



Publikationen des Deutschen Archäologischen Instituts

Dirk Blaschta, Alfredo Mederos Martín, Saoussanne Yahia, Mohamed El Mhassani, Carlos P. Odriozola Lloret, José Ángel Garrido Cordero, José María Martínez-Blanes

The Phoenician-Punic Necropolises Djebila and Aïn Dalia Kebira (Tangier Region, Morocco)

Madridener Mitteilungen Bd. 65 (2024) 152-199

<https://doi.org/10.34780/e163-u166>

Herausgebende Institution / Publisher:
Deutsches Archäologisches Institut

Copyright (Digital Edition) © 2024 Deutsches Archäologisches Institut
Deutsches Archäologisches Institut, Zentrale, Podbielskiallee 69–71, 14195 Berlin, Tel: +49 30 187711-0
Email: info@dainst.de | Web: <https://www.dainst.org>

Nutzungsbedingungen:

Mit dem Herunterladen erkennen Sie die [Nutzungsbedingungen](#) von iDAI.publications an. Sofern in dem Dokument nichts anderes ausdrücklich vermerkt ist, gelten folgende Nutzungsbedingungen: Die Nutzung der Inhalte ist ausschließlich privaten Nutzerinnen / Nutzern für den eigenen wissenschaftlichen und sonstigen privaten Gebrauch gestattet. Sämtliche Texte, Bilder und sonstige Inhalte in diesem Dokument unterliegen dem Schutz des Urheberrechts gemäß dem Urheberrechtsgesetz der Bundesrepublik Deutschland. Die Inhalte können von Ihnen nur dann genutzt und vervielfältigt werden, wenn Ihnen dies im Einzelfall durch den Rechteinhaber oder die Schrankenregelungen des Urheberrechts gestattet ist. Jede Art der Nutzung zu gewerblichen Zwecken ist untersagt. Zu den Möglichkeiten einer Lizenzierung von Nutzungsrechten wenden Sie sich bitte direkt an die verantwortlichen Herausgeber*innen der jeweiligen Publikationsorgane oder an die Online-Redaktion des Deutschen Archäologischen Instituts (info@dainst.de). Etwaige davon abweichende Lizenzbedingungen sind im Abbildungsnachweis vermerkt.

Terms of use:

By downloading you accept the [terms of use](#) of iDAI.publications. Unless otherwise stated in the document, the following terms of use are applicable: All materials including texts, articles, images and other content contained in this document are subject to the German copyright. The contents are for personal use only and may only be reproduced or made accessible to third parties if you have gained permission from the copyright owner. Any form of commercial use is expressly prohibited. When seeking the granting of licenses of use or permission to reproduce any kind of material please contact the responsible editors of the publica-

tions or contact the Deutsches Archäologisches Institut (info@dainst.de). Any deviating terms of use are indicated in the credits.



ABSTRACT

The Phoenician-Punic Necropolises Djebila and Aïn Dalia Kebira (Tangier Region, Morocco)

Dirk Blaschta – Alfredo Mederos Martín – Saoussane Yahia – Mohamed El Mhassani – Carlos P. Odriozola – José Ángel Garrido Cordero – José María Martínez-Blanes

The cemeteries of Djebila (DJ) and Aïn Dalia Kebira (AD) are the largest Phoenician-Punic necropolises in Morocco. Although they are very similar in appearance, there are slight differences between them. Michel Ponsich, the excavator, only mentioned inhumation burials for both cemeteries, but for the Djebila necropolis it is likely that cremation burials also existed, which were probably not recognised during his excavation. The burial customs are similar to those of the Iberian Peninsula and there appear to have been close links between the two regions. The main occupation period of both necropolises was very probably in the 6th century BCE. The finds show many foreign Mediterranean elements, although the question of whether objects were perhaps also made in the region north of the Atlas Mountains by specialized craftsmen cannot be answered at this stage. The processing and analysis of the finds has not yet been completed, so this should be regarded as a preliminary report.

Pottery is present in only 30 % of the tombs at Aïn Dalia Kebira and Djebila. Of particular note is the presence of handmade vessels »à chardon« from the end of the 8th and mainly the 7th century BCE, as well as two small Cruz del Negro type urns, one from each necropolis, and very few fragments of red-slipped Phoenician pottery, including the lower base of a possible dipper jug, and part of the body and the start of the neck of a probable oinochoe with a trilobed rim.

The project to re-examine the Phoenician-Punic cemeteries of Djebila and Aïn Dalia Kebira also involves the integration of scientific analyses and restoration works. By analysing some of the amber finds from the Djebila cemetery, Baltic amber from the Early Iron Age was identified for the first time in the area north of the Atlas Mountains. The restoration works revealed many decorations on objects, remains of textile fibre, and certain types of metalworking skills.

KEYWORDS

Early Iron Age, Northern Africa, Morocco, Phoenicians, necropolis

The Phoenician-Punic Necropolises Djebila and Aïn Dalia Kebira (Tangier Region, Morocco)

Part I

Introduction

¹ Thanks to the kind permission of the Fondation Nationale des Musées in Morocco (FNM), it was possible to review, redescribe, and photograph the finds from the necropolises of Djebila and Aïn Dalia Kebira in the Kasbah Museum in Tangier. A campaign was carried out in the Autumn of 2023, with work continuing in spring 2024.

² The aim of this article is to date the necropolises on the basis of the ceramic finds (see the report on the ceramic finds by Alfredo Mederos) and to examine the burials and finds for anomalies that may shed new light on both necropolises. It should be noted in advance that a reassessment of the find material also revealed amber, identified as Baltic amber based on the analyses by Carlos Odriozola (see the report at the end of this article). In Spring 2024, Alexandra Jeberien (HTW Berlin) and Ulrike Uhlig (HTW Berlin) began restoration work on the finds from both cemeteries. Initial results are presented in this report. The photographs of the objects were taken by María Latova (German Archaeological Institute, Madrid Department).

The Necropolises

³ Two larger necropolises (Djebila with 107 graves and Aïn Dalia Kebira with 84 graves) are known in the Tangier region, which date to the Phoenician-Punic period. Michel Ponsich, the excavator of these necropolises, initially dated these two sites to the 8th – 5th century BCE¹, but later narrowed the period down to the 7th – 5th century BCE². The boundary between the Phoenician and Punic periods in the western Mediterranean is generally placed around the middle of the 6th century BCE³. This means that influences

¹ Ponsich 1967, 24.

² Ponsich 1970, 163.

³ Aubet 1996, 12. 49.



Fig. 1: Reconstructed ancient coastline in the Tangier area with the necropolises of Djebila and Ain Dalia Kebira.

1

from both the Levant and Carthage are conceivable. As these are the only major, well-studied necropolises of this type north of the Atlas Mountains, it seemed worthwhile to take a closer look at this material. Unfortunately, there is no reliable evidence of settlements in the vicinity of the cemeteries, so that the finds from these necropolises cannot be related to settlement areas. The area surrounding the cemeteries is now heavily affected by urbanisation; the corresponding settlements have presumably now been built over. What is special about the necropolises of Djebila and Ain Dalia Kebira are the individuals buried in a contracted position, which is atypical for Phoenician-Punic burials. This raises the question of whether this was an indigenous (conservative) population that was able to obtain the numerous Phoenician-Punic materials found in these necropolises through exchange with the Phoenician world, or whether a relatively strong migration of people from other regions of the Mediterranean or at least the strong spread of new ideas may have had a strong influence on the living environment of the people north of the Atlas⁴.

⁴ There are differences in geographical location between the Djebila and Ain Dalia Kebira necropolises. Djebila is with a distance of 800 m from the Atlantic very near to the coast, while Ain Dalia Kebira is with 12 km from the coast further away. It can be assumed that in Phoenician-Punic times the Atlantic coast had a different course

and that in ancient times the site of Aïn Dalia Kebira was situated at the eastern end of a bay extending far inland (Fig. 1). Today there is a freshwater spring directly south of the necropolis, which probably also existed in ancient times.

Methodology

5 In order to achieve the above objectives, it was necessary to describe the features and finds from the two necropolises of Djebila and Aïn Dalia Kebira as precisely as possible. Therefore, the descriptions of the features and finds from Ponsich's publication (Ponsich 1967) were initially processed in trivial Excel lists in order to develop new cross-references and content. A database will be set up at a later date, as work on the finds has not yet been completed and changes may still occur. This report is a first draft that is intended to serve as a preliminary report.

6 In order to go beyond previous attempts at interpretation, the graves were divided into two age groups (adult and children) based on the size of the grave, where possible. In some cases, Ponsich had described children's burials and even concluded that they were children's graves in the absence of skeletal remains and correspondingly small grave sizes (e. g., DJ 64 and DJ 65 in Djebila)⁵. What is striking in Ponsich's descriptions is that a certain grave size is not exceeded in child burials. Our methodology is therefore based on the assumption that only inhumation burials existed, and cremations were not carried out. The same approach was already used in another work by Emanuele Papi, who also used groupings into adults and children for the analysis of the Djebila and Aïn Dalia Kebira cemeteries when describing Iron Age burials in Morocco⁶. During our further analysis of the necropolises, however, we found that many graves lacked skeletal remains and that cremation burials cannot be excluded with absolute certainty. Nevertheless, in many cases the results are conclusive and plausible enough that the fundamental correctness and feasibility of this method cannot be doubted. In the case that cremations have been carried out, probably larger graves tended to be used for cremations of adult individuals and, conversely, smaller ones for children. Unfortunately, Ponsich never made gender-specific analyses on the human skeletal remains, so that the simple distinction between adults and children is the only way to derive social interpretations from the necropolises of Djebila and Aïn Dalia Kebira.

The Burials

Djebila

7 The necropolis of Djebila comprises 107 graves. A total of 73 adult graves and 31 child graves can be defined on the basis of the grave sizes (ratio 2.35 : 1). Information on the lengths of the graves is missing for three graves, so that an age-specific classification is not possible. The boundary between graves of the adult and child groups is 0.9 m (grave length) in the descriptions by Ponsich in the case of Djebila. All graves which exceed 0.9 m were never described by Ponsich as child burials.

8 They are primarily single graves, and multiple burials are documented in only six tombs. The multiple burials (DJ 20, DJ 59, DJ 68) do not exceed three individuals, though in these instances the relationship between the individuals within the grave is unclear. In grave DJ 20 and DJ 68, it is unclear whether the individuals lay on top of each other and should be considered chronologically separate or whether a simultaneous burial was carried out. In DJ 59, the skeletons are definitely no longer in anatomical association. This indicates a secondary burial (Fig. 3 a). Three graves show evidence of double burials (DJ 31, DJ 63, DJ 107). In these, the skeletal remains can only be inter-

5 Ponsich 1967, 194–197.

6 Papi 2019, 288 fig. 9.3.

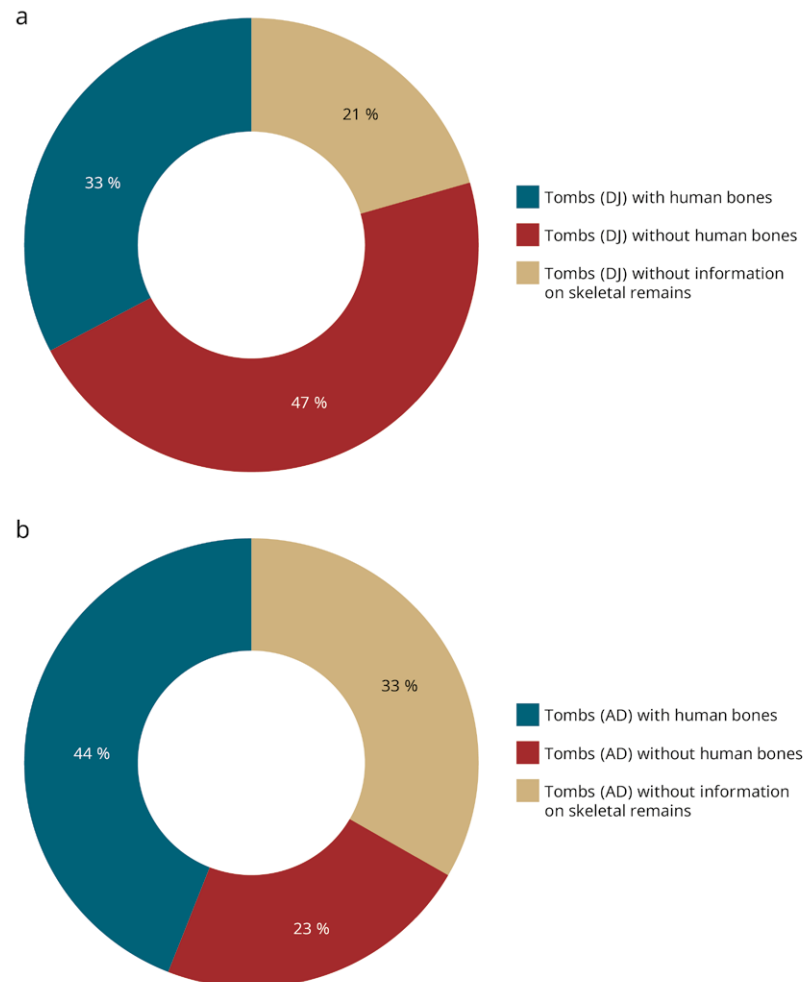


Fig. 2: Proportion of skeletal remains in the total number of graves: a. Djebila; b. Ain Dalhia Kebira.

2

preted for DJ 31. There, the two individuals lie on top of each other, either due to a lack of space or because the two burials were chronologically consecutive events.

9 If the skeletons are present, Ponsich only documented burials with skeletons in a contracted position. The occurrence of cremation burials or those in an extended position was not mentioned anywhere and therefore appears to be completely absent. The graves are all described as »tombe à inhumation« or »tombe d'enfant à inhumation«. In total, however, only 14 graves with contracted position and 21 other graves with skeletal remains can be found in Djebila. In almost half of all graves (50 graves; 47 % of all graves) there were apparently no skeletal remains (Fig. 2 a). In addition, no further information was given about the skeletons in many published descriptions (22 graves, 21 % of all graves), so it remains unclear whether there were actually human bones present. Unfortunately, it is not possible to categorise these graves as graves without skeletal remains, as in some cases the photographs show that human skeletons must be present (DJ 17, DJ 69). It is striking that the skeletons of some of the contracted burials (if the drawings published by Ponsich are interpreted as a real image of the archaeological findings) are not complete. Parts of the body are missing, especially the upper part of the body (Fig. 3 b). This gives the impression that the treatment of the deceased was much more complex than previously assumed. The custom of cremation burial cannot be excluded either as in Djebila many, especially larger, bulbous vessels (including those of the »vase a chardon« type) occur in graves without skeletal remains and were presumably used as urns (DJ 26, DJ 32, DJ 41, DJ 55, DJ 64, DJ 65, DJ 66, DJ 67,

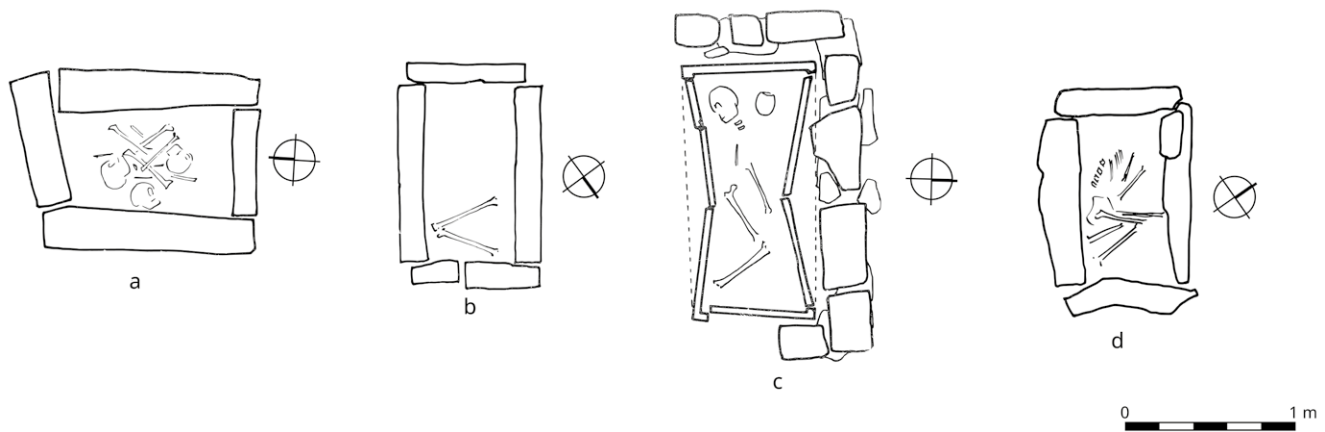


Fig. 3: Special skeletal finds in Djebila and Ain Dalia Kebira. a. DJ 59; b. DJ 81; c. AD 5; d. AD 69.

DJ 82, DJ 85). The ceramic type ›vase a chardon‹ could serve as both an urn and an offering vessel (see the part on pottery by Alfredo Mederos). In the Tartessian cemetery of *Setefilla* these vessels were mostly used as urns⁷. A fragment of a *Cruz del Negro* urn from grave DJ 104, in which presumably no skeletal material was found, could be an indication of a cremation burial, as Cruz del Negro amphorae were generally used as urns. It is therefore possible that cremations were not recognised during the excavation. In comparison, the proportion of cremations in the Jardín cemetery is 56 % of the total⁸. This roughly corresponds to the graves without skeletal remains in Djebila. It is also interesting to note that in Jardín cremations were not necessarily only found in small graves, but also in those that would have been large enough for inhumations⁹. However, the observation that the existing finds from Djebila show no traces of burning speaks against the existence of cremation graves. But, it should also be noted that in the Jardín cemetery, the metal objects in the cremation graves also show no traces of burning, i. e., they were not cremated together with the deceased¹⁰.

¹⁰ The burials in a contracted position are not necessarily limited to the region north of the Atlas, but are also widespread on the Iberian Peninsula and probably of indigenous tradition. We have several cases of individuals in a contracted position on the Iberian Peninsula from the 7th and 6th centuries BCE in the Tartessian necropolis of *La Angorrilla* (Seville)¹¹. George Bonsor (1899) excavated three burials in a contracted position in *El Acebuchal* (Seville), which also are linked to the Tartessian region¹². Findings from the Iberian Peninsula also point to a ritual with the cranium. Likewise, in *El Acebuchal*, a skull was apparently deliberately smashed in an ossuary¹³. In four cremation graves in *El Acebuchal*, the pyre was simply placed on the ground and the body was burnt; the ashes were then covered with one or more layers of amphora sherds, so as not to mix the ashes with the earth of the burial mound¹⁴. For Djebila (DJ 66), Ponsich also mentioned several amphora sherds which, in comparison with *El Acebuchal*, could also have served as a cover for a cremation burial. In grave DJ 66, no

⁷ Krueger 2022, 45–46.

⁸ Schubart – Maass-Lindemann 2007, 272.

⁹ Schubart – Maass-Lindemann 2007, 273.

¹⁰ Schubart – Maass-Lindemann 2007, Tombs: 70 (pl. 9.7 no. 197); 71 (pl. 9.7 nos. 202. 203); 77 (pl. 9.9 nos. 239–241); 80 (pl. 9.9 nos. 253. 254); 100 (pl. 9.19 no. 335).

¹¹ Fernández Flores u. a. 2014, Seiten? Tombs: 14, 15, 17, 20–23, 27–32, 34, 37, 38, 41–46, 49, 50, 54, 58–68. There are also burials in a supine decubitus position, such as tombs 18, 19, 24, 25, 33, 35, 36, 39, 40, 47, 48, 55, 57, and in a mixed supine and lateral position in tombs 14, 26, 53, and a prone position in tombs 51, 56.

