

***A half-carved marble vessel (Tsoukali)
from the ancient quarries of Myloi, Karystos in southern Euboea:
A contribution to the study of the use of Karystian marble
for vase carving in antiquity***

Eirene POUPAKI
Maria CHIDIROGLOU

Περίληψη

Τα αρχαία λατομεία που παρήγαγαν καρύστια λίθο (*marmor Carystium*) στα Στύρα και την Κάρυστο Ευβοίας έχουν ερευνηθεί σε ικανοποιητικό βαθμό. Μελέτες γι' αυτές τις θέσεις δημοσιεύτηκαν για πρώτη φορά τον 19ο αιώνα οι οποίες αφορούσαν στην τοπογραφία των λατομείων, καθώς και σε αρχιτεκτονικά μέλη που λαξένονταν σε αυτές τις θέσεις, όπως κίονες, πλίνθοι και βάθρα ή βάσεις. Επαρκώς έχει διερευνηθεί επίσης και το δίκτυο διακίνησης του καρύστιου μαρμάρου *cipollino* σε όλη τη Μεσόγειο κατά τη Ρωμαϊκή Αυτοκρατορική περίοδο και σε μεταγενέστερες περιόδους. Ωστόσο, ορισμένα στοιχεία για αυτά τα λατομεία καθώς και η παραγωγή τους παραμένουν άγνωστα και δεν έχει ακόμα πραγματοποιηθεί συστηματική διερεύνηση των προϊόντων των εργαστηρίων λιθοξοϊκής, με βάση τα αρχιτεκτονικά μέλη και τα άλλα λίθινα τέχνηρα που βρίσκονται εγκατεσπαρμένα σε θέσεις αρχαίας εξόρυξης στη νότια Εύβοια. Το ημίεργο μαρμάρينو αγγείο, γνωστό ως «Τσουκάλι», βρίσκεται κατά χώρα (*in situ*) στο αρχαίο λατομείο των Μύλων βόρεια της Καρύστου. Αποτελεί ένα σπάνιο τέχνηρο λατομείου που απαιτεί περαιτέρω έρευνα. Είναι μονολιθικό από πράσινο καρύστιο μάρμαρο *cipollino* με δύο ορθογώνιες λαβές. Έχει χαρακτηριστεί ως λεκάνη για την εμφάνιση των μεταλλικών εργαλείων των λατόμων ή περιρραντήριο (*labrum*), αλλά καθώς πρόκειται για μοναδικό εύρημα, η χρήση του οποίου έχει επαρκώς μελετηθεί θα παρουσιαστούν μερικές σκέψεις σχετικά με την αρχική του χρήση. Η μελέτη μας βασίζεται στην έρευνα του λατομείου όπου βρίσκεται μέχρι σήμερα το ημίεργο αγγείο και στην εξέταση της τυπολογίας και των παράλληλων έργων μέσα από την έρευνα της σχετικής βιβλιογραφίας. Το άρθρο αυτό συνοδεύεται από ένα σύντομο κατάλογο αγγείων που λαξεύτηκαν σε πράσινο καρύστιο μάρμαρο *cipollino* που καταρτίστηκε ύστερα από ενδελεχή έρευνα της σχετικής βιβλιογραφίας, συμπεριλαμβανομένων μερικών αδημοσίευτων θραυσμάτων, με την ελπίδα ότι αυτός ο προκαταρκτικός κατάλογος θα συμβάλει στη μελέτη μιας άγνωστης πτυχής της παραγωγής των αρχαίων εργαστηρίων λιθοξοϊκής της Καρύστου.

Introduction¹

One of the most noteworthy ancient quarries in Greece lies at the foot of Mount Ochi in southern Euboea. It extends over a large area to the north/north-east of the village of Myloi and is adjacent to the nearby quarry groups at the sites of Kyliandroi-Platanitses and Panagia.² Karystian marble, Καρυστία λίθος (post-medieval and modern name: ‘cipollino’), geologically identified as a rock of the serpentine group of marbles, has long been extracted there. Its exploitation presumably dates back to the Classical period,³ but the first systematic attempts to quarry large monoliths were connected to projects undertaken by wealthy rulers of the Late Hellenistic period.⁴ Karystian marble became famous during the Roman Imperial period, when legal ownership of the quarries passed to the emperor.⁵ It was being exported in the Mediterranean region, even as rubble, since the Roman Republican period.⁶ Blocks and columns of Karystian marble, along with quarried marbles from other regions, were stored in special deposits of the empire (*stationes marmorum*).⁷ During the Roman Imperial period, architectural items carved in Karystian marble, such as columns, blocks and other forms of building material, were distributed throughout the Mediterranean region.⁸ Some limited use of Karystian marble is also attested in the Byzantine era. Despite the widespread tendency to recycle architectural members (*spolia*) during the Byzantine period, some limited extraction of monolithic columns did occur at the quarries of Karystos in the Renaissance period and in the period of Ottoman dominion in Greece, right up until modern times, as evidenced by relevant finds and distribution data.

1. We are especially indebted to the Ephorate of Antiquities of Euboea, most of all to our prematurely departed colleague, Maria Kosma, for the permission to restudy the vase. We also want to thank Aspasia Drigopoulou for the drawing of the vase and Yannis Tsipas for the weeding of the area around the vase, in order to examine it in detail. Finally, many thanks are owed to Nikolas Dimakis, who revised our English text, and Athena Chadjidimitriou and Prof. Stavros Mamaloukos for their generous advice.

2. Bruno 1998, 327-332; Chidiroglou 2009, 76; 2010a; 2010b; Dodge 1984, 91-93; Dworakowska 1983, 23, 49, 53, 64, 69, 131; Hankey 1965, 53-59; Higgins and Higgins 1996, 86; Kokkorou-Alevras et al. 2010, 28-29; Koželj and Wurch-Koželj 1995, 17-31; Lambraki 1980, 51-56; Lazzarini 2007, 183-203; Lazzarini et al. 1995, 161-169; Papageorgakis 1964, 262-278; Pensabene 1998, 311-326; Zappas 1981-1982, 248-251.

3. Chidiroglou 2010a, 50. This date is based upon the attested tool marks and the applied quarrying methods, as well as the recent findings from the whole region of the ancient Karystia: Chidiroglou 2010b.

4. Dodge 1984, 72.

5. Generally speaking, the organization of quarries and marble trade in the Roman Empire was due to Tiberius (see Dodge 1984, 70; Kokkorou-Alevras et al. 2010, 62-63, with citations to ancient sources). Freedmen were often employed as supervisors in the quarries; see for instance Hymenaeus Thamyrianus, a *lapicidinis Carystiis*, a *dispensator*, responsible for the Karystian quarries in the mid-1st century AD: Hirt 2010, 157-159, n. 264. According to the inscriptions from the Myloi quarries (*IG XII.9*, 32, 33, 35; *CIL III.2*, 12286; *CIL III* 563) it can be claimed that the systematization of this quarry group probably took place in the 2nd century AD. For instance, Karystian cipollino architectural items were used in the Harbour of Lechaion in Corinth in the 2nd century AD: Shaw 1969, 71. The Karystian quarries were valued by the Romans: Hirt 2010, 28-29, with main period of extraction to order from AD 133 to 161: Hirt 2010, 170-171.

6. Pliny (*NH XXXVI.6*, 48) mentions Mamurra, one of Caesar's engineers in Gaul, as the first exporter of Karystian marble (Dworakowska 1983, 23). In addition, early cipollino use has been detected in Kos (in the central *thermai* complex, close to Casa Romana, and in the stoa of the harbour: Poupaki 2012, 177-178) and in various sites in Asia Minor. Cipollino used for an inscribed artefact (2nd century AD) was also discovered in Bucklersbury House in Walbrook (Museum of London, no. 18498). The distribution range of Karystian cipollino has been studied by many scholars (Chidiroglou 2010a; Dodge 1988, 220, fig. 5; Lazzarini 2007, 115, fig. 22; Sutherland 2013), but there are still many sites to be added.

7. Rough blocks from the Karystian quarries have been discovered in the Forum Romanum, in the harbour Marmorata of the Tiber and in Ostia (Bruzza 1870, 519-520; Dworakowska 1983, 69, n. 234-235; Legrand 1889, 519-520).

8. Papageorgakis 1964, 267. See, for instance, rectangular cipollino tubes: Barbier de Montault 1870, 450, no. 69; Morcelli et al. 1869, 14, no. 69.

