Confounding Narratives: Dressel 2-4 vs. Dressel 1

Identification characteristics:

- *Rim: collar type*
- *Handle: long-rectangular shape*
- *Neck: cylindrical in trend*

Dressel 1

Dressel 2-4

Dressel 1

Tarraconensis (Spanish) Handle (marker 4) – Tirant Bay

- Semi-circle type ring, attached to narrowing neck
- Matrix: pyroxene inclusions
- Interpretation: Dressel 23
- Handle acts as most important find of 2016 survey

Discussion

- Lusitanian transport networks as models for possible Balearic sea trade
 - *Additional use of Stanford Geospatial ORBIS*
- Two posited hypotheses for site formation:
 - *1. Deposited artifacts are a result of island hopping and cabotage*
 - *2. Surveyed material is a consequence of ancient storms, therefore vessels engaged in open-sea networks*

Analysis

- Use of ancient anemology data as an accurate source for climate models
- Consequences of wind movements on seafaring routes
 - *High wind velocities and wave heights*
 - *Shoreline sailing and the use of landmarks*

Future study and suggestions

- Further investigation in limestone gulches and seagrass meadows
- Necessity of increasing bottom time via dive boat
- Associated obstacles in project planning
 - *Budgetary and logistical issues*
- Conservation and protection of materiality

Question Period