

ΚΟΡΩΝΕΪΚΑ

STORAGE-JAR PRODUCTION AND TRADE IN THE TRADITIONAL AEGEAN

(PLATES 99–112)

Τὰ πιθάρια τὰ πήγανε κυλοτά.
—Koroni potter

RECENT ARCHAEOLOGICAL RESEARCH on prehistoric Aegean trade, such as the excavation of the Kaş shipwreck on the south coast of Anatolia, has revealed that large clay storage jars (pithoi) were traded by sea during the Bronze Age along with other commodities and were used as transport containers in maritime commerce.¹ At the Late Bronze Age port site of Kommos on the south coast of Crete, imported pithoi (as well as amphorae) from Naxos, Cyprus, Mainland Greece, Egypt, and possibly Syria and Sardinia indicate that trade involving pithoi was much more common in earliest antiquity than previously assumed.²

Just as pithoi yield valuable information about the nature of Bronze Age Aegean trade, so the large storage jars (*πιθάρια*; see Glossary, pp. 709–711 below) produced during the 19th and 20th centuries after Christ in the Koroni district of Greece (Figs. 1 and 7) offer archaeological evidence for product distribution and trade connections between the traditional Aegean world and the eastern Mediterranean. These *pitharia*, known throughout the Aegean as *Κορωνεΐκα*, were widely traded by means of sailing ships and caravans whose primary concern was the distribution of basic Peloponnesian commodities, including olive oil, wheat, currants, wool, silk, cheese, leather, beeswax, dyes, gums, and resins.³ While following the routes of standard Aegean foodstuffs and raw goods, *Koroneïka* achieved a value of their own within the dual economy of traditional Aegean trade (see “Marketing and Trade”, pp. 698–707 below) and survive today as archaeological testimony for the diversification of international commerce in Greece after the War of Independence in 1821.

This article reconstructs in detail the manufacture of *pitharia* and wheelmade storage jars within the traditional cultural context of 19th- and 20th-century Messenia, examines the reasons for their use and trade throughout the eastern Mediterranean, and, using the

¹ G. F. Bass, “A Bronze Age Shipwreck at Ulu Burun (Kaş): 1984 Campaign,” *AJA* 90, 1986 (pp. 269–296), p. 279, ill. 2; C. Pulak, “The Bronze Age Shipwreck at Ulu Burun, Turkey: 1985 Campaign,” *AJA* 92, 1988 (pp. 1–37), pp. 12–13, fig. 2.

² L. V. Watrous, *Excavations at Kommos in Southern Crete, III, The Late Bronze Age Pottery*, Princeton, in press, chapter III.

³ B. Kremmydas, *Τὸ Ἐμπόριο τῆς Πελοποννήσου στὸ 18^ο Αἰῶνα (1715–1792)*, Athens 1972, pp. 144–197 (= Kremmydas); M. Sakellariou, *Ἡ Πελοπόννησος κατὰ τὴν Δευτέραν Τουρκοκρατίαν (1715–1821)*, Athens 1939, pp. 213–273.

distribution of *Koroneika* as an indicator, defines some types of commercial interaction that might have been possible in prehistoric Aegean trade.⁴

LOCAL HISTORY

The potters' villages of the Koroni district (Fig. 1) were set back from the shore of the Messenian Gulf along low, rolling hills north of the port town of Koroni.⁵ Research by Peter Topping has verified that the villages of Charakopio, Aïdini, Katiniades (*sic*), Petriades, and Vounaria were in existence near Koroni around 1700.⁶ The four main potters' villages of the 19th and 20th centuries, Vounaria, Kombi, Petriades, and Charakopio, were adjoined by hamlets (*κουτσοχώρια*), including Aïdini and Katiniada, where individual potters worked. One potter also maintained a workshop in the village of Nea Koroni, to the north of Vounaria.⁷

⁴ This article is dedicated in fond memory of Ioannis Panaghiotis Mylonas, potter of Messenia, who first sent me on the trail of *Koroneika*; in honor of the *piharades* and *stamnades* of the Koroni district, whose unending kindness and patience made my fieldwork possible; and in tribute to Roland Hampe and Adam Winter, pioneers in the field. I am deeply indebted to all in the Aegean who over a fifteen-year period shared their knowledge of the traditional world.

For helpful discussion and criticism at various points in preparing this study I am grateful to Peter Topping, Eleni Angelomati-Tsoungaraki, Stanley Aschenbrenner, Katerina Korre-Zographou, and Doniert Evely. This article has benefited from a critical reading by Henry T. Wright. L. Vance Watrous provided constant support, encouragement, and critical suggestions during the most difficult years of this research.

Some of the material in this article was presented in a public lecture, «'Η Παραγωγή και τὸ Ἐμπόριο Πιθαρίων στὴ Παραδοσιακὴ Ἑλλάδα: Ἰδέες γιὰ τὴν Μελέτη τῆς Ἀρχαιότητος», at the University of Athens in 1982. From 1982 through 1984, research on this topic as part of a book, *The Traditional Industries of Greece: Their History, Technology, Raw Materials and Trade*, in preparation, was generously supported by a grant from the Institute for Aegean Prehistory.

All research was carried out by me in Greek and Turkish and any inaccuracies are my own. [The transliteration of modern Greek terms (see Glossary, pp. 709–711 below) generally follows spelling rather than pronunciation.—Ed.]

⁵ Previous researchers in the area included R. Hampe and A. Winter, whose brief visit was described in the first volume of their classic general survey of traditional pottery manufacture in the eastern Mediterranean, *Bei Töpfern und Töpferinnen in Kreta, Messenien und Zypern*, Mainz 1962, pp. 47–54.

For a short period the area was also studied by F. E. Matson: "Ceramic Studies," in *The Minnesota Messenia Expedition: Reconstructing a Bronze Age Regional Environment*, W. McDonald and G. Rapp, Jr., edd., Minneapolis 1972, pp. 200–224.

⁶ P. Topping, "The Post-Classical Documents," in McDonald and Rapp, *op. cit.* (pp. 64–80), p. 73.

⁷ In order to maintain control over the large and complex body of ethnographic data presented here, there were two requirements: 1) long-term (multi-year) visitation and re-visitation of the pottery production sites in Koroni, resulting in repeated discussion of the same information with craftsmen, and 2) uniformity in the research strategy used with all individuals.

With respect to the first requirement, fieldwork was carried out annually from 1973 through 1988, with intensive periods of study in the Koroni production centers until 1982. From 1982 onwards study was extended throughout the Peloponnese, the Ionian islands, Central Greece, Epiros, Thessaly, Macedonia, Thrace, Istanbul, the Black Sea (from Zonguldak to Samsun), the Sea of Marmara, Western Anatolia (from Çanakkale to Bodrum), the Dodecanese, Crete, and the Cyclades.

For the second requirement, a primary set of 154 questions served as the basis of discussion with every informant directly or indirectly involved in the production process (from clay procurement through marketing and trade). This set was supplemented by additional questions and extensive discussions which evolved over numerous workdays. Complementary sets of questions on related themes (e.g., roof-tile production, storage

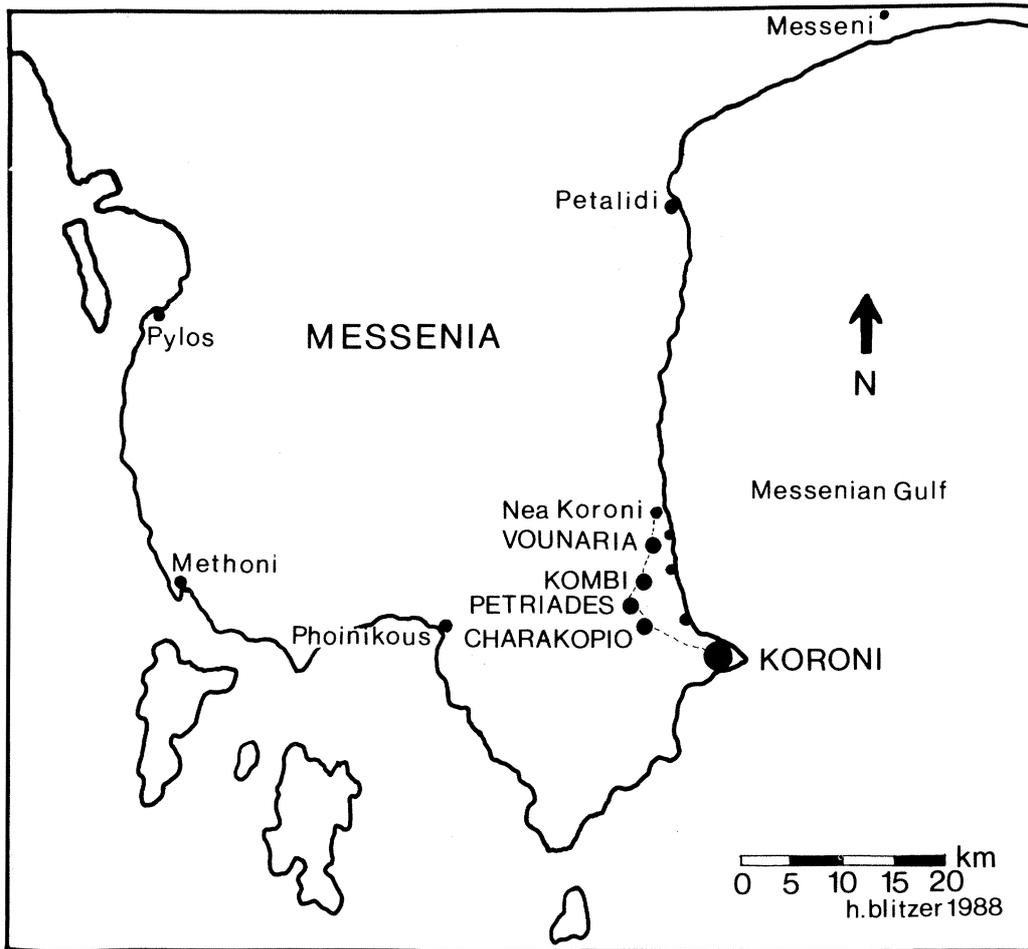


FIG. 1. Map of Messenia showing port town of Koroni and four main potters' villages of Vounaria, Kombi, Petriades, and Charakopio. Small dots on shoreline represent approximate locations of 19th-century stopping points for ships unloading *pitharia*.

Three ceramic industries coexisted as early as the 19th century in the Koroni district, in part as a result of the Pliocene clays on which the villages were built. Πιθαρᾶδες (potters who produced *pitharia*; Pl. 102:c, d), σταμνάδες (potters who manufactured wheelmade

life and storage capacities as they relate to clay vessels, olive-oil production and processing, and Aegean trade prior to the use of mechanized transport) were asked of all individuals and served as the foundation for discussion of these subjects. Outside the Koroni district, a set of approximately 100 questions was used as the basis for specific discussion of numerous themes, including trade routes in the traditional Aegean, procurement of the Koroni *pitharia* via ἔμποροι (traders) and ship captains, the role of coastal olive-oil ἀποθήκες in 19th-century Aegean trade, and local storage-jar production in regions where *Koroneïka* had been traded.

In every case I have accepted majority opinion as the foundation for statements made in the text. Among the hundreds (1124) of individuals who contributed to this study from 1973 to 1988, differing points of view were sometimes encountered. Where more than 25 percent disagreed with the majority on a particular subject this is noted. In no instance here is the perception of one or several persons regarded as fact.

vessels; Pl. 104:b), and *κεραμοποιοί* (roof-tile makers; Pl. 109:e) all functioned within the Koroni villages and passed their knowledge from generation to generation, frequently across family lines. Prior to 1930 there were five *pitharades*, fifteen *stamnades*, and three *keramopoioi* in Vounaria, at least ten *pitharades* in Charakopio, fifteen *pitharades* in Kombi, and one *keramopoios* and around fourteen *pitharades* in Petriades. Thus, if a youth wished to learn any of the three crafts he could easily do so, although in some respects the choice of occupation was dependent on his manual dexterity. One *stamnas*, for example, learned the craft from his father; his grandfather, however, had been not a potter but a roof-tile maker. Such family histories were common in the Koroni district and always involved men; women appear not to have participated in pottery production.

As in other regions of Greece, the Koroni potters point to ancient sherds scattered throughout their landscape as a testimonial to the antiquity of their own craft. In actual fact, it is possible, through the recollection of local inhabitants and through evidence of trade, to trace the manufacture of both *pitharia* and wheelmade vessels firmly back at least to the middle of the 19th century. Archives and the commentaries of early travelers have as yet yielded little written evidence for the existence of the Koroni ceramic industries during the 19th century or earlier. While it is tempting to look to the flourishing ceramic center at Siphnos as the source of potting knowledge in Messenia, proximity to Italy and the presence of imported Italian ceramic products within the region may also have had some effect. No one in the Koroni locale can relate exactly when the industries began, or how.⁸

Agriculture was the economic base of life in the region for all its inhabitants, whether potters or not. Currants and olive oil bolstered a local economy that included the participation of builders, tinnners, basketmakers, ironworkers, saddlemakers, shoemakers, carpenters, peddlers, cloth sellers, and traders (*emporoi*). Many inhabitants engaged in the caravan trade as muleteers and worked regularly between the region and the rest of the Peloponnese, some venturing as far as Thessaly.⁹ This caravan trade accounted, to a certain extent, for the distribution of smaller ceramic products from Koroni (see “Marketing and Trade”, pp. 698–707 below).

Many informants insist that in the pre-World War I period and in the 19th century, potters (*ἀγγειοπλάστες*) could live on the income from their ceramic production alone. Others describe poverty as the fate of the Koroni potter («ή ζωή ήταν μαρτυρική», “life was a torment”), who could not subsist without a sufficient measure of his own farmed land. In most recent times, potting or roof-tile manufacture was only a supplement to the income from farming.

⁸ I am grateful to C. W. J. Eliot for discussing with me the lack of emphasis on traditional industries in the writings of the early travelers in Greece. A few individuals in the Koroni district recall that a Siphniote potter worked in the area prior to World War II but left shortly thereafter. He was said to have manufactured wheelmade vessels, including *τσουκάλια*, the baking and cooking dishes for which Siphnos is famous. Despite his presence, however, Koroni housewives were said to prefer the true Siphniote variety.

⁹ N. P. Pasagioti, *Τὸ Χαρακοπιὸ Μέσσηνίας*, Athens 1975, pp. 37–38. The account in Pasagioti is complemented by the recollection of Koroni district inhabitants, who described extensive caravan trade in the early years of this century.

THE POTTER

The Koroni potter labored, most commonly, with two assistants. To each kiln, therefore, were attached three individuals who filled all the needs of the workshop. One helper was primarily responsible for the fuel and the firing, and the second was concerned mainly with the collection, processing, and storage of the clay. The potter himself made the vessels and oversaw all the activities of the workshop, the profits of which were divided equally among the three.

The most common phrase heard in discussion among potters in the Koroni villages was «*ανάλογος με τὸ καιρό*» (“depending on the weather”). All the endeavors of the workshop, clay preparation, fuel procurement, potting, drying the vessels, firing, and storing the clay, were dependent on variations in the weather. The descriptions of procedures reported in this article, including the times required and the amounts and ratios of raw materials, were always expressed by the potter with this *caveat*. It is easy to comprehend why potters worked during the warmer months of the year, with more consistent weather, usually from May through October. Potters also spoke of ill health as a factor in production, since chronically aching hands and feet and rheumatism during the cooler months played a role in their schedules. Many recall, however, that in the years prior to World War II, firings every Saturday from April through November were considered necessary to meet the demand for *pitharia* and wheelmade vessels.

While there were some prosperous potters in the district, most informants recall a life in which their diet consisted of oil, bread, and tomatoes. The accumulation of capital was not viewed as a possibility unless the potter could engage in trade (*ἐμπόριο*), either by manufacturing a surplus of clay vessels and acting as his own middleman, or through judicious trading of a surplus of agricultural goods, which was a rarity. The greatest profit from the sale of clay vessels was viewed by most as the prerogative of the *emporos*.

Subsistence was frequently difficult for the potter and his family in the Koroni locale, and *pitharades*, especially after 1920, were obliged to travel to other parts of the Aegean, frequently Crete and even Cyprus, to produce and sell their Koroni-style wares. A few informants suggest that as early as the World War I period potters were temporarily leaving the area. All remark that during the summers there was great pressure, both on the land and within the ceramic industries, so that many craftsmen endured a forced migration in order to support their families. During the *κατοχή* (occupation during World War II) in Messenia, potters were known to load up a pack animal with sacks of wheelmade vessels or even carry by themselves a single small *pithari* filled with wheelmade vessels and make the trip on foot to Megalopolis or Tripolis in order to sell them or exchange them for foodstuffs.

