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Edited by Søren Dietz



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The cover illustration depicts a Bronze Statuette
of a Horse found at the Argive Heraion. NM 13943.
Drawing by Niels Levinsen. See p. 55, Fig. 19.

Four inscribed hanging nodules in the Heraklion Museum

Erik Hallager

Abstract

Among the sealings in the Heraklion Museum are four unpublished hanging nodules with Linear A inscriptions. These nodules are particularly interesting not so much because of their inscriptions, but for their shapes, chronology and, in one case, its seal impression. The nodule from Phaistos in the Old Palace Period is the earliest-known inscribed hanging nodule; of the two from Knossos, one betrays “classical” LM IB features otherwise missing at that site while the other was stamped by a seal which was also used at Hagia Triada; the nodule from Zakros is only the third inscribed nodule known at that site.

NOTE 1

For types and classes of nodules, see Hallager, forthcoming. A slightly different classification is found in e.g. Weingarten 1987, 3–7, and Weingarten 1994, fig. 1.

NOTE 2

Levi 1957, 105.

NOTE 3

Carratelli 1957, 363–388.

NOTE 4

Brice 1961; Raison & Pope 1980; and GORILA.

NOTE 5

Weingarten’s class IX.

NOTE 6

Sides of single-stringed hanging nodules: A the side with the seal impression; B is the next surface turned right (against the clock) in the hanging position and C is the last side still turning the nodule right.

NOTE 7

GORILA 5, 99–103 and GORILA 2, 51–66.

Among the many single-stringed hanging nodules¹ in the Heraklion Museum are four with Linear A inscriptions which deserve full publication:

– HM 689 from the Old Palace at Phaistos, has been forgotten. Its inscription was noted and commented upon by D. Levi in his publication of the Phaistos sealings,² but it was not included in G.P. Carratelli’s publication of inscriptions;³

probably for this reason, it has been overlooked by the various later *corpora* of Linear A⁴.

– HM 1236 and HM 369 from Knossos and HM 32/1 from Zakros, have hitherto entirely escaped notice.

Descriptions

KN Wa 50, (HM 1236) Fig. 1–2.

Completely preserved single-stringed hanging nodule, of pyramid-shape⁵. Clay finely gritted, little porous, burnt dark grey all over. Side A⁶ (Fig. 1a): seal impression, Side B (Fig. 1b): inscription A 301 (L 88) with clear finger prints below inscription; Side C: very clear fingerprints. A little polish preserved on seal impression. Diam: 1.25 x 1.1 cms; H: 2.2 cms.

The inscription (Fig. 1b–c) was impressed, not very deeply into the clay, with a very rough stylus. The sign A 301 (L 88) is frequently inscribed on hanging nodules. It is written in the same “classical” way on many nodules from Hagia Triada, in a style reminiscent of that of Scribe 100 HT Wa.⁷



Fig. 1 **KN Wa 50**, (HM 1236) in hanging position. Scale 2:1. a. Face A with seal impression; b. Face B with inscription; c. Facsimile of inscription.

Fig. 2. Photograph and drawing of seal impression on **KN Wa 50**. Scale 3:1.



The almost completely preserved outline of the seal impression (Fig. 2) shows a lentoid of a diameter of ca. 1.1 cm; a cord passing through a horizontal string hole is visible in the impression. The main part of the motif is poorly preserved and not enough remains to distinguish a motif with certainty. In one half of the seal is seen several strokes in a right angle going out from the centre with some strokes in between as a filling design, while in the other half a slightly bent line is running almost along the edge and with a few strokes above it. The bent line excludes a “quatrefoil”, while also the interpretation as a griffin on a wavy bottom line seem very difficult. The design must remain enigmatic.

Context. There is no indication of find spot in the catalogue except for “Knossos ...” (the museum number has been newly given to the nodule). In Evans’s sketches of seal impressions from the Little Palace in 1905, one is somewhat reminiscent of HM 1236.⁸ Evans’s sketch shows a griffin facing right, with only neck, head and wings clearly indicated. The details, however, between the sketch and our impression are different: a slightly bent instead of almost straight neck and the wing “feathers” differently indicated. In spite of a superficial similarity the differences in details excludes a positive identification of both motif and find spot.

Date. The nodule shape is of the fully developed “classical” Minoan type and the

Linear A sign is executed in the “classical” way as on the Hagia Triada nodules. It would therefore be tempting to suggest a LM I(B) date.

