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**A RESEARCH REPORT ON HELLENISTIC
POTTERY: COS AMPHORAS**

Amphoras used to transport wine, olive oil, and other products are known primarily from the Hellenistic period (and later Roman). To be sure, they were manufactured in Greece earlier, but in the Hellenistic period there appear numerous new forms of containers, the number of cities producing and exporting amphoras increases several times over, and the custom of stamping them becomes widespread. While in the classical period only a few centers stamped their wares, e.g. Chios, Lesbos, Samos, Thasos, and Cos (which, as we shall see, was recently added to this group¹), in the Hellenistic period we may list over 30 centers that used this system².

Research on the Cos amphoras is still in the initial phase, despite the almost ten years that have gone by since the publication of a brief characterization of these amphoras by J.-Y. Empereur and A. Hesnard³. The goals of the present research include the following: to identify the types of amphoras produced on the island; to ascertain whether they are the original products of the local workshops, or based on imported models; to determine what was contained within them; to describe the evolution of the shapes of the vessels, and to study the dispersion of these amphoras in the Mediterranean basin and their impact on local production.

¹ C. Kantzia, *Ena keramiko ergastirio amphoreon tou protou misou tou 4ou ai p.Ch. stin Ko*, (in:) *G'Epistimoniki Sinantisi gia tin ellinistiki keramiki, Chronologimena sinola - ergastiria, Thessaloniki, 24-27 Septembriou 1991*, Athens 1994, pp. 323-354, pl. 251-267 (=Kantzia)

² J.-Y. Empereur, A. Hesnard, *Les amphores hellénistiques*, (in:) *Céramiques hellénistiques et romaines II, Annales Littéraires de l'Université de Besançon 331*, Paris 1987, p. 10 (=Empereur, Hesnard).

³ Empereur, Hesnard, pp. 22-23, pl. 4: 19-21.

THE CLASSICAL PERIOD (Fig.1)

Until quite recently, it was supposed that Cos amphoras began to be produced in the early 3rd century B.C., and continued through the Hellenistic and Roman periods. However, archaeological research conducted in recent years on the island itself, especially in the city of Cos⁴, has provided new data, indicating that amphoras were already being manufactured here in the 5th century B.C. In 1990 and 1991, in the course of this investigation (which was of a rescue nature), the remains of a ceramic workshop specializing in the production of amphoras were discovered in the city of Cos.

The workshop was active in the city called “Cos-Meropis” (one of the island’s major cities) from an undetermined date in the 5th century B.C. until 412⁵. At the end of the fifth century, the workshop renewed its activities, and was again abandoned in 366 B.C., when by synecism the city of Cos came to be founded on the site of the earlier classical settlement. In essence what was discovered was not the workshop itself, but rather its refuse, which, however, had been covered by a newer building erected in 366, a date which thus constitutes a *terminus ante quem* for the workshop.

Among the artifacts recovered from this workshop, Kantzia distinguishes three basic types of amphoras (each with derivative forms) that were produced here⁶. The clay is identical in all types: bright red-orange (5 YR 6/6 according to the Munsell code⁷), containing golden mica, sand, white particles, and other contaminants. The amphoras have a rather thick engobe, whitish or yellowish in color. Amphoras with stamps occur beside unstamped amphoras in all three types.

Cos I (Fig. 1:1)

The Cos I amphoras include specimens that are identifiable with the “classic” Cos amphoras: they have twin-roll handles, and a slightly convex molded ring at the base of the neck, these being the most characteristic features of the amphoras from this island, features which we find also in amphoras of the Hellenistic period.

⁴ The research in Cos is being done under the direction of Ephoria Dodecanissos; cf. Kantzia, p. 325, notes 14 and 19. The University of Athens’s Institute of Archaeology and Art History is conducting excavation investigations at the Kardamaina site (ancient Halasarna), which has also produced ceramic material; the Cos amphoras from this research are the topic of a doctoral dissertation by Victoria Georgopoulou. Regarding the excavations, see G. Kokkoroou-Alevra, S. Kalopissi-Verti, M. Panagiotidi, *Anaskaphi stin Kardamaina (archaia Alasarna) tis Ko*, (in:) Κωακα, vol. 5 (Athens 1995), pp. 141-184; by the same authors, *Excavations at Kardamaina (ancient Halasarna) in Kos*, (in:) Αρχαιογνωσια (Athens, in print).

