

# EXCAVATIONS AT KAVOUSI, CRETE, 1987

(PLATES 73–84)

IN THE SUMMER OF 1987 the Kavousi Project began full-scale excavations on the Vronta ridge and the Kastro peak in the Siteia mountains above the modern village of Kavousi.<sup>1</sup> These sites, first excavated by Harriet Boyd in 1900, have been the object of study and cleaning by the authors since 1978.<sup>2</sup> The eight-week excavation season was divided into six weeks on Vronta and two weeks on the Kastro. Two weeks of restoration and study followed.<sup>3</sup>

<sup>1</sup> This article is dedicated to the memory of Duane A. Bingham (1931–1988). Duane's abiding interest in classical archaeology led him during the summers from his career as instructor in industrial arts to serve as photographer for the Nichoria, Naukratis, and Kavousi excavations. His hard work, cheerful presence, and professionalism will be sorely missed.

<sup>2</sup> For accounts of previous work at Kavousi, see the following:

Boyd, "Kavousi" = H. A. Boyd, "Excavations at Kavousi, Crete, in 1900," *AJA*, 2nd ser., 5, 1901, pp. 125–157

"Kavousi 1978–1981" = G. Gesell, L. Day, and W. Coulson, "Excavations and Survey at Kavousi, 1978–1981," *Hesperia* 52, 1983, pp. 389–420

"Kavousi 1982–1983" = G. C. Gesell, L. P. Day, and W. D. E. Coulson, "Kavousi, 1982–1983: The Kastro," *Hesperia* 54, 1985, pp. 327–355

"Kavousi 1983–1984" = L. P. Day, W. D. E. Coulson, and G. C. Gesell, "Kavousi, 1983–1984: The Settlement at Vronta," *Hesperia* 55, 1986, pp. 355–387

Other works frequently cited are abbreviated as follows:

Brock = J. K. Brock, *Fortetsa, Early Greek Tombs near Knossos* (BSA Supplementary Paper No. 2), Cambridge 1957

Coldstream, "Knossos" = J. N. Coldstream, "Knossos 1951–61: Protogeometric and Geometric Pottery from the Town," *BSA* 67, 1972, pp. 63–98

DAG = A. M. Snodgrass, *The Dark Age of Greece*, Edinburgh 1971

Vrokastro = E. H. Hall, *Excavations in Eastern Crete: Vrokastro* (University of Pennsylvania, The University Museum, Anthropological Publications III, iii), Philadelphia 1914

<sup>3</sup> The excavations at Kavousi are being carried out by the Universities of Tennessee and Minnesota and by Wabash College, under the auspices of the American School of Classical Studies at Athens. We are especially grateful for the support and assistance of the Greek Archaeological Service, in particular Dr. Iannis Tzedakis, the Director of the Service, and Nikos Papadakis, the Director of the Ephoreia of East Crete. Kalliope Kotzageorgi and Marilena Kanetaki represented the Greek Archaeological Service on the site.

Generous support has been supplied by the University of Tennessee, Wabash College, the Graduate School of the University of Minnesota, the Institute for Aegean Prehistory, the National Geographic Society, the David A. Packard Foundation, Mr. and Mrs. Richard Sias, and Mr. Donald S. Kennedy.

During the 1987 season, Professor Geraldine C. Gesell (University of Tennessee) served as general director, oversaw all aspects of the excavation, and made the study of the shrine material included in this report (with the help of a Professional Development Award). Professor Leslie P. Day (Wabash College) served as field director at Vronta and has written the report on the excavations at that site. Professor William D. E. Coulson (University of Minnesota and the American School of Classical Studies at Athens) directed the excavations on the Kastro and is responsible for that section of the report. The staff consisted of the following:

Trenchmasters: Dr. Elizabeth Fisher (Randolph-Macon College), Kevin Glowacki (Bryn Mawr College), Donald Haggis (University of Minnesota), Marina Markantonatos (University of Cincinnati),

## VRONDA (Fig. 1)

Twenty-six trenches were opened on the summit and surrounding slopes of Vronda. The first goal of the season was to clear the five buildings which the cleaning in 1983 and 1984 had revealed on and below the summit<sup>4</sup> and to recover their complete plans. Of particular interest was Building E southeast of the summit, where cleaning had indicated potentially deep and stratified deposits and revealed a more complex history of occupation than shown in the houses on the summit.<sup>5</sup> It was hoped that excavation of this area would shed some light on the date of foundation of the Vronda settlement as well as on its later history.

Although the 1983–1984 cleaning had indicated that the settlement extended from the summit of the hill down the southeast and southwest slopes, excavation was needed to define its precise boundaries. It was hoped that this Early Iron Age settlement was small enough to make feasible the recovery of its complete plan.

Another objective of the season was to investigate anomalies located by the magnetometer and electrical-resistivity survey made at the Vronda settlement in 1986 by Professors Stavros Papamarinopoulos of the University of Patras and Grigori Tsokas of the University of Thessaloniki. These anomalies lay in a large field to the south and west of the known settlement and on the terrace near Boyd's Tombs IV, V, and VI.<sup>6</sup>

Since burials are so valuable both for answering questions about social structure and religious beliefs and in providing evidence for the physical state of the people, a further objective was to locate and excavate new tombs. This aim is particularly important because

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Margaret Mook (University of Minnesota), Dr. Jeffrey Soles (University of North Carolina, Greensboro), and Susan Springer (Hunter College).

Assistants: Philip Ammerman, Kevin Baldwin (University of Minnesota), Lloyd and Jacqueline Beebe, Thomas Brogan (Wabash College), Anne Ellenberger (Gustavus Adolphus College), Pedar Foss (Gustavus Adolphus College), Paulette Opegard (College of St. Catherine), Dr. Morris Weiss, Terry Weiss, and Nancy Wood (University of Minnesota). Maria Liston and Jonathan Reynolds (University of Tennessee) served as physical anthropologists.

Other staff included: Duane Bingham (photographer), Michael Hoff (Boston University) and Melissa Pinsley (architects), Stephen Mooney (artist), Kimberly Flint (Duke University; palaeobotanist), Helen Kingsley, Albert Nyboer, and Xenia Hiloudaki (conservators), Janet Colbert (registrar), and Yvonne Greenleaf (camp manager).

We are grateful to the following consultants who gave of their expertise: Peter Day (petrology), Carole Gillis (conical cups), Jim Raab-Rust (remote-sensing photography), David Reese (shells), Dr. John Foss and Michael Timpson (University of Tennessee; soil scientists).

Volunteers included Richard and Jeannette Sias and Betty Matthew.

We owe great thanks to the people of Kavousi, who have worked with us and without whose help the excavations could not have taken place. We are especially grateful to our foreman, Nikolai Spiliarotis, the Cultural Society of Kavousi, and the present and former mayors of the village, Demetrios Kophinakis and Antonios Athenakis.

We wish to thank Evangeliki Sachperoglou, the University of Crete, the British excavations at Palaikastro and Knossos, Stephen Miller, former director of the American School of Classical Studies, and Harry C. Rutledge for their assistance.

<sup>4</sup> See "Kavousi 1983–1984," pp. 360–385.

<sup>5</sup> *Ibid.*, pp. 378–385.

<sup>6</sup> For the location and description of these tombs, see "Kavousi 1978–1981," pp. 394–409 and p. 395, fig. 3. The original publication of these tombs is Boyd, "Kavousi," pp. 132–136.

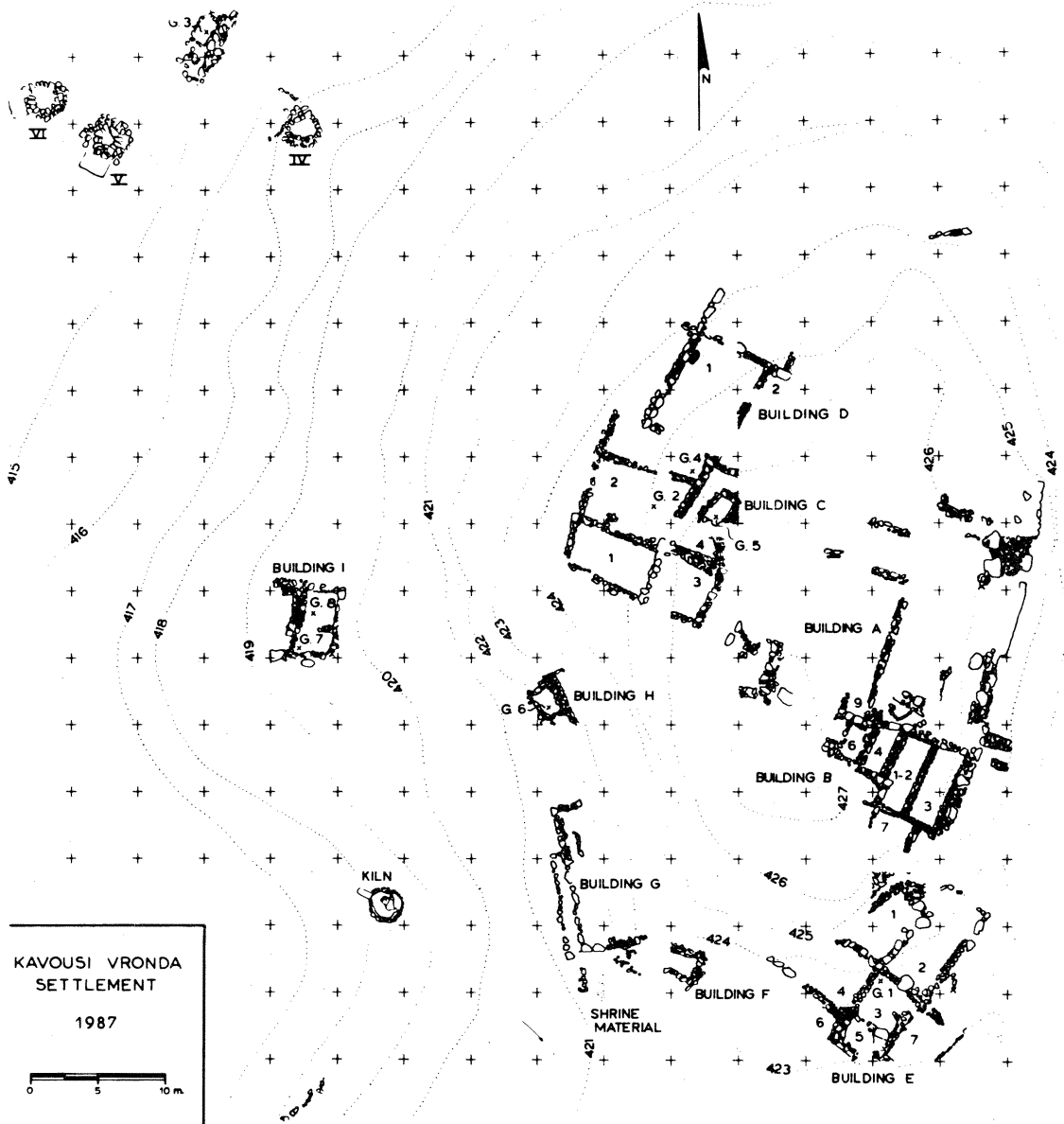


FIG. 1. Plan of Vronda settlement

even though one of the 10 tombs known from previous excavation at Vronda was found with its contents intact (Tomb IV), it was only briefly described.<sup>7</sup>

A final objective was to investigate the area north of the settlement, between Vronda Tombs X and IX, known as Xerambela, where road building in 1985 had revealed walls.<sup>8</sup>

<sup>7</sup> Boyd, "Kavousi," pp. 133–134.

