

# MINIATURIZED AMPHORA IN THE PUNIC BAY OF CÁDIZ (SPAIN)

## AN UPDATED APPROACH TO THEIR PRODUCTION, FUNCTION AND STANDARDIZATION



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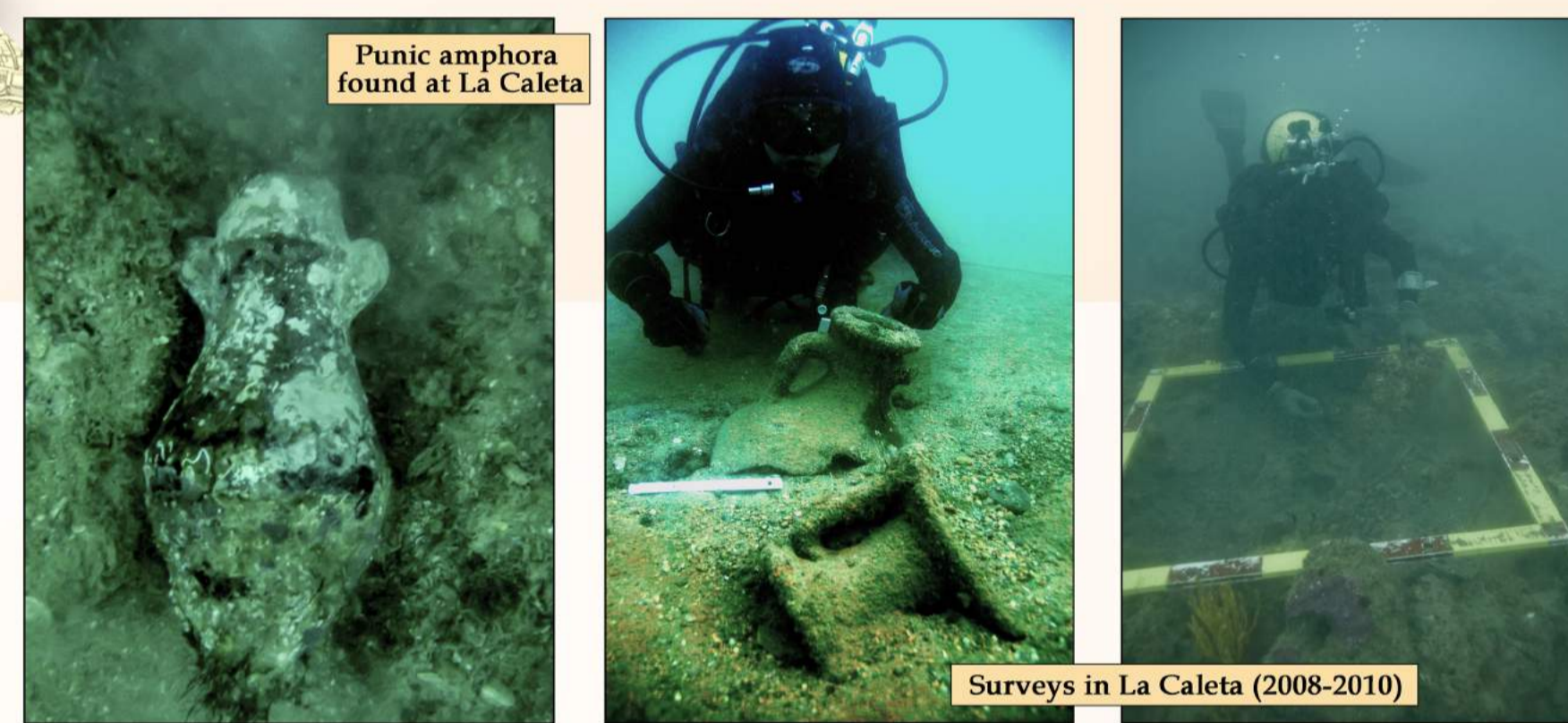
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### LA CALETA, PORT AND WORSHIP

The coastal zone to the west of the Phoenician city of Gadir (later Roman Gades) was characterized in Antiquity by the existence of a natural channel with remarkable port conditions, surrounded by two long promontories on which are presumed sanctuaries dedicated to Astarte (north) and Baal Hammon (south). Outside the channel some islets would have existed in ancient times, but the landscape has been severely transformed by coastal erosion and stone quarrying. The information on these places of worship is very scarce, and up to now there are not unearthed remains of their structures to certify their location in the area or determine their dating.

