

## A GROUP OF PECULIAR SEALS IN THE HIEROGLYPHIC CORPUS

by ANNA MARGHERITA JASINK

The shape generally used by carvers of Hieroglyphic seals is the prismatic one (with three or four lateral faces)<sup>1</sup>. Among the exceptions are the seals with one face, which form a considerable group of twenty-two seals, which will be analyzed elsewhere<sup>2</sup>; the 4-sided bar from Arkhanes, already the object of specific analyses<sup>3</sup>; and the remaining group of “exceptions”, listed in the table below, consisting of seals recognized as Hieroglyphic (numbered in CHIC) and of two seals which are not always included in the *corpus* of Hieroglyphic seals. This last group presents many common traits and constitutes a small *corpus* into the Hieroglyphic patrimony.

Two cushions	No. 1	CMS VII 35	CHIC #205
	No. 2	CMS III 149	CHIC #206
Two gables	No. 3	CMS VI 14	CHIC #251
	No. 4	CMS II 1, 393	CHIC #252
Two discoids <sup>4</sup>	No. 5	CMS II 1, 394	CHIC #202
	No. 6	CMS VI 13	CHIC #203
One amygdaloid	No. 7	CMS II 3, 151	CHIC #204
One cube	No. 8		CHIC #313
One wedge <sup>5</sup>	No. 9	CMS II 1, 420	CHIC #207
Two four-sided stepped prisms	No. 10	CMS II 2, 315	CHIC #291
	No. 11	CMS II 2, 217	CHIC #292
One amygdaloid	No. 12	CMS XIII 15	
A square with rectangular faces	No. 13	CMS II 2, 271	

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<sup>1</sup> We include among these seals also one eight-sided prism, from Neapolis (#314), with particular characters: see Jasink 2007.

<sup>2</sup> Jasink (forthcoming).

<sup>3</sup> CMS II 1, 391 / CHIC #315. It has been defined as rectangular bar with three set-off seal surfaces on each face” (Yule 1980: 100). For a recent analysis of the symbols carved on this famous seal see Jasink 2009: 108, 118, 129, 145.

<sup>4</sup> More specifically, we could follow the definition by Yule 1980: 47, who distinguishes a disc, “which is circular with flat and parallel faces and edges”, from a discoid, “with its circular and biconvex faces and thick edges”. According to these designations, No. 5 may be defined as a disc and No. 6 as a discoid.

<sup>5</sup> It is defined in CHIC as a *cylindre aplati* (as the cushions) but with the added note *à base ellipsoïdale*, in CMS as *Keilförmiges Plättchen mit hufeisenförmigen Siegelflächen; waagerechte Durchbohrung*. This seal comes from the necropolis of Chrysolakkos (Mallia).

All the faces of these seals are engraved<sup>6</sup>.

Seven of the seals – Nos. **1. 3. 4. 5. 6. 8. 11** – bear the *Arkhanes formula*; a sure chronology of all these pieces is difficult. Two of them, No. **5** and No. **4**,<sup>7</sup> coming from the necropolis of Phourni (Arkhanes), although first ascribed by the excavator to the long period between EM III and MM IA<sup>8</sup>, have recently been assigned to the narrower period of MM I A or even slightly later both on stylistic grounds and on the pottery from Funerary Building 6 (an ossuary with six rooms) now dated from MM IA to MM II<sup>9</sup>. The Arkhanes seals consequently are likely to precede the Hieroglyphic seals of the protopalatial deposits, although it is possible to hypothesize a dating slightly before or around the beginning of the palatial period. In any case, we can agree that both the symbols composing the *Arkhanes formula* and other symbols engraved on the seals of Arkhanes, which are very similar to putatively later Hieroglyphic signs, may be considered as the first script signs appearing in Crete and may already be interpreted as Hieroglyphic signs<sup>10</sup>.

The seals from Moni Odigitria seem to belong to the same range of time as the seals from Arkhanes, both the cemeteries having a very long life and both beginning in the EM II period<sup>11</sup>. In the Ossuary five bone seals similar in motifs to the Arkhanes seals of the third phase came to light, including our cube (No. **8**)<sup>12</sup>. Cubes are rare in Cretan glyptic: this class consists only of five examples, to which we must now add our No. **8**, and are all of good quality, according to Yule<sup>13</sup>. Two cubes are made of bone (not ivory as earlier thought): No. **8** and CMS II 1, 64 from Aghia Triada<sup>14</sup>; it seems of interest that both bone seals are carved to form circular sur-

<sup>6</sup> With the exception of No. 12, which bears carved symbols only on one of the two faces (see below).

<sup>7</sup> Beside these seals it is convenient to recall the rectangular bar mentioned in n. 3, which raises to three the seals from Arkhanes/Phourni with the *Arkhanes formula*. A further seal of unknown provenance might bear at least the first part of the *formula*, but we are dealing with a simple hypothesis: CHIC #201 (Jasink 2009: 53, 70-71, 100).

<sup>8</sup> Sakellarakis in CMS II 1: 442.