The local daily wage (*ἡμεροκάματο*) in the period around 1900 was recalled as approximately one drachma. At this same time a wheelmade clay vessel (*βήκα* or *εἰκοσάρα*) (Fig. 4:4) with a capacity of 20 *okades* (1 *oká* = 1.27 kg.) cost 20 lepta (100 lepta = 1 drachma). A *pithari* with a capacity of roughly 300 *okades* (Fig. 2:1) was sold for between 10 and 15 drachmas. A wooden barrel holding around 500 kilograms was priced at 50 drachmas. The discrepancy between the time and effort required to produce pottery and the resulting income

precluded, according to most informants, the accumulation of surplus capital, and the comment that pottery manufacture resulted in a minimal return («δὲν μὰς συμφέρει», “it isn’t profitable”) may have had meaning in earlier periods as well.

THE CLAY

Alfred Philippson, in his 19th-century description of the geology of Messenia, remarked on the calcareous Pliocene clays of the Koroni area and also noted the existence of a ceramic industry producing “*Töpfe*” (*pitharia*?) and “*Krüge*” (wheelmade vessels?).¹⁰ The local light-brown clay available in the coastal hills north of Koroni had a variety of interchangeable names during the 19th and early 20th centuries, of which three were commonly employed: *πηλός*, *χώμα*, and *λάσπη*. More rarely, the terms *γλίνα* and *ἄργιλλος* might also be used, occasionally in jest. Following World War II, with the depletion of local clay resources, Koroni potters were forced to procure approximately two-thirds of their clay from a site to the north, near the town of Messeni, and only one-third from scattered residual and subsidiary sources in the immediate locale.¹¹

It was considered desirable to locate clay beds with few inclusions, although in recent years such beds were difficult to find. Clays around the village of Vounaria were believed to be of especially high quality and were comparatively free of inclusions. A good clay could not have sand or other particles (*ξενὸ χῶμα*) in it. The clay deposit was selected (*διαλεγμένο*) by the potter and checked for the special viscosity and strength needed in order to fire well, and the landowner was then paid for the chosen deposit.

The fine clay was collected in either of two ways. A mine (*γρόττα*) could be dug into a hillside and, as the opening increased in size, might be shored up with wooden support beams. Many of these mines became tunnels deep into the coastal hills (Pl. 99:a). In more accessible spots, entire hillsides might be mined away in layers by helpers who dug into the clay deposits with picks (Pl. 99:b). The cobble- to boulder-size chunks were then gathered into piles with a hoe and carried off to the outdoor beating area of the workshop (Figs. 3 and 5, Pl. 99:c). A single donkey fitted with two large oblong baskets (*πούρια*) would, over a one- to two-day period, make as many as 35 trips to and from the mine, transporting in that time enough clay to fill one *pithari* kiln with four to six large *pitharia*, or one small-vessel kiln with *ca.* 500 wheelmade vessels of varying types (see “The Kiln”, pp. 695–698 below).

On the beating floor a helper with a wooden mallet (*κόπανο* or *κόπανα*) made from a forked tree branch broke up the clay into pebble- to granule-size pieces (Pl. 99:d, e). It was then mixed with water, which, until the introduction of piped water, was brought to the workshops in jars on pack animals. The water was stored outdoors in *pitharia*, which were

¹⁰ A. Philippson, *Die griechischen Landschaften*, III, ii, *Der Peloponnes: Der Westen und Süden der Halbinsel*, E. Kirsten, ed., Frankfurt 1959, p. 397. I am grateful to Dorothea Arnold for discussing the possible interpretations of these two words used by Philippson. According to Dr. Arnold, pots without handles (*pitharia*?) might be described as *Töpfe* and those with handles (wheelmade vessels?) as *Krüge*, although a stylistic use of these words might also have been intended.

¹¹ Many of these secondary sources contained clay which differed in color from the preferred light-colored clays mined primarily around Vounaria. This fact accounts for variations in the biscuit of 20th-century vessels.

kept filled by the potter's helper. The vessel in which the beaten clay was mixed with water was called a *κουρούπα*, a spherical *pithari* (Pl. 103:a) that had been prematurely finished with an open mouth at its widest diameter (Pl. 99:f). In some cases a complete *pithari* of this spherical type was intentionally broken off at its greatest diameter to achieve the same cauldronlike shape (Pl. 100:a). These *kouroupes* were set outdoors (Fig. 5) near an open workspace that, within the last 30 years, had been filled with settling basins (*σουρές*). All informants are in agreement that the process of settling the clay in basins (to sort coarse particles from the clay) was first employed in the Koroni district during the 20th century, probably after World War II, and according to some the idea was introduced from elsewhere.

In this 20th-century system used specifically for the clay of wheelmade pots, the clay and water were mixed and stirred with a wooden rod for several hours in the *kouroupa* (Pl. 100:a), or more recently in cement basins (Fig. 3), to the consistency of a slip. Following this, the liquid was removed from the *kouroupa* with a metal container (*τενεκές*) and was poured through a sieve (made of window screen) into the fired-brick or cement settling basins (Figs. 3 and 5, Pl. 100:c). It was common practice to achieve a depth of 15 to 20 centimeters (roughly the length of one's hand) in the *soures* because a lesser amount would quickly crack and dry out unevenly. One could regulate the drying of smaller or larger amounts of clay (up to 1000 kg. could be processed at a time) by making the layers thicker or thinner as necessary and monitoring the time spent drying. In the *soures* the clay would sit from seven to fifteen days, depending on the weather. During this time it was said of the clay «*λύνει*» (“it is dissolving”). After three days in the basins, the clay was cut (with a nail attached to a wooden handle) into squares (Fig. 5, Pl. 100:b), to prevent cracking and to encourage even drying for the remainder of the period. Most bothersome impurities were removed in the sieving (pebbles, fossil material) or sank (sand) to the bottom of the *soures* and were scraped out after the clay squares had been lifted (Pl. 100:c). The squares were carried or wheeled (in a barrow) to the indoor stamping floor of the workshop building (*ἀποθήκη*; Figs. 3 and 5). The desired final ratio in the clay mixture used for wheelmade vessels was said by informants to be one-fifth water to four-fifths clay.

At the stamping floor the potter resigned himself to at least one full day of work stamping and wedging («*ζυμώνω τὸ πηλό*», “I knead the clay”) from 200 to 300 *okades* of clay (this form of measurement was used most frequently by potters), a rough average of the amount worked at one time. Originally, most stamping floors (Figs. 3 and 5; Pl. 100:d) were constructed of wooden boards (*σανίδες*) or made of stamped, packed earth. These materials had been replaced in recent years with cement. One day's worth of wedged clay was perceived as equaling two to three days of work at the wheel.

The clay squares on the stamping floor were piled up in a mound, or, less frequently, were laid out flat and slightly overlapping. The potter stood on the mound, stamping and wedging (*πάτημα*) until it flattened out into the form of a pie (*ἄπλωμα*) (Fig. 5, Pl. 100:d). Once the potter was satisfied that this first face of the clay had been properly homogenized («*καταλαβαίνω μὲ τὸ πόδι*», “I understand through my foot”), the pie was cut into pieces

with the same tool used at the settling basins. The resulting pieces were turned to their opposite faces and again piled up. This second mound was reduced to the same flat pie shape.

Depending on the work schedule of the potter, the clay was either immediately made into spheres (*μπάλλες*) by hand or stored in a corner of the workshop as a thick column covered with hemp mats (*λινάτσες*) or in recent years, “tarps”. In many cases this column of clay (Figs. 3 and 5) was rubbed smooth by hand so that no corners or cracks would dry out. The place chosen for storage was always dark and damp. According to most, clay could sit from eight to ten months in this condition. Although the *linatses* were wet down every eight to ten days as a matter of course, the clay itself was considered to need moisture after roughly three months storage. From this column were made the clay spheres, measured by eye and by weight in the hand, that were used in the production of wheelmade vessels. Recent potters also used a balance scale in the preparation of spheres. In the case of clay intended for the manufacture of *στάμνες* (the largest of the wheelmade storage jars [Fig. 4:1]), the wedged clay remained on the stamping floor for three extra days of drying before it was made into spheres. The rule was, the larger the wheelmade pot, the drier the clay used to make it.

During the 19th century and possibly, according to most informants, as late as 1955, a different method of clay preparation was employed both for *pitharia* and for wheelmade vessels. In the manufacture of *pitharia* the clay and water mixture in the *kouroupes* (it took roughly two hours to fill and mix two of them) was stirred for several hours. Some potters state that the resulting clay slip in one *pithari* was removed with *tenekedes* and sieved into the second, adjacent *pithari*, thus providing a logical reason for the frequent occurrence of two *pitharia* together in the workshop plans (Fig. 5). When the clay slip was sufficiently mixed, it was combined with battered and crushed, pebble- to granule-size fragments of a rock known locally as *λεπίδι* or *λεπιδόχωμα* that had been mined from at least two locations, Livadaki and Sklaviko, in the hills west of the Koroni villages. This rock (Pl. 100:e), consisting of interbedded layers of shale (the preferred raw material), mudstone, and chert, was used in recent years as the bedding for road construction in the region under the name *στουλνάρι*. The shale-like bits of *lepidi* that show very clearly in the bases (Pl. 100:f) and bodies (Pl. 103:f) of 19th- and early 20th-century Koroni *pitharia* were said to “turn soft” in the clay. This rock was added to the *pithari* clay in the proportion of one-tenth *lepidi* to nine-tenths clay. It was thus distributed throughout the body of the completed vessel. According to many potters, *lepidi* was also added in extra amounts to the base and to the lower 30–50 cm. of the *pithari*, thus increasing the strength and stability that would be needed there («κράταγε σφιχτό», “it held it together”). The *pitharia* made with this 19th-century mixture were viewed locally and throughout the Aegean as more solid (*στέρεο*) than the 20th-century products manufactured without it. It is not clear exactly when this material ceased to be used, but it is possible to state that by the post-World War I era, ca. 1925, it was no longer evident.

The mixture of clay and *lepidi* was removed from the *kouroupes*, made into thin, flat, round or oblong patties, and laid outside in the sun to dry on *linatses*. It was allowed to lose

very little of its water in this drying period because the preferred final ratio for *pithari* clay was one-third water to two-thirds clay.

After drying outdoors, the *pithari* clay was stored either in another large jar, or more recently, in a trough or bin (Fig. 3) inside the damp workshop building where it could maintain its significant water content. *Pithari* clay was not wedged: it was much too wet. It was, ultimately, soft (*μαλακός*) and like a thick whipped cream in texture (Pls. 101:b and 102:b), in great contrast to the harder, drier clay used for wheelmade vessels.

Wheelmade pottery produced in the 19th century was made from clay that had been soaked in *kouroupes* but to which *lepidi* was not added. The plain clay and water mixture was, like *pithari* clay, made into patties and dried in the sun, although for a significantly longer period of time than that of *pitharia*. The patties were then brought to the stamping floor, piled up, and stamped and wedged as described above. In this process, any remaining inclusions were found by the foot of the potter, although it is fair to say that clay deposits chosen during the heyday of Koroni pottery production had few inclusions. This wheel clay was stored in a column as described or was put to use immediately.

THE WORKSHOP

Potters' workshops in the Koroni district included a building, a kiln, and an outdoor work area (Figs. 3 and 5). There appears to have been no standard plan in any of the villages, only a repetition of these three elements arranged according to the space available. In the workshop of a *pitharas* there was usually more space than in the workshop of a *stamnas* (compare Figs. 3 and 5). The workshop building (*apotheke*) was constructed of mud brick made from the local clay mixed with chaff and sometimes sherds and generally had one or two doors but no windows. The packed-earth floor, a plaster of clay and chaff covering the walls (Pl. 104:b), little ventilation, and the absence of light made the *apotheke* a moist, dark place ideal for the manipulation, storage, and drying of clay in a constant atmosphere. The *apothekes* were also quiet, and conversation, except during breaks, was usually kept to a minimum.

The interior of a *pitharas'* workshop building contained storage jars or troughs holding the prepared wet clay (Fig. 3) and a large open area for the manufacture of *pitharia* in stages. The building might also be used as a living space, although this was not standard practice. Beyond these components, spaces existed for the storage of water in jars and of *lepidi*. The workshop of a *pitharas* was spare in comparison with that of a *stamnas* (Fig. 5). The exterior work area of the *apotheke* contained a space for beating clay, *kouroupes* or mixing troughs, a drying area, the kiln, and a space for vessels which were ready for market. All these spaces overlapped as needed. Tools present included the *kopano* and kiln implements used in loading and unloading (*διχούλι* and *μασά*). In all, it was not a complicated plan.

In contrast, the *apotheke* of a *stamnas* (Fig. 5) was usually crowded. The wheel was set in a pit, always against a wall, and a broken water jar was plastered with clay onto the bench where the potter sat (Pl. 104:a-c). There were also a stamping floor, an extensive drying area for the vessels, a place for the glazing of those pots which required it, and, in

recent years, an area for weighing the clay spheres used in production. Some workshops also had a hearth and a table and chairs used during meals and rest periods. The outdoor space of the workshop contained a beating area for the clay, which included stacked baskets of clay and the *kopano*. Outdoor drying areas were located wherever there was an empty space. *Kouroupes* or troughs for mixing clay and, in recent times, settling basins were generally placed together. While the home of the potter might be next door or near by, it was not generally part of the workshop area. The tools used daily and discarded materials such as an old wheel (Fig. 5), mud brick for the kiln, and tools for stoking and firing, were frequently found outside. The kiln was close to the building, and the fuel for it was stored indoors (frequently in the storeroom of the potter's house) until ready for use, at which point it was stacked around the entrance to the stoking chamber (Fig. 5).

The amount of debris and discarded material found in the workshop varied from potter to potter. Some were more fastidious than others and immediately removed any debris to dumping areas near the villages. Some left mud brick, broken baskets, quantities of sherds, bits of mud plaster, straw, remnants of fuel, broken tools, and other discarded equipment to lie until they were gradually absorbed into the clay background of the workshop (Pls. 99:e and 106:b).

PITHARI PRODUCTION

Pitharades worked in Vounaria, Petriades, Kombi, and Charakopio (Fig. 1) during the 19th and early 20th centuries. In addition, single *pitharades* maintained workshops, one in the village of Nea Koroni and another in Aïdini. *Pitharia* produced in the Koroni district were known within and outside the region as *Koroneïka* and were frequently called *τζάρες* locally. (Likewise, *pitharades* were known locally as *τζαράδες*.) Individual names were used for different sizes of *pitharia*, although there is some inconsistency in how these names were applied.

Four perceived "types" of *pitharia* were manufactured in the Koroni villages during the 19th century (Fig. 2:1–4; see "Types of Pitharia", pp. 686–691 below) and the very beginning of the 20th. The word "type" as used here reflects the loose distinctions made among *pitharia* by the inhabitants of Koroni. In actual fact, the difference between Type 1 and the more sacklike Type 2 is simply a matter of capacity and slight variation in shape. Indeed, within each of these perceived categories significant variation was found in dimensions and capacity (see p. 686 below). Types 1 and 2 were produced only until the turn of the century and appear to have been discontinued between 1890 and 1910. Types 3 and 4 probably continued to be produced into the early 20th century. Types 1–3 were referred to locally as *pitharia* or *tzares*. Type 4, known locally as a *τρίχρορο πιθαρόπουλος*, was the only 19th-century handmade storage vessel manufactured consistently with a glaze (Pl. 103:e).

Type 5 (Fig. 2:5), produced at the very end of the 19th and throughout the 20th century, and Type 6 (Fig. 2:6), manufactured during the 20th century (primarily without the use of *lepidi*, although some few examples containing it can be found) were called *pitharia* or *μπόμπες*. Types 7 and 8 (Fig. 2:7, 8), which are much the same glazed vessel with slightly different proportions, replaced the 19th-century three-handled *pitharopoulos* (Type 4)

until recently. Intermediate sizes between Types 5 and 6 and Types 7 and 8 were also found, indicating perhaps that vessels were sometimes made to requested capacities. Within Types 5–8 there were also significant variations in dimensions (Pl. 111:a–c).

To produce a *pithari* of Types 1–3 the following method was employed. Soft clay mixed with *lepidi* was scooped in handfuls from a jar or bin in the *apotheke*. Crushed *lepidi* was then scattered thickly on the previously moistened floor of the workshop in the place where the base would rest. A circular patty of *pithari* clay was then placed on this spot (Pl. 101:a) and was flattened out. A very soft, rippled ring of clay was placed around the circumference of the patty (Pl. 101:b–d) and was smoothed and gradually drawn out and up to form a completed foot (Pl. 101:e). This foot was allowed to dry sufficiently so that another ring could be added. The *pithari* base was wet down every day during the construction process. Each ring added was smoothed with a wet sponge and allowed to sit for six to seven hours (Pl. 102:a). It was then drawn up (Pl. 101:f–g), raising the height of the vessel wall five to ten centimeters. A ring added at 9 A.M. would therefore be drawn up at 3 P.M. and smoothed again with a wet sponge.

