

K. SCHMIDT – B. BECHTOLD

## Fabrics of Malta

### INTRODUCTORY NOTE

Systematic fabric studies on Maltese pottery have a relatively short history. In 2000 B. Bruno and C. Capelli published a first paper dealing with three fabrics, identified, on the basis of archaeometric analyses, among two amphorae types of the Late Republican and Early Imperial period.<sup>1</sup> Two of these fabrics ('impasti A-B') have been considered as local productions, characterized by a matrix made of the Blue Clays rich of foraminifera and present on Gozo and on the North-western part of Malta.<sup>2</sup> In her 2004 monograph, B. Bruno summarizes this petrographic results (thin sections), labeling now the presumably local fabrics as 'G' (gruppo generico) and 'GL' (gruppo con glauconite). For a third one 'VQ' (gruppo con vulcaniti e quarzo) the attribution to Malta remains still open because of the very frequent presence, among its texture, of volcanic inclusions and quartz particles, apparently alien to the archipelago's geology.<sup>3</sup>

More or less at the same time, C. Sagona presents the first of her monographs, in which 14 'ware types', supplemented with a detailed verbal description and a dating range, are identified.<sup>4</sup> This research is subsequently complemented by a second archaeometric study on selected samples from Tas-Silġ, this time undertaken by H. Mommsen and team. The chemical pattern SILA, which contains samples from seven out of nine of the analyzed ware types dating from the Late Neolithic Temple Period down to the Late Punic period, has been established by means of Neutron activation analysis. SILA "(...) can be taken for a pottery production centre possibly in the area of Tas-Silġ."<sup>5</sup> Finally, very recently M. Anastasi has given a brief overview of the locally produced tables wares obtained from the Żejtun excavations.<sup>6</sup>

So far, the edition of Maltese coarse, handmade- and amphorae fabrics presented here, which represent the principal wares attested to the investigated Żejtun contexts, has not been supported by any kind of archaeometric research<sup>7</sup> and is based on archaeological arguments only. Already within the framework of the first release of FACEM in 2011, the identification of the Maltese coarse<sup>8</sup> and handmade fabrics started from the analysis of selected materials yielded by the excavations at the Roman Villa of Żejtun.<sup>9</sup> Most, if not all of these samples stem from stratified, sealed Middle Punic

1 Bruno and Capelli 2000.

2 Bruno and Capelli, 60, fig. 1, 64.

3 Bruno 2004, 92-95. Bruno's in-depth discussion suggests, however, that sand and volcanic rocks may easily have been imported to Malta for the special purpose to improve some technical aspects of the local pottery industry. For this group see previously Bruno and Capelli 2000, 63.

4 Sagona 2002, 77-84. To the Phoenician-Punic period here under focus can be referred: Coarse Gritty Ware, Thick-Slipped Crisp Ware, Crisp Ware, Biscuit Ware and Soft Brown Ware.

5 Mommsen et al. 2006, 84-7.

6 Anastasi 2012, 31-2.

7 It must be emphasized, however, that two samples referring to the amphorae fabrics MALTA-A-2 (M 119/34) and MALTA-A-3 (M 119/41) have already undergone archaeometric analysis (chemical analysis/XRF and petrographic analysis/thin sections) which will be evaluated by G. Montana (Dipartimento di Scienze della Terra e del Mare, Università degli Studi di Palermo) to whom I am extremely grateful for a first, preliminary examination of the archaeometric data related to these two samples, see also below, MALTA-A-2 and MALTA-A-3.

8 Within the framework of the Facem data base the term 'coarse ware' defines plain wares which in the specific case of the Maltese pottery series show smoothed, slipped or untreated surfaces, eventually decorated by red painted lines or bands.

9 I am extremely indebted to A. Bonanno and N.C. Vella, directors of the excavations of the Department of Classics

deposits. Given the apparent, macroscopic homogeneity of the ceramics enclosed within these levels, we considered them as hypothetical local products, mainly in consideration of the well known fact that at Malta the overwhelming majority of ceramic finds has to be attributed to local workshops.<sup>10</sup> The Maltese amphorae fabrics<sup>11</sup> have been defined on the basis of the analysis of seven samples from Żejtun (supra n. 8), one from the Malta Survey Project<sup>12</sup> and three samples, respectively from the Tas-Silġ sanctuary<sup>13</sup> and from a rescue excavation in the historical centre of Rabat.<sup>14</sup> This admittedly still small assemblage has been supplemented by an important group of 13 samples from Pantelleria (survey and acropolis excavations),<sup>15</sup> a single fragment from Carthage,<sup>16</sup> six samples from Jerba<sup>17</sup> and, finally, an almost entirely preserved amphora found in the necropolis of Camarina – Rifriscolaro.<sup>18</sup>

B.B.