¹² Bonsor 1899, 288: contracted position in tombs 2, 5, 8.

¹³ Bonsor 1899, 159.

¹⁴ Bonsor 1899, 153.

skeletal remains were found. All of this underlines the close connection between both regions, the region north of the Atlas and the Iberian Peninsula.

Aïn Dalia Kebira

¹¹ The Aïn Dalia Kebira cemetery consisted of 84 graves, of which 47 graves belonged to the adult group and 30 to the child group (ratio 1.6 : 1). Aïn Dalia Kebira thus had more graves of children than the necropolis of Djebila. It is not possible to categorise seven graves in Aïn Dalia Kebira into age groups, as the descriptions are missing. As in Djebila, the categorisation into age groups is based on the length of the tombs. With one exception, the excavator Ponsich only describes child burials for graves up to a length of 0.95 metres. This corresponds somewhat with the findings in Djebila. Only in one case were human remains found in a grave with a length of 1.20 m described as a child's burial (AD 59). This is therefore a special case that does not significantly affect the basic categorisation into age groups made here. In another case, a juvenile individual was mentioned in a grave with a length of 0.90 metres.

¹² Most of the burials in Aïn Dalia Kebira are single graves. As in Djebila, multiple burials can be regarded as exceptions and have been recorded in only six graves. A maximum of three individuals were placed together in one grave in multiple burials (AD 42, AD 47, AD 58), in the other three cases two individuals each (AD 6, AD 28, AD 55). In the burials with three individuals, the skeletons are usually at different levels. This may be due to a lack of space or chronological sequences. In the burials with two individuals, different variants appear to exist: In AD 6, an older burial was moved to one side. In AD 28, the individuals are positioned face to face and were probably buried at the same time. In AD 55, the burials took place one after the other. In this case, the individuals were lying on top of each other and were separated by stone slabs.

¹³ As in Djebila, the well-preserved skeletal remains here are exclusively contracted burials. An almost extended position can only be determined for grave AD 5 (Fig. 3 c). There, the individual lies in a stone sarcophagus with the head to the west (a stringent west-east orientation is also known from the Jardín cemetery on the Iberian Peninsula)¹⁵. Stone sarcophagi are only known from the Aïn Dalia Kebira necropolis and only occur twice there. As in Djebila, there is no trace of cremation burials. The position of the skeleton could still be determined in only 25 graves. In the remaining graves, either no bones were mentioned by Ponsich (28 graves), none were found (19 graves) or there were bones present (seven graves), or the bones were dislocated in the grave (five graves). In Aïn Dalia Kebira, no human skeletons can be observed in only about 23 % of the graves (Fig. 2 b). As in Djebila, it is not certain whether the graves without information on the skeletal remains actually contained any human skeletons. In Aïn Dalia Kebira there is no certain evidence that vessels were found in graves without skeletal remains. Due to the rather small number of graves without skeletal remains compared to Djebila and the presumed absence of vessels in graves without skeletal remains, the custom of cremation burials in Aïn Dalia Kebira is rather unlikely. The discovery of a Cruz del Negro amphora at the feet of the deceased individual in tomb AD 60 also suggests that this type of vessel was used as an offering vessel at Aïn Dalia Kebira. The same can be assumed for some of the ›à chardon‹ vessels found in three graves together with skeletal remains (AD 26, AD 28, AD 32).

¹⁴ As in Djebila, there are graves in Aïn Dalia Kebira which indicate that, in some cases, skeletal remains were deliberately removed. In AD 10, for example, the head is missing from the drawing published by Ponsich, and Ponsich explicitly notes the absence of the head in grave AD 69 (Fig. 3 d). Here, too, the burial customs appear to have been varied and less regulated.

¹⁵ Schubart – Maass-Lindemann 2007, 272.



Fig. 4: Gold finds (according to Ponsich).

The Finds

Introduction

¹⁵ Ponsich only provides information on the position of finds in the grave for a few objects. Neither the descriptions nor the drawings provide any substantial information. The only exceptions to this are a few ceramic and ostrich egg vessels, bracelets as well as iron tools (sickles, knives). The remaining material is described by Ponsich mainly in the form of ensemble lists, from which no exact find position can be determined. This is particularly unfortunate, as the exact location of the jewellery objects in the grave could have provided information about how they were worn.

¹⁶ In the necropolis of Djebila, 39 graves (36 %) have no finds. In 18 graves (17 %) there are only vessels and no other grave goods. In Aïn Dalia Kebira, 32 graves (38 %) contain no grave goods. There are no graves in Aïn Dalia Kebira that contain only pottery and no other grave goods. About one third of the graves in both necropolises can be described as containing no grave goods.

Gold

¹⁷ Gold finds are very rare in Djebila and Aïn Dalia Kebira (Fig. 4). This certainly distinguishes both cemeteries from the elaborate burial complexes with stone burial chambers near the settlement of *Cotta* (Grotte d'Hercule)¹⁶ at Ras Achakkar or the newly discovered burial complexes near *Lixus*¹⁷, where gold finds were more frequent. The latter hardly differ from the two cemeteries near Tangier in terms of their funerary architecture and burial customs. The only interesting observation here is that the Djebila and Aïn Dalia Kebira cemeteries certainly do not represent the upper end of a social differentiation, but rather necropolises of a ›middle class‹.

¹⁸ The gold found in both cemeteries is body jewellery from the head area (ear and nose rings). In Djebila, the gold jewellery comes in two cases from graves of the adult group (Fig. 4, DJ 63; DJ 99) and in one case from a grave of the child group (Fig. 4, DJ 65). In Aïn Dalia Kebira, two gold earrings (Fig. 4: AD 10) were found in one grave and a gold nose- or earring (Fig. 4, AD 4) in another. Both graves belong to the adult group. The total gold weight for both necropolises is unlikely to have exceeded 6 g.

¹⁹ Gold is therefore only detectable in the Djebila cemetery as the grave goods of a child (DJ 65). The proportion of precious metals (including silver) in this grave is generally relatively high, so that this grave can certainly be categorised as something special. In addition, this grave was located together with a conspicuous number of other children's graves on the crest of the hill, which raises the question of special burial areas for children, similar to a Tophet¹⁸. The lower proportion of children's burials in Djebila

¹⁶ Koehler 1931, 18–20; Ponsich 1967, 30–35.

¹⁷ El Khayari 2007, 146 f.

¹⁸ Papi 2019, 287–289.

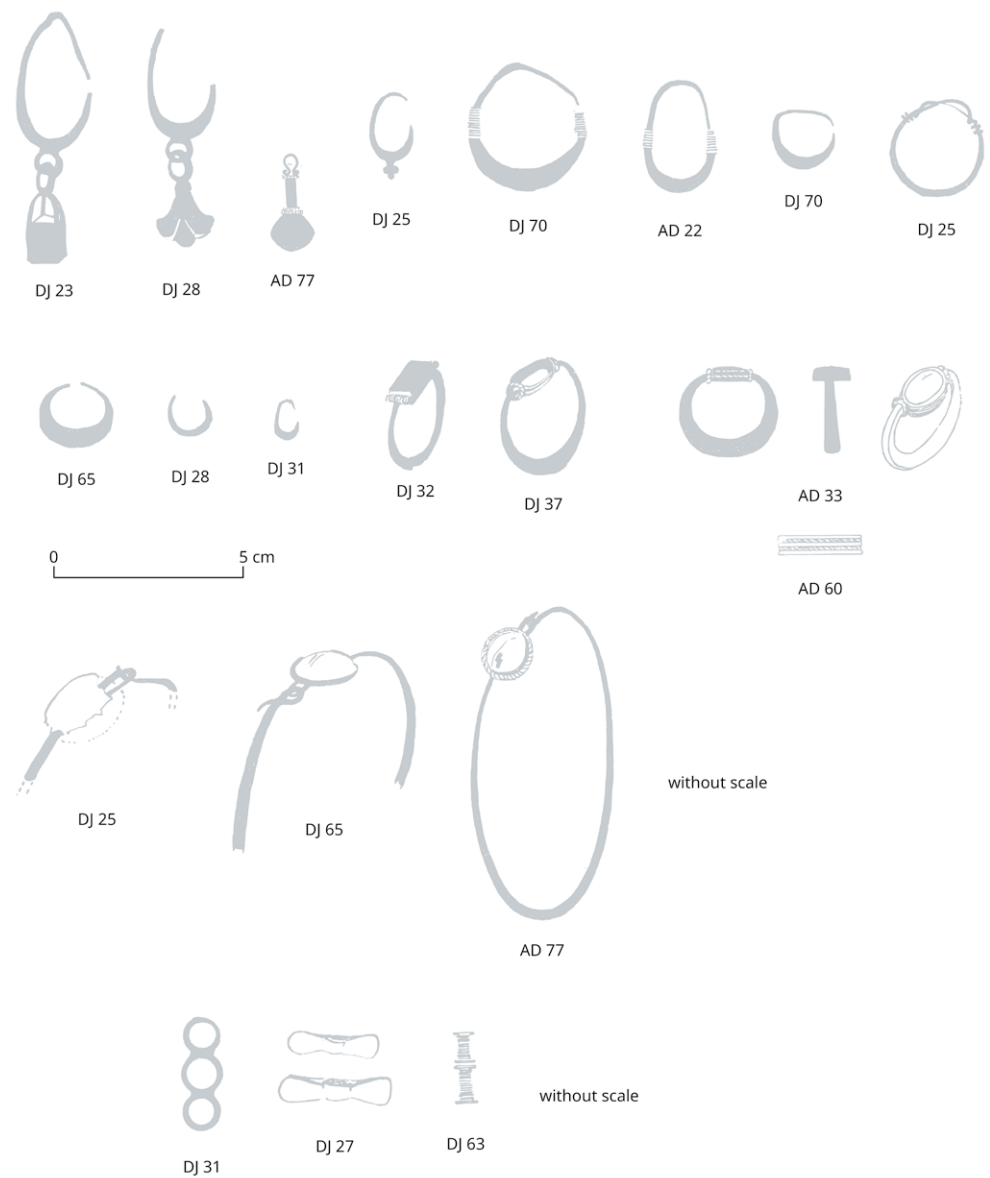


Fig. 5: Silver finds (according to Ponsich).

5

compared to Aïn Dalia Kebira would also speak in favour of special burial districts for children in Djebila.

Silver

20 Body jewellery made of silver is far more numerous, again mainly from regions of the head, but silver jewellery was also worn in the neck area in the form of elaborately designed necklaces and some rings were worn on the hands as finger rings (Fig. 5).

21 The most common type are silver earrings with a pendant in the form of a basket (Fig. 5, DJ 23). Earrings of this type are widespread in the Mediterranean region and are particularly common in the necropolises of Carthage, where they date from the 7th–4th century BCE¹⁹ but also appear on the Iberian Peninsula²⁰. The earrings are mostly found in pairs in the tombs of Djebila and Aïn Dalia Kebira, which ultimately also speaks in favour of their use as earrings. Only in some cases (AD 22, AD 40) has this type been found three times in one tomb, possibly indicating its use in the form of necklaces, as

19 Quillard 1979, tab. I.

20 Fernández Flores u. a. 2014, 205 tomb 46.



Fig. 6: Silver earrings with box pendant in various sizes.

6

can also be assumed for Carthage²¹. This type of earring is generally typical of tombs from the adult group and is less frequently found in children's graves. The sizes of the earrings can vary greatly. The weights of these earrings are between 2.5 and 8 g for the complete specimens. The differences in weight are therefore also reflected in the different proportions of this type (Fig. 6). A certain type of earring, a basket pendant with small spheres placed in the basket (Fig. 6, left), is found one-to-one in the Tartessian area, in the necropolis of La Angorrilla²². This raises the question of whether the Phoenician city of Gadir (Cadiz) was the place of manufacture of these earrings²³, from where they were traded both to the Guadalquivir valley and to Northwest Africa. However, it is also quite possible that the earrings, like other silver jewelry, were made by local craftsmen²⁴.

²² Further earrings of different shapes can be cited, which are documented for both the adults and children (Fig. 5, DJ 28; AD 77; DJ 25; DJ 70; AD 22; DJ 70; DJ 25; DJ 65).

²³ Furthermore, Ponsich also described nose rings (Fig. 5, DJ 28; DJ 31). Due to the lack of documentation, it is not possible to clarify whether this allocation was based on the original find position in the grave. The nose rings (>anneau de nez<) can occur in graves of the adults or children.

²⁴ Four finger rings (Fig. 5, DJ 32; DJ 37) come from two tombs in Djebila of the adult group and appear in pairs. One ring is a ring with a rotatable stone setting (DJ 37) and the other is a ring with a fixed rectangular plate (DJ 32). In one grave there were no skeletal remains, in the other the bones were dislocated. It is therefore not possible to determine whether the rings belonged to two individuals or just one. The finger ring with the stone setting is a typical find in the Mediterranean region as in Carthage²⁵ and is also documented on the Iberian Peninsula. A similar ring with an Egyptian scarab was found in the cemetery in Jardín. Due to the mention of a king's name, it is possible to date the ring from Jardín to around 520 BCE²⁶. The finger ring with a fixed rectangular plate is also typical of the mediterranean find spectrum²⁷. The surface of the plate has

²¹ Gauckler 1915, pl. CCV.

²² Fernández Flores u. a. 2014, 205 tomb 46.

²³ Perdigones Moreno u. a. 1990, figs. 34. 36. 37.

²⁴ de la Bandera Romero – Ferrer Albelda 2014, 432 fig. 1; 446 f.

²⁵ Gauckler 1915, pls. CXXVII. CL. CLXXXV.

²⁶ Schubart – Maass-Lindemann 2007, 328.

²⁷ Gauckler 1915, pls. CXXII. CLXVIII. CLXXXV.

Fig. 7: Silver finger ring from a tomb in Djebila (DJ 32) before restoration (a) and after restoration (b), with the depiction of a winged ibex.



7

probably been heavily cleaned by Ponsich in search of an inscription (Fig. 7 a), because it is typical of this type of ring. Our restoration work in 2024 revealed an engraving of a winged ibex (Fig. 7 a). It would be a separate task to determine the origin of the ring. Metal analysis is an important key for this and shall be carried out in the future. The image of an ibex is typical of the Babylonian-Persian region and probably linked to a lunar deity²⁸. A completely identical type of ring, although made of gold, was discovered in the Tartessian necropolis of *La Joya* (Huelva) in tomb 5. The seal plate of this ring depicted a griffin with outstretched wings. The dating of this grave is uncertain. Based on other additional finds, this tomb at *La Joya* can be dated to around the end of the 7th century BC to the beginning of the 6th century BC²⁹.

²⁵ A ring with a similar stone setting to DJ 37 was found in one grave in Aïn Dalia Kebira (Fig. 5, AD 33). On closer examination of the find in the museum, the stone inlay proved to be amber (Fig. 8). No information on the skeletal remains is available for this grave. Two pairs of finger rings (Fig. 5, AD 60) were also discovered in two other tombs (AD 60, DJ 77). This type is a ring made of sheet silver with elaborate decoration (Fig. 9). The grave AD 60 contained only one individual, probably an adult. This would be the only evidence of a double set of finger rings for one individual. Grave DJ 77 was described by Ponsich as a burial of a child, probably because of the small grave size. Skeletal remains were not mentioned here by Ponsich, therefore the classification of a child remains uncertain.

²⁶ One necklace (DJ 25, DJ 65, AD 77) has survived from each of three child graves (Fig. 5), respectively. These pieces of jewellery thus appear to represent a typical pattern of furnishings for children. The rings could be attached to the neck by means of a hook.

²⁸ Golani 2013, fig. 15, 28; Mailland 2021, 224–226.

²⁹ Beba 2008, 81–83 fig. 44.



Fig. 8: Silver finger ring from Ain Dalhia Kebira (AD 33) with amber inlay.

8

In Djebila (DJ 65) there was a relatively large ring with a diameter of 13.5 cm and a weight of 28.5 g, which raises the question of whether this could be a piece of jewellery from a child at all. The jewellery plate of this neck ring had a hollow chamber made of sheet silver (DJ 65). The necklace from Ain Dalia Kebira (AD 77), which is also well preserved, has a setting containing an amber stone (Fig. 10). The diameter of this necklace is 8.5 cm and it weighs 10 g. The object is therefore more suitable for a child than the previous necklace.



9

Fig. 9: Silver finger ring with decoration from Djebila (DJ 77).

27 Silver components of necklaces come exclusively from graves of the adult group. One object (Fig. 5, DJ 31), composed of three interconnected rings, has a length of 2.2 cm and a weight of 0.9 g. This type is comparable to the finds from the cemeteries of Carthage³⁰. This pendant probably formed a necklace together with wing-like beads (Fig. 5, DJ 27) made of gold-plated silver (the gilding was only recognisable after the current restoration), as these two types of objects frequently appeared together. The winged beads are then present in larger quantities (about 9–10 specimens per burial). These small beads have a length of 1.7–1.8 cm and weigh about 0.3 g and are also known from Phoenician-Punic contexts on

30 Gauckler 1915, pl. CXIX.

Fig. 10: Necklace with amber inlay from a child's grave in Aïn Dalia Kebira (AD 77)



10

the Iberian Peninsula such as Villaricos³¹. Cylindrical tubular beads (Fig. 5, DJ 63) made from a spiral wire also occur more frequently in the graves. The length of these tubular beads is difficult to determine as all specimens are incomplete. We can probably assume a length of 6–10 mm and a weight of 0.3–0.5 g. In one case (DJ 63), Ponsich had interpreted this type of tubular bead as a pendant for an earring³², but this must now be regarded as a misjudgement after re-examining the finds.

Bronze

28 The most conspicuous grave goods are certainly the sometimes quite heavy and large bronze rings, which could be worn either as arm or leg rings. The rings always have open ends and the ends often overlap. In three graves from Aïn Dalia Kebira, the locations of bronze rings are documented by the published grave drawings. On the left wrist of the individual from grave AD 8 there were two bronze bracelets with a striking decoration (Fig. 11). Interesting here is the depiction of a cross, which was probably already attached when the bracelet was made and was not carved into it later. The engraving has the same structure (width and depth of the lines) as the rest of the decoration on the rings. The crosses could be a symbol associated with the goddess Astarte³³. Ponsich described a femur length of 0.37 m for the buried individual in this grave. The femur length indicates an individual with a height of approx. 1.45–1.50 m³⁴. In this case, despite the short burial length of 0.8 m, it cannot be excluded that this may have been an adult or at least a juvenile individual.

29 In grave AD 10 from Aïn Dalia Kebira there were seven bronze rings with open ends, without decoration, a diameter of approx. 7–8 cm and a weight of 14–22 g per ring (Fig. 12). According to the grave drawing published by Ponsich and his description, two of the rings were located on one of the two lower legs (presumably the right one). Due to the size of the grave, this is most probably an adult individual.

30 In grave AD 55 there were eight bronze rings, four on each lower leg of an adult individual. The rings look similar to those in grave AD 10.

31 The fundamental problem with Ponsich's publication is the lack of find drawings, especially for the bronzes. The new examination of the material revealed that

31 Astruc 1951, pl. XVI.

32 Ponsich 1967, 194.

33 Nigro 2019, 114 fig. 14.

34 Steinhagen 2013, 26–28.



a



b

Fig. 11: Two bronze arm rings from Ain Dalia Kebira (AD 8) with the depiction of a cross (possibly a symbol of the goddess Astarte) were found on the right wrist.