The ribs on the *pitharia* were known as *ζωνάρια*. Each *zonari* was made separately on the surface of the vase (Pl. 102:b, c) with the addition of dabs of creamlike clay to the raised wall. This soft clay was smoothed with a sponge into the deep *zonari* shape. This combination of an added ring and a *zonari* was called the *κόλλησις*. The amount of work accomplished on a *pithari* each day was measured in terms of *kolleseis* but was frequently expressed in terms of *zonaria*. In one day it was generally possible to raise the height of a *pithari* wall by one *zonari*, that is, one application of a ring and a rib. One average *kollesis* on a large *pithari* was perceived as equaling roughly five to ten centimeters in added height. (Individual potters had their preferred dimensions.) Thus, a *pithari* with 20 well-spaced *zonaria* took roughly 20 days to build. On rare occasions, however, especially during the dry months of the summer, as many as two *zonaria* might be added, but most *pitharades* preferred the safe application of one per day.

A number of *pitharia* could be made at the same time, with various stages visible throughout the workshop (Pl. 102:c, d). This mass production was standard and required a sufficient amount of indoor space (Fig. 3). *Pithari* Types 1–3 needed roughly ten days of drying indoors and ten days outside before they were fired. Smaller *pitharia* dried for three to five days indoors and about five days outdoors.

Lids for *pitharia* were made by hand and included some examples with thick, round handles (Fig. 2) and others with finials or plug handles (Pl. 111:e). Rather than a sponge, a wet cloth (*πανί*) was used to finish the collared rim of the *pithari*. Plastic decoration was applied only to the neck of 19th-century *pitharia*, directly below the rim (Pls. 99:f, 103:c, and 110:e) and included various straight and wavy bands of clay (Fig. 2) with finger impressions, incisions, or both. Stamped decoration included the use of reed fragments pressed into the neck to create both plain and overlapping circles. Rarely, a broken bit of comb might be used to create parallel lines, although this practice is found on only a few *pitharia* of the 20th century and was more commonly used for wheelmade pottery.

Nineteenth-century *pithari* Types 1–3 were unglazed. Type 4 and 20th-century Types 5–8 were glazed with a liquid mixture known locally as *λιθάρι*, *μίνιο*, or *γιαλί*. This consisted of four parts red lead (minium), purchased in Athens and known to the potters as *λιθάργυρος* or *lithari*, mixed with three parts *πιπίλι*, a local earth said to help the glaze melt smoothly.

According to most informants, the last potter who knew how to manufacture vessels on the scale of Type 1 (capacity of 300 *okades* or more) died between 1910 and 1915. In 1935, according to most, the potter who made *pitharia* of roughly 200-*oka* capacity (Type 2) ceased to work. Until around 1955 potters were able to manufacture *pitharia* holding about 100 to 150 *okades*. The smaller jars (Types 7 and 8) were manufactured until recently and were true products of the post-World War II era; diminished capacity, declining quality, and reduced need all contributed to this truncated final expression of *Koroneïka* manufacture in Messenia (Pl. 111:c).

TYPES OF PITHARIA

As storage vessels in the 19th and 20th centuries, *pitharia* from Koroni were used primarily for olive oil in homes and commercial establishments and less frequently for water and wine in domestic *apothekes*. The *pitharia* were usually covered with clay lids but could also be found with wooden covers made of *sanides* or flat slabs of limestone. In the case of wine, the lid was sealed with clay and the *pithari* was perforated with a drill (*τρυπάνι*).¹² Wine, however, was stored in *pitharia* only if one could not afford a wooden barrel, which was always considerably more expensive. Wine tended to turn to acid more easily in *pitharia*. *Koroneïka* were not perceived in Messenia as so useful in the storage of grain because of the accumulation of moisture («δὲν εἶναι στεγνὸ μέρος στὸ πιθάρι», “it’s not dry in a *pithari*”). In other locations, however, such as Kimolos and other Cycladic islands, barley was frequently stored in *Koroneïka*.

What follows is a detailed description of the Koroni *pithari* types, including dimensions, capacities, and functions. Especially in the case of 20th-century *pitharia*, all the measurements given the vessels are extremely variable. They are less so for the 19th century, when there was closer adherence to specific sizes and capacities that were directly related to the measures of transport containers. Some variability in shape and dimensions, however, existed in both periods, depending on the skill (and sometimes the temperament) of the potter.

Type 1 (Fig. 2:1, Pls. 103:a–c, 110)

Name: *πιθάρι* or *τζάρα*

Unglazed. Spherical shape

Height: 1.15–1.30 m.

Rim diameter: 0.50–0.52 m.

Max. diameter: 1.10–1.28 m.

Rim thickness: 0.07–0.09 m.

Max. circumference: 3.10–3.47 m.

Capacity: 288 *okades* (365 kg.)–350 *okades* (445 kg.)

Average perceived capacity: 300 *okades* or 400–500 kg., or 6 *βαρέλια*

Perceived weight of vessel: 150 *okades*

¹² This type of drill is illustrated in R. Hampe and A. Winter, *Bei Töpfern und Ziegeln in Suditalien, Sizilien und Griechenland*, Mainz 1965, pp. 60–61, pls. 53 and 54.

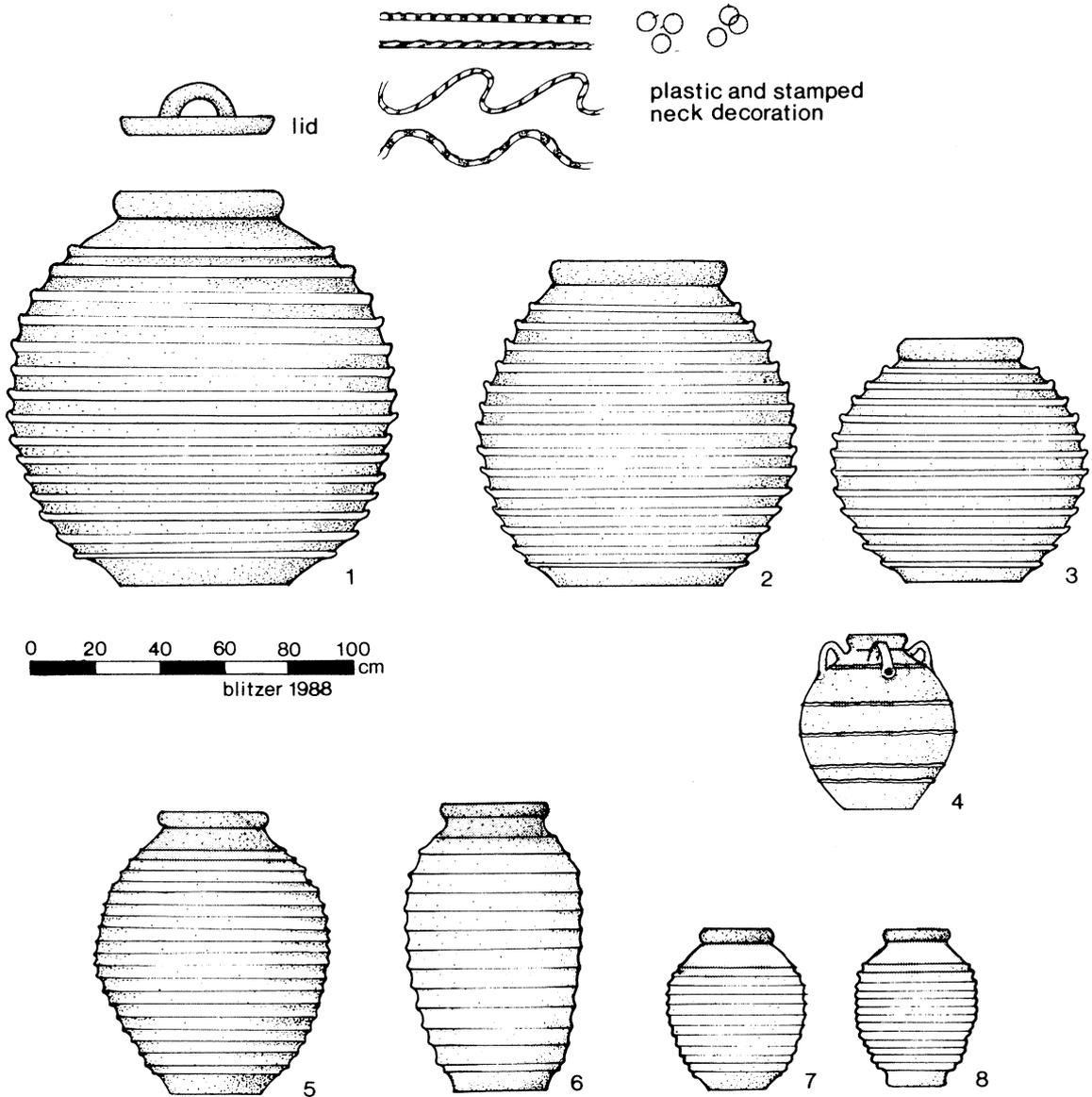


FIG. 2. *Koroneika*. Types of *pitharia* produced in the Koroni district during the 19th century (Types 1–4) and the first half of the 20th century (Types 5–8)

Note: The capacity of this type was perceived in many locations in the Aegean in terms of *barelia* (or *βαρέλιες*), the 18th- and 19th-century transport containers in which olive oil was shipped.¹³ One *bareli*

equaled 48 *okades* (1 *oka* = 1.27 kg.), 4–5 *tenekedes*, or 66 *κανάρες*. This *pithari* type would therefore hold 6–7 *barelia* of oil.

¹³ The *bareli* or *barela* was also called the *μυλλερόλε* by French *emporoi* in 18th-century Greece. Variation in transport measures of commodities was standard throughout the eastern Mediterranean in the 18th century, with wheat accounted for in terms of the *κιλό τῆς Κωνσταντινούπολις* (= 22 or 22½ *okades*), the

Type 2 (Fig. 2:2, Pls. 103:c, 110:f)

Name: *πιθάρι* or *τζάρα*

Unglazed. Sacklike, spherical shape

Height: 0.90–1.0 m.

Rim diameter: 0.45–0.52 m.

Max. diameter: 0.85–0.97 m.

Rim thickness: 0.06–0.09 m.

Max. circumference: 2.75–*ca.* 3.0 m.Capacity: *ca.* 192 *okades* (244 kg.)–250 *okades* (312 kg.)Average perceived capacity: 200–250 *okades*, or 4–5 *barelia*

Type 3 (Fig. 2:3, Pl. 103:d)

Name: *πιθάρι* or *τζάρα*

Unglazed. Spherical, sometimes squat shape

Height: 0.70–0.85 m.

Rim diameter: 0.35–0.45 m.

Max. diameter: 0.80–0.95 m.

Rim thickness: 0.05–0.07 m.

Max. circumference: *ca.* 2.10–2.55 m.Capacity: *ca.* 150 *okades* (190 kg.)Average perceived capacity: 150 *okades* or *ca.* 3 *barelia*

Type 4 (Fig. 2:4, Pl. 103:e)

Name: *τρίχερο πιθαρόπουλος* or (rarely) *πιθαράκι*

Glazed. Irregular spherical shape with three handles

Height: *ca.* 0.50 m.

Rim diameter: 0.17–0.18 m.

Max. diameter: 0.45–0.50 m.

Rim thickness: 0.03–0.04 m.

Max. circumference: *ca.* 1.50–1.70 m.Capacity: 40–50 *okades* (50–63 kg.)Average perceived capacity: 40 *okades**Note:* Type 4 vessels were used in the storage of olives as well as olive oil.

Type 5 (Fig. 2:5, Pl. 111:a)

Name: *πιθάρι*, *τζάρα*, or (infrequently) *μπόμπα*

Glazed and unglazed. Irregular conical to bulbous shape

Height: *ca.* 0.85–0.90 m.

Rim diameter: 0.32–0.35 m.

Max. diameter: 0.65–0.75 m.

Rim thickness: *ca.* 0.04–0.05 m.Max. circumference: *ca.* 2.10–2.25 m.Capacity: 150–200 *okades* (190–245 kg.)Average perceived capacity: 150–200 *okades*

Type 6 (Fig. 2:6, Pl. 111:b)

Name: *πιθάρι*, *τζάρα*, or (infrequently) *μπόμπα*

Glazed and unglazed. Cylindrical to slightly conical shape

Height: 0.65–0.85 m.

Rim diameter: 0.30–0.35 m.

Max. diameter: 0.55–0.60 m.

Rim thickness: 0.05–0.06 m.

Max. circumference: *ca.* 2.0–2.25 m.Capacity: extremely variable, 80–150 *okades*? (100–190 kg.?)

Average perceived capacity: extremely variable

Type 7 (Fig. 2:7, Pl. 111:c)

Name: *πιθαρόπουλος* or *πιθαράκι*

Glazed. Squat conical shape

Height: 0.45–0.55 m.

Max. diameter: *ca.* 0.40 m.

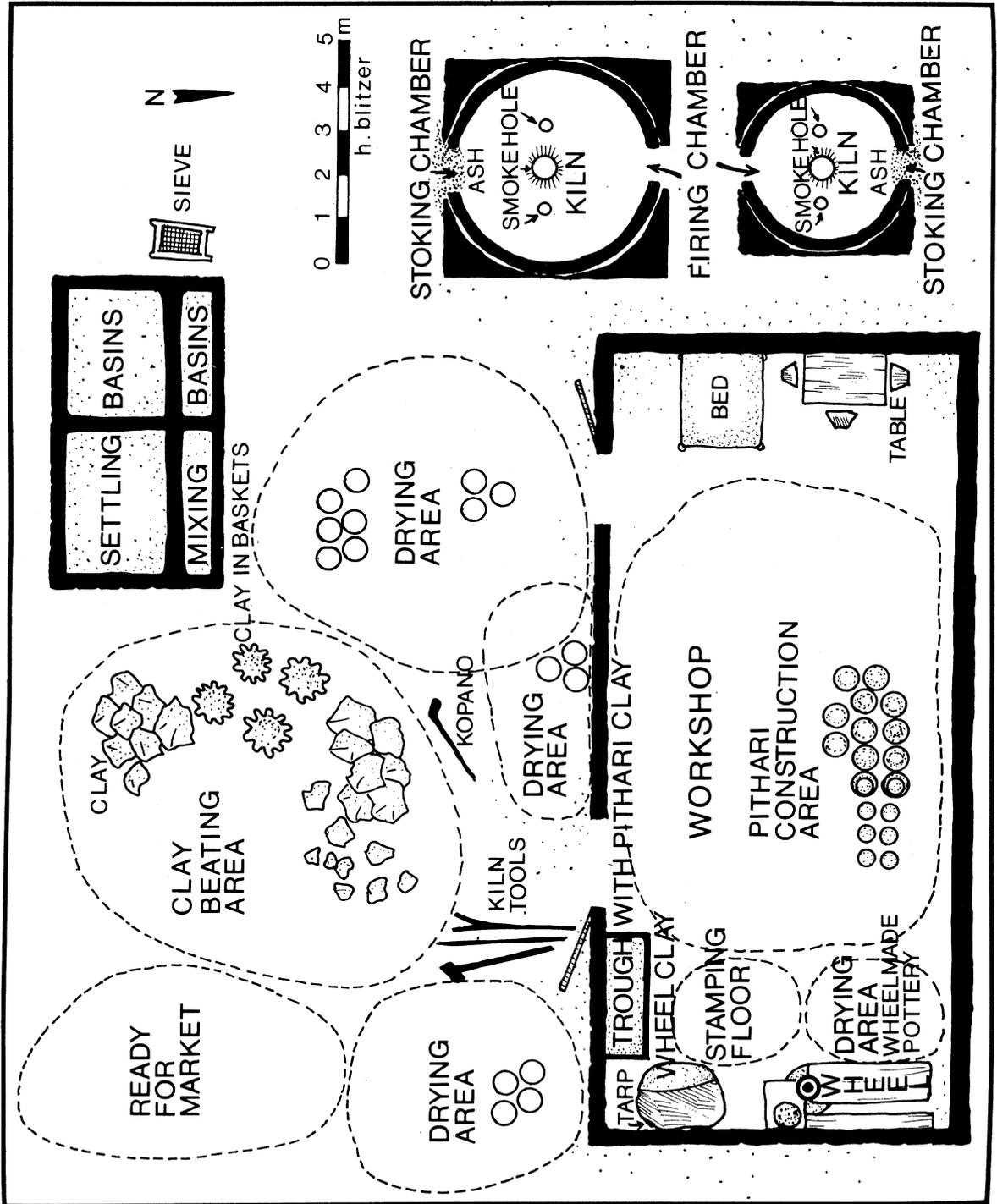
Rim thickness: 0.03–0.04 m.

Max. circumference: 1.45–1.62 m.

Capacity: 40–50 *okades*? (50–63 kg.?). Extremely variableAverage perceived capacity: 30–50 *okades*

κουβέλι (63 *okades*), the *μόδι* (270 *okades*), and the *φόρτωμα* (88 *okades*): Kremmydas, pp. 125–129. Ship captains and *emporoi* as agents of trade were fully aware of these metrical variations in the eastern Mediterranean and arranged their commercial transactions accordingly. This system of differing weights and measures persisted into the 19th century and had existed in the Byzantine period as well. I am indebted to Drs. Demetrios Tsoungarakis and Eleni Angelomati-Tsoungaraki for discussing with me the varieties of weights and measures and for explaining some of the causes of variation. Commercial accommodation to the many different metric systems which existed throughout the eastern Mediterranean during these pre-mechanized historic periods should give pause to Aegean archaeologists who seek simplicity and metric uniformity in Bronze Age trade in the eastern Mediterranean.