In any case, since the beginning of the Phoenician presence to beyond the Roman conquest (206 BCE) this maritime environment seems to have combined the development of commercial and port activities with cult, and constitutes one of the key scenarios to explore the evolution of settlement patterns in the insular area of the Bay of Cádiz during the 1<sup>st</sup> millennium BCE.



### RECENT RESEARCH AND PROJECTS

The study of the miniaturized amphorae dates back to the beginnings of scientific underwater archeology in the Bay of Cádiz in the 1980s, when the first materials were published and a first typological classification was developed (cf. References). However, it must be considered that a large number of these small amphorae have been looted in La Caleta area since the 1950s. Only part of these vessels were purchased by the Cadiz Museum but many another are still in the hands of private collectors (for which the available information so far has been limited until now). During 2008 - 2010 archaeological surveys were carried out under the direction of A. Higuera-Milena Castellano in the shoals and rocky reefs located to the northwest of Cádiz and in the area of Punta del Nao. These project has allowed to document with updated archaeological methods a significant amount of these miniature ceramic vessels, as well as transport amphorae, terracottas and other ceramics from the Phoenician, Punic and Roman times. Currently another project led by A. Higuera-Milena and A. Sáez Romero is being developed at the Museum of Cádiz in order to study all the remains discovered in the area.



### WHERE AND WHY

How hundreds of miniaturized amphorae were deposited on the seabed surrounding this area of the western coast off Cádiz is still an issue that has not been adequately clarified. Some researchers have proposed that these small amphorae could be items offered by sailors and merchants to the main deities of the sanctuaries that were located in the environs of the port channel of La Caleta, in order to promote a secure navigation towards the Mediterranean or the Atlantic. Others have seen in these objects, and others such as terracottas and perfume-burner saucers, the residues of specific cult ceremonies carried out in the form of maritime processions.

In any case, the surveys carried out in 2008 - 2010 have revealed its enormous dispersion not only within the channel or at Punta del Nao (were most of plundering was developed in mid-20<sup>th</sup> century), but in basically all the peripheral shallow waters, sandbanks and barrier reefs located to the northwest of the ancient Gadir (see blue spots in the map).