11

many bronze rings are decorated. The material includes rings with some very simple decorations, mostly at the ends of the rings in the form of vertical lines. In addition, there are also very elaborate bronze rings in which the ends of the rings are shaped like snake or mammal heads (Fig. 14). There are also indications of different sizes of



Fig. 12: Seven bronze rings from Ain Dalia Kebira (AD 10). Two of the rings were found on the lower leg.

12



13

Fig. 13: Decorations at the ends of bronze bracelets.

bracelets, which suggest that bronze rings were worn by both children and adults. The smallest rings, with an internal diameter of no more than 3 cm, come from grave of a child (DJ 39).

32 In addition to bracelets, the finds from both cemeteries also include a whole series of finger rings which, like the bracelets, have open ends. The finger rings are typical for graves of the adult group, with a quantity of one to three rings per grave. From one child tomb (AD 26) there are a total of six smaller rings, which Ponsich interprets as finger rings. Finger rings were made either from a simple bronze wire or a thin sheet of bronze. Decorations on the bronze finger rings are rarely recognisable in the find material from Djebila and Ain Dalia Kebira.

33 Ponsich defines some smaller bronze rings as nose rings, for example in the tombs of children AD 23 and DJ 35.

34 Bronze necklaces are rare and only found once in each cemetery. The necklace from DJ 31 (adult group) has a diameter of 14.5 cm and a weight of 17.9 g and is made of 3 mm thick bronze wire. The ring could be fastened with hooks at the ends of the ring. Another bronze necklace comes from AD 26 (child group) and is almost identical to the DJ 31 example. The ring here also has a diameter of 14.5 cm, but a

weight of 27.3 g. The size of the ring also raises the question of whether the ring was actually made for a child.

35 The double-shafted pins (Fig. 15) described by Ponsich as »épingles à cheveux de bronze«³⁵ (bronze hairpins) with heads bent twice into loops occur in both Djebila and Aïn Dalia Kebira only in graves of adults (DJ 51, DJ 59, AD 34, AD 6) and were found in pairs in two single burials (DJ 51, AD 34), but only once as a single find in a double burial (AD 6). In grave DJ 59 several individuals are buried, so that there are uncertainties regarding the paired occurrence of the needles for one individual.

36 Length measurements of the pins were not given by Ponsich, and there are no scale indications in the drawings. Upon re-examining the material and the needles, it was possible to determine the dimensions (length: 9.2–9.5 cm; weight: 2.5–4 g). A particularly small needle with a length of 4.0 cm and a weight of 1.3 g comes from grave AD 6. During the restoration of the needles we could identify some mineralized textile fibre on the surface of a needle of tomb DJ 51 that gives an indication of its use as a garment pin and not as a hair pin like Ponsich suggested.

37 In Djebila and Aïn Dalia Kebira, the needles are conspicuously part of the grave furnishings in almost all tombs together with ostrich eggshell vessels. The only exception here is tomb AD 34, where no ostrich egg was found. The pins are basically similar to those referred to in German-language archaeological research on the Mediterranean region as »Doppelnadeln«, »Illyrische Omeganadeln« and in English-language research as »double pins«. The needles appear to have their centre of distribution in western Greece³⁶. The Illyrian pins are mainly part of the furnishings of male graves in the Illyrian find area that gave them their name³⁷. In terms of shape, the needles from the cemeteries near Tangier appear to correspond to needles from the 8th to the end of the 6th century BCE. The needles underwent morphological changes in the course of their development. At the end of the 6th century BCE, from the middle of the 6th century BCE at the earliest, a constriction underneath the loops becomes established³⁸, which cannot be observed in the needles from Djebila or Aïn Dalia Kebira. It should also be added that the Illyrian pins appear in grave AD 34 together with silver



14



15

Fig. 14: Decorations on the ends of bronze bracelets in the shape of animal heads from a child's grave in Djebila (DJ 80): a. before restoration; b, c. after restoration.

Fig. 15: Illyrian bronze garment pins from Djebila and Aïn Dalia Kebira are typical for graves of adult individuals (perhaps men).

35 Ponsich 1967, 186–189. 191 f.

36 I am grateful to Anne Sieverling for encouraging me to look into needles. See Philipp 1981, 97–102 for literature.

37 Jacobsthal 1956, 137.

38 Philipp 1981, 98.



16



17

Fig. 16: Bronze appliqués from Djebila (DJ 90) sewn onto fabric or leather. There are still remnants of cords on the eyelets. The surface of these objects was originally tin-plated and had a silver appearance.

Fig. 17: A bronze awl from Ain Dalia Kebira (AD 67).

41 The bell has a height of 3.5 cm, a maximum diameter of 2.8 cm, and a weight of 18.5 g, with a perforation of 2.9 mm at its crown. The bell clapper has a length of 2.6 cm. The suspension of the clapper consists of a bronze wire 1.3 mm thick, which is connected to the bell wall on one side and drawn through a small opening in the crown area on the other side, resting on the bell body. The bell wall is made of bronze sheet 1.2–1.3 mm thick. In the drawing published by Ponsich, the depiction of the bell clapper is too short. In fact, the bell ball (the lower end of the clapper) protrudes slightly from the bell body. The bell is still functional and has a bright metallic sound. During the restoration work carried out, mineralised remains of textiles and a thin cord that served as a fastening were discovered. It can therefore be assumed that the bell was attached to the body of the deceased individual.

42 Bronze bells can be offerings in the context of Phoenician-Punic burials in the Mediterranean region, both for adults (presumably more often women) and especially for children⁴¹. These objects likely had both apotropaic and pragmatic purposes, as the sound of bells can drive away wild animals. Findings with bells in graves are rarely so

earrings. It is possible that this type of bronze pin was also worn by women in the region north of the Atlas Mountains.

38 Bronze costume components used as clothing trimmings (Fig. 16) all come from Djebila and from graves of adults (tombs DJ 27, DJ 90). These are hat-shaped garments or leather appliques, one of which has a triangular rather than a round basic shape. Identical objects can be found in furnishing features from the necropolises of Carthage³⁹ and Villaricos⁴⁰. This proves the adoption of Phoenician-Punic costumes in the coastal region north of the Atlas during the pre-Roman Iron Age. The objects from the tombs of Djebila were probably originally coated with tin and had a silver colour. This has been revealed by this year's restoration work.

39 A bronze awl (Fig. 17) has been found in a grave of the adult group from Ain Dalia Kebira (AD 31). The object has a rectangular cross-section and a length of 4.1 cm. It cannot be excluded that such bronze tools were used to process silver or gold as well.

40 A small bronze bell with a length of approximately 3.5 cm (Fig. 18) originates from a child's grave (DJ 65). The fact that grave 65 is also the most richly equipped grave with metals in the entire Djebila necropolis underscores the significance of the find and the grave.

39 Gauckler 1915, pl. CXXVII.

40 Siret 1985, 84 pl. XVII.

41 Fariselli 2015, 35.



Fig. 18: A bronze bell from a child's grave in Djebila (DJ 65): a. from the outside; b. from the inside.

18

well-documented that the exact position in the grave can be described. Additionally, anthropological determinations of the buried individual are often missing. However, valuable clues about bells in graves can be found in some burial finds. In the Phoenician-Punic core area of Carthage (Byrsa), a bell was found on the chest of a child buried in an amphora⁴². In the Phoenician-Punic necropolis of Puig de Molins, several bells were also found in children's graves. In the burial ground of Puig de Molins, the use of bells can be traced from the second half of the 6th century BCE to the 4th century BCE, perhaps even until the 2nd/3rd century BCE⁴³. However, the inclusion of bells is not limited to the Phoenician-Punic cultural area but has also found its way into the burial customs of the Iberian culture. This is evidenced by the burial of a 5–7-month-old baby in Castallet de Bernabé (Valencia), where a small bronze bell was found on the right wrist of the deceased child (burial in the so-called Departamento 3)⁴⁴. This Iberian settlement dates back to the 5th – 3rd centuries BCE⁴⁵.

Iron

⁴³ Iron finds in Djebila and Aïn Dalia Kebira are part of the grave inventory and are exclusively present in graves of the adult group. Mostly, these are tools in the form of sickles (DJ 31, DJ 79, DJ 99, AD 20, AD 25) and knives (DJ 22, AD 24, AD 25, AD 42, AD 74, AD 80) or weapons in the form of spearheads (AD 42).

⁴⁴ The sickles are about 30 cm in size and have a serrated working edge (Fig. 19). The sickle blade has a width of approximately 1.5 cm.



19

Fig. 19: Iron tools are typical for graves of adult individuals. Here are fragments of an iron sickle from Ain Dalhia Kebira (AD 74).

⁴² Fariselli 2015, 36.

⁴³ Mezquida Orti 2016, 828–831.

⁴⁴ Guérin 2003, 332 figs. 376. 377; p. 361.

⁴⁵ Guérin 2003, 10.



Fig. 20: Iron knife with rivets for attaching a handle made of organic material (AD 42).

20

45 The shape of the knives resembles the forms known from the Iberian Peninsula⁴⁶ (Fig. 20). Rivets for attaching a handle of organic material are visible in the area of the handle base. In grave AD 42, a slightly different knife shape, probably a billhook, is present, which Ponsich described as a »serpe«.

46 In grave AD 20, a sickle was found in the east within the tomb cist on a stone slab. Here, the stone slab could have served as a kind of sacrificial table. Similar evidence is found for a knife in grave AD 24. Here, the knife was also laid on a small stone slab in the eastern corner of the burial chamber. The spearheads are heavily corroded and require restoration to make further statements.

47 Interestingly, iron has been used for weapons and tools on the Iberian Peninsula since the end of the 8th century BCE but increased since the 6th century BCE⁴⁷. It can be assumed that the spread of iron technology north of the Atlas was somehow similar.

48 Possibly, iron jewelry in the form of small rings (DJ 27) or bracelets (AD 1) is also known from the necropolises. However, Ponsich's interpretation as jewelry is rather uncertain, as the object in DJ 27 does not have open ends and the ring in AD 1 is too fragmentary to decide whether the ring was closed or not.

Beads

49 A variety of materials were used for beads. The most commonly occurring beads in terms of quantity are glass and ostrich eggshell beads. Necklaces consisting of cowrie (*Cypraea*) shells are also frequently found. Less represented in the findings are amber, carnelian, and agate beads, as well as cardium shells. Agate beads and cardium shells usually occur individually and then, due to their size, form the central element of a necklace.

50 Glass beads are mentioned by Ponsich as occurring in 15 graves (14 %) in Djebila and in nine graves in Aïn Dalia Kebira (11 %). Approximately 80 beads are attributed to Djebila and around 50 to Aïn Dalia Kebira. Interestingly, glass beads are predominantly found in graves of the adult group. The shape of the beads mostly

46 Grevey 2020.

47 Ruiz Zapatero u. a. 2012, fig. 4, 10.

varies between elongated oval, spherical, and disc-shaped, with colours ranging from blue-turquoise, reddish-brown to brown, and white to grey, as well as honey-coloured. A particularly beautiful necklace comes from grave AD 79 with turquoise glass beads and a reddish-brown agate bead as its central component (Fig. 21 a). A marine-blue bead from AD 18 (Fig. 22 a) and an eye bead from grave DJ 28 (Fig. 22 b) are also notable pieces of jewellery. Also of interest are several longer, honey-coloured glass rods (DJ 90). Ponsich thought they could likely be coated with silver sheet in some places. The restoration work of the objects showed a thin silver sheet inside of the glass pearls. They formed a necklace together with an elongated oval, reddish-brown glass bead (Fig. 23).

51 While investigating the finds, it became apparent that some of the pearls referred to by Ponsich as brown glass beads are actually amber (Fig. 24). Examining the list of graves reveals a significantly higher quantity at the cemetery in Djebila, whereas in Aïn Dalia Kebira, amber is only evident in one grave (DJ 4, DJ 31, DJ 63, DJ 68, DJ 95, DJ 101, AD 81). All graves containing amber beads belong to the adult group. Analysis of three amber bead fragments (see analysis by Carlos Odriozola) from a necklace found in grave DJ 101 confirmed the presence of Baltic amber. While Baltic amber has been sporadically present in the northeastern Iberian Peninsula since the Chalcolithic period, widespread distribution and thus a firmly established amber trade with the Baltic region can only be traced back to the Late Bronze/Early Iron Age⁴⁸. Apparently, the area north of the Atlas Mountains was also integrated into the Mediterranean amber trade, especially with the Iberian Peninsula.

52 Disc-shaped, ostrich eggshell beads (Fig. 21 a. b) are very numerous quantitatively (190 beads in Djebila and 21 beads in Aïn Dalia Kebira), but they are only found in four graves in Djebila (DJ 3, DJ 4, DJ 89, DJ 95) and in only two graves in Aïn Dalia Kebira (AD 68, AD 79). Generally, ostrich eggshell beads are a typical addition in graves of the adult group. The largest quantity of these beads was found in grave DJ 4, with a total of 138 ostrich eggshell beads. Ostrich eggshell beads are predominantly found in combination with shell and glass beads as well as semi-precious stones. Necklaces made of ostrich eggshell beads are also frequently found in the necropolises in Carthage⁴⁹.

53 Carnelian beads are extremely rare overall and are only found in one grave of the adult group in Aïn Dalia Kebira (AD 10). The necklace contains seven elongated oval and two spherical beads (Fig. 21 c).

54 The most commonly used shell species for necklaces are *Cypraea* and *Cardium* shells. Conversely, *Conidae* shell pendants are rare, with surfaces appearing polished in some cases (DJ 77). Ponsich also interpreted *Murex* shells as part of necklaces, although their condition is often quite fragmented with broken surfaces, making their use in the form of necklaces rather uncertain. Other shell species are also present in the finds, such

Fig. 21: Various necklaces from Djebila and Aïn Dalia Kebira with turquoise, grey, brown glass beads, agate bead in the centre of the necklace and ostrich egg shell beads (a), ostrich egg shell beads, honey coloured and brown glass beads (b), reddish carnelian and greyish glass beads (c).

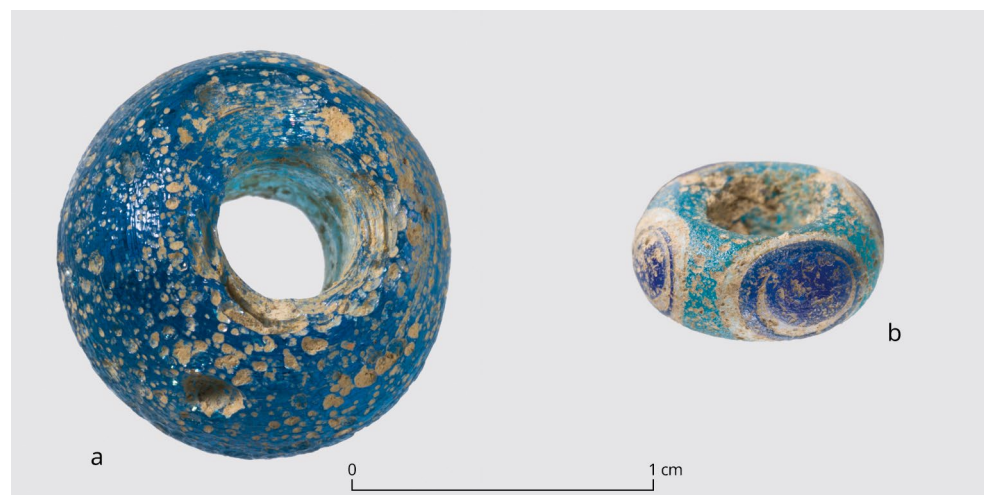


21

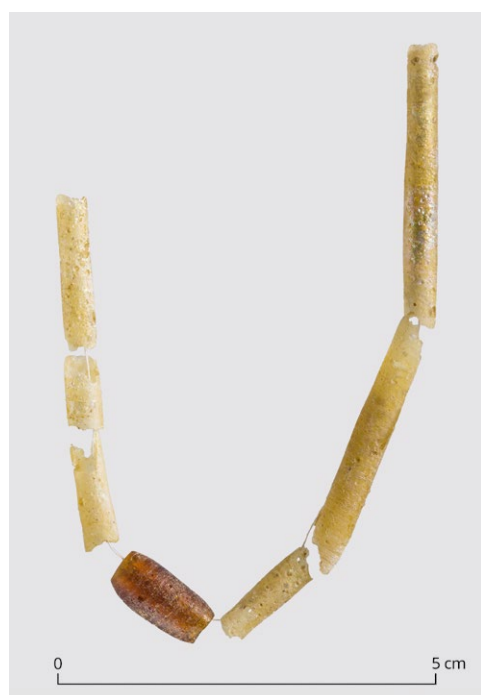
48 Murillo-Barroso – Martinon-Torres 2012, figs. 9. 10.

49 Gauckler 1915, pls. CXIX. CXXII. CXXVII. CXXXI. CXLV.

Fig. 22: a. Blue glass bead from Ain Dalia Kebira (AD 18); b. Blue-yellow eye bead from Djebila (DJ 28).



22



23

Fig. 23: Necklace with long honey-coloured glass beads lined with silver foil on the inside and a brown glass bead from Djebila (DJ 90).

Fig. 24: Various amber beads made of Baltic amber from the Djebila cemetery (DJ 101).



24

as *Patellidae* or smaller shell species whose assignment to a specific genus is uncertain. However, there is no hard evidence of perforation for these latter types of shells, making their use in the form of necklaces doubtful. Without knowing the original position of the shell in the grave, it is generally difficult to classify a shell as a bead, especially if it occurs only a few times in the grave. Due to the custom at the Djebila cemetery of sprinkling graves with sea sand (DJ 4, DJ 20, DJ 63, DJ 66, DJ 79, DJ 81), shells may have accidentally entered the grave. Furthermore, perforations of shells can also appear through natural processes, as is often seen in shells on a beach.

⁵⁵ The use of *Cypraea* shells as jewellery is certain and is also well known from the tombs in Carthage⁵⁰. It is noticeable that the smaller specimens (1.5–2.6 cm) are flattened on one side, while the larger *Cypraea* shells (length: 2.6–3.4 cm) remain intact. The latter only have a perforation to string the shell and are much less represented in



Fig. 25: Necklaces made of flattened *Cypraea* shells from Djebila are typical for adults (DJ 31).



26

Fig. 26: a. Complete *Cypraea* shells are rare and usually found in children's graves (DJ 39); b. Complete *Cypraea* shells (DJ 39) from the other side.

the finds. A total of over 200 *Cypraea* shells come from the Djebila site, and just over 100 *Cypraea* shells come from Aïn Dalia Kebira. Flattened *Cypraea* shells are exclusively found in graves of children in Aïn Dalia Kebira (AD 11, AD 18, AD 23, AD 30, AD 45, AD 80). However, the quantity there is very low, ranging from one to four shells per grave. In Djebila, flattened *Cypraea* shells are more typical for adults (DJ 27, DJ 31, DJ 50, DJ 51, DJ 90). Only two graves of the child group there contain these flattened shell beads (DJ 35, DJ 74). The graves with the largest *Cypraea* necklaces are DJ 27 (100 pieces), DJ 31 (118 pieces), and DJ 51 (78 pieces), all belonging to the adult group (Fig. 25). In the graves of children in Djebila, there are also only one to two flattened *Cypraea* shells present. A very similar, although not identical pattern emerges with the complete *Cypraea* shells (Fig. 26). In Aïn Dalia Kebira, the shells are always found in children's graves (AD 11, AD 17, AD 23), while in Djebila, although graves of children (DJ 39, DJ 65, DJ 74, DJ 77, DJ 83) also exhibit this type of shell, three graves of the adult group (DJ 2, DJ 13, DJ 18) do as well. The quantity of complete and perforated *Cypraea* shells in Djebila, as well as in Aïn Dalia Kebira, ranges from one to four specimens per grave, not more.

