

CAST BRONZE VESSELS IN THE 6TH-9TH CENTURIES. PRODUCTION CENTRES, CIRCULATION AND USE IN ECCLESIASTICAL AND SECULAR CONTEXTS

In the first part of this study, published in the previous issue of the *Archäologisches Korrespondenzblatt*, we have examined the finds from Morbello (prov. Alessandria/I) – a liturgical set composed by an ewer, a thurible and an oil lamp in cast bronze, most probably concealed into the ground during the 8th century¹. Assessed assemblages of liturgical items from the early medieval Western Mediterranean are rather rare: thus, the set from Morbello brought into the spotlight a number of issues related in general to the production, circulation and use of cast bronze vessels – including the so-called Coptic types –, which will be discussed in more detail in the following pages.

CAST BRONZE VESSELS IN THE WEST: REMARKS ON TYPOLOGY AND DISTRIBUTION

Joachim Werner's and Pere de Palol's renowned classifications for the »Coptic« vessels stand remarkably well the test of time and are still useful in many ways. Yet they are not anymore completely adequate to illustrate the whole picture of the production and circulation of cast bronze vessels throughout the Mediterranean Basin. Moreover, these »classical« typologies mix technical, morphological and functional features and are *a priori* oriented to distinguish »imported« vessels from »local« ones. Subsequent archaeometric examinations did not succeed in identifying relevant criteria to the classification of the samples, nor in conclusively relating the items to specific production backgrounds². On the whole, the available data on technological aspects still appear insufficient to play a primary role in the typological classifications of cast bronze vessels: in the scientific literature, this is often a scarcely considered subject, and even the most »basic« information provided is at times incorrect. A case in point is a group of items from the Iberian Peninsula, mistakenly published in the pioneer studies as hammered: they are in fact cast, but a part of the subsequent literature continued to describe them as produced by hammering a bronze sheet³.

In sum, all this means morphological observations still appear to be the main available tool to classify the vessels and to try to assess where they were produced. Kirsten Werz, who relied primarily on morphological and decorative criteria, has proposed one of the latest attempts in this direction⁴. However, the straightforward use of Werz's typology is problematic, for the classification criteria seem to be too strict in some cases and excessively flexible in some others⁵. Tivadar Vida has set out recent and valuable approaches to the morphological development of Mediterranean ewers during Late Antiquity and the Early Middle Ages⁶.

To put the production and circulation of these cast vessels in the wider background of the liturgical (or liturgy-related) vessels in the West⁷, it seems most useful to propose a thorough examination of a few typological groupings, based almost exclusively on morphologic criteria. The overall picture, although still fragmentary, provides relevant evidence on some sequences of production, circulation and imitation of some types of objects.



Fig. 1 Main types of the so-called Coptic vessels according to Joachim Werner, and other types of early medieval cast bronze vessels identified in the present study. – (Drawings M. Beghelli).

An eastern origin of some types of early medieval cast bronze vessels may be plausible in some cases, but not for the whole group of »Coptic vessels«. The bronze basins with openwork foot – Werner’s type B1 (fig. 1), attested in contexts from the late 6th to the early 8th century – are consistent pieces of evidence to start with. Mapped some time ago by Ursula Koch (fig. 2), they are distributed throughout the Mediterranean Basin and reach as far as Southern England, Egypt and the Levant⁸. The most significant clustering of finds is located in South-Western Germany and Northern Italy: this led Patrick Périn to argue that B1 type basins were produced in Western Europe and exported to the East, where the attested examples are fewer⁹. The German and Italian B1 finds, though, come almost exclusively from funerary contexts. This marks a difference with regard to other types of cast bronze vessels found in the West, mainly recorded in settlement or church contexts¹⁰: it seems likely that, in this specific case, the B1 distribution may be connected to the »distortion factor« related to the custom of using them as grave goods in those territories¹¹. Thus, the items belonging to this type might have come to Europe as imports from the Eastern Mediterranean. The distribution clearly outlines a »belt« following a South-East to North-West orientation. Also, so far there is not a single find from the Spanish-French Mediterranean coastline – which, as we shall see, in the case of other types indicates different production centres and different trade routes.

A similar distribution pattern is shown by coeval Werner’s A1 pans (figs 1; 3, 1-2), attested in Egypt and Israel¹² as well as in South-Western Germany and Italy (fig. 2)¹³. The relatively frequent presence of Greek inscriptions on the European finds (fig. 3, 1-2)¹⁴ strongly suggests an origin in Eastern-Mediterranean workshops. It is noteworthy that Greek inscriptions occur only in the oldest dating contexts (e.g. Güttingen

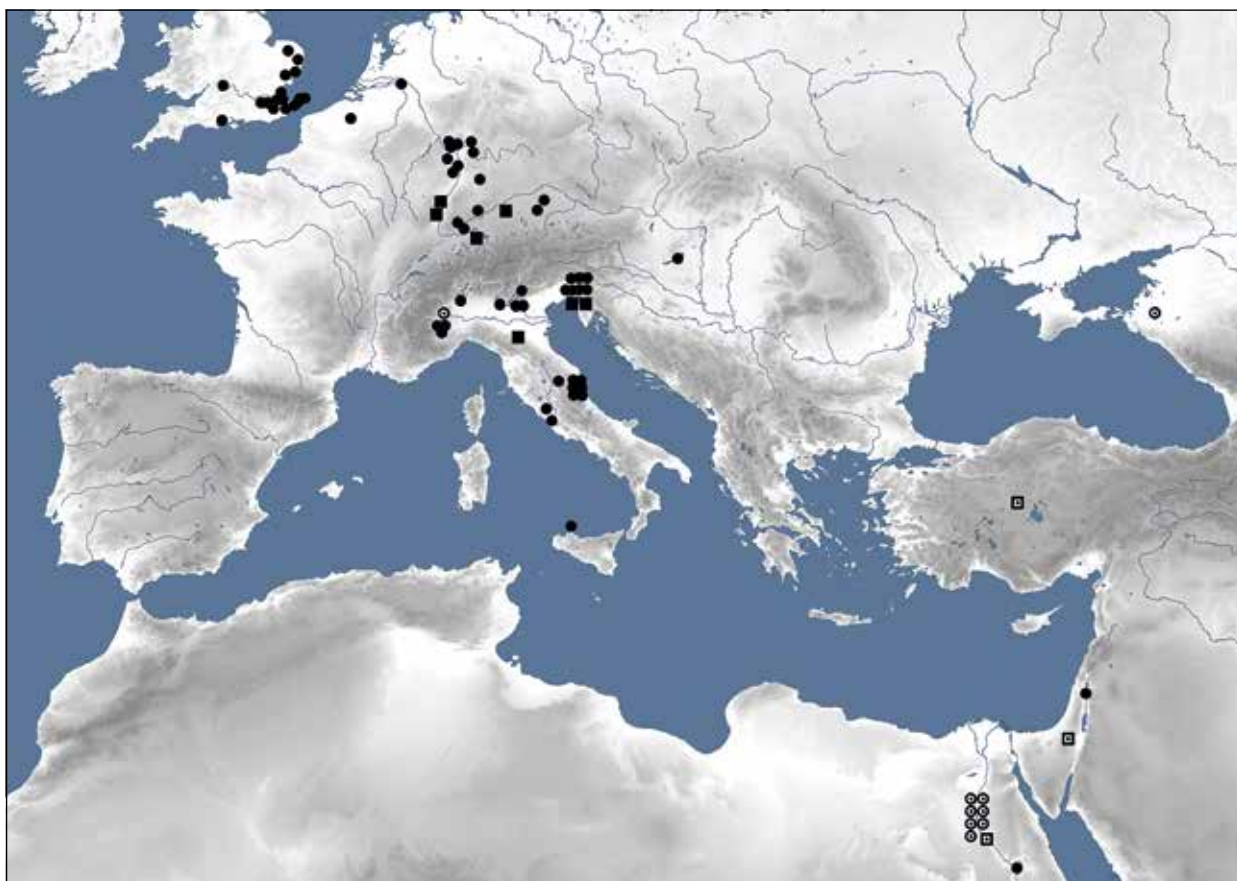


Fig. 2 Werner's A1 type (■) and B1 type (●), distribution map. The list of finds can be found at the bottom of the text. – (Map M. Beghelli / J. Pinar Gil).



Fig. 3 Pans of Werner's A1 type (1, 3) and later derivatives (2, 4). – 1 Reggio Emilia, with a Greek inscription. – 2 Wittislingen. – 3 »Egypt«, with a Greek inscription. – 4 Biskupija-Crkvina, grave 1. – (1 after Baldini 2008, 411; 2 after Wamser/Zahlhaas 1998, 58; 3 after Ross 1962, pl. 34, 51; 4 after Petrinec 2009, fig. 89).

grave 38 [Kt. Thurgau/CH], Cividale-San Mauro grave 21 [prov. Udine/I]; late 6th/early 7th century): in all likelihood, these imports inspired local (anepigraphic) derived products, as later finds such as Wittislingen (Lkr. Dillingen a. d. Donau/D; mid-7th century; **fig. 3, 3**) or Biskupija-Crkvina 1 (Šibensko-kninska žup./HR; late 8th-early 9th century; **fig. 3, 4**) suggest¹⁵.



Fig. 4 Ewers of Prepotto type. – **1-2** Ballana, tomb 80. – **3** Ballana, tomb 118. – **4** Prepotto. – **5** »Rome«, Gorga collection. – **6** Tarragona, Cathedral cloister. – **7** Rome, Vittorio Emanuele II Monument. – (1-3 after Emery 1938, pls 78-79; 4 after Carretta 1982, pl. 9; 5, 7 after Arena et al. 2001, 422-423; 6 after Hauschild 1994, pl. V).

