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A dive into storerooms and correspondence: a review of the underwater site of Nido del Cuervo (Murcia, Spain)

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Abstract: The underwater site of Nido del Cuervo was discovered by chance in 1977. Some amphoras and stamped lead ingots were recovered, and the site was interpreted as a late-Republican shipwreck. In 1992, after an underwater survey campaign, other ceramic artefacts were extracted and some remains of naval architecture were documented. The material collection in its entirety, however, has never been analysed. Through the re-examination of the excavation documents and materials and the analysis of the maritime constraints on navigation, this contribution aims to provide new data characterising the nature of the deposit and some considerations on the navigation dynamics and possible causes of the shipwreck.

Keywords: Roman shipwrecks, late-Republican, nautical constraints, lead ingots, stamps, sea trade

Introduction

The underwater site of Nido del Cuervo (Águilas, Murcia, south-eastern Spain) was discovered in 1977 after an attempt by divers to steal archaeological remains from the seabed. The intervention by the Guardia Civil and the Patronato de Excavaciones Arqueológicas Submarinas de la Provincia Marítima de Cartagena, directed at the time by Julio Mas García, led to the recovery of 15 lead ingots and a set of amphora sherds, mainly Dressel 1C and Dressel 28 amphoras (Mas, 1980: 256, 2004: 67–68; Parker, 1992: 213; Pérez Bonet, 2008: 25, Brown, 2011). Thanks to a collaboration with the scholar Claude Domergue, the main expert in ancient mining in southern Spain, the ingots were dated to the Republican period and considered part of the same series. The scholars interpreted the site as the wreck of a late Roman Republican vessel that transported lead ingots manufactured in the area around Cartagena, specifically in the Sierra Almagrera, and wine amphoras from southern

Italy to the south of the Spanish peninsula (Domergue and Mas, 1983). In 1992, the entire area was surveyed by the CNIAS (Centro Nacional de Investigaciones Arqueológicas Submarinas), which recovered a large amount of ceramic material. They also documented some pieces of wood, metal nails, and a lead sheet belonging to the ship on the seabed (Pinedo, 1996: 80). Over the years, private individuals have donated a number of pieces from around the site to the Museo Arqueológico de Águilas and the Museo Nacional de Arqueología Subacuática in Cartagena. In addition, the ingots have been sampled for isotopic analysis on several occasions, and the results have been incorporated into different publications (Domergue and Rico, 2023; Rothenhöfer et al., in preparation; Trincherini et al., 2009).

Due to the variety of interventions carried out, the lack of a systematic excavation, the uncertainty about the totality of the materials extracted, and the fact that they have never been studied in depth, the need arose to reconsider the deposit through a detailed analysis of the archaeological record and the maritime landscape in which the site is located.

Geographical context and maritime constraints on navigation

The site is located a few metres off the coast of modern Águilas, close to the point of Nido del Cuervo, from which it takes its name, in a steeply sloping area that alternates rocky areas with *Posidonia oceanica* meadows and descends to a depth of between 16 and 18 m. The rocky peak of Nido del Cuervo is part of the Punta de la Aguilica, which separates two large inlets, the Bahía del Hornillo and the Bahía de Levante (Fig.1).

