

# THE BEGINNING OF GRAPE CULTIVATION IN THE IBERIAN PENINSULA: A REAPPRAISAL AFTER THE HUELVA (SOUTHWESTERN SPAIN) ARCHAEOLOGICAL FINDS AND NEW RADIOCARBON DATINGS

El comienzo del cultivo de la uva en la Península Ibérica: una revaluación a partir de los hallazgos arqueológicos de Huelva (suroeste de España) y de nuevas dataciones radiocarbónicas

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## RESUMEN

Este artículo presenta una breve revisión cronológica de las más antiguas cerámicas procedentes del primer estrato con actividad antrópica investigado hasta la fecha en la antigua ciudad de Huelva, así como en relación con los cultivos de viñedos de la vecina área agrícola de La Orden-Seminario. También recopila 10 dataciones radiocarbónicas (AMS) de diversas muestras orgánicas del citado estrato obtenidas por cuatro laboratorios diferentes. La conclusión más relevante del estudio es que los fenicios introdujeron el cultivo de la uva en la Península Ibérica preferentemente en la segunda mitad del siglo X a.C.

## PALABRAS CLAVE

Cultivo de la uva; marfil; AMS radiocarbono; Fenicios; Huelva.

## ABSTRACT

This paper provides a brief chronological overview of the oldest pottery found in the deepest anthropogenic stratum thus far investigated at the ancient city of Huelva, along with the oldest ceramics related to vineyards of the neighbouring agricultural countryside at La Orden-Seminario. It also compiles ten AMS radiocarbon dates of diverse organic materials of the referred stratum carried out by four different labs. The main conclusion of the study is that the Phoenicians introduced grape cultivation in the Iberian Peninsula preferably in the second half of the 10th century BC.

## KEY WORDS

Grape cultivation; ivory; AMS radiocarbon; Phoenicians; Huelva.

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### 1. LOCATION AND EXTENT OF THE ANCIENT CITY OF HUELVA

The ancient habitat of Huelva, in southwestern Spain, occupied the apex of a peninsula open to an estuary at the confluence of the Tinto and Odiel rivers. One of the areas of the city was built on some of the small hills rising on the estuary; another one, rather wider, spread over an estuarine marsh at the foothills. During the first half of the first millennium BC this settlement reached an expansion of at least 20 densely built hectares. This surface was even larger if we are to include other hillocks with scattered buildings and remnants of activities related to silver metallurgy (González de Canales 2018, 67-68) (Figure 1).

### 2. FINDS AT THE LOWEST STRATUM WITH HUMAN OCCUPATION AT 7-13 MÉNDEZ NÚÑEZ ST / 12 LAS MONJAS SQUARE AND 3 CONCEPCIÓN ST

In 1998, an archaeological excavation took place at 7-13 Méndez Núñez St / 12 Las Monjas Square (hereinafter MN/PM) (Figure 2). As in other

areas built on the marshland, the excavation was interrupted by flooding when a powerful water table was reached. Later on, after the constructor proceeded to empty the terrain, a first subphreatic greyish-black anthropogenic stratum, between -5 to -6 m deep and 1 meter thick, could be distinguished (González de Canales *et al.*, 2004, 25; 2006, 13-14) and the removal of its muddy soil was selectively controlled. A great number of Phoenician and indigenous pottery, one ensemble of Greek geometric vessels, another of Sardinian and some Cypriot and Italic specimens were recovered. Multiple remains of industrial activities (silver, copper and iron metallurgy), handcrafted products (ivory carving, glyptic, carpentry...), cattle bones, fisheries (with a wide variety of species), and agricultural remains were also collected. A first paleobotanical study by Javier Sánchez (Ph.D. in Forestry Engineering and History Licenciante) identified *Vitis vinifera*, *Ficus carica*, and *Hordeum* seeds among other plant remains. This study provided the earliest evidence of grape cultivation in the Iberian Peninsula