## Coarse wares (MALTA-C-1 to MALTA-C-2)

The microscopic analysis of only 13 samples from the Roman Villa site of Żejtun (Malta) has led to the distinction of two fabrics which differ basically by their texture, more coarse in the case of MALTA-C-2.

### FABRIC DESCRIPTION

**MALTA-C-1 (M 114/1. 2. 14, M 115/2)** shows a pale, reddish-brown or reddish matrix and a compact, fine to middle fine texture with generally small and some large inclusions. Small and sporadically large red or reddish-brown inclusions and white mica are frequent, particularly prominent result whitish, yellowish or reddish-brownish clayey (?) particles of small and/or large dimensions. Infrequent to frequent are white and yellowish carbonate particles, pseudomorphoses and foraminifera. Finally, infrequent are quartz, small black inclusions and voids. MALTA-C-1 has been used for plates of Sagona's type III:2 (M 114/1.2.14) and trefoil jugs of Sagona's III-IV: 1a-1b

---

and Archaeology of the University of Malta, and to N. Cutajar (Superintendence of Cultural Heritage of Malta) for the sampling permission. The ceramic materials are currently studied by the author. For first notes on the Żejtun Roman Villa see now Abela 2012 with earlier references.

10 Ciasca 1999, 75, 1985, 17, Bruno 2004, 83.

11 For a detailed discussion of MALTA-A-1 to MALTA-A-3 see also Bechtold (forthcoming).

12 I thank the co-directors of this project N.C. Vella (Department of Classics and Archaeology of the University of Malta), R.F. Docter (Ghent University) and N. Cutajar (Superintendence of Cultural Heritage of Malta) for the sampling permission.

13 I thank N.C. Vella and A. Bonanno, directors of the excavations of the Department of Classics and Archaeology of the University of Malta, for the sampling permission. The selected amphorae will be published in Sagona (forthcoming).

14 2009 rescue excavations in Gheriexem Str. (Cutajar et al. forthcoming). I am extremely grateful to N. Cutajar (Superintendence of Cultural Heritage of Malta) for the sampling permission.

15 Bechtold 2013a, 465-67, tav. 89,6-7, 2013b, chap. 1.6, cat. 9-14, tav. 2,9-14, 2013c, cat. 4, pl. 1,1.

16 Excavations of the Ghent University/INP Tunis under the direction of R.F. Docter and F. Chelbi, for the last preliminary report see Docter et al. 2006 with earlier references.

17 I am indebted to my colleague S. Ben Tahar (Institut National Patrimoine) for the opportunity to present here the small assemblage of Maltese amphorae yielded by his recent excavations at Ghizène, on the northern coast of Jerba. For the most recent preliminary report see Ben Tahar and Sternberg 2011 with earlier references. The Punic amphorae from these excavations will be published by Ben Tahar (forthcoming).

18 Special thanks are due to J.-Chr. Sourisseau (Université de Provence, Centre Camille-Jullian) for his kind permission to present the Maltese amphora from tomb 637, soon to be published by Sourisseau (forthcoming, chap. 1).

(M 115/2), characterized by smoothed, slipped and sometime painted surfaces. All samples stem from 4th century B.C.E. levels excavated in the Roman villa of Żejtun.

**MALTA-C-2 (M 114/3. 4. 5. 6. 7. 8. 9, M 115/1. 3.)** represents a coarser version of MALTA-C-1 and is also very close to MALTA-A-1. It shows two variants of colour, a red one and a red one with grey core. The texture is middle fine to coarse, irregular to granular and in most cases compact, characterized by the frequent presence of white and yellowish carbonate particles and pseudomorphoses.<sup>19</sup> As well as MALTA-A-1 and MALTA-C-1, MALTA-C-2 contains red, brownish or yellowish and grey clayey (?) particles of small and large dimensions and no or infrequent quartz. Foraminifera are infrequent to very frequent, small and some large red or reddish-brown inclusions and white mica are frequent. Generally small black inclusions and voids are present. MALTA-C-2 has been used for plates of Sagona's III-IV: 2b (M 114/8), carinated bowls (M 114/3) and carinated basins (M 115/3), closed shapes (M 114/5. 6. 9, M 115/1), sieves (M 114/4) and dolia, characterized by slipped, and sometime painted and/or smoothed surfaces. All samples stem from 4th century B.C.E. levels excavated in the Roman villa of Żejtun.

