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MULTIMEDIA AT MINOAN MYRTOS–PYRGOS, CRETE

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The Minoan settlement of Myrtos–Pyrgos on the south coast of Crete has produced five seals (and one unfinished seal), 11 seal impressions on clay vessels, two roundels and one nodulus, as well as two Linear A tablets and two inscriptions on clay vessels. Dating between Early Minoan II and Late Minoan IB, these documents form valuable evidence for the development of sealing, marking and writing practices at a small but important rural settlement, including a penchant for using antique seals for stamping jars. They contribute too to understanding the regional hierarchical and, probably, political cultures of Crete throughout this long period, especially in the late Protopalatial phase of Middle Minoan IIB, when there seems to have been a special relationship with Malia on the north coast, and again in Late Minoan IB, when there was a relationship with Knossos. Finally, the paper discusses a pithos fragment from Tel Haror in Israel, which appears to have an inscription in Cretan Hieroglyphic or Linear A, and may well have been a product of Myrtos or nearby.

The long-lived Minoan Bronze Age settlement at Myrtos–Pyrgos (hereafter usually Pyrgos) on the south coast of Crete 14 km west of Ierapetra and 1.75 km west of the Early Minoan (EM) II settlement of Myrtos–Fournou Koryfi (hereafter Fournou Koryfi), and excavated by the British School at Athens (Cadogan 1978; 1992), has produced a little but important evidence for the development of sealing, marking and writing practices on Crete between EM II, which was the Pyrgos I period of occupation of the site, and Late Minoan (LM) IB in the Pyrgos IV period of occupation (Cadogan 1999). We present a comprehensive account of the evidence, except for the pot marks of principally Middle Minoan (MM) IIB date, the Pyrgos III period of occupation, which Cadogan and Ferrara are preparing for a separate publication. Cadogan (1978) explains the periods of occupation at Pyrgos.

The documents are: six seals (one unfinished); 11 seal impressions stamped on clay vessels, two roundels and a nodulus; two clay tablets; and two inscriptions on clay vessels. Some of these have been published already (Morpurgo-Davies and Cadogan 1971; 1977; Rehak and Younger 1995; Ferrara, Weingarten and Cadogan 2016). Where this is the case, we add any new information below.

SEALS, SEAL IMPRESSIONS, ROUNDELS AND NODULUS

Pyrgos I: EM II

It is hard to identify any architecture of the EM II Pyrgos I settlement because of subsequent building, destructions, abandonments and rebuildings at the site. But we see from scattered deposits that it was of about the size (*c.* 0.5 ha) of the later settlements and enjoyed a prosperous culture that was identical to that of nearby Fournou Koryfi, where daily life was well preserved (Warren 1972). Pyrgos, however, was at least four times as large as Fournou Koryfi (Cadogan 2011b, 40 and n. 9; Cadogan and Knappett in preparation) and, with the benefits of water and good farmland in the Myrtos river valley, was probably the more important of the two settlements. Both were destroyed by fire in EM IIB, presumably at (much) the same time, and abandoned. For Pyrgos this did not last long until it was reinhabited, possibly in EM III but more likely when the culture of MM IA overlapped that of EM III. The site's being reoccupied, which Fournou Koryfi was not, is a further sign of the likely superior status of Pyrgos in EM II.

Two conoid steatite seals **1** and **2** are surface finds without contexts, but we assign them with confidence to EM II, since they are closely similar to steatite examples from EM IIB Fournou Koryfi (*CMS* V, nos 16–17; Warren 1970; 1972, 226–7; Krzyszkowska 2005, 60–1, 385, cat. nos 94–5). The steatite of the seals from both sites is almost certainly local (cf. Warren 1969, 140–1, fig. 4; 1972, 226, 265; Wagstaff 1972, 275, fig. 110).

A small biconical steatite seal **3** (or cylinder-shaped with concave sides), that is pierced with three holes in the middle, is probably also of EM II date: one may compare a similarly shaped steatite seal found outside Koumasa Tomb B and dated to EM II (Panagiotopoulos 2012, 213, pl. 144β; and pers. comm.). If **3** is not EM II, it is hard to see it as later than the Pyrgos IIa–b period of EM III / MM IA date. Its context is of little help. It was found in House A on the edge of the hilltop immediately east of the Country House (Fig. 1:3) in a level with LM I pottery and one or two sherds of Pyrgos III MM IIB date. In nearby trenches a few other likely EM or, more generally, Prepalatial finds have appeared in later levels, including a kernos-jug (MP/70/105; HM Λ3890) that is closely similar to one from Koumasa Tomb E (Xanthoudides 1924, pl. 31, cat. no. 686; Warren 1969, 48, 256, cat. no. D 167; Legarra Herrero 2014, 188, for the context). At Pyrgos these items are probably the chance remains of earlier occupation at this part of the hill.

Another find, possibly of EM II date, is **4**, which was found in a yet later context (Fig. 1:4) on the west side of Tower 3 on the top of the hill, dateable by two Ottoman coins, one of Mahmud II (1808–39), the other of Selim III (1789–1807) and struck in Cairo in 1793 (1171 AH). These were identified by the late George Miles. If **4** is not a bead, it seems to be an unfinished bottle-seal in steatite; there are no designs, although plenty of scratches. A seal from Krasi Tomb A (*CMS* II.1, no. 406; S. Marinatos 1929, 114, 122–3, figs 15–16:51) looks similar: although found outside the tomb, it was probably contemporary with the contents of the lower burial layer, dated to EM I–IIA (Galli 2014, 234).

Measurements are in centimetres in the catalogues in this paper. The # sign indicates either the number(s) of the excavation basket(s) – or *zembili(a)* – in use when the item was found or the sign number in the *Corpus Hieroglyphicarum Inscriptionum Cretae* (Olivier and Godart 1996; henceforth *CHIC*). Photographs (at scale 3:1) of seals and seal impressions are from the Corpus der minoischen und mykenischen Siegel (CMS) archives unless credited otherwise. Items **1–3**, **6–8**, **12**, **18**, **19** and **23** are in the Herakleion

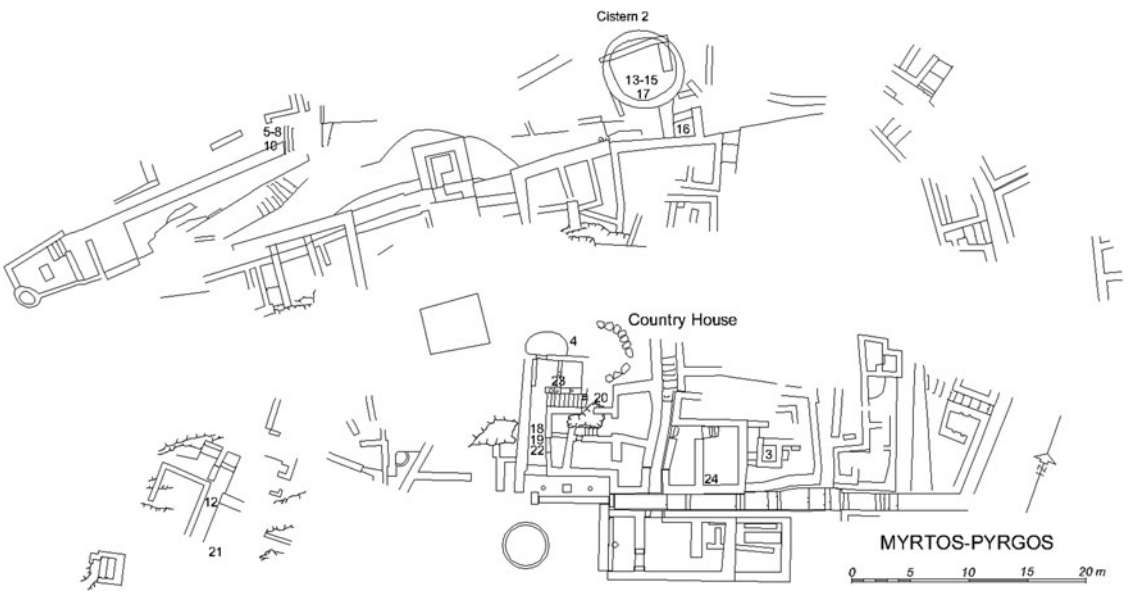

Fig. 1. Myrtos–Pyrgos, with find spots of **3**, **4**, **8**, **18**, **19** and **22**, and approximate find spots of **5–7**, **10**, **12–17**, **20**, **21**, **23** and **24**. I. Grundon after D. Smyth.

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Archaeological Museum (HM), **4**, **5**, **9**–**11**, **13**–**17**, **21** and **24** in the Stratigraphical Museum at Knossos (SMK), and **20** and **22** in the Ayios Nikolaos Archaeological Museum (ANM). Items identified during excavation and given field numbers are **3**, **4**, **8**, **18**, **19** and **22**: their find spots are shown in Fig. 1, together with the general locales of **5**–**7**, **10**, **12**–**17**, **20**, **21**, **23** and **24**. Fig. 1 does not show surface finds **1**, **2**, **9** and **11**.

1–**4** are seals in green steatite. Parallels cited from Fournou Koryfi are all of EM IIB date.

1. MP/71/186; HM Σ2661. Surface find on the West Slope. Elongated conoid. Ht 2.3. Base 1.3 × 1.3 × 1.3 × 0.9. Light green steatite. Sides unequal in width and covered with scratches (unpolished / poorly polished). Base design: random lines and shallow marks, perhaps more the *idea* of a seal device than an actual sphragistic image. Cf. a similarly shaped steatite seal (deep grooves carved into the top below the string hole), also with irregular shallow lines on base *CMS* V, no. 16, from Fournou Koryfi, and a chlorite conoid with similar base *CMS* II.1, no. 197, from Lebena Tomb II (EM I: Sakellarakis 1980, 3–6, fig. 1; part of EM II group, or possibly late EM I: Alexiou and Warren 2004, 133–5, fig. 35:535, pl. 118*D*; EM II: Sbonias 2010, 207). Fig. 2.

2. MP/75/2; HM Σ2596. Surface find outside site to east. Irregular, narrow elongated conoid. Ht 2.4. W. flat base 0.6–0.9. Light green steatite, as **1**. Unusually large string hole (D. 0.2); no sign of wear. Slightly more polished than **1**. Base design: three short horizontal lines crossed by a vertical line. Cf. similar design on base of serpentine button seal with perforated flange *CMS* V, no. 14, from Fournou Koryfi. Fig. 3.

3. MP/70/103; HM Σ2662. House A, Room 26: trench L5 level 2 #388 find 3 (Fig. 1:3). Biconical or cylindrical shape with incurving sides. Ht. 1.55. D. at top and bottom 0.95. D. waist 0.7, pierced by three (joining) string holes. Mid-green mottled steatite. Two flat seal surfaces, both with designs: 'top': simple coil spiral; 'bottom': off-centre X partly enclosed by deep semi-circular line; four small strokes connect semi-circle to edge of base. Cf. steatite seal *CMS* II.1, no. 169 from Koumasa, which is not illustrated in toto but is described as an 'Oblonger Zylinder mit konkavem Mantel' with somewhat similar engraved base motifs; also, the simple coil spiral on side c of chlorite three-sided prism *CMS* III, no. 224 (Giamalakis Collection), side a of steatite three-sided prism *CMS* II.1, no. 307, from

Fig. 2. **1**. HM 2661.