<sup>8</sup> For the approximate location of Xerambela, see the plan in "Kavousi 1978–1981," p. 395, fig. 3.

As the purpose of these structures and their relationship to the settlement were unclear, they warranted further investigation.

## I. BUILDINGS ON THE SUMMIT

### *Building B*

Five rooms of Building B had been cleaned in the 1983 season. Room 7, which in the cleaning had produced many fragments of an interesting pithos,<sup>9</sup> was excavated to recover the remaining fragments of the pithos for restoration (Pl. 73:a). Some fine pottery was found amid the pithos fragments, including a stirrup jar (V87.132), a conical cup, a "scuttle" (V87.85), and a deep bowl (V87.129). The stirrup jar is decorated with curvilinear designs, possibly representing an octopus, with close parallels on two Late Minoan (LM) IIIC stirrup jars from Moulana.<sup>10</sup> The conical cup is similar to those found in other buildings at Vronda.<sup>11</sup> The handle and base of a terracotta scuttle or lamp were also found.<sup>12</sup> The long curved handle has a depression at the end, and the preserved fragment of the rim is indented where the handle is attached. Similar objects have been found at Karphi<sup>13</sup> and Kastri.<sup>14</sup> The deep bowl (Pl. 74:a), which has a close parallel at Kastri,<sup>15</sup> is a common LM IIIC shape. The design of tricurved streamers flanking a crosshatched lozenge is similar to motifs on LM IIIC or Subminoan (SM) vessels at Vrokastro<sup>16</sup> and Phaistos.<sup>17</sup> The material from Room 7 is consistent in style and date with the pottery from the rest of Building B, especially Rooms 3 and 4, where vessels of LM IIIC were found with a few pieces which might be Subminoan.<sup>18</sup> The deep bowl, with its combination of linear geometric elements and curvilinear LM IIIC streamers, is the latest piece from Room 7 and could be Subminoan.<sup>19</sup> It would thus appear that Building B went out of use no later than the Subminoan Period.

### *Buildings C and D*

Excavation was also carried out on the west side of the summit, where cleaning in 1984 had revealed two buildings, C and D. Two new rooms were added to the plans of these

<sup>9</sup> "Kavousi 1983–1984," p. 373.

<sup>10</sup> P. Betancourt, *The History of Minoan Pottery*, Princeton 1985, p. 184, fig. 131. See also A. Kanta, *The Late Minoan III Period in Crete (SIMA 58)*, Göteborg 1980, pls. 82:5 and 82:6 (no. 3480) and pls. 82:8, 82:9, and 121:3 (no. 3481).

<sup>11</sup> Cf. "Kavousi 1983–1984," pls. 81:b and c, 82:f; p. 361, fig. 4.

<sup>12</sup> This shape has been called a brazier or lamp but has recently been identified as a scuttle (H. Georgiou, *Keos, VI, Ayia Irini: Specialized Domestic and Industrial Pottery*, Mainz 1986, pp. 28–29).

<sup>13</sup> M. Seiradaki, "Pottery from Karphi," *BSA* 55, 1960 (pp. 1–37), p. 13, fig. 8.

<sup>14</sup> L. H. Sackett, M. R. Popham, and P. Warren, "Excavations at Palaikastro. VI," *BSA* 60, 1965 (pp. 248–315), p. 290, fig. 11:t, pl. 78:d.

<sup>15</sup> *Ibid.*, p. 295, fig. 15, no. KP21, and pl. 73:b.

<sup>16</sup> *Vrokastro*, p. 150, fig. 89:A and C, of Subminoan date.

<sup>17</sup> Kanta (footnote 10 above), p. 97 and pl. 34:4, of advanced LM IIIC date.

<sup>18</sup> See "Kavousi 1983–1984," pp. 366–375.

<sup>19</sup> While the Subminoan style can be identified in central Crete, in the eastern part of the island it is not so readily distinguishable from LM IIIC. Subminoan has not been found in East Crete in a stratigraphic sequence above LM IIIC. A further problem is that the pottery classified as Subminoan has been found in graves, while that recognized as LM IIIC is mainly from settlement areas.

buildings, one to the southeast and another to the northeast of Room C2. It is no longer certain that Building C is a single structure; Rooms 1 and 2 and the room to the northeast are on a lower terrace and may belong to a separate building. Rooms 3 and 4 may be more closely linked with the rooms of Building D or may belong to a third building. Further excavation is needed to clarify the relationships of these rooms.

### 1. Area Northeast of Room C2 (Grave 4)

A corner of a room northeast of Room 2 was excavated down to its flagstone and bed-rock floor (Pl. 73:b, lower left). The fill in this room had been disturbed by a later burial in the south corner (Grave 4), which was characterized by stones and soft ashy earth containing burned bones and pottery. Two individuals were recognized: an adult and an infant. The bones were fragmentary and the skeletons incomplete, as if the bodies had been cremated elsewhere and later deposited here. Although the bones were too badly burned to permit identification of sex or age, the presence of the infant and the type of grave goods suggest that it was the grave of a woman who died in childbirth.

The grave goods included a spindle whorl (V87.14) and two fine bronze pins (V87.94, V87.95; e.g. Pl. 74:b). The long (8.15 cm.), straight pins are similar: each has a short head with a small disk and moldings below it on either side of a biconical swelling.<sup>20</sup> The pottery was fragmentary and much of it was badly burned. The deposit included an oinochoe (V87.89), probably imported, of soft, white fabric with matt black paint (Fig. 2:1). As reconstructed in the drawing, the neck is too short. The vessel is probably one of the so-called Praesos-type oinochoai found at Fortetsa,<sup>21</sup> which began in Protogeometric B (PGB) but appear most commonly in the Early Orientalizing (EO) period. The rosettes in concentric circles on the shoulder and the hatched leaves on the neck suggest a Late Geometric (LG)—EO date for the oinochoe. Another fragmentary oinochoe (V87.84) has a neck of unusual shape (Fig. 2:2). The multiple zigzags on the neck are common on Cretan Geometric pottery, and the concentric circles in a metopal arrangement on the shoulder are also Geometric.

Fragments of a number of aryballoi were recovered, three of which are illustrated (Fig. 2:3–5). Most (Fig. 2:3 and 4) are globular with small concentric circles on the shoulder, a type common to LG–EO. Many parallels can be found from the tombs at Fortetsa<sup>22</sup> and from unpublished tombs at Kavousi (Plai tou Kastrou). The second type (Fig. 2:5) is a Creto-Cypriote aryballos (V87.69) with large concentric circles on either side, often found in EO context in Crete,<sup>23</sup> although already in use by LG times.

<sup>20</sup> Similar pins are known from Early Iron Age Crete. See *Vrokastro*, p. 104, fig. 58:C, D; J. Boardman, *The Cretan Collection in Oxford*, Oxford 1961, p. 33, fig. 14, nos. 139, 140. See also P. Jacobsthal, *Greek Pins and their Connexions with Europe and Asia*, Oxford 1956, figs. 56 (Psychro Cave) and 57 and 57a (Vrokastro), of “sub-geometric” date (pp. 17–18).

<sup>21</sup> Brock, pp. 155–156; cf. also p. 99 and pl. 76, no. 1128.

<sup>22</sup> Brock, p. 68, pl. 49, no. 734 (O); p. 90, pl. 71, no. 950 (O); p. 94, pl. 71, no. 1024 (G); pp. 113–114, pl. 96, no. 1317 (O); p. 123, pl. 96, no. 1421 (G).

<sup>23</sup> Cf. Brock, p. 130, pl. 97, no. 1509; p. 81, pl. 59, no. 896. A similar vessel comes from the Plai tou Kastrou tomb at Kavousi (Herakleion Museum no. 736).