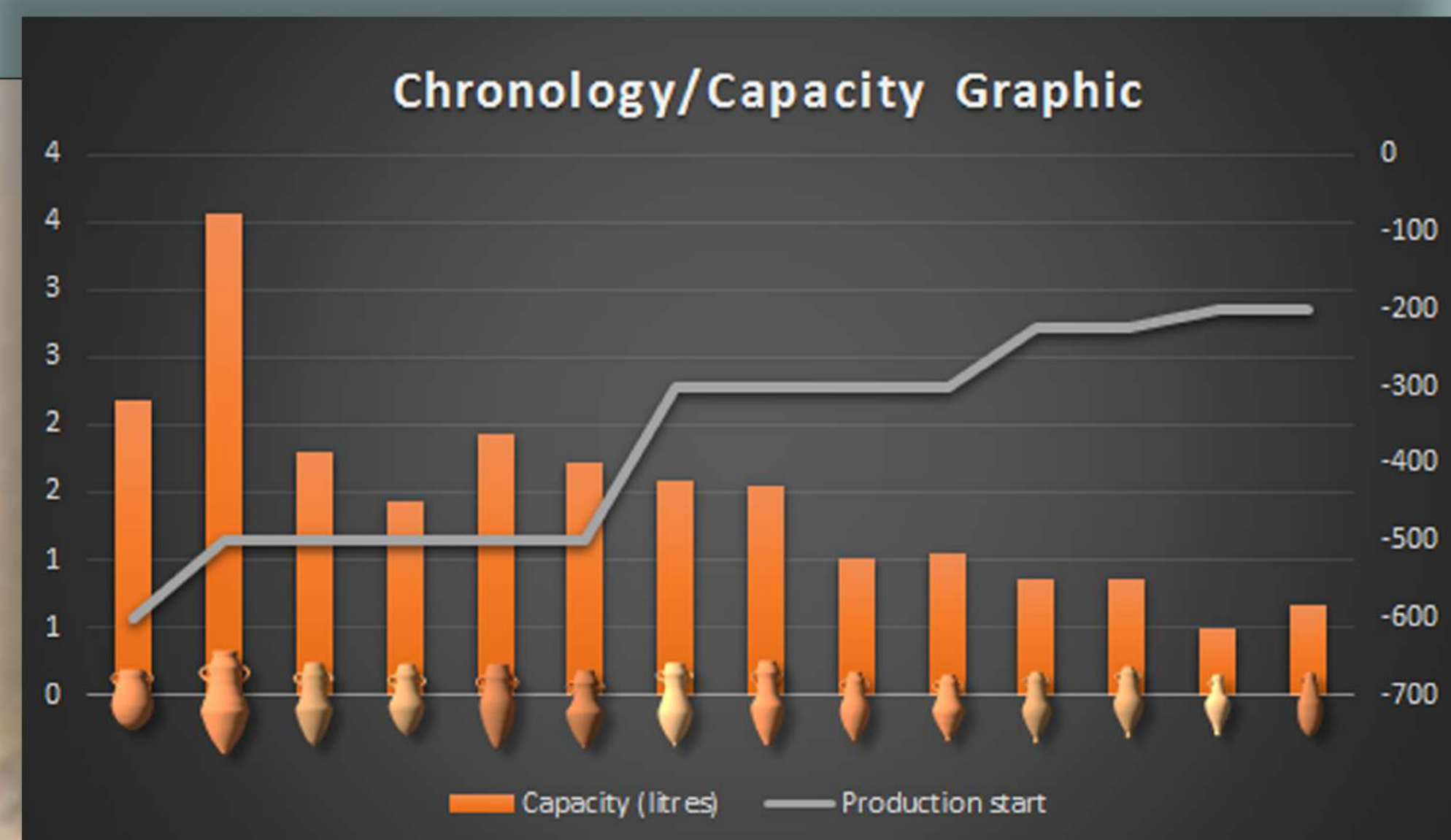
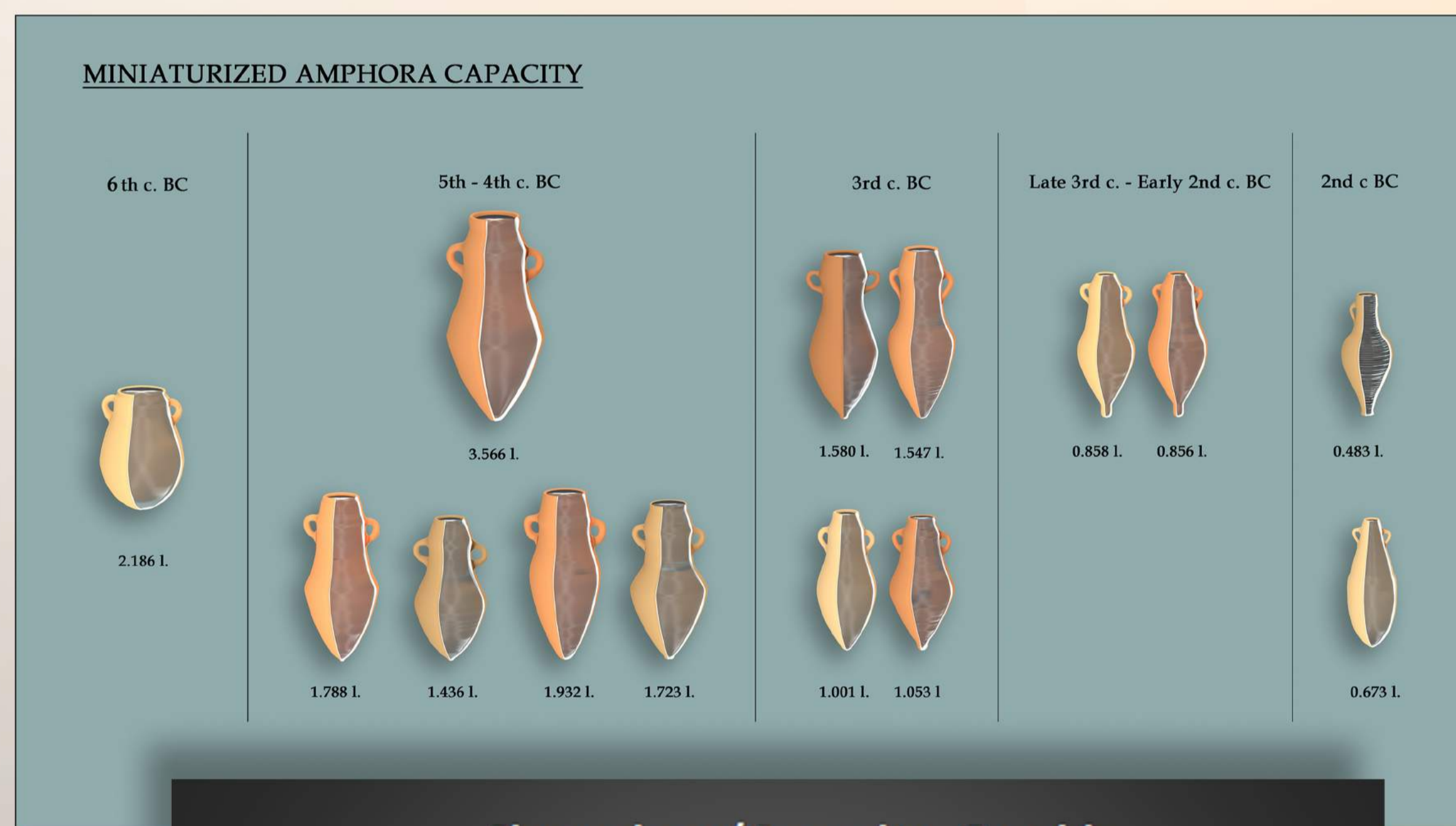