56 In Djebila, *Cypraea* shells appear to be more widespread overall. This suggests better access to this resource near the Atlantic coast by trading. Presumably, like amber, *Cypraea* shells had to be imported, as they were likely native to the Red Sea in ancient times. In Aïn Dalia Kebira, *Cypraea* shells have only been found in graves of children. However, there are no shell necklaces with many beads there, but always only one to four specimens. In Djebila, the large shell necklaces with many *Cypraea* beads are especially typical for graves of adults, while few of the flattened and complete *Cypraea* shells, in quantities of one to four specimens, are more typical for graves of children.

Amulets

57 There are only two amulets known. One is a small head of a faun (DJ 77) made probably of faience, and the other is a small ram's head (Fig. 27), most likely made of ivory (AD 30). Both amulets come from tombs of children. Faun heads are frequently found in the material of the necropolises of Carthage⁵¹. Depictions of rams are found in the Tartessian necropolises on the Iberian Peninsula⁵².

58 The ram's head from Djebila was part of a necklace, which additionally included three flattened *Cypraea* shells and three fish vertebrae. With the fauns head, two larger, non-flattened *Cypraea* shells and a polished shell of the *Conidae* genus likely belong to the necklace.

Organic Material

59 Ponsich mentioned carbonized grains of wheat as grave goods in vessels (DJ 64). Grains of wheat without an explicit description in a vessel were found in two other graves (AD 39, DJ 78). Carbonized peas were described by Ponsich for grave DJ 76. The wheat grains clearly found in one vessel belong probably to a child, while all other organic remains belong to graves of the adults.

51 Gauckler 1915, pls. CXVIII. CLXVIII. CLXXVI. CLXXVII.

52 Chamorro 1987, 227 fig. 26.



27

60 A review of the finds on site in the Kasbah-Museum revealed an organic sample from grave DJ 78. An analysis could not confirm the presence of wheat grains. The carbonized fragments, on the other hand, were a burnt resin (verbal information from Reinder Neef), the exact nature of which still requires further analysis. Apparently, the remains of an incense offering can be recognised here, a typical custom in Phoenician burials⁵³. In Morocco, sandarak resin could be a possible native resource for incense offerings⁵⁴.

Fig. 27: Ivory ram's head from a child's grave in Ain Dalia Kebira (AD 30).

Ostrich Eggshell Vessels

61 Ostrich eggshell vessels have been found in Djebila with eight specimens (DJ 2, DJ 20, DJ 31, DJ 51, DJ 59, DJ 68, DJ 94, DJ 101), as well as in Ain Dalia Kebira with five specimens (AD 5, AD 6, AD 42, AD 56, AD 78). All the ostrich eggs were found in graves of the adult group. The preservation of the ostrich eggs is mostly fragmentary; the diameter can be determined on the basis of two well-preserved ostrich eggs (DJ 31: 13.2 cm; AD 56: 13.0 cm). The preserved but incomplete height of the ostrich eggs is 13–14 cm (Fig. 28). The walls of the ostrich eggs from Djebila and Ain Dalia Kebira vary in thickness between 1.52–2.54 mm.

62 A very elaborate relief decoration is present on an ostrich egg from Ain Dalia Kebira (AD 5) (Fig. 29). Further decorated ostrich eggs were described by Ponsich exclusively for the Ain Dalia Kebira site (AD 5, AD 6, AD 42, AD 78). According to Ponsich, the decoration of the ostrich eggs includes relief (AD 5, AD 6, AD 42) and red painting (AD 78). On re-examining the ostrich egg fragments, this conclusion has to be revised. Further relief decoration in the form of a line was also found on the egg fragments from grave AD 78 in the form of a simple horizontal line near the rim of the eggshell vessel. An egg from grave AD 6 also has a thin horizontal line near the mouth of the vessel. Ponsich described the ostrich egg from grave AD 42 with engravings in a triangular shape. An original painting of the ostrich egg from AD 78 with red paint is rather unlikely after

53 López-Bertran 2019, 147–149.

54 Marzoli – El-Khayari 2010, 96.



28

Fig. 28: Ostrich egg vessels come exclusively from graves with adult individuals. The combination of ostrich eggshells with multiple burials and Illyrian needles is striking.

a renewed examination of the find material. However, it seems possible that red color played an important role in burials and that traces of it have been preserved on the outside or the inside of the ostrich eggs. The inside of the decorated ostrich egg jar from tomb 5 in Aïn Dalia Kebira (AD 5) is stained red in several places, indicating that ostrich eggs may also have served as containers for red substances, most likely for ochre⁵⁵.

⁶³ Drill holes are recognisable on one vessel (DJ 20), which suggest old repairs and underline the value of the objects.

⁶⁴ It is interesting to note that ostrich eggs occur quite frequently in multiple burials of two to three individuals (DJ 20, DJ 31, DJ 59, DJ 68, AD 6, AD 42), but, as in the other individual burials, only as single pieces. Moreover, ostrich eggs in Djebila are not limited to elaborate funerary architecture in the form of stone cists, but are also part of the grave goods of a simple rectangular grave pit without stone slabs in Djebila (DJ 2). Although skeletal remains were mentioned for this grave, it remains unclear whether this was a multiple or a single burial. No skeletal remains were discovered in two other graves in Djebila (DJ 94, DJ 101) and no further conclusions can be drawn. Decorated ostrich eggs in Aïn Dalia Kebira are linked to elaborate funerary architecture. There are only four tombs (AD 5, AD 6, AD 42, AD 78) in Aïn Dalia Kebira that are architecturally different (quarry-stone masonry) from the other tombs (simple stone cists). Two of these graves also contained stone sarcophagi (AD 5, AD 78). Due to their size, stone sarcophagi appear to have been used exclusively for individual burials. AD 5 contained the skeleton of an individual in an almost extended position; the head of the individual was located to the west and the relief decorated ostrich egg directly to the north of the head (Fig. 3 c). The position of ostrich eggs in the west of the tomb has parallels on the Iberian Peninsula (Jardín

necropolis)⁵⁶. The tombs from Aïn Dalia Kebira without a stone sarcophagus were multiple burials: two individuals in AD 6 and three individuals in AD 42. The only undecorated ostrich egg in Aïn Dalia Kebira was found in a stone cist (AD 56), which is common for almost all tombs. As this grave was obviously disturbed (missing stone slab covering and evidence of dislocated bones), it is not possible to decide whether there was perhaps a multiple burial.

⁶⁵ In Djebila, ostrich eggshell vessels are never found in combination with a ceramic vessel and therefore appear to be a substitute for pottery⁵⁷. In Aïn Dalia Kebira, the combination of ceramic vessels and the addition of an ostrich egg only occurs in grave AD 42 within a multiple burial. It is therefore not possible to decide whether the ostrich egg belonged to a burial with or without pottery. Although a small amphora sherd is mentioned by Ponsich for grave AD 6, this was categorised as older, by Ponsich as Neolithic. Ostrich eggs are also never found together with pottery in the other graves.

⁶⁶ Based on the findings, it is difficult to decide whether ostrich eggs represent a gender-specific burial practice. In the single burial in grave DJ 51, the combination of an ostrich egg with two bronze Illyrian pins (described by Ponsich as »épingles à cheveux de bronze«⁵⁸) and a *Cypraea* necklace is documented. In grave AD 34 there are two Illyrian pins together with silver earrings with basket pendants, but here without the addition of an ostrich eggshell vessel. In their area of origin, the Illyrian pins are mainly found in men's graves⁵⁹. It cannot be excluded, therefore, that grave 51 was the burial of a man. On the other hand, grave AD 34 with the earrings could be a woman's grave. Unfortunately, there is no anthropological data to verify this interpretation. In addition, further attributions to the accompanying material in the multiple burials are simply not possible due to the published excavation documentation. An Illyrian pin is also present in grave AD 42, which contained a lot of iron tools or even weapons made of iron. Overall, this speaks in favour of the burial of ostrich eggs together with Illyrian pins and iron tools or weapons in graves of male individuals.

⁶⁷ Ostrich eggs north of the Atlas were probably regarded as something exotic, as they were in the Iberian Peninsula⁶⁰. In any case, bone remains of *Struthio camelus* have not yet been found anywhere in Phoenician-Punic sites north of the Atlas Mountains⁶¹. Ostrich eggs were very probably imported into the area north of the Atlas.



29

Fig. 29: The only fully decorated ostrich egg vessel comes from a rare grave with a stone sarcophagus and a skeleton in an almost extended position. The egg was located next to the head of the individual in the west of the tomb (AD 5).

⁵⁶ Schubart – Maass-Lindemann 2007, 276.

⁵⁷ López Pardo 1990, 30.

⁵⁸ Ponsich 1967, 186–189.

⁵⁹ Jacobsthal 1956, 137.

⁶⁰ Jiménez Barrero u. a. 2021.

⁶¹ Becker u. a. 2013, 97; Papi 2019, 304.

Metal Weights

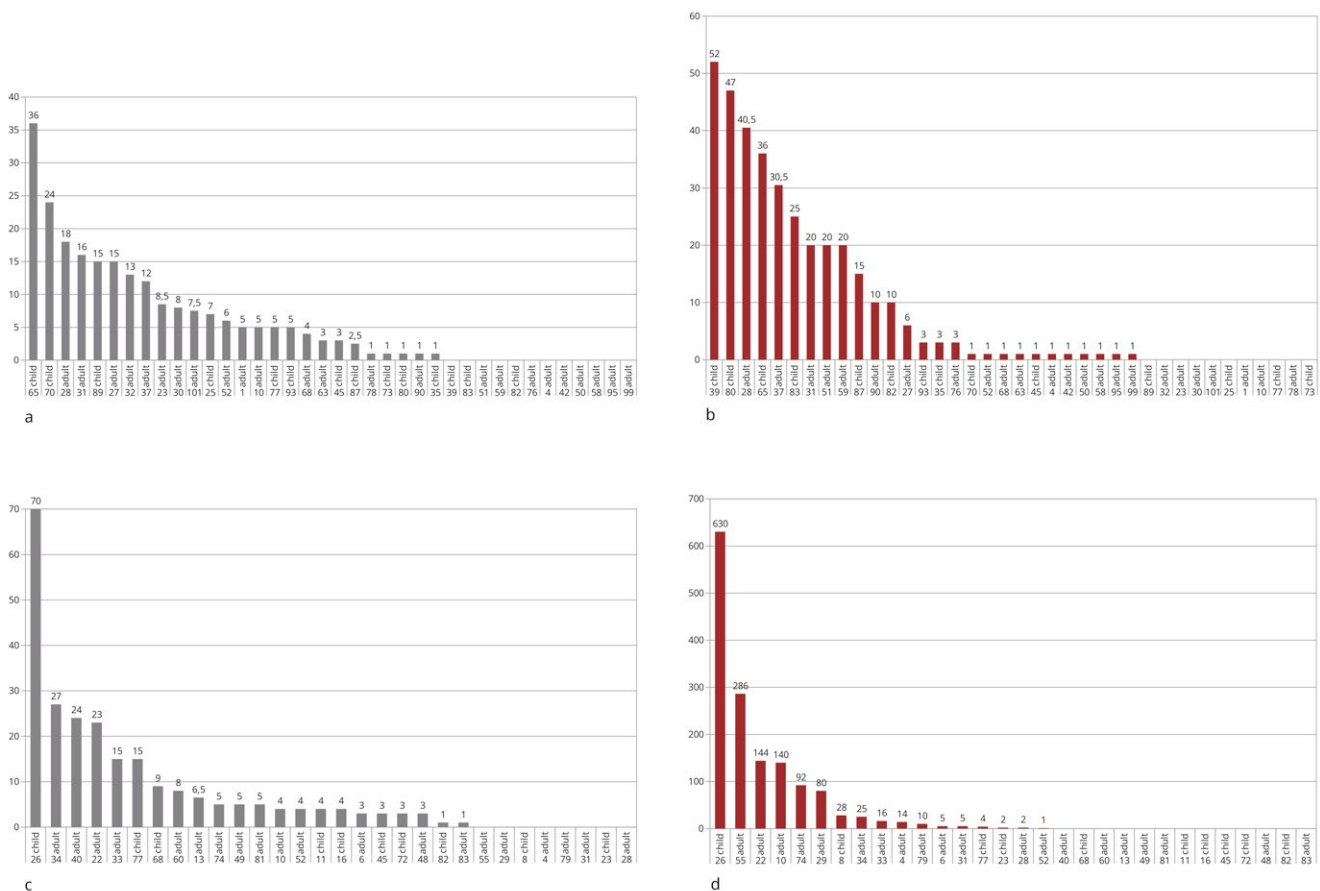
68 In principle, all features and finds are suitable for investigating social archaeological issues and determining social differentiation within a society. However, an important aspect within the prehistoric or protohistoric metal periods is the quantity of metal. These quantities are best determined by weights rather than by the number of finds. The metal weights were compiled for both cemeteries. In many cases, metal weights were documented by the excavator, providing a good reference base. Missing metal weights could be determined for the gold, silver and bronze finds in all cases, as these could be reconstructed with sufficient certainty. No weights were given by Ponsich for the iron finds, we were therefore unable to analyse this group of finds⁶².

Djebila

69 A total of three gold finds are known from the Djebila cemetery (DJ 63, DJ 65, DJ 99), each weighing no more than 1 g. These are smaller gold rings which, in the case of grave DJ 65, may even have belonged to a child. The remaining gold finds in Djebila are distributed exclusively among burials of the adult group.

70 Among the silver finds, a total weight of 223.5 g was determined for the Djebila necropolis (Fig. 30 a). The grave with the highest silver weight (36 g) is grave DJ 65, followed by grave DJ 70 (24 g). Both burials belong to children, determined both by grave size and on the basis of Ponsich's descriptions for these graves as children's graves. However, it should be noted that only grave DJ 70 contained parts of the skeleton, while the skeletal remains from DJ 65 were missing. If Ponsich's age-specific

Fig. 30: Compilation of the silver (grey) and bronze weights (red) from Djebila (a, b) and Ain Dalia Kebira (c, d).



classification is correct, then DJ 65 most richly endowed with silver artefacts would have been a child's grave. It would also contain one of the few gold finds in the entire necropolis. Grave DJ 70 is special not only because of its high silver weight, but also because of the evidence of trepanation⁶³. Both children's graves were also located in a prominent position in the necropolis, namely at the highest point on a hilltop.

71 The total bronze weight of the Djebila necropolis reached a value of 352 g (Fig. 30 b). Children's graves are also among the graves richest in bronze artefacts (graves DJ 39, DJ 80, DJ 65). Tomb DJ 65, which is in an exposed position, is again interesting as it already contained one of the few gold finds and the highest silver weight. However, the highest bronze weight was found in grave DJ 39 (52 g), followed by DJ 80 (47 g) and DJ 28 (40,5 g). The first two graves belong to children, the third to the adult group. The bronze rings from DJ 28 seem to be quite small and could have belonged probably also at least to a juvenile individual. One ring there shows an inner diameter of only 3,4 cm⁶⁴. Unfortunately Ponsich didn't find human bones in that grave, which cannot exclude the possibility of a burial of a mother with child.

Aïn Dalia Kebira

72 Three gold finds were discovered in Aïn Dalia Kebira, two earrings weighing 1 g each in tomb AD 10 and a nose- or earring of approx. 1 g in tomb AD 4. Both tombs belong to the adult group.

73 The total silver weight of the Aïn Dalia Kebira necropolis is 242.5 g (Fig. 30 c). The silver found in this necropolis also shows an extremely high value of 70 g for a grave of a child (AD 26). The grave is said to have contained a silver ring, the weight of which Ponsich gave as 70 g. However, the size of the ring is described by Ponsich as 34 mm in diameter. As Ponsich published neither a photo nor a drawing of the ring, it remains unclear whether Ponsich's claims are actually true. The graves following AD 26 are graves of the adult group (AD 34, AD 40, AD 22), whose silver weights are between 23–27 g and thus less than half the silver weight of grave AD 70.

74 The total weight of the bronzes in Aïn Dalia Kebira is 1484 g, which is about one kilogram above the bronze weight of Djebila (Fig. 30 d). Among the bronzes in Aïn Dalia Kebira, it is striking that tomb AD 26 (child) is the tomb richest in bronzes with a bronze weight of 630 g. It is followed by tombs of the adults (AD 55, AD 22, AD 10).

75 Even if the analysis of the finds has not been completed, there are indications that children's graves can be very richly furnished with silver and bronze artefacts. A more pronounced social differentiation can possibly be recognised here; the gold and silver weights can be categorised as moderate, are very similar in both necropolises and probably correspond to a cemetery of a middle class, perhaps even a somewhat upper middle class. There is a difference of approx. 1 kg in the bronze weights between the two necropolises. The fact that Aïn Dalia Kebira has slightly more bronzes could relate to a local tradition that is even more deeply rooted there than in Djebila.

Conclusions

76 Based on the burials, there are hardly any differences between Djebila and Aïn Dalia Kebira. Both necropolises show evidence of contracted burials. Only in Aïn Dalia Kebira are stone sarcophagi present. In tomb AD 5, the individual lies in a stone

63 Ponsich 1970, 159 with note 145. According to a pathological and radiological study commissioned by Ponsich, there was no so-called periosteal reaction at the surgical site. This led to the conclusion that it must have been a post-mortem operation. In principle, however, it cannot be excluded that the individual simply did not survive the procedure.

64 For comparison, the diameters of the wrists of our two female restorers were measured, which had a diameter of approx. 4.5–4.9 cm.

sarcophagus in an almost outstretched position with the head to the west. The stone sarcophagus, the position of the skull and the ostrich egg in the west of this grave is strongly related to Phoenician-Punic burials on the Iberian Peninsula (e. g., Jardín necropolis). Local traditions no longer seem recognisable in this grave. It is also interesting to note that there are probably fewer child burials in Djebila than in Aïn Dalia Kebira. In addition, the restriction of child burials to certain cemetery areas in Djebila is well in line with the Phoenician-Punic element of the so-called tophets. The high number of graves without skeletal remains especially in Djebila indicates the presence of cremations. It seems possible that this burial type was not recognised during Ponsich's excavation. The presence of cremations could be cited as a further link to the Mediterranean region. In addition, the burial customs as a whole appear to be much more elaborate than initially thought. Multiple burials and partial removal of human bones, especially of the skull and perhaps also the upper body, can be identified. Similar characteristics can be found on the Iberian Peninsula, which emphasises the close links between the two regions.

77 Among the finds, the proportion of objects with a Phoenician-Punic character is enormous. Even the bronze finds, which could initially have been assumed to be local artefacts, show that there are many references to the Mediterranean region. The burial of a child together with a bronze bell fits the picture well. Nevertheless, the find material also contains echoes of Tartessian finds from the Iberian Peninsula. Although the individuals in both necropolises were heavily endowed with precious metals, compared to other known Phoenician-Punic graves at Ras Achakkar or Lixus, the finds from Djebila and Aïn Dalia Kebira are more indicative of burial sites of a middle class. The addition of tools in the form of knives and sickles supports the statement that no upper class can be expected in the Djebila and Aïn Dalia Kebira necropolises. In our opinion, the fact that the metal weights already show a pronounced social differentiation, which is expressed in both necropolises in children's graves richly furnished with metal, proves an advanced individualisation of death. Indeed, it is difficult to identify completely identical grave ensembles. No two graves are the same as far as the finds are concerned. Only the simple stone cist as a grave form is characterised by conformity and was possibly regulated by professional authorities. It should also be added that differences were made between children and adults in the grave furnishings. For example, the addition of ostrich eggshell vessels, Illyrian needles, iron tools, finger rings, amber beads or large cypraea necklaces with many shell beads can be found in the graves of adult individuals. Children's graves, on the other hand, have amulets and bells, which supports the need for protection of the youngest members of the society. In addition, some objects in children's graves that presumably belonged to adults, perhaps their parents, could indicate either parents' love or the premature assumption of social roles that were actually intended for adults.