FIG. 3. Sketch plan of a 20th-century workshop shared by a *pitharas* and a *stannas* from the Koroni district



Type 8 (Fig. 2:8)

Name: *πιθαρόπουλος* or *πιθαράκι*

Glazed

Height: 0.45–0.50 m.

Rim diameter: *ca.* 0.20 m.

Max. diameter: 0.35 m.

Rim thickness: *ca.* 0.03 m.Max. circumference: *ca.* 1.50 m.Capacity: *ca.* 30–40 *okades?* (38–50 kg.?).

Variable

Average perceived capacity: 30–40 *okades**Note:* Types 7 and 8 were used in the storage of olives as well as olive oil. Other foodstuffs might also be stored in these types.

It is generally agreed that three or four men were needed to lift *pitharia* of Types 1 and 2 and move them from one place to another. In contrast, these largest *pitharia* could be rolled easily from one location to another on their sides, which were both protected and strengthened by the thick *zonaria* (Pl. 103:b). Indeed, it is the recollection of all informants that such jars were rolled, without any damage whatsoever, down footpaths leading to the shore of the Messenian Gulf (Fig. 1), where sailing ships waited to onload orders of *pitharia*. It took one or two men to handle a single *pithari* in this activity, which was described as follows: «τὰ πιθάκια τὰ πήγανε κυλοτά», “they moved the *pitharia* by rolling them”.

The strength and durability of the 19th-century Koroni *pithari* were directly related to the way in which it had been constructed. In fact, it was most unusual to find that moisture, extreme heat, or extremely wet conditions had any effect on *Koroneika*. In contrast to Cretan *pitharia*, whose bases might shear off when exposed to constant moisture (thus the common Cretan practice of placing *pitharia* on stone slabs),¹⁴ cracking seems not to have been a problem. The most visible type of damage to the *Koroneika* appears always to have been the scaling off of sections of *zonaria* (Pl. 103:a, left side of *pithari*) as a result of physical force (e.g., being rolled against a rock or struck with a metal tool). More commonly the *zonaria* were chipped and flaked in a minor way (Pl. 103:f) as a result of general wear and tear, but the body of the *pithari* remained sound. Breakage of the type seen in Plate 108:e occurred when a kiln of these *pitharia* “fell” during firing, but all informants stated that this happened rarely during the 19th century. (The sherds shown in Plate 108:e are primarily from smaller, 20th-century *pitharia*.)

The lasting nature of these jars made them a good investment for the home and for commercial enterprises (see “Marketing and Trade”, pp. 698–707 below), including olive-oil mills (*ἐλαιοτριβεία*) and the establishments of olive-oil merchants (*ἐλαιοπῶλες*) and soap manufacturers (*σαπουννοποιοί*). In the home they were placed in *apothekes* under fairly constant conditions and were regularly cleaned and emptied before new oil supplies were stored. Quantities of boiling water were used in cleansing *pitharia* and were sometimes mixed with various herbs (bay and thyme were frequently cited, but the choice varied). According to some informants, fig leaves might be bound together into a brush and used to scrub the interior. Newly processed olive oil was sometimes moved from one *pithari* to a different, clean one after the oil had sat for periods varying from several weeks to several months. It was said that in this way the acidity of the stored oil was substantially reduced (it

¹⁴ Evidence for this phenomenon is collected in Blitzer, *Traditional Industries* (footnote 4 above), chapter 6, “The Ceramic Crafts and Related Industries.”

penetrated the walls of the jar), and the old jar was then immediately cleaned as described above and re-used.

PRODUCTION ON THE WHEEL

The potter's wheel was known as the *τροχός* and less frequently as the *τόρνος* (Pl. 104:a). It consisted of the *πανωτροχή*, the upper wheel, which averaged *ca.* 0.30 m. in diameter, and the lower wheel (*κατωτροχή*), which was *ca.* 0.80 m. in diameter and 0.04 m. thick. The shaft and upper wheel were made of iron, and the lower (kick) wheel was fashioned from *sanides*. Wheels could be used for as long as 80 to 90 years, at which point the wood of the lower wheel sometimes gave out. The wheel ran in a counterclockwise direction at a speed regulated by the potter's foot. Until the second half of the 20th century the wheel shaft was set into a hard limestone base with a hole for a sharp pivot. More recent wheels were fitted into metal bases with bearings. The wheel and base were set into a pit (Pl. 104:a-c) surrounded by wooden supports and a long bench (Figs. 3 and 5) on which the potter sat. At the margin of the bench was a large jar, usually a broken *stamna* or *beka*, containing water into which the potter continually dipped his hands, sponges, and shaping tools. Tools used included a thread (or in recent times a bouzouki wire) to cut the bases of vessels when the wheel had stopped, resulting in a pattern of straight parallel lines. A piece of broken comb or reed was used to make wavy lines on the body of the vessels. The shaping tool or potter's rib was known locally as a *στέλλα* and was made of beech wood. Lips of vessels were finished with a small piece of cloth (*pani*), also dipped constantly in water.

In preparation for making a storage vessel on the wheel, clay was removed from the storage column (above, p. 682) and fashioned into spheres that were measured by eye and in the hand by weight. In producing a *stamna* (Fig. 4:1), the largest of the wheelmade storage jars, two balls of clay were used together; a single sphere of sufficient size could not be properly prepared by hand. The spheres were placed on the *panotroche*, one on top of the other, and were wet completely with the cloth. The two spheres were consolidated into a conical shape with a hollow at the top that was gradually raised higher and higher. The potter's hand placed inside then fashioned a hollow reaching halfway down into the cone, and the drawing-up process continued until hand pressure from within was used to create the wide *stamna* shape (Pl. 104:b). Throughout this process the potter used ribs to shave the walls, and he constantly wet the clay with water from the vessel at his side. Shavings from the pot on the wheel were thrown into a pile near the base of this water jar, resulting in an accumulation of very wet clay that was later used to repair small cracks and holes in the vessels as they dried indoors (Pl. 104:d).

Wheelmade vessels were produced only in the village of Vounaria, and whether they were made for storage or daily use, they were glazed with the same red-lead mixture used for *pitharia*, three parts *pipini* to four parts minium. The vessels made on the wheel were dried inside the workshop (Pl. 104:d) for periods of time determined by their size. Large vessels (*stamnes* and large *bekes*) dried inside the *apotheke* for three to five days and were then moved outside for approximately ten days in the sun (Pl. 104:e). Smaller vessels required

shorter periods (two to five days) both indoors and out, depending on the weather. Handles were added to wheelmade pots within ten hours after the pot was made, or after one day of drying.

TYPES OF WHEELMADE VESSELS

Clay vessels made on the wheel were used both for storage (Fig. 4:1–3) and for everyday activities in the home and the field (Fig. 4:1–9). In addition, flowerpots were made by the potters in a variety of sizes, two of which are illustrated (Fig. 4:10, 11). It is evident that other shapes beyond those shown here were produced as well, but they were not consistently made by all potters and are therefore not included. A clay bank and a series of small items (*μικράκια*), including a horn for children, were among them. It is also clear that some shapes, among them the *beka* and the *stamna*, were once made by hand rather than on the wheel.¹⁵

The *stamna*, largest of the glazed wheelmade storage jars (Fig. 4:1, 2), was used in the home for storing olives, cheese, olive oil, salted meats (*παστό*), and other foods. It was manufactured in at least four sizes, the largest with three handles (*τριπλοχέρι*) and the remaining three sizes with two handles (*διχέρι*). Lids were made for these vessels on the wheel and usually had simple knobs for handles. *Stamnes* were found in storage and living areas of the home.

The *καπακλί* or *πινιάτα* (Fig. 4:3) was a lidded vessel used specifically to bring food (usually hot food for the midday meal) to workers in the fields. It was made in at least two sizes (some informants say three), and the two handles on opposite sides of its bulbous body were strung with twine or rope so that it could be transported easily. In the home this glazed vessel was used for storage of foods and spices.

The water jar produced in the Koroni district was known as the *beka* (Fig. 4:4). Again, at least two (and probably three) sizes of this jar were manufactured for use in the home and the field. The *beka* was suspended from a rope for use at wells and for transport and was bisque-fired. The shoulders of these vessels were sometimes decorated with incised parallel lines made with a comb. Some individuals state that this jar was also employed for wine, but all agree that it was not a “table” vessel, which function was reserved for the *λαϊ*, or *λαϊνο*, used in serving water and wine at the table. It was bisque-fired and was made in two sizes (Fig. 4:5). Combed decoration could sometimes be found on its neck.

The *βηκιά*, a two-handled glazed vessel, was used in carrying wine or water to work in the fields. Like the *kapakli*, it was strung with a cord for transport. It might also be used in the home for olive oil, and it was made in at least three sizes (Fig. 4:6). Another glazed vessel with a single handle, the *ροϊ* (Fig. 4:7), was used as a pitcher for the pouring of oil and was made in one size.

The *γουνδί* (Fig. 4:8) was a mortar used in the preparation of foods such as *σκορδαλιά* (garlic sauce). It was glazed and made in one size. Glazed bowls known as *λεκάνια* or *σουπιέρες*, employed as all-purpose dishes for meals (Fig. 4:9), were made on the wheel in at least three sizes. In recent years production of this type on the wheel was replaced by jiggering (the use of molds). Decoration on the rims of these vessels included parallel lines made with contrasting earth known as *μπαντανάς*. Flowerpots or *γλάστρες*, both glazed

¹⁵ The production of wheelmade vessels in the Koroni district will be discussed in detail in a separate article.

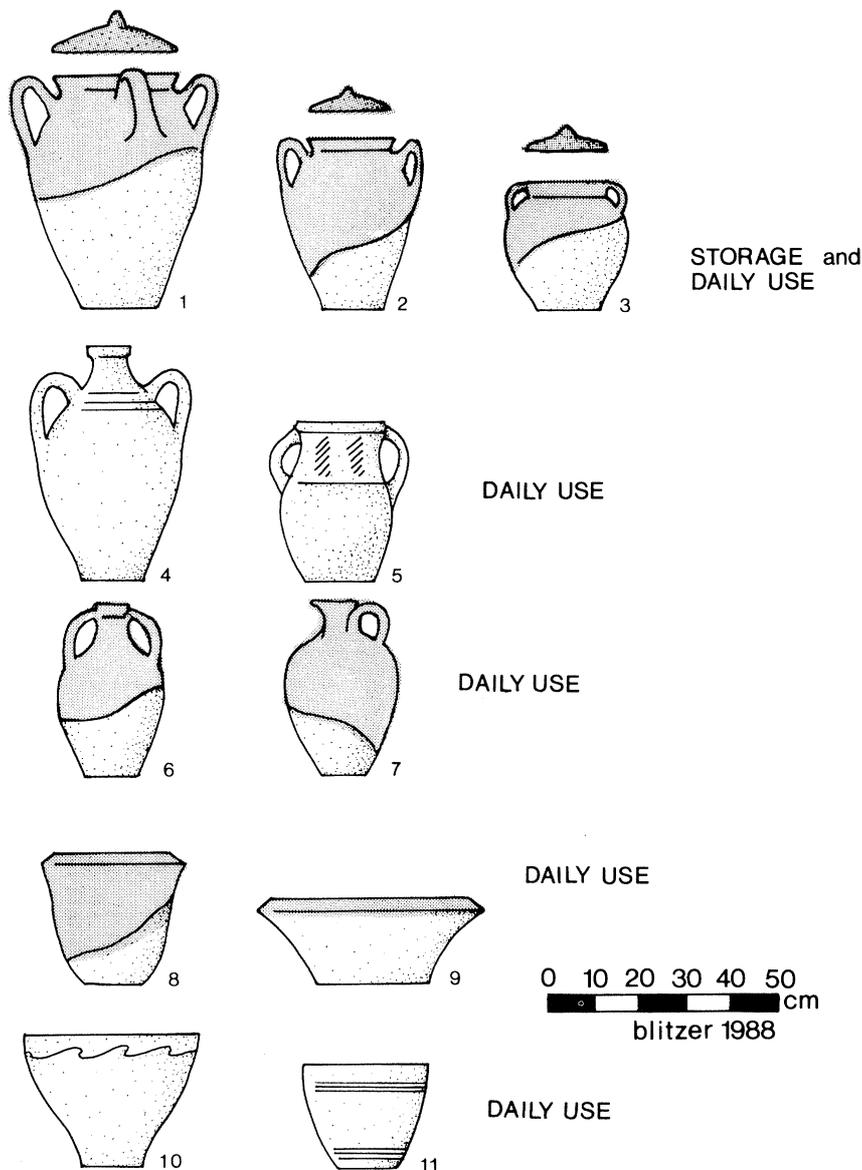


FIG. 4. Types of wheelmade vessels produced during the 19th and 20th centuries in the Koroni district. The shapes illustrated reflect the most recent forms produced.

and unglazed, were produced in as many as six sizes and decorated with incised lines in various combinations (Fig. 4:10, 11).

Pottery produced on the wheel in the Koroni district met a substantial local demand. Wheelmade pots from Koroni were also exported throughout the Peloponnese and the western part of Greece along with *pitharia*. Their use in the home formed a natural complement to the variety of *pitharia* available from the Koroni potters, and their quality, at least in the late 19th and early 20th centuries, was said to be high.

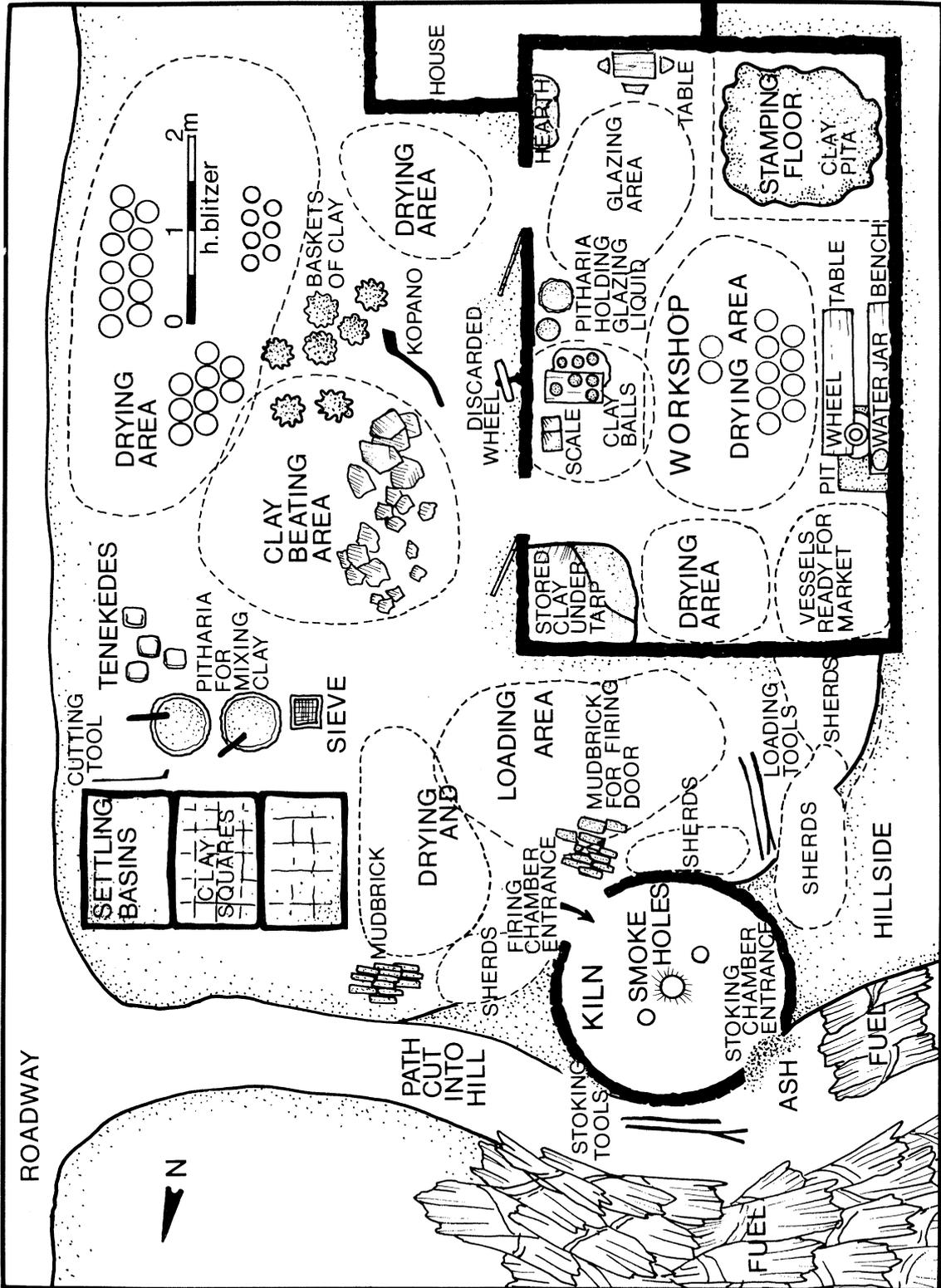


Fig. 5. Sketch plan of a 19th-20th-century workshop of a *stannas* in the Koroni district

THE KILN

Each workshop in the Koroni villages maintained its own kiln. The kilns for wheelmade vessels (Pl. 106:a, b) were smaller than those built for *pitharia* (Pl. 105:a–c), although their circular construction was the same.¹⁶ Kilns could be built freestanding, with an extra support of earth or mud brick at the base (Pl. 106:a), or dug into hillsides and slopes, with the entrance to the firing chamber built at one level and that to the stoking chamber at a lower level on the opposite face (Fig. 5, Pls. 106:b and 107:a).

