

EARLY IRON AGE POTTERS' MARKS IN THE AEGEAN

(PLATES 108–120)

In memory of Κούκλα (Evelyn Lord Smithson)

IN 1952 Vincent Desborough drew attention to five Attic Protogeometric vases each bearing a painted cross.¹ Of these, three were found at Athens, two in the Kerameikos, one in the Agora;² the other two were found at Knossos.³ In his discussion of them Desborough wrote: “As a curiosity, the painted X on [Kerameikos] 1069 should be noted—the skyphos from the same tomb has the same mark beneath one of its handles,” and he made passing reference to a similar mark on a belly-handled amphora from the Athenian Agora.⁴ Concerning the two Attic skyphoi found at Knossos, he writes that these “have one peculiarity in common—a roughly painted cross beneath one of the handles; it is tempting to suppose that the potter who made them had perhaps marked them thus as for export, but apart from

¹ Desborough 1952, pp. 11, 83–84, 87.

This paper grew out of the study of the Early Iron Age cemetery at Torone, which was entrusted to my care in the mid 1980's. Eight handmade vases (B4–B11 below) from the cemetery were incised with symbols that could be interpreted as potters' marks. In scanning the bibliography it soon became evident that these marks were unique for the period; the literature indicated that potters' marks were exceedingly rare, or nonexistent, in the Early Iron Age. Visits to Greek museums, however, altered this impression, for although not abundant, Early Iron Age potters' marks were not quite so elusively phantom as scholars had thought. The normally inconspicuous positions of such marks on, below, or near a handle, or else on the underside of a pot, easily overlooked, has made it difficult to glean the symbols from published photographs of pottery. It cannot be stressed enough that the catalogue of marks presented here does not aim to be exhaustive and that the list as it stands is probably very far from complete. It had been my intention to illustrate each of the potters' marks assembled here with a drawing or photograph, or both. This, however, has not proved possible.

I am grateful to a good many friends and colleagues for providing me with illustrations or for allowing me access to material in their care, especially the following: Rana Andrews, Nancy Bookides, Bodil Bundgaard Rasmussen, Richard Catling, William Coulson, Jan Jordan, Don Evely, Bernhard Hänsel, Ursula Knigge, Irimi Lemos, Wolfgang Mayr, Penelope Mountjoy, Christopher Pfaff, Mervyn Popham, N. Prokopiou, Ioulia Vokotopoulou, Ken Wardle, Charles Williams, II, and Eo Zervoudake. Sources for the illustrations are acknowledged more fully in the list of credits, pp. 495–496; with regard to illustrations I owe a very special thanks to Anne Hooton and to Craig Mauzy. I am particularly grateful to Robin Hägg for encouraging me to publish, some time ago, the Toronean potters' marks mentioned above; I apologize to him for the delay. Special thanks are also due to Alan Johnston, Irimi Lemos, Wolfgang Mayr, Mehmet Özdoğan, Christopher Pfaff, and Ken Sheedy for discussing various aspects connected with this paper and particularly to Richard Catling for sharing with me his knowledge of the Early Iron Age. An early version of this paper was scrutinized by Jeremy Rutter, to whom I am most grateful; he has saved me from many errors, both of fact and of judgment; those that remain are of my own doing. Thanks are also due to Marian McAllister and her staff at the Publications Office of the American School of Classical Studies for their professionalism, patience, and good humor in the production of this paper. This paper is dedicated in memory of a scholar whose support and inspiration cannot be adequately honored; she is sorely missed.

² *Kerameikos* IV, inv. no. 1069, pl. 5, inv. no. 1072, pl. 22; Agora P 6693 (unpublished).

³ Knossos: Brock 1957, no. 58, p. 13, pl. 7; no. 187, p. 21, pl. 12.

⁴ Desborough 1952, p. 11 (A3 below).

the unlikelihood of such a theory, a skyphos of Type IV, found in the Kerameikos, has the same distinguishing mark, and there is no reason to doubt that this vase was made locally.”⁵ Desborough noted a further example, a skyphos from Aigina, with a cross beneath one of its handles.⁶ Apart from these notes, nothing has since been written on Protogeometric potters’ marks,⁷ despite growing interest in the pot marks of the Bronze Age,⁸ as well as later graffiti on Greek Geometric and early Archaic pottery.⁹

Scholarly neglect especially of the Protogeometric potters’ marks is symptomatic of the very concept of a “Dark Age”, a convenient construction dividing Aegean prehistorian from classical archaeologist.¹⁰ Because this “Dark Age” does not readily belong, for reasons difficult to fathom, in the intellectual realm of the prehistorian nor is it firmly in that of the classical archaeologist, it floats rather uncomfortably in between. This is most recently reflected in Henry Immerwahr’s survey of Attic script, where he writes: “No extant inscriptions are earlier than the third quarter of the 8th century B.C.; nor am I aware of potters’ marks or other signs on Attic Protogeometric or Early Geometric pottery, with the exception of an upright painted cross under one handle of a Protogeometric amphora from the Athenian Agora [Agora P 6693; **A3** below]. In view of the large quantity of Attic pottery from these periods, this fact supports the notion that Greece was illiterate in the first quarter of the first millennium B.C., especially since potters’ marks are frequent in the Mycenaean period and reappear after the middle of the 8th century.”¹¹

The purpose of this paper is to reexamine Desborough’s five pots and to assemble and discuss examples of Early Iron Age (Protogeometric and Geometric) pottery inscribed with what may reasonably be classed as potters’ marks that have since come to light, to the knowledge of the author. It would appear that the common Bronze Age practice of marking a vase, whether by paint, incision, or stamping prior to firing, does not altogether cease with the demise of the Mycenaean way of life, nor does it reappear suddenly after a long, barren hiatus. The list that follows is probably far from complete; it is presented in order to draw attention, once more, to the existence of such marks and in the hope that further examples may be noted and published.

A useful definition of potters’ marks is provided by Aliko Halepa Bikaki, who writes: “We consider as potters’ marks . . . those made on the pot before firing, when the pot was still

⁵ Desborough 1952, pp. 83–84.

⁶ Desborough 1952, p. 87.

⁷ See, for example, Desborough 1964; Desborough 1972; Snodgrass 1971.

⁸ For a bibliography of Bronze Age potters’ marks, see *Keos* IV, pp. xii–xiv; for inscribed stirrup jars, see, among others, Raison 1968; Sacconi 1974; Mylonas 1962; Chadwick 1963; Palmer 1971; Palmer 1972; Palmer 1973; Palmer 1978; Catling *et al.* 1980; Bennett 1986; for Linear B and after, see Bennett 1991. For further references, see note 126 below.

⁹ See, among others, Coldstream 1977, pp. 295–302 and, most recently, Johnston and Andreiomenou 1989; Johnston 1979, *passim*; Jeffery 1989; Stroud 1989; *Samothrace* II, ii; *Études Thasiennes* VII, pp. 119–122; Lorber 1979; Immerwahr 1990; Lang 1991; Hackl 1909; Langdon 1975; Powell 1988, esp. p. 65, note 4 for references; Powell 1991, with reviews: Hainsworth, Johnston, Ray, and Whitley 1992 (with a reply by Powell); Wachter 1989; Luria 1964; Luria 1967. Especially useful for the functions and manifestations of writing in ancient Greece are a number of papers in Detienne 1988.

¹⁰ On this aspect, see especially S. P. Morris 1989; S. P. Morris 1992.

¹¹ Immerwahr 1990, p. 7.

in the hands of the potter, and therefore added most probably by the potter himself (hence the term), whatever their meaning and function."¹² With the exception of the tentative Group E (see pp. 471–473, 490–491 below), the marks are usually simple and as a rule occur on inconspicuous parts of vases. The most common positions are on the handles or immediately below, on vessels of both open and closed forms, or else on the underside of a vase. Less inconspicuous are a group of isolated painted symbols, mostly crosses, found on one side of the neck of Protogeometric neck-handled amphoras or at the center of the neck on contemporary hydriai (**A1**, **A7**, **A8**, **A12–A17**, **A19**). This difference in position is noteworthy, but the marks are nevertheless classified as potters' marks, provided they are isolated and not part of any clearly defined decorative scheme.¹³

The marks presented here include ones that are painted, incised, impressed, or stamped before firing. Any signs painted or incised *after* firing are not included as potters' marks.¹⁴ Similarly, other marks made during the process of forming a vase, such as mat impressions or slashes, gouges, or other impressions on or near handle and leg attachments (specifically for the purpose of attaching the handle or leg), are not included. As Halepa Bikaki further notes, whatever the meaning of a mark, it clearly has reference to the object on which it appears.¹⁵ Consequently, marks on other classes of objects, such as loomweights or spindlewhorls, are not included here, as they constitute a separate group.¹⁶

CATALOGUE OF EARLY IRON AGE POTTERS' MARKS

The following list has been divided into five groups on the basis of the type of potter's mark, labeled **A–E**. Group **A** is a list of simple painted symbols found on wheelmade painted pottery of Protogeometric, Sub-Protogeometric, or Geometric date. The majority are painted crosses (**X** or **+**) found either beneath a handle of a vase, on its neck, or on the underside. A variety of incised symbols, including impressed dots, found on handmade burnished pottery of the period is listed under the heading of Group **B**, as are two examples of incised marks on wheelmade pottery. Many of the handmade pots derive from tombs and were mostly found in association with wheelmade painted pottery contemporary with that of Group **A**. Those from Corinth derive from a number of well deposits dating to various phases of the Geometric period. Group **C** lists stamped impressions which may

¹² *Keos* IV, p. 2.

¹³ Compare Vitelli (1977, p. 19), who states: "We might consider . . . the free-floating, non-repetitive painted motif another version of the potter's mark." See also Donnan 1971, p. 464, where it is noted that potters' marks incised on utility vessels of the Moche style of Peru (*ca.* A.D. 100–800) "are consistently located on the neck of the vessel . . . and are on one side only."

¹⁴ Cf. *Keos* IV, p. 3.

¹⁵ *Ibid.*

¹⁶ Although far from common, such marks on terracotta implements do occasionally occur in Early Iron Age contexts. See, for example, Pfaff 1988, no. 118, p. 79, pl. 32 (pyramidal loomweight with small stamp impression on its side); Brann 1960, MC 206, p. 406, fig. 2, pls. 89, 90 (spindlewhorl with small stamp impression). Both objects are dated to the earlier 8th century B.C. It is noteworthy that in the "sign system" of the Neolithic Vinča culture, symbols are numerous on figurines, spindlewhorls, and other objects, in addition to pottery; see Winn 1981, *passim*; Masson 1984.

be classified as potters' marks. Although stamping vessels with seals or other objects is not altogether uncommon,¹⁷ the practice appears to have been used mostly for decorative purposes.¹⁸ In a few rare cases, however, where only a single inconspicuous impression is found on a vase, a decorative intention seems unlikely;¹⁹ it is such marks that are presented below under Group C. It should be noted here that these are, on the whole, later than those of Groups A and B, dating mainly to the Late Geometric period or else to the Middle Geometric II period.²⁰ I have also added, under the separate heading of Group D, a number of more simple finger or thumb impressions, invariably found at the base of a handle, on both wheelmade and handmade pottery. The few examples of these presented below range in date from latest Mycenaean or Submycenaean through the Late Geometric periods.

The symbols listed under the heading of Group E are presented in a spirit of inquiry. It is here suggested that *some* of the earliest figurative motifs on Athenian painted pottery of the Early Iron Age, namely Protogeometric horses and birds, are plausibly potters' marks. Such a conclusion derives from a comparison of the nature and placement of potters' marks such as plain crosses with the placement or positioning of the earliest Athenian horses and birds. The number of these is small indeed; they are more fully discussed under Group E.

Those pieces listed with a query (?) in the catalogue are dubious as potters' marks and are discussed more fully in the commentary.

GROUP A. PAINTED SYMBOLS ON WHEELMADE PAINTED POTTERY

ATHENS

A1. Kerameikos Tomb 34, Fig. 1, Pl. 108:a, b
inv. no. 1069
Neck-handled amphora. Attic.

Painted X on neck on one side of vessel only.
Kerameikos IV, inv. no. 1069, pp. 7–8, 13, 37, pl. 5;
Desborough 1952, pp. 11, 83–84, 87.
Developed Protogeometric

A2. Kerameikos Tomb 34, Fig. 1, Pl. 108:c, d
inv. no. 1072
Skyphos. Attic.

Painted X beneath one of the handles.
Kerameikos IV, inv. no. 1072, pp. 8, 11, 37, pl. 22;
Desborough 1952, pp. 11, 83–84, 87.
Developed Protogeometric

A3. Agora Tomb XV, P 6693 Fig. 2, Pl. 109:a, b
Belly-handled amphora. Attic.
Painted † beneath one of the handles.

Unpublished (mentioned in Desborough 1952, p. 11).
Late Protogeometric

A4. Agora Well L 11:1, Lot ΩΔ 145:44 Fig. 2
Base fragment, one-handled cup (rather than
skyphos) with high conical foot. Attic.

Painted X on underside.
Unpublished.
Early Protogeometric

A5. Agora Well L 11:1, Lot ΩΔ 145:26 *bis* Fig. 2
Base fragment, small open vessel with low ring
foot. Attic.

Painted mark (as shown) on underside.
Unpublished.
Early Protogeometric

A6. Agora Well J 14:2, P 23499 Fig. 2
Base fragment, small open vessel (skyphos
or one-handled cup) with high conical foot.
Attic.

¹⁷ Boardman 1972, p. 112.

¹⁸ This aspect is discussed more fully below, pp. 470–471, 483–484.

¹⁹ Pfaff 1988, p. 40.

²⁰ *Ibid.*, pp. 39–40.

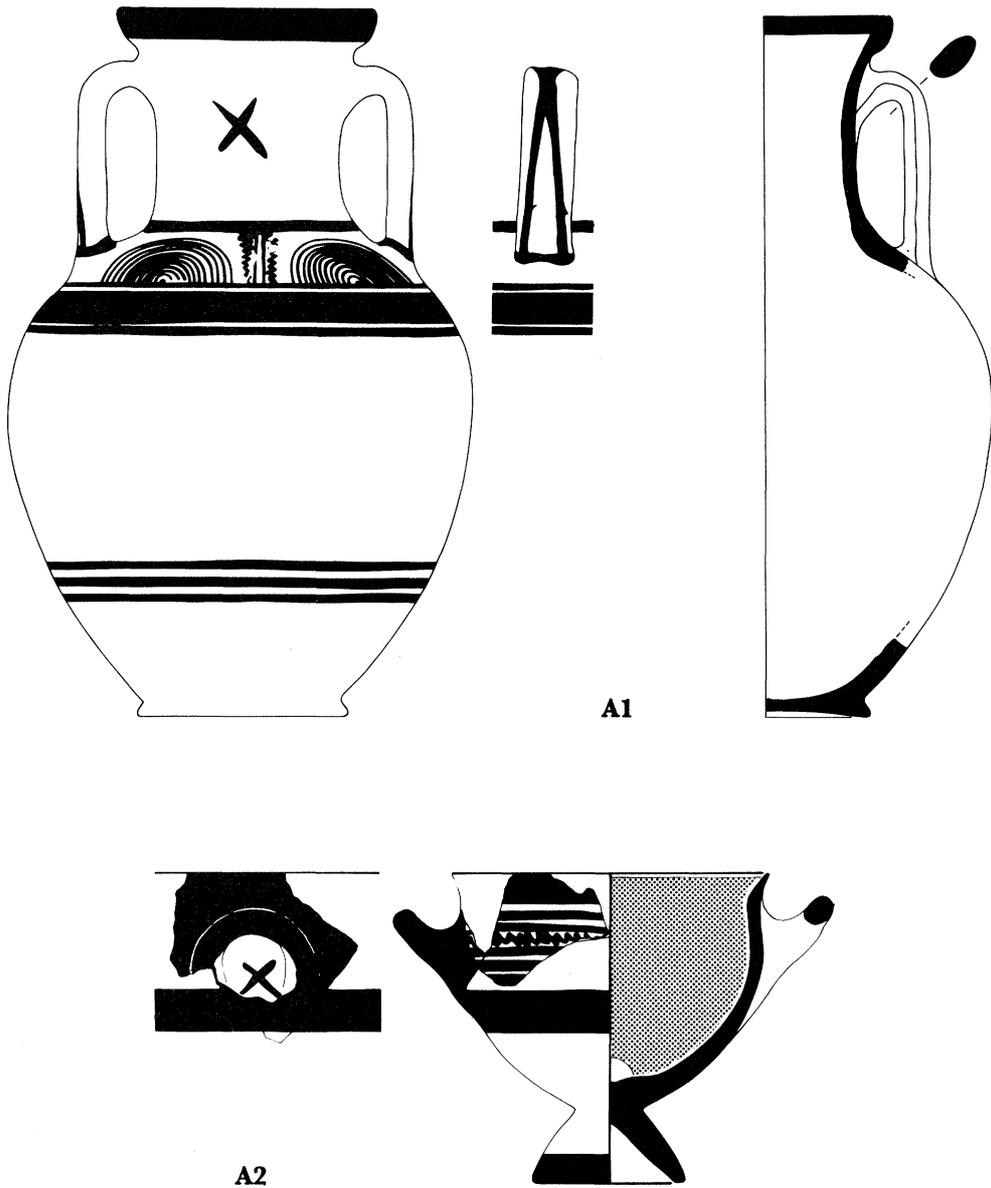


FIG. 1. Athens, Kerameikos: **A1** (1:5) and **A2** (1:3)

Portions of five irregular strokes radiating from center of underside.

Unpublished.

Early Protogeometric

A7. Agora Well L 6:2, P 6423 Fig. 3, Pl. 109:c-e
Neck-handled amphora. Attic.

Painted + on neck on one side of vessel only.

Unpublished; noted in C. W. Blegen 1952, p. 282;
Agora VIII, p. 32, under no. 15.

Middle Geometric

A8. Agora Well L 18:2, P 12434 Fig. 3, Pl. 110:a, b
Fragmentary neck-handled amphora. Attic.

Painted cross (+) or other symbol on neck on one side of vessel.

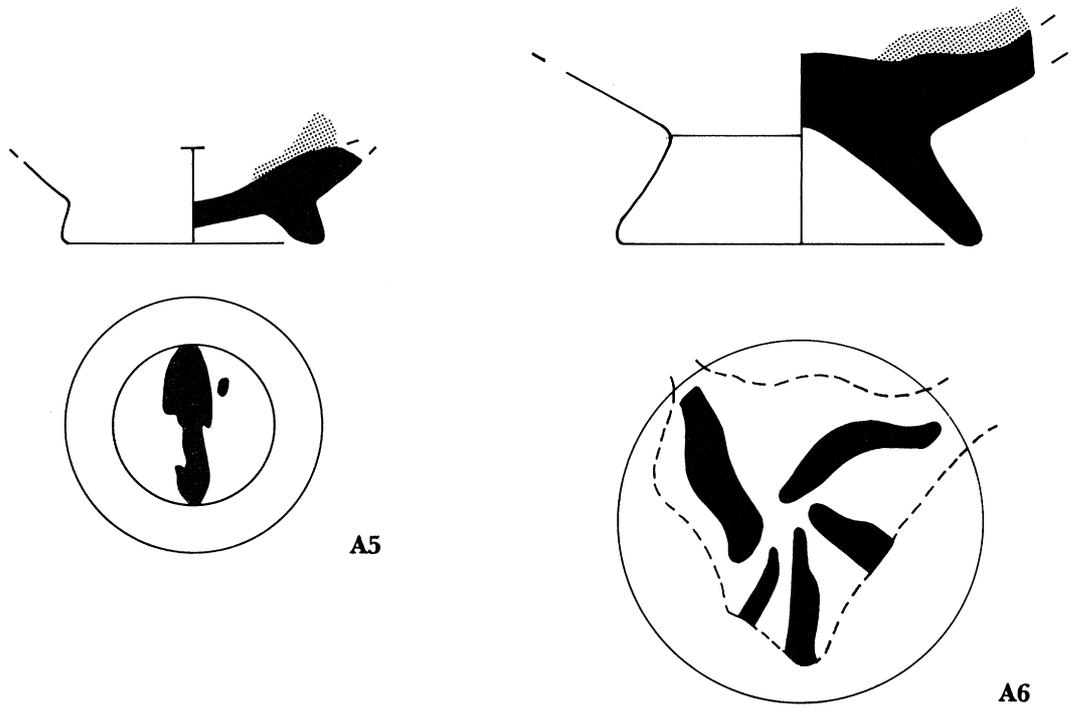
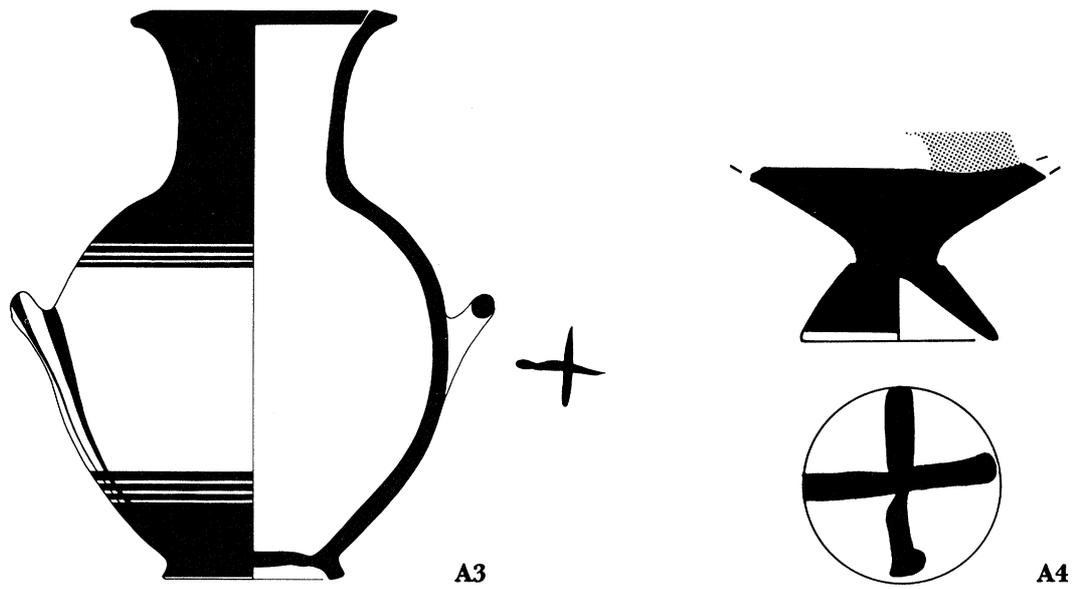
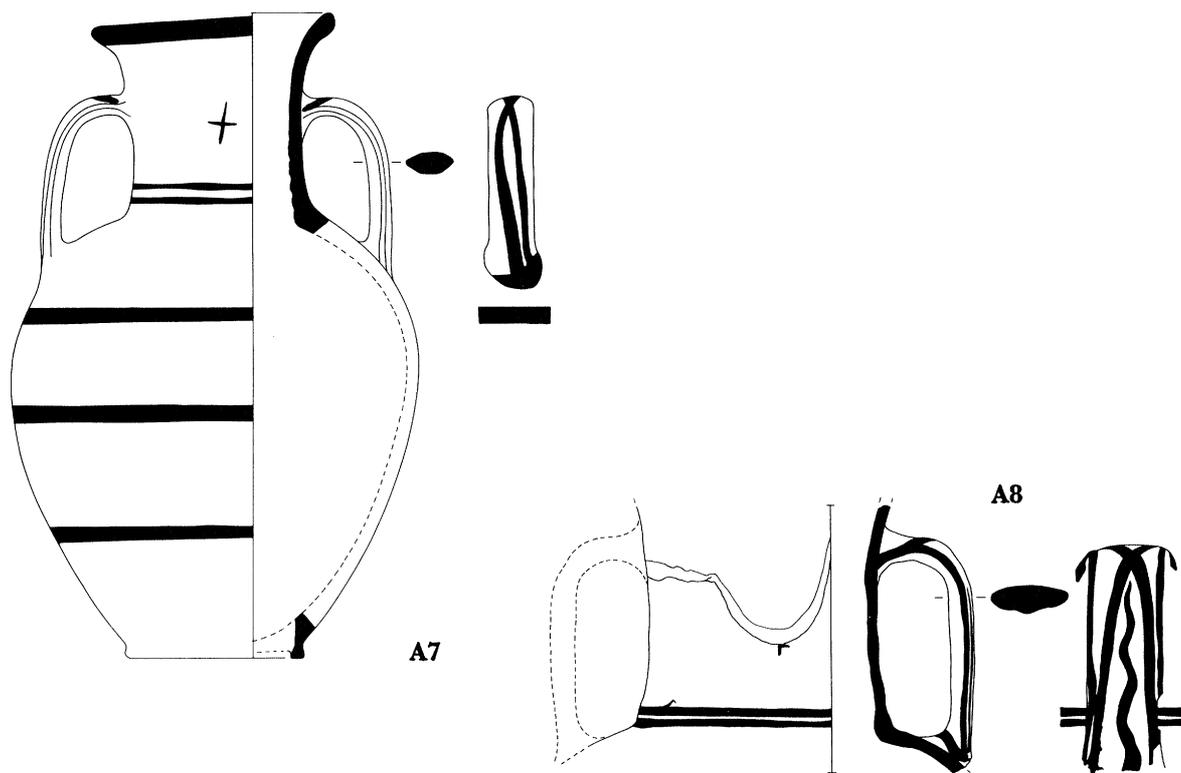


FIG. 2. Athens, Agora: **A3** (1:5) and **A4–A6** (1:1)

FIG. 3. Athens, Agora: **A7** and **A8** (1:5)

Agora VIII, no. 15, p. 32, pl. 2; Brann 1961, p. 323, discussion under F 1.

Late Geometric (third quarter 8th century B.C.)

Cf. *Agora Well M 13:1*, P 27939

Neck-handled amphora. Attic.

Two asterisks (eight-pointed stars), one at center on each side of vase.

Unpublished.

Middle Geometric II

AIGINA

A9. Aigina Museum (no inv. no.) Pl. 110:c, d
Skyphos. From Aigina, exact provenance unknown. Probably Attic (see below).

Painted X below which is a small altarlike motif, partially overlapping the X, beneath one of the handles. Similar altarlike motif below the other handle (information from E. L. Smithson).

Kraiker 1951, no. 18, p. 24, pl. 1; Desborough 1952, pp. 86–87.

Late Protogeometric/Early Geometric

CRETE (ATTIC IMPORTS)

A10. Fortetsa Tomb VI [20] Pl. 110:e
Skyphos. Attic.

Painted X beneath one handle.

Brock 1957, no. 58, p. 13, pl. 7; Desborough 1952, pp. 83–84, pl. 33.

Developed Protogeometric

A11. Fortetsa Tomb XI [16a] Pl. 110:f
Skyphos. Attic.

Painted X beneath one handle.

Brock 1957, no. 187, p. 21, pl. 12; Desborough 1952, pp. 83–84, pl. 33.

Developed Protogeometric

EUBOIA

- A12.** Lefkandi, Toumba Building, no. 465
Fragmentary neck and rim, neck-handled amphora. Euboian.
Painted + on center of neck (perhaps on both sides of the vase?).
Lefkandi II, i, no. 465, p. 116, pls. 28, 64.
Middle Protogeometric
- A13.** Lefkandi, Toumba Building, no. 466
Fragmentary neck and rim, neck-handled amphora. Euboian.
Partially preserved, large painted X on neck, apparently only on one side of vase.
Lefkandi II, i, no. 466, p. 116, pls. 28, 64.
Middle Protogeometric
- A14.** Lefkandi, Toumba Building, no. 474
Fragmentary hydria neck and rim. Euboian.
- A15.** Lefkandi, Toumba Building, no. 492
Neck and rim fragment, neck-handled amphora or hydria. Euboian.
Painted + on center of neck.
Lefkandi II, i, no. 492, p. 118, pls. 30, 68.
Middle Protogeometric
- A16.** Lefkandi, Toumba Building, no. 508
Neck fragment, neck-handled amphora or hydria. Euboian.
Partially preserved painted + on center(?) of neck.
Lefkandi II, i, no. 508, p. 118, pl. 30.
Middle Protogeometric

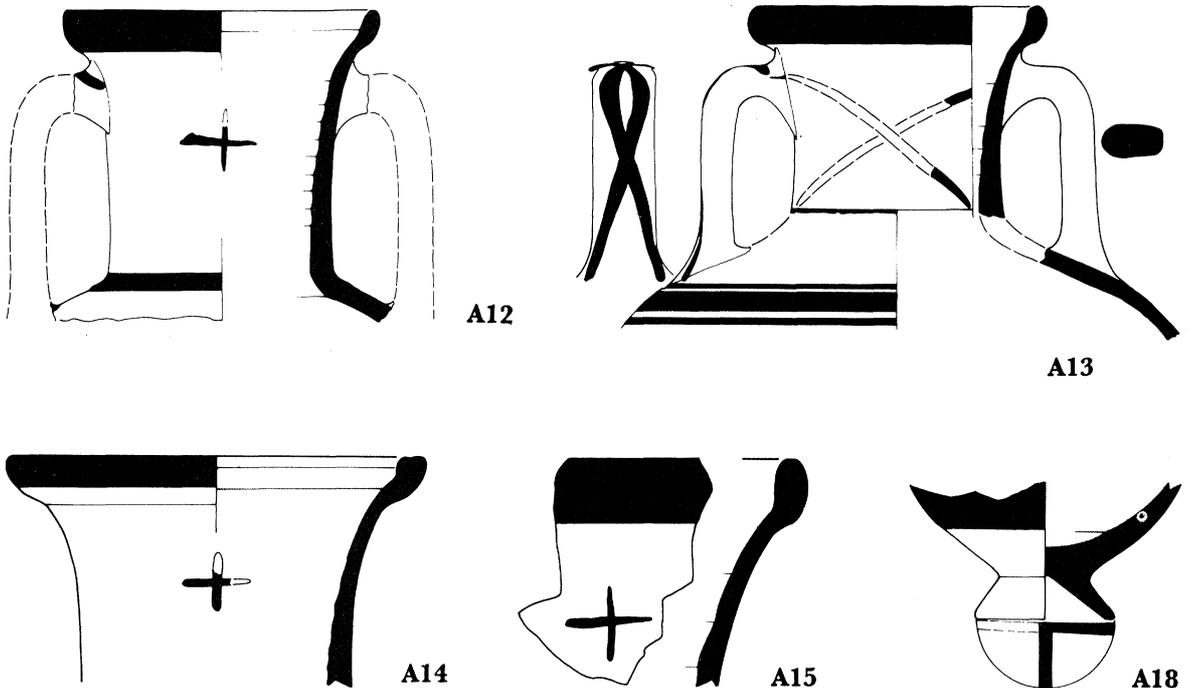


FIG. 4. Lefkandi: **A12–A15** (1:5) and **A18** (1:3)

- A17.** Lefkandi, Toumba Building, Pl. 111:d
no. 509
Neck fragment, neck-handled amphora or hydria. Euboian.
Partially preserved painted + on center(?) of neck.
Lefkandi II, i, no. 509, p. 118, pl. 30.
Middle Protogeometric
- A18.** Lefkandi, Toumba Building, Fig. 4
no. 252
Lower body and foot fragment, small open vessel with high conical foot. Euboian.
Partially preserved painted X on underside.
Lefkandi II, i, no. 252, p. 107, pl. 51.
Middle Protogeometric
- A19.** Lefkandi, "Xeropolis" settlement, no. 39
Fragmentary neck and rim, amphora. Euboian.
Painted double axe on neck on preserved side of vase; to right, at break, graffito A (incised after firing?).
Lefkandi I, no. 39, pp. 60, 71, 93, pl. 40.
Late Geometric
- CYCLADES
- A20.** Rheneia, Parakastri Tombs, Pl. 112:a, b
no. A1474
One-handled cup. Cycladic.
Painted X on underside.
Desborough 1952, no. A1474, pp. 156–158, pl. 19 (no mention of painted X); cf. *Délos* XV, p. 49.
Late Protogeometric/Early Geometric
- ARGOLID
- Mycenae*
- A21.** Mycenae Tomb G 607, Pl. 112:c, d
inv. no. 59-55
One-handled cup. Argive.
Painted X on underside.
Desborough 1973, no. 5, p. 88, pl. 30:a, h; Courbin 1966, p. 221; Coldstream 1968a, p. 115.
Early Geometric II
- A22.** Mycenae Tomb G 607, Pl. 112:e, f
inv. no. 59-61
One-handled cup. Argive.
Painted X on underside.
Desborough 1973, no. 11, p. 89, pl. 30:g, h; cf. **A21**.
Early Geometric II
- A23.** Mycenae Tomb G II (vases outside),
inv. no. 53-325
One-handled cup. Argive.
Painted asterisk on underside.
Desborough 1954, no. 5, p. 261, pl. 44, no. 53-325; Coldstream 1968a, p. 120.
Middle Geometric II
- Argos*
- A24.** Argos C.310 (Sondage 103)
Fragmentary one-handled cup. Argive.
Painted X on underside.
Courbin 1966, p. 222, note 1 (compared to Mycenae nos. 59-55 and 59-61 [**A21**, **A22**]).
Late Protogeometric/Early Geometric
- A25.** Argos C.4690
One-handled cup. Argive.
Painted X on underside.
Courbin 1966, p. 311, note 2 (unpublished).
Geometric
- A26.** Argos C.1082 Pl. 113:a
Base fragment, "coupe" (skyphos or kantharos). Argive.
Painted X on underside.
Courbin 1966, p. 311, note 2, pl. 76.
Late Geometric
- A27.** Argos C.1126
Base fragment, "coupe" (skyphos or kantharos). Argive.
Painted X on underside.
Courbin 1966, p. 311, note 2 (unpublished).
Geometric
- A28.** Argos C.2728 Pl. 113:c
Base fragment, "coupe" (skyphos or kantharos). Argive.
Thick, painted X on underside.
Courbin 1966, p. 311, note 2, pl. 76.
Late Geometric
- A29.** Argos C.4666 Pl. 113:d
Base fragment, small open vessel. Argive.
Painted asterisk on underside.
Courbin 1966, p. 311, note 2, pl. 76.
Early Geometric
- A30.** Argos C.500 Pl. 113:b
Base fragment, oinochoe. Argive.

Painted mark at center of underside consisting of five parallel zigzags framed on all four sides by single zigzags.

Courbin 1966, p. 311, note 2, pl. 85.

Late Geometric

Compare also the following pieces, which bear more complicated motifs on their undersides (probably decorative elements rather than potters' marks):

Argos, pyxis C.237, Courbin 1966, p. 311, note 2, pl. 85.

Argos, pyxis C.572, Courbin 1966, p. 311, note 2, pl. 85.

Tiryns

A31? Tiryns Grave 14[b]

Handmade kantharos. Argive.

Painted X in red on underside.

Tiryns I, ii, no. 34, pp. 129, 159, pl. XV:11; Courbin 1966, p. 311, note 2.

The vessel, though listed as Geometric, has a Middle Helladic look about it.

A32. Tiryns Cemetery (but not from tomb)

Fragmentary krater. Argive.

Painted X under preserved handle.

Tiryns I, ii, p. 143, pl. XX:1.

Late Geometric

A33? Tiryns, Nauplion Museum 3817,

Pyxis. Argive.

Painted X on underside.

Courbin 1966, p. 311, note 2 (unpublished).

Geometric

A34? Tiryns (unpublished)

Fragmentary plate. Argive.

Painted X on underside.

Courbin 1966, p. 311, note 2.

Geometric

CORINTHIA

A35. Klenia, CP-2217

Oinochoe. Corinthian.

Painted asterisk ("eight-pointed star") on underside.

Charitonides 1955, no. 4, p. 126, pl. 39; Pfaff 1988, p. 56, note 157.

Middle Geometric I

Compare Corinth C-1978-333, a Late Geometric or Early Protocorinthian oinochoe with hatched marsh bird painted on the underside: Williams 1981, no. 70, p. 152, fig. 7; cf. Pfaff 1988, p. 56, note 157.

MESSENIA

A36. Nichoria, P815

Pl. 113:e

Fragmentary cup base. Local.

Thick, painted X surrounded by thin circular band on underside.

Nichoria III, P815, p. 219, pl. 3:71.

Dark Age II Period (ca. 975–850 B.C.)

Compare a likely painted X on the underside of a two-handled jar from the Geometric or Subgeometric levels overlying the Mycenaean palace at Ano Englianos, Pylos. The vase in question is perhaps that published in *Pylos* I, no. 617?, p. 185, pl. 347. The piece is discussed more fully below.

ITHAKA

A37. Aitos, Lower Deposit

Kantharos. Local.

Underside described as "cross-hatched . . . perhaps a potter's mark." Robertson 1948, no. 357, pp. 66–69, fig. 40, pl. 23; Coldstream 1968a, p. 224, note 3, p. 227.

Late Geometric

MACEDONIA

A38. Kastanas Toumba,

Fig. 5, Pl. 113:f

inv. no. 5048,

Fragmentary neck-handled amphora. Local (Central Macedonian).

Eighteen painted dots arranged in three vertical rows of six, to one side of and slightly above lower attachment of one of the handles.

Hänsel 1979, no. 3, p. 198, fig. 18 (mark not illustrated).