78 As far as dating the graves, the metal finds give the impression that most finds can be dated to the 6th century BCE. However, this does not exclude the possibility of assuming a complete occupation of the cemeteries from the end of the 8th to beginning of the 5th century BCE, as Ponsich has suggested and as the ceramics from Djebila and Aïn Dalia Kebira will show further below.

79 Summarising the most important elements of the cemeteries, the heterogeneity of the burials and artefacts should be emphasised, which is difficult to reconcile with an autochthonous, conservative population. Rather, one gains the impression of a society with a pronounced individuality actively involved in the Mediterranean trade network, probably especially with the Iberian Peninsula. The evidence of Baltic amber is certainly the most impressive proof of this. The term »Phoenician-Punic« should be used for Djebila and Aïn Dalia Kebira rather as a time frame and not as a term of cultural identity.

Dirk Blaschta – Saoussane Yahia – Mohamed El Mhassani

Part II

Ceramics

Handmade Vases ›à chardon‹

80 Ceramics from the necropolis of Aïn Dalia Kebira and Djebila are not a frequent element among the grave goods, appearing in only 25 graves, 29.76 % of the 84 tombs at Kebira, and in 34, 31.77 % of the 107 tombs at Djebila. Among the ceramic forms, the most relevant due to their frequency and morphology are the vases ›à chardon‹ (Fig. 31), which provide us with the most interesting chronological data, which have only recently been assessed very generically, placing them in a very broad chronological range between the 8th and 1st centuries BCE⁶⁵.

81 However, in the initial study, Ponsich gave them a more restricted chronology between the 8th and 5th centuries BCE⁶⁶, whereby some specimens would be clearly ancient, with the ›à chardon‹ vessel from tomb DJ 69 of Djebila having a chronology between the 8th and 7th centuries BCE⁶⁷. He relates this to the ›à chardon‹ vessels of Cruz del Negro and Setefilla, which he claims precede the specimens from Carthage from the 8th to 7th centuries BCE⁶⁸. He assigns other ›à chardon‹ vessels to the 7th century BCE, such as those from tombs DJ 41 and DJ 53 of Djebila and tomb AD 32 of Aïn Dalia Kebira⁶⁹. He suggests a chronology between the 7th and 6th centuries BCE⁷⁰ for the majority of the tombs.

Fig. 31: Ceramic vessels ›à chardon‹ from Djebila and Aïn Dalia Kebira (from left to right): AD 26, DJ 21, DJ 41, AD 32, DJ 69.



31

65 Papi 2019, 297.

66 Ponsich 1970, 93. 165.

67 Ponsich 1970, 106.

68 Ponsich 1969, 181.

69 Ponsich 1970, 112.

70 Ponsich 1969, 182.

82 Ponsich⁷¹ relates the ›à chardon‹ vessels found in tombs DJ 41 and DJ 53 and AD 32 to the vases ›à chardon‹ found in the 8th century BCE tombs of Carthage and those of Rachgoun in Algeria. He additionally dates the AD 77 masonry cists of the Aïn Dalia Kebira necropolis to the 7th century BCE, while two »sarcophagi« – tombs AD 5 and AD 78 from Aïn Dalia Kebira – are dated to the 5th century BCE⁷². On the other hand, the necropolis of Djebila is considered to be very well dated between the 7th and 5th centuries BCE⁷³. The assigned lower chronological limit of the early 5th century BCE is identified by the absence of Attic ceramics, Phoenician amphorae, and lamps, as well as the scarcity of red slip pottery⁷⁴.

83 Vases ›à chardon‹ (funnel-shaped) have an inverted truncated cone shape, sometimes a flat bottom with a pointed foot, a globular lower body, a marked carination from which divergent vertical walls start, ending in an exvasated rim, with a mouth diameter generally larger than the maximum diameter of the globular body.

84 It has been proposed that the vessels ›à chardon‹ imitate lotus flowers⁷⁵ as the lotus, *Nelumbo nucifera*, an aquatic plant found in the Nile River that opens at dawn and closes at night, symbolises regeneration and life⁷⁶. They would therefore be a symbol of resurrection in the afterlife. This has led the vase ›à chardon‹ to be likened with the winged goddess, Astarte⁷⁷.

85 It is a common form during the transition from the Late Bronze Age to the Early Iron Age, called urns or type E.II of Diego Ruiz Mata⁷⁸, a handmade vessel from the 8th century BCE, attesting to their indigenous origin in the Iberian Peninsula⁷⁹. On the other hand, other authors maintain an Oriental, Egyptian origin in the New Kingdom⁸⁰ or a Phoenician origin of the ›vase à chardon‹⁸¹.

86 Among the stratigraphies of settlements, one of the most interesting is the sequence from Macareno hill (Seville) where the vase ›à chardon‹ begins in stratum 26 from the Late Bronze Age⁸² and lasts until stratum 21, already in the 6th century BCE. Another interesting stratigraphy is from Los Quemados hill (Córdoba), appearing from level 16 of the 9th century BCE, during the Late Bronze Age⁸³, although they are more frequent from level 14 in the 8th century BCE⁸⁴ and continuing in level 12 from the 7th century BCE⁸⁵.

87 From a chronological and social point of view, they appear in the Medellín necropolis in the richest tombs, encompassing the twelve examples documented in seven tombs in phase I of the necropolis (c. 650–625 BCE), except for one from c. 625–600 BCE⁸⁶. These vessels continue to appear in tomb 70/12A (c. 575–550 BCE) where two of the five urns they contained may well be classified as handmade, ›à chardon‹ vessels⁸⁷, indicating their survival in the first half of the 6th century BCE.

71 Ponsich 1967, 23 f.

72 Ponsich 1967, 37; Ponsich 1969, 178 pl. 3 a. b; Ponsich 1970, 99. 103 pl. 30 a. b.

73 Ponsich 1967, 142.

74 Ponsich 1969, 181; Ponsich 1970, 106. 108. 165.

75 Escacena 2000, 231; Escacena 2019, 59.

76 Keel – Uehlinger 1992, 54.

77 Escacena 2000, 231; González Prats 2014, 639. 641.

78 Ruiz Mata 1995, 277 figs. 22–24.

79 Aubet 1975, 84; Pachón et al. 1989–1990, 242; Pachón – Aníbal 2000, 278; Arruda 2002, 189; Torres 2002, 149. 368; Marlasca et al. 2005, 78.

80 Cintas 1950, 330–335; Cintas 1970, 332.

81 Pellicer 1968, 66; Bisi 1970, 49; Belén – Pereira 1985, 313; Caro 1989, 51. 54; Mancebo 1991–1992, 279.

82 Pellicer et al. 1983, 65 figs. 74, 356; 76, 5.

83 Luzón – Ruiz Mata 1973, pl. IX.

84 Luzón – Ruiz Mata 1973, pl. X.

85 Luzón – Ruiz Mata 1973, pl. XII a.

86 Torres 2008, 658. 661.

87 Almagro Gorbea 1977, 326 f. fig. 125, 12-3; Almagro Gorbea et al. 2006, 73 fig. 75, 3.

88 These vessels, when wheel-made with painted decoration, have been associated exclusively with cremations of women in the necropolis of Setefilla, where most of the cremated women died at around 20 years of age, possibly due to problems derived from pregnancy or childbirth⁸⁸. In the Medellín necropolis, the anthropological remains have always been attributed to female individuals, in two cases associated with small children of less than a year old or between two and three years old⁸⁹. The tomb with two vessels ›à chardon‹ from Santa Cruz de la Sierra (Cáceres) also seems to correspond to an adult female⁹⁰.

89 An important aspect is their function within the tombs. In some necropolises they are almost always the funerary container, the clearest example being tumuli A and B at Setefilla (Seville). They are used as funerary urns for cremations in tumulus A and are present in tombs 12, 13, 17, 18, 20, 22, 24, 25, 26, 30, 33, 34, 41, 42, 43, 45, 46, 49, 51, 52, 54, 62, 65, and around tombs 14 and 21. As an accompanying vessel serving as a container for offerings, they are in the minority. The vessel in tomb 27 is hand-made and wheel-made in tomb 41 and perhaps tomb 62 with painted bands⁹¹. In tumulus B, handmade vases ›à chardon‹ with cremated bones are present in tombs 1, 2, 4, 5, 7, 11, two vessels in tomb 12, and one in tombs 17, 20, 21, 22, 25, 26, 27, and 31⁹².

90 An opposite case is the Cruz del Negro necropolis, where 20 handmade ›à chardon‹ vases and two wheel-made ones were found⁹³. In only three tombs, 4, 6 and 26, the vessels ›à chardon‹ were used as cinerary containers. On the other hand, in the other 19 tombs they were used as a container for offerings, although they generally appeared fragmented, which is why Bonsor does not draw them nor does he seem to have collected the fragments. This is the case in Tomb II, where the remains of broken vessels were found inside the vase ›à chardon‹⁹⁴. Occasionally it is indicated that they still contained elements of adornment, such as a bronze belt clasp in tomb 11 or remains of ivory in tomb 22⁹⁵, which could suggest that they were primarily used to contain a liquid offering.

91 In the new campaigns, handmade vessels ›à chardon‹ have reappeared in some tombs of the Cruz del Negro, at least in tombs 22, 65, and 123⁹⁶, and a sketch of tomb 5 with another ›à chardon‹ has also been published⁹⁷. In all four cases they accompany vessels associated with Cruz del Negro urns, red slip craters or deposits on the floor without urns.

92 In the necropolis of La Joya (Huelva), their function as a container for offerings also predominates. On some occasions it was used as a funerary container, as in the case of tomb 1⁹⁸. However, it is usually a vessel to accompany the urn, normally a Cruz del Negro urn, as in tomb 2⁹⁹, tomb 6¹⁰⁰, tomb 12¹⁰¹, tomb 23¹⁰² or there is a cremation and an inhumation on the floor of the tomb, with the vase ›à chardon‹ forming part of the grave goods, as in tomb 9¹⁰³.

88 Aubet 1995, 402. 404.

89 Torres 2008, 659 fig. 754.

90 Martín Bravo 1998, 39 fig. 2, 1. 2.

91 Aubet 1975, 31 ff.

92 Aubet 1978, 12 ff.; Aubet 1980–1981, 93 figs. 10. 11.

93 Bonsor 1928, 13; Mederos et al. 2023.

94 Bonsor 1899, 79.

95 Maier 1992, 100. 103.

96 Amores et al. 2000a; Amores et al. 2000b; Amores et al. 2000c.

97 Amores et al. 2000a, 160.

98 Orta – Garrido 1963, 23 fig. 13.

99 Garrido 1970, 18 f. fig. 8.

100 Garrido 1970, 33 fig. 22.

101 Garrido – Orta 1978, 36, fig. 16.

102 Echevarría et al. 2021, 253 fig. 15, 3.

103 Garrido 1970, 56 fig. 41.

93 As in the exceptional case of tomb DJ 21 from the necropolis of Djebila, where two vases ›à chardon‹ appear together, although the height of both could not be reconstructed¹⁰⁴, we also know of examples in the Iberian Peninsula with two or three vases ›à chardon‹ in tombs. In the necropolis of La Joya, the Cruz del Negro urn in tomb 16 is accompanied by three vessels ›à chardon‹¹⁰⁵ and, in tomb 19, containing two cremations inside Phoenician amphorae, there are another three vessels ›à chardon‹, although only one is drawn¹⁰⁶.

94 Tomb 24 from La Joya is interesting because the vase ›à chardon‹ was deposited inverted some time after the burial¹⁰⁷, which suggests that, rather than containing a liquid or semi-solid offering for the deceased, it could have been used in a funerary banquet held next to the tomb. However, as it is not contemporary with the burial, it does not exclude the function as a container for liquid offerings when it appears in association with urns in the tombs.

95 In North African contexts, the most interesting examples come from the necropolis of Rachgoun (Algeria) where two vessels ›à chardon‹ – both handmade – containing cremations have been documented in tombs 38 and 117¹⁰⁸. However, there is also a small vessel of the same shape as one of the grave goods¹⁰⁹. A vase ›à chardon‹ is found in tomb structures at Lalla Ghano (Morocco)¹¹⁰, attributed to the 5th – 3rd centuries BCE¹¹¹.

96 In Carthage, vases ›à chardon‹ are present in the oldest levels of the sanctuary of Tanit¹¹² and in other sectors of Carthage between the 8th and 7th centuries BCE¹¹³.

97 In the necropolis of Aïn Dalia Kebira and Djebila, the tombs with vases ›à chardon‹ sometimes coincide with those with significant grave goods, acting probably as offering vessels as indicated by Ponsich¹¹⁴, as they are all inhumations (on the possible occurrence of cremations in the Djebila cemetery, see the part by D. Blaschta et al.). This is the case with tomb AD 26, with a silver ring and various bronze adornments, where the 19 cm high, red-slipped vase ›à chardon‹ with a four-footed base is next to the head¹¹⁵. Tomb AD 28, with a double burial, contains a small, 15 cm-tall vase ›à chardon‹ with a truncated cone-shaped foot, accompanied by a bronze finger ring, a small iron tool, and a glass bead¹¹⁶. Tomb AD 79 contains the presumed base of a wheel-turned vase ›à chardon‹ with a flat base¹¹⁷, like the vases ›à chardon‹ in tomb DJ 21 from Djebila, accompanied by a bronze bracelet and various necklace elements.

98 This is also the case in the necropolis of Djebila; in tomb DJ 1, the 17.5 cm vase ›à chardon‹ is accompanied by two silver earrings¹¹⁸. Tomb DJ 4 contains only the preserved neck of a vase ›à chardon‹ together with a bronze ring and a necklace with ostrich shell, glass and amber beads¹¹⁹. In tomb DJ 22, an iron knife accompanies a possible ›à chardon‹ vase, although only a fragment of the rim is preserved¹²⁰. Finally, tomb DJ 27

104 Ponsich 1967, 159–161 fig. 58 d pl. 41 d.

105 Garrido – Orta 1978, 59. 63 figs. 30–32.

106 Garrido – Orta 1978, 164 fig. 103.

107 Echevarría et al. 2021, 256 figs. 17. 19. 20.

108 Vuillemot 1955, pl. 7.

109 Vuillemot 1955, pl. 11, 17.

110 Rebuffat – Limane 2011, 75 M60 type?.

111 Papi 2019, 294.

112 Harden 1927, fig. 3; Harden 1937, 65 fig. 3 k pl. IX, 6.

113 Cintas 1950, 472. 476. 510. 512. 531.

114 Ponsich 1967, 72.

115 Ponsich 1967, 72. 74–76 fig. 23 b pl. 18 c.

116 Ponsich 1967, 74 f. fig. 23 e.

117 Ponsich 1967, 124 f. fig. 43 c.

118 Ponsich 1967, 146 pl. 37b; 147; 148 fig. 53c.

119 Ponsich 1967, 149 f. fig. 54 c.

120 Ponsich 1967, 159. 162 fig. 59 b.

has a ring and two silver earrings together with a possible vase ›à chardon‹, although the neck is fragmented, but its form corresponds to that of one of the two specimens from tomb 21¹²¹. The occurrence of this type of vessel in Djebila, together with silver earrings with basket pendants, could indicate that it belongs to women's graves, as is the case on the Iberian Peninsula.

99 On other occasions, the vase ›à chardon‹ is accompanied by other grave goods, as in in tomb AD 30 at Kebira containing the burial of a child together with a small, 13 cm, wheel-made and painted vase ›à chardon‹, which Ponsich¹²² relates to *Kouass* vases ›à chardon‹ from the 5th century BCE. It is accompanied by a small handmade bowl 10 cm in diameter, filled with cereal grains.

100 More exceptional is the presence of two vases ›à chardon‹ in the same tomb, which seems to have been the case in tomb AD 75 at Kebira, both fragmented below the start of the neck¹²³.

101 Occasionally the vase ›à chardon‹ has no associated grave goods, as in tomb AD 32 of the Kebira necropolis, containing a large vase ›à chardon‹, 24.5 cm high¹²⁴. In the Djebila necropolis this is more frequent; only the neck of the vase ›à chardon‹ in tomb DJ 14 is preserved, but has no drawing or photograph¹²⁵. Tomb DJ 26 contained a very fragmented vase ›à chardon‹, although the neck with divergent rim was preserved¹²⁶. This is also the case in tomb DJ 53, containing an 18 cm-high vase ›à chardon‹ with a raised foot¹²⁷, which is unusual for this type of vessel and may be influenced by Greek kraters, but which are also used in other vessels such as the cup from tomb DJ 64. There is a similar absence of grave goods in tomb DJ 69, which only has the 22 cm high ›à chardon‹ vase with a flat base¹²⁸. This marked carination, with convergent walls and before the divergent neck, is present in the handmade vases ›à chardon‹ in tombs 2, 3, and 6 of the Cruz del Negro, all three with a flat base¹²⁹, although their heights are greater, measuring between 31 and 48 cm. There is also a possible long-necked vase ›à chardon‹ in tomb DJ 78 but without drawing or photograph¹³⁰, and another vase ›à chardon‹ with omphalos and neck with convergent walls, although the rim is missing, from tomb DJ 85¹³¹.

102 Also interesting are possible local interpretations of vases ›à chardon‹, as in tomb DJ 17 from Djebila, which has a shorter neck with convergent walls, a divergent rim, and a much higher spherical body¹³², which differ from the vases ›à chardon‹ with their more vertical neck and spherical body with the widest point at the bottom. They are similar in height, 17 cm, and have an omphalos at the base. Another possible local interpretation of a vase ›à chardon‹ exists in tomb DJ 32¹³³ with a height of 21 cm, shaped wider at the bottom and with a convergent-walled neck and a divergent rim. In tomb DJ 41 it has a foot, a middle carination from which a convergent-walled neck starts but is not finished (as it is only 12 cm high¹³⁴) but it resembles vessels like the one in tomb DJ 53¹³⁵.

121 Ponsich 1967, 166 f. fig. 61 b.

122 Ponsich 1967, 78–80 fig. 24 c. d pl. 19 a. c.

123 Ponsich 1967, 117–119 figs. 40; 41 b.

124 Ponsich 1967, 82 f. fig. 25 b.

125 Ponsich 1967, 154.

126 Ponsich 1967, 167. 169 fig. 60 i.

127 Ponsich 1967, 188–190 figs. 50 c; 67 e.

128 Ponsich 1967, 199–201 fig. 71 e pl. 52 e.

129 Bonsor 1928, 13; Maier 1999, Seite? figs. 3, 23. 24; 5, 32.

130 Ponsich 1967, 207.

131 Ponsich 1967, 211 f. fig. 74 c.

132 Ponsich 1967, 156–158 fig. 57 d pl. 40 d.

133 Ponsich 1967, 175–177 fig. 63 c pl. 46 b.

134 Ponsich 1967, 181–183 pl. 48d fig. 65 e.

135 Ponsich 1967, 181–183 pl. 48d fig. 65 e.

Wheel-painted Vases »à chardon«

103 Exceptionally, there are some wheel-painted ceramics (Fig. 32) including a vase »à chardon« in tomb 30 at Djebila and Aïn Dalia Kebira. A fragment of a belly with painted bands is mentioned from DJ 30, which Ponsich¹³⁶ relates to the Phoenician colony of Toscanos and the painted ceramics of Banasa. The pottery from AD 30 was completely reconstructed, drawn and photographed by Ponsich¹³⁷, and it is clearly a wheel-painted vase »à chardon« with matte red bands on the neck and the upper part of the belly, giving it a Phoenician chronology prior to the 5th century BCE according to Mohamed Kbiri Alaoui¹³⁸.