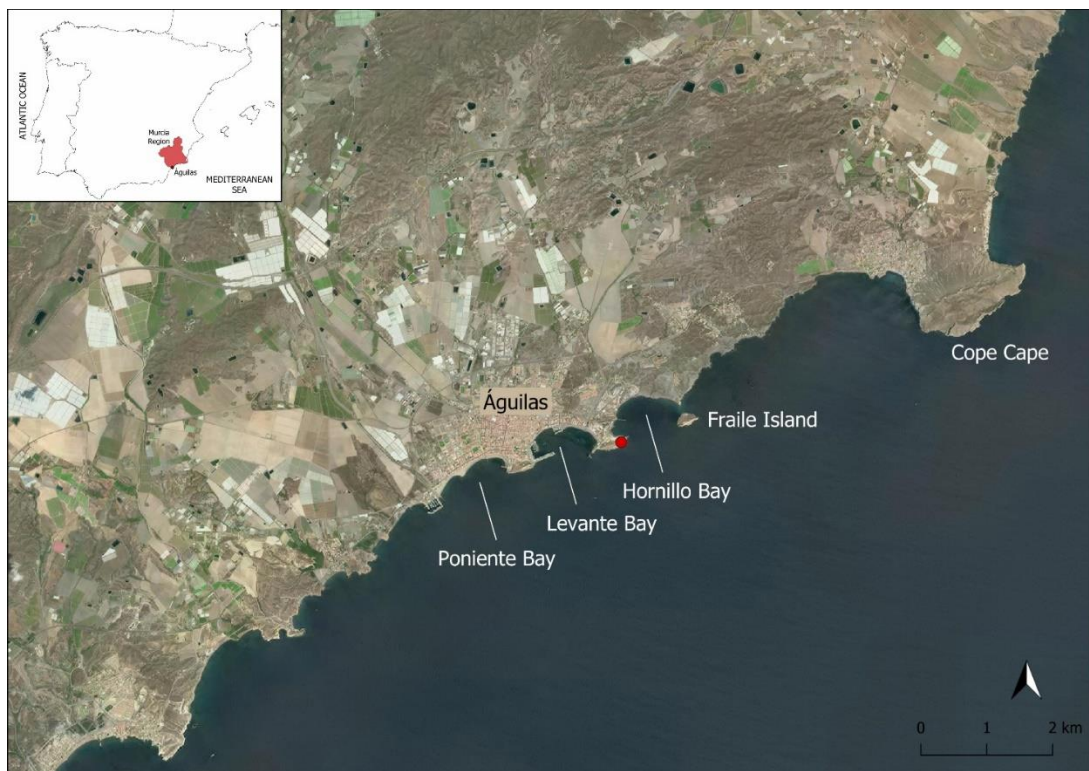


Figure 1 Location of the Nido del Cuervo peak, Águilas, Murcia (by the author)

The coastal section is characterised by a rugged morphology due to its complex geological structure, which is conditioned by the eastern foothills of the sub-Baetic Systems (Hernández, 2010). There are notable mountainous volumes that plunge directly into the sea in this area, such as the Maláguide complex, and there are numerous networks of longitudinal and orthogonal fractures that give rise to a steep and rocky coast, interspersed with sandy bays and coves (Berrocal and Ballester, 2008).

The settlement of Águilas is situated in a coastal sedimentary basin, surrounded by high coastal and pre-coastal mountain ranges that isolate it from the inland regions and delimit its plain. The prominent feature of this area is the predominantly low coastline with alternating wide beaches, and cliffs often accompanied by the presence of coastal islands, peninsulas, and promontories. The presence, in the vicinity, of important mineral resources, well-irrigated valleys suitable for agriculture, and beaches and bays well-sheltered from the winds were the basis for the establishment of productive and commercial settlements (Hernandez, 1999, 2010).

These peculiar geographical features, such as promontories and rocky peaks, are of great importance for navigation. The massif of Cabo Cope (245 m above sea level), the Isla del Fraile, the Aguilica point and the hill of the castle of San Juan are conspicuous points, easily visible from the sea. Their geological conformation makes them easy to recognise and fundamental points for navigational orientation. Between these rocky features there are numerous bays with wide beaches; their favourable and stable conformation make them important anchoring points and real natural harbours sheltered from the winds and currents.

Following the methodological approach suggested by some scholars (Cerezo Andreo, 2014, Izquierdo i Tugas, 2018), we conducted an analysis on the major maritime constraints (winds, waves and currents) based on modern and historical data.¹ From this it arose that the navigation conditions are not disadvantageous in this stretch of coast but would have been detrimental to any ships entering the Hornillo Bay under heavy winds. The prevailing winds that affect this stretch of coast are mainly two: the Levant (from NNE-NE-ENE) and the Leveche (from WSW-SW-SSW). These two winds blow with great intensity, easily exceeding 8 m/s (around 15 knots). Throughout the year, there are 3% of calms, i.e., days with no relevant wind blowing at no more than 1 m/s, which means that, in theory, the remaining 96% of the days are suitable for sailing, or at least there would be sufficient wind to do so (Fig.2).

