

EXPLORING REGIONAL VARIATION IN LATE CYPRIOT II–III PITHOI: PERSPECTIVES FROM ALASSA AND KALAVASOS

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INTRODUCTION

Large storage jars known as pithoi became part of the Cypriot ceramic repertoire in the third millennium B.C. They were used for household storage of food products and liquids throughout the Bronze Age and later eras. During the Late Cypriot (LC) period, pithoi also began to figure prominently in the domains of exchange and political economy. Vessels of diverse shapes and sizes were occasionally shipped to distant ports around the Mediterranean, accompanying cargoes of copper and other trade goods.¹ Very large jars, sometimes measuring up to two meters in height, were produced for use in official or elite storage complexes on Cyprus, most notably in the LC II–III periods.² Broad typological similarities are evident among the pithoi recovered from widely dispersed settlements in Cyprus and abroad, but the question of whether there was any significant regional variation in the forms, fabrics, and technological attributes of these vessels has yet to be systematically explored.

The study of regional variation in Late Cypriot pithoi is important because of the light it may shed on regional systems of ceramic production and distribution, politico-economic organization, and perhaps on broader networks of long distance trade as well.³ In this paper I make a preliminary attempt to address the question of regional variation in pithos production through the comparison of storage vessels from Alassa (Paliotaverna and Pano Mandilaris) with those from Kalavassos Ayios Dhimitrios and other sites

dating to the LC II and LC III periods. I would like to emphasize that this discussion represents a work in progress, detailing current and future lines of analysis rather than presenting a series of definitive conclusions. As such, I hope it will serve as a stimulus for further discussion and research.⁴

A TYPOLOGICAL OVERVIEW OF LATE CYPRIOT PITHOI

A general transformation of Middle Cypriot pithos wares and styles seems to have been underway during the LC I period, culminating in the distinctive array of forms and fabrics observed in the LC II–III periods.⁵ On the basis of a detailed study of the LC IIC pithoi of Kalavassos Ayios Dhimitrios and comparative analysis of pithoi from other roughly contemporaneous sites, I have proposed a general schema of pithos types based on formal attributes and size.⁶ Three principal groups of pithoi (I–III) with various subcategories of styles and sizes may be discerned. Frequently recurring types associated with these groups are illustrated in Figure 1. Table 1 tracks parallels for the forms illustrated in Figure 1 as well as variant types within each category from sites in Cyprus. Table 2 presents descriptive statistics on size variation within the formal and size classes defined.

Pithoi assigned to Group I (Fig. 1: a–c) have wide mouths and short necks relative to their overall body sizes. They may have been used for products that were accessed frequently and stored on a relatively short-term basis. They are found both in monumen-

¹ Eg., the Uluburun shipwreck (PULAK 1998, 203–204); see also the Cape Iria wreck (LOLOS 1995, 73–78). Cypriot pithoi have also been found at Ras Shamra and Minet el-Beida in Syria (SCHAEFFER 1949, 209, fig. 86), various sites in Israel (BALENSI 1985, 71, no. 10; RABAN 1988, 289–290, fig. 12; STERN 1993, 327, fig. 2, 333, no. 10 with references), Kommos in Crete (WATROUS 1992, 157–158, fig. 70, pl. 52), Antigori in Sardinia (JONES and DAY 1987, 259, 262), and Marsa Matruh in Egypt (HULIN 1989, 120–121).

² KESWANI 1989, 1992, 1993; PILIDES 2000a.

³ If it is possible to “fingerprint” the sources of pithoi based on a combination of petrographic, physico-chemical, and typological analyses, then the study of these vessels could be

very useful in reconstructing Late Bronze Age trade routes and ports-of-call in the eastern Mediterranean. It is necessary to understand the prevailing systems of pithos production in Cyprus first, however, because if production was centralized rather than localized, the place of production might have been relatively distant from the place of export.

⁴ I would like to thank Sophocles Hadjisavvas for the invitation to study the pithoi from his excavations at Alassa and the Institute for Aegean Prehistory for supporting this research. I am also grateful to Paulos Flourentzos, Director of the Cyprus Department of Antiquities, for facilitating my studies.

⁵ PILIDES 1996, 106–110; 2000a, 1–7, figs. 1, 2.

⁶ SCHUSTER 1984; KESWANI 1989.

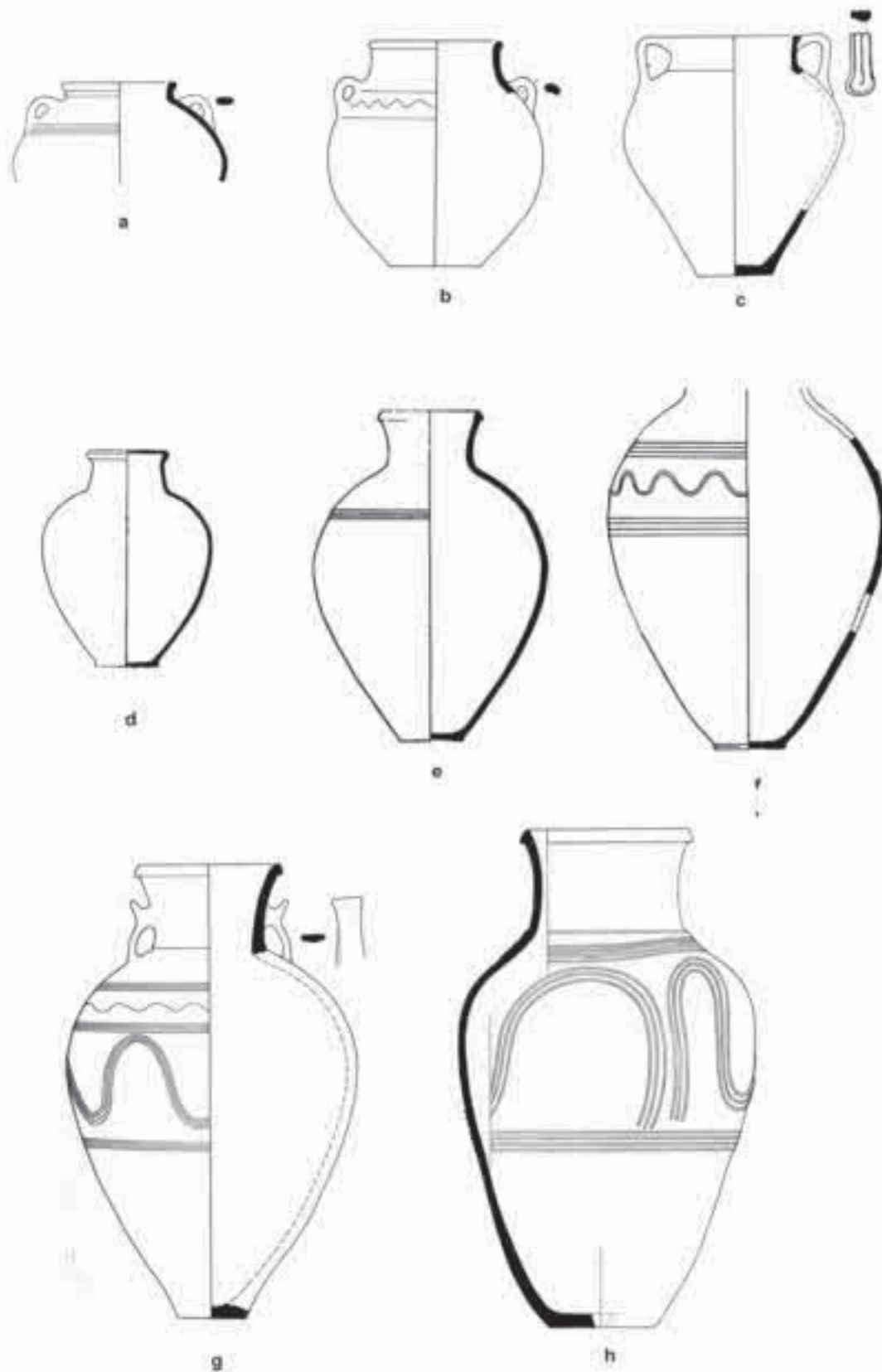


Fig. 1 Examples of Late Cypriot pithos forms: a) Group IA; b) Group IB1; c) Group IB2; d) Group II size 1; e) Group II size 2/3; f) Group II size 3/4; g) Group II size 4; h) Group III. See Table 1 for source references, height measurements and comparanda

