

ForSEA discovery – ER2

Function: Research protocols for interrogation of shipwreck assemblages: recovery, documentation and analyses of structural ship timbers from *in situ* shipwrecks.

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Ship Timber as Symbol?

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Dendro-provenancing & Contextualizing Ancient Cedar Ship Remains from the Eastern Mediterranean / Near East

From the archaeological record, we know where ancient ships ended their lives, but until now, we haven't known where they began. This dissertation follows a path to the determination and contextualization of ship timber provenance: the path of a piece of cedar wood from the forest to the ship, to the archaeological record, and its provenance back to the original forest.

In the historical records of the Ancient Near East and Eastern Mediterranean, cedar (*Cedrus* sp.) is often cited as having been used as a ship timber (among other uses). Historians and archaeologists often assume that the wood came from the Lebanon, even though the ancient sources are nearly always ambiguous. There are three other areas in the Eastern Mediterranean that could have supplied cedar to ancient shipwrights: Cyprus, Syria, and Turkey.

To complement the ancient texts, this study uses strontium isotopic ratios (a series of geochemical analyses on bedrock and living cedar wood from the region) to determine that ancient ship timbers did come from areas other than Lebanon. The analyses were so effective in one case as to pinpoint the exact forest (instead of a mountain range or region) that supplied timber for an Egyptian boat belonging to Pharaoh Senwosret (Sesostris) III. Other analyses suggest that Syrian and Cypriot forests supplied cedar ship timber for the Uluburun and Athlit Ram, respectively.

This study also proposes reasons as to why these forests were selected over others nearby. Cedar wood and forests were revered in the ancient world, especially during the Bronze Age, and it seems that during this period, wood may have been sought from certain forests and mountains because they had deep religious and mythological significance. The symbolism of the forest may have been echoed in the ship's timbers, imbuing the vessel to its core with sacred meaning and the symbolism of divine beings or sacred concepts. Many scholars have written on the role of religion in seafaring, but this dissertation presents evidence that religion also played a role in shipbuilding, beginning with the extraction of timber from sacred forests and mountains.



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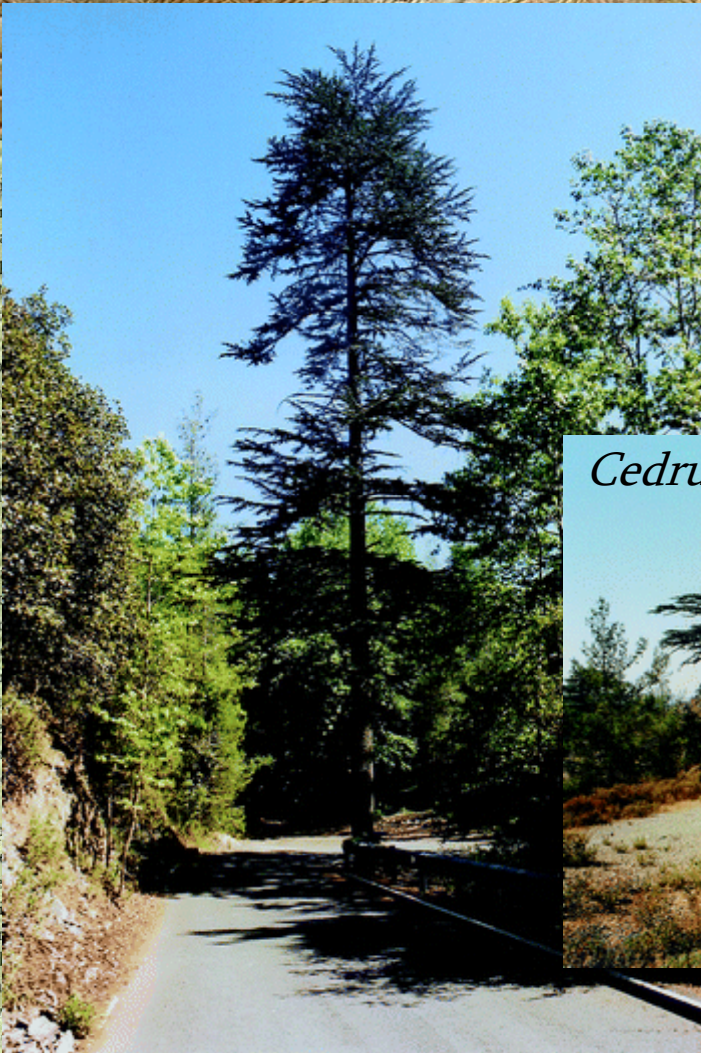
Supervisor: Dr. Prof. Karel Van Lerberghe
Co-Supervisors: Dr. Prof. Patrick Degryse
Dr. Prof. Sturt Manning (Cornell University)

From the archaeology of their lives, but until a dissertation follows a study of ship timber from the forest to its provenance back to the

In the historical Mediterranean, cedar (*Cedrus*) was the primary ship timber (among others), and we assume that the wood sources are not far from the areas in the Eastern Mediterranean where ancient shipwrights worked.