¹ For this analysis we used data from 2008, monitored from a SIMAR station (2066089) at Cape Cope (WGS84, 37°25'12.0"N, 1°30'00.0"W). Historical data are available at <https://www.puertos.es/es-es/oceanografia/Paginas/portus.aspx> (accessed on 20/12/23).

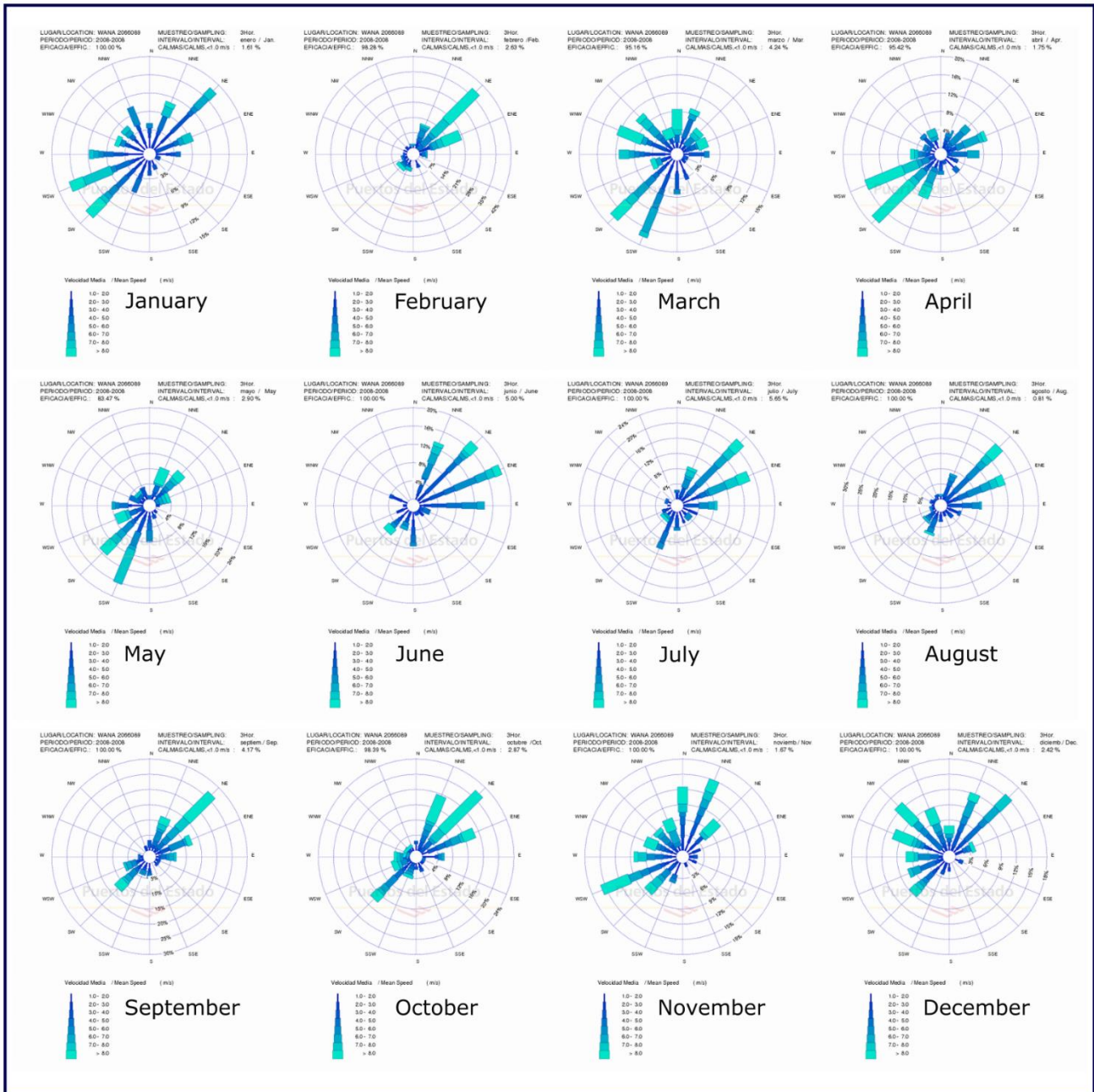


Figure 2 Monthly wind rose at Cabo Cope station (Puertos del Estado: <https://www.puertos.es/es-es>)