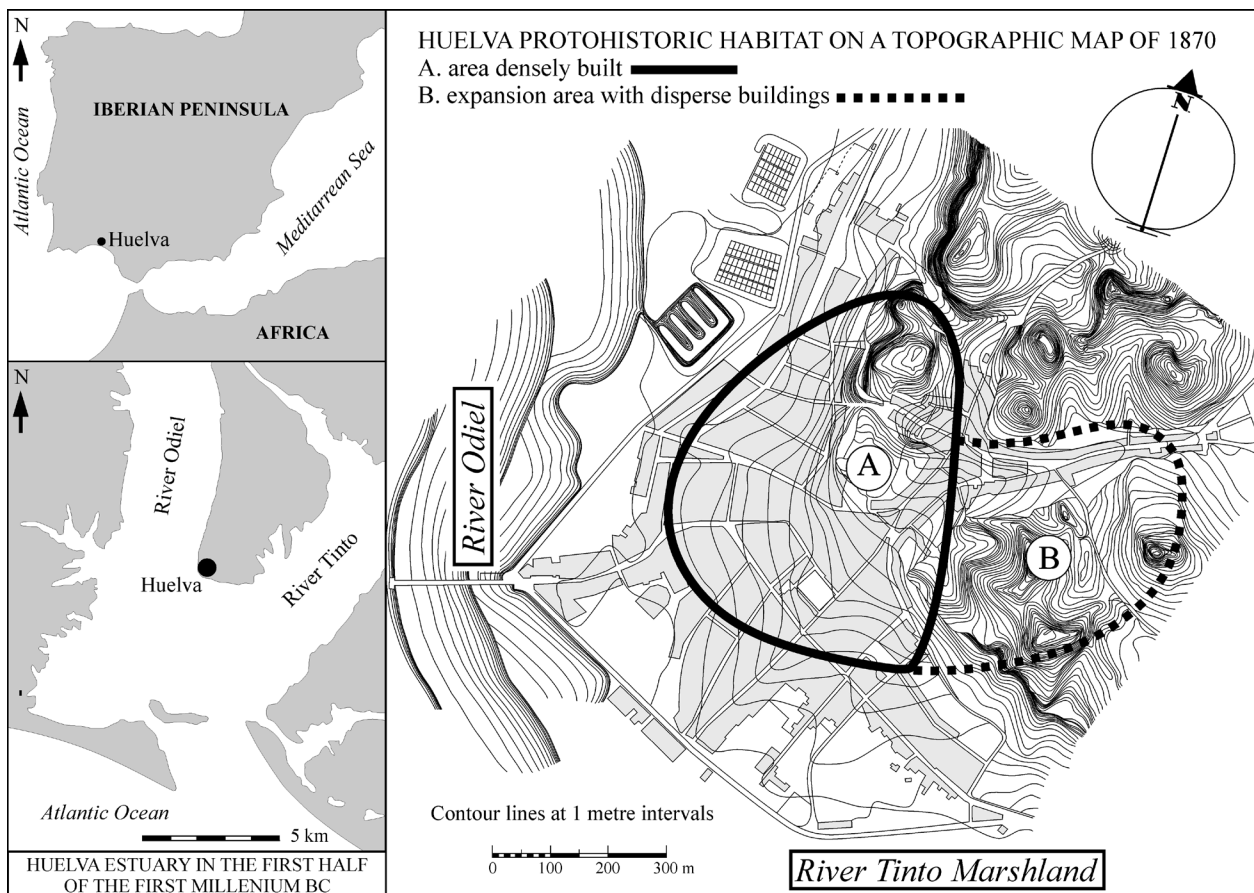


Figure 1. Huelva location and the ancient city.

and a nearby agricultural landscape was inferred as well (Sánchez Hernando, 2004). A few years later, wide trench structures at the La Orden-Seminario site, three kilometres north of the old settlement, were interpreted as vestiges of vineyards (Vera and Echevarría, 2013) (Figure 2).

Between 2009 and 2010 another excavation took place at 3 Concepción St, just 43 m away from MN/PM (Figure 2). Materials under the water table were again recovered after a careful control of the earthwork during the mechanical draining and emptying of the terrain. Some of the results of this excavation were reported at the conference *Contextualising early Colonisation* (García Fernández *et al.*, 2016). The results corresponding to the earliest stratum of human occupation were widely published later, especially those concerning the pottery (González de Canales *et al.*, 2017). In both, MN/PM and 3 Concepción St, the collection of agricultural seeds and other plant leftovers was laboriously carried out through flotation and sifting by the archaeologist and analyst Leonardo Serrano (†). Consequently, all plant samples analysed were recovered by the same researcher, following a similar procedure.

### 3. CERAMIC CHRONOLOGY

Taking several Cypriot and Levantine archaeological sites as a reference, the beginning of the deepest anthropogenic stratum under study and the Phoenician presence at MN/PM were estimated *ca.* 900 BC, although considering the second half of the 10th century BC. The most recent limit of this stratum was determined *ca.* 770 BC (González

de Canales, 2004, 242; González de Canales *et al.*, 2004, 199). In 3 Concepción St, the second half of the 10th century BC was considered as well for the oldest limit of the same stratum, though its most recent limit was slightly later than MN/PM (González de Canales *et al.*, 2017, 43–44; González de Canales and Llompart forthcoming).

