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AEGEAN SEALS OF THE LATE BRONZE AGE:  
MASTERS AND WORKSHOPS

II. THE FIRST-GENERATION MINOAN MASTERS\*

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\* For the abbreviations, see the Introduction, *Kadmos* 21, 1982, 104–5. Add:  
Hood 1978 Sinclair Hood, *The Arts in Prehistoric Greece* (Harmondsworth)  
Karo G. Karo, *Die Schachtgräber von Mykenai* (Munich 1930)

The ceramic date given after a seal is that of its context.

The drawings in Figures 1–6 are numbered consecutively, and are cited in bold face, 1, 2, etc.

Corrigendum: in the Introduction, *Kadmos* 21, 1982, 117 line 3, for 48 read 40.

## Illustrations

I wish to thank Dr Ingo Pini for his permission to reproduce drawings made for CMS (Figs. 1, 3-10, 12, 14, 16, 18, 20-22, 24, 26, 27, 30, 32-36, 38-45, 47-52, and 58-61). Figs. 2, 11, 15, 46, and 53-55 are taken from their primary publications. The rest are drawn by the author on the basis of published photographs.

The drawings in Figures 1-6 are an aide-mémoire to stylistic features; more detailed understanding is given by the primary publications cited below.

The simple references below with volume and index numbers only are to the *Corpus der minoischen und mykenischen Siegel* (Berlin, 1964 ff.).

AGDS = *Antike Gemmen in deutschen Sammlungen*, Munich, 1968 ff.

CMCG = A.X. Sakellariou, *Les Cachets minoens de la Collection Giamalakis, Etudes Crétoises X*, Paris 1958.

CS = V.E.G. Kenna, *Cretan Seals*, Oxford 1960.

HM = Heraklion Museum seals: HMm = rings HM = sealings.

Karo = G. Karo, *Die Schachtgräber von Mykenai*, Munich 1930.

Text	Nr.	Ref.	Text	Nr.	Ref.
A	I 1	1 XII 207		34	IX 174
		2 Karo 274		35	I 13
	2	3 I 233a		36	IX 171
		4 I 233b		37	CS 22P
		5 I 272a		38	IV 298
		6 I 272b		39	IV 290
		7 XII 229		40	IV 287
		8 I 151		41	XII 228
		9 I 258			
	10	I 273	III 1	42	I 213
		11 CMCG 335		43	IV 246
		12 XII 214	2	44	V 422a
		13 CS 235		45	V 422b
	3	14 XIII 9	3	46	HMs 377
		15 HM 1713		47	I 270
	4	16 V 654		48	IV 257
		17 AGDS II Berlin 36		49	V 677a
	5	18 I 206		50	V 677b
		19 X 268		51	V 677c
	6	20 I 480	B	52	I 219
		21 IV 258		53	HMm 424
		22 IV 40D		54	HMm 1034
		23 AGDS III Kassel 6		55	Ring from Mochlos
				56	Ring from Hogarth's House
II	1	24 IX 112		57	Ring from Avgo
		25 CS 375	3	58	I 269
		26 VIII 128		59	I 271
		27 XII 168		60	I 288
		28 X 262	4	61	I 144
		29 CS 37P		62	CS 239
		30 XIII 136	5	63	CS 238
	2	31 X 261		64	CS 297
		32 XIII 40	6	65	CS 343
		33 IV 300			