The Levant wind is the most predominant, blowing every month of the year, more violent and stronger in winter, and milder and more constant in the months of *mare apertum*. In September and October, it starts to blow more strongly; 27% of the time, it blows at over 8 m/s and brings with it storms and squalls. The Leveche has its moment of maximum predominance and violence in March and April, reaching a predominance of 20% at speeds of over 30 km/h. In May, it is dominant but with lower speeds, and then it blows steadily and without reaching high speeds during June, July, and August. It is an unpredictable and fast-forming wind and is undoubtedly the greatest danger to navigation in this area. In the winter months, these two winds are still present and at times predominant, but the phenomenon that takes place in this period of the year is an exponential

increase in the winds from the NW due to a cold air pocket from the north of Europe, which produces strong, inconstant, and variable winds. Concerning the swell, the direction from which waves come is closely related to the two predominant winds (Fig.3), and in general, their power does not constitute major problems or dangers for navigation. In fact, more than 80% of the waves do not exceed one metre in height, and in a year, there are 8% of calm days in which the waves are less than 0.2 m high. The periods with the highest waves of relevant strength are the winter months (where they reach their maximum peak in December), between April and May (where the Leveche blows strongly), and between October and November.

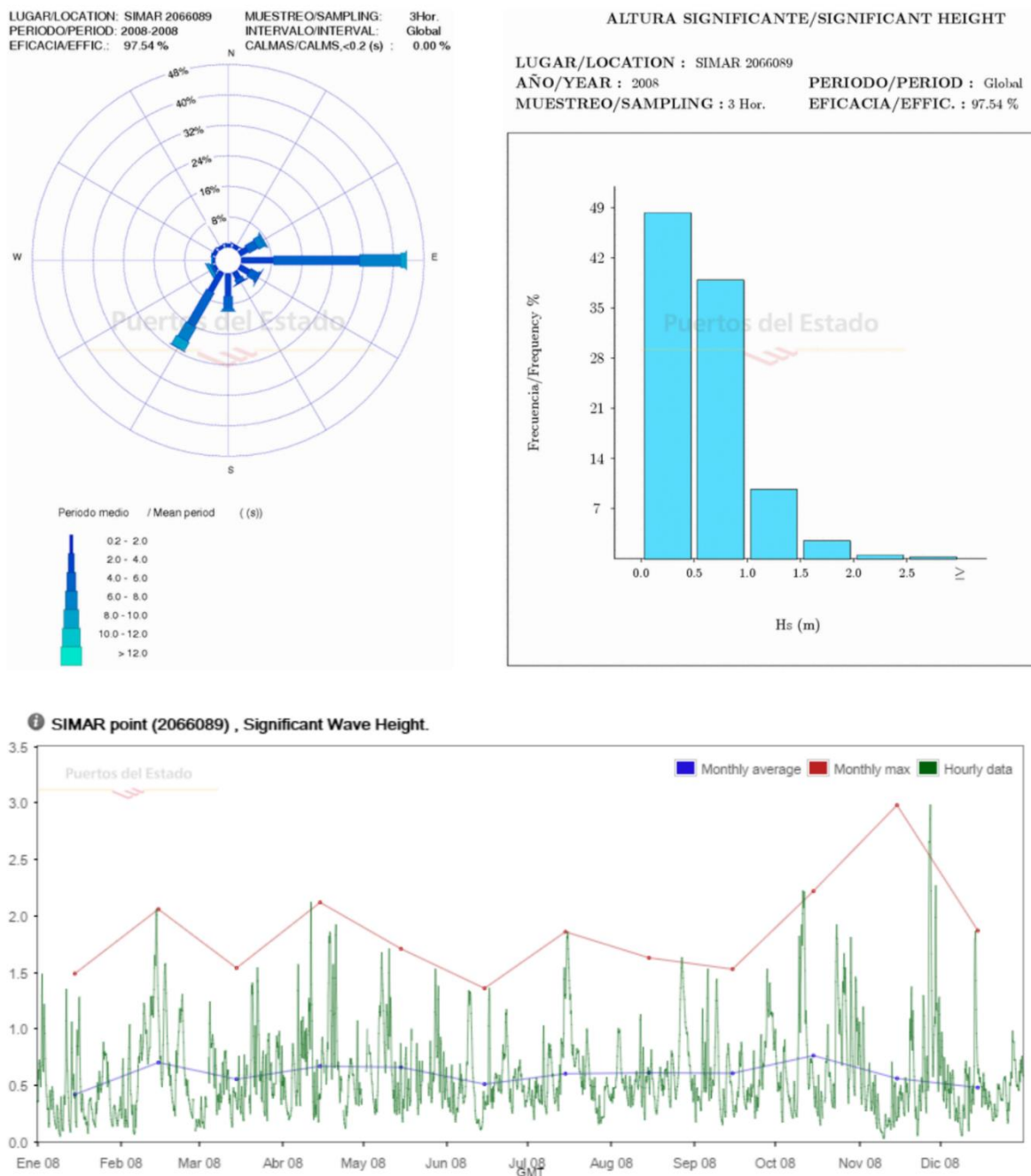


Figure 3 Wave direction, force, frequency, and height diagrams at Cabo Cope station (Puerto del Estado: <https://www.puertos.es/es-es>)

Archaeological context