To complement the dendrochronological data (a series of geochemical analyses of wood from the region), we will determine if the wood comes from areas other than those in one case as to pinpoint the range or region) that were used by Pharaoh Senwosret III in his Cypriot forests and Athlit Ram, respectively.

This study also proposes to be conducted over others in the ancient world, especially that during this period, the forests and mountains had a religious significance. Tied to the ship's timber, the meaning and the symbolism. Many scholars have argued that this dissertation presents evidence that religion also played a role in shipbuilding, beginning with the extraction of timber from sacred forests and mountains.



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Cedrus libani & *C. brevifolia*

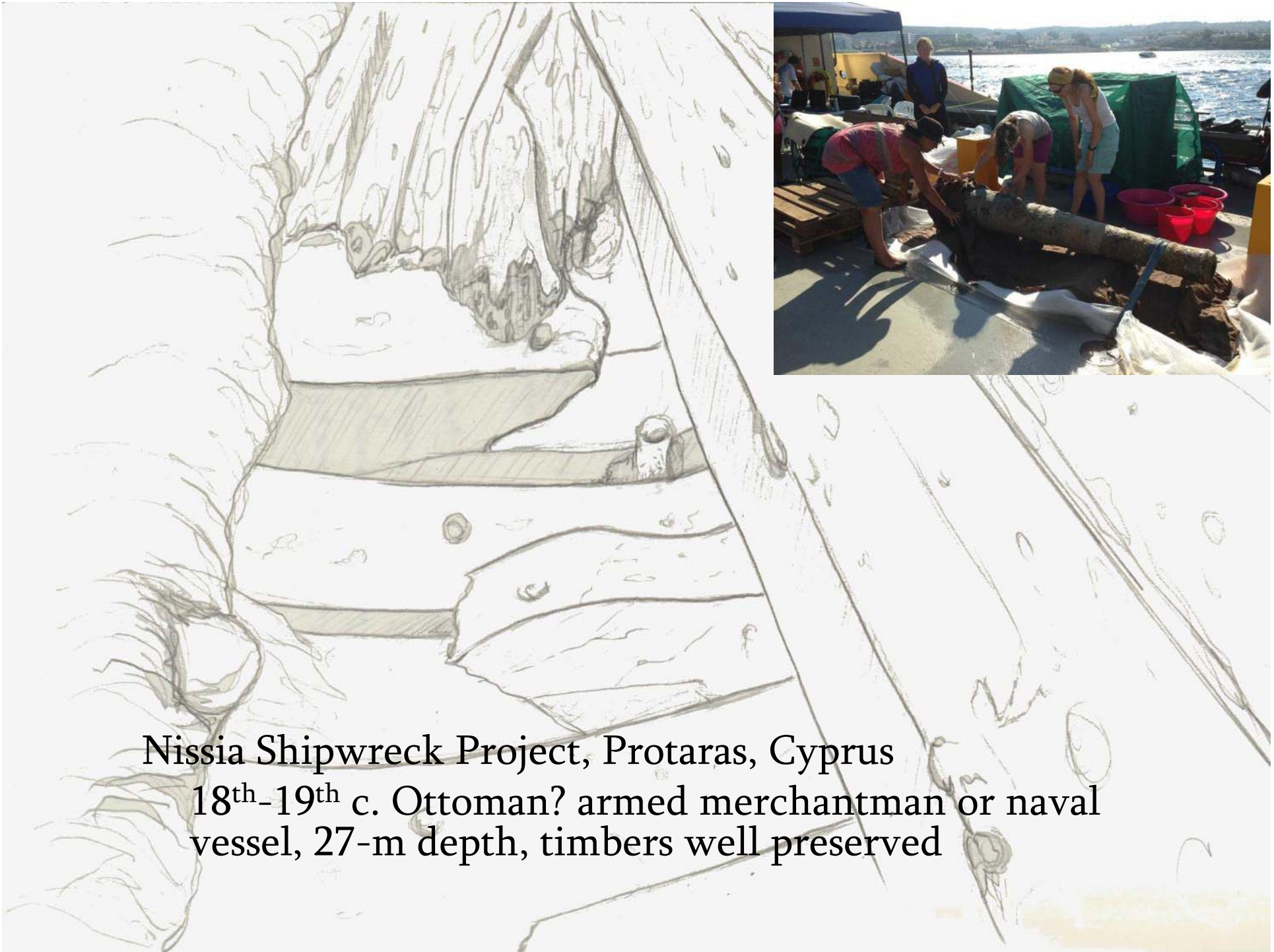


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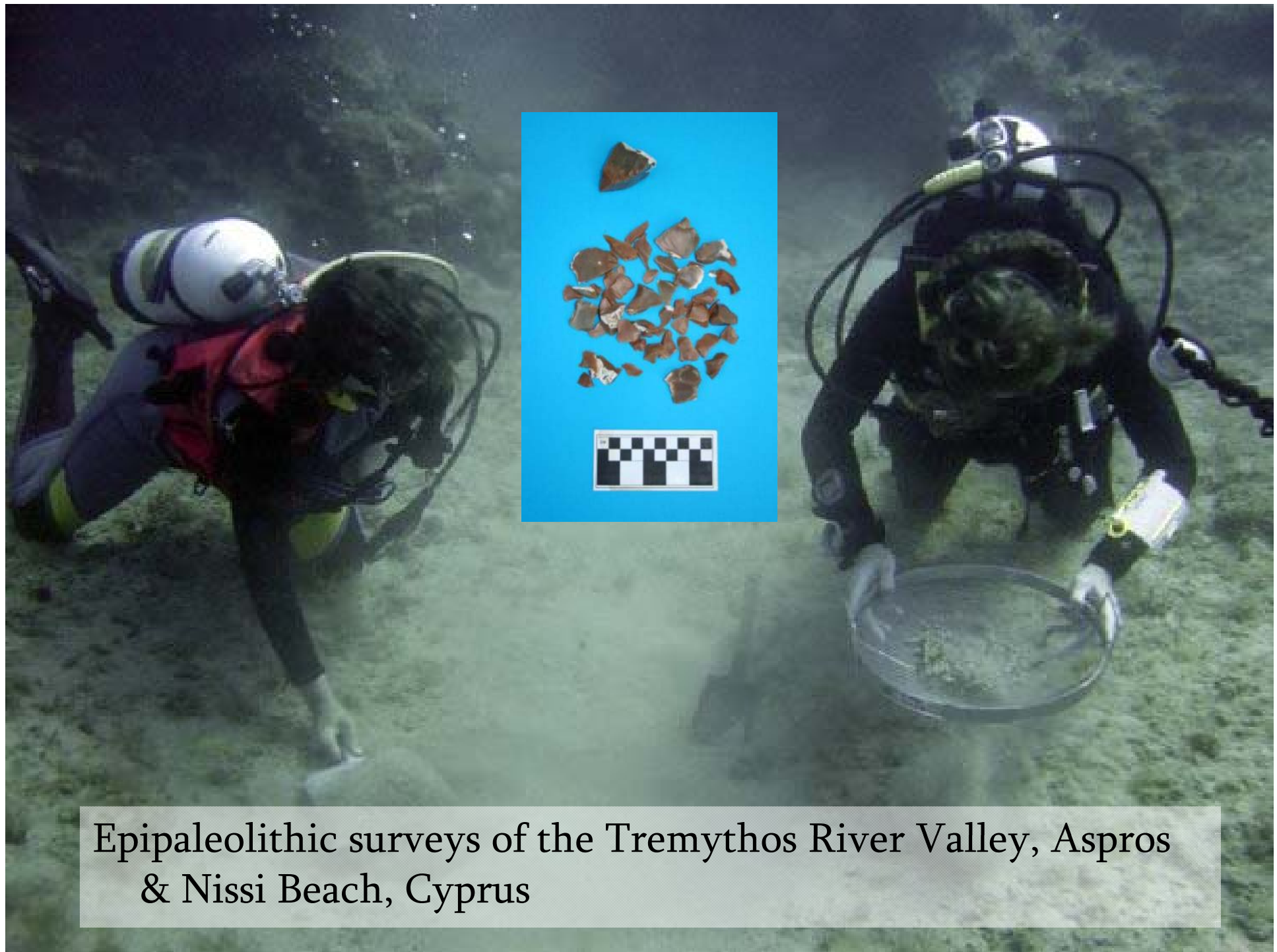
➔ *Cedar Forests, Cedar Ships: Lore, Allure & Metaphor in the Mediterranean Near East*



Nissia Shipwreck Project, Protaras, Cyprus
18th-19th c. Ottoman? armed merchantman or naval vessel, 27-m depth, timbers well preserved



Mazotos Shipwreck Project, Larnaca, Cyprus
mid 4th-c. BC merchant vessel, 45-m depth, amphora cargo



Epipaleolithic surveys of the Tremeythos River Valley, Aspros & Nissi Beach, Cyprus



Bouldnor Cliff, West Solent, UK

Mesolithic submerged landscape, 11-m depth, *in situ* worked flints and timbers – logboat construction site?