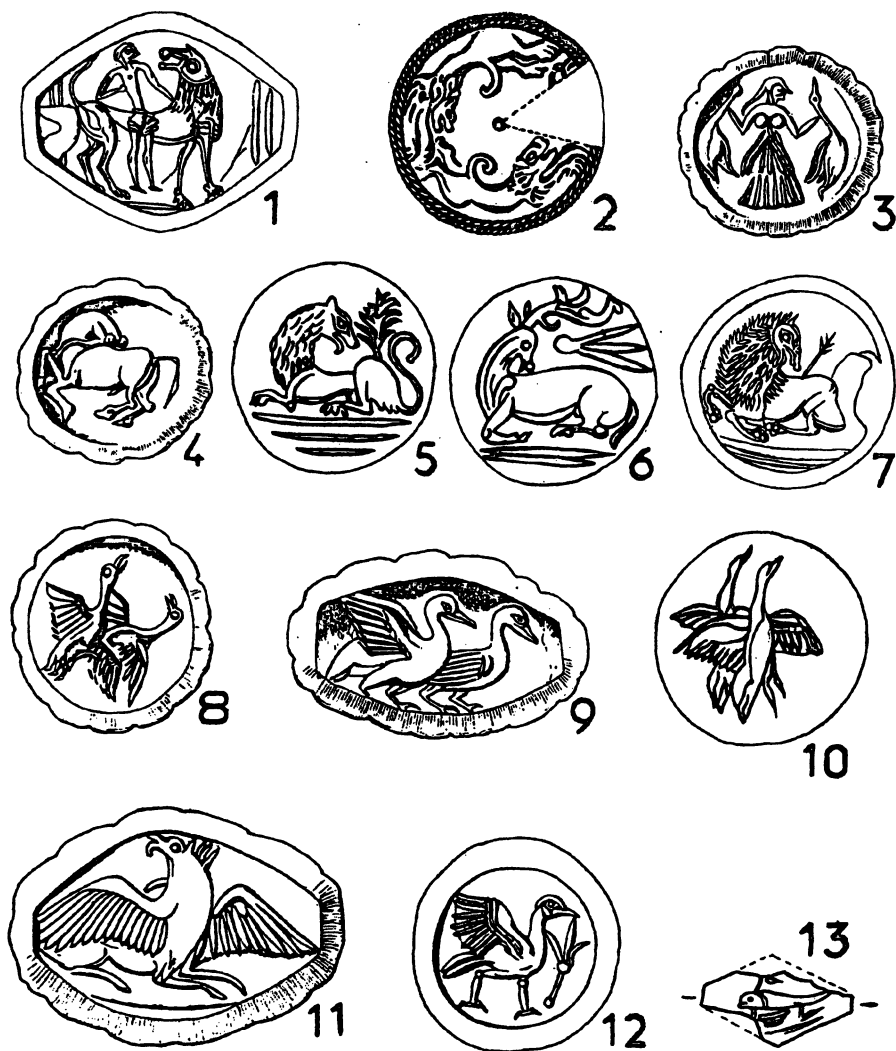


Fig. 1  
 1, 2: The Jasper Lion Master  
 2-13: The Vapheio-Rutsi Prism Master

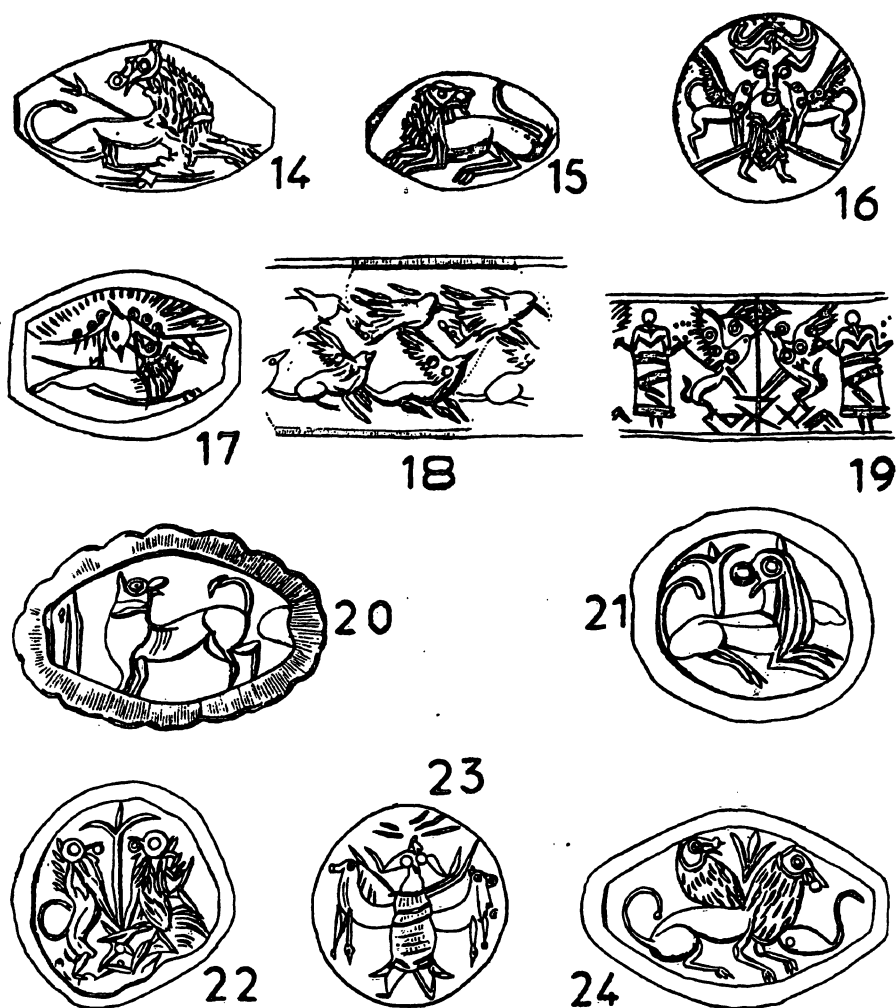


Fig. 2

14,15: The Master of the Lion from Ayios Ioannes T. 4

16, 17: The Master of the Attacking Griffin in Berlin

18, 19: The Master of the Attendant Griffins

20-23: The Bulbous-Nose Master and Close

24: Miscellaneous Line Jawed Lions



Fig. 3  
25-31: Popular Group, Women and Men  
32-35: Popular Group, Animals and Monsters



Fig. 4

36-41: Cretan Popular Group: Animals and Monsters (cont.)

42, 43: The Master of the Berry-Head Waterbirds

44-46: The Master of the Eleusis Matrix

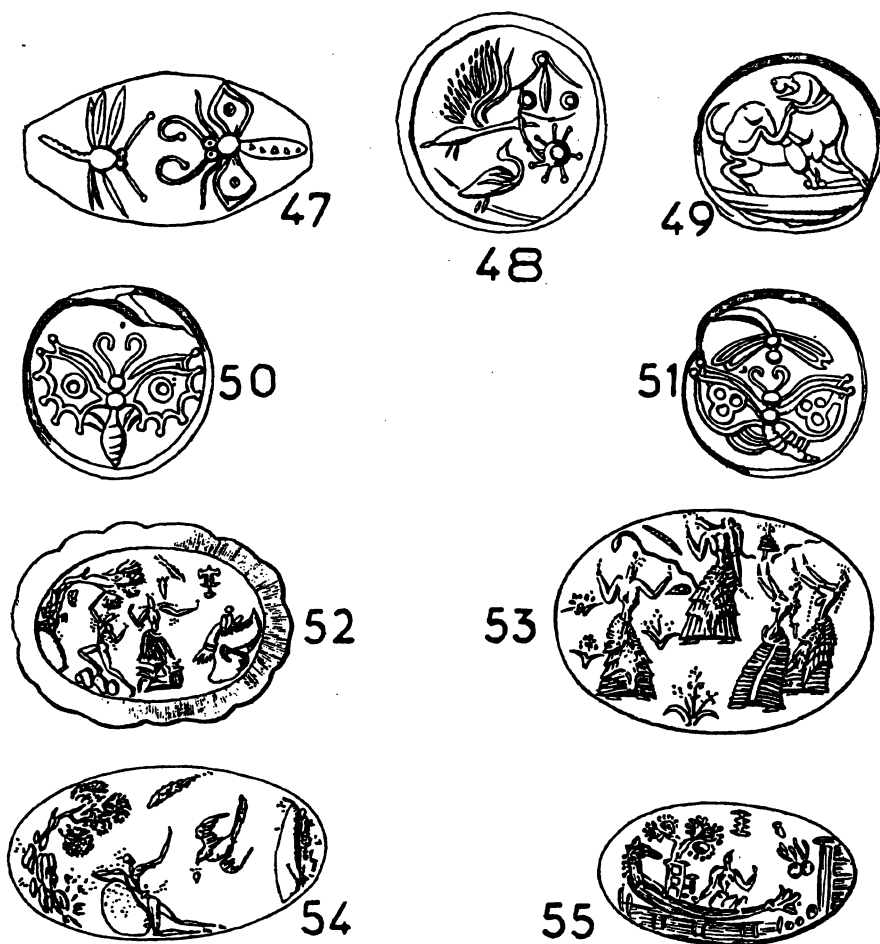


Fig. 5  
 47-51: The Master of the Theban Butterflies  
 52-55: The Master of the Isopata Ring