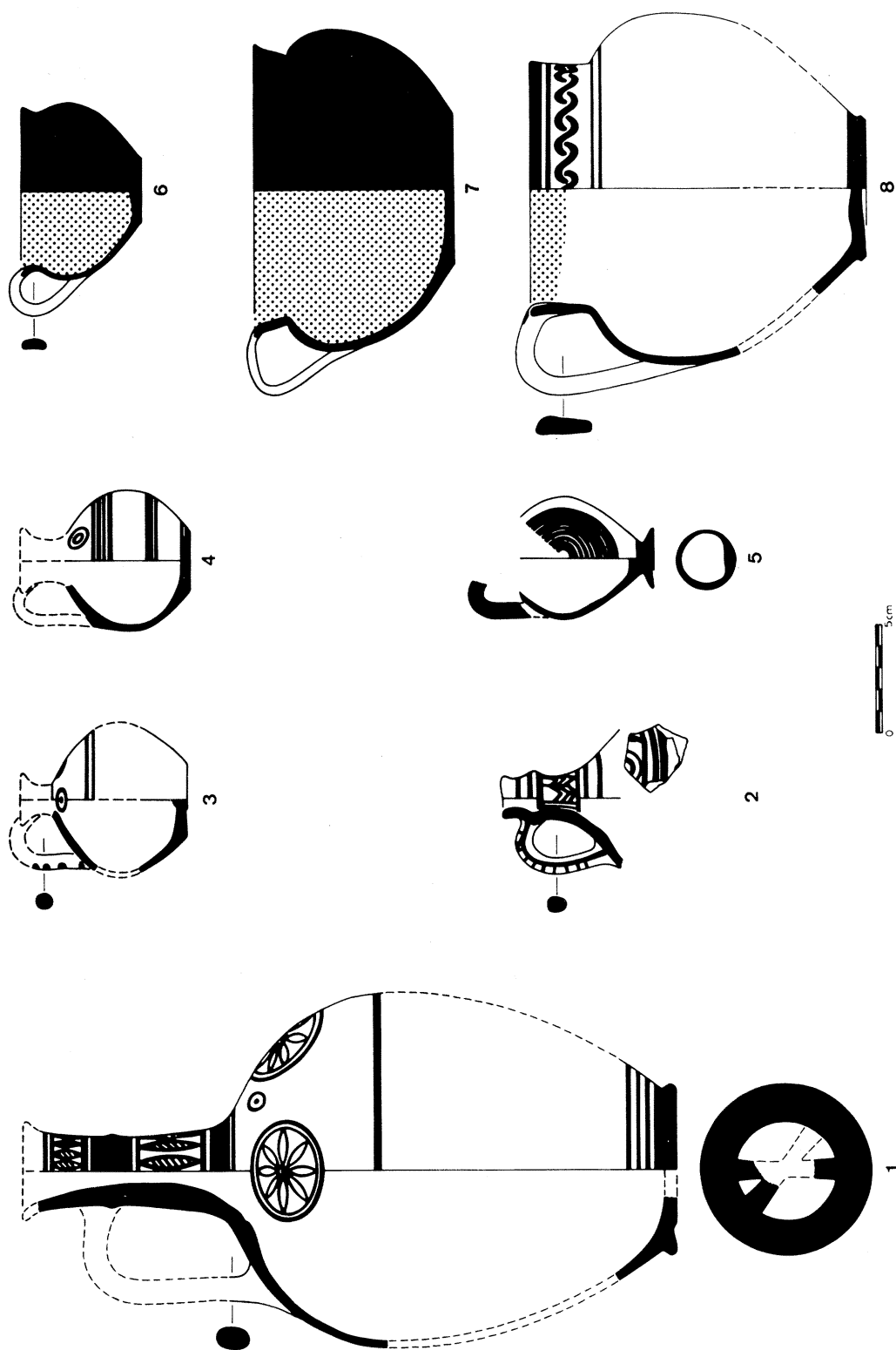


FIG. 2. Pottery from Grave 4, Vronda. Scale 1:3

The deposit included a large number of cups; two monochrome examples are illustrated (Fig. 2:6 and 7). The smaller (V87.91) is much like the Minoan teacup in shape (Fig. 2:6), but rather than surviving from the Bronze Age, it probably derives from mainland Early Geometric (EG) types.<sup>24</sup> A cup of similar shape came from the cremation burial in Room E3 at Vronta in 1984,<sup>25</sup> and examples similar in size and shape have appeared at Fortetsa.<sup>26</sup> The second example (V87.127) is much larger (Fig. 2:7, Pl. 74:c); LG–EO parallels for this shape can be found in the Fortetsa tombs<sup>27</sup> and the Knossos settlement.<sup>28</sup> The thin, hard fabric common to the two monochrome cups from Grave 4 suggests an EO date.<sup>29</sup> The larger cup was found with a miniature cup (V87.68; Pl. 74:d), set in a niche in the wall at a level just above the burial, perhaps put there after some final ceremony.

Finally, there were fragments of a large cup or jug (Fig. 2:8), which is also of unusual shape. It is a cross between Brock's "Mug-type oinochoe"<sup>30</sup> and a deep cup.<sup>31</sup> The fact that the interior is unpainted except at the rim suggests that it should be classed as an oinochoe. The rim is decorated with an "S" pattern, common on LG–EO pots from Kavousi.<sup>32</sup> In general, the pottery from this burial looks later than any found so far at Vronta, and the grave should be placed at the very end of the Late Geometric or the beginning of the Early Orientalizing Period.

## 2. Room C4 (Grave 5)

Room 4 was also partially excavated, but it, too, had been disturbed by the presence of a later burial, a rectangular cist grave (Grave 5) which contained both cremations and inhumations. In this case, the builders removed the rubble from the center of the room, creating a rectangular pit, which was then lined with a row of stones to form a large rectangular box, 2.00 × 1.10 m. (Pl. 73:c). The builders did not make use of any of the walls of the earlier structure.

The grave contained two layers of burials. The lower layer of black earth contained three cremations, all disturbed. The number of individuals could be ascertained by a count of skulls. The bones of two of the cremations, one of an adult male, the other too poorly preserved for identification, had been pushed to the southwest and northwest sides of the tomb and were mixed together. The bones of the third cremation, those of a subadult 11 to 12 years old, lay closer to the center of the cist. Many iron tools and weapons were also pushed to the southwest and northwest sides of the tomb (Pl. 75:a), but it was not possible to

<sup>24</sup> So suggests Brock, p. 167.

<sup>25</sup> "Kavousi 1983–1984," p. 383, fig. 14:42.

<sup>26</sup> Brock, p. 99, pl. 76, no. 1127 (LG–EO).

<sup>27</sup> Brock, p. 127, pl. 103, no. 1452; p. 128, pl. 103, no. 1465.

<sup>28</sup> Coldstream, "Knossos," p. 83, fig. 8, E2.

<sup>29</sup> Brock (p. 166) suggests that the earlier cups tend to be rough and heavy, while those of LG–EO are thinner, with more sharply offset rims.

<sup>30</sup> Brock, p. 155. Cf. p. 51, pl. 34, no. 507; p. 75, pl. 50, no. 838 (PGB–MG).

<sup>31</sup> Brock, p. 106, pl. 103, no. 1226 (O); p. 104, pl. 103, no. 1198 (O).

<sup>32</sup> It is found, for example, on the neck of the famous hydria from the tomb at Skouriasmenos: Boyd, "Kavousi," pls. III and IV.

associate them with particular cremated individuals. The iron was corroded and broken, making identification of the objects difficult, but the hoard included fragments of at least two spearheads (V87.98, V87.101) of the long, narrow type favored on Crete (e.g. Pl. 74:e, bottom),<sup>33</sup> four knives (V87.96, V87.102, V87.103, V87.104; e.g. Pl. 74:e, top left and middle),<sup>34</sup> a sickle (V87.99; Pl. 74:e, top right), a chisel with a bent tip (V87.97), and tweezers (V87.100). An obsidian blade (V87.80) and many fragments of burned pottery were also found in the tomb.

An inhumation burial was found above the black layer containing the cremations and separated from it by flat stones and red-brown earth. The well-preserved skeleton lay in an extended position, legs crossed at the ankles and arms crossed over the chest (Pl. 75:b). It belonged to a man who was apparently 60 to 70 years old and toothless at death. There were signs of healed wounds on the right arm and hands.

The grave goods accompanying this inhumation included a bronze pin (V87.138) like those in Grave 4 and a fine skyphos (V87.128; Pl. 74:f). The skyphos is an unusual piece. The shape is early; its closest parallels date to PGB, although some examples run into Mature Geometric (MG).<sup>35</sup> The decoration, however, is a variation of the multiple zigzag, which is very common on Crete in the LG Period.<sup>36</sup> Here short strokes link the zigzags together so that they resemble an angular guilloche. The zigzags are arranged in a panel between the handles, and the whole arrangement looks like a local imitation of a LG krater from Knossos.<sup>37</sup> The date for this final inhumation would thus appear to be Late Geometric.

## II. BUILDING E

Work in the 1987 season focused on this building below the summit on the southeast. Four new rooms (Rooms 4, 5, 6, and 7) were added to the plan. The south corner of Room 1 was excavated, along with its southwest wall. Of particular interest is a doorway which led from Room 1 to Room 4 (Pl. 75:c). The door, 0.96 m. wide, has a threshold paved with stones. It lies in line with the closet found in the northeast wall of Room 1, a fact which now suggests that the closet had originally been a door that was later blocked. Two floor levels associated with the door were found beside the threshold in Room 4, and the pottery when thoroughly studied will give a date for these two phases of occupation. The rest of the floor had washed away down the slope to the southwest, leaving only the rubble fill which had been brought in to level the bedrock before the building was constructed. When the northeast end of Room 2 was uncovered, it was learned that here also erosion had removed all the floor surfaces and all but a few stones of the walls. Only the rubble fill on which the floor

<sup>33</sup> *DAG*, pp. 266–267. Cf. the example illustrated on p. 266, fig. 94, from Fortetsa. This is Snodgrass' Type J spear; A. M. Snodgrass, *Early Greek Armour and Weapons*, Edinburgh 1964, pp. 123–126.

<sup>34</sup> A knife with a riveted handle similar to this one was found in a tomb on Gypsades. See S. Hood, G. Huxley, and N. Sandars, "A Minoan Cemetery on Upper Gypsades," *BSA* 53–54, 1958–1959 (pp. 194–262), pp. 245 and 255, fig. 32, no. 17.

<sup>35</sup> See, for example, the amphoriskos or flat-based skyphos from Tomb IX at Vronda, "Kavousi 1978–1981," pl. 77:f. A number of similar shapes, called pyxides, were found at Fortetsa: Brock, p. 38, pl. 26, nos. 361 and 369 (PGB); p. 121, pl. 103, nos. 1397 and 1404 (PGB-MG); p. 61, pl. 45, no. 643 (MG).

<sup>36</sup> Coldstream, "Knossos," p. 80.

