

Introduction

This chapter is a contribution to the study of the network of commerce between the Great Oasis, the Nile Valley, and the Mediterranean basin during the Roman and Late Roman periods,¹ focused in particular on the Egyptian and imported amphoras found during the 2012 and 2013 survey and the 2004–13 excavations at Trimithis/Amheida (Fig. 10.1).²

Like the other major oases of Egypt, Dakhla is a depression in the desert plateau, enclosed by a high scarp,³ where identifiable settlements are dated to early historical periods, with an exponential increase in number in the Roman period (Fig. 10.2).⁴ In late antiquity there was a steep decline in the number of sites, although the oasis was never completely abandoned. R. S. Bagnall has argued that at many sites the latest documents date to the 360s, the date of the Kellis Agricultural Account Book, and Kellis/Ismant el-Kharab itself seems to have been abandoned around the 390s.⁵ Other settlements probably continued later than that, but little has been found dating to the last 250 years of Roman rule.

¹ I would like to express my gratitude to the Directors of the “Partner University Fund” Project, Professor R. S. Bagnall (ISAW) and Professor G. Tallet (University of Limoges) for inviting me to join this international group of scholars, and for giving me the opportunity to present the results of my work during the Oasis Magna Conference in New York. Special thanks go to Professor P. Davoli (University of Salento) for entrusting me with the study of ceramics at Amheida, and Professor P. Ballet (University of Paris Nanterre) for her invaluable teaching and supervision. I am also grateful to the University of Heidelberg’s Sonderforschungsbereich 933 “Materiale Textkulturen. Materialität und Präsenz des Geschriebenen in non-typographischen Gesellschaften,” which is funded by the Deutsche Forschungsgemeinschaft (DFG), for its support of my research.

² Preliminary reports of the survey (2001–2, 2012–13) and excavations (2004–15) are published online at www.amheida.org/index.php?content=reports. The database of the excavation is also available online: www.amheida.com.

³ Giddy 1987: 29; Said 1990: 11–13; Vivian 2004: 9–10; Bravard, Chapter 2 this volume.

⁴ Bagnall and Rathbone 2004: 249, 262. ⁵ Bagnall and Ruffini 2012: 115–17.

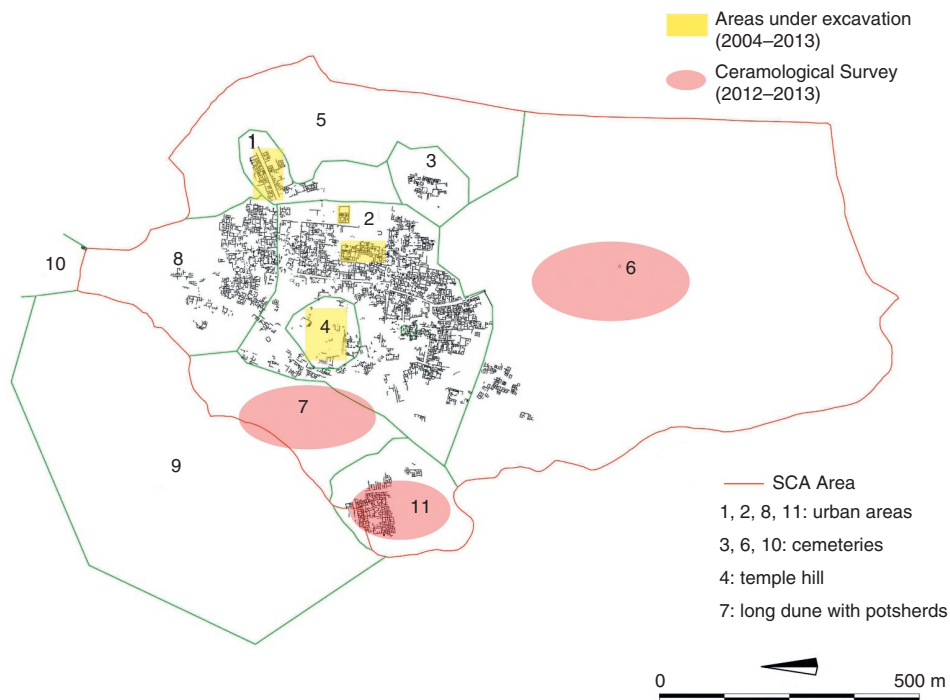


Fig. 10.1 Amheida general map (2013) (Excavations at Amheida).

Amheida is located in the northwestern part of this oasis, and during the Roman period was a prominent city, second overall only to the ancient and modern capital of the oasis, Mothis/Mut el-Kharab.⁶ Excavations at Amheida have provided material dating from the Old Kingdom to the Late Roman Period, thus proving the longevity of the site.⁷ Hundreds of ostraca found in one of the excavated houses (B1) and in the stratigraphy below it show us many dozens of snapshots of individual economic acts. The identified texts comprise accounts of different commodities, such as hay, oil, vinegar, wine, cotton, and bread, letters and delivery orders for olive oil or wine, lists of names, and writing exercises (Fig. 10.3). The largest number of texts is written on tiny ostraca set in mud jar stoppers and used as tags for containers

⁶ Worp 1995; Bagnall and Ruffini 2004: 143–4.

⁷ About the ceramic productions of the Dakhla Oasis during the different historical periods, see Hope 1999: 215–43. See also Soukiassian *et al.* 1990: 75–85; Marchand and Tallet 1999: 307–52; Patten 2000: 87–104; Bagnall *et al.* 2015.

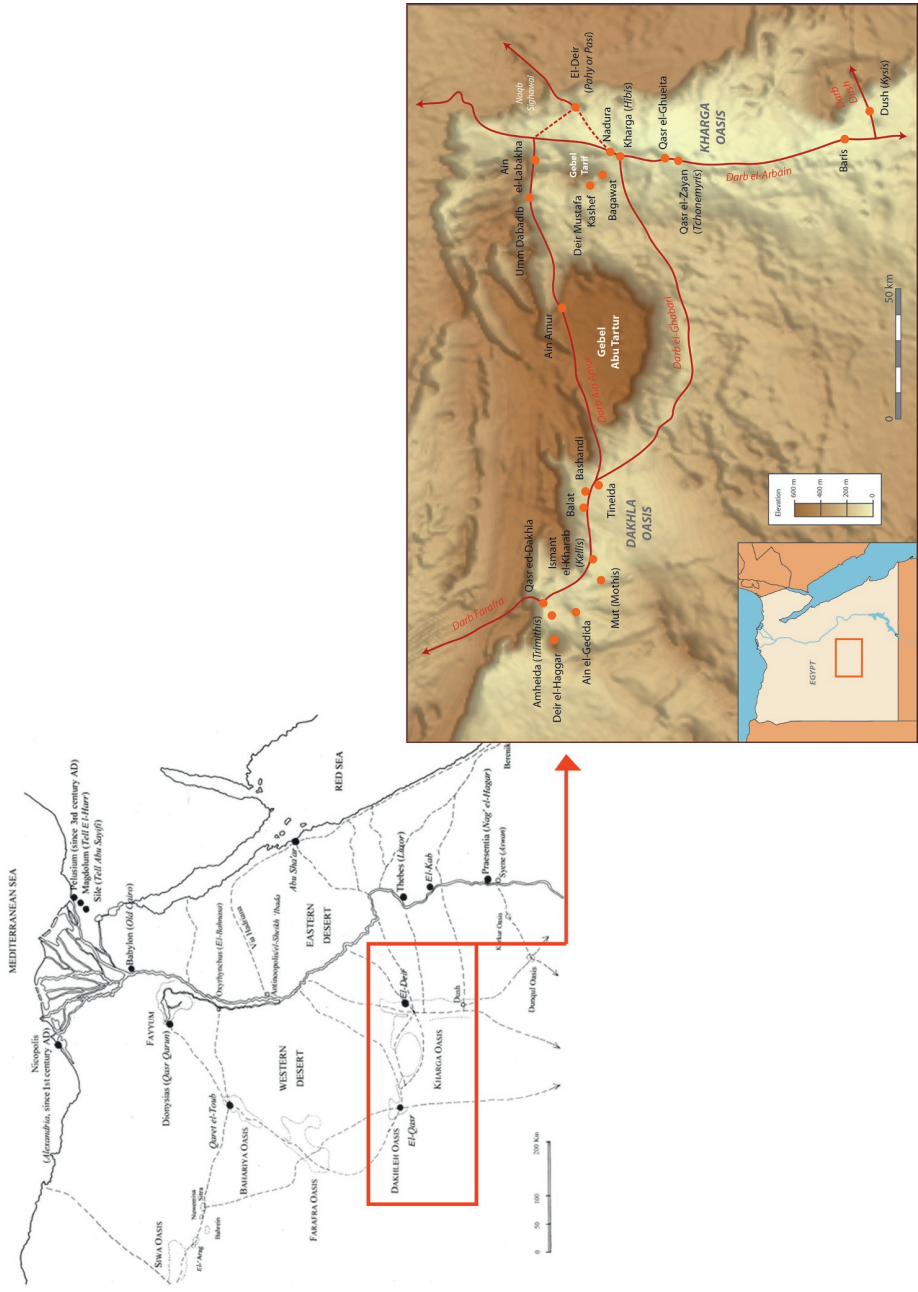


Fig. 10.2 The Great Oasis and the Late Roman military settlements (end of third/beginning of fourth century AD) (after Rossi 2012).