FORM / SIZE CATEGORY	FORMS ILLUSTRATED IN FIGURE 1 AND PARALLELS	OTHER FORMAL AND SIZE VARIANTS WITHIN THE CATEGORY
Group IA (Fig. 1:a)	<p>Illustrated: K-AD II, ^afig. 16:2 (pres. ht. 40 cm) Description of example: extremely short-necked pithos with wide mouth; vertical loop handles on shoulder; horizontal bands of relief decoration</p> <p>Parallels: K-AD II, fig. 16:1 (pres. ht. 37 cm) M-P, ^bfig. 24:373 (ht. ca. 50 cm)</p>	<p>M-P, ^bfig. 24:354 (ht. ca. 78 cm); no handles; large size M-P, ^bfig. 24:355 (ht. ca. 50 cm); no handles or body decoration Kition V, ^cpl. CCXIII:1125 (ht. 11.4 cm); no handles; wavy as well as horizontal relief bands of decoration; large size Apliki (PILIDES 2000a, 19, fig. 7:3); fragment with incised wavy line decoration</p>
Group IB1 (Fig. 1:b)	<p>Illustrated: K-AD II, fig. 16:23; (ht. 65 cm) Description of example: short-necked pithos with vertical loop handles on shoulder; incised wavy and horizontal lines</p> <p>Parallels: K-AD II, fig. 16:21, 22 (hts. ca. 63, 61 cm) M-P, ^bfig. 24:374 (ht. ca. 56 cm) Kition V, ^cpl. CCXXI:3008 (pres. ht. 39 cm; ca. 1/2–2/3 profile) Apliki, ^d139, fig. 6:2 (pres. ht. ca. 61 cm; ca. 6/7 profile) Apliki, 151, fig. 12:3 (ht. ca. 54 cm) P-K, ^epls. XXII, XXXIX:88 (pres. ht. 28.5 cm) Maa, ^fpls. LXI, CLXXXIV:469 (ht. 63.5 cm) Maa, ^fpls. LXXXII, CXCV:530 (ht. 46.3 cm)</p>	<p>Apliki, 143, fig. 8:4 (pres. ht. ca. 75 cm; ca. 9/10 profile); 2 parallel wavy incised bands; large size Kition V, ^cpls. CLXXXV, CCXXXVIII:3681 (ht. 75 cm); 2 parallel wavy incised bands of decoration; large size K-AD 1983, ^g34, fig. 6:13, 14 (hts. ca. 69, 51 cm); no handles M-P, ^bfig. 24:372 (ht. ca. 56 cm); no handles or body decoration K-B, ^hpl. 27:B926 (ht. 77 cm); no handles or body decoration TIS, ⁱ108, pl. 55:P1042 (ht. 64 cm); no handles or body decoration P-K, ^epls. XXII, XXXIX:6, 26, 87 (hts. 70, 75.5, 60.3 cm) and P-K, ^epls. XXII, XL:107, 126 (hts. 64 cm, pres. ht. 42.5 cm); no body decoration Apliki, 151, fig. 12:4 (ht. ca. 74 cm); no body decoration K-B, ^hpl. 27:B940,941, 942 (hts. 55, 59, 62 cm); no body decoration P-K, ^epls. XXII, XXXIX:17 (ht. 56 cm); horizontally mounted vertical loop handles; no body decoration Kition V, ^cpl. CCXIII:1124 (ht. 103 cm); horizontally mounted vertical loop handles; horizontal and wavy relief bands of decoration; large size K-B, ^hpl. 27:B945 (fragment); horizontally mounted vertical loop handles; horizontal and wavy relief bands of decoration in contrasting color clay or paint</p>
Group IB2 (Fig. 1:c)	<p>Illustrated: K-AD II, fig. 16:27 (ht. 65 cm) Description of example: short-necked pithos with ribbed strap handles mounted from rim to shoulder</p> <p>Parallels: K-AD II, fig. 16:24 (fragment) M-P, ^bfig. 24:365 (ht. ca. 78 cm) Apliki, 139, fig. 6:1 (ht. ca. 50 cm) Apliki, fig. 11:2 (fragment) P-K, ^epl. XL:45A (restored ht. 91 cm) K-B, ^hpl. 27:B947, pl. 28:B950 (hts. 63, 56 cm)</p>	<p>K-AD II, fig. 16:25 (fragment); flat strap handle mounted below rim; crudely incised horizontal and wavy decoration K-AD II, fig. 16:26 (ht. ca. 73 cm); flat strap handle mounted below rim; parallel horizontal relief bands of decoration K-AD 1983, ^g34, fig. 6:15 (fragment); incised horizontal and wavy decoration P-K, ^epls. XXII, XL:16 (ht. 60 cm); neck widening toward base Kition V, ^cpls. CLXXX, CCXXXVII:4633 (ht. 45 cm); neck widening toward base; ring base; incised horizontal lines of body decoration Kition V, ^cpls. CLXXX, CCXXXVII:4634 (ht. 55.2 cm); handle mounted below rim; neck widening toward base; ring base K-B, ^hpl. 27:B946 (ht. 67 cm); neck widening toward base; disc base Apliki, 151, fig. 12:2 (ht. ca. 58 cm); disc base TIS, 107, pl. 55:P207 (ht. 52 cm); incised horizontal and wavy line on shoulder</p>
Group II size 1 (Fig. 1:d)	<p>Illustrated: M-P, ^bfig. 24:375 (ht. 64 cm) Description of example: small, long-necked pithos without handles; no decoration</p> <p>Parallels: K-AD II, fig. 17:8 (ht. ca. 67 cm)</p>	<p>TIS, 107, pl. 55:P207 (ht. 52 cm); incised horizontal and wavy line on shoulder</p>

^a K-AD II = Kalavassos Ayios Dhimitrios (KESWANI 1989).

^b M-P = Myrtou Pighades (CATLING 1957).

^c Kition V = Kition (KARAGEORGHIS and DEMAS 1985).

^d Apliki = Apliki Karamallos (TAYLOR 1952).

^e P-K = Pyla Kokkinokremos (KARAGEORGHIS and DEMAS 1985).

^f Maa = Maa Palaeokastro (KARAGEORGHIS and DEMAS 1988).

^g K-AD 1983 = Kalavassos Ayios Dhimitrios (SCHUSTER 1984).

^h K-B = Kourion (Episkopi) Bamboula (BENSON 1972).

ⁱ TIS = Toumba tou Skourou (VERMEULE and WOLSKY 1990).

Table 1 Typological variation in Late Cypriot pithoi: examples and comparanda keyed to Fig. 1