<sup>37</sup> *Ibid.*, p. 79, fig. 6.

had been laid was preserved. The remainder of Room 3 was uncovered, as well as the smaller Room 5 to the southwest. Room 5 was obviously a later addition, since its walls do not bond with the other walls of the building. Room 6 has a bench along its southeast wall (Pl. 75:d), but it is not yet clear whether this bench lies inside or outside the building. Room 7 may have been a courtyard, open to the air. The line of stones on the southeast indicated on the plan (Fig. 1) has no good face and may be part of the modern terrace wall. Much pottery was found smashed on the cobbled surface of Room 7 (Pl. 76:a), most of it coarse cooking ware. A possible doorway leads from Room 7 into Room 3.

The new rooms of Building E confirm that it had at least three building phases. In the first phase, rubble fill was put in to level the area, and the walls of Rooms 1–4 were constructed. It is difficult to date this construction, since the fill already contained much broken pottery when it was brought in. As was the case with the fill in Room 1,<sup>38</sup> little of this pottery was diagnostic, but it appears to be mixed, including sherds of Middle Minoan (MM) and LM IA date.

After the construction of Rooms 1–4, Room 5 was added. Possibly at the same time a new threshold was put into the doorway between Rooms 1 and 4 to match a raised floor level. It may have been at this time or later that the bench was put into Room 1. The third phase of construction can be seen in the creation of the closet in Room 1. Building E thus appears to have been occupied longer than any other building found at Vronta. Its pottery differs from that found in buildings on the summit, an indication of a different date of destruction, as suggested earlier.<sup>39</sup>

### III. AREA EAST OF TERRACE WALL

The 1984 cleaning showed that the large wall running along the southeast side of the summit was a terrace wall for the buildings above.<sup>40</sup> One trench was laid out east of this wall, where cleaning revealed possible house walls running perpendicular to it. Two rooms were found (Pl. 76:b). As with other buildings on the site, their elusive floors consisted of a thin layer of clay over rubble fill. A layer of calcareous material overlay the floors, possibly fallen from the roof or an upper storey. A fragment from the torso of a terracotta goddess, similar to those from the shrine deposit (see p. 289 below; Pl. 78:c, bottom), was found in the deposit above the floor. Below the floor of the southwestern room was an earlier wall, and it is clear that the building had two phases of construction. The presence of a building using the massive wall as its boundary further confirms that this wall could not have served a defensive function.

### IV. BUILDING H

One trench was opened on the southwest slope of the summit, where it was hoped that traces of a street might be found. Just below the surface, however, walls of a building (Building H) began to appear. Little of the actual structure remained, since the area was

<sup>38</sup> See "Kavousi, 1983–1984," p. 378.

<sup>39</sup> *Ibid.*, pp. 384–386.

<sup>40</sup> *Ibid.*, pp. 375–376.

both eroded and disturbed by later use. Along the bedrock and not associated with the building remains was found a fragment of a stone kernos (V87.4) of unusual type (Pl. 77:a, b). Although this serpentine vessel is fragmentary, three cups are preserved, one large central one and two smaller ones flanking it. Other small cups no doubt existed, either two more on the other side of the central cup to form a rectangle or many more in a circle around the central cup. There are no exact parallels for this type of kernos; the closest comparisons are block vases or kernoï of earlier date on Crete.<sup>41</sup>

Two of the walls of Building H were later re-used as part of a cist grave (Grave 6; Pl. 76:c) similar to Grave 5 in Building C. The southeast and southwest walls were constructed of a single row of stones (Pl. 76:d). The cist grave thus formed measures roughly  $1.95 \times 1.20$  m. Like Grave 5 it contained inhumations on top of cremations. Above the pebble floor of the cist were two cremated individuals. One, pushed to the southeast side, was too poorly preserved to identify. The second cremation, clearly later, was not so thorough; the skeleton of an adult 40 to 50 years old is still partly articulated. The soil associated with these cremations was soft and dark, and burned stones were found over and among the bones. Pushed to the southeast side was a hoard of iron weapons and tools, but it is not clear with which of the cremations these belonged. Eighteen corroded objects of iron were inventoried, including fragments of 4 to 6 spearheads (V87.107, V87.111, V87.115, V87.117, V87.119, V87.120; Pl. 77:c, row 2 right, row 3), two smaller spearheads or javelin heads (V87.112, V87.118; e.g. Pl. 77:c, bottom), a dagger or sword (V87.110; Pl. 77:c, row 2 left), an axehead (V87.108; Pl. 77:d), tongs (V87.114; Pl. 77:e), a chisel (V87.121; Pl. 77:c, top), a simple arched fibula (V87.106), and a pin (V87.122). The spearheads are the elongated Cretan types (see p. 286 above). The fragments of dagger- or sword-handles preserve the iron pins, but since so little of their length remains, it is impossible to tell whether they were long swords or shorter daggers. Similar swords or daggers can be found both on Crete<sup>42</sup> and on the Mainland.<sup>43</sup> The axehead has a long haft, for insertion into a wooden handle, and projections at the juncture of head and haft. It is similar to a Geometric axehead found in Athens.<sup>44</sup> An obsidian blade (V87.81) was also found. The pottery associated with the cremations was badly burned and has not yet been restored; the burning destroyed much of the decoration and distorted the shapes, making the pottery difficult to identify.

On top of the cremations, badly eroded, was a primary inhumation, possibly of two individuals: bones of an adult and a subadult in the mid-teens were found. Associated with

<sup>41</sup> The closest parallels are Warren's Form E, block vases with three or more than four cups; his Form B is similar, but has four cups arranged by twos in a rectangular block. See P. Warren, *Minoan Stone Vases*, Cambridge 1969, pp. 11–14. The Form E kernoï are mostly from LM contexts, while those of Form B are in MM I deposits or deposits which are mixed, but include MM I. Since there are no exact parallels for the Vronda kernos, it is difficult to know to which period it belongs, but it is almost certainly earlier than the major period of occupation on the summit.

<sup>42</sup> V. R. d'A. Desborough, *The Greek Dark Ages*, London 1972, p. 230, fig. 24, from Ayios Ioannes.

<sup>43</sup> DAG, p. 273, fig. 96:b from Argos, and p. 223, fig. 79 from the Kerameikos in Athens.

<sup>44</sup> DAG, p. 235, fig. 84. A similar shape, although more elongated and of bronze, was found in the settlement at Karphi; see H. W. and J. D. S. Pendlebury and M. B. Money-Coutts, "Excavations in the Plain of Lasithi. III. Karphi. A City of Refuge of the Early Iron Age in Crete," *BSA* 38, 1937/38 (pp. 57–145), pl. 29:2, no. 455.

the inhumations were at least two skyphoi, one decorated with a zigzag pattern (Pl. 77:f); the other, a pedestaled "Eteocretan" shape<sup>45</sup> has an "S" motif (Pl. 77:g). Both are probably LG in date. In the stones above the grave was a miniature amphoriskos (V87.123; Pl. 77:h).

## V. SOUTHWEST OF THE SUMMIT: BUILDING F AND THE SHRINE AREA

### *Building F*

During removal of a modern terrace wall below the summit on the southwest, a doorway was uncovered. Further investigation revealed a small room built up against an overhanging cliff of rock with a doorway in its southeast corner (Pl. 80:a). The doorway was constructed of two upright slabs of stone on either side of a flat threshold block. Modern glazed wares and other post-ancient pottery suggested that the walls and the doorway were modern. Below the modern floor, however, traces of a possible ancient structure began to appear. In the northeast corner of the room was an ash pit, which went below the modern walls. The snout of an animal figurine (V87.70; Pl. 78:a) found below the modern floor suggests possible cult activity.

### *Shrine Material*

A deposit of broken cult equipment was found to the west of Building F. It included fragments of several snake tubes and goddesses with upraised hands similar to those found in shrines of the LM IIIB and LM IIIC periods.<sup>46</sup> At least three snake tubes of different fabrics have already been distinguished (V87.133; e.g. Pl. 78:b). The snake tubes appear to be of the standard type with serpentine handles on either side of the tube. It is too early to tell whether each goddess had her own snake tube,<sup>47</sup> but it is clear that one goddess and one snake tube were made of the same poorly fired red clay.

From the number of separate mouth, ear, nose, arm, hand, finger, torso, and cylindrical-skirt fragments (Pl. 78:c, d), it is possible to differentiate at least five goddesses. The figures are of very different quality, varying from a poorly fired and now crumbling red-clay figure to a well-fired pink-clay hand with a finely modeled thumb and fingernail. None of the Minoan cult symbols which normally appear on the snake tubes or goddesses has yet

<sup>45</sup> Cf. "Kavousi 1983-1984," p. 383, fig. 14:39. A close parallel can be found at Adromyloi, see J. P. Droop, "Some Geometric Pottery from Crete," *BSA* 12, 1905/1906 (pp. 24-62), p. 43, fig. 21, no. 3218. For the decoration see parallels cited above for Grave 4 (p. 286 above; Fig. 2:8).

<sup>46</sup> The nearest shrine is that of LM IIIB date at Gournia, about 10 kilometers to the west by the modern road. It is a rectangular room (4.00 × 3.00 m.) with a bench and is located on top of the ridge at the eastern edge of the LM IIIB town. The cult equipment included at least three goddesses with upraised hands and five snake tubes. One goddess and one snake tube were decorated with relief snakes. See H. B. Hawes, B. Williams, R. Seager, and E. Hall, *Gournia, Vasiliki and Other Prehistoric Sites on the Isthmus of Hierapetra, Crete*, Philadelphia 1908, pp. 47-48. The nearest contemporary shrine is at Karphi (ca. 70 kilometers west by modern road). Situated on the saddle of the LM IIIC settlement, it is also a rectangular room with a bench. It contained five figures of goddesses with a variety of attributes, including horns of consecration, disks, and birds, but no snakes or snake tubes. See Pendlebury *et al.* (footnote 44 above), pp. 75-76; Seiradaki (footnote 13 above), p. 29. For a discussion and bibliography of these and other shrines of the goddess with upraised hands, see G. Gesell, *Town, Palace, and House Cult in Minoan Crete (SIMA 67)*, Göteborg 1985, pp. 42-45 and the appropriate catalogue entries.

<sup>47</sup> As is true of two goddesses from Gazi: Gesell, *op. cit.*, p. 44.