of wine or oil. These tags usually provide us a year date, a place, and a personal name (Fig. 10.4).⁸

The fragments of imported amphoras identified during the analysis of the pottery sherds unearthed at the site shed a new light on possible patterns of use and consumption in the different areas of Trimithis during the Roman and Late Roman Period. The identification of these imports, which are distinctively different from local products, is based on morphology and fabric types. Unfortunately, the fragmentary nature of this material does not always allow a precise identification of the containers that they were part of.

The Amphoras

Amphoras are quite rare in the oases: transport containers used for the trade of local products were mostly of local production and different shapes, such as jars, kegs,⁹ and flasks/bottles.¹⁰ The imports at Amheida found in the excavated areas (Areas 1, 2, 4) and on the surface (especially Areas 6, 7, 11) represent only 1.57 percent of the overall ceramic corpus (Egyptian amphoras = 0.99 percent; imported amphoras = 0.58 percent) (Fig. 10.5). However, their presence adds new information to the data already published by C. A. Hope and A. Ross in 2007 on trade and commerce in the oasis during the first to fourth century AD.¹¹ The data provided by the survey and excavations conducted by the Dakhleh Oasis Project during the past thirty years at various sites within the oasis has demonstrated a significant presence of imports, predominantly at Trimithis, Mothis, and Kellis.¹² Among the three sites, Trimithis has the widest variety of imported amphoras

⁸ Bagnall and Ruffini 2012; Ast and Bagnall 2016: 1458–70; Ast, Chapter 6 this volume.

⁹ About the kegs in the Great Oasis, see Henein 1997: 161–6; Hope 2000: 189–234; Marchand 2000a; Rougeulle and Marchand 2011: 443, n. 13. See also Ballet, Chapter 9 and Soto Marín, Chapter 11 this volume.

¹⁰ This type of flask or double-handled bottle, although present in different sites of the Great Oasis, was found in large quantities in Kharga. This seems to suggest that they were produced there, starting from the third century AD (Phase III), with a strong increase in production and distribution between the fourth and fifth centuries AD, at the end of the Phase III. Ballet and Vichy 1992: 119; Ballet 2004: 221–5.

¹¹ Hope and Ross 2007: 463–80. ¹² Hope and Ross 2007: 475, table I.



Fig. 10.3 A letter and receipts from Amheida (B1, Area 2.1) (Caputo 2016, fig. 19).

identified so far, which can be divided into two main groups: amphoras of Egyptian production (63.0 percent) and amphoras from outside Egypt (37.0 percent) (Fig. 10.6).



Fig. 10.4 Some examples of well-tags from Amheida (B1, Area 2.1) (Caputo 2016, fig. 17).

The Egyptian amphoras

Only two types of Egyptian amphoras have been identified: the Amphore égyptienne 3 (AE 3) and the Late Roman amphora 7 (LRA 7), both used for trading wine.¹³

¹³ Widely spread from the Byzantine to the Arab period, these amphoras seem to have been less used in foreign trade: Pieri 2005: 132, 201–2.

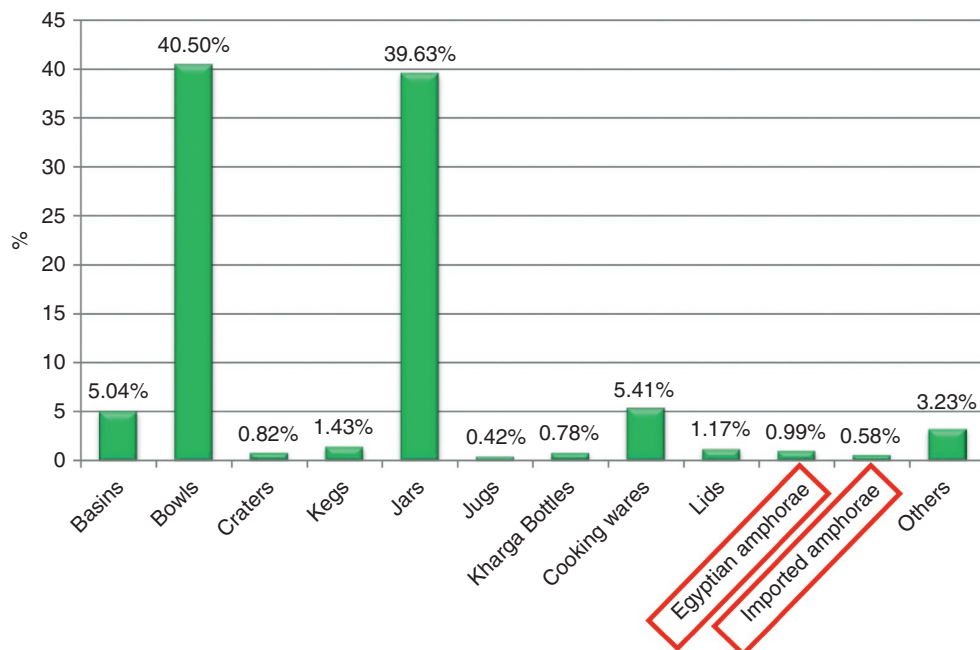


Fig. 10.5 Percentages of vessel categories at Amheida.

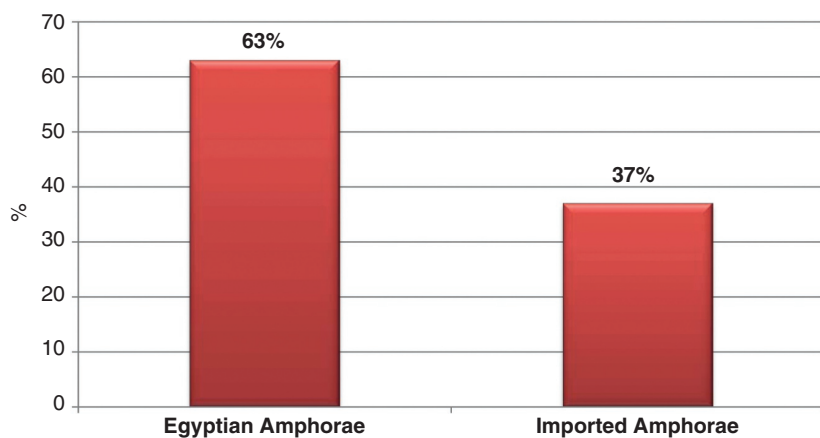


Fig. 10.6 Percentages of Egyptian and imported amphoras at Amheida.

The catalogued sherds of AE 3¹⁴ are all surface finds (Area 1.1 and Area 11).¹⁵ Although the shape of the rim is the same for all the fragments, the

¹⁴ About Roman amphoras AE 3, see Dixneuf 2011: 97–128.

¹⁵ Some body sherds were also present in stratigraphic units below floor levels of Street 2 and the courtyard (rooms 9 and 10) of house B1 (Area 2.1). For the fragments from Area 11, see Caputo 2014: 168, 177, fig. 4 (no. 11).