We shall now explain briefly some of the reasons why a dating deferred to the end of the 9th century BC for the older Phoenician ceramics of Huelva can be rebutted, just like the attribution of part of the organic remains to a fictitious pre-Phoenician level not shown in the plots investigated. First of all, these assumptions are not often validated by the required analysis of Phoenician pottery in Eastern stratigraphies (case of Pérez-Jordà *et al.*, 2017). In other occasions, the chronology of a certain Phoenician ceramic type is downgraded to its last occurrence in a particular stratigraphy, without taking into account the possibility of intrusions from older levels (case of Núñez Calvo, 2008, 19, concerning Tyre amphora type 12). Needless to say that equally incorrect is to force the oldest possible dating as it is to assign the most recent ones to all cases. A relevant fact to be considered is that the amount of Phoenician ceramics found in the deepest anthropogenic stratum at 3 Concepción St doubled those of local tradition leaving an uncertain margin, or virtually none at all, for a conjectural pre-Phoenician phase. Furthermore, atypical fragments of Phoenician amphorae were recovered manually immediately above virgin soil (González de Canales *et al.*, 2017, 41). This does not preclude some pre-Phoenician traces to emerge in other parts

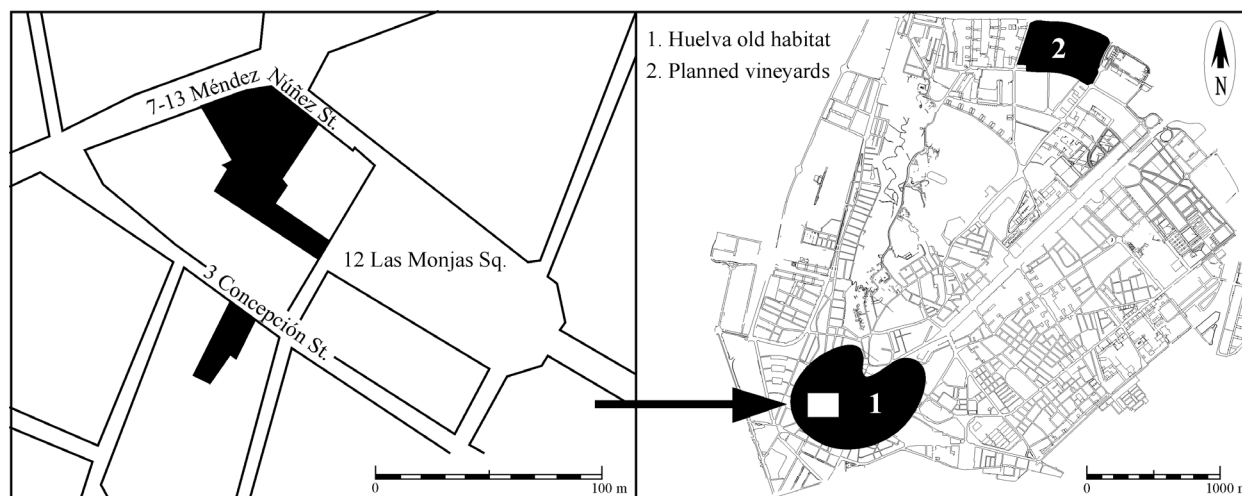


Figure 2. City plots investigated and area with planned vineyards.

of the city. Equally noteworthy is the absence in Phoenician contexts of Cádiz dated to the end of the 9th century BC (Gener Basallote *et al.*, 2012), as well as La Rebanadilla in Málaga (Sánchez Sánchez-Moreno *et al.*, 2012), and the Phoenician colony of Kition in Cyprus (Bikai, 2003), of several of the older Phoenician types found in Huelva. Some of these types could be assigned to the 10th century BC (González de Canales *et al.*, 2017, 43–47; González de Canales and Llompart forthcoming). One last consideration concerns the famous bronze hoard of the Huelva estuary dated to the 10th century cal BC (Ruiz Gálvez, 1995, 79). The pre-Phoenician ascription of this deposit (as in Pérez-Jordà *et al.*, 2017, 530–532) disregards the elbow fibulae included in the hoard, whose clear parallels in Cyprus and the Levant support mutual relationships despite where they might have been manufactured. Ayelet Gilboa, an excellent specialist in Iron Age Phoenician Pottery, after considering that a *Tipo Huelva* fibula and an 'Atlantic' *obelos* in the Amahus tomb 523 can be ascribed to Phoenician Ir1/2 transitional horizon (which she dates to the second half of the 10th BC), suggests that Huelva's potentially earliest Phoenician pottery, from a typological standpoint, may belong to this horizon, although this could not be substantiated (Gilboa, 2013, 326). It is to be noted that such assessment was prior to the finds of 3 Concepción St and most radiocarbon dates herein considered.