Unpublished.

KN Wa 51 (HM 369), Fig. 3-4.

Broken hanging nodule; the imprint of a knot is visible inside (as on broken Hagia Triada nodules). Clay dark brick red to brownish, finely gritted. Well polished. Finger prints on unstamped sides. Side A (Fig. 3a): seal impression Gill 1965, Ec; PM I, 600, fig.594, Levi 1926a type 114; Side B: mostly missing; Side C (Fig.3b): two incised lines, Linear A inscription?: *vest*. Diam: 1.4 x [1.1]; H: [1.5].

The inscription (?) (Fig. 3b-c) was impressed not very deeply into the clay with a relatively fine pointed stylus. It is not certain that these incisions are from a Linear A inscription: they do not fit with any known signs on hanging nodules, but AB 73 (MI), with the upper part rather closed as found on several Hagia Triada tablets, would not be incompatible with the remains on **Wa 51**.

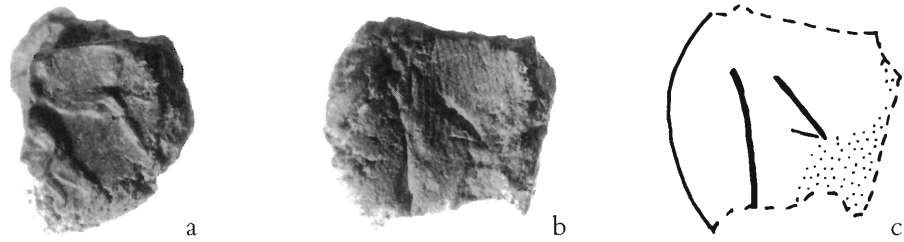
The seal impression (Fig. 4) is only fragmentarily preserved, but it clearly represents the lower right part of Levi’s type 114 from Hagia Triada: a combat scene from a ring.

Context. There is no secure indication of its context. Evans in PM I attributed the nodule to the Little Palace⁹ but Gill reasonably pointed out that the low mu-

NOTE 8
AE/NB 1905, 9a second row right; reproduced in Gill 1965, pl.18, U21.

NOTE 9
PM I, 600.

Fig. 3. **KN Wa 51**, (HM 369) in hanging position. Scale 2:1. a. Face A with seal impression; b. Face C with inscription; c. Facsimile of inscription.



NOTE 10
Gill 1965, 87.

NOTE 11
Betts 1967a, 32, no.12.

NOTE 12
I am grateful to Professor Dr. Ingo Pini for this information.

NOTE 13
For example, Pini 1990, 33-60.

NOTE 14
Hallager, forthcoming; Weingarten's class VIII.

NOTE 15
CMS II.5, no. 300.

NOTE 16
GORILA 2, 95 and GORILA 1, 298 and 310.

NOTE 17
Fiandra, type G.

NOTE 18
also CMS II.5 allocates these sealings to Vano 25.

NOTE 19
For a fuller discussion of the chronology of this deposit: Vandenabeele 1985, 13-14.

seum number indicates that the nodule was unearthed during the first four years of excavations;¹⁰ thus, it most likely comes from the palace proper. Another fragment, HM 1275, with an impression from the same ring,¹¹ was found in a storeroom in the Heraklion Museum, "which housed pottery from the Domestic Quarter of the Palace".¹² The context of both nodules thus remains uncertain.

Date. The date of the nodule must also remain uncertain. Although the impression was made by the same ring that impressed five parcel nodules (Weingarten's classes II, IV and V) at LM IB Hagia Triada, there is sufficient evidence to show that official seals may have remained in use for long periods.¹³ Therefore, an LM IB date is by no means certain although the

seal device does indicate a date within LM I.

Bibliography: PM I, 600, fig. 594; Gill 1965, 87; Pini 1989, 203-204, fig. 1; Weingarten 1991, 312, n.13.

PH Wa 52 (HM 689), Figs. 5-7

Fragmentary hanging single-stringed nodule of pear shape.¹⁴ Impression from large knot inside nodule. Clay light brown to reddish, finely gritted, few white spots, slightly porous. No fingerprints preserved. No polish preserved. Side A (Fig. 5a): Seal impression, Levi 1957 type 189;¹⁵ Side B (Fig. 5b): inscription, AB 131a (L 82a); C: missing. Diam: 1.0 x 1.1; H. [1.5].