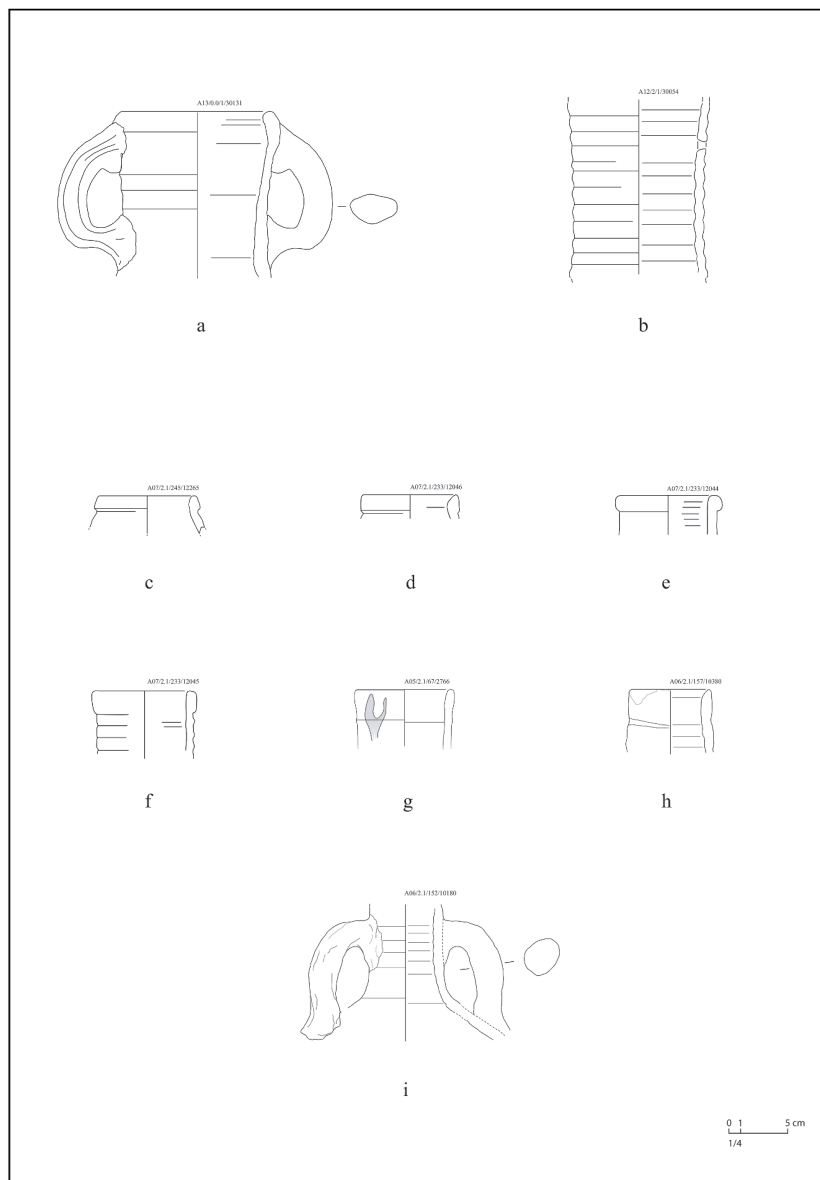


Fig. 10.7 a–b: Amphores égyptiennes 3 (AE 3); c–i: Late Roman amphoras 7 (LRA 7) (drawings Clementina Caputo).

different nature of the clay suggests two different places of production: the Mariut Lake area (Fig. 10.7, a–b) and the Nile Valley. According to D. Dixneuf's classification, the fragment of the Mariut amphora AE 3 corresponds to the sub-type AE 3–1.1 variant A.¹⁶ The fabric is characterized by

¹⁶ Dixneuf 2011: 98–107, 319 (fig. 83).

a calcareous clay, sandy, and medium-coarse to medium-fine texture. The color of the fracture varies depending on the firing from buff-brown to red-brown. These types of amphoras have “C”-shaped rims, flat interior surfaces, high cylindrical necks, and ear-handles attached to the upper part of the neck with rounded sections starting from the base. They are usually dated to the period from the end of the first century BC to the second century AD.¹⁷ The sherd of AE 3 in Nile silt,¹⁸ instead, is closer to the amphoras published by R. Tomber as AE 3a, found in the Eastern Desert (Mons Claudianus and Mons Porphyrites) and dated to the first/second century AD.¹⁹ The presence in the Eastern Desert of amphoras of the same typology as those produced in the Mariut area but in different fabrics indicates that they were produced in other *ateliers* in Egypt with local clays.²⁰

The LRA 7²¹ is the most widespread container in Egypt from the Late Roman period to the beginning of the Islamic period. These amphoras were intended mainly for stocking and trading Egyptian wines within Egypt.²² The main center of production seems to be Middle Egypt (i.e., Antinoopolis and Hermopolis Magna).²³ It was produced in many variants from the second half of the fourth century to the late tenth or early eleventh century AD.²⁴ The fabric is chocolate-brown in color, and the texture is soft and dense, rich in mica inclusions, and sometimes with very fine chaff and quartz particles. The exterior surface is usually from brown to “chamois” in color; the inner surface is always pitched.²⁵ The typological classification of the

¹⁷ Dixneuf 2011: 101–4.

¹⁸ The fragment of AE 3 in Nile clay (Inv. A13/ 0.0 /1/30126, ø 13 cm) was not drawn because of the poor state of preservation.

¹⁹ Tomber 2007: 529, fig. 2 (4). ²⁰ Tomber 2007: 525–35; Dixneuf 2011: 107.

²¹ The LRA 7 is known also as ribbed-amphora, Egloff 173–177, and Hermopolita B; see Egloff 1977: 114–15, pl. 58–59 (n. 3) and Bailey 1998: 129–32 (n. 4). It is classified also as “Class 52” of the typology established by Peacock and Williams: Peacock and Williams 1986: 204–5. See also Pieri 2005: 128–32, 288 (pl. 48); Dixneuf 2011: 154–73, 362–80, figs. 146–74.

²² A few specimens of LRA 7 are attested between the fifth and seventh centuries AD in some sites of the western Mediterranean (Carthage, Milan, Ravenna, and Rome) and of the south-central part of France (Aix-en-Provence, Arles, Toulouse, Narbonne, and Marseille); see Tomber and Williams 2000: 41–54; Pieri 2005: 132, 201–2.

²³ Workshops of LRA 7 have been recognized at Oxyrhynchos (Behnasa), Hermopolis Magna (Ashmunein) – where their production is attested since the end of the fourth century AD – Antinoopolis (Sheikh Abada), Akôris (Tehneh el-Gebel), and Edfu. See Ballet and Picon 1987: 38; Empereur and Picon 1989: 244; Ballet *et al.* 1991: 134–40, figs. 6–8. See also Pieri 2005: 129, 132; Dixneuf 2007: 167–78; 2011: 157–63.

²⁴ The first type of LRA 7 has cylindrical necks and the handles set from under the rim to the base of the neck, while in later shapes the handles stop on the shoulder. The toe is slim and always full. About the technological aspects of the manufacture, see Dixneuf 2011: 154–6.

²⁵ Marchand and Dixneuf 2007: 312–14.



Fig. 10.8 Distribution of fragments of LRA 7 in Serenos' house (B1) (drawings Clementina Caputo).

numerous variants of amphoras LRA 7 is mainly based on the shape of the neck, the diameter of the shoulder, and the capacity (about 9 liters for LRA 7 of larger module and from 6 to 7 liters for the smaller ones), only occasionally on the shape of the rim, which is rarely preserved.²⁶ As for the Great Oasis, imports of wine amphoras of the LRA 7 type are in use concomitantly, though in far lesser quantity, with locally produced containers such as kegs and Kharga bottles.²⁷ The LRA 7 fragments found in the occupational layers of Serenos' house (B1) come mainly from rooms 6 (DSU 67), 14 (DSU 233), 15 (DSU 152, DSU 157), and 12 (DSU 245) (Fig. 10.8). According to the stratigraphy the *terminus post quem* for the construction of the house has been established to ca. AD 340,²⁸ while the last phase of occupation is dated

²⁶ The edges of the amphoras were probably broken during opening by knocking off instead of removing the mud stopper that sealed it. All the complete amphoras lack this important portion for recognizing the variants. See Dixneuf 2011: 156. About the classification and the chronological evolution of LRA 7 shapes and production centers, see also Pieri 2005: 128–9, 131, fig. 86; Dixneuf 2011: 154–73, 362–80 (figs. 145–74), 238.