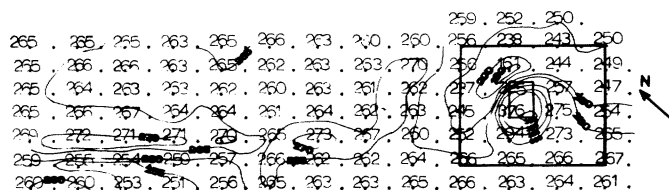


FIG. 3. Magnetic map of field to southwest of Vronda settlement by geophysical survey

been found, although several fragments of unusual shape may turn out to be new types of cult symbols. The fragments of the goddesses and snake tubes were not in their original position but were scattered among the rubble fill on the slope. Isolated fragments of similar figurines have been found elsewhere on the site. The exact location of the shrine from which they came is still to be determined.

#### *Area South of Shrine*

One trench was excavated five meters south of the deposit of shrine material. It produced no architecture and few signs of human activity. Clearly the settlement did not extend so far south. The trench is important, however, for defining the ancient contours of the land and in providing soil samples to help reconstruct the geomorphology of the area.

### VI. SOUTHWEST OF THE SUMMIT

#### *Field to the Southwest*

In 1986 the geophysical survey investigated the large field to the southwest of the settlement to test for underlying structures. Total-intensity geomagnetic measurements carried out with a proton magnetometer (ELSEC 770) located an impressive anomaly (Fig. 3), with a strength of more than 200 gammas and an external extent of 30 sq. m. These indications suggested either a structure of baked earth or a large metallic object. Electrical-resistance mapping was also conducted in the same area with a Geoscan RM 4, and the data was entered into an Epson HX-20 microcomputer and processed in the field. The resulting dot-matrix map (Fig. 4) indicated a structure (shown by arrows on the plan) and not a metallic object. The geophysical survey, which showed an anomaly in both the magnetic and electrical readings, strongly suggested a major structure of baked clay in the area. In 1987 several trenches were laid out to test the findings of the survey. Excavation revealed the remains of a pottery kiln (Fig. 5), with the entrance or stoking hole, the stoking chamber, and about one-quarter of the floor of the firing chamber preserved.

The kiln is irregularly oval in plan ( $2.13 \times 1.88$  m.), with a central pillar to support the floor of the firing chamber (Pl. 79:a). The entrance or stoking hole on the west, a channel 1.30 m. long cut into the bedrock, slopes down into the stoking chamber (Pl. 79:b). The stoking chamber was also cut into the bedrock; its sides were subsequently built up and lined with clay, which was then fired very hard (Pl. 79:c). The central rectangular pillar was partly cut out of the bedrock, but the upper parts were built up of flat stones and clay.

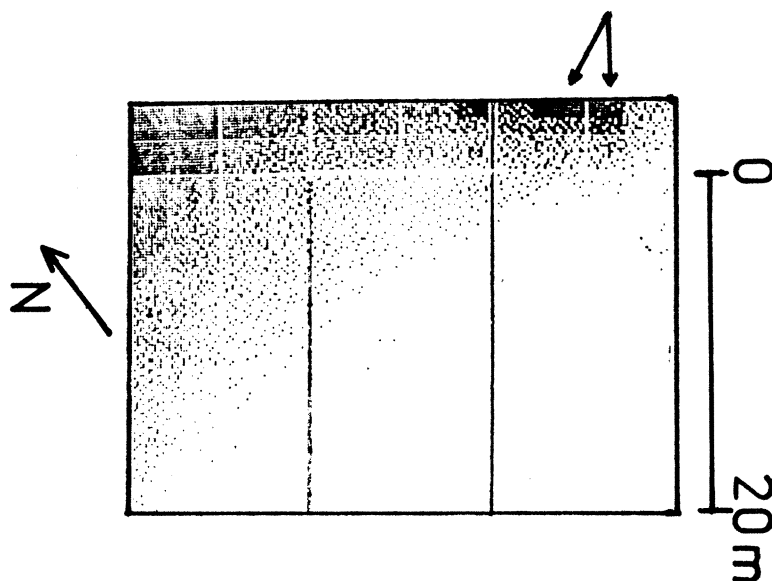


FIG. 4. Map of field southwest of Vronda settlement measuring electrical resistance

At the same level as the top of the pillar is a ledge of stone and clay around the outer edge of the stoking chamber (Pl. 79:c). This ledge, along with the pillar, helped support an arch of clay on which rested the floor of the firing chamber.<sup>48</sup> Flat stones are incorporated in the clay floor (Pl. 79:d). Large rectangular vent holes ( $0.12 \times 0.10$  m.) through the floor allowed the heat to rise into the firing chamber. Five of these holes are preserved near the wall, and there is room for at least three more. Whether there were other holes in the floor toward the center cannot now be determined. Nothing of the upper structure of the kiln is preserved, but it is likely to have been domed, like other updraft kilns.<sup>49</sup> Possibly the mud-brick dome was removed after each firing.

The stoking chamber was found filled with stones and fired clay from the collapsed firing floor. There was some pottery in the debris, most of it coarse and much of it burned gray or warped. No wasters were found outside the kiln. There was little fine ware to date the use of the kiln, but there were some identifiable LM IIIC sherds. If these indicate the date of the structure, then the Vronda kiln is the earliest known example on Crete of what became the standard type of pottery kiln in the Classical period.<sup>50</sup>

<sup>48</sup> A wooden frame may have been erected on which the arch was formed when the lower parts of the kiln were constructed. So postulate W. Rostoker and E. Gebhard ("The Reproduction of Rooftiles for the Archaic Temple of Poseidon at Isthmia, Greece," *JFA* 8, 1981 [pp. 211–227], p. 219) for the kiln used to fire the Archaic roof tiles at Isthmia.

<sup>49</sup> For a brief account of the updraft kiln, see Betancourt (footnote 10 above), pp. 117–119.

<sup>50</sup> See C. Davaras, "A Minoan Pottery Kiln at Palaikastro," *BSA* 75, 1980 (pp. 115–126), p. 125, Type B. Larger kilns with central supports for a floor began to replace small kilns with ledges in the Bronze Age, but these supports consisted of short parallel walls dividing the interior of the fire chamber into a number of channels, as at Phaistos and Stylos (Davaras, pp. 121–122). The use of the single pier became common in

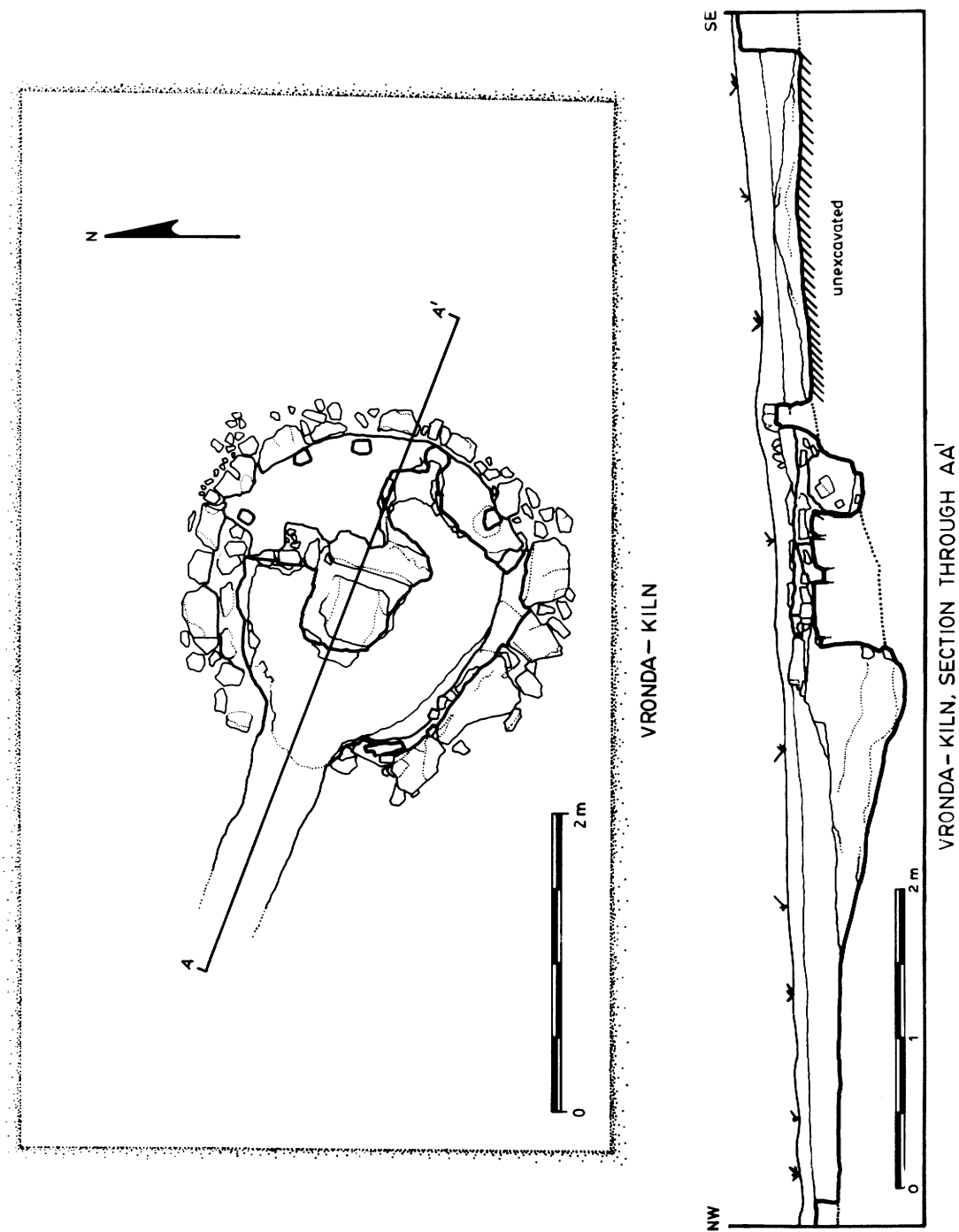


Fig. 5. Plan and section of kiln, Vronda

Finally, the location of the kiln is interesting: it seems to lie well outside the boundaries of the settlement. Two other trenches were opened in the vicinity. One close to the kiln produced no architecture and few artifacts. The other, lying farther south, contained a wall running from southwest to northeast. This structure was probably a terrace wall, since the surface to the southeast of it was at a higher level than that to the northwest. There were no signs of other structures and little pottery; hence it seems likely that this terrace served an agricultural purpose, to retain soil for trees or crops, rather than to support buildings.