The inscription (Fig. 6a-b), made with a medium rough stylus, is not pressed very deeply into the clay. The completely preserved sign is most likely AB 131a (L 82a). Parallels are known from Phaistos: **PH Wc 42**, and **43**; also **PH 9b**, **25.1** and **Wc 41** may provide elements of parallels.¹⁶

The seal impression (Fig. 7) depicting a dog's head is fully preserved and has been published. The same seal also impressed two small box sealings.¹⁷

Context. D. Levi's excavations at the Old Palace at Phaistos. No specific context is indicated in E. Fiandra's list; the HM catalogue gives 'Palace at Phaistos', in all probability Vano 25 since the catalogue always mentions those sealings found in different rooms.¹⁸

Date: MM II.¹⁹

Publication: Levi 1957, 105; CMS II.5, no. 300.



Fig. 4. Photograph of the seal impression on **KN Wa 51**. Scale 3:1.

ZA Wa 38.²⁰ (HM 32/1) Figs. 8-10. Hanging nodule, broken at one end. Flat on side with seal impression while the reverse is dome-cone shaped with a pointed “top”. The section, however, is triangular. Same shape as HM 32/2-4, which are single-stringed hanging nodules of the “two-finger” type.²¹ **ZA Wa 38** is broken and it cannot be ascertained whether single-stringed or two-stringed. The clay is dark red to grey, finely gritted, and well polished. Finger prints on both unstamped sides. Side A (Fig. 8a): Seal impression, Hogarth type Z 4; side B: empty; side C (Fig. 8b): Inscription in Linear A: A 301. Diam: 1.7 x 1.05; H: [1.6].

The inscription (Fig. 9a-b) is done with a relatively fine stylus and, except at the top of the sign, pressed deep into the clay. The sign almost certainly must be read A 301 (L 88) with the vertical stroke along the fracture of the nodule and the “wing” turning left in a way reminiscent of how the sign was executed on, for example, **HT Wa 1679**.

The seal impression (Fig. 10), of a female in flounced bell-skirt supporting a goat whose head falls back over her right shoulder, is probably from a lentoid, and has been published. The same seal is also found on the three similar hanging nodules (HM 32/2-4).

Context. The nodule was part of the large assemblage of nodules discovered in 1901 by Hogarth in Zakro House A, Room VII; in addition to the 564 nodules was also found a Linear A tablet and a roundel.

Date: LM IB.

Bibliography: Hogarth 1900, 132-133; Hogarth 1902, 77, fig. 3 and pl. VI.4; Levi 1926b, 158; Sakellarakis 1972, 246, pl.95c-d; Weingarten 1991, 305-306 and pl.3; Pini 1992, 17, pl.VIc.

Discussion

The Inscriptions

There is nothing unusual about the inscriptions on Zakros **Wa 38** and Knossos **Wa 50**. Sign A 301 is by far the most common on the Hagia Triada nodules and

also occurs twice on nodules from Khania. Similarly, the combination of shape and inscription on the Knossos nodule is unexceptional since 84% of the A 301 signs were on nodules of pyramid type – in principle a triangular clay piece with a flat base.²² In this respect the Knossos nodule agrees very well with the pattern at Hagia Triada. The meaning of the sign on nodules, however, remains uncertain. Weingarten pointed out that administrators at Hagia Triada and at Khania using sign A 301 together with sign AB 74 (ZE) formed a different group from those using the signs KA, KU, RO and SI.²³ The single nodules from Knossos and Zakro do not, of course, prove that the same division worked on these sites.

The Phaistos nodule is now the earliest known inscribed hanging nodule. If correctly interpreted, the sign suggests the ideogram for WINE. In contrast to single signs on roundels (throughout the period MM II – LM IB), single signs on LM IB nodules do not seem to have had ideographic meaning. In LM IB, the same single, isolate signs written on different kinds of documents probably have different values. Thus, for example, the sign TE on the tablet **HT 107.3** is apparently an ideogram²⁴ whereas it appears not to have had ideogrammatic value when inscribed on 25 hanging nodules from Hagia Triada. Likewise, the isolate sign O (AB 61/L 80) occurs with possibly different intent on tablets, roundels and nodules.