<sup>9</sup> Sbonias 1995: 175 ascribed the seals, coming from Rooms I and III, to MM IA. In the same book (65-70) the author, on the basis of the seals' contexts, divided the whole of prepalatial seals in three basic phases (EM II, EM III- early MM IA, late MM IA -MM IB) which are all recognizable in the seals from Arkhanes. The seals with the *Arkhanes formula* and other "Hieroglyphic" symbols – belonging to the so-called "Arkhanes script group" (Yule 1980: 170; Sbonias 1995: 108, with some differences) – could likely be included in the third phase, as suggested by Karytinis 2000: 126-130 (with references). Weingarten 2003: 296-297 stresses the chronological incertitude for dating the Arkhanes script group and proposes an early protopalatial date, on the basis of the associated pottery; Sbonias 2010: 352 points out how these seals are made exclusively of bone and occasionally soft-stone, but not of ivory, and this could be a further evidence for a subsequent phase of their production with respect to the fine prepalatial ivory seals to be placed within EM III/early MM IA.

<sup>10</sup> On the problem of the identification with Hieroglyphic signs of further symbols appearing on the Arkhanes seals see Jasink 2009: 108 with n. 297, 145, 195. We refer, for example, to the symbols/signs ♪ (008), ♫ (010), ♪ (\*181).

<sup>11</sup> See the recent publication on the Cemetery of Moni Odigitria by Vasilakis, Branigan 2010.

<sup>12</sup> Sbonias 2010b: 204-206, Nos. S31, S33, S35 (the cube), S37, S47. The seals of the Ossuary are 23 (S30-S52) and, beyond bone, the materials are mainly white paste (12 seals), followed by yellowish paste (5) and black steatite (1).

<sup>13</sup> Yule 1980: 44.

<sup>14</sup> According to Krzyszkowska 1989: 118, on the basis of CMS photographs it was made from a hippopotamus incisor.

faces, which delimit the motifs, analogously to the other seals belonging to the so-called Border/Leaf Complex. The presence of the *Arkhanes formula* and the manufacture of cube No. 8 are additional elements which suggest a high dating of this Hieroglyphic seal. It is possible that the Moni Odigitria seal was a product of the same carver or workshop located at Arkhanes, and was imported to the south<sup>15</sup>.

The four-sided stepped prism from Gouves No. 11 with the *Arkhanes formula*, comes from the Asprougas field and is consequently without any context. The symbols of the double-axe and of the cuttlefish have no peculiar shape, and represent simply a typical variant into the Hieroglyphic script, but the signs 095 ♪ and 052 ♫ don't differ from the similar examples belonging to the *formula*. Moreover, the "terraced" shape of the seal appears only on another 4-sided prism, No. 10; on one face, an amorphous shape (a lizard?) is carved with a technique similar to that of seals from the Mallia workshop Complex<sup>16</sup>. Unfortunately, the seal cannot be more closely dated than MM I(B)-II.

The discoid from the area of Knossos, No. 6, acquired by Evans in 1909, is very similar to the second discoid, No. 5 (especially the inclusion of the motifs within a line border<sup>17</sup>) as well as to the two gables, Nos. 3-4, and the cube No. 8; as a consequence, a dating later than MM IB seems difficult. We agree with the suggestion by Pini<sup>18</sup> of a dating parallel to the other Arkhanes seals, even if a range between EM III-MM IA in our opinion is too early. Also the cushion (No. 1) - brought to Evans in 1894 and whose provenance is unknown - presents in our opinion symbols executed in a similar way to the signs on the discoid No. 5, especially the two last signs of the formula, 095 ♪ and 052 ♫; moreover, these two symbols, although appearing as variants of a same shape in the *formula*, are not attested in other groups, at least not with a similar shape<sup>19</sup>, unlike the "cuttlefish" and the "double axe"<sup>20</sup>. In fact, the later sealings from Samothrace CMS VS.1B, 325-327 / CHIC #135-137 (stamped, respectively, on two roundels, [SA Wc 1] and [SA Wc 2], and on a *nodu-*

<sup>15</sup> Sbonias 2010b: 219. The same consideration may be referred as well to the cube from Aghia Triada and to the three-sided gable from Kalathiana, made from a wild boar's tooth, which "is another isolated example of Hieroglyphic seals found in southern Crete" (Sbonias 2010b: 219): in spite of the fact that this last seal has not been included in CHIC, it bears on face *b* a Hieroglyphic sign, the logogram U \*181, the double three-barred hook (*U-sistrum*) - in this case with four instead of the typical three bars of the Hieroglyphic script (for a discussion on this seal see Jasink 2009: 108-9 and n. 299). On face *a* a schematic quadruped inserted into geometrical motifs is stylistically similar to the motif on face *b* of the cube from Moni Odigitria. The circular surface which delimits the motifs is a further evidence for the belonging of this seal to the "Arkhanes group" and the Border/Leaf Complex.

<sup>16</sup> Yule 1980: 139.

<sup>17</sup> From a stylistic point of view, Yule 1980: 210 assigned all the seals with the *Arkhanes formula* to the "Border/Leaf Complex", because they "have deeply incised borders on the seal faces". Krzyszkowska 2005: 70 stresses how this bordered disc is one of the best examples of this typology of seals bearing the *formula*.


<sup>18</sup> Pini 2009: 51.