#### *West of Summit: Building I*

One trench was laid out west of the summit, where walls on the surface suggested that houses may have continued. Although excavation of the area was not completed, it is clear that there was a building of at least two rooms, facing a possible courtyard on the west (Building I). A doorway 1.05 m. wide led into the southern room from the west, and a short spur wall separated the southern room from the northern. Both rooms had floors of thin clay over cobbles.

In both rooms the deposits had been disturbed by later burials. Grave 7 in the southern room contained a cremation burial. Much of the skeletal material is missing, and the remaining bones are too fragmentary and burned to permit classification. There were no grave goods. Grave 8 in the northern room held a secondary burial; the bones had been burned in a pyre elsewhere and placed in a small pithos set on the floor. Again, the bones were too fragmentary to identify age or sex.

There may have been a courtyard to the west. Along the east wall of the court was a bench, and at right angles on the north lay a small bench or pot stand. An obsidian core (V87.61) was found in the courtyard. Further excavation may show whether this was a chance find or the building was a stoneworker's establishment.<sup>51</sup>

## VII. TOMB AREA

The terraces to the west of the settlement, where Boyd excavated three tholos tombs in 1900 (Tombs IV, V, VI) were explored for burials. The geophysical survey attempted to locate voids which might represent intact tombs, but without success. A promising elliptical anomaly proved to be a crude terrace wall. Other possible traces of tombs were explored, including surface depressions or mounds, areas with trees, and circles of stones. None of these produced remains of tholos tombs. One distinctive mound did prove to be a cist grave (Grave 3) like those found on the summit.

Grave 3 was a rectangular cist, roughly 1.03 × 1.85 m. (Pl. 80:b). The builders apparently made use of an existing wall on the northeast; its construction is different from that of the other three walls of the grave. It is two courses high and has a good inner face of regular limestone blocks, while the other three walls were built of a single row of large

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Classical times on Crete, but the earliest example is an Archaic kiln from Lato (Davaras, p. 125); they may have existed earlier on the Mainland.

<sup>51</sup> Obsidian blades continued to be used into the Geometric period at Vronda. One was found in Grave 5 and another in Grave 6.

breccia boulders, one course high. To the southwest was an area paved with flat stones. A depression in the paving surrounded by upright stones marks the place where a pot or stele had stood. The grave itself contained two cremation burials. The earlier had been pushed to the northeast side of the grave, apparently to make way for the later. The skull of the first body, which had been incompletely burned, was sufficiently intact to be identified as that of an adult male. The second burial, which lay toward the southwestern part of the grave, was associated with scorched stones and friable black earth, an indication that the cremation took place within the grave itself. The remains were so completely burned that it was impossible to identify the age or sex of the second individual.

The grave contained a large amount of pottery, much of it found on the northeast side of the cist and most of it burned. It was not always possible to determine whether a vessel belonged to the first or second burial. Certainly associated with the second burial was a bronze pin (V87.93; Pl. 81:a) which, although broken, could be seen to be similar to those from Grave 4, a bronze earloop (V87.137; Pl. 81:b), and an iron pin (V87.105). The cup and aryballos, which were found intact among the stones above the burials (Pl. 80:c), must have been put in after the second burial, possibly in connection with some ritual which took place after the interment. The monochrome cup (V87.33; Fig. 6:1, Pl. 81:c) is heavy and rough, similar in shape to PGB cups from Fortetsa;<sup>52</sup> monochrome cups, however, continued to be popular in the Geometric period. The aryballos (V87.32; Fig. 6:10, Pl. 81:d) is of an unusual shape, with an almost rounded bottom, and is decorated with rough horizontal bands in a metopal arrangement. There are no good parallels for the shape or decoration.<sup>53</sup>

Most of the other vessels found could have belonged to either burial. Cups were the most frequent shape; several are illustrated in Figure 6. Two monochrome cups (2 and 3) have parallels at Fortetsa<sup>54</sup> and Knossos.<sup>55</sup> Although at Fortetsa the shape has a wide chronological range, fine, thin-walled examples like these are usually later in the series, perhaps LG. Cup 2 has a handle which is decorated with oblique slashes, like examples from Fortetsa and Knossos.<sup>56</sup> Cup 4 (V87.35) is of an unusual shape;<sup>57</sup> it is decorated in red paint with vertical stripes on the rim and, in the handle zone, a row of upright loops with central dots. The loop motif is common on LG pottery from other tombs at Kavousi, especially the tomb on Plaï tou Kastrou.<sup>58</sup> Other cups and larger bowls with simple conical profiles were also found.

The monochrome skyphos (V87.36; Fig. 6:5) represents a common LG–EO shape on Crete, although it is more regularly found decorated.<sup>59</sup> Similarly, the tray or lid with reflex-

<sup>52</sup> Brock, p. 46, pl. 35, no. 434.

<sup>53</sup> The closest parallel for the shape has a different neck, mouth, and handle. See Droop (footnote 45 above), p. 43, fig. 21, no. 3206.

<sup>54</sup> Brock, p. 50, pl. 35, no. 491. This is transitional to LG–O, type iii (p. 166). See also p. 98, pl. 76, no. 1124 of LG–EO date.

<sup>55</sup> Coldstream, "Knossos," pp. 95–96, fig. 15, G105 (MG).

<sup>56</sup> Coldstream, "Knossos," pp. 82–83, D30 and pl. 21 (early LG); Brock, p. 98, pl. 76, no. 1123 (G).

<sup>57</sup> No exact parallel can be found for the shape. The body is similar to that on a pedestaled cup at Fortetsa; see Brock, p. 48, pl. 35, no. 471, of Geometric date.

<sup>58</sup> See J. N. Coldstream, *Greek Geometric Pottery*, London 1968, pl. 57:n, for example.

<sup>59</sup> Coldstream, "Knossos," pp. 82 and 85, F14 (here called a kotyle); Brock, p. 40, pl. 27, no. 396; p. 66, pl. 45, no. 723.

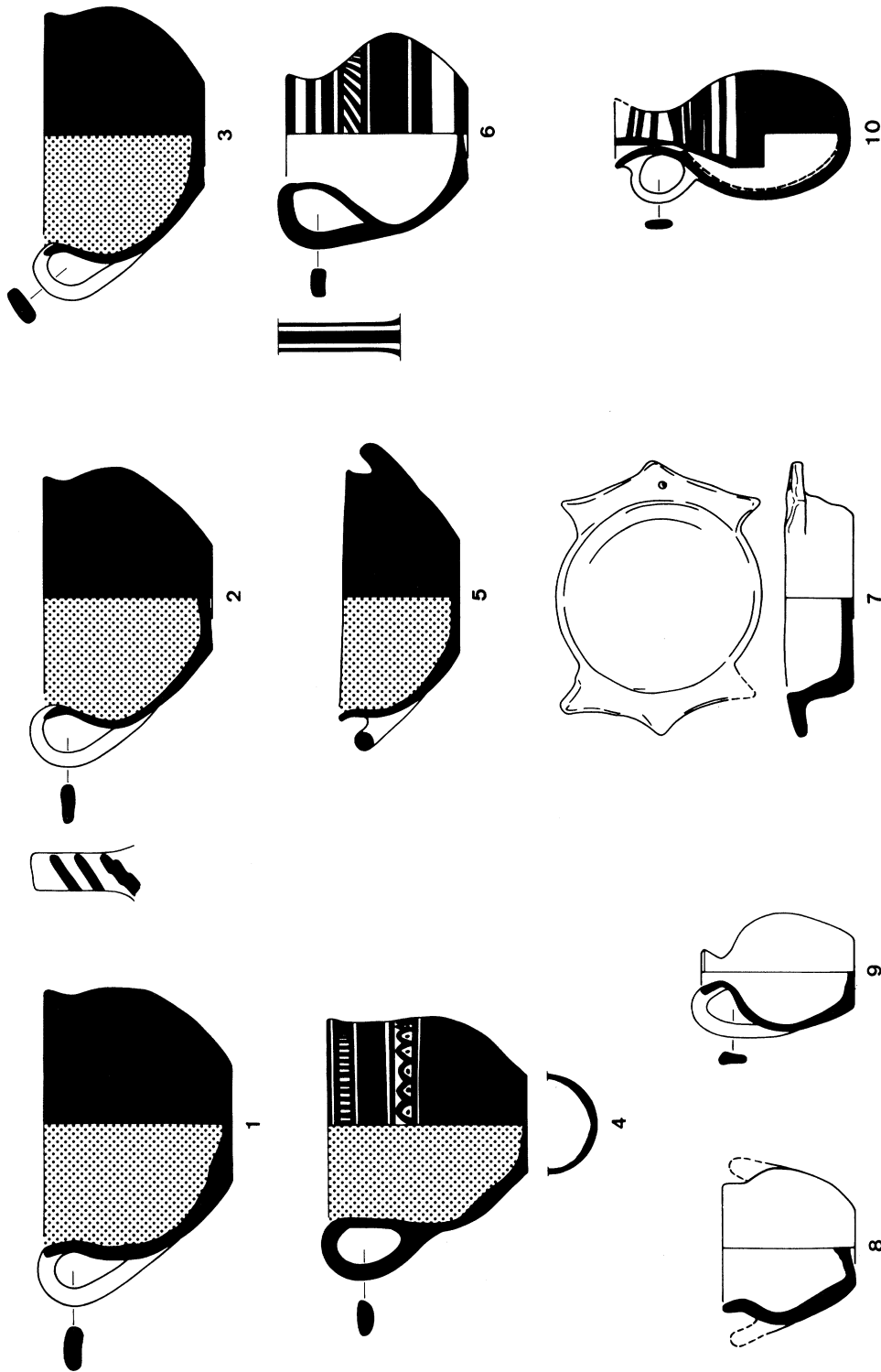


FIG. 6. Pottery from Grave 3, Vronda. Scale 3:10

type lugs (V87.34; Fig. 6:7) can be paralleled in Geometric burials at Kavousi,<sup>60</sup> Fortetsa,<sup>61</sup> Arkades,<sup>62</sup> and in the Ayios Nikolaos area.<sup>63</sup> This example is undecorated and small, and one of the lugs is pierced. The tiny amphoriskos (V87.43; Fig. 6:8) is a miniature variety of a shape found in Vronda Tomb IX.<sup>64</sup>

There were fewer closed shapes. The jug (V87.92; Fig. 6:6) or mug-type oinochoe is unusual in both shape and decoration. The form may represent a survival of a Minoan shape,<sup>65</sup> although similar examples occur in the PGB repertoire at Fortetsa.<sup>66</sup> A similar decoration of oblique strokes can be found on a skyphos of LG–EO date from Fortetsa.<sup>67</sup> The undecorated aryballos (Fig. 6:9) is not so globular as the LG–EO examples from Grave 4 (see p. 283 above).

