UNDERWATER SURVEYS IN NORTHERN MENORCA: MATERIAL ASSEMBLAGES AND SHIPWRECKS

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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
  - \textit{Installation of control points}
  - \textit{Focus on visual search techniques:}
    - Linear (swim-line) and circular (radial)

- Ancient sources

- Limitations
  - \textit{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