<sup>19</sup> On symbol 095 ♪ and the possibility of the existence of variants of the same sign on other Hieroglyphic seals see Jasink 2009: 49-50, 107.

<sup>20</sup> We must mention two further sealings from Knossos which could present the *formula*, but whose symbols are very doubtful: CMS II 8, 29 / CHIC #179 (Jasink 2009: 70, 153) and CMS II 8, 56 / CHIC #134 (Jasink 2009: 70, 126, 146).

lus, SA We 3)<sup>21</sup>, and CMS VS.3, 343, found subsequently<sup>22</sup>, were all probably impressed by cushion seals<sup>23</sup>; they also bear the first two signs of the *formula*<sup>24</sup>, which perhaps have an autonomous life with respect to the whole *formula*. It may be that such seals, still in use at the beginning of the neopalatial administration, were possibly preserved by provincial(?) Minoan functionaries and impressed for their particular significance, most likely a religious one, on the typical administrative documents of the period (roundels and *noduli*). This fact adds evidence for the prolonged use of the *Arkhanes formula*, well known from the libation tables inscribed in Linear A.

Nos. 7 and 9 are from Mallia, the former from Quartier Mu (a surface find from the area of the seals workshop<sup>25</sup>), consequently dated to MM IB-II, the latter from the area of the Chrysolakkos complex (no known context), with a dating suggested by the excavator to MM IB-MM II<sup>26</sup>. Both seals bear signs which are “more reminiscent of the incised versions of Hieroglyphic signs, in that only their contour is carved”<sup>27</sup>. This characteristic is also recognized on two 4-sided prism seals from Mallia, which also differ from the other Hieroglyphic seals in the symbols and the sign-groups represented<sup>28</sup>: respectively, #294, a seal with an anomalous length (cm. 3,95), bearing both script-signs and strange signs, likely selected by the carver without a literate purpose<sup>29</sup>; and #307, of dubious authenticity<sup>30</sup>, with unparalleled sign-groups on each side.

Returning to Nos. 7 and 9, each also presents other peculiarities which reveal their specific position among the Hieroglyphic seals. The first, a steatite amygdaloid, bears on one of its two faces a sign-group –  || X 038-034-066 – not known elsewhere, and on the other, half broken, a complex composition we are not able to interpret. The second is the wedge (*cyindre aplati à base ellipsoïdale*), a most unu-

<sup>21</sup> For a discussion on the symbols which are present next to the first signs of the *formula* see Jasink 2009: 8, 12, 23, 70, 153 n. 233. For the problem concerning the numbering of the sealings from Samothrace see Del Frio 2008: 208.

<sup>22</sup> We are dealing again with a *nodulus*. The CHIC number #137bis(?) has been given by Del Frio 2008: 201. We are inclined (Jasink 2009: 71, 109-110) to recognize also on this impression the first two signs of the *Arkhanes formula*, even if, while the “cuttlefish” symbol is well recognizable, the hypothetical “double axe” presents a rhombus/losange” shape, more similar to a cross. The same uncertainty is stressed also by Del Frio, *loc.cit.*

<sup>23</sup> In general, on the sealings from cushions seals see Dionisio, Jasink, Weingarten forthcoming.

<sup>24</sup> We are not sure that the use of the first part of the formula is simply occasional.

<sup>25</sup> Poursat, Olivier 1996: 104 n. 2, 174.

<sup>26</sup> Demargne 1945: 58-59.

<sup>27</sup> Karnava 2000: 233. On the first seal, this characteristic is well recognizable on face *a*, for the sign 034; on the second on face *b*, for the sign 044.

<sup>28</sup> Karnava *cit.* quotes a further seal from Mallia, #281, with the same technique, the unique which doesn't seem to present other peculiarities. Karnava rightly recalls another document, again from Mallia, the single Hieroglyphic inscription carved on a libation table, #328, which bears signs more similar to signs incised on clay than carved on stone. We could suspect that the technique used for all these objects is a feature belonging to a specific workshop or family of carvers, that in this way may differ from the other artisans.

<sup>29</sup> Jasink 2009: 54. 31.

<sup>30</sup> *Dimensions inusitées; puérilité de la gravure; caractère atypique du texte* (CHIC: 285).

sual shape, which also has unusual iconography on both sides. On one face a human figure is in the middle of the composition, larger than the other symbols, and may represent a dividing motif between two groups of script-signs<sup>31</sup>. At least two other Hieroglyphic seals present a large ornamental design, perhaps the main motif of the seal's face with respect to the script signs: #257, a 3-sided red carnelian prism, where a full-length cat in the middle of the face is surrounded by four symbols, in our opinion forming a script group 𐀀𐀁(𐀂) 038-010-031(-061)<sup>32</sup>; and #297α.γ., where two different *gorgon's* heads (alternatively, the second could be a cat-mask) join with two different script-groups, 𐀃 050-019 and 𐀄𐀅 011-056, respectively<sup>33</sup>. The difference between the wedge's face and these others may be seen in the use of the first as a *matrix*<sup>34</sup> (see below), while the whole faces of the others with the probable script-groups as well as the large ornamental figurative symbol had to be impressed on the clay<sup>35</sup>.