The stable occupation of the territory of Águilas began only in the late Republican period, primarily linked to mining exploitation, followed by a significant high-imperial phase. In the 4th and 5th centuries AD, the area reached its maximum expansion due to the exploitation and commercialization of products derived from fishing. Since the end of the Republic, the coastlines of Murcia have been involved in small-scale maritime trade, sending mining products to Cartagena, where goods from Italy and the Mediterranean were received to supply the mining population. Águilas became an important satellite of Carthago Nova early on. Numerous archaeological finds in the surrounding areas and the urban centre testify to the importance of mining activity in the region (Palacios, 1982; Domergue, 1990; Ramallo and Berrocal, 1994; Hernández, 2010; Arboledas et al., 2017), although modern exploitation makes its study challenging. In addition to the remains of mining settlements and cupellation furnaces, the discoveries of fish-salting factories and furnaces for the production of amphoras attest that other products also played a crucial role in the local economy during the Roman period (Ramallo, 1985: 435-442; Hernández, 1999; Quevedo, 2021: 211; Quevedo et al., 2021). The intensity and scale of these activities, especially during late antiquity, are reflected in archaeological remains along Hornillo Bay and in new discoveries of powerful structures for the production of fish sauce on Isla del Fraile (Quevedo and Hernández, 2020; Quevedo et al., 2023).

Material Collection

The materials from the Nido del Cuervo site are, for the most part, unpublished. Even today, it has not been possible to locate all the pieces from the different interventions, so it has been essential to analyse the documentation present in the inventories and archives of the ARQVA Museum, where most of the materials are to be found. In particular, the discovery of a series/set of documents and letters that Mas and Domergue exchanged at the time of their discovery was crucial to our work. The invaluable information and details contained therein allowed us to get a more complete picture of the situation and the materials extracted (see especially Mas, 1977a and Mas, 1977b). The recovered artefacts from the site consist of 9 lead ingots, 1 lead stock, 38 ceramic pieces, and 2 stoppers.