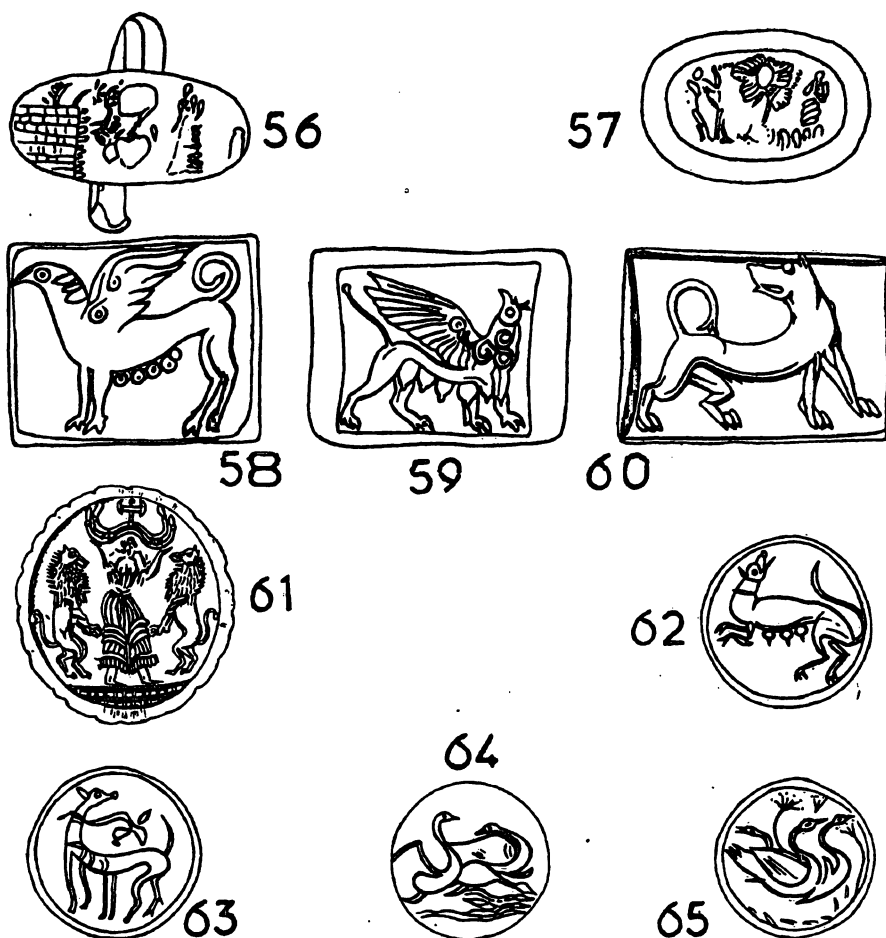


Fig. 6

56, 57: The Avgo Ring Group

58-60: The Master of the Messenian Griffins on Cushions

61: The Master of the Potniai Leontōn

62, 63: The Master of the Ashmolean Dogs

64, 65: The Master of Birds with Lumpy Bodies



## A. The Line-Jawed Lions Group and the Cretan Popular Group

### *Introduction*

About 20% of sealstones are made from the common soft (Mohs scale 1.5–4) stones that are often identified as varieties of serpentine or steatite in modern discussions. Serpentine (Mohs 4) is defined as a hydrous silicate of magnesium oxide, so called because its usually obscure green colour resembles that of snakeskin. Steatite (Mohs 2) is a variety of talc, a silicate of magnesium plus various impurities, and has, as the name implies, a greasy or soapy texture; because of the impurities steatite comes in many colors, the most common being shiny black, pale green, caramel brown, rust red, cream yellow, or any mottled combination.

Since it is not often possible to determine petrologically whether a sealstone is of serpentine or steatite, we therefore define these terms to fit easily appreciated criteria. Steatite has a greasy texture and an oily sheen; it is so soft that a fingernail would almost be able to scratch it. Serpentine is dull and grainy, usually green to grey in color; it is sufficiently hard for a penknife, without excessive pressure, only lightly to scratch it. It should be noted that some silicates like haematite or jasper can often be confused with serpentine, though a minute hardness test on the back of the stone will resolve the issue.

No Late Bronze Age steatite seal has been excavated from contexts dated earlier than the end of LH III Ai, while the serpentine seals occur mostly in LM I contexts. From the findspot it also seems extremely probable that the serpentine seals are Cretan, and that those of steatite are Mainland and Island in manufacture. Stylistically, too, there is a noticeable difference. The serpentine seals commonly depict animals and human figures in cult scenes, plus a few monsters, all with fully, though simply, modeled bodies and linear limbs. The steatite seals almost invariably depict either animals (so schematically scratched on the seal-face that their species cannot often be determined), or plant forms that are little more than geometric designs.

Almost all these soft-stone seals have been found in fairly humble contexts: fills, simple houses, cist graves, and some chamber tombs.<sup>1</sup>

<sup>1</sup> A few steatite seals come from provincial LH III B–C tholoi (V 150–6, 429, 622–5, 741, 746–9), where and at a time when they were no doubt rare.

The humble nature of the majority of the findspots for such soft-stone seals suggests that they were the possessions of the common folk. The easily acquired materials and the simple (when not hasty) engraving both argue for their being inexpensive, while their large numbers imply a copious demand.

For such reasons these sealstones constitute the Popular Groups.<sup>2</sup> The serpentine seals found almost exclusively in LM I Cretan contexts comprise the more naturalistic Cretan Popular Group (hereafter, the CP Group); the steatite seals found mostly on the Mainland, occasionally in the Islands, and rarely in Crete in contexts dated no earlier than LH III Ai late, form the cruder Mainland Popular Group, which will be discussed in a subsequent study.

Because the CP figures are simply modelled and the soft serpentine wears more quickly, scholars have often been misled about their proper dating. Kenna dates the distinctive type of lion (the Line-Jawed type discussed below) on XII 207 to LM I, on IV 274 to LM III Ai, on VIII 125 to LM III Aii and on 80 to LM III B, and on VII 197 to LH III C, while Boardman illustrates the same lion on CS 373 (GGFR pl. 193) under the general heading "the End of the Bronze Age" (pp. 105–106).

The actual date for the group is secure; the two seals from the earliest contexts (V 690 and I 13) point to a beginning late in the 16th century B.C. The majority of CP examples from dated contexts, however, were in use in the LM IB/LH IIA period and may indicate that the group's *floruit* extended into the 15th century B.C. We may postulate then a phase 1525–1475 B.C. for the Cretan Popular Group.

This CP Group is a collection of soft-stone seals, but the basic traits of the style can also be found on a number of hard-stone seals, whose better preservation and generally more deliberately careful style allow us to assign them more confidently to several artists who together make up the Line-Jawed Lion Group (hereafter, the L-J Lion Group).

It is unreasonable to assume, however, that the L-J Lion artists are different from the CP artists. The typical CP lion differs from the L-J lion only in attitude, not in anatomy; this only difference lies in the fact that the softer serpentine allows the artist to engrave with ease and fluidity, while the harder and more valuable stones demand greater self-consciousness, more planning, more control, more seriousness of inten-

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<sup>2</sup> Boardman thinks of both groups as expressions of the "Common Style" (GGFR 393). We prefer the term 'popular' because it not only implies their simplicity but also connotes their use and value.

tion.<sup>3</sup> The CP lion, simple and toy-like, is, however, actually better suited to soft stones and often looks inappropriate, though charmingly so, on hard-stone seals (e.g., AGDS II Berlin 36, and CMS I 13, 144 and 145) or on the gold-foil cutouts (e.g., Karo, 41, 45, 50) from Mycenae Shaft Grave III.