K.S.

### **Transport amphorae (MALTA-A-1 to MALTA-A-5)**

The microscopic analysis of 35 samples from Malta (Żejtun, Tas-Silġ, Malta Survey project 2008 and Rabat), Camarina, Pantelleria, Jerba and Carthage has led to the distinction of five amphorae fabrics. Especially MALTA-A-1 and MALTA A-4 correspond very well to the Maltese Coarse Ware fabrics MALTA-C-1 and MALTA-C-2, even if they are more strongly tempered.

#### **FABRIC DESCRIPTION**

Fabrics MALTA-A-1 to MALTA-A-4 show a rather compact and granular matrix and are characterized by the prominent presence of carbonate-pseudomorphoses and bioclastic grains/foraminifera, while generally subelongated, angular, white particles are contained in MALTA-A-2 only. Vughy and channel-shaped voids occur regularly in all of these fabrics. By contrast, the soft matrix of MALTA-A-5, characterized by a lower number of inclusions, seems to be close to the handmade fabric MALTA-HP-1.

**MALTA-A-1 (M 119/42.43, M 149/8.9.10.11.12.13, M 115/4.5.8.10.13.14)** shows a compact, granular reddish matrix, often characterized by a grey core. Carbonate-pseudomorphoses and bioclastic grains/foraminifera are very frequent, particularly prominent appear to be also red, pale brown or yellow inclusions (clay fragments?), while quartz particles are infrequent or completely absent. Channel and especially vughy-shaped voids occur regularly, in addition to relatively small, red, reddish-brown and black inclusions. The very homogenous sample group of MALTA-A-1 is very close to the plain ware fabrics of MALTA-C-1 and MALTA-C-2 which have been found in vessels yielded by late 4th century BCE deposits excavated at Żejtun. So far, MALTA-A-1 has been documented on Jerba, Pantelleria and Malta itself in amphorae of Ramon's Middle Punic<sup>20</sup> shapes T-2.2.1.1 (M 115/8, 149/8.9) and T-2.2.1.2 (M 115/5), in one 3rd century B.C.E. item of Ramon's T-3.2.1.2 (M 119/42) and, finally, in a Late Punic Ramon's T-7.4.3.1 (M 115/10) amphora which show the continuous use of this fabric at least from the 5th down to the 2nd century B.C.E.

**MALTA-A-2 (M 115/7.12, M 92/95, M 113/7, M 119/33.34.35.36.37.38.40)** shows a greyish,

<sup>19</sup> An even higher percentage of pseudomorphoses shows sample M 114/10, which appears to be, however, also close to MALTA-C-1.

<sup>20</sup> Also the undiagnostic items M 115/13.14 from Żejtun stem from sealed 4th B.C.E. fills.

medium to coarse grained, compact matrix, sometimes characterized by a reddish-orange surface. The fabric is riddled with generally subelongated, angular, most of all white coloured particles, carbonate-pseudomorphoses and bioclastic grains/foraminifera. As MALTA-A-1, it usually contains greyish or yellowish inclusions (clay fragments?) and quite small, reddish-brown and black particles. Vughy and channel-shaped voids and mica occur regularly. Sample M 119/34 has already undergone archaeometric analysis (XRF and thin sections), still in process of evaluation by G. Montana (see above, n. 7) who stated, however that this fabrics appears to be “(...) ricchissimo in microfossili calcarei (talora anche ben preservati dal processo di cottura) e povero in sabbia quarzosa (sporadica/rara)”. This particular aspect does currently not find any comparison among the data base of Sicilian amphorae fabrics built up by Montana and team.<sup>21</sup>

MALTA-A-2 has been found exclusively in 7th century B.C.E. amphorae of Sagona's type I:1 from Pantelleria, Camarina and Malta itself. At Żejtun it occurs – most probably as a residual – in a 4th century B.C.E. level (M 115/12).