Sub-Protogeometric

RHODES

A39. Exochi Tomb D, no. 8

Fig. 5

Oinochoe. Rhodian.

Sun pattern, consisting of eleven-pointed star emanating from central disk on underside.

Friis Johansen 1958, D 8, p. 37, fig. 69:a, b; Coldstream 1968a, p. 274.

Late Geometric

Compare the partially preserved painted "swastika" on the underside of the fragmentary oinochoe base from Exochi: Friis Johansen 1958, Z 7, pp. 70, 72, fig. 146.

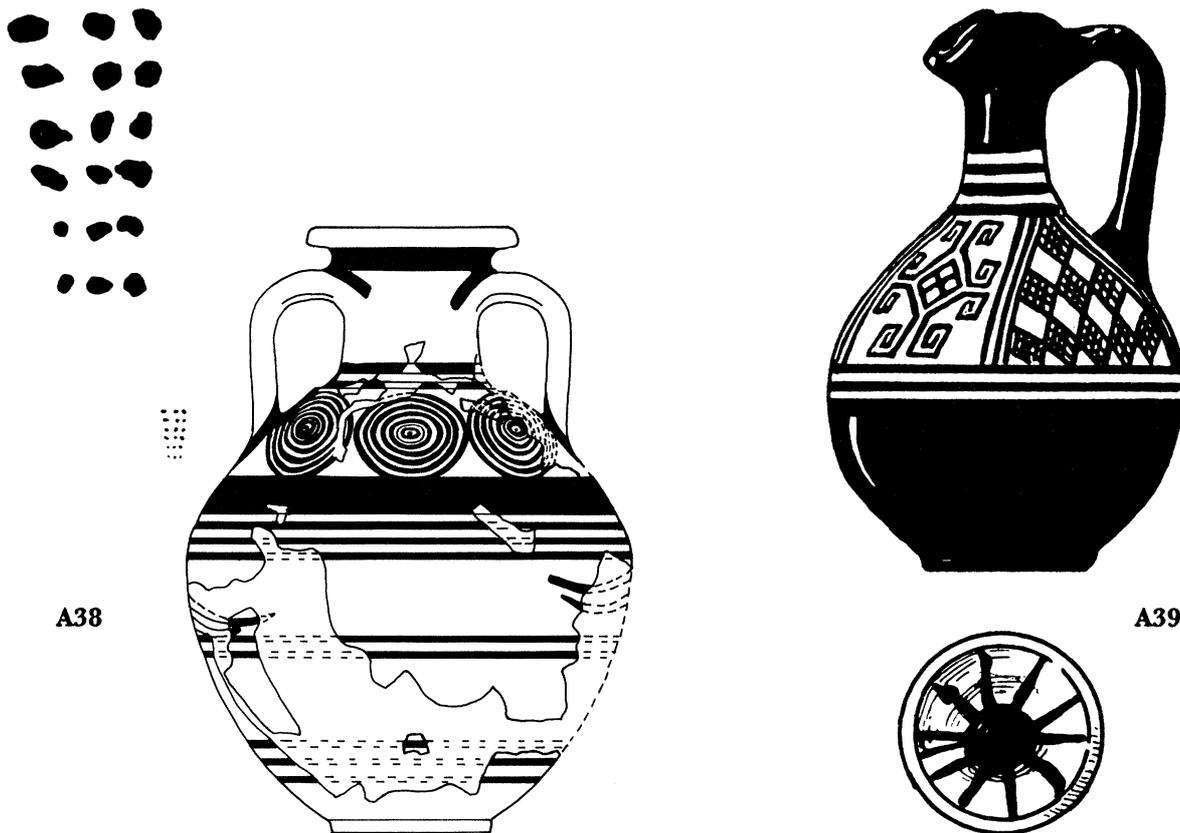


FIG. 5. Kastanas: **A38** (1:6, detail 1:1). Exochi: **A39** (1:1)

GROUP B. INCISED SYMBOLS, INCLUDING IMPRESSED DOTS, ON WHEELMADE AND HANDMADE POTTERY

(i) WHEELMADE, PAINTED POTTERY

ATHENS

B1. Agora Tomb Q 8:5, Fig. 6, Pl. 114:a, b
P 23555,

Miniature high-footed cup. Attic.

Incised vertical stroke at base of handle.

Unpublished.

Earlier/Developed Protogeometric



FIG. 6. Athens, Agora: **B1** (1:2)

EUBOIA

- B2.** Lefkandi, "Xeropolis" settlement, Pl. 114:c
no. 171 (=111[m])
Body fragment from shoulder of large jug or
amphora. Imported?

Mark partially preserved, consisting of at least three short vertical lines with horizontal line scored across them.

Lefkandi I, pp. 91, 93, no. 111(m), pl. 16, no. 171, pl. 69:m.

Sub-Protogeometric I-II (=Attic Early Geometric I-II)

(ii) HANDMADE POTTERY

THESSALY

- B3.** Marmariani Tomb V, no. 6 Fig. 7
Handmade jug with cutaway neck. Thessalian or Macedonian.

Eight incised diagonal strokes on outer face of handle towards handle base.

Heurtley and Skeat 1930/1931, no. 6, pp. 13-14, fig. 4 (mark not illustrated).

Late Protogeometric

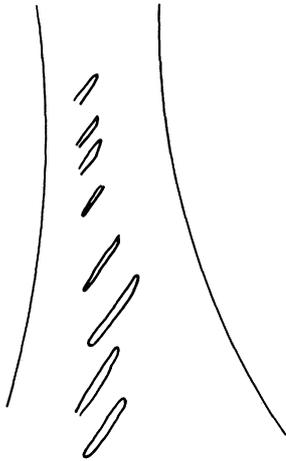


FIG. 7. Marmariani: **B3** (1:1)

CHALKIDIKE

- B4.** Torone Tomb 10, no. 1 Figs. 8, 10, Pl. 114:d
(inv. no. 84.22)
Fragmentary handmade kantharos. Local.

Incised motif on outer face of one handle towards handle base.

Unpublished.

Submycenaean/Early Protogeometric

- B5.** Torone Tomb 10, no. 3 Figs. 8, 10, Pl. 114:e
(inv. no. 84.04)
Handmade kantharos. Local.

Three incised vertical strokes on outer face of handle at juncture with body.

Unpublished.

Submycenaean/Early Protogeometric

- B6.** Torone Tomb 38, no. 2 Figs. 8, 10, Pl. 114:f
(inv. no. 81.08)
Handmade jug with cutaway neck, almost complete. Local.

Three incised strokes (two vertical, the other diagonal) on outer face of handle at juncture with body. Fourth stroke, incised *after* firing, located between central and right-hand strokes.

Unpublished.

Protogeometric

- B7.** Torone Tomb 66, no. 1 Figs. 8, 10, Pl. 115:a
(inv. no. 81.832)
Fragmentary, handmade one-handed cup/
kyathos. Local.

Fourteen preserved impressed dots on body immediately to left of lower handle attachment.

Unpublished.

Protogeometric

- B8.** Torone Tomb 75, no. 2 Figs. 9, 10,
(inv. no. 82.716A) Pl. 115:b, d
Fragmentary, handmade jug with cutaway
neck. Local.

Two impressed dots on body immediately below handle; also three incised motifs on body of vase, each directly above a mastos or lug handle.

Unpublished.

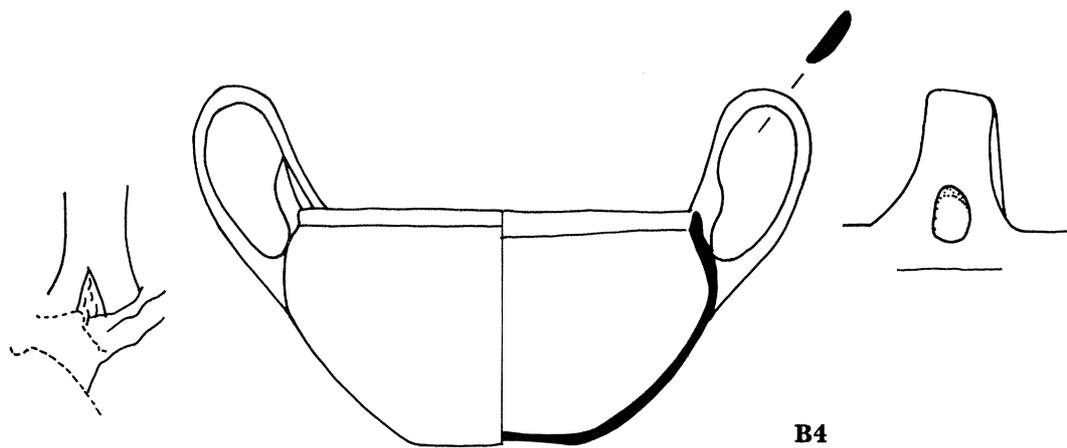
Late Protogeometric

- B9.** Torone Tomb 82, no. 3 Figs. 9, 10, Pl. 115:c
(inv. no. 81.822)
Handmade jug with cutaway neck, almost complete. Local.

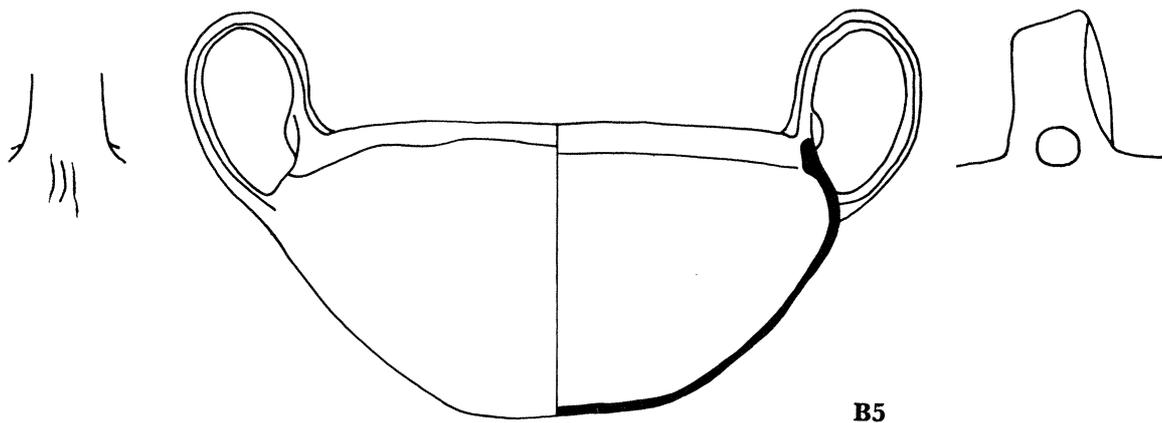
Incised arrow- or Λ -shaped motif on body immediately below handle.

Unpublished.

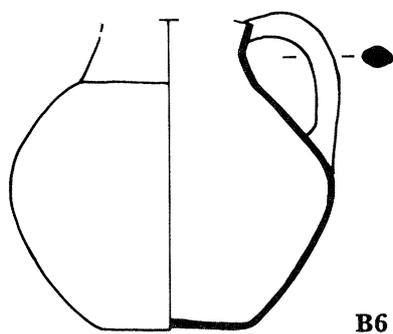
Late Protogeometric/Sub-Protogeometric



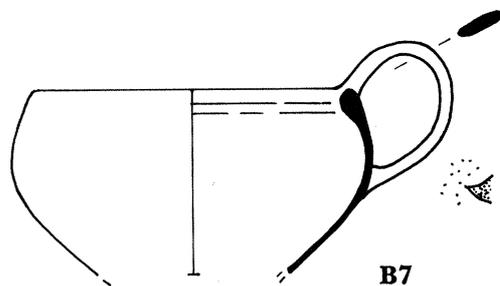
B4



B5



B6



B7

FIG. 8. Torone: B4-B7 (1:3)

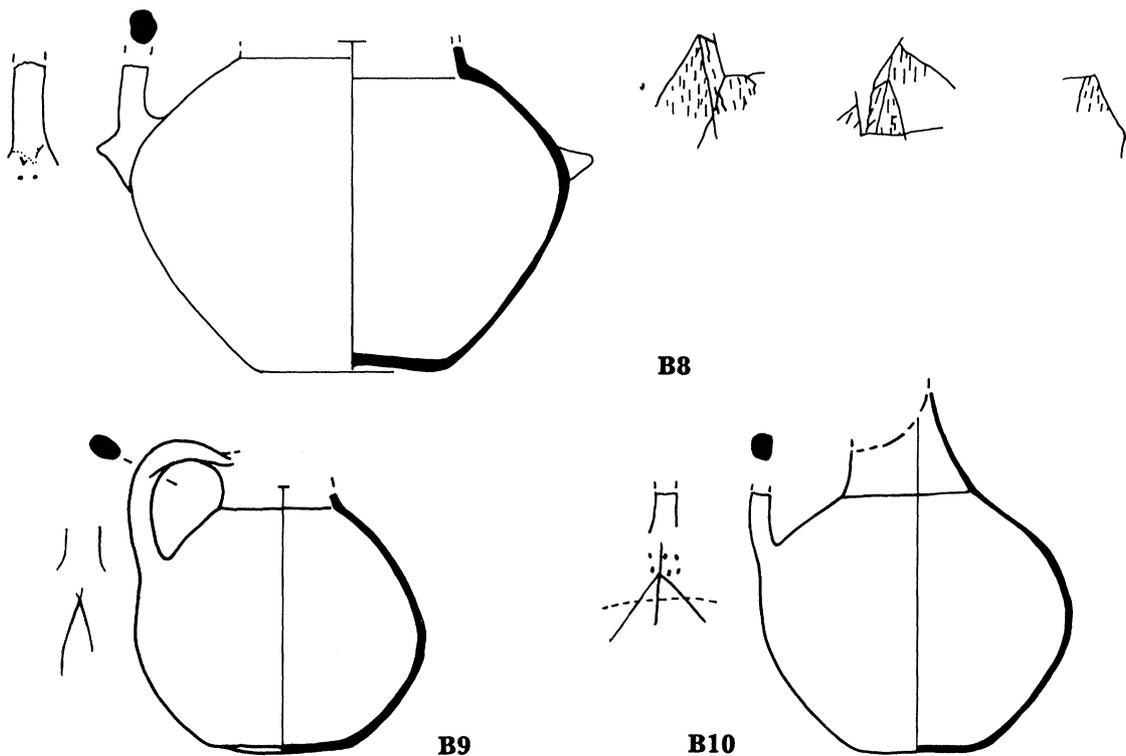


FIG. 9. Torone: **B8-B10** (1:3)

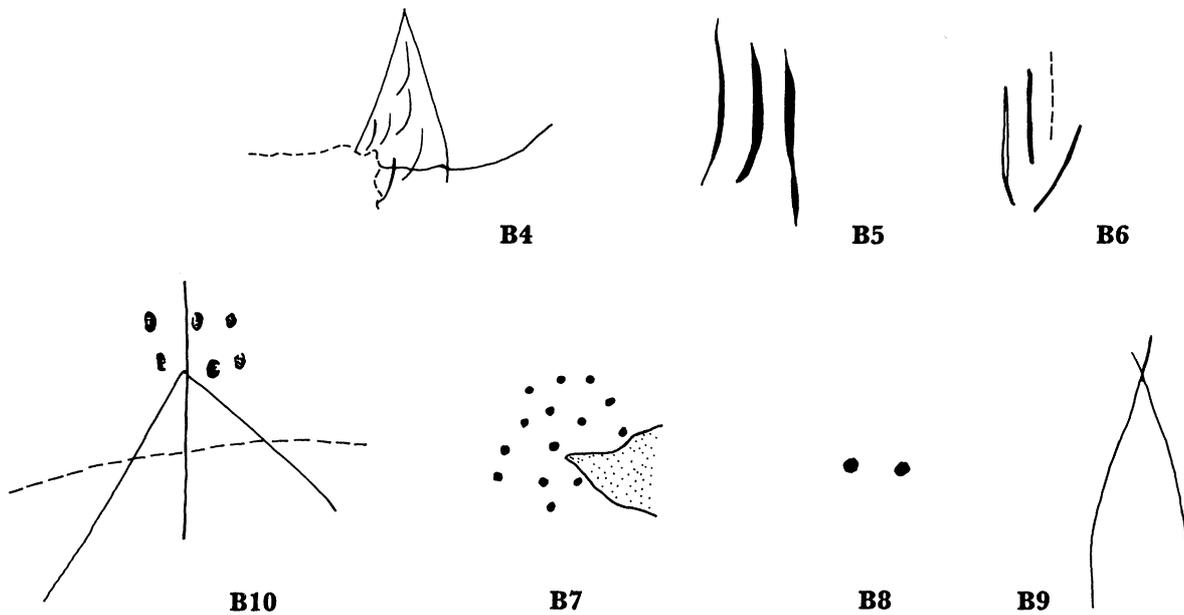


FIG. 10. Torone: details of **B4-B10** (1:1)

- B10.** Torone Tomb 41, no. 3 Figs. 9, 10, Pl. 115:e
(inv. no. 81.07)
Handmade jug with cutaway neck, almost complete. Local.

Incised motif with impressed dots, as shown, on body immediately below handle. Horizontal line incised *after* firing traverses central part of mark.

Unpublished.

Late Protogeometric

- B11.** Torone Tomb 18, no. 1 Fig. 11, Pl. 115:f
(inv. no. 82.70)
Handmade two-handled jar (amphora). Local.

Five incised short strokes set vertically in line on upper shoulder on one side of vessel.

Unpublished.

Protogeometric

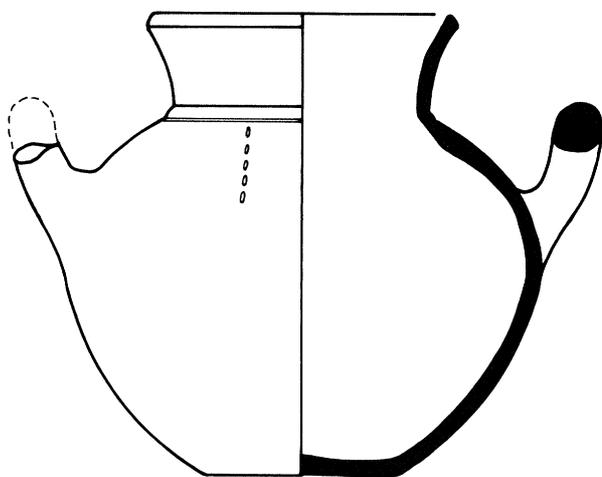


FIG. 11. Torone: **B11** (1:3)

CORINTH

- B12.** Corinth, Well 1981-6, Fig. 12
C-1982-168
Neck and rim fragment, hydria. Corinthian.

Three incised horizontal strokes at top of handle near upper attachment.

Pfaff 1988, no. 74, p. 66, fig. 23.

Middle Geometric II

- B13.** Corinth, Well 1963-7 Fig. 12, Pl. 116:a, b
at Anaploga, C-63-650
Amphora. Corinthian.

Three incised vertical strokes on neck on one side of vessel.

Pfaff 1988, p. 66, note 188, p. 63, fig. 22.

Early Geometric or Middle Geometric I

- B14.** Corinth, Well 1940-5, Fig. 12, Pl. 116:c, d
C-40-370
Amphora. Corinthian.

Three incised vertical strokes at top of one handle.

Weinberg 1948, C16, p. 212, pl. 76; Pfaff 1988, p. 166, note 189.

Late Geometric or Early Protocorinthian

Compare another Corinthian amphora (P 6434 [D3]), imported to Athens and found in the fill of a Middle Geometric well in the Athenian Agora (Well L 6:2). The vessel (*Agora* VIII, no. 242, p. 59, pl. 13), dated to the first half of the 8th century B.C., has a straight line of eleven impressed dots down one handle; on the other, a total of fifteen impressed dots. There is a finger or thumb impression at the base of each handle. This amphora is considered by Brann (*Agora* VIII, p. 59) to be the earliest Corinthian import in the post-Mycenaean pottery groups from the area of the later Athenian Agora. She notes a similar imported amphora at Phaleron, dated to the early 7th century B.C.; Young 1942, p. 29, fig. 7.

Compare a miniature handmade jug, Corinth CP-1907 (*Corinth* VII, i, no. 18, p. 7, pl. 2), said to have two horizontal incised lines below the handle and near the bottom; it is not clear whether these lines represent incised decoration on the body, nor is it stated whether they were incised before or after firing.

Compare the recently published incised marks on the locally produced pottery from the Protohistoric settlement on the Cittadella at Morgantina in central Sicily: *Morgantina* IV, p. 60. The marks are all incised and are found either under one of the handles of three pithoi (*Morgantina* IV, no. 95, p. 171, pls. 32 and 76; no. 552, p. 209, pls. 52 and 141; no. 6, pp. 214-215, pls. 55 and 151) or else on the underside of a variety of pots, including plumed vessels and carinated cups (*Morgantina* IV, nos. 61, 116, 171, 174, 184, 187, 292, 380, 438, 588, p. 60).

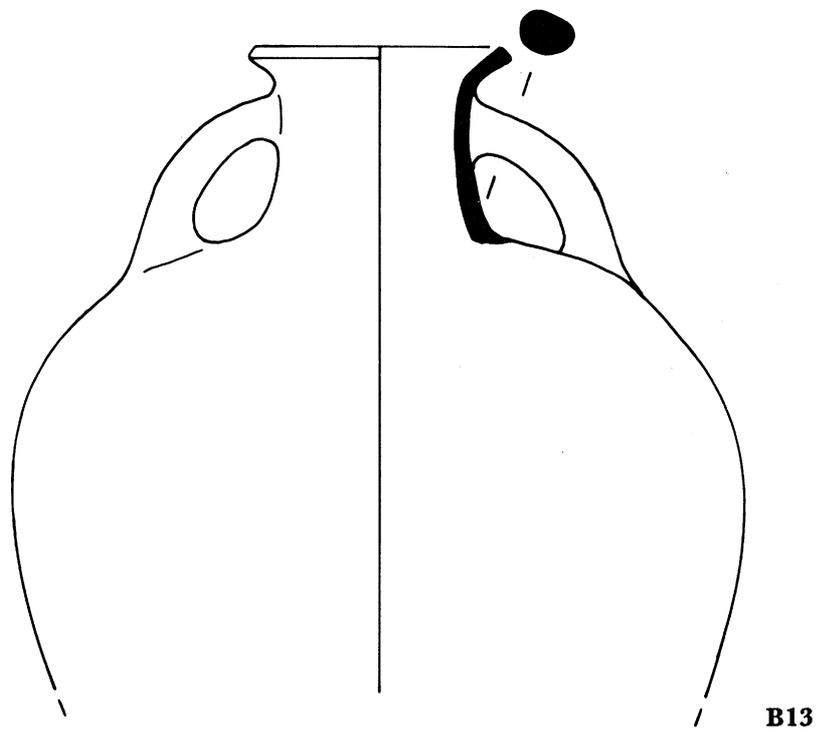
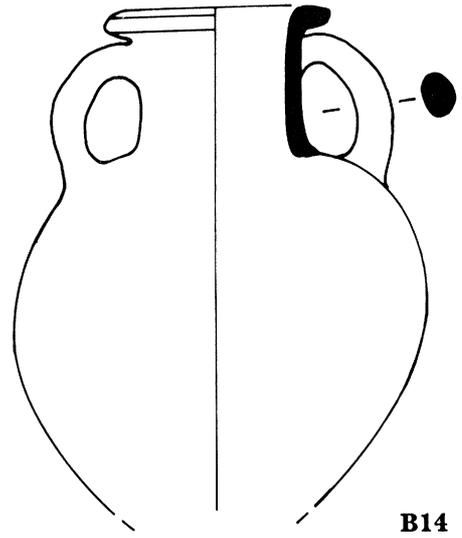
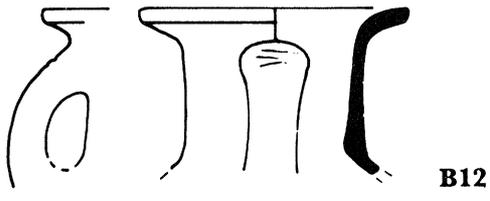


FIG. 12. Corinth: **B12–B14** (1:5)

GROUP C. STAMPED IMPRESSIONS ON COARSE-WARE VESSELS

CORINTH

- C1.** Corinth, Well 1981-6, Fig. 13, Pl. 117:a
C-1982-132
Shoulder and neck fragment, probably hydria(?). Corinthian.

Square stamp impression on upper part of handle showing framed human figure in relief.

Pfaff 1988, no. 73, pp. 65-66, figs. 23, 24, pl. 31.
Middle Geometric(?)

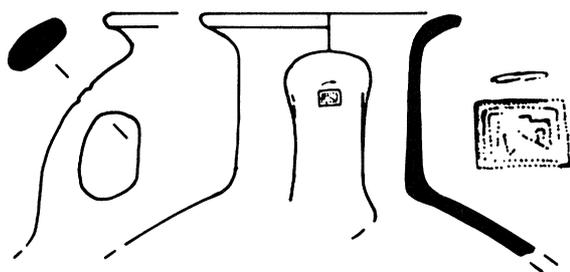


FIG. 13. Corinth: **C1** (1:5)

- C2.** Corinth, Well 1981-6, Pl. 117:b
C-1982-131
Handle fragment, probably from pitcher(?). Corinthian.

Ovoid stamp impression at base of handle showing crude, eight-pointed star formed by four intersecting lines in relief.

Pfaff 1988, no. 88, pp. 71-72, pl. 31.
Middle Geometric(?)

- C3.** Corinth, Well 1975-3, C-75-207 Pl. 117:c
Amphora handle fragment. Corinthian.

Oval stamp impression at base of handle consisting of X with V's filling quadrants.

Williams and Fisher 1976, no. 4, p. 101, pl. 17; Pfaff 1988, p. 39, pl. 31.

Middle Geometric II

- C4.** Corinth, C-1983-55 Pl. 117:d
Handle fragment, probably from pitcher. Corinthian.

Rectangular stamp impression showing standing human figure.

Pfaff 1988, p. 39, pl. 31.

Late Geometric

PITHEKOUSAI

- C5.** Pithekoussai Pl. 117:e
Fragmentary neck, closed vessel.

Rectangular (almost square) stamp impression at center of neck on one side of vessel showing scene interpreted as Ajax carrying corpse of Achilles.

Boardman 1972, pp. 112-113, 133, fig. 166; Buchner 1966, p. 11; Boardman 1968, p. 8.

Ca. 700 B.C.

GROUP D. FINGER OR THUMB IMPRESSIONS AT BASE OF HANDLE

(i) WHEELMADE, PAINTED POTTERY

ATHENS

- D1.** Athens Agora, Well U 26:4, Fig. 14, Pl. 118:a
P 17324
Shoulder and handle fragment, neck-handled amphora. Attic.

Finger impression at base of preserved handle.

Unpublished.

Latest Mycenaean/Submycenaean

Compare also, from the same deposit, a vertical handle from a large closed vessel with finger or thumb impression at the base of the shaft (P 30384, unpublished).

(ii) HANDMADE POTTERY

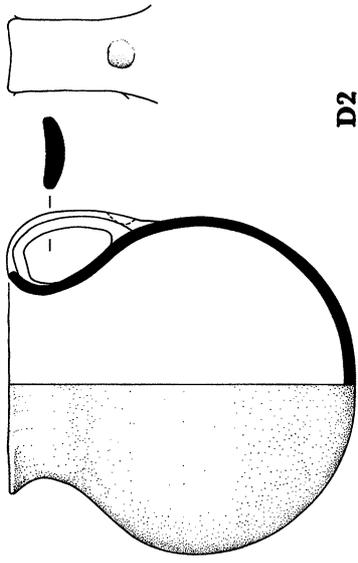
- D2.** Athens Agora, Well B 18:9, Fig. 14,
P 19040 Pl. 118:b, c
Fragmentary chytra (restored). Attic.

Finger or thumb impression at base of handle.

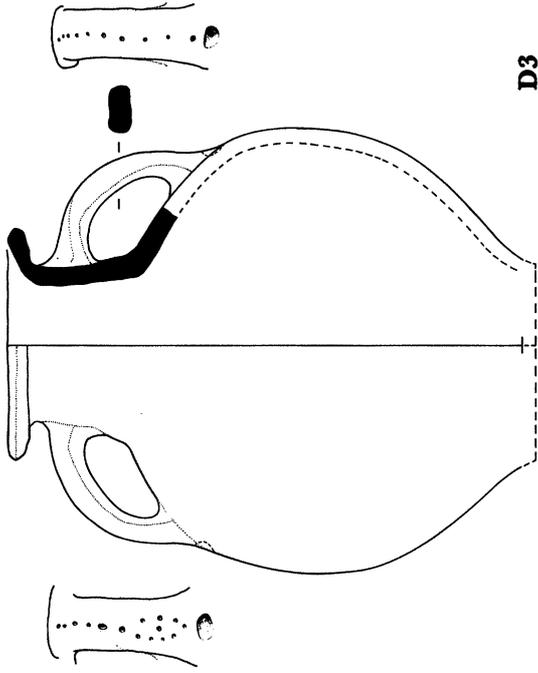
Unpublished.

Middle Geometric II

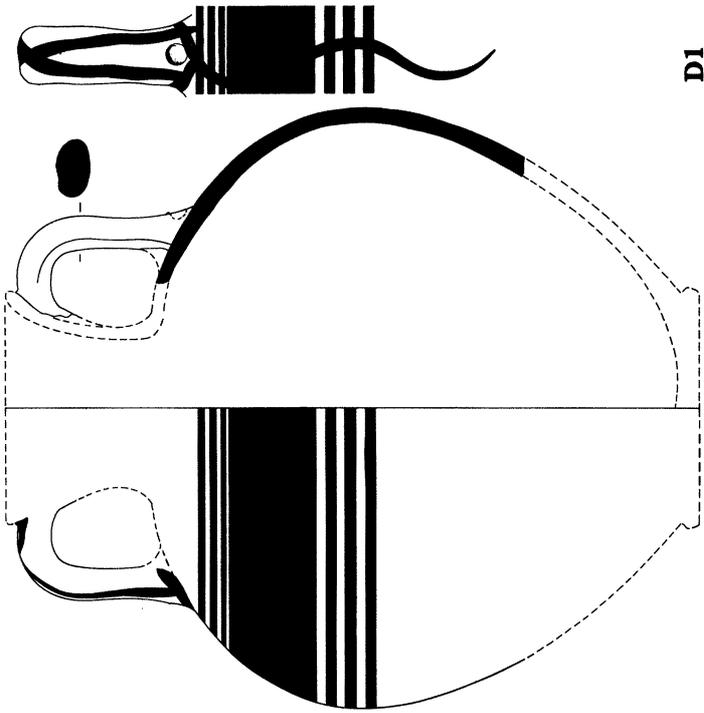
- D3.** Athens Agora, Well L 6:2, Fig. 14, Pl. 118:d-f
P 6434
Fragmentary amphora (restored). Corinthian.



D2



D3



D1

FIG. 14. Athens, Agora: D1 (1:5), D2 and D3 (1:4)

Finger or thumb impression at base of both handles; impressed dots on both handles (see above under **B14**).

Agora VIII, no. 242, p. 59, pl. 13.

Middle Geometric II

CORINTH

D4. Corinth, tomb below stoa in Forum, C-36-826
Oinochoe. Corinthian.

Finger or thumb impression at base of handle.

Corinth VII, i, no. 88, p. 30, pl. 14; cf. E. P. Blegen 1937, p. 137, fig. 1.

Late Geometric

D5. Corinth, Well 1981-6, C-1982-133
Amphora. Corinthian.

Finger or thumb impression at base of both handles.

Pfaff 1988, no. 68, p. 65.

Middle Geometric

D6. Corinth, Well 1981-6, C-1982-134
Amphora. Corinthian.

Finger or thumb impression at base of one handle, two at base of the other.

Pfaff 1988, no. 69, p. 65.

Middle Geometric

D7. Corinth, Well 1981-6, Lot 1982-161:28
Fragmentary pitcher. Corinthian.

Finger or thumb impression at base of handle.

Pfaff 1988, no. 87, p. 71.

Middle Geometric

D8. Corinth, Well 1981-6, C-1982-139
Chytra. Corinthian.

Finger or thumb impression at base of handle.

Pfaff 1988, no. 115, p. 78.

Middle Geometric

D9. Corinth, Well 1981-6, C-1982-138
Chytra. Corinthian.

Finger or thumb impression at base of handle.

Pfaff 1988, no. 116, pp. 78-79.

Middle Geometric

GROUP E. PAINTED FIGURES (ATTIC PROTOGEOMETRIC HORSES AND BIRDS)

ATHENS

E1. Kerameikos, inv. no. 1260 Fig. 15, Pl. 119:a, b
Fragment of body of belly-handled amphora.
Attic.

Painted horse in reserved field immediately below handle.

Kerameikos IV, pl. 27.

Protogeometric

E2. Kerameikos Tomb 18, Fig. 15, Pl. 119:c, d
inv. no. 560
Belly-handled amphora. Attic.

Painted horse standing on horizontal band on body (below wavy lines), beside one of the horizontal handles.

Kerameikos I, pl. 56; *Kerameikos* IV, pl. 27.

Developed Protogeometric

EUBOIA (ATTIC IMPORT)

E3. Lefkandi, Toumba Tomb T39-19 Pl. 120:a, b
Skyphos. Attic.

Painted bird in reserved area beneath each handle.

Popham, Pope, and Raison 1982b, p. 218, pl. 29:a-c.
Late Protogeometric

Compare the painted "centaur" (?) holding a palm-branch or tree under one of the handles of the Submycenaean/Early Protogeometric pyxis, *Kerameikos* XIII, pp. 13-15, fig. 3, p. 78, pl. 1:1, Beil. 1 (inv. no. 3030) from Grave N 120; Kourou 1989, p. 111, fig. 1. There are remains of a painted motif (described as "spiralartiges Motiv") under the other handle, mostly not preserved. A palm branch or tree, along with other motifs, appears on the main body of the vessel in such a way as to suggest that the area under the handles forms only one element in a larger figured composition, as is the case in some Mycenaean pictorial vases (see note 122 below).

Compare the partially preserved painted horse under the handle of the fragmentary Middle Geometric I krater, *Kerameikos* V, i, inv. no. 1254, Grab 43, pl. 22; Benson 1970, pl. XXXII:4; Hurwit 1985, p. 64, figs. 29, 30. A human mourner is painted on the same vessel immediately to the left of the handle and slightly above it; compare the partially

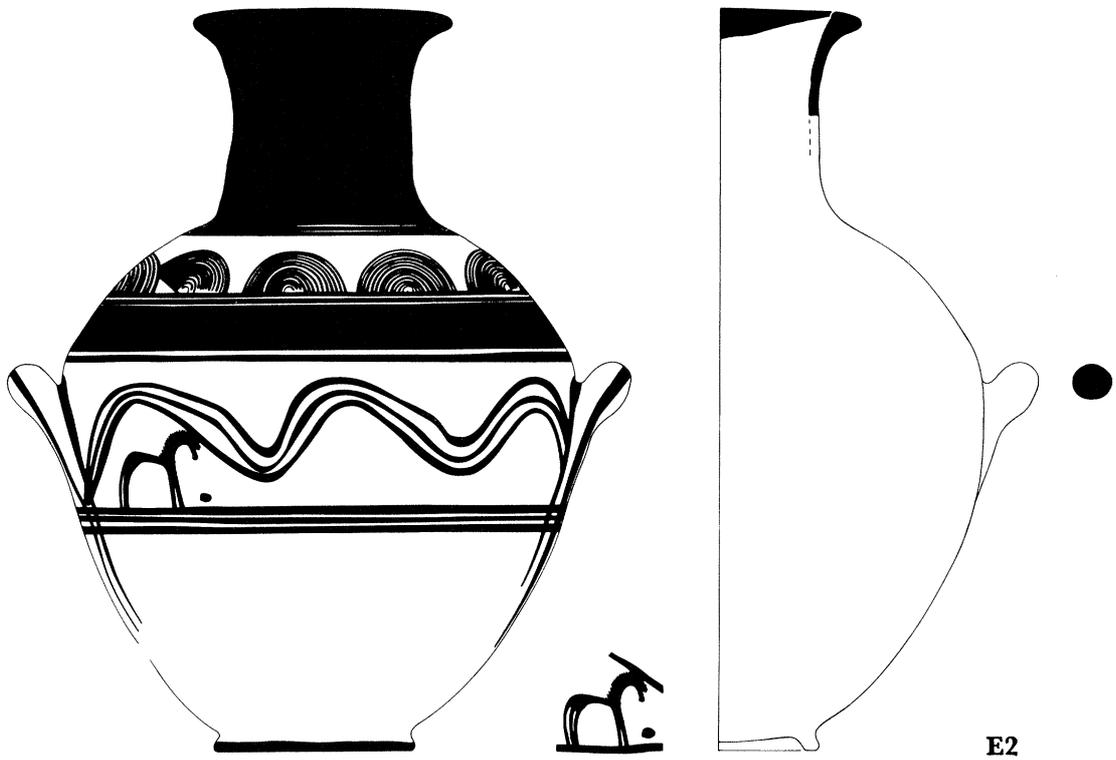


FIG. 15. Athens, Kerameikos: E1 (1:2) and E2 (1:5)

preserved painted mourners under each handle of the fragmentary Middle Geometric II/Late Geometric I amphora, *Kerameikos* V, i, inv. no. 1214, pl. 49.

