

Seventh-century BC Phoenician vessel discovered at Playa de la Isla, Mazarrón, Spain

I. Negueruela, J. Pinedo, M. Gómez, A. Miñano, I. Arellano and J. S. Barba

Museo y Centro Nacional de Investigaciones Arqueológicas Submarinas (C.N.I.A.S.), Cartagena, Spain

Since October 1993, the National Underwater Archaeological Research Centre (N.U.A.R.C.) at Cartagena (Murcia, Spain) has been working on the NAVE FENICIA project, namely the documentation, recovery and study of a Phoenician vessel and its cargo, dating from the 7th century BC, submerged at Playa de la Isla, Mazarrón (Figs 1 & 2).

The project is being carried out by a combined team, which includes archaeologists, conservators, photographers, laboratory chemists, draughtsmen and nautical assistants. This team is made up of 13 permanent members who, on various occasions, have been joined by graduates from several Spanish and European universities. Financial backing for the project has been obtained from the Fine Arts Department of the Spanish Ministry of Culture, from the Administration Department of the Autonomous Region of Murcia and, in particular, from a local finance com-

pany (Caja de Ahorros del Mediterráneo, C.A.M.).

The site was discovered in September 1988 as a result of a programme of archaeological exploration carried out by N.U.A.R.C. On that occasion, the presence of Phoenician material (mainly fragments of amphoras of the Trayamar I type) (Schubart & Niemeyer, 1976) was observed. Particularly well-preserved ceramic fragments, barely affected by marine concretion which showed that they could not have been uncovered for very long, were found in the sand and *posidonia oceanica* of the seabed. This material had come to the surface of the seabed as a result of the work being carried out at Mazarrón on the construction of a marina. The resulting coastal dynamics especially affected the Playa de la Isla. A funnel effect, arising from the construction of a sea wall in the marina, caused the beach virtually to disappear and the seabed in the bay to be stripped, thus leaving the remains uncovered.

As the process described above endangered the preservation of the site, N.U.A.R.C. decided to pursue investigations in this area, as a result of which a wooden structure, corresponding to the remains of a vessel, appeared during the following summer.

In 1991, a short programme was carried out for the immediate protection of the remains as the coastal dynamics of the area continued to be unstable. In this programme, two 1 m² soundings were carried out, one at each end of the wooden structure, and Phoenician ceramics associated with the structure were observed. Later, the remains were given a protective



Figure 1. Map of Spain to show the location of Mazarrón.



Figure 2. View of the bay at Playa de la Isla.

covering of successive layers of sand, mesh and gravel (Cabrera *et al.*, 1992).

1993/94 Nave Fenicia Project—development of the investigation

Right from the start of this project it was considered essential to carry out a full exploratory investigation of the area, as the site contained a large number of Phoenician sherds near the surface of the seabed around the boat structure.

This investigation was to focus on the following aspects:

1. Information on the evolution of the seabed as a result of the effects of coastal dynamics; to this end, an inspection of the area was carried out, and the corresponding bathymetric and diagrammatic plans showing the characteristics of the seabed (vegetation, sand, mud, stones) were drawn up.
2. Delimitation of the extent of the site.
3. Location of the areas with the highest concentration of Phoenician material.
4. Definition of the contaminated areas of the site on the surface of the seabed.
5. Evaluation of the degree of preservation of the remains, in order to identify the parts most recently uncovered.
6. Full retrieval of the material exposed on the surface of the seabed, in order to both study and protect it from further degradation as well as from acts of piracy by looters.

The first step was to mark the limits of the area to be explored around the nucleus of the structure of the vessel. An area measuring 60 × 60 m was decided upon, with one side aligned north. This area was then divided into six 10 m strips wide, along the north/south axis. The width chosen for the strips was considered to be suited to underwater work and one which would allow an overall picture of the position of the remains to be maintained throughout the work.