#### 4. RADIOCARBON DATING

Concerning C14 determinations by Accelerator Mass Spectrometry (AMS), Groningen University reported three dates of cattle bones from MN/PM. The earliest one (GrN-29512) refers mainly to the 10th century cal BC and the most recent (GrN-29511 and GrN-29513) to the 9th century cal BC (Nijboer and van der Plicht, 2006; Pérez-Jordà *et al.*, 2017). Pérez-Jordà *et al.* mention a fourth determination, GrN-29514, that does not exist for Huelva in the Nijboer paper but refers to an average based on the 3 radiocarbon dates with a genuinely assigned GrN-number. Other two AMS dates from MN/PM were carried out by the Klaus-Tschira-Archäometrie-Zentrum (Heidelberg, Germany) on Asiatic elephant (AD/J 10.397) and hippopotamus (AD/J 36A/11) ivories related to Phoenician trade. Both refer to the 10th century cal BC (Marzoli *et al.*, 2016, Table 7), which must have been the time when the ivories arrived in Huelva, except that an unlikely long period would have elapsed, in both cases, since the animals died before being transported. As to the archaeobotanical remains sent to the Archaeobotany Lab of the Instituto de Historia (CSIC, Madrid, Spain), seed samples of grapevine from MN/PM (Beta 295783) and 3 Concepción St (Beta 406164) and one of *Hordeum vulgare* from 3 Concepción St (Beta 429022) were dated to the transition period between 9th and 8th century cal BC, while another of *Hordeum vulgare*

Site	Material	Lab number	14C age BP	cal BC 1σ	cal BC 2σ
1. MN/PM	Cattle bone	GrN-29511	2745±25	909–843	934–826
2. MN/PM	Cattle bone	GrN-29512	2775±25	943–895	996–845
3. MN/PM	Cattle bone	GrN-29513	2740±25	884–843	930–823
4. MN/PM	Elephant ivory	AD/J 10.397	2804 ± 25	994–921	1024–897
5. MN/PM	Hippopot. Ivory	AD/J 36A/11	2791 ± 25	975–908	1008–851
6. MN/PM	<i>Hordeum vulgare</i>	Beta 406165	2800 ± 30	994–915	1025–848
7. MN/PM	<i>Vitis vinifera</i>	Beta 295783	2640 ± 30	820–797	891–787
8. MN/PM	<i>Vitis vinifera</i>	CNA-3773	2795 ± 30	980–909	1015–889
9. Concepción	<i>Vitis vinifera</i>	Beta 406164	2590 ± 30	803–780	819–595
10. Concepción	<i>Hordeum vulgare</i>	Beta 429022	2630 ± 30	815–795	837–779

Table 1. 1–3: Nijboer *et alii* 2006; Pérez-Jordà *et alii* 2017, Table 2, cal IntCal13. 4–5: Marzoli *et alii* 2016, 122 and Table 7, cal IntCal13 and SwissCal3. 6–7 and 9–10: Pérez-Jordà *et alii* 2017, Table 2, cal. IntCal13. 8: in this paper, we appreciate A. Mederos's calibration using cal IntCal13 version 7.0.4.



from MN/PM (Beta 406165) was dated to the 10th century cal BC (Pérez-Jordà *et al.*, 2017, Table 2). All of these radiocarbon dates fall within the above mentioned broad chronological frame defined by pottery, although Groningen and Klaus-Tschira-Archäometrie-Zentrum only designate the upper part. The present paper compiles a new AMS dating of grape seeds from MN/PM (CNA-3773), the analysis of which was carried out by the Centro Nacional de Aceleradores (CNA, Seville, Spain). The result yielded is older than the previous ones of *Vitis vinifera* (Beta 295783 and Beta 406164), close to the oldest of cattle bones (GrN-29512) and very close to the Asiatic ivories (AD/J 10.397 and AD/J 36A/11) and *Hordeum vulgare* of MN/PM (Beta 406165) determining 10th century cal BC (Table 1). Regarding this latter determination we appreciate Rafael Ocete's information.