⁵ Kantzia, pp. 325-332; regarding the remains of other ceramic workshops producing amphoras in the Classical and Hellenistic periods, recently identified in Cos and the near vicinity, see Kantzia, pp. 352-353.

⁶ Kantzia, pp. 332-342.

⁷ Munsell Soil Color Charts (Baltimore 1973).

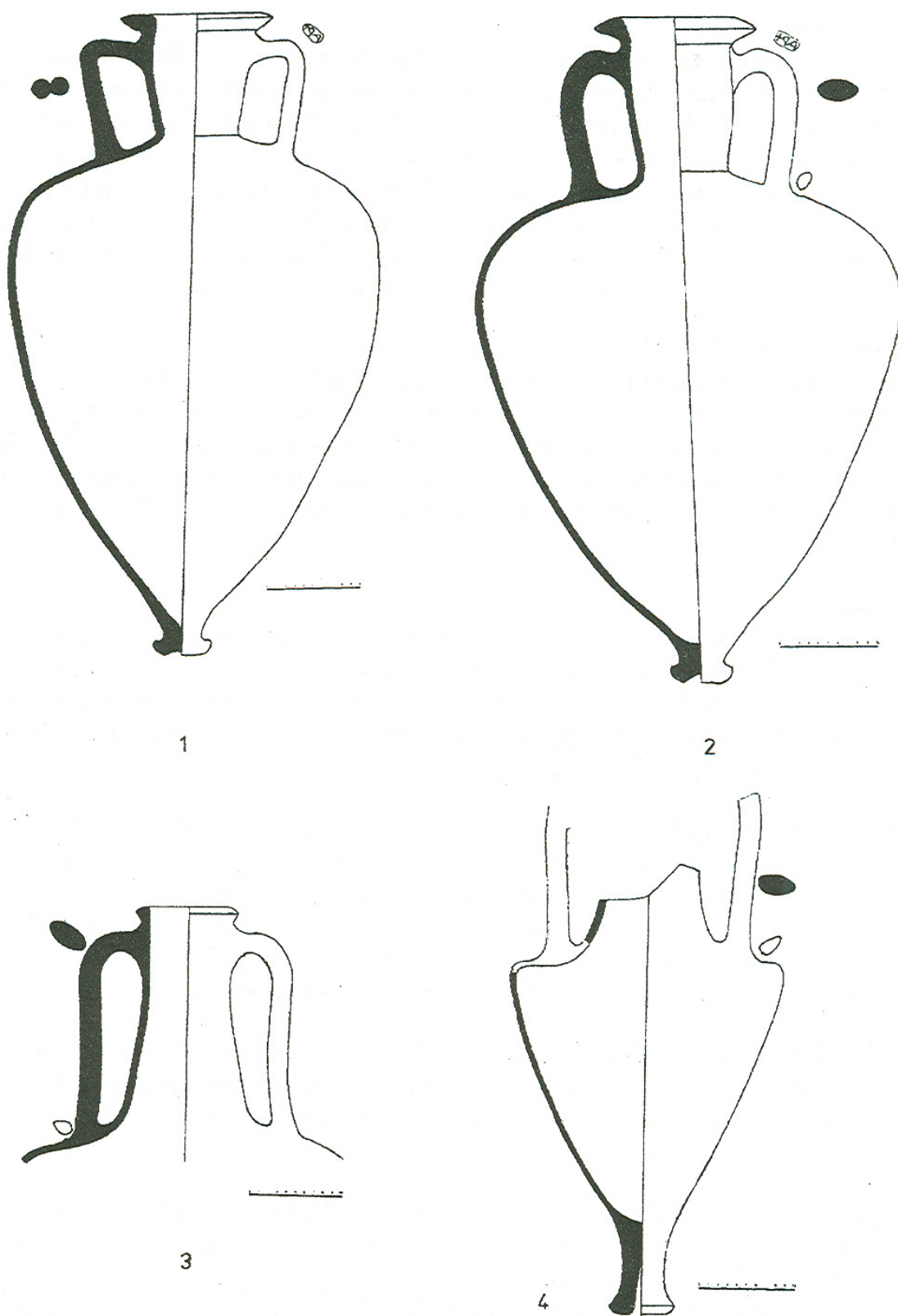


Fig. 1. Cos amphoras, 1st half of the 4th century B.C. - 1. Cos I; 2. Cos II; 3-4. Cos III (according to Kantzia, figs. 5-9).