The kiln was called the *φούρνος* or *καμίνι*. Kilns were used for fairly long periods; one potter's kiln built in 1890 was still functioning in 1975. Unbaked mud brick (*πλίθρες*) made from local clay and earth with chaff (*ἄχυρο*) formed the walls of the kiln (Pl. 105:e), varying in thickness from roughly 0.30 to 0.50 m. The exterior surface of the kiln was covered with a plaster of clay and chaff that was replenished as needed (Pl. 106:e), and clay alone was sometimes used as a liner on the kiln interior (Pl. 105:d, lower left). The kilns were built by the potters themselves (it was considered absolutely essential to know how to do this), which accounts for the variety of shapes encountered in the domes and base supports of these updraft structures (Pls. 105, 106:a, b).

The stoking chamber of the kiln was formed by arches (*καμάρες*), made one at a time of mud brick, meeting in the center of the chamber in a thick column called the *στύλος* or *κολόνα*. The arches and the column supported the floor of the firing chamber where the vessels were placed. The floor of the firing chamber was made of wet clay into which sticks had been inserted vertically. When the clay dried the sticks were removed, leaving 50 to 75 holes through which heat from the stoking chamber could pass into the firing chamber.

The dome of each kiln had three smoke holes (*φανούρια*). The center one (Figs. 3 and 5) remained open at all times, while the remaining two were kept open during the firing and closed with clay lids called *καπάκια* when the kiln was sealed. The three *phanouria* were necessary because of the manner in which fuel was burned in the kilns. During the firing, fuel was inserted first on one side of the stoking chamber, then on the other. The resulting smoke left the kiln from the corresponding *phanouri*. At no point during the firing was the entire stoking chamber filled with fuel. The “balance” achieved with this practice was considered important.

Strengthening the walls of freestanding kilns was frequently attempted through the addition of sherds or even broken jars filled with earth and clay (Pl. 105:a, b). Potters also piled up extra earth and clay around the mud-brick bases of the kilns, especially those of substantial dimensions. The diameters of the kilns ranged from roughly two and a half meters (for wheelmade pottery, Fig. 5) to four or five meters (for *pitharia*, Fig. 3). The stoking chamber might range from 90 centimeters to a meter in height, and the dimension from the floor of the firing chamber to the top of the dome was extremely variable (as little as two meters and as great as three or four). The door to the firing chamber was roughly a meter and a half in height (Pl. 106:c) and 60 centimeters or more in width. For the stoking

¹⁶ In contrast, kilns used by roof-tile makers were always square, unroofed, and built of mud brick and clay plaster, and they were torn down at the end of a firing.

chamber (Pl. 107:a) the door was often around 75 centimeters high and about 80 centimeters wide.

Before the firing began, the entrance to the firing chamber was blocked up with mud brick and plaster so that only a limited opening remained at the top through which the potter could observe the progress of the firing. Once firing was complete and the kiln had cooled, this wall was torn away, and the debris from it was generally thrown to the side of the kiln (Fig. 5).

The fuel used in the kilns varied. Cuttings (*βέργες*) from vines were in constant supply as a result of local viticulture. Approximately 350 to 400 *μάτσα* (bunches or bundles) of *berges* were used in the firing of an average kiln of roughly 500 wheelmade vessels. Eighteen hundred *matsa* of the same fuel would have been necessary before World War I for the firing of a kiln holding four to six large *pitharia*.

Another measure used for bundles of fuel was the *δέμα*, and there is no agreement among local inhabitants on whether this was equal to or different from the *matso*. Other fuels used included olive-wood prunings (*έλαιά*), *σκίνα* (*Pistacia*), *πουρνάρι* or *πρινάρι* (oak), *πριονίδια* (sawdust and shavings from the carpenters' workshops), and various wild aromatic and prickly shrubs (*θάμνους καὶ διάφορα χαμοκλάρια*). Crushed olive pits (*πυρήνες*) might also be employed, but these were mentioned much less frequently by older potters. To accumulate enough wood fuel to fire one kiln holding 500 wheelmade vessels, a donkey was led three times a day to a local source (the hills to the east and south), a round trip of three and one-half hours. Fuel procured from local farmers (*berges* and olive prunings) was paid for, as were wild shrubs cut from distant landholdings.

During the late 19th and early 20th centuries, six or fewer vessels would be fired at once in *pithari* kilns. In recent years, with reductions in the sizes of *pitharia*, more vessels were processed in each firing. The average number of wheelmade pots fired at once was 500–600, although some kilns holding 700–800 vessels were known. The pots were placed in the kiln in layers, usually three (Pl. 106:c), with glazed vessels in the center of the kiln and a ring of unglazed pottery around them (Pl. 107:f). An average kiln might contain 80 large glazed *stamnes*, 40 two-handled *stamnes*, 170 large unglazed *bekes*, 40 large *kapaklia*, 40 small *bekes*, 40 *roïa*, 25 *laïna*, 20 *goudia*, and 40 *mikrakia* (small vessels of various types). At the front of the firing chamber, directly in sight of the aperture of the firing-chamber door (Pl. 106:d) were placed small sample vessels (*δείγματα*) that the potter regularly observed to gauge the progress of the firing. Broken pots and sherds might be used as kiln separators where necessary, and in the case of *pitharia*, baked and unbaked rectangular solids of clay (*ντακάκια*) were sometimes used (Pl. 109:f). As elsewhere, the potter devoted a great deal of time to the loading of the kiln, since carelessness could result in a “fall” and the loss of income.

At the beginning of a firing the smoke emitted from the apertures was quite heavy (Pl. 106:e). Half a *matso* of fuel (Pl. 107:a) was loaded into alternate sides of the stoking chamber roughly every five minutes (Pl. 107:b) during the first five hours of firing. The first phase of firing (reduction phase) was an attempt to build up the kiln temperature gradually,

resulting, during the second half, in a constant heat that was described as “white hot” (oxidation phase). During the first phase the flames were so strong (Pl. 107:c) that they often passed through the holes in the firing-chamber floor and were visible in the heights of the chamber itself. As great billows of black smoke left the kiln (Pl. 106:e), the vessels within were also dark colored or black, and the potter would check their condition by examining the *deigmata* at the opening above the firing-chamber door (Pl. 106:d).

Estimates of the length of time necessary for a kiln of 500 wheelmade vessels range from eight to twelve hours. In contrast, *pithari* Types 1 and 2, or even Type 3, required twelve to fourteen hours. Midway in the firing process the potter would check the *deigmata* to see whether they had begun turning reddish in color. Finally, during the last half of the firing, the sample, if all was proceeding well, began to turn “white” or light colored, and when it reached its proper color, which the potter learned through experience, the firing was ended. Likewise, a sample with glaze would at this point begin to turn yellow, and the glaze would run or “sweat”.

When the potter chose to terminate the firing, the helper stopped inserting fuel and the fire was allowed to go out gradually. The door to the stoking chamber was then sealed with mud brick and clay plaster (Pl. 107:d), and ashes were raked away from it. The upper portion of the firing-chamber door was blocked with mud brick and clay plaster, and the two lateral *phanouria* were covered with lids. Heat continued to leave the kiln through the central aperture in the dome. The kiln was often decorated with a cross or other apotropaic device and was finally allowed to sit from two to five days (a longer period was necessary for *pithari* kilns). Until the potter was ready to open it, the kiln rested without disturbance.

If there was one villain in the firing process recognized by all potters it was the wind. Air taken in from the outside at any point during the firing (and during the cooling process as well) could cause a temperature change, cracking of vessels, and perhaps an entire lost kiln. Windy days were thus avoided.

Despite a cooling period of several days or more, the greatest care was taken in unloading the kiln (Pl. 107:e), including opening the firing-chamber door gradually, by degrees. This permitted a regulated amount of air to penetrate the still warm kiln. Vessels were removed with a variety of tools (Pls. 107:e and 108:a) and by hand and were set outside to cool completely.

A certain amount of breakage (Pl. 108:b), roughly 3 percent, was expected in the kilns of most potters (about 12 to 15 wheelmade vessels in a kiln of 500). A few potters stated that breakage of as much as 10 percent was common despite their careful loading efforts. With very bad luck a potter might expect a fallen kiln, because one or more vessels had slipped out of place, and a breakage rate of 40 percent. As all pots were placed in the kiln—either touching one another or separated by sherds, the movement of one clearly affected others (Pl. 107:f). For *pitharia*, especially the larger types, kiln breakage was uncommon, and some potters stated that it was extremely rare in the early years of this century.

There was great variation in the potters’ approach to breakage debris. Some allowed vast quantities of breakage to accumulate along the margin of the kiln (Fig. 5; Pl. 108:b),

while others removed it quickly. A good deal of the breakage from the village of Vounaria was deposited outside the settlement in an area used for generations (Pl. 108:c, d). Recent bulldozing in these breakage deposits in order to widen a path revealed their stratification, including variant vessel shapes that were no longer produced. Sherds from wheelmade vessels were also used as kiln supports, as a form of grog in mud-brick walls and, along with large fragments of broken *pitharia*, as a protective cover along the tops of mud-brick walls (Pl. 108:e). Since pre-World War I *pitharia* broke very rarely, either in the kiln or in use, these *pithari*-covered walls are a fairly good indication of the change in quality between 19th- and 20th-century products.

When the newly fired vessels had cooled sufficiently outdoors, they were stored in warehouses (Pl. 109:b) or even in the potter's workshop (Pl. 109:a) until they were sold or transported to market. On days when vessels were to be picked up, the roadsides of the villages were filled with *pitharia* and wheelmade vessels lying in groups (Pl. 109:c), and empty outdoor spaces in the workshops were taken up with hundreds of vessels (Figs. 3 and 5).

Before the trade of *Koroneika* is discussed, it is important to examine why, given the difficulties in producing pottery and earning a living from it, Koroni potters did not devote more of their own time to marketing and trade connections. A primary answer to this question lies in the demanding nature of pottery production in these traditional circumstances. According to most informants, during the production season a potter could spend all his time keeping up with the demand for vessels and the competition for orders, with the procurement of necessary supplies, and with overseeing all the workshop activities that were carried out concurrently. There was literally no free time for entrepreneurial efforts that might have a beneficial effect on his economic position. The potter was the true center of the workshop, and while a workshop might be less efficient or less productive without a helper, it could not function without the potter. There was pressure to produce (one potter recalls making 120 large *bekes* every day for an entire season in the years following World War II), and having *pitharia* or wheelmade vessels available in an *apotheke* was extremely important when traders, ship captains, or even local inhabitants came to buy.

MARKETING AND TRADE

The marketing and trade of *pitharia* and wheelmade vessels in the Koroni district during the 19th and early 20th centuries evoke a distinct image of commercial activity within an economy that for centuries had been divided between the upper class (the landlords) and the lower stratum of society (the peasants). The opportunities open to the Koroni potter in marketing his wares were not often taken up because of the demands on his time described above. Six intersecting ways in which Koroni *pitharia* were distributed over the last 100 years are described below in their culture-historical context. The list begins with interactions in which the Koroni potter was the initiator at a local and regional level (1–4) and concludes with commercial activity resulting in long-distance sea trade (5, 6).

1. *Pitharades* and *stamnades* were able to sell their wares from their workshops to local residents who came to buy immediately, if *pitharia* and wheelmade vessels were available,

or to order specific pots for a later date. In this context the stockpiling of a ready supply of vessels was essential. Such direct contact, however, between the potter and the local consumer was not a substantial source of income, being an occasional interaction which occurred chiefly for *stamnades*. According to most informants, local well-to-do individuals who had a surplus of oil or local *emporoi* who were stockpiling olive oil might purchase *pitharia* in some quantity, but local farmers and craftsmen would generally own only one or perhaps several.

2. Fairs (*πανηγύρια*) held in towns and villages in Messenia, such as those at Messeni (Figs. 1 and 7:13) and Petalidi (Fig. 1) and in the wider Peloponnese, were also the occasion for markets to which craftsmen, including potters, brought their wares. Koroni potters recall participating frequently in markets at local village *panegyria* and at the fairs in Petalidi (Pl. 109:d) and Messeni, which were events lasting several days and which included the sale of wooden tools, copper vessels, basketry, cloth, and other products, as well as pottery.

Panegyria in the 17th and 18th centuries in the Peloponnese were primarily small, weekly, day-long markets where necessities were offered for sale. Their commercial significance in these early periods tends to have been local. But two annual Peloponnesian fairs were extremely important for trade within the peninsula as a whole, one at Tripolitsa (Tripolis, Fig. 7:18) in the beginning of June and the other at Mistra.¹⁷ The Tripolis *panegyri*, which might last as long as 15 days (documented for the late 18th century), involved commercial exchange in cloth of all types (e.g., felts, silks) and in other commodities as well.

Transport to the interior of the Peloponnese during the 18th and 19th centuries was carried out primarily with pack animals, singly or in caravans, and by means of the *κάρο*, the two-wheeled wooden vehicles that allowed quantities of goods to be transported at once. While some villages in the Peloponnese contained many *καραγωγοί*, individuals whose vocation was the transport of goods by cart,¹⁸ the ownership of such a vehicle in the Koroni region during the late 19th and early 20th centuries was recalled as uncommon, and those who owned them did engage in transport for profit. Muleteers in the district also participated in caravan transport of clay vessels, either to distant markets and *panegyria* or to the local port of Koroni.¹⁹ For his participation in such fairs the Koroni potter was thus dependent on transport by professionals, who then received a share of his profits.

3. Since Tripolis was perceived as the economic center of the Peloponnese well into the beginning of the 19th century (all major roads emanated from it and most caravans passed through it),²⁰ it is not unexpected that Koroni potters, in speaking of times of economic stress, would recall making trips themselves to Tripolis in order to sell both *pitharia* and wheelmade vessels. The potter's movement from his home base was involuntary and indicative of the poor economic conditions that prevailed in the region after World War I and

¹⁷ Kremmydas, p. 329.

¹⁸ Kremmydas, p. 258.

¹⁹ Pasagiotti (footnote 9 above), p. 37.

²⁰ Kremmydas, p. 258.

during the *katoche* in World War II. Potters recall packing wheelmade vessels in sacks (about ten vessels to a sack) and loading them on donkeys (2 or 3 sacks to each animal) for the trip to Tripolis (26 hours) or to the Olympia-Pyrgos area (30 hours). Others recall a potter loading a *pithari* with wheelmade vessels and carrying it up to the area of Megalopolis or Tripolis in order to find food during the *katoche*. This type of economic stress, resulting in such drastic moves, was also responsible for the departure of potters from the Koroni area. Again, in the period around both World Wars, especially during the summers, there were too many potters and not enough demand. Koroni potters (and roof-tile makers) traveled at these times to Crete, Cyprus, Pyrgos, Sparta, and Nauplion in order to produce and sell their Koroni-style wares. Some recall that they earned a greater profit (twice as much per vessel) making and selling their pottery at distant locations. There is general disagreement as to how many potters might have left in any particular period and where exactly they worked. All those cited were *pitharades*.

4. A fourth option open to the Koroni potter was to sell his wares to local and visiting traders (*emporoi*) who accumulated pottery from the production centers and resold it in larger land markets. Many of these *emporoi* were from the region, while others were from more distant towns to which they returned with their purchases. These traders might maintain their own pack animals and carts and could easily transport *pitharia* and wheelmade vessels by overland routes to Tripolis (26 hours), between Koroni and Methoni (6 hours), and between Koroni and Pylos (8–9 hours). After World War I, at the port site of Phoinikous to the south of Koroni (Fig. 1), *pitharia* were brought to the area by means of pack animals and by cart over a route that took three hours. From Koroni to Kalamata (Fig. 7) required 8 hours by pack animal and from Pylos to Tripolis (via Androusa) required 23 hours.²¹ This overland travel was time-consuming and considered arduous. Wherever possible, therefore, large and small clay vessels from the Koroni potters were sent by ship, either from the port at Koroni or from the shore below the villages.

5. The *emporoi* in Koroni during the 19th and early 20th centuries were able to buy *pitharia* and wheelmade vessels from the Koroni potters, stockpile them, and then offer them to ship captains who stopped at the port for other Peloponnesian commodities, including olive oil and currants. This trade in *pitharia* from the Koroni port was substantial enough in the 19th and early 20th centuries that the *pitharia* were identified as Koroni products (thus *Κορωνέϊκα*). In actual fact, the inhabitants of Koroni outside the potters' villages knew very little about the vessels and their production.