This phenomenon seems to be the rule in the early medieval West, as other types of cast vessels show. Ewers with trefoil mouth and three-footed base (figs 1, 4) are an eloquent example of this. These ewers – that we will name as »Prepotto type« from now on – display a quite similar distribution, being particularly well attested in Lower Nubia and Italy (fig. 5)¹⁶. Unlike other types examined in this paper, these objects have shown no direct connection to liturgical contexts so far, and their production seems to have taken place slightly earlier than the bulk of »Coptic« vessels: judging from the contexts recorded at Ballana (Aswan gov./ET)¹⁷, the type was already being used by the late 5th century¹⁸. In any case, the dissemination pattern of these jugs reiterates some of the tendencies outlined by Werner's types A1 and B1: these objects may indeed be connected to actual Egyptian production centres¹⁹. These »south-eastern« products, though, appear to have inspired a number of local producers after they reached the Western Mediterranean as imported goods: the clearest example is an ewer from Rome, come to light near the Vittorio Emanuele II Monument (fig. 4, 7), whose main features – overall form, proportions and tripod base – enable to identify it as a local variant of the Egyptian Prepotto ewers. The bulk of Prepotto ewers found in the West is smaller than the Egyptian specimens (fig. 4, 5-7). In addition, the only Western example recorded in a dating context suggests a remarkably later deposition: it was discovered in a grave whose earth filling contained some pottery sherds and a fragmentary belt buckle that provides the burial with a *terminus post quem* around 600 AD²⁰. Both the morphological differences and the chronological gap between Eastern and Western



Fig. 5 Prepotto type, distribution map. The list of finds can be found at the bottom of the text. – (Map M. Beghelli / J. Pinar Gil).

finds suggest that they may be attributed to different production centres, as in the case of A1 pans and their western »imitations«. Similar sequences of production, export and imitation can be recognized when examining other types of Mediterranean cast bronze vessels, and are a valid explanatory model for the wide dissemination of this kind of product during the Early Middle Ages.

Other types of bronze ewers show entirely different distribution patterns, that complete, so to speak, the picture of the production and circulation of this kind of artefacts in the Mediterranean. Thus, connections within different Western European territories are shown by the late 6th-mid-7th century ewers of Werner's A2 type (**fig. 6**), mainly concentrated in Southern Germany and Italy's northern half, with isolated finds in Dalmatia, Spain and the North Sea area (**fig. 7**)²¹. Their dissemination, therefore, enables to support P. Périn's attribution to an Italian origin of this type of jugs, whose circulation may have followed both South-North (probably transalpine) and East-West (Mediterranean) routes. A cast bronze ewer, showing a more stylized form, has been interpreted by T. Vida as a probable precursor of A2 ewers²² (see below, **fig. 24, 3**). It is kept at the Bardo Museum, and the exact find spot is unknown, but probably local: this piece of evidence would confirm the A2 ewers as a Western-Mediterranean product. Another closely related ewer has been discovered at the cemetery of Budakalász (Kom. Pest/H), grave 740²³. As T. Vida has shown, its rich, figurative decoration finds its best counterparts in Late Roman artworks of the late 4th-5th century²⁴. The ewer's outline, nonetheless, fits well into the A2 group; the form and leaf-shaped appendix of the handle is typical for



Fig. 6 Ewers of Werner's A2 type. – 1 Thierhaupten-Oberbaar. – 2. 6 Solin. – 3 »Spain«. – 4 »Bonn«. – 5 Nocera Umbra, grave 17. – 7 Ittenheim. – 8 Pfahlheim. – 9 Montale. – (1 after Goldenes Byzanz 2012, 368; 2. 6 after Werner 1954/1957, pl. VIII; 3 after de Palol 1950, pl. XIX; 4 after Erdmann 1938/1939, pl. 43; 5. 9 after Carretta 1982, pl. 8; 7 courtesy of the Musée Archéologique de la Ville de Strasbourg; 8 after Veeck 1931, pl. 79).

A2 ewers, while the four-footed animal and the human head, respectively at the upper and lower end of the handle, look very similar to early medieval Spanish and Sardinian counterparts²⁵. All these features suggest clear connections with Western early medieval cast products, which are also supported by its deposition date (first third of the 7th century). The Budakalász ewer, however, is admittedly an exceptional artwork and, as such, the precise nature of its relations to »ordinary« cast ewers remains difficult to determine.

The fact that the Italian Peninsula was actually one of the areas where cast bronze vessels were produced may be confirmed by some additional finds, such as three ewers with a globular-to-ovoid body,



Fig. 7 Werner's type A2 (●) and Spilamberto type (■), distribution map. The list of finds can be found at the bottom of the text. – (Map M. Beghelli / J. Pinar Gil).

scarcely profiled mouth, and three-footed base (**fig. 8**). The specimens recorded at the cemeteries of Spilamberto (prov. Modena/I) and Cividale del Friuli (prov. Udine/I)²⁶ might be identified as examples of a still loosely defined Northern Italian group of artefacts; a third ewer found at Wijchen (prov. Gelderland/NL) should thus be regarded as an Italian import²⁷: it is worth stressing that the distribution of this type and of A2 ewers is identical (**fig. 7**). Both at Spilamberto and Cividale, the deposition of the ewers occurred around 600 AD: given the morphological features of this group of artefacts, they can be plausibly regarded as prototypes for Werner's B3 ewers, found in contexts dated to the mid-7th-8th centuries²⁸.

The production of cast bronze vessels in South-Western Europe is clearly attested by tall-footed, stylized jugs with an ovoid body and long, flared neck (**fig. 9**): based on their distribution (**fig. 10**), they can be easily acknowledged as Spanish productions, dating to the late 7th-8th century²⁹. The circulation of this type of ewer was not limited to Peninsular Spain, as shown by the find from Borutta (prov. Sassari/I) in Sardinia (**fig. 9, 9**), likewise discussed in the first part of this study³⁰. These objects can be grouped within the Las Pesqueras type, named after one of the most significant find spots.

Another three jugs appear to be related to the Las Pesqueras type: they show very similar bodies and proportions but are provided with *nodus* or pseudo-*nodus* and other common decorative features (**fig. 11**). Two of these items come most probably from Spain, and the third is the abovementioned jug from Morbello, discussed in the first part of this study. Just like the exemplars of the Las Pesqueras group, the ewers of the Morbello type show an entirely Western-Mediterranean distribution focused on the Iberian Peninsula and the westernmost parts of Italy (**fig. 10**).

Close relations between these two territories are also revealed by a small group of Sardinian jugs (**figs 10, 12**): although they must be related to strictly local productions, their main morphologic and decorative features are common to the Spanish finds³¹, from which they probably derive; in this case, too, we find again the same mechanisms discussed above for other types of cast bronze vessels, i. e. sequences of import (from the Iberian Peninsula) and imitation (in Sardinia). As seen, genuinely Spanish bronze vessels were indeed circulating, and are archaeologically attested – as the find from Borutta shows – on the island. So far, no finding context has provided a precise chronology for the group of Sardinian products depicted in **figure 12**. However, on the grounds of the typological features in common with the Spanish ewers, they may be tentatively dated to the 7th-8th centuries. A single example found at Hurbanovo (okr. Komárno/SK) in Slovakia (**fig. 12, 3**)³² indicates that, as well as some earlier Eastern types, the objects belonging to the Sardinian group could travel over long distances – although, it seems, occasionally or more rarely.

This might also be the case of Werner's B3 jugs (**figs 13; 23D**), unequally recorded throughout the Mediterranean in contexts dating to the late 7th and early 8th century: the vast majority of finds is concentrated in South-Western Germany, France and Spain (**fig. 14**)³³. Only one example is exceptionally known in the Levant, but coming from the antiques-market³⁴. In our view, the abovementioned »burial distortion factor« – i. e. the larger quantities of finds in the West, allegedly due to the practice of using bronze vessels as grave goods: an argument traditionally used to support an eastern production – cannot explain the disproportion of occurrences, with just one specimen (probably) found in the East, and all the others found in the West. Moreover, this argument can hardly apply to the finds from the Iberian Peninsula, where cast bronze ewers are recorded, just like in the Levant, almost exclusively in settlement or church contexts, not in graves³⁵. All in all, it seems very reasonable to agree with P. Périn's assertion that Werner's B3 ewers should be regarded as Western European products³⁶.

This hypothesis is confirmed when examining another group of ewers, which will be referred to as Mañaria type hereafter in the text. These ewers share a number of morphological features with the B3 type, although displaying slightly wider bodies and taller feet (**fig. 15**). They are mainly attested, again, in the Western Mediterranean (Tunisia, Portugal, Spain, Southern France and Sardinia), a single example having been



Fig. 8 Ewers of Spilamberto type. – **1** Spilamberto, grave 62. – **2** Cividale-San Mauro, grave 50. – **3** Wijchen. – (1 after de Vingo 2010, 53; 2 after Ahumada Silva 2010, pl. 129; 3 after Peddemors/Swinkels 1989, fig. 1).



Fig. 9 Ewers of Las Pesqueras type. – **1** Alesga. – **2** Lindes. – **3. 7** »Cangas de Onís«. – **4** Montoro. – **5-6. 10** Las Pesqueras. – **8** Balbarda. – **9** Borutta. – **11** Alcaraz. – **12** Bobia. – **13** El Gatillo de Arriba. – (1. 3. 11 after Hispania Gothorum 2007, 557. 559; 2. 7. 12 after Arbeiter/Noack-Haley 1999, pl. 6; 4 after de Palol 1950, pl. 62; 5-6. 10 after Bronces romanos 1990, 28; 8 after Art of medieval Spain 1993, 52; 9 after Carretta 1982, pl. 7; 13 after Königreich der Vandalen 2009, 167 Kat. 131).



Fig. 10 Las Pesqueras type (●), Morbello type (■) and Sardinia type (▲), distribution map. The list of finds can be found at the bottom of the text. – (Map M. Beghelli / J. Pinar Gil).