The quarry

The quarry at Myloi consists of several impressive vertical quarry fronts, single spaced (like chambers) or in groups. Step-like extraction signs are attested in many areas as a result of the organized manner of extraction. Large piles of marble chips, small stones, blocks abandoned *in situ* and many blocks and columns, semi-detached from the rock bed, provide ample evidence to reconstruct the exact series of tasks that took place in each of the ancient quarries.⁹ Among the most noteworthy quarry marks preserved in the sites are the quarrying channels around the imprints of the detached blocks and the series of point marks that often replaced the use of wedges (pointillé technique,¹⁰ most probably dating to the Archaic period). The use of wedges for the final detachment of a marble block from the rock bed remained a common practice for a long period of time in the quarry at Myloi, as the number and types of the extant rectangular, trapezoidal or cuneiform wedge-holes testify.¹¹ Few quarry fronts preserve traces of the quarry pick, known as τύκος (modern Greek πικούνι), a heavy iron tool with a wooden handle and curved pointed edges. The quarrymen's use of τύκος or τυπίδα or κροταφίδα¹² in the deep channels surrounding the semi-extracted blocks left traces on the quarry fronts. These traces are in the form of engraved parallel and oblique or horizontal lines usually in a fish-bone pattern ('a *festoni* technique' which generally dates from the 3rd century AD onwards).¹³ On the visible parts of the rock-faces, series of engraved, vertical, parallel, short lines (*hastes*) have been also noted. They can be interpreted as numbering signs, which would have been part of an inventorying system for the extracted blocks or those which were ready to be moved.¹⁴ Sledge paths bordered by pole-holes have been preserved in all quarrying areas. These traces comprise important, albeit still largely unrecorded, evidence on networks of quarry transport roads and paths in southern Euboea.¹⁵ To the north-east of the Myloi quarry group, on another plateau of Mount Ochi, a rectangular building that had probably been in use from the Late Classical to the Roman Imperial period, which is known as the Ochi Dragon House (δρακόσπιτο Όχης), has been variously interpreted. The building has been thought to represent lodging for the quarry workers or for the officers who supervised the quarries, or an ancient shepherds' hut that was used mainly in the summer, or even a shrine where the quarrymen worshipped their divine protectors.¹⁶ Cult practices in the area of the Karystian quarries are corroborated by the existence of an inscribed rectangular votive niche carved on a quarry face at the Kylindroi site. A Latin dedicatory inscription to Herakles by the Roman centurion Sergius Longus (AD 132) is preserved on the base of the niche.¹⁷ Niches carved in rock and connected to cult are not uncommon in southern Euboea.¹⁸

9. Papageorgakis 1964, 266.

10. Chidioglou 2010a, 50.

11. Papageorgakis 1964, 266; and authors' remark.

12. Orlandos 1994, 118-120.

13. Quarry fronts with 'a *festoni* technique' and related oblique striations due to the quarry pick are found to the north of the stone vase 'Tsoukali' in Karystos and to north-west of the curved cut of the rock, where the block for the vase had probably been extracted.

14. Similar engraved symbols have been noted in the ancient quarries of Avlemonas on Kythera (Tsaravopoulos 1987-2003, 207-208) and in the quarry at Aformous, Apollonas on Naxos (Kokkorou-Alevras et al. 2013, 118, fig. 19). The above-mentioned quarry front at Myloi bears five similar inscribed *hastes*.

15. Quarry road networks have been recorded in the region of Styra: Vanhove 1996.

16. Carpenter and Boyd 1976; 1977; Koželj and Wurch-Koželj 1995, 27-29; Moutsopoulos 1982; Reber 2010.

17. *CIL* III, 12286 (Schaubert); Chidioglou 2009, 76; Hirt 2010, 170-171; Mosser 2003, 270, no. 210; Richier 2004, 326, no. 271. According to the inscription, the dedicator of the niche, which probably had a statue inside, was the centurion of the Legio XXI Primigenia and XV Apollinaris: Hirt 2010, 170-171, n. 10. There are more inscriptions in the quarry: 'E', 'IA', 'MEOEDE' and 'NE'. The last two date to the 5th century AD: Lambraki 1980, 51. There are also inscribed Christian crosses and ten *hastes*: Lambraki 1980, 51.

18. See for instance: Chidioglou 2012; Crielaard et al., 2012, 91, fig. 11; Keller 1985, 105-106, no. 42, fig. 51; Lambraki 1980, 41-43, figs. 7b, 8.

'Tsoukali' vessel

Several half-finished architectural items and other artefacts remain *in situ* in the quarry groups at Kyllindroi and Myloi, such as 14 columns in the former, carved of the same block as their capitals and bases,¹⁹ one capital,²⁰ and a big vessel with two protruding cubic handles (cat. no. 1) in the latter. This vessel, known to the locals as τσουκάλι (cooking pot), is the main subject of our contribution (Fig. 1).²¹

The dimensions are as follows: external diameter 1.69 m, internal diameter 1.86 m, depth 0.50 m, bottom thickness 0.30 m, height 0.96-1.00 m, handle dimensions 0.61 x 0.64 m and 0.63 x 0.63 m respectively, and handle height above rim 0.19 m. The stone vase at Myloi is shaped like a basin, with two square handles protruding from the flat projecting rim and reaching to the bottom. The vessel is quite shallow and its internal walls are slightly convex, whereas its external walls are curved. On its bottom surface, the letters Z and H, the number XXXX and five *hastes* IIIII (Fig. 2)²² have been carelessly incised, as graffiti. Similar quarrying signs can be also noted on an unfinished cipollino basin from Ostia (cat. no. 6). The internal surface of the vase in Karystos preserves the marks of a bow drill, which was probably used for the removal of the 'nucleus' of the marble block, whereas point chisel marks in horizontal series have been noted on its external surfaces.

Evidence regarding the use of the 'Tsoukali' vase is offered by its location in the quarry: the big basin is located in a prominent place on the central plateau of the quarry, on the top of a hill at the end of the modern road, which traverses the modern village of Myloi. After a thorough survey of the surrounding area, a quarry sledge path has been noted close to the vase, on a higher level. The sledge path was bordered by pole-holes, two of which have been preserved. The poles bearing the ropes which held the extracted blocks to be transported were inserted into these sockets (Fig. 3). To the north of the plateau, there is a grooved rock-cut, which was probably the exact spot where the block for the vase was extracted (Fig. 4). Transporting that immense block to the central plateau of the quarry must have represented quite a challenge to the quarrymen, not only because of its shape and weight but also because of the steep slope below its extraction spot: if the workers miscalculated, the extracted block could have fallen into the ravine. Its transport was achieved using solid straps, which were fastened around the block and pulled by the workers or a special machine (crane²³). The straps were probably held tight by being inserted through special holes on the quarry's front. One of these holes can be seen today to the west of the extraction spot (Fig. 5). Similar holes cut into quarry fronts have been also recorded in other ancient quarries (e.g. on the rock-face next to the half-worked kouros in the Archaic Apollonas quarry of Naxos and in quarries on Thasos). After all these difficulties, the block for the vessel was transferred to the central plateau and was probably carved there. Its final location point offered a panoramic view of the Karystos Bay and the hill on which the Castello Rosso was erected in the medieval period. After the necessary small-scale removal of the vegetation from the area around the 'Tsoukali' vase, we readily understood that this vessel was placed on stone slabs, which probably belong to the original pavement of the plateau.

19. Dimensions of 14 columns: length range: 11.20-11.90 m, diameter range: 0.80-1.30 m: Chidiroglou 2009, 76; Hankey 1965, 58. See also Lambraki 1980, 54; Papageorgakis 1964, 266; Pensabene 1998, 311-315.

20. Dimensions: 0.95 x 0.95 m, diameter: 0.90 m, height: 0.46 m (Lambraki 1980, 51).

21. The production of oversized basins at the ancient quarry sites is also attested in many other Roman quarries, e.g. in Moria on Lesbos (Ambrogi 2005, nos. 97-99), in Dokimeion (Ambrogi 2005, nos. 134-136) and in the Egyptian caves of the quarrying site Mons Claudianus (Ambrogi 2005, nos. 29-30). Two more semi-carved basins of cipollino have been found in Ostia (Ambrogi 2005, no. 87) and in Rome (Ambrogi 2005, no. 89). A half-finished basin of smaller dimensions carved in local reddish breccia comes from a cave quarry at Eretria, in Euboea (Ambrogi 2005, no. 113).

22. cf. graffiti mentioning Zeus in southern Euboea: *IG XII.9.53*, 54; Fachard 2005; Fachard 2006; Moutsopoulos 1982, 341-345, pls. 96, 97, 99, fig. 56. There are also inscribed Christian crosses and ten *hastes*: Lambraki 1980, 51.

23. Orlandos 1994, 107-112.

The form of the vase is quite distinctive (Fig. 6). The huge unfinished vase with the two handles was previously identified as a metallurgical basin that contained water for the cooling of the quarrying tools after repairs over the fire.²⁴ More recently, it was identified as a Roman *perirrhanterion* (*labrum*),²⁵ similar to the ones found in Perge or Aphrodisias in Asia Minor, which were oversized like the Karystian example. Water containers known as *perirrhanteria*, *labra*, *louteria*, craters or phialai were also used in church courtyards for ablutions during Byzantine times in Christian cult (e.g. the container from Ephesos' basilica), but they were different in shape from the 'Tsoukali' vessel. *Perirrhanteria* were usually manufactured with a central raised dome (omphalos) in the centre of the interior and were handleless. Some were also used as fountains (*fontanae*) in later periods. This is the case for a basin of Karystian marble in the *caldarium* of the Forum Baths in Herculaneum²⁶ which was used as a fountain, with a narrow pipe adapted in the middle of its omphalos.

In the Roman period, there was a marked preference of members of the elite for coloured marbles. This fashion led to the consequent expansion of the quarrying and trade of the Karystian cipollino marble that was used for columns and architectural blocks. It appears that this marble was also used for the construction of minor objects, such as vases, as can be testified by the number of the *perirrhanteria* of the attached catalogue. The green to grey colour of the Karystian marble may have been preferred by its buyers on the grounds of various ancient symbolic perceptions, such as a colour metaphor for water and the relevant religious connotations.

A second cipollino vase of a size smaller than the 'Tsoukali' vessel was observed by T. Zappas, in the same quarry,²⁷ but it proved difficult to relocate. As a matter of fact, different types of vases must have been carved from Karystian marble, albeit this is a subject that has not yet been researched. We present here some previously unpublished fragments of *louteria* or *perirrhanteria* from Kos (cat. nos. 16-17)²⁸ and Athens (cat. nos. 14-15, Fig. 7a-b)²⁹ and a part of a table from Athens (cat. no. 13, Fig. 8);³⁰ together with other parallels, these demonstrate that cipollino vases were not uncommon at least from Roman times to Late Antiquity. Among others, an example of an incomplete cipollino *labrum* in a marble deposit on the bank of the Tiber (cat. no. 8) in Rome proves that exportation of incomplete or half-worked cipollino vases was not uncommon. The earliest use of this marble for basins, found in the ancient marble workshops on Delos, has been noted by A. Ambrogi³¹ as dating to the 1st century BC (cat. no. 2). The use of cipollino for the construction of table/basin column supports (*hypostata*),³² is also well documented. Of these supports, an unfinished example from Ostia³³ proves that these artefacts were purchased by Roman traders or stockyard agents in a rough state, as were the basins. From the Late Hellenistic period onwards, the general taste for decorative elements of coloured marbles in the interior of buildings prompted the marble worker to use cipollino slabs for wall revetments and floor paving. A

24. Koželj 1988, 38, fig. 16a.

25. Ambrogi 2005, no. 83.

26. Maiuri 1970, 37.

27. Zappas 1981-1982, 251, fig. 6.

28. The first *perirrhanterium* fragment was found during the salvage excavation of a Late Roman/Early Byzantine mansion in the city of Kos (Tsocha property), to the east of Casa Romana, while the provenance of the other fragment is unknown.