Compare the partially preserved painted bird under the handle of the fragmentary Middle Geometric II krater from the Athenian Agora, P 6422 (Well L 6:2):

Marwitz 1959, p. 106 (under heading IIa); Davison 1961, fig. 145; Coldstream 1968a, pp. 26–27. The area under the corresponding handle on the other side of the vase is not preserved.

Compare Corinth C-1978-333, listed above under **A35**.

COMMENTARY

GROUP A

The Athenian potters' marks first noted by Desborough though not actually labeled as such by him, including the two from Knossos, form a neatly defined and homogenous group of symbols. All are painted crosses normally found beneath the handle, except for the X on amphora **A1**, which is located on the neck on one side of the vase. The shapes represented include three skyphoi (**A2**, **A10**, **A11**) and two amphoras (**A1**, neck-handled; **A3**, belly-handled). All five vases were deposited in tombs either as ash urns or as *kterismata*. **A1** and **A2** were both found in Tomb 34 of the so-called Precinct XX Cemetery south of the Eridanos in the area of the Athenian Kerameikos;²¹ **A3** was found in Tomb XV in the area of the later Athenian Agora;²² and **A10** and **A11** derive, respectively, from Tombs VI and XI of the Fortetsa Cemetery near Knossos.²³ All five vases may be assigned to the Protogeometric period, **A1** and **A2** being the earliest,²⁴ **A3** the latest of the five.²⁵ Closely connected to this group is the skyphos from Aigina published by Kraiker (**A9**), which may well be of Athenian manufacture.²⁶ Desborough considered the vase to be related

²¹ For a plan of the Precinct XX Cemetery (primarily cremation tombs), see *Kerameikos* IV, Beil. 1; for the "Pompeion Cemetery" north of the Eridanos (primarily inhumation tombs), see *Kerameikos* I, Beil. 1. For the location of the two burial grounds in relation to each other, see Kübler 1942, p. 48, fig. 4; Müller-Karpe 1962, fig. 34. For a plan of the graves excavated in 1964 and 1965, see Schlörb-Vierneisel 1966, pl. 3. See further Styrenius 1967; Krause 1975; I. Morris 1987; Mountjoy (with Hankey) 1988; Whitley 1991; Papadopoulos 1993.

²² This grave will be published more fully in the forthcoming volume by E. L. Smithson and J. K. Papadopoulos on the Submycenaean through Middle Geometric pottery from the Athenian Agora.

²³ See note 3 above.

²⁴ Kübler (*Kerameikos* IV, p. 13) assigned Tomb 34 to the "Reifer Stil"; cf. Desborough 1952, pp. 8–20.

²⁵ Desborough, though not specifically citing Agora P 6693, considered the scheme of paint over the lower part of the body of a belly-handled amphora coupled with the covering of the shoulder and neck with paint, thus leaving the belly zone clear of any decoration (as is the case of P 6693), as "indications of extreme lateness in the series"; see Desborough 1952, p. 30.

²⁶ I have not seen the vase, nor do I know its current whereabouts (presumably Aigina, though it is not currently on display). Both Kraiker and Desborough refer to the X under one handle: Kraiker 1951, no. 18, p. 24; Desborough 1952, pp. 86–87. The vase was studied by Professor Evelyn L. Smithson, to whom I am grateful for providing me with her notes on it; concerning provenance she states that the "clay looks Attic" (see Pl. 110:d).

to his Type IVa skyphos;²⁷ it is best accommodated in the Late Protogeometric or Early Geometric I period.²⁸ Unfortunately, there are no details on its context.²⁹

The isolated cross on **A1** finds parallels on two later pieces from the Athenian Agora. The first of these, **A7**, has a painted cross on one side of the neck of this previously unpublished amphora, found in the fill of a Middle Geometric well. A partially preserved cross or other symbol is also on one side of the fragmentary amphora **A8**, which was found in the fill of a Late Geometric well. These pieces differ from **A1** only in that the crosses are upright and that both derive from nonfunerary contexts. On yet another unpublished amphora from the Athenian Agora (P 27939), there is an isolated asterisk (eight-pointed star) on *both* sides of the vessel (cf. asterisks on **A23**, **A29**, **A35**). I have listed this piece above only for comparison, since the fact that the motif appears on both sides of the vase may indicate a decorative function.

The other three previously unpublished fragments from the Agora (**A4–A6**) differ from the remainder of the Athenian examples in that the marks appear on the undersides of open vessels. As was the case with **A7** and **A8**, **A4–A6** derive from nonfunerary contexts. All three may be dated to the early stages of Protogeometric: **A6** comes from the fill of Well J 14:2, the so-called Heliaina well, which is assigned to the “earliest Protogeometric phase (PG I).”³⁰ The total yield of the well was some 1,000 pieces, from which this is the only conceivable potter’s mark. The mark itself is unique and was described by Evelyn Smithson as perhaps “brush wipings”.³¹ Such an interpretation is possible, particularly in view of the quantity of potters’ refuse deposited in wells, but the location of the irregular strokes on the underside, similar to other marks discussed below, and the absence of similar “wipings” on other pots may suggest that it was painted intentionally; it is listed here as a query. **A4** and **A5** both derive from Well L 11:1, which has been assigned to “Early Protogeometric (PG II)”, that is, both pieces are considered to be slightly later than **A6**. This well yielded almost 2,000 pieces, including clear evidence of potters’ refuse.³² The painted cross on the underside of the tall conical foot of a one-handed cup (**A4**) is similar to many marks found on the undersides of open vessels throughout the Aegean. Its closest parallel, in terms of both the mark and the shape of the vessel on which it appears, is **A18** from Lefkandi, which is of near-contemporary date. Both **A4** and **A6** are open vessels with tall conical feet. The mark on the underside of **A5**, which can only be described as an irregular stroke, appears on a small open vessel with a ring foot.

Another well-defined group of painted crosses (X and †) is that which appears on a number of recently published fragments from Lefkandi (**A12–A18**). The seven Protogeometric examples presented here derive from the fill associated with the large building near

²⁷ Desborough 1952, p. 86. **A2** is an earlier example of the same type. It should be noted that one handle is missing on **A9**, as is the foot-plate.

²⁸ E. L. Smithson, personal communication.

²⁹ Kraiker (1951, p. 24) describes it as a *Streufund*. The condition of the vase may suggest that it was deposited in a tomb; cf. Desborough 1952, p. 86.

³⁰ E. L. Smithson, unpublished draft MS of the catalogue of the Early Iron Age pottery from the Athenian Agora.

³¹ *Ibid.*

³² Thompson 1950, p. 37, pl. 16; cf. Thompson 1947, p. 202; *Agora* XIV, p. 186.

the site of the Toumba cemetery, often referred to as the "Heroön".³³ This fill, which yielded a large quantity of fragmentary pottery, contained material largely dating to the Middle Protogeometric period, although smaller quantities of earlier residual pottery were recorded.³⁴ With the exception of **A18**, the **X**'s were all painted on the necks of large closed vessels, either neck-handled amphoras or hydriai; a cross is also found on the underside of **A18**. All seven vases are assumed to be of local manufacture. In terms of shape and the position of the marks on the vase, the Euboian examples **A12–A17** are closely related to **A1** from the Kerameikos and are probably of contemporary, or near-contemporary, date (cf. **A7** and **A8**; also the position of the three strokes on **B13**, which is later). With the exception of **A13**, the Lefkandi crosses are upright. Unlike their contemporary Athenian counterpart (**A1**), however, the Lefkandi pieces were not deposited in tombs but derive from a context considered by the excavators as nonfunerary, albeit one closely related to a well-known cemetery.³⁵ The argument that this building may be seen as some sort of *Grabbau* is worthy of further consideration.³⁶

The crosses on the necks of **A1**, **A7**, **A8**, and **A12–A17** differ in style and conception from those in the same position on a number of neck-handled amphoras of Protogeometric date, particularly those of Thessaly.³⁷ The latter, especially the amphoras from Marmariani,³⁸ are distinguished by the fact that the **X**'s are larger, appear on *both* sides of the vase, and clearly constitute part of the decorative scheme of the vessel inasmuch as the **X**'s represent the continuation, onto the neck, of the painted decoration of the handles.³⁹ It is also common to find on these vases the painted decoration of the handle extending well below it, onto the body of the vase.⁴⁰ It is worth adding that the Thessalian amphoras (Late Protogeometric) are later than **A1** and **A12–A17** (Early–Middle Protogeometric).

Another possible potter's mark from Lefkandi is found on the fragmentary neck of an amphora from the Xeropolis settlement (**A19**), dated to the Late Geometric period.⁴¹ The mark is unique in that it shows a double axe and, as such, is perhaps better accommodated in

³³ See, for example, Popham, Pope, and Raison 1982a, pp. 169–174. See also Calligas 1988. See now *Lefkandi II*, ii.

³⁴ *Lefkandi II*, i, *passim*, especially pp. 86, 91–94.

³⁵ See note 33 above.

³⁶ Such an argument seems, on the basis of current consensus, unlikely, although the fact that the "Hero", or "Heroine", of Lefkandi and his or her probable or apparent consort were buried under the floor of the building (or the building was erected on top of them) is an aspect deserving further discussion. The evidence from the building is now fully discussed in *Lefkandi II*, ii. For a study of *Grabbauten* in the Greek world, including some buildings which are clearly not, see Themelis 1976.

³⁷ Heurtley and Skeat 1930/1931, nos. 78, 79, pl. VI, cf. also no. 77, with horizontal bands on the neck; Desborough 1952, nos. 77–79, pl. 22. The exception to this may be **A13**, which is reconstructed with a large **X**: *Lefkandi II*, i, no. 466, pl. 64.

³⁸ See Heurtley and Skeat 1930/1931 and Desborough 1952 in note 37 above (*loc. cit.*); see further Verdelis 1958, pp. 91–93.

³⁹ This is clearly seen also on a Thessalian Late Protogeometric neck-handled amphora found at Knossos: Coldstream 1991, p. 292, fig. 6.

⁴⁰ See, for example, Verdelis 1958, pl. 1; for the recently published Thessalian Protogeometric pottery from Iolkos, see Sipsie-Eschbach 1991.

⁴¹ *Lefkandi I*, no. 39, pp. 60, 71, 93, pl. 40. For isolated double axes in Argive Geometric, see Coldstream 1968a, p. 123.

Group E. The piece is of further interest since to the right of the painted axe, at the break, is an alphabetic graffito, alpha, evidently incised after firing. The fragmentary state of the vase is such as to make it impossible to determine whether the axe was part of the decorative scheme or indeed a potter's mark. Its apparently isolated position on the neck of an amphora is close to the crosses on **A1**, **A7**, **A8**, and **A12–A17**.

A third group of potters' marks, primarily painted crosses, is found on the undersides of a number of predominantly open vessels of the Geometric period. Their positions on vases, easily overlooked, may suggest that the occurrence of such marks is more common than is indicated here. The earliest of these, **A4–A6** from Athens and **A18** from Lefkandi, have already been noted. The largest number of such marks is found in the Argolid at Mycenae, Tiryns, and Argos;⁴² there is a Cycladic example from Rheneia (**A20**)⁴³ and a fragmentary one from Nichoria in Messenia (**A36**). In writing about the latter, William Coulson notes that no parallels for the painted X on the underside, which he refers to as decoration, are to be found in Messenia or in west Greece or Lakonia.⁴⁴ The Nichoria cup is assigned to the so-called Dark Age II period, which is dated to *ca.* 975–850 B.C.⁴⁵ Somewhat later is a two-handled vase from Pylos cryptically listed above under Messenia but not catalogued, which has a possible painted X on its underside.⁴⁶ It appears to have been found in a Late Geometric or Subgeometric deposit, thought to be associated with an olive press, overlying the ruins of the Mycenaean palace at Ano Englianos. Carl Blegen continually refers to a "black oily matter", particularly in the area of Room 40, Court 42, and the Northeast Gateway 41, which caused some damage, presumably because of its acidic content, to some of the Mycenaean blocks in the underlying levels.⁴⁷ A reference in the final publication to an olive press dates it to about 600 B.C.⁴⁸ Blegen assigned the pottery recovered from this deposit to a "late Geometric phase", dating it perhaps to the turn from the 7th to the 6th century;⁴⁹ Nicholas Coldstream refers to the same material as Late Geometric or perhaps Subgeometric.⁵⁰

Of similar date to the Nichoria cup are the cup from Rheneia (**A20**) and two from Mycenae (**A21**, **A22**), all three found in tombs, which are very similar to one another in

⁴² There do not appear to be any potters' marks among the Protogeometric finds from Asine, for which see *Asine II*, iv.

⁴³ In publishing the cup, Desborough (1952, p. 157) made no reference to the painted X on its underside. I am grateful to Dr. Wolfgang Mayr for bringing this vase to my attention and for providing photographs of it.

⁴⁴ *Nichoria III*, pp. 80–81.

⁴⁵ *Ibid.*

⁴⁶ In going through the late Evelyn Smithson's notes, I came across a reference to a painted cross on the underside of a two-handled vessel from the "Olive Press Area" at Pylos. Smithson included the piece under the numbers M147, M150, M182, none of which seems to match up with any of the publication numbers in *Pylos I* or *III*, both of which include "Geometric" material found in levels postdating the Mycenaean Palace. Smithson jotted a cursory description of the vase and included a rough sketch of both the vase and the mark in question. On the basis of these notes, the most likely candidate is *Pylos I*, no. 617, p. 185, pl. 347, although the published description of the vase makes no reference to any painted mark on the underside. As I am uncertain about virtually all aspects of this vase, I thought it best to list but not to catalogue it.

⁴⁷ *Pylos I*, pp. 177–184.

⁴⁸ *Ibid.*, p. 177.

⁴⁹ *Ibid.*, p. 184.

⁵⁰ Coldstream 1977, p. 162.

details of shape and decoration. The bodies of the two cups from Mycenae are solidly painted, and their handles are barred; the cup from Rheneia is of nearly identical shape and decoration, although it has a small reserved band around the short, almost straight lip and a smaller reserved band at the base. The cross on the underside of **A21** is somewhat thinner than that on **A22** (the latter also has a painted band around the edge of the underside), while some of the terminals of the X on **A20** extend onto the thin reserved band at the juncture of base and body. Closely related to these cups are two from Argos (**A24**, **A25**); similar painted crosses are also found on the undersides of three fragmentary skyphoi or kantharoi from Argos, mostly of the Late Geometric period (**A26–A28**). Another one-handled cup from Mycenae (**A23**), assigned by Coldstream to the Middle Geometric II period,⁵¹ has a painted asterisk on its underside; a similar asterisk is found on the base fragment of the small open vessel **A29** from Argos, assigned by Courbin to his *géométrique ancien* (Early Geometric) period,⁵² and on the underside of a Middle Geometric I oinochoe from Klenia near Corinth (**A35**).⁵³ A related painted symbol is also found on the underside of a Rhodian oinochoe from Exochi (**A39**); it differs from the other asterisks in that it consists of eleven rays emanating from a central painted dot or disk and is therefore best described as a “sun pattern”.⁵⁴ Asterisks and concentric circles, as well as more complex designs, are also commonly found on the undersides of Protogeometric and Geometric kalathoi (terracotta “baskets”).⁵⁵ These have not been included here, since the inspiration for such designs, on a shape as specific as the kalathos, is surely basketry.⁵⁶ The influence of basketry on Early Iron Age pottery has been discussed by a number of scholars.⁵⁷ It seems unlikely, however, that such an influence served as the inspiration for the asterisks on **A23**, **A29**, and **A35** (cf. **A39**) or the painted crosses on the undersides of **A4**, **A18**, **A20–A22**, **A24–A28**, and **A36**, since these occur on drinking vessels (skyphoi, cups, and kantharoi) or oinochoai, which are not normally associated with plektonic weaving. Moreover, whereas asterisks and the like are usual for kalathoi, they are not standard for Early Iron Age drinking or pouring vessels.

The mark on the fragmentary oinochoe base from Argos (**A30**) is unique; it consists of five parallel zigzags framed on all four sides by single zigzags. The only other oinochoai listed here with marks on their undersides, **A35** and **A39**, have already been mentioned. In the context of Argive Late Geometric, John Boardman has argued that the multiple zigzag may, in certain cases, represent water.⁵⁸ It is therefore tempting to assume that the design on

⁵¹ Coldstream 1968a, p. 120.

⁵² Courbin 1966, no. C.4666, p. 311, note 2, pl. 76.

⁵³ Charitonides 1955, no. 4, p. 126, pl. 39; cf. Pfaff, p. 56, note 157.

⁵⁴ Friis Johansen 1958, D 8, p. 37, fig. 69:a, b. This motif does not appear in the list of Geometric motifs assembled by Coldstream (1968a, pp. 395–397); the various types of “stars” and the distinctive “sunburst” discussed by him are different from the symbol on **A39**.

⁵⁵ Desborough 1952, pp. 113–117; cf. Smithson 1968, pp. 98–103, pl. 34, esp. nos. 28, 29; *Lefkandi I*, no. 492, pl. 22; Pfaff 1988, p. 56, note 157; *PM II*, i, pp. 134–135; Coldstream 1992, no. GH 8, pl. 58, no. 8, pl. 68.

⁵⁶ Cf. Rutter 1988, p. 85.

⁵⁷ *Ibid.*; *Agora VIII*, p. 14 and note 46, also the “basket bowl”, no. 271, p. 62, pl. 16; cf. Thompson 1946, p. 286; see further Kosmopoulos 1953. For recently published Corinthian basket bowls, see Pfaff 1988, nos. 109–111, pp. 76–77, fig. 37, pl. 31.

⁵⁸ Boardman 1983, esp. p. 19, with fig. 2.4:a, b (= Courbin 1966, pl. 40). Courbin (1966, p. 475) sees the multiple wavy lines as the offspring of the old multiple-brush pattern. To this, Boardman (1983, p. 19) adds that

the underside of **A30** may denote “water” or “liquid”. In discussing the Argive material, Paul Courbin comments on the treatment of undersides: “Dans l’immense majorité des cas il est d’ailleurs réservé; cependant, il existe quelques exemples où il est orné d’un motif, le plus souvent une simple croix, parfois d’autres motifs.”⁵⁹ Similarly, Christopher Pfaff remarks: “Decoration occurs on the undersides of a variety of Middle Geometric and Late Geometric vessels at Corinth, but the practice was never widely adopted.”⁶⁰

The four pieces from Tiryns are problematic. Painted crosses are said to be found on the undersides of the pyxis **A33** and the plate **A34**, but I have not had occasion to see these vases. The X on **A34** is probably decorative, since the undersides of Geometric plates and dishes are normally decorated with a variety of designs.⁶¹ I have included it here in order to draw attention to the occurrence of crosses on plates, but I have otherwise not catalogued plates. Similarly, the undersides of pyxides of the Geometric period are usually decorated.⁶² Though listed as Geometric, the handmade kantharos **A31** from Tiryns Grave 14 has a Middle Helladic look about it and may be earlier.⁶³ The painted X under the preserved handle of the large but fragmentary Late Geometric krater **A32** is listed here with a query: painted decoration under the handles of large Late Geometric kraters is very common,⁶⁴ and it is not clear whether this X is a potter’s mark or decorative.

Similarly problematic is the kantharos from Aitos (**A37**); in describing the vase, Martin Robertson states that “the foot is cross-hatched underneath, perhaps a potter’s mark,” but he provides no illustration of the mark.⁶⁵ Coldstream has assigned the vessel to Ithakan Late Geometric I.⁶⁶

not all such designs are made by the multiple brush and states that “even if this were their origin it would not deny them the possibility of serving a more realistic purpose too.”

⁵⁹ Courbin 1966, p. 311.

⁶⁰ Pfaff 1988, p. 56. Pfaff goes on to list all inventoried vases of the Geometric period at Corinth which have “decorated” undersides. Of the thirteen pieces listed (including Pfaff 1988, no. 47, p. 56), seven are kalathoi with either concentric circles (three examples), asterisks or eight-pointed stars (two), a plain cross (one), or a triple banded cross on their undersides. The remainder include **A35** and the piece cited above in the catalogue for comparison, in addition to two protokotylai, a globular aryballos, and a plate, each with painted concentric circles on their undersides. See also *Corinth* VII, i, no. 46, p. 14, pl. 8. For painted spirals and related designs on the underside of Rhodian Archaic pottery, see *Vroulia (Rhodes)*, pp. 162–194.

⁶¹ For decoration on the undersides of Geometric plates, see, for example, Coldstream 1968a, *passim*; Cambitoglou *et al.* 1981, pp. 56–58; *Délos* XV, no. 4, pls. XXXIII, LI; *Kerameikos* V, i, pls. 101–104; Heurtley and Skeat 1930/1931, pl. VIII; Charitonides 1955; Friis Johansen 1958, p. 58, figs. 119, 120, p. 68, fig. 137; Mylonas 1975, III, no. 35, pl. 195, no. 53, pl. 200, pls. 395, 434:β.

⁶² Coldstream 1968a, *passim*, esp. pl. 9:f–n; *Kerameikos* V, i, pls. 61–65; *Kerameikos* XIII, no. 11, pl. 11, pls. 15–17, 19, 23, 25, 27–36, 42–44.

⁶³ Again, I have not had occasion to study the vase firsthand, and it is difficult to ascertain details from the published photograph in *Tiryns* I, ii, pl. XV:11. For Middle Helladic vases found in Geometric tombs at Tiryns, see, for example, Verdélis 1963, esp. Beil. 21, no. 2. Cf. the painted and incised X’s on the undersides of a late Middle Helladic kantharos from Tsoungiza (Rutter 1990, no. 19, p. 432, fig. 11) and a Late Helladic I Aiginetan krater from Lerna (Zerner 1988, no. 23, fig. 8); cf. further Zerner 1990, pp. 23–34.

⁶⁴ Coldstream 1968a, *passim*.

⁶⁵ Robertson 1948, no. 357, pp. 66–69, fig. 40, pl. 23. I have not seen the vase.

⁶⁶ Coldstream 1968a, p. 224, note 3, p. 227.

The only other *painted* potter's mark known to me, excepting the figured ones discussed below (Group E), comes as something of a curiosity inasmuch as it finds no parallel in terms of either the painted symbol or its positioning on the vase. It is found on the shoulder, to one side of and slightly above one of the handles of a neck-handled amphora from Kastanas Toumba (**A38**).⁶⁷ The mark consists of eighteen painted dots arranged in three vertical rows of six. The fragmentary amphora on which it appears was found in the later levels of the site (*Schichten* 1–5) and is perhaps best classified as Sub-Protogeometric.⁶⁸ Noteworthy is the fact that the vase has no funerary associations whatsoever. The closest parallels for this mark are the impressed dots discussed below (**B7**, **B8**, **B10**).

Such, then, are the painted potters' marks of Early Iron Age date of Group A. With the exception of **A5**, **A6**, **A19**, **A23**, **A29**, **A30**, **A35**, **A37**, **A38**, and **A39**, the marks are all crosses, set either vertically (+) or diagonally (X). They can be found either below the handle (or handles) of skyphoi (**A2**, **A9–A11**) or, less commonly, below the handle of a belly-handled amphora (**A3**), or else on the neck of neck-handled amphoras and hydriai (**A1**, **A7**, **A8**, **A12–A17**). They can also be found on the undersides of small open vessels such as one-handled cups, skyphoi, and kantharoi (**A4**, **A18**, **A20–A22**, **A24–A28**, **A31**, and **A36**) and perhaps also on the undersides of pyxides (**A33**) and plates (**A34**). Compared to the crosses, other painted symbols are rare: a painted asterisk is found on the underside of the one-handled cup **A23**, on the small open vessel **A29**, and on the undersides of the oinochoai **A35** and **A39**, the latter best described as a "sun pattern". The marks on **A5**, **A6**, **A19**, **A30**, **A37**, and **A38** are unique.

A number of other painted designs or motifs, not listed here, are conceivably potters' marks. Notable among these is the vertical arrow, a particularly favored motif on the necks of Argive Middle Geometric II neck-handled amphoriskoi.⁶⁹ I have not included these because such arrows normally occur on both sides of the vase and are usually found within a clearly rendered window, panel, or metope, which forms part of the structured syntax of geometric ornament.⁷⁰

GROUP B

This group comprises a number of symbols *incised* or *impressed* (but not stamped) on vases prior to firing. The group as a whole may be further subdivided into those marks incised on wheelmade painted pottery and those on handmade vessels. Of the symbols found on wheelmade pottery I have listed only two examples (**B1**, **B2**). There are surely more, but in scanning the available material there are problems in determining from published descriptions and illustrations whether the marks were incised before or after firing (see

⁶⁷ Hänsel 1979, no. 3, p. 198, fig. 18. The amphora itself is illustrated but not the potter's mark.

⁶⁸ Hänsel 1979, p. 197.

⁶⁹ Cf. Coldstream 1968a, p. 121, pl. 24:h; Courbin 1966, C.2443, pl. 13; *Tiryns* I, ii, nos. 2, 3, 9, pl. 17; Verdélis 1963, Beil. 12, no. 7 (Gr. XVI:2), Beil. 23, no. 4 (Gr. III:4), and cf. no. 5.

⁷⁰ The position of such arrows is often similar to that of linear or figured ornament on the necks of Geometric closed vessels; cf., for instance, Coldstream 1968a, pls. 7:b, c, 8:c, d, 16:b, e, 7:a, e, 18:b, 23:a, b, 24:c, d, f, 28:b, 33:a, b, 34:j, 41:c, 42:f, 43:a, 53:h; *Kerameikos* V, i, inv. no. 291, pl. 32 (compare the asterisk in a metope on the shoulder of the oinochoe, inv. no. 298, pl. 75); Mylonas 1975, III, no. 867, pl. 397. Compare also the asterisks on the amphora Athens, Agora P 27939, listed above under **A8**.

below and p. 467 below). By far the greatest number of symbols occurring on wheelmade painted pottery are graffiti incised after firing. In this respect the numerous inscriptions on sherds from Mount Hymettos, dating mostly to the 7th century B.C. or very late 8th, are illuminating. Of the 171 fragments catalogued by Merle Langdon, which add considerably to the earlier publications of Carl Blegen and Rodney Young and to which may be added another 380 uninventoried sherds, there is no certain example of an inscription incised *before* firing.⁷¹ Langdon cautions, however, that the surface of a sherd was sometimes too worn to determine with certainty whether the inscription was incised before or after firing.⁷² Of the two incised marks on wheelmade pottery catalogued here, the earliest is **B1**. It consists of a short incised vertical stroke located at the base of the handle on a miniature high-footed cup from an unpublished tomb in the Athenian Agora. The position of the mark is identical to the more numerous marks on handmade pottery discussed below, particularly those from Torone. The tomb may be assigned to the early or developed stages of Protogeometric. The other example listed here is fittingly described by Lilian Jeffery as “heavily ploughed in the clay before firing.”⁷³ In discussing the piece, Jeffery lists it among the nonalphabetic signs from Lefkandi, noting that it is probably not a xi but that “perhaps some kind of tally was intended or a merchant’s mark.”⁷⁴ This was one of some thirteen published examples of graffiti on fragments of pottery and tiles from the Xeropolis settlement at Lefkandi. The others appear to be incised after firing, although one or two are dubious.⁷⁵ It should be noted that of the thirteen fragments from the site, **B2** is the earliest, assigned to Sub-Protogeometric I–II.⁷⁶ Of particular interest is the fact that the fragment is from a vessel that was probably imported to Lefkandi.⁷⁷

Potters’ marks incised *before* firing are relatively common on handmade pottery. The group as a whole includes those marks found on handmade burnished pottery which may reasonably be dated to the Protogeometric period or soon after (**B3–B11**) and those marks found on handmade coarse ware or domestic pottery of the Geometric period (**B12–B14**). For the former I have listed nine examples (there are probably more): eight from the Early Iron Age cemetery at Torone (**B4–B11**) and a ninth from Marmariani (**B3**). The nine marks are found on the lower handle or at the base of a handle, except for **B11**, where the mark

⁷¹ Langdon 1976, pp. 10–11, with note 11; the additional 380 pieces, each preserving only traces of inscribed strokes, are noted on p. 10, note 5. For the earlier publications, see C. W. Blegen 1934; Young 1940. Compare the Old Smyrna inscriptions on pottery: Jeffery 1964.

⁷² Langdon 1976, p. 11, note 11.

⁷³ *Lefkandi* I, p. 91.

⁷⁴ *Ibid.*

⁷⁵ All but two of the sherds from Lefkandi are from plain or solid painted vases. The inscriptions on the latter are clearly incised after firing. The most dubious is no. 106(g) (*Lefkandi* I, pl. 69:g), described as “heavily incised”. I have not had occasion to inspect these pieces firsthand, and it is difficult to determine conclusively from the published photograph whether incision preceded or followed firing. The mark is not unlike the arrow- or lambda-shaped marks from Torone (see p. 468 below).

⁷⁶ *Lefkandi* I, p. 89, where 111(m) is assigned to Sub-Protogeometric I–II, which is contemporary with Attic Early Geometric. 103(c) and perhaps 102(d) are Sub-Protogeometric III, as late as Middle Geometric II in the Attic sequence. The remainder are thought to be Late Geometric.

⁷⁷ In *Lefkandi* I, p. 93, the clay of 111(m) is described as micaceous, and it is concluded that the piece was probably not local.

was incised on the shoulder on one side of the vase. Of the latter subgroup I know of three examples (again, there are probably more), all from Corinth. The largest number of this category as a whole, those from Torone (previously unpublished), may be dealt with first.

Excavations on Terrace V, on the lower north slopes of the Archaic and Classical city of Torone, uncovered an Early Iron Age cemetery yielding a total of 134 tombs, of which 118 were cremations.⁷⁸ The remains of a Late Geometric potter's kiln were also excavated, some 2.50 m. from the present-day terrace edge and about 1.25 m. northeast of the nearest tomb.⁷⁹ The date of the kiln is assigned to the second half of the 8th century B.C.⁸⁰ The tombs, on the other hand, range in date from "Submycenaean"⁸¹ to a time roughly contemporary with the end of Attic Early Geometric, if not slightly later, corresponding to Lefkandian Sub-Protogeometric.⁸² A total of over 500 pots and other small finds were recovered from the cemetery, while more recently, excavations on Promontory 1 (the Lekythos) at Torone have uncovered evidence of a settlement of contemporary date.⁸³ The combined evidence of the cemetery, the kiln, and the more fragmentary material from Promontory 1 has established the existence of a local ceramic tradition with the production of both wheelmade painted and handmade burnished pottery. Of these two types of wares, the local wheelmade owes its inspiration to contemporary pottery from central and southern Greece, especially to the influence of Attic Early Protogeometric. The local handmade ware, on the other hand, is steeped in a Macedonian Bronze Age tradition. A similar situation is also seen at Vergina,⁸⁴ Assiros Toumba,⁸⁵ and Kastanas Toumba,⁸⁶ although it should be stressed that the proportion of handmade pottery to wheelmade is considerably greater at those sites than at Torone, where the wheelmade far outnumbers the handmade.⁸⁷ Of the 544 vases

⁷⁸ For the location of the site and a general historical introduction, see especially Meritt 1923; *RE VIA* 2, 1937, cols. 1795–1798, *s.v.* Torone (E. Oberhammer); Zahrnt 1971, pp. 247–251; Cambitoglou 1975, pp. 103–111; Cambitoglou and Papadopoulos 1988. For annual preliminary reports other than those already cited, see Cambitoglou 1977; 1978; 1981; 1982; 1984; 1986. See also Cambitoglou and Papadopoulos 1990; 1991; 1994 (forthcoming). Preliminary notices have also appeared in *Ἐργον*, *AR*, and *BCH*. For a published selection of pottery from the Early Iron Age cemetery, see Papadopoulos 1988a; Papadopoulos 1988b. See further Papadopoulos 1990.

⁷⁹ Papadopoulos 1989a.

⁸⁰ *Ibid.*, pp. 23–26.

⁸¹ That is, if "Submycenaean" is to be considered a distinct chronological entity. This is discussed at some length by, among others, Jeremy Rutter (1978, pp. 58–65); cf. Smithson 1982, p. 141, note 5; Mountjoy 1986, p. 194; Mountjoy 1988. See also *Asine II*, iii, esp. pp. 85–86; Jacob-Felsch 1987; Jacob-Felsch 1988.

⁸² The chronology of the cemetery is more fully discussed in my forthcoming volume in the Torone series. It should be stressed that the latest tombs of the cemetery (*ca.* 850 B.C.) and the kiln (*ca.* 750–700 B.C.) are separated in time by about a century. As such, the pots produced in the Terrace V kiln were not specifically made for use in the cemetery. For the location of kilns on or near the site of an earlier cemetery, see Papadopoulos 1992, p. 220.

⁸³ See references to Cambitoglou and Papadopoulos in note 78 above. The promontory is referred to as the Lekythos in Thucydides 4.113.

⁸⁴ Βεργίνα I; Petsas 1963; Radt 1974.

⁸⁵ Wardle 1980; Wardle 1983; Wardle 1987; 1988; 1989.

⁸⁶ Hänsel 1979 and especially *Kastanas* (a).

⁸⁷ The figure at Torone is 139 handmade pots and 204 wheelmade (i.e., 40.5 percent of the pottery is handmade); this number is based on a straight count of all pottery deposited in tombs. A count of all the

recovered from tombs at Vergina excavated by Andronikos only 58 were wheelmade (i.e., 89.3 percent of the pottery is handmade),⁸⁸ while at Kastanas Toumba handmade wares accounted for between 64 and 88 percent of the total pottery, the highest figure being typical of Level 7 (= K Period VII, 900–700 B.C.).⁸⁹ The high proportion of wheelmade pottery at Torone not only provides an important body of new Macedonian material with clear central and southern Greek connections during the Early Iron Age but also suggests the mechanics by which southern Greek styles of pottery penetrated the inland regions of Macedonia through intermediary coastal sites like Torone.⁹⁰ The various proportions of wheelmade to handmade pottery are important to note, since at Torone potters' marks occur only on handmade vessels, whereas at Kastanas the solitary potter's mark is on a wheelmade amphora.

There are eight incised symbols which may be classed as potters' marks at Torone (**B4–B11**). As noted above, seven of the marks are found at the base of the lower handle attachment, or nearby, and only on handmade burnished vessels. The eighth is found isolated on the shoulder. The marks occur on four shapes, as follows:

Jugs with cutaway necks:	4 examples (B6, B8–B10)
Kantharoi:	2 examples (B4, B5)
Cup/kyathos:	1 example (B7)
Two-handed jar (amphora):	1 example (B11)

Chronologically, the eight marks do not appear to form a consistent group within the period of the use of the cemetery. The latest is **B9**, which was found in the same tomb as one of the only two pendent-semicircle skyphoi from the burial ground.⁹¹ **B10** is earlier, probably Late Protogeometric to judge by the wheelmade painted pottery found in the same tomb, while **B8** is of similar, if not slightly earlier, date. The kantharoi **B4** and **B5**, recovered from one and the same tomb, belong to the earlier stages of the period of the use of the cemetery (Submycenaean or Early Protogeometric), and **B11** is best assigned to developed

Early Iron Age pottery from Terrace V (including that from the kiln) gives a figure of 171 handmade as opposed to 269 wheelmade vases (i.e., 38.9 percent of the pottery is handmade). For Early Iron Age handmade wares elsewhere in Greece, see Reber 1991.

⁸⁸ Cf. Desborough 1972, pp. 86, 216–220.

⁸⁹ *Kastanas* (a), p. 12, fig. 1.

⁹⁰ Some evidence supporting the important role played by coastal sites in Macedonia, particularly those of Chalkidike, comes from Assiros Toumba, where the results of clay analysis of a sample of Late Bronze Age sherds have indicated that the samples classed as "Provincial Mycenaean" (that is, implying a source in Macedonia other than Assiros) may well have been produced at a coastal site in Chalkidike; see Jones 1986, p. 494; Wardle 1980, p. 252. Jan Bouzek (1986), however, prefers to see such a production center near the Axios estuary. A comparable role played by coastal sites in Chalkidike may also be observed earlier, during the Middle Bronze Age and Early Mycenaean periods; see Cambitoglou and Papadopoulos 1993.

⁹¹ The pendent-semicircle skyphos found in the tomb (T82-2) was the only such skyphos in local fabric from the cemetery; the other, T77-3, is an import, perhaps Euboio-Thessalian rather than Cycladic. The pendent-semicircle skyphos is a hallmark of the regional *koine* comprising Euboia, Thessaly, the northern Cyclades, and Skyros during the later stages of the Late Protogeometric period and in the course of the Sub-Protogeometric; see *Lefkandi* I, pp. 291–292, 297–302; Desborough 1972, pp. 185–220; Desborough 1952, pp. 127–179; Descoedres and Kearsley 1983, esp. pp. 41–52; Coldstream 1968a, pp. 148–157. The most recent study of the shape is that of Rosalinde Kearsley (1990). According to her typology, Torone T82-2 is best accommodated within the framework of Type 3, which she dates to the 9th century B.C. (contemporary with Attic Early Geometric–Middle Geometric I).

Protogeometric. The contexts of the remainder were less informative as to date; **B6** was found with another handmade vessel, a pitharion, not precisely dated, and **B7** served as the cinerary urn and was the only pot in the tomb.