From the scanty evidence of the Old Palace period, it is hard even to guess if the Phaistos inscription had the value of the ideogram WINE. What seems certain, however, is that the inscription on **PH Wa 52** – as well as on the few other inscribed MM hanging nodules²⁵ – are not comparable to what appears to be the standardized repertoire of LM IB. It may also be worth noting that there is a much higher percentage of uninscribed single-stringed hanging nodules in the Middle Minoan deposits than in Late Minoan I(B) deposits. Possibly, hanging (single-stringed) nodules – in contrast to roundels – changed their purpose as they evolved

NOTE 20

The two inscriptions previously published by Weingarten (1983b, 107-108) should in accordance with the numeration of GORILA (where they curiously enough were not included in vol. 5) be given **ZA Wa 36** (HM 94, hanging nodule, cone) and **ZA Wb 37** (HM 51/2, parcel nodule).

NOTE 21

I have preferred to classify the four nodules “two-finger” against the better advice of Weingarten (1991, 305), who classifies them Class XI (dome). It is true that one may argue a dome shape, but two things made me prefer the “two-finger” type: Firstly the four nodules have got two flat and one “bulky” surface as is typical for the “two-finger”, and secondly the shape is definitely not the oblong doom shape of Hagia Triada (the “aman-de” of GORILA 2).

NOTE 22

Hallager, forthcoming.

NOTE 23

Weingarten 1987, 1-38.

NOTE 24

as it may also be on the Knossos roundel **KN Wc 49** (Hallager & Weingarten 1992, 177-179).

NOTE 25

The Middle Minoan inscribed hanging nodules are **PH Wa 32, 51**, and **KN Wb 33** (the last is a hanging nodule and not a sealing as the Wb indicates; cf. Hallager, forthcoming).

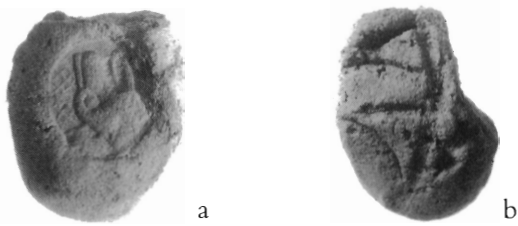


Fig. 5. **PH Wa 52** (HM 689) in hanging position. Scale 2:1. a. Face A with seal impression; b. Face B with inscription.

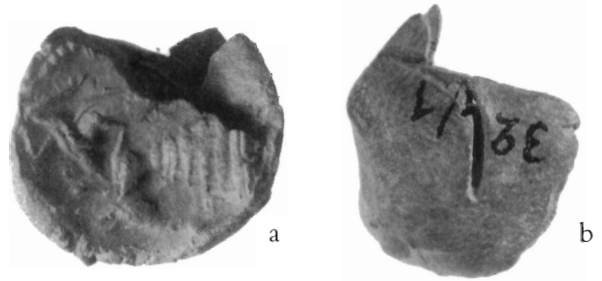


Fig. 8. **ZA Wa 38** (HM 32/1) in hanging position. Scale 2:1. a. Face A with seal impression; b. face with inscription.

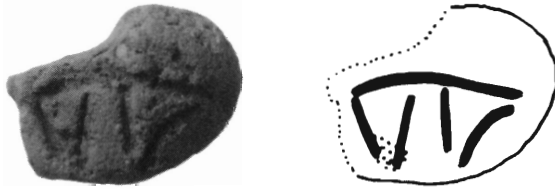


Fig. 6. Photograph and facsimile of the inscription on **PH Wa 52**. Scale 2:1.

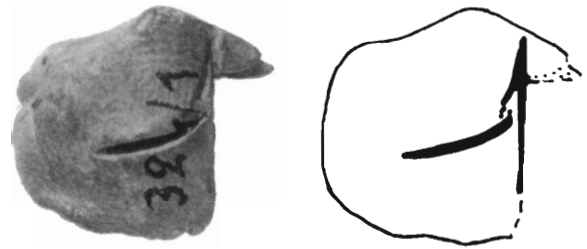


Fig. 9. Photograph and facsimile of the inscription **ZA Wa 38**. Scale 2:1.



Fig. 7. Photograph of the seal impression on **PH Wa 52**. Scale 3:1.



Fig. 10. Photograph of the seal impression Z 4 on **ZA Wa 38**. Scale 3:1.