Figure 4 a) ingot no.50196 - b) ingot no.01523 (Museo Nacional de Arqueología Subacuática's archive)

Inventory nr.	Lower base		Upper base		Eight	Cartouches			Inscription	Stamp
	Lenght	Width	Lenght	Width		nr.	Lenght	Width		
00733	44 cm	9 cm	39 cm	4 cm	9 cm	1	24,5 cm	4 cm	-	-
00742	44,5 cm	8 cm	41 cm	4 cm	9 cm	3	1) 6 cm	1) 2 cm	1) anchor	-
							2) 9 cm	2) 2 cm	2) [L ---]CF	
							3) 7 cm	3) 2 cm	3) -	
01521	43 cm	9 cm	39 cm	4,5 cm	9 cm	1	23,5 cm	4 cm		
01523	45,5 cm	11 cm	41 cm	5 cm	10,5 cm	1	25 cm	3 cm	- OSTVMI	-
01526	43 cm	8,5 cm	39 cm	4,5 cm	8,5 cm	1	24 cm	4 cm	-	-
01527	43 cm	7 cm	40 cm	4 cm	9 cm	1	23,5 cm	4 cm	-	-
50196	45 cm	11 cm	40 cm	4,5 cm	10,5 cm	1	24 cm	3 cm	Q·SEI·P·F·MEN· POSTVMI	AI - AI
50198	45 cm	9 cm	41 cm	4 cm	8 cm	1	9,5 cm	2 cm	-	-
MAMAG 1-2-2001	43 cm	10 cm	41 cm	5 cm	9 cm	1	23 cm	3 cm	-	-

Table 1 Measurements, inscriptions, and stamps on the studied ingots

Lead Ingots

Two of the lead ingots bear the same inscription. Both of them belong to type D1A² and are very similar in characteristics and dimensions (table 1, fig.4). One (no.01523) presents a partial onomastic epigraph in the central cartouche. The other (no.50196) shows a complete inscription in the central cartouche and two stamps on one of the lateral faces (in which the letters “A I” are repeated). It is an onomastic formula that reads: *Q·SEI·P·F·MEN·POSTVMI*, which stands for *Quintii Seii Publii Filii Menenia Postumi*. This is the only known attestation for this individual, probably the renter of one or more mines in the important metalworking district of south-eastern Iberia. In fact, the *tribu Menenia*, which probably originates from Campania (Domergue, 1990; Stefanile, 2017), obtained Roman citizenship after the Social War in 88 BC and thus the possibility of accessing the exploitation of metal resources. The identification of the person is doubtful; however, the closest correspondence seems to be with the equites *Quintus Seius Postumus* (Domergue and Mas, 1983; Cerezo, 2015; Stefanile, 2017; Domergue and Rico, 2023) quoted by Cicero.³ He owned a house on the Palatine Hill in Rome and was poisoned around 58/57 BC by *Publius Clodius Pulchrus*, who wanted to seize his house. There seems to be no connection with the inscription of POSTVMI RVFI on the lead ingots from the Cabrera 5 wreck (Colls et al., 1986: 31–80) nor with an inscription found in the Roman theatre of Cartagena of the POSTVMII ALBINUS ET MAXIMUS, a prominent family in the city that probably financed part of the construction of the theatre (Ramallo, 2003; Perea, 2005), nor

² The classification used is that made by Claude Domergue (1990: 253; Domergue and Rico eds, 2023), according to which four types can be distinguished, belonging to different chronological phases. All the ingots studied are attributed to type D1 (also defined as Republican), which dates from the Republican period to the beginning of the High Empire. Within this group, there are three variants (known as D1A, D1B, and D1C), which are differentiated by the number of cartouches (one for type D1A, two for type D1B, and three for type D1C).

³ Cic. *De Domo sua ad Pontifices oratio*, 115–129.

with a *liberta* mentioned in an inscription from Cartagena named *Seia Anicia Probata* (Domergue, 1990: 324).

The two cold-printed stamps can be related not to the production phase of the artefact but to the transportation and commercialization of the metal (Colls et al. 1986: 69–70; Manacorda, 1993: 38; Domergue, 1998) or, in some cases, they may constitute control marks made by the imperial administration (Díaz, 2006: 292). This type of stamp is not frequent on ingots from the Republican period, while it is much more widespread and documented on artefacts from the Imperial period. This evidence from Nido del Cuervo, with only other six specimens,⁴ probably constitutes a precedent of what would become, in the Augustan period, a more widespread custom.