²⁷ Ballet 2004: 226. ²⁸ Ast and Davoli 2016: 1447–71.

between 360 and 375. The sherds of LRA 7 can be identified with the type AE 7-1.1, variants A (Fig. 10.7, e–g) and B (Fig. 10.7, c–d, h) in D. Dixneuf's classification, dating to the second half of the fourth century AD.²⁹ AE 7-1.1 is a small amphora, characterized by a narrow band rim and a rounded outside, a medium-tall cylindrical neck, handles with oval section attached from the middle of the neck to the top of the shoulder (Fig. 10.7, i) with small tips. The diameter of the rims varies between 6 and 8 cm. The fabric used for manufacturing Amheida LRA 7 is characterized by Nile clay which is brown in color, very dense, with very fine white and mica inclusions. The presence of these amphoras in the house attests to a modest import of wine containers from the Nile Valley, and the contexts of Serenos' house suggest that this kind of amphora was already in use at the middle of the fourth century AD. The closest parallels to this type were found at Ismant el-Kharab,³⁰ Mut el-Kharab,³¹ and Dush,³² where they are dated to the mid- to late fourth or early fifth century AD.

The Amphoras from Abroad

The imports from outside Egypt (Table 10.1) originated from the Aegean area (Cretan, Rhodian, and some badly preserved examples of Cnidian amphoras), the eastern Mediterranean (Pamphylian amphora, MAU XXVII/XXVIII, S. Lorenzo 7 amphora, Late Roman amphora 4), the central Mediterranean (Keay LII), and North Africa (Spatheion 1).³³

Among the imported amphoras from the southeastern Aegean area there are examples mainly from Crete, Rhodes, and Knidos. At least two sherds found at Amheida were part of Cretan amphoras (Fig. 10.9, j),³⁴ generally used to transport Cretan wine (*passum*).³⁵ These amphoras were made throughout the island from the early first century to the mid-fourth century AD.³⁶ Cretan amphoras spread from the end of the Augustan period to various areas of the Mediterranean,³⁷ and to several Egyptian

²⁹ Dixneuf 2011: 163–5, 366–7, figs. 152–3, 155.

³⁰ Hope 1985: 121, fig. 6 b.37; Ballet 2007: 483, 486, fig. 3.

³¹ Paul Kucera (Monash University), oral communication.

³² Ballet 2004: 225–6, fig. 221 (no. 55). See also Chevalier, Chapter 12 this volume.

³³ Hope and Ross 2007: 474. On imports from Mons Claudianus, see Tomber 1996: 46–9. On imports from Dush (Kysis) in the Kharga Oasis, see Ballet 2004: 226–8.

³⁴ The fragment of Cretan amphora Inv. no. A06/2.1/127/10327 is not in the catalog because of the poor state of preservation.

³⁵ Marangou-Lerat 1996: 5–29. ³⁶ Marangou-Lerat 1996: 35–122.

³⁷ Riley 1979: 181; Marangou-Lerat 1996: 74.

Table 10.1 Summary of Egyptian and imported amphoras at Amheida.

Type of amphora	Origin	Capacity (liters)	Contents	Date range	Distribution	NMI ^a Amheida
AE 3-1.1A	Mariut Lake area, Nile Valley	10-13.5	Wine	1st-2nd century AD	Egypt	3
LRA 7-1.1A and B	Middle Egypt	6-7 (small module)	Wine	mid-4th-5th century AD	Egypt, North Africa, Libya, Nubia, south-central France, Italy, Greece, Black Sea region, Pannonia, Levant, Palestine	13
AC1a	Crete	20-25	Wine (<i>passum</i>)	Second half 1st-beg. 3rd century AD	Egypt, eastern Mediterranean, Italy, North Africa, Greece	2
Rhodian	Rhodes and east of Datça	23-30	Figs, wine	Late 3rd-mid-1st century AD	Egypt, Aegean, Cyrenaica, Italy, France, Germany, Pannonia, Switzerland, Britain	3
Cnidian	Knidos	Uncertain	Wine	3rd century BC-3rd century AD	Greece, Cyprus, Turkey, Egypt	2
Pamphylian	Western Cilicia, Tracheia	Uncertain	Wine, olive oil	1st BC-3rd century AD	Aegean area, southwest islands of Asia Minor, Turkey, Palestine, Israel, Egypt	1
Mau XXVII/XXVIII	Rough Cilicia, Cyprus	15-20	Wine (<i>passum</i>) Cilicium), olive oil	2nd-early 3rd century AD	Marina al-Alamein, western Mediterranean, Aegean and Pontic regions	1
S. Lorenzo 7	Regions around Phoea or Marmara	Uncertain	Uncertain	3rd-5th century AD	Italy, Dalmatian coast, Black Sea, Crimea, Israel, north Sinai, Cyrenaica, Egypt	1
Late Roman amphora 4	Gaza, Ashkelon, and Ashdod	24-26	Wine, fish, wheat	last third of 5th-mid-6th century AD	Carthage, Egypt, Sinai, south Gallia, Italy	2
Spatheion 1	Tunisia (Carthage, Nabuel, Sidi Zahruni)	3.5	Olives in brine, wine, <i>garum</i>	end 4th-mid-5th century AD	Mediterranean Sea, Black Sea region	1
Keay LII	Southern Italy (Calabria) and Sicily (Naxos)	Uncertain	Wine	4th-7 century AD	Southern Italy, Rome, northwestern Mediterranean, North Africa, eastern Mediterranean	1

^a NMI = nombre minimum d'individus - the minimum number of individual vessels of each type found on the site.

sites along the coast as well as in the Western and Eastern Deserts.³⁸ The sherds found at Amheida belong to the so-called Amphore crétoise 1, variant “a” (AC 1a), extensively produced on Crete from the second half of the first century AD to the beginning of the third century AD.³⁹ This variant had a capacity between 20 and 25 liters. It is characterized by a slightly convex rim, a straight neck that becomes concave in connection with the shoulder, an ovoid or cylindrical body, and pointed or button base. The arc-shaped handles are positioned from below the rim to the end of the shoulder.⁴⁰ Amphora AC 1a is considered the earliest type, as it is usually present only in contexts dated to the first century AD.⁴¹ The fragments of Cretan amphoras AC 1a in Amheida have been recovered on the surface of Area 11 and below the floor in courtyard 9 of B1 (DSU 127). These sherds are characterized by a narrow straight neck and bowed handles from below the rim to the shoulder. The fabric is hard, smooth, and fine, buff in color with small white limestone inclusions.

Fragments of at least three Rhodian amphoras were collected at the site (Fig. 10.9, k–m). Production started in the last quarter of the fourth century BC⁴² and extended to the early second century AD.⁴³ During the first centuries of production they appear in the shape of jars with arched handles, with mushroom or rolled rims.⁴⁴ After the first half of the third century BC, their shape becomes relatively standardized, with rolled rims, cylindrical necks, handles attached just below the rim rising to the conventionally known Rhodian acute angled shape, and slim bodies tapering at the bottom, where they end in a small peg toe.⁴⁵ In the Roman imperial period, slight modifications appear in the handles, which become “horned,” with a distinctive raised point at the edge.⁴⁶ Some amphoras of this shape were found in the cargo of the shipwreck Dramont D: dating to

³⁸ Marina el-Alamein, see Majcherek 2007: 12–13, 26–7 (fig. 1, nos. 1–6; fig. 2, nos. 7–10); Alexandria, where a cargo of Cretan amphoras was identified in the shipwreck discovered by Empereur near the entrance of the port, see Empereur 1997: 836; Tebtynis (Fayyum), see Marangou and Marchand 2007: 247, 280 (fig. 31, AC₄) and Ballet and Południkiewicz 2012: 168, 318, pl. 80 (724); Dime es-Seba (Fayyum), see Dixneuf 2012b: 315, 325, 341 (no. 6); Mons Claudianus, see Majcherek 2007: 11–12.

³⁹ Marangou-Lerat 1996: 68–70, 74–5; Majcherek 2007: 12, 26 (fig. 1, no. 1).

⁴⁰ Marangou-Lerat 1996: 68. ⁴¹ Marangou-Lerat 1996: 74. ⁴² Monakhov 2005: 70.

⁴³ Martin-Kilcher 1994; Whitbread 1995: 53; Göransson 2007: 160.