Fig. 11 Ewers of Morbello type. – **1** Museo Arqueológico Nacional, Madrid (unknown provenance, probably Spain). – **2** Instituto Valencia de Don Juan, Madrid (unknown provenance, probably Spain). – **3** Morbello. – (1 after Herrera 1968, 195; 2 after Art of medieval Spain 1993, 51; 3 after Crosetto 2011, fig. 6).

recorded in Southern Germany (fig. 14)³⁷. Unlike B3 ewers, only a part of the Mañaria ewers are cast; others are made of hammered bronze sheet³⁸. The distribution of Mañaria ewers shows the same pattern as Werner's B3, yet with opposite concentrations of finds: Werner's B3 ewers are less numerous in the areas where the Mañaria group is better attested, and vice versa. The Mañaria jugs concentrate in the peripheral areas of distribution of B3 ewers, which is most clearly visible in Bavaria and Cantabrian Spain. This is probably a relevant datum and suggests that there might be a direct link between the two types: Mañaria ewers



Fig. 12 Ewers of Sardinia type. – **1-2, 4** Olbia (?). – **3** Hurbanovo. – (1-2, 4 after Pani Ermini/Marinone 1981, 127-129; 3 courtesy of Prof. Dr. Ján Rajtár).

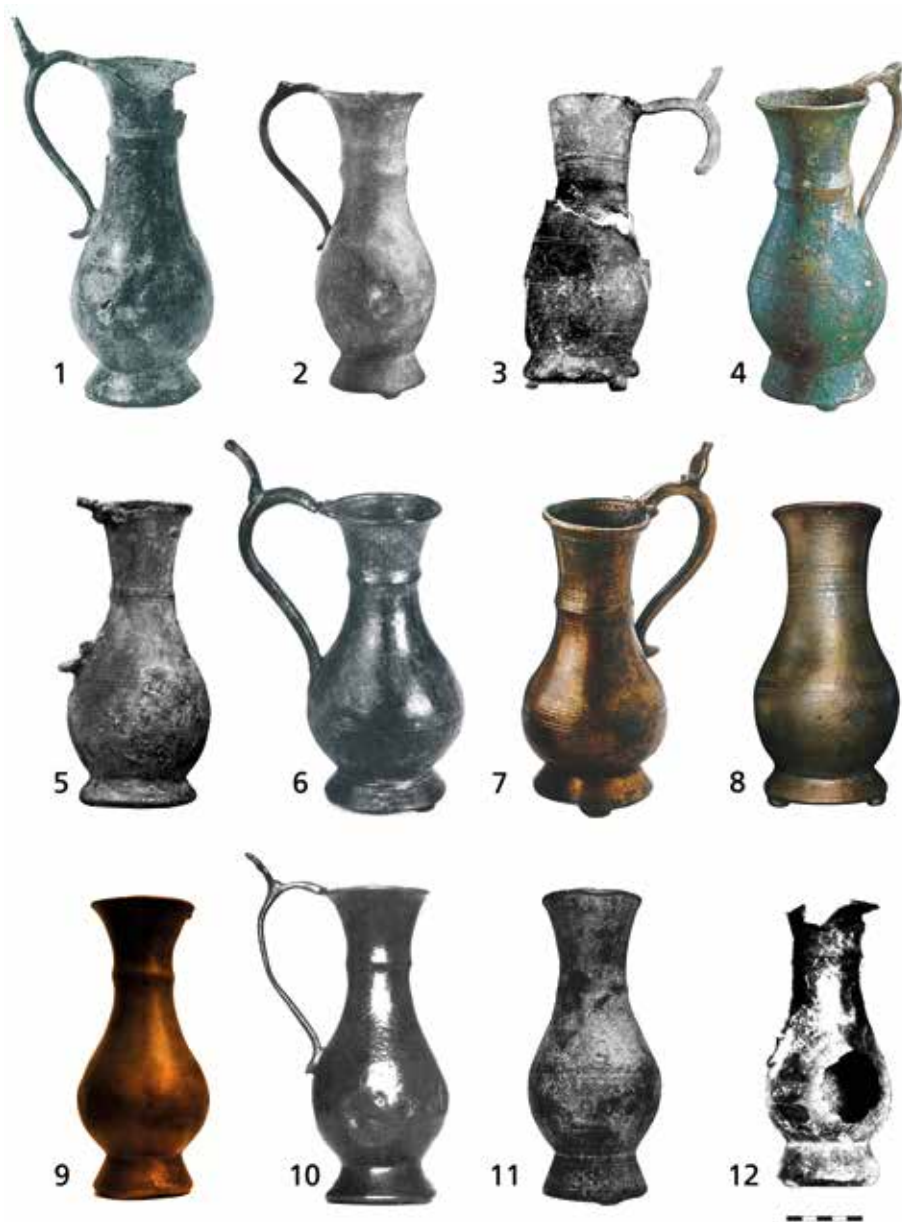


Fig. 13 Ewers of Werner's B3 type. – **1** Bardouville, Seine river. – **2** »Lower Aragon«. – **3** Cuers. – **4** Lauchheim-Mittelhofen, grave 25. – **5** Palaminy. – **6** »Syria«. – **7** Pfahlheim »Brühl«, grave 4/1883. – **8** Bergerac, Dordogne river. – **9** Segovia area (?). – **10** Sens, Yonne river. – **11** Collet de Sant Antoni. – **12** La Grassa. – (1 after Périn 1992, 36; 2, 11 after de Palol 1950, pls 20, 22; 3 after Codou 1998, fig. 1; 4 after Stork 2001, 21; 5 after Manière 1968, pl. between p. 40 and 41; 6 after Féhervári 1980, pl. 3; 7 after Gut 2010, 32; 8 after Ruet 2013, fig. 1; 9 courtesy of the Museo de Segovia; 10 after Bronzes antiques 1982, 44; 12 after Zeiss 1934, pl. 29).



Fig. 14 Werner's B3 type (●) and Mañaria type (■), distribution map. The list of finds can be found at the bottom of the text. – (Map M. Beghelli / J. Pinar Gil).

might have been produced where B3 ewers, although known, were difficult to purchase. Such a picture fits well with Palol's proposal to identify them as Spanish imitations of Werner's B3 ewers³⁹. One might add just one remark to Palol's observations: the newest finds show that the Mañaria ewers should not be strictly considered Spanish, but Western Mediterranean in a wider sense. In any case, as said, not a single »Mañaria imitation« has been recorded so far in the two main regions of concentration of Werner's B3 ewers, i. e. South-Western Germany and Catalonia. In our opinion, the production of B3 ewers is most likely to be placed in these two areas. Some technological features could indeed indicate that B3 ewers were produced by workshops in more than one single region: the best-preserved specimens from Germany and France suggest that the ewers were usually cast in a single piece⁴⁰, whereas in the Iberian Peninsula they often display independent handles, assembled to the main body by means of rivets or soldering. Interestingly enough, independent handles appear to be widespread among the Mañaria-type jugs: this characteristic, which can be observed in many other types produced in the Iberian Peninsula⁴¹, might imply a Spanish origin of the Mañaria and of a significant part of the B3 ewers.

Werner's B4 »teapots« (fig. 16), whose best dated archaeological contexts belong to the mid-7th century, may be also regarded as Western European products. The examples attested so far come from Southern Germany, Southern England, Central Spain and Southern France (fig. 17)⁴². The limited number of finds does not enable us to pinpoint the production region, although the Western Mediterranean appears as a convincing option. A similar case is that of Werner's B2 pans, which started to be deposited in graves around the



Fig. 15 Ewers of Mañaria type. – 1 »Astorga«. – 2 Montbrun. – 3 Sant’Andrea Frius. – 4 Penne-d’Albigeois. – 5 »Tunesia«. – 6 Bobadela. – 7 »Cordoba«. – 8 Proendos. – 9 »Ammersee«. – 10 Mañaria. – 11 Lisbon. – 12 Museu d’Arqueologia de Catalunya, Barcelona (unknown provenance, most probably Spain). – (1. 7-8. 10. 12 after de Palol 1950, pls 26-28. 32; 3 after Curatola 1993, 67; 5 after Bejaoui 2005, fig. 11; 6 after *In tempore Sueborum* 2017, 188; 9 after Wamser/Zahlhaas 1998, 60 Kat. 55; 11 after Schulze-Dörrlamm 2006, 621; 2. 4 photographs of the Musée Saint-Raymond, Toulouse).

mid-7th century: a vast majority of the examples has been recorded in South-Western Germany, whereas only two pans from the coasts of Catalonia and Asia Minor are known⁴³. In sum, Werner’s B2, B3 and B4 types share very similar chronology, distribution and deposition contexts (B2 pans and B3 jugs being frequently associated) and should, therefore, be acknowledged as Western productions.

The examined examples of bronze vessels convey the picture of a Western Mediterranean where multiple production centres coexisted: a territory characterized by trade networks that, at least concerning this kind of goods, were still functioning in the 7th and 8th centuries. Medium-distance distribution of cast bronze vessels seems to have been the rule, and not only in the West, for some forms of cast ewers appear to have been produced and used exclusively in the Eastern Mediterranean. Some globular-bodied and (often) anthropomorphic ewers, for instance, can be safely identified as genuine Egyptian products based on the recorded find spots (fig. 18)⁴⁴. A larger Near- and Middle-East-based distribution pattern is shown by a group of ewers with a wide ovoid body (figs 19-20), which includes the renowned Abu Yazid’s ewer, made in Bosra (Gouv. Darā/SYR)⁴⁵. Its Arabic inscription reports that the jug was produced in 688/689 of the



Fig. 16 »Teapots« of Werner's B4 type. – 1 Museo Arqueológico Nacional, Madrid (unknown provenance, probably Spain). – 2 Pfahlheim-»Brühl«, grave 9A/1883. – 3 Wheathamstead. – 4 Casillas. – 5 Cap d'Agde. – 6 Wonsheim, grave 1/1893. – (1 after de Palol 1955/1956, pl. 1; 2 after Veeck 1931, pl. 20; 3 after Anglo-Saxon and Teutonic 1923, 79; 4 after de Palol 1961/1962, fig. 3; 5 after Musée de l'Ephèbe 2001, 24; 6 after Grünewald/Koch 2009, 887).



Fig. 17 Werner's B2 (■), B3 (●) and B4 (▲) types, distribution map. The list of finds can be found at the bottom of the text. – (Map M. Beghelli / J. Pinar Gil).



Fig. 18 Egyptian (Coptic) early medieval ewers. – **1. 3** Giza. – **2** »Egypt«. – (1. 3 after Wulff 1909, pls 51. 54; 2 after Santrot et al. 2001, 91).