FORM/SIZE CATEGORY	FORMS ILLUSTRATED IN FIGURE 1 AND PARALLELS	OTHER FORMAL AND SIZE VARIANTS WITHIN THE CATEGORY
Group II size 2/3 (Fig. 1:e)	<p>Illustrated: <i>M-P</i>, 57, fig. 24:359 (ht. 100 cm) Description of example: medium- to large-sized, long-necked pithos without handles; parallel horizontal relief bands Parallels: <i>Aphiki</i>, 143, fig. 8:3 (ht. ca. 96 cm) <i>P-K</i> pls. XXI, XXII, XLI:16A, 18A, 19 (pres. hts. 51.5, 88 cm, restored ht. 108.5 cm) <i>K-B</i>, pl. 27:B930, 932 (ht. 107 cm, pres. ht. 110 cm) <i>Maa</i>, pls. LXII, CLXXXIV:462 (ht. 100.7 cm) <i>Ts</i>, 111, pl. 60:P1147 (ht. 84.8 cm)</p>	<p><i>Kition</i> V, pls. XXXVIII, LXI:1112; (pres. ht. 95 cm; 2/3 profile); flat strap handle with thumb grip; no decoration? <i>K-B</i>, pl. 27:B931 (pres. ht. 92 cm); no decoration? <i>Maa</i>, pls. LXI, CLXXXIV:586 (ht. 79.3 cm); handles from below rim to shoulder; no decoration <i>Maa</i>, pls. LXII, CLXXXIV:463 (ht. 102.5 cm); 2 registers of incised horizontal and wavy lines; no handles</p>
Group II size 3/4 (Fig. 1:f, g)	<p>Illustrated (Fig 1:f): <i>M-P</i>, 57, fig. 24:362 (pres. ht. 110 cm) Description of example: large-sized, long-necked pithos; apparently without handles; horizontal and wavy relief bands of decoration Parallels: <i>M-P</i>, 57, fig. 24:359 (pres. ht. ca. 66 cm; 1/3-1/2 profile) Dromolaxia Trypes (ÅSTRÖM 1977, 111-112, fig. 3, ht. 145 cm) <i>Athienou</i>^j 114, fig. 52:2, pl. 35, ht. ca. 135 cm) <i>Ts</i>, 111, pl. 60:P938 (ht. 124.5 cm) Illustrated (Fig 1:g): <i>K-AD</i> II, fig. 17:28 (ht. 161 cm) Description of example: large-sized, long-necked pithos; flat strap handles with thumb grips, mounted from mid-neck to shoulder; horizontal and wavy relief bands of decoration; additional register of decoration with incised wavy line (so far unique to this case) Parallels: <i>Kition</i> V, pls. CLXXXIV, CCXXXVIII:922A (fragment) <i>Maa</i>, pls. LXXXII, CXCV:589 (ht. 134 cm) <i>Maa</i>, pls. LXXXII, CXCV:611 (fragment)</p>	<p><i>Maa</i>, pls. LXII, CLXXXIV:494 (ht. 117.3 cm); flat strap handles without thumb grips from mid-neck to shoulder <i>Kouklia</i> (MAIER 1977, 137, 139, fig. 4, TA 508, pres. ht. ca. 102 cm; ca. 2/3 profile?); single wavy relief band; disc base <i>Athienou</i>, 114, fig. 52:1, pl. 35; (ht. ca. 143 cm); thick neckband; 4 parallel horizontal relief bands around shoulder</p>
Group III (Fig. 1:h)	<p>Illustrated: <i>SCE</i> IV:IC,^k fig. LXXII:6; WESTHOLM 1943, 94, fig. 1 (ht. 169 cm); from Ayia Irini Description of example: extremely large, thick-walled, long-necked pithos without handles; horizontal and wavy relief bands of decoration; circular hole in base (occurrence variable in close parallels) Parallels: <i>M-P</i>, 57, fig. 24:361 (pres. ht. 130 cm; ca. 2/3 profile) <i>K-AD</i>; many unrestored examples from Bldg. X Analiondas Paliokichia (BUCHHOLZ 2000, 185, 187, 188, fig. 1:f, ht. 153 cm)</p>	<p><i>Kouklia</i> (MAIER 1976, 95-96, pl. XIX:1-3, 1977, 138, fig. 3, TA 415, pres. ht. 155 cm; ca. 9/10 profile); 5 parallel wavy relief bands; flat strap handles with thumb grips from mid-neck to shoulder; seal impressed directly on handle <i>HST</i>^l, 36-37, fig. 11 (ht. 168 cm); flat strap handles with thumb grips from mid-neck to shoulder <i>Ts</i>, 111, 166, pl. 62:P939 (ht. 167.5 cm); flat strap handles with thumb grips from mid-neck to shoulder <i>Ts</i>, 111, pl. 60:P1045 (ht. 172 cm); flat strap handles with thumb grips from mid-neck to shoulder</p>

^j *Athienou* = Athienou Bamboulari tis Koukouminas (DOTHAN and BEN-TOR 1983)

^k *The Swedish Cyprus Expedition*, Vol. IV, Part IC (ÅSTRÖM 1972)

^l *HST* = Hala Sultan Tekke (ÅSTRÖM 1976)

Table 1 continued Typological variation in Late Cypriot pithoi: examples and comparanda keyed to Fig. 1

tal ashlar buildings and in other, less ostentatious residential and workshop contexts. The vessels assigned to Group IA are differentiated from those of Group IB on the basis of their proportionally shorter necks, wider rim diameters, greater wall thicknesses, and relatively thick, rounded or square-shaped rims. Both Groups IA and IB display internal variations in body, base, and neck forms, the occurrence and type of body decoration, and the presence or absence of handles, handle forms, and vessel sizes. Group IB is subdivided into two categories, with form IB2 being distinguished from IB1 by the presence of flat or ribbed strap handles mounted from the rim or just below it to the shoulder of the vessel.

The pithoi of Group II (Fig. 1: d–g) have long necks and constricted mouths in proportion to their overall body sizes. They may have been intended for products that were accessed less frequently and stored over longer periods of time. Group II vessels

display some degree of variation in body and neck shapes, decoration, the presence or absence of handles, and other minor attributes, but the most striking dimensions of variability relate to size. Four different size classes were defined among the Group II vessels at Kalavassos on the basis of variations in rim diameter, neck height, and overall vessel height. Like the pithoi of Group I, Group II pithoi occur both in ashlar buildings and other settlement contexts.

Group III pithoi (Fig. 1: h) are formally similar to those of Group II but may be distinguished by their overall massivity. They have extremely thick walls (ca. 3–6 cm) and exceptional heights (up to 200 cm in some cases). At Kalavassos Ayios Dhimitrios, they were found mainly in the Northeast Area ashlar administrative complex. They also seem to have been concentrated in the ashlar buildings at Alassa Paliotaverna, rather than in the more modestly constructed buildings at nearby Pano Mandilaris. It is likely that

Group	Statistics (cm)	Rim Diam.	Neck Ht.	Wall Th.*	Vessel Ht.
IA	Range:	32.0–50.0	4.4–9.7	1.2–2.8	50.0–118.0
	Mean:	41.1	6.9	2.1	
	Std. dev.:	5.1	1.5	0.4	
	N:	19	18	19	
IB1	Range:	24.0–44.0	5.0–13.0	1.2–2.5	52.0–103.0
	Mean:	32.4	8.5	1.7	
	Std. dev.:	4.9	2.1	0.4	
	N:	26	23	29	
IB2	Range:	30.0–42.0	7.0–12.2	1.3–2.4	50.0–91.0
	Mean:	34.0	9.2	1.8	
	Std. dev.:	4.5	2.2	0.4	
	N:	8	7	7	
II size 1	Range:	19.0–32.0	9.0–15.0	1.1–2.2	64.0–67.0
	Mean:	25.2	12.6	1.8	
	Std. dev.:	4.3	2.2	0.3	
	N:	12	7	12	
II size 2	Range:	24.0–36.0	16.0–19.0	1.5–2.8	78.0–100.0
	Mean:	29.7	17.6	2.0	
	Std. dev.:	4.0	1.1	0.4	
	N:	16	14	15	
II size 3	Range:	32.0–38.0	20.7–26.0	1.5–2.9	100.0–126.0
	Mean:	35.3	23.4	2.1	
	Std. dev.:	2.0	1.9	0.4	
	N:	9	8	8	
II size 4	Range:	40.0–48.0	22.0–29.2	1.5–3.2	120.0–161.0
	Mean:	44.7	–	2.3	
	Std. dev.:	2.8	–	0.4	
	N:	28	2	20	
III	Range:	50.0–64.0	39.0–40.0	2.5–4.5	up to 200.0
	Mean:	56.5	–	3.7	
	Std. dev.:	4.6	–	0.5	
	N:	23	4	23	

*Wall thickness measurements were taken near the midpoint of the neck.

Table 2 Statistics on size measurements for Groups I–III pithoi. Rim diameter, neck height, and upper body wall thickness measurements are calculated from the Kalavassos Ayios Dhimitrios sample (extending KESWANI 1989, 13, table 2). Vessel height observations include pithoi from Kalavassos and other published examples cited in Table 1. Note that wall thicknesses of Group III pithoi may measure up to 6 cm in the lower body

Group III vessels were manufactured primarily for long-term, official storage and not for ordinary household use.