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Fig. 3. **2**. HM 2596.

Fig. 4. **3** HM 2662, (a) top, (b) bottom. Drawings: D. Evely.

Platanos Tomb B, and the base design of the tall conoid *CMS* II.1, no. 430, from the Trapeza Cave. Fig. 4.

4. MP/71/16; SMK. Outside Tower 3: trench G4 level 2 #1018 find 4 (Fig. 1:4). Unfinished, its thicker base possibly intended as base of a bottle-seal. Ht 1.3. W. top 1.0 (max.). W. bottom 1.3; 'waist' 0.8. Light green steatite, as **1** and **2**. Unpierced, shaped but unpolished stone; no designs on either end. Possibly the shape is related to the unfinished tufa (calcite?) conoid *CMS* V, no. 19, from Fournou Koryfi. Fig. 5.

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Fig. 5. **4**. MP/71/16. Photo: D. Walker.

In view of the strong cultural similarities between EM II Pyrgos and nearby Fournou Koryfi, it is hardly surprising that seals **1**, **2** and **4** are similar in shape and devices – one might even remark, in their 'provincial' irregularity (Sbonias 1995, 80) – to those from Fournou Koryfi. What might be surprising, however, is that more, and more varied, sealstones – as well as one of the earliest seal impressions on Crete (*CMS* V, no. 20) – come from the latter, a smaller and less important site: this is almost certainly a reflection of the chances of archaeological recovery. It should be kept in mind, however, that the Fournou Koryfi seals were distinctly worn around the string holes (while **1**, **2**, and **3** from Pyrgos showed no signs of wear), possibly indicating more intensive use or, more likely, their being fastened for personal display.

Fournou Koryfi was abandoned after the EM IIB destruction whereas Pyrgos was reoccupied, with episodes of construction and reconstruction over hundreds of years regularly preceded by the dumping of older material down the hillsides. It seems reasonable to assume that Pyrgos once boasted an array of seals at least equal to those of Fournou Koryfi (*CMS* V, nos 14–19, including two 'blanks' with unengraved bases [cf. Sbonias 1995, 40–1, 80–1]).

Equally, there is no reason to think that seals would not have been used to close or mark objects at Pyrgos as at Fournou Koryfi.[1] The clay sealing from Fournou Koryfi stamped by *CMS* V, no. 20, although found near the doorway of Room 29, is not a door sealing of any known type (Weingarten 1990b, 105, n. 1): what it actually sealed remains unknown. The clay was stamped thrice by a flat oval seal depicting an angle-filled cross (with added dots), a well-known Aegean motif, the origin of which can be traced back to Anatolia (Aruz 2008, 28–9, and n. 118); versions of angle-filled cross motifs appear at EH II Lerna and Geraki, Ayia Irini on Keos, and Prepalatial sites in the Mesara, and central and eastern Crete (Aruz 2008, 29, nn. 116, 117), with a simpler version in west Crete as well (Vlasaki and Hallager 1995, 265, fig. 14). Clearly, Fournou Koryfi was somewhat in touch with the Prepalatial glyptic mainstream, whatever that might mean at this early date (cf. Sbonias 2010, 221–2), and in all probability so was Pyrgos.

Since the seals from both Pyrgos and Fournou Koryfi are all made of soft stones, commonly steatite (NB: *CMS* V, no. 18, first reported as basalt, is in fact a soft stone, albeit unidentified), they were shaped and engraved entirely with hand tools, a task well within the competence of local craftspeople, as may also be suggested by the prevalence of local steatites. However, seal shapes – such as the signet with pierced handle from Fournou Koryfi (*CMS* V, no. 14) and

[1] On Prepalatial seal use, cf. Vlasaki and Hallager 1995, table 1: the two sealings from the West Court at Knossos should be deleted as MM intrusions.

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elongated conoids at both sites – as well as the rare triple string-hole of seal **3**, and its coil-spiral device, also found at more distant sites, might better be explained by itinerant craftspeople occasionally arriving at Pyrgos. These would not have been specialist seal-engravers, but were rather perhaps little more than peddlers who carried simple stone-carving tools (blades, burins and knives) in their packs; nonetheless they created social objects (cf. Anderson 2016, 118) that conveyed the idea of personal or estate identity, possibly even an identity shared with other rural settlements.

Pyrgos IIc(–IId[?]): MM IB(–IIA[?])

5 appears to be the earliest example by context at Pyrgos of a handle stamped with a seal before firing. It was found in Area 98 on the West Slope of the hill (Fig. 1:5) in the open space of a gravel yard of Pyrgos IIc / MM IB date that lay over the Pyrgos IIb / EM III–MM IA use level of Street VI, the processional way that led along a terrace to the Tomb at the south-west corner of the settlement. Although the context dates to MM IB, we cannot exclude the possibility that this jar with its seal impression is of Pyrgos III date, and that this handle fragment had somehow worked down into an earlier context. Alternatively, and a little more likely, the excavation level may have been, in places at least, an interface between Pyrgos II and Pyrgos III (that is, it is a level where Pyrgos III material fell onto Pyrgos II remains that were there already). Since, however, the pottery from the level seems homogeneous, and the level was below another gravel spread, assigned to Pyrgos IId / MM IIA, a Pyrgos III date for **5** remains improbable. If this interpretation is correct, **5** seems the earliest example of impressing a seal on a jar handle from Pyrgos, and perhaps from the Malia–Lasithi–Mirabello (MLM) cultural and, probably, political region (Cadogan 2013a) or even Crete as a whole, with the possible exception of a stamped handle from Palaikastro reportedly from an EM III–MM I context (Sackett and Popham 1965, 301, 304, fig. 18:21), but not included in the list of handles in Müller (1999, 389, n. 110), due to uncertainty. Slightly later is the well-dated MM IIA stamped jar handle from Petras (*CMS* V Supp. IB, no. 329; Krzyszkowska 2016).

Seal impressions **6** and **7** may offer supporting evidence for the practice of stamping seals on jar/amphora handles before the late Protopalatial period of MM IIB. They are also from Area 98, in levels that may have been interfaces between Pyrgos II and III: the pottery is predominantly of Pyrgos IIb–c date, possibly extending to Pyrgos IId; but there is also a little of clearly Pyrgos III date. The seal used for impression **6** could well be of late Prepalatial date.

We may also mention here **14**, which was in the later MM IIB / LM I context of deposit 2 in Cistern 2 (as was **15**) but is probably of Pyrgos IIb / EM III–MM IA date, as discussed below.

Handles **5**–**7**, and **11**–**16** plus **17** (below), are vertical handles from coarse ware jars, many (or all) of which would have been oval-mouthed amphorae (Müller 1999, 441, table 2 lists seal-impressed vessel handles; additions in Weingarten 2015, 75, n. 1). Macroscopic inspection of the fabric of both groups of handles suggests at present that these vessels from Pyrgos were made locally, including **16**, which is part of the Parading Lions Group: all the same, a programme of petrographic analysis of all the stamped handles of Minoan Crete would be a valuable contribution to understanding exchange and the movement of jars between the different sites and regions.

In the descriptions of **5**–**7**, and **10**–**17**, 'round', 'oval' and 'thick oval' indicate the section of a handle. The seal impressions are at the base of the handle and central/frontal, unless stated otherwise. The vessels are in semi-coarse or coarse ware, apart from **10**, and – in so far as one can tell from such small remnants – appear to have dark-on-light decoration, apart from **14** and, probably, **10**.

5. MP/73/196; SMK. Area 98: trench A3 level 14 #3784 (Fig. 1:5). Round handle; dark brown stripe to left of handle, and solid large circle over and around impression. L. impression 2.7. W. impression 2.2. Impression of soft-stone (?) ovoid seal face at base of handle in centre. Traces of dark paint running over impression. Design effaced. Weingarten 2015, 71–2, fig. 1 (upside-down), 74. Fig. 6.

6. MP/73/114; HM Π20766; *CMS* II.6, no. 225. Area 98: trench Z4 level 15 #3237 (Fig. 1:6). Round handle; dark brown wash on handle, with probable traces of trickle below. D. impression

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Fig. 6. **5**. MP/73/196. Drawing: D. Faulmann; photo: D. Evely.

2.4–2.8. Impression from soft-stone seal with flat round base. Design: Parading Lions (see below): two contorted and crossed 'lion' protomes (pictorialised whorls?). Possibly to be assigned (JW) to the 'Northern Rounded Figures subgroup' (cf. the deep gouging characteristic of the subgroup, and truncated S figure in *CMS* V, no. 301: Anderson 2016, 235–42); if not, 'the crossed and intertwined figures … are certainly related to a strikingly similar MM IA example (HM 2487)' of the Interwoven sub-group (Anderson 2016, 275); in both cases a late Prepalatial or very slightly later date is favoured for its manufacture though not its use; cf. *CMS* II.5, no. 283. Cf. Malia, steatite three-sided prism *CMS* II.2, no. 235, MM II; Gournia House Tomb I, serpentinite (?) button seal *CMS* V Supp. IA, no. 51 (MM IB–IIB context: Weingarten 2016, 6–7). Weingarten 2015, 71–2, fig. 4, 74; Anderson 2016, 257–8, 280–1. Fig. 7.

7. MP/73/220; SMK; *CMS* II.6, no. 226. Area 98: trench Z4 level 11 #3232 (Fig. 1:7). Oval handle; traces of dark-on-light decoration. D. impression 1.6–1.8. Impression of round and flat soft-stone (?) seal face. Design: four amphorae placed one above the other, flanked by three floating amphorae plus two indistinct forms. Cf. Pelon 1970, 138–9, pl. 26:3, cat. no. 268, a weight from Malia Quartier Epsilon (LM IA context); and *CMS* IX, no. 3D, on the very worn side b of a three-sided soft-stone prism (MM I–II). Fig. 8.

Pyrgos III: MM IIB

Nine or 10 of the 20 seals and seal impressions from Pyrgos may be datable by context or style (or both) to the Pyrgos III / MM IIB period. They are four-sided Cretan Hieroglyphic prisms **8** and **9**,

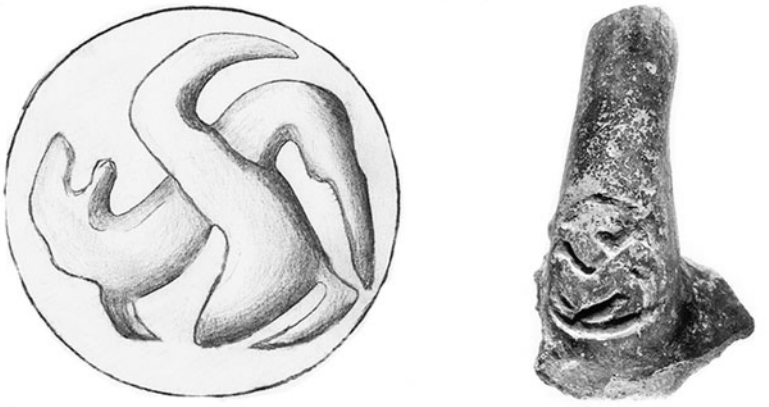

Fig. 7. **6**. *CMS* II.6, no. 225.