The marks themselves were incised prior to firing and, in most cases, at a time when the fabric of the vase was quite dry, leather-to-bone hard rather than moist-to-leather hard. The difficulty of determining whether such marks were made before or after firing is fully discussed by Thomas Palaima *et alia* with reference to potters' marks of the Bronze Age.⁹² It is therefore possible to establish, on the basis of the physical characteristics of the marks, whether they were made before or after firing.⁹³ The very thin, cleanly incised lines of the marks on **B4–B6**, **B9**, and **B10** contrast to the few instances of incised decoration on local handmade vessels, where the incisions, executed while the clay was less dry, are characterized by lines and strokes that are deeper and broader.⁹⁴ The mark on the shoulder of **B11** is the most deeply incised of the group (cf. **B3**). The Torone marks further contrast to incisions that are executed on the surface of the pot after firing, which normally have many tiny successive strokes of the cutting implement within the incision itself.⁹⁵ The latter are generally less clean, on account of the resistance offered to the cutting implement by the hardened surface of the fired pot.⁹⁶ It is worth noting that in the mark on **B6**, the third vertical stroke from the left is a scratch made after firing; it contrasts to the three strokes incised prior to firing (compare a similar scratch on **B10**; see p. 468 below). The dots on **B7**, **B8**, and **B10** are fine and very shallow and were also impressed when the fabric was quite dry.

The eight Toronean potters' marks comprise symbols which, descriptively, may be divided into four broad groups:

(α) *Three vertical strokes*: **B5** and **B6**. Three neat, vertical strokes are found on one side of the vessel only, at the base of the lower handle attachment on the kantharos **B5**. Three similarly executed and located strokes are found on the jug **B6**, but here the stroke on the right is slightly more diagonal.

(β) *Five vertical strokes in line*: **B11**. Five comparatively deep strokes arranged in a vertical line were incised on the shoulder on one side of the two-handled jar or amphora, **B11**. Both the mark and its position are unique among the handmade wares included here. The only other catalogued mark that occurs on the shoulder of a pot is **B2**.

(γ) *Dots only*: **B7** and **B8**. A group of fourteen preserved dots, closely clustered together, are found on the body at the point of maximum diameter, immediately below and very slightly to the left of the lower handle attachment on the cup/kyathos **B7**. As the vessel is chipped at this point, there may well have been a few more dots originally. Two similarly

⁹² Palaima, Betancourt, and Meyer 1984, pp. 70–71.

⁹³ *Ibid.* See further Daniel 1941, pp. 273–275; Stubbings 1951, p. 45; Edgar in Atkinson *et al.* 1904, p. 177.

⁹⁴ Such incised decoration on handmade vases is rare at Torone; cf., for example, Torone T109-5.

⁹⁵ Daniel 1941, p. 273, note 56; compare the many later graffiti in *Agora XXI*, *passim*.

⁹⁶ Compare and contrast the well-known early Greek alphabetic inscriptions incised after firing, such as: Coldstream 1977, pp. 295–302; Snodgrass 1971, p. 351, fig. 111; Jeffery 1989, pls. 1, 9:18, 22:1, 47:1 and 3, 57:43b, 68:32a, 69:43 and 44. Also the graffiti from Xeropolis: *Lefkandi I*, pp. 89–93, pl. 69:a–l (incised after firing), m (= **B2**, incised prior to firing). Compare further the graffito at the base of the handle on the cup in the Mitsotakis Collection: Tsipopoulou 1984, II98, p. 166, fig. 11, pl. 44; also that immediately below the handle on a Geometric cup from the Eleusis cemetery: Skias 1898, p. 58, fig. 4; compare also p. 85, fig. 18 (which is earlier), with a potter's mark associated with a mastos, not unlike those on **B8** below.

impressed dots are found on the jug **B8** directly below the mastos at the base of the handle. **B8** is of further interest since incision is found on the body of the vase, in the form of three motifs (not unlike the potter's mark on **B4**) which are grouped above mastoi arranged symmetrically around the body of the vase (Fig. 9). Given the position of these motifs directly above mastoi, which, in effect, are lug or atrophied handles, and given the rarity of incised decoration on Toronean handmade pottery, it is possible that these motifs are also potters' marks rather than decoration, although such repetition is unusual. Dots are also found on the more complex composite mark on **B10**.

(δ) *Arrow- or lambda-shaped marks: B4, B9, and B10.* On **B9** two diagonal lines cross over at the top to define a simple arrow- or lambda-shaped symbol. A similar mark is also found below one handle on the kantharos **B4**, but in this case the space defined by the two converging diagonals is filled with short, slightly hooked strokes.⁹⁷ Somewhat more complex is the mark on the jug **B10**; two diagonal lines converge and are bisected by a vertical line that extends beyond their apex. Arranged in two parallel horizontal rows of three, two dots to the left of the vertical line and four to the right, are six impressed dots similar to those on **B7** and **B8** (cf. Fig. 10). A further horizontal line, clearly incised *after* firing, traverses the two diagonal lines and the vertical line at approximately their midpoints.⁹⁸

As far as I am aware, the only comparable potter's mark in the Greek world, incised on a handmade pot prior to firing and *contemporary* with the Torone marks, is found on the lower exterior face of the handle of a jug with cutaway neck from Marmariani.⁹⁹ Elsewhere in the Aegean similar marks may well exist, but it is often difficult to establish, particularly from fragmentary assemblages of coarse-ware pottery, whether the incised symbols are potters' marks or decoration.¹⁰⁰ The Marmariani mark consists of eight comparatively deep, diagonal strokes. Like the Toronean vases, the Marmariani jug was found in a tomb, in this case a large tholos tomb. The vase itself may represent an import from Macedonia or at least displays strong Macedonian influences.¹⁰¹ Although diagonally grooved, twisted, or fluted handles are a feature of North Aegean handmade wares of the Late Bronze and

⁹⁷ Compare the incised "decoration" or marks on the body of the jug **B8** (Fig. 9).

⁹⁸ This horizontal line is rather problematic. It is, most probably, a later scratch such as that already noted on **B6**, but its fortuitous position over the central part of the inscription seems particularly well defined, as is the case with the one on **B6**. This raises the possibility that both "scratches" may have been consciously incised sometime after the vases were fired.

⁹⁹ Heurtley and Skeat 1930/1931, no. 6, p. 13; the vase itself is illustrated and a brief description of the mark given, but it is not illustrated. I am grateful to Dr. Eo Zervoudake and Dr. N. Prokopiou for allowing me access to the Protogeometric pottery from Marmariani excavated by Heurtley and Skeat, now in the National Archaeological Museum in Athens.

¹⁰⁰ See, for example, the fragmentary coarse pottery from Karphi: Seiradaki 1960, pl. 12:b.

¹⁰¹ The handmade jug with cutaway neck is one of the characteristic hallmarks of Late Bronze and Early Iron Age Macedonia, and its ancestry may be traced back to the Early and Middle Bronze Age periods in Macedonia. Typologies of the shape have been presented from settlement material at Kastanas; see *Kastanas* (a), pp. 48–58; from cemetery material at Vergina, see Βεργίνα I, pp. 194–201; more recently, from the cemeteries at Vitsa Zagoriou in Epiros, see Vokotopoulou 1986, pp. 236–241, fig. 9, plans 15–31; and from the "Protohistoric" cemeteries associated with the settlement at Kastri on Thasos, see Koukouli-Chrysanthake 1992, pp. 397–399, fig. 85, shape VII A–E.

Early Iron Ages,¹⁰² I doubt whether the incised strokes on **B3** are decorative, since they differ from normal grooving or ridging found on handles.

Slightly later than the marks from Torone and Marmariani are those incised on pots prior to firing on a series of handmade coarse-ware vessels of the Geometric period from Corinth (**B12–B14**). The marks are found on two shapes: amphoras and hydriai. The most recent study of these is by Christopher Pfaff, on whose notes on the subject I rely for information.¹⁰³ According to Pfaff, this type of amphora has a long history at Corinth, beginning perhaps as early as the Early Geometric period and continuing in the specialized form of the Corinthian Type A and A' transport amphoras dating from the 7th through the 2nd centuries B.C.¹⁰⁴ As for the hydriai, they too appear to be as early as the amphoras, although knowledge of their development is still rather incomplete.¹⁰⁵ The earliest of the three presented here (**B13**) is dated to the Early Geometric or Middle Geometric I period; **B12** is dated to Middle Geometric II, and the latest, **B14**, is said to be Late Geometric or Early Protocorinthian.¹⁰⁶ There are three incised vertical strokes on top of one of the handles on the amphora **B14**; three similar strokes are found on the vertical handle of the hydria **B12**, but in this case the strokes are horizontal. Three incised vertical strokes are also found on the neck on one side of the amphora **B13**, in a position similar to the painted crosses on **A1**, **A7**, **A8**, and **A12–A17**. Although handmade vessels such as these could be deposited in tombs at Corinth,¹⁰⁷ the three examples presented here derive from fill dumped in wells. The placement of the marks on the handles of **B12** and **B14** is not unlike that on the vessels from Torone and Marmariani already noted, although they are placed on top of the handle arch, not on the handle base; the exception is **B13**, where the mark is found on the neck.

In his discussion of the coarse-ware hydriai from the North Cemetery at Corinth, Rodney Young notes that “the building of coarse pots by hand may well have been a craft handed down through the centuries in particular groups or families, a craft much more conservative than that of the potter who threw his vessels on the wheel and decorated them afterward.”¹⁰⁸ This conservatism in the handmade pottery tradition is an important aspect, and it may well be that the practice of marking such vases represents an Early Iron Age survival of a much more common Bronze Age custom.¹⁰⁹

¹⁰² Heurtley 1939, pp. 98–99, 104, 216, fig. 87:a–f, h (Late Bronze Age Vardaróphtsa [Axiochori], referred to as “fluted” or “grooved”), p. 233, fig. 106 (Early Iron Age Vardaróphtsa, referred to as “twisted”); Wardle 1980, no. 44, p. 256, fig. 16, nos. 51–53, p. 260, fig. 19. At Kastanas jugs with such handles include Hochstetter’s types 1a–d: *Kastanas* (a), p. 53, fig. 12, p. 57, fig. 13. See also Wardle’s comments in Popham, Pope, and Raison 1982b, p. 235.

¹⁰³ Pfaff 1988, esp. pp. 29–33.

¹⁰⁴ *Ibid.*, p. 29.

¹⁰⁵ *Ibid.*, pp. 32–33; cf. *Corinth XIII*, p. 41.

¹⁰⁶ For bibliography, see the catalogue entries for **B12–B14**.

¹⁰⁷ *Corinth XIII*, pp. 41, 43.

¹⁰⁸ *Ibid.*, p. 41. The extreme conservatism of potters and their reluctance to innovate is stressed by George Foster (1965) in his study of peasant pottery manufacture.

¹⁰⁹ For the marking of the handle bases on Bronze Age transport and cooking vessels, especially the handles of medium-coarse Minoanizing Lustrous-Decorated ware and less often on Aiginetan cooking pots, which are

GROUP C

This is a small group of five stamps found in inconspicuous or isolated positions on larger closed vases. The four examples from Corinth (**C1–C4**) are closely related to **B12–B14** inasmuch as the stamps are found on the handle, or at the base of the handle, of Corinthian handmade coarse-ware vessels. All four vases are fragmentary: **C3** is an amphora, **C1** probably a hydria, and **C2** and **C4** are thought to be pitchers; they are fully discussed by Pfaff.¹¹⁰ In addition to these four vessels, contemporary stamped impressions are found at Corinth on a lid¹¹¹ and a pyramidal loomweight.¹¹² The former bears on its upper surface several large oval stamp impressions with a crosshatched pattern; such repetition would imply that the purpose of stamping was decorative, and on that basis, the piece has not been classified here.¹¹³ The loomweight has also not been classified for the reasons given above.¹¹⁴ Pfaff has argued that the design on **C2** was perhaps stamped with a clay die, whereas the remainder were produced using stone, metal, wood, or bone dies; in the case of the stamps on **C1**, **C3**, and **C4**, he compares the similarity of the pattern to that on Geometric sealstones and a bronze weight.¹¹⁵ **C1** and **C4** are figured designs, **C2** and **C3** nonfigured.

The stamp on **C5** is found near the center of the fragmentary neck of a closed vessel from Ischia,¹¹⁶ its position on the vase is similar to that of the painted crosses on **A1**, **A7**, **A8**, **A12–A17**, and the three incised strokes on **B13**. The design shows a Geometric warrior carrying the body of a fallen comrade, a scene interpreted as Ajax carrying the corpse of Achilles.¹¹⁷ The same stamp was evidently used to decorate a clay plaque found at

executed in much the same way as the handmade Early Iron Age vessels listed here, see Nordquist 1987, p. 63; Zerner 1986; cf. *Asine* I, no. 3, p. 230, fig. 168 (Early Helladic), pp. 283–284, fig. 195 (Middle Helladic II); *Asine* II, ii, no. 63, p. 67, fig. 79, p. 137, fig. 131; Hägg and Hägg 1978, p. 31, fig. 18. For the marking of vases, including handle bases, before and after firing in the Late Bronze Age, see note 126 below. For similarly marked Etruscan coarse-ware amphoras of the Archaic period, see especially Albore Livadie 1978, p. 88, fig. 6; p. 84, fig. 2; p. 85, fig. 4; pp. 90–91, figs. 8, 9; pp. 93–94, figs. 11, 12; p. 97, fig. 14; pp. 103–104, figs. 18, 19; p. 113, fig. 25.

¹¹⁰ Pfaff 1988, pp. 39–40. One reviewer of this article has noted that **C3** may be Early Helladic in date. The design bears a general similarity to Early Helladic clay sealings, for which see, for example, Heath 1958; also some Minoan Prepalatial seals such as *CMS* II, i, no. 96, p. 110; cf. no. 302, p. 349, no. 435, p. 516; *CMS* IV, no. 106, p. 121 (Middle Minoan I); cf., among others, Warren 1970. It is certainly possible that the fragmentary amphora handle on which the impression appears represents residual material encountered in later fill, although the general context is Geometric.

¹¹¹ Pfaff 1988, no. 112, pl. 31.

¹¹² Pfaff 1988, no. 118, pl. 32.

¹¹³ Pfaff 1988, p. 40. Other cases of decorative stamping are listed by Pfaff (pp. 39–40) and include a Protogeometric–Early Geometric pithos lid from Knossos and a Geometric pithos(?) from Phaistos.

¹¹⁴ Compare the stamped spindlewhorl, bead, or button from the Athenian Agora dated to the first half of the 8th century B.C.: Brann 1960, p. 406, fig. 2.

¹¹⁵ Pfaff 1988, p. 40, with notes 101 and 102.

¹¹⁶ Buchner 1966, p. 11; Boardman 1968, p. 8; Boardman 1972, pp. 112–113, 133, fig. 166.

¹¹⁷ Boardman 1972, pp. 112–113, 133. This is thought to be the earliest example of the scene in Greek art, followed by a similar representation on an ivory seal from Perachora: Boardman 1963, p. 147, fig. 16 (= Ahlberg-Cornell 1992, p. 288, fig. 46:b).

the Heraion on Samos.¹¹⁸ The vessel on which the impression is found appears to be a coarse-ware amphora or hydria, although details of shape and fabric are not given in the publication; the vase is dated shortly before or after 700 B.C. and is therefore slightly later than **C1–C4**.

All five stamped examples derive from settlement contexts, although the exact findspot of **C5** is not noted. The general similarity, particularly in terms of position, of these marks to the well-known stamped amphora handles of later periods is discussed more fully below (pp. 482–483).

GROUP D

This group has been distinguished from the impressed dots of Group B and the stamp impressions of Group C by virtue of the fact that the impressions are made by the finger or thumb of the potter, not with an implement. In the case of three of the four examples listed here that I have personally inspected, fingerprints are clearly visible within the finger impression on **D1**, and traces of fingerprints may also be observed on **D3**. There are no clear fingerprints on **D2**, although these were probably made by the potter's finger or thumb. I have not had occasion to inspect **D4–D9**.

The nine examples listed here probably represent only a small fraction of such marks in the Early Iron Age. Eight of the nine were found in the fill of a number of wells in the area of the later Athenian Agora and Corinth; only one (**D4**) was found in a tomb. Two are Attic (**D1**, **D2**), the remainder are of Corinthian manufacture. Such marks occur on both wheelmade and handmade pots that derive from both funerary and nonfunerary contexts. The impressions are invariably found at the base of the handle or handles on a variety of shapes: **D1** is a fragmentary, wheelmade, neck-handled amphora; **D2**, **D8**, and **D9** are chytrai; **D3**, **D5**, and **D6** are handmade amphoras; and **D4** and **D7** are pitchers or oinochoai. On **D3**, **D5**, and **D6** there are finger impressions at the base of both handles, while in the case of **D1** only one of the two handles of the vase is preserved; **D2**, **D4**, **D7**, and **D8** are one-handled shapes. Of the nine examples presented here, **D3** is of special interest since both handles of the vase bear a series of impressed dots that may be potter's marks and also because the vessel represents a Corinthian import to Athens (see discussion above under **B14**, p. 451; cf. **D3**, pp. 453, 455). On one side of the vase the final impressed dot is situated within the finger impression.

Although only a small number of such marks is presented here, it is noteworthy that they cover the entire chronological span of the period from latest Mycenaean or Submycenaean through Late Geometric.

GROUP E

The three pieces listed under this heading should, strictly speaking, be listed under Group A. Though figured, the placement of the symbols on **E1–E3** is identical to some of

¹¹⁸ Boardman 1968, p. 8. The stamp is repeated on the plaque at least eight times, and there are two pierced holes at the top for suspension. The plaque is illustrated in Hampe 1936, pl. 34; Ohly 1941, no. 416, pl. 11. Both the Pithekoussai stamp and that on the Samos relief (Samos Museum T 416) are conveniently illustrated together in Ahlberg-Cornell 1992, nos. 10, 11, pp. 35–38, p. 287, figs. 44, 45; see also pp. 288–291, figs. 46–52, and pp. 321–322, figs. 107–109 for later representations of the theme.

the more humble X's of Group A, and it is therefore suggested here that some of the earliest Athenian horses and birds served a similar function, as potters' marks. The painted horse under the handle of the belly-handled amphora **E1** has the identical position of the upright cross on the belly-handled amphora **A3**. The solitary horse standing on the belly-handled amphora **E2** is similar, but the animal has been placed on the body of the vase, next to the handle. The style of the horses on **E1** and **E2** is so similar that it is conceivable that the two vases were made by the one potter who used this distinctive design as his mark.¹¹⁹

The two birds, one under each handle, on the Attic Protogeometric skyphos found in Tomb 39 of the Toumba cemetery at Lefkandi¹²⁰ have the identical position of the X's on the contemporary Attic skyphoi **A2**, **A9–A11**. Prior to the discovery of this vase, the earliest bird on Attic Iron Age pottery dated from the Middle Geometric period.¹²¹

The horses and birds on **E1–E3** are the *earliest* figures in Attic Iron Age vase painting. They are invariably placed below or near a handle.¹²² It is only during the closing stages of Protogeometric and during the Early Geometric period that this scheme is done away with and figures are given more prominence by being placed on the necks of closed vessels¹²³ or else in a metope on an open vase.¹²⁴ These later figures, rather than being casually tucked away in inconspicuous positions, are ostentatiously displayed and carefully incorporated within the highly structured syntax of the geometric ornament. In this way, they anticipate figural developments of the later Middle and Late Geometric periods.¹²⁵ The placement of the earlier figures on **E1–E3**, however, stands in total contrast to that of the later examples. A few pieces stand in between and are more difficult to evaluate. The most notable of these are the pyxis and the fragmentary krater from the Kerameikos listed for comparison in the catalogue above under Group E. A three-legged figure, normally referred to as a centaur, holding a tree or palm branch, occupies the area under one handle of the pyxis; a spirallike motif, mostly not preserved, is found under the other handle. Both motifs may be linked with

¹¹⁹ Almost identical are the six horses on the neck (three on either side) of the small shoulder-to-lip-handled amphora, *Kerameikos* IV, inv. no. 911, pl. 8. I believe the latter was made by the same potter who made **D1** and **D2**. In the conventional chronological scheme, **D2** would normally be assigned to developed Protogeometric; **D1** is difficult to date precisely on account of its fragmentary state, whereas *Kerameikos* IV, inv. no. 911, pl. 8 should be Late Protogeometric. If I am correct in assuming that the horses on these three vessels were painted by the same potter, then much of the Protogeometric period could be condensed into the active lifetime of one craftsman.

¹²⁰ Popham, Pope, and Raison 1982b, T39-19, pp. 218, 235, pl. 29:a-c.

¹²¹ Benson 1970, p. 28.

¹²² In Mycenaean pictorial vase painting, it is not uncommon to find figures tucked away in some comparable position, like the birds under the handles of the Warrior Vase from Mycenae: Vermeule and Karageorghis 1982, pp. 130–132, pl. XI:42. In most such cases, however, they are only one element in a much larger figured composition.

¹²³ Such as the horses on the small amphora *Kerameikos* IV, inv. no. 911, pl. 8 and the horses framing the swastika in a panel on the neck on either side of the neck-handled amphora in the Chatziorgyris Collection, Athens, N.M. 18045; Benson 1970, pls. IV:1, V:1, 2.

¹²⁴ Such as the kantharos fragment, Athens, Agora P 1654; Burr 1933, no. 62, p. 560, fig. 19; Coldstream 1968a, p. 13; Benson 1970, no. 2, pl. IX.

¹²⁵ For figures in Attic Protogeometric pottery and in contemporary pottery styles elsewhere in the Greek world, see Kopcke 1977, pp. 32–50; Benson 1970, *passim*; Snodgrass 1971, p. 401; Papadopoulos 1990.

the decoration on the main body of the vessel. In the case of the krater, a partially preserved horse appears under the handle of the vase and a human mourner stands nearby, just to the left and slightly above the same handle. The funerary symbolism of the mourner in this case can hardly be doubted, but he is subordinate to the linear ornament, and the close proximity of man and horse may suggest that the two are symbolically related.

DISCUSSION

The majority of the Early Iron Age potters' marks assembled above, particularly those of Groups A and B, find nearly identical parallels among the *corpora* of incised, impressed, and painted marks employed on vessels of the Aegean¹²⁶ and Cypriot Bronze Ages,¹²⁷ as well as among similarly executed marks on Hellenic vases.¹²⁸ It should be stressed, however, that any similarities between the Early Iron Age potters' marks on the one hand and the earlier and later marks on the other is probably coincidental, and such ubiquitous signs as crosses, vertical strokes, and dots belong, as Alan Johnston puts it, to the very basic repertoire of decorative ornament, although, as he further notes, "in certain aspects of material culture an unbroken, if tenuous tradition survived."¹²⁹

Concerning the purpose that such marks served, a number of interpretations of the Bronze Age material have been suggested.¹³⁰ In the majority of cases the signs are interpreted as having served a function in the *production* or *distribution*, or both, of the pots on which they appear. Suggested functions include maker's mark or mark of ownership, capacity,

¹²⁶ The bibliography on Greek Bronze Age potters' marks is becoming substantial; for full references to the literature up to the early 1980's, see *Keos* IV, especially pp. xii–xiv; cf. Caskey 1970. For the Early Bronze Age, see especially *Zygouries*, p. 107, fig. 92; Tzavella-Evjen 1980; MacGillivray 1981; Pullen 1985, which includes the most up-to-date discussion of Early Helladic potters' marks. See also Branigan 1969. For the implications of these marks for Early Helladic trade and economy and their role in the development of linear writing, see Renfrew 1972, pp. 411–414. For the Middle Bronze Age, see especially Crouwel 1973; Nordquist 1987, p. 63 (with references); Zerner 1988; Coleman 1986, no. A 17, p. 12, pl. 19:a; Overbeck 1989, pp. 32–33. For the Late Bronze Age, especially useful are Raison 1968 and Sacconi 1974; Döhl 1978; Döhl 1979; Olivier 1988; Kober 1948; Tsipopoulou 1990 (mostly, but not exclusively, Late Minoan I). Hirschfeld 1990 is useful for postfiring marks added to Late Helladic and Minoan vases found on Cyprus. For Aigina (Middle and Late Helladic), see *Alt-Ägina* III, i, pls. 124, 125; Bernabò-Brea 1952. The table of potters' marks compiled by Edgar in Atkinson *et al.* 1904 (p. 178) is still useful and offers many close parallels, particularly for the marks of Group B. See also Kontoleon 1965; Webster 1966; Åkerström 1974; Popham, Pope, and Raison 1976.

¹²⁷ The Cypriot corpus of Bronze Age potters' marks is extensive; see especially Palaima, Betancourt, and Meyer 1984; Frankel 1975; Daniel 1941, esp. pp. 273–275; Stubbings 1951, p. 45; Åström 1966, pp. 149–192; Åström 1967; Åström 1969; Stewart and Stewart 1950, pp. 390–394; Vermeule and Wolsky 1976; Vermeule and Wolsky 1990, pp. 351–354; Masson in *Kition* I, pp. 145–147; Karageorghis and Masson 1968; for the trade link between Cyprus and Greece, see Catling *et al.* 1980. For Cypro-Minoan inscriptions on vases, mostly incised after firing, see Persson 1937; cf. Mitford 1971.

¹²⁸ Johnston 1979, p. 1.

¹²⁹ *Ibid.*

¹³⁰ These are treated by a number of scholars, with useful overviews by Alikí Halepa Bikaki and Paul Åström: *Keos* IV, pp. 42–43; Åström 1966, pp. 189–192.

TABLE 1. Early Iron Age Potters' Marks

Cat. No.	Symbol	Provenance	Context	Fabric	Shape	Position of Mark	Date
A1	X	Athens, Kerameikos	Tomb	Attic	WM N-H Amphora	Neck	DPG
A2	X	Athens, Kerameikos	Tomb	Attic	WM Skyphos	Under Handle	DPG
A3	+	Athens, Agora	Tomb	Attic	WM B-H Amphora	Under handle	LPG
A4	X	Athens, Agora	Well deposit	Attic	WM Cup	Underside	EPG
A5		Athens, Agora	Well deposit	Attic	WM small open vessel	Underside	EPG
A6		Athens, Agora	Well deposit	Attic	WM small open vessel	Underside	EPG
A7	+	Athens, Agora	Well deposit	Attic	W-M N-H Amphora	Neck	MG
A8	+ (?)	Athens, Agora	Well deposit	Attic	W-M N-H Amphora	Neck	LG
A9	X	Aigina	Tomb?	Attic?	WM skyphos	Under handle	LPG/EG
A10	X	Knossos, Fortetsa	Tomb	Attic	WM Skyphos	Under handle	DPG
A11	X	Knossos, Fortetsa	Tomb	Attic	WM Skyphos	Under handle	DPG
A12	+	Lefkandi	Toumba Building	Euboian	WM Amphora	Neck	MPG
A13	X	Lefkandi	Toumba Building	Euboian	WM Amphora	Neck	MPG
A14	+	Lefkandi	Toumba Building	Euboian	WM hydria	Neck	MPG
A15	+	Lefkandi	Toumba Building	Euboian	Amphora / hydria WM	Neck	MPG
A16	+	Lefkandi	Toumba Building	Euboian	Amphora/ hydria WM	Neck	MPG
A17	+	Lefkandi	Toumba Building	Euboian	Amphora / hydria WM	Neck	MPG
A18	X	Lefkandi	Toumba Building	Euboian	WM small open vessel	Underside	MPG
A19		Lefkandi	Xeropolis Settlement	Euboian	WM Amphora	Neck	LG
A20	X	Rheneia, Parakastri	Tomb	Cycladic	WM Cup	Underside	LPG/EG
A21	X	Mycenae	Tomb	Argive	WM Cup	Underside	EG II
A22	X	Mycenae	Tomb	Argive	WM Cup	Underside	EG II
A23	✱	Mycenae	Tomb	Argive	WM Cup	Underside	MG II
A24	X	Argos	?	Argive	WM Cup	Underside	LPG/EG
A25	X	Argos	?	Argive	WM Cup	Underside	Geometric
A26	X	Argos	?	Argive	WM small open vessel	Underside	LG
A27	X	Argos	?	Argive	WM small open vessel	Underside	Geometric
A28	X	Argos	?	Argive	WM small open vessel	Underside	LG

A29		Argos	?	Argive	WM small open vessel	Underside	EG
A30		Argos	Settlement	Argive	WM Oinochoe	Underside	LG
A31	X	Tiryns	Tomb	Argive	HM Kantharos	Underside	Middle Helladic?
A32	X	Tiryns	Cemetery area	Argive	WM Krater	Under handle	LG
A33	X	Tiryns	?	Argive	WM Pyxis	Underside	Geometric
A34	X	Tiryns	?	Argive	WM Plate	Underside	Geometric
A35		Klenia	Tomb	Corinthian	WM Oinochoe	Underside	MG I
A36	X	Nichoria	Settlement	Messenian	WM Cup	Underside	PG/EG
A37		Aetos	Settlement	Ithakan	WM Kantharos	Underside	LG
A38		Kastanas	Settlement	Central Macedonian	WM Amphora	Near handle	SubPG
A39		Exochi	Tomb	Rhodian	WM Oinochoe	Underside	LG
B1	I	Athens, Agora	Tomb	Attic	WM Cup	Handle base	EPG/DPG
B2		Lefkandi	Xeropolis Settlement	Imported?	WM Jug / Amphora	Shoulder	SubPG I-II
B3		Marmariani	Tomb	Thessalian	HM Jug	Handle	LPG
B4		Torone	Tomb	Coastal Macedonian	HM Kantharos	Handle base	SM/EPG
B5		Torone	Tomb	Coastal Macedonian	HM Kantharos	Handle base	SM/EPG
B6		Torone	Tomb	Coastal Macedonian	HM Jug	Handle base	PG
B7		Torone	Tomb	Coastal Macedonian	HM Cup / Kyathos	Near handle base	PG
B8	..	Torone	Tomb	Coastal Macedonian	HM Jug	Handle base	LPG
B9		Torone	Tomb	Coastal Macedonian	HM Jug	Handle base	LPG/SubPG
B10		Torone	Tomb	Coastal Macedonian	HM Jug	Handle base	LPG
B11		Torone	Tomb	Coastal Macedonian	HM Amphora	Shoulder	PG
B12	≡	Corinth	Well deposit	Corinthian	HM Hydria	On handle	MG II
B13		Corinth	Well deposit	Corinthian	HM Amphora	Neck	EG/MG I
B14		Corinth	Well deposit	Corinthian	HM Amphora	On handle	LG/EPC

C1		Corinth	Well deposit	Corinthian	HM Hydria?	Handle	MG?
C2		Corinth	Well deposit	Corinthian	HM Pitcher?	Handle base	MG?
C3		Corinth	Well deposit	Corinthian	HM Amphora	Handle base	MG II
C4		Corinth	Settlement	Corinthian	HM Pitcher	Handle	LG
C5		Pithekoussai	?	?	HM Amphora?	Neck	LG (c. 700 BC)
D1	Finger mark	Athens, Agora	Well deposit	Attic	WM N-H Amphora	Handle base	SM
D2	Finger mark	Athens, Agora	Well deposit	Attic	HM Chytra	Handle base	MG II
D3	Finger mark	Athens, Agora	Well deposit	Corinthian	HM Amphora	Handle base, both handles	MG II
D4	Finger mark	Corinth	Tomb	Corinthian	HM Oinochoe	Handle base	LG
D5	Finger mark	Corinth	Well deposit	Corinthian	HM Amphora	Handle base, both handles	MG
D6	Finger mark	Corinth	Well deposit	Corinthian	HM Amphora	Handle base, both handles	MG
D7	Finger mark	Corinth	Well deposit	Corinthian	HM Pitcher	Handle base	MG
D8	Finger mark	Corinth	Well deposit	Corinthian	HM Chytra	Handle base	MG
D9	Finger mark	Corinth	Well deposit	Corinthian	HM Chytra	Handle base	MG
E1		Athens, Kerameikos	Cemetery area	Attic	WM B-H Amphora	Under handle	PG
E2		Athens, Kerameikos	Tomb	Attic	WM B-H Amphora	On body, near handle	DPG
E3		Lefkandi	Tomb	Attic	WM Skyphos	Under handle both sides	LPG

Key

B-H	Belly-Handled	N-H	Neck-Handled
D	Developed	PC	Protocorinthian
E	Early	PG	Protogeometric
HM	Hand-Made	SM	Submycenaean
L	Late	SubPG	Sub-Protogeometric
M	Middle	WM	Wheel-Made

TABLE 2. Shapes of Vases with Potters' Marks and Their Positions

WHEELMADE AND PAINTED POTTERY

(i)	Amphoras, neck-handled	Neck: A1, A7, A8(?) , A12, A13 (cross); A19 (axe) Beside handle: A38 (dots) Handle base: D1 (finger impression)
	Amphoras, belly-handled	Under handle: A3 (cross); E1 (horse) Near handle: E2 (horse)
(ii)	Hydriai	Neck: A14 (cross)
	Amphoras/hydriai/large closed vessels	Neck: A15, A16, A17 (cross) Shoulder: B2
(iii)	Oinochoai	Underside: A30 (zigzags); A35 (asterisk); A39 (sun pattern)
(iv)	Pyxides	Underside: A33? (cross)
(v)	Kraters	Under handle: A32 (cross)
(vi)	Skyphoi	Under handle: A2, A9, A10, A11 (cross); E3 (birds, one under each handle)
(vii)	One-handled cups	Underside: A4, A20, A21, A22, A24, A25, A36 (cross); A23 (asterisk) Handle base: B1 (stroke)
(viii)	Kantharoi	Underside: A37 (crosshatching)
	Unidentified small open vessels (skyphoi, cups, kantharoi)	Underside: A18, A26, A27, A28 (cross); A29 (asterisk); A5, A6 (irregular stroke[s])
(ix)	Plate	Underside: A34? (cross)

HANDMADE POTTERY

(x)	Amphoras/two-handled jars	Neck: B13 (3 strokes); C5 (stamp) Shoulder: B11 (5 strokes) Handle: B14 (3 strokes) Handle base: C3 (stamp); D3, D5, D6 (finger impressions)
(xi)	Hydriai	Handle: B12 (3 strokes); C1 (stamp)
(xii)	Pitchers, oinochoai, and jugs with cutaway neck	Handle base: B3 (8 strokes); B6 (3 strokes); B8 (2 dots); B9 (arrow-shaped mark); B10 (composite mark: dots and arrow-shaped mark); C2, C4 (stamp); D4, D7 (finger impression) Body (above mastoi?): B8 (arrow-shaped marks)
(xiii)	Kantharoi	Handle base: B4 (arrow-shaped mark); B5 (3 strokes) Underside: A31 (cross [Middle Helladic?])
(xiv)	Cup/kyathoi	Body, near handle base: B7 (14 dots)
(xv)	Chytrai	Handle bases: D2, D8, D9 (finger impression)

TABLE 3. Types of Marks

Crosses (X and †)	A1, A2, A3, A4, A7, A8, A9, A10, A11, A12, A13, A14, A15, A16, A17, A18, A20, A21, A22, A24, A25, A26, A27, A28, A31?, A32, A33, A34?, A36
Asterisks (eight-pointed stars)	A23, A29, A35, cf. C2
Sun pattern	A39
Cross with V's filling the quadrants	C3
Stroke(s), variously arranged	(1 stroke): A5, B1 (3 strokes): B5, B6, B12, B13, B14 (5 strokes): A6, B11 (8 strokes): B3
Arrow-shaped marks and variations	B4, B8, B9, B10
Crosshatching	A37, cf. B2
Zigzags	A30
Dots	A38, B7, B8, B10
Composite marks (arrow-shaped and dots)	B10, cf. B8
Axe	A19
Horses	E1, E2
Birds	E3
Humans	C1, C4, C5
Finger Impressions	D1, D2, D3, D4, D5, D6, D7, D8, D9

commodity, provenance (workshop or production center), or destination.¹³¹ Moreover, it is clear, particularly from marks found on the pottery from a specific site, that there is more than one category of mark and that they served a variety of purposes. For example, Bikaki has argued that the composite signs on the Middle Bronze Age (Period IV) pottery from Kea may indicate capacity, whereas the Linear A signs, which emerged during the later stages of the Middle Bronze Age (Period V), may have functioned as labels, possibly relating to the commodity contained in the vessel.¹³² In dealing with the distinctive Middle Helladic gold-mica wares considered to be of Aiginetan origin and found in quantity in the Argolid, Gullög Nordquist points to the occurrence of potters' marks on the undersides or handles of the imported vessels and suggests that the marks may indicate a production aimed at

¹³¹ *Ibid.* Other suggested functions that have been aired may be more summarily treated. For example, Vitelli (1977, p. 26) noted, but quickly dismissed, the possibility that pots were marked to avoid spreading contamination from diseased owners. Another possibility suggested for the more tactile marks of the Neolithic period is that they were designed as aids for blind users of the vessels. Although discussing blindness at some length, Vitelli (1977, p. 23) notes that the question of what kind of aid the marked vessels provided would still remain. In his study of the markings on early prehistoric artifacts, Alexander Marschack suggested that they served a time-factoring purpose, specifically for keeping track of time in order to anticipate seasonal changes: Marschack 1972, p. 27; cf. Vitelli 1977, p. 28. In discussing this suggestion, Vitelli states: "The potting process itself is time-factored, probably seasonal and cyclical, but how the . . . marks on pots might be related to that cycle escapes me."