Christian era, although some scholars have suggested that the lack of space on the object would have »forced« the engraver to drop the first digit of the date, thus conveying a dating either in 783/784 or 882/883⁴⁶. It appears, however, that such an argument is not supported by any further epigraphic, palaeographic, stylistic or typological piece of evidence. Judging by the morphological features of the ewer – closely related to the typological repertoire displayed by late 7th-8th-century European assemblages, such as the Morbello treasure –, it seems more probable that Abu Yazid had his ewer ready for delivery by the late 7th century. Some bronze-sheet hammered ewers with similar bodies, yet with narrow, scarcely profiled mouths (fig. 21) convey a chronology around the 8th century: the examples recorded in Corinth (GR) and Pontes/Đerdap on the Danube (okr. Bor/SRB)⁴⁷ find several convincing counterparts among late 7th- and 8th-century precious metal vessels, for example from the Podgor-

nenskij kurgans (obl. Rostov/RUS) and within the Nagyszentmiklós/Sânnicolau Mare (jud. Timiș/RO) treasure⁴⁸. The ewer from Pontes was part of a deposit of metal objects buried after the 850s: by then, it may have been an old object. In any case, this group of ewers from the Balkan Peninsula outlines a pattern of regional-based circulation (fig. 20), which recalls that of some cast vessels in the West as well as in the Levant. These few examples of eastern ewers show that Waldo Tobler's and Ian Hodder's principles⁴⁹ apply to early medieval Greece and Near East just as fine as elsewhere: epigraphic data suggest that these ewers were produced in Eastern-Mediterranean workshops, and their find spots do concentrate in that area, in which every group has a specific regional distribution. A cast bronze jug recorded in the excavations at the basilica of Eleutherna in Crete and a hammered one retrieved from the Plemmyrion shipwreck in Eastern Sicily show a half-way form between the Abu Yazid and the Corinth groups (fig. 22)⁵⁰. Considering their provenances (fig. 20), they can be seen as a sort of »chain link« between the Balkan (Corinth type) and the Near East (Abu Yazid's type) groups: it is probably no chance that the Eleutherna/Plemmyrion characteristic form is reproduced by means of both casting and hammering techniques.

In our view, all these data support our interpretation of the vast majority of cast vessels recorded in the West as a product of Western workshops. Late 6th-8th-century Eastern-Mediterranean objects might have played a role in the production networks of cast bronze vessels in the West – as shown, for instance, by the just mentioned half-way forms in contact zones – but probably to a much lesser extent than traditionally reckoned. »Eastern influences« upon western vessels seem to fit well into the mid-distance pattern outlined earlier in this study: the Italian ewers of the Spilamberto type, for instance, share some formal features with Greek vessels, such as the clamp-shaped end of the handles – also present on another Italian type of jug, Werner's A2, as well as among the finds from the Plemmyrion shipwreck – and the overall form of the ewer body (cf. figs 6; 8; 22-23C). The geographically circumscribed range of these influences – which does not stretch further than both sides of the Adriatic and Ionian coastlines – suggests that Byzantine workshops should not be given a more significant role in the shaping of Mediterranean early medieval cast vessels than any concurrent Western regional manufacturing centre.



Fig. 19 Ewers of Abu Yazid's type. – **1** unknown provenance, Walters Art Gallery, Baltimore. – **2** Abu Yazid's jug, Georgian National Museum, Tbilisi. – **3** »Syria or Iraq«. – **4** »Mesopotamia«. – (1 after Baer 1983, fig. 113; 2 after Evans/Ratliff 2012, 220; 3 after Unity 1985, 101; 4 after Fehérvári 1980, pl. 1).

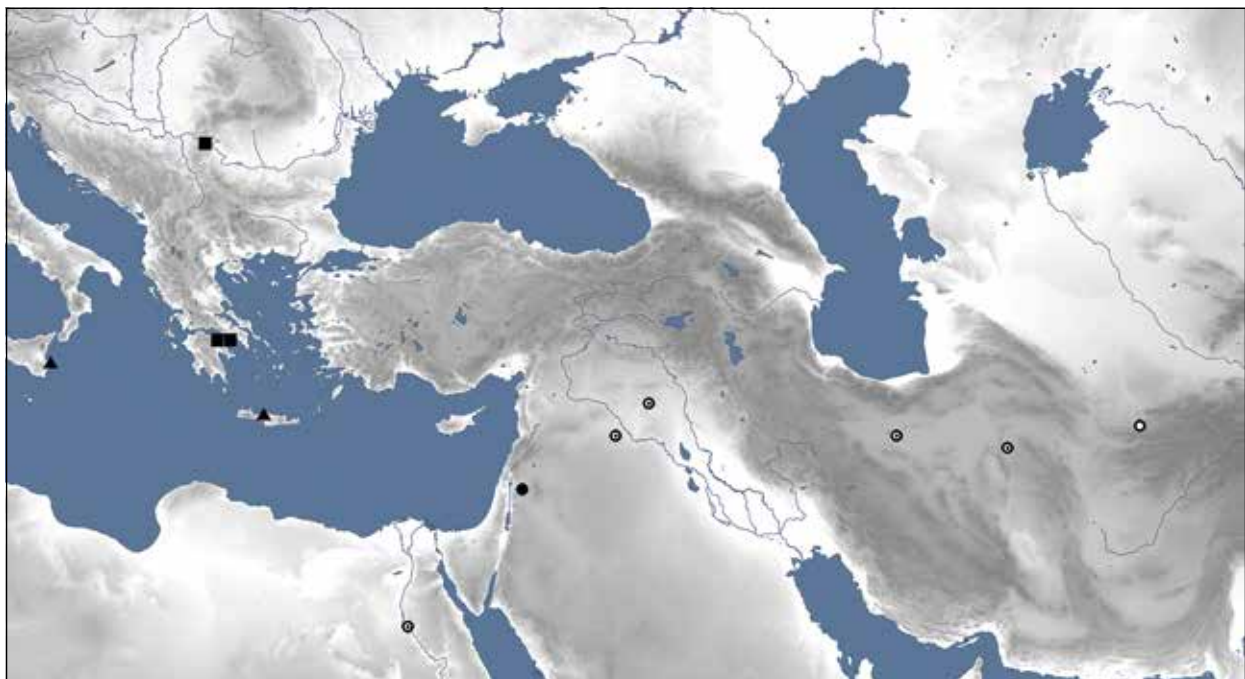


Fig. 20 Abu Yazid's type (●), Corinth type (■) and Eleutherna/Plemmyrion type (▲), distribution map. The list of finds can be found at the bottom of the text. – (Map M. Beghelli / J. Pinar Gil).

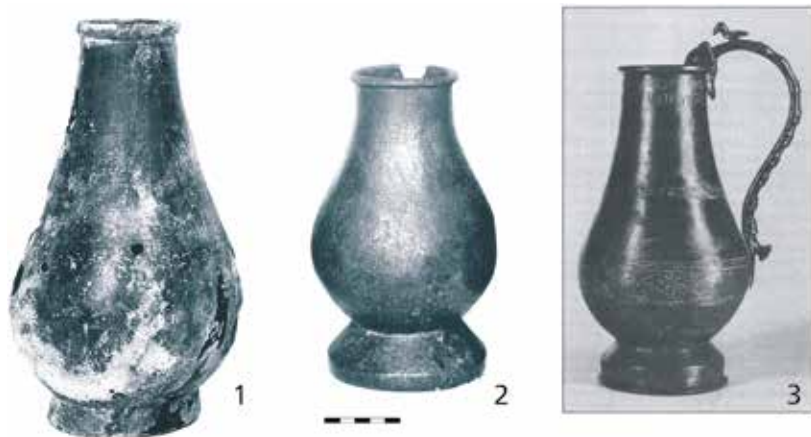


Fig. 21 Ewers of Corinth type. – **1-2** Corinth. – **3** Đerdap, deposit B. – (1-2 after Davidson 1952, pl. 51; 3 after Marjanović-Vujović 1987, fig. 4).

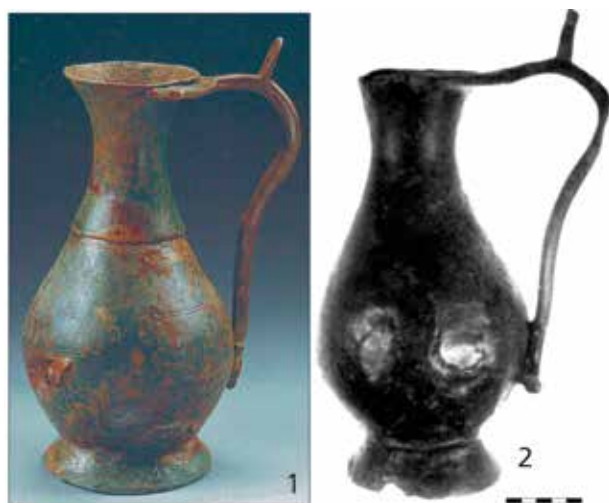


Fig. 22 Ewers of Eleutherna/Plemmyrion type. – **1** Eleutherna, basilica, sector III. – **2** Syracuse-Plemmyrion. – (1 after Stampolidis 2004, 216; 2 after Kapitän/Fallico 1962, fig. 16).

ON CIRCULATION AND DEPOSITION MODALITIES: TRADE AND USE

The available evidence on the modalities of circulation of cast bronze vessels is just as limited as the hints on their production centres. However, two facts seem to be remarkably relevant: firstly, the distribution of the objects displays a denser clustering in coastal regions, with the sole exception of the »anomalous« concentration of vessels in South-Western Germany⁵¹; secondly, cast bronze vessels are attested in shipwrecks, as the examples from Plemmyrion, Camarina (prov. Ragusa/I), Favàritx (E) and, perhaps, Frontignan and Cap d'Agde (both dép. Hérault/F) show⁵². These underwater finds include typologies with a clear East-West (or West-East!) distribution: a Werner's B1 basin at Camarina, a Werner's B3 ewer at Frontignan, a Werner's B4 »teapot« at Cap d'Agde and »Eastern« thuribles, lamps and ewer handles at Plemmyrion (**fig. 23**)⁵³. Finds, such as the B3 ewers retrieved from the rivers Yonne at Sens (dép. Yonne/F), Seine at Bardouville (dép. Seine-Maritime/F) and Dordogne at Bergerac (dép. Dordogne/F), the B1 basin found at the Tiber in Rome (I), the candlestick foot from Quentovic (dép. Pas-de-Calais/F) or the lamps from the Guadalquivir and Saône banks, respectively at Cordoba (E) and La Truchère or Brienne (dép. Saône-et-Loire/F) may also be evidence for the waterway circulation of cast bronze implements⁵⁴.