Koroni *emporoi* also sold wheelmade vessels to captains of caïques who transported them to Stoupa, Kardamyli, and the Mani (Fig. 7:14), to Methoni (12), Phoinikous and Pylos (11), to Kyparissia (9), to Pyrgos (8) and to the Ionian Islands (4–6). These locations and inland Peloponnesian towns to which wheelmade pottery from Koroni was traded overland combine to form a trading pattern in which the Koroni district supplied the Peloponnese, especially the western flank, and the Ionian Islands.²² Since there were many other

²¹ Kremmydas, p. 261. The travel times given by Kremmydas were confirmed by inhabitants of Koroni.

²² It is possible that Koroni wheelmade vessels were sent to many more locations than those cited here, but local recollection and the ceramic evidence do not offer any proof of this. The rarity of *pitharades* in the Peloponnese is worthy of note.

potters manufacturing wheelmade vessels throughout the Peloponnese (at Pyrgos, for example), it is obvious that there was sufficient demand in the Peloponnese for small household vessels to support wheelmade pottery workshops in many locations. Local demand, then, maintained the Koroni *stamnades* in a way that it did not the *pitharades*.

Pitharia purchased by the Koroni traders were moved to Koroni by *karo*. Many informants recall hundreds of *pitharia* stacked up together to await pick-up, completely covering the Koroni wharf. It required several men to lift each of the 20th-century (Type 5) *pitharia* and load them onto caïques, where neither binding nor packing materials were used to stabilize them during the voyage. A few remember that smaller wheelmade vessels might be placed inside a *pithari*, but this was obviously not a common occurrence. Some ship captains recall trips around 1925–1930 when *pitharia* broke during the voyage and were thrown into the sea. Thus *pitharia* were regularly available for purchase from the *emporoi* at Koroni, and before the common use of engines on ships (ca. 1930–1935) they were transported by sail throughout the Aegean and eastern Mediterranean (Fig. 7), primarily during the warm months of the year, roughly April through October.

6. The final means by which Koroni *pitharades* could market their *pitharia* was through direct contact with ship captains, many of whom were also *emporoi* and the owners of their own ships. Other captains, who were agents for *emporoi* located at distant and foreign ports, might or might not own the ships on which they were sailing.

Many in the Koroni villages recall that ship captains would put in at beaching points on the shore below the villages (Fig. 1) or would come directly to the villages from the dock at Koroni. These captains purchased *pitharia* that were already made, placed orders for *pitharia* that would be picked up in the future, or would ask, “When will you fire?” so that they could return with their ships after a short period and onload newly fired *pitharia*. The ship captains were responsible for relaying direct orders to the *pitharades* from other parts of the Aegean (western Anatolia and Crete were frequent sources) and from the eastern Mediterranean (Palestine and Egypt were often cited by informants). They might also onload groups of *pitharia* to sell as a venture along the route of their trip and could gather additional orders as they proceeded on their way. In his dealings with these ship captains the Koroni *pitharas* was more fortunate than in his other marketing transactions, for no Koroni middleman intruded to skim off a share of the profit.

According to most, ships stopped frequently on the shores below the villages and the *pitharia* were rolled down to the sea («κνλοτά») on the paths. Elderly inhabitants recall unspecified numbers of *pitharia* leaving the potters’ villages each week in this manner at the turn of the century.

In order to reconstruct the distribution of *Koroneïka* at the turn of the century, until about 1915, it is possible to use two separate types of evidence. The first is the combined recollection of the Koroni potters, of local inhabitants, of the traders in the region, and of ship captains who dealt with the *Koroneïka*.²³ The second is the *pitharia* themselves, which, in many cases, were still visible in recent years at the locations to which they had been shipped.

²³ See footnote 7 above for the method by which this information was collected. It is clear that considerable evidence, both ethnographic and ceramic, no longer exists.

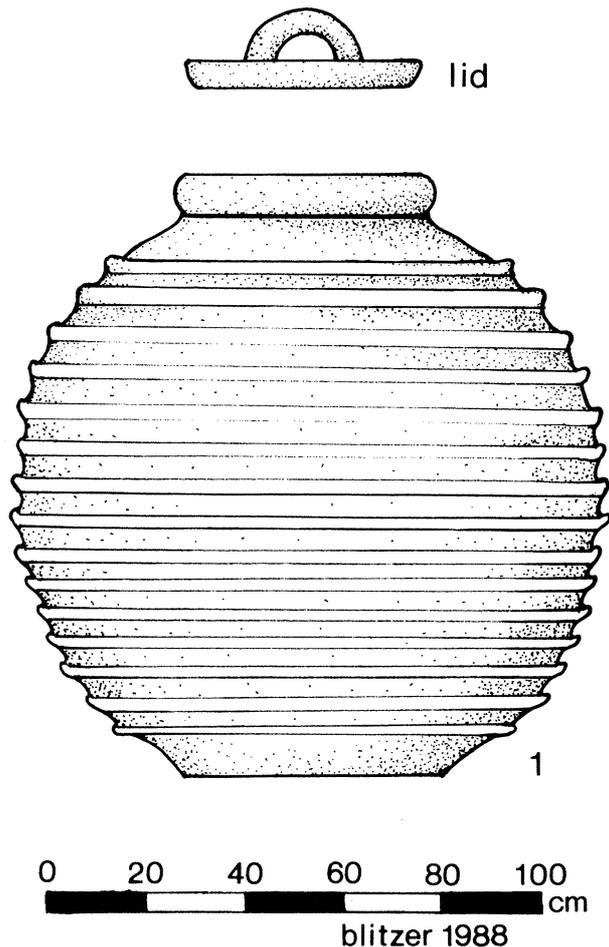


FIG. 6. *Pithari* Type 1

It is the largest of the *Koroneika*, Type 1 (Fig. 6), that provides the best-documented evidence for trade and distribution throughout the Aegean, primarily because it ceased to be produced sometime between 1890 and 1910. It was therefore transported on sailing ships to the locations shown in Figure 7, all of which were commonly cited by inhabitants of the Koroni district. While in some cases it was not possible to locate the actual *pitharia* in these places (see below), there was strong recollection of *pithari* trade to the sites shown in Figure 7.²⁴ By land the *Koroneika* were transported into the Peloponnese, to locations within Messenia (Fig. 1) and to Sparta (Fig. 7:16), the area of Megalopolis (17) and Tripolis (18). By sea the Type 1 *pitharia* were sent to Albania (1, Aulona; 2, Cheimarra), the Ionian Islands (3, Corfu; 4, Ithaka; 5, Kephallonia, and 6, Zakynthos), the Gulf of Corinth (7, Patras;

²⁴ The author was not able to visit North Africa (Libya), Egypt, Palestine, Cyprus, Tinos, Seriphos, or Albania for this study.

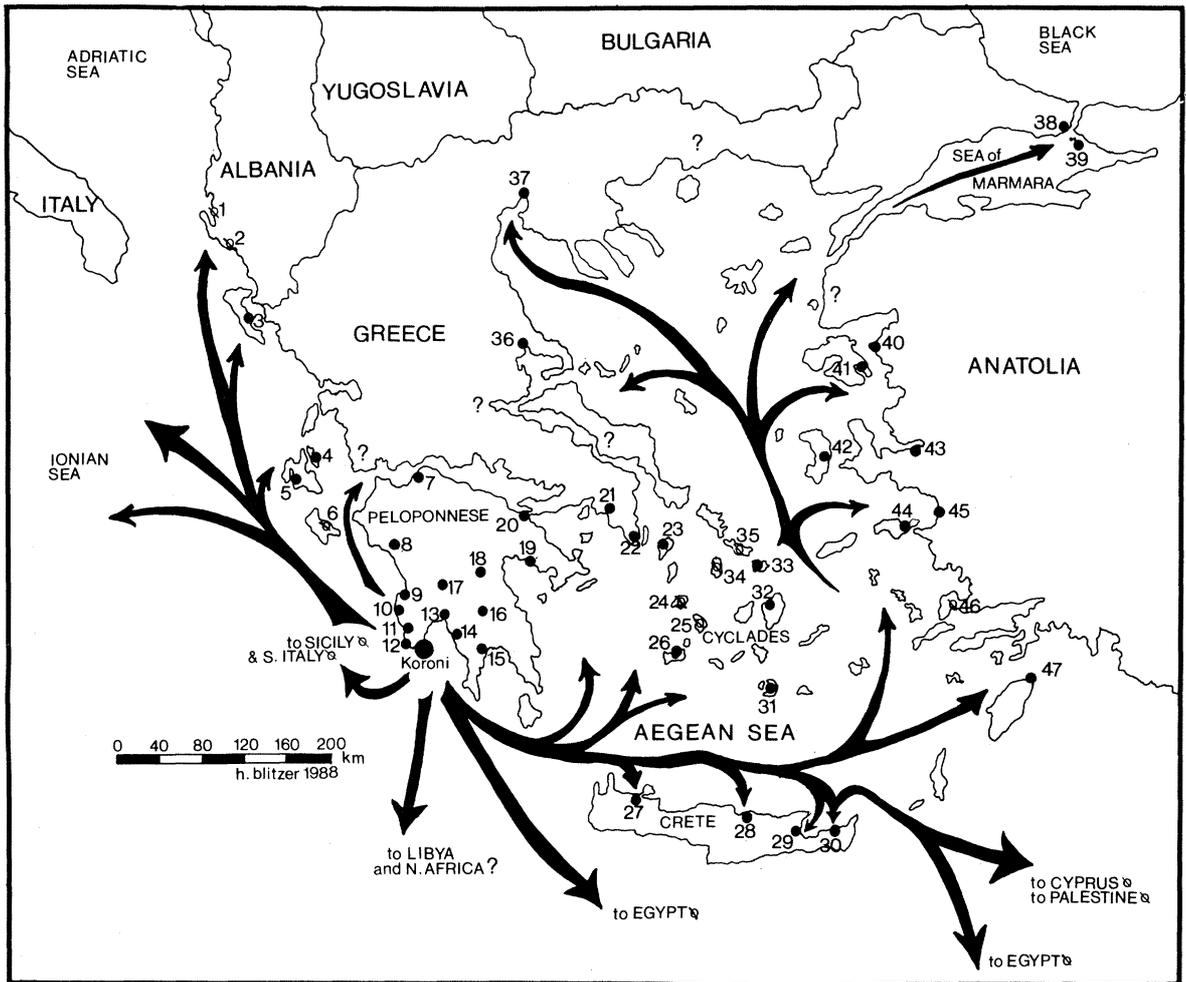


FIG. 7. Distribution map of Type 1 *pitharia*. Solid dots: existence of Type 1 *pitharia* verified by the author. Open dots: overwhelming ethnographic evidence within the Koroni district for trade of Type 1 *pitharia* to these areas, but no actual vessels found by the author.

- | | | |
|-----------------------------------|----------------------------|-----------------------|
| 1. Aulona | 17. Megalopolis | 33. Mykonos |
| 2. Cheimarra | 18. Tripolis | 34. Syros |
| 3. Corfu | 19. Nauplion | 35. Tinos |
| 4. Ithaka | 20. Corinth | 36. Volos |
| 5. Kephallonia | 21. Athens | 37. Thessalonike |
| 6. Zakynthos | 22. Laurion and Makronisos | 38. Istanbul |
| 7. Patras | 23. Tzia | 39. Prinkipos Islands |
| 8. Pyrgos | 24. Seriphos | 40. Ayvalik district |
| 9. Kyparissia | 25. Siphnos | 41. Mytilene |
| 10. Philiatra and Gargalianoi | 26. Melos and Kimolos | 42. Chios |
| 11. Pylos district | 27. Chania | 43. Smyrna |
| 12. Methoni district | 28. Herakleion | 44. Samos |
| 13. Kalamata and Messeni district | 29. Aghios Nikolaos | 45. Kuşadasi district |
| 14. Kardamyli and the Mani | 30. Siteia | 46. Bodrum |
| 15. Gythion | 31. Thera | 47. Rhodes |
| 16. Sparta | 32. Naxos | |

20, Corinth), coastal sites in the Peloponnese (8, Pyrgos area; 9, Kyparissia; 10, Philiatra and Gargalianoi; 11, Pylos [Navarino]; 12, Methoni district; 13, Kalamata and Messeni; 14, Kardamyli and the Mani; 15, Gythion; 19, Nauplion) and to Athens (21), Laurion and Makronisos (22). In Crete the *Koroneika* were imported to Chania (27), Herakleion (28), Aghios Nikolaos (29), and Siteia (30). In the Cyclades there was shipment to all the islands, according to some informants, but those most frequently cited were Tzia (23), Seriphos (24), Siphnos (25), Melos and Kimolos (26), Thera (31), Naxos (32), Mykonos (33), Syros (34), and Tinos (35). In northern Greece the ports of Volos (36) and Thessalonike (37) received shipments of these jars, as did Istanbul (38) and the Prinkipos Islands (39). Along the west coast of Anatolia and in the Dodecanese Type 1 *pitharia* were sent to the Ayvalik district (40), to Mytilene (41), Chios (42), Smyrna (43), Samos (44), the Kuşadası district (45), Bodrum (46) and Rhodes (47). In addition, according to most informants, these jars were sent to southern Italy and Sicily, to North Africa (some say Libya), to Egypt (most commonly to Alexandria), and to Cyprus and Palestine.

Koroneika were shipped along frequently used routes determined by the annual production and distribution of standard Aegean commodities and by means of boats that sailed throughout the Aegean moving goods as they were available from port to port on consignment and by chance. Local inhabitants recall the wharf at Koroni filled with jars awaiting Palestinian *emporoi*,²⁵ who picked up hundreds of *pitharia* in the years around 1930 and transported them throughout the eastern Mediterranean. Turkish *emporoi* are known to have collected *pitharia* directly from Charakopio and to have transported them to Smyrna and places along the way in the years between 1933 and 1936. Other ships plied the routes toward Italy and Sicily, stopping with *Koroneika* at the Ionian Islands, Brindisi, and Bari. A few informants remember ships traveling to North Africa with *Koroneika*, although some dispute this recollection. According to many in the district, large caïques stopped at least twice a month at the port of Koroni in the early 20th century to onload substantial quantities of agricultural goods. It required two to three days to sail by caïque from Koroni to Crete (first Chania, then Herakleion) in the years around 1910, and it is in Crete that the *Koroneika* were frequently ordered for specific use in the *apothekes* of *λαδάδες* (oil merchants), *elaiotribeia* (oil mills), and *sapounopoioi* (soap manufacturers). Local ship captains recall circumnavigating the island of Crete and off-loading *Koroneika* at the major harbors of the north coast before proceeding to Egypt. According to Cretan informants, the oil warehouses of Herakleion contained lines of Koroni *pitharia* set up to receive both olive oil and olive-oil lees (for use in soap factories). Indeed, Koroni inhabitants recall large orders for *pitharia* from oil factories in Herakleion in the time period before 1912.

Roof tiles were traded as well during this early period, and Koroni tiles traveled to the Mani, the Ionian Islands, and other locations along the west coast of the Peloponnese. Currants from the Koroni area were sent to Patras and Kalamata. *Koroneika* were exchanged

²⁵ "Palestinians" and "Turks" are among the most frequent nationalities cited for ship captains who visited the Koroni area. For a discussion of similar problems in earlier periods see Kremmydas, pp. 244–245 and G. B. Leon, «Ελληνική Εμπορική Ναυτιλία (1453–1850)», in *Ελληνική Εμπορική Ναυτιλία, Τράπεζα της Ελλάδος*, Athens 1972 (pp. 13–56), p. 15. See also p. 707 below.

for *tsoukalia* on the island of Siphnos, and in Crete barley and *φασόλια* (beans) were sometimes picked up in exchange for jars. As far as can be reconstructed from the streams of recollection presented here, a variety of means was used to “move” the *Koroneïka* along these variable sailing routes, with barter, direct payment, orders, and commissions figuring in the process.

Outside the Peloponnese, the *pitharia* from Koroni were sometimes described as being “from Italy”, “from Crete”, or from an unknown location and could be known as *κιούπια*, *kouroupes*, or *pitharia*. More commonly, however, the jars were described as *Koroneïka*. Ship captains recollected trips throughout the Aegean with Koroni jars in which the first stops might be in Crete and the ultimate destination the west coast of Anatolia and Palestine. Another trip from Koroni might begin with trading in the Cyclades and then continue in the Ionian Islands and Italy. The movement of goods, especially the basic commodities, was carried out in a complicated fashion dependent in part on competition and supply and demand.

Demand clearly played a role in the distribution of *Koroneïka* in the late 19th and early 20th centuries, for these *pitharia* were imported to regions with their own distinctive storage-jar production centers, including Italy, Crete, the Dodecanese, and western Anatolia. Likewise, Italian storage jars were imported to Greece (Pls. 111:d and 112:a–c) at this same time.²⁶ Cretan *pitharia* (Pl. 112:d) were produced at several centers on the island and appear to have been primarily for use within Crete. So-called Mytilene *pitharia* (called *küpler* in western Anatolia and *kiouπia* in the Dodecanese) had a distribution range that included coastal sites throughout the eastern Aegean region. Why then were Koroni *pitharia* imported to these areas in the 19th and early 20th centuries? In order to answer this question it is necessary to examine the historical role of Koroni in trade, not simply in the 19th and early 20th centuries but also in the 18th century, when the foundations were laid for later economic developments that would affect *Koroneïka*.