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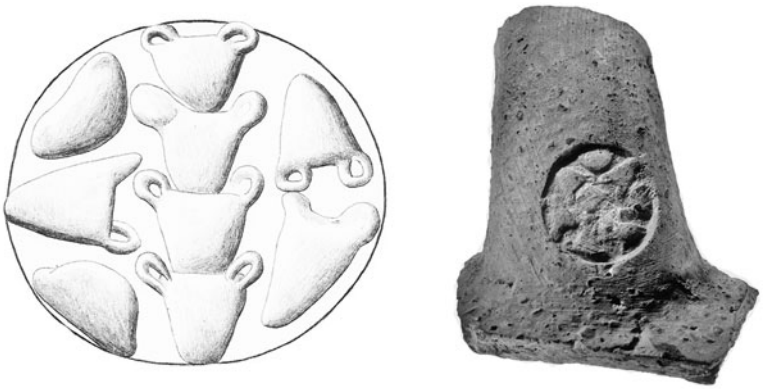

Fig. 8. **7**. *CMS* II.6, no. 226.

and seal impressions **10**–**16** and mark **17**, which is included but is uncertain. As **8** and **9**, **11** and **12**, and **15** have already been published (Ferrara, Weingarten and Cadogan 2016), the accounts of them below will be brief, though with a few further comments.

Seal **9** and impression **11** are surface finds from the West Slope, whose principal feature is a huge deposit of MM IIB rubbish (called the Great Fall deposit) that had been thrown down from the top of the hill. Originally, this material would have been part of the contents of, or connected in some other way with, a Central Building that stood there in Pyrgos III: a predecessor of the Pyrgos IV LM I Country House (Cadogan 1997). Even though found on the surface, it is likely that **9** and **11** had been among the Great Fall rubbish. Finds clearly within the deposit are seal **8** and impression **10**, from Area 98 at the south end of the Great Fall. No seals or impressions occurred at the north end of the Fall. In the topsoil at the south-west corner of the top of the hill in a level with a little pottery of mixed date (LM I, Hellenistic, and Ottoman or later), impression **12** almost counts as another surface find.

Five seal impressions were found on the north side of the Pyrgos hill, in differing contexts in or near the large Cistern 2, which was built by, and used in, MM IIB (Pyrgos III) and then became a rubbish dump (Oddo 2015; Oddo and Cadogan 2016). Impression **13** is from the muddy use level in the bottom of the Cistern: deposit 1. Above this, and pending final checks, we have identified two deposits: a middle deposit 2 and an upper deposit 3. The earth and stones of deposit 2 were probably rainwash, perhaps from a time in MM III when the settlement appears unoccupied (after the MM IIB destruction): the pottery is mainly Pyrgos III but has some of LM IA Pyrgos IV date (that had probably been washed in). Deposit 3 has large amounts of fine LM IA pottery (and a handful of LM IB sherds) plus some earlier pottery. The LM IA pottery of deposits 3 and 2 may come from another clearance at the top of the hill like the earlier one that produced the MM IIB Great Fall deposit. This clearance could have been an early, or the first, stage of a remodelling of the structures there when erecting the present grand Country House in LM IA (Cadogan 1997; Driessen and Macdonald 1997, 218). On our present understanding, impressions **14** and **15** are from deposit 2 and a possible, but unlikely, impression **17** from deposit 3; impression **16** was found above Steps 6 close by the Cistern.

In sum, the seals and seal impressions datable by context or style, or both, to Pyrgos III (MM IIB) are almost all from rubbish deposits, apart from two surface finds and one near-surface find. Only **13** is for certain from a MM IIB use level, just as **5** seems to be from a MM IB use level; **6** and **7** may be from use levels provisionally datable to MM IB–IIA; **14** and **16** appear to be EM III–MM IA antiques in later contexts.

Seals

Seals **8** and **9** are four-sided prisms inscribed with Cretan Hieroglyphic, both of them in the Great Fall deposit of Pyrgos III. **8** is inscribed on one side only, **9** on all four sides. The signs on **9** include

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a full-bodied cat, an animal of special importance in MM Crete (Krzyszkowska 2015), which may be rehabilitated as a script sign, as well as possibly a logogram (Ferrara and Weingarten 2022; Younger 1997, 387).

8. MP/73/156; HM Σ2536; *CHIC* #282. Area 98: baulk Z3/A3 level 2 #4302 find 4 (Fig. 1:8). L. 2.1. W. 0.7. D. hole 0.2. Four-sided prism in grey–green steatite, inscribed on side a only (Ferrara, Weingarten and Cadogan 2016, 84, fig. 3:a,b1,c1, 92). The reading of the inscription is contentious: Ferrara, Weingarten and Cadogan (2016, 91–3) proposed reading it as 008-011-*SM* 37 𐄁 𐄂 𐄀 {𐄀} and, noting the decorative motifs on sides b–d, attributed the motif on side b to the 'Curlicue Monster Workshop' active at Malia (or possibly Petras) in MM IIB. Anastasiadou (2011, 104, 106, n. 549) notes that, although four-sided, **6** is stylistically similar to the three-sided prisms of her Malia / Eastern Crete group. Ferrara, Weingarten and Cadogan 2016, 82, fig. 1:2, 84, fig. 3, 91–3, table 2, 96–7. Fig. 9.

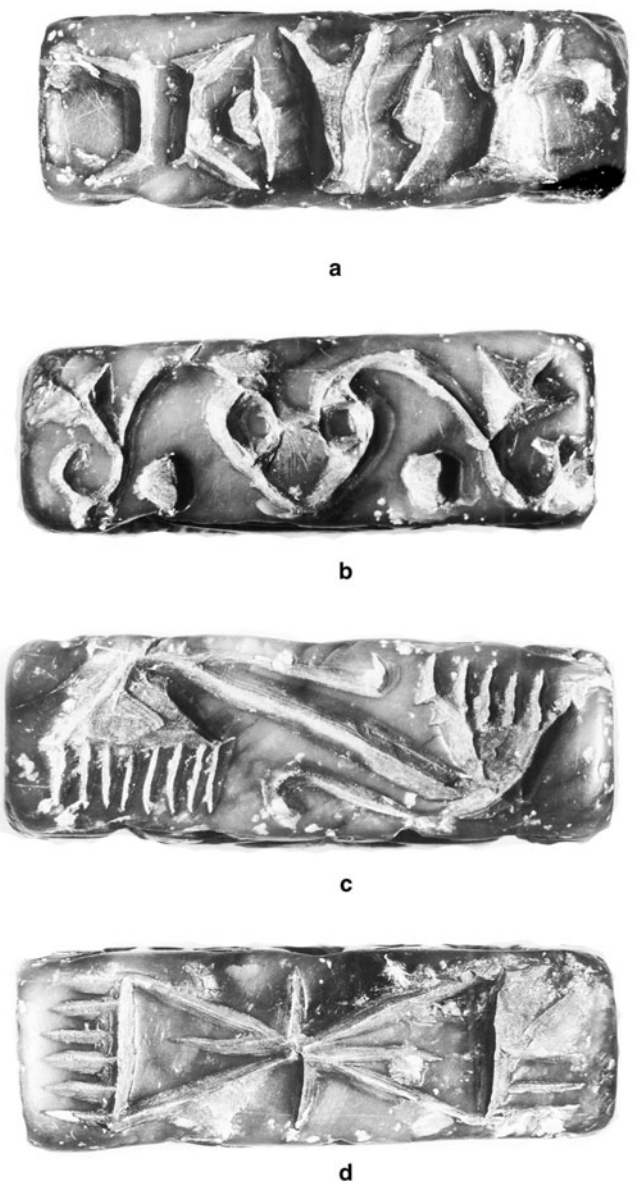

Fig. 9. **8** HM 2536. Sides a–d.

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Table 1. Proposed transcription of seal **9**.

Side a	Side b	Side c	Side d
XX 044-cat-005	X 036-092-031	038-010-031	XXX 042 |||| 40-053-041

9. MP/75/3; HM Σ2595; *CHIC* #309. Surface find on upper West Slope. L. 1.7. W. 0.6. D. hole 0.25. Four-sided prism in green jasper, inscribed on all four sides. The reading suggested by Ferrara, Weingarten and Cadogan (2016) is shown in Table 1. Cadogan 1978, 83, fig. 40; Krzyszkowska 2012, 156, n. 40 (although from a 'controlled' excavation, it remains a chance find without context); 2015, 102–5, fig. 4*a* (placing the cat motif with other Minoan depictions of cats); Ferrara, Weingarten and Cadogan 2016, 82–3, fig. 2:1, 88–91, table 2, 95–7; Decorte 2017, 43 and n. 22, 45, fig. 8, 55, fig. 19; Ferrara and Weingarten 2022, 112–16, fig. 2*a*, tables 1–3, 117, n. 1. Fig. 10; Table 1.

Seal impressions

At Middle Bronze Age Pyrgos, seal impressions appear stamped only on the handles of vessels, and none on any other type of object or document. Stamped handles of (almost always) coarse ware amphorae (or jars) were a feature of east-central Crete that extended to the far east of the island. Their contexts, when known, are on the whole MM II: Malia (11), Pyrgos (nine), Palaikastro (five), Petras (one), Gournia (two from the new excavations in the North Trench / Kilns area at Gournia [John Younger, pers. comm.]: in an EM III–MM IA context, 10.872, albeit stamped by a seal from the Malia Workshop Group, MM II; in a Protopalatial context, 14.1834, stamped by a seal from the Border Leaf Group, MM I [close to *CMS* II.5, no. 258, from Phaistos]), and Symi (one), and there is one from Sambas in the Pediada. Other singletons have turned up in north-central Crete at Archanes, Juktas and Poros. A possible Minoan import at Samothrace is *CMS* V Supp. 3, no. 342.

A surprising exception to the practice of stamping coarse ware jars is **10**, a fine ware vessel, probably a jug: stampings on fine ware are extremely rare, if not otherwise unknown. As is the case with **5**–**7** above, the seals were stamped centrally (frontally) on or at the base of the handles (a favourite place also for incising pot marks) except for: **10**, stamped on the top of the handle but still centrally; **12**, stamped on the rim where the handle joins; and **13**, which is stamped on the left side of the base of the handle.

10. MP/73/262; SMK; *CMS* II.6, no. 227. Area 98: baulk Z3/A3 level 1 #4300 (Fig. 1:10). Round fine ware handle, probably from a jug; dark wash outside and to rim inside. D. impression 1.0. Impression, stamped at top of handle just below rim, of round and flat soft-stone seal. Design: central dot surrounded by six dots (five attached, one floating) with 11 lines radiating from central dot, eight of which touch or enclose dots (*Punktrosette*): cf. steatite button seal *CMS* II.1, no. 271 from Platanos Tomb B (lines more wobbly but equally irregular); steatite plate seal *CMS* II.1, no. 415 from Malia Maison E (lines even more irregular); and, confounding the dating, a 'white paste' hemispheroid, *CMS* III, no. 79, which cannot be later than MM IA, whereas the *Punktrosette* seals are stylistically dated in *CMS* to MM II. Weingarten 2015, 71–2, fig. 5, 74. Fig. 11.

11. MP/94/2; SMK; *CMS* II.6, no. 230. Surface find on lower West Slope. Round handle; burnt and/or weathered. L. impression 1.4. W. impression 0.85. Impression of half-oval flat hard-stone seal face at base, but off-centre to the left. Design: it is very likely that the impression was stamped by a hard-stone theriomorphic seal, for which a close parallel is *CHIC* #198 (070–073), a chalcedony theriomorph from the region of Mirabello (not listed in *CHIC* but an addendum to the corpus: Del Freo 2008, 200 and n. 6). On the impression two signs are discernible: 070-019 𐄁𐄂, which do not correspond to any previously attested sequence. Weingarten 2015, 73–4, fig. 7; Ferrara, Weingarten and Cadogan 2016, 82–6, fig. 5:4, 94. Fig. 12.