The item from Frontignan (**fig. 23D**) is particularly noteworthy, as it appears to be a revealing case to show how these vessels circulated in the West. Found near the coast, halfway between the two main clustering

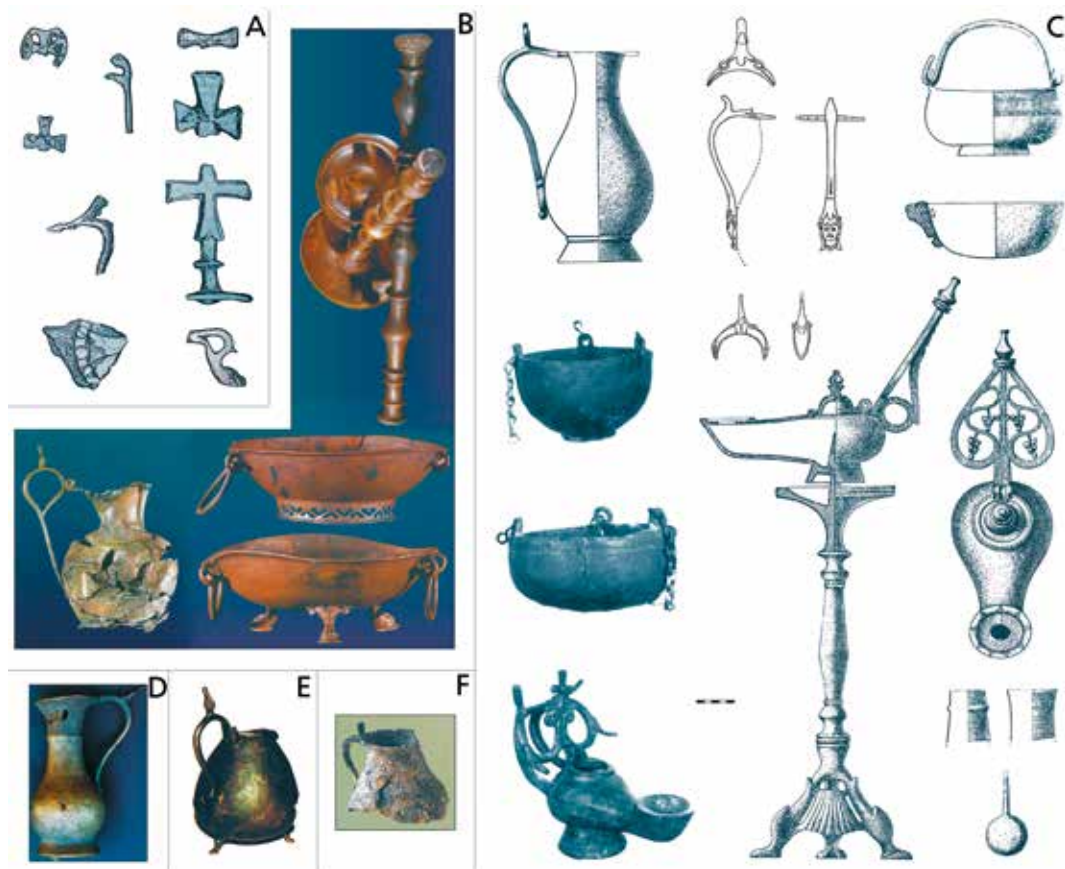


Fig. 23 Western-Mediterranean shipwrecks and seaside finds with cast bronze items. – **A** Favàritx, shipwreck. – **B** Camarina, shipwreck. – **C** Syracuse-Plemmyrion, shipwreck. – **D** Frontignan, single find. – **E** Cap d'Agde, single find(?). – **F** Hérault-Rocher de la Lauze, single find(?). – (A after Tejedor 1978, figs 1-2; B after Di Stefano 1995, 29-31; C after Kapitän/Fallico 1962, figs 4. 7. 9-10. 13; D after Lugand/Bermond 2001, fig. 583; E after Musée de l'Éphèbe 2001, 24; F after Mystère 2003, 55).

areas of B3 ewers, it helps to reconstruct a trade network connected to middle-distance seafaring, which fits remarkably well into the sequences of import and imitation of several types of cast bronze vessels outlined by our typological observations. The available data suggest that the ewer was cast in one piece – a feature, as highlighted above, attested in France and even more often in South-Western Germany. It seems therefore very likely that the jug from Frontignan was produced in South-Western Germany and may have reached the Western Mediterranean following the Rhone course downstream. It is thus plausible that Western-Mediterranean ports played a significant role in the dissemination of B3 ewers, probably as redistribution centres, supplying the Southern Gallic and Eastern Iberian coasts with these products. This trade route, however, seems to have functioned in both senses: an ewer found in the Ammersee area (fig. 15, 9), probably produced in Spain, bears witness of such activity⁵⁵. Some sporadic written records – for instance, the mention of »*vasa de auricalco et argentea*« brought from Sicily to Ravenna in the mid-7th century⁵⁶ – confirm both how (presumably by sea, reaching major ports) and how far (middle distance) these objects usually travelled in South-Western Europe.

The circulation of these items in northern Gaul and the surrounding territories can be better understood and explained if one acknowledges South-Western Germany as the most likely area of production of some types of cast bronze vessels. This seems particularly evident for the mid- and late 7th-century period, as a significant part of Werner's types B2, B3 and B4 might have been produced – as the observations made so far

suggest – by local workshops. From that area, ewers, basins and teapots may have travelled north-west following major river routes such as the Rhine, the Yonne and the Seine, as several finds recorded next or within these rivers show⁵⁷. As also shown by a similar distribution of objects, the same Northern Gallic waterways might have been used, already in the late 6th century, to bring Mediterranean cast ewers (Werner's A2 and Spilamberto types, along with other early examples⁵⁸) and basins (Werner's B1 type) up to the North Sea area⁵⁹. However, the available evidence suggests that the trade routes followed by the cast bronze vessels in Western Europe slightly varied over time (cf. **figs 2. 7. 17**). In the years around 600 AD, »Coptic« basins (Werner's B1 type) and Italian ewers (Werner's A2 and Spilamberto types) were still reaching Southern Germany by the main roads leading through the Alps⁶⁰. The route then followed downstream the course of the Rhine, up to the North Sea. About 650 AD, according to the observations made above, new local production centres seem to have developed and been functioning in South-Western Germany: as a consequence, Southern Gallic ports had replaced Italian distribution centres as the main links with the Mediterranean area, while the river routes brought cast vessels to major Gallic cities such as Rouen and Sens⁶¹. Despite these changes over time, the Rhine remained a »constant«, as the traffic on this river route does not show visible alterations over the 7th century.

As seen above, the distribution of the vessels discussed in the present paper shows that most of the objects recorded in the West came from a regional or inter-regional market and that Eastern-Mediterranean »influences« were much weaker than traditionally assumed. The examination of dating contexts suggests that long-distance trade-relations fluctuated over time. Exports by sea of Egyptian/Levantine bronze ware to the West are well attested during the late 5th-6th century, the case of Prepotto ewers being among the clearest archaeologically recorded sequences (**fig. 5**)⁶². These objects were produced and used in the 5th-6th centuries Egypt and were in use up to the 7th century in the Western Mediterranean, where they probably served as a model for local products. The chronology of the depositions of the Egyptian examples fits well with the available material evidence for workshops producing cast bronze vessels, such as the one that was active at the Elephantine island between the late 5th and the 6th century⁶³. Written records also attest that bronze implements were part of the cargoes of trade ships departing from Alexandria in the late 5th century⁶⁴. An inscription on a bronze plate found at the Favàritx shipwreck (**fig. 23A**) suggests an origin in Egypt or the Levant⁶⁵: however, its relation to other Late Antique lighting devices and vessels coming from the same shipwreck remains uncertain, as the items loaded on the ships did not necessarily come from the same production centre. In any case, it seems that written and material evidence consistently indicates that until about 500 AD, some types of cast bronze vessels were being produced in Egypt and exported by sea to the Western European regions.

It is worth mentioning that there is no convincing evidence of bronze ewers travelling from Egypt to Europe after the end of the 5th century: this fact turns the Prepotto ewers into one of the few available »candidates« to be recognized as *urcei alexandrini*. The 9th-century *Gesta abbatum Fontanellensium* reports this kind of item as having been donated to the abbey of Saint Wandrille (dép. Seine-Maritime/F) in the second half of the 8th century⁶⁶. It can therefore be argued that the Carolingian-period *urceus alexandrinus* was a fossil-word that bore witness of an already distant past when existed a sustained trade in bronze vessels between Egypt and Western Europe. Should this hypothesis be accepted, however, the term in the 9th-century text should of course not necessarily and specifically be related to Prepotto type ewers: for all we know, the chronicler might have used this fossil-word to mean in general any kind of bronze ewers⁶⁷.

By 600 AD, the overall situation appears slightly changed. The oldest vessels of Werner's »Coptic group« (A1 pans and B1 basins) may be regarded as the latest testimonies of the previously flourishing trade in bronze ware: probably originating in Egypt or Asia Minor, A1 and B1 types started to occur in cemeteries of Northern Italy and South-Western Germany in the last third of the 6th century (**fig. 2**). As mentioned earlier,

later cast vessels such as Werner's B2 pans, B3 ewers and B4 »teapots« outline a quite different picture: they are recorded in dating contexts only from the mid-7th century onwards, and find only very few counterparts in the Levant (B2 and B3) or none at all (B4) (**fig. 17**). Thus, these two groups of vessels (A1 and B1, on one hand, and B2, B3 and B4, on the other) belong to different production centres and different chronologies, even if they might occasionally occur together in the same deposition context.