¹³² *Keos IV*, p. 42.

export.¹³³ She goes on to state that the potters' marks on both the imported Aiginetan and Lustrous Decorated pots more likely served the function of marking a producer, rather than destination, because the marks on such vessels appear to be the same at most sites where they are found.¹³⁴ Similarly multifunctional are the trade marks on Greek vases of the Archaic and Classical periods, as well as the contemporary graffiti and dipinti incised or painted after firing.¹³⁵ In an important article on Neolithic potters' marks, and in the context of the distribution of marked pots, K. D. Vitelli notes that the use of potters' marks suggests not the trade of objects or even verbal information but the regular relocation of potters within different settlements.¹³⁶ She visualizes a model in which the distribution of potters' marks might indicate marriage patterns and kinship ties within Neolithic communities.¹³⁷

As for the Early Iron Age marks presented here, their isolated or else inconspicuous placement on a vase, whether on, below, or near a handle, on the neck, on the underside, or, more rarely, on the shoulder, contrasts to the positioning of painted or incised ornament and evinces a significance beyond that of decoration. In any interpretation of the marks, it is important to bear in mind the multifunctional aspects of the Bronze Age and later Greek marks. Of significance is not only the nature of the mark itself but also the shape, decoration, and function of the vessel on which it appears, as well as its context. Although the quantity of potters' marks assembled here is small and the corpus probably far from complete, what is immediately remarkable is the wide distribution of such symbols throughout the Greek world in the Early Iron Age. Details of provenance and context are summarized and presented in Table 1 (pp. 474–476 above). Early Iron Age potters' marks are common in Athens, Corinth, the Argolid, and elsewhere in the Peloponnese; in the north they are found in Thessaly, central Macedonia, and Chalkidike. They are common in Euboiia, and there is at least one example from the Cyclades, another from Rhodes, while in the west there is a solitary mark from Ithaka and one from Pithekoussai. What is also remarkable about the marks is the range of shapes, both wheelmade and painted and handmade vessels, on which they occur (Table 2, p. 477 above). Potters' marks of the period are found on perhaps as many as fifteen individual shapes, which serve a wide variety of functions.

In the majority of cases, the interpretation of the Early Iron Age marks as indicators of capacity seems unlikely because similar marks, such as the painted crosses, appear on vases not only of different shapes and sizes but also of different function (drinking cups and amphoras, for example). Similarly, a numerical value for such common marks as dots (**A38**, **B7**, **B8**, **B10**) or simple strokes (**A5**, **A6**, **B1**, **B3**, **B5**, **B6**, **B11–B14**) is usually, though not always, negated in the modern literature, as such marks are again found on vessels of different shapes and sizes.¹³⁸ This in itself, however, presupposes an understanding of the numerical system employed at the time and a knowledge of its application in specific

¹³³ Nordquist 1987, p. 63; for Aigina as the production center of the Middle Helladic gold-mica wares, see Zerner 1978, p. 57.

¹³⁴ Nordquist 1987, p. 63.

¹³⁵ Johnston 1979; *Agora XXI*.

¹³⁶ Vitelli 1977, p. 30.

¹³⁷ *Ibid.*

¹³⁸ *Ibid.*; cf. Tzavella-Evjen 1980, p. 96. Johnston (1983, p. 67) notes that numerals are not found for sure in the extant later Greek material before 600 B.C.; Johnston 1979; cf. Robb 1978.

instances.¹³⁹ It is worth remembering that the interpretation of numerical values of marks of the Classical and Roman periods often involves a good deal of controversy and doubt¹⁴⁰ and that Bronze Age or later Greek methods of numerical notation should not be assumed for the Early Iron Age.¹⁴¹ The most likely candidates for numerical notations are the strokes and dots (Table 3, p. 478 above), but in both cases definitive analysis is hampered by the quantitative meagerness of the sample. Little can be deduced from the complex mark on **A38**, comprising eighteen painted dots arranged in three vertical rows of six, as it is unique and comes from a site that has yielded, so far as I know, no other certain potters' marks.¹⁴² The dots on **B7**, **B8**, and **B10**, though all from Torone, do not manifest any apparent pattern. The fourteen preserved dots on **B7** were impressed near the handle base of a cup/kyathos, whereas only two dots were impressed at the base of the handle on the jug **B8**. The composite mark on **B10** is different again, combining six dots with an arrow-shaped symbol, although it is found on a shape and in a position similar to the mark on **B8**. In a similar vein, the majority of marks comprising strokes reveal no clear pattern. Of these, **A5**, **A6**, **B1**, **B3**, and **B11** are unique and occur on vases of different shape; any number of interpretations might be suggested but few conclusively established statistically. The marks comprising three strokes on **B5** and **B6**, both from Torone, are similar, but once more they are found on vessels of totally different shape, which would seem to argue against any intentional notation system based on capacity or commodity. More interesting are the marks from Corinth (**B12–B14**), since in this case something of a pattern might appear to emerge. Each mark comprises three strokes; on the hydria **B12** the strokes are set horizontally on the handle, whereas on the amphoras **B13** and **B14** they are set vertically. The mark on **B13** appears on the neck, that on **B14** on the handle. It may be tempting to suppose a consistent numerical notation to do with capacity in the case of **B13** and **B14**, especially since these amphoras are considered the progenitors of the later Corinthian Type A and A' transport amphoras.¹⁴³ It should be stressed, however, that **B13** is considerably larger than **B14** and also much earlier. The variance in size of the two amphoras would seem to argue against an interpretation as capacity indicators in this specific instance, although it is possible that some other numerical meaning was intended.

Establishing commodity is fraught with the same difficulties as establishing capacity, since similar marks are found on vessels of different shapes, sizes, and functions. The one

¹³⁹ For an outline of the system of weight widely used in the Aegean during the Middle and Late Bronze Age, and for Minoan and Cycladic metrology, see Petruso 1978; Petruso 1979; Bennett 1950; Was 1971a; Was 1971b; Was 1972; Was 1973a; Was 1973b; Was 1974; Was 1977; Was 1978. See further Duhoux 1974; Boskamp 1982; De Fidio 1983.

¹⁴⁰ See, among others, *Agora XXI*, pp. 1, 21–23, 55–87; Lang 1956; also *Agora V*, p. 95 (M123), pp. 105–106 (M230, M232), pp. 109–110 (M273), p. 115 (M330, M333).

¹⁴¹ For Greek systems of numerical notation, see Tod 1911/1912; Tod 1926/1927; Tod 1936/1937; Tod 1950; see further Lang 1955; Lang 1956; and generally *MSR* 1864–1866.

¹⁴² Although the Early Bronze Age as well as the Late Bronze and Early Iron Age handmade pottery from Kastanas has been published, the wheelmade painted pottery awaits definitive publication in *Kastanas* (c). For the handmade wares, see *Kastanas* (a); for the Early Bronze Age, see *Kastanas* (b). For the Late Helladic painted pottery from the site, see Podzuweit 1979. For a published selection of Early Iron Age painted pottery, see Hänsel 1979, various examples on p. 190, fig. 15; pp. 193–194, figs. 16, 17; p. 198, fig. 18.

¹⁴³ Pfaff 1988, p. 29.

noted exception may be **A30**, where, in the context of Argive Late Geometric, the complex zigzag design may denote “water” or “liquid”, a symbol not inappropriately painted on the underside of a pouring vessel.¹⁴⁴

That the marks are an indication of ownership also seems unlikely since the vast majority of later Greek owners' marks are normally, though not exclusively, incised on a vase *after* it was fired.¹⁴⁵ An alternative suggestion, which does not appear to have been seriously considered, especially with regard to the Bronze Age potters' marks, is that certain symbols may have denoted specially commissioned, preordered, prepaid, or reserved pots or sets of pots. In this respect, the amphora **A1** and skyphos **A2**, each with a painted cross and both deposited in Tomb 34 in the Precinct XX cemetery in the Kerameikos, may well have formed part of a coordinated set of pots either purchased, preordered, or specially commissioned. The two one-handed cups from Mycenae deposited in the same tomb (**A21**, **A22**), each with a cross on the underside and surely products of one workshop if not one potter, could be interpreted in the same light; so too the kantharoi **B4** and **B5**, found in the same tomb at Torone, although in this case the marks are different from one another. Such an interpretation could apply to other Early Iron Age potters' marks, particularly since many derive from the same context and could therefore have been originally part of a specially ordered batch of pots or kiln load.¹⁴⁶ A similar interpretation may equally apply in the case of some of the Bronze Age potters' marks already noted. Here the whole question of pottery production, market demand, and the seasonality of certain potters' activities, such as firing, is important.¹⁴⁷ Most ethnographic studies of traditional modern potters of the Mediterranean have shown, first of all, that many elements of pottery production are seasonally defined, with the result that purchasable pots are not available all year round; secondly, that potters, especially those highly skilled, find it difficult to keep up with market demand.¹⁴⁸ Assuming that seasonality of potters' activity and healthy market demand are plausible for Early Iron Age pottery production, then the possibility of a potter specially marking a vase as part of a batch, whether for a local client or for export, need not be surprising. In such a situation, the mark itself would not necessarily denote specific maker or owner or specific destination. In the context of workshop production, a mark, whether incised or painted, may have served as a reminder to the maker, for whatever purpose.

Much of the literature on Bronze Age and later Greek potters' marks has focused on vases specifically marked for export, with the symbol signifying either provenance or destination. Such a commercial possibility for the Early Iron Age was raised by Desborough in the case of

¹⁴⁴ See note 58 above.

¹⁴⁵ *Agora XXI*, pp. 23–51, especially p. 29. Note also the alphabetic inscriptions on the later terracotta molds from Corinth, of which Agnes Stillwell (*Corinth XV*, i, p. 84) writes: “The inscriptions perhaps designated the owner or, more likely, the workman who made the mould.” For illustrations of the inscribed molds, see *Corinth XV*, i, pl. 28.

¹⁴⁶ Compare the marks on a number of pots from the Toumba building at Lefkandi (**A12–A18**); also **A4** and **A5**, dumped into the same well in the area of the later Athenian Agora.

¹⁴⁷ Seasonality of potters' activities is a point stressed by, among others, Vitelli (1977, p. 28).

¹⁴⁸ Richter 1923, pp. xi–xiii; Casson 1938; Hampe and Winter 1962; Hampe and Winter 1965; Birmingham 1967; Hankey 1968; Winter 1972; Cuomo di Caprio 1982; Voyatzoglou 1984; Blitzer 1984; Betancourt 1984b; Jones 1986, pp. 849–880; Blitzer 1990. Cf. Lisse and Louis 1956; Cook 1984; Saraswati and Behura 1966.

the two Attic Protogeometric skyphoi with painted crosses found in tombs at Knossos.¹⁴⁹ He considered such a possibility unlikely, however, largely because a similar mark was found on another Attic skyphos (**A2**) deposited in a tomb in Athens. Apart from **A10** and **A11**, the only vases of the period with potters' marks representing imports to the site where they were found are **D3**, **E3**, and probably **B2**. The first two are a Corinthian handmade amphora found at Athens and an Attic skyphos found at Lefkandi; the last, also found at Lefkandi, is of undetermined fabric (Table 1, p. 475 above). Another possibility is the Attic(?) skyphos found on nearby Aigina (**A9**) and perhaps also **C5**, although details of provenance and context of both vases are uncertain.¹⁵⁰ In some of these cases, the possibility of a mark relating to provenance or destination cannot be dismissed, but the marks can equally refer to commissions or orders, as noted above, and need not specifically mark provenance or destination.

In any discussion of the commercial complexities of the Early Iron Age potters' marks, the apparent, if not striking, similarity of the stamped marks on **C1–C5** and later Greek stamped amphora handles, especially in terms of their positions, deserves special mention. Four of the five impressions are found either on the handle or at the handle base of an amphora (**C3**), a hydria (**C1**), and two possible pitchers (**C2**, **C4**) of Corinthian manufacture. The exception is a stamp isolated on the neck of an amphora(?) from Pithekoussai (**C5**).¹⁵¹ As already noted, the handle fragment **C3** is from a type of amphora that continues in the specialized form of the Corinthian Type A and A' transport amphoras of the 7th through 2nd centuries B.C.¹⁵² In her seminal paper on the stamped amphora handles found in the Athenian Agora, Virginia Grace enumerated the forms of the stamps and their suggested purposes.¹⁵³ It is unlikely, however, that the highly specialized forms of these stamps are found before the Classical period. Grace states that the most likely function of the later stamps was to date the stamp itself, or rather its die, which was then a license, valid for a limited period, permitting a manufacturer to sell goods in return for payment to the government; the extra cost he then collected by raising the price of the commodity to cover the amount.¹⁵⁴ The existence of such revenue marks in the Early Iron Age is most unlikely, if for no other reason than the paucity of such stamped impressions and the lack of sufficient detail in the design of the die. It is equally unlikely that the stamps on **C1–C5** explicitly or implicitly signify where they were made, nor is it likely that they denote specific capacity, commodity, or destination, as all five are of different form, are found on vessels of different shapes, and four of them were made and produced at the one site. Furthermore, it is not clear whether the die belonged to

¹⁴⁹ Desborough 1952, pp. 83–84 (**A10** and **A11**).

¹⁵⁰ I have not included the Corinthian oinochoe found at Klenia (**A35**), since Corinth and Klenia are located very close to one another.

¹⁵¹ Such a position is common for stamped impressions on many Roman amphoras; see, for example, Callender 1965; Beltrán Lloris 1970; Peacock and Williams 1986; Papadopoulou 1989b. As for **C5**, I wonder if the vessel itself is not of Corinthian manufacture (cf. **D3**).

¹⁵² Pfaff 1988, p. 29; for the history of this type of amphora, see Koehler 1979.

¹⁵³ Grace 1934, pp. 197–199.

¹⁵⁴ *Ibid.*, p. 199. The other, previously suggested functions were that the stamps date the wine or date the pot and thus serve to measure its proper drying period. Alternatively, amphora stamps might be seen as simply an inheritance of brick stamps or as good advertising for the jar manufacturer.

the potter who made the vase or to someone else. In this respect, the *officinators'* names found on later Rhodian stamped amphora handles are worth bearing in mind.¹⁵⁵

It is generally accepted that a seal, whether by gift or otherwise, may be delegated to a steward, messenger, or subordinate officer and that it may also be used on behalf of a state to certify a document or guarantee official standards.¹⁵⁶ Once more, the data set of such stamps for the Early Iron Age is so small that a more thorough analysis is impeded, and it is unfortunate that there are so few examples like **C5**, since the same die was used to stamp a terracotta plaque found at Samos.¹⁵⁷ The most basic purpose of sealing is to secure and identify property.¹⁵⁸ The practice of stamping vases and other objects with gems or dies is well attested in the Greek Bronze Age,¹⁵⁹ and stamped pot handles of the Bronze and Early Iron Ages are found in Palestine.¹⁶⁰ It is therefore possible that the stamps on **C1–C5** are makers' marks; this would assume that each individual die belonged to a different potter. In the case of such an interpretation, however, it seems odd that more vessels, or fragments of vessels, have not been found with similar stamps. As Pfaff notes, the vast majority of the coarse-ware vessels at Corinth and elsewhere are not stamped, and he concludes that the function of stamps was by no means essential.¹⁶¹ It may be that the stamps served to mark a pot, or batch of pots, for a particular client or purpose. It is also possible that the vessels were stamped using the seal of the intended owner or buyer, for whatever purpose. If the evidence of the later Greek stamped amphora handles is any indication for use in the Early Iron Age, a point that can certainly be contested, then it is also possible that the sealing of the vases, in order to secure or identify property, need not refer to the vase itself but rather to its contents. In such an interpretation, the mark would not necessarily refer to a *specific* commodity but rather indicate that that commodity was the property or product of the owner of the seal. The fact that similar dies were used to stamp other objects, however, such as loomweights, spindlewhorls, and votive plaques, would tend to argue that the purpose of stamping was to indicate the maker or owner of the object bearing the stamp.¹⁶²

Two further aspects of the sealings on **C1–C5** are important to note. The first is the material from which the die was made. If Pfaff's observations on the stamp impressions on

¹⁵⁵ Grace 1934, esp. pp. 214–220.

¹⁵⁶ Boardman 1972, p. 13. For the function of seals in the Aegean Bronze Age, see, most recently, the various papers in Palaima 1990.

¹⁵⁷ See note 118 above.

¹⁵⁸ Boardman 1972, p. 13.

¹⁵⁹ *Zygouries*, p. 106, fig. 91; note also the stamped impression on the handle of an Early Minoan III–Middle Minoan I cup from Petras: Tsipopoulou 1990, no. 24, p. 103. The most recent overview (with references), particularly for the Early Bronze Age, is Pullen 1994; see also Wiencke 1989, p. 507, note 78. See further *CMS* I, nos. 160–163, pp. 181–183; *CMS* I, Supplementum, no. 17, p. 44, nos. 170–172, pp. 208–211; cf. *Poliochni* I, pl. 129:a; Tsountas 1899, no. 15, pl. 9; *CMS* V, i, nos. 120–149, pp. 93–114 (pottery, including pithoi and hearth rims); ii, nos. 451–482, pp. 356–377 (pottery and hearths), nos. 503–509, pp. 396–400; nos. 529–572, pp. 428–454 (= *Tiryas* IV, pls. XVI–XIX); Wiencke 1969, pp. 508–509; cf. Lavezzi 1979; Wiencke 1970; *CMS* V, Supplementum 1A, no. 383, p. 414, nos. 399–403, pp. 431–435; Dousougli-Zachos 1989; Weisshaar 1989; Benson 1956; Catling and Karageorghis 1960, pp. 123–124.

¹⁶⁰ Grace 1934, p. 199, note 4.

¹⁶¹ Pfaff 1988, p. 40.

¹⁶² See notes 16, 113, 114 above.

Corinthian coarse-ware vases and implements are correct, then the dies used were probably made of various materials.¹⁶³ Pfaff convincingly argues that the die used repeatedly to stamp a locally made lid at Corinth, the intention of which is surely decorative, was made of clay.¹⁶⁴ He also notes that the crudeness of the pattern on **C2** might indicate, though less certainly, that it too was stamped with a clay die. For the remainder, he suggests that the crispness of the design would indicate the use of stone, metal, wood, or bone dies.¹⁶⁵ It is perhaps no coincidence that the one verified example of decorative stamping at Corinth was with a die made of material readily at hand in a potter's workshop. That is to say, the die was probably made for the specific purpose of decorating the vase. If such a pattern could be demonstrated or established on a firmer statistical base, then perhaps more could be said about the function of these sealings in the Early Iron Age.

The second aspect to consider is the quantity of Aegean Early Iron Age seals. The earliest post-Mycenaean seals found in a datable context on the Greek mainland, and likely to be local products, are the ivory pyramidal seal stamps deposited in the mid-9th-century grave on the north slopes of the Areopagos known as the "Tomb of a Rich Athenian Lady".¹⁶⁶ In his discussion of these seals, Boardman first notes the early date of ivory working, believing that ivory was a new material for the Greeks of the Iron Age, reintroduced, as was the art of seal engraving, from the East.¹⁶⁷ He goes on to state: "Since seal use was already current in about 850 B.C. we should probably assume the existence of seals in other materials which have not survived, such as wood, because there is no other physical evidence for seals until the stone series beginning nearly a century later."¹⁶⁸ In discussing Bronze Age seals found in 8th- and 7th-century tombs or votive deposits, Boardman states that "the gems were handled and worn as amulets by folk to whom the near-realistic arts of the Bronze Age were as strange as the use of the seals themselves."¹⁶⁹ He compares this situation with Greek Bronze Age seals worn by peasants in the last century in Crete, the *γαλακτόπετρες* bought by visitors and collectors like Sir Arthur Evans.¹⁷⁰ Although their number is small, it is nevertheless significant that three of the five impressions presented here (**C1–C3**) can be assigned to the earlier 8th century and, as such, are welcome additions to the corpus for this period. More significantly, the fact that all five are stamped on vases suggests a specialized function with full intent, not previously noted for this period, and further indicates that the use of seals was by no means a strange phenomenon, at least for certain members of the population. The existence of these Early Iron Age stamp impressions brings us a little closer, but does not totally bridge the chronological gap, to similar stamp impressions on vases of the Bronze

¹⁶³ Pfaff 1988, p. 40.

¹⁶⁴ Pfaff 1988, no. 112, pp. 40, 77, pl. 31. For the possible use of clay dies to stamp later Greek amphora handles, see Grace 1935. It is worth noting that a serpentine seal with a crosshatched design similar to that on the Corinthian lid was found at Pithekoussai; see Buchner and Boardman 1966, no. 26, p. 21, fig. 36.

¹⁶⁵ Pfaff 1988, p. 40.

¹⁶⁶ Smithson 1968, nos. 79, 80, pp. 115–116, pl. 33; compare a faience pyramidal stamp seal from Rhodes (Marmara): Laurenzi 1936, p. 164, fig. 151, dating to the early 9th century B.C.

¹⁶⁷ Boardman 1972, p. 108.

¹⁶⁸ *Ibid.*

¹⁶⁹ Boardman 1972, p. 107.

¹⁷⁰ *Ibid.*

Age and, at the other end of the time scale, a little nearer to stamped amphora handles and similarly marked vases of the Archaic and Classical periods.

Stamp impressions are also found on terracotta roof tiles, particularly of the Lakonian type.¹⁷¹ These are not included here as they fall outside the chronological scope of this paper; the earliest stamped roof tiles are dated to the first half of the 7th century B.C.¹⁷² The suggested functions of these stamps, however, are important to note. In his studies of stamped roof tiles, Rainer Felsch has suggested that the stamps on tiles of Hellenistic and later date served to facilitate checking by the client or as protection against theft, whereas the earlier stamps (Archaic and Classical) served as an accounting aid for internal workshop requirements or perhaps as advertising for the workshop.¹⁷³ A feature common to the earlier tiles is that the impressions are located on the lower, hidden, face of the tile, in contrast to those of later date, which are stamped on the upper face.¹⁷⁴

A possible clue as to the function of the early post-Mycenaean use of “to seal” is provided by Theognis 1.19–24:

Κύρνε, σοφιζομένω μὲν ἔμοι σφρηγίς ἐπικεῖσθω
 τοῖσδ' ἔπεσιν, λήσει δ' οὔποτε κλεπτόμενα,
 οὐδέ τις ἀλλάξει κάκιον τοῦσθλοῦ παρεόντος,
 ᾧδε δὲ πᾶς τις ἔρει· Θεύγνιδός ἐστιν ἔπη
 τοῦ Μεγαρέως πάντας δὲ κατ' ἀνθρώπους ὀνομαστοῦ,
 ἀστοῖσιν δ' οὔπω πᾶσιν ἀδεῖν δύναμαι·

A similar usage of σφραγίζω (Ionic σφρηγίζω) is echoed in Kritias (*Elegiac Poems* 4): “... σφραγίς δ' ἡμετέρης γλώττης ἐπὶ τοῖσδεσι κεῖται.” In both passages, whether the “seal of the wise man” or the “seal of my tongue”, σφρηγίς/σφραγίς is used metaphorically as a warrant, guarantee, or signature. In Theognis 1.19–24 it is specifically used to guard against theft or plagiarism and to avert the misrepresentation of his meaning. A similar function may well lie behind the stamping of vases with a seal in the Early Iron Age, whether the stamps served as a warrant or mark of guarantee, perhaps as a protective measure against theft or wrongful use, as Felsch has suggested for the later stamped roof tiles.

Related to the stamp impressions of Group C are the finger impressions of Group D, particularly since such impressions, normally found at the base of a handle (or handles), are common on a variety of standard transport amphoras of the Classical period.¹⁷⁵ Finger or thumb impressions, usually at the base of both handles, are found on Thasian, Samian, Mendean, and other amphora types of the Classical period; they occur on some but not all examples of any given amphora type within a given period. Judging from complete or reasonably well preserved vessels, finger impressions are found on both die-stamped and unstamped amphoras. The fact that not all amphoras from a particular region or workshop manufactured at a similar time have finger impressions indicates that the impressions are not just a typological feature of the shape or decoration of that amphora type. Unfortunately, the

¹⁷¹ Felsch 1979; Felsch 1990.

¹⁷² Felsch 1990, p. 313.

¹⁷³ *Ibid.*, p. 301; cf. Felsch 1979, pp. 18–19.

¹⁷⁴ Felsch 1990, p. 301; cf. Hübner 1973, p. 86; Hübner 1976, p. 180, note 29.

¹⁷⁵ Grace 1949; Grace 1956, no. 5, p. 129; Grace 1971, esp. p. 93, discussion under no. 3.

occurrence of finger impressions on Classical and Hellenistic transport amphoras has not received the attention in amphora studies accorded to the more complex stamps.

The Early Iron Age finger impressions assembled above are found on a variety of shapes, serving different purposes. They occur more commonly on handmade vessels but may well be more numerous on wheelmade shapes than is indicated here.¹⁷⁶ The fact that these impressions are found on a relatively small number of examples of any given shape suggests that they are not an essential component of the process of attaching the handle.¹⁷⁷

Another function, suggested by at least one commentator, is that a mark made on a vase prior to firing serves the purpose of indicating or identifying the object as a dedication, or its owner as a dedicant.¹⁷⁸ Certainly, a great many vases inscribed *after* firing are dedications or intended as votive offerings; the numerous inscriptions from Mount Hymettos, already discussed, represent only one group of examples. The votive plaque found at the Heraion on Samos and stamped with the same die as that used for **C5** (see p. 471 above with note 118; p. 483) would certainly qualify as a dedication, identifying the owner of the seal as the dedicant. As for the Early Iron Age vases assembled here, such an interpretation is untenable because not one of the vases can be shown with certainty to have been deposited in a context identified as a temple, sanctuary, or the like. This is not to say that such an interpretation is impossible for the period, only that we have no evidence for it. The problem, in part, may lie in the paucity of known Early Iron Age sanctuary sites or, rather, the poor state of the preservation of, and general lack of well-stratified deposits from, those known.¹⁷⁹

The most common interpretation of many of the Bronze Age and post-Geometric marks appears to be as maker's marks. Emily Vermeule, for example, has stated that potters' marks are simple symbols that function like a thumbprint on an object.¹⁸⁰ In the case of the marks of Group D a finger or thumb impression constitutes the mark. The apparent, if not obvious, similarity between the humble Early Iron Age crosses and the ubiquitous X serving as a signature for illiterate people living in our own time may be noted.¹⁸¹

The use of identification marks in Greek literature is attested as early as Homer. In Book VII (161–199) of the *Iliad*, Nestor, having shamed the Achaians for not standing up to

¹⁷⁶ The Corinthian handmade examples catalogued above in Group D include pieces of normal Corinthian "coarse ware" as well as examples of "cooking ware": Pfaff 1988, pp. 65–79.

¹⁷⁷ To take just one shape as an example, among the many Early Iron Age chytrai from the Athenian Agora that I have personally inspected, **D2** is the only example with a finger impression.

¹⁷⁸ Panayotou 1986, p. 99.

¹⁷⁹ Drerup 1969; Kalpaxis 1976; Mazarakis Ainian 1985; Mazarakis Ainian 1988; Mazarakis Ainian 1989; Mazarakis Ainian 1992; Mazarakis Ainian (forthcoming); Fagerström 1988.

¹⁸⁰ Vermeule 1972, p. 40; cf. Vitelli 1977, p. 27.

¹⁸¹ Although common, the painted crosses of Group A are rarely similar to one another, except, perhaps, in some of those cases where pots are likely to have been produced by one potter. The differences among the various crosses are not only confined to whether the mark was painted upright or diagonally but are also in details of execution. The large X on **A13** from Lefkandi, for example, is certainly very different from the small vertical crosses on **A12**, **A14**, and **A15**, and such differences may be noted among many of the similar marks presented here. Among the vessels plausibly made by the same potter, the crosses on **A1** and **A2** are of interest because they are very similar to one another, even though they are found on vases of totally different shape and in different positions. In both cases, the lower right terminal of the cross is slightly elongated, while the upper left is comparatively shorter.

Hektor's challenge to fight a man in single combat, moved nine Greeks to spring to their feet as volunteers. The aged king of the Pylians recommended that the winner should be chosen by lot:

κλήρω νῦν πεπάλεσθε διαμπερές, ὅς κε λάχῃσιν· (7.171)

In accordance with the recommendation, each man marked his lot, and these were cast into the helmet of Agamemnon:

ᾠς ἔφαθ', οἱ δὲ κλήρον ἐσημήναντο ἕκαστος,
ἐν δ' ἔβαλον κυνέη Ἀγαμέμνονος Ἀτρεΐδαο· (7.175–176)

The winning lot was circulated by herald among the Achaian throng and was finally recognized by Aias, who knew at a glance his mark (σήμα):

ὅς μιν ἐπιγράψας κυνέη βάλε, φαίδιμος Αἴας,
ἧ τοι ὑπέσχεθε χεῖρ', ὁ δ' ἄρ' ἔμβαλεν ἄγχι παραστάς,
γνῶ δὲ κλήρου σήμα ἰδὼν, γήθησε δὲ θυμῷ. (7.187–189)

In the above passage it is reasonably clear that the *σήματα* are marks, not written letters. Elsewhere in Homer the *σήματα* λυγρὰ of Bellerophon (*Il.* 6.168) were, similarly, not written letters but simple symbols, pictorial tokens, or devices.¹⁸² The later (Archaic and Classical) use and meaning of *σήμα*, *σημεῖον*, *ἐπίσημα*, *ἐπίσημον*, and *παράσημον*, whether denoting “sign”, “mark”, “seal”, “signature”, “token”, “device”, or “emblem”, have been reviewed recently by Jeffrey Spier.¹⁸³ He sees their beginnings in the late 8th and early 7th centuries and states that most *semata* are common, single-figure motifs (usually animals) that are neither part of a narrative composition nor abbreviations of a more complex scene (cf. the animals of Group E).¹⁸⁴ He notes that Archaic *semata* defy iconographic investigation, that our literary sources are of little help, and that the motifs probably had little or no symbolic content.¹⁸⁵ Spier's discussion concentrates on seals, coins, and shields of the Archaic period. The use of seals in the Early Iron Age, limited as it is, has already been discussed above, and it is clear that the *widespread* use of seals in post-Bronze Age Greece is not really seen until the 6th century B.C.¹⁸⁶ The emblems on coins are beyond the scope of this paper, as are Greek shield devices, although the latter are found in figurative representations on Late Geometric and Protoattic vases.¹⁸⁷ If the potters' marks assembled here served a function similar to the Homeric or later *semata*, then the origin of such marks may be traced to the earliest stages of the Early Iron Age.

¹⁸² Cf. LSJ, *s.v.* *σήμα*. Some scholars, for example A.T. Murray in his translation of the *Iliad* (Loeb ed., 1988 reprint of the 1924 translation, p. 274, note 1), note that this is the only passage in Homer that suggests possible knowledge of writing. The word *σήμα* may denote a mark made by an illiterate person (see note 181 above), as in the papyrus no. 67163.37 (Maspéro 1913).

¹⁸³ Spier 1990.

¹⁸⁴ Spier 1990, pp. 127–128.

¹⁸⁵ Spier 1990, p. 128.

¹⁸⁶ Spier 1990, p. 109 (with references).

¹⁸⁷ The earliest example of a shield device cited by Spier (1990, p. 114 and pl. 5:a) is the Late Geometric amphora in the Benaki Museum (Cook 1947, p. 150; Snodgrass 1964, p. 62, note 95), which shows one warrior in file holding a shield on which there is the emblem of a horse. The earliest extant shields bearing actual devices listed by Spier (1990, p. 114, notes 86–88) date to the very late 7th or 6th centuries B.C.

An interesting twist to the maker's-mark or identification-mark theory is noted by David Frankel, who, following Åström, suggests that potters' marks on some Cypriot Bronze Age vessels convey the identity of the potter and that their function was to identify individual potters' products which had been fired collectively in a common kiln.¹⁸⁸ Although such a possibility is perhaps tempting in the case of Bronze Age Cyprus, it seems less likely in Early Iron Age Greece on account of the minimal variety of vessel forms, particularly among the wheelmade wares, which suggests the work of professional potters.¹⁸⁹ Furthermore, assuming that the firing of pottery in common kilns was the standard practice in the Early Iron Age, then one might reasonably expect to find a higher incidence of such marks, as is the case in Bronze Age Cyprus. An interesting ethnographic case from eastern Anatolia shows that ceramic vessels made by women in different households and fired communally in a common kiln are distinguished not by isolated or inconspicuous marks but rather by the overall decoration of each vase. Indeed the function of the so-called "decoration" is to identify individual potters' products.¹⁹⁰ In a simulation study recreating Neolithic processes of the making and communal firing of pots, Vitelli has shown that hand-building pottery is not only a slow and very individual process but also one in which it is very difficult for even the same person to produce several identical pots.¹⁹¹ For the firing process she states: ". . . there is no question of identifying which pot belongs to whom when it comes to unloading the finished products."¹⁹² And even many of the exploded fragments (wasters) can be quickly identified by members of the group.

It may be argued that when the decoration of painted vases is as standardized as is the case, for example, with Attic or Lefkandian Protogeometric and Geometric wares, or when there is no decoration at all, as in the case of the handmade vessels presented here, then simple marks would suit well the purpose of identifying the products of individual potters in communal firings. In the case of the wheelmade painted vases, the very standardization of shape and decoration indicates the work of professional potters, who, like many modern traditional potters of the Mediterranean, maintained their workshop and kiln(s) individually and independently. In such a specialized pottery industry there is little room for communal

¹⁸⁸ Frankel 1975, p. 38; Åström 1966, p. 189; cf. *Morgantina* IV, p. 60. A more penetrating study, suggesting that the function of potters' marks is to identify several potters' products fired collectively in a kiln, is that by Christopher Donnan (1971). Donnan provides illuminating ethnographic analogies that may cast light on the interpretation of ancient Peruvian potters' marks. He distinguishes between pottery manufacture for a market center on the one hand and pottery manufacture by traveling potters on the other. In each case, potters who are not part of the same family or economic unit but who fire their pots collectively in a common kiln mark their vessels. These invariably incised marks are referred to by the modern Peruvian potters as "signales", a term probably deriving from the verb "signar", meaning to sign or mark with seal; see Donnan 1971, p. 465. It should be noted, however, that the ancient potters' marks discussed by Donnan are found only on coarse, sand-tempered utility vessels of coastal north Peru and not on the finer, painted pottery of the Moche style.

¹⁸⁹ For Early Iron Age kilns, see Papadopoulos 1989a.

¹⁹⁰ I am grateful to Professor Mehmet Özdoğan for bringing this information to my attention. In a recent reworking of the Kerameikos tombs, James Whitley (1991) has suggested, on the basis of an ethnographic analogy with modern Nuristan, that the decoration of Athenian Early Iron Age pottery, particularly that of the 9th century B.C., comprises a set of symbols that denote achieved social rank or status.

¹⁹¹ Vitelli 1977, p. 27.

¹⁹² Vitelli 1977, pp. 27–28.

fring. Similarly standardized are many of the handmade vases assembled here, particularly those from Corinth. The Corinthian potters' marks occur on three highly specialized shapes: amphoras, hydriai, and pitchers. In the case of all three, the similarity of clay and technique, and the lack of any major variety in individual forms, suggests a uniform and highly productive workshop.¹⁹³ Somewhat more variety can be observed in the shape of the handmade wares of Torone, though much less so in the sphere of fabric, burnishing, and technique. The slight differences in details of shape and proportions of the handmade jugs (**B6, B8–B10**), for example, is perhaps due to diachronic development or change, rather than indicating synchronic variation. Moreover, Frankel's suggestion of communal firings is based on a mode of pottery production that essentially meets a local or household demand. Few, if any, of the vessels he specifically discusses are exported beyond the immediate region. In the case of the Early Iron Age vessels discussed here, it is clear that potters' marks occur most frequently on the pottery manufactured at sites such as Athens, Lefkandi, and Corinth, that is, centers whose ceramic products (both wheelmade and handmade) were widely exported. The fact that the pottery of a number of regional Early Iron Age workshops is found, often in quantity, throughout the Aegean, Cyprus, the coastal Levant, Italy, and Sicily would argue that such pottery production may have been in part directed toward an active export trade and not restricted to local consumption.

There are two important differences between Early Iron Age potters' marks on the one hand and Bronze Age and post-Geometric marks on the other that may provide some hint as to their function. The first is that the vast majority of Bronze Age, and later, marks occur on pottery found in settlement contexts; the large number of marks on pottery from Bronze Age Phylakopi, Lerna, and Keos, as well as Cyprus, are cases in point.¹⁹⁴ Similarly, in the post-Geometric period, it is generally rare to find vases specifically marked for commercial regulation, like the Greek stamped amphora handles, in any quantity in funerary contexts.¹⁹⁵ Of the seventy Early Iron Age vases with potters' marks assembled here, at least twenty-six were found in tombs,¹⁹⁶ to which a further two may be added;¹⁹⁷ thirty-two were found in nonfunerary contexts,¹⁹⁸ of which seven (those from the Toumba area at Lefkandi) are associated with a building located on the site of a well-known cemetery; the contexts of the remaining ten are uncertain or lack published details.¹⁹⁹ If the latter are excluded from the calculations, then almost half of all Early Iron Age potters' marks come from tombs.²⁰⁰ In certain regions or sites, such as Torone, potters' marks are only found on pots deposited in

¹⁹³ Note the similarity in the shape of individual forms in Pfaff 1988, p. 63, fig. 22 (amphoras); p. 64, fig. 23 (hydriai); pp. 69–72, figs. 27–30 (pitchers).