Four of the seals of interest, the cushions Nos. 1-2 and the four-sided stepped prisms Nos. 10-11, may be included in a category of Hieroglyphic seals which we have defined as *matrixes*, in a specific sense<sup>36</sup>: one symbol and/or groups of symbols are carved on a single face with other symbols or groups but not necessarily linked together and which could possibly be employed to stamp separately (even if this use is not attested expressly for these specific seals). Such a division may be marked in various ways<sup>37</sup>: in the case of 1a the *Arkhanes formula* is divided in two parts - which usually are carved on two different faces of the same seal - by a line incised along the whole face. The same expedient is used on 2b, to divide the ideographic symbols of the olive 𐀆 \*155 and the vineyard 𐀇 \*156, while on #2a two incised lines form a cross dividing the face into four parts, each with a different symbol: the spiral 𐀈 309, the J-hook 𐀉 302, the cross 𐀊 307, the rectangle with a prolonged side 𐀋 308. Possibly #207 (No. 9) also belongs to this group of seals. The four-sided stepped prisms Nos. 10-11 use another system of subdivision: two faces are flat, but two are "terraced", raising them into two fields on different levels. On No. 10 such an expedient is used on faces b-d, where the symbols 𐀋 308 and 𐀌 \*157, on face c and 𐀈 309(?) and 𐀉 302, on face β, are simply divided by a step, while on face α a line incised along the face divides \*155 from two symbols, 𐀊 307 and, likely, 𐀍 \*176<sup>38</sup>, with the same expedient used for the two cushions. On No. 11 the two

<sup>31</sup> A more exhaustive analysis of the whole seal has been given in Jasink 2009: 58-59, with notes 13.15, 92 n. 212.

<sup>32</sup> Jasink 2009: 88.

<sup>33</sup> Jasink 2009: 146-147, 47-48.

<sup>34</sup> We use this term in a particular way (Jasink 2009: 147-148), i.e. for a seal's face which doesn't present a single "word" but bears different sign-groups that on other seals appear individually. We hypothesize that it is possible to use, alternatively, only a section of the face for impressions.



<sup>35</sup> On faces β and δ of the same seal we have hypothesized to be in front of *matrixes*, where the dividing symbol is formed by a vertical bar with three branched endings on each side (Jasink 2009: 88, 158).



<sup>36</sup> Jasink 2005 *passim*; Jasink 2009:147-158.

<sup>37</sup> The most evident expedient is given by the same shape of the seal, well recognizable in two examples: #291 and #292 - the two 4-sided prisms analyzed above -, where the narrower faces are "terraced", and form two different fields with inscribed signs.

<sup>38</sup> See a specific discussion on these symbols in Jasink 2009: 150-151.

“terraced” faces are used to divide ⚡ 309 from ⚡ 307 (face *a*) and ⚡ 302 from ⚡ 308 (face *b*). As stressed above, the two further faces bear the *Arkhanes formula*.

Quite possibly, the opposite device is also used: symbols belonging to different faces may be unified and read together to form a unique “word” or “sentence”. Such an expedient has been analyzed by Olivier showing by example CMS VI 95 (#256)<sup>39</sup>; we may add, even if doubtfully, one of the seals listed above, i.e. the rectangular plate in steatite No. 13, named more generically as a “cube” by Karnava<sup>40</sup> (not recognized as Hieroglyphic by Olivier; not included in CHIC) but inserted, although doubtfully, into the *corpus* by Karnava<sup>41</sup> and Jasink<sup>42</sup>. We have hypothesized the presence on two faces of this seal of two script signs, the template(?)  036 and the textile  041, each on a different face, which could be read together to form the script-group 036-041 - unfortunately unknown elsewhere. The two symbols have been carved in a strange style, but their resemblance to the two script-signs is undeniable. Nevertheless, beyond the peculiar shape of this seal, which is the true reason for the inclusion of this object in our paper, the seal being to my knowledge the only(?)<sup>43</sup> example of this typology with Hieroglyphic signs, we don't find other connections with the whole of the analyzed seals.

Finally, the amygdaloid No. 12 is included in our classification because of the presence of two symbols, double axe  042 and bucranium  011, one above the other, which could represent a script-group. This has also been proposed by Karnava<sup>44</sup> and we, too, have listed this seal in the Appendix of our previous monograph<sup>45</sup>. However, Onassoglou catalogued the seal among the talismanic seals, assuming that the two symbols have no script value. The technique, the shape and, in fact, almost all the characteristics seem to confirm Onassoglou hypothesis, but, if the proposed dating<sup>46</sup> is true, the seal belonging to the Middle Minoan period, we think convenient the inclusion in our small *corpus* as well.

To summarize the data about this small corpus of “exceptional” seals, we may divide them, first, into four main groups according to their material. 1) Five seals are of soft stone, steatite: No. 13, the rectangular plate (not recognized in CHIC); No. 7, the amygdaloid from Mallia; Nos. 6 and 3, two of the seals with the *Arkhanes formula*, the first a discoid and the second a gable, both in olive green steatite and

<sup>39</sup> Olivier 1995: 173-175.