Of the Peloponnesian ports (Fig. 7) used during the Ottoman domination, Patras, Nauplion, Koroni, Methoni, and Navarino (Pylos) were most active during the 18th century.²⁷ At the beginning of the century, Koroni was a market town, but by the year 1750 it had grown into a major port. Of all the commodities produced in the Peloponnese during this period, olive oil was the most significant for Koroni, and vast quantities were shipped out every year in barrels. Koroni was the major transshipment point for Peloponnesian oil in the 18th century because of the presence of French *emporoi* and trading houses in the town. French ships transported a substantial portion of the Peloponnesian oil to Marseille, where factories used the oil throughout the 19th century in the production of soap, and thus in the processing and cleansing of wool, cotton, and other fibers before they were woven into cloth, and the finishing of cloth before it was dyed. Since at this time the Peloponnese and

²⁶ These Italian products are referred to in the Ionian Islands and the area of Naupaktos as *Λιβορνοδέσικα* or vessels from Livorno, Italy, a port with substantial trade during the 18th (Sakellariou [footnote 3 above], p. 210) and 19th centuries. Small Italian-type storage jars found in the southern part of Messenia were called *Λιβή* (Pl. 112:c).

²⁷ Kremmydas, p. 23.

Crete were the major producers of oil in the Aegean, the French market was consuming a good part of Greek output in the late Ottoman period.²⁸

Emporoi in the 18th-century Peloponnese included individuals from the southern European nations and from present-day Yugoslavia, Turks, Jews, and Greeks. Among these traders there was considerable competition for control of commodities such as olive oil, and by the last quarter of the 18th century Greek ships and Greek *emporoi* began to replace the French in the oil trade, in part because French interest in importing Greek oil had declined. The cloth factories at Marseille after 1780 did not need Greek olive oil to meet their production goals, and this trade came eventually to a halt. At the same time, in the years before Greek independence, genuine Greek trade began to develop, as a result of international agreements such as the Treaty of Küçük Kaynarca in 1774, which endorsed measures protecting the cultural and economic rights of Christians within the Ottoman Empire, and industry, formerly the domain of western Europe, became a strong part of the Greek economy.

In the late 18th and early 19th centuries, a number of oil mills, oil warehouses, oil merchandising establishments, and soap factories owned and operated by Greeks were established along the shores of the Aegean. One of the features of these industrial units was storage space for newly milled oil, for oil to be sold or traded, and for oil lees that would be used in soap production. It is to an oil warehouse in Herakleion that the *Koroneïko* shown in Plate 110:b was shipped at the turn of the century. Oil mills and warehouses in the Dodecanese and western Anatolia (Pls. 110:c and 112:e–g) tended, in contrast, to use “Mytilene” *kioupi* or *küpler*,²⁹ which most informants insist were made by potters from the island of Mytilene, but which were probably produced in one of any number of eastern Aegean potters’ workshops during the 19th century. In this eastern Aegean region *Koroneïka* were employed in the homes of wealthy individuals, members of a rising commercial or landholding middle class who could afford to import quality goods, including *pitharia*, into their homes and *apothekes*. In Crete, however, local Cretan *pitharia* continued to be used in homes, and *Koroneïka* appear to have been primarily for commercial use.

It is the quality and durability of the Koroni *pitharia* that marked them for use in prosperous 19th-century households and in commercial enterprises throughout the Aegean. The spherical Type 1 *pithari* (Fig. 6) produced in Koroni was viewed as a long-lasting investment for the storage of oil in the home and the factory. Thick walled, easily moved, and known for its “keeping” ability for oil, it was a wise commercial purchase, in contrast, for example, to the thinner-walled, less rugged Cretan *pitharia*. A burgeoning oil trade within the 19th-century Aegean provided both the commercial need for such sturdy vessels

²⁸ Kremmydas, p. 144.

²⁹ Owners and workers in olive-oil mills and oil warehouses along the west coast of Anatolia were consistent in calling these vessels “*küpler*, *Midilli'den*” (“*pitharia* from Mytilene”). The term *kioupi*, used instead of *pithari* throughout the Dodecanese and in some of the Cycladic islands, is a Greek variation on *küp*. For a complete discussion of the foundation of and production in oil mills and soap factories in Mytilene see Βιομηχανικά Κτήρια στη Λέσβο (19ος και Αρχές 20ου Αιώνα) Ελαιοτριβεία-Σαπουνοποιεία, Νομαρχείο Λέσβου, Mytilene 1986, especially pp. 49–55, which show storage areas similar to the Ayvalik warehouse illustrated here in Plate 112:e. In a few cases these soap factories and oil mills date to the late 18th century as well.

and the individually held capital for their purchase. Koroni potters constantly stated that in the private sector the “rich” were the purchasers of *Koroneïka*, since they were the ones with capital available in order to buy them and the abundance of oil requiring storage in their home *apothekes* and their commercial establishments.

The distribution of Type 1 Koroni *pitharia* throughout the Aegean and the eastern Mediterranean during the 19th century thus reflects the growth of Greek-owned industry and the continued trade of olive oil within a newly defined economic situation involving Greek entrepreneurs as well as foreign ones. Type 1 *Koroneïka* are also indicators of the rise of a class of individuals whose wealth was based to some degree on landholding but primarily on trade and industry. With the end of Ottoman domination in parts of Greece and the decline of Ottoman dependence on the participation of foreign interests in trade, 19th-century Greece entered a period of active internal economic growth in which Greeks and foreigners alike had a role. Wheat, olive oil, legumes, currants, silk, cheese, and unprocessed wool continued to be produced in the Peloponnese, but the major ports by the beginning of the 19th century were Patras and Nauplion; Koroni was no longer among the most important.³⁰ The quantities of goods produced appear to have traveled in more and different directions in the 19th century than before, with perhaps more participants on a smaller scale. While it was common in the 18th century for foreign (western European) trading houses to use the flag of Jerusalem for their ships, or, from the middle of the century, the Ottoman flag,³¹ 19th-century ships appear to have been owned and operated by a wider assortment of traders from locations throughout the eastern Mediterranean. Determining the ownership of these vessels was difficult, for they might be manned by Greeks or by an international crew headed by a Greek or foreign national who was simply an agent for traders in some other part of the eastern Mediterranean.³² Thus it is not clear, when the Koroni potters speak of Palestinians or Turks docking at the Koroni port, to whom the ships actually belonged.

The profit motive was in effect in the Peloponnese (and Koroni) both within the period of Ottoman domination and during the century after Greek independence was won in 1821. Traders during the Ottoman period and thereafter maintained a position of power based on capital accumulation and existed outside the normal structure of land-bound society, which included landowners, farmers, and craftsmen.³³ Trade, both within the Ottoman Empire and outside it, was perceived as the most efficient means to capital accumulation, and in every sense was a local response to external developments on a regional and international level.

IMPLICATIONS FOR PREHISTORIC AEGEAN TRADE

In his classic article “Anthropological Perspectives on Ancient Trade,” Robert McC. Adams suggested that studies of ancient trade have tended to view the subject in terms of “habitual

³⁰ Kremmydas, p. 30, p. 155.

³¹ Kremmydas, p. 244.

³² Leon (footnote 25 above), p. 15.

³³ Leon (*op. cit.*, p. 14) notes this phenomenon for earlier periods.

patterns in the movement of goods.”³⁴ He pointed out that ancient trade was considerably more complex than has been assumed and that ethnographic and ethnohistoric sources could be used to provide some clarification of this complexity. This study of the production and trade of Koroni *pitharia* in the 19th- and 20th-century Aegean offers some indication of the variety of factors influencing trade in a traditional society.

Primarily on the basis of the distribution of Mycenaean pottery, scholars have interpreted trade in the Late Helladic III Aegean as palace-linked commerce that was carried out in Mycenaean ships.³⁵ It would be correct to infer from the trade in *Koroneïka* that this need not have been so. While *Koroneïka* were widely distributed across the Aegean from a single source, no central administrative structure controlling this trade ever existed at Koroni. The same may be true for Mycenaean trade in the Aegean, since there is no mention of overseas trade in the Linear B tablets. In addition, the centralized production of *Koroneïka* does not imply the existence of a Messenian fleet that carried the jars across the Aegean. This is partly true because pottery, including *Koroneïka*, was an incidental commodity, secondary to the wide variety of basic goods that formed the foundation of 19th-century Aegean trade. The same probably holds for the Late Bronze Age III period, as the cargo, primarily copper ingots but also Cypriot pithoi and Milkbowls, of the Kaş shipwreck seems to indicate.³⁶

During the Ottoman period, traders of many nationalities appear to have operated outside the normal structure of society established by the Ottoman Empire. They acted not as producers, like farmers and craftsmen, but were motivated by profit and were relatively independent of the strictures of Ottoman rule.³⁷ Likewise, traders do not seem to figure in the Late Bronze Age Linear B tablets, an indication that they may have functioned outside established, land-bound society, away from the direct control of the Mycenaean palatial administration. Scholars who have considered Late Helladic III trade in the Aegean have assumed that the Mycenaean palace was the sole source of capital at that time. This may not be correct. In the Ottoman Empire and its aftermath there were clearly two sources of capital: political power and commercial (multinational) enterprise.

The stimuli for the manufacture of *Koroneïka* were primarily external: the declining role of French traders, the reduced oil needs of the Marseille soap and textile factories, Greek independence and the resulting Greek trade and industrial growth in Aegean oil mills, oil-merchandising establishments, and soap factories that needed storage jars. Their manufacture was fueled locally by pressure on the land and poverty among the Koroni peasants.

The problem with current interpretations of Late Helladic III trade is that the appearance and spread of Mycenaean pottery in the Mediterranean have been treated solely in

³⁴ R. McC. Adams, “Anthropological Perspectives on Ancient Trade,” *Current Anthropology* 15, 1974 (pp. 239–249), p. 249.

³⁵ F. H. Stubbings, “The Expansion of Mycenaean Civilization,” *CAH* (rev. ed. 1965), II, chap. XXII(a), pp. 16–21; G. Cadogan, “Patterns in the Distribution of Mycenaean Pottery in the East Mediterranean,” in *Acts of the International Archaeological Symposium “The Mycenaeans in the Eastern Mediterranean”*, Nicosia 1973, pp. 166–174.

³⁶ Bass (footnote 1 above), pp. 269–296; Pulak (footnote 1 above), pp. 1–37.

³⁷ Kremmydas, pp. 152–155.

Aegean terms, as if the process could be explained by a literal reading of the archaeological remains alone. This study suggests that such a view is almost certainly an oversimplification and that there were other important factors at work in the distribution of Mycenaean pottery overseas, such as the powerful Near Eastern trade structure, the presence of eastern traders in the Aegean, and the changing economic and political conditions caused by fluctuating relations among international powers in the eastern Mediterranean.³⁸

GLOSSARY³⁹

Ἄγγειοπλάστης (pl. ἄγγειοπλάστες). Potter.

Ἄπλωμα. Round, flat clay patty created through wedging.

Ἀποθήκη (pl. ἀποθήκες). The potter's workshop. Also a general term for storeroom.

Ἄργιλλος. *See* πηλός.

Ἄχυρο. Chaff used in kiln construction.

Βαρέλι (βαρέλια) (pl. βαρέλια, βαρέλες). Transport for olive oil.

Βέργες. Vine cuttings used as kiln fuel.

Βήκα (pl. βήκες). Bisque-fired water jar, known in its large size as an εἰκοσάρα.

Βηκιά. Two-handled glazed vessel for wine or water.

Γιαλί. *See* λιθάρι, μίνιο.

Γλάστρες. Flowerpots made on the wheel.

Γλίνα. *See* πηλός.

Γουδί (pl. γουδιά). Wheelmade vessel as a mortar.

Γρόττα. Clay mine.

Δείγματα (μικράκια). Small sample pots used by the potter in firing to determine the condition of the kiln.

Δέμα (pl. δέματα). Measure of kiln fuel.

Διαλεγμένο. Description of clay chosen for mining.

Διχούλι. Double-pronged tool used in loading and unloading the kiln.

Εἰκοσάρα. *See* βήκα.

Ἐλαιά. Olive-wood.

Ἐλαιοπῶλες. Oil merchants.

Ἐλαιοτριβεία. Oil mills.

Ἐμπόριο. Trade.

Ἐμπορος (pl. ἔμποροι). Trader.

Ζωνάρι (pl. ζωνάρια). Rib on a Koroni πιθάρι.

Καμάρες. Arches supporting the firing chamber of the kiln.

Καμίνι. Potter's kiln; also called the φούρνος.

Κανάτα (pl. κανάτες). Measure of olive oil.

Καπάκι (pl. καπάκια). *See* φανούρια.

Καπακλί (pl. καπακλιά). Wheelmade vessel for use in the field. Also known as πινιάτα.

Κάρο (pl. κάρα). Two-wheeled wooden cart.

³⁸ A full comparative study of Aegean trade patterns and their relation to eastern Mediterranean commercial enterprise ("Patterns of Commodity Trade and the Traditional Aegean Economy: Implications for Antiquity") is in preparation. Some of these themes have been addressed by A. Yannai in *Studies on Trade between the Levant and the Aegean in the 14th to 12th Centuries B.C.*, diss. Oxford University, 1983.

³⁹ This article contains local Messenian word forms and pronunciations which in many cases deviate from the standard, accepted spellings found in dictionaries. The words and phrases are recorded here as spoken by the potters themselves and, as with all data in this article, have been verified through years of fieldwork.

Καραγωγός (pl. *καραγωγοί*). Owner of a cart (*κάρο*) who provided transport for commodities in the interior Peloponnese.

Κατοχή. The occupation of Greece in World War II.

Κατωτροχή. Lower (kick) wheel of the potter's wheel.

Κεραμοποιός (pl. *κεραμοποιοί*). Roof-tile maker.

Κιούπι (pl. *κιούπια*). Term used instead of *πιθάρι* in the Dodecanese and in some parts of the Cyclades. From the Turkish *küp*.

Κόλλησις (pl. *κολλησείς*). The addition of a ring and rib to a Koroni *πιθάρι*.

Κολόνα. *See* *στύλος*.

Κόπανο or *κόπανα* (pl. *κόπανα* or *κόπανες*). Wooden mallet for beating clay.

Κορωνείκα. *Πιθάρια* manufactured in the Koroni district.

Κουρούπα (pl. *κουρούπες*). *Πιθάρι* in which clay and water were mixed.

Κυλοτά. "Rolling", the means by which *Κορωνείκα* were transported to ships waiting on the shore of the Messenian Gulf.

Λαδάδες. Oil merchants.

Λαϊ (Λαίνο) (pl. *λαίνα*). Wheelmade clay table vessel for water.

Λάσπη. *See* *πηλός*.

Λεκάκι (σουπιέρα) (pl. *λεκάνια*, *σουπιέρες*). Wheelmade bowl for use in the home.

Λεπίδι (λεπιδόχωμα). Crushed rock added to *πιθάρι* clay in the production of 19th-century Koroni *πιθάρια*; also known as *στουλνάρι* when used in road construction.

Λιθάρι, λιθάργυρος (*μίνιο*, *γιαλί*). Glaze used for *πιθάρια* and small vessels in the Koroni district.

Λινάτσες. Hemp mats used in the potters' workshops.

Μασά. Tool used in loading and unloading the kiln.

Μάτσο (pl. *μάτσα*). Measure of fuel (bunch or bundle).

Μικράκια. Small wheelmade vessels which were also used individually as samples in kiln firings.

Μίνιο. *See* *γιαλί*, *λιθάρι*.

Μπάλλες. Spheres of clay made by the potter prior to the production of vessels on the wheel.

Μπαντανάς. Decorative earth used in production of wheelmade pottery.

Μπόμπα (pl. *μπόμπες*). Local name for conical *πιθάρι*.

Ντακάκια. Rectangular clay solids used as kiln supports.

Ξενό χῶμα. Non-argillaceous particles found in mined clay.

Ώκά (pl. *ὀκάδες*). Nineteenth-century (and earlier) measure; 1 *ὀκά* = 1.27 kg.

Πανωτροχή. Metal upper wheel of the potter's wheel.

Πάτημα. Wedging of the clay on the stamping floor.

Πηλός. Clay; also called *χῶμα*, *λάσπη*, *γλίνα*, *ἄργιλλος*.

Πιθαράκι. Small *πιθάρι*.

Πιθαράς (pl. *πιθαράδες*). Potter who manufactures *πιθάρια*; also known as a *τζαράς*.

Πιθάρι (pl. *πιθάρια*). Clay storage jar.

Πιθαρόπουλος. Small *πιθάρι*.

Πινιάτα (pl. *πινιάτες*). *See* *καπακλί*.