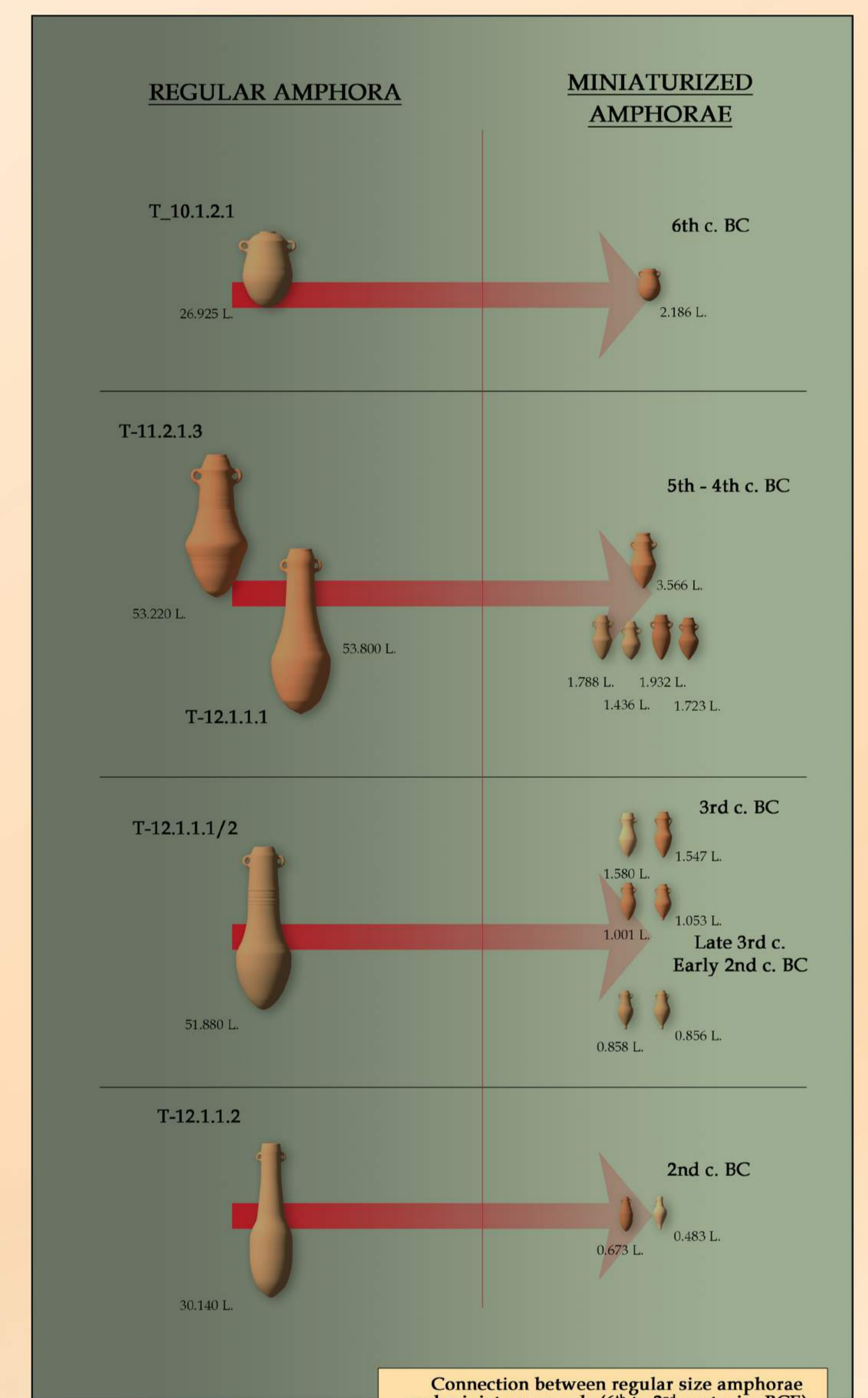
### TYPOLOGICAL FEATURES