The decrease in the import of Eastern bronze ware in the West was balanced by a strengthening of medium-distance trade: unlike most late 6th-early 7th century objects, almost every type of vessel dating from the mid-7th to the early 8th century is attested in Spain, Gaul, Italy and South-Western Germany. Moreover, examples like the Sardinian jug found in Hurbanovo in Slovakia (**fig. 10**), and the just mentioned B2 and B3 easternmost finds, might suggest some movements in the opposite direction, from the West towards the Levant, the extent of which is currently difficult to assess. Interestingly enough, the 7th century is also the period in which some other entirely different categories of goods stopped to be traded over long distances from the East to the West⁶⁸. A prominent example are marble items, which ceased to be imported from the Byzantine empire in the late 6th century⁶⁹: as shown by a recent statistic, in the 7th-9th century, about 90-95 % of the stone used in architectural sculpture in the West was locally procured, whether newly quarried or reused from ancient monuments⁷⁰. As just another example – a meaningful one for the importance of the city –, in the 7th-8th century the flow of goods from the East had remarkably contracted even in Rome: for instance, the securely dated layers from Crypta Balbi yielded ceramics that imitated eastern forms, yet were produced in local workshops⁷¹. In general, the contraction of the long-distance trade between Byzantium and the West is also suggested by the quantitative and qualitative analysis of shipwrecks with diverse sorts of cargoes⁷². These hints seem to indicate some common traits characterizing the market of diverse classes of goods: thus the medium-distance trade in cast bronze vessels from the 7th century onwards would not appear as an isolated phenomenon but should be set against the same economic background as other types of items.

What happened between the two »snapshots« of the distribution of Egyptian cast vessels in the West around 500 and 600 AD (**figs 2. 5**) seems difficult to reconstruct. As said, the prolonged use and the emergence of local imitations of the Prepotto ewers suggests that »Coptic-styled« vessels started to be produced in the West (most probably in Italy) already in the 6th century, which fits well with the evidence of certainly Italian-made ewers (Spilamberto and Werner's A2 types) occurring in deposits from the late 6th century onwards⁷³. This appears to be further confirmed by a small, yet very heterogeneous group of cast bronze ewers sparsely recorded in Africa, Italy, Gaul and South-Western Germany (**fig. 24**)⁷⁴. Some of them (e. g. the ewers from the Bardo Museum, Lavoye and »Italy«) are to be seen as direct forerunners of 7th century Western products; the examples from dating contexts (Lavoye 307bis and Mackenheim) suggest that they were deposited by the early and mid-6th century. As they find no direct counterparts in the East, these items were likely manufactured by Western workshops that, according to the distribution of the objects, could tentatively be located in Italy and north-eastern Gaul. Yet it is important to stress that the small amount and the heterogeneity of these ewers make our observations merely hypothetical: they were produced and used in a time in which the circulation of Egyptian and Levantine cast vessels is attested throughout the Mediterranean, so it is also possible that at least some of these 6th-century types could actually have been imported from the easternmost territories⁷⁵.

Concerning the use of the vessels, a number of issues have already been addressed in the first part of this study; as mentioned earlier, »Western Mediterranean«, »local« and »Byzantine« objects can be found together in a single liturgical set, a treasure or a grave, the Morbello assemblage representing a case in point⁷⁶. It is relevant to observe that, generally speaking, a group of items with very different provenances could easily come together at the very end of their useful life. This is indeed a situation that archaeologists



Fig. 24 6th-century cast ewers in the West. – **1** Vicq, grave 617. – **2** unknown provenance, Musei Vaticani, Rome. – **3** unknown provenance, Musée Nationale du Bardo. – **4** Lavoye, grave 307bis. – **5** Frénouville, grave 508A. – **6** Dettingen. – **7** Mackenheim. – (1 after Périn 1992, fig. 6; 2 after de Palol 1950, pl. 9; 3 after Vida 2006, fig. 2; 4 after Joffroy 1974, fig. 68; 5 after Pilet 2008, 517; 6 after Veeck 1931, pl. 20; 7 after Vallet 1976, fig. 2).

record very frequently in settlement layers, grave furnishings and any other kind of deposit, both in ecclesiastical and »secular« archaeological contexts. Moreover, when one considers the main features of the accumulation processes of church treasures, it becomes clear that heterogeneity must have been the rule rather than the exception: after an initial endowment (e. g. by the founder), liturgical implements, furniture and adornments continued to be added to the »treasure« and were renewed throughout the existence of the church by means of several donations⁷⁷; written sources such as the Episcopal *gesta* – in the first place the Roman *Liber Pontificalis* – are particularly generous in describing the phenomenon in the most prominent ecclesiastical centres in the Early Middle Ages⁷⁸. These gifts were offered over time, and therefore extremely heterogeneous: they often originated from distant locations and were shaped in different artistic traditions⁷⁹. And yet they were integrated into a single assemblage of church equipment: Early Medieval iconographic evidence suggests that objects of different provenance could be in use together in the same church at the same time⁸⁰. Thus, a combination of archaeological, visual and written sources shows that »liturgical sets« made by a single workshop were by no means the rule in the early medieval West.

CONCLUSIONS

A better understanding of the patterns of production, distribution, accumulation and use of the Mediterranean bronze vessels requires a new approach based upon a systematic examination of not only the artefacts, but also the original assemblages and contexts they belonged to, as well as the »dialogue« with selected written and iconographic sources. From this perspective, the recently re-discovered Morbello assemblage is an important piece of evidence, enabling to discuss a number of relevant issues related in general to early medieval cast bronze vessels: the treasure refines our knowledge on the typological reper-

toire of liturgical implements, pinpoints the chronology of certain items and contributes identifying their production centres and distribution patterns. Within this re-examination – which necessarily leads to a review of the so-called Coptic vessels – a particularly relevant outcome is recognizing multiple production centres, and some traces of middle-distance seafaring trade within Western Europe. On the contrary, the available evidence for long-distance imports from the Eastern Mediterranean in the Early Middle Ages appears to be far less substantial than generally reckoned.

LIST OF FINDS

The following lists of finds refer to the distribution maps published in the present paper, which include the items previously mapped by other authors (mainly, Werner's types), plus some additional objects: these have been quoted in the present text, where can be found the respective bibliography. For space reasons, it is not possible to list here the literature referring to every single find on the maps. However, the bibliographical references can be found in: de Palol 1950; Werner 1954/1957; Richards 1980; Périn 1992; 2005; Bárdos 1992; Koch 1994; Werz 2005; Drauschke 2011 (especially for Werner's types) and Beghelli/Pinar 2013 (especially for the Spanish types, and for some more recently discovered items belonging to Werner's types).

In the distribution maps, the objects with completely unknown provenance have been mapped according to the location where they are preserved (e. g. a museum), and are marked with an empty circle, or square, or triangle. Most of the objects with uncertain provenance (e. g. »Spain«) have been conventionally mapped at the position of the current capital of each country/region (e. g. Madrid for »Spain«), and their symbols consist in an empty circle, or square, or triangle, with a dot in the centre.

Distribution map **figure 2**

A1 type: Anatolia (uncertain location). – Egypt: middle Egypt (uncertain location). – France: Ittenheim, Heidolsheim. – Germany: Güttingen, Salgen. – Israel: Negev region (uncertain location). – Italy: Cividale del Friuli (2 objects), Reggio Emilia.

B1 type: Belgium: Beerlegem. – Egypt: Egypt, uncertain locations (7 objects), Thebes. – Germany: Altheim, Aschheim, Dörnigheim, Eppstein, Gammertingen, Geislingen, Großwallstadt, Horkheim, Hüfingen (2 objects), Meckenheim, Niederwalluf, Oestrich-Winkel, Rennertshofen, Weilbach, Wonsheim. – Hungary: Zamárdi. – Italy: Brescia, Camarina, Castel Trosino (6 objects), Chiusi, Civezzano, Cividale del Friuli (7 objects), Momo, Nocera Umbra, Piedmont (uncertain location), Rome, Sutri, Testona (3 objects), Trezzo sull'Adda, Verona (2 objects). – Jordan: Pella. – Netherlands: Millingen aan de Rijn. – Russia: southern Russia, uncertain location. – Switzerland: Beggingen. – United Kingdom: Asthall Barrow, Badley⁸¹, Boscombe, Caistor, Chilton, Faversham, Faversham/King's field, Gilton, Kent (county, uncertain provenance), Reculver, Sarre (2 objects), Teynham, Westwell, Wickham, Wickham Market, Wingham.

Distribution map **figure 5**

Prepotto type: Egypt: Ballana (3 objects). – Italy: Prepotto, Rome, Rome (uncertain location). – Spain: Tarragona.

Distribution map **figure 7**

A2 type: Croatia: Solin (2 objects). – France: Ittenheim. – Germany: Bonn (most probably), Pfahlheim, Thierhaupten-Oberbaar. – Italy: Montale, Nocera Umbra. – Netherlands: Welsrijp. – Spain: Spain, uncertain location. Spilamberto type: Italy: Cividale del Friuli, Spilamberto. – Netherlands: Wijchen.

Distribution map **figure 10**

Las Pesqueras type: Italy: Borutta. – Spain: Alcaraz, Alesga, Balbarda, Bernardos, Bobia, Cangas de Onís (most probably; 2 objects), Cueva de Cudón (Santander), Cueva del Asno de los Rábanos, El Gatillo de Arriba (2 objects), Museum für Angewandte Kunst Köln (unknown provenance, possibly Spain), Las Pesqueras (3 objects), León region (uncertain location), Limpias, Lindes, Museo Arqueológico Nacional, Madrid (5 objects, unknown provenance, probably Spain), Museo Arqueológico Sevilla (unknown provenance, probably Spain), Montoro, Northern Spain (uncertain location; Instituto Valencia de Don Juan Madrid), Palencia (most likely), Quintanilla de Arriba, Roses, Sant Julià de Ramis, Spain (uncertain location, Instituto Valencia de Don Juan Madrid).

Morbello type: Italy: Morbello. – Spain: Instituto Valencia de Don Juan Madrid (unknown provenance, probably Spain), Museo Arqueológico Nacional, Madrid (unknown provenance, probably Spain).