As indicated in Table 1, some of the most distinctive forms of Groups I–III pithoi have close parallels in shape and decoration at sites that are widely distributed throughout Cyprus. Regionally concentrated stylistic differences are not readily evident. It seems likely that LC II–III pithos-makers and pithos-users shared a broad tradition of functional categories and stylistic conventions, as is also evident in other types of pottery and material culture at this time. These general similarities do not, however, preclude the existence of regional differences in raw materials selection, forming practices, and firing techniques, or of microvariations in style that may only be elicited through detailed descriptive and quantitative analyses of rim, base, and handle forms, vessel proportions, and decorative nuances. Indeed, the identification of compositional (petrographic and chemical), technological, and microstylistic variations in pithoi are of central importance to understanding prevailing systems of ceramic production.

RECONSTRUCTING MODES OF PITHOS PRODUCTION IN LC II–III

At least three alternative models for Late Cypriot pithos production may be proposed. One possibility is that some types of pithoi, if not all, were manufactured at specific locations and subsequently exchanged over considerable distances within Cyprus. I will refer to this as the model of centralized production, with the qualification that there might have been a few (rather than just one) production centers, each serving a relatively large geographical area encompassing multiple communities. Another possibility is that the producers of pithoi were itinerant craftspeople, as observed in recent historical times in both Crete and Cyprus.⁷ A third possibility is that production was highly localized, with pithos-makers residing in many different communities, serving the needs of their own villages and towns and perhaps a few close neighbors.

Although we might tend to dismiss the hypothesis of centralized production as improbable, given the difficulties of transporting very large vessels, it is not necessarily untenable. The people of the Late Cypriot period were capable of moving many tons of copper ore and copper ingots, large loads of timber for fuel and shipbuilding, and very heavy building stones. An ethnographic study of pottery distribution in early-twentieth-century Spain illustrates the transport of large wine jars in mule- or donkey-pulled carts and in pairs on the backs of donkeys.⁸ Similar methods of transportation could have been employed in ancient times in Cyprus. Moreover, if pithoi were produced near coastal centers during the Late Bronze Age, they could have been transported from one region to another by sea, as has been reported for the jars known as *koroneika*, manufactured in Messenia in southwestern Greece.⁹ Finds of both whole or fragmentary Late Cypriot pithoi from shipwreck and other sites around the Mediterranean demonstrate that these vessels, despite their bulk, were often traded over very long distances.¹⁰

There is at present relatively little direct evidence relating to pithos manufacture. Although numerous finds and features dating to the LC I–II periods at Toumba tou Skourou were interpreted by Vermeule as evidence for pottery manufacture, it is not certain as to whether pithoi were in fact produced on the site; the concentration of pithoi in Room 3 of House B may represent a storeroom for agricultural commodities rather than “a place where pithoi were stored for display and sale.”¹¹ Pilides notes examples of a misfired Group I pithos at Pyla Kokkinokremos,¹² a misfired pithos sherd from Kition Area I, Floor III,¹³ and pieces of vitrified clay, misfired pithos fragments, and a deformed pithos at Maa Palaeokastro.¹⁴ If we assume that wasters and misfired pots or fragments of pots are unlikely to have moved very far from production sites, then these items might attest to the presence of at least a few production loci in different parts of the island. Even so, we cannot determine from this evidence whether localized, centralized, or itinerant production systems are

⁷ VOYATZOGLOU 1974, 1984; LONDON 1989a.

⁸ VOSSEN 1984, 385, photo 7.

⁹ BLITZER 1990.

¹⁰ See above, no. 1.

¹¹ VERMEULE and WOLSKY 1990, Room 3, House B: 109–111, quotation from 110; evidence for pottery manufacture including balls and sacks of raw clay, a settling basin for clay

refining, ceramic slag, misfired vessels, and various possible firing areas: 23, 28–29, 35, 38, 55, 76–79, 141–142.

¹² PILIDES 2000a, 94; KARAGEORGHIS and DEMAS 1984, 33, no. 6, pls. XXII, XXXIX.

¹³ PILIDES 2000a, 28.

¹⁴ PILIDES 2000a, 42; KARAGEORGHIS and DEMAS 1988, 230, 115, no. 463, pls. LXII, CLXXXIV.

represented. In order to reconstruct ancient modes of production, we must turn to detailed studies of the pithoi themselves.

Table 3 outlines the patterning of compositional, technological, and stylistic data that might be associated with alternative systems of pithos manufacture. In the case of centralized production, we might expect to find relatively standardized forms, decorative conventions, fabric compositions, and technologies of production within and between contemporaneous sites in regions supported by a particular production center. In the case of itinerant production, we might also observe standardized pithos forms and decoration, along with similar technologies of production, at geographically distant sites served by the same group of potters, but pithos fabrics would derive from diverse clay sources. Localized pithos production might be attested by differences in form and decoration correlated with significant diversity in clay fabrics between sites or adjacent regions. Technologies of production might also vary from one region to another.¹⁵

The analysis of these variables is presently at a preliminary stage. Detailed formal studies of pithos assemblages from multiple sites have yet to be undertaken to assess the extent of microstylistic variation between different sites and regions. Technological and compositional studies are also in their infancy. The pioneering petrographic analyses of pithoi undertaken by Pilides and colleagues suggest that

there are at least some geographical variations in the raw material sources and tempering materials used for pithoi, but more intensive studies of this type are needed to identify approximate locations of pithos production and networks of distribution.¹⁶ With regard to petrographic analyses and other types of physico-chemical source characterization studies, the importance of sampling multiple sherds from each site, along with the intensive sampling of potential clay sources, needs to be emphasized. Until we are able to define the full range of variation in the composition of ceramics and clays within particular localities, it will be impossible to make significant comparisons between different sites and regions.

As we approach the problem of productive organization, it is also important to keep in mind that multiple modes of production could have been in operation at any given time. Different classes or subclasses of pithoi may have been produced by different groups of potters working in different productive systems, with different regional scales of distribution. Additionally, productive organization may have changed over time, and every site will probably yield pithoi of varying ages that might have been produced under different systems of production.¹⁷ Furthermore, regardless of the prevailing local or regional system of production, at least small numbers of pithoi may have been acquired from distant production centers through various modes of exchange including the presentation of gifts or tribute.

Mode of production	Raw Material Sources (clay and inclusions)	Manufacturing Techniques (paste preparation, forming and finishing, firing technology)	Form and Decoration (microvariations)
Centralized	Consistent across large areas served by production centers (assuming potters favor particular raw material sources)	Consistent across large areas served by production centers	Consistent across large areas served by production centers
Itinerant	Variable between regions (contingent on geological variation)	Consistent across large areas served by itinerant work groups	Consistent across large areas served by itinerant work groups
Localized	Variable between regions (contingent on geological variation)	Potentially variable between regions	Potentially variable between regions

Table 3 Alternative models of pithos production: correlates in pottery assemblages

¹⁵ In ethnoarchaeological studies, LONDON (1989b, 225–228) noted differences in tools, raw materials, decorations, and type frequencies that distinguish the ceramic products of contemporaneous villages in Cyprus.

¹⁶ XENOPHONTOS, PILIDES, and MALPAS 2000.

¹⁷ LONDON (1989a, 78) notes that in recent historical times the large jars known as *pitharia* sometimes remained in use for over 100 years.

COMPARATIVE PERSPECTIVES ON THE PITHOI OF ALASSA

The ongoing study of the pithoi from the Late Bronze Age center of Alassa, located in the southwestern foothills of the Troodos Mountains, affords the opportunity to address the problem of regional variations in pithoi and the organization of pithos production. Excavations at Alassa were undertaken by Sophocles Hadjisavvas and the Cyprus Department of Antiquities between 1984 and 2000. Settlement remains with evidence for metalworking, domestic, and ritual activities were found at the locality known as Pano Mandilaris.¹⁸ Three large ashlar buildings were uncovered at the locality Paliotaverna, 250 m to the northwest of Pano Mandilaris. Building II, the best preserved of these structures, covered an area of 1410 m². At least 16 large pithoi were housed in a storeroom located in its northern wing, and other storage vessels were found sunk in the floor of the central courtyard. Additional pithoi were found in Building III.¹⁹ It is possible that members of the ruling elite at Paliotaverna were engaged in the collection and storage of agricultural products, possibly for the purposes of staple finance (redistribution) and/or ceremonial feasting.