⁴⁴ Mushroom-shaped rims include many sub-divisions of form and fabric. For the Rhodian mushroom-rimmed amphoras, see also Monakhov’s variant I – A in Monakhov 2005; Finkielsztejn 2001, pl. A, 2.

⁴⁵ Monakhov proposed the classification of the Rhodian form into several variants, see Monakhov 2005: 69–95.

⁴⁶ The shape clearly developed from the late Hellenistic prototypes by the late first century BC and lasted into the early second century AD, see Peacock and Williams 1986: 102–4 (Class 9). See also Göransson 2007: 160.

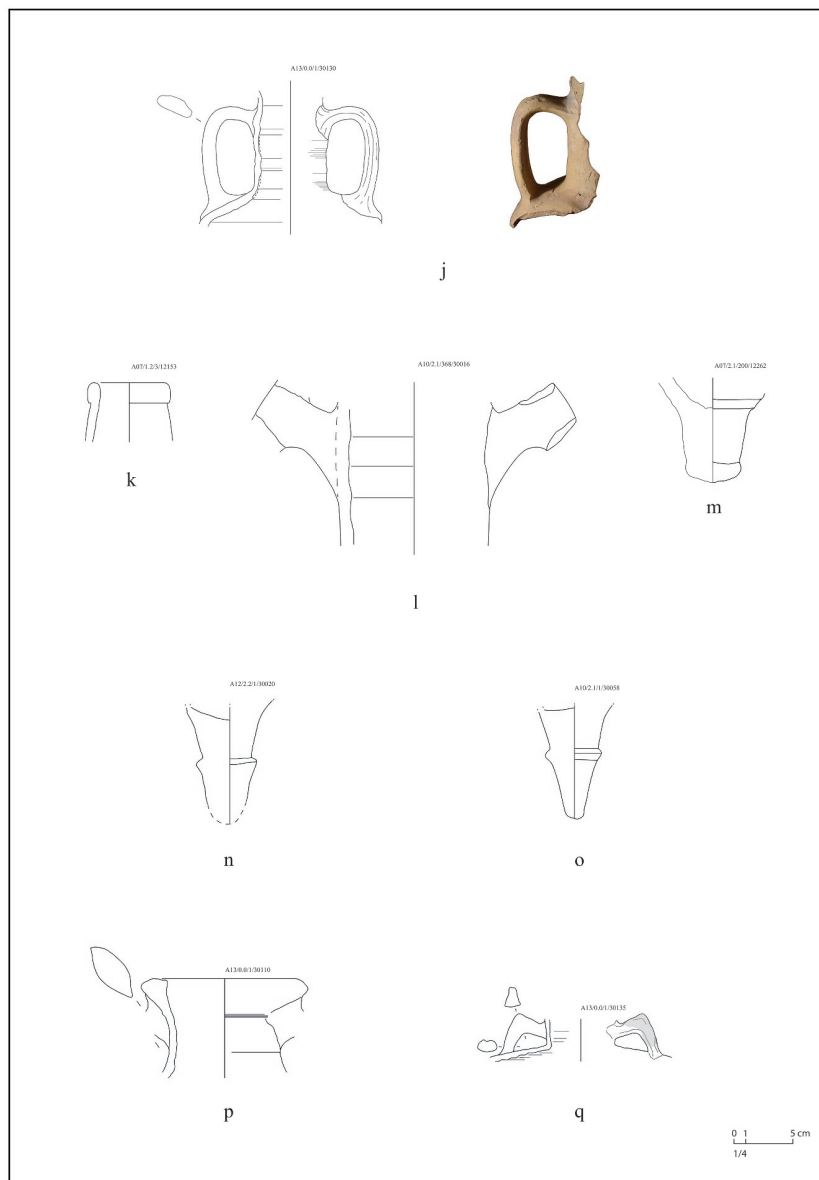


Fig. 10.9 j: Cretan amphora; k–m: Rhodian amphoras; n–o: Cnidian amphoras; p: Pamphylian amphora; q: Mau XXVII/XXVIII amphora (drawings and photo J. Marchand, C. Caputo).

the mid-first century AD, they also contained figs.⁴⁷ Peacock identified at least six fabric types for these amphoras, among which the most common

⁴⁷ Joncheray 1974: 31–3. From some papyrus fragments of the Zenon archive, in which reference is made to these amphoras, we learn that they were used to import not wine but rather dried figs into Egypt, ἰσχαδῶν ῥοδίων κερ(άμις): *P.Cair.Zen.* 1.59110.22–23.

are Fabric 1 and Fabric 2.⁴⁸ They were mainly used for Rhodian wine (capacity 23–30 liters),⁴⁹ or wine-based products from other areas of the central and eastern Mediterranean.⁵⁰ Their production centers were located in Rhodes and east of Datça (southwest Turkey).⁵¹ Although these amphoras are frequently found at Egyptian sites, they are rarely mentioned in the written sources.⁵² The fragments found at Amheida come from Area 1.2 (DSU 3) and Area 2.1 (DSU 200 and DSU 368). One fragment has a rounded rim with cylindrical neck (Fig. 10.9, k);⁵³ a second one is a fragment of a neck with part of a horn-handle (Fig. 10.9, l); and a third one is the final part of the amphora, characterized by a squat tip (Fig. 10.9, m). All three pieces are made from Fabric 1, fine and hard, reddish-pink in the fracture with a light brown or beige slip on the exterior surface. The inclusions consist of red-brown and white particles, which are present in a rather homogeneous way in the fabric. Examples of Rhodian amphoras closest to the fragments of Amheida have been identified in other sites of the Dakhla Oasis (Mut el-Kharab, Ismant el-Kharab),⁵⁴ in the Fayyum (Tebtynis⁵⁵ and Soknopaiou Nesos⁵⁶), and in sites on the Mediterranean coast (Alexandria).⁵⁷

Cnidian amphoras were produced from the Archaic period until the sixth century AD.⁵⁸ Like Rhodes, Knidos produced wine. The written sources unfortunately do not report much information on the quality of the Knidos products. Only the finds of amphoras allow us to know their diffusion around the Mediterranean basin during the Hellenistic and Roman periods. In Egypt, Roman period papyri mention the presence of the amphoras from Knidos as Κνιδία κεράμια (Knidia keramia), sometimes

⁴⁸ Rhodian fabric 1 has been dated from the first century BC to the second century AD. See Peacock 1977: 261–73; Nicolaou and Empereur 1986: 515–31; Hope and Ross 2007: 465, 477 (fig. 1c–f).

⁴⁹ For Rhodian amphoras' capacities, see Wallace Matheson and Wallace 1982: 293–320.

⁵⁰ The wine exported in these amphoras was diluted with sea water, τεθαλασσωμένους οίνους (*Tethalassōmenous oinous*), highly appreciated not only in the Mediterranean but also in some areas of the Black Sea and the Indian Ocean. Fraser 1972: 162–71; Bezeczky 2005.

⁵¹ For excavated production centers, see Whitbread 1995: 54 with further references. On amphora production in the Rhodian Peraea during the Hellenistic period, see Şenol *et al.* 2004: 353–9 with further references to earlier publications.

⁵² For a summary of the sources that mention the wine and the vineyards of Rhodes, see Salviat 1993: 152–61. See also Marangou and Marchand 2007: 246.

⁵³ Dixneuf 2015: 209, 243 (plate 8.1 n. 4). ⁵⁴ Hope and Ross 2007: 465, 477, fig. 1 (c–d).

⁵⁵ Marangou and Marchand 2007: 246, figs. 24–7. ⁵⁶ Dixneuf 2012b: 325, 341 (no. 4).

⁵⁷ Cankardes-Şenol 2007: 33–56.

⁵⁸ The starting date for the production of the Cnidian amphoras was previously placed in the third century BC (Whitbread 1995: 68). French–Turkish excavation on the Datça peninsula has pushed the date for the beginning of production back to the Archaic period (sixth century BC), see Göransson 2007: 157.

associated with amphoras from Crete, Κρητικά κεράμια (Krētika keramia).⁵⁹ The only fragments of Cnidian amphoras identified at Amheida are two bases (Fig. 10.9, n–o) that were found on the surface in Area 2.1 and Area 2.2; unfortunately it is not possible to identify their specific type. The fabric is made of calcareous clay, orange to light brown in color, fine and hard; the inclusions consist of very fine black and white particles.