Each strip is investigated thoroughly by two or three archaeologists, depending on visibility. Divers cover the entire area most meticulously, as much of the material is very difficult to see against the seabed.

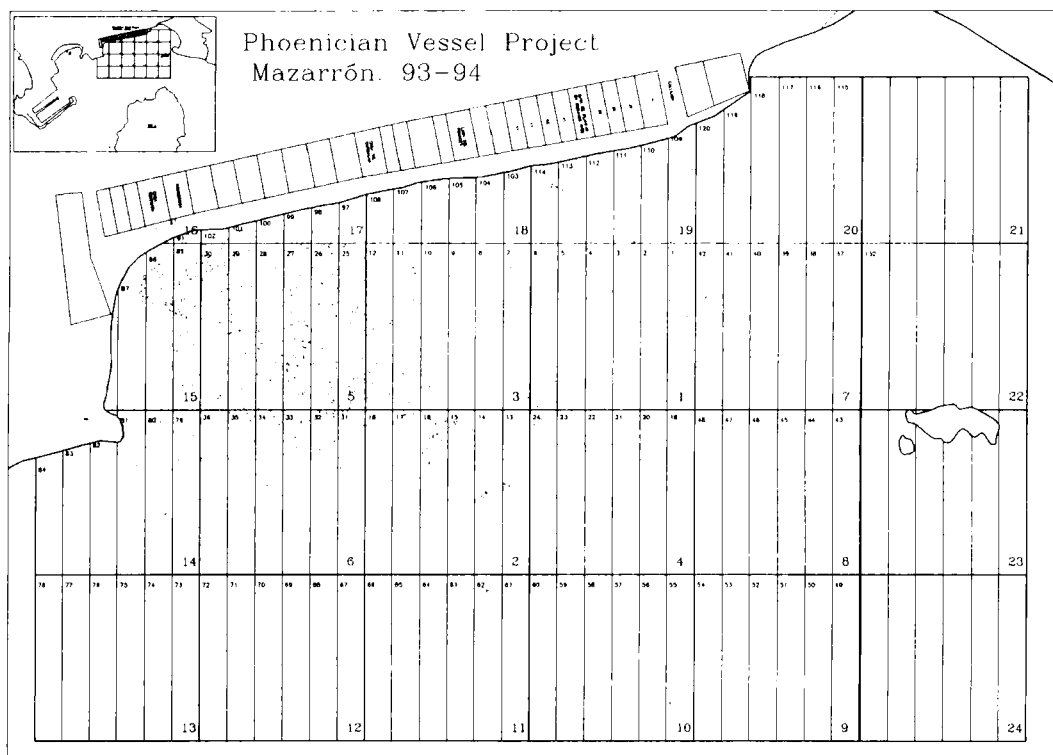


Figure 3. Grid on the wreck-site showing the distribution of Phoenician sherds.

The strips are swept lengthways or in zigzag pattern and each object found is put into a mesh bag and replaced in the position in which it was found. Later, with the aid of an electronic tachymeter, Total Station, the topographical location of each fragment is determined so that the geographical coordinates of each piece can be noted. Although it is excessively slow and laborious, this system allows us to mark on the plan the exact location of each fragment as it is found. This permits us, when drawing up the final charts, to classify the dispersion of the material both by cultural periods as well as by particular forms within each period. As a result, an exact plan of the dispersal of the archaeological remains on the bed of the bay can be prepared, showing the possible areas of contamination, the places with the highest concentration of finds, the areas of accidental dispersal, and so on.

Only objects which are especially relevant because of their position, state of preservation, or uniqueness, have been graphically docu-

mented on the seabed. Once the exact position of each of the pieces discovered in one strip has been noted, they are taken to the surface where they are given a preliminary reference number corresponding to the topographical files to identify them until they reach the laboratory. Here they undergo the normal procedures of recording and conservation.