### *I. The Line-Jawed Lions Group*

This group comprises at least six major artists who use a distinctive type of lion – the mane is stippled with short strokes or dashes and is separated from the large rectangular or broadly circular head by an arc that is prolonged to form the lower jaw; this lower jaw usually droops either to depict an open mouth (the Jasper Lion Master) or to curve sharply down as if it was also doubling as a lolling tongue (the Vapheio-Rutsi Prism Master). This latter use of the lower jaw is far more common, and may stem from a simplified version of the jaw and tongue in the work of the MM artist, the Palaikastro Cat Master.

#### 1. The Jasper Lion Master (Fig. 1)

(Knossos, ca. 1525–1500 B.C.)

BSA 74, 1979, 274–278. This master's lions are distinguished by the use of dots for the paws and tips of the jaws, and by a fairly rectangular neck in which the mane is depicted by rows of regular short strokes; often the tail rises from the lower back. JHB proposes a date early in the 15th century or late in the 16th; JGY (TUAS 6, 1981, 67) adds the gold spindle or pinhead Karo 274 from Mycenae Shaft Grave IV, thus raising the date at least to the last quarter of the 16th century B.C.

As Published:

*The Master.* V 304 and 493 (both LH I–II); VII 90; VIII 154; X 250; XII 271; CMCG 260; CS 244 and 245; a sealing in the Stratigraphical Museum, Knossos; and a lentoid (8793–1863) in the Victoria and Albert Museum.

*Near.* V 584 (LH I–II) and 690 (LM IA); X 303; AT 66; HM 661 and 888; Copenhagen NM 1364; BSA cast 184; and a lentoid in the Edith Eccles collection.

<sup>3</sup> If artists who worked mainly in soft stones put their hand to agates, cornelians, and jasper, we should expect the converse and that therefore not all serpentine or steatite sealstones belong to either the Cretan or Mainland Popular Group but are instead soft stone renderings of later styles that occur predominately in hard stones; these will be discussed in the appropriate subsequent articles.

Add:

*The Master.* XII 207 (1) probably from Crete, and a gold spindle or pinhead (2 = Karo 274) from Mycenae Shaft Grave IV (LH I).

*Close.* a) Note the large heads, short dotted muzzle and dotted hind leg.

One hand: IX 114 and IX 7D and AT 97.

Close: V 585 from Kasarma (LH I-II).

Near: Kn HMs 158 (KSPI R32), and Kn HMs 303 (KSPI R23).

b) One hand: AT 45 and KZ 109.

*Dependent.* (forgery – Gill, BICS 8, 1961, 7-13; authentic – Kenna, CS s.n. 357); CS 357 from Ayia Pelagia (said to be LM IIA).

## 2. The Master of the Vapheio-Rutsi Prisms (Fig. 1)

(ca. 1525-1500 B.C.)

This artist uses a simple linear style with fewer dots than does the Jasper Lion Master. The deeply engraved shoulder line that continues to form the foreleg resembles his mane demarcation that forms also the lower, drooping jaw. These traits are found on almost all CP seals, revealing the V-R Prism Master as the most influential of the group. The prisms I 233, 272, and 273 with waterbirds are all small and all of amethyst; the stag on I 272b shows a lumpy body, drooping tail that thickens at the end, large hooves, and dotted elbow/knee joints as does the bull on I 233b – compare the lions on IX 114 and 7D, close to the J-L Master.

### Lions, Bulls, Stags, Boars:

*The Master.* I 233 (3, 4) from Vapheio and 272 (5, 6) from Rutsi (both LH IIA).

*Close.* VIII 137; XIII 22; HM 2096 from Knossos (LM IB; AR 1959-1960 fig. 270); and XII 229 (7).

### Waterbirds:

The two prisms I 233 and 272 are obviously by the same master; the connection between this pair and I 273 is more tenuous. The material for all three prisms is the same; the diameter of the faces is nearly the same on all three seals; in all three cases side a) is right side up to side b); I 233 and 272 have the same type of gold mount, while personal inspection of I 273 reveals the post for a possibly similar gold mount within the stringhole;<sup>4</sup> and the lumpy, incoherent modelling is the same for all

<sup>4</sup> This type of gold mount, a single ring of gold, is, however, fairly common (on posts: I 44, 74, 233, 250, 255, 272; on caps: V 639) and decorates early sealstones.

animals (note the waterbirds' legs on I 273). The careful detailing of the bird wings on I 273, even the pin feathers on both sides a and b (unillustrated), all stand in direct contrast to the more impressionistic rendering of the birds on I 233a; perhaps the slightly greater size of the birds on I 273 might account for their better details.

I 151 (8) from Mycenae T. 518 (LH I-II), 258 (9) from Vapheio (LH IIA), and 273 (10) from Rutsi (LH IIA); AT 94 and 95; and CMCG 335 (11) from Lasithi.

*Close.* XII 214 (12) probably from Crete.

*Near.* I 150 from Mycenae T. 518 (LH I-II).

### Alerions:

The wings are carefully executed, similar to those of the preceding waterbirds. A small curvilinear line separates the head from the body, probably a carry-over from the line that demarcates the master's lion manes and lower jaws. Note how this line becomes a loop about the eye on soft stones (see CP Alerion below). On AT 17 and 18 a leg is depicted (cf. CS 423, CP Monsters in V-R Prism Master's Style below). CS 235 (13); and AT 16-18.

### 3. The Master of the Lion from Ayios Ioannes T. 4, HM 1713 (Fig. 2)

This master uses L-J Lion traits for the head and mane, a dot eye and a larger dot nose, and a broad Cut Style treatment of the body.

XIII 9 (14), and HM 1713 (15) from Ayios Ioannes T. 4 (LM IB-II; BSA 51, 1956, 93 fig. 5 and pl. 14).

### 4. The Master of the Attacking Griffin in Berlin, AGDS II Berlin 36 (Fig. 2)

Like the preceding master, this artist uses L-J Lion traits (the mane-to-jaw line, long claws, harsh shoulder) and Cut-Style traits (tubular drill marks on the griffin's wings and for the eyes, and long sleek bodies).

V 654 (16) from Ialysos T. 20 (LH III Ci), and AGDS II Berlin 36 (17) said to be from Athens.

### 5. The Master of the Attendant Griffins (Fig. 2)

Probably the same as the Master of the Attacking Griffin in Berlin, this master also uses tubular drill marks on his griffin's wings but employs dots for the eyes and the occasional paw.