Hadjisavvas dates the finds from the habitation floors at both Pano Mandilaris and Paliotaverna to the LC IIIA period. Sherd material associated with the construction of the ashlar Building II at Paliotaverna, however, suggests a LC IIC (late 14th–13th century B.C.) date for the foundation of the administrative complex, and deposits sealed beneath the floors at Pano Mandilaris, along with tombs at this locality, attest to LC II or earlier activity.²⁰ Alassa was therefore contemporaneous with other south coast towns at Pyla, Kition, Hala Sultan Tekke, Maroni, Kalavassos, Kourion, Kouklia, and Maa, although its final florescence in LC IIIA would have postdated the LC IIC ashlar complexes at Kalavassos and Maroni.²¹

Preliminary study of the pithoi from Alassa permits the identification of certain formal and decorative characteristics, as well as aspects of fabric composition and technology, that contrast with the pithoi from Kalavassos Ayios Dhimitrios. Below, I will outline the principal distinctions that may be observed between these sites, and then, in the last part of the paper, I will consider the ways in which those differences may have been related to systems of ceramic production and other cultural factors such as regio-

nalism and diachronic changes in style and political symbolism.

Differences in Fabric and Technology

Pithos fabrics differ noticeably between Alassa and Kalavassos. There is considerable variation in fabric color at both sites. At Kalavassos the colors range from yellowish buff to light red or pinkish brown, sometimes displaying a darker shade of red (presumably the result of firing) near the edges of the section. Buff to brown fabrics also occur at Alassa, but another, contrasting fabric group made from a distinctive reddish brown clay (darker than the Kalavassos fabrics) is common at Paliotaverna, especially among the seal-impressed vessels.

Kalavassos pithos fabrics of all colors tend to be characterized by extremely dense, small black grit inclusions, with some larger black, red, and white inclusions. Alassa fabrics also have black grits, but they appear to be less dense, and the proportion of larger red and sometimes white inclusions seems comparatively high. It is likely, therefore, that different clay sources and different paste recipes were employed at Alassa and Kalavassos.

Other differences are evident in the application of slips. The Kalavassos pithoi tend to have dense, comparatively well-preserved slips of either a yellowish buff or a greenish white color. Similar slip colors may be seen on the Alassa pithoi, but the Alassa slips tend to be thinner, patchy, and ephemeral, with less of a contrast in color between the fabric and the slip. Sometimes there appears to have been no slip whatsoever.

Firing practices also seem to have differed between the two sites. In general, the Kalavassos fabrics are much harder than those found at Alassa, and they make an almost metallic clanking sound when knocked together. While faint grayish brown cores are sometimes visible especially in thick, light reddish brown fabrics at Kalavassos, the bright red wares found at Alassa frequently display very pronounced gray cores.

One further observation on differences in fabrics and forming practices at Alassa pertains to base types. All of the pithos bases that I am familiar with from Kalavassos are flat and have an extremely gritty texture on the exterior surface. Flat, gritty bases are also found at Alassa, but so are chaff-textured bases, pos-

¹⁸ HADJISAVVAS 1989, 35–39.

¹⁹ HADJISAVVAS 1996, 30; 2001, 62; 2003, 434.

²⁰ HADJISAVVAS 2003, 433–436.

²¹ KARAGEORGHIS 1990; CADOGAN 1996, 19; SOUTH 1996, 40.

sibly indicative of a different preparation of the surface on which the pithos was formed.²² In one unusual example, curious polygonal impressions are visible on the base.²³

Visual observation of the pithos assemblages from Kalavassos and Alassa leads me to suggest that the potters serving these sites made use of different raw material sources, different recipes for the preparation of clay mixtures and slips, different firing practices, and, in some instances, different practices for the forming of the pithos base. Sherd samples from both sites are currently undergoing petrographic and technological analyses by Eleni Nodarou at the INSTAP Study Center for East Crete. Further elucidation of the differences between the two sites will be possible when her studies have been completed.

Formal Variation

Group I

Several complete Group I pithoi were excavated at Alassa Paliotaverna. The examples shown in Figures 2–4 illustrate a number of characteristics that distinguish the pithos forms of Alassa from those seen at Kalavassos.



Fig. 2 Pithos 19 (left) and Pithos 297 (right) from Alassa Paliotaverna. Limassol District Museum. Photo P.S. Keswani

Figure 2 (left) illustrates a Group IB2 vessel (Pithos 19) that measures approximately 61 cm in height, consistent with the size range observed for vessels of this type at Kalavassos. Pithos 19 contrasts with the Kalavassos examples, however, in its neck profile (widening toward the base) and in the presence of a disc base.²⁴ It has a bright red fabric that is frequently observed in various classes of Paliotaverna pithoi, but differs from the range of lighter reddish brown to buff fabrics seen at Kalavassos, as noted above in the section on fabric and technology.

While Group IB2 pithoi from Kalavassos typically have straight or everted necks, the occurrence of widening necks at Pyla Kokkinokremos, Kition, and Episkopi (Kourion) Bamboula is noted in the list of variant forms presented in Table 1. Disc bases on Group IB2 pithoi have also been found at Episkopi Bamboula and Apliki Karamallos. The broad geographical distribution of these attributes in the southeastern (Pyla and Kition), southwestern (Alassa and Episkopi), and northwestern (Apliki) parts of the island makes it seem unlikely that their occurrence at Alassa is a regional peculiarity.

Figure 2 (right) illustrates a Group IA vessel (Pithos 297) that is notable for its size (approximately 89 cm in height and 85 cm in maximum exterior diameter) and its upswung or horizontally mounted vertical loop handles. Group IA vessels from Kalavassos tend to be relatively small,²⁵ although some larger, fragmentary vessels were found in Building X. Large Group IA pithoi have been found at Myrtou Pighades and Kition (Table 1). Horizontally mounted vertical handles do not seem to have been present in any pithos classes at Kalavassos, but similar handle forms may be seen on Group IA and IB1 vessels at Pyla Kokkinokremos, Kition, and Episkopi Bamboula (Table 1). The fabric of Pithos 297 is a pale brown or buff color.

Figure 3 presents an example of another very large Group IA or IB1²⁶ vessel (Pithos 15), measuring approximately 100 cm in height and 97 cm at its maximum exterior diameter. The height range for

²² E.g., Limassol District Museum, Alassa Paliotaverna K-9/720.

²³ Limassol District Museum, Alassa Paliotaverna 2000/709.

²⁴ Other examples of pithoi with disc bases from Alassa include the Group II Pano Mandilaris Pithos 164 (discussed below) and Limassol District Museum 2000/709 and 1998/349. It is possible that the appearance of the disc base is a chronological development; articulated (disc and ring) bases are commonly found on Plain White Wheelmade I/II and II jugs, which seem to be later than the flat-based Plain

White Handmade and Wheelmade I jugs; see ÅSTRÖM 1972, figs. LXIX–LXXI; KESWANI 1991, 108–110.

²⁵ KESWANI 1989, fig. 16.

²⁶ I have classified Pithos 297 as Group IA on the basis of its proportionally short neck (9 cm) and wide rim diameter (54 cm); Pithos 15, however, with its slightly longer neck (11.5 cm) and narrower rim diameter (43.5 cm) could be assigned to either Group IA or IB1.



Fig. 3 Pithos 15 from Alassa Paliotaverna. Limassol District Museum. Photo P.S. Keswani



Fig. 4 Pithos 299 from Alassa Paliotaverna. Limassol District Museum. Photo P.S. Keswani

the largest Group IB vessels from Kalavassos is 64–71 cm and the maximum diameter range is 60–70 cm. Like Pithos 297, Pithos 15 has horizontally mounted vertical loop handles, but its handles are further elaborated by an unusual pointed projection on the top. The fabric is a reddish brown color.