Fragments of amphoras recognized as imports from the southern coasts of Anatolia were found in Area 11: one type comes from Pamphylia, and another from Cilicia. The Pamphylian amphoras, relatively widespread in the Hellenistic period,⁶⁰ were used at least until the third century AD to transport wine or olive oil, and are unfortunately poorly documented at Roman sites.⁶¹ The distribution of these amphoras is mainly based on the finding-places of their stamped handles: Delos, Athens, the islands of Kos, Rhodes, and Cyprus, Syria (Antioch), Palestine (Sarafand al-Amar), Israel (Gezer, Nessana), and Egypt (Alexandria).⁶² A considerable quantity of Pamphylian amphoras are attested in Egypt (i.e., Marina el-Alamein), often found together with amphoras from Crete, mainly in the assemblages dated to the second century AD.⁶³ The fragment from Amheida (Fig. 10.9, p) is similar in shape to those from Marina, with a thickened rim (ø 14 cm) with a small groove on the top, and a low cylindrical neck that curves out toward the rim and the body. The fabric is soft, buff-orange in color, fine in texture, with red and black particles.

The fragment from Cilicia corresponds to the “Pinched-handles” amphora known as Agora G199 or Mau XXVII/XXVIII.⁶⁴ This is a medium-sized amphora, with short, cylindrical neck, rim gently everted, plain or slightly ribbed body, ending with a distinctive elongated toe, sometimes with a “mushroom” cap. The short, right-angled handles, which are grooved and pinched from the sides, are the distinctive morphological feature of this type.⁶⁵ The variants of the fabric are indicative of different

⁵⁹ Some papyri seem also to attest the local imitation of Cnidian amphoras in Egypt from the Roman period to the early Arab conquest (fourth–eighth century AD). For a list of the documents recording the “Late Knidia,” see Mayerson 2000: 165–7. See also Marangou and Marchand 2007: 247.

⁶⁰ Grace 1973: 192–5.

⁶¹ For the later versions of the Pamphylian amphoras, see the system of identification and typological development made by V. Grace based on her study on the finds from Delos and the Athenian Agora: Grace 1973: 183–208, especially 198–200.

⁶² Grace 1973: 191–2. ⁶³ Majcherek 2007: 24–5, 31 (fig. 6, nos. 39–40).

⁶⁴ Agora G199 (Robinson 1959: 43, pl. 8); Ostia 631 (Panella 1973: 474–6, fig. 34); Zemer 41 (Zemer 1978: 52, no. 41); Mid-Roman amphora 4 (Riley 1979: 186–7); Nea Paphos Type 3 (Hayes 1991: 91–2); Pinched-handle amphora (Leonard 1995: 144–5).

⁶⁵ Majcherek 2007: 21–4.

production centers: kilns producing these amphoras with micaceous red-orange fabric have been discovered by C. Williams in Rough Cilicia (Anemurium)⁶⁶ and by N. Rauh and K. Slane in western Rough Cilicia (Syedra and Biçkici).⁶⁷ Examples made in hard pinkish-red/orange and yellowish/buff-beige wares have been attributed to Cypriot workshops by Hayes.⁶⁸ J. Lund has suggested that the “classical” shape dates to the first–second century AD, with high neck and handles (Agora G199). This type developed progressively into the late third–early fourth-century AD variant that had a smaller volume, featuring a wide low neck and small handles (Agora M239).⁶⁹ C. Williams has suggested that these containers were probably intended for the transport of the highly prized Cilician raisin-wine (*passum Cilicium*)⁷⁰ and olive oil. The amphoras were mainly distributed in western Cyprus (especially at Nea Paphos), in Rough Cilicia, and complete examples were found at Marina el-Alamein in Egypt.⁷¹ Most of the finds in Marina correspond to the type Agora G199, while a smaller number of examples can be identified as transition types or later variations. These types occur principally in assemblages dated to the second and early third century AD.⁷² Our find in Amheida (Fig. 10.9, q) has a cream-colored external surface and only the initial part of the handle remains attached below the rim, which is missing. The fabric is soft and buff-orange in color, fine in texture, with red and black particles. According to the fabric and the height of the neck, the fragment corresponds to the type Agora G199 and is very close to the examples found at Marina el-Alamein in assemblages of the second to early third century AD.⁷³

Among the Trimithis imports, a specimen of S. Lorenzo 7 amphora (Fig. 10.10 r) has been found on site during the survey carried out around the southern edge of Area 11, and it most probably belongs to the cemetery context (Area 6).⁷⁴ This amphora, known also as Berenice 298–99, is an

⁶⁶ Williams 1989: 91–6. ⁶⁷ Rauh and Slane 2000: 319–30.

⁶⁸ Hayes 1991: 91. Even if no kilns have been found on Cyprus, the source on the island proposed by Hayes has been supported by Lund: Lund 2000: 565–78; see also Majcherek 2007: 22.

⁶⁹ Lund 2000: 565–78.

⁷⁰ Williams 1989: 90–1, fig. 54 (no. 548), pl. 16 (no. 548). Cilician wine (*passum Cilicium*) was mentioned by Pliny the Elder. In Book 14 of the *Naturalis Historia* (81–94), several chapters deal with the subject in detail: vine species, nature of soil, climate, types of wines known: Majcherek 2007: 23.

⁷¹ Daszkiewicz *et al.* 1997: 132–8; Majcherek 2007: 22.

⁷² This seems to be the period of greatest distribution of this type on other sites in the Mediterranean: Majcherek 2007: 23.

⁷³ Majcherek 2007: 23–4, 30–1, fig. 5 (32–3) and fig. 6 (34).

⁷⁴ Eroded body sherds and handles of this type of amphora were collected in the same area and correspond at least to two specimens. In addition to common pottery and amphoras, in Area 6

eastern Mediterranean/Aegean- production, but it owes its name to findings made in the excavations carried out in the Basilica of San Lorenzo in Milan.⁷⁵ It is a heavy vessel with thick rim and handles, and a wide body that narrows toward its concave base.⁷⁶ Various examples have been recognized in Italy. In Milan, during the 1986–92 archaeological excavations in the area of the Catholic University, archaeologists investigated a complex stratigraphic deposit called “dark layer,” corresponding to a portion of the cemetery *extra muros* in use from the third to the fifth century AD. Six rims of S. Lorenzo 7 were found in this dark layer among numerous imported amphoras from the eastern Mediterranean, together with “Pinched-handle” amphora fragments. The possible secondary use of this amphora for funerary purposes is suggested by the presence of *enchytrismos* burials dated between the late third and the early fourth century AD. This type of container was used as a “coffin” by making a cut just above the shoulder.⁷⁷

The analysis of the clay suggests an origin in the regions surrounding Phocaea or the Marmara Sea.⁷⁸ Other examples have been found along the Dalmatian coasts (Sibenik),⁷⁹ Black Sea (Tomis), Crimea (Tiritake), Israel (Caesarea), north Sinai (Qasrawet), as well as Cyrenaica (Benghazi).⁸⁰ The date-range of production suggested by L. Villa for this type of amphora is “between the third and fourth and perhaps even fifth century.”⁸¹ The date of the destruction of Qasrawet in the late fourth century AD confirms the circulation of these amphoras at that later period. However, according to the three examples found at Tomis an even later dating for these amphoras could be possible, the sixth century AD.⁸² Our example in Amheida has a short and slightly cylindrical neck and rounded rim, and is slightly concave in the inner side, with handles, oval in section, that start from the rim. The shape is very close to those found both in the “Catholic University” excavation⁸³ and in Qasrawet,⁸⁴ and can be dated between the third century and the beginning of the fifth century AD.

parts of coffins in very coarse terracotta have also been recognized: www.amheida.org/inc/pdf/Report2013.pdf.

⁷⁵ Corrado 2003: 101–7. ⁷⁶ Arthur and Oren 1998: 203.

⁷⁷ Airoldi 2001: 119, fig. 9. An analogous case is also attested in the necropolis of S. Lorenzo of Parabiago, see Scotti 1996: 170.

⁷⁸ Corrado 2003: 107. ⁷⁹ Villa 1994: 382–6. ⁸⁰ Arthur and Oren 1998: 203 (n. 32).

⁸¹ The dating of the amphoras in Villa 1994: 382–6, is confirmed by findings from Ostia and Altino, see Ferrarini 1993: 157–64.