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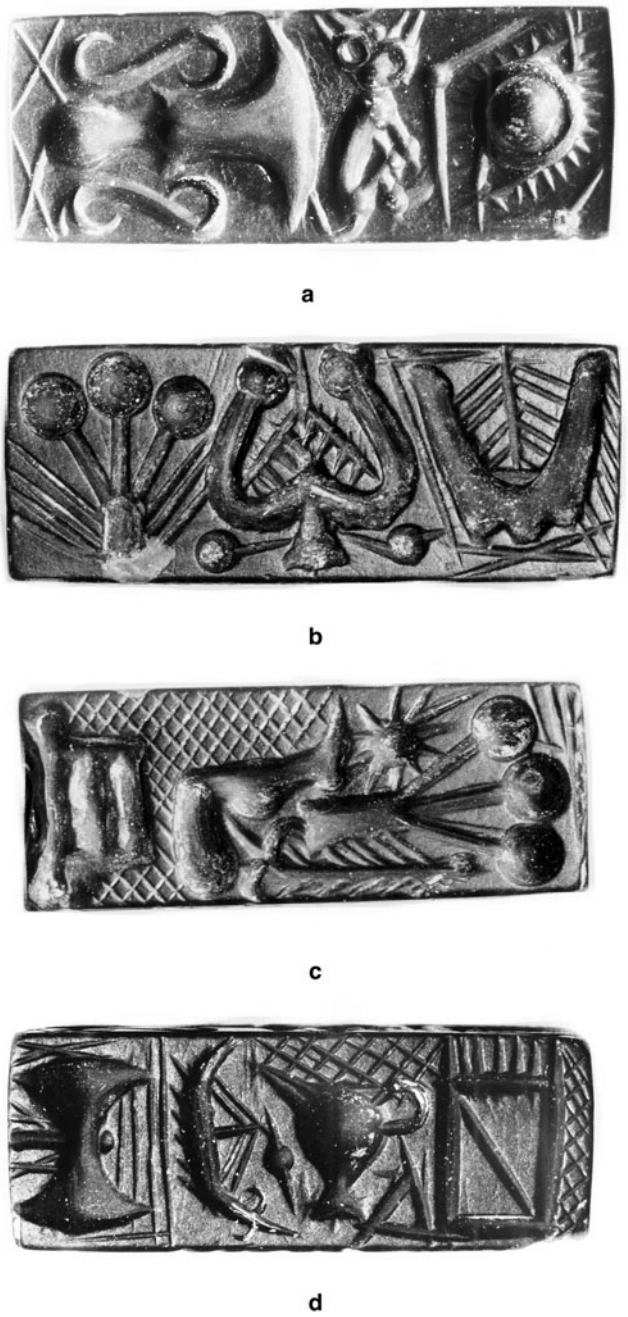

Fig. 10. **9** HM 2595. Sides a–d.

12. MP/71/268; HM σ1096; *CHIC* #133; *CMS* II.6, no. 229. Area of Street VIII: baulk B8/B9 level 1 #1380 (Fig. 1:12). Oval handle, almost certainly from an oval-mouthed amphora; dark band to rim inside and on rim, including over impression; horizontal bars on handle. D. impression 1.2. Impression of round and flat hard-stone seal face on rim, which is folded over junction with handle. Design: three Hieroglyphic signs and one non-Hieroglyphic (?) depiction, arranged in a circle. The order of signs is uncertain: *CHIC* #133 028-070-041 𐄁𐄂𐄃. The non-Hieroglyph possibly depicts a fish (the *CMS* drawing of a dolphin is unlikely), but even autopsy by Ferrara, Weingarten and Cadogan (2016, 94) could not resolve the issue. Ferrara, Weingarten and Cadogan 2016, 82, fig. 1:3, 86, fig. 4, 94; Weingarten 2015, 71, 73–4, fig. 6. Fig. 13.

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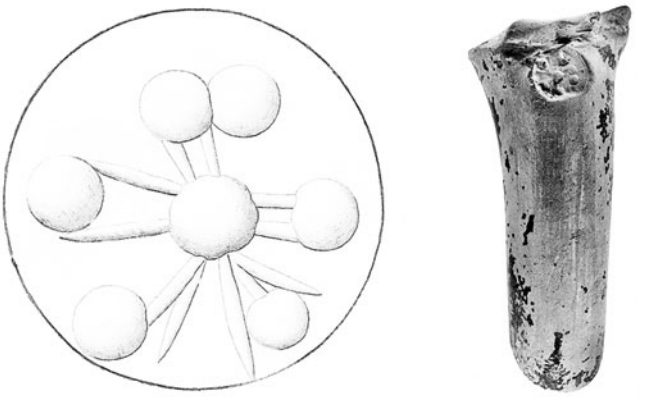

Fig. 11. **10**. *CMS* II.6, no. 227.

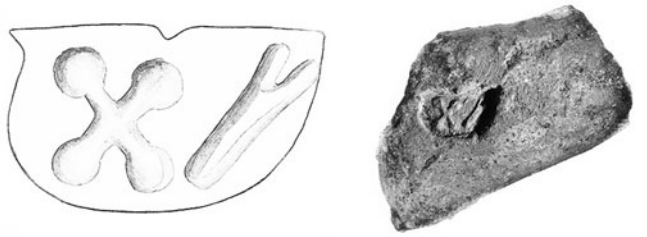

Fig. 12. **11**. *CMS* II.6, no. 230.

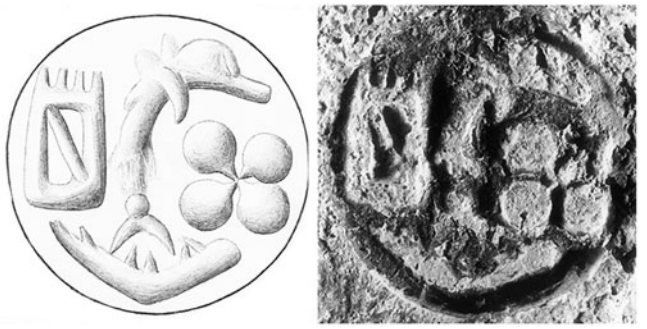

Fig. 13. **12**. *CMS* II.6, no. 229.

13. MP/73/240; SMK; *CMS* II.6, no. 228. Cistern 2 deposit 1: trench F02 level 9 #3196 (Fig. 1:13). Round handle, probably from an oval-mouthed amphora; diagonal dark bars on handle. D. impression 1.0. Impression of round and flat hard-stone seal face at base of handle on left side. Design: central cross in circle from which spring four identical 'plants', each with three branches ending in a dot. Krzyszkowska 2005, 99–100, Ill. 163, 387; Weingarten 2015, 72–4, fig. 2 (upside-down). Fig. 14.

14. MP/73/241; SMK; *CMS* II.6, no. 224. Cistern 2 deposit 2: trench F02 level 6 #3180 (Fig. 1:14). Round handle; fabric possibly with grano-dioritic inclusions; black wash outside covers impression; traces of linear decoration in creamy white typical of East Cretan EM III. D. impression 1.5. Impression of flat round, soft-stone seal face. Design: rectangular interlocking pattern. Cf. Sakellarakis 1980, 10–11, fig. 7:4 (and Sakellarakis and Sapouna-Sakellaraki 1997, 684, fig. 778 top right), from Archanes Tomb E (upper level: MM IA). Weingarten 2015, 72, 74. Fig. 15.

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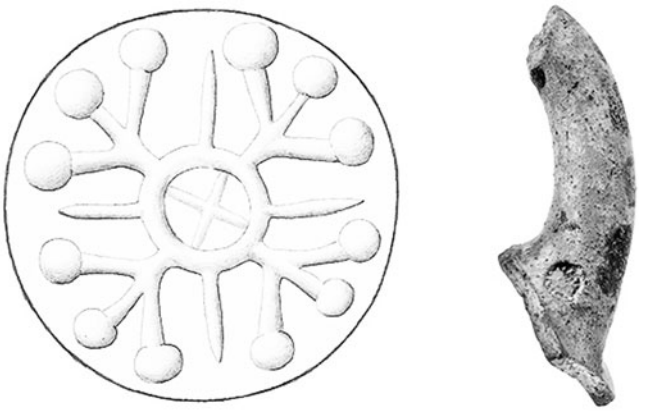

Fig. 14. **13**. *CMS* II.6, no. 228.

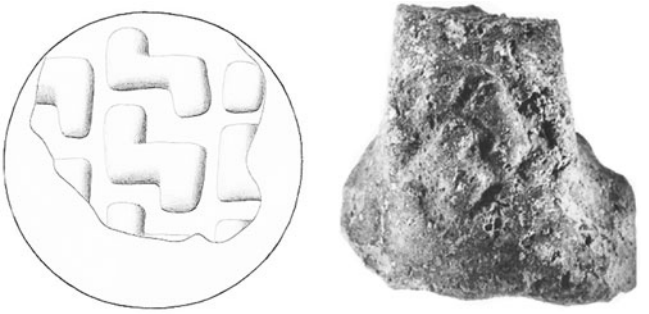

Fig. 15. **14**. *CMS* II.6, no. 224.

15. MP/73/239; SMK; *CMS* II.6, no. 231 (where upside-down); *CHIC* #175. Cistern 2 deposit 2: trench F02 level 6 #3172 (Fig. 1:15). Thick oval handle; traces of decoration in red on body of vessel. Impression of one side of a hard-stone (?) four-sided Hieroglyphic prism. Design: a four-sign inscription, only sign 019 clearly visible, preceded by very faint sign 005, with further illegible traces. Weingarten 2015, 73–4, fig. 8 (upside-down); Ferrara, Weingarten and Cadogan 2016, 82, fig. 1, 5, 85, 87, fig. 6 (fig. 6*a* upside-down), 94. Fig. 16.

16. MP/73/257; SMK; *CMS* II.6, no. 223. Steps 6: trench G01 level 3 #3123 (Fig. 1:16). Round handle. Impression as preserved, 2.8 × 1.8; original D. estimate 3.0. Impression of broken (almost half missing) round and flat soft-stone (?) seal. Design: Parading Lions (see below): lions walk around seal periphery in counter-clockwise direction; *Vierpass* in centre. Stylistic

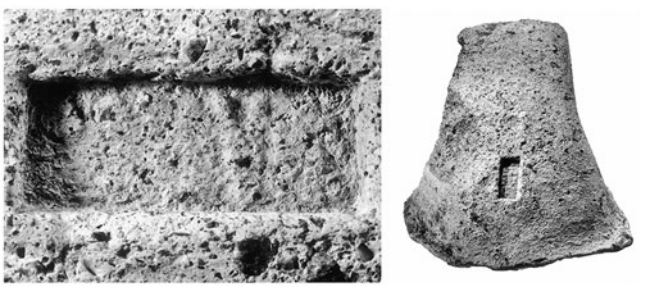

Fig. 16. **15**. *CMS* II.6, no. 231.