**MALTA-A-3 (M 119/39.41.228.229)** differs from MALTA-A-2 by the colour of its matrix, sometimes brownish instead of grey, and, most of all, by the almost complete absence of the angular white particles. Sample M 119/41 has been analyzed by the means of XRF and thin sections (see above, n. 7) and corresponds, according to G. Montana, to the same characteristics as M 119/34, even if it has been fired at a clearly higher temperature. Currently, MALTA-A-3 has been identified on Pantelleria only in amphorae of Sagona's I:1 (M 119/39.41) and in a still unidentified, but certainly 7th century B.C.E. type (M 119/228).

**MALTA-A-4 (M 105/1, M 115/6.9.11.17)** shows a coarse, hard fired and granular, pale red to pale pink matrix with brownish-grey core. It is riddled with many yellowish white carbonate-pseudomorphoses and bioclastic grains/foraminifera, while reddish-brown particles are rare. MALTA-A-4 is very close to MALTA-A-1, but differs from the later one basically by the prominent presence of pseudomorphoses. Currently it has been found on Malta only, in two amphorae from a sealed 5th century B.C.E. deposit at Rabat (M 115/11 of Ramon's T-2.2.1.1 and M 115/17, unidentified type), one Ramon's T-3.2.1.2 item from Tas-Silġ (M 115/6) and in an unidentified amphora type from Żejtun (M 115/9) which testifies to a use of this fabric from the 5th down to the late 3rd century B.C.E. at least.

**MALTA-A-5 (M 115/16)** displays a soft, coarse and porous matrix of greenish-white colour. It contains frequent foraminifera, infrequent small red/reddish-brown and black inclusions and white and greenish-white fragments (clay/carbonate particles?). Currently, MALTA-A-5 has been found only in one amphora close to Ramon's T-2.2.1.1, yielded by a sealed Middle Punic deposit excavated at Rabat (c. 450-380 B.C.E.). The ascertained stratigraphic provenance of this piece justifies the definition of a new fabric, even if represented just by a single sample.

K.S.

## **Handmade Ware (MALTA-HP-1)**

A small assemblage of six samples, all from Middle Punic levels excavated at the Żejtun villa site, defines MALTA-HP-1.

### **FABRIC DESCRIPTION**

---

<sup>21</sup> Email of the 18th of October, 2013.

**MALTA-HP-1 (M 116/1.2.3.4.5.6)** shows a red, reddish-brown or yellow (M 116/4), coarse (M 116/1.3) to very coarse (M 116/2.4.5.6) matrix, sometimes characterized by a grey core (M 116/5.6). The texture is granular and irregular with frequent voids. The fabric contains more or less frequently yellowish, brownish, reddish and greyish fragments (clay and/or carbonate?). Very frequent are small to middle sized, yellowish and white carbonate inclusions, while pseudomorphoses occur only sporadically. Moreover, foraminifera as well as small and some large sized red/reddish-brown and black particles are typical, while small quartz particles and white mica are infrequent. Notwithstanding its coarser tempering, MALTA-HP-1 is related to MALTA-A-1 as well as to MALTA-C-1 to MALTA-C-2. It has been used for pots (M 116/1), basins (M 116/2.4.5), tripod bowls (M 116/3) and storage vessels (M 116/6).

K.S.