⁸² Arthur and Oren 1998: 203. ⁸³ Corrado 2003: 101–30, fig. 7, 47–52.

⁸⁴ Arthur and Oren 1998: 200, fig. 5 (4–5).

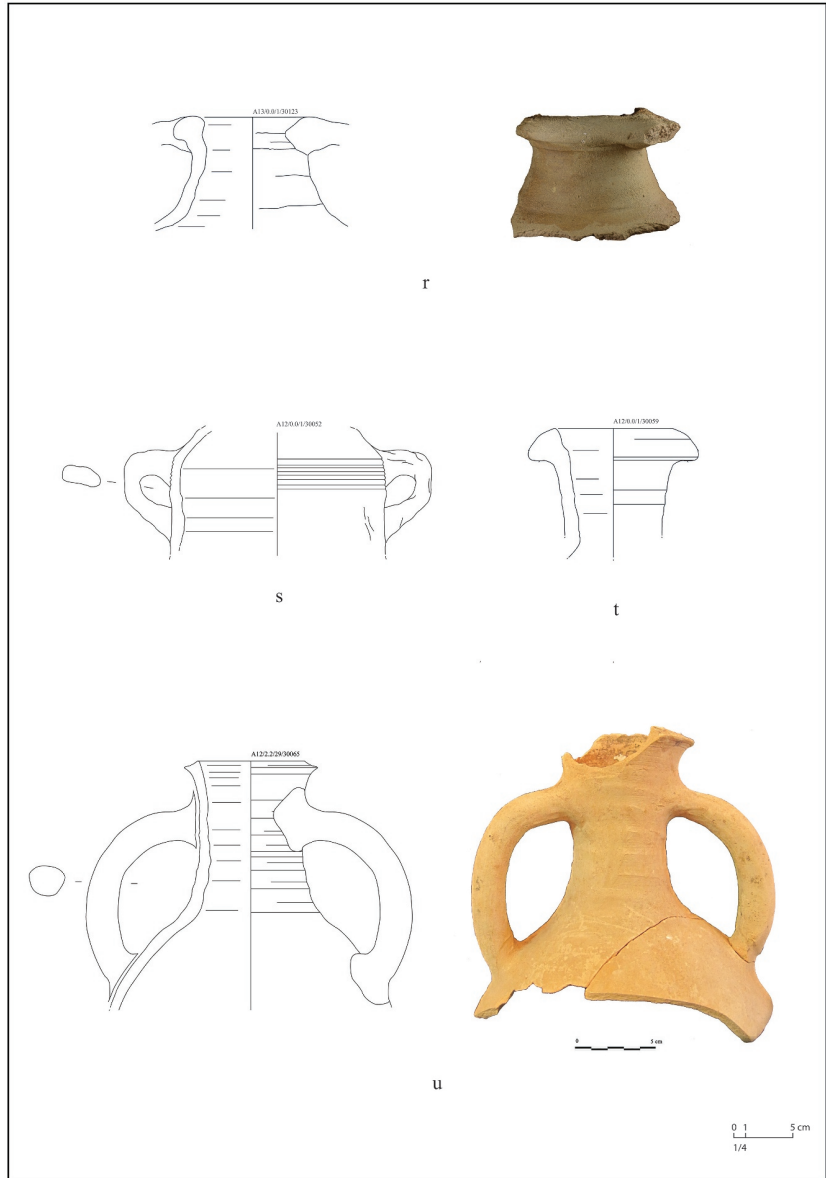


Fig. 10.10 r: S. Lorenzo 7 amphora; s: Late Roman amphora 4; t: Spatheion 1 amphora; u: Keya LII amphora (drawings and photos Clementina Caputo).

The Late Roman amphoras 4 (LRA 4) or “Gaza amphoras”⁸⁵ are, together with the Late Roman amphora 1 (LRA 1), the containers made in the east that are most popular and widespread in the Mediterranean

⁸⁵ On the names of LRA 4 according to other classifications, see Pieri 2005: 101–14, especially 101–3, n. 188.

basin during the Byzantine period.⁸⁶ The production centers of these types of amphoras have been identified in the south of Israel, particularly in Gaza, Ashkelon, and Ashdod, and in the western desert of the Negev, at Beer Sheva.⁸⁷ They could be used for wine (especially from Gaza), fish, and wheat.⁸⁸ Although there are at least five different versions of the LRA 4,⁸⁹ they have some common morphological characteristics which allow them to be distinguished from other containers: the absence of neck, the small rounded handles with oval section on the shoulder, and some remains of clay around the rim. Deep ribs are usually concentrated on the shoulders and on the base. The fabric is brown to orange in color, or red-orange in its finest version, grainy, and medium hard. The inclusions consist of quartz, calcite, and mica particles.⁹⁰ In Egypt, LRA 4 are attested from the beginning of the fourth century AD to the seventh century AD.⁹¹ The fragment of shoulder with the handle found at Amheida (Fig. 10.10, s) comes from the surface in Area 2 and, although the absence of the rim does not allow for a reliable identification, it most probably corresponds to the LRA 4 variant B1 according to Pieri's classification. This variant has a more elongated body shape (so-called "cigare") and a higher capacity (24–26 liters), and it was produced between the last third of the fifth century AD and the mid-sixth century AD.⁹²

Amphoras imported from the central and western Mediterranean are represented at Amheida with only two sherds, one from northwest Africa and the other from Italy. The fragment of the African amphora (Fig. 10.10, t) is similar in shape to cylindrical containers of the late imperial period (type Keay XXV/XXVI)⁹³ or even the African "Spatheion."⁹⁴ These amphoras, dating to the late fourth century AD and the first half of the fifth century, are characterized by everted rim, tall neck slightly flared toward the edge, small handles on the neck, and a slender body with long and narrow tip. Their

⁸⁶ Ballet 1996: 827; Pieri 2005: 101–14. ⁸⁷ Pieri 2005: 109–10.

⁸⁸ Remains of fish were present in several specimens of LRA 4B found in Qasrawet, in the north of the Sinai peninsula, and the remains of grain were discovered in containers found in Egypt. See Zemer 1978: 61, 113; Riley 1979: 222.

⁸⁹ Pieri 2005:103–9. ⁹⁰ Pieri 2005: 103.

⁹¹ Ballet and Picon 1987: 33; Hope and Ross 2007: 473, 480 (fig. 4g).

⁹² Pieri 2005: 105–6. Some fragments of LRA 4 from Gaza were also found at Dush in unreliable contexts of the fortress and are dated between the fourth and sixth centuries AD. See Ballet 2004: 227, 240, fig. 223 (no. 64).

⁹³ Panella 1982: 176–8; Keay 1984: 184–212.

⁹⁴ About the name given by V. Grace to the African tapered amphoras, see Grace 1961. See also Bonifay and Leffly 2002: 48–9, no. 42.

capacity is about 3.5 liters. Made in Tunisia, at Carthage,⁹⁵ Nabeul, and Sidi Zahruni,⁹⁶ these containers spread throughout the Mediterranean and the Black Sea region.⁹⁷

Although their content is still uncertain, it is believed that the type “Spatheion 1” contained briny olives, as shown by the examples found in the wreck “Dramont E” at Saint-Raphaël (France).⁹⁸ However, other products are not excluded, such as wine or fish sauce (*garum*).⁹⁹ The fragment of African amphora found at Amheida is a “Spatheion 1” type, and it is characterized by an everted rim with a triangular section and a slight depression on the inner surface, a cylindrical neck which flares upwards, and the attachment of the handle, oval in section, visible on the neck.

One sherd of Italian amphora (Fig. 10.10, u) was found in Area 2.2 (DSU 29, Room 28 of Building 6): it is from an amphora of the Key LII type,¹⁰⁰ also known as Robinson M 234. This wine amphora was produced between the fourth and the seventh century AD in the Calabro-Peloritana area (Calabria, southern Italy). Some workshops were discovered at Pélario and Marina di S. Lorenzo,¹⁰¹ and in Sicily at Naxos.¹⁰² This container is characterized by a rim with a triangular section, a tall cylindrical neck, handles oval in section and positioned from under the rim to the top of the rounded shoulder, and a flat base. They were widespread in central and southern Italy, and in the northwestern Mediterranean (Marseilles and Tarragona), but their presence is also attested in North Africa (Carthage) and in the eastern Mediterranean (Athens).¹⁰³ The amphora Key LII found at Amheida is well preserved in its upper part but fragmentary in the lower part of the body. It has a rim with triangular section, and two handles with rounded section extending from the neck to the rounded shoulder. The interior surface is pitched. The closest parallels have been found at Tell el-Farama,¹⁰⁴ and they belong to the sub-type 2 which, according to the classification of M. Bonifay and D. Pieri, is a variant typical of the second half of the fifth century AD.¹⁰⁵

⁹⁵ Panella 1982: 176–8. ⁹⁶ Ghalia *et al.* 2005: 495–507.