The material from this grave is difficult to date, but many of its parallels are with MG or LG material from elsewhere on Crete. It is probable that the burials belong to the Late Geometric period, like the cist graves uncovered in the Vronda settlement. Since, however, the material does appear to be earlier than that found in Graves 1, 5, and 6, Grave 3 may be the earliest of the cist graves yet found at Vronda.

### VIII. XERAMBELA

Finally, some 200 meters north of the settlement, in the level field between Vronda Tombs X and IX, a trench was laid out to investigate walls uncovered by road construction. Recent occupation in this area was attested by the presence of two *alonia*, or threshing floors.

Excavation revealed walls of a building of Byzantine date, probably the remains of a farmstead (Pl. 80:d). Its plan has not been completely recovered, but there is at least one room, entered through a doorway on the north. Pottery included fragments of sgraffito of the 12th and 13th centuries after Christ, brown-glazed and green-glazed wares, and combed ware. A coin (V87.124; Pl. 81:e, f) of Isaac II Angelos (A.D. 1185–1195) gives a date of late 12th to 13th century for this farmstead.<sup>68</sup> During the period from A.D. 1211 to 1252 many local landowners were being displaced by the large influx of Venetian settlers who arrived when Venice acquired Crete. It is likely that this farmstead belonged to a local Cretan who was forced to move from the fields in the plain up into the mountains. Excavation has not yet revealed any trace of earlier remains in this area.

<sup>60</sup> There is a fine unpublished example from the tomb at Plaī tou Kastrou (Herakleion Museum no. 756); it is decorated on the interior and bottom with Geometric designs.

<sup>61</sup> Brock, p. 81, pl. 58, no. 890 of LG date.

<sup>62</sup> D. Levi, "Arkades—Una città cretese all'alba della civiltà ellenica," *ASAtene* 10–12, 1927–1929 (pp. 15–710), p. 289, figs. 374, 375.

<sup>63</sup> Droop (footnote 45 above), pp. 37–39, figs. 15, 16.

<sup>64</sup> "Kavousi 1978–1981," pl. 77:f, of PGB date.

<sup>65</sup> A similar shape is found at Kastri, where it may belong to a period earlier than its LM IIIC context. Sackett, Popham, and Warren (footnote 14 above), p. 294, fig. 14, P14.

<sup>66</sup> Brock, p. 27, pl. 17, no. 227 (PG); p. 38, pl. 26, no. 375.

<sup>67</sup> Brock, p. 69, pl. 49, no. 763.

<sup>68</sup> The authors are grateful to John MacIsaac for his identification of this coin and its significance. Cf. M. F. Hendy, *Coinage and Money in the Byzantine Empire 1081–1261*, Washington, D.C. 1969, pp. 144–145, pl. 21, nos. 5–7.

## IX. HISTORY OF THE VRONDA SETTLEMENT

Current evidence places the beginning of major habitation on Vronda during the LM IIIC period.<sup>69</sup> Buildings A and B and possibly others belong to this period and may have gone out of use early in Subminoan. Contemporary with these buildings were the shrine with its goddesses and the kiln. The material from all these buildings resembles that found at Karphi. How and why the buildings at Vronda fell out of use is unclear; there is no sign of violent destruction by fire or earthquake. The most likely explanation is that the buildings were abandoned.

Building E must have had a slightly different history, since it had several phases of occupation and continued to be used into MPG. The date of its construction is still uncertain; the building may have been contemporary with the buildings on the summit or later.

Of great interest is the new information provided by the Late Geometric graves. Although some of the earlier tholos tombs were re-used in this period, two new types of graves appear: cist graves and cremation burials in abandoned houses. Of the latter there were different types. In one, the body was cremated in an abandoned LM IIIC house, then the bones and grave goods were covered with stones and left where they were (Grave 1). The other type was a secondary burial: the body was burned on a pyre elsewhere, then placed in the building and covered over with stones (Grave 4 and possibly Grave 7) or put into a pithos (Grave 8). No certain pyre sites have yet been identified.

The cist graves (Graves 3, 5, and 6) either made use of existing walls (Graves 3 and 6) or were completely built anew (Grave 5). The combination of cremation and inhumation in the same grave (Graves 5 and 6) is unusual; in both cases the inhumation was made after the cremation burial. The use of two types of burials in the same grave may indicate a change in burial customs within the LG period, or the difference in type may depend upon status, sex, age, or other factors. The graves were surprisingly rich in iron tools and weapons, especially when compared with the contents of the earlier tholos tombs at Vronda. Obviously the people who buried their dead at Vronda in the Late Geometric period had greater wealth and a higher level of technology than those who lived there in the LM IIIC–SM periods.

Cist graves such as those at Vronda are not a newly discovered phenomenon in East Crete. The description which Boyd gives of the “shaft graves” that she excavated at Chondrovolakoi suggests that they were similar to the cist graves found on the summit.<sup>70</sup> Also possibly of the same type are the so-called bone enclosures found at Vrokastro.<sup>71</sup> These simple structures with a single line of stones for walls seem similar to the Vronda cist

<sup>69</sup> MM I material has been found in the soil below Building A on the summit, and MM and LM I sherds appear in the rubble fill under Building E, but there are no traces of architecture associated with any of these. The source of the rubble fill is unknown, but it appears that the sherds were brought in with it. The few sherds of possible LM IIIB which appear in the buildings are probably survivals and may suggest that the foundation of the settlement was early in LM IIIC.

<sup>70</sup> Boyd, “Kavousi,” pp. 154–155. Boyd gives the place name of this area, which lies north of and below Xerambela, as Chondrovolakes, and this spelling was followed in all subsequent publications. Current inhabitants of the area, however, have confirmed that this spelling is erroneous and that the proper place name is Chondrovolakoi.

<sup>71</sup> *Vrokastro*, pp. 154–172.

graves. The Vrokastro bone enclosures contained cremation burials and LG pottery. Finally, Boyd may herself have found one of these graves on Vronda. She reported finding a hoard of iron tools and weapons in her excavations on the summit at Vronda,<sup>72</sup> and it is possible that these came from a cist grave or cremation burial. The bones and pottery are so fragmentary and fragile that she may not have recognized that she had found a grave. It is just possible that Room 9 in Building B, which was earlier identified as a closet,<sup>73</sup> may in fact have been one of these cist graves. The room is slightly larger than the cist graves found in 1987, but two of its walls, those that are not the walls of Building A, are of the same type of construction as the cist graves.

A final question is raised by these LG graves. Where did the people who buried their dead at Vronda live? Although it is possible that people came down from the Kastro to bury their dead here, it is equally likely that there is an undiscovered settlement of this period closer to the site of Vronda.

### KASTRO (Fig. 7)

Eleven trenches were opened on the Kastro. There were three major goals for the season. First, it was deemed necessary to clarify architectural features in the central part of the settlement excavated by Boyd.<sup>74</sup> Accordingly, work was carried out within the rooms and around the edges of the previously excavated settlement. The second goal was to look for earlier phases in the buildings with a view to providing a firm date for the foundation of the settlement. The final goal was to determine the extent of the settlement, by investigating the south, east, and west slopes of the peak where sherds and surface walls indicated that buildings existed. A primary focus for the 1987 season was the saddle which lies between the settlement and the false peak to the northwest.

#### I. CENTRAL PART OF SETTLEMENT

Two trenches were opened in the area of Boyd's Room 7: one was placed inside the room, and the other in the so-called corridor to the west. Within Room 7, the accumulated topsoil was cleared to the level reached by Boyd. Below this level lay at least two floor surfaces (Pl. 82:a). The earliest floor, laid over the bedrock, appears to be Mature Geometric in date. It was found only in the western part of the trench, a possible indication that the room in this phase was smaller and did not extend so far to the east as the later structure. In LG times, the room was expanded to its present shape, and a new floor and threshold (Pl. 82:b) were put in. Two sherds from the earlier floor of Room 7 are illustrated. One (Pl. 83:a, left), of imported fabric, is decorated with vertical chevrons between vertical bands, which can be paralleled, for example, on an MG vessel from Knossos.<sup>75</sup> The other (Pl. 83:a, right), of a flaky local fabric, is quite worn but appears to have a similar decorative motif.

<sup>72</sup> Boyd, "Kavousi," p. 132.

<sup>73</sup> "Kavousi 1983-1984," p. 360.

<sup>74</sup> For Boyd's excavation of the Kastro settlement, see Boyd, "Kavousi," pp. 137-143. For the material from the 1982 cleaning, see "Kavousi 1982-1983," pp. 327-355.

<sup>75</sup> Coldstream (footnote 58 above), pl. 53:a.