(From: Watson & Gale 1990, p. 190)

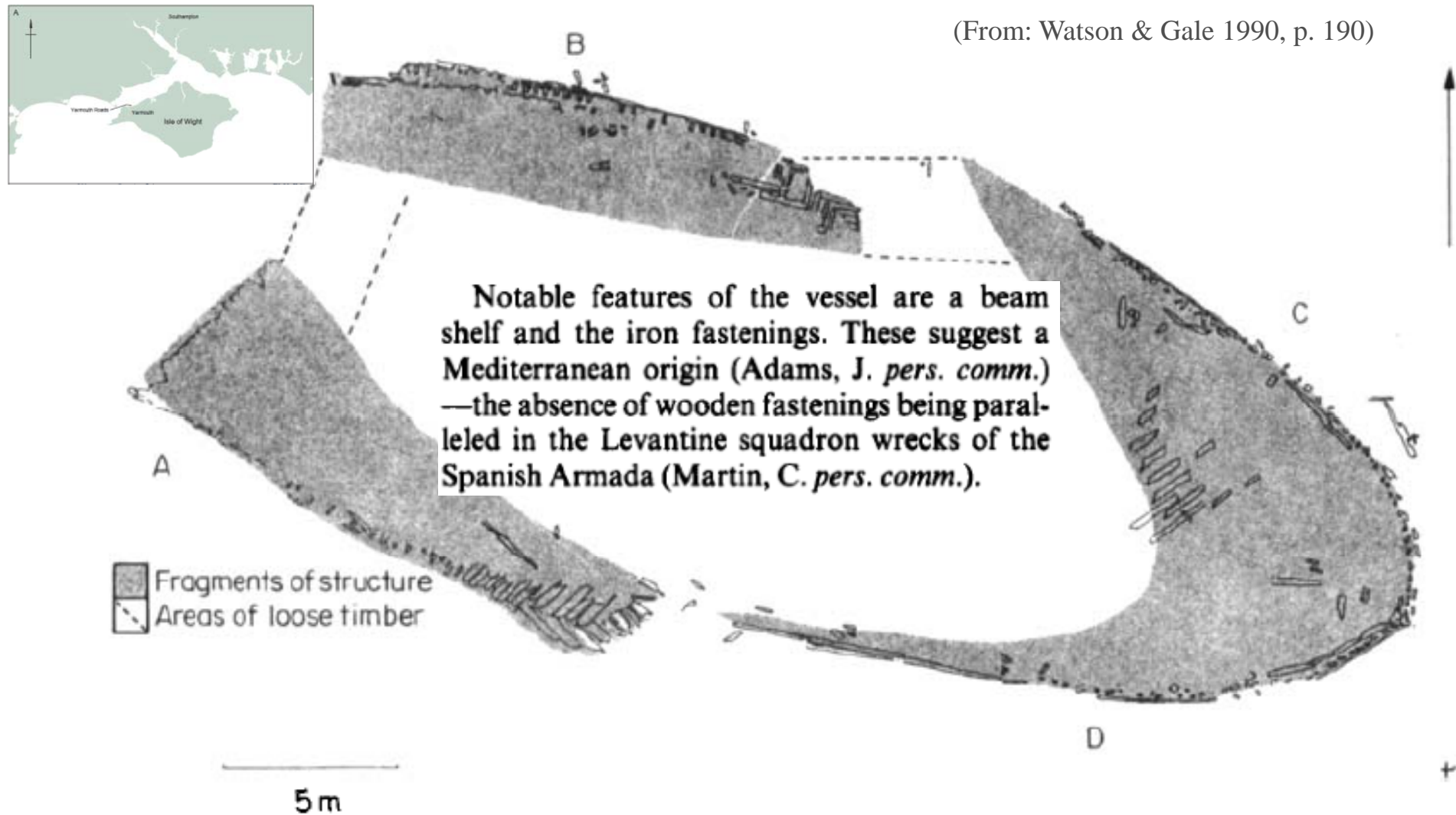


Figure 3. Site plan showing suggested area of surviving timber.

Yarmouth Roads Wreck, West Solent, UK

mid-16th to early 17th-c. Spanish? carrack (*Santa Lucia* ?), 6-m depth



- * Develop best practice standards for *in situ* timber selection & sampling
- * Compile historical & archaeological evidence for shipbuilding practices in N. Europe - Mediterranean - Iberia to enable comparative analysis
- * Development of dendro-archaeological approaches to assessing ship timbers
- * Development of digital techniques for 3D visualization of growth & morphology of parent trees

forests afloat



“The construction of a large, ocean-going ship could require the felling of over 4,000 large trees ...”