¹⁹⁴ See notes 126 and 127 above; for Lerna, see especially Caskey 1955, p. 34, pl. 15:c–f; Caskey 1956, p. 156; Caskey 1960.

¹⁹⁵ Archaic and Classical amphoras were sometimes used, or reused, as funerary containers; see, among others, *Kerameikos* IX, pp. 13–14, 20–25, pl. 9.

¹⁹⁶ **A1–A3, A10, A11, A20–A23, A31, A35, A39, B1, B3–B11, D4, E1–E3.**

¹⁹⁷ **A9** is probably from a tomb, although its exact context is unknown, while **A32** was found in the area of the Tiryns cemetery but not actually in a tomb.

¹⁹⁸ **A4–A8, A12–A19, A36–A38, B2, B12–B14, C1–C4, D1–D3, D5–D9.**

¹⁹⁹ **A24–A30, A33, A34, C5.**

²⁰⁰ The figure would be higher if the Lefkandi marks from the Toumba building were regarded as coming from a funerary context; see note 36 above.

tombs. The suggestion, therefore, that the *majority* of marks served some commercial purpose in the Early Iron Age seems less likely, unless the pots bearing the marks saw service prior to having been deposited in their final resting place. It should be stressed, however, that at many Early Iron Age sites in Greece the material largely derives from either funerary or settlement contexts; it is comparatively rare to find substantial quantities of pottery and other small finds from both settlement and tomb contexts at one and the same site.

The second point has to do with the quantity of Early Iron Age potters' marks; the quantitative analysis of the largely Middle Protogeometric deposits encountered inside and in areas immediately outside the Toumba building at Lefkandi is illuminating. Among the 26,000 or so sherds, weighing almost half a ton, recovered in the course of the excavations, only seven bear potters' marks.²⁰¹ At Athens three of the eight examples of potters' marks recovered from nonfunerary contexts were found in two wells, which between them yielded almost 3,000 sherds.²⁰² The situation is similar for sites such as Corinth, Torone, and those in the Argolid, where the quantity of marked vases appears to form only a very small proportion of the total. At other sites, such as Rheneia, Klenia, Nichoria, Aetos, Kastanas, Exochi, Marmariani, and Pithekoussai, a solitary mark is all that has been recorded. There is certainly nothing approaching the quantities of marks at Bronze Age sites such as Phylakopi²⁰³ or Ayia Irini, where some ninety marks were found in Period IV deposits alone (20th/19th to 17th centuries B.C.),²⁰⁴ or in contemporary Lerna, where in the Middle Helladic period well over 100 marks are known.²⁰⁵

The fact that Early Iron Age potters' marks are rare in comparison to earlier and later pot marks, coupled with the fact that many are found in tombs, is of further interest, for if the pattern of deposition is not purely fortuitous, then the possibility of pots being specifically marked as intended for the tomb should not be overlooked. A pot thus marked would essentially entail a special commission (see p. 481 above). Here, the figured representations of Group E are of particular interest. In his discussion of the horses found on a few Attic Protogeometric vases deposited in tombs (including **E1** and **E2**), Karl Kübler drew attention to the chthonic character of the animal.²⁰⁶ Similarly, Petros Themelis interpreted the well-known centaur from Lefkandi as a "death daemon" with chthonic features.²⁰⁷ For later Geometric pottery Gudrun Ahlberg considered the ubiquitous bird (cf. **E3**) as a "sort of ideogram with the function of underlining the funeral character of these scenes."²⁰⁸ Jack Benson went further by equating birds with horses and not only stressed their funerary symbolism but traced this back to a Mycenaean heritage.²⁰⁹ This heritage and its survival in Greek ritual and religion was well treated by Martin Nilsson, who was able to show, in certain

²⁰¹ *Lefkandi II*, i, p. 3.

²⁰² The total yield of Well J 14:2 was 999 sherds, that of Well L 11:1, 1,972 sherds.

²⁰³ Edgar in Atkinson *et al.* 1904.

²⁰⁴ *Keos IV*, pp. 7–21.

²⁰⁵ See notes 133 and 194 above.

²⁰⁶ *Kerameikos IV*, p. 5; cf. *Kerameikos V*, i, pp. 27–28. The chthonic character of the horse is also discussed by other scholars, including Malten 1914; Yavis 1950; Andronikos 1968, pp. 84–91; Burkert 1985, pp. 199–203.

²⁰⁷ *Lefkandi I*, pp. 215–216; see also Desborough, Nicholls, and Popham 1970.

²⁰⁸ Ahlberg 1971a, p. 233, also pp. 139–141.

²⁰⁹ Benson 1970, pp. 26–31.

contexts, the various iconographic functions of birds.²¹⁰ Not only may a bird indicate the epiphany of a god or goddess, it may also represent the human soul.²¹¹ The horse itself has been considered by others as the symbolic standby of aristocratic societies everywhere.²¹² Whatever the exact meaning of birds and horses, their funerary associations have been stressed in the modern literature. Without wishing to deconstruct these notions, the fact remains that horses and birds painted on Early Iron Age pottery are found in quantity in settlement debris and in refuse dumps.²¹³ This is not to say that the funerary or aristocratic complexities of such figures are misguided interpretations but rather that not all horses and birds need have a deeper, symbolic, meaning. Moreover, there is surely a difference between a horse drawing a chariot in an *ekphora* scene, framing the bier in a *prothesis*, or standing beside a mourner or a bird associated with combat scenes, whether on land or sea, on the one hand and an isolated horse or bird under a handle on the other.²¹⁴ In the former case the animal is structured within a complex representational scene, while in the latter it is isolated and inconspicuous. As has been argued above, the placement of the animals on **E1–E3** stands in total contrast to those of the Early to Late Geometric periods, and their closest parallels in terms of position are the painted crosses under the handles of the Attic pottery listed in Group A. Moreover, figures such as **E1–E3** are only found in Attic Protogeometric.²¹⁵ It has also been suggested above that the horses on **E1** and **E2** were painted by a single potter, who used this distinctive design as his mark, and that the birds on **E3** are also conceivably an idiosyncratic maker's mark. If such an interpretation is permissible, then the function of these horses and birds would not be unlike the later potter or painter signatures on Greek vases, where the maker explicitly signs his name (those that sign are all men) with *egrap(h)sen* or *epoiesen* (in any number of spellings). Once more, Vitelli's experimental studies with a group of students simulating the processes of the prehistoric potter are of interest. She states: "Many of them do mark their creations, usually by incising initials or a symbol on the bottom of their objects."²¹⁶ If Vitelli's students, like the potter craftsmen of 6th- and 5th-century B.C. Athens, felt the urge to sign or mark their vases, why not the Early Iron Age Athenian potter, particularly one as skilled as the craftsman who produced **E1** and **E2**? In the context of a nonliterary, or protoliterary society, a simple X, like a horse or bird, could easily have served as a signature of sorts, and it is perhaps not surprising that the earliest *alphabetic* potter's signature can be traced back to the later 8th century B.C.²¹⁷

²¹⁰ Nilsson 1968, pp. 330–340, 434, 491–496.

²¹¹ *Ibid.*; cf. Hägg 1986. For the "soul-bird", see further Vermeule 1979, pp. 8, 18–19, figs. 13, 14, 65.

²¹² See, among others, Snodgrass 1971, pp. 414–415.

²¹³ Coldstream 1968a, *passim*.

²¹⁴ For *prothesis* and *ekphora* scenes, see Ahlberg 1971a, *passim*; for birds associated with combat scenes, see Ahlberg 1971b.

²¹⁵ Although figures are found in other regional Early Iron Age styles (see note 125 above), their placement on a vase is different from that of **E1–E3**.

²¹⁶ Vitelli 1977, p. 27.

²¹⁷ [---]ινος μ' ἐποίησε, from Pithekoussai. See Peruzzi 1973, pl. III; Jeffery 1976, fig. 1; Jeffery 1982, p. 829, fig. 2; Heubeck 1979, p. 123, fig. 50; Johnston 1983, p. 64, fig. 4; Powell 1991, no. 10, p. 128. For the signatures of later Athenian potters and painters, especially useful are the comments of Alan Boegehold (1985, pp. 15–32).

More significantly, there is in Greek no distinction between the word *to write* and *to paint*. The word γράφειν/γράφω may denote any number of meanings, including to scratch (e.g., σήματα γράφας ἐν πίνακι: “having scratched marks or figures on a tablet”); to sketch, draw (e.g., γῆς περιόδους γράφω: “draw maps”), or paint; to write (e.g., γράφειν εἰς διφθέρας: “to write on skins”); to inscribe (e.g., γράφειν εἰς στήλην: “to inscribe a stele”); to brand (e.g., ἐν τῷ προσώπῳ γραφεῖς τὴν συμφοράν: “having it branded on his forehead”), or, generally, to write down.²¹⁸

In dealing with the Aegean Bronze Age marks, Sterling Dow notes, “. . . we may urge that most potters’ marks are not meaningless whimsical scratches, but are lines drawn with full intent; they mean something. Whatever the purpose(s) . . . the impulse was common.”²¹⁹ In discussing the welts identified as potters’ marks on Middle Neolithic pottery of southern Greece, Vitelli writes: “They are quite intentional; but if they are not decorative they must have some other meaning or reason for existing.”²²⁰ In looking at the Bronze Age material Anna Sacconi concluded that potters’ marks are only occasional notations and do not constitute a system of any kind.²²¹ She further notes that they show no evolution through time and that any resemblance they may have to Aegean scripts is purely fortuitous.²²² Other scholars, like Dow, recognize in potters’ marks some remote connection to literacy: “potters’ marks were in the soil from which literacy grew.”²²³ Others, like Maurice Pope, believe that certain Bronze Age potters’ marks suggest, but by no means prove, a contemporary knowledge of writing.²²⁴

Any similarity between such symbols as the painted crosses of Group A or the lambda-shaped mark on **B9** and earlier Aegean scripts or later Greek alphabetic scripts must be purely coincidental. As Johnston has pointed out, the evidence from Lefkandi and Pithekoussai shows that the adoption of the Phoenician syllabary by the Greeks probably took place a generation before the first previously known surviving Greek graffito of ca. 740 B.C.²²⁵ Barry Powell, following Rhys Carpenter’s and P. Kyle McCarter’s comparison of Greek and Phoenician letter forms, concludes that the Greek alphabet was created about 800 B.C.²²⁶ The proponents of an earlier date of transmission have not won general

²¹⁸ LSJ, *s.v.* γράφω; see also Rumpf 1947, p. 10; Jucker 1978, p. 39. In Homer, *Il.* 17.599 “. . . γράψεν δέ οἱ δαστέον ἄχρισ”, the word γράψεν denotes “to cut”, in this case the spearpoint of Polydamas cutting to the shoulder bone of Peneleos.

²¹⁹ Dow 1973, p. 585.

²²⁰ Vitelli 1977, p. 17.

²²¹ Sacconi 1974, pp. 207–209.

²²² *Ibid.*

²²³ Dow 1973, p. 585.

²²⁴ Pope 1964, p. 4.

²²⁵ Johnston 1983, p. 66, with references to Lefkandi and the recent material from Pithekoussai (p. 63); Johnston also refers (p. 66) to the recent discovery of a Cypriot syllabic inscription of the later 11th century B.C. at Palaipaphos, for which see Karageorghis 1980, fig. 76; also Johnston in *Kition* IV, p. 49. The Lefkandi material is presented by Jeffery in *Lefkandi* I, pp. 89–93. For Greek alphabetic and prealphabetic writing systems generally, see Heubeck 1979; see further Jensen 1970, pp. 123–161, 450–582; Jeffery 1967; Best and Woudhuizen 1988.

²²⁶ Powell 1991, pp. 18–19; Carpenter 1933; Carpenter 1938; Day 1934; McCarter 1975a, esp. pp. 123–124; cf. Watkins 1976a; Watkins 1976b; Johnstone 1978; Isserlin 1983; Allen 1987, p. 169; Wachter 1989. On the

acceptance. Martin Bernal's radical suggestion that the history of the Greek alphabet can be traced back to the middle of the second millennium has met with stiff resistance.²²⁷ Perhaps the most serious challenge has come from Joseph Naveh, who contends that the transfer occurs as early as 1100 B.C.²²⁸ Although there are, as yet, no verified Greek alphabetic inscriptions before the 8th century, the fact remains that surviving examples of early Phoenician writing, prior to 500 B.C., are not only rare but often insecurely dated.²²⁹ In view of the nature of the evidence, I would concur with Alan Millard's judicious statement: "The arguments for a high date, as for a low, are based on the hazards of survival and recovery, liable to be overthrown by a single find. Unsatisfactory though the position may be, no more precise date can be given for the adoption of the alphabet by the Greeks than the three centuries and a half, 1100 to 750 B.C."²³⁰ But even if unrelated to any script (that is, a known system of writing) the Early Iron Age potters' marks nevertheless constitute in themselves a system of symbols.²³¹

The history of potters' marks in the Aegean may be traced back to at least as early as the Middle Neolithic period.²³² They take hold in the Early Helladic period and are abundant during the Middle and Late Bronze Age. From the beginning the marks appear to be a constant feature of the Aegean potter's craft.²³³ Although ceramic styles develop and change, the craft of the potter remains essentially conservative and traditional.²³⁴ In viewing potters' marks against the backdrop of Aegean pottery production, however, there are, in terms of technology, a number of radical changes in pottery manufacture. Not least among these is the introduction of the kiln, which, on the basis of available data, does not appear before the Early Bronze Age,²³⁵ although some scholars have argued that the domed ovens

question of orality and literacy, see, among others, Ong 1982, esp. pp. 17–20; Thomas 1992, esp. pp. 52–73, on the coming of the alphabet. See also Nieddu 1982; Vegetti 1983; Havelock 1982, esp. pp. 39–88; Havelock 1986.

²²⁷ Bernal 1987a; Bernal 1987b, pp. 34–35, 86–87, 393–399, 427–433; Bernal 1990; Bernal 1991, pp. 501–502. For a useful critique of Bernal, see, among others, Muhly 1990, pp. 92–94.

²²⁸ Naveh 1973; also Naveh 1982, esp. chap. 6; compare Ullman's earlier, 13th-century B.C. date, discussed and downdated by Naveh (1982, p. 1, note 2); Ullman 1934. Naveh's early date was disputed by McCarter (1975a, pp. 113–118; cf. Goody 1987, p. 61) but more recently was defended by Frank Cross (1980, p. 17). For a useful overview of the debate, see Logan 1986, pp. 41–43.

²²⁹ Powell 1991, p. 20. Only eight early Phoenician inscriptions are listed in the standard work by Donner and Röllig (1962–1964, nos. 1–8). For the difficulties of dating these inscriptions, see Isserlin 1982, p. 804. See also Edwards and Edwards 1974; McCarter 1975b. For a full discussion of the Tekke bronze bowl, see Szyner 1979.

²³⁰ Millard 1976, p. 142; cf. Millard 1986. Also Finley 1965, p. 9.

²³¹ Cf. *Keos* IV, p. 1.

²³² See especially Vitelli 1977; Dow 1973, p. 584; Vermeule 1972, pp. 40–41. See also the Neolithic potters' marks from Selevac (Yugoslavia) in Tringham and Krstić 1990, p. 702, pl. 16:1 (classified as "maker's marks"); for early owner/producer marks, see further Winn 1981; Masson 1984.

²³³ Dow 1973, p. 585.

²³⁴ Hampe and Winter 1962; Hampe and Winter 1965; Papadopoulos 1992.

²³⁵ As far as I know, the earliest verified potter's kiln, with clear evidence of its firing load, remains that uncovered by Walter Heurtley and Raleigh Radford at Ayios Mamas in Chalkidike, assigned to the Early Bronze Age; see Heurtley 1939, pp. 5–7, figs. 6, 7:b; cf. Heurtley and Radford 1927/1928, pp. 152–155. The Late Neolithic "kiln" from nearby Olynthos, published by George Mylonas, is best seen as an oven: *Olynthus* I,

and circular hearths found in Neolithic settlements, used for cooking and to bake bread, may have also been used for firing pottery.²³⁶ Other important technical innovations include the introduction of the wheel, controlled reduction firing, and a number of devices used for painted decoration, such as the multiple brush and compass.²³⁷ Although potters' marks are found from the Neolithic into historic times, it would be wrong to imply that the need or function of such symbols was a constant throughout these periods, especially when their popularity, ranges of form, and use, coupled with the technical aspects of pottery production, so clearly varied with time and place within the Aegean. Nevertheless, the question of continuity, particularly from the Late Bronze Age into the Early Iron Age, deserves to be addressed from the view of pottery manufacture.²³⁸

In terms of technique and technology in pottery, the transition from bronze to iron sees no major change. Early Iron Age kilns are virtually identical to those of the Bronze Age, as they are to those of Classical, Hellenistic, and Roman times,²³⁹ and there is little difference in the preparation of clays, slips, and glazes or paints.²⁴⁰ There is, moreover, a good deal of continuity in the sphere of vase shapes, as there is in the details of decorative motifs, although compass-drawn circles and semicircles replaced those previously drawn by hand. The ceramic products of the Early Iron Age do not degenerate to a small household production, meeting the modest needs of a small and isolated community living in the ashes of a Mycenaean citadel. Indeed, the products of a number of regional Early Iron Age workshops were as widely sought after in foreign markets as were the products of the Minoan and Mycenaean "palaces". It is perhaps in such a context of continuity in craftsmanship that the Early Iron Age potters' marks should be viewed.

Continuity from the Late Bronze Age is perhaps also seen in another symbol from the Early Iron Age: two similar marks on a Protogeometric foundation block at Iolkos (Pl. 120:c).²⁴¹ Anthony Snodgrass compares the sign, which is repeated twice on the block,

pp. 12–18; compare the comment of Richard Jones (1986, pp. 776–777). For a similar but earlier (Middle Neolithic) oven at Dikili Tash (first uncovered in 1972 and excavated in 1987), see Mylonas 1988, p. 30; *AR* 34, 1987/1988, p. 53 (Catling).

²³⁶ See, for example, Valmin 1935, p. 26, fig. 8; cf. Gimbutas, Winn, and Shimabuku 1989, pp. 32–74.

²³⁷ Concerning compasses, as well as the multiple brush and the "speed of the revolving potters' wheel," Harrison Eiteljorg's experiments have raised a good deal of healthy doubt as to the precise nature of the application of decoration on vases of the Protogeometric style. Many of his observations and conclusions have been discussed by Berit Wells in *Asine* II, iv. Whatever the implements themselves may have looked like exactly, the existence of compasses and of the multiple-brush device (or "multiple-quill" device, as Wells would have it) cannot be seriously doubted. See Eiteljorg 1980; *Asine* II, iv, p. 120. For the multiple brush, see Boardman 1960; also useful is the discussion by Coldstream in his review of Courbin 1966 (1968b).

²³⁸ Continuity in other aspects from the Late Bronze into the Early Iron Age has, most recently, been restated by, among others, Hooker (1988), Deger-Jalkotzy (1991), and S. P. Morris (1989; 1992).

²³⁹ A useful list of kilns was published by Robert Cook (1961). To this list additions were made by Juliusz Ziomecki (1964, esp. pp. 25–31) and by Kostis Davaras (1980, pp. 118–120, notes 6–20), who earlier provided a list of Cretan kilns of all periods, as well as those of Late Helladic date on the Mainland (1973). Further additions were made by Aikaterine Despoine (1982, pp. 80–91, notes 1–10), and to this list add Papadopoulos 1989a.

²⁴⁰ Jones 1986, *passim*.

²⁴¹ Theocharis 1960, pl. 35:a; Orlandos 1960, esp. p. 58, fig. 69; Vermeule 1972, p. 41, fig. 6:bb; Snodgrass 1971, p. 373.

with sign number 24 of the Linear B script and considers it a survival of a hereditary skill.²⁴² Demetrios Theocharis compares the symbol to the letter Ψ of the Greek alphabet.²⁴³

There is little doubt that the Early Iron Age potters' marks represent an important addition to our knowledge of such symbols for the period. They eloquently show yet another element of continuity in the Greek tradition throughout the Early Iron Age.²⁴⁴ However such marks may actually have functioned in Early Iron Age society, their identification is open to a number of possibilities. Whatever their interpretation, the very fact of their existence is of some importance, for they represent some of the earliest, archaeologically traceable evidence, in the period after the demise of the Mycenaean way of life, of the need for some system of symbols. They establish that the far better documented traditions of potters' marks in the Bronze Age, on the one hand, and in the Archaic to Classical periods, on the other, are linked by a previously under-appreciated, indeed virtually unrecognized, Protogeometric and Geometric tradition. In the words of Alan Wace, they may argue that "in culture, in history and in language we must regard prehistoric and historic Greece as one indivisible whole."²⁴⁵

ILLUSTRATION CREDITS

Figs. 1, 3, 6, 14, 15. Drawings by A. Hooton.

Fig. 2. Drawings by E. L. Smithson, inked by A. Hooton.

Fig. 4. Drawing courtesy of the British School at Athens.

Fig. 5, **A38**. Drawing by A. Hooton (after *JRGZM* 26, 1979, p. 198, fig. 18, no. 3, with mark added); detail drawing by J. K. Papadopoulos.

A39. Drawing courtesy of the National Museum, Copenhagen (Friis Johansen 1958, fig. 69:a. b).

Fig. 7. Drawing by P. A. Mountjoy.

Figs. 8, 9. Drawings by J. K. Papadopoulos and R. Temple.

Figs. 10, 11. Drawings by A. Hooton and J. K. Papadopoulos.

Figs. 12, 13. Drawings by C. A. Pfaff.

Pl. 108. Courtesy DAI Athens; photograph by J. K. Papadopoulos.

Pls. 109, 110:a, 114:a, b, 118. Courtesy Agora Excavations; photograph by Craig Mauzy.

Pls. 110:c, 119. Courtesy DAI Athens.

Pl. 110:d. Notebooks of E. L. Smithson; photograph by R. Workman.

²⁴² Snodgrass 1971, p. 373. Symbol 24 (basic value *ne*) of the Mycenaean syllabary, found with variants at Knossos, Pylos, Mycenae, and Thebes, differs from the more straightforward symbol 27 (ψ; basic value *re*) in that the upper terminal of the vertical is distinguished by a short horizontal line and that in some of the variants there are two arms on the left side, not unlike (though not identical to) the Iolkos marks. For the Mycenaean syllabary, see Ventris and Chadwick 1973, p. 41, fig. 9 (after Bennett) and p. 23, fig. 4 for the proposed values of the syllabary. For related symbols in Linear A, see *ibid.*, p. 33, fig. 6, L54 (ψ), also L52 (after Carratelli); Platon and Brice 1975, p. 96, L54, L52.

²⁴³ Orlandos 1960, p. 58. It is a sad fact that the symbols on the Iolkos block have been generally overlooked by scholars interested in the chronology of the transmission of the alphabet.

²⁴⁴ On the question of continuity, see notes 10 and 238 above.

²⁴⁵ Wace 1973, p. xxxv.

- Pl. 110:e, f. Courtesy British School at Athens.
- Pls. 111, 114:c, 120:a, b. Courtesy British School at Athens, M. R. Popham.
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- Pl. 113:a–d. Courtesy École Française d'Athènes.
- Pl. 113:e. Courtesy W. D. E. Coulson.
- Pl. 113:f. Courtesy B. Hänsel.
- Pls. 114:d–f, 115:a–c. Courtesy Athens Archaeological Society and Australian Archaeological Institute at Athens; photograph by E. Comiskey.
- Pl. 115:f. Courtesy Athens Archaeological Society and Australian Archaeological Institute at Athens; photograph by R. Scannell.
- Pls. 116, 117:a–d. Courtesy Corinth Excavations.
- Pl. 117:e. *Expedition* 8.4, 1966, p. 11.
- Pl. 120:c. Courtesy Athens Archaeological Society; D. Theocharis.

BIBLIOGRAPHY

- Ahlberg, G. 1971a. *Prothesis and Ekphora in Greek Geometric Art (SIMA 32)*, Göteborg
- . 1971b. *Fighting on Land and Sea in Greek Geometric Art*, Stockholm
- Ahlberg-Cornell, G. 1992. *Myth and Epos in Early Greek Art. Representations and Interpretation (SIMA 100)*, Jonsered
- Åkerström, Å. 1974. "Drei mykenische Gefäßfragmente in Nauplia," *Kadmos* 13, pp. 44–47
- Albore Livadie, C. 1978. "Sur les amphores de type étrusque des nécropoles archaïques de Nuceria, aspects et problèmes de l'étrusquisation de la Campanie," *Rivista di Studi Liguri* 44, pp. 71–135
- Allen, W. S. 1987. *Vox Graeca*, 3rd ed., Cambridge
- Alt-Ägina* III, i = H. Walter and F. Felten, *Alt-Ägina*, III, i, *Die vorgeschichtliche Stadt: Befestigungen, Häuser, Funde*, Mainz 1981
- Andronikos, M. 1968. *Totenkult (Archaeologia Homerica III, Kap. W)*, Göttingen
- Asine* I = O. Frödin and A. W. Persson, *Asine. Results of the Swedish Excavations 1922–1930*, Stockholm 1938
- Asine*, II, *Results of the Excavations East of the Acropolis 1970–1974*
- ii = S. Dietz, *The Middle Helladic Cemetery, the Middle Helladic and Early Mycenaean Deposits*, Stockholm 1980
- iii = B. S. Frizell, *The Late and Final Mycenaean Periods*, Stockholm 1986
- iv = B. Wells, *The Protogeometric Period*, Part 1, Stockholm 1976, Parts 2 and 3, Stockholm 1983
- Åström, P. 1966. *Excavations at Kalopsidha and Ayios Jakovos in Cyprus*, Lund
- . 1967. "Some Pot Marks of the Late Bronze Age Found in Cyprus and Egypt," *SMEA* 4, pp. 7–10
- . 1969. "Pot Marks of the Late Bronze Age from Cyprus," *OpAth* 9, pp. 151–159
- The Athenian Agora. Results of Excavations*
- V = H. S. Robinson, *Pottery of the Roman Period. Chronology*, Princeton 1959
- VIII = E. T. H. Brann, *Late Geometric and Protoattic Pottery, Mid-8th to Late 7th Century B.C.*, Princeton 1962
- XIV = H. A. Thompson and R. E. Wycherley, *The Agora of Athens*, Princeton 1972
- XXI = M. Lang, *Graffiti and Dipinti*, Princeton 1976
- Atkinson, T. D., R. C. Bosanquet, C. C. Edgar, A. J. Evans, D. G. Hogarth, D. MacKenzie, C. Smith, and F. B. Welch. 1904. *Excavations at Phylakopi in Melos (JHS Supplementary Paper 4)*, London
- Beltrán Lloris, M. 1970. *Las ánforas romanas en España*, Zaragoza

- Bennett, E. L., Jr. 1950. "Fractional Quantities in Minoan Bookkeeping," *AJA* 54, pp. 204–222
- . 1986. "The Inscribed Stirrup Jar and Pinacology," in *Φιλία ἐπιτὴς Γεώργιου Ε. Μυλωνάν Α*, Athens, pp. 136–143
- . 1991. "The End of the Mycenaean Script: The Case of the Missing Heirs," in *Musti et al.* 1991, pp. 563–571
- Benson, J. L. 1956. "Aegean and Near Eastern Seal Impressions from Cyprus," in *The Aegean and the Near East. Studies Presented to Hetty Goldman on the Occasion of her Seventy-fifth Birthday*, S. S. Weinberg, ed., New York, pp. 59–79
- . 1970. *Horse, Bird and Man. The Origins of Greek Painting*, Amherst, Mass.
- Bernabò-Brea, L. 1952. "Signi grafici e contrassigni sulle ceramiche dell'età del bronzo delle Isole Eolie," *Minos* 2, pp. 5–28
- Βεργίνα Ι = M. Andronikos, *Το νεκροταφείον των τύμβων (Βεργίνα Ι)*, Athens 1969
- Bernal, M. 1987a. "On the Transmission of the Alphabet to the Aegean before 1400 B.C.," *BASOR* 267, pp. 1–19
- . 1987b. *Black Athena: The Afroasiatic Roots of Classical Civilization, I, The Fabrication of Ancient Greece 1785–1985*, London
- . 1990. *Cadmean Letters: The Transmission of the Alphabet to the Aegean and Further West before 1400 B.C.*, Winona Lake, Ind.
- . 1991. *Black Athena: The Afroasiatic Roots of Classical Civilization, II, The Archaeological and Documentary Evidence*, London
- Best and Woudhuizen 1988 = *Ancient Scripts from Crete and Cyprus*, J. Best and F. Woudhuizen, eds., Leiden 1988
- Betancourt 1984a = *East Cretan White-on-Dark Ware. Studies on a Handmade Pottery of the Early to Middle Minoan Periods* (University of Pennsylvania, University Museum Monograph 51), P. P. Betancourt, ed., Philadelphia 1984
- . 1984b. "Ethnology and the Interpretation of the Archaeological Record," in Betancourt 1984a, pp. 158–163
- Birmingham, J. 1967. "Pottery Making on Andros," *Expedition* 10, pp. 33–39
- Blegen, C. W. 1934. "Inscriptions on Geometric Pottery from Hymettos," *AJA* 38, pp. 10–28
- . 1952. "Two Athenian Grave Groups of About 900 B.C.," *Hesperia* 21, pp. 279–294
- Blegen, E. P. 1937. "News Items from Athens," *AJA* 41, pp. 137–145
- Blitzer, H. 1984. "Traditional Pottery Production in Kentri, Crete: Workshops, Materials, Techniques and Trade," in Betancourt 1984a, pp. 143–157
- . 1990. "Κορωνητῆα: Storage-jar Production and Trade in the Traditional Aegean," *Hesperia* 59, pp. 675–711
- Boardman, J. 1960. "The Multiple Brush," *Antiquity* 34, pp. 85–89
- . 1963. *Island Gems*, London
- . 1968. "Island Gems Aftermath," *JHS* 88, pp. 1–12
- . 1972. *Greek Gems and Finger Rings*, London
- . 1983. "Symbol and Story in Geometric Art," in *Ancient Greek Art and Iconography*, W. G. Moon, ed., Madison, Wis., pp. 15–36
- Boegehold, A. L. 1985. "The Time of the Amasis Painter," in *The Amasis Painter and His World. Vase Painting in Sixth-Century B.C. Athens*, D. von Bothmer, ed., New York, pp. 15–32
- Boskamp, A. 1982. "Die minoischen Maßeinheiten: ein Zwischenbericht," *Kadmos* 21, pp. 15–25
- Bouzek, J. 1986. "Macedonia and Thrace in the Early Iron Age," in *Αρχαία Μακεδονία IV* (papers read at the Fourth International Symposium in Thessalonike, 21–25 September 1983), Thessalonike, pp. 123–132
- Branigan, K. 1969. "The Earliest Minoan Scripts: The Pre-Palatial Background," *Kadmos* 8, pp. 1–22
- Brann, E. T. H. 1960. "Late Geometric Grave Groups from the Athenian Agora," *Hesperia* 29, pp. 402–416
- . 1961. "Protoattic Well Groups from the Athenian Agora," *Hesperia* 30, pp. 305–379
- Brock, J. K. 1957. *Early Greek Tombs Near Knossos (BSA Supplementary Volume 2)*, Cambridge
- Buchner, G. 1966. "Pithekoussai: Oldest Greek Colony in the West," *Expedition* 8.4, pp. 5–12
- Buchner, G., and J. Boardman. 1966. "Seals from Ischia and the Lyre-player Group," *Jdl* 81, pp. 1–62

- Burkert, W. 1985. *Greek Religion*, J. Raffan, trans., Cambridge, Mass. Originally published as *Griechische Religion der archaischen und klassischen Epoche (Die Religionen der Menschheit 15)*, Stuttgart 1977
- Burr, D. 1933. "A Geometric House and a Proto-Attic Votive Deposit," *Hesperia* 2, pp. 542–640
- Callender, M. H. 1965. *Roman Amphorae*, London
- Calligas, P. G. 1988. "Hero-cult in Early Iron Age Greece," in Hägg, Marinatos, and Nordquist 1988, pp. 229–234
- Cambitoglou, A. 1977. «Ανασκαφή Τορώνης», Πρακτικά 1975 [1977], pp. 103–130
- . 1980a. «Ανασκαφή Τορώνης (1976)», Πρακτικά 1977 [1980], pp. 75–135
- . 1980b. «Ανασκαφή Τορώνης», Πρακτικά 1978 [1980], pp. 80–93
- . 1983. «Ανασκαφή Τορώνης», Πρακτικά 1981 [1983], pp. 33–39
- . 1984. «Ανασκαφή Τορώνης», Πρακτικά 1982 [1984], pp. 69–78
- . 1988. «Ανασκαφή Τορώνης», Πρακτικά 1984, A' [1988], pp. 40–65
- . 1990. «Ανασκαφή Τορώνης», Πρακτικά 1986 [1990], pp. 112–131
- Cambitoglou, A., S. Peirce, O. Segal, and J. K. Papadopoulous. 1981. *Archaeological Museum of Andros. Guide to the Finds from the Excavations of the Geometric Town at Zagora*, Athens
- Cambitoglou, A., and J. K. Papadopoulous. 1988. "Excavations at Torone, 1986: A Preliminary Report," *MeditArch* 1, pp. 180–217
- . 1990. "Excavations at Torone, 1988," *MeditArch* 3, pp. 93–142
- . 1991. "Excavations at Torone, 1989," *MeditArch* 4, pp. 147–171
- . 1993. "The Earliest Mycenaean in Macedonia," in *Wace and Blegen: 1939–1989. Pottery as Evidence for Trade in the Aegean Bronze Age. Proceedings of the International Conference Held at the American School of Classical Studies, Athens, 2–3 December 1989*, C. Zerner, with P. Zerner and J. Winder, eds., Amsterdam, pp. 289–302
- . 1994. "Excavations at Torone, 1990," *MeditArch* 7 (forthcoming)
- Carpenter, R. 1933. "The Antiquity of the Greek Alphabet," *AJA* 37, pp. 8–29
- . 1938. "The Greek Alphabet Again," *AJA* 42, pp. 58–69
- Caskey, J. L. 1955. "Excavations at Lerna, 1954," *Hesperia* 24, pp. 25–49
- . 1956. "Excavations at Lerna, 1955," *Hesperia* 25, pp. 147–173
- . 1960. "Royal Shaft Graves at Lerna," *Archaeology* 13, pp. 130–133
- . 1970. "Inscriptions and Potters' Marks from Ayia Irini in Keos," *Kadmos* 9, pp. 107–117
- Casson, S. 1938. "The Modern Pottery Trade in the Aegean," *Antiquity* 12, pp. 464–473
- Catling, H. W., and V. Karageorghis. 1960. "Minoika in Cyprus," *BSA* 55, pp. 108–127
- Catling, H. W., J. F. Cherry, R. E. Jones, and J. T. Killen. 1980. "The Linear B Inscribed Stirrup Jars and West Crete," *BSA* 75, pp. 49–113
- Chadwick, J. 1963. "Note on an Inscribed Sherd from Mycenae," *Kadmos* 2, pp. 75–76
- Charitonides, S. 1955. "A Geometric Grave at Clenia in Corinthia," *AJA* 59, pp. 125–128
- Coldstream, J. N. 1968a. *Greek Geometric Pottery. A Survey of Ten Local Styles and Their Chronology*, London
- . 1968b. Review of Courbin 1966, in *JHS* 88, pp. 235–237
- . 1977. *Geometric Greece*, London
- . 1991. "Knossos: An Urban Nucleus in the Dark Age?" in Musti *et al.* 1991, pp. 287–299
- . 1992. "Early Hellenic Pottery," in Sackett 1992, pp. 67–87
- Coleman, J. E. 1986. *Excavations at Pylos in Elis (Hesperia Supplement 21)*, Princeton
- Cook, J. M. 1947. "Athenian Workshops Around 700," *BSA* 42, pp. 139–155
- Cook, R. M. 1961. "The 'Double Stoking Tunnel' of Greek Kilns," *BSA* 56, pp. 64–67
- . 1984. "The Calke Wood Kiln," in *Ancient Greek and Related Pottery. Proceedings of the International Vase Symposium in Amsterdam, 12–15 April 1984*, H. A. G. Brijder, ed., Amsterdam, pp. 63–66
- Corinth. Results of Excavations*
- VII, i = S. S. Weinberg, *The Geometric and Orientalizing Pottery*, Cambridge, Mass. 1943
- XIII = C. W. Blegen, H. Palmer, and R. S. Young, *The North Cemetery*, Princeton 1964
- XV, i = A. N. Stillwell, *The Potters' Quarter*, Princeton 1948
- Courbin, P. 1966. *La céramique géométrique de l'Argolide*, Paris