5. PHOENICIANS AND GRAPE CULTIVATION AT LA ORDEN-SEMINARIO

As a result, a late first presence of the Phoenicians in Huelva towards the end of 9th century is not only contested by pottery but also by AMS dating. By the same token, a similar dating for the beginning of the grape cultivation at La Orden-Seminario (see above) is discarded. Also unjustified is a supposed pre-Phoenician phase defined by bi-conical vessels and carinated open shapes at this same agricultural site (Vega and Echevarría, 2013, 98; Beltrán Pinzón and Díaz Rodríguez, 2016, fig. 5.1-2). It is to be remarked that similar vessels are associated with Phoenician ceramics in MN/PM and 3 Concepción St (Figure 3).

Significantly, at La Orden-Seminario was documented a very wide ridged-neck Phoenician jug (Beltrán Pinzón and Díaz Rodríguez, 2016, fig.

6.3) (Figure 4), close to specimens of the Cyprus Kouklia horizon (Bikai, 1987, examples in pls. IV-VI) dated from *ca.* 1050 to 850? BC (Bikai, 1987, 69). Besides the Phoenician jug, amber and cornaline beads appeared (Beltrán Pinzón and Díaz Rodríguez, 2016, fig. 6.1-2). Another interesting find at La Orden-Seminario is a *brocca askoide* with simple circles printed on the handle. This design is dated between the 10th and 9th centuries BC in the Castello di Lipari (Botto, 2011, 42), that is to say, not earlier than the oldest Phoenician vessels found at Huelva.

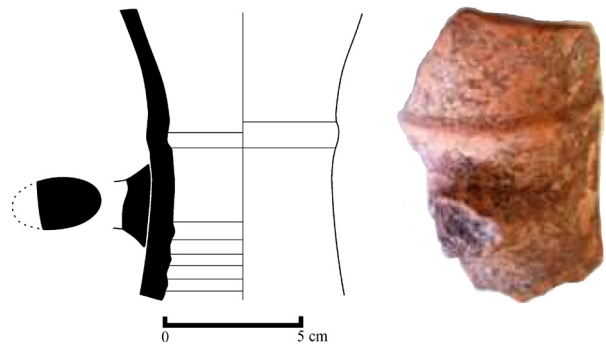


Figure 4. La Orden Seminario site. Phoenician jug (after Beltrán Pinzón and Díaz Rodríguez 2016, fig. 6.3).

CONCLUSION

While new research does not favour any different interpretations, current archaeological finds and radiocarbon dating establish that grape cultivation was introduced in the Iberian Peninsula by the Phoenicians, preferably in the second half of the 10th century BC. In this regard, coincidence between Phoenician pottery and radiocarbon chronologies in Huelva's first anthropogenic stratum must be emphasized, as well as the same 10th century cal BC dating obtained by four

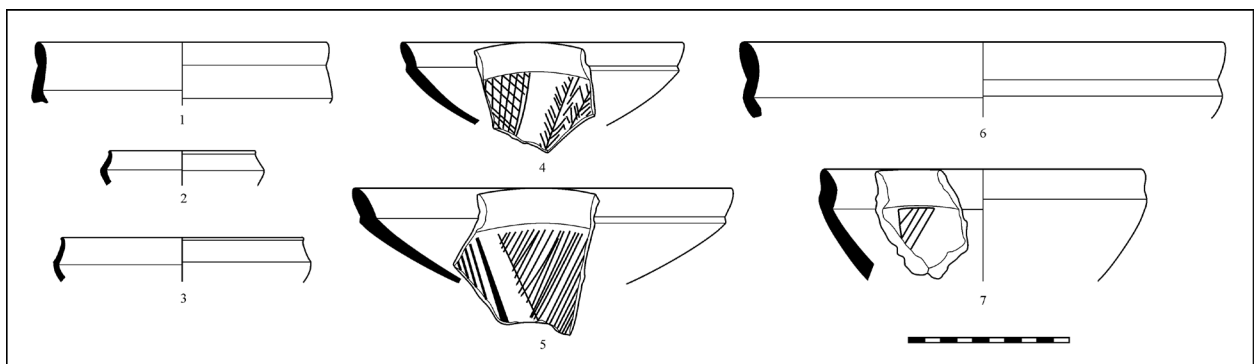


Figure 3. Autochthonous bi-conical and open carinated open shapes. 1 and 6: 3 Concepción St. 2-5 and 7: MN/PM (after González de Canales 2018, fig. 6).

separate labs on different kinds of samples (*Vitis vinifera* and *Hordeum vulgare* seeds, cattle bones and Asiatic ivories).

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