I 206 (18) from Prosymna T. 2 (LH II-III A), X 268 (19), XIII 39, AT 96, AM 1938. 1073 (CS pl. 20), and HM 127 from Avdou Pediados (ArchEph 1907 pls. 6-8 no. 103).

*Close.* (note the use of the solid drill instead of the tubular drill): X 242; and HM 1753 from Sphakia Siteias (Praktika 1955 pl. 110 gamma).

*Dependent.* (the addition of the radius with dotted elbows and carpal pads resembles some of the later work of the school of the Mycenae-Vapheio Lion Master): CS 351 from Psychro (GGFR pl. 145).

### 6. The Bulbous-Nose Master (Fig. 2)

Like the Master of the Lion from Ayios Ioannes T. 4, this master uses a large dot for the animal's nose, but also employs the same sized drill for the eye, and places both dots close together if not actually touching. With the exception of the three Close seals, the Bulbous-Nose lions have no paws (see the Master of the Attendant Griffins). The Munich amygdaloid, however, carries a lion whose head is in the Bulbous-Nose style, but the paws are dotted and a radius is added ending in a dotted carpal pad (see the Master of the Attendant Griffins, Dependent, above); the master of the Kassel and AM lentoids below may have worked primarily in soft stones (cf. CP Women Subgroups and p. 129 below).

I 480 (20) from Crete; IV 258 (21) from Kousse in the Messara, and 40D (22) from Eleounda; IX 13D; HM 1899 from Knossos; and AT 49.

*Close.* a) AGDS I Munich 66 from Melos and perhaps HM 1317 from Mavrospelio T. III (BSA 28, 1926-7, no. III. 13)

b) One hand: AGDS III Kassel 6 (23) from the Menidi Tholos (LH III B), CS 352 from the Knossos area.

### 7. Miscellaneous Line-Jawed Lions (Fig. 2)

I 172 from Mycenae, 194 from Midea, 254 from Vapheio (LH IIA), 405 from Koukaki near Athens, 506 from Crete; IV 229 from Siteia; V 602 from Mycenae (LH III B); VII 171; IX 112 (24); X 135; XII 213; CS 329 from Central Crete, and 330 "found in Egypt"; HM 18 (ArchEph 1907 pls. 6-8 no. 50), 20, and 30; BSA Cast 183.

## II. *The Cretan Popular Group* (Figs. 3, 4)

This group is admittedly a large mixed group of serpentine seals that carry figures more or less perfunctorily engraved. The human figures are subdivided by costume, the animals by style.

### Women:

#### a) The dress is decorated with long horizontal strokes:

CS 375 (25) from Smyrna and HM 148a from Mochlos Pediados (PM II fig. 194b).  
Associated sealings: KZ 4 and 5.

#### b) The dress is decorated with two vertical rows of convex arcs meeting to form V-shapes:

VIII 128 (26), AT 123, and CMCG 367.

#### c) The dress is decorated with a register of vertical strokes bounded by two horizontal lines:

XII 168 (27) and 276a both probably from Crete; XIII 5D; CMCG 361 from Knossos; CS 252, 253 from Knossos, 282-4 and 41P; HM 183 from Ayia Triada (LM IB; ArchEph 1972 pl. 94B), 200 from Knossos (BSA 8, 1901-2, 8), 393 from Gournia (ArchEph 1972 pl. 94c), 395 from Gournia (Gournia p. 54, fig. 28.8: "oldest part of town"), and 944; and Florence Museum 84708 from Korai near Knossos (SMEA 10, 1969, 7-18, no. 4).

#### d) The dress is decorated with two parallel V's separating two registers of vertical strokes (cf. IV 295 in Lions a. In the V-R Prism Master's style, p. 124 below):

I 513 from Crete; IX 163 from Ligortyno near Gortyn; X 262 (28); XII 239 probably from Crete, CMCG 360 from Knossos; HM 86 from Kalyvron Mylopotamou (ArchEph 1907 pls. 6-8, no. 86), 143 from Knossos (ArchEph 1907 pls. 6-8, no. 111), 919 from Tylissos (ArchEph 1912, pl. 16a), and 1287 (ArchEph 1972 pl. 94d).

#### e) Miscellaneous Woman:

IV 283b from Fortetsa and 307 from Roussochoria; V 253 from Armenoi T. 24 (LM III Aii-Bi); VII 134; VIII 95; IX 164; X 160 and 270; XII 264 and 12D both probably from Crete; XIII 135 probably from Crete; CMCG 364 from Knossos and 366; HM 213 from Knossos (ArchEph 1972, pl. 94 eta) and 226 from Knossos (ArchEph 1907, pls. 6-8, no. 126); Kn HMs 669 (KSPI C8); AT 105 and 122; Sk 15; and two lentoids from Mallia (EtCrétoises XI p. 142f., nos. 2 and 5, pl. LII. 7 and 8).

### Men:

#### a) The robe is decorated with a zig-zag band filled with short strokes:

CS 37P (29) and AGDS I Munich 87 from Crete.

#### b) Two men behind figure-8 shields walk left:

XIII 136 (30) and a lentoid in the G. S. Kirk collection.

c) Miscellaneous Men (see IV 293 in Lions a. In V-R Prism Master's Style, below):

X 161; HM 33 and 140a (ArchEph 1907 pls. 6–8 nos. 61 and 109); 1589 from Mallia (EtCrétoises IX pl. XVI); and Sk 1; and XIII 16 Db.

Cult:

X 261 (31); and Kn HMs 157 (R91); and I Supp. 114.

Lions:

a) In the V-R Prism Master's Style:

I 503–5 from Crete; IV 274 from Phaistos, 293 from Vonní, and 295 from Knossos; V 222 from Epidauros (LH I–II context), 241 and 242 from Armenoi T. 13 (LM III Aii context), and 511 from Korakou (LH IIA context); VII 197 and 198 both from Crete; VIII 75, 80, and 125 all probably from Crete; IX 143 and 148; X 150; XII 243; XIII 40 (32), and 125; CMCG 270, 287, 291, 297, 298, and 288, 290, and 300 all three from Knossos; CS 369, 373, and 30P; AGDS I Munich 54 and II Berlin 42 both from Crete; HM 57, 96 from Mallia, 923 from Tylissos (EtCrétoises III fig. 14), 1217, 1615, 2123 from Knossos (LM IB context; ArchRep 1961–2 fig. 39), and 2138; Kn HMs 256a (R88?) and 257 (R81; AJA 74, 1970, 404–6); AT 40 and 42; and a lentoid from the Unexplored Mansion, Knossos.

b) Miscellaneous:

I 110 from Mycenae T. 78, and 502 and 508 both from Crete; IV 276, 282, 285, 302, and 310 all five from Knossos, 277 from Atsipades, 279 from Mallia, 319 from Amariano; V 182, 264 from Armenoi T. 39 (LM III Aii–Bi); VII 238 from the Knossos area; VIII 78, 79, and 124 all probably from Crete; IX 180; X 153–5, and 304; XII 208, 273, and 299 all probably from Crete; XIII 124 and 19D–21D; CMCG 267 and 289, both from Knossos, 265 and 269 from Phaistos, and 272, 299, and 301; CS 370, 28P, and 36P; AGDS IV Hamburg 8; HM 37, 93 from Mallia, and 367 from Knossos (ArchEph 1907 pls. 6–8, no. 136); AT 36 and 38; a disk? from Gournia (Gournia, fig. 28.10); and gold-foil cut-outs (Karo 50) from Mycenae Shaft Grave III (LH I context).