- Cross, F. M. 1980. "Newly Found Inscriptions in Old Canaanite and Early Phoenician Script," *BASOR* 238, pp. 1–20
- Crouwel, J. H. 1973. "Pot Marks on Grey Minyan Ware," *Kadmos* 12, pp. 101–108
- Cuomo di Caprio, N. 1982. *Ceramica rustica tradizionale in Puglia*, Lecce
- Daniel, J. F. 1941. "Prolegomena to the Cypro-Minoan Script," *AJA* 45, pp. 249–282
- Davaras, K. 1973. «Μινωική κεραμεική κάμινος εις Στύλων Χανίων», *ΑρχΕφ* 1973, pp. 75–80
- . 1980. "A Minoan Pottery Kiln at Palaikastro," *BSA* 75, pp. 115–126
- Davison, J. M. 1961. *Attic Geometric Workshops* (YCS 16), pp. 1–161
- Day, J. 1934. "The Date of the Adoption by the Greeks of the Phoenician Alphabet," *Classical Weekly* 28.10, pp. 73–80
- De Fidio, P. 1983. "Il ricapitolativo Ed e i sistemi di misura Micenei," *Kadmos* 22, pp. 14–39
- Deger-Jalkotzy, S. 1991. "Diskontinuität und Kontinuität: Aspekte politischer und sozialer Organisation in mykenischer Zeit und in der Welt der homerischen Epen," in Musti *et al.* 1991, pp. 53–66
- Délos XV* = C. Dugas and C. Rhomaios, *Les vases préhelléniques et géométriques* (*Exploration archéologique de Délos XV*), Paris 1934
- Desborough, V. R. d'A. 1952. *Protogeometric Pottery*, Oxford
- . 1954. "Mycenae 1939–1953: Part V. Four Tombs," *BSA* 49, pp. 258–266
- . 1964. *The Last Mycenaean and Their Successors. An Archaeological Survey c. 1200–c. 1000 B.C.*, Oxford
- . 1972. *The Greek Dark Age*, London
- . 1973. "Late Burials from Mycenae," *BSA* 68, pp. 87–101
- Desborough, V. R. d'A., R. V. Nicholls, and M. R. Popham. 1970. "A Euboean Centaur," *BSA* 65, pp. 21–30
- Descœudres, J.-P., and R. A. Kearsley. 1983. "Greek Pottery at Veii: Another Look," *BSA* 78, pp. 9–53
- Despoine, A. 1982. «Κεραμεικοί κλιβανοί Σίνδου», *ΑρχΕφ* 1982, pp. 61–84
- Detienne 1988 = *Les savoirs de l'écriture. En Grèce ancienne*, M. Detienne, ed., Lille 1988
- Döhl, H. 1978. "Bronzezeitliche Graffiti aus Tiryns: I. Vor dem Brand eingeritzte Zeichen," *Kadmos* 17, pp. 115–149
- . 1979. "Bronzezeitliche Graffiti und Dipinti aus Tiryns: II. Nach dem Brand eingeritzte und gemalte Zeichen," *Kadmos* 18, pp. 47–70
- Donnan, C. B. 1971. "Ancient Peruvian Potters' Marks and Their Interpretation through Ethnographic Analogy," *American Antiquity* 36:4, pp. 460–466
- Donner, H., and W. Röllig. 1962–1964. *Kanaanäische und aramäische Inschriften*, Weisbaden
- Dousougli-Zachos, A. 1989. "Ein frühhellenischer Stempelroller aus Ton," in Pini 1989, pp. 19–25
- Dow, S. 1973. "Signs and Marks not Spoken: Potters' Marks; Masons' Marks; Seals and Signets," *CAH* II, i, Cambridge, chap. XIII, ii, pp. 584–589
- Drerup, H. 1969. *Griechische Baukunst in geometrischer Zeit* (*Archaeologia Homerica* II, Kap. O), Göttingen
- Duhoux, Y. 1974. "Les mesures mycéniennes de surface," *Kadmos* 13, pp. 27–38
- Edwards, G. P., and R. B. Edwards. 1974. "Red Letters and Phoenician Writing," *Kadmos* 13, pp. 48–57
- Eiteljorg, H., II. 1980. "The Fast Wheel, the Multi-brush Compass and Athens as the Home of the Proto-geometric Style," *AJA* 84, pp. 445–452
- Études Thasiennes VII* = L. Ghali-Kahil, *La céramique grecque (Fouilles 1911–1956)* (*Études Thasiennes VII*), Paris 1960
- Fagerström, K. 1988. *Greek Iron Age Architecture. Developments through Changing Times* (SIMA 81), Göteborg
- Felsch, R. C. S. 1979. "Boiotische Ziegelwerkstätten archaischer Zeit," *AM* 94, pp. 1–40
- . 1990. "Further Stamped Roof Tiles from Central Greece, Attica, and the Peloponnese," *Hesperia* 59, pp. 301–323
- Finley, M. I. 1965. *The World of Odysseus*, London
- Foster, G. 1965. "The Sociology of Pottery," in *Ceramics and Man* (*Viking Fund Publications in Anthropology* 41), F. R. Matson, ed., Chicago, pp. 43–61
- Frankel, D. 1975. "The Pot Marks of Vounous: Simple Clustering Techniques, Their Problems and Potential," *OpAth* 11, pp. 37–51

- Friis Johansen, K. 1958. *Exochi. Ein frührhodisches Gräberfeld*, Copenhagen
- Gimbutas, M., S. Winn, and D. Shimabuku. 1989. *Achilleion: A Neolithic Settlement in Thessaly, Greece, 6400–5600 B.C.*, Los Angeles
- Goody, J. 1987. *The Interface between the Written and the Oral*, Cambridge
- Grace, V. 1934. "The American Excavations in the Athenian Agora, Fourth Report: Stamped Amphora Handles Found in 1931–1932," *Hesperia* 3, pp. 197–310
- . 1935. "The Die Used for Amphora Stamps," *Hesperia* 4, pp. 421–429
- . 1949. "Standard Pottery Containers of the Ancient Greek World," in *Commemorative Studies in Honor of Theodore Leslie Shear* (*Hesperia* Supplement 8), Princeton, pp. 175–189
- . 1956. "Stamped Wine Jar Fragments," in *Small Objects from the Phyx: II* (*Hesperia* Supplement 10), Princeton, pp. 113–189
- . 1971. "Samian Amphoras," *Hesperia* 40, pp. 52–95
- Hackl, R. 1909. "Merkantile Inschriften auf attischen Vasen," in *Münchener archäologische Studien dem Andenken Adolf Furtwänglers gewidmet*, Munich, pp. 1–106
- Hägg, R. 1986. "Die göttliche Epiphane im minoischen Ritual," *AM* 101, pp. 41–62
- Hägg and Hägg 1978 = *Excavations in the Barbouna Area at Asine 2*, I. and R. Hägg, eds., Uppsala 1978
- Hägg, Marinatos, and Nordquist 1988 = *Early Greek Cult Practice. Proceedings of the Fifth International Symposium at the Swedish Institute at Athens, 26–29 June 1986*, R. Hägg, N. Marinatos, and G. Nordquist, eds., Stockholm
- Hainsworth, J. B., A. W. Johnston, J. Ray, and J. Whitley. 1992. Reviews of Powell 1991 and reply by Powell in *The Cambridge Archaeological Journal* 2, pp. 115–126
- Hampe, R. 1936. *Frühe griechische Sagenbilder in Böotien*, Athens
- Hampe, R., and A. Winter. 1962. *Bei Töpfern und Töpferinnen in Kreta, Messenien und Zypern*, Mainz
- . 1965. *Bei Töpfern und Ziegler in Süditalien, Sizilien und Griechenland*, Mainz
- Hankey, V. 1968. "Pottery-making at Beit Shebab, Lebanon," *PEQ* 100, pp. 27–32
- Hänsel, B. 1979. "Ergebnisse der Grabungen bei Kastanas in Zentralmakedonien 1975–1978," *JRGZM* 26, pp. 167–202
- Havelock, E. A. 1982. *The Literate Revolution in Greece and Its Cultural Consequences*, Princeton
- . 1986. *The Muse Learns to Write: Reflections on Orality and Literacy from Antiquity to the Present*, New Haven/London
- Heath, M. C. 1958. "Early Helladic Clay Sealings from the House of the Tiles at Lerna," *Hesperia* 27, pp. 81–121
- Heubeck, A. 1979. *Schrift (Archaeologia Homerica III, Kap. X)*, Göttingen
- Heurtley, W. A. 1939. *Prehistoric Macedonia. An Archaeological Reconnaissance of Greek Macedonia (West of the Struma) in the Neolithic, Bronze and Early Iron Ages*, Cambridge
- Heurtley, W. A., and C. A. R. Radford. 1927/1928. "Two Prehistoric Sites in Chalcidice," *BSA* 29, pp. 117–186
- Heurtley, W. A., and T. C. Skeat. 1930/1931. "The Tholos Tombs at Marmáriané," *BSA* 31, pp. 1–55
- Hirschfeld, N. E. 1990. "Incised Marks on Late Helladic and Late Minoan III Pottery" (unpublished M.A. thesis, Texas A & M University 1990)
- Hooker, J. T. 1988. "From Mycenae to Homer," in *Studies in Honour of T. B. L. Webster II*, J. H. Betts, J. T. Hooker, and J. R. Green, eds., Bristol, pp. 57–64
- Hübner, G. 1973. "Dachterrakotten aus dem Kerameikos von Athen," *AM* 88, pp. 67–143
- . 1976. "Antefixa deorum Athenarum," *AM* 91, pp. 175–183
- Hurwit, J. M. 1985. *The Art and Culture of Early Greece, 1100–480 B.C.*, Ithaca/London
- Immerwahr, H. 1990. *Attic Script: A Survey*, Oxford
- Isserlin, B. S. J. 1982. "The Earliest Alphabetic Writing," in *CAH III*, i, 2nd ed., Cambridge, pp. 794–818
- . 1983. "The Antiquity of the Greek Alphabet," *Kadmos* 22, pp. 151–163
- Jacob-Felsch, M. 1987. "Kalapodi. Bericht zur spätmykenischen und submykenischen Keramik," *AA* [JdI 102] 1987, pp. 26–35
- . 1988. "Compass-drawn Concentric Circles in Vase Painting. A Problem of Relative Chronology at the End of the Bronze Age," in *Problems in Greek Prehistory. Papers Presented at the Centenary Conference of the British School of Archaeology at Athens, Manchester, April 1986*, E. B. French and K. A. Wardle, eds., Bristol, pp. 193–199
- Jeffery, L. H. 1964. "Old Smyrna: Inscriptions on Sherds and Small Objects," *BSA* 59, pp. 39–49

- . 1967. "Αρχαία γράμματα. Some Ancient Greek Views," in *Europa: Studien zur Geschichte und Epigraphik der frühen Aegais (Festschrift für Ernst Grumach)*, W. C. Brice, ed., Berlin, pp. 152–166
- . 1976. *Archaic Greece: The City-States c. 700–500 B.C.*, London
- . 1982. "Greek Alphabetic Writing," in *CAH III*, i, Cambridge, pp. 819–833
- . 1989. *The Local Scripts of Archaic Greece*, rev. A. W. Johnston, Oxford
- Jensen, H. 1970. *Sign, Symbol and Script*, G. Unwin trans., 3rd ed., London 1970. Originally published as *Die Schrift in Vergangenheit und Gegenwart*, Glückstadt/Hamburg 1935
- Johnston, A. W. 1979. *Trademarks on Greek Vases*, Warminster
- . 1983. "The Extent and Use of Literacy: The Archaeological Evidence," in *The Greek Renaissance of the Eighth Century B.C.*, R. Hägg, ed., Stockholm, pp. 63–68
- Johnston, A. W., and A. Andreiomenou. 1989. "A Geometric Graffito from Eretria," *BSA* 84, pp. 217–220
- Johnstone, W. 1978. "Cursive Phoenician and the Archaic Greek Alphabet," *Kadmos* 17, pp. 151–166
- Jones, R. E. 1986. *Greek and Cypriot Pottery. A Review of Scientific Studies* (British School at Athens, Fitch Laboratory Occasional Paper 1), Athens
- Jucker, H. 1978. "Eine Oinochoe aus Bucchero sottile mit etruskischer Inschrift," *Quaderni Ticinesi. Numismatica e antichità classica* 7, pp. 29–42
- Kalpaxis, A. 1976. *Frühgriechische Baukunst in Griechenland und Kleinasien*, Athens
- Karageorghis, V. 1980. "Chronique des fouilles et découvertes archéologique à Chypre en 1979. 7. Fouilles des tombes à Palaepaphos (Ancienne Paphos)," *BCH* 104, pp. 788–789
- Karageorghis, V., and O. Masson. 1968. "Late Bronze Age News from Cyprus (1967–1968)," *Kadmos* 7, pp. 100–103
- Kastanas. Ausgrabungen in einem Siedlungshügel der Bronze- und Eisenzeit Makedoniens 1975–1979*
- (a) = A. Hochstetter, *Die handgemachte Keramik, Schichten 19 bis 1*, Berlin 1984
- (b) = I. Aslanis, *Die frühbronzezeitlichen Befunde und Funde*, Berlin 1985
- (c) = B. Hänsel, *Die eisenzeitliche Drehscheibenkeramik*, forthcoming
- Kearsley, R. A. 1990. *The Pendent Semi-circle Skyphos*, London
- Keos IV = A. Halepa Bikaki, *Ayia Irini: The Potters' Marks (Keos IV)*, Mainz 1984
- Kerameikos. Ergebnisse der Ausgrabungen*
- I = W. Kraiker and K. Kübler, *Die Nekropolen des 12. bis 10. Jahrhunderts*, Berlin 1939
- IV = K. Kübler, *Neufunde aus der Nekropole des 11. und 10. Jahrhunderts*, Berlin 1943
- V, i = K. Kübler, *Die Nekropole des 10. bis 8. Jahrhunderts*, Berlin 1954
- IX = U. Knigge, *Der Südhügel*, Berlin 1976
- XIII = B. Bohn, *Die geometrischen Pyxiden*, Berlin 1988
- Kition. Excavations at Kition*
- I = V. Karageorghis, ed., *The Tombs*, Nicosia/London 1974
- IV = V. Karageorghis, *The Non-Cypriote Pottery*, Nicosia 1981
- Kober, A. 1948. "The Minoan Scripts: Fact and Theory," *AJA* 52, pp. 82–103
- Koehler, C. G. 1979. "Corinthian A and B Transport Amphoras" (diss. Princeton University 1979)
- Kontoleon, N. M. 1965. "Zwei beschriftete Scherben aus Naxos," *Kadmos* 4, pp. 84–85
- Kopcke, G. 1977. "Figures in Pot-Painting before, during, and after the Dark Age," in *Symposium on the Dark Ages in Greece*, E. N. Davis, ed., New York, pp. 32–50
- Kosmopoulos, L. W. 1953. "Birch-Bark Technique: A Possible Prototype for Some Greek Prehistoric Wares?" in *Studies Presented to David Moore Robinson on His Seventieth Birthday II*, G. E. Mylonas and D. Raymond, eds., St. Louis, pp. 1–24
- Koukouli-Chrysanthake, C. 1992. Πρωτοϊστορική Θάσος. Τα Νεκροταφεία του Οικισμού Καστρί, Athens
- Kourou, N. 1989. "Aegean Orientalizing Versus Oriental Art: The Evidence of Monsters," in *The Civilizations of the Aegean and Their Diffusion in Cyprus and the Eastern Mediterranean, 2000–600 B.C. Proceedings of the International Archaeological Symposium*, V. Karageorghis, ed., Larnaca, pp. 110–123
- Kraiker, W. 1951. *Aigina. Die Vasen des 10. bis 7. Jahrhunderts v. Chr.*, Berlin
- Krause, G. 1975. *Untersuchungen zu den ältesten Nekropolen am Eridanos in Athen* (Hamburger Beiträge zur Archäologie, Beiheft 3:I, II), Hamburg

- Kübler, K. 1942. "Kerameikos, Ergebnisse der Ausgrabungen: Die Frühzeit," in *Das neue Bild der Antiken I*, H. Berve, ed., Leipzig, pp. 35–40
- Lang, M. 1955. "Dated Jars of Early Imperial Times," *Hesperia* 24, pp. 277–285
- . 1956. "Numerical Notation on Greek Vases," *Hesperia* 25, pp. 1–24
- . 1991. "The Alphabetic Impact on Archaic Greece," in *New Perspectives in Early Greek Art*, D. Buitron-Oliver, ed., Hanover/London, pp. 65–79
- Langdon, M. K. 1975. "The Dipylon Oinochoe Again," *AJA* 79, pp. 139–140
- . 1976. *A Sanctuary of Zeus on Mount Hymettos (Hesperia Supplement 16)*, Princeton
- Laurenzi, L. 1936. *Necropoli Ialisie (Scavi dell'anno 1934) (Clara Rhodos VIII)*, Bergamo
- Lavezzi, J. C. 1979. "Early Helladic Hearth Rims at Corinth," *Hesperia* 48, pp. 342–347
- Lefkandi I = The Iron Age (BSA Supplementary Volume 11)*, M. R. Popham, L. H. Sackett, and P. G. Themelis, eds., Oxford 1979/1980
- Lefkandi II = The Protoegeometric Building at Toumba*
- i = R. W. V. Catling and I. S. Lemos, *The Pottery (BSA Supplementary Volume 22)*, Oxford 1991
- ii = *The Excavation of the Building, Its Architecture and Finds (BSA Supplementary Volume 23)*, M. R. Popham, P. G. Calligas, and L. H. Sackett, eds., Oxford 1993
- Lisse, P., and A. Louis. 1956. *Les potiers de Nabeul, étude de sociologie Tunisienne*, Paris
- Logan, R. K. 1986. *The Alphabet Impact. The Impact of the Phonetic Alphabet on the Development of Western Civilization*, New York
- Lorber, F. 1979. *Inschriften auf korinthischen Vasen. Archäologisch-epigraphische Untersuchungen zur korinthischen Vasenmalerei in 7. und 6. Jh. v. Chr. (Archäologische Forschungen 6)*, Berlin
- Luria, S. 1964. "Zur Frühgeschichte des griechischen Alphabets I: Die frühattischen Inschriften," *Kadmos* 3, pp. 88–107
- . 1967. "Zur Frühgeschichte des griechischen Alphabets II: Zur Entstehung des griechischen Alphabets," *Kadmos* 6, pp. 135–150
- McCarter, P. K., Jr. 1975a. *The Antiquity of the Greek Alphabet and the Early Phoenician Scripts (Harvard Semitic Monographs 9)*, Missoula
- . 1975b. "A Phoenician Inscription from Pithekoussai," *AJA* 79, pp. 140–141
- MacGillivray, J. A. 1981. "Early Cycladic Potters' Marks from Mount Kynthos in Delos," *BCH* 105, pp. 615–621
- Malten, L. 1914. "Das Pferd im Totenglauben," *JdI* 29, pp. 179–256
- Marschack, A. 1972. *The Roots of Civilization*, New York
- Marwitz, H. 1959. "Kreis und Figur in der attisch-geometrischen Vasenmalerei," *JdI* 74, pp. 52–113
- Maspéro, J. 1913. *Papyrus grecs d'époque byzantine. Catalogue général des antiquités égyptiennes du Musée du Caire II*, Paris
- Masson, E. 1984. "'L'écriture' dans les civilisations danubiennes néolithiques," *Kadmos* 23, pp. 89–123
- Mazarakis Ainian, A. J. 1985. "Contribution à l'étude de l'architecture religieuse grecque des Ages Obscurs," *AntCl* 54, pp. 5–48
- . 1988. "Early Greek Temples: Their Origin and Function," in Hägg, Marinatos, and Nordquist 1988, pp. 105–119
- . 1989. "Late Bronze Age Apsidal and Oval Buildings in Greece and Adjacent Areas," *BSA* 84, pp. 269–288
- . 1992. "Nichoria in the South-western Peloponnese: Units VI-1 and IV-5 Reconsidered," *OpAth* 19, pp. 75–84
- . Forthcoming. *From Rulers' Dwellings to Temples: A Study of the Origins of Greek Religious Architecture in the Protoegeometric and Geometric Periods (SIMA)*
- Meritt, B. D. 1923. "Skione, Mende and Torone," *AJA* 27, pp. 447–460
- Millard, A. R. 1976. "The Canaanite Linear Alphabet and Its Passage to the Greeks," *Kadmos* 15, pp. 130–144
- . 1986. "The Infancy of the Alphabet," *World Archaeology* 17, pp. 390–398
- Mitford, T. B. 1971. "The Cypro-Minoan Inscriptions of Old Paphos," *Kadmos* 10, pp. 87–96
- Morgantina IV = R. Leighton, The Protohistoric Settlement on the Cittadella (Morgantina Studies IV)*, Princeton 1993
- Morris, I. 1987. *Burial and Ancient Society: The Rise of the Greek City-State*, Cambridge

- Morris, S. P. 1989. "Daidalos and Kadmos: Classicism and 'Orientalism': The Challenge of *Black Athena*," *Arethusa* Special Issue, pp. 39–54
- . 1992. *Daidalos and the Origins of Greek Art*, Princeton
- Mountjoy, P. A. 1986. *Mycenaean Decorated Pottery: A Guide to Identification (SIMA 73)*, Göteborg
- (with V. Hankey). 1988. "LH III C Late versus Submycenaean: The Kerameikos Pompeion Cemetery Reviewed," *JdI* 103, pp. 1–37
- MSR = *Metrologorum Scriptorum Reliquiae*, Leipzig 1864–1866
- Müller-Karpe, H. 1962. "Die Metallbeigaben der früheisenzeitlichen Kerameikosgräber," *JdI* 77, pp. 59–129
- Muhly, J. D. 1990. "*Black Athena* versus Traditional Scholarship," *JMA* 3.1, pp. 83–110
- Musti et al. 1991 = *La transizione dal Miceneo all'alto arcaismo. Dal palazzo alla città (Atti del Convegno Internazionale Roma, 14–19 marzo 1988)*, D. Musti, A. Sacconi, L. Rochetti, M. Rocchi, E. Scafa, L. Sportiello, and M. E. Giannotta, eds., Rome 1991
- Mylonas, G. E. 1962. "An Inscribed Sherd from Mycenae," *Kadmos* 1, pp. 95–97
- . 1975. Το Δυτικόν Νεκροταφείον της Ελευσίνας I–III, Athens
- . 1988. «Δίκελλα («Ντικιλί Τάς»)", Έργον 1987 [1988], pp. 28–31
- Naveh, J. 1973. "Some Semitic Epigraphical Considerations on the Antiquity of the Greek Alphabet," *AJA* 77, pp. 1–8
- . 1982. *Early History of the Alphabet*, Jerusalem
- Nichoria III = *Dark Age and Byzantine Occupation (Excavations at Nichoria in Southwest Greece III)*, W. A. McDonald, W. D. E. Coulson, and J. Rosser, eds., Minneapolis 1983
- Nieddu, G. 1982. "Alfabetismo e diffusione sociale della scrittura nella Grecia arcaica e classica: pregiudizi recenti e realtà documentaria," *Scrittura e Civiltà* 6, pp. 233–261
- Nilsson, M. P. 1968. *The Minoan-Mycenaean Religion and Its Survival in Greek Religion*, 2nd ed., rev., Lund
- Nordquist, G. C. 1987. *A Middle Helladic Village: Asine in the Argolid*, Uppsala
- Oberhummer, E. *RE* VIA 2, 1937, cols. 1795–1798 (Torone)
- Ohly, D. 1941. "Frühe Tonfiguren aus dem Heraion von Samos II," *AM* 66, pp. 1–46
- Olivier, J.-P. 1988. "Tirynthian Graffiti: Ausgrabungen in Tiryns 1982–1983," *AA* [*JdI* 103] 1988, pp. 253–268
- Olynthus I = G. E. Mylonas, *The Neolithic Settlement (Excavations at Olynthus I)*, Baltimore 1929
- Ong, W. J. 1982. *Orality and Literacy: The Technologizing of the Word*, London
- Orlandos, A. K. 1960. «Ιωλχός», Έργον 1960, pp. 55–61
- Overbeck, J. 1989. *The Bronze Age Pottery from Kastro at Paros (SIMA Pocket Book 78)*, Jonsered
- Palaima, T. G., P. P. Betancourt, and G. H. Meyer. 1984. "An Inscribed Stirrup Jar of Cretan Origin from Bamboula, Cyprus," *Kadmos* 23, pp. 65–73
- Palaima 1990 = *Aegean Seals, Sealings and Administration. Proceedings of the NEH-Dickson Conference of the Program in Aegean Scripts and Prehistory of the Department of Classics, University of Texas at Austin, January 11–13, 1989 (Aegaeum 5)*, T. G. Palaima, ed., Liège 1990
- Palmer, L. R. 1971. "Mycenaean Inscribed Vases I: The Evidence from the 'Unexplored Mansion' at Knossos," *Kadmos* 10, pp. 70–86
- . 1972. "Mycenaean Inscribed Vases II: The Mainland Finds," *Kadmos* 11, pp. 27–46
- . 1973. "Mycenaean Inscribed Vases III: The Consequences for Aegean History," *Kadmos* 12, pp. 60–75
- . 1978. "Mycenaean Inscribed Vases IV: Final Agreement," *Kadmos* 17, pp. 102–114
- Panayotou, A. 1986. "An Inscribed Pithos Fragment from Aiane (W. Macedonia)," *Kadmos* 25, pp. 97–101
- Papadopoulos, J. K. 1988a. «Τορώνη», in Η Μακεδονία από τα Μυκηναϊκά χρόνια ως τον Μέγα Αλέξανδρο, Athens, pp. 82–86
- . 1988b. "The Early Iron Age Cemetery at Torone," in *Ancient Macedonia* (Australian Exhibition Catalogue), Athens, pp. 83, 182–186
- . 1989a. "An Early Iron Age Potter's Kiln at Torone," *MeditArch* 2, pp. 9–44
- . 1989b. "Roman Amphorae from the Excavations at Torone," *ΑρχΕφ* 1989, pp. 67–103
- . 1990. "Protogeometric Birds from Torone," in Ευμουσα. *Ceramic and Iconographic Studies in Honour of Alexander Cambitoglou (MeditArch Supplementary Volume 1)*, J.-P. Descoeudres, ed., Sydney, pp. 13–24
- . 1992. "Λάσσανα, Tuyères, and Kiln Firing Supports," *Hesperia* 61, pp. 203–221

- . 1993. "To Kill a Cemetery: The Athenian Kerameikos and the Early Iron Age in the Aegean," *JMA* 6.2, pp. 175–206
- Peacock, D. P. S., and D. F. Williams. 1986. *Amphorae and the Roman Economy: An Introductory Guide*, London
- Persson, A. W. 1937. "More Cypro-Minoan Inscriptions," in *The Swedish Cyprus Expedition. Finds and Results of the Excavations in Cyprus 1927–1931* III, E. Gjerstad, J. Lindros, E. Sjöqvist, and A. Westholm, eds., Stockholm, pp. 601–618
- Peruzzi, E. 1973. *Origini di Roma* II, Bologna
- Petruso, K. M. 1978. "Marks on Some Minoan Balance Weights and Their Interpretation," *Kadmos* 17, pp. 26–42
- . 1979. "Reflections on Cycladic and Minoan Metrology and Trade," in *Papers in Cycladic Prehistory*, J. L. Davis and J. F. Cherry, eds., Los Angeles, pp. 135–142
- Petsas, P. 1963. «Ανασκαφή αρχαίου νεκροταφείου Βεργίνης (1960/1961)», *Δελτ* 17, 1961–1962, Α' [1963], pp. 218–288
- Pfaff, C. A. 1988. "A Geometric Well at Corinth: Well 1981-6," *Hesperia* 57, pp. 21–80
- Pini 1989 = *Fragen und Probleme der bronzezeitlichen ägäischen Glyptik* (CMS Beiheft 3), I. Pini, ed., Berlin 1989
- Platon, N., and W. C. Brice. 1975. Ενεπίγραφοι πινακίδες και πίθοι Γραμμικού συστήματος Α εκ Ζάχρου, Athens
- Podzuweit, C. 1979. "Spätmykenische Keramik von Kastanas," *JRGZM* 26, pp. 203–223
- Poliochni* I = L. Bernabò-Brea, *Città preistorica nell'isola di Lemnos (Poliochni I)*, Rome 1964
- Pope, M. W. M. 1964. *Aegean Writing and Linear A (SIMA 8)*, Lund
- Popham, M. R., M. Pope, and J. Raison. 1976. "An Inscribed Pithoid Jar from Knossos," *Kadmos* 15, pp. 102–107
- . 1982a. "The Hero of Lefkandi," *Antiquity* 56, pp. 169–174
- . 1982b. "Further Excavation of the Toumba Cemetery at Lefkandi, 1981," *BSA* 77, pp. 213–248
- Powell, B. B. 1988. "The Dipylon Oinochoe and the Spread of Literacy in Eighth-Century Athens," *Kadmos* 27, pp. 65–86
- . 1991. *Homer and the Origin of the Greek Alphabet*, Cambridge
- Pullen, D. J. 1985. "Social Organization in Early Bronze Age Greece: A Multidimensional Approach" (diss. Indiana University 1985)
- . 1994. "A Lead Seal from Tsoungiza, Ancient Nemea, and Early Bronze Age Aegean Sealing Systems," *AJA* 98, pp. 35–52
- Pylos. The Palace of Nestor at Pylos in Western Messenia*
I = C. W. Blegen and M. Rawson, *The Buildings and Their Contents*, Princeton 1966
III = C. W. Blegen, M. Rawson, W. Taylour, and W. P. Donovan, *Acropolis and Lower Town. Tholos, Grave Circle, and Chamber Tombs. Discoveries outside the Citadel*, Princeton 1973
- Radt, W. 1974. "Die früheisenzeitliche Hügelnekropole bei Vergina in Makedonien," in *Beiträge zu italienischen und griechischen Bronzefunden (Prähistorische Bronzefunde 20.1)*, H. Müller-Karpe, ed., Munich, pp. 98–147
- Raison, J. 1968. *Les vases à inscriptions peintes de l'age mycénien et leur contexte archéologique (Incunabula Graeca 19)*, Rome
- Reber, K. 1991. *Untersuchungen zur handgemachten Keramik Griechenlands in der submykenischen, protogeometrischen und der geometrischen Zeit (SIMA Pocket Book 105)*, Jonsered
- Renfrew, A. C. 1972. *The Emergence of Civilization: The Cyclades and the Aegean in the Third Millennium B.C.*, London
- Richter, G. M. A. 1923. *The Craft of Athenian Pottery*, New Haven
- Robb, K. 1978. "The Poetic Sources of the Greek Alphabet: Rhythm and Abecedarium from Phoenician to Greek," in *Communication Arts in the Ancient World*, E. A. Havelock and J. P. Hershbell, eds., New York, pp. 23–36
- Robertson, M. 1948. "Excavations in Ithaca, V: The Geometric and Later Finds from Aetos," *BSA* 43, pp. 1–124
- Rumpf, A. 1947. "Classical and Post-Classical Greek Painting," *JHS* 67, pp. 10–21
- Rutter, J. B. 1978. "A Plea for the Abandonment of the Term 'Submycenaean'," in *TUAS* III, P. P. Betancourt, ed., Philadelphia, pp. 58–65

- . 1988. "Early Helladic III Vasepainting, Ceramic Regionalism and the Influence of Basketry," in *Problems in Greek Prehistory. Papers Presented at the Centenary Conference of the British School of Archaeology at Athens, Manchester, April 1986*, E. B. French and K. A. Wardle, eds., Bristol, pp. 73–89
- . 1990. "Pottery Groups from Tsoungiza of the End of the Middle Bronze Age," *Hesperia* 59, pp. 375–458
- Sacconi, A. 1974. *Corpus delle iscrizioni vascolari in Lineare B (Incunabula Graeca 57)*, Rome
- Sackett 1992 = *Knossos: From Greek City to Roman Colony. Excavations at the Unexplored Mansion II (BSA Supplementary Volume 21)*, L. H. Sackett, ed., Oxford
- Samothrace II*, ii = K. Lehmann, *The Inscriptions on Ceramics and Minor Objects (Samothrace II, ii)*, London 1960
- Saraswati, B., and N. K. Behura. 1966. *Pottery Techniques in Peasant India (Anthropological Survey of India, Memoir No. 13: 1964 [1966])*, Calcutta
- Schlörb-Vierneisel, B. 1966. "Eridanos-Nekropole. Berichte über die Grabungen 1964 und 1965 südlich der heiligen Strasse. I. Gräber und Opferstellen hS 1–204," *AM* 81, pp. 4–111
- Seiradaki, M. 1960. "Pottery from Karphi," *BSA* 55, pp. 1–37
- Sipsie-Eschbach, M. 1991. *Protogeometrische Keramik aus Iolkos in Thessalien*, Berlin
- Skias, A. N. 1898. «Παναρχαία Ελευσινιακή νεκρόπολις», *ΑρχΕφ* 1898, pp. 31–122
- Smithson, E. L. 1968. "The Tomb of a Rich Athenian Lady, ca. 850 B.C.," *Hesperia* 37, pp. 77–116
- . 1982. "The Prehistoric Klepsydra: Some Notes," in *Studies in Athenian Architecture, Sculpture, and Topography Presented to Homer A. Thompson (Hesperia Supplement 20)*, Princeton, pp. 141–154
- Snodgrass, A. M. 1964. *Early Greek Armour and Weapons*, Edinburgh
- . 1971. *The Dark Age of Greece. An Archaeological Survey of the Eleventh to the Eighth Centuries B.C.*, Edinburgh
- Spier, J. 1990. "Emblems in Archaic Greece," *BICS* 37, pp. 107–129
- Stewart, J. R., and E. Stewart. 1950. *Vounous 1937–1938. Field-Report of the Excavations Sponsored by the British School of Archaeology at Athens*, Lund
- Stroud, R. S. 1989. "The Art of Writing in Ancient Greece," in *The Origins of Writing*, W. M. Senner, ed., Lincoln/London, pp. 103–119
- Stubblings, F. H. 1951. *Mycenaean Pottery from the Levant*, Cambridge
- Styrenius, C.-G. 1967. *Submycenaean Studies. Examination of Finds from Mainland Greece with a Chapter on Attic Protogeometric Graves*, Lund
- Szyncer, M. 1979. "L'inscription phénicienne de Tekke, près de Cnossos," *Kadmos* 18, pp. 89–93
- Themelis, P. G. 1976. *Frühgriechische Grabbauten*, Mainz
- Theocharis, D. R. 1960. «Ανασκαφαι εν Ιωλκώ», *Πρακτικά* 1960, pp. 49–59
- Thomas, R. 1992. *Literacy and Orality in Ancient Greece*, Cambridge
- Thompson, H. A. 1946. "The Influence of Basketry on Attic Geometric Pottery," *AJA* 50, p. 286
- . 1947. "The Excavation of the Athenian Agora, 1940–1946," *Hesperia* 16, pp. 193–213
- . 1950. "The Odeion in the Athenian Agora," *Hesperia* 19, pp. 31–141
- Tiryns. Die Ergebnisse der Ausgrabungen*
I, ii = W. Müller and F. Oelmann, *Die 'geometrische' Nekropole*, Athens 1912
IV = K. Müller, *Die Urfirmiskeramik*, Munich 1938
- Tod, M. N. 1911/1912. "The Greek Numerical Notations," *BSA* 18, pp. 98–132
- . 1926/1927. "Further Notes on the Greek Acrophonic Numerals," *BSA* 28, pp. 141–157
- . 1936/1937. "The Greek Acrophonic Numerals," *BSA* 37, pp. 236–258
- . 1950. "The Alphabetic Numeral System in Attica," *BSA* 45, pp. 126–139
- Tringham, R., and D. Krstić. 1990. *Selevac: A Neolithic Village in Yugoslavia*, Los Angeles
- Tsiporoulou, M. 1984. «Πρωτογεωμετρικά και γεωμετρικά αγγεία από τη συλλογή Κ. και Μ. Μητσotάκη», *Δελτ* 33, 1978, A' [1984], pp. 146–167
- . 1990. "Potters' Marks from Petras, Siteia," *Kadmos* 29, pp. 92–106
- Tsountas, C. 1899. «Κυκλαδικά II», *ΑρχΕφ*, pp. 73–134
- Tzavella-Evjén, T. H. 1980. "Potters' Marks from Lithares," *Kadmos* 19, pp. 93–96
- Ullman, B. C. 1934. "How Old Is the Greek Alphabet?" *AJA* 38, pp. 359–381
- Valmin, N. 1935. *Rapport préliminaire de l'expédition en Messénie 1934*, Lund