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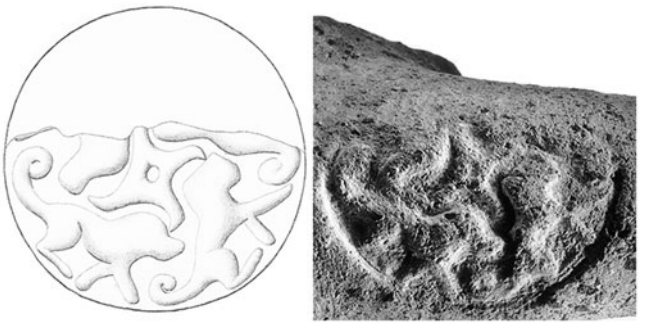

Fig. 17. **16**. *CMS* II.6, no. 223.

comparanda: the 'Platanos Rotators/Slow-Drilled Dots subgroup' (Anderson 2016, 278–9). Pini 1990, 36; Cappel 2012, 181; Weingarten 2015, 72, fig. 3 (upside-down), 74. Fig. 17.

The Parading Lions Group

Two of the nine seal impressions from Pyrgos were made by soft-stone seals belonging to the late Prepalatial Parading Lions Group (PLG). This is a surprising find. Although the PLG is a large group (over 60 seals and impressions), there are hints that these sealings were somehow different. First, both their original seals appear to have been of soft stone (*CMS*), whereas most PLG seals are made of hippopotamus ivory or at least of bone. Second, the Group's distribution is concentrated in central Crete, above all in the Mesara and at Archanes, with only outliers in the east. Elsewhere, too, they left a perhaps surprising number of impressions. It seemed then a good idea to focus on the seal impressions to see how they differed, if they did, from the extant seals themselves. Those marked by * are probably 'true' sealings.

In the list below the dates are of the contexts where the sealings were found.

1. **CMS* II.8, no. 32. Knossos, Room of the Olive Press. Three direct object sealings, soft stone, MM II (Panagiotaki 1993, 39). Anderson 2016, 233–4: Linear-zoned subgroup/related.
2. **CMS* V Supp. 3, no. 324. Chamalevri. Direct object sealing, hippopotamus ivory (?). MM IA (Vlasaki and Hallager 1995). Anderson 2016, 241–2: Northern Rounded Figures subgroup.
3. **CMS* II.5, no. 283. Phaistos, Room 25. Two direct object sealings (one combined with seal impression *CMS* II.5, no. 60: design of concentric circles), material unknown. MM IIB. Anderson 2016, 257: Interwoven subgroup / related Cross-Figure / Protome Pairs (cf. **6**).
4. **CMS* II.5, no. 281. Phaistos, Room 25. Direct object sealing, hippopotamus ivory (*CMS*). MM IIB. Anderson 2016, 276–7: Elongated Heavy-Headed subgroup (?).
5. **CMS* II.8, no. 6. Knossos, Early Houses. Direct object sealing (jar stopper), hippopotamus ivory (*CMS*). EM III (Hood and Cadogan 2011, 234–5). Anderson 2016, 262–3: Platanos Rotaters / Slow-Drilled Dots subgroup/related.
6. CMS II.6, no. 149. Archanes, Tourkoyeitonia. Impression on clay conoid, pierced for hanging (pace *CMS*: 'nodulus'), hippopotamus ivory. LM IB. Anderson 2016, 277–8: Stylized subgroup.
7. CMS II.6, no. 223; **16**. Myrtos–Pyrgos. Impression on jar handle, soft stone (? *CMS*). MM IIB (mixed with LM I). Anderson 2016, 278–9: Platanos Rotaters / Slow-Drilled Dots subgroup.
8. CMS II.6, no. 225; **9**. Myrtos–Pyrgos. Impression on jar (or jug) handle, soft stone (*CMS*). MM IIB. Anderson 2016, 257–8. Possibly to be assigned (JW) to the Northern Rounded Figures subgroup (or related?).
9. CMS II.6, no. 190. Malia, Quartier Mu. Impression on pierced rectangular clay weight, soft stone (*CMS*). MM IIB. Anderson 2016, 279–80.
10. CMS II.6, no. 191. Malia, Quartier Mu. Impression on jar handle, soft stone (*CMS*). MM IIB. Anderson 2016, 280.
11. HM σ1179. Symi. Mixed/disturbed level. Impression (*c.* 15% missing) on jar handle, soft stone (?). Three lions walk counter-clockwise around the edge of the seal; trefoil centre. Lebessi 1993,

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229, pl. 142β; Pini 2006, 6, cat. no. 8, pl. 3:2, judging that it was from the same workshop as 7 (**16**), above.

We have thus 11 Parading Lions Group seals stamped on clay objects: five are probably true sealings (marked with *) in that they closed something, and the seals were stamped for purposes of identity or authority of some kind, while the rest are stamped in a more decorative fashion, closing nothing, on pottery, weights, and miscellaneous surfaces. Two examples in the list (2 and 5) come from definite Prepalatial contexts; eight were found in later levels and one (11) in a mixed level, although its date too is late Prepalatial.

Put in context: as of the last published count (Vlasaki and Hallager 1995, 253–4, 268–9), 18 seal impressions could be dated to relatively certain Prepalatial contexts, of which two impressions (11.1%) were from PLG seals. If we include seals that were likely to have been manufactured in the Prepalatial period but were found in later or unknown contexts, and thus may have been antiques when they were stamped, we can say (after Pini 1990, 34–5, table 1) that we have some 30 Prepalatial seal impressions – whether in the period of their manufacture or later; of these, 11 (37%) are PLG seals. Clearly, the PLG is heavily over-represented for sphraghistic use, both at the time of manufacture and, more emphatically, later. What can account for this distinction?

Anderson (2016) does not indicate that any PLG subgroup is responsible for more than a single seal impression (although Pini 2006, 6, argues that 7 and 11 may be from the same workshop; and 2 and 9 as well if I [JW] am correct in assigning 9 to a place in, or at least 'related' to, the subgroup of 2). Notably, six impressions can be assigned with reasonable certainty to have been made by soft-stone and four by hippopotamus ivory seals. Given that the majority of PLG seals are of hippopotamus ivory, this imbalance might be significant, or merely practical: perhaps it reflects the greater resistance of stone seals, even soft stones, compared to ivory. If regularly used, they would simply survive longer, which might well be a factor, at least for those that were (still being?) stamped long after their manufacture. The geographical spread is interesting: 1 and 3–6 come from the PLG heartland in central Crete; the remainder, not all in later contexts (e.g. 2), are from western or, especially, eastern Crete.

Details aside, it is striking that so many PLG seals were *in use*. It is, of course, a large group of over 60 seals and seal impressions, but the Border Leaf Group (EM III–MM IB), for example, has over 130 extant examples (Sbonias 1995, 99–105), yet they left no such concentration of early seal impressions. That PLG seals were the material markers of a specific social group and represented an emerging elite seems certain (Weingarten 2005, 763–5), the vanguard (as it were) in the formative time leading up to the First Palaces.

Hieroglyphic seal impressions

The East Cretan MM group of stamped amphora or jar handles is especially interesting because six or seven of the 27 handles were impressed by Hieroglyphic seals:

Malia (two): *CHIC* #150 = *CMS* II.6, no. 189; *CHIC* #132 (not in *CMS*).
Myrtos–Pyrgos (three): **11**, **12**, **15**.
Petras (one): *CMS* V Supp. IB, no. 329 (not in *CHIC*); Krzyszkowska 2016.
Palaikastro (one possible): *CMS* II.6, no. 246, stamped by a round and flat metal seal, engraved in negative with a Hieroglyphic or pseudo-Hieroglyphic inscription (not in *CHIC*).

17. MP/73/245; SMK. Cistern 2 deposit 3: Cistern SE level 3 #3136 (Fig. 1). Round handle; diagonal dark bars on handle, and solid circle covering, and around, the mark. L. mark 1.0. W. mark 0.6. Design: two marks looking like the impression of an irregular shape of seal but, in fact, incised by some tool (perhaps a potter's smoothing stick). Weingarten 2015, 73–4. Fig. 18.

Pyrgos IV: LM IB

The LM I documents from Myrtos–Pyrgos were found in, or around, the Country House (Cadogan 1997) that dominated the period IV settlement. They date to LM IB when the House

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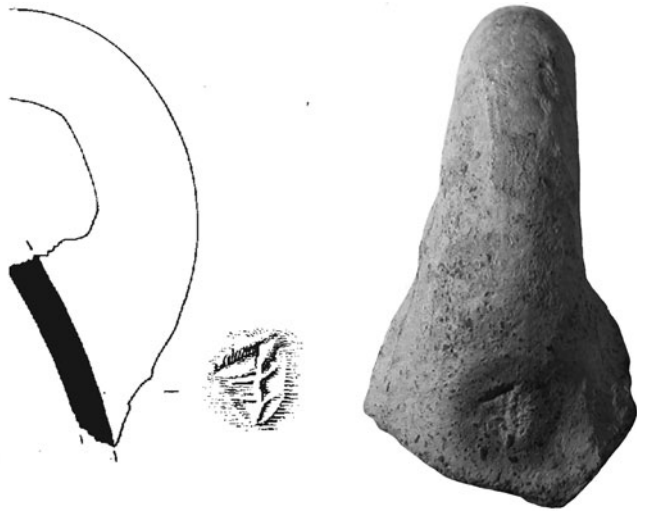

Fig. 18. **17**. MP/73/245. Drawing: J. Clarke; photo: D. Evely.

was destroyed by a fire so hot that it splintered masonry and vitrified pottery. In the collapse of the building large ashlar blocks and the gypsum slabs of the upper floor(s) fell into the ground floor rooms that had been terraced into the hill's soft bedrock, especially Passage 1 and Light Well 3 on the west side of the Country House (Fig. 1). This destruction happened at, probably, an advanced stage of LM IB, to judge from Alternating Style sherds in the destruction debris and a bell cup (Cadogan 2011a, 145–8, fig. 2) in House A (next to the Country House to the east), and other evidence. Barley and vetch in Storeroom 9 of the Country House have produced a suite of C-14 dates for this disaster (Manning et al. 2002).

Roundel **18**, nodulus **19** and Linear A tablet **22** came from a Shrine or Shrine Treasury on the upper floor of the Country House (Cadogan 2008), whose contents were mainly found scattered among destruction debris on upper floor gypsum slabs that fell into Passage 1. The assemblage also included five (or more) tubular stands for offerings, a red faience triton shell, a bronze rosette and two pieces of reworked Egyptian Early Dynastic stoneware, as well, in all probability, as Linear A tablet **23**, which was among items fallen into adjacent parts of the building (Space 12, Stairs 2 and Light Well 3). Another likely member of the Shrine / Shrine Treasury group is roundel **20**, which was a surface find near the top of Stairs 2.

18. PYR Wc 3; MP/71/217; HM σ1097; *CMS* II.6, no. 233. Country House Passage 1 (Shrine or Shrine Treasury group): baulk G5/G6 level 2 #1748 find 4 (Fig. 1:18). Roundel, seal depicting two lions attacking a bull, from a metal or hard-stone ring (Becker 2018, 487–8, cat. no. A 79). Preserved impression: L. 2.2, Ht 1.5. Burnt. Cadogan 1981, 170–1, fig. 2; Pini 1985, 154–5, figs 1, 4, 5; Younger 1985, 71, cat. no. 13 (Dot-Eye Mumps: m, Bulls with closed mouth); 1988, 115, 399; Weingarten 1990a, 22, cat. no. A-36; 1990b, 109, n. 27; Hallager 1996, 1.68–9, fig. 25, and n. 237, 83, 2.195; Cadogan 2008, 9–10, cat. no. 3, fig. 5:25; Becker 2018. Fig. 19.