29. Cat. no. 13: 0.14 x 0.55 x 0.11 x 0.07 x 0.11 x 0.09 m, wall thickness: 0.022-0.035 m. Fragment of the body. Well-smoothed surfaces, covered with mortars. Cat. no. 14: preserved height: 0.09 m, wall thickness: 0.03/0.035 m. Fragment of the rim and the body. Well-smoothed surfaces, covered with mortars. Flat rim. Two circular sockets for the insertion of metallic joints.

30. Dimensions: estimated rim diameter: 0.455 m, rim thickness: 0.025 m, bottom thickness: 0.015 m. Roughly carved. Stepped rim. Base ring on the bottom external surface.

31. Ambrogi 2005, no. 69.

32. e.g. one unfluted column support from Casa Romana on Kos, three from Herculaneum (Ambrogi 2005, nos. 59-61), three from Pompeii (Ambrogi 2005, nos. 62-64), five from Ostia (Ambrogi 2005, nos. 65-69) and one in the Vatican (Ambrogi 2005, no. 70).

33. Ambrogi 2005, no. 69.

typical instance demonstrating this tendency is a rather rare type of aquarium in the form of a Roman amphitheatre model, paved with small cipollino slabs, that had been constructed on a mosaic floor in the Roman villa, excavated in the 1990s, in the area of the site of Palaiochora at Karystos.³⁴

The shape of the ‘Tsoukali’ vessel, with its outward, flat and projecting rim and handles, is reminiscent of the Neo-Attic craters,³⁵ which were carved in Pentelic marble and dominated the Athenian marble workshops between the 1st century BC and the 1st century AD. Its general form however is different: the ‘Tsoukali’ vessel is shallower, and its profile curved instead of articulated. Moreover, handles, such as those of the ‘Tsoukali’ vase are not usually found on *perirrhantaria*, as far as we can judge from the published examples. Handles are not usually found on stone metallurgical basins either, although such basins are often found in quarrying sites.³⁶ The closest parallels of *labra* with handles below the rim are three examples carved in Phrygian marble (*pavonazzetto*), which were found in a shipwreck at Punta Sciffo.³⁷ Marble utilitarian vases, such as the washbasin of the 1st century BC from the *nymphaeum* of the Shepherd Villa in Stabii (Antiquarium Stabiano, no. 63894),³⁸ are closer in form to the half-finished ‘Tsoukali’ vase. The Stabii vase was fixed on a column support and resembles a huge cylix. Even after its final refinement in the quarry in antiquity, the plain handles of the ‘Tsoukali’ vase could have remained compact, in a fashion similar to the handles of the marble crater with the oval rim in the yard of Izmir/Smyrna Archaeological Museum in Konak and unlike the Stabii washbasin.³⁹ The globular, squat body of the ‘Tsoukali’ vase resembles that of the Stabii vase. Its dimensions (1.00 m high; rim diameter 2.00 m) are close to those of the Stabii vase, too. Certain affinities can be also noted on *canthari aquarii* sometimes found in front of entrances of Christian churches. The general shape of these *canthari* derives from the homonymous typical drinking cup of the Classical period, and they are often noted in the literature of the 5th and 6th centuries AD.⁴⁰

The form of the ‘Tsoukali’ vase has a parallel in a small half-finished Athenian marble bowl (New Acropolis Museum, no. M1915; Figs. 9-10).⁴¹ In a fashion similar to the ‘Tsoukali’ vase, the handles of this vase do not interrupt the surface of the rim. The vase was found in a well that had been filled with waste products during the Late Roman period, and its type may be derived from the Neo-Attic marble workshops, installations of which were recently excavated in the Makrygiannis plot, to the south of the Acropolis.

The use of the vessel

The prominent location of the ‘Tsoukali’ vase in the quarry at Karystos and its visual contact with most of the quarrying areas in the complex leads us to make some suggestions on the original use of the

34. Chidirolou 2012.

35. Grassinger 1991, nos. 1, 8, 17, 18, 22, 41, 44, 53, 58.

36. The only *perirrhantaria* with handles of smaller dimensions are those published by Ambrogi 2005 (nos. 129, 147).

37. Bartoli 2008, 203-205, nos. Lab.1-3.

38. Bonifacio et al. 2001, 167, no. 261. For close parallels: Van Den Hoek and Herrmann 2013, 33-34, fig. 5, n. 93-94.

39. Unpublished.

40. Van Den Hoek and Herrmann 2013, 17-22.

41. New Acropolis Museum, no. M1915AB. Unpublished. It was found in a Late Roman well discovered between the ‘Acropolis’ and ‘Sygrou-Fix’ metro stations during the construction of the Athenian metro. Dimensions: height: 0.115 m, diameter of rim: 0.82 m, diameter of bottom: 0.685 m, width of handles: 0.13 m. White thin-grained Pentelic marble. Two joined fragments of a semi-finished bowl. Part of the bowl is missing. Calyx-like external outline. Outward rim. Convex upper rim surface. Concave inner walls. Slightly convex bottom surface. Compact handles, carved on opposite ends of the rim, just above it and reaching the centre of the bottom. Bow-drill traces on the internal surfaces, point chisel marks on the handles and tooth chisel marks on the external surfaces of the bowl, except on the upper surface of the rim which was smoothed with a gouge.

vessel. After a careful examination of its surfaces, no mistakes in carving were noted; the vase therefore did not remain in the quarry due to a failure in its carving. Though it seems plausible that either the order or the purchase of the vase was cancelled some time before it was finished and the vase remained in the quarry. In this case, its use as a quarry water basin for the cooling down of tools cannot be rejected.⁴²

After the initial identification of the ‘Tsoukali’ vase as a fountain basin by A. Lambraki, we pondered the claim first proposed by A. Ambrogi, who identified this vase as *labrum-perirrhaterium*.⁴³ The main reason for our disagreement with the latter suggestion is the type of the vase, which is not identical to the published *perirrhaterium* types.⁴⁴ It seems reasonable to assume that the vase would have been useful in the quarry, if it had been used as a *louterion*, i.e. a washing basin, a vessel form which generally follows the same typology as the *perirrhaterium*. One could assert that the quarrymen, having completed their difficult task, needed some quick refreshment from the heat—relief that could have been obtained by their sprinkling the water from the basin on themselves.⁴⁵ If we accept this rather doubtful assumption, the bathing workmen would have been visible from the surrounding areas and subjected to their colleagues’ observation and comments. Moreover, there are no known parallels for such constructions in other quarrying areas.

According to recent research,⁴⁶ the terminology for water vessels carved in the Late Republican and Roman Imperial periods is fluid, especially for vases that resemble craters. The use of the term *cantharus* in the Late Roman literary sources for basins often modified into fountains in church *atria* is often translated in Greek as χυτρόκαυλος. This name, a compound of *chytra*-pot and *kaulos*-spout, echoes this semi-globular vase shape, with handles shaped like ears. All the above conclusions on the carved marble vases of types similar to the ‘Tsoukali’ vase provide hints on the appropriate terminology for this category of vessels. In fact, its size and its form correspond to the use of small cooking pots called in the ancient literature χύτραι, λοπάδαι or κάκαβοι, terms affiliated with χυτρόκαυλος. A smaller-scale vessel—like a big mortar (ὄλμος) without handles—can be noted on a terracotta figurine of the early 5th century BC found in a grave at Rhitsona (now in the Archaeological Museum of Thebes), which depicts a man grating cheese in it.⁴⁷ The term κάκαβος has been cited by Athenaeus as referring to a big—presently undocumented—cooking vessel of the ancient Karystians.⁴⁸ The term reminds us of the basin known as κότταβος in the ancient sources, which lent its name to a famous game played in Greek and Etruscan banquets in the 5th and 4th centuries BC⁴⁹ that is often depicted on red-figure pottery.⁵⁰ Should we perhaps accept that the ancient use of that vessel is reflected in the modern term τσουκάλι used by the Karystians, as well as generally in (pre-)modern Greek language nowadays? The lack of firm archaeological evidence prevents such a conclusion. Preparing a meal in a stone vessel is not practical, and this way of cooking is not attested in antiquity, primarily because it would have been extremely difficult to put such a large stone vessel on the fire in order to prepare a warm meal. The big stone vessels were, on the contrary, appropriate for mixing or crushing fruits and condiments (ὄλμοι),

42. See n. 21.

43. Lambraki 1980, 53, fig. 17; Ambrogi 2005, no. 83.

44. Poupaki 2001-2002, 281-288 (with earlier literature).

45. Poupaki 2001-2002, 275-280 (with earlier literature).

46. Van Den Hoek and Herrmann 2013, 35, n. 97.

47. Burrows and Ure 1907/1908, 296-297, fig. 21. A similar terracotta figurine is in Boston Museum of Fine Arts, and this big vessel for grated cheese has a handle: Borrows and Ure 1907/1908, 296, fig. 20. See also: Aravantinos 2010, 213; Demakopoulou and Konsola 1995, 60, pl. 31.