To date, this method has been used to cover twenty 3600 m² areas, resulting in a total of 72,000 m² of the seabed having been systematically examined and cleared of archaeological objects (Fig. 3). At the moment, the investigation is still not completed as further Phoenician sherds are to be found outside the areas already examined.

Parallel to the development of the exploratory investigation, and taking into account the results obtained by it, certain areas were chosen in which to carry out a series of stratigraphic soundings in order to check the following: the general stratigraphic register of the site; the cause of particular groupings of Phoenician

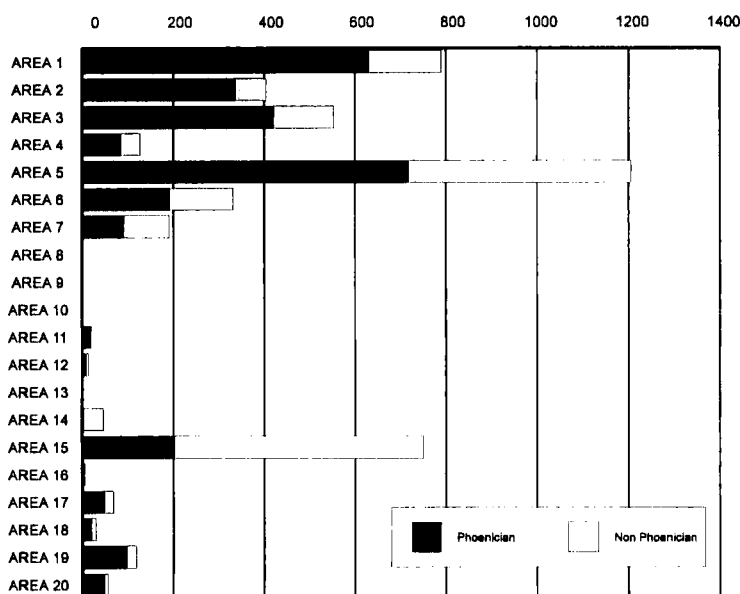


Figure 4. Bar chart showing the distribution and frequency of Phoenician and non-Phoenician finds on the wreck-site.

objects as observed; and the evolution of certain geomorphological structures (sand, banks, areas of dead *posidonia oceanica*, mounds of stones) together with their relationship to the archaeological context.

A total of twenty-three soundings have been carried out, twenty of them in 4 m² modules and the other three in 10 m² modules. These soundings correspond to the general numerical order of the grid drawn up at the beginning of the project.

The soundings have allowed study of the stratigraphy of the seabed and made note of its uneven nature throughout the work area. Thus, alongside areas obviously stripped by erosion, it has been possible to observe other areas where, fortunately, the successive strata are conserved, and where various sandy deposits of different degrees of evolution alternate with formations of seaweed.

Finds

1. Pottery

Over 7,000 fragments have been catalogued, of which 72% belong to the Phoenician period (Fig. 4). A number of sherds derive from numerous Trayamar I amphoras, as well as plates, bowls with different borders and sides,

pots, pans, urns, pithoi, panniers (espuerta) and three-legged mortars (Figs 5 & 6). Another large number of badly shattered sherds are difficult to identify but could correspond to any of the listed items or, alternatively, come from ritual goblets, such as mushroom-lip jugs or trefoiled-lip jugs (Negueruela, 1983). Several of the fragments, particularly from some of the amphoras and plates, show remains of a red slip (Figs 7 & 8), while others were coated with a white slip. No evidence has been found of the use of polychromy. Taking into account the normal pattern along the coast of Malaga and Granada, the analysis of the plates would lead to the deduction that these belong to the Toscanos IV, late Laurita, Trayamar period (Pellicer, 1962; Negueruela, 1981; Schubart & Niemeyer, 1976), and the other fragments mentioned above also fit perfectly with this period. Taking the biggest and the smallest plates recovered until now, their measurements are as follows (Schubart, 1976: passim):

MZ93-SP-14-2: Diameter: 28'9. Rim: 5'6.
28'9: 5'6=5'16.