Bulls:

a) In the V-R Prism Master's Style:

I 479 from Crete; IV 281 from Aphrati and 300 (33) from Choumeni; VIII 126 probably from Crete; X 169, and 297; XIII 129, and 130; CMCG 246 from Knossos; CS 385; and HM 917 from Tylissos (ArchEph 1912 pl. 15f.), 1959 from Knossos, 2299 from Archanes Tholos B (LM III Ai context); and 2621 from Iouktas Peak Sanctuary.

b) Dappled:

IV 278 from Kapetaniana and 322 from the Messara; VII 243; IX 121; and HM 142 (ArchEph 1907 pls. 6–8, no. 110).



c) With Striated Necks:

IV 284 from Lastros and 299 from Knossos; V 282 from Armenoi T. 64 (LM III Aii context); VIII 156; IX 174 (34); XII 272 probably from Crete; XIII 131 and 132; CS 300, 312 from near Herakleion, and 388; AGDS I Munich 38 from Crete; and HM 72 from the Psychro Cave (ArchEph 1907 pls. 6-8, no. 78).

d) Miscellaneous:

I 492 and 496, both from Crete; IV 280 from Lastros, 289 from the Messara, 305 from Knossos, and 306 from Siteia; VIII 96 probably from Crete; IX 17D; XII 209, 278, and 297, all probably from Crete; CMCG 232, 233, and 245; CS 387; HM 34 and 35 (ArchEph 1907 pls. 6-8, nos. 62 and 63), 202 and 203, both from Knossos, 384 (ArchEph 1907 pls. 6-8, no. 140), and 1196.

Agrimi:

a) In the V-R Prism Master's Style:

HM 915 from Tylissos (ArchEph 1912 pl. 155).

b) Miscellaneous:

IV 288 and 303 from the Messara, 296 from Tsoutsouros, and 309 from Aphrati; IX 173 (also near the Group of the Couchant Agrimi); XII 96, 274, 275, and 308, all probably from Crete; HM 16, 128, and 138 from Tylissos (ArchEph 1907 pls. 6-8, nos. 48, 102, and 108); and Kn HMs 165 (G12).

Deer:

a) In the V-R Prism Master's Style:

In amethyst:

I 13 (35) from Mycenae Shaft Grave III (LH I) and HM 225 from a Geometric tomb at Knossos (ArchEph 1907 pls. 6-8, no. 125).

In serpentine:

I 501 from Crete; IX 170 and 171 (36); X 279; XII 307 probably from Crete; CMCG 256; CS 25P, and 26P from Palaikastro; AGDS I Munich 86 from Crete; HM 212 from Knossos, and 216; and KZ 103.

In gold:

Foil cut-outs (Karo 45, 46) from Mycenae Shaft Grave III (LH I).

b) Miscellaneous:

I 497, 499 and 500, all from Crete; IV 317 from Crete; X 156; CMCG 247 from Knossos; and CS 27P.

Boars:

I Supp. 96 from Crete; IX 177; and AT 80.

Waterbirds:

I Supp. 99 from Crete; Kn HMs 659 (U117), and 134 (Q14).

## Octopus:

CS 195 (= FM 21.1: LH IIA); IX 10D.

## Monsters:

## A) In the V-R Prism Master's Style

Babylonian Dragon — dappled like CP Deer and the griffin on IV 287, below (40):

CS 22P (37); Sk 11; and gold-foil cut-outs (Karo 41) from Mycenae Shaft Grave III (LH I).

Alerion — looped eyes:

IV 298 (38), and XII 225 probably from Crete.

Eagle-Woman — looped eyes:

IV 290 (39) from Embaros; VII 143; XIII 3; AGDS II Berlin 58 from Syra; CS 374; and HM 614 from Axos.

## Griffin:

a) Dappled like CP Deer and the Babylonian Dragon on CS 22P, above:

IV 287 (40) from the Messara; and X 220.

b) Looped eyes and horizontally striated necks:

IV 248 from Skalani, 283a from Fortetsa, and 318 from Phaistos; IX 138 and 178; XII 228 (41) probably from Crete, and 253; XIII 54; CS 32P and 35P; and HM 65 (GGFR pl. 190).

c) Looped eyes and vertically striated necks:

?VII 240 from Hellenika (Knossos).

d) Looped eyes and plain neck:

I 510 from Crete; XII 266 probably from Crete; XIII 55; AGDS II Berlin 31 from Crete; and Kn HMs 685 (U66).

## Griffin-Eagle:

CMCG 423 from Knossos.

## B) In Miscellaneous Styles:

## Alerion:

XII 254 probably from Crete; HM 41 from Crete (ArchEph 1907 pls. 6–8, no. 68), and HMs 568 from Mallia (LM IB context).

## Eagle-Woman:

I 468 from Crete; V 274 from Armenoi T. 55 (LM III Aii-Bi context); VII 141 and 144; IX 165; XII 277 probably from Crete; CMCG 373, 374, 376, and 422, all four from

Knossos, and 375 and 424; CS 365, 376, and 377; AT 102-4; and HM 1954 from Knossos, Field of Terracottas.

#### Agrimi-Woman:

XII 276b probably from Crete.

#### Genius:

Cs 338 and 380 from Knossos; KN HMs 360 (Q16), and 371.

#### Griffin:

IV 313 from Tylissos; IX 179; XIII 56; CS 368 from Milatos; AGDS I Munich 55 from Crete; HM 1902 from Knossos, and Kn HMs 316/317 (R49).

### *III. Lesser CP/L-J Lion Artists of Birds and Butterflies*

Waterbirds and butterflies seem to be favorite motifs of the first-generation Minoan artists. The ones listed below, however, are not very impressive; with their bulbous bodies and feathers cut, as it were, across the flesh these are vapid copies of the V-R Prism Master's birds, whose sleek bodies complement the sharp outlines of the wing feathers. The compositions here are also more static: rows of waterbirds standing about, usually flanked by an obligatory papyrus. The butterflies too are rendered in a purely conventional and repetitive manner.