104 Another case mentioned is a wheel-made vessel with a cylindrical neck and painted horizontal bands, 9.5 cm high, from tomb AD 84 at Aïn Dalia Kebira¹³⁹. From the characteristics of its paste, it is undoubtedly attributed to the Kouass workshop¹⁴⁰ as suggested by Ponsich¹⁴¹.

Cruz del Negro urns

105 Cruz del Negro urns receive their name from the ceramics found in Bonsor's excavations¹⁴² in Cruz del Negro¹⁴³. As a designation of a specific type, this name was used regularly after the publication of the Medellín series where they are expressly called »Cruz del Negro type urns«¹⁴⁴.

106 We only know of one wheel-made Cruz del Negro urn, 19 cm high, from tomb AD 60 of Aïn Dalia Kebira (Fig. 33) deposited at the foot of the burial¹⁴⁵ and accompanied by two silver rings¹⁴⁶ considered to be of Punic type¹⁴⁷.

107 In the case of the necropolis of Djebila we also only know of one likely example from tomb DJ 104, of which only part of the rim and one of the handles are preserved¹⁴⁸. They are classified as type IX vases with handles perpendicular to the neck¹⁴⁹.

108 The urns from Aïn Dalia Kebira and Djebila seem to correspond to types 5 or 6 of the Cruz del Negro from the first half of the 6th century BCE. Although they do not have a neck band and the drawing does not specify whether they have two twinned handles, types 5 and 6 sometimes also have two ribbon handles with a circular cross-section.

109 Subtype 5, with a chronology of c. 600–575 BCE, corresponds to smaller urns and features a biconical shape that narrows at the base and at the point of connection with the start of the vertical neck and divergent rim, with a central shaft from which either two twinned handles or two ribbon handles with a circular cross-section emerge. In the Cruz del Negro, this is seen in urn 41 of the Hispanic Society¹⁵⁰ and urn 10 of the Casa Museo Bonsor¹⁵¹. There is also a specimen in the Campo de las Canteras, Carmona¹⁵².

110 Cruz del Negro urns have been documented in the Mondego river basin, in Santa Olaia, Portugal, the northernmost point in the Atlantic¹⁵³, and on the Mediterra-

136 Ponsich 1967, 170–172 fig. 62 c pl. 44 c.

137 Ponsich 1970, 130. 135. 137 fig. 45 c pl. 44.

138 Kbiri Alaoui 2000, 1187. 1190. 1194 fig. 3, 2.

139 Ponsich 1967, 127–129 pl. 33d fig. 44 h.

140 Kbiri Alaoui 2000, 1184 fig. 3, 1; 1187.

141 Ponsich 1970, 130.

142 Bonsor 1899, 77 f. figs. 73. 74; 115 fig. 111; 128 fig. 193.

143 Aubet 1971, 116.

144 Almagro Gorbea 1977, 395 fig. 156.

145 Ponsich 1967, 106–108 fig. 35 e pl. 27, 2 c; Ponsich 1970, 127 f. fig. 41 e pl. 40.

146 Ponsich 1967, 106–108 fig. 35 d pl. 27, 2 b.

147 Ponsich 1967, 108.

148 Ponsich 1967, 221 f. fig. 77 c.

149 Ponsich 1970, 118.

150 Aubet 1976–1978, 273 fig. 2, 9.

151 Maier 1999, 103 fig. 4, 29.

152 Belén – Pereira 1985, fig. 7.4.

153 Frankenstein 1997, figs. 32. 33.



32

Fig. 32: Wheel-made and painted vessels »à chardon« from Ain Dalhia Kebira (AD 30, AD 84).



33

Fig. 33: Cruz del Negro amphora from Ain Dalhia Kebira (AD 60).



34

Fig. 34: a. Bottom of a wheel-made and red-slipped dipper jug from Djebila (DJ 30); b. Inside of jug.

of Djebila is one of the most interesting because, according to Ponsich¹⁶⁶, it contains an oinochoe and a red-slipped flask, which he uses to date the tomb to between the 7th and 6th centuries BCE. Given its fragmentary nature, it is difficult to assess it with the drawings and photos it presents and new drawings would be necessary. The lower part of the flask is preserved (Fig. 34), as well as a fragment of the neck of the oinochoe. Red-slipped perfume flasks or bottles are rare, although two examples are known from the Cruz del Negro¹⁶⁷. The oldest flasks have a ring foot, which this example lacks, and the more mod-

Oinochoe and ampulla with red slip

113 Tomb DJ 30 from the necropolis

nean façade, as well as handmade imitations in tomb 184 of the necropolis of Agullana, Gerona¹⁵⁴, where they coexist in the same tomb with subtype 6¹⁵⁵. They have also been documented in the necropolis of Can Piteu-Can Roqueta in Barcelona¹⁵⁶, on Roman road 38 in Ibiza¹⁵⁷ or inland in Extremadura, with an additional three examples from Medellín, Badajoz, 82/17-1, 85A/4-1, and 86H/18-1¹⁵⁸.

111 Subtype 6, with a chronology of c. 575–550 BCE, corresponds to smaller urns and features a spherical shape with a pyriform tendency, slightly wider in the lower half, a vertical neck and a divergent rim with a central thickening, from which either two twinned handles or two ribbon handles with a circular cross-section sprout. In the Cruz del Negro, these features are present in urn 48 of the Hispanic Society¹⁵⁹ and urn 5 of the Casa Museo Bonsor¹⁶⁰.

112 Some interesting contexts featuring urns of subtype 6 can be found in the later phase of frequentation of Mogador¹⁶¹, in stratum IIb of grid 3 of Cerro del Villar, Málaga¹⁶², in tomb 86C/15-1 of Medellín, Badajoz¹⁶³, in tomb 7 of the necropolis of Frigiliana, Málaga¹⁶⁴ or in phase IIb of the Palaiapolis of Ampurias¹⁶⁵.

154 de Palol 1958, fig. 165, 9–11.

155 de Palol 1958, fig. 165, 1. 12.

156 Marlasca et al. 2005, fig. 1, 9.

157 Gómez Bellard et al. 1990, fig. 86, 360.

158 Torres 2008, 648 figs. 738–740.

159 Aubet 1976–1978, 273 fig. 2, 10.

160 Maier 1999, 103 fig. 4, 5.

161 Kbiri Alaoui – López Pardo 1998, 13 fig. 4, 377.

162 Aubet et al. 1999, 211. 274 figs. 108 a–d; 129 h.

163 Almagro Gorbea et al. 2006, 236 figs. 316. 317; Torres 2008, 650 fig. 741.

164 Arribas – Wilkins 1969, 226 f. fig. 14, 1.

165 Castanyer et al. 1999, fig. 203, 1.

166 Ponsich 1967, 170–172 fig. 62 b–d pl. 44.

167 Culican 1970, 8 fig. 1 E; Aubet 1976–1978, 278 f.

ern ones evolve from spherical shapes to oval profiles. Therefore, a possible chronology would be the last quarter of the 7th century BCE¹⁶⁸ or the first half of the 6th century BCE. However, from the new drawing, it seems to be more of a base of a small dipper juglet or jugs with a characteristic pointed bottom and Phoenician red slip on the outside. These ceramics, which appear from Tyre V¹⁶⁹ with more rounded bottoms, are very frequent in Tyre III¹⁷⁰, and are well represented in a tomb in the northern necropolis of Achziv where 27 examples were found¹⁷¹. In the Iberian Peninsula they also appear in funerary contexts such as tomb 24 of tumulus 1 at Las Cumbres (Cádiz)¹⁷², which also has red engobe on the outside, or tomb 63 of tumulus A at Setefilla¹⁷³. However, these are more common in 7th century BCE contexts and are somewhat wider and less cylindrical, such as the Teatro Cómico de Cádiz¹⁷⁴, Castillo de Doña Blanca¹⁷⁵, Cerro del Villar en Málaga¹⁷⁶ or the La Pancha pottery on the coast of Vélez-Málaga¹⁷⁷. In north African contexts they are very well represented in Mogador, where 15 examples are known¹⁷⁸ and one example in the Algerian necropolis of Rachgoun¹⁷⁹.

¹¹⁴ Mushroom-mouthed jars, which are usually accompanied by a jug with a trilobate rim, are an important element in Phoenician-rooted grave goods. The specimen from tomb DJ 30 has a preserved neck and the start of the mouth opening with two decorative incisions above a presumed handle. Despite the orientation of the drawing it could be a jug with a conical neck, similar to a specimen from Cruz del Negro or another from Carambolo Bajo, both in Seville¹⁸⁰ and both of which have a strip on the neck, while other specimens such as those from Casa de la Viña in Málaga have incisions¹⁸¹, as in the case of Djebila.

Handmade Pots with Fingerprint Decoration

¹¹⁵ Only one example of the cooking pots with fingerprint decoration is known to us, a specimen accompanied by a jug with a ribbon handle from tomb AD 80 of Aïn Dalia Kebira¹⁸², which includes it in its type VII¹⁸³. The most characteristic element is a simple decoration with a row of fingerprints below the rim or at shoulder height, as in this case. It has been suggested that these ceramics are of Phoenician origin and their chronology has been placed between the late 8th and late 6th centuries BCE, with a peak in their use during the 7th and early 6th centuries BCE¹⁸⁴. On the other hand, other researchers have considered it to be part of the ceramic ware of the indigenous population of the Late Bronze Age, appearing before the arrival of the Phoenicians at the beginning of the 8th century BCE and reaching its peak from the middle of the 8th century and throughout

¹⁶⁸ Orsingher 2010, 68 f. pls. 1. 2.

¹⁶⁹ Bikai 1978, 41 f. tab. 9.

¹⁷⁰ Bikai 1978, pl. 12, 1–23.

¹⁷¹ Mazar 2004, 45. 66 f. fig. 13.

¹⁷² Ruiz Mata – Pérez 1995, pl. 3.

¹⁷³ Aubet 1975, 128 f. fig. 54, 2.

¹⁷⁴ Torres et al. 2014, 63 fig. 8 a.

¹⁷⁵ Ruiz Mata 1985, 259. 262 fig. 8, 7.

¹⁷⁶ Aubet et al. 1999, 171 figs. 121 d; 164 a.

¹⁷⁷ Martín Córdoba et al. 2006, 277 fig. 15 c.

¹⁷⁸ Jodin 1966, 145 pl. 38; López Pardo – Mederos 2008, 250.

¹⁷⁹ Vuilleminot 1955, pl. 9, 20.

¹⁸⁰ Ruiz Mata 1986, fig. 11.

¹⁸¹ Martín Córdoba et al. 2006, fig. 12.

¹⁸² Ponsich 1967, 125–127 figs. 33 b; 43 e. f.

¹⁸³ Ponsich 1970, 118. 125 fig. 38.

¹⁸⁴ Ladrón de Guevara 1994, 329. 332.

the 7th century BCE¹⁸⁵. A wider chronological range is proposed by Mariano Torres¹⁸⁶ between 850 and 500 BCE.

Other Ceramic Forms

116 There are other simpler handmade ceramic forms or those that are in a fragmented state, which makes their evaluation difficult, but these nevertheless show the presence of indigenous local forms. Thus, a number of objects are mentioned in the necropolis of Ain Dalia Kebira but are not described in the tomb inventory¹⁸⁷. These include a small fragment of a ›Neolithic‹ amphora in tomb AD 6 without a drawing or photograph¹⁸⁸, a jug with ribbon handle in tomb AD 23¹⁸⁹, a jug with two ribbon handles in tomb AD 24¹⁹⁰, a bowl with high bend and ringed foot from tomb AD 25¹⁹¹, two ceramics from tomb AD 42 without a drawing or photograph¹⁹², a necked vessel from tomb AD 45¹⁹³, a jug with ribbon handle in tomb AD 48 at the feet of the individual¹⁹⁴, a small necked vessel measuring 9.5 cm from tomb AD 50¹⁹⁵, a bowl in tombs AD 59¹⁹⁶ and AD 67¹⁹⁷, and a necked vessel and a jug with a ribbon handle from tomb AD 82¹⁹⁸.

117 In the necropolis of Djebila, we find: fragments of a necked vessel with divergent rim from tomb DJ 2, also without a drawing or photograph¹⁹⁹; a small cup measuring 6 cm from tomb DJ 39²⁰⁰; a small jug measuring 10 cm in height with a ribbon handle and an appendage serving as a spout which, coming from tomb DJ 65 with a child burial, is interpreted by Ponsich²⁰¹ as a feeding bottle; a jug with a ribbon handle from tomb DJ 66 along with fragments of amphorae²⁰²; a small cup measuring 6 cm in height in tomb DJ 67 with a child burial²⁰³; a small bowl with flat base 5 cm in height in tomb DJ 70 with a child burial²⁰⁴; fragments of common ceramics from tomb DJ 76, also without drawing or photograph²⁰⁵; a small necked vessel with divergent wall from tomb DJ 82 within a child burial²⁰⁶; a fragment of an amphora of indeterminate shape in tomb DJ 86²⁰⁷; several fragments of handmade ceramics in tombs DJ 97 and DJ 98²⁰⁸; a cup with a 5.5 cm foot from tomb DJ 102²⁰⁹; and an atypical form, perhaps a possible lid (›couvercle‹) ending in a point with two lines of small perforations and not associated with any other particular container²¹⁰.

185 Ruiz Mata 1995, 278 f.

186 Torres 2002, 163.

187 Ponsich 1967, 119 fig. 41 f; 128 f. fig. 44 f.

188 Ponsich 1967, 49.

189 Ponsich 1967, 69 f. fig. 21 c.

190 Ponsich 1967, 71–73 fig. 22 c pl. 16 b.

191 Ponsich 1967, 72–74 fig. 22 f pl. 17 c.

192 Ponsich 1967, 87.

193 Ponsich 1967, 91 f. fig. 29 b.

194 Ponsich 1967, 96 f. fig. 31 b.

195 Ponsich 1967, 96 f. fig. 31 e.

196 Ponsich 1967, 107 f. fig. 35 b.

197 Ponsich 1967, 110–112 fig. 62 b–d pl. 28 c.

198 Ponsich 1967, 119 fig. 41 f; 128 f. fig. 44 f. s. 186.

199 Ponsich 1967, 147.

200 Ponsich 1967, 181. 183 fig. 65 b.

201 Ponsich 1967, 193. 195. 197 fig. 69 g pl. 51 g.

202 Ponsich 1967, 196–198 fig. 70 i.

203 Ponsich 1967, 198–200 fig. 71 b pl. 52 b.

204 Ponsich 1967, 201–203 fig. 72 e pl. 63 b.

205 Ponsich 1967, 204.

206 Ponsich 1967, 208 f. fig. 73 j.

207 Ponsich 1967, 211.

208 Ponsich 1967, 217.

209 Ponsich 1967, 219 f. pl. 58 c.

210 Ponsich 1967, 220–222 fig. 62 b–d pl. 58 e.

Another striking aspect is that some of the tombs with ceramic vessels lack other additional burial items, as is the case with a necked vessel and a bent-sided bowl in tomb AD 7 in Ain Dalia Kebira²¹¹, tomb AD 16 with a jug with a ribbon handle and a bowl with a ringed foot²¹², or in tomb AD 19 containing fragments of very eroded hand-made ceramics, also without drawings or photographs²¹³. The same happens in tombs of Djebila, such as a vessel with a spherical body from tomb DJ 12 without drawings or photographs²¹⁴, as well as a bowl with a flat bottom from tomb DJ 60, also without drawings or photographs²¹⁵. An exceptional case is tomb DJ 64 with three vessels in one tomb, a bowl with a flat bottom, a cup 15.2 cm in diameter with an indicated foot, and a jug with a ribbon handle²¹⁶.

Alfredo Mederos Martín

Part III

Amber Analysis

Methodology

We used FTIR, a well-grounded methodology, to study the origin of an amber bead found at Djebila.

The sampled bead was tested by Attenuated Total Reflectance Fourier Transform Infrared spectroscopy (ATR-FTIR) using a Nicolet IS5 FTIR spectrometer equipped with a ID7 diamond ATR accessory. The data were collected as infrared transmission spectra after scanning each specimen 64 times in the range 4000–400 cm^{-1} , with a resolution of 4 cm^{-1} .

The recorded spectra were then compared to the published reference spectra (INR00035 and INR00103 cards from <www.irug.org>) in order to find matching spec-

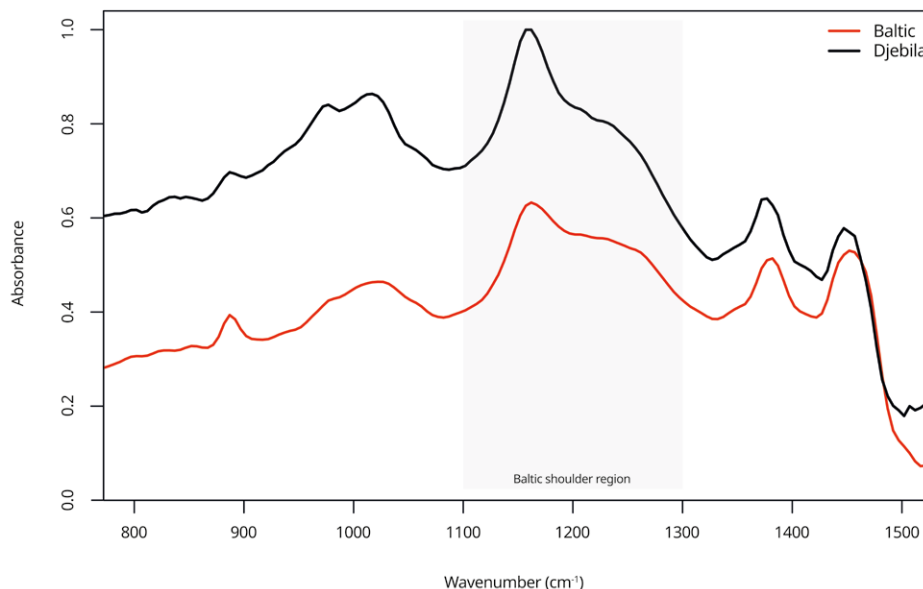


Fig. 35: FTIR spectrum in the fingerprint region of the analysed sample (DJ 101) compared to standard reference spectrum from the Baltic region.

35

²¹¹ Ponsich 1967, 52–54 fig. 15 b. c pl. 9 b. c.

²¹² Ponsich 1967, 63 f. fig. 19 b. c.

²¹³ Ponsich 1967, 66.

²¹⁴ Ponsich 1967, 154.

²¹⁵ Ponsich 1967, 192.

²¹⁶ Ponsich 1967, 193–195 fig. 69 f. h pl. 51 a–c.

tral features or fingerprints that allow for a positive origin match, thus establishing a probable origin for the tested samples.

Results & Discussion

122 The bead's spectrum shows the so-called Baltic shoulder – an intense absorption peak in the 1160–1150 cm⁻¹ range, preceded by a characteristic band between 1250 and 1180 cm⁻¹, typical of ambers from the Baltic²¹⁷.