<sup>40</sup> Karnava 2000: 49, 172.

<sup>41</sup> Karnava 2000: 50.

<sup>42</sup> Jasink 2009: 124, 126, 194. In this last page (194, Tab. 7) we have listed also other five seals – CMS II 2, 229; CMS II, 288, CMS IV 125, MS VS.1A, 325; CMS XII 49) – with one Hieroglyphic sign on one face, which could be used with the same expedient.

<sup>43</sup> Yule 1980: 72-73 distinguishes rectangular plates in ivory, in soft and in hard stone, with a dating between EM II to MM III, but the only seal referred to as belonging to the Hieroglyphic deposit group with Hieroglyphic inscriptions (CMS XII 111 / CHIC #278) may be simply defined as a 4-sided prism. Younger 1993: 178-179 (with Charts I-IV) in his general remarks concerning shapes doesn't mention any Hieroglyphic motif on rectangular plates.

<sup>44</sup> Karnava 2000: 26, 172, Index II.

<sup>45</sup> Jasink 2010: 194 (Appendix B, Tab. 5).

<sup>46</sup> *Mittelminoish*, according to CMS XIII 15. In fact, it could belong to MM III, probably in the early neopalatial period.

of very good workmanship; No. 10, one of the two four-sided stepped prisms. 2) Four other seals have been identified as made of bone, rather than of ivory<sup>47</sup>: Nos. 4-5, the gable and the discoid from Arkhanes; No. 8, the cube from Moni Odigitria; No. 9, the wedge from Chrysolakkos. Both steatite and bone use very similar carving techniques and skills, requiring simply knives, burins and slow, hand-turned drills. 3) No. 11, the other four-sided stepped seal, is in marble, i.e. a semi-hard stone. 4) The remaining three seals are of hard semiprecious stone: Nos. 1 and 2, the two cushions, are in agate and No. 12, the amygdaloid in the Boston Museum of Fine Arts, in carnelian. These stones require the use of new rotary tools, and new techniques, and this is a problem for their dating, if we assume that this use was adopted only since MM II.

We may hypothesize that at least the largest part of these “exceptional seals” were made in a period of transition and, generally, they do not seem to require specific new technologies. It seems likely that the group of seals as a whole were important objects and unique examples, with hard stone only used in a small minority of cases – and, eventually, as a work of later carvers with a taste of archaism.

As to provenance, the few known contexts show that they were deposited in graves. The *Arkhanes formula* spreads from Phourni to other necropolises – in particular to Moni Odigitria – and it seems of great interest that seals similar in shape, iconography, material and style reach various regions of the island, suggesting a similar interest by seal owners to take possession of analogous objects, made by artisans possibly in contact with each other. It may be hypothesized that this group of seals represents an aspect of a transitional phase between the last prepalatial and the beginning of the protopalatial period<sup>48</sup>. However, it may be of some significance that only few Hieroglyphic seals, and exactly our “exceptional” seals, are carved with this specific group of signs, which is not common in the larger corpus of Hieroglyphic seals. Only in the time of the Samothrace sealings – typical of Linear A and not of Hieroglyphic – are seals bearing the first half of the *formula* used to make seal impressions. We may hypothesize that, in the early period of Hieroglyphic script, this *formula* was a meaningful sacral expression and so was carved on precious objects like seals; but, in the following period, it was no longer common on seals – and also some of the single component symbols fell in disuse; if we accept a later dating for those seals with the *formula* carved in hard stones, this may reveal a taste of archaism by occasional carvers. This progressive disappearance may explain why we find the *formula* exclusively on some libation’s tables in Linear A and a partial *formula* on the sealings of Samothrace, an island away from Crete, and possibly testifying to an ideal and ancient predominance of Crete.

As to the shapes, it doesn’t seem pure chance that most of the seals do not conform to the common prismatic shape. From one side, we may suppose that they generally represent the first attempts by the seal-carvers to produce seals with script, using the shapes of the period, and that such seals are luxury items. Each of

<sup>47</sup> Sbonias 2010: 352.

<sup>48</sup> For a synthetic but valuable analysis of some characters of this transitional period see Sbonias 2010: 361.

them may be considered an *unicum*, and cannot be assimilated to other Hieroglyphic seals. The care in the design is undeniable, and also the effort to engrave symbols with specific shapes appears evident. It may be significant that, with respect to many other inscribed seals, the craftsmen do not use ornamental or filling motifs (apart from occasional branches), probably because they consider the script-sign to be the ornamental object. We suppose that a difference between script and decoration is not yet felt and conscious.

Two seals (one pseudo-cube and one amygdaloid) have been included in our discussion, since they correlate in shape with two of the group's seals. That they belong to the Hieroglyphic corpus is only a suggestion since we acknowledge that we are not able to find other points of connection. Moreover, No. 13 is defined generically as a cube, but it is in fact a square with rectangular faces.

We close our paper with a brief catalogue of the thirteen seals of interest, specifying the relevant data for the above discussion, followed by their drawings (Figs. 1.2.3)<sup>49</sup>.