MZ93-SP-11-94: Diameter: 21'9. Rim: 3'5.
21'9: 3'5=6'25.

It is important to point out that, so far, we have not found any sherds which could

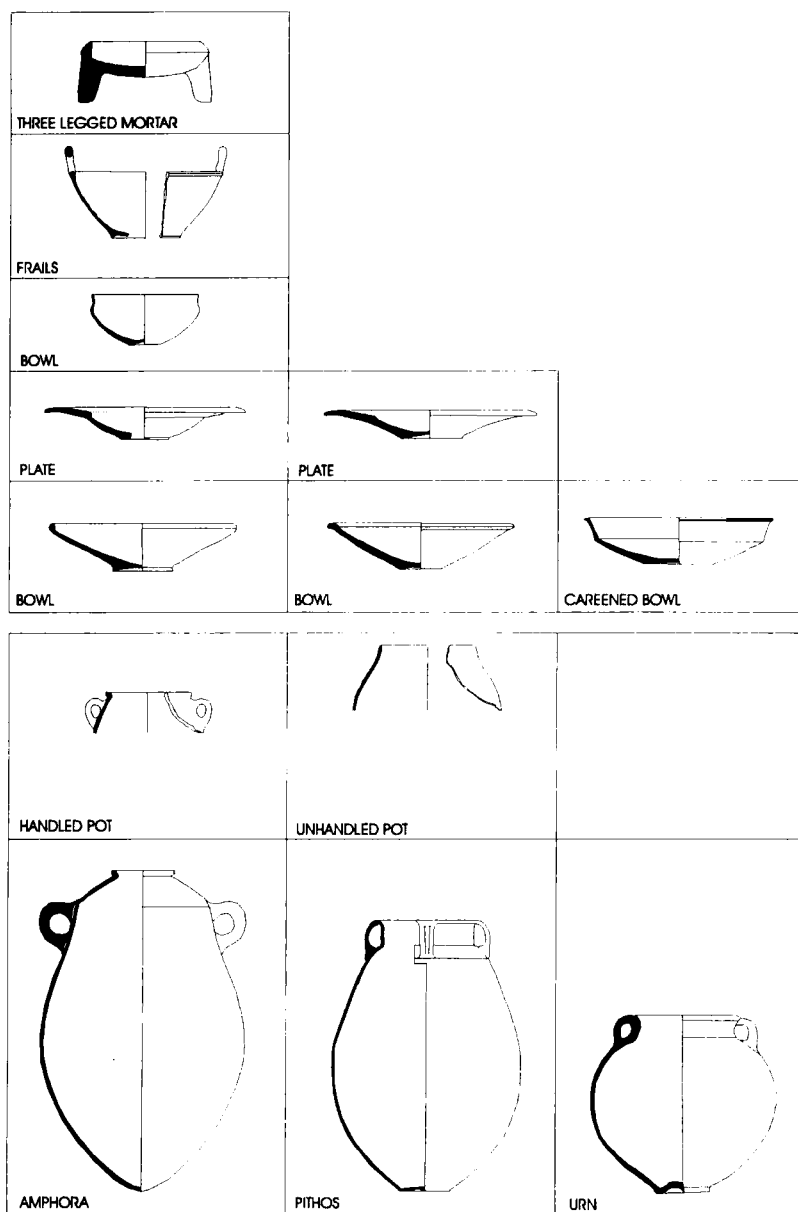


Figure 5. The most frequently occurring forms of Phoenician pottery.

be dated with any certainty as being either from the 8th century BC or from the 6th century BC (Negueruela, 1979–80). What is significant is the appearance of numerous fragments of hand-made ceramics with the same forms as are shown on the ceramics chart corresponding with the Phoenician sites of Chorreras, Toscanos and Morro de la

Mezquitilla on the coast of Malaga (Aubert *et al.*, 1979; Schubart, 1983; Schubart & Maas-Lindemann, 1984).