Figure 4 shows Pithos 299, which has the rim, neck, and ribbed strap handle form typical of Group IB2, but is embellished with the horizontal and wavy relief band decoration more typical of Groups II and III pithoi. The closest parallel for this hybrid form may be a Group IA pithos with similar decoration from Kition (noted in Table 1). Pithos 299 is yet another very large Group I vessel, with a height of approximately 104 cm and a maximum exterior diameter of the same size. The fabric is a pale brown or buff color.

The preceding examples represent only a small fraction of the total variation in Group I vessels from Alassa. Nevertheless, they present a number of formal characteristics (eg., widening neck profiles, disc bases, large sizes, and horizontally mounted vertical handles) that have yet to be observed at Kalavassos, but are paralleled to some extent at other sites.

Groups II and III

Well-preserved pithoi belonging to Groups II and III are extremely scarce at Alassa. The following examples of substantially represented vessels, however, help to elucidate some of the contrasts and similarities between the Alassa repertoire and assemblages from other sites.

A restored Group II vessel (Pithos 164) from

Pano Mandilaris is shown in Figure 5. The height of Pithos 164 is approximately 89 cm, placing it within the second size tier of Group II vessels. Its neck is unusually long (ca. 26 cm) for this size category, however, and unlike other examples from Kalavassos and elsewhere, the neck widens considerably from top to bottom. Like the Group IB2 Pithos 19 from Paliotaverna, Pithos 164 also has a disc base, which is infrequently paralleled in the published examples of Group II pithoi from other sites. It has a yellowish brown to buff fabric.

Figures 6 and 7 illustrate examples of Group III pithoi from Paliotaverna. A massive pithos neck and shoulder fragment is shown in Figure 6. The preserved height of this fragment is 65 cm, and assuming that approximately one-third of the profile is represented, the overall height of the original vessel must have been close to 200 cm. The parallel horizontal relief bands are typical of Groups II and III pithoi; it is not certain whether there were wavy relief bands below. Figure 7 shows Pithos 379, which was found in a pit north of Building III. This is the most completely preserved and restored Group III vessel from Paliotaverna, with a preserved height of 175 cm (from the base of the vessel to the top of the shoulder) and a wall thickness of 4.1–4.5 cm. Pithos 379 displays the shape and decoration (multiple horizontal and wavy parallel relief bands) commonly seen on Group III vessels at Kalavassos and elsewhere (eg., Fig. 1: h). Both vessels from Paliotaverna have reddish brown fabrics.

Until the study of the Alassa pithoi is complete, the full range of variation in vessel forms at this site



Fig. 5 Pithos 164 from Alassa Pano Mandilaris. Limassol District Museum. Photo P.S. Keswani

cannot be described. A preliminary survey of the sherd material and partially complete vessels from Paliotaverna and Pano Mandilaris suggests that the full range of Groups II and III sizes observed at Kalavassos was also present at Alassa. Vessel proportions (eg., the ratio of neck to body height) may have differed somewhat at Alassa, however. It should be noted that while the examples of pithoi discussed above lack handles, it is evident from sherd material that vessels with flat handles and thumb grips occurred frequently at Alassa, as was also the case at Kalavassos and other sites.

Decorative Variation

From the preceding examples of Group III vessels, it is apparent that the decoration of pithoi with relief bands of horizontal and wavy parallel lines formed in the wet clay body, ubiquitous at Kalavassos and other LC sites, was also practiced at Alassa. The Alassa repertoire, however, includes several other relatively distinctive modes of decoration. These variations, along with parallels from other sites, are summarized below.

Incised Decoration

From LC sites throughout the island, there are numerous examples of Group IB pithoi decorated



Fig. 6 Pithos neck from Alassa Paliotaverna, preserved height 65 cm. Limassol District Museum. Photo P.S. Keswani



Fig. 7 Pithos 379 from Alassa Paliotaverna, preserved height 175 cm. Limassol District Museum. Photo P.S. Keswani

with a single wavy line incised between two horizontal lines around the upper body of the vessel. This decoration has also been observed at Alassa, albeit infrequently. A striking variation observed on four sherds to date at Paliotaverna is the shallow incision of a single wavy line in a band of buff-colored clay (0.3–0.5 cm thick and 4.5–5.5 cm high) that was applied to the reddish brown pithos fabric (Fig. 8). To the best of my knowledge, there are no published parallels for this type of decoration at other LC sites.



Fig. 8 Incised wavy line on applied band of light-colored clay. Alassa Paliotaverna 1998/636. Limassol District Museum. Photo P.S. Keswani



Fig. 9 Three wavy lines incised in pithos fabric. Alassa Paliotaverna 1997/553. Limassol District Museum. Photo P.S. Keswani



Fig. 10 Flat pithos handle with two vertical incised wavy lines. Alassa Paliotaverna 1996/231. Limassol District Museum. Photo P.S. Keswani



Fig. 11 Pithos body sherds from Alassa Paliotaverna with applied white horizontal and wavy relief bands. Episkopi Museum. Photo P.S. Keswani

Another rare variation is characterized by the deep incision of three parallel wavy lines on a band of applied clay that was the same color as the underlying red pithos fabric²⁷ or directly in the fabric of the pithos itself (Fig. 9). The latter example is paralleled by an unstratified find from Area III at Maa Palaeokastro.²⁸

More common than any of the preceding variants

is the occurrence of two vertical incised wavy lines on flat, unslipped pithos handles of reddish brown or reddish orange fabric (Fig. 10). Eight examples of this decoration have been identified so far at Alassa Paliotaverna. There is a parallel find from Area II at Maa Palaeokastro.²⁹

²⁷ Limassol District Museum Alassa Paliotaverna 1998/583.

²⁸ KARAGEORGHIS and DEMAS 1988, pl. CLXI: Unstrat. Dep./35.

²⁹ KARAGEORGHIS and DEMAS 1988, pl. XCIX: Area 24/8.



Fig. 12 Pithos body decoration from Alassa Paliotaverna with applied light-colored clay bands, thick white slip, and reddish brown paint. Episkopi Museum. Photo P.S. Keswani

Applied Decoration

One of the most common forms of decoration at Alassa, particularly associated with the large Group II and III red ware vessels found at Paliotaverna, is the application of multiple horizontal and one or two wavy lines in a contrasting white or generally light-colored clay around the body of the pithos (Fig. 11). The use of contrasting clay relief decoration has not been reported at Kalavassos, Maroni, or the northern sites of Myrtou Pighades, Apliki Karamallos, and Toumba tou Skourou. It has been observed at other Late Cypriot sites, however, including Maa Palaeokastro, Kouklia, and Episkopi Bamboula in southwestern Cyprus and Pyla Kokkinokremos, Kition, and Hala Sultan Tekke in the southeast.³⁰

In some cases at Alassa, an additional slip of a fine white clay or plaster-like substance was applied on top of these relief bands and further embellished with



Fig. 13 Pithos body decoration with applied light-colored clay bands and impressed circles. Alassa Paliotaverna 1999/610. Limassol District Museum. Photo P.S. Keswani

lines of reddish brown paint (Fig. 12). Close parallels for the Alassa examples have yet to be identified, but fragments of a pithos with red or pink painted decoration on a white slip have been reported at Hala Sultan Tekke.³¹

In another decorative variation observed on several fragments from Alassa, the applied light-colored clay was impressed with rows of tiny circles (Fig. 13). Several examples of this motif, similar but perhaps not identical to the Alassa examples, have been noted at Maa Palaeokastro.³²

SEAL IMPRESSIONS

More than 150 pithos fragments with seal impressions have been found at Alassa, far exceeding the quantities found at other Late Cypriot sites to date.³³ Smith suggests that the impressions were generally

³⁰ Maa: KARAGEORGHIS and DEMAS 1988, pls. LX: 82/9, 85/6, 79/3; LXXVI: 75/10; CIV: 63/2; CXIX: West of 9/3; CXXVII: 44A/10; CXLII: 85A and East 12, 88A/13; CLVIII: 58; CLX: various unstratified. Kouklia: MAIER 1968, 91 (Kaminia Tomb 1 and Evreti Tomb 3); 1973, 77–78, pl. XV:6. Episkopi Bamboula: BENSON 1972, 102, no. B945 and pl. 27: B945. Pyla Kokkinokremos: KARAGEORGHIS and DEMAS 1984, pl. XXIV: Group D; 34, no. 16A, pls. XXI:16A, XLI:16A. Kition: KARAGEORGHIS and DEMAS 1985, pls. CXLVII: Temenos A/5; see also PILIDES 2000a, 28–29 and Table 13 for other possible examples. Hala Sultan Tekke: HULT 1981, 37 and fig. 64; HATZIANTONIOU 1983, 115 and no. 15, fig. 329.