NOTE 26
See further in Hallager, forthcoming

from the earliest to the latest known specimens. Certainly, none of the early hanging nodules falls within the standardized repertoire of physical shapes known in the LM I B period throughout the island.²⁶ In short, we cannot exclude the possibility

that the sign A 131 on **PH Wc 52** was meant as an ideogram; nor can we be certain that this early hanging nodule had precisely the same function as its counterparts in the LM IB period.

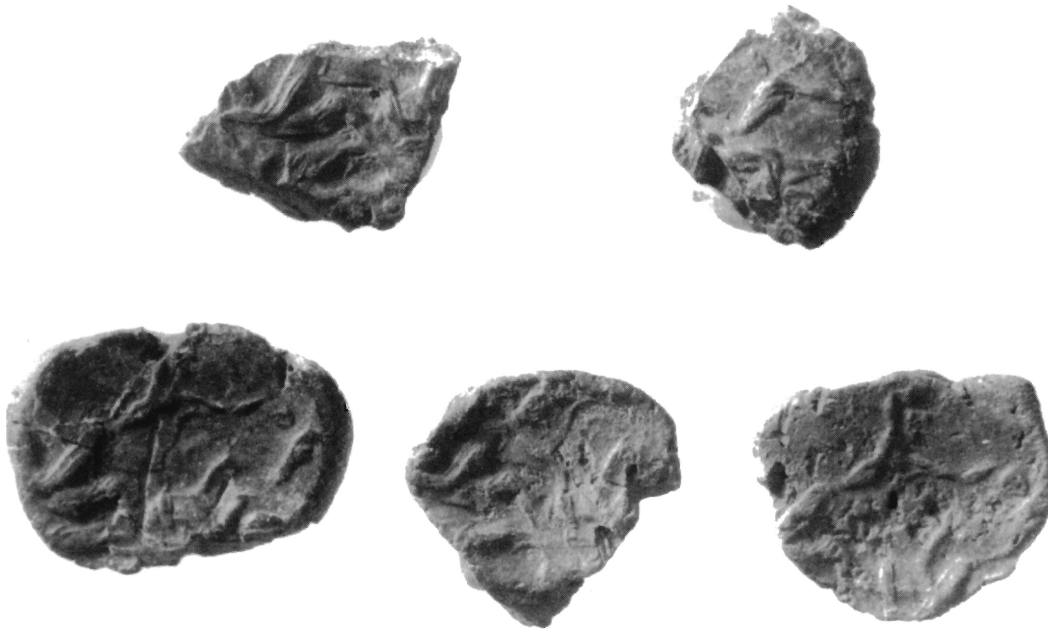


Fig. 11. Photograph of five seal impressions with Levi's type 114. Upper row from Knossos: HM 369 and 1275; bottom row from Hagia Triada: HM 526/1, /2, and /3. Scale 2:1.

The seal impression on **KN Wc 51**

The most intriguing of the seal impressions is that found on HM 369 (**KN Wa 51**). It is part of a combat scene from a ring of oval shape. There exist seven impressions from this ring: five found among the LM IB nodules at Hagia Triada, HM 526/1-3 (lower row on Fig. 11), HM 595 and HM 596, and two fragments from Knossos, HM 1275 and the nodule **Wa 51** (upper row on Fig. 11). The five from Hagia Triada were found on three 1-seal lying parcel nodules, and two 2-seal standing parcel nodules together with imprints of seal HT 143 on the same nodules,²⁷ while those from Knossos appear to have been hanging nodules – both too fragmentary to determine if with single- or two stringed. Inside the broken HM 369 was the characteristic knot of the hanging nodules; the very fragmentary HM 1275 also bears an inside imprint of characteristic weed/reed, for which reason it may also be assumed to be part of a hanging nodule. The clay of HM 1275 is dark red brownish, finely gritted, and very well polished. Very clear finger prints on the preserved part of side C. Diam: [0.7] x [1.25]; H: [1.9].

The seal-user or the authority behind

the seal-user seem to have been of some importance. Not only is the impression from a large ring with a very unusual device: a combat scene. The seal is also one of the very few, rarely found among the nodules which occurs both alone (KN and HT 526) and together with another seal,²⁸ in this case another gold ring with a cult scene (HT 143 on HM 595 and 596). Furthermore the seal has been impressed on nodules at different sites and at different types of nodules at each site. This leaves us with the classic questions: did the nodules or the ring travel; and in which direction did the nodules or ring travel.