#### 1. The Master of the Berry-Head Waterbirds (Fig. 4) (= The Tragana Duellist Master?)

(Knossos?, ca. 1500-1475? B.C.)

The waterbird's S-shaped neck, plump body, and large dot for the eye/head are the diagnostic traits. The dappled cat (CS 344) and the birds' striated wing feathers (even on glass, I 213 and probably AT 27) are standard CP types. The master uses both serpentine and hardstones, including glass.

I 213 (42) from Prosymna T. 13 (same sealtype as AT 27? below) and 471 from Crete; IV 246 (43) from Mochlos; V 234 from Chania; IX 154 (by the Tragana Duellist Master); X 224 from Crete; XII 203; CMCG 312 and 328; CS 289, 290 from Kato Chorio near Gournia, and 344 from Archanes; HM 109, 136, 193 (all in ArchEph 1907 pls. 6-8, nos. 97, 106, and 123), 194 from Gournia/Avgo, 565 from Palaikastro (LM II; JDI 95, 1980, 77-108, no. C5), and 1900 from Knossos; and AT 24 and 27 (same sealtype as I 213? above).

Close. X 306.

## 2. The Master of the Eleusis Matrix, V 422 (Fig. 4)

(Knossos, ca. 1500–1475 B. C.)

The matrix V 422 for gold-plated ring bezels carries a cult scene with women in dresses that are variants of CP Women Subgroup D, and another scene with waterbirds amongst plants and dots. The birds have ovoid bodies with heavy striations for the wings folded against the back. The heads consist of a long line on the bottom surmounted by an arc for the crown and eye; this type of head resembles the type used more formally by the MM artist, the Birds in Weeds Master (cf. VII 44, V 238, XIII 122).

V 422 (44, 45) from Eleusis T. Hπ 3; X 305; Kn HMs 162 (Q13), 201, 358 (KSPI L?), HMs 377/00 (46; KSPI VA; Gill, *die kretisch-mykenische Glyptik und ihre gegenwärtige Probleme*, 34–6, fig. 3); and AT 22, 23, and 93; and HM 2047.

*Close.* CMCG 313 and HM 211, both from Knossos, and KZ 89.

*Near.* XII 221 and a lentoid in the Velay Collection from a Geometric tomb north of Knossos (GGFR pl. 96).

## 3. The Master of the Theban Butterflies (Fig. 5)

(Knossos, ca. 1500 B. C.)

The master's dragonflies are fairly realistic, but the butterflies are more conventional and patterned: the wings, like sunglasses, sweep up to a point, and are decorated with a central dot and a double profile line above; the antennae draw together to form a heart; and two or more lines connect each wing to the abdomen. The spectacle-shape of the wings and their central dot resemble the butterflies of the gold-foil cut-outs Karo 51 from Mycenae Shaft Grave III (contrast the cut-outs Karo 2/82 and 4 from the same grave). Kenna (CS s.n. 302) connects CS 302, HM 840, and AT 35; IV 257 has a waterbird very similar to CS 302.

I 270 (47) from Rutsi (LH IIA); IV 257 (48) from Mallia; V 677 (49–51) from Thebes, Kolonaki T. 17 (LH III Ai); VIII 152; CS 234, and 302 from near Knossos; HM 197 from Gournia, 840 from Knossos,<sup>5</sup> and 1736 from Gypsades T. 2 (LM III Ai–ii; BSA 1958–9 pl. 62.3); Kn HMs 370; AT 29 and 35; and KZ 71, 72, and 74.

<sup>5</sup> CS s.n. 302 says this seal came from houses south of Knossos which should make its context LM IA. PM I 705–6 identifies this seal, however, with a sealing from the Little Palace, while PM IV 490 derives this 'sealing' more vaguely from "the Palace Site at Knossos."

*Close.* X 95 and gold cut-outs of butterflies (Karo 51) from Mycenae Shaft Grave III (LH I).

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## B. The Monumental Minoan Artists of the Late 16th Century B. C.

The dominant style of the CP and L-J artist is simplistic and child-like, more suited to the soft serpentine than to the hard stones on to which the style was occasionally translated. The bodies of animals are generally round and sleek, highly decorated with stipples (deer, some bulls, and lion manes), short strokes (lion manes and clothing), and dots (the tips of jaws, paws, and tails). Compositions are often careless — legs bend so that it is often impossible to know if the artist was depicting an animal running, lying down, or sitting; sometimes the compositions even appear silly, like the small lions and griffins attacking their far larger prey (e.g., XII 228 in CP Monsters A. Griffin, and 243 in CP lions a., pp. 126, 124 above).

Other Minoan artists, however, were beginning to develop a more monumental style, finally transferring the figures on the carved MM stone vases to seals, rendering muscles as thick encircling ropes, and giving the figures, animal and human, dramatic poses like stretching, striding, and gesturing. The best of these artists is the Mycenae-Vapheio Lion Master, who will be discussed in the following article.

In spite of the difference in emphasis, these monumental artists did borrow some stylistic traits from their more simplistic colleagues: the Master of the Potniai Leontōn from Mycenae T. 515 retains the line-jawed lion, the Master of the Messenian Griffins on Cushions the looped eye and long claws, and the Master of the Ashmolean Dogs the harsh shoulder line.

This more monumental and formal approach may be ascribed to glyptic's last major technical innovation in the Bronze Age: the engraving of stone moulds for metal rings, metal and glass seals, and glass and faience jewelry. The development of this technique did not take long, certainly no longer than a century, beginning with the gold foil overlays of MM stone vases. Several of these stone vessels still preserve traces of their original gold covering.<sup>6</sup>

<sup>6</sup> P. Warren, *Minoan Stone Bowls*, pp. 45 (vases from Phaistos), 86 (HM 993), 87 (the Peak Sanctuary rhyton from Zakro), 97 (HM 65); add HM 3323 and NMA 829.

That most of the gold is gone and only traces remain on most examples is not surprising; it undoubtedly has been ripped off the vessels, sometimes with such force that they shattered. We may also imagine the missing heads of Mycenae's Lion Gate to have been similarly gold-leafed and thus removed during some sack of Mycenae.<sup>7</sup>

Though Warren dates the inception of gilding stone vessels to MM II based on the excavator's date for Phaistos Room LI,<sup>8</sup> we shall elsewhere in this series propose a date of 1675 B. C. for the sealings found there.