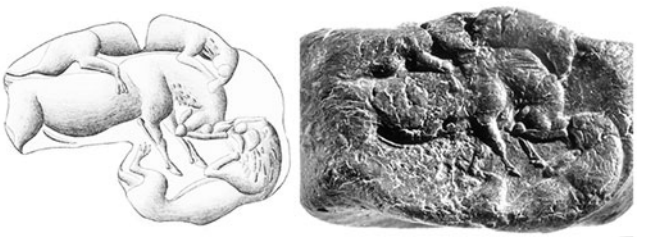

Fig. 19. **18**. *CMS* II.6, no. 233.

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The motif of two or three lions attacking a bull, with one lion usually attacking the bull's head while one or more leap onto its back, was listed and discussed first by Pini (1985, 154–5); a further example is from Chania (*CMS* V Supp. 1A, no. 140). Outside of glyptic, this may also be the motif of the gold inlays from Shaft Grave III at Mycenae of Late Helladic I date, where three lions attack a bull running in flying gallop (Karo 1930–3, 119–20; Younger 1978, 288–9, fig. 6:6).

In the list below seal impressions 1–3 were in LM IB contexts, and 4 in the LM IIIA2 context of the destruction of the Palace of Knossos.

1. *CMS* II.6, no. 233; **18**. Myrtos–Pyrgos. LM IB.
2. *CMS* II.6, no. 274. Tylissos. Seal impression on nodulus from a metal ring (Becker 2018, 488, cat. no. A 80). LM IB.
3. *CMS* V Supp. 1A, no. 140. Chania. Seal impression on nodulus from a metal ring (Becker 2018, 488–9, cat. no. A 81). LM IB.
4. *CMS* II.8, no. 347. Knossos, Magazine 11 (erroneously attributed to the Archives Deposit [Evans 1935, 534–5, fig. 487], corrected by Popham and Gill [1996, 10]). Seal impression on direct-object sealing from a metal or hard-stone ring (Becker 2018, 534–5, cat. no. A 169). *CMS* stylistic dating: LM I–II; Becker 2018: LM III.

All four impressions are from rings, either of metal or a hard stone; despite the oval ring form, the composition is strongly circular. None are stamped on typical LM I sealing types: rather, two were stamped on noduli (like many rings of Knossian origin/manufacture: Weingarten 2010), one on a roundel, and one on a direct-object sealing (which dates the act of stamping to Final Palatial Knossos but not the ring's date of manufacture). Unfortunately, no impression is well preserved. While the theme is virtually the same, the engraving styles differ, with only a few common traits to support their contemporaneousness (e.g. the elongated-pellet lion manes of 1 [**18**], 2 and 4; and the three-toed lions of 1 [**18**] and 2.

19. MP/71/218; HM σ1098; *CMS* II.6, no. 232. Country House Passage 1 (Shrine or Shrine Treasury group): baulk G5/G6 level 2 #1748 find 1 (Fig. 1:19). Nodulus (triangular prism shape), stamped by cushion seal depicting two standing, overlapping, boars. Burnt. Cadogan 1981, 170–1, fig. 3; Younger 1985, 67, cat. no. 5 (Group of the Couchant Boars, a group dated by Younger [1985, 66–7] *c.* 1475–1450 BC, and its workshop assigned to Knossos [?]); 1988, 74, 400; Weingarten 1990a, 22 and n. 13, cat. no. A-37; 1990b, 109, n. 27; Cadogan 2008, 10, 12, cat. no. 2, fig. 5:24; Dionisio, Jasink and Weingarten 2014, 108, 236, 262, cat. no. S-38. Fig. 20.

Valasia Isaakidou and Judith Weingarten write:
Pigs rarely appear in Aegean iconography. Having relatively few comparanda makes it difficult to distinguish wild from domestic pigs, not least because early domesticated breeds were smaller,

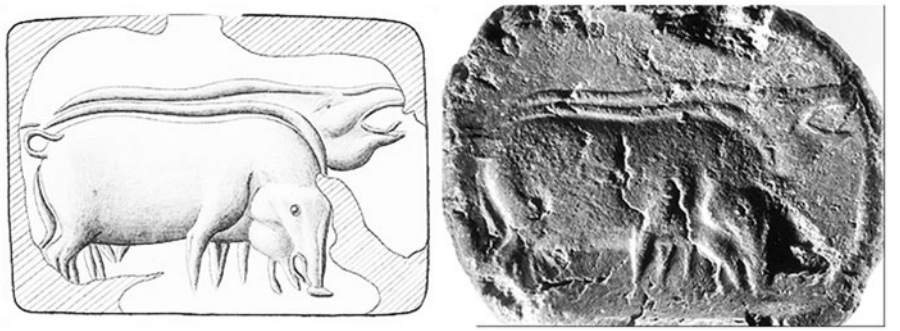

Fig. 20. **19**. *CMS* II.6, no. 232.

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thinner, and more bristly than the smooth, pink porkers of modern farms. Although palaeontological and biogeographical studies indicate that wild boars were absent (Mavridis 2003; Isaakidou 2005), feral animals (escaped domesticates) may have roamed the Bronze Age Cretan landscape (Isaakidou 2005, 280; Halstead and Isaakidou 2011, 172). If not, Minoan craftspeople may still have been aware of the existence of boars elsewhere, for instance on the Greek mainland. The tusks depicted here do not resolve the issue, as both wild and domestic pigs bear tusks, which are larger in wild than domestic animals and, in both cases, are dramatically larger in males than females (e.g. Schmid 1972, 81, pl. 4). The front pig of the two has a V-shaped appendage at the end of its underbelly which *CMS* identifies as the male sex organ (though wrongly placed and wrongly drawn; correct: e.g. *CMS* III, no. 159*b*) – which suggests that **19** depicts two male pigs. In either case, the rounded configuration of these pigs perhaps invites identification as fattened domesticates rather than free-ranging wild or feral animals. Later (Linear B) texts from Pylos list a few cattle and more numerous pigs fattened (*sialos*) for sacrifice, and this term appears to have earlier roots in Linear A, albeit associated with sheep rather than pigs (Meissner 2019, 198).

Analysis of the animal bones from Pyrgos II, III and IV puts the discussion in a clearer context as it reveals a surprisingly high level of pork consumption (Gamble 1979, 123, table 1; Isaakidou unpublished study, in progress) when compared with other EM–LM East Cretan assemblages.[2] In fact, the Pyrgiots' consumption of pork is matched only at the Palace of Knossos (Isaakidou 2005, 210, table 6:19). The similarity with Knossos, where the Neopalatial faunal assemblage comes overwhelmingly from the 'public/elite core' area of the site, may be seen as indicating privileged diet, in cultural (Knossian) and/or social (elite) terms. In support of the latter, it is notable that biometric evidence shows that at least some of the Pyrgos pigs, like their Knossian counterparts, fall in the upper size range of Bronze Age Aegean domesticates (Isaakidou 2005, 252) and so were well fed, which is consistent with the iconographic hints of fattening. In the recent past, at least, the relatively small size of *fattened* domestic pigs on Crete, compared to their counterparts in mainland Greece, highlights the difficulties faced by many small-scale farmers in providing large amounts of nutritious fodder (Halstead and Isaakidou 2011, 167; 2015, 32), reinforcing the suggestion that consumption of fattened pigs at Neopalatial (and Protopalatial) Pyrgos implied elite social status.

20. PYR Wc 4; ANM 12567; *CMS* II.6, nos 234–5. Surface find near Country House Stairs 2 (Fig. 1:20). Roundel (disc shape), inscribed on both flat sides and stamped with five seal impressions, three by a cushion seal (*CMS* II.6, no. 235) with a cult scene and two by a hard-stone lentoid (*CMS* II.6, no. 234) depicting two lions flanking their kill, a bovine. All five seal impressions are scored *supra sigillum* with an oblique mark indicating the number '1'. Rehak and Younger 1995; Hallager 1996, 2.196–7; Younger 2015; Cadogan 2008, 9, fig. 5:54, 11–12, cat. no. 28; Dionisio, Jasink and Weingarten 2014, 108, 236, 262, cat. no. S-39; Weingarten 2017, 101, n. 6, n. 9, 104, n. 19. Figs 21, 22.

The sign on one face is difficult to interpret (Fig. 22*b*), not merely because the surface is damaged. Rehak and Younger (1995; Younger 2015) identified it with a logogram that in Linear B was used for gold (see tablet from Pylos PY Jo 438). If the interpretation is at all valid, this version would be more than marginally different. While the two hooks on either side do match such identification, the middle section of the sign does not. We could argue that it may be an untidy, approximate version of this logogram, but we cannot discount the possibility that it can be a reduplicated simple sign, given that the main body of the sign presents two symmetrical, specular sections.

The cushion seal impression is extremely damaged. One can be sure only that it includes a female wearing a flounced skirt, her arms raised at the elbow in a gesture of veneration/prayer.

[2] See for example Isaakidou in Molloy et al. 2014, 335, table 6; also unpublished data from ongoing study by Isaakidou of EM Trypiti, Neopalatial Sisi and EM–LM Priniatikos Pyrgos.

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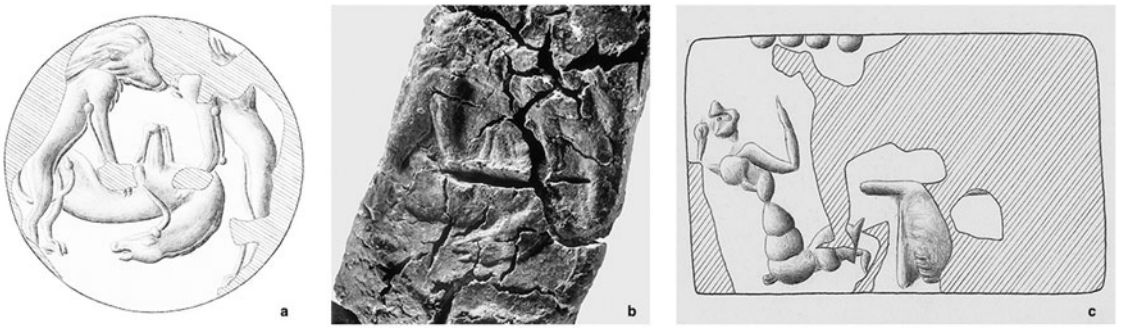

Fig. 21. **20**. Roundel impressed by seals *CMS* II.6 (a) drawing no. 234, (b) photo no. 234, and (c) drawing no. 235.

Fig. 22. **20**. Roundel inscriptions: PYR Wc 4A and PYR Wc 4B. Photo: J. Weingarten.

Possibly the shape to her right is from a hide skirt with a tiny tail which would indicate (if a hide skirt) that the figure wearing it was facing in the same direction as the female figure.

The lentoid depicts lions standing on either side of their prey, a bull, upside-down, its collapsed legs and neck twisted back, indicating death. Although stylistically different from the lions' attack scene pictured on roundel **18**, it is worth noting that the two roundels from Pyrgos are both stamped by seals depicting lions attacking bulls: this could be meaningful.