Figure 5 a) ingot no.00742 – b) first cartouche with an anchor - c) central cartouche with the inscription (by the author)

A third ingot (no.00742, fig.5) presents three heavily corroded cartouches of smaller size (table 1). For this reason and its characteristics, it belongs to the D1C type. In one of the lateral cartouches is the symbol of an anchor, whereas in the central one is a part of an onomastic epigraph. In the third cartouche, the inscription has completely disappeared due to the high amount of corrosion. Only a

⁴ Mal di Ventre C (75–50 BC) (Salvi, 1992, pp. 670–671), Scoglio Businco (1st c. BC?) (Lo Schiavo & Boninu, 1986, p. 141), Las Amoladeras (50–30 BC) (Díaz Ariño, 2006; Sinner et al., 2020, pp. 146–147), one recovered in the waters of Cartagena (Domergue, 1990, p. 271), one in the waters of the Tiber, and one from Cartaromana Ischia (Domergue & Rico, 2023).

few letters of the central epigraph can be distinguished: *L[---]CF*, and it's impossible to read it entirely. It most probably indicates the name of a *privatus* (possibly a *Lucius ... Caii Filii*) and not of a *Societas Publicanorum*. As yet, no relationship or similarity emerges with other Republican lead ingots of Hispanic origin (Domergue, 1966; 1990; 2016; Bigagli, 2002; Trincerini et al., 2009; Ramallo and Martínez, 2010: 142), nor with the Roman epigraphic record of the coastal area of the Murcia region (Abascal and Ramallo, 1997). It is, in fact, the only attested specimen in which the anchor symbol appears in the first cartouche, before the onomastic inscription.

The other six ingots belong to type D1A (table 1), although some details differ slightly. The central cartouches are highly corroded, and no traces remain of the inscriptions.



Figure 6 Lead anchor stock (by the author)

Lead anchor stock

In 2007, the Archaeological Museum of Águilas received as a donation a lead anchor stock recovered by a diver from the area. The stock was found in the vicinity of the site, partly under a large rock, and, during the recovery operations, it was fragmented into two parts. The piece was made using the mould-casting technique, the same technique used to make ingots, and has two arms and a hollow central box of a quadrangular shape. The transverse lead stem, which must have been housed in the centre of the box, is lost, but traces of the starts, which were cast at the time of manufacture, are preserved on the inner faces. It is 55 cm long and 9 cm high, the width of the extremities is 3 cm, and it weighs about 10 kg (fig.6). No traces of inscriptions or stamps are visible. The use of wooden anchors with lead stocks is considered typical of the Roman period (Haldane, 1990: 22) and, according to radiocarbon dating, can be dated in a chronological range from the 5th century BC (Purpura, 2003) to the 3rd century AD (Haldane, 1990). Based on the most common classifications, the lead stock from the Archaeological Museum of Águilas must be attributed to Kaptäin's typology 3c and Haldane's IIIb, which are dated roughly between the 3rd century BC and the 3rd century AD (Kaptäin, 1984; Haldane, 1990). This specimen is indeed small, but this does not exclude its relevance to the supposed wreck. Several sites and shipwrecks throughout the Mediterranean, in fact, as iconographic sources, testify that vessels were equipped with several anchors, of varying size and weight, used for different purposes and manoeuvres; according to different studies, it is estimated that Greek and Roman vessels could carry between five and ten anchors (Beltrame, 2002: 18).

Ceramic Materials

The ceramic ensemble consists of amphoras, stoppers, and pottery which are mostly fragmentary and very eroded. The published reports speak mainly of the presence of numerous Dressel 1C (Domergue and Mas, 1983; Pinedo, 1996, p. 80) and a few Dressel 28 amphoras (Mas, 1980; 2004; Parker, 1992; Pérez Bonet, 2008). The fact that these were recovered from different excavations and survey campaigns does not give a clear picture of their provenance and, consequently, of their pertinence to a wreck. In any case, all the material is being reviewed,⁵ and preliminary analyses reveal important data that may lead to a reconsideration and reinterpretation of the archaeological context. What is evident from a first examination of the catalogues and documents relating to the recoveries is that the material belongs to various types that are distributed over a very broad chronological span (from the late Republican Era up to Late Antiquity). A review of the single pieces, however, reveals that many of the materials have not been well identified and classified, which leads to a different chronological attribution to the deposit. In fact, some amphoras identified as Dressel 1C are most likely Dressel 12 from the Baetic area, while there is no trace of any Dressel 28.