Πιπίνι. Local earth used in making glaze.

Πλίθρα (pl. *πλίθρες*). Unfired mud brick.

Πούρια. Baskets used in the transport of clay.

Πυρήνες. Crushed olive pits used as fuel.

Ροϊ (pl. *ροϊά*). Wheelmade vessel for use in the home as a pitcher.

Σανίδα (pl. *σανίδες*). Wooden boards, used in the lower (kick) wheel, in lids of *πιθάρια*, and on the stamping floor.

Σαπουνοποιός (pl. *σαπουνοποιοί*). Soap manufacturer.

Σκίνα. *Pistacia* wood used as kiln fuel.

Σουπιέρα (pl. σουπιέρες). *See* λεκάνι.

Σουρές. Clay settling basins.

Στάμνα (pl. στάμνες). Largest of the wheelmade household storage jars made with three handles (τριπλο-
χέρι) and with two handles (διχέρι).

Σταμνάς (pl. σταμνάδες). Potter who manufactures vessels on the wheel.

Στέλλα. Wooden tool used in shaping wheelmade vessels. Potter's rib.

Στύλος. Central column in the kiln stoking chamber; also known as κολόνα.

Τευκέες (pl. τευκέδες). Metal container (= 12 ὀκάδες) used in potter's workshop.

Τζάρα (pl. τζάρες). Another name for πιθάρι.

Τζαράς (pl. τζαράδες). Potter who manufactures τζάρες (πιθάρια): another name for πιθαράς.

Τόρνος. *See* τροχός.

Τρίχρο πιθαρόπουλος. Nineteenth-century, three-handled small πιθάρι made by πιθαράδες.

Τροχός. Potter's wheel; also called the τόρνος.

Τρυπάνι. Hand-powered drill.

Τσουκάλια. Clay cooking pots produced on the island of Siphnos.

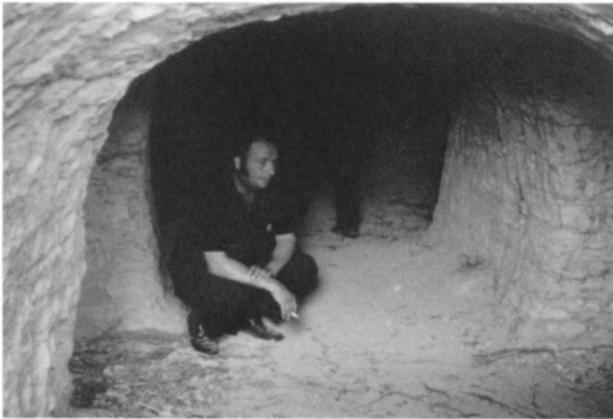
Φανούρι (pl. φανούρια). Smoke hole in the dome of the kiln, closed with clay lids called καπάκια.

Φούρνος. Potter's kiln; also called the καμίνι.

Χῶμα. *See* πηλός.

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a. Clay mine used by Koroni potters during the 19th century



b. Detail of pick marks on the walls of clay mine



c. Cobble- to boulder-size chunks of clay deposited in outdoor beating area of the potter's workshop



e. Pebble- to granule-size clay pieces ready for soaking



d. Beating the clay with a *kopano* in preparation for mixing with water



f. *Kouroupa* used for mixing clay with water in 19th- and 20th-century Koroni workshops

PLATE 100



a. Broken Type 1 *pithari* and stirring rod used for mixing clay and water. In background, filled settling basins



b. Settled clay cut into squares prior to removal from basin



c. Fired-brick basin from which clay has been removed



d. Stamping and wedging the clay inside the workshop



e. Interbedded shale, mudstone, and chert rock (*lepidi*) crushed, battered, and mixed with the clay of 19th-century *pitharia*



f. Base of typical Type 1 *pithari* showing *lepidi* fragments



a. Forming the base



b. Adding a soft ring to form the wall

Pithari production inside potter's *apotheke*



c. Smoothing and consolidating the ring



d. Drawing the wall outward and upward



e. The completed base

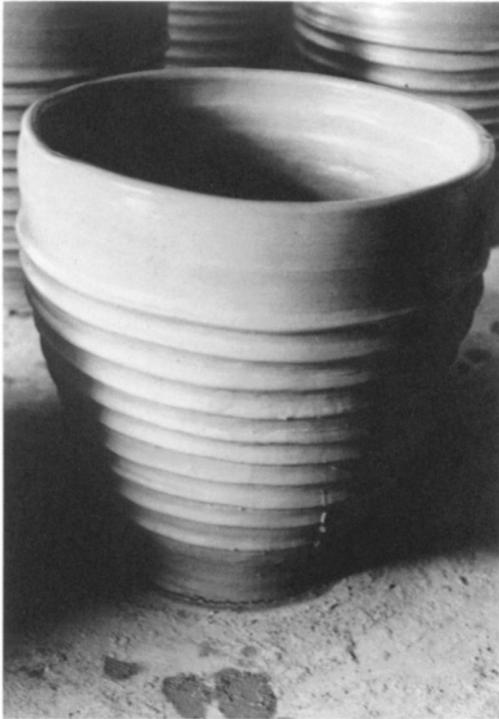


f. Drawing up the clay of an added ring (*kollesis*)



g. Smoothing and evening out the *kollesis*. Note the wetness of the clay

PLATE 102



a. Raised ring having dried for one day.
Note the wet base of the *pithari*

Pithari production inside potter's *apotheke*



b. Creamlike clay added to make the *zonari*



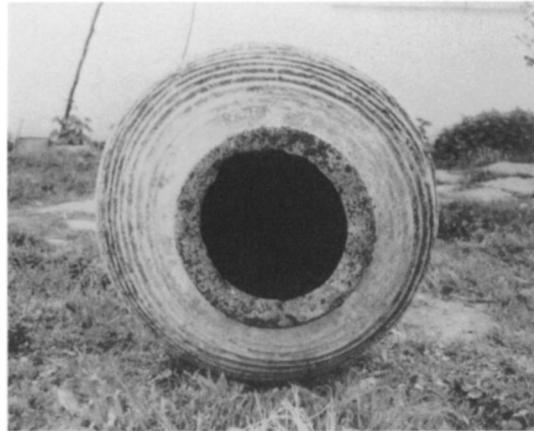
c. Adding *zonaria* to a succession of *pitharia*



d. Drawing up the walls of a succession of *pitharia*



a. Type 1 *pithari* produced during the 19th century. Kusadasi district, western Anatolia



b. Type 1 *pithari* resting on its *zonaria* in the manner used during 19th century for transport downhill to ships



c. Type 1 *pithari* in foreground. In background: Type 2. Chania district, Crete



d. Type 3 *pithari*. Sinarades district, Corfu



e. Type 4 *pithari*. Koroni district, Messenia



f. Detail of *lepidi* inclusions in the walls and ribs of 19th-century *Koroneika*



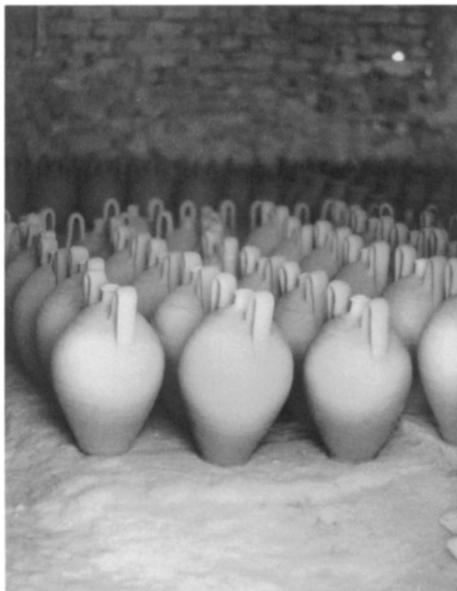
a. Potter's wheel, Koroni district



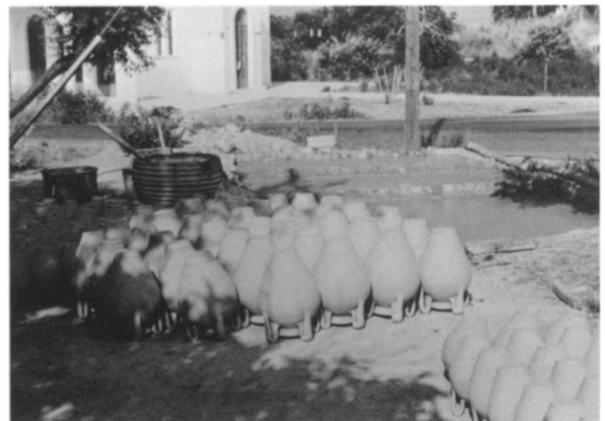
b. Producing a *stamna* on the wheel



c. Detail of a wheel showing pit and water vessel set in clay



d. *Bekes* drying inside the workshop building (*apotheke*)



e. *Stamnes* drying outdoors



a. *Pithari* kiln, Koroni district



b. Detail of a *pithari* kiln showing dome and broken *pitharia* built into walls



c. Detail of b showing upper level of dome



d. Detail of b showing baked clay lining below and curvature of kiln wall above

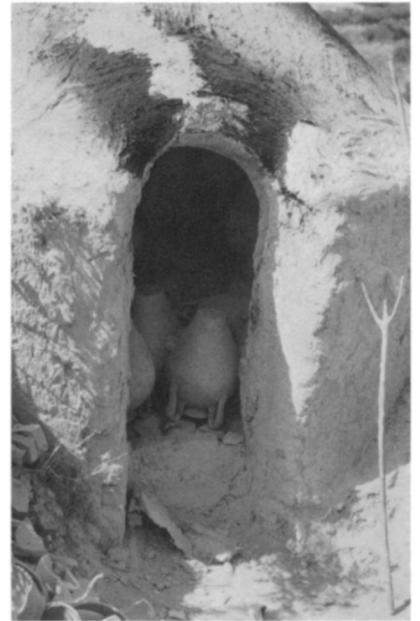


e. Cross-section of a typical kiln wall

PLATE 106



a. Freestanding kiln for wheel-made vessels, showing extra mud-brick support at base. Settling basins in foreground



c. Detail of firing chamber entrance showing unfired stacked vessels. Loading tool to right



b. Kiln for wheelmade vessels built into hill



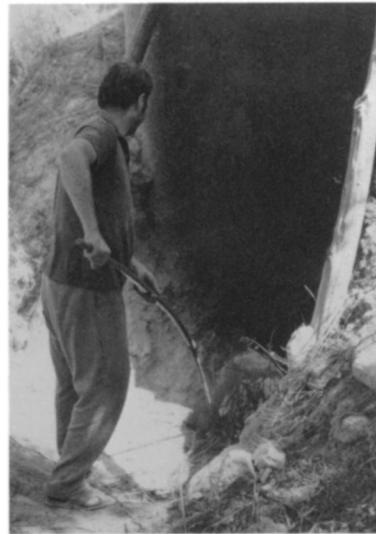
d. Sealed firing chamber door at start of firing. Note small aperture at top of door



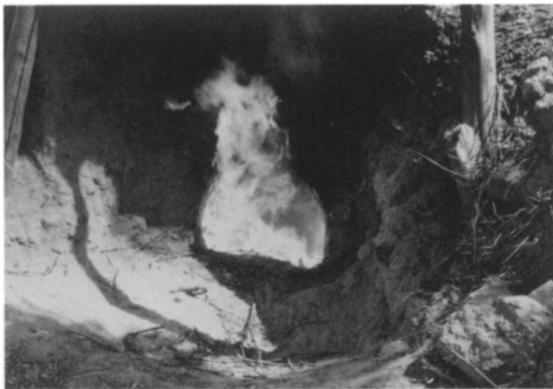
e. Heavy emission of smoke during first half of firing. All *phanouria* open



a. Stoking chamber entrance. Half-matso of fuel before entrance



b. Inserting fuel on one side of stoking chamber



c. Emission of fire from stoking chamber after five hours of firing



d. Sealed stoking chamber. Firing completed



e. Opening the firing-chamber door. Removal of vessels



f. View into firing chamber showing completed stacked vessels



a. Tools for loading and unloading and bisque-fired vessels



b. Breakage accumulated outside kiln over several seasons



c. Stratified breakage deposits east of Vounaria



d. Detail of c



e. Large sherds of 20th-century *pitharia* and wheelmade vessels covering mud-brick walls. Note sherds in mud brick



a. Bisque-fired *bekes* stored in a potter's *apotheke*



b. *Apotheke* filled with vessels before shipment to market or port



c. *Stamnes* by roadside, ready for transport to market



d. *Pitharia* and wheelmade vessels for sale at *panegyri*. Petalidi, Messenia



e. Tools for roof-tile production. Left, *kaloupi*. Right, *kopano*



f. Kiln supports for *pitharia*

PLATE 110



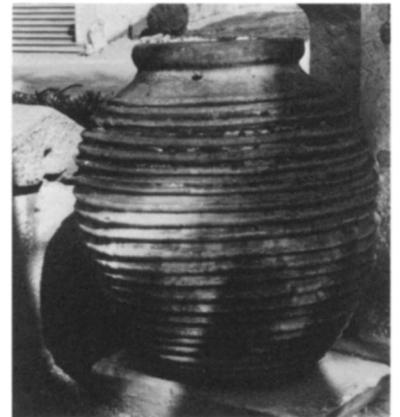
a. Type 1 *pithari*. Koroni district, Messenia



b. Type 1 *pithari*. Knossos district, Crete



c. Type 1 *pithari* and Eastern Aegean *koupi*. Samos



d. Type 1 *pithari*. Prinkipos Islands, Sea of Marmara



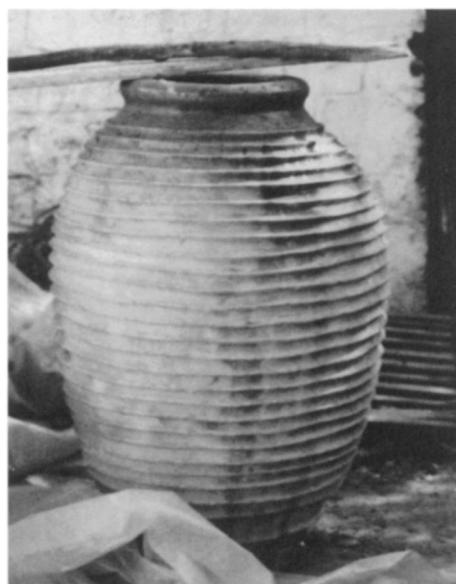
e. Type 1 *pithari*. Thera



f. Type 1 and Type 2 *pitharia*. Ithaka



a. Type 5 *pithari*. Koroni district, Messenia



b. Type 6 *pithari*. Koroni district, Messenia



c. Type 7 *pithari*. Petalidi district, Messenia



d. Koroni district *stamna* and Italian-made storage jar. Ithaka



e. Handmade lid of type used for *stamnes* and smaller Koroni *pitharia*

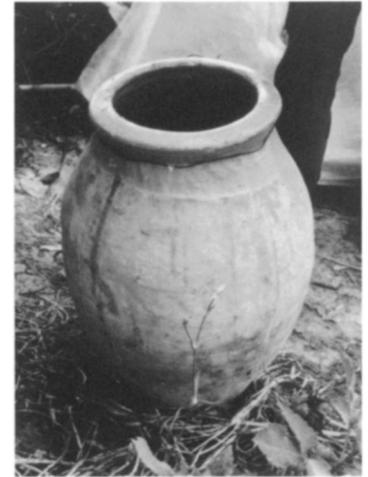
PLATE 112



a. Italian storage jar. Corfu



b. Italian storage jar of type found in northwest Peloponnese, Naupaktos, and Ionian Islands. Ithaka



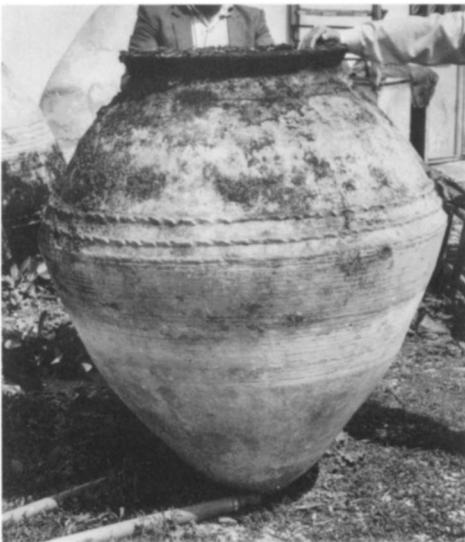
c. Italian-type storage jar found in Ionian Islands and western Peloponnese, called *Λιβή* in Koroni and Methoni districts. Phoinikounta in the Peloponnese



d. Cretan *pitharia* and *kourou피아* made at Thrapsano, Crete



e. Eastern Aegean storage jars (*kiouπia*) at an olive-oil warehouse. Ayvalik district, western Anatolia



f. Eastern Aegean *kiouπi*

g. Olive-oil depot with *kiouπia in situ*, for oil lees. Note spillage and oil buildup on earth floors. Ayvalik district, western Anatolia