### CATALOGUE

<b>Number</b>	1
<b>CMS / CHIC</b>	VII 35 / #205
<b>Provenance</b>	Crete (Evans 1894)
<b>Museum</b>	London, British Museum (1921.7-11.2)
<b>Chronology</b>	Stylistic dating: MM II-III (possibly at its beginning, according to the analogies with #202 from Arkhanes; but the material, hard stone, and the style of the ibex could be signs of a later dating!)
<b>Material</b>	Hard stone: grey and white agate
<b>Shape</b>	Cushion ( <i>Cylindre aplati</i> according to CHIC)
<b>Working technique</b>	Wheel, solide drill
<b>Measurement (mm.)</b> <b>Motif</b>	17×12×8 a. the <i>Arkhanes formula</i> on two registers. A dividing bar and three crosses complete the design b. a galloping ibex attacked by a dog. Five lunettes representing rocks complete the design

<sup>49</sup> The technical data are based on CMS and the Arachne database. In the motif section we follow the numbering of the faces (a,b,c,d) according to CMS; the correspondence with the numbering of CHIC can be easily found. The drawings are from the photographic archives of CMS (with the kind permission of I. Pini and W. Müller), except Fig. 2 No. 8a-d, which has been taken from Vasilakis, Branigan 2010: Plate 61.



<b>Number</b>	2
<b>CMS / CHIC</b>	III 149 / #206
<b>Provenance</b>	Crete, Mallia(?), Pediados
<b>Museum</b>	Heraklion, Archaeological Museum (Giamalakos Coll. 3082)
<b>Chronology</b>	Stylistic dating: MM II
<b>Material</b>	Hard stone: partially translucent grey and beige agate
<b>Shape</b>	Cushion ( <i>cylinder aplati</i> according to CHIC)
<b>Working technique</b>	Wheel, solide drill
<b>Measurement (mm.)</b>	17,7×13,7×6,7
<b>Motif</b>	a. four Hieroglyphic signs (𐤀 𐤁 𐤂 𐤃) divided by two crossing bars. A small v-shape motif, ending with two dots, is carved next to the four symbols b. two Hieroglyphic signs (𐤄 𐤅) divided by a bar. A small v-shape motif, ending with two dots, is carved next to the two symbols

<b>Number</b>	3
<b>CMS / CHIC</b>	VI 14 / #251
<b>Provenance</b>	"Phournoi" (not Phourni/Arkhanes; probably the village of Phourné between Elounda and Neapolis)
<b>Museum</b>	Oxford, Ashmolean Museum (1938.928)
<b>Chronology</b>	EM III-MM I (likely MM I)
<b>Material</b>	Soft stone: dark olive green steatite
<b>Shape</b>	Gable
<b>Working technique</b>	Cut
<b>Measurement (mm.)</b>	14×13×14
<b>Motif</b>	a. two uncertain Hieroglyphic signs (𐤆 / 𐤇 and 𐤈 ?). A row of notches completes the design b. three Hieroglyphic signs (𐤉 𐤊 𐤋) in a strange style, forming the second part of the <i>Arkhanes formula</i> . Two petaloid shapes with branches complete the design c. two Hieroglyphic signs (𐤌 𐤍), forming the first part of the <i>Arkhanes formula</i> . A petaloid shape with three branches completes the design

<b>Number</b>	4
<b>CMS / CHIC</b>	II 1, 393 / #252
<b>Provenance</b>	Arkhanes, Phourni necropolis, Building 6, Room III
<b>Museum</b>	Heraklion, Archaeological Museum (2266)
<b>Chronology</b>	EM III-MM IA (likely MM I)
<b>Material</b>	Bone
<b>Shape</b>	Gable
<b>Working technique</b>	Cut, deeply incised borders
<b>Measurement (mm.)</b>	a: 15,5×13×1,55; b: 13×11×13; c: 13×11×13.
<b>Motif</b>	a. two Hieroglyphic signs (𐤀 𐤓), forming the first part of the <i>Arkhanes formula</i> b. four Hieroglyphic (?) symbols: one could be identified either with 𐤓 or with 𐤓; the other three have a petaloid shape but could represent three identical vessels as well c. three Hieroglyphic signs (𐤓 𐤓 𐤓) in a strange style, forming the second part of the <i>Arkhanes formula</i> . A forked branch completes the design





<b>Number</b>	5
<b>CMS / CHIC</b>	II 1, 394 / #202
<b>Provenance</b>	Arkhanes, Phourni necropolis, Building 6, Room III
<b>Museum</b>	Heraklion, Archaeological Museum (2245)
<b>Chronology</b>	EM III-MM IA (likely MM I)
<b>Material</b>	Bone
<b>Shape</b>	Discoid
<b>Working technique</b>	Cut, deeply incised borders
<b>Measurement (mm.)</b>	Ø 15,1; Th. 6,3
<b>Motif</b>	a. two Hieroglyphic signs (𐤀 𐤓), forming the first part of the <i>Arkhanes formula</i> . A single branch, next to the sepia, with off-shoots on only one side completes the design b. three Hieroglyphic signs (𐤓 𐤓 𐤓), forming the second part of the <i>Arkhanes formula</i> . Three hatched triangles along the border complete the design