48. Ath. IV 169 e-f (Καρύστου θρέμμα, γηγενής, ζέων.; κάκαβον λέγω), IV 28 a-b.

49. See for example, http://en.wikisource.org/wiki/1911_Encyclop%C3%A6dia_Britannica/Cottabus, last modified 10 January, 2014.

50. E.g. on a red-figure pelike in Berlin from Tarkynia (CVA Berlin, III, pl. 100). For this game see, for instance: <http://www.perseus.tufts.edu/hopper/text?doc=Perseus:text:1999.04.0063:id=cottabos-cn> Last modified 11 January, 2014. For an overview of Greek symposia and their games, see Wecowski 2013.

as well as for mixing water and flour for kneading bread and related goods (κάρδοποι). The vessel's shape does not allow us to ascertain if it was put to such use.⁵¹ On the other hand, stone models of vessels and other large objects are known as dedications to sanctuaries. These votives primarily served as objects that commemorated an event closely related to the stone model or as artefacts that would underscore the special status of an individual or a community.⁵² On a final note, one cannot rule out the possibility that the special shape of the 'Tsoukali' vase was a result of a misconception on the quarrymen's part of an order of a typical Roman pot, such as a *labrum*, and this was their attempt to relate the quarried object to local utilitarian types of vases. As a result of one of the reasons presented above or some other contingency, the 'Tsoukali' vase remained in the quarry.

The 'Tsoukali' vase in cultic context

The worship of Herakles in ancient quarries, a space where human power and endurance were constantly challenged, is testified in many regions.⁵³ In the area of the Karystian quarries at Myloi, this cult is confirmed by epigraphic evidence found at a short distance from the site of the vessel, as we have noted.⁵⁴ Most of the ancient cultic practices, such as those performed in the cult of Herakles did not necessarily take place in a roofed building: they could also have been performed in the open air,⁵⁵ as was the case for other deities, too. For example, no built shrine in honour of this hero-god had been erected on Thasos before the 5th century BC, but his cult was already active by that time.⁵⁶ Furthermore, Herakles is represented in certain reliefs and vase paintings standing in front of his shrine, a four-columned, unroofed monument (*Säulenbau*)⁵⁷.⁵⁸ On a marble relief from Eretria,⁵⁹ Herakles is depicted standing in front of an unroofed building and a circular *eschara*, while a priest holds the knife for the sacrifice and the sacrificial steer that was dedicated to the god.

Meat consumption was paramount in many sanctuaries during feasts and rituals honouring Herakles⁶⁰ (Paus. 2.10.1). The sources testify that in rituals to Herakles, as for other chthonic deities, the

51. See Poupaki 2001-2002.

52. For instance, a votive stone ship is attested by the sources to have been dedicated in a sanctuary of Poseidon in Geraistos, in southern Euboea: Procop. *Goth.* IV, 22, 27. *IG XII.9*, 1258.

53. During the 4th century BC, the quarries of Eleusinian black stone were included in the Sanctuary of Herakles' domain on the Akris hill, at Eleusis, where the Sanctuary of Demeter and Kore was located: Clinton 2005, 94. The cult of Herakles is also attested in the Asopos Roman quarries in Laconia (Kokkorou-Alevras et al. 2009) and other quarrying sites of Laconia (e.g. Vatheia tou Mouzi: Tsouli 2014, 762, fig. 3), in the Roman quarries at Kourtzi, Mytilene, in Lesbos (Charitonidis 1961/62, 263) and in the quarries of Thasos (Waelkens et al. 1988, 115), etc. A votive niche, similar to the one at Myloi, is also mentioned in the quarries at Styra: Lambraki 1980, 41-43, figs. 7b, 8.

54. *CIL III*, 12286 (Schaubert); Chidioglou 2009, 76; Hirt 2010, 170-171; Mosser 2003, 270, no. 210; Richier 2004, 326, no. 271.

55. For instance on Thasos (Larson 2007, 184-186) and at the Asopos quarry (Kokkorou-Alevras et al. 2009, 173).

56. Larson 2007, 184.

57. Van Straten 1995, 89.

58. On a relief in the Boston Museum of Fine Arts (no. 96696: Caskey 1925, no. 47) a crater appears on that shrine echoing Euripides (*HF* 1328-1333), who mentions that Herakles is honoured in Attica with sacrifices and a stone monument.

59. Eretria Archaeological Museum, no. 631: Mitropoulou 1976, 28, fig. 7; Themelis 1982, 173, pl. 107β; *LIMC*, IV, s.v. *Herakles*, no. 1379 (Boardman 1988). cf. also the niches at Plakari, Karystos: n. 18.

60. In Antimacheia on Kos the cult of Herakles Diomedonteios is epigraphically attested in a sacred law of the late 4th century BC. In Herakles' cult that was founded by Diomedon on Kos, two ceremonies took place, underscoring the double cultic role of Herakles as a hero-god, ἥρωας θεός (Pind. *Nem.* 3.22): on the first day they sacrificed on an altar as for the Olympian Gods (θεῖν), and on the second day, during the sacrifice known as δλόκαυστα, the sacrificed animal was totally burnt over the altar (ἀρήν καυτός) of the hero (*LS* 151; Bosnakis 2013, 224, n. 36; Bouraselis 2000, 55, n. 134; Farnell 1921, 122; Georgoudi 1998, 311-312; Herzog 1928, no. 10; Paton and Hicks 1899, no. 36; Segre 1993, ED 149, 22-39; Sherwin-White 1978, 364-365; Stafford 2010, 234, n. 18; Vollkomer 1988, 85; Zarraftis 2005, 20-21), as in Sicyon (Ekroth 2008b; Guthrie 1950, 238; Stafford 2010, 232-233) and on Thasos, from the Archaic period onwards (Farnell 1921, 122; Georgoudi 1998, 311).

male worshippers⁶¹ consumed part of the sacrificed animal (ἐναγίζειν). Herodotus (2.44) mentions the construction of two different shrines as the best way to worship Herakles: one for offering sacrifices to him and another for ἐναγισμούς.⁶² In sacrifices to Herakles the victim was a goat, lamb or steer.⁶³ Often, the blood of the animal was collected in a special vessel, the σφάγειον, and it was poured over the altar after the sacrifice.⁶⁴ This means that the σφάγειον should be easy to carry and therefore the 'Tsoukali' vase could not have had such a use.

A very interesting scene of θυσιαστική εὐωχία ('sacrificial feast'),⁶⁵ which took place after the sacrifice, is depicted on the Ionic hydria 'Ricci' (540 BC) in the Villa Giulia in Rome.⁶⁶ The sacrificed animal is cut into portions on a table. The meat was cooked over the fire, either by grilling after being penetrated by skewers (ὄβελοι) or it was boiled in a big marmite, a *lebes*, from which one of the cult personnel with the aid of a big fork, the κρεάγρα, grasped pieces of meat for distribution. A similar vase is depicted in a mythical scene on an Apulian *dinos*, attributed to the Dareios painter, in the Metropolitan Museum of New York.⁶⁷ The scene represents preparations for the sacrifice of Herakles by Bousiris. The slaves are depicted pouring water carried in amphorae to a *lebes* set over a fire in order to cook the hero himself after he is killed as their sacrificial victim—a plan that eventually goes awry.⁶⁸

Intestines and the best parts of the sacrificed animal were examined (σπλαγχνοσκοπία), and the edible parts were cooked over the altar, or laid on tables⁶⁹ and offered raw to the gods and the priest, together with non-blood offerings, during the communal meal called τραπεζώματα.⁷⁰ The cooked meat of the sacrificed animal was distributed to a small number of worshippers, probably those responsible for the feast. Typical items in the shrines of Herakles on Thasos, apart from the altars, are the τράπεζαι, for the 'restraining of sacrificial victims',⁷¹ and the κλίνας, for the adorers to use during ritual meals.⁷² Ekroth considered that in these rituals, 'the meat was displayed for everyone to see. If raw, it was placed on a table at the altar. If cooked, it was presented on the θεοξενία table surrounded with other food-stuffs.'⁷³

61. The cult practices in honour of Herakles mainly involved men, who were inspired by his courage, bravery and physical strength. Also for the same reasons, adolescent men worshipped Herakles before their military exercises or during their training in gymnasia and related places: Burkert 1993, 438.

62. In the first ceremony the sacrificed animal was smoked over the fire set on the altar, so that the smoke (κνίσα) could reach the residence of the gods in the sky and bring them pleasure and satisfaction (Ekroth 2008b, 88-89).

63. Before the animal was slaughtered, its head was held downwards above a pit in the ground (the sewer or the grid-dle) so that the animal's blood would be collected there and the chthonic hypostasis of the hero would be satisfied. During ceremonies in honour of the Olympian gods, the head of the animal was held looking towards the sky and its blood fell on the altar: Farnell 1921, 155.

64. Ekroth 2002, 245-247; Van Straten 1995, 49.

65. Ekroth 2008b.

66. Herda 2011, 61, n. 19 (with earlier bibliography); Ricci 1946-1948.

67. No. 1984.11.7.

68. Von Bothmer 1984-1985, 6; Brinkmann 2003, 175-176.

69. A special stone artefact like a τράπεζα with short rim has been also found in an open-air shrine of the chthonian deity (Kybele) at Loryma in Karia: Held 2010, 362, fig. 9.

70. Ekroth 2008a; 2008b, 98-99; 2011.

71. Ekroth 2008b, 98, n. 66.

72. It must be added that close architectural resemblances have been noted between the ancient rural buildings known as δρακόσπιτα (Dragon Houses) in Euboea and fortifications in Karia, in Asia Minor. The Euboean Dragon Houses have been also interpreted as lodgings for Karian slaves, who worked in the quarries (Carpenter and Boyd 1976; 1977). This theory relies on Herodotus, who informs us that Darius brought Karian slaves to Euboea during his campaign to Greece and that these people helped Xerxes during the sea and land battles in Euboea (Carpenter and Boyd 1977, 211, with quotations from ancient writers). However, this connection of the Euboean Dragon Houses to foreign constructors remains only hypothetical and is in contrast to the attested long use of these buildings throughout the Late Classical to Roman periods.