In the 1980s and 1990s it was refused that miniature amphorae had accurately imitated the local regular-sized transport prototypes, and most authors supported the idea that they were simple reproductions inspired by such profiles without following any standard of size, shape or capacity. Our research, however, suggest that local miniature containers not only intended to imitate the forms of their contemporary commercial transport vessels, but also maintained a regular relationship with their capacity patterns, no doubt reflecting the measurement systems of the city itself (which appear to be based on the Levantine *kad*).

The earliest miniatures seem to have imitated the Phoenician amphoras T-10121 (7<sup>th</sup> -6<sup>th</sup> centuries BC), while the containers from the 5<sup>th</sup> - 4<sup>th</sup> centuries tried to reproduce the profile of the successful T-1210 and T-1211 types. During the 3<sup>rd</sup> century the model imitated was the T-1211/2, whereas the type T-1211/2 inspired the local miniature amphorae during the 2<sup>nd</sup> century BCE under Roman domination (no data about more recent miniatures has been published up to now). Other types of miniature versions of transport amphorae were manufactured in local kiln sites, but have not been documented so far in the waters of La Caleta.

### THE CAPACITY STANDARDS

The metric system governing the production of miniature amphorae seems to have been stable during the 6<sup>th</sup>-3<sup>rd</sup> BC centuries, based on a pattern of probable eastern origin, with a unit of capacity of 6-7 liters. The oldest small amphorae, probably dating to the 6<sup>th</sup> century BCE, includes individuals of about 6.5 liters and others of around 2 liters. That is, there would be a series of miniatures according to the unit of the system and another series that would be a third of the unit. This pattern seems to continue during the 5<sup>th</sup> - 4<sup>th</sup> centuries BCE, a period of great wealth and commercial expansion of the city, including at least two sets of 3-3.5 liters (half of a unit) and another around 1.5-2 liter (third). It seems reasonable to suppose that the existence of series of small amphorae with different capacities should cover the needs of worshippers with equally dissimilar economic resources.



### OFFERING, BUT WHAT?

None of the analyzed individuals retains evident traces of resin or pitch coatings, nor of the original contents. Also, the fact that there are various findings of these small amphorae in fish-processing facilities does not, for the moment, support the option of carrying "exclusive fish by-products" (as A. García y Bellido and other authors have suggested, being the interpretation with more followers at present).

It seems likely that from its initial use for usual local contents (salted fish or wine) they were later transferred to a multifunction role generalized from the Hellenistic period (packaging multiple products). However, an option that seems also reasonable enough is that from the beginning potters sold them empty to very heterogeneous purchasers, and that each one would have filled it with different types and quantities of contents to be offered to the divinity.

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