Two different seals, a cushion and a lentoid, were used to stamp **20**. While a handful of earlier roundels from Malia (MA Wc 13/14) and Samothrace (SA Wc 2) were stamped by more than one seal, it is only here at Pyrgos (**20**) and at Knossos (KN Wc 3, 30, 41, 46) that the practice of stamping roundels with two or more different seals continued into Neopalatial times. Cushion seals stamped on roundels are found only at: Samothrace (Dionisio, Jasink and Weingarten 2014, cat. nos S-9, S-10, S-11 [S-9 and S-11 inscribed with Cretan Hieroglyphics and stylistically connected to S-10]); Pyrgos (**20** = Dionisio, Jasink and Weingarten 2014, cat. no. S-39); and Knossos (Dionisio, Jasink and Weingarten 2014, cat. no. S-17). Likewise, cushion seals stamped on noduli occur only at: Samothrace (Dionisio, Jasink and Weingarten 2014, cat. nos S-7, S-8); Pyrgos (**19** = Dionisio, Jasink and Weingarten 2014, cat. no. S-38); and Knossos (Dionisio, Jasink and Weingarten 2014, cat. nos S-15, S-16, S-18 [13 examples], S-19 [four examples]). Clearly, one of the links in sealing practices of Neopalatial Knossos was with Pyrgos.

TABLETS AND INSCRIPTIONS

Apart from the inscriptions on **20**, Myrtos–Pyrgos during the MM IIB–LM IB periods yielded inscribed sherd **21**, Linear A tablet fragments **22** and **23** and possibly inscribed jar **24**. Among these, **21** has a dubious script affiliation: its signs can be ascribed to Linear A and Cretan Hieroglyphic interchangeably. Its date is also uncertain, but probably between MM (IIB) and LM IB. It was found at the south-west corner of the top of the hill, in a level of earth just below

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the topsoil – an insignificant context with some LM I detritus, but also a cup that was probably MM.

The context of **22** is described above. **23** was found nearby in an excavation level that covered both Light Well 3 and the north end of Passage 1, together with another unusual find: a fragment of a bowl of Yiali obsidian (Cadogan 2008, 9, fig. 5:14; 11, cat. no. 32), a rare elite product of Neopalatial Crete (Warren 1969, 135–6). But there was also a Hellenistic lamp in the level, coming from the late second to early first century BC shrine of Hermes and Aphrodite of period V at Pyrgos that was built over the ruins of the LM I Country House at the top of the hill (Cadogan and Chaniotis 2010, 294–301). This could have been a votive offering, or just lost down a hole among the level's fallen ashlar blocks. Either way, it does not affect the LM IB date of **23**.

Apart from its context, **23** is unusual for two reasons. It is a sliver of fine buff clay – which is abnormal, if not unique for these documents – that has broken off from something unknown and larger, leaving a rough underside to the sliver while the top with the inscription was smoothed with a thin layer of fine buff clay that had been applied, probably as a slip, to a core of coarser clay (that no longer exists) such as that of **22**. The practice of applying fine clay to coarse clay is known on cooking pots in both Pyrgos III and IV periods. Here it produced a better surface for inscribing. However, this fine layer at some moment separated from what it was stuck to, perhaps in the fire that destroyed the Country House, when its fall could have broken it into its original two layers of clay. It is also possible, however, that it had been deliberately fired: could the potter and/or scribe have thought that this was essential so as to secure the fine clay surface for its inscription?

Another inscriptive uncertainty is **24**, a storage jar with a possible monogram. It is not clear whether we can assign it to the status of an inscription, although we propose tentatively that it be classed as PYR Zb 6. The possible monogram is on the shoulder of a medium-sized four-handled jar from the LM IB destruction deposit in Storeroom 9, which was one of the two main storage places, with Storeroom 8, of the Country House. Up to 14 pithoi were found in Storeroom 9, as well as three large jugs and four storage jars. Among these, **24** was reconstructed from sherds and does not have a specific provenance. It is closely similar in shape to jar MP/70/P42 in Storeroom 9, which is, however, about half its size and capacity. The pithoi and other jars could all have been used for keeping and managing farm produce: one pithos contained bitter vetch (*Vicia ervilia*) and another hulled six-row barley (*Hordeum vulgare* ssp. *vulgare*); emmer (*Triticum dicoccum*) was also kept in the Storeroom, while a patch of greasy earth suggested that (at least) one pithos held olive oil.

Above Storerooms 8 and 9 there was probably another upper floor shrine, to judge from the stone offering table, three Cycladic jugs (that were antiques in the context) and a pair of amphora-rhyta (perhaps also antiques) that had fallen into Street I outside the two Storerooms (Cadogan 1978, 79–81, figs 32–3; N. Marinatos 1984, 177). Shrines above storerooms have been identified at other sites in Crete and the Cyclades, as well as shrines connected with rooms that seem to have been used for crafts and cooking, including making bread, leading to the suggestion that the priests/esses were, or could have been, in charge of storage and production (N. Marinatos 1984, with others' suggestions in the discussion). Jar **24** may have fallen from the upper floor into Storeroom 9, but we cannot confirm this or deny it. If it did, it could have been part of the contents of the presumed shrine.

MM (IIB)–LM IB

21. PYR Zb 5; MP/71/79; SMK. South of House Y: trench B10 level 2 #1347 (Fig. 1:21). Body fragment of jar or other vessel. 5.3 × 5.1 × 6.3. Coarse fabric. L. of sign 1: main stem 2.1; tail 1.0. L. preserved of sign 2: 2.1. Faint red horizontal band below inscription. Olivier 1999, 428–9; Del Freo and Zurbach 2011, 92; Ferrara, Weingarten and Cadogan 2016, 82, fig. 1:6, 87–8, fig. 7:6, 94–6. Fig. 23.

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Fig. 23. **21**. PYR Zb 5. Photo: J. Weingarten.

This is a small sherd from a coarse ware jar, perhaps an oval-mouthed amphora. Two signs are inscribed neatly and deeply on its surface. The signs, in our opinion, can be more safely ascribed to the Cretan Hieroglyphic script than Linear A, even though they have been transcribed into Linear A signs as AB 04-57 (Olivier 1999, 428–9; Del Freo and Zurbach 2011, 92) for reasons tied to the chronology of the pottery in association with this piece, which point to a LM I date (and thus more embedded in a Linear A script milieu). We cannot, however, exclude the possibility that this sherd is earlier, belonging to Pyrgos III. If interpreted as Cretan Hieroglyphic, the two signs would be read as CH 025-056, although the second sign is damaged in its top section, so its diagnostic features cannot be ascertained. It must be noted that a document from Petras (Tsipopoulou and Hallager 2010, 180) bears the sequence 025-056-005, which partly overlaps with the sequence of **21**.

LM IB

22. PYR 1; MP/70/78; ANM 6524; *GORILA* I, 321–2. Country House Passage 1: trench G6 level 2 #97 find 13 (Fig. 1:22). Tablet fragment. L. preserved 3.2–3.4. W. 4.9. Th. 0.8–1.0. Red–orange coarse clay. Smoothed surface with some cracking. Burnt or/and already fired. Morpurgo-Davies and Cadogan 1971; Raison and Pope 1971, 315 and frontispiece, cat. no. PU 1 (now PYR 1); Hooker 1973; Raison and Pope 1994, 283, cat. no. PU 1; Cadogan 2008, 9, fig. 5:33, 10, cat. no. 1, 12; Ferrara and Weingarten 2022, 118–19, fig. 5. Fig. 24.

Although this tablet is damaged and its bottom section broken, we assume that the text is complete, as it records a seemingly self-standing set of information. (A nick, however, at the break, beneath but slightly to the right of the right end of the ninth stroke of the numeral, may be possibly part of a third line.) Some gypsum incrustation on the surface of the break must be an effect of the fire that destroyed the Country House. It shows that this is an old break that may have happened earlier or, otherwise and perhaps more likely, during the fire. The cracking on the surface is another effect of the fire (rather than from an earlier intentional firing).

The Linear A script of the inscription is consistent with its LM IB date and find spot. The text covers two lines for a total of two sequences, one syllabic and neatly readable (Morpurgo-Davies

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Fig. 24. **22**. PYR 1. Photo: D. Walker.

and Cadogan 1971), and the second line, possibly wholly logographic, which conveys the subject matter via the logogram for wine and a stated quantity of 90 via the numeral.

The reading of the signs needs to be updated in accordance with the *GORILA* standardised sign list, as AB 37-80-26-40-04, as far as the first line is concerned (*GORILA* V, 264). The first sign in line 2 was dubious when Morpurgo-Davies and Cadogan first published the item, and they interpreted it as a ligature of sign 92 (*te* in Linear AB, which is indeed attested at the end of the first line). Hooker (1973) in turn, and following their lead, assumed it qualified the type of wine mentioned. However, this is likely to be sign A316, as attested in Phaistos (PH 8b.1, PH 1a.1.2) and Knossos (KN 91.2), and equally likely a logogram. The final, and ninth, horizontal stroke marking the tens in the numeral appears to have been added after the other eight strokes, as it is slightly detached from them and unbalanced: we should expect two columns of five and four tens, rather than the other way round.

23. PYR 2; MP/70/210; HM 1681; *GORILA* V, 58–9. Country House Light Well 3: trench G5 level 3 #431 (Fig. 1:23). Tablet fragment, broken at sides and underneath, which is rough. L. preserved 1.85. W. preserved 2.7. Th. preserved 0.5. Fine pink-buff clay; buff slip. Burnt, perhaps resulting in (slight) curling of the preserved surface. Morpurgo-Davies and Cadogan 1977; Raison and Pope 1994, 283–4, cat. no. PU 2; Cadogan 2008, 11, cat. no. 25. Fig. 25.

This item is extremely damaged but all the same two Linear A signs are discernible, one being a numerical sign belonging to the fraction series. We cannot surmise, nor reconstruct, the original dimensions of the tablet, but we can assume that it is broken on all sides with the exception, perhaps, of the top section. We can safely identify the klasmatogram J corresponding to ½ (for the mathematical values of Linear A fraction signs: Corazza et al. 2021). Before it is a damaged sign, upon which Morpurgo-Davies and Cadogan (1977, 9) rest their case, and so shall we. The fine clay skim on which the signs are incised is surprising, as are the ruled lines. While lines do exist, if rarely, on Linear A tablets, most are very different from the neat, very orderly lines that we find on this specimen. The closest parallels are on two tablets from Phaistos (PH 8a and 16), and on other tablets from Palaikastro, Tylissos and Hagia Triada (PK 1, TYL 3, HT 86a; Morpurgo-Davies and Cadogan 1977, 9). Lines in Linear A appear to be drawn as section separators, rather than as guiding lines, which is the regular practice in Linear B (Salgarella 2020, 190–1 and n. 55).

24. PYR Zb 6; MP/70/P74; SMK. Room 9; trench K5 level 2 #169–70, 172; baulk K5/K6 level 2 #199–200 (Fig. 1:24). Jar, *c.* 80% preserved; one horizontal handle broken, one vertical handle

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Fig. 25. **23**. PYR 2. Drawing: J. Clarke; photo: C. Papanikolopoulos.