73. Ekroth 2008b, 100. Elsewhere, Ekroth (2002, 16) notes: 'three kinds of rituals were used in hero-cults: (1) animal sacrifice in which the blood was poured out, the meat was destroyed and no meal was included in the ritual, (2) the presentation of a table with food offerings, such as cakes, vegetables, fruit and cooked meat, and (3) animal sacrifice in which the hero's portion was burnt on an altar, while the rest of the meat was eaten by the worshippers.'

Conclusions

A close examination of the ‘Tsoukali’ vase brings to mind images of pre-modern and modern large cooking pots, in which portions of meat were served. Evidence relating to a number of sacrificial items that were indispensable during hero-cult practices is offered by the inscriptions, in which various culinary vessels are named.⁷⁴ Should we suggest that the cooked meat of sacrificial victims could have been served or displayed in a vessel like the one at ‘Tsoukali’ before being distributed to the worshippers, i.e. the quarrymen? Or on another cultic level, would it be possible to interpret the ‘Tsoukali’ stone vase as a large votive model of a cooking pot or basin? In this case the stone model would echo real cooking vessels that were used for the preparation of large-scale, perhaps also communal, meals. The stone pot based securely on a plateau a few metres away from its extraction spot appears as if it remained in use in the quarries, even if it was originally ordered for transport. On the other hand, there is no good epigraphic or other archaeological evidence to support the confinement of the stone vase to a strictly cultic use. The brief reference to the ceremonial practice taking place during Herakles’ cult elsewhere does not necessarily mean that there was a close connection between the half-finished vase from the Myloi quarries and the feasts in honour of this hero-god. Nevertheless, the protector god of this quarry group was Herakles, as testified by the 2nd-century AD inscribed votive niche in the vicinity of these quarries. It is probable that the meat portions of the sacrificed animal were cooked in a metallic or a ceramic vessel (possibly a *lebes*) or grilled with the aid of ὀβελοί over a fire set on an altar in the open-air shrine of the god, which can only hypothetically be located in the area of the ‘Tsoukali’ vase. The inscribed letters Z and H may constitute abbreviations to Zeus and Herakles, but they could also be interpreted as the results of a quarrymen’s random scratching or pastime, without any special meaning. Based on known parallels, the numbers XXXX and IIIII inscribed inside the vase could be interpreted as quarrying notes, meaning either the number of the blocks to be extracted⁷⁵ or the workers’ shifts. If we accept that the ‘Tsoukali’ vase was a ritual or votive vessel, then these numbers could refer to the portions of meat of the sacrificed animal, a practice often mentioned in the *Ἱεροὶ Νόμοι*. Finally, one cannot exclude a possible practical function for the stone vessel in the quarrying area, such as its occasional or regular use as a large basin or vessel filled with water by and for the craftsmen for cooling.⁷⁶

The type and the shape of the ‘Tsoukali’ vase maintain the basic principles of popular cooking vessels used in the preparation of religious and communal meals. Large cooking pots are attested for various regions, including Karystos, home of the large cooking pot named *kakavos*, as we have noted. In all suggested interpretations, we find common ground in the fact that large cooking vessels emphasize aspects of community bonding through participation in communal feasts, rituals or other organized group tasks. As shown above, the shape of the ‘Tsoukali’ vase, as well as other traits, is influenced by the Neo-Attic tradition, the presence of which in Euboea is attested by other archaeological data.⁷⁷ During the Roman period, similar vases in varying sizes and of local cipollino marble were manufactured and exported (see catalogue below). Finally, the multifaceted and complex use of this intriguing stone vase, the ‘Tsoukali’, should not be dismissed since the evidence suggests that the reuse of good-quality stone in southern Euboea, as is the case elsewhere in Greece, was a frequent occurrence in the ancient world and into modern times.

74. e.g. χύτρ[αι], κάδοι χαλκοί, σφαγεῖα καὶ χερό[νιπτρα -] (*IG II² 1416*); κρατήρ στρογγύλος, χύτρα, κότταβος, γαστροπτίς (*IG II² 1638*).

75. See n. 14.

76. The ‘Tsoukali’ vessel is nowadays a rather good depository for rain water, lasting from winter until the end of spring.

77. e.g. funerary relief from Eretria depicting a sculptor carving a marble crater: Karanastasi 2010.

Catalogue of vases in Karystian marble (cipollino)

1. 'Tsoukali' half-carved vessel

Karystos, Myloi quarry (*in situ*). GPS 38°2' 16'' 24° 26' 26''

1st century BC-1st century AD

Ambrogi 2005, no. 83; Kozelj 1988, 38, fig. 16a; Lambraki 1980, 53; Papageorgakis 1964, 266

2. Museo Barracco - *labrum*

Rome, Museo Barracco. From a Roman building in the site of 'Palazzetto Farnesina ai Baullari'

1st century BC

Ambrogi 2005, no. 91 (with additional literature); Cavalieri 2000, no. 24

3. Herculaneum - *labrum* on a column support

Forum Baths. In an apse of the *apodyterium* (*in situ*)

Caesarian or Julio-Claudian period

Ambrogi 2005, no. 84 (with additional literature); Cavalieri 2000, no. 21; Maiuri 1970, 37

4. Herculaneum - fountain *labrum*

Suburban Baths. In the atrium of *caldarium* (*in situ*)

Augustan period

Ambrogi 2005, no. 85 (with additional literature); Cavalieri 2000, no. 22

5. Ostia - *labrum*

Ancient street of Vigili, probably transferred from neighbouring baths or from Poseidon Baths

Tiberian or Claudian period

Ambrogi 2005, no. 86 (with additional literature)

6. Ostia - half-carved *labrum* with signs of quarrying

Atrium of the Roman villa in the site of Porta Marina (*in situ*)

Mid-Imperial period

Ambrogi 2005, no. 87

7. Ostia - *labrum*

Thermopolium on Artemis Street

First half of the 2nd century AD

Ambrogi 2005, no. 88

8. Rome - half-carved *labrum*

Rome. Antiquarium del Celio. Probably from the marble deposits on the borders of the Tiber

Undetermined date

Ambrogi 2005, no. 89

9. Villa Albani - *labrum*

Rome. Villa Albani, no. 114. Unknown origin (used as fountain basin in 'Loggia del Bigliardo', Rome)

Undetermined date

Ambrogi 2005, no. 91 (with additional literature); Cavalieri 2000, no. 23; Morcelli et al. 1869, 21, no. 114

10. *Labrum* in Temple of Jupiter Heliopolitanus
Rome, Janiculum Hill. Temple of Jupiter Heliopolitanus (*in situ?*)
Undetermined date (2nd-3rd century AD?)
Calzini Gyzens 1996, 279, n. 11

11. Ny Carlsberg - basin
Ny Carlsberg Glyptothek (Copenhagen). Unknown origin; bought in Cyprus
3rd-4th century AD
Ambrogi 1995, no. AII16 (with additional literature)

12. Piazza Nicosia - basin
Rome. Piazza Nicosia. Unknown origin
3rd-4th century AD
Ambrogi 1995, no. AI10 (with additional literature)

13. Fragment of a round table (Fig. 8)
New Acropolis Museum, no. M203. Athens, Makrygiannis plot, mid-Byzantine grave-ossuary (‘χώρος 3’)
Late Roman
Unpublished

14. Fragment of a basin (Fig. 7b)
New Acropolis Museum, no. M1140. Athens, Makrygiannis plot, from the central drain of Late Roman road ‘οδός 2’
Late Roman
Unpublished

15. Fragment of a basin (Fig. 7a)
New Acropolis Museum, no. M529. Athens, Makrygiannis plot, from a modern layer
Late Roman
Unpublished

16. Fragment of a basin
Kos Archaeological Museum, without inv. no. From the Late Roman/Early Byzantine mansion on M. Tsocha’s property (to the east of Casa Romana)
Late Roman
Unpublished

17. Three fragments of a basin
Medieval Castle of Kos (archaeological deposit), without inv. no. Unknown origin
Late Roman (?)
Unpublished

18. *Labrum* from Florence
Florence. Giardino di Boboli. Fontana del Carciofo. Unknown origin
Undetermined date
Cavaliere 2000, no. 20