John Betts, in his discussion of the use of identical or replica seals found at different sites, maintained that the seals were stamped on *local* clay and concluded that it was the seals which travelled. Based on the study of the rings which made these impressions Betts identified a workshop which could hardly have been anywhere but Knossos, and he suggested that Knossian administrators travelled around Crete with an official seal.²⁹ Judith Weingarten in her discussion of the problem agreed with Betts on the origin of the rings / workshop at Knossos, but she maintains that some of the nodules with impressions from these rings were stamped on clay which was *foreign* to the site where the

NOTE 27

Levi 1926a, 143-144 mentions only one, but according to the forthcoming CMS II,6 Levi's type 144 is also by seal 114. Pini 1989, 201.

NOTE 28

This phenomenon occurs 4 times at Hagia Triada, perhaps 7 times at Zakro, once at Khania and once in Sklavokambos.

NOTE 29

Betts 1967b, 15-40.

NOTE 30
Weingarten 1986, n. 25.

NOTE 31
Weingarten 1991, 312,
n.13.

NOTE 32
A preliminary name for one of the major clay groups which I believe can be identified at Hagia Triada: a rather dark red brownish clay in well polished nodules with a dark brownish surface with light grey-brownish spots.

NOTE 33
An explanation not incompatible with my observations is that the impressions on the nodules from Hagia Triada were stamped when the ring had become more worn than when it was used on the Knossos nodules. Other explanations, however, may also be thought of.

NOTE 34
Weingarten 1983a, 38-42;
Pini 1983, 559-572.

nodules were found;³⁰ in other words, it was the nodules that travelled.

In June 1993, when I examined the Hagia Triada nodules, I noted in connection with HM 526/1 “Clay: very dark brown, earthy (KN[ossos]?)” while 526/2 and /3 appeared to me to be of local clay. Going quickly through the Knossos sealings in the same month, I particularly noted HM 1275 which “look[ed] like HT clay 14,17”;³² afterwards I realized that the motif was Levi’s type 114 from Hagia Triada and I felt certain that this fragment had been misplaced in the HM. Only later did I realize that HM 369 also bore the impression of HT 114, and the low museum number of this nodule ment that it must have come from Knossos. The clay of HM 369 strongly reminded me of that of HM 1275; thus, there was no reason not to accept that 1275 was found at Knossos. In August 1993 I re-examined five nodules together with comparable material. The two nodules from Knossos were much better polished than those of Hagia Triada, so that details of the motif appeared more clearly than on the HT nodules. Whatever the explanation of this difference,³³ it was a further indication that HM 1275 was in fact from Knossos. Concerning the origin of the clay of the five nodules, the re-examination did not give me reasons to alter my original observations, but only scientific clay analyses will settle the issue. Two more details emerged from further re-examination of the Hagia Triada nodules: HM 526/1 was better polished than /2 and /3, and it had sealed a “parcel” or document of a different size from those of /2 and /3 (which had identical imprints).

We can now present the following conclusions with some confidence:

1. The seven nodules were stamped by the same ring, HT 114.
2. Two nodules were found at KN, five at HT.
3. The KN-nodules are hanging nodules – the HT nodules are parcel nodules.
4. HT 526/1 sealed a parcel or document different from that of 526/2 and /3.
5. The HT nodules are all contemporary,

but the KN nodules need not be of the same date.

We can also present the following subjective judgments:

1. HM 1275 and perhaps 369, although found at KN, are of HT clay.
2. HM 526/1 found at HT is of KN clay.
3. HM 526/2-3, 595 and 596 found at HT are of local clay.

It is worth noting that, at the very least, the same ring was used on different types of supports at two different sites. There exist fairly convincing arguments for the flat-based nodules having sealed parchment,³⁴ and it is reasonable to suppose that these were written documents. The function of the hanging nodules is as yet a matter of dispute. If we disregard the origin of the clay, we might imagine a situation where (just to point out one possible interpretation) a seal user at Knossos, whether an official or administrator, locally worked on one type of documents while also dispatching sealed written documents to Hagia Triada.