## REFERENCES

- Abela, R. 2012. *The Żejtun Roman Villa. Research. Conservation. Management* Malta: Wirt iż-Żejtun.
- Anastasi, M. 2012. "The pottery from the 1972 excavations at the Żejtun Villa." In Abela 2012, 26-41.
- Bechtold, B. 2013a. "Le anfore da trasporto da Cossyra: un'analisi diacronica (VIII sec. a.C. - VI sec. d.C. attraverso lo studio del materiale della ricognizione." In Almonte, M. *Cossyra II. Ricognizione topografica. Storia di un paesaggio mediterraneo*, edited by Th. Schäfer, K. Schmidt, and M. Osanna, 409-517. Tübinger Archäologische Forschungen 11. Rahden/Westfalen: Verlag Marie Leidorf.
- Bechtold, B. 2013b. "La frequentazione di Cossyra fra la seconda metà dell'VIII ed il VII sec. a.C.: nuovi dati emersi dallo studio delle anfore." In Schäfer et al. 2013.
- Bechtold, B. 2013c. "Un deposito domestico di età arcaica dal saggio VIII (scavo 2007)." In Schäfer et al. 2013.
- Bechtold, B. Forthcoming. "La distribuzione di anfore da trasporto maltesi fuori dall'arcipelago: nuovi dati." In *Collection of essays in honour of A. Bonanno*, edited by A.J. Frendo, C.R. Vella, and N.C. Vella. Ancient Near Eastern Studies. Leuven: Peeters.
- Ben Tahar, S. Forthcoming. "Ghizène. Un comptoir punique de la Petite Syrte." Carthage Studies 8. Ghent: Department of Archaeology and Ancient History of Europe, Ghent University.
- Ben Tahar, S., and M. Sternberg. 2011. "La pêche à Jerba à l'époque punique: l'apport de l'archéologie." *RStFen* XXXIX,1:99-116.
- Bruno, B. 2004. *L'arcipelago maltese in età romana e bizantina. Attività economiche e scambi al centro del Mediterraneo*. Bari: Edipuglia.
- Bruno, B., and C. Capelli. 2000. "Nuovi tipi di anfore da trasporto a Malta." In *6ª giornata: le scienze della terra e l'archeometria* (Este 1999), edited by C. d'Amico and C. Tampellini, 59-65. Este.
- Ciasca A. 1985. "Note sulla distribuzione di alcune ceramiche puniche maltesi." *Bulletin Archéologique du Comité des Travaux Historiques et Scientifiques* 19:17-24.
- Ciasca, A. 1999. "Sicilia e Malta. Note su repertori ceramici a confronto." In *La cerámica fenicia en Occidente: centros e producción y áres de comercio* (Guardamar de Segura 1997), edited by A. González Prats, 69-87. Alicante.

- Cutajar, N., M. Spiteri, and B. Bechtold. Forthcoming. "2009 Gheriexem Str. Excavation at Rabat."
- Docter, R.F., F. Chelbi, B. Maraoui Telmini, B. Bechtold, H. Ben Romdhane, V. Declercq, T. De Schacht, E. Deweirdt, A. De Wulf, L. Fersi, S. Frey-Kupper, S. Garsallah, I. Joosten, H. Koens, J. Mabrouk, T. Redisssi, S. Roudesli Chebbi, K. Ryckbosch, K. Schmidt, B. Taverniers, J. Van Kerckhove, and L. Verdonck. 2006. "Carthage Bir Massouda: Second preliminary report on the bilateral excavations of Ghent University and the Institut National du Patrimoine (2003-2004)." *BABesch* 81:37-89.
- Mommsen, H., A. Bonanno, K. Chetcuti Bonavita, I. Kakoulli, M. Musumeci, C. Sagona, A. Schwedt, N.C. Vella, and N. Zacharias. 2006. "Characterization of Maltese pottery of the Late Neolithic, Bronze Age and Punic Period by neutron activation analysis." In *Geomaterials in Cultural Heritage*, edited by M. Maggetti and B. Messiga, 81-89. London: Geological Society, Special Publications 257.
- Sagona, C. 2002. *The Archaeology of Punic Malta*. Ancient Near Eastern Studies Supplement 9. Leuven: Peeters.
- Sagona, C. Forthcoming. "The pottery." In *Tas-Silġ, Marsaxlokk (Malta) II. Archaeological Excavations conducted by the University of Malta 1996-2005*, edited by Bonanno A. and N.C. Vella. Ancient Near Eastern Studies Supplement Series. Leuven: Peeters.
- Schäfer, Th., K. Schmidt, and M. Osanna, eds. 2013. *Cossyra I. Ergebnisse der Tübinger Grabungen auf der Akropolis von S. Teresa/Pantelleria. Der Sakralbereich*. Tübinger Archäologische Forschungen 12. Rahden/Westfalen: Verlag Marie Leidorf.
- Sourisseau, J.-Chr. Forthcoming. "Les amphores phénico-puniques de la nécropole de Rifriscolaro à Camerine (fouilles P. Pelagatti, 1969-1979, tombes 1-1800). Caractérisation et aspects de la circulation des produits puniques en Sicile orientale au VIe s. av. J.-C." In *Veder greco a Camarina dal Principe di Biscari ai giorni nostri* (Catania), edited by F. Giudice.

This paper should be quoted as K. SCHMIDT and B. BECHTOLD. 'Fabrics of Malta'. In FACEM (version 06/12/2013) (<http://www.facem.at/project-papers.php>)