2. Metal

A silver ring with movable soapstone scarab (Fig. 9). It is complete but heavily concreted and is, at present, undergoing conservation.

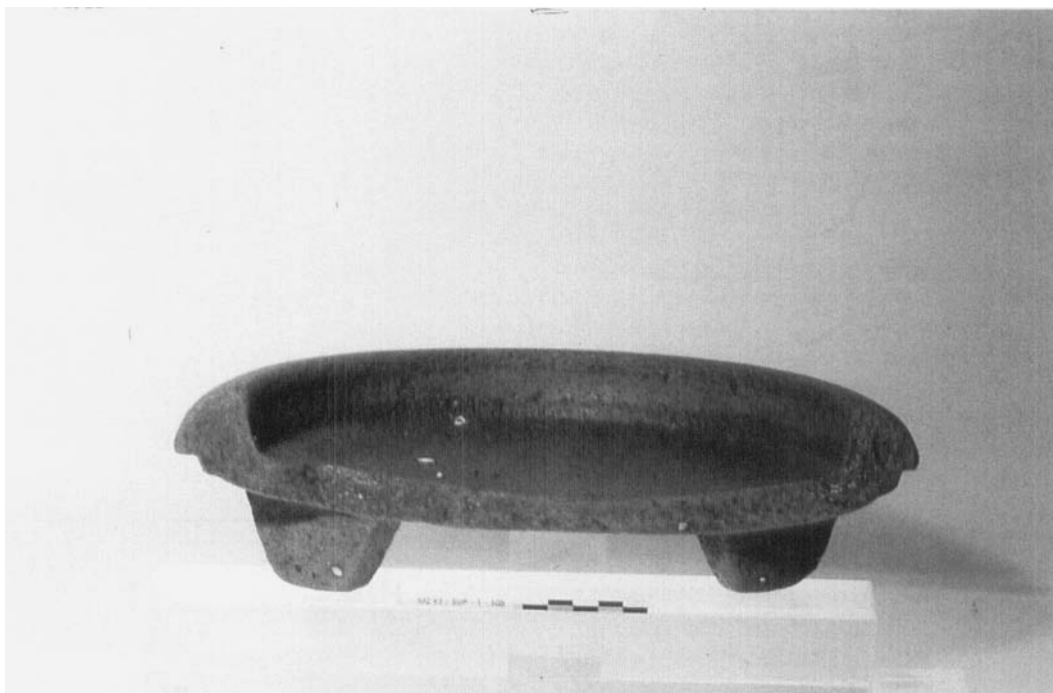
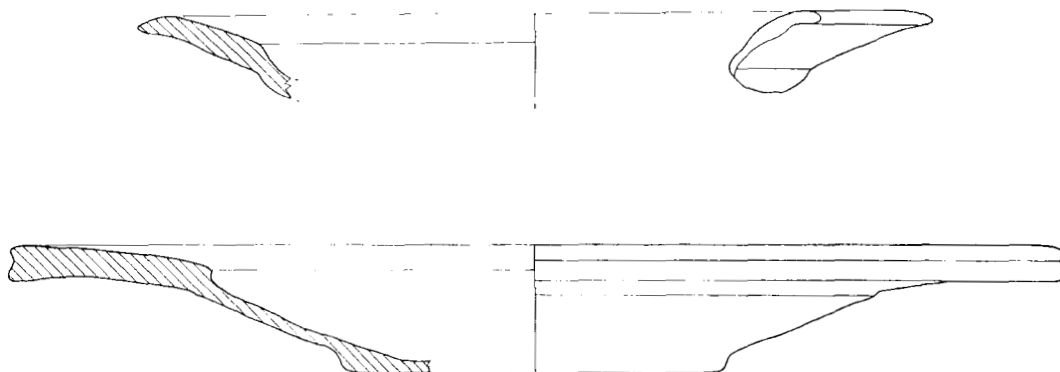


Figure 6. A Phoenician three-legged mortar.