⁹⁷ Riley 1979: 91–467; Panella 1973: 460–633. ⁹⁸ Santamaria 1995. ⁹⁹ Bonifay 2004.

¹⁰⁰ Key 1984.

¹⁰¹ Arthur 1989: 133–42; Gasperetti and Di Giovanni 1991: 875–85, especially 875–6, 879–80, 883, figs. 3.1 and 4; Corrado and Ferro 2012: 177–88. In addition to the discovery of the production facilities on both sides of the Straits of Messina, the results of the mineral-petrographic investigations were also determinant, see Capelli 1998: 335–42

¹⁰² Sagui 1998: 303–30; Panella 2001: 177–275.

¹⁰³ Bonifay and Villedieu 1989: 17–46; Sciallano and Sibella 1991; Reynolds 1995; Pacetti 1998: 185–208, especially 190–2; Sagui 1998: 305–30; Arena *et al.* 2001; Panella 2001: 177–275.

¹⁰⁴ Dixneuf 2006: 393 (fig. 7), 394. ¹⁰⁵ Bonifay and Pieri 1995: 114–16.

Conclusion

Looking at the distribution in the different excavation areas at Amheida (Fig. 10.11) it is possible to note that the Late Roman amphoras (fourth–seventh century AD) are concentrated in the city center, mostly in Area 2 and especially in Serenos’ house (B1), where the consumption of wine seems to have been high, as attested by the quantities of Kharga bottles for wine found in the house, especially in room 15.¹⁰⁶ The few fragments of Roman amphoras present in Area 2 were found only in a rubble layer

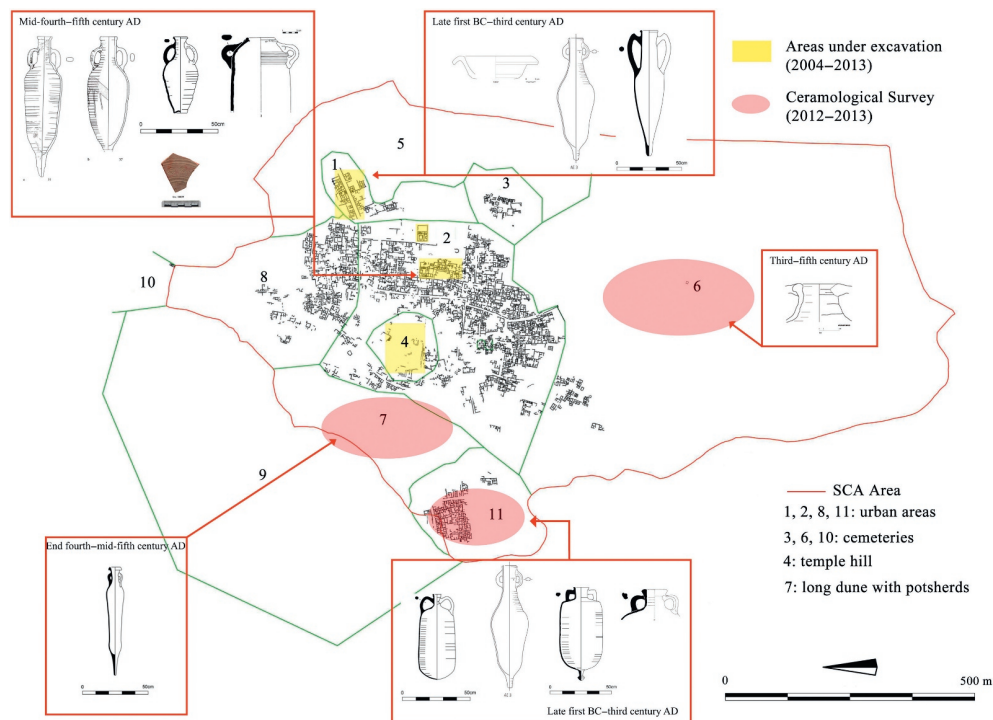


Fig. 10.11 Distribution of the amphoras in the different excavation areas at Amheida.

¹⁰⁶ The ceramic materials coming from the house, the school, and the streets adjacent to these buildings have been studied by the author, Irene Soto Marín, and Julie Marchand and will be the subject of a future publication. A poster with the preliminary results of this study, entitled “Pottery from the Fourth Century House of Serenos in Trimithis/Amheida (Dakhla Oasis)” was presented to the Fifth International Conference on Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean. Archaeology and Archaeometry (LRCW 5), Alexandria (Egypt), 6–10 April 2014, see Caputo *et al.* 2017: 1011–26. The other sub-areas, Areas 2.2 and 2.3, are still under excavation. The preliminary results are published at: www.amheida.org/index.php?content=reports.

which was used as foundation fill before the house was built, thus below the main occupational layer.¹⁰⁷ Some fragments of African Red Slip Ware were also found in Area 2, mostly large plates (Form 60) decorated with impressed concentric circles and petals, dated to ca. AD 320–80.¹⁰⁸ This shape finds a local imitation in the so called Oasis Red Slip Ware production.¹⁰⁹

Most of the fragments of Roman amphoras (first–third century AD) have been identified in Area 11, but mainly on the surface where the pottery was collected by choosing the sherds that could convey the most useful information about dating and typology and not systematically.¹¹⁰ The survey is expected to continue in the upcoming seasons.

In Area 1, fragments of amphoras are rare, both Egyptian and imported (i.e., AE 3 amphora and Rhodian amphora); other kind of imports have been found, most of them datable to the Roman period, such as fragments of mortars produced in Italy or Cyprus.¹¹¹ The mortar has thick walls and an everted flaring rim (ø rim 27 cm). It is made of imported fabric of medium-coarse texture, beige in color with many large red and black ovoid inclusions.¹¹² While the presence of amphoras is explained by their contents, the presence of the mortars can probably be explained by their being ancillary objects accompanying loads of other materials. Indeed, the flow of imports of precious objects into the oasis of Dakhla (particularly to Kellis)¹¹³ demonstrates that some of the population had access to and could purchase luxury items, and that they may have enjoyed a higher social status.

Despite the distance from the major Egyptian trading centers, a few settlements in Dakhla had access to imported commodities from around the Mediterranean region such as wine, olive oil, and also other products that (unlike olive oil and wine) were not readily available locally. Most of the other minor centers, for example Ain el-Gedida, have imports from the Nile Valley but none from North Africa or the Mediterranean.¹¹⁴ The presence of imported fine wares and amphoras in one of the major sites

¹⁰⁷ Ast and Davoli 2016.

¹⁰⁸ Hayes 1972: 238–9, no. 52 (m), 235, no. 27 (h). The fragments were found in sub-areas 2.3 and 2.1 (R19) and are still under study.

¹⁰⁹ The red slipped fine table wares produced in the Great Oasis are known also as “Kharga Red Slip Ware” (Rodziewicz 1985: 235–41; 1987: 123–36; Ballet 2004: 224) or “Oasis Red Slip Ware” (Hope 1979: 196; 1980: 299–300, pls. XXIX, XXXV).

¹¹⁰ Caputo 2014: 164–5. ¹¹¹ Dixneuf 2015: 217, 246 (Planche 8.4 n. 46).

¹¹² Tomber 2006: 80–1, fig. 1.30 (no. 37–378).

¹¹³ Hope and Whitehouse 2003: 291–310. Cf. Ballet, Chapter 9 this volume.

¹¹⁴ Dixneuf 2012a: 459.

of the oasis shows that only the main settlements had access to the full range of material that was imported, as Hope and Ross have already suggested, and that the redistribution of these products or part of them was strictly dependent on the relations between each minor agricultural settlement and these main centers. It should also be noted that because of its location – opening up roads to the west and north – the site of Trimithis could have acted as a distributor for other sites of the oasis.