<b>Number</b>	6
<b>CMS / CHIC</b>	VI 13 / #203
<b>Provenance</b>	Knossos?, Temenos, field Hellenika?
<b>Museum</b>	Oxford, Ashmolean Museum (1928.929)
<b>Chronology</b>	AM III – MM IA (Pini); prepalatial (Krzyszkowska); perhaps MM IB?
<b>Material</b>	Soft stone: olive green steatite with a darker patch
<b>Shape</b>	Discoid with slightly convex back
<b>Working technique</b>	Scraped, cut
<b>Measurement (mm.)</b>	Ø 13; Th. 3 to 5
<b>Motif</b>	a. two Hieroglyphic signs (𐤠 𐤢), forming the first part of the <i>Arkhanes formula</i> ; a bifoliate figure completes the design b. three Hieroglyphic signs (𐤢 𐤣 𐤤), forming the second part of the <i>Arkhanes formula</i> . Two petaloid elements with branches complete the design











<b>Number</b>	7
<b>CMS / CHIC</b>	II 3,151 / #204
<b>Provenance</b>	Mallia, Quartier MU (from the surface next to the workshop of seals)
<b>Museum</b>	Heraklion, Archaeological Museum (1796)
<b>Chronology</b>	MM I-II? (in our opinion); LM I? (according to Arachne)
<b>Material</b>	Soft stone: serpentine
<b>Shape</b>	Amygdaloid.
<b>Working technique</b>	Wheel, solid drill
<b>Measurement (mm.)</b>	13×16×7
<b>Motif</b>	a. Two or three Hieroglyphic signs (𐤠 𐤢 𐤤): the central sign – the “two mountains” – presents only the contour carved, resembling the corresponding sign incised on clay b. At least, two unrecognizable motifs: one, composed by some bars and dots, the other, a linear motif with crossing diagonal bars. More than half face is broken

<b>Number</b>	8
<b>CMS / CHIC</b>	Unpublished in CMS / #313 / S35 (No. given in Moni Odigitria 2010)
<b>Provenance</b>	Moni Odigitria cemetery, Ossuary
<b>Museum</b>	Heraklion, Archaeological Museum (2850)
<b>Chronology</b>	MM IA-IB (according to Sbonias)
<b>Material</b>	Bone
<b>Shape</b>	Cube (cuboid)
<b>Working technique</b>	Cut, deeply incised borders
<b>Measurement (mm.)</b>	Ø 20-25; L. of tips 12-15
<b>Motif</b>	<p>The motifs of four faces are included in a line border(Border/Leaf Complex) )</p> <p>a. two symbols might be considered as Hieroglyphic signs: a “cuttlefish” (Y 019) and a “tree with ascending branches” (Y 025) although with an unusual shape – unfortunately a group Y is not known elsewhere. The latter design has been interpreted also as a “standing figure” (Sbonias 2010b: 205). A small hatched triangle completes the face</p> <p>b. a schematic quadruped inserted into geometrical motifs (a bar, a circle and two hatched triangles)</p> <p>c. three Hieroglyphic signs (Y 019 Y 025 Y 026), forming the second part of the <i>Arkhanes formula</i></p> <p>d. two Hieroglyphic signs (Y 026 Y 027), forming the first part of the <i>Arkhanes formula</i>; a small petaloid with three branches (or a bifoliate) completes the design</p>



<b>Number</b>	9
<b>CMS / CHIC</b>	II 1, 420 / #207
<b>Provenance</b>	Mallia, Necropolis of Chryssolakkos
<b>Museum</b>	Heraklion, Archaeological Museum (1442)
<b>Chronology</b>	Suggested dating: MM IB-II (without context)
<b>Material</b>	Hippopotamus bone
<b>Shape</b>	Wedge
<b>Working technique</b>	Cut, drilled
<b>Measurement (mm.)</b>	16×16×10

<b>Motif</b>	<p>a. likely a script-group formed by  and three dots, partly lost</p> <p>b. a human figure in the middle of the composition, with a larger dimension than the other symbols; two groups of symbols: on one side, , on the other a dot (O?) and a partly lost cylindrical figure with a circular prominence. A cross above  completes the design</p>
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<b>Number</b>	10
<b>CMS / CHIC</b>	II 2, 315 / CHIC #291
<b>Provenance</b>	Crete?
<b>Museum</b>	Heraklion, Archaeological Museum (1269)
<b>Chronology</b>	Stylistic: MM II
<b>Material</b>	Soft stone: steatite
<b>Shape</b>	Four-sided stepped prism
<b>Working technique</b>	Cut, scraped
<b>Measurement (mm.)</b>	17×7×9
<b>Motif</b>	<p>a. a lizard</p> <p>b. two script-signs,  309(?) and  302, divided by a step</p> <p>c. a line incised along the face dividing the sign  *155 from two symbols,  307 and, likely,  *176</p> <p>d. two script-signs,  308 and  *157, divided by a step</p>