- Vegetti, M. 1983. *Oralità, Scrittura, Spettacolo (Introduzione alle culture antiche I)*, Turin
- Ventris, M., and J. Chadwick. 1973. *Documents in Mycenaean Greek*, 2nd ed., Cambridge
- Verdelis, N. M. 1958. Ο Πρωτογεωμετρικός ρύθμος της Θεσσαλίας, Athens
- . 1963. "Neue geometrische Gräber in Tiryns," *AM* 78, pp. 1–62
- Vermeule, E. T. 1972. *Greece in the Bronze Age*, 2nd ed., rev., Chicago
- . 1979. *Aspects of Death in Early Greek Art and Poetry*, Berkeley/Los Angeles
- Vermeule, E., and V. Karageorghis. 1982. *Mycenaean Pictorial Vase Painting*, Cambridge, Mass.
- Vermeule, E. T., and F. Wolsky. 1976. "Pot-Marks and Graffiti from Toumba tou Skourou, Cyprus," *Kadmos* 15, pp. 61–76
- . 1990. *Toumba tou Skourou. A Bronze Age Potters' Quarter on Morphou Bay in Cyprus*, Cambridge, Mass.
- Vitelli, K. D. 1977. "Neolithic Potters' Marks from Lerna and the Franchthi Cave," *JWall* 36, pp. 17–30
- Vokotopoulou, I. 1986. Βίτσα. Τα νεκροταφεία μιας μολοσσικής κώμης, Athens
- Voyatzoglou, M. 1984. "Thrapsano, Village of Jar Makers," in Betancourt 1984a, pp. 130–142
- Vroulia (Rhodes)* = K. F. Kinch, *Fouilles de Vroulia (Rhodes)*, Berlin 1914
- Wace, A. J. B. 1973. "Foreword," in *Documents in Mycenaean Greek*, M. Ventris and J. Chadwick, eds., Cambridge
- Wachter, R. 1989. "Zur Vorgeschichte des griechischen Alphabets," *Kadmos* 28, pp. 19–78
- Wardle, K. A. 1980. "Excavations at Assiros, 1975–9. A Settlement Site in Central Macedonia and Its Significance for the Prehistory of South-east Europe," *BSA* 75, pp. 229–267
- . 1983. "Assiros. A Macedonian Settlement of the Late Bronze and Early Iron Age," in *Ancient Macedonia III* (Papers read at the Third International Symposium), C. Svolopoulos, ed., Thessalonike, pp. 291–305
- . 1987. "Excavations at Assiros Toumba 1986. A Preliminary Report," *BSA* 82, pp. 313–329
- . 1988. "Excavations at Assiros Toumba 1987. A Preliminary Report," *BSA* 83, pp. 375–387
- . 1989. "Excavations at Assiros Toumba 1988. A Preliminary Report," *BSA* 84, pp. 447–463
- Warren, P. 1970. "The Primary Dating Evidence for Early Minoan Seals," *Kadmos* 9, pp. 29–37
- Was, D. A. 1971a. "Numerical Fractions and Symbols for Measures in the Minoan Hieroglyphic Script," *BICS* 18, pp. 16–25
- . 1971b. "Numerical Fractions in Minoan Linear Script A: I. The Evaluation of the Fraction Signs," *Kadmos* 10, pp. 35–51
- . 1972. "Numerical Fractions in the Minoan Linear Script A: II. The Measurement of Dry Commodities and Their Use in the Payment of Minoan Labour," *Kadmos* 11, pp. 1–21
- . 1973a. "Numerical Fractions in the Minoan Linear Script A: III. The Measurement of Liquids," *Kadmos* 12, pp. 28–59
- . 1973b. "Numerical Fractions in the Minoan Linear Script A: IV. The Measurement of Weight," *Kadmos* 12, pp. 134–148
- . 1974. "Numerical Fractions in the Minoan Linear Script A: V. Olive Oil and Related Commodities," *Kadmos* 13, pp. 82, 95–116
- . 1977. "The Mycenaean Units of Measure," *Kadmos* 16, pp. 26–35
- . 1978. "The Land-Tenure Texts from Hagia Triada, I–II," *Kadmos* 17, pp. 16–25, 91–101
- Watkins, C. 1976a. "Syntax and Metrics in the Dipylon Vase Inscription," in *Studies in Greek, Italic and Indo-European Linguistics (Innsbrucker Beiträge zur Sprachwissenschaft 16)*, A. Morpurgo Davies and W. Meid, eds., Innsbruck, pp. 431–441
- . 1976b. "Observations on the 'Nestor's Cup' Inscription," *HSCP* 80, pp. 25–40
- Webster, T. B. L. 1966. "Signs on the Base of Mycenaean Vases," *Kadmos* 5, p. 147
- Weinberg, S. S. 1948. "A Cross-section of Corinthian Antiquities (Excavations of 1940)," *Hesperia* 17, pp. 197–241
- Weisshaar, H.-J. 1989. "Reliefpithoi und Herdplatten aus Tiryns," in Pini 1989, pp. 315–322
- Whitley, J. 1991. *Style and Society in Dark Age Greece: The Changing Face of a Pre-Literate Society 1100–700 B.C.*, Cambridge
- Wiencke, M. H. 1969. "Further Seals and Sealings from Lerna," *Hesperia* 38, pp. 500–521
- . 1970. "Banded Pithoi of Lerna III," *Hesperia* 39, pp. 94–110

- . 1989. "Change in Early Helladic II," *AJA* 93, pp. 495–509
- Williams, C. K., II. 1981. "A Survey of Pottery from Corinth from 730–600 B.C.," *ASAtene* n.s. 43, pp. 139–153
- Williams, C. K., II and J. E. Fisher. 1976. "Corinth 1975: Forum Southwest," *Hesperia* 45, pp. 99–162
- Winn, S. M. M. 1981. *Pre-Writing in Southeastern Europe: The Sign System of the Vinča Culture, ca. 4000 B.C.*, Calgary, Alberta
- Winter, A. 1972. "Aufwülsten und Brennen eines Riesenpithos," *AA* [*JdI* 87], pp. 541–552
- Yavis, C. G. 1950. "Origins of Chthonic Worship," *AJA* 54, p. 263
- Young, R. S. 1940. "Excavations on Mount Hymettos, 1939," *AJA* 44, pp. 1–9
- . 1942. "Graves from the Phaleron Cemetery," *AJA* 46, pp. 23–57
- Zahrnt, M. 1971. *Olynth und die Chalkidier. Untersuchungen zur Staatenbildung auf der Chalkidischen Halbinsel im 5. und 4. Jahrhunderts v. Chr.*, Munich
- Zerner, C. W. 1978. "The Beginning of the Middle Helladic Period at Lerna" (diss. University of Cincinnati 1978)
- . 1986. "Middle Helladic and Late Helladic I Pottery from Lerna," *Hydra* 2, pp. 58–74
- . 1988. "Middle Helladic and Late Helladic I Pottery from Lerna: Part II: Shapes," *Hydra* 4, pp. 1–10
- . 1990. "Ceramics and Ceremony: Pottery and Burials from Lerna in the Middle and Early Late Bronze Ages," in *Celebrations of Death and Divinity in the Bronze Age Argolid. Proceedings of the Sixth International Symposium at the Swedish Institute at Athens, 11–13 June 1988*, R. Hägg and G. C. Nordquist, eds., Stockholm, pp. 23–34
- Ziomecki, J. 1964. "Die keramischen Techniken im antiken Griechenland," *Raggi, Zeitschrift für Kunstgeschichte und Archäologie* 6:1–2, pp. 1–36
- Zygouries* = C. W. Blegen, *Zygouries. A Prehistoric Settlement in the Valley of Cleonae*, Cambridge, Mass. 1928

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a. A1



b. Detail of A1



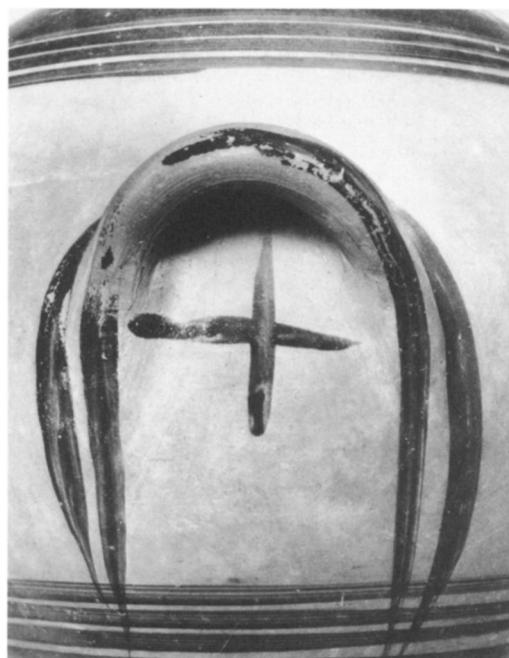
c. A2



d. Detail of A2



a. A3



b. Detail of A3



c. A7, Side A



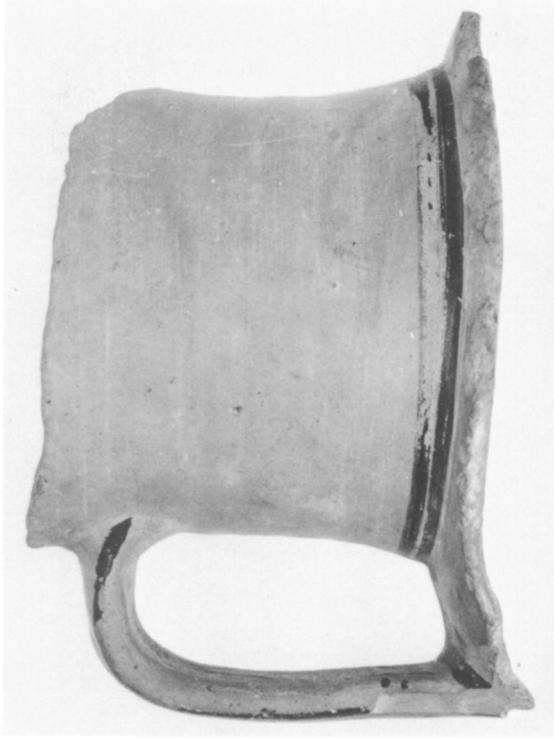
d. Detail of A7



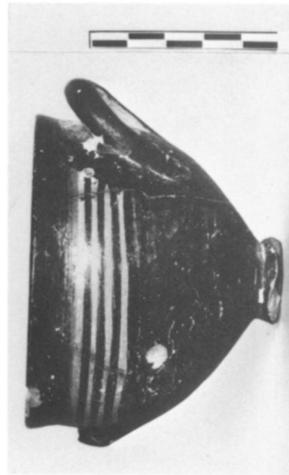
e. A7, Side B



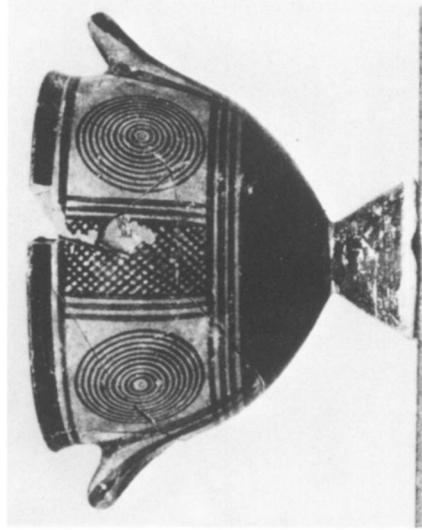
a. A8, Side A



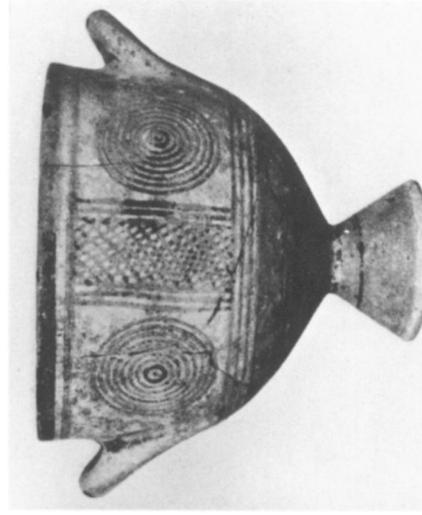
b. A8, Side B



c. A9



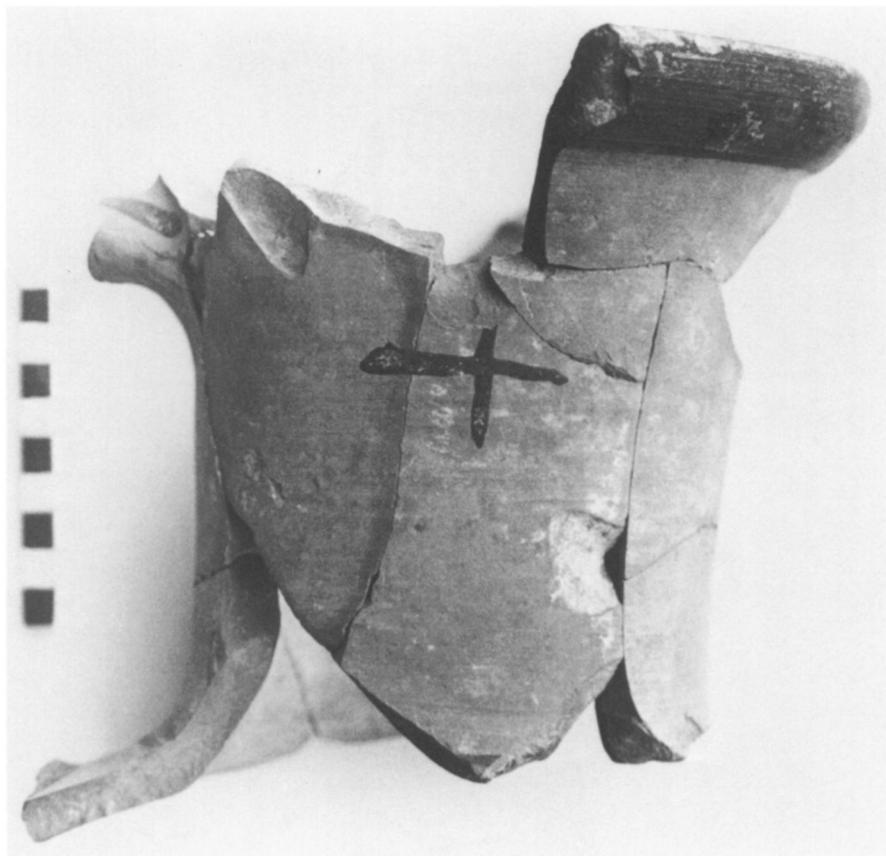
e. A10



f. A11

= SKETCHES
 little black spots; only line in handle.
 Clay looks like it is well made and paint good.
 Under one handle (X) have a small 
 other-like construction which is laid across the X ^{almost exact.}
 The centre of the X is smudged or smudged around.
 Under the other handle, near looking is 
 and drawn from the glaze above. 

d. A9. Sketch of potter's mark



a. A12



b. A15



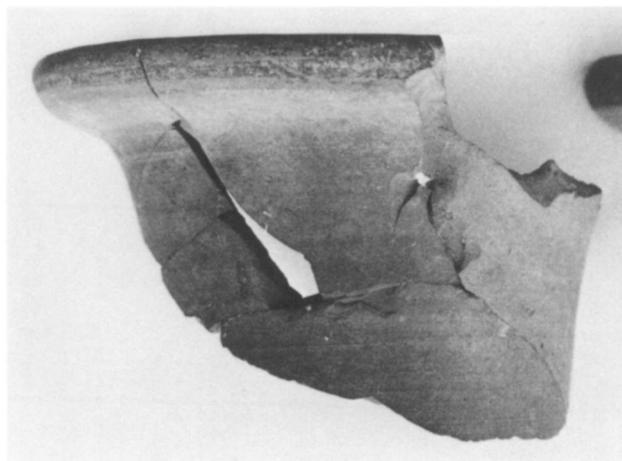
c. A16



d. A17



e. A13



f. A14



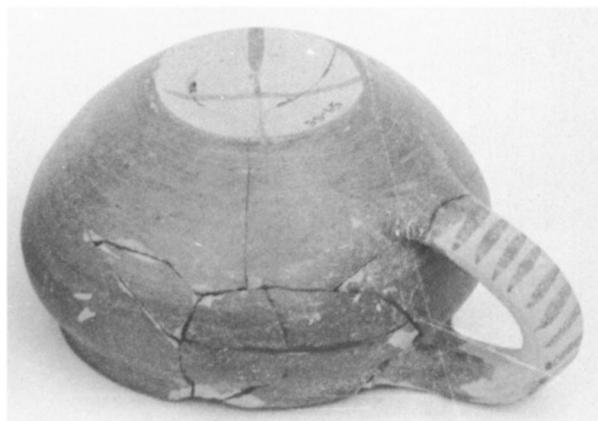
a. **A20.** Side view



b. **A20.** Bottom view



c. **A21.** Side view



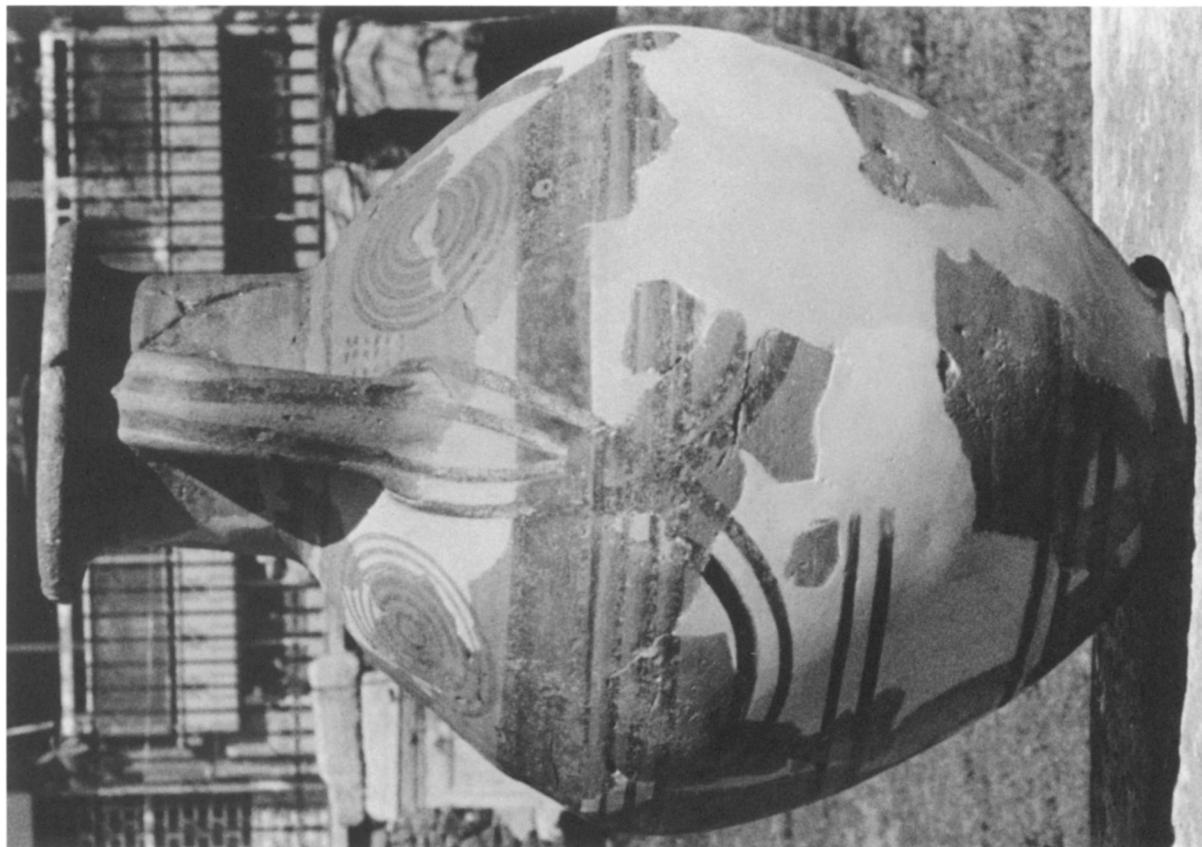
d. **A21.** Bottom view



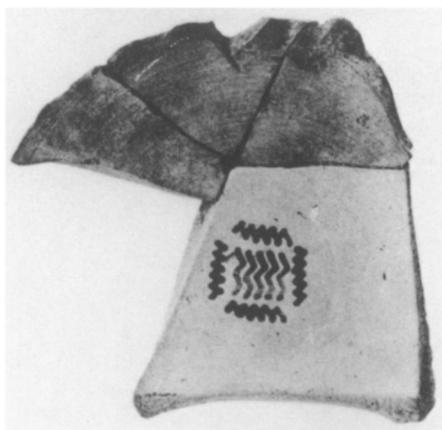
e. **A22.** Side view



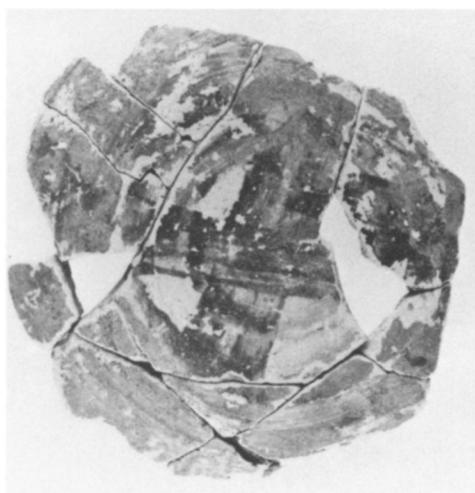
f. **A22.** Bottom view



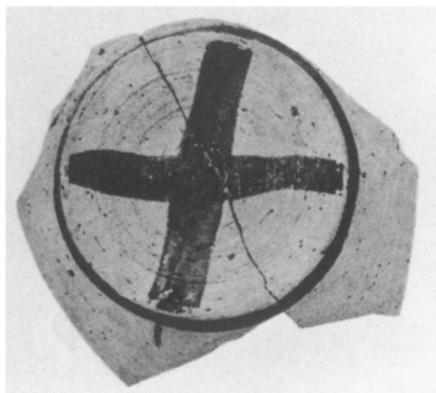
f. A38



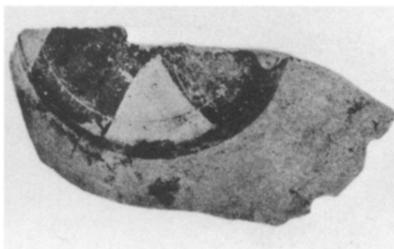
b. A30



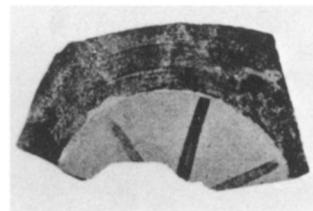
c. A36



a. A26



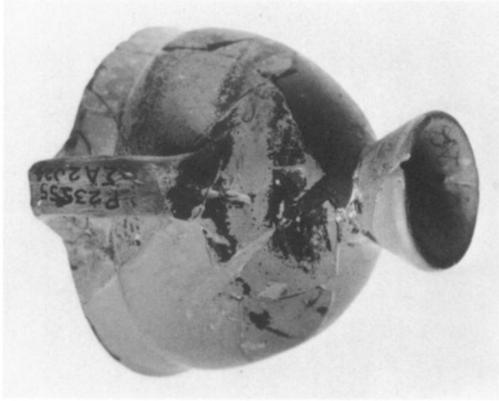
c. A28



d. A29

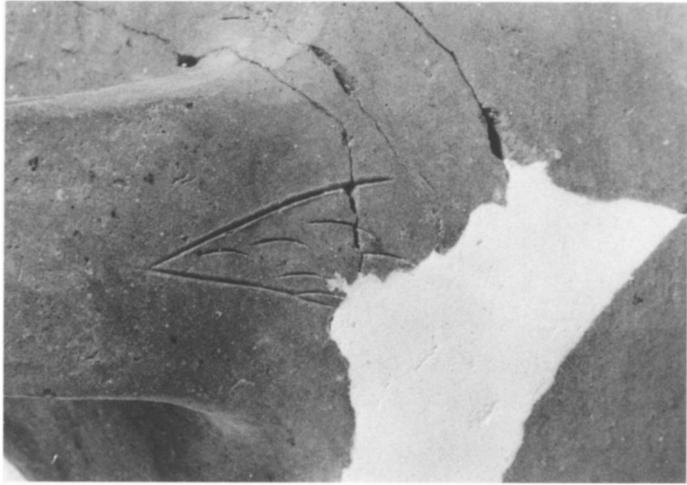


c. B2



a. B1. Side view (3:4)

b. B1. Potter's mark



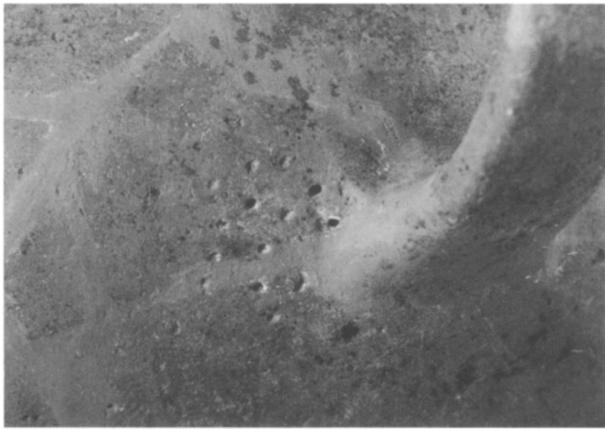
d. B4



e. B5



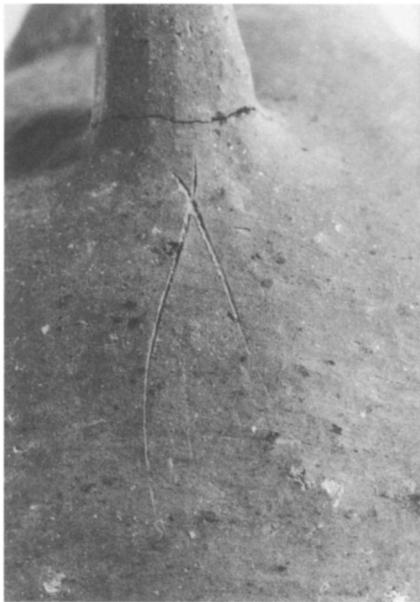
f. B6



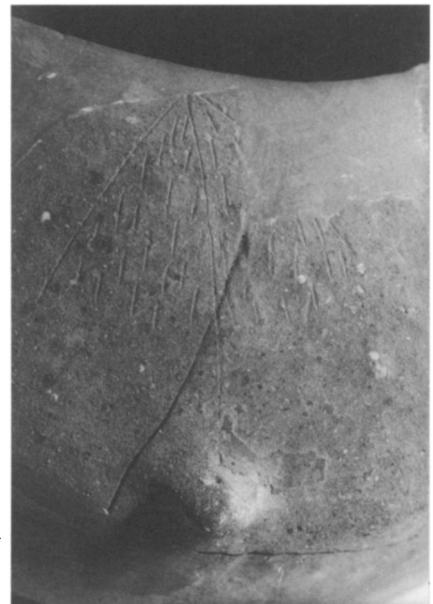
a. **B7**



b. **B8**. Potter's mark below handle



c. **B9**



d. Detail of incised symbol on body of **B8**



e. **B10**



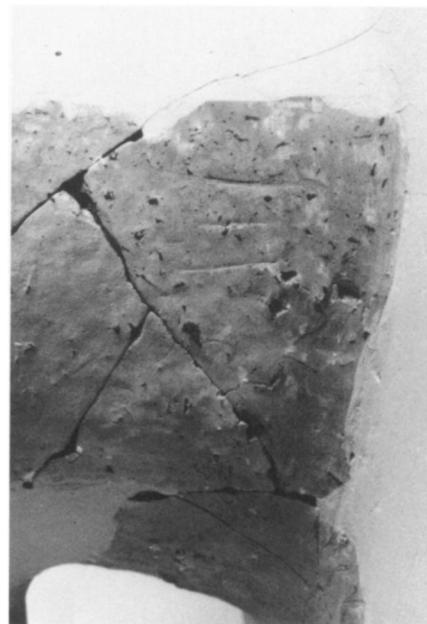
f. **B11**



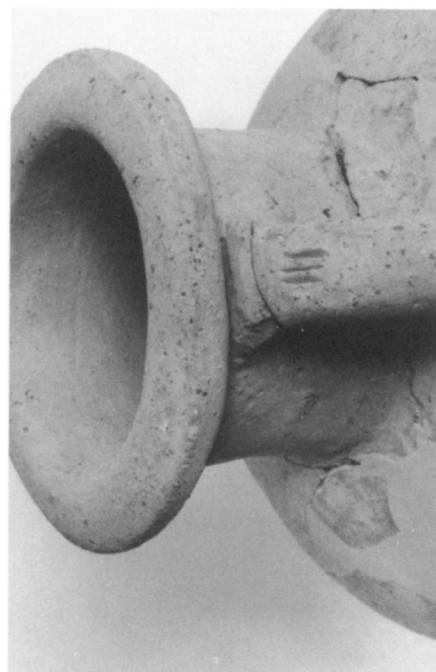
a. B13



c. B14



b. Detail of B13



d. Detail of B14



a. C1 (1:1)



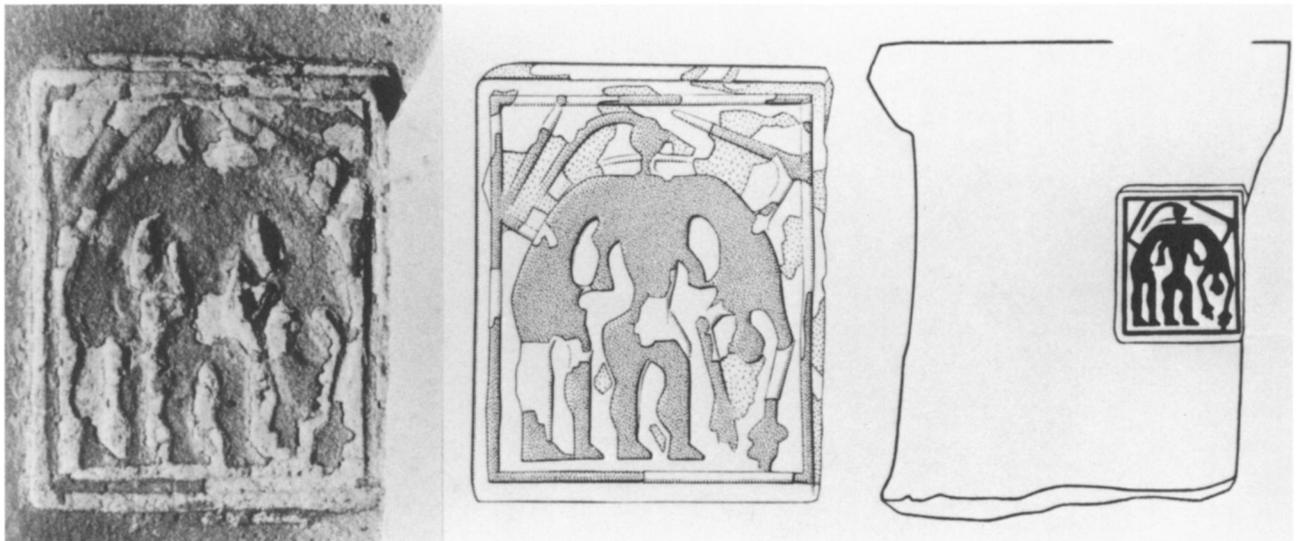
b. C2 (1:1)



c. C3 (1:1)



d. C4 (1:1)



e. C5



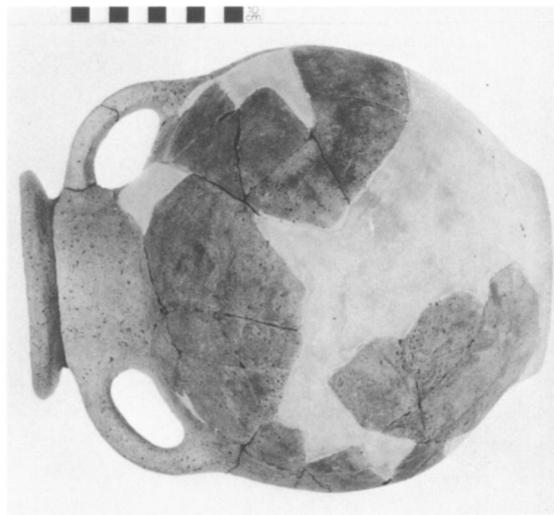
a. **D1**



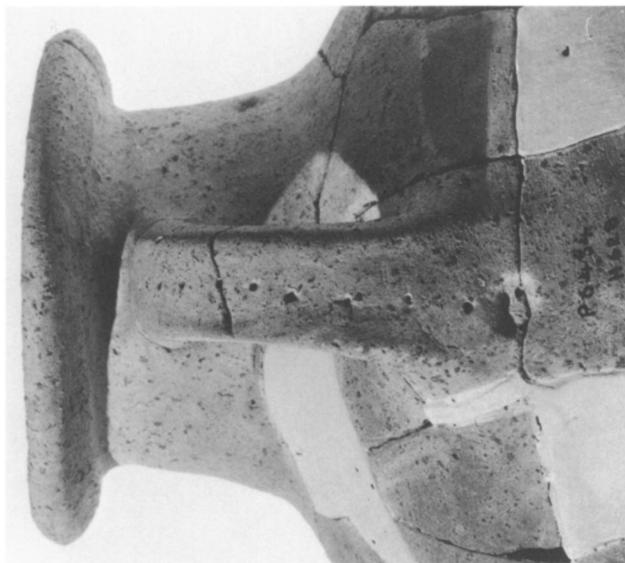
b. **D2**



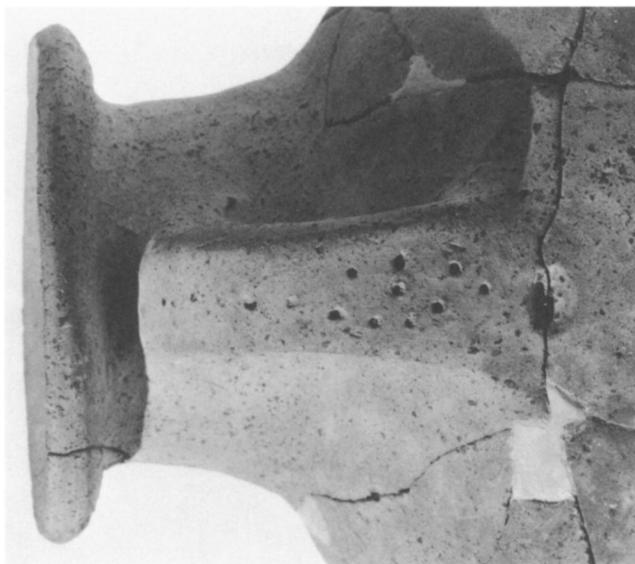
c. Detail of **D2**



d. **D3**



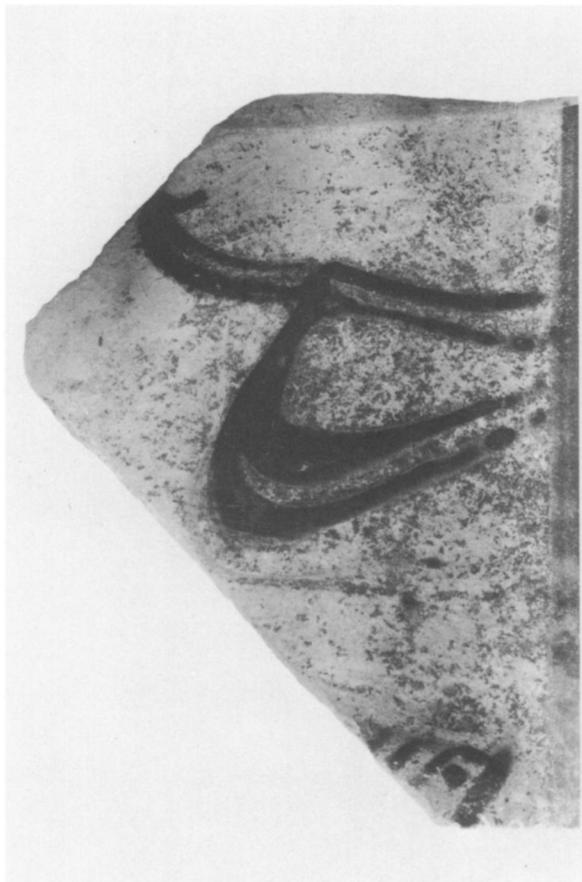
e. Detail of **D3**: handle A



f. Detail of **D3**: handle B



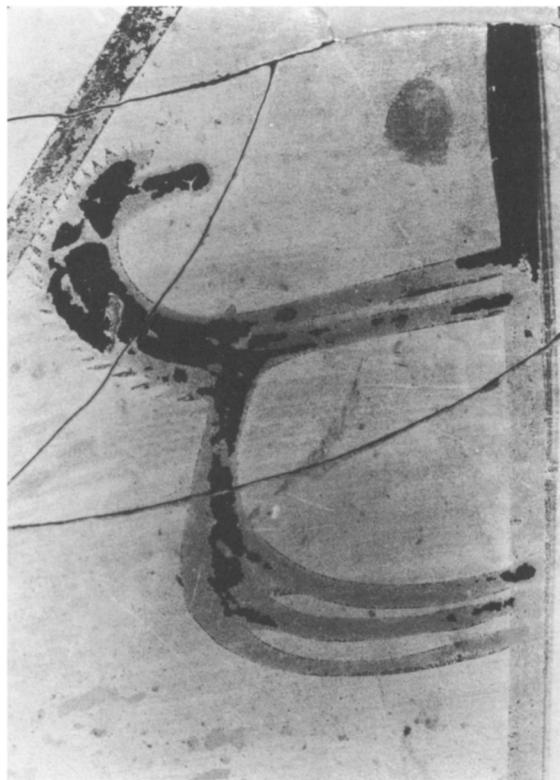
a. **E1**



b. Detail of **E1**



c. **E2**



d. Detail of **E2**



a. E3. Lefkandi:
Toumba Tomb
T39-19



b. E3. Handle view



c. Iolkos, inscription
on Protogeomet-
ric wall block