Bibliography

- Ambrogi, A. (1995) 'Vasche di età Romana in Marmi Bianchi e Colorati'. *Studia Archeologica* 79. Rome: L'Erma di Bretschneider.
- Ambrogi, A. (2005) 'Labra di età Romana in Marmi Bianchi e Colorati'. *Studia Archeologica* 136. Rome: L'Erma di Bretschneider.
- Aravantinos, V. (2010) *The Archaeological Museum of Thebes*. Athens: John S. Latsis Public Benefit Foundation EFG; Eurobank Ergasias S.A.-Olkos.
- Barbier de Montault, X. (1870) *Musées et Galleries de Rome. Catalogue général de tous les objets d'art qui y sont exposés*. Rome: J. Spithover.
- Bartoli, D. G. (2008) 'Marble Transport in the Time of Severans: A New Analysis of the Punta Scifo a Shipwreck at Croton, Italy'. PhD thesis. Texas A&M University, USA.
- Boardman, J. (1988) 'Trade in Greek Decorated Pottery'. *Oxford Journal of Archaeology* 7(1), 27-33.
- Bonifacio, G., A. M. Sodo, G. C. Ascione, eds. (2001) *In Stabiano. Cultura e Archeologia da Stabiae: la Città e il Territorio tra l'Età Arcaica e l'Età Romana. Catalogo della Mostra (4 novembre 2000 - 31 gennaio 2001)*. Castellammare di Stabia: N. Longobardi.
- Bosnakis, D. (2013) 'Από τον Αθηναϊκό Κεραμεικό στην Κω. Ένας Αμφορέας από τον Κύκλο του Ζωγράφου του Αντιμένους με Παράσταση του Ηρακλή'. In *ΔΙΝΗΕΣΣΑ. Τιμητικός τόμος για την Κατερίνα Ρωμιοπούλου*, edited by P. Adam-Veleni and K. Tzanavari, 219-225. Thessaloniki: Archaeological Museum of Thessaloniki.
- Von Bothmer, D. (1984-1985) 'Greek and Roman Art'. *Notable Acquisitions (Metropolitan Museum of Art) 1984-1985*, 6-7.
- Bouraselis, K. (2000) *Kos between Hellenism and Rome. Studies on the Political, Institutional and Social History of Kos from ca. the middle 2nd century BC until late Antiquity*. Philadelphia: American Philosophical Society.
- Brinkmann, V. (2003) 'Herakles totet den ägyptischen König Busiris'. In *Herakles - Herkules*, edited by R. Wünsche, 175-176. Munich: Staatliche Antikensammlungen München.
- Bruno, M. (1998) 'Su un Fusto Colossale di Cipollino sopra le Cave di Kyliindroi nel distretto di Myloi'. In Vol. II of *Marmi antichi [Cave e Tecnica di Lavorazione, Provenienze e Distribuzione]*, edited by P. Pensabene, 327-332. Rome: L'Erma di Bretschneider.
- Bruzza, L. M. (1870) 'Iscrizioni dei Marmi Grezzi'. *Annali 1a Cirrispondenza Archeologica* 42, 106-204.
- Burkert, W. (1993) *Αρχαία ελληνική θρησκεία. Αρχαϊκή και κλασσική εποχή* [trans. N. Bezantakos]. Athens: Kardamitsa Editions.
- Burrows, R. and P. Ure (1907/1908) 'Excavations at Rhitsona in Boeotia'. *Annual of the British School at Athens* 14, 226-318.
- Calzini Gyzens, J. (1996) 'La localization du Temple de Jupiter Héliopolitain au Janicule'. In *Orientalia Sacra urbis Romae: Dolichena et heliopolitana*, edited by G. M. Bellelli and U. Bianchi, 277-288. Rome: L'Erma di Bretschneider.
- Carpenter, J. and D. Boyd (1976) 'The Dragon Houses of Southern Euboea'. *Archaeology* 29, 250-257.
- Carpenter, J. and D. Boyd (1977) 'Dragon Houses, Euboea, Attika, Karia'. *American Journal of Archaeology* 81(2), 179-215.
- Caskey, L. D. (1925) *Catalogue of Greek and Roman Sculpture in the Museum of Fine Arts, Boston*. Cambridge, Massachusetts: Harvard University Press.
- Cavalieri, M. (2000) 'Fontane Circolari in Marmi Colorati nel Mondo Romano: Diffusione ed Impiego'. *Aurea Parma LXXXIV(III)*, 417-438.
- Charitonidis, S. (1961/1962) 'Λέσβος, Μυτιλήνη'. *Αρχαιολογικόν Δελτίον* 17(Β' Χρονικά), 261-263.
- Chidiroglou, M. (2009) 'New Data on the Ancient Quarries in Southern Euboea, Greece'. In *ΛΕΥΚΟΣ ΛΙΘΟΣ. Marbre et Autres Roches de la Méditerranée: Études Interdisciplinaires. Actes du VIIIe Colloque International de l'ASMOSIA 2006, Aix-en Provence 12-18 Juin 2006*, edited by J. Philippe, 73-91. Aix-en-Provence: Maisonneuve & Larose.
- Chidiroglou, M. (2010a) 'Karystian Marble Trade in the Roman Mediterranean Region: An Overview of Old

- and New data.' *Bollettino di Archeologia on line I [Volume speciale/Poster Session 7]*, 48-56. http://www.bollettinodiarcheologiaonline.beniculturali.it/documenti/generale/6_CHIDIROGLOU.pdf. Accessed 10 January, 2014.
- Chidiroglou, M. (2010b) 'The Archaeological Research in the Region of the Modern Municipality of Styra: Old and New Finds.' *Mediterranean Archaeology and Archaeometry* 10(3), 19-28.
- Chidiroglou, M. (2012) 'Η Αρχαία Καρυστία. Συμβολή στην Ιστορία και Αρχαιολογία της περιοχής από τη Γεωμετρική έως και την Αυτοκρατορική εποχή'. PhD thesis. University of Athens, Greece.
- Clinton, K. (2005) *Eleusis. The inscriptions of Stone. Documents of the Sanctuary of the Two Goddesses and Public Documents of the Deme*. Athens: Η εν Αθήναις Αρχαιολογική Εταιρεία.
- Crielaard, J. P., F. Songu, M. Chidiroglou and M. Kosma (2012) 'The Plakari Archaeological Project. Project Outline and Preliminary Report of the First Field Season (2010)'. *Pharos* 18(2), 83-106.
- Demakopoulou, K. and D. Konsola (1995) *Αρχαιολογικό Μουσείο της Θήβας. Οδηγός*. Athens: Ταμείο Αρχαιολογικών Πόρων και Απαλλοτριώσεων.
- Dodge, H. (1984) 'Building Materials and Techniques in the Eastern Mediterranean from the Hellenistic to the 4th century AD'. PhD thesis. University of Newcastle upon Tyne, UK.
- Dodge, H. (1988) 'Palmyra and the Roman Marble Trade. Evidence from the Baths of Diokletian.' *Levant* XX, 215-230.
- Dworakowska, A. (1983) *Quarries in Roman Provinces*. Wrocław: Ossolineum.
- Ekroth, G. (2002) 'The Sacrificial Rituals of Greek Hero-Cults in the Archaic to the Early Hellenistic periods.' *Kernos Supplement* 12.
- Ekroth, G. (2008a) 'Meat, Man and God. On the Division of the Animal Victim at Greek sacrifices'. In *Μικρός Ιερομνήμων. Μελέτες εις Μνήμην του Michael H. Jameson*, edited by A. Matthaiou and I. Polinskaya, 259-290. Athens: Ελληνική Επιγραφική Εταιρεία.
- Ekroth, G. (2008b) 'Burnt, Cooked or Raw: Divine and Human Culinary Desires at Greek Animal Sacrifice'. In Vol. 15 of *Performances Intercultural Studies on Ritual, Play and Theatre 15 [Transformations in Sacrificial Practices. From Antiquity to Modern Times] Proceedings of an International Colloquium. Heidelberg, 12-14 July, 2006*, edited by E. Stavrianopoulou, A. Michaels and C. Ambos, 87-111. Berlin: Transaction Publishers.
- Ekroth, G. (2011) 'Meat for the Gods'. *Kernos Supplement* 26, 15-41.
- Fachard, S. (2005) 'Trois Sites de l'Érétriade Méridionale: Aghios Nikolaos, Tsakaioi, Myrtia'. *Antike Kunst* 48, 114-123.
- Fachard, S. (2006) 'Les Forteresses de l'Érétriade: Prospections, Relevés et Études'. *Antike Kunst* 49, 87-95.
- Farnell, L. R. (1921) *Greek Hero Cults and Ideas of Immortality*. Oxford: Clarendon Press.
- Georgoudi, S. (1998) 'Héraclès dans les Pratiques Sacrificielles des Cités'. In *Kernos Supplément* 7, 301-317.
- Grassinger, D. (1991) 'Römische Marmorkrater'. Vol. XVIII of *Monumenta Artis Romanae*. Mainz am Rhein: P. von Zabern.
- Guthrie, W. K. C. (1950) *The Greeks and their Gods*. London: Methuen.
- Hankey, V. (1965) 'A Marble Quarry at Karystos'. *Bulletin du Musée du Beyrouth* 18, 53-59.
- Held, W. (2010) 'Die Heiligtümer und Kulte von Loryma'. In *Hellenistic Karia. Proceedings of the 1st International Conference on Hellenistic Karia. Oxford, 29 June-2 July, 2006*, edited by D. Van Bremen and J-M. Carbon, 355-377. Talence: Ausonius Édition.
- Herda, A. (2011) 'How to Run a State Cult: The Organization of the Cult of Apollo Delphinios in Miletus'. In *Current Approaches to Religion in ancient Greece, Papers presented at a Symposium at the Swedish Institute at Athens, 17-19 April, 2008*, edited by J. Wallensten and M. Haysom, 57-93. Stockholm: Swedish Institute at Athens.
- Herzog, R. (1928) *Heilige Gesetze von Kos*. Berlin: Walter de Gruyter.
- Higgins, M. and R. Higgins (1996) *A Geological Companion to Greece and the Aegean*, London: Duckworth.
- Hirt, A. M. (2010) *Imperial Mines and Quarries in the Roman World: Organizational Aspects 27 BC-AD 235*. Oxford: Oxford University Press.
- IG XII.9 = Ziebarth E. (1915) *Inscriptiones Graecae: Inscriptiones Euboeae insulae*, XII.9. Berlin 1915.