<b>Number</b>	11
<b>CMS / CHIC</b>	II 2, 217 / #292
<b>Provenance</b>	Gouves?, Pediados, Field Asprougas?
<b>Museum</b>	Heraklion, Archaeological Museum (1868)
<b>Chronology</b>	Stylistic dating: MM II
<b>Material</b>	Middle hard stone: pseudo-jasper (white yellowish marble according to CMS)
<b>Shape</b>	Four-sided stepped prism
<b>Working technique</b>	Wheel?
<b>Measurement (mm.)</b>	14×6×10
<b>Motif</b>	<p>a. two script-signs,  309 and  307, divided by a step</p> <p>b. two script-signs,  302 and  308, divided by a step</p> <p>c. first part of the <i>Arkhanes formula</i>,  </p> <p>d. second part of the <i>Arkhanes formula</i>, </p>

<b>Number</b>	12
<b>CMS / CHIC</b>	XIII 15
<b>Provenance</b>	Crete
<b>Museum</b>	Boston, Museum of Fine Arts (65.874)
<b>Chronology</b>	MM III
<b>Material</b>	Hard stone: from orange to dark red carnelian
<b>Shape</b>	Amygdaloid
<b>Working technique</b>	"Talismanic" technique (Onassoglou 1985: 171-189)
<b>Measurement (mm.)</b>	18×13
<b>Motif</b>	A double axe above a bukranium. The style is undoubtedly talismanic (Onassoglou KO -17)

<b>Number</b>	13
<b>CMS / CHIC</b>	II 2, 271
<b>Provenance</b>	Ierapetra
<b>Museum</b>	Heraklion
<b>Chronology</b>	Stylistic dating: MM II
<b>Material</b>	Soft stone: steatite
<b>Shape</b>	Square with rectangular faces
<b>Working technique</b>	Cut, scraped
<b>Measurement (mm.)</b>	15×9×7
<b>Motif</b>	a. perhaps the symbol corresponding to "template"  036 b. a random-scratching motif c. perhaps the symbol corresponding to "textile"  041 d. seven irregular dots disposed on two lines

Anna Margherita Jasink  
 Università di Firenze  
 Dipartimento di Scienze dell'Antichità  
 Medioevo e Rinascimento e Linguistica  
 Piazza Brunelleschi 4  
 50121 Firenze

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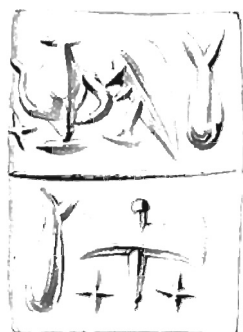
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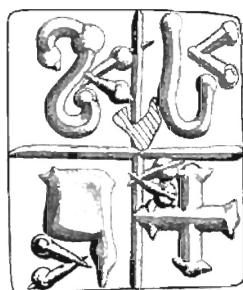




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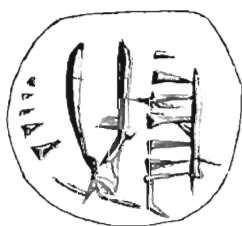
No. 1b



No. 2a



No. 2b



No. 3a



No. 3b



No. 3c



No. 4a



No. 4b



No. 4c

Fig. 1



No. 5a



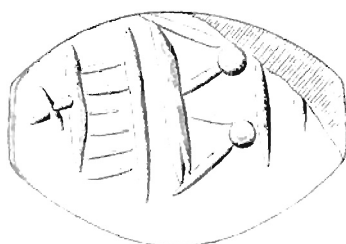
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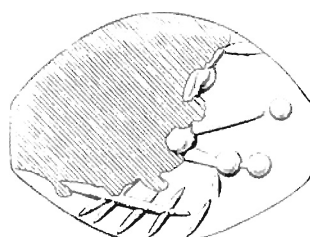
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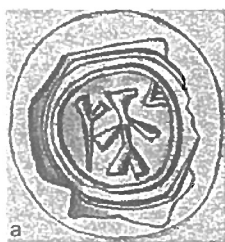
No. 6b



No. 7a



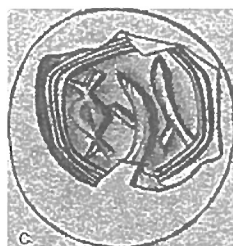
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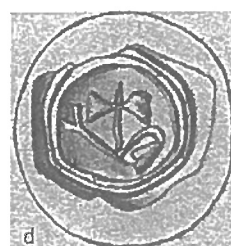
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No. 8b

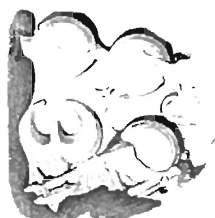


No. 8c



No. 8d

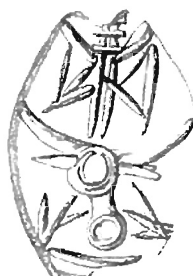
Fig. 2



No. 9a



No. 9b



No. 12



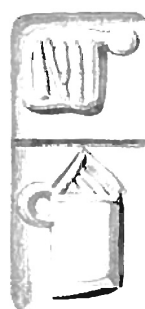
No. 10a



No. 10b



No. 10c



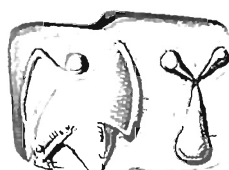
No. 10d



No. 11a



No. 11b



No. 11c



No. 11d



No. 13a



No. 13b



No. 13c



No. 13d

Fig. 3