³¹ OLOFFSON 1977, 131, F1022; HULT 1978, 66, F1096. A ladder

pattern in dark brown matt paint was found on the fabric of a pithos fragment from Maa Palaeokastro; the same fragment was also decorated with the impression of a hunting scene rolled in an applied white band (KARAGEORGHIS and DEMAS 1988, 154, cat. nos. 299A and 299B; PORADA 1988, pl. A).

³² KARAGEORGHIS and DEMAS 1988, pls. LXXVI:75/14; XCIX:24A/6; CXXVII:103/4; CXXXI:61A/8.

³³ In her (2008) catalogue, Smith lists a total of 40 examples from eight general locations other than Alassa. She also illustrates stamped impressions on pithoi from Phlamoudhi (Vounari and Melissa). For further discussions of seal-impressed pithoi, see SMITH 1994; WEBB and FRANKEL 1994; BUCHHOLZ 2000.



Fig. 14 Pithos fragment with applied light-colored body decoration and impression in applied clay band. Note that the impression is also visible in the underlying pithos fabric. Alassa Paliotaverna 1995/67. Limassol District Museum. Photo P.S. Keswani

made with wooden rollers.³⁴ Several different rollers, varying in height from ca. 2.5–7.0 cm, were used at Alassa. Among the various subjects portrayed are scenes with chariots and running bulls, warriors in combat with lions and griffins, a kneeling warrior confronting a lion and a standing warrior following a bull, recumbent griffins, and geometric motifs.³⁵

A number of different methods of seal impression were employed at Alassa. The majority of the impressions were rolled on light-colored bands of clay that had been applied to the upper body of the vessels before firing. The clay bands varied considerably in consistency and thickness (0.1–0.5 cm). Figure 14 shows an example of a very thin clay band, under which the impression made by the roller can be seen in the pithos fabric as well. Most of the pithoi decorated with impressions in applied clay bands had a reddish brown fabric, and many of them were also decorated with applied, light-colored horizontal and wavy bands. In a few instances, the impressions were colored with brown paint.³⁶ There are also some cases

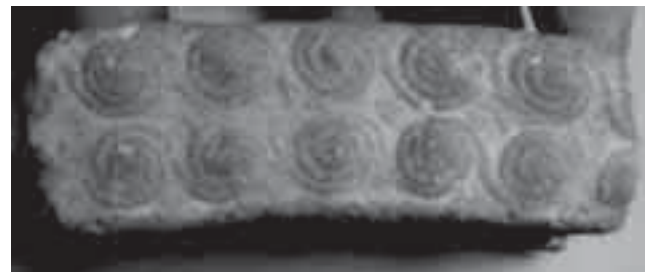


Fig. 15 Flat handle fragment decorated with two rows of impressed double spirals on the top surface (a) and sides (b). Alassa Paliotaverna 1992/395. Limassol District Museum. Photo P.S. Keswani

in which either a dark brown clay or a clay mixed with a dark brown pigment was used as the medium for the impressions.³⁷

Additionally, there are a number of fragments from vessels in which the impressions were made directly in the pithos fabric before firing. Most of the impressions made in applied bands were located around the upper body of the pithos; the direct impressions, however, occurred in a variety of locations including the body, neck, and handles. One of the more common motifs observed among the direct impressions is two rows of double spirals³⁸ rolled on

³⁴ SMITH 2008.

³⁵ The seal impressions will be published by S. Hadjisavvas in the final report of the excavations at Alassa. For an interim discussion, see HADJISAVVAS 2001.

³⁶ E.g., Limassol District Museum Alassa Paliotaverna 1992/614 and others.

³⁷ E.g., Limassol District Museum Alassa Paliotaverna 1997/564 and others.

³⁸ Although very similar to a seal impression from Analiondas

Palioklichia (Cyprus Museum 1953/IX-3/6), the Alassa seal or roller, which was used on several handles, lacks the round to diamond-shaped bump (shell motif) seen between the two rows on the Analiondas example as well as the perpendicular connection between the two rows. Cf. BUCHHOLZ 2000, 188, fig. 1:d; SMITH 2008, fig. 10a. It also appears to have been slightly smaller in size (measuring ca. 3 cm in height) compared to the Analiondas roller, which measures 3.4 cm (SMITH 2008, cat. no. 49).

the tops and sides of flat pithos handles and thumb grips (Fig. 15).

Seal-impressed pithoi have not been found in the substantial pithos assemblages from Kalavassos Ayios Dhimitrios, Maroni (Vournes and Tsaroukkas), Pyla Kokkinokremos, Toumba tou Skourou, Myrtou Pighades, or Apliki Karamallos to date. They occur at several sites along the south coast, however, including Maa Palaeokastro, Kouklia (Evreti/Asproyi and area TA), Episkopi Bamboula, Hala Sultan Tekke, and Kition, as well as at Enkomi Ayios Iakovos, Athienou Bamboulari tis Koukounninas, and Analiondas Palioklichia in the eastern and central regions of the island.³⁹ For the most part, different seals were used at each site, although similar themes involving chariots and/or bulls (common to the overall repertoire of LC artistic iconography) sometimes recur at distant localities. One seal that depicts a row of griffins and was impressed directly on a few pithoi at Alassa also seems to have been used on a vessel found at Episkopi Bamboula, but this is the only instance of overlapping seal use identified to date.⁴⁰

PRODUCTION, REGIONALISM, CHRONOLOGY AND POLITICS

Differences in both fabric and technology observed in the pithoi from Kalavassos and Alassa suggest that these vessels were made from different, possibly localized raw material sources and by potters working in different traditions of manufacturing practice. The technological and stylistic differences between the two communities make it seem unlikely that they were served by the same group or groups of itinerant potters. This does not exclude the possibility of an itinerant system of production, however, as different regions may have been served by different groups of mobile craftsmen. Furthermore, while the differences in fabrics between the two settlements might seem to support a model of localized rather than centralized production, it is possible that each community was itself a production center for a large surrounding region, or that the two communities were served by two different regional production centers. Only the expansion of this study to include compositional, technological, and formal variation of pithos samples from other contemporaneous settlements in the immediate and broader vicinities of Kalavassos and Alassa will allow us to determine the degree of standardization in pithos

production within areas of varying scale and, in turn, to evaluate the applicability of centralized, itinerant, and localized models of production.

As noted in the preceding discussion, the Kalavassos and Alassa pithos assemblages also display considerable microstylistic variation in certain vessel forms and methods of decoration. Do the differences between these two communities represent regionalism defined in terms of the overt, deliberate expression of local identity through the use of distinctive stylistic symbolism? If so, then Kalavassos would seem to have occupied an oppositional or antithetic position both with respect to Alassa and other southwestern sites (where some Alassa features are paralleled) and to certain southeastern sites such as Hala Sultan Tekke, Kition, and Pyla Kokkinokremos (where some Alassa features are also paralleled). Alternatively, might the pithos makers serving Kalavassos have eschewed features such as disc bases, horizontally mounted vertical handles, and contrasting color applied decorations simply because they operated within a separate domain of production where they were ignorant of or uninterested in broader emergent practices and trends? If so, the question then arises as to why the more distant communities of the southeast and the southwest were in closer communication.