Figure 7. Redware plate as found on the seabed.



Fragmentos MZ-93-SP-11-94 y MZ-93-SP-14-2

Figure 8. Parts of two redware plates.

A spearhead (Fig. 10) made of ternary bronze, an alloy apparently also found in objects from other Bronze Age sites—Venat (Coffyn *et al.*, 1981), Mallorca (Delibes & Fernández Miranda, 1988)—but with a high percentage of iron, which indicates a more sophisticated smelting process (Craddock & Meeks, 1987). However, the foreign influence present has been dated to the latter part of the Late Bronze Age—First Iron Age (Rovira, 1993).

3. Stone

Half of a stone anchor, of a type used over many periods, but which may be of the Phoenician period.

The ship

See Figs 11 & 12. So far only a brief investigation has been carried out on the vessel to control its state of preservation and to check the effectiveness of the protective cover set up during the 1991 programme. This investigation evinced the excellent condition of the wood due to the layer of sand that had been covering it. To date, the keel has been discovered, together with a good part of the planking which is held together by a system of mortises, tabs and wooden tenons (*mortaja-lengüeta-pasador*), as well as the cylindrical frames (*cuadernas cilíndricas*) which are sewn with ropes to the hull of the boat. This brief investigation also permitted



Figure 9. Scarab mounted on a silver ring. The stone is probably steatite.

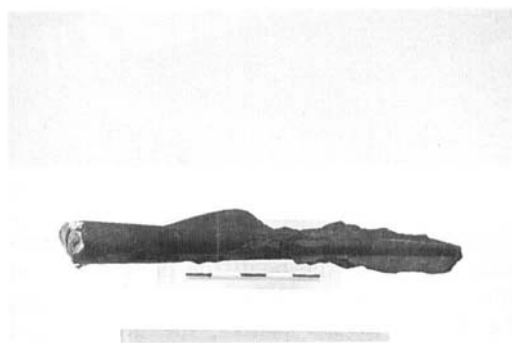


Figure 10. Spearhead of ternary bronze with a high iron content.

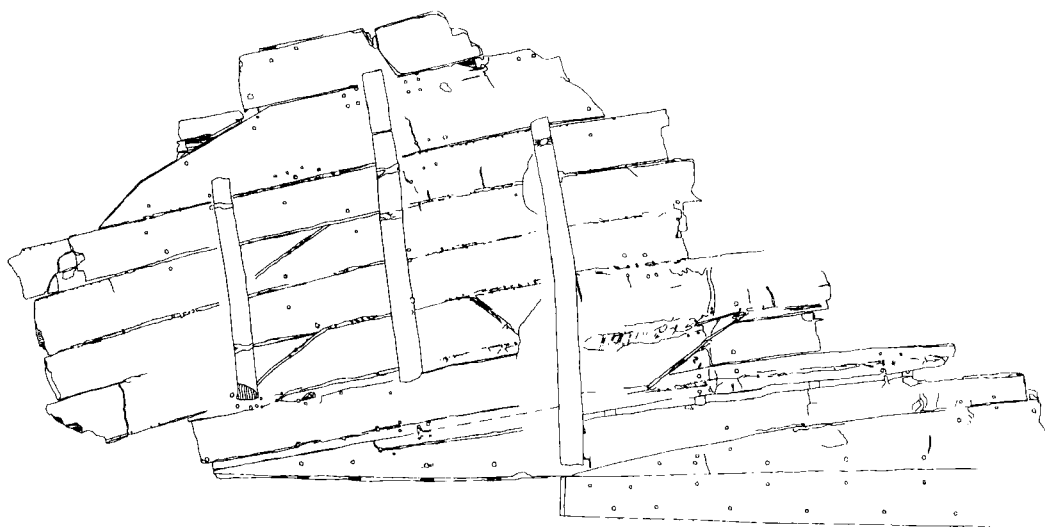


Figure 11. Field sketch to show the portion of hull uncovered.