Results

From a meteorological perspective this area is, in general, quite calm. In the months of *mare apertum*, the main winds (Levant and Leveche) blow steadily and gently, allowing navigation, while in the winter months they reach a force and violence that often turns into storms and squalls. The mainly low swell, which is closely linked to these two winds, makes Águila's coasts a favourite place for anchoring boats, thanks also to all the big inlets that characterise this stretch of coastline and that can act as a shelter from the winds and the movement that the waves can provoke. Concerning the lead ingots, the two elements that present the *Postvmvs* epigraph date between the second and third quarters of the 1st century BC. For the three cartouches exemplar, we are able to date it to the late Republican period but not relate it to a particular producer or *Societas*, given the high degree of corrosion of the inscription. The anepigraphic specimens can be roughly dated from the middle of the 2nd century BC, when the exploitation of the mines by the Roman Republic intensified, to the beginning of the Augustan age. Due to the poor state of preservation, it is difficult to determine whether the slight differences in size and shape indicate that the specimens belong to different series/set or whether they are minor manufacturing imperfections. Only one specimen, whose central panel is much smaller than the others, can certainly be considered to not belong to the *Postumus* series/set.⁶ The results of isotopic analyses made on the ingots do not seem to agree (Domergue and Rico, 2023; Trincherini, et al., 2009). However, the most recent study carried out, for which all ingots were sampled (Rothenhöfer et al., in preparation), attributes the metal origin of all ingots to the Mazarrón metal deposits.

Regarding the pottery, on a preliminary basis, the hypothesis that this was homogenous cargo of Dressel 1C and Dressel 28 amphoras belonging to a unique wreck is definitely to be discarded,

⁵ For a more detailed analysis, see Lucarini et al., in press.

⁶ Ibidem.

which would also pose problems in terms of the chronological consistency. Instead, it appears that there are materials dated to the Late Republican period that are coherent with the chronology of the ingots and therefore probably part of the cargo of a shipwreck, as well as other objects of varying provenance and chronology that probably come from an anchorage.

Concluding remarks

From this work emerges the importance of re-analysing old excavations and material recoveries, as well as re-excavation in archives and museums. Even if the emerging picture is still confused or some of the artefacts or documentation relating to the campaigns carried out are missing, the information that can be gleaned from new studies is many and important. This can lead to the reinterpretation of the deposit and break the chain of citations of incorrect or incomplete information that, in our case, has been going on since the 1980s.

Concerning the Nido del Cuervo deposit, we are therefore able to state that the presence of a late Republican wreck is more than possible. The chronological consistency of many materials (all lead ingots, from the same area around Mazarrón, and several ceramic artefacts) and the discovery in 1992 of some naval elements would suggest a small redistribution ship dated to the third quarter of the 1st century BC.

The lead anchor stock found in the vicinity of the deposit, despite its small size, together with metal and wooden remains, could be part of this wreck, which probably sank due to a storm. The force of the Leveche wind could easily push ships towards the coast, the reefs, or the numerous ledges that lie between the shelters, possibly hitting the boat as it was seeking shelter in the more protected Hornillo Bay.

On the other hand, the heterogeneous ensemble of pottery most likely represents a dispersion of objects displaced by the main current NE–SW. The materials' origin could be traced back to Hornillo Bay, a strategic anchorage, and the activities and frequentation of the small Fraile Island. Their chronology attests to the intense and long-lasting frequentation of Aguila's coasts, especially from the 4th century AD onwards.

A deeper analysis of the ceramic artefacts and their provenance, combined with the determination of a more certain origin of the metal, will shed light on the possible route that the ship was following and on the possible destination of the products it transported.

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