Cos II (Fig. 1:2)

The basic features distinguishing this type from Cos I is the characteristic triangular lip, identified as the “mushroom lip”, along with the swan neck, and the banded handles with elliptical sections, with a thumb print at the lower point of attachment. The neck of a Cos II amphora is relatively short, slightly bulging in the center, joined to the shoulders virtually at a right angle; sometimes an indentation occurs instead of a molded ring. The bellies of these two types do not much differ from each other: they are bulged, sometimes in the Cos II amphoras very wide in the upper part. The feet of both types are very similar to each other.

Cos III (Fig. 1:3-4)

This type has a small triangular lip; banded, slightly s-shaped handles with a thumb print at the lower point of attachment; a neck that narrows towards the top; and virtually straight shoulders, sharply angled and merging with the belly, which narrows sharply towards the bottom, ending in a foot that is deeply indented from the bottom (there is a Cos III sub-type with a shallow foot). This type was produced at the workshop in varying sizes.

Stamps

As previously mentioned, stamped handles were also found in the remains of the workshop⁸. The lack of heterogeneity in these stamps indicates that the workshop was not in operation for a long period of time. There were many fewer stamped amphoras than unstamped. 244 stamps were discovered, from among which 9 types have been distinguished; three of these occur very often.

Type 1 is represented by 185 stamps, 84 of which occurred on the twin-roll handles of Cos I amphoras, while 101 occurred on the banded handles of Cos II amphoras. These are rectangular stamps located just above the crook of the handle, with an inverted inscription containing three large letters, carefully crafted: Αρχ(...). The stamp constitutes the abbreviation of a name that is hard to fill out, since names beginning with these three letters were very popular on the island.

Type 2 includes 33 objects made from the same stamp, which occurs only on Cos III amphoras. This is a characteristic Cos stamp: a small rectangle with the image of a crab, surrounded on three sides by dots; below, in very small letters, the ethnicon ΚΩΙΟΝ. This type co-occurs with Type I.

Type 3 is a rectangular stamp with the ethnicon ΚΩΙΟΣ, which occurs only on Type I amphoras, i.e. on the classic Coan amphoras (15 examples); the ethnicon refers to the amphoras or to its contents.

The remaining types, 4-9, are represented by only a few specimens, or even in some cases a single extant example.

⁸ Kantzia, pp. 342-349.