If, however, my subjective judgment of origin of clay happens to be correct, the situation is more complicated, with a number of possible interpretations. In the case of the five HT nodules, it would indicate that *both* nodule and ring had travelled. How could one explain otherwise the presence of the same seal impressed on both Knossian and local clay but found at the same site?

Until a more secure identification is established of the clays used for nodules or noduli stamped by “replica” rings, we shall still have to face the question: what or who travelled and from where to where?

The nodules

The four nodules discussed above are important not just because they are inscribed but especially because such nodules are rarely found at Phaistos, Knossos or Zakro. In fact, **PH Wa 52** appears to be unique, the only inscribed hanging nodule at Phaistos which may with some confidence be ascribed to the Old Palace pe-

riod in Crete.³⁵ In fact, at least three more (uninscribed) hanging nodules were discovered in Vano 25 at Phaistos.

1) HM 772 M kappa,epsilon' is a completely preserved pear-shaped hanging nodule, uninscribed. The clay is brown reddish, slightly earthy. Surface polished. Side A: seal impression (Levi Type 132); Side B seal impression (also Levi Type 132); Side C: blank. No finger prints. (Diam: 1.7 x 1.5; H: 1.95 cms). The same seal had been used on another 178 sealings (door or chests).³⁶

2) HM 994 gamma, a complete hanging nodule of cone shape. Uninscribed. No fracture, but clay appears fine light brownish. Little polish preserved. No finger prints. Tiny hole at top. In place of a seal impression, finely incised criss-cross lines are drawn on the bottom.³⁷ (Diam: 1.4 x 1.3; H: 0.9).

3) HM 836i is an irregular two-stringed type: rather disc-shaped with a string hole going through the whole nodule (thus, two string holes), with seal impression (Levi 1957 type 32) on one surface while the other side was pressed flat against some smooth surface. (Diam: 2.05 x [1.15]; H: 1.2). A parallel for this kind of disc-shaped hanging nodule is HM 7/1 from Zakro.

Compared with the more than 6.000 direct-object sealings from Vano 25 at Phaistos, four hanging nodules are an extremely limited amount of material but they nevertheless demonstrate that the use of 'classic' hanging nodules – later predominant in administrative sealing systems – had already begun in the Old Palace period. This observation seems to emphasize Weingarten's observation that "there is already evidence for evolution away from the Near Eastern sealing model at MM IIB Phaistos..."³⁸

At Knossos we cannot be certain of the earliest use of single-stringed hanging nodules because they lack secure stratigraphical contexts. If one were to judge solely by seal impressions, the shape could go back to the Early Minoan period: a clearly Early Minoan seal was used to stamp such a nodule in the Arsenal at Knossos (HM 375);³⁹ the shape of the

nodule, however, must date from the LM I period. Another is said to come from the Hieroglyphic Deposit, HM 128, (cf. *supra*) but this cannot be ascribed to the Old Palace period with any certainty. Similarly, the other inscribed Knossian hanging nodule **KN Wb 33** (HM 666) found in the NE House,⁴⁰ cannot be firmly dated.

While there are a great number of hanging nodules from the Palace at Knossos, by far the majority are *two* two-stringed types, both predominant during the Mycenaean occupation of the site.⁴¹ Therefore, it is often difficult to determine if a hanging nodule is Mycenaean or Minoan – especially when fragments are concerned. Single-stringed types, however, were not used in Mycenaean administration so it is logical to assume that any single-stringed hanging nodules at least predate the Mycenaean occupation. We have thus been able to collect 18 probable Minoan hanging nodules from Knossos. With the exception of HM 1236, and most likely the above-mentioned HM 375 and possibly also HM 369, none of the 18 has the "classical" shapes found elsewhere in LM IB Crete:

– HM 353 is an early cone shape; HM 355, 356/1 and /2 tend towards a mixture of cone and pyramid shape.⁴² To the last two should probably also be added HM 1248. They are all four coming from the Temple Repository.⁴³

– The complete HM 120 (and 199), AM 1938.941 and HM 246 (with two different seal impressions) are of the early pear-shaped nodules.

The last three are of unknown Knossian provenance and date, and the same applies to the incomplete HM 368 and the complete two-stringed, HM 142. Two hanging nodules from the Temple Repository at Knossos⁴⁴ are probably two-stringed (HM 359 and HM 385); both are also rather early stylistic types.