Either of the above explanations of stylistic differences between Kalavassos and Alassa (the expression of local identity or the insularity of productive domains) is conceivable, yet both of them seem rather awkward with respect to pithos variability. Moreover, given the wide geographical distribution (east and west along the south coast) of the attributes that distinguish the Alassa pithos repertoire from the Kalavassos material, it is difficult to argue that those attributes were merely idiosyncrasies of Alassa. It may be necessary, therefore, to consider the possibility that a small but significant chronological difference between the two communities accounts for the disparities in their assemblages. The concentration of very rich LC IIA–IIB tombs in the Northeast Area of Ayios Dhimitrios suggests that this site was already an important center when Building X, with its massive pithos storage hall, was first constructed, perhaps late in LC IIB or early in LC IIC. Many of the Kalavassos pithoi could have been manufactured and installed near the beginning of this period or during the middle of LC IIC, when Building X was recon-

³⁹ See the discussion and references in SMITH 2008.

⁴⁰ See SMITH 2008, cat. nos. 25 and 26.

structed with impressive ashlar masonry and its storage facilities were expanded.⁴¹ Those same pithoi may have remained in use for generations.⁴² Although there is also evidence from tombs and deposits under the floors for occupation at Alassa prior to the LC IIC period, Hadjisavvas dates the construction of the pithos magazine located at the north end of Paliotaverna Building II to the end of the LC IIC or the beginning of the LC IIIA period, and he attributes the installation of the storage pithoi with impressed decoration to the LC IIIA period as well.⁴³ Several of the other settlements with pithos assemblages that share similarities with the Alassa finds (i.e., Pyla Kokkinokremos, Kition, Hala Sultan Tekke, Kouklia, and Maa Paleaokastro) also appear to have been established or raised to major prominence at or very near the end of LC IIC.⁴⁴

In her study of the seals and the one seal impression from Kition, Edith Porada argued that the corpus of impressed sherds from Cyprus should be dated to the LC III period.⁴⁵ Smith, however, in her careful archaeological analysis of the seal- and roller-impressed finds, notes that most were discovered “in contexts dating them to the end of the LC IIC or to the beginning of the LC IIIA period” and were used in the construction of LC IIIA features.⁴⁶ Two seal-impressed body sherds (a stamp-impressed sherd from Enkomi and a Babylonian seal-impressed sherd from Episkopi Bamboula) are dated to the LC IIA–IIB period.⁴⁷ Thus, while the practice of making impressions on pottery may have originated earlier, it appears not to have become very common before the later part of LC IIC. While there will probably continue to be considerable debate over how the late LC IIC and early LC IIIA periods are to be differentiated, in the present context these distinctions may be less important than the identification of chronological developments within the century or more ascribed to the LC IIC period itself.⁴⁸

The practice of making seal impressions on pithoi is noticeably absent at the extensively excavated LC

IIC communities of Maroni and Kalavassos in south central Cyprus. While this absence could be a manifestation of the heterarchical, regionally variable systems of political organization and ideology in this era,⁴⁹ it is perhaps more likely that the use of the impressions, along with other decorative and formal trends observed in the Alassa pithoi, also represents a chronological development of the very late LC IIC and LC IIIA periods. This development may have had a component of regionalism as well, inasmuch as the preponderance of impressed finds occurs in southwestern Cyprus.⁵⁰ As mentioned above, there are over 150 fragments from Alassa, with the next highest totals coming from Maa, where 25 impressed sherds were found, and Episkopi Bamboula, which has yielded 6 examples. There are also two finds from Kouklia, where broad horizontal exposures of LC IIC and LC IIIA strata are lacking except in the Sanctuary of Aphrodite. By contrast, there are only two impressions from Analiondas Palioklichia (both on the same vessel), one from Athienou, two from Enkomi, and one each from Kition and Hala Sultan Tekke.⁵¹ Of the eastern sites just named, all except Analiondas Palioklichia (investigated only through survey), have been extensively excavated. The decoration of pithoi with scenes depicting royal or elite activities (the hunting of animals from chariots) and cosmological or mythological themes (warriors in combat with wild beasts, griffins) may represent the adoption of a new mode of political symbolism and possibly administrative practices that were especially favored by the emergent polities of the southwest.

The nature of the ties between the southwestern communities at Alassa, Episkopi, Kouklia, and Maa remains at present unknown. Smith has suggested that the occurrence of impressions made by the same roller at Alassa Paliotaverna and Episkopi Bamboula attests to the increasing complexity of socio-economic relationships between these settlements near the onset of the twelfth century B.C.⁵² It is difficult to determine, however, whether those relationships entailed administrative oversight, the dispatch of jars and their con-

⁴¹ SOUTH 1997, 172–173.

⁴² Here again, London’s ethnographic observations on the longevity of *pitharia* in 19th–20th century A.D. Cyprus are relevant; see n. 17 above.

⁴³ HADJISAVVAS 2003, 436.

⁴⁴ KARAGEORGHIS 1990, 7–27; for slightly later dates on some of these sites, see KLING 1989, 87.

⁴⁵ PORADA 1985.

⁴⁶ SMITH 1994, 276.

⁴⁷ SMITH 1994, 275–276.

⁴⁸ Until recently, the timespan from 1300 to 1200 or 1190 B.C. was generally assigned to the LC IIC period; e.g., KARAGEORGHIS 1990, 2. A review of the radiocarbon data, however, has led MANNING *et al.* (2001) to raise the beginning of this era to 1340–1315 B.C.

⁴⁹ See the arguments in KESWANI 1996.

⁵⁰ See also PILIDES 2000b, 370.

⁵¹ See the catalogue in SMITH 2008.

⁵² SMITH 2008.

tents as tribute (from subordinate to master) or redistributed commodities (moving in the opposite direction), or the social exchange of gifts among kin and/or allies residing in geographically proximate settlements. A closer analysis of the fabrics of the vessels associated with these impressions and comparisons with the larger pithos assemblages of Alassa and Episkopi might at least help to elucidate the direction of exchange, if not its precise definition.

The political and ceramic relationships between Alassa and Maa merit particular scrutiny. Based on petrographic analyses of three pithos sherd samples from Maa and four from Alassa, Pilides has noted that there are close compositional similarities between the two sites, and she argues that “the pithoi found at Alassa were probably made in the Pafos region, suggesting . . . some form of exchange or trade involving their contents.”⁵³ There are certainly similarities in decorative practices (applied contrasting relief decoration, triple incised lines, impressed circles) observed at the two sites that could represent the work of the same group of potters, working either from the same production center or as itinerants. The analysis of larger samples of sherd material from both sites, as well as the investigation of local clay sources and production technologies, however, will be necessary to determine whether the pithoi found in these two communities were centrally or locally produced. It is also unclear as to whether the extensive use of seal-impressed decoration at both sites reflects an administrative, or at least a political, relationship between them. Eight of the 25 impressions from Maa have a theme that overlaps with scenes from Alassa (chariots and running bulls), but different seals were used at each site. The other 17 examples from Maa depict scenes with goats and trees not seen at Alassa. There would thus appear to have been some degree of independence between the two sites in seal selection and

thematic preferences, even though broadly similar forms of political symbolism were employed.

CONCLUSIONS

This preliminary study of regional variation in pithoi has undoubtedly raised more questions than it has answered. Comparing the pithos assemblages from Kalavassos in south central Cyprus and Alassa in the southwest, it is evident that there are compositional and technological differences that place these sites in separate domains of pithos manufacture. There are also stylistic differences that may reflect small but significant chronological differences between the sites. Taking a broader geographic view, many of the stylistic attributes that distinguish Alassa from Kalavassos have a wide distribution along the south coast of the island, suggesting some level of familiarity, interaction, and emulation among potters serving distant communities. An assessment of whether pithos production was regionally centralized, highly localized, or itinerant requires much further study, however.

If there is one feature of the Alassa pithoi that may have been associated with regionally localized practices and preferences as well as chronological change, it may be the use of seal-impressed decoration, which seems to have been concentrated in southwestern Cyprus. Closer study of fabric compositions, technological attributes, and methods of seal impression (especially the characteristics of the applied bands), as well as other stylistic attributes, may eventually help to elucidate the organization of production in this region. From a political perspective, it would appear that the patrons who commissioned the manufacture of seal-impressed pithoi participated in a shared system of political ideology and symbolism, while making use of locally differentiated complements of seals and iconography.

⁵³ PILIDES 2000a, 110–111 (quotation on 111).

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