Fig. 26. **24**. PYR Zb 6. Drawing: D. Faulmann; photo: S. Ferrara.

missing. Ht 39.0. D. rim 17.6. D. base 22.0. Max. capacity *c.* 17.2 litres.[3] Coarse buff clay. Apparently handmade. Broad piriform shape; low collar rim; two vertical and two horizontal round handles below rim. The surviving vertical handle has a deep vertical incision at the point of greatest projection (which was almost certainly not a sign but part of the LM I ceramic practices with storage jars). Possible original decoration of brown bands on the vessel is hard to substantiate. There are faint traces of brown bands around the rim, on the upper body, and to, and above, the base – and possibly over the whole body. Fig. 26.

A possible, if tentative, sign can be found to the right of the surviving handle. The *ductus* of its traits is untidy and tentative, and marred by the several sherd fragments reassembled in reconstructing the vessel. Some diagnostic segments of a sign are, however, observable as their trait is deep and deliberate, and does not appear to be accidentally scratched or part of a severed fragment. Whether there was any intention to make the sign legible and to inscribe the surface with clarity is another matter. The damaged state of the jar is not conducive to a definitive reading, nor was autopsy conclusive. Our interpretation remains highly speculative, if pondered. In terms of

[3] Following the software developed by Jean-Paul Thalmann as part of the ARCANE project: Thalmann 2007, 432.

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similarity, the sign might be interpreted as A 367 (*GORILA* V, 309), so far a hapax found on a conical hanging nodule from Ayia Triada (*GORILA* II, 66, cat. no. HT Wa 1851).

THE MEDIA OF MINOAN MYRTOS

The media for communication and administration at EM II–LM IB Myrtos–Pyrgos, with those for EM II at Myrtos–Fournou Koryfi, help to define the progress and changes of culture and connections with the rest of Crete of Minoan Myrtos for around a millennium if, apparently, interrupted twice by temporary abandonments of Pyrgos following destructions in EM IIB and MM IIB. Because of the long later history of Pyrgos, little survives of the Pyrgos I EM II settlement except for a few scattered finds: the well-preserved settlement at Fournou Koryfi shows what the culture of Pyrgos would have been; and the seals are similar. Despite a few signs of contacts in glyptic with the rest of the island and receiving pottery from the Bay of Mirabello and some fine ware from the Mesara, we imagine a localised pattern of life concentrating on the Myrtos valley.

Pyrgos II, spanning EM III / MM IA to, probably, MM IIA, shows signs of sharing in a wider culture: a similar pattern of occupation from EM II onwards to that of Malia and growing cultural sophistication in the milieu of the Malia–Lasithi–Mirabello zone, yet with expanded connections with the culture of central Crete. The seal impressions show this well, with what is among the earliest (**5**: MM IB) stampings on a jar in a good context from anywhere in Crete, if not actually the earliest, marking the start of a practice that was concentrated in the MLM zone and peaked in MM IIB / Pyrgos III (cf. Pini 2006, 9–10). However, the antique Parading Lions Group seal used for stamping **16** looks in design to late Prepalatial central Crete, while the vessel seems of local manufacture. This Janiform situation is matched in the pottery of Pyrgos, which shows a blending of the East Cretan EM III creamy-white-on-dark and central Cretan polychrome traditions.

We may also note here that, somewhat to our surprise, no seals were found in, or at, the long-lived Tomb at Pyrgos, whether in the Pyrgos II levels or later, down to LM I (Pyrgos IV).

By MM IIB (Pyrgos III) the settlement had become ostentatiously rich and prosperous. The elite could eat pork (and continued to do so in LM I), and built monumentally with defence works, two cisterns and, we presume, a Central Building that ruled the settlement. As a leading member of the MLM zone, Pyrgos enjoyed close and varied cultural connections with Malia (Cadogan 2013a), albeit with some imports of pottery from the Mesara and the far East of Crete. The presence of Cretan Hieroglyphic was an important part of this relationship, notably in such items as seal **9** in green jasper, a luxury item for the use, presumably, of a VIP in some way connected with Pyrgos, perhaps through a marriage with Malia. But, while there is little doubt that the possession of a Hieroglyphic seal could be prestigious in itself, there is no evidence that any were used at Pyrgos in an organised administrative manner (as they were at Malia) and no direct evidence that the Cretan Hieroglyphic script could be read, let alone written on the site.

The LM I seals, sealings and Linear A texts of Pyrgos IV are part of the wholesale change in the culture and politics of Pyrgos from being linked to, if not a dependency of, Malia to a similar special relationship with Neopalatial Knossos. The high amount of pork, possibly fattened pigs, eaten at Neopalatial (and Protopalatial) Pyrgos probably attests to its elite status and intriguingly mirrors urban Knossos rather than other East Cretan settlements, where sheep and goats were the overwhelming majority of animals consumed. The presence of Linear A (**22**), together with roundel **18** and nodulus **19** in a shrine context in the Country House, together with such elite products as a faience triton shell paralleled only at Mycenae and Akrotiri on Thera, and almost certainly a product of Knossos as was the Marine Style jug in the group, encapsulates the interconnection in Neopalatial Crete of religion, administration and social control, the agricultural economy, and arts and crafts. Above all, the superb Knossian architecture of the Country House may be seen as a blatant show of Knossian power on a hill that, although low, is

still remarkably visible from the mountains of the Myrtos river basin. Pyrgos lies at the spot where the ancient main route from Knossos came off the mountains to reach the coast before continuing towards the Ierapetra isthmus (Cadogan 2019). Such is the setting for the surprising discovery that roundel **20** was stamped by two seals, a practice known only at Knossos and Pyrgos in the Neopalatial period of Crete.

Finally, a fragment of a coarse ware jar, probably a pithos, from the Negev of Israel may fill a gap in the documentary history of Pyrgos. Found in a temple precinct at Tel Haror of Middle Bronze III date of around 1600–1550 BC (which would be equivalent to LM IA in Minoan terms, whether on the high or the low chronology), this sherd had been cut out of a large jar, of which no other fragments were found: it may even have been a votive offering as a sherd. On it an inscription of three signs that appear to be in Linear A or possibly Cretan Hieroglyphic had been incised before firing.

Petrography suggests that there is a good possibility that the pithos with this inscription came from Myrtos or nearby (Oren et al. 1996; Day et al. 1999; Karnava 2005; Quinn and Day 2007a; 2007b). If this was the case, it is extremely likely that Pyrgos was somehow involved, being the principal Palatial era settlement of the district: as Artemis Karnava (2005, 838) has generously remarked, 'it is one of those rare happy occasions when the epigraphic data match the archaeological record'. Furthermore, if Pyrgos was involved, this sherd then fits well into the break in the documents we have presented, coming between the MM IIB / Pyrgos III items **8**–**17** and the Pyrgos IV items of LM IB date **18**–**20** and **22**–**24**. (This may also be the case for **21**.) In the history of the settlement, it would complement the start of the Pyrgos IV period which appears to have been in LM IA: evidence of MM III occupation at Pyrgos is scarce to non-existent (Cadogan 2013b). But a production date for the pithos in MM III should not be completely ruled out.

The pithos was a product of the so-called 'South Coast' ophiolite-rich tradition of potting that flourished at or near Myrtos (Nodarou 2022) and/or in the country to the west as far, at least, as Keratokambos (Whitelaw et al. 1997). Although a similar ophiolitic fabric has recently been recognised on the north coast of Crete at Chersonisos between Heraklion and Malia, as well as other possible places on the south coast to the east of Ierapetra (Liard 2018; 2019, 187–8; Liard et al. 2018), these candidates are not as compelling. The microfossils observed in the clay, for example, fit well with those from the Myrtos region (Quinn and Day 2007a; 2007b), as do the dolerite inclusions (Day et al. 1999, 193; Nodarou 2022, 94). It remains a strong – and attractive – possibility that the Tel Haror fragment is from Myrtos or around.

That leaves the difficult question (which also applies to **21**): Cretan Hieroglyphic or Linear A? While AB 30 (FIGS) causes no problem (the sign is much the same in both scripts), the CLOTH signs do differ, albeit both are rectangular in outline. The Hieroglyphic cloth logogram *163 is a rectangle with fringes above and below, a sign which continues in use in Linear A (with long fringes below) even as it is replaced by AB 54, a loom-like sign. The third sign was identified as a bull's head, despite Jean-Pierre Olivier's (1996) view that it resembled a Cretan wild goat (agrimi) and we agree with this interpretation. While the horns are indeed too straight for an adult male agrimi, the slim triangular head and slender neck, including the ridge of hair behind the neck, are exactly right and exclude any jowly thick-necked bull.

Although there is a fair amount of evidence for the Cretan Hieroglyphic script at Pyrgos in MM IIB (seals **8** and **9**; impressions **11**, **12** and **15**), there is no evidence for their use beyond the rare stamping of jar handles and no reason to think that any seals were manufactured on site but rather imported from elsewhere in the MLM cultural zone. After the MM III hiatus, when there is minimal evidence, or none at all, for habitation at Pyrgos, and during which time the Cretan Hieroglyphic script was replaced by Linear A at Knossos and throughout east Crete, the superb architecture of the Country House built on the hill testifies to the arrival of Knossian power and Knossian hegemony in the region. It is reasonable to expect that any writing as may now have come this way would have been written and read in the newly dominant script. The LM IB evidence for Linear A at Pyrgos supports such a timely shift, and therefore, if the Tel Haror sherd is confirmed to have begun its journey at or near LM IA Myrtos–Pyrgos, it is more than likely that the script incised into the pithos was Linear A.

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Πολυμέσα στον μινωικό Μύρτο–Πύργο στην Κρήτη

Στον μινωικό οικισμό του Μύρτου–Πύργου στη νότια ακτή της Κρήτης, έχουν βρεθεί πέντε σφραγίδες (και μια έκτη ημιτελής), 11 αποτυπώματα σφραγίδων σε πήλινα αγγεία, δύο δισκία και ένα κουπόνι, καθώς και δύο πινακίδες στη Γραμμική Α, και δύο επιγραφές σε πήλινα αγγεία. Τα τεκμήρια αυτά, τα οποία παρουσιάζονται εδώ, χρονολογούνται μεταξύ της Πρωτομινωικής ΙΙ και της Υστερομινωικής ΙΒ περιόδου και αποτελούν πολύτιμες μαρτυρίες για τις πρακτικές σφράγισης, σημείωσης και γραφής – ακόμη και της χρήσης αρχαιότερων σφραγίδων για τη σήμανση αποθηκευτικής κεραμεικής – στον συγκεκριμένο μικρό αλλά σημαντικό επαρχιακό οικισμό. Συμβάλλουν, επιπλέον, στην κατανόηση των περιφερειακών ιεραρχικών, και μάλλον και πολιτικών, πολιτισμικών ενοτήτων της Κρήτης κατά τη μακρά υπό μελέτη εποχή. Κυρίως στην ύστερη παλαιοανακτορική Μεσομινωική ΙΙΒ περίοδο, όταν φαίνεται ότι υπήρχε μια ιδιαίτερη σχέση της εγκατάστασής με τα Μάλια στη βόρεια κρητική ακτή, και, ξανά, στην Υστερομινωική ΙΒ, όταν η κατεξοχήν σχέση της ήταν, πλέον, με την Κνωσό. Στη συζήτηση εγγράφεται, τέλος, ένα κομμάτι πίθου από το Τελ Χαρόρ στο Νεγκέβ του Ισραήλ, που φέρει επιγραφή στη Γραμμική Α ή στην Κρητική Ιερογλυφική, και αποτελεί μάλλον προϊόν του Μύρτου ή της περιοχής του.

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