- Karanastasi, P. (2010) 'Η επιτύμβια στήλη του Μεγιστοκλή'. In *Ερέτρια. Ματιές σε μια αρχαία πόλη*, edited by N. Kaltsas, S. Fachard, A. Psalti and M. Giannopoulou, 353. Athens: Swiss School of Archaeology in Greece.
- Keller, D. (1985) *Archaeological Survey in Southern Euboea, Greece: A reconstruction of human activity from Neolithic times through the Byzantine period*. PhD thesis. Indiana University, USA.
- Kokkorou-Alevras, G., A. Chatziconstantinou, A. Efstathopoulos, E. Zavvou, N. Themis, K. Kopanias and E. Poupaki (2009) 'Ancient Quarries in Laconia'. In *Sparta and Laconia. From Pre-History to Pre-Modern. Proceedings of the Conference held in Sparta by the B.S.A., the University of Nottingham, the E'E.P.C.A. and the 5th E.B.A. 17-20 March, 2005*, edited by W. Cavanagh, C. Gallou and M. Georgiadis, 169-180. London: British School at Athens.
- Kokkorou-Alevras, G., E. Poupaki and A. Efstathopoulos (2010) *Αρχαία Ελληνικά Λατομεία*. Athens: Πολιτιστικό Ίδρυμα Ομίλου Πειραιώς.
- Kokkorou-Alevras, G., E. Poupaki and A. Efstathopoulos (2013) 'Αρχαίο Λατομείο Μαρμάρου στον Απόλλωνα της Νάξου'. In *Πρακτικά Δ' Πανελληνίου Συνεδρίου με θέμα 'Η Νάξος διά μέσου των αιώνων'* (Κωμιακή, 4-7 Σεπτεμβρίου 2008), edited by I. Promponas and E. S. Psarras, 109-126. Athens: Δήμος Νάξου και Μικρών Κυκλάδων.
- Koželj, T. (1988) 'Les Carrières des Époques Grecque, Romaine et Byzantine: Techniques et Organisation'. In *Ancient Marble, Quarrying and Trade. Papers from a Colloquium held at the Annual Meeting of the Archaeological Institute of America, San Antonio, Texas, December, 1986*, edited by C. Fant, 3-79. Oxford: Archaeopress.
- Koželj, T. and M. Wurch-Koželj (1995) 'Dragon-houses of Southern Euboea: Military Guard-places of the Quarries'. In *The Study of Marble and Other Stones in Antiquity. ASMOSIA III Athens: Transactions of the 3rd International Symposium of the Association for the Study of Marble and other Stones in antiquity*, edited by Y. Maniatis, N. Herz and Y. Basiakos Yannis, 17-31. London: Archetype.
- Lambraki, A. (1980) 'Le Cipolin de la Karystie. Contribution à l'Étude des Marbres de la Grèce exploités aux Époques Romaine et Paléochrétienne'. *Révue Archéologique* 1, 51-56.
- Larson, J. (2007) *Ancient Greek Cults. A Guide*. New York: Routledge.
- Lazzarini, L. (2007) 'Note sulle Cave di Marmo usate per Statuarie Greca Arcaica'. In *I Greci in Adriatico nell' Età dei Kouroi. Quaderni di Archeologia nelle Marche XIII*, edited by M. Luni, 221-237. Urbino: Quattroventi.
- Lazzarini, L., U. Masi and P. Tucci (1995) 'Petrographic and Geochemical Features of the Carystian marble, "Cipollino verde", from the ancient quarries of Southern Euboea (Greece)'. In *The Study of Marble and Other Stones in Antiquity. ASMOSIA III Athens: Transactions of the 3rd International Symposium of the Association for the Study of Marble and other Stones in antiquity*, edited by Y. Maniatis, N. Herz and Y. Bassiakos, 161-169. London: Archetype.
- Legrand, P-E. (1889) 'Deux inscriptions latines de Carystos'. *Bulletin de Correspondance Hellénique* 13, 519-523.
- Maiuri, A. (1970) *Herculaneum*. Rome: Istituto Poligrafico Dello Stato, Libreria Dello Stato.
- Mitropoulou, E. (1976) *Five Contributions to the Problems of Greek reliefs*. Athens: Εκδόσεις Πύλη.
- Morcelli, S. A., C. Fea and E. Q. Visconti (1869) *Description de la Villa Albani aujourd'hui Torlonia*. Rome: Imprimerie Salviucci.
- Mosser, M. (2003) 'Die Steindenkmäler des Legio XV Apollinaris'. Vol. 5 of *Wiener Archäologische Studien*. Vienna: Phoibos.
- Moutsopoulos, N. (1982) 'Τα δρακόσπιτα της ΝΔ Εύβοιας: Συμβολή στην Αρχιτεκτονική, την Τυπολογία και τη Μορφολογία τους'. *Επιστημονική Επετηρίδα της Πολυτεχνικής Σχολής. Τμήμα Αρχιτεκτόνων. Αριστοτέλειο Πανεπιστήμιο Θεσσαλονίκης Η'* (1978-1980), 263-479.
- Orlandos, A. (1994) *Τα Υλικά Δομής των Αρχαίων Ελλήνων και οι Τρόποι Εφαρμογής αυτών κατά τους Συγγραφείς, τας Επιγραφάς και τα Μνημεία*. Athens: Βιβλιοθήκη της εν Αθήναις Αρχαιολογικής Εταιρείας.
- Parapeorgakis, I. (1964) 'Συμβολή εις την Γνώσιν των εις την Αρχαίαν Ελλάδα χρησιμοποιηθέντων Μαρμάρων και των Λατομείων αυτών. II. Τα Αρχαία Λατομεία του Καρυστίου Μαρμάρου'. *Πρακτικά της Ακαδημίας Αθηνών* 39, 262-278
- Parapeorgakis, I. (1967) 'Τα εις την Μαρμαρικήν Τέχνην Χρήσιμα Πετρώματα της Ελλάδος'. *Γεωλογικά Χρονικά των Ελληνικών Χωρών* 18, 193-270.
- Paton, W. R. and E. L. Hicks (1899) *The Inscriptions of Cos*. Oxford: Clarendon Press.

- Pensabene, P. (1998) 'Le Colonne Sbozzate di Cipollino nei Distretti di Myloi e di Aetos (Karystos)'. In Vol. II of *Marmi antichi [Cave e Tecnica di Lavorazione, Provenienze e Distribuzione]*, edited by P. Pensabene, 311-326. Rome: L'Erma di Bretschneider.
- Roupaki, E. (2001-2002) 'Λίθινα Λουτήρια, Περιρραντήρια και Κάρδοποι της Κλασικής Αρχαιότητας'. *Αρχαιολογία* 11, 273-306.
- Roupaki, E. (2012) 'Κωακοί λίθοι και κωακή λιθοξοΐα. Η Χρήση των Λίθων της Κω στην Αρχιτεκτονική, Γλυπτική και Κατασκευή Επιτύμβιων, Ενεπίγραφων Μνημείων και Τέχνηργων. Αρχαϊκή-Παλαιοχριστιανική περίοδος. Η Σημασία της για την Οικονομία του Νησιού'. PhD thesis. University of Athens, Greece.
- Reber, K. (2010) 'The Dragon Houses of Styra: Topography, Architecture and Function'. *Mediterranean Archaeology and Archaeometry* 10(3), 53-61.
- Ricci, G. (1946-1948) 'Una hydria da Caere'. *Annuario della Scuola Archeologica di Atene*: 24-26 and 47-57.
- Richier, O. (2004) 'Centuriones ad Rhenum. Les Centurions légionnaires des armes romaines du Rhin'. *Gallia Romana* 6. Paris: De Boccard.
- Segre, M. (1993) 'Iscrizioni di Cos. 1. Testo'. Vol. VI of *Monografie della Scuola Archeologica di Atene e delle missioni italiane in Oriente*, edited by D. P. Delmouzu and M. A. Rizzo. Rome: L'Erma di Bretschneider.
- Shaw, J. (1969) 'A Foundation in the Inner Harbor at Lechaum'. *American Journal of Archaeology* 73(3), 370-372.
- Sherwin-White, S. (1978) 'Ancient Cos. An historical study from the Dorian settlement to the Imperial Period'. *Hypomnemata. Untersuchungen zur Antike und zu ihrem Nachleben* 51. Göttingen: Vandenhoeck & Ruprecht.
- Stafford, E. (2010) 'Herakles between Gods and Heroes'. In *The Gods of Ancient Greece. Identities and Transformations*, edited by J. Bremmer and A. Erskine, 228-244. Edinburgh: Edinburgh University Press.
- Sutherland, J. (2013) *Karystian Cipollino Marble. Its Export from Euboea and Distribution*. Oxford: Archaeopress.
- Sutherland, J. and A. Sutherland (2002) 'Roman Marble Quarrying near Karystos Southern Euboea'. *Journal of Cultural Heritage* 3, 254-256.
- Themelis, P. G. (1982) 'Ανασκαφή στην Ερέτρια'. *Πρακτικά της εν Αθήναις Αρχαιολογικής Εταιρείας*, 163-180.
- Tsaravopoulos, A. (1987-2003) 'Κυθηραϊκά Νέα'. *HOPOS* 14-16, 207-211.
- Tsouli, M. (2014) 'New Evidence on ancient Quarrying Activity at the Mani Peninsula'. In *Interdisciplinary Studies on Ancient Stone. ASMOSIA X Proceedings of the Tenth International Conference of ASMOSIA. Association for the Study of Marble & Other Stones In Antiquity. Rome 21-26 May, 2012*, edited by P. Pensabene and E. Gasparini, 823-830. Rome: L'Erma di Bretschneider.
- Van Den Hoek, A. and J. J. Herrmann (2013) 'Paulinus of Nola, Courtyards and Canthari: a Second Look'. In *Pottery, Pavements, and Paradise: Iconographic and Textual Studies on Late Antiquity*, edited by A. Van Den Hoek and J. J. Herrmann, 9-64. Leiden: Brill.
- Vanhove, D. (1996) *Roman Marble Quarries in Southern Euboea and the associated Road Systems*. Leiden: Brill.
- Van Straten, F. T. (1995) *Hiera Kala. Images of Ancient Sacrifice in Archaic and Classical Greece*. Leiden: Brill.
- Vollkomer, R. (1988) *Herakles in the Art of Classical Greece*. Oxford: Oxford University Committee for Archaeology.
- Waelkens, M., P. De Paepe and L. Moens (1988) 'Patterns of Extraction and Production in the White Marble Quarries of the Mediterranean: History, Present Problems and Prospects'. In *Ancient Marble, Quarrying and Trade. Papers from a Colloquium held at the Annual Meeting of the Archaeological Institute of America, San Antonio, Texas, December, 1986*, edited by J. C. Fant, 81-116. Oxford: Archaeopress.
- Wecowski, M. (2013) *The Rise of the Greek Aristocratic Banquet*. Oxford: Oxford University Press.
- Zappas, T. (1981-1982) 'Η Καρύστια και Στύρια Λίθος. Αρχαία λατομεία και μάρμαρα'. *Αρχαία Ευβοϊκών Μελετών* 24, 143-275.
- Zarraftis, I. (2005) *Κώια. Α' τόμος (Γεωγραφικά-Ιστορικά)*. Κος: Ιπποκράτειος Δημοτική Βιβλιοθήκη Κω.