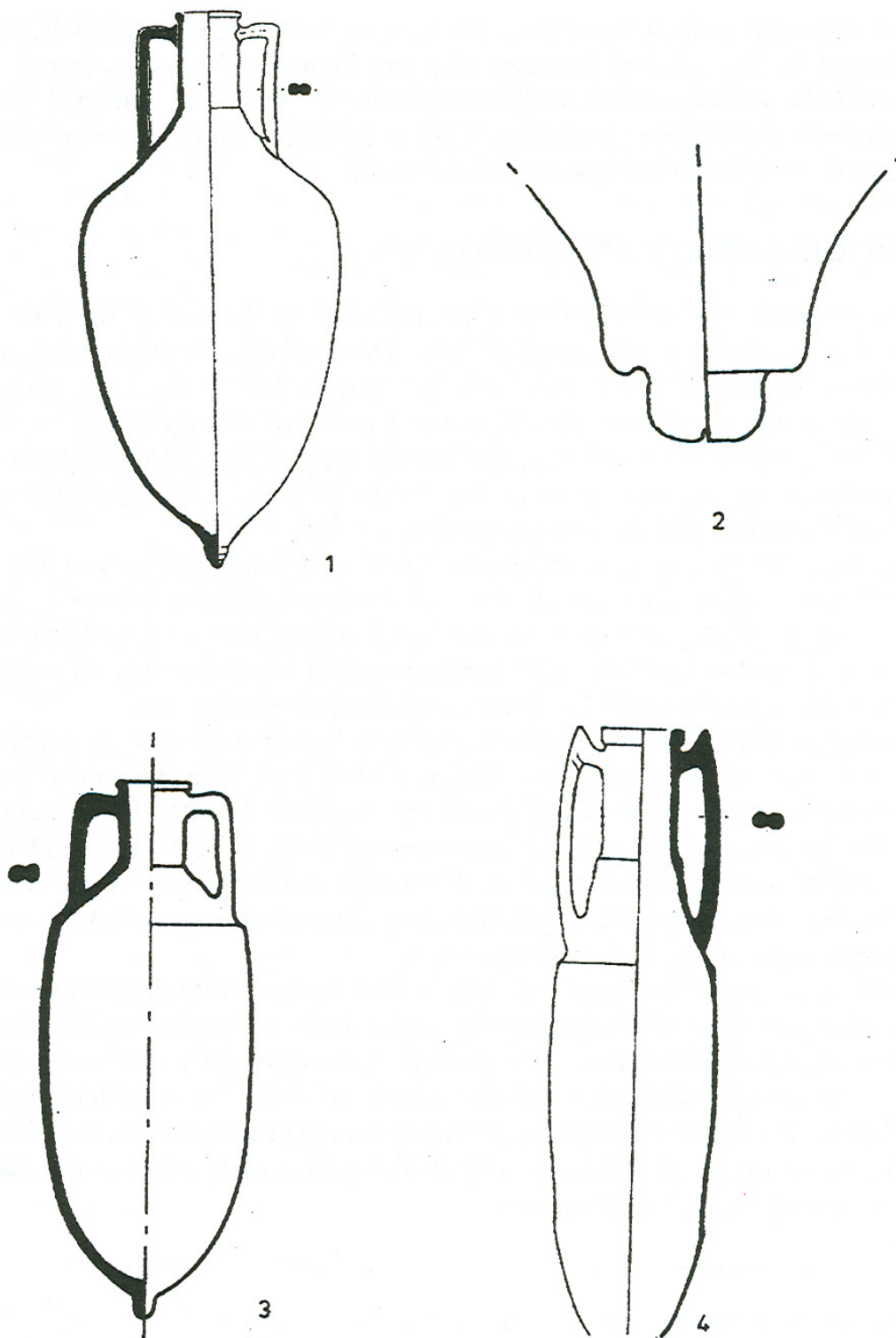


Fig. 2. 1-2 Cos amphoras, Hellenistic period - 1. 2nd cent. B.C.; 2. from Delos, before 69 B.C.; 3-4 Sub-Cos amphoras: 3. Dressel amphora 2-4; 4. Coan-type amphora from Amathus, 1st cent. A.D. (1-3 according to Empereur and Hesnard, pl. 4: 19 and 21, and pl. 8: 39; 4 according to J.-Y. Empereur, *Les amphores*, in: *Études chypriotes VIII* (Nicosia 1987), pl. 26: 2b).

Cos amphoras in the Classical period were used to store and transport wine, as is indicated by the pitched interiors of many amphora fragments found in the remains of the workshop; it is well known that only amphoras intended for wine were impregnated with pitch or resin. Clay stoppers for amphoras have also been found, some with images of kraters and cantharoi⁹.

THE HELLENISTIC PERIOD (Fig. 2:1-2)

The production of amphoras in Cos continued to flourish in the Hellenistic period. The amphoras from Hellenistic Cos that have thus far been published are dated from the end of the 270s to the 1st century B.C.¹⁰ Since, as mentioned earlier, the production of amphoras on the island had already begun in the 5th century B.C., it may be presumed, despite the lack of recognized and published Cos amphoras for the period from 366 to ca. 270 B.C., that production was continued throughout the 4th century and into the 3rd.

The most familiar type in the period under discussion consists of amphoras with twin-roll handles, a continuation of the Cos I type described above (Fig. 2:1). These are made of clay similar to the clay used in the Classical period (most often 5YR 6/4-6/6 reddish yellow), with additives and a small quantity of mica. The island's workshops did, however, produce other types of amphoras¹¹.

Amphoras with twin-roll handles exhibit a certain evolution of shape: they grow more and more slender and elongated (Fig. 2:1). The permanent features remain easily recognizable: small rolled lip, twin-roll handles that emerge just below the lip, rise slightly upwards and then fall to the shoulders; shoulders very steep, with a clearly defined break at the transition to the belly; neck separated from the shoulders by a light indentation; foot finished in such a way as to create "un bouton rentré" (Fig. 2:2); walls very thin¹².

Some Cos amphoras were stamped¹³. The stamps were impressed on one handle; they are most often rectangular, and contain only one name (sometimes two) and a symbol (mace, crab, etc); the ethnikon occurs only rarely. The present state of our research indicates that the custom of stamping persisted to the 1st century B.C. The ratio of stamped to unstamped amphoras is not precisely known.

