

Visible and invisible cargoes in the Late Bronze Age:

The view from the shipwrecks

CyCoMed

Dr Angelos Papadopoulos

Institute of Historical Research/National Hellenic Research Foundation

Introduction

Shipwrecks can be considered as time-capsules due to the fact that time literally stopped at the time of the sinking and (unless looted in later times). The scattered cargo can provide valuable data regarding the chronology, trade and exchange networks, marine engineering, movement of people and objects, as well as the diplomatic relationships between the upper classes and the “superpowers” in the Eastern Mediterranean during the Late Bronze Age (*ca.* 1650-1100 BCE). At the same time the deposition processes and the sea environment may preserve some materials, usually organic, that are otherwise lost in land environments due to the mild Mediterranean climate. In addition to the material culture, people, ideas, technological know-how, beliefs, religions and even viruses and diseases travel onboard a boat. However, unlike finished products and raw materials, the aforementioned can hardly be traced or even identified in the archaeological record.

The setting

The 14th and 13th centuries BCE should be considered as the time of international communication and movement of people and goods. The Egyptians and the Hittites seem to dominate the political arena as the major superpowers. The extensive trade networks, i.e. land and sea routes connect several polities and kingdoms established in the Eastern Mediterranean, including Mycenaean Greece, Cyprus and the many states of the Syro-Palestinian coast. Excavations in these lands have revealed large amounts of exports, such as Mycenaean pottery in Cyprus and the Levant, Cypriot copper and handmade pottery, precious metals, African and/or Syrian ivory, pieces of luxurious jewellery and various types of artwork. This was clearly an early form of “globalization” amongst the upper and middle classes of the region.

The shipwrecks

Together with data from the excavations at major sites, a handful of shipwrecks add to the available corpus of data and the results allow a deeper comprehension of what was moving around the Mediterranean, even if it does not survive physically to this day. Certain major discoveries at the southeast coast of modern Turkey shed significant light to long-distance trade practices and maritime routes between the peoples of the Eastern Mediterranean.

- 1) The **Uluburun ship** (*ca.* 1300 BCE) contained several tons of raw materials, such as African blackwood, elephant and hippopotamus tusks, ostrich eggshells, orpiment, thousands of murex opercula shells, Canaanite jars containing terebinth resin and a variety of perishable spices, condiments and foodstuffs. Impressively, the ship was also carrying 10 tons of copper, mostly as rectangular ingots (354 of them) and in other shapes as well, plus 1 ton of tin in various ingot shapes, which corresponds to the right amount of copper and tin in order to produce bronze (9/10 copper and 1/10 tin). Lead isotope analysis has shown that these ingots are of Cypriote origin. Glass ingots were also included in the cargo as well as Canaanite jars filled with thousands of glass beads. However, alongside the raw materials, manufactured products were included in the cargo: Ivory duck-shaped vessels, ceramic ram-headed rhyta, gold earrings, bracelets and pendants, Canaanite daggers and Mycenaean swords, Aegean sealstones and glass beads, a wooden and wax writing board, bronze zoomorphic weights, stone scepters or maces, Mycenaean and Cypriote pottery, Kassite cylinder seals, various scarabs, including a unique gold Nefertiti scarab and a bronze and gold nude female statuette.
- 2) The **Cape Gelidonya** shipwreck (*ca.* 1200 BCE) has revealed a cargo that contained approximately 1 ton of metal mostly in the shape of the usual four-handled ingot (34 of them, weighting 25 kg) and also some ‘bun-ingots (24, weighing 3 kg), all originating from Cyprus. In addition, 17 or 18 smaller flat slabs of copper were made of Greek copper from the mines of Lavrion in Attica. Several broken bronze tools were recovered, more likely to be recycled and it is noteworthy that tin was also found in the wreck.
- 3) As a matter of fact, a third wreck of an even earlier ship (perhaps 16th-15th c. BCE) was discovered very recently near Antalya, at the site of **Kumluca**.

Excavations started only in 2019 and they seem to reveal a copper ingot carrier, as more than 100 of them were identified.

- 4) Contemporary to the Cape Gelidonya boat, another wreck was recently systematically investigated, at **Point Iria** of Argolid. It carried a rather modest cargo of pottery from Cyprus, the Peloponnese and Crete. It is thought that the vessel departed from Cyprus and arrived at the Argolid via Crete, judging from the large storage pithoi from Cyprus and the Aegean pottery that were stored onboard.
- 5) Further excavated Bronze Age shipwrecks include the ones found at **Pseira** in Crete (pottery, perhaps 18th c. BCE), at **Koulenti** in the Peloponnese (pottery, perhaps 17th-16th c. BCE), at **Sheytan Deresi** in Turkey (pottery, perhaps 16th c. BCE), at **Haifa** in Israel (mostly metals, 14th to 12th c. BCE) and at **Modi** islet in the Aegean (pottery, 12th c. BCE)

Judging from the available evidence it seems that based on the currents, the winds and the seasonal weather, the most common route would have been travelling anti-clockwise, i.e. southwards from Crete to Egypt, then along the Syro-Palestinian coast, all the way up to the southern coast of Anatolia, opposite Cyprus and then possibly via Rhodes to Crete and the Aegean again.

So what do we have not?

Pottery, metals, faience, stone and sometimes bone belong to the categories of raw materials that survive through time and they can be recovered, complete or partially preserved, in the archaeological record. Organic materials such as wood, leather, flora and fauna do not seem to survive in the mild Mediterranean climate, but the extreme conditions of a shipwreck occasionally preserve them. As a result, the cargo of the Uluburun wreck allows us to discuss the uses of terebinth resin and murex shells, the collecting and selling of herbs, while a small wooden logbook has been identified as well. All these are fascinating discoveries, yet it is more than clear that significant data is still missing.

Cloth and linen are some of the items gone forever. Unless they are preserved in the extreme dry conditions of the Saharan desert in Egypt, it is highly unlikely that they will ever be recovered elsewhere. Textual evidence from archives in Anatolia and the well-preserved Egyptian wall paintings, suggest that their trade was of major

importance. Equally, wooden pieces of furniture decorated with ivory inlays, beds of ebony, but also simple and modest wooden tools and cutlery cannot be found. Papyri, leather goods and even baskets are missing from the archaeological record. Ethnographic studies reveal that these materials were used frequently in pre-industrial societies, yet not much can be said about their presence in prehistory. Fish and salted meat were also parts of the cargoes of ships for sale, but also for the crews to consume, but only scattered bones from non-local fish and other animals were recovered at various prehistoric sites (but not on the actual wrecks).

To take it even further, it is clear through art that the transportation of technology and mobility of skilled craftspeople was a common activity as well. Religious and burial practices, thoughts and ideas also travel, but they can only be identified indirectly through the study of the so-called direction of trade and artistic styles via the revealed artwork. Viruses and diseases clearly traveled onboard these boats, just like later in historical times when textual records allowed a safer reconstruction of their movement and subsequent effects.

What survives the archaeological record is what can endure the deposition processes, usually stone, clay and metals. The majority of man-made products, from foodstuffs to their garments and everyday objects of use cannot be traced or identified. Considering that, the study of the past is a rather biased business, in terms of available data, yet the shipwrecks in the Eastern Mediterranean littoral allow a safer methodological approach as time capsules, in which the material culture survives in better conditions than on land.

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