Sardinia type: Italy: Sardinia, most likely Olbia (3 objects). – Slovakia: Hurbanovo.

Distribution map **figure 14**

B3 type: France: Bardouville, Bergerac, Cuers, Frontignan, Palaminy, Sens (2 objects). – Germany: Barzheim, Bondorf, Giengen a. d. Brenz, Großbottwar, Harxheim, Lauchheim, Ötlingen, Pfahlheim. – Spain: Adanero, Astorga, Lower Aragón region (uncertain location), Calonge-Collet de Sant Antoni, El Bovalar, Instituto Valencia de Don Juan Madrid (unknown provenance, probably Spain), La Grassa, León, León region (uncertain location), Mula, Narros, Segovia or Valladolid (uncertain location), Son Peretó, Spain (uncertain location). – Syria: Keir collection, unknown provenance, most probably Syria.

Mañaria type: France: Montbrun, Penne-d'Albigeois. – Germany: Ammersee region (uncertain location). – Italy: Sant'Andrea Frius. – Portugal: Bobadela, Lisbon. – Spain: Astorga (most probably), Córdoba (most probably), Museu d'Arqueologia de Catalunya, Barcelona (unknown provenance, probably Spain), Mañaria, Mave, Sober, Spain (uncertain location, British Museum, London). – Tunisia: Tunisia, uncertain location.

Distribution map **figure 17**

B3 type: France: Bardouville, Bergerac, Cuers, Frontignan, Palaminy, Sens (2 objects). – Germany: Barzheim, Bondorf, Giengen a. d. Brenz, Großbottwar, Harxheim, Lauchheim, Ötlingen, Pfahlheim. – Spain: Adanero, Astorga, Lower Aragón region (uncertain location), Calonge, El Bovalar, Instituto Valencia de Don Juan Madrid (unknown provenance, probably Spain), La Grassa, León, León region (uncertain location), Mula, Narros, Segovia or Valladolid (uncertain location), Son Peretó, Spain (uncertain location). – Syria: Keir collection, unknown provenance, most probably Syria.

B2 type: France: Delle. – Germany: Beffendorf, Engelstadt, Giengen a. d. Brenz, Gladbach, Harxheim, Korschbroich, Lauchheim (3 objects), Lauffen, Morken (Kreis Bergheim), Neudingen, Ötlingen, Pfahlheim,

Southern Germany (uncertain location), Wonsheim. – Spain: Calonge, Cueva de Cudón (Santander; uncertain typological attribution: the object could belong to Werner's B1 type). – Switzerland: Barzheim. – Turkey: Izmir. – United Kingdom: Canterbury (2 objects).

B4 type: France: Cap d'Agde. – Germany: Hessen (uncertain location), Münzesheim, Pfahlheim, Sand (Gem. Todtenweis, Lkr. Aichach), Wonsheim. – Spain: Casillas, Museo Arqueológico Nacional, Madrid (unknown provenance, probably Spain). – United Kingdom: Wheathampstead.

Distribution map **figure 20**

Abu Yazid's type: Afghanistan: Museum Kabul (unknown provenance). – Egypt: Egypt, uncertain location. – Mesopotamia (uncertain location). – Syria: Bosra (location of production, as attested by the inscription). – Syria or Iraq (uncertain location). – Persia (uncertain location). Eastern Persia (uncertain location).

Đerdap type: Greece: Corinth (2 objects). – Serbia: Đerdap.

Eleutherna/Plemmyrion type: Greece: Eleutherna. – Italy: Syracuse.

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in East and West. Distribution, Reception and Functionality (5th-9th centuries)«. – On the part of J. Pinar Gil, the preparation of this paper was supported by a visiting professorship provided by the Philosophical Faculty of the Univerzita Hradec Králové in Summer term 2019.

Notes

- 1) Beghelli/Pinar 2019. The set has been discovered in 1897; a recent paper about it, describing thoroughly the objects and the original context, is Crosetto 2011.
- 2) Dannheimer 1979.
- 3) As noted by Zamora Canellada 2007, 214-215, with further reading. – See also note 30.
- 4) Werz 2005, 18-50.
- 5) On this point, see also Beghelli/Drauschke 2017, 59-60, with bibliography.
- 6) Vida 2006; 2011.
- 7) Périn 2005, 96-97.
- 8) Koch 1994, 66-69. Some updating to her dissemination map: Garam 2001, pl. 131, 2. – Walmsley 2002, fig. 221. – Di Stefano 1995. – Arena et al. 2001, 421-422 no. 1016. – Zagari 2005, 110 pls II, 2; III. – De Marchi 2011, 289-290 fig. 14. – Drauschke 2011, 132 with note 1299; 342-347. – Lusuardi Siena/Giostra 2012, 171-180. 295-307. – Micheletto et al. 2014, 114 fig. 26. – The basin from Arcisa grave 5 (Chiusi, prov. Siena/I; Koch 1994, 80 no. 39), which is often quoted as a B1 basin in the German literature, is hammered not cast, and belongs to an entirely different type (on this point, see von Hessen 1971, 23).
- 9) P. Périn (2005, 95), instead, suggested that the few examples recorded in the East should be regarded as western imports.
- 10) See below.
- 11) Périn 1992, 44. 50. See also Beghelli/Pinar 2019, 285-287.
- 12) Ross 1962, 46-48 pl. 34, 51. – Hayes 1984, 124-125. – Golan/Goldfus Mevorah 2016-2017, 150-151.
- 13) Drauschke 2011, 125-126. – de Vingo 2010, 52-53. – De Marchi 2011, 289-290 fig. 14. – Beghelli/Drauschke 2017, 47-48 and passim.
- 14) Colussa 2010, with earlier literature.
- 15) Werner 1950. – Petrinc 2009, 66. 218-219.
- 16) Carretta 1982, 23 pl. 9, 1. – Arena et al. 2001, 422-423 nos 1020-1021. – Zagari 2005, 110 pl. II, 3.
- 17) Emery 1938, 320-321 pls 78C-D; 79B.
- 18) Török 1986.
- 19) See above in this paragraph and also below, p. 424.
- 20) Hauschild 1994, 154-155.
- 21) Werner 1938, 85-86 pls 27, 4; 28, 1-2; 1943, pl. 30; 1954/1957, 125 pl. VIII. – de Palol 1950, 62-63 pl. 19. – Boeles

- 1951, 334 fig. 66. – Carretta 1982, 22-23 pl. 8, 1. 3. – Trier 1992. – Wamser/Zahlhaas 1998, 59-60 no. 54. – We are deeply grateful to Dr. Bernadette Schnitzler (Musée archéologique de Strasbourg) for having kindly provided new photographs of the jug.
- 22) Vida 2006, 265-266.
- 23) Vida 2006; 2009; 2016, 19-46.
- 24) Vida 2009; 2016, 19-46.
- 25) See Beghelli/Pinar 2019, 283; here **fig. 10**.
- 26) de Vingo 2010, 52-53. – Ahumada Silva 2010, 117-123 pl. 129.
- 27) Peddemors/Swinkels 1989.
- 28) See below in this paragraph.
- 29) de Palol 1950, 69. In his study, P. de Palol stated that this and other types of ewers were made of hammered bronze sheet. Later technological examinations showed that these objects were mostly cast: e.g. Schlunk/Hauschild 1978, 200-201. – Carretta 1981, 21. – Boube 1988, 20 note 81. – Ripoll 1993, 51-52. – Arbeiter/Noack-Haley 1999, 94-96. – On this point, see also Zamora Canellada 2007, 190. 192-193. 214-215. – On chronological issues, see Beghelli/Pinar 2019, 279-282.
- 30) Maetzke 1966. – Carretta 1982, 21 pl. 7, 2. – Riemer 2000, 465 pl. 104, 2. – Crosetto 2011. – See Beghelli/Pinar 2019, 279-282.
- 31) Almagro 1966, 371-379 pls I, 2; II, 3-4. – Pani Ermini/Marinone 1981, 86-87 nos 127-129. – Carretta 1982, 21-23 pl. 7, 1. 3-4. – Baldini/Schiaffino 2015, 310-311. – See also Beghelli/Pinar 2019, *passim*.
- 32) Zábajník 2004, 90-91. 159 pl. 9. – We are deeply grateful to Prof. Dr. Jan Rajtár (Slovenská akadémia vied, Nitra) for having kindly provided a photograph of the jug and for having shared with us some most useful information on the find.
- 33) Périn 1992, 48. – Drauschke 2011, 342-347. Some Western-Mediterranean »updates« to their find lists: Codou 1998. – Zamora Canellada 2007. – Ruet 2013. – We are deeply grateful to the staff of the Museo de Segovia for permission to examine the jug from the Segovia area and to publish the photograph taken on that occasion.
- 34) Fehérvári 1980, 35 pl. 3, 3a. – Périn 1992, 47. – Nawroth 2001, 182. The jugs from Prepotto, from the Museo Gregoriano and from the Museo Nazionale d'Arte Orientale in Rome (Werner 1954/1957, 126 no. 44. – Périn 1992, 49. – Nawroth 2001, 182 nos 21. 24) do not belong to the type B3 (Museo Nazionale d'Arte Orientale: Scerrato 1966, 17-18 fig. 4; Prepotto and Museo Gregoriano: see **figs 4, 4; 24, 2**). The specimens kept in the Museo Archeologico Nazionale in Cagliari (belonging to our type »Sardinia«, see below in this paragraph and **fig. 12**) were probably found at Olbia: of course, the referred city is the Sardinian Olbia (prov. Sassari/I), and not the Ukrainian Olbia (Drauschke 2011, 347).
- 35) See Beghelli/Pinar 2019, 285-287.
- 36) Périn 2005, 95.
- 37) Bejaoui 2005, 119 fig. 11. – Schulze-Dörrlamm 2006, 621. – de Palol 1950, 67-68 pls 26-29. – Boube 1988, 19-20. – Almagro 1966, 368-371 pl. 1, 1. – Pani Ermini/Marinone 1981, 85 no. 126. – Carretta 1982, 22 pl. 8, 2. – Dannheimer 1979, 131 pl. 17, 1. – Wamser/Zahlhaas 1998, 60 no. 55.
- 38) de Palol 1950, 66-67. The formal affinities that can exist between hammered and cast metal vessels have been summed up in Vida 2011.
- 39) de Palol 1950, 66-67.
- 40) On this manufacturing technique, see Eichhorn/Urban 1978.
- 41) See e.g. Las Pesqueras and Morbello types.
- 42) Drauschke 2011, 342-346. – Dannheimer 1962. – Musée de l'Ephèbe 2001, 24.
- 43) Koch 1994, 69. – Drauschke 2011, 342-346.
- 44) Wulff 1909, 216 pls 51. 54. – Santrot et al. 2001, 91.
- 45) Pinder-Wilson 1960. – Fehérvári 1980, 32-33 pl. 1, 1a. – Baer 1983, 83-84. – Unity 1985, 100-101. – Blair 1998, 117-118. – Curatola 2010, no. 9 – Evans/Ratliff 2012, 219-220. – Other examples belonging to the same type are claimed to have been found in Egypt (Museum of Islamic Art, Cairo) and Persia (Sotheby's).
- 46) Blair 1998, 117-118, with further reading.
- 47) Davidson 1952, 73-74 pl. 51, 557-558.
- 48) Naumenko/Bezuglov 1996, 255 fig. 2. – Bálint 2004. – Daim et al. 2018.
- 49) See the first part of this study: Beghelli/Pinar 2019, 285-287.
- 50) Stampolidis 2004, 216. – Kapitän/Fallico 1967, figs 10. 16. On the Plemmyrion shipwreck, see also below, p. 428.
- 51) See the previous paragraph.
- 52) Kapitän/Fallico 1962. – Fallico 1974, 489-490. – Di Stefano 1995. – Zagari 2005, 110. – Tejedor 1978. – On the find at Frontignan and its environmental context: Rouquette 2001. – Lugand/Bermond 2001, 389. – Cap d'Agde: Musée de l'Éphèbe 2001, 24. – Shipwreck evidence for hammered copper-alloy vessels is relatively abundant throughout the Mediterranean: see Mundell Mango 2001; 2009, 233-236.
- 53) An incense burner recorded at the Yassi Ada shipwreck provides further evidence to this suggestion: Bass/van Doornick 1982. A hammered wide globular-bellied, short-footed jug found at the Plemmyrion shipwreck is morphologically related to »eastern« cast jugs. See above in this paragraph.
- 54) Périn 1992, 48. – Delahaye 2015. – Ruet 2013. – Arena et al. 2001, 421-422. – Routier/Barbet 2011, 38-42. – Legros 2015, 145 fig. 96, 12. – Bronces romanos 1990, 226. – Bonnamour 2000, 118.
- 55) Dannheimer 1979, 131 pl. 17, 1.
- 56) Lib. Pont. Eccl. Raven. 111. – Roth 1980, 156 note 6.
- 57) Périn 1992. – Delahaye 2015.
- 58) See **figs 6. 8. 24** (especially **fig. 24, 1. 4-7**).
- 59) Boeles 1951, 334 fig. 66. – Richards 1980. – Leman 1986. – Peddemors/Swinkels 1989. – Callebaut 2014, 56. In general, see also Beghelli/Pinar 2019.
- 60) Werner 1938, 76 pl. 29, 3. – Roth 1971, 350-351.
- 61) Périn 2005, 95. – Schulze-Dörrlamm 2010, 252-253. – A direct maritime connection between the South-Eastern Mediterranean and Gallic ports such as Marseille was suggested by H. Roth (1980, 160).