Cos amphoras in the Hellenistic period, as in earlier times, were used to transport wine produced on the island.

⁹ Kantzia, pp. 349-350.

¹⁰ Empeur, Hesnard, p. 22.

¹¹ Empeur, Hesnard, p. 23.

¹² V. R. Grace, *Amphoras and the Ancient Wine Trade*, Picture Book no. 6, Excavations of the Athenian Agora, 2nd edition, Princeton 1979, Figs. 56-59 and corresponding text; Empeur, Hesnard, p. 22.

¹³ The corpus of Coan stamps announced as forthcoming some time ago by V. R. Grace (cf. Kantzia, p. 324, note 11) has not yet appeared; since the death of this scholar, her research has been continued on the basis of her archives by C. G. Koehler, N. Savvatiadou-Petropoulakou and associates.

SUB-COS AMPHORAS (Fig. 2: 3-4)

At the end of the 2nd century B.C., and especially in the early 1st century, twin-roll amphoras became extraordinarily popular, and began to be produced in many other centers outside of Cos, in both the eastern and western halves of the Mediterranean Basin. Among these centers in the East should probably be listed Cnidus and Rhodes, the cities of Caria, Egypt, and Cyprus¹⁴.

It was in the West, however, that amphoras with twin-roll handles enjoyed particular popularity. H. Dressel assigns them the numbers 2-4 in his classification (Fig. 2:3), while in the classification scheme developed by D. P. S. Peacock and D. F. Williams this type constitutes Class 10, there identified as the most important type of amphora for wine in the western Mediterranean during the early Roman period. Many centers producing these amphoras have been recognized, located in Italy, Spain, southern France, and Britain¹⁵.

In terms of their shape, sub-Cos amphoras are generally more slender than Cos amphoras; the shoulders are more definitely separated from the belly, which is more cylindrical, while the foot most often has a pointed end (Fig. 2:3). It should be clearly emphasized, however, that there were many variants of these amphoras, and thus it is difficult to give a single "binding" typology at this stage in our research.

Sub-Cos amphoras were made of different types of clay, depending on the place of production, and in this respect there are no grounds to generalize.

The dating of sub-Cos amphoras extends from the late 2nd-early 1st centuries B.C. to at least the 2nd century A.D.; in some regions, such as Egypt, production may have continued into the 3rd century A.D.¹⁶

Sub-Cos amphoras, like Cos amphoras, were probably used to transport wine.

From the foregoing evidence we may safely infer that the island of Cos was one of the more important centers for the production of wine, and the amphoras used to transport and store it. The history of this production begins in the 5th century B.C. and lasts (probably without interruption) for five centuries, until the 1st century B.C. and later. The amphora with twin-rolled handle, an original discovery of the Cos potters, "conquered the known world" towards the end of the 2nd century B.C., and was imitated in many centers, in both the eastern and western parts of the Mediterranean basin, for many years to come, to the end of the 2nd century A.D.

¹⁴ Empeur, Hesnard, p. 22; J. Lund, *Pottery of the Classical, Hellenistic, and Roman Periods*, (in:) *The Land of the Paphian Aphrodite 2: The Canadian Palaipaphos Survey Project, Artifacts and Ecological Studies*, edd. I. W. Sørensen and D. W. Rupp, SIMA 104.2, Göteborg 1993, p. 123; as for Cyprus, see J. W. Hayes, *Paphos III: The Hellenistic and Roman Pottery*, Nicosia 1991, pp. 85-86, and the present author's *Nea Paphos. Studia nad ceramiką hellenistyczną z polskich wykopalisk (1965-1991) [Nea Paphos: Studies on the Hellenistic Pottery from the Polish Excavations (1965-1991)]* (Cracow 1995), pp. 73 and 76.

¹⁵ Empeur, Hesnard, p. 23; D. P. S. Peacock, D. F. Williams, *Amphorae and the Roman Economy*, London and New York, 1986, pp. 105-106.

¹⁶ Lund, op.cit., p. 124.

In the very condensed picture presented above of Cos and sub-Cos amphoras, a number of questions remain unanswered: Did the Cos II and III types described above originate on the island, or were they copies of foreign models? Did these types (like Cos I) continue into the Hellenistic period? Were amphoras produced on Cos in the latter half of the 4th and beginning of the 3rd centuries B.C.? When did the production of amphoras on the island cease? Other questions remain as well. We can only hope that future research on Cos amphoras will provide some answers.