123 The set of recorded spectral features in the analysed sample (Fig. 35) are compatible with the spectral features recorded for the amber occurring at the Baltic region.

Acknowledgements

124 The analysis of amber beads was funded by the MICIN under contract PID2021-124421NB-I00).

Carlos P. Odriozola – José Ángel Garrido Cordero – José María Martínez-Blanes

Bibliography

- Almagro Gorbea 1977** M. Almagro Gorbea, El Bronce Final y el Periodo Orientalizante en Extremadura, *Bibliotheca Praehistorica Hispana* 14 (Madrid 1977)
- Almagro-Gorbea et al. 2006** M. Almagro-Gorbea – J. Jiménez Ávila – A. Lorrio – A. Mederos – M. Torres, La necrópolis de Medellín I. La excavación y sus hallazgos, *Bibliotheca Archaeologica Hispana* 26, 1 = *Studia Hispano-Phoenicia* 5, 1 (Madrid 2006)
- Amores et al. 2000a** F. Amores – A. Fernández Cantos, La necrópolis de la Cruz del Negro (Carmona, Sevilla), in: C. Aranegui Gascó (ed.), *Argantonio, rey de Tartessos. Exhibition catalogue* (Sevilla 2000) 156–163
- Amores et al. 2000b** F. Amores – A. Fernández Cantos – M^a. S. Gil de los Reyes, La Cruz del Negro, tumba 65, Carmona, Sevilla, in: C. Aranegui Gascó (ed.), *Argantonio, rey de Tartessos. Exhibition catalogue* (Sevilla 2000) 299
- Amores et al. 2000c** F. Amores – A. Fernández Cantos – M^a. S. Gil de los Reyes, La Cruz del Negro, tumba 123, Carmona, Sevilla, in: C. Aranegui Gascó (ed.), *Argantonio, rey de Tartessos. Exhibition catalogue* (Sevilla 2000) 301
- Arribas – Wilkins 1969** A. Arribas – J. Wilkins, La necrópolis fenicia del Cortijo de las Sombras (Frigiliana, Málaga), *Pyrenae* 5, 1969, 185–244
- Arruda 2002** A. M. Arruda, Los fenicios en Portugal. Fenicios y mundo indígena en el centro y sur de Portugal (siglos VIII–VI a. C.), *Cuadernos de Arqueología Mediterránea* 5–6, 1999–2000 (2002)
- Astruc 1951** M. Astruc, La necropolis de Villaricos, *Informes y memorias* 25 (Madrid 1951)
- Aubet 1971** M^a. E. Aubet Semmler, Los hallazgos púnicos de Osuna, *Pyrenae* 7, 1971, 110–128
- Aubet 1975** M^a. E. Aubet Semmler, La necrópolis de Setefilla en Lora del Río, Sevilla (túmulo A) (Barcelona 1975)
- Aubet 1976–1978** M^a. E. Aubet Semmler, La cerámica a torno de la Cruz del Negro, *Ampurias* 38–40, 1976–1978, 267–287
- Aubet 1978** M^a. E. Aubet Semmler, La necrópolis de Setefilla en Lora del Río, Sevilla (túmulo B), *Programa de investigaciones protohistóricas* 3 (Barcelona 1978)
- Aubet 1980–1981** M^a. E. Aubet Semmler, Nuevos hallazgos en la necrópolis de Setefilla (Sevilla), *Mai-nake* 2–3, 1980–1981, 87–115
- Aubet 1995** M^a. E. Aubet Semmler, Aproximación a la estructura social y demográfica tartésica, in: Tartessos. 25 años después 1968–1993. Jerez de la Frontera. Actas del congreso conmemorativo del V Symposium Internacional de Prehistoria Peninsular, Biblioteca de Urbanismo y Cultura 14 (Jerez de la Frontera 1995) 401–409
- Aubet 1996** M^a. E. Aubet Semmler, *The Phoenicians and the West. Politics, Colonies and Trade* (Cambridge 1996)
- Aubet et al. 1999** M^a. E. Aubet Semmler – P. Carmona – E. Curià – A. Delgado – A. Fernández Cantos – M. Párraga, Cerro del Villar I. El asentamiento fenicio en la desembocadura del río Guadalhorce y su interacción con el hinterland (Sevilla 1999)
- Beba 2008** S. Beba, Die tartessischen »Fürstengräber« in Andalusien, *Bochumer Forschungen zur ur- und frühgeschichtlichen Archäologie* 1 (Rahden/Westf. 2008)
- Becker u. a. 2013** C. Becker – A. von den Driesch – H. C. Küchelmann, Mogador, eine Handelsstation am westlichen Rand der phönizischen und römischen Welt – die Tierreste, in: G. Gruppe – G. McGlynn – J. Peters, *Current Discoveries from Outside and Within. Field Explorations and Critical Comments from the Lab*, *Documenta archaeobiologiae* 10 (2012) (Rahden/Westf. 2013) 11–159
- Beck et al. 1965** C. W. Beck – E. Wilbur – S. Meret – D. Kossove – K. Kermani, The Infrared Spectra of Amber and the Identification of Baltic Amber, *Archaeometry* 8, 1, 1965, 96–109
- Belén – Pereira 1985** M^a. Belén – J. Pereira, Cerámicas a torno con decoración pintada en Andalucía, *HuelvaA* 7, 1985, 307–360
- Bikai 1978** P. M. Bikai, *The Pottery of Tyre* (Warminster 1978)
- Bisi 1970** A. M^a. Bisi, La ceramica punica. Aspetti e problemi (Naples 1970)
- Bonsor 1899** G. Bonsor Saint Martin, Les Colonies agricoles pré-romaines de la vallée du Bétis, *Revue Archéologique* (3^a s.) 35, 1899, 126–159. 232–325. 376–391
- Bonsor 1928** G. Bonsor Saint Martin, From Tarshish to the Isles of Tin, *Art and Archaeology* 25, 1928, 10–17
- Caro 1989** A. Caro Bellido, *Cerámica gris a torno tartesia* (Cádiz 1989)
- Castanyer et al. 1999** P. Castanyer – Q. Esteba – E. Pons – M. Santos – J. Tremoleda, L'assentament indígena de la primera edat del ferro, in: X. Aquilué Abadías (ed.), *Intervencions arqueològiques a Sant Martí d'Empúries* (1994–1996). De l'assentament precolonial a l'Empuries actual, *Monografies Emporitanes* 9 (Barcelona 1999) 103–215
- Chamorro 1987** J. G. Chamorro, Survey of Archaeological Research on Tartessos, *AJA* 91, 2, 1987, 197–232
<<https://doi.org/10.2307/505217>> (27.07.2024)
- Cintas 1950** P. Cintas, *Ceramique Punique*, Publications de l'Institut des hautes études de Tunis 3 (Paris 1950)
- Cintas 1970** P. Cintas, Manuel d'archéologie punique I. Histoire et archéologie comparées. Chronologies des temps archaïques de Carthage et des villes phéniciennes de l'Ouest (Paris 1970)
- Culican 1970** W. Culican, Phoenician Oil Bottles and Tripod Bowls, *Berytus* 19, 1970, 5–18
- de la Bandera Romero – Ferrer Albelda 2014** M. L. de la Bandera Romero – E. Ferrer Albelda, Las joyas y adornos personales, in: Á. Fernández Flores – A. Rodríguez Azogue – M. Casado Ariza – E. Prados Pérez (eds.), *La Necrópolis de Época Tartésica de la Angorilla* (Sevilla 2014) 429–475

- Echevarría et al. 2021** A. Echevarría – D. González Batanero – J. M. Beltrán – J. C. Vera – D. Marzoli, Die Gräber 21–28 von La Joya (Huelva, Andalusien). Vorbericht über die Probegrabung 2019, *MM* 62, 2021, 230–328
- El Khayari 2007** A. El Khayari, L'apport de la Nécropole de Raqqada (Lixus, Larache) à la connaissance de l'art phénico-punique, in: *La Méditerranée des Phéniciens. De Tyr à Carthage* (Paris 2007) 146 f.
- Escacena 2000** J. L. Escacena Carrasco, La arqueología protohistórica del sur de la Península Ibérica. Historia del un río revuelto, *Arqueología Prehistórica* 4 (Madrid 2000)
- Escacena 2019** J. L. Escacena Carrasco, Carmona como paradigma de Tartessos, in: M. González Jiménez – A. Caballos (eds.), *La imagen de Carmona a través de la historia, la literatura y el arte. Carmona vista, Carmona inventada, Carmona imaginada. XI Congreso de Historia de Carmona, Serie Historia y geografía* 352 (Sevilla 2019) 43–66
- Fariselli 2015** A. C. Fariselli, Bambini e campanelli. Note preliminari su alcuni «effetti sonori» nei rituali funerari e votivi punici, in: E. Acquaro, *L'Archeologia Punica e gli dèi degli altri, Byrsa 21/22–23/24, 2012/13* (Ravenna 2015) 29–44
- Fernández Flores u. a. 2014** Á. Fernández Flores – A. Rodríguez Azogue – M. Casado Ariza – E. Prados Pérez, Necrópolis de época tartésica de la Angorrilla, Alcalá del Río, Sevilla, *Serie Historia y geografía* 271 (Sevilla 2014)
- Frankenstein 1997** S. Frankenstein, *Arqueología del colonialismo. El impacto fenicio y griego en el sur de la Península Ibérica y el suroeste de Alemania* (Barcelona 1997)
- Garrido 1970** J. P. Garrido Roiz, Excavaciones en la necrópolis orientalizante de La Joya, Huelva (1ª y 2ª Campañas), *Excavaciones Arqueológicas en España* 71 (Madrid 1970)
- Garrido – Orta 1978** J. P. Garrido Roiz – E. M. Orta, Excavaciones en la necrópolis de la Joya, Huelva (3ª, 4ª y 5ª campañas), *Excavaciones Arqueológicas en España* 96 (Madrid 1978)
- Gauckler 1915** P. Gauckler, *Nécropoles puniques de Carthage I* (Paris 1915)
- Golani 2013** A. Golani, Jewelry from the Iron Age II Levant, *Orbis biblicus et orientalis. Series archaeologica* 34 (Fribourg 2013)
- Gómez Bellard et al. 1990** C. Gómez Bellard – B. Costa – F. Gómez Bellard – R. Gurrea – E. Grau – R. Martínez Valle, La colonización fenicia de la isla de Ibiza, *Excavaciones Arqueológicas en España* 157 (Madrid 1990)
- González Prats 2014** A. González Prats, La cerámica a torno. Tipos 23–32, 35–42 y 44–48, in: A. González Prats (ed.), *La Fonteta 2. Estudio de los materiales arqueológicos hallados en la colonia fenicia de la actual desembocadura del río Segura (Guardamar del Segura, Alicante) II* (Alicante 2014) 573–690
- Grevey 2020** A. Grevey, The Origins of the First Ferrous Knives on the Iberian Peninsula and in Southern France. A Typological Viewpoint (9th – 7th Centuries BC), in: M. C. Belarte – M. C. Rovira – J. Sanmartí (eds.), *Iron Metallurgy and the Formation of Complex Societies in the Western Mediterranean (1st Millennium BC). Proceedings of the 8th International Archaeological Meeting of Calafell 2016, ArqueoMediterrània 15* (Barcelona 2020) 115–124
- Guérin 2003** P. Guérin, El Castellet de Bernabé y el horizonte ibérico pleno edetano, *Serie de trabajos varios* 101 (Valencia 2003)
- Harden 1927** D. B. Harden, Punic urns from the Precinct of Tanit at Carthage, *AJA* 31, 1927, 297–310
- Harden 1937** D. B. Harden, The pottery from the Precinct of Tanit at Salammbô, Carthage, *Iraq* 4, 1937, 59–89
- Jacobsthal 1956** P. Jacobsthal, Greek Pins. And Their Connexions with Europe and Asia, *Oxford Monographs on Classical Archaeology* 3 (Oxford 1956)
- Jiménez Barrero u. a. 2021** H. Jiménez Barrero – J. A. Martín Ruiz – L. A. Ruiz Cabrero – M. L. Ramos Sáinz (eds.), *Principio vital. Cáscaras de huevo de avestruz en Ibiza (Eivissa 2021)*
- Jodin 1966** A. Jodin, Mogador : comptoir phénicien du Maroc atlantique (Tangier 1966)
- Kbiri Alaoui 2000** M. Kbiri Alaoui, A propos de la chronologie de la nécropole rurale d'Aïn Dalia Lekbira (région de Tanger, Maroc), in: M^a. E. Aubet – M. Barthélemy (eds.), *Actas del IV Congreso Internacional de Estudios Fenicios y Púnicos* (Cádiz, 1995) III (Cádiz 2000) 1185–1195
- Kbiri Alaoui – López Pardo 1998** M. Kbiri Alaoui – F. López Pardo, La factoría fenicia de Mogador (Essaouira, Marruecos). Las cerámicas pintadas, *AEspA* 71, 1998, 5–25
- Keel – Uehlinger 1992** O. Keel – C. Uehlinger, Gods, Goddesses, and Images of God in Ancient Israel (Minneapolis 1992)
- Koehler 1931** H. Koehler, Une tombe punique au Cap Spartel (Maroc), *Revue des Musées. Fouilles et découvertes archéologiques* 25, 1930 (1931), 18–20
- Krueger 2022** M. Krueger, La necrópolis de Setefilla. Aspectos rituales y sociales (Poznań 2022)
- Ladrón de Guevara 1994** I. Ladrón de Guevara Sánchez, Aportación al estudio de la cerámica con impresiones digitales en Andalucía (Cádiz 1994)
- López Pardo 1990** F. López Pardo, Sobre la expansión fenicio-púnica en Marruecos. Algunas precisiones a la documentación arqueológica, *AEspA* 63, 1990, 7–41
- López Pardo – Mederos 2008** F. López Pardo – A. Mederos Martín, La factoría fenicia de la isla de Mogador y los pueblos del Atlas (Santa Cruz de Tenerife 2008)
- López-Bertran 2019** M. López-Bertran, Sensing Death among the Phoenicians and the Punic (900–200 BC), in: G. Papantoniou – Ch. Morris – A. K. Vionis (eds.), *Unlocking Sacred Landscapes. Spatial Analysis of Ritual and Cult in the Mediterranean, SIMA* 151 (Nicosia 2019) 139–153

- Luzón – Ruiz Mata 1973** J. M^a. Luzón – D. Ruiz Mata, *Las raíces de Córdoba* (Córdoba 1973)
- Maier 1992** J. Maier Allende, *La necrópolis de »La Cruz del Negro«* (Carmona, Sevilla). *Excavaciones de 1900 a 1905*, CuPaUAM 19, 1992, 95–119
- Maier 1999** J. Maier Allende, *La necrópolis tartésica de la Cruz del Negro* (Carmona, Sevilla), *ayer y hoy*, MM 40, 1999, 97–114
- Mailland 2021** F. Mailland, *The Image of the Ibex through 4000 Years of Art from the Near East to Central Asia. Origin and Evolution of a Myth*, in: *Rock-Art a Human Heritage. Proceedings of the XXVIII Valcamonica Symposium 2021* (Capo di Ponte 2021) 222–228
- Mancebo 1991–1992** J. Mancebo Dávalos, *La cerámica de barniz o engobe rojo de Montemolín* (Sevilla), *Zephyrus* 44–45, 1991–1992, 269–299
- Marlasca et al. 2005** R. Marlasca – M. C. Rovira – X. Carlús – C. Lara – J. López Cachero – N. Villena, *Materiales de importación en la necrópolis de incineración de Can Piteu-Can Roqueta* (Sabadell, Barcelona), in: S. Celestino – J. Jiménez Ávila (eds.), *El periodo orientalizante. Actas del III Simposio Internacional de Arqueología de Mérida II*, *Anejos de AEspA* 35 (Mérida 2005) 1039–1049
- Martín Bravo 1998** A. M. Martín Bravo, *Evidencias del comercio tartésico junto a puertos y vados de la cuenca del Tajo*, *AEspA* 71, 1998, 37–52
- Martín Córdoba et al. 2006** E. Martín Córdoba – J. de D. Ramírez – V. Ruesca – Á. Recio, *Necrópolis fenicias de los siglos VIII–VII a. C. en la desembocadura del río Vélez* (Vélez-Málaga, Málaga), in: M. Corrales Aguilar, *Tiempos de púrpura. Málaga antigua y antigüedades hispanas I*, *Mainake* 28, 2006, 303–331
- Marzoli – El-Khayari 2010** D. Marzoli – A. El-Khayari, *Vorbericht Mogador* (Marokko) 2008, MM 51, 2010, 61–108
- Mazar 2004** E. Mazar, *The Phoenician Family Tomb n. 1 at the Northern Cemetery of Achziv* (10th – 6th centuries BCE). *Cuadernos de Arqueología Mediterránea* 10 (Barcelona 2004)
- Mederos et al. 2023** A. Mederos Martín – J. Maier Allende – J. Jiménez Ávila, *La necrópolis orientalizante de la Cruz del Negro* (Carmona, Sevilla). *Los trabajos de G. E. Bonsor* (1896 – 1911). SPAL *Mono-grafías Arqueología* 50 (Sevilla 2023)
- Mezquida Orti 2016** A. Mezquida Orti, *Ritual funerario en la necrópolis del Puig des Molins* (Ibiza). *La excavación de 2006*, *Monografías del Museu Arqueologic d'Eivissa e Formentera* 1 (PhD Thesis University of Barcelona 2016)
- Murillo-Barroso – Martinon-Torres 2012** M. Murillo-Barroso – M. Martinon-Torres, *Amber Sources and Trade in the Prehistory of the Iberian Peninsula*, *European Journal of Archaeology* 15, 2, 2012, 187–216 <<https://doi.org/10.1179/1461957112Y.0000000009>>
- Nigro 2019** L. Nigro, *The Temple of Astarte »Aglaiá«* at Motya and Its Cultural Significance in the Mediterranean Realm, in: S. Blakely – B. J. Collins (eds.), *Religious Convergence in the Ancient Mediterranean*, *Studies in Ancient Mediterranean Religions* 2 (Atlanta, Georgia 2019) 101–126
- Orsingher 2010** A. Orsingher, *Le oil bottle fenicie. Analisi dei contesti e considerazione crono-tipologiche*, *Sardinia, Corsica et Baleares Antiquae* 8, 2010, 37–69
- Orta – Garrido 1963** E. Orta – J. P. Garrido, *La tumba orientalizante de »La Joya,«* Huelva, *TrabPrehist* 11 (Madrid 1963)
- Pachón – Aníbal 2000** J. A. Pachón – C. Aníbal, *Un vaso chardón orientalizante en el Museo Arqueológico de Osuna* (Sevilla). *Estudio y reconstrucción*, *Florentia Iliberritana* 11, 2000, 265–292
- Pachón et al. 1989–1990** J. A. Pachón – J. Carrasco – C. Aníbal, *Decoración figurada y cerámicas orientalizantes. Estado de la cuestión a la luz de los nuevos hallazgos*, *CuadGranada* 14–15, 1989–1990, 209–272
- de Palol 1958** P. de Palol, *La necrópolis hallstättica de Agullana* (Gerona), *Bibliotheca Praehistorica Hispana* 1 (Madrid 1958)
- Papi 2019** E. Papi, *Revisiting First Millennium BC Graves in North-West Morocco*, in: D. J. Mattingly – M. Sterry – M. C. Gatto – N. Ray (eds.), *Burials, Migration and Identity in the Ancient Sahara and Beyond*, *Trans-Saharan Archaeology* 2 (Cambridge 2019) 281–312
- Pappa 2010** E. Pappa, *Reflections on the earliest Phoenician presence in North-West Africa*, *Talanta* 40–41, 2008–2009 (2010), 53–72
- Pellicer 1968** M. Pellicer Catalán, *Las primitivas cerámicas a torno pintadas hispanas*, *AEspA* 41, 1968, 60–90
- Pellicer et al. 1983** M. Pellicer – J. L. Escacena – M. Bendala, *El Cerro Macareno, Excavaciones Arqueológicas en España* 124 (Madrid 1983)
- Perdigones Moreno u. a. 1990** L. Perdigones Moreno – Á. Muñoz Vicente – G. Pisano, *La necrópolis fenicio-púnica de Cádiz. Siglos VI–IV a. de C.*, *Studia punica* 7 (Rome 1990)
- Philipp 1981** H. Philipp, *Bronzeschmuck aus Olympia*, OF 13 (Berlin 1981)
- Ponsich 1967** M. Ponsich, *Nécropoles phéniciennes de la région de Tanger, Etudes et travaux d'archéologie marocaine. Villes et sites du Maroc antique* 3 (Tanger 1967)
- Ponsich 1969** M. Ponsich, *Influences Phéniciennes sur les populations rurales de la Region de Tanger*, in: *Tartessos y sus problemas. V Symposium Internacional de Prehistoria Peninsular* (Jerez de la Frontera, 1968), *Publicaciones Eventuales* 13 (Barcelona 1969) 173–184
- Ponsich 1970** M. Ponsich, *Recherches archéologiques à Tanger et dans sa région* (Paris 1970)
- Quillard 1979** B. Quillard, *Bijoux carthaginois 1. Les colliers d'après les collections du Musée national du Bardo et du Musée national de Carthage*, *Publications d'histoire de l'art et d'archéologie de l'Université catholique de Louvain* 15 = *Aurifex* 2 (Louvain 1979)