- 62) See Mundell Mango 2001, 98 on the presence of bronze implements among the cargo of a ship departing from Alexandria in the late 5th century. – On the Elephantine workshop, see Beghelli/Drauschke 2017, 61-66. – On the Prepotto ewers, see above, p. 416-417.
- 63) Beghelli/Drauschke 2017, 61-66. See also above, p. 414-416.
- 64) See below in this paragraph.
- 65) de Palol/Ripoll 1990, 274. – de Hoz 1997, 88; 2014, 550-551.
- 66) Ges. Abb. Font. 15. – Roth 1980. – Schulze-Dörrlamm 2010, 252.
- 67) Although an in-depth analysis on this point lies outside the scope of this paper, further research might provide interesting results on the use of this term in early medieval texts.
- 68) Hodges 1982, 122. – Gutiérrez Lloret 2015, 76.
- 69) Marano 2008; 2016. – Sodini 2000; 2002; 2008.
- 70) Beghelli 2018. – Preliminary results are available in Beghelli 2014. – The remaining 5-10% concerns distances of 50-100 km; in only one case the stone was procured about 200 km away from the site where it was used. This distance is, however, not even remotely comparable to the thousands of kilometers stone could cover on waterways in the Roman and Early Byzantine periods. From about the 7th century, also the stone used in architectural projects in the Byzantine empire is generally locally procured: see the previous note.
- 71) See Cipriano et al. 1991, 109. – McCormick 2001, 618-620, with further reading.
- 72) Kingsley 2009.
- 73) See above, p. 416-419.
- 74) Vida 2006, 365-366 fig. 2A. – de Palol 1950, 37-38 pl. 9. – Joffroy 1974, 86. 129-130 fig. 68 pl. 31. – Vallet 1976, 75-78. – Pilet 1980, 254 pls 138-139. 198; 2008. – Périn 1992, 44 fig. 6. – Veeck 1931, 323 pl. 20B.
- 75) For example, Périn 1992, 44: on iconographic grounds, the author argues in favour of an eastern origin for the ewer from Vicq (départ. Yvelines/F), grave 617 (fig. 24, 1).
- 76) See the first part of this study: Beghelli/Pinar 2019.
- 77) See Beghelli/Pinar 2019, 287-289.
- 78) The case of old Saint Peter's basilica is eloquent enough: de Blaauw 1994, 479-485, 542-547. See also Arnaldi/Cadili 2013, with further reading.
- 79) The late 7th-century *Vita Eligii*, for instance, reports that Eligius brought to the Solignac monastery every implement and furnishing he could find himself, plus everything the king and the rich and powerful might give him: *Vita Eligii* I.15.
- 80) Beghelli/Pinar 2013, 744.
- 81) Drauschke 2011, 343 no. 67 writes »Babley« instead of »Badley«, following the list of finds in Bárdos 1992, 37 no. 21. This is a misprint, as the place name is written differently in Bárdos 1992, 14 note 19, no. 21: »Badlay«. However, this is again a misprint, as this location does not exist: the correct name is »Badley« (Ipswich, Suffolk).

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Gegossene Bronzegefäße des 6.-9. Jahrhunderts. Produktionszentren, Verbreitung und Nutzung in kirchlichen und säkulären Kontexten

Die Themen, die sich durch die erneute Untersuchung eines liturgischen Gerätesatzes, gefunden bei Morbello (prov. Alessandria/I), ergaben, können besser in einem größeren Zusammenhang von Produktion und Umlauf gegossener Gefäße in Mittelmeerraum und Mitteleuropa des frühen Mittelalters verstanden werden. Neue typologische Vorschläge, feinere Datierungen und eine genaue Verteilungsanalyse erweisen sich als passende Instrumente, um einen neuen Überblick zum frühmittelalterlichen Handel zwischen verschiedenen westlichen Territorien zu gewinnen: Neue Produktionszentren scheinen sich hier etabliert zu haben, wohingegen das Ausmaß der Kontakte mit dem östlichen Mittelmeerraum schwächer ausgeprägt zu sein scheint, als bislang angenommen. Diese Ergebnisse spiegeln die großen wirtschaftlichen und politischen Veränderungen wider, die Westeuropa und der Mittelmeerraum während des 7. und 8. Jahrhunderts durchlebten, wie es auch ein Trend zeigt, der an anderen archäologischen Fundarten abgelesen werden kann.

Übersetzung: M. Struck

Cast Bronze Vessels in the 6th-9th Centuries. Production Centres, Circulation and Use in Ecclesiastical and Secular Contexts

The issues raised by the re-examination of the liturgical set found at Morbello (prov. Alessandria/I) can be better understood in the wider framework of the production and circulation of cast bronze vessels in the early medieval Mediterranean and Central Europe areas. New typological proposals, refined dating and thorough distribution analysis prove suitable research tools to provide a renewed survey on early medieval trade among different Western territories: here, new production centres seem to have emerged, while the extent of the contacts with the Eastern Mediterranean appears weaker than traditionally assumed. These results mirror the major economic and political transformations underwent by Western Europe and the Mediterranean basin throughout the 7th and 8th centuries, according to a trend also attested by other categories of archaeological finds.

Vaisselle de bronze coulé des 6^e-9^e siècles. Centres de production, circulation et utilisation dans les contextes ecclésiastiques et séculiers

Les questions soulevées par le réexamen de l'ensemble liturgique trouvé à Morbello (prov. Alessandria/I) peuvent être mieux comprises dans le cadre plus large de la production et de la circulation des vaisselles en bronze coulé dans les régions médiévales de la Méditerranée et de l'Europe centrale. De nouvelles propositions typologiques, une datation affinée et une analyse approfondie de la distribution sont autant d'outils de recherche adaptés pour renouveler l'enquête sur le commerce médiéval précoce entre les différents territoires occidentaux: ici, de nouveaux centres de production semblent avoir émergé, tandis que l'étendue des contacts avec la Méditerranée orientale semble plus faible que ce que l'on pensait traditionnellement. Ces résultats reflètent les transformations économiques et politiques majeures subies par l'Europe occidentale et le bassin méditerranéen au cours des 7^e et 8^e siècles, selon une tendance également attestée par d'autres catégories de mobiliers.

Traduction: L. Bernard

Schlüsselwörter / Keywords / Mots clés

Frühes Mittelalter / gegossene Bronzegefäße / Metallarbeiten / liturgische Geräte / Handel / Verbreitung

Early Middle Ages / cast bronze vessels / metalwork / liturgical implements / trade / circulation

Haut Moyen Âge / vaisselle de bronze coulé / travail du métal / instruments liturgiques / commerce / circulation

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