Figures



Figure 1:
Half-carved cipollino vase in Myloi
quarry ('Tsoukali'). Photo
M. Chidioglou and E. Poupaki.

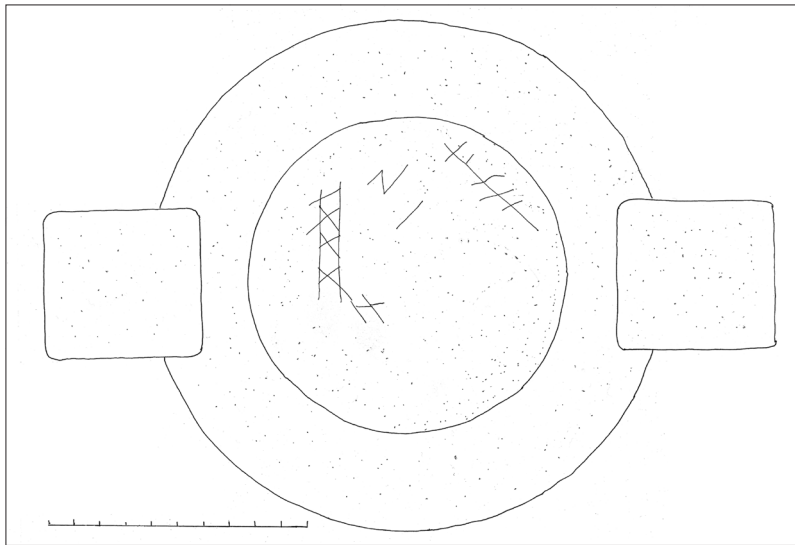


Figure 2:
Upper side of the half-carved vase.
Drawing E. Poupaki.



Figure 3:
Pole-holes close to the half-carved
vase. Photo M. Chidioglou and
E. Poupaki.



Figure 4:
Curved rock-cut for the detachment
of the block used for the ‘Tsoukali’ vase.
Photo M. Chidiroglou and E. Poupaki.



Figure 5:
Hole in the rock-face for the insertion
of the straps used for the transfer of the
marble block. Photo
M. Chidiroglou and E. Poupaki.

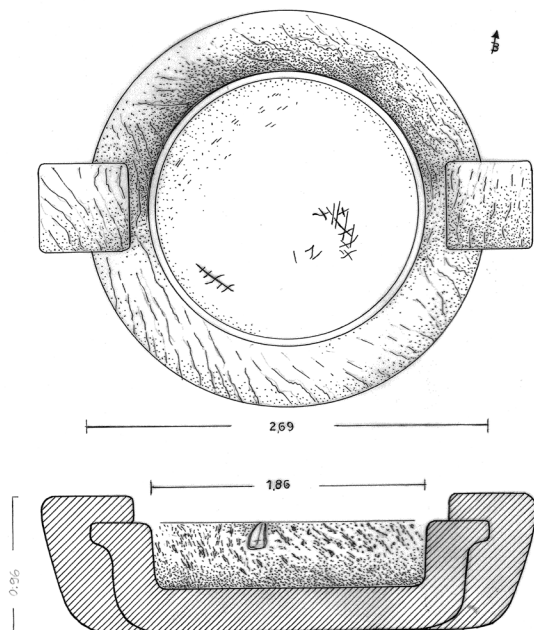


Figure 6:
Half-carved cipollino vase (‘Tsoukali’) at Myloi quarry.
Drawing A. Drigopoulou.

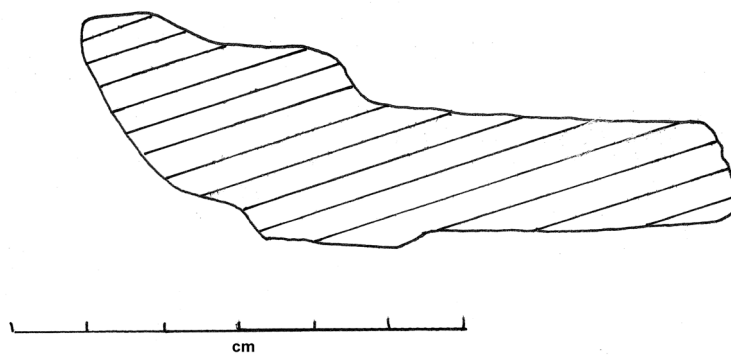
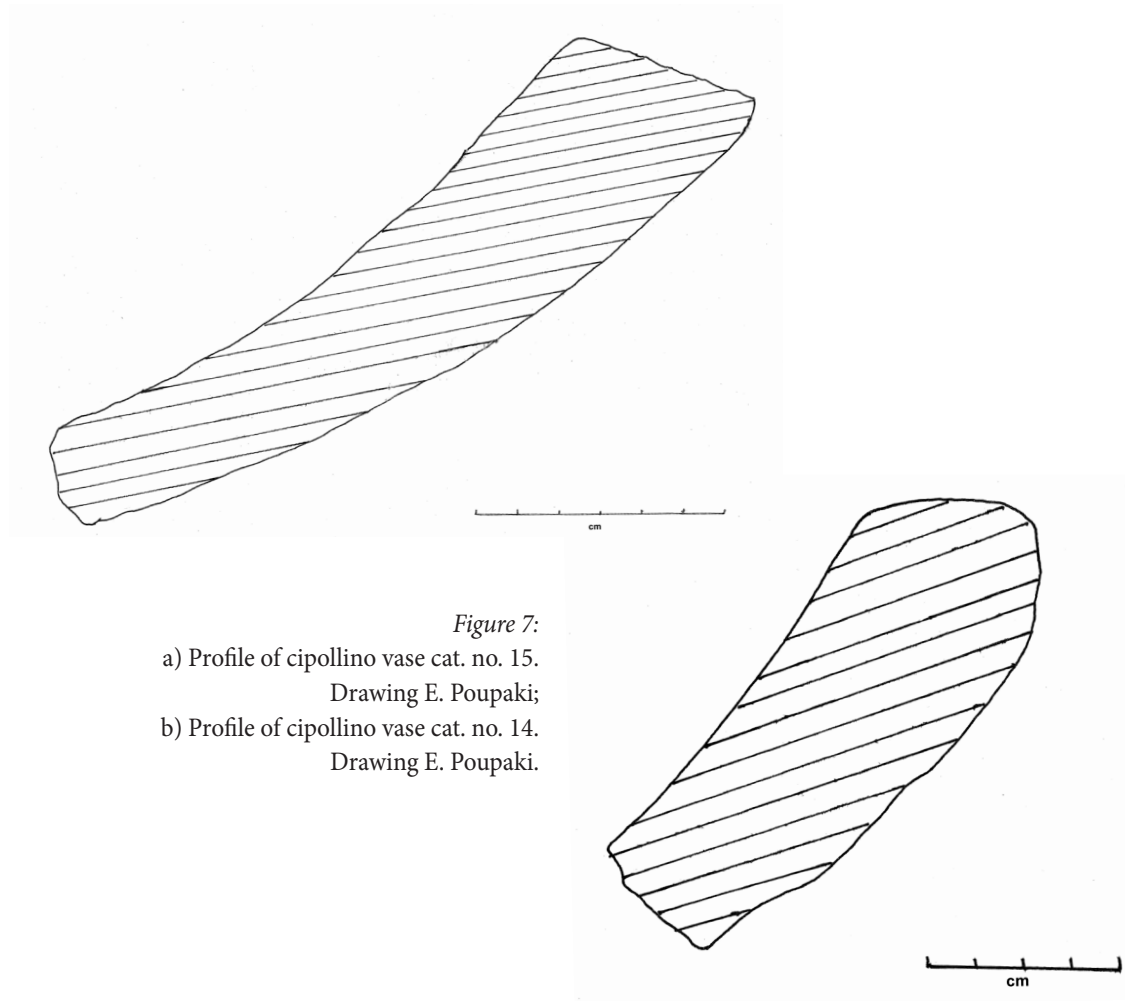




Figure 9:
Upper and bottom side of
the half-carved marble vase
from Athens.
Photo N. Antoniadis.

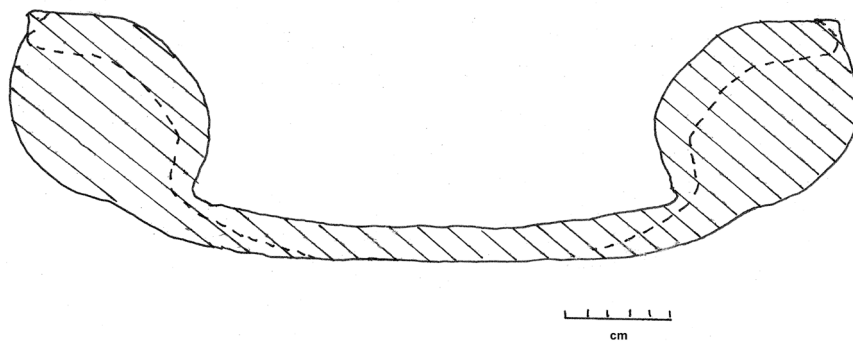


Figure 10: Profile of the half-carved marble vase from Athens. Drawing E. Poupaki.