Rebuffat – Limane 2011 R. Rebuffat – H. Limane, Carte archéologique du Maroc antique. Le bassin du Sebou 1. Au sud du Loukkos, Villes et sites archéologiques du Maroc 2 (Rabat 2011)

Ruiz Cabrero 2021 L. A. Ruiz Cabrero, Aspectos Simbólicos de las Cáscaras de Huevo de Avestruz, in: H. Jiménez Barrero (ed.), Principio Vital. Cáscaras de Huevo de Avestruz en Ibiza (Eivissa 2021) 17–28

Ruiz Mata 1985 D. Ruiz Mata, Las cerámicas fenicias del Castillo de Doña Blanca (Puerto de Santa María, Cádiz), in: M. E. Aubet Semmler – G. del Olmo Lete (eds.), Los fenicios en la Península Ibérica, vol. I (Sabadell 1985) 241–263

Ruiz Mata 1986 D. Ruiz Mata, Aportación al análisis de los inicios de la presencia fenicia en Andalucía sud-occidental, según las excavaciones del Cabezo de San Pedro (Huelva), San Bartolomé (Almonte, Huelva), Castillo de Doña Blanca (El Puerto de Santa María, Cádiz) y El Carambolo (Camas, Sevilla), in: Homenaje a Luis Siret (1934–1984) (Sevilla 1986) 537–555

Ruiz Mata 1995 D. Ruiz Mata, Las cerámicas del Bronce Final. Un soporte tipológico para delimitar el tiempo y el espacio tartésico, in: Tartessos. 25 años después. 1968–1993. Jerez de la Frontera. Actas del congreso conmemorativo del V Symposium Internacional de Prehistoria Peninsular, Biblioteca de Urbanismo y Cultura 14 (Jerez de la Frontera 1995) 265–313

Ruiz Mata – Pérez 1995 D. Ruiz Mata – C. Pérez Pérez, El poblado fenicio del Castillo de Doña Blanca (El Puerto de Santa María, Cádiz) (El Puerto de Santa María 1995)

Ruiz Zapatero u. a. 2012 G. Ruiz Zapatero – M. Fernández-Götz – J. Álvarez-Sanchís, Die Ausbreitung der Eisenmetallurgie auf der Iberischen Halbinsel, in: A. Kern – J. K. Koch – I. Balzer – J. Fries-Knoblach – K. Kowarik – C. Later – P. C. Ramsel – P. Trebsche – J. Wiethold (eds.), Technologieentwicklung und -transfer in der Hallstatt- und Latènezeit. Beiträge zur Internationalen Tagung der AG Eisenzeit und des Naturhistorischen Museums Wien, Prähistorische Abteilung – Hallstatt 2009, Beiträge zur Ur- und Frühgeschichte Mitteleuropas 65 (Langenweissbach 2012) 149–166

Schubart – Maass-Lindemann 2007 H. Schubart – G. Maass-Lindemann, Toscanos. Die phönizische Niederlassung an der Mündung des Río de Vélez 2. Grabungskampagnen in der Siedlung von Toscanos (1967 und 1978), an den Befestigungen des Alarcón (1967, 1971 und 1984) und in der Nekropole Jardín (1967–1976), MF 6, 2 (Berlin 2007)

Siret 1985 L. Siret, Villaricos y Herrerías. Antigüedades púnicas, romanas, visigóticas y árabes. Memoria descriptiva e histórica (Madrid 1985)

Steinhagen 2013 K. Steinhagen, Bestimmung von Körperhöhe, Alter und Geschlecht anhand der Höhe des Os sacrum und der Knochenlängen der unteren Extremität – virtuelle MR-Anthropometrie in einer populationsbasierten MR-Studie (PhD Thesis University of Greifswald 2013)

Torres 2002 M. Torres Ortiz, Tartessos, Bibliotheca Archaeologica Hispana 14 = Studia Hispano-Phoenicia 1 (Madrid 2002)

Torres 2008 M. Torres Ortiz, Vasos ›a chardón‹, in: M. Almagro Gorbea – A. J. Lorrio – A. Mederos – M. Torres (eds.), La necrópolis de Medellín II. Estudio de los hallazgos, Bibliotheca Archaeologica Hispana 26, 2 = Studia Hispano-Phoenicia 5, 2 (Madrid 2008) 658–662

Torres et al. 2014 M. Torres Ortiz – E. López Rosendo – J. M. Gener Basallote – M. Á. Navarro García – J. M. Pajuelo Sáenz, El material cerámico de los contextos fenicios del Teatro Cómico de Cádiz: un análisis preliminar, in: M. Botto (ed.), Los Fenicios en la Bahía de Cádiz. Nuevas Investigaciones, Collezione di Studi Fenici 46 (Roma 2014) 51–82

Vuillemot 1955 G. Vuillemot, La nécropole punique du phare dans l’île Rachgoun (Oran), Libyca. Archéologie-Epigraphie 3, 1, 1955, 6–76

ZUSAMMENFASSUNG

Die phönizisch-punischen Nekropolen von Djebila und Aïn Dalia Kebira (Region Tanger, Marokko)

Dirk Blaschta – Alfredo Mederos Martín

– Saoussane Yahia – Mohamed El Mhassani –

Carlos P. Odriozola – José Ángel Garrido Cordero

– José María Martínez-Blanes

Die Gräberfelder von Djebila (DJ) und Aïn Dalia Kebira (AD) sind die größten phönizisch-punischen Nekropolen in Marokko. Obwohl sie in ihrer Ausprägung sehr ähnlich sind, weisen sie doch leichte Unterschiede auf. Michel Ponsich, der Ausgräber, erwähnte für beide Gräberfelder nur Körperbestattungen. Für die Nekropole von Djebila ist es jedoch wahrscheinlich, dass auch Brandbestattungen existierten, die bei seinen Ausgrabungen wahrscheinlich nicht erkannt wurden. Die Bestattungssitten ähneln denen der Iberischen Halbinsel, und es scheinen enge Verbindungen zwischen den beiden Regionen bestanden zu haben. Die Hauptbelegungszeit beider Nekropolen lässt sich sehr wahrscheinlich in das 6. Jahrhundert v. Chr. datieren. Die Funde weisen viele fremde mediterrane Elemente auf. Hierbei kann beim derzeitigen Bearbeitungsstand nicht ausgeschlossen werden, dass einzelne Objekte in der Region nördlich des Atlasgebirges von spezialisierten Handwerkern hergestellt wurden. Die Bearbeitung und Analyse der Funde ist noch nicht abgeschlossen, so dass diese Arbeit als Vorbericht zu betrachten ist.

Keramik ist nur in 30 % der Gräber von Aïn Dalia Kebira und Djebila vorhanden. Besonders ist das Vorhandensein von handgefertigten Gefäßen ›à chardon‹ vom Ende des 8. und vor allem des 7. Jahrhunderts v. Chr. sowie von zwei kleinen Urnen des Typs ›Cruz del Negro‹ (je eine aus jeder Nekropole). Hinzu treten wenige Fragmente rotpolierter phönizischer Keramik, darunter der Boden eines möglichen Schöpfgefäßes, sowie vermutlich ein Teil des Körpers und der Halsansatz einer Oinochoe mit einer dreilappigen Mündung. Das Projekt zur erneuten Untersuchung der phönizisch-punischen Friedhöfe von Djebila und Aïn Dalia Kebira umfasst auch die Integration von wissenschaftlichen Analysen und die Durchführung von Restaurierungsarbeiten. Durch die Analyse einiger Bernsteinfunde aus dem Gräberfeld von Djebila konnte baltischer Bernstein aus der frühen Eisenzeit zum ersten Mal für die Region nördlich des Atlasgebirges nachgewiesen werden. Durch

die Restaurierungsarbeiten konnten zahlreiche Verzierungen auf Bronzeobjekten freigelegt, Reste von Textilfasern erkannt und bestimmte Arten der Metallverarbeitung definiert werden.

SCHLÜSSELWÖRTER

Frühe Eisenzeit, Nordafrika, Marokko, Phönizier, Nekropole

RESUMEN

Las necrópolis fenicio-púnicas de Djebila y Aïn Dalia Kebira (Región de Tánger, Marruecos)

Dirk Blaschta – Alfredo Mederos Martín

– Saoussane Yahia – Mohamed El Mhassani –

Carlos P. Odriozola – José Ángel Garrido Cordero

– José María Martínez-Blanes

Los cementerios de Djebila (DJ) y Aïn Dalia Kebira (AD) son las necrópolis fenicias y punicas mas grandes de Marruecos. Aunque estas son muy similares entre sí, presentan ligeras diferencias. Michel Ponsich, el excavador, mencionó solamente inhumaciones en ambos cementerios. En la necrópolis de Djebila, sin embargo, es probable que también hubiera enterramientos de incineración, que probablemente no fueron reconocidos durante sus excavaciones. Las costumbres funerarias son muy similares a las de la península ibérica y parece que existían estrechos vínculos entre ambas regiones. El principal período de ocupación de ambas necrópolis puede situarse muy probablemente durante el siglo VI a.C. Los hallazgos muestran numerosos elementos mediterráneos foráneos. Dado el estado actual del estudio, no se puede descartar que algunos objetos hayan sido fabricados por artesanos especializados provenientes de la región al norte de la cordillera del Atlas. La documentación y el análisis de los hallazgos aún no han concluido, por lo que este artículo debe considerarse un informe preliminar.

La cerámica sólo está presente en el 30 % de las tumbas de Aïn Dalia Kebira y Djebila. En particular se puede mencionar la presencia de vasijas artesanales ›à chardon‹ de finales del siglo VIII y sobre todo del VII a.C., así como dos pequeñas urnas del tipo ›Cruz del Negro‹ (una de cada necrópolis), y muy pocos fragmentos de cerámica fenicia con engobe rojo, entre ellos la base de un posible cucharón, y probablemente parte del cuerpo y la base del cuello de una oinochoe de boca trilobulada.

El proyecto de reexaminación de los cementerios fenicio-púnicos de Djebila y Ain Dalia Kebira incluye también la integración de análisis científicos y la restauración de los objetos. El análisis de algunos hallazgos de ámbar del cementerio de Djebila permitió identificar por primera vez ámbar báltico de la Primera Edad del Hierro en la región situada al norte del Atlas. Los resultados de la restauración permitieron descubrir numerosas decoraciones en objetos de bronce, identificar restos de fibras textiles y definir ciertos tipos de procesos metalúrgicos.

PALABRAS CLAVE

Edad del Hierro, Norte de África, Marruecos, Fenicios, necrópolis

PROOF OF ILLUSTRATIONS AND PHOTOS

Portada: D-DAI-MAD-MLA-DG-45-2023-515 (M. Latova)

Fig. 1: DAI, USGS, GEBCO (author: D. Blaschta, modifications: C. Comas-Mata)

Fig. 2 a. b: D. Blaschta

Fig. 3 a–d: D. Blaschta

Fig. 4: D. Blaschta

Fig. 5: D. Blaschta

Fig. 6: D-DAI-MAD-MLA-DG-45-2023-405 (M. Latova)

Fig. 7: a. D-DAI-MAD-MLA-DG-45-2023-124; b. D-DAI-MAD-MLA-DG-15-2024-054 (M. Latova)

Fig. 8: D-DAI-MAD-MLA-DG-45-2023-389 (M. Latova)

Fig. 9: D-DAI-MAD-MLA-DG-46-2023-121 (M. Latova)

Fig. 10: D-DAI-MAD-MLA-DG-46-2023-126 (M. Latova)

Fig. 11: a. D-DAI-MAD-MLA-DG-45-2023-458; b. D-DAI-MAD-MLA-DG-45-2023-450 (M. Latova)

Fig. 12: D-DAI-MAD-MLA-DG-46-2023-020 (M. Latova)

Fig. 13: D-DAI-MAD-MLA-DG-46-2023-156 (M. Latova)

Fig. 14: a. D-DAI-MAD-MLA-DG-45-2023-299; b. D-DAI-MAD-MLA-DG-15-2024-227; c. D-DAI-MAD-MLA-DG-15-2024-216 (M. Latova)

Fig. 15: D-DAI-MAD-MLA-DG-45-2023-429 (M. Latova)

Fig. 16: D-DAI-MAD-MLA-DG-45-2023-345+352+356 (M. Latova)

Fig. 17: D-DAI-MAD-MLA-DG-46-2023-092 (M. Latova)

Fig. 18: D-DAI-MAD-MLA-DG-15-2024-130+143 (M. Latova)

Fig. 19: D-DAI-MAD-MLA-DG-46-2023-105 (M. Latova)

Fig. 20: D-DAI-MAD-MLA-DG-46-2023-054 (M. Latova)

Fig. 21: D-DAI-MAD-MLA-DG-45-2023-497 (M. Latova)

Fig. 22: a. D-DAI-MAD-MLA-DG-46-2023-039; b. D-DAI-MAD-MLA-DG-45-2023-059 (M. Latova)

Fig. 23: D-DAI-MAD-MLA-DG-45-2023-360 (M. Latova)

Fig. 24: D-DAI-MAD-MLA-DG-45-2023-374 (M. Latova)

Fig. 25: D-DAI-MAD-MLA-DG-45-2023-115 (M. Latova)

Fig. 26: D-DAI-MAD-MLA-DG-45-2023-139+140 (M. Latova)

Fig. 27: D-DAI-MAD-MLA-DG-45-2023-505+507+509 (M. Latova)

Fig. 28: D-DAI-MAD-MLA-DG-16-2024-164 (M. Latova)

Fig. 29: D-DAI-MAD-MLA-DG-46-2023-004 (M. Latova)

Fig. 30: D. Blaschta

Fig. 31: D-DAI-MAD-MLA-DG-17-2024-010 (M. Latova)

Fig. 32: D-DAI-MAD-MLA-DG-16-2024-221 (M. Latova)

Fig. 33: D-DAI-MAD-MLA-DG-16-2024-176 (M. Latova)

Fig. 34: a. D-DAI-MAD-MLA-DG-45-2023-081; b. D-DAI-MAD-MLA-DG-45-2023-083 (M. Latova)

Fig. 35: C. P. Odriozola

ADRESSES

Dirk Blaschta
Deutsches Archäologisches Institut
Serrano 159
28002 Madrid
Spain
dirk.blaschta@dainst.de
ORCID-iD: <https://orcid.org/0009-0003-1070-6162>
ROR: <https://ror.org/04e1nss61>

Prof. Dr. Alfredo Mederos Martín
Departamento de Prehistoria y Arqueología
Facultad de Filosofía y Letras

Universidad Autónoma de Madrid
Campus de Cantoblanco
28049 Madrid
Spain
alfredo.mederos@uam.es
ORCID-ID: <https://orcid.org/0000-0002-0036-7940>
ROR: <https://ror.org/01cby8j38>

Dr. Saoussane Yahia
Musée la Kasbah
Place la Kasbah
Tangier 90030
Morocco
s.yahia@fnm.ma
ORCID-ID: <https://orcid.org/0009-0000-4272-3512>

Dr. Mohamed El Mhassani
Université Mohamed V de Rabat
Avenue des Nations Unies, Agdal,
Rabat B.P: 8007 N.U
Morocco
mohamed.el.mhassani@gmail.com
ORCID-ID: <https://orcid.org/0000-0002-7240-1984>
ROR: <https://ror.org/00r8w8f84>

Prof. Dr. Carlos Patricio Odriozola Lloret
Departamento de Prehistoria y Arqueología
Facultad de Geografía e Historia
Universidad de Sevilla
Calle de María de Padilla s/n
41004 Sevilla
Spain
codriozola@us.es
ORCID-ID: <https://orcid.org/0000-0002-4411-2528>
ROR: <https://ror.org/03yxnp24>

UNIARQ
Centro de Arqueologia da Universidade de Lisboa
Faculdade de Letras
Alameda da Universidade
1600-214 Lisboa
Portugal
ROR: <https://ror.org/01c27hj86>

Dr. José Ángel Garrido Cordero
Departamento de Prehistoria y Arqueología
Facultad de Geografía e Historia
Universidad de Sevilla
Calle de María de Padilla s/n
41004 Sevilla
Spain
Jgarrido8@us.es

ORCID-ID: <https://orcid.org/0000-0002-9585-7917>
ROR: <https://ror.org/03yxnp24>
Dr. José María Martínez-Blanes
Departamento de Química Inorgánica
Campus Reina Mercedes
Facultad de Química
Universidad de Sevilla
C/ Profesor García González
41013 Sevilla
Spain
blanes@us.es
ORCID-ID: <https://orcid.org/0000-0001-7359-8195>
ROR: <https://ror.org/03yxnp24>

METADATA

Titel/Title: Die phönizisch-punischen Nekropolen von Djebila und Ain Dalia Kebira (Region Tanger, Marokko)/*The Phoenician-Punic Necropolises Djebila and Ain Dalia Kebira (Tangier Region, Morocco)*
Band/Issue: MM 65, 2024
Bitte zitieren Sie diesen Beitrag folgenderweise/
Please cite the article as follows: D. Blaschta – A. Mederos Martín – S. Yahia – M. El Mhassani – C. P. Odriozola – J. Á. Garrido Cordero – J. M. Martínez-Blanes, *The Phoenician-Punic Necropolises Djebila and Ain Dalia Kebira (Tangier Region, Morocco)*, MM 65, 2024, § 1–42, <https://doi.org/10.34780/e163-u166>
Copyright: Alle Rechte vorbehalten/*All rights reserved.*
Online veröffentlicht am/*Online published on:* 20.12.2024
DOI: <https://doi.org/10.34780/e163-u166>
Schlagwörter/Keywords: Frühe Eisenzeit, Nordafrika, Marokko, Phönizier, Nekropole/*Early Iron Age, Northern Africa, Morocco, Phoenicians, necropolis*
Bibliographischer Datensatz/*Bibliographic reference:* <https://zenon.dainst.org/Record/003076319>