To gild stone vessels is hardly different from gilding stone seals, and three still preserve their gold covering: V 197 (cylinder), IX 204 (lentoid), and CS 203 (cushion). In addition, there is the gold covering for a lost cushion seal IV 39D, and a gold lentoid V 200 made of two soldered gold plates. CS 203 also provides added technical details, like the glue that fixed the foil to the seal and an engraved groove around the face that probably helped the foil adhere to its steatite core.<sup>9</sup> A similar groove appears around the face of the stone matrix AM 1938.1087 from the Knossos Lapidary's Workshop, presumably to create a ridge around the produced gold plate for tight bonding with its backing. Grooves also appear around the faces of I 172 (Misc. Line-Jawed Lions) and X 261 (CP Cult), suggesting that these too may once have been gilded.

CS 203 is stylistically the earliest gilded seal, the fish belonging to the MM Fish-School Group, while the other gilded seals seem to fall into the general period under discussion, the late 16th-early 15th centuries B. C.

The stone vessel carved in relief and gilded or the stone seal carved in intaglio and gilded became unique objects not reproducible. When the lapidary realized, however, that the stone carved in relief or in intaglio could serve as the matrix for a metal sheet reproducing the design to be transferred to another form, he created a type of mass-production. This process of reproducing artifacts through moulds was undoubtedly accelerated, if not suggested, by the introduction of moulded glass from the East in the late 16th century B. C.

We have ample evidence for the moulding and chasing of both metal and glass objects, and for the development in part of these procedures by sealstone engravers. Many gold cut-out foils from Mycenae Shaft

<sup>7</sup> JGY following Wace, *AJA* 82, 1978, 298 fn. 32.

<sup>8</sup> Warren, *op. cit.*, p. 162-3.

<sup>9</sup> JGY, *BSA* 74, 1979, 258-268, esp. pp. 265-66.

Graves III–V are identical, and must have been produced by hammering gold sheets over stone moulds and then enhancing them with further chasing: the tripartite shrine (Karo 242–4); sequins (Karo 11) which are further embellished; foils (Karo 9) that either retain their margin or have it cut away; and inlays (Karo 119/120) depicting lions attacking a bull either left or right. In larger designs some main elements could be produced from a single mould: the spiral design on the breastplate Karo 625 was taken from one mould applied four times – top and bottom, and top right and left sides; the diadems Karo 232 and 3 could have been produced from a single mould each, shaped like that which produced the diadem rays Karo 5 or like the ivory object with raised bosses of gradually increasing size from MH I Lerna.<sup>10</sup> Other main elements in larger designs were taken individually from separate moulds: the gold crown from Grave III covered with multiple applications of various sizes of embossed and leafy rosettes; the shield band Karo 260 and 261 with multiple applications of an oddly imbalanced rosette that also appears on both ends of diadems Karo 233–235.

We may also imagine that the lions, arcades, and foliate bands on the gold cups Karo 220, 213, 627, 628, 786, and 787, the gold plaques 808–811 for the hexagonal wooden box, and perhaps the battle scenes on the silver vessels 477/481, 504, and 605–607 were all produced on carved stone moulds, rather than created as repoussé work.

Moreover, several foils from Shaft Graves III and IV point directly to the hand of seal engravers. The gold spindle or pinhead Karo 274 was produced on a mould carved by the Jasper Lion Master, and the dappled stags, cats, and Babylonian Dragons on the cut-out foils 41, 45, and 50, as well as others, were all made from moulds engraved in the style of the Cretan Popular Group.

The moulds that produced the small gold foils, plaques, and cups need only have been stone dies with designs in intaglio. The gold leaf could have been laid over the design, tapped gently into it, lifted, and turned over to reveal the same design but in mirror image and in repoussé. Molten glass or faience could also be poured into such intaglio moulds to produce relief beads, as the several matrices that survive testify.<sup>11</sup> Such glass or faience beads (e.g., Karo 71) come from Shaft Graves Upsilon, Xi and III, and may have been made locally.<sup>12</sup>

<sup>10</sup> *Hesperia* 23, 1954, 22, pl. 9g, with references to five others.

<sup>11</sup> For beads, e.g., Tsountas, "Μήτρες καὶ Ξίφη ἐκ Μυκηνῶν," *ArchEph* 1897 cols. 97–128; E. Vermeule, *Kadmos* 5, 1966, 144–6; and for seals, XII 262.

<sup>12</sup> K. Pollinger Foster, *TUAS* 6, 1981, 9–16.

On the other hand, the same metal plates could have been effected from moulds with their designs in relief; the metal leaf would have been laid over the design, tapped and worked to produce its image also in relief, and then lifted off. Though no such matrix has survived, it would be reasonable to imagine that such might be more suitable for the larger plaques, like those (Karo 808–811) for the wooden box, and for the complex scenes on either the Silver Siege Rhyton from Shaft Grave IV or the silver krater from Grave V at Mycenae.

Matrices carved in relief but located within a tondo recessed in the stone die are necessary for the production of glass seals, whose designs, by definition, must resemble intaglio work. Fortunately one such matrix exists, XII 262 from Poros, Crete. Though both Evans (PM II 237–8) and Kenna (CS p. 77 and CMS XII p. 353) identified it either as a practice piece or as a mould for gold or glass, it can only be a mould to produce glass lentoids: the much-used tondo with standing goat XII 262c could easily have produced a figure-8 shaped glass lentoid similar to the blue glass one V 598 from Mycenae's House of the Idols (LH III Bii), and the contorted positions of both agrimi 262a and bull 262b as well as their peculiarly square muzzle and large hooves are diagnostic features of the mass-produced glass lentoids from the Medeon cemetery: compare, especially, V 255, 258, and 381/82.

If the innovation of producing gold objects from moulds came in the late 16th century B.C., it would seem reasonable to suppose that, once glass as a material was known, its manufacture as beads or seals would have followed immediately. Hood (1978: 136) suggests that glass manufacture was introduced to the Aegean in the early 15th century B.C. on the evidence of presumably locally-made objects from Kakovatos Tholos A (LH IIA): but this date should be pushed earlier, into the late 16th century B.C., if we decide that the faience beads from the Mycenae Shaft Graves are local products, and that the style of the Poros matrix and glass lentoids from Medeon – the contorted poses of the animals, their square muzzles, and large almond eyes and hooves – is close enough to that of the gold plaques Karo 808–811 (for the hexagonal wooden box from Shaft Grave V) to show that the same artist created them all. In a subsequent study this artist will be discussed as a colleague of the Mycenae-Vapheio Lion Master.

The process of producing gold-foil cut-outs and plaques led, apparently rapidly, to the production of gold-plated bezels for rings. Some rings had their designs entirely engraved on to the bezel because this consisted of solid gold either cast along with or brazed to the hoop (e.g., HMm 1017 from Archanes and VII 68), or of some other solid