Figure 12. Part of the hull photographed *in situ*.

observation of certain hitherto unknown structural aspects of the boat: the preservation of part of the dunnage, the system used for sewing the frames to the planks, the interior and exterior caulking; and the system used for joining the keel to the stem.

Future plans

A systematic excavation of the remains of the boat structure will be carried out during the next programme of investigations, with a full data record of the discoveries, removal to the surface of any evidence found of a possible

cargo, and exhaustive documentation of the wood. Once the excavation works have been concluded, an underwater life-size mould will be taken of the interior of the structure, for later use in the production of a model for display purposes. Later on, all the information collected will be processed in the laboratories

until the final conclusion of the studies is reached. Likewise, the different necessary restoration treatments will be started.

As a final phase to the project, an assessment of the possibility of removing the vessel from its present position and preserving it in the Museum is being undertaken.

References

- Aubet, M. E., Maas-Lindemann, G. & Schubart, H., 1979, Chorreras. Un establecimiento fenicio al este de la desembocadura del Algarrobo. *Noticiario Arqueológico Hispánico*, **6**: 91-138.
- Cabrera, P., Pinedo, J., Roldán, B., Perera, J. & Barba, J. S., 1992, Campaña de Cubrición del yacimiento subacuático de la Playa de la Isla (Mazarrón-Murcia): II. *Jornadas de Arqueología Subacuática en Asturias*, Oviedo: 19-21.
- Colfyn, A., Gómez, J. & Mohen, J. P., 1981, *L'apogée du Bronze Atlantique. Le Dépôt de Venat*. Paris.
- Craddock, P. T. & Meeks, N. D., 1987, Iron in ancient copper. *Archaeometry*, **29**(2): 187-204.
- Delibes, G. & Fernández Miranda, M., 1988, Armas y utensilios de bronce en la Prehistoria de las Islas Baleares. *Studia Archaeologica*, **78**.
- Negueruela, I., 1979-80, Sobre la cerámica de engobe rojo en España. *Habis*, **10-11**: 355 ff.
- Negueruela, I., 1981, Zur datierung der westphönizischen nekropole von Almuñécar. *Madridrer Mitteilungen*, **22**: 211-228.
- Negueruela, I., 1983, Jarros de boca de seta y de boca trilobulada de cerámica de engobe rojo en la Península Ibérica. *Homenaje al Prof. Martín Almagro Basch*, **2**: 259-279.
- Pellicer, M., 1962, Excavaciones en la necrópolis púnica Laurita del Cerro de San Cristóbal (Almuñécar, Granada). *Excavaciones Arqueológicas en España*, **17**.
- Rovira, S., 1993, La metalurgia de la Edad del Hierro en la Península Ibérica: una síntesis introductoria. *Metalurgia en la Península Ibérica durante el primer milenio a.C. Estado actual de la investigación*: 45-70.
- Schubart, H., 1976, Westphönizische teller. *Rivista di Studi Fenici*, **IV,2**: 179-196.
- Schubart, H., 1983, Morro de la Mezquitilla. Vorbericht über die grabungskampagne 1982 auf dem siedlungshügel an der Algarrobo- Mündung. *Madridrer Mitteilungen*, **24**: 104-131.
- Schubart, H. & Niemeyer, H. G., 1976, Trayamar. Los hipogeos fenicios y el asentamiento en la desembocadura del río Algarrobo. *Excavaciones Arqueológicas en España*, **90**.
- Schubart, H. & Maas-Lindemann, G., 1984, Toscanos. El asentamiento fenicio occidental en la desembocadura del río Vélez. *Noticiario Arqueológico Hispánico*, **18**: 39-211.