We would therefore argue that "classical" LM IB type hanging nodules were indeed restricted to the LM IB period, a hypothesis which seems justified by this brief survey of Phaistos and Knossos hanging nodules. At Knossos, we found very

NOTE 35

PH Wa 32 has with reasonable arguments (Vandenabeele 1985, 15) been ascribed to the New Palace period; and the only hanging nodule of this type said to come from the Hieroglyphic deposit at Knossos (HM 128) has most reasonably been suggested to be of the New Palace period (Pini 1990, 37-46); the date of the Hieroglyphic deposit in general is, in any case, not settled beyond doubt.

NOTE 36

Fiandra 1968, pl. PE'A'. It may perhaps be the nodule Fiandra refers to, 391, n.4 and again in ASSA, 59.

NOTE 37

Levi 1957, fig.60 Upper row, third from left.

NOTE 38

Weingarten in ASSA, 56.

NOTE 39

Pini 1990, 34-37.

NOTE 40

Hallager, forthcoming.

NOTE 41

Weingarten 1988, 1-25.

NOTE 42

These have by Weingarten been published as noduli, Weingarten 1990, 22, **A-40**.

NOTE 43

Panagiotaki 1993, 90-91, nos.16, 18-19, 22.

NOTE 44

HM 385 is now certain from the TR, cf. Panagiotaki 1993, 81*w*, while HM 359 may be doubtful cf. Panagiotaki 1993, 83*ac*. See also Gill 1965, 69-70.

NOTE 45

Weingarten 1983a, 30 has listed them under the category “Other” [than Classes I–VI]. In Weingarten 1991 they were reclassified Class XI. See discussion in n. 21.

NOTE 46

Weingarten 1991, 305.

few nodules from outside the palace area which could be classified as “classical” types. Those from Palace – with only MM III and possibly early LM IA destructions – did not yet have “classical” shapes; no more did those from MM II Phaistos.

The shapes of Zakro nodules HM 32/1–4 are most unusual for nodules from Zakro.⁴⁵ This observation, together with the fact that one of those nodules is inscribed, naturally raises the question whether they are local or imported – as was argued for the other two inscribed nodules at Zakro.⁴⁶ No definite answer can be given to this question, but some observations may favour a suggestion of local origin. The fabric of the clay of these four nodules did not appear to differ from the remaining Zakro-nodules (but this is, as we have seen, a subjective observation). More to the point is the fact that the shape of the four nodules were not only unusual for Zakro, but also for other sites with hanging nodules. The argument that the only cone nodule with an inscription at Zakro should be an import is easily taken, but when the “two-finger” type is unique and found four times, there is no basis for arguing that it should be imported rather than local. True, none of the single-stringed nodules from Zakro bear impressions from the Zakro Master’s hand, but this fact need not exclude single-stringed nodules, as for example in Khania, having been used in the local administration. The sign A 301 is not rendered in a way reminiscent of this sign on the Zakro tablets but neither is it particularly close to the way the sign is rendered elsewhere. If in fact the four nodules are imports, the scanty information derived from their shape and inscription would point to a site different from those we now know

to have been administered with single-stringed nodules.

Summary

The four inscribed hanging nodules presented here are in some ways intriguing. **PH Wa 52** proves to be the earliest known inscribed hanging nodule from Minoan Crete; together with the few un-inscribed counterparts, it points towards the administrative sealing system which became predominant at the end of the New Palace period. The hanging nodules from the Old Palace period at Phaistos and the MM hanging nodules from Knossos had not yet developed into the ‘classical’ shapes known in the LM IB period; neither are the few inscriptions on these early nodules really comparable with the standardized ones of the LM IB period. The same applies to the possible inscription on **KN Wa 51** which may fall chronologically between the early and the late ones despite the seal impression also known from LM IB Hagia Triada. Of the remaining nodules, **KN Wa 50** and **ZA Wa 38**, the former may be open to doubt both concerning provenance and date, while the original source of the latter can be disputed. There are, however, indications that both are ‘at home’ on the site where they were discovered; the LM IB date can hardly be disputed for the ZA nodule and a similar date seems most probable for the KN nodule. As such, it is interesting that the signs on the few inscribed nodules of the latest New Palace period outside Hagia Triada and Khania fall into the known repertoire – indicating one uniform administrative practice throughout the island at the end of the LM IB period.

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Abbreviations others than those found in the DAI:

AE/NB:

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ASSA:

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