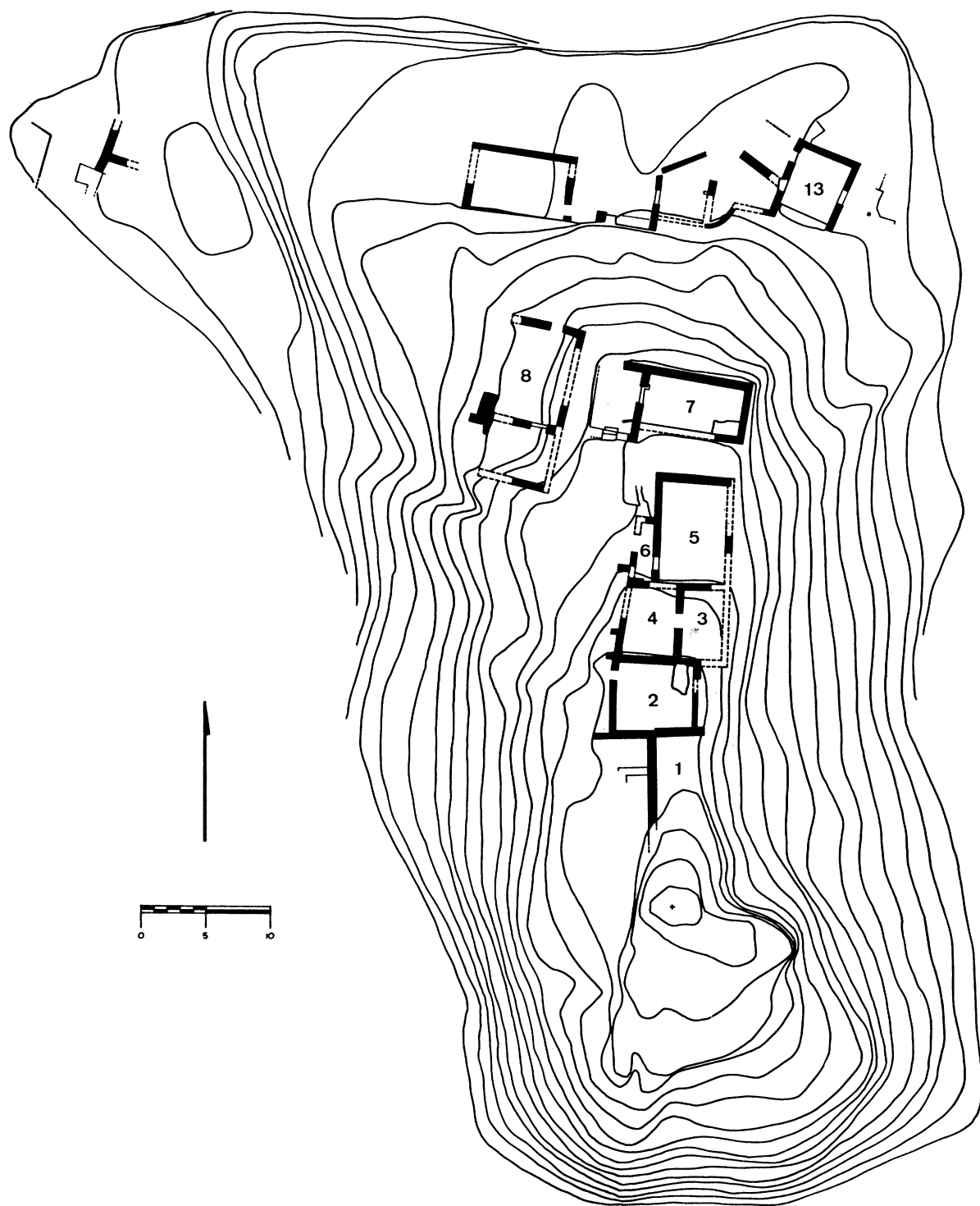


FIG. 7. Plan of Kastro settlement

The same phases were also detected in the area west of Room 7, which had previously been identified as a corridor or street. The area can now be recognized as another room entered from above on the south by a series of steps (Pl. 82:c). A large bin with a stone-paved floor (Pl. 82:d) had been built into the southeast corner when the room was remodeled in LG times. Pottery from this area included two cup fragments of note; one has vertical wavy lines on the rim and concentric circles in a metopal arrangement below (Pl. 83:b), the other an unusual series of hatched, pillar-like motifs below the rim (Pl. 83:c).

## II. AREA WEST OF ROOM 8

Two trenches were opened to the west of Room 8, where cleaning in 1982 had revealed a portion of a wall.<sup>76</sup> This wall was found to run north-south across both trenches and served as the east wall for two rooms on a lower terrace running parallel to the walls of Room 8 above. The western part of these lower rooms no longer exists, having collapsed over the edge of the cliff.

In the southern room were found five unusual figurines, probably *ex votos*. They were all made of unpainted coarse clay. Two represent females. One (K87.39), nearly complete, lacks only the top of the head and measures 0.132 m. in its preserved length (Pl. 83:d). The head is large and nearly square, with knoblike eyes and pinched-out eyebrows and nose. The torso is almost the same size and has attached two small arms and rounded legs. Breasts and an incised slit in the pubic area indicate the sex. The second female figurine (K87.42), consisting of a fragmentary torso with only breasts and one arm preserved, is similar in design. Possibly belonging to this torso is a small head (K87.43), with pinched-out nose and ears (Pl. 83:e). A second, similar head (K87.44; Pl. 83:f) also belongs to the same group. These figurines are remarkably crude and quite unusual. Exact parallels are not known, but they generally resemble Geometric figurines found at Anavlochos.<sup>77</sup> With the fragments of figurines were found two small cylindrical vessels of clay (K87.40, K87.45), each with a small depression in the top. One was accompanied by a small lid (K87.41; Pl. 83:g).

## III. AREA AROUND ROOM 13

Five trenches were opened around Room 13 in order to examine its immediate environs. Only a small rectangular "bin" was found to the north. A trench to the west, however, revealed a wall and another room with at least two phases of occupation, spanning the Mature and Late Geometric periods.

Another trench was opened immediately to the east of Room 13, where cuttings in the bedrock suggested the existence of an additional structure. Here the discovery of a column base (Pl. 84:a), cut from the natural bedrock and directly in line with the eastern doorway of the room, indicates that the area to the east was connected with Room 13. The LG surfaces found here, however, seem to represent an exterior space, such as a porch. This trench also yielded a hard floor surface of an earlier date, possibly MG; it extends into the trench to the

<sup>76</sup> See "Kavousi 1982-1983," p. 337 and p. 338, fig. 6.

<sup>77</sup> P. Demargne, "Recherches sur le site de l'Anavlochos," *BCH* 55, 1931 (pp. 365-412), pp. 390-393, figs. 28-30.

south and may be associated with an earlier wall there. Also to the south were cuttings in the bedrock for a wall and a bench belonging to the LG period. Benches and bins exist elsewhere on the Kastro, but the column base is the first found in the settlement. Typical of the LG pottery found in this area are two fragments from the shoulders of pouring vessels, one decorated with horizontal multiple zigzags (Pl. 84:c), the other with concentric circles (Pl. 84:d).

#### IV. FALSE PEAK

Two trenches were opened towards the false peak on the west. These yielded part of a building (Pl. 84:b) with two phases of occupation, from MG to LG. Two rooms of this building have been uncovered but not cleaned to bedrock. The presence of these rooms indicates that the settlement on the Kastro extended to the false peak and was thus considerably larger than originally thought.

GERALDINE C. GESELL

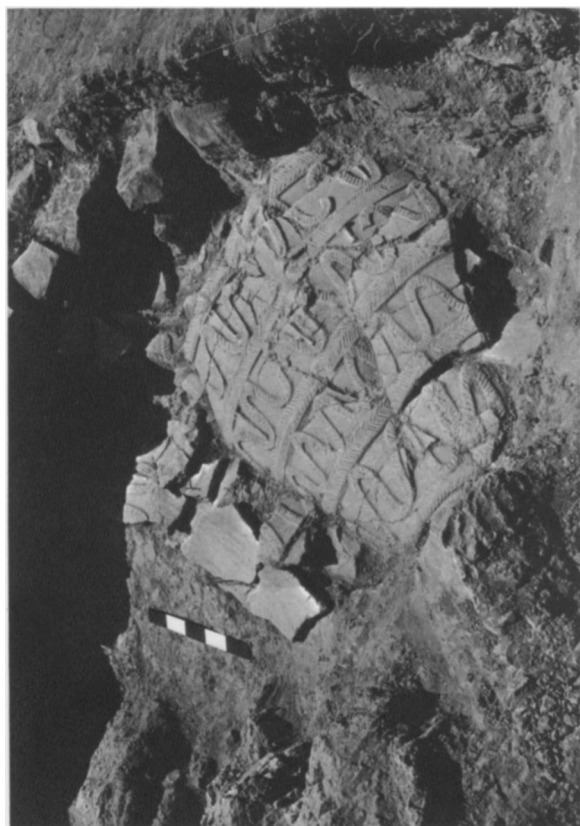
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a. Building B, Room 7. Pithos smashed on bedrock, from west



c. Building C, Room 4 and Grave 5 (upper right)



b. Building C, Room 4 and room northeast of Room 2. Floor under Grave 4 (lower left)

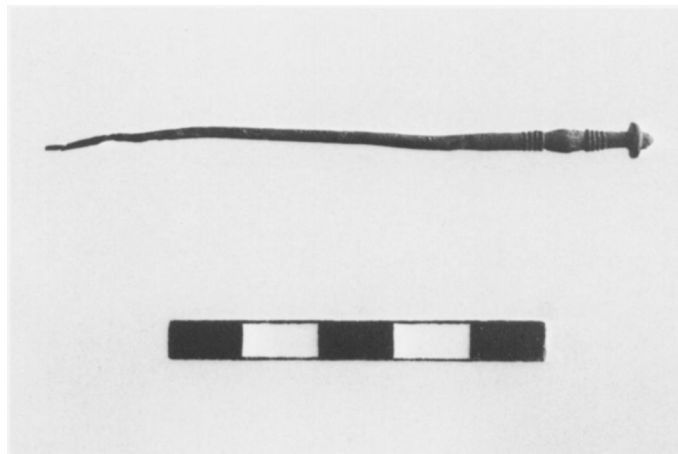
Vronda

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PLATE 74



a. Building B, Room 7. Deep bowl V87.129



b. Grave 4. Bronze pin



c. Grave 4. Monochrome cup V87.127



d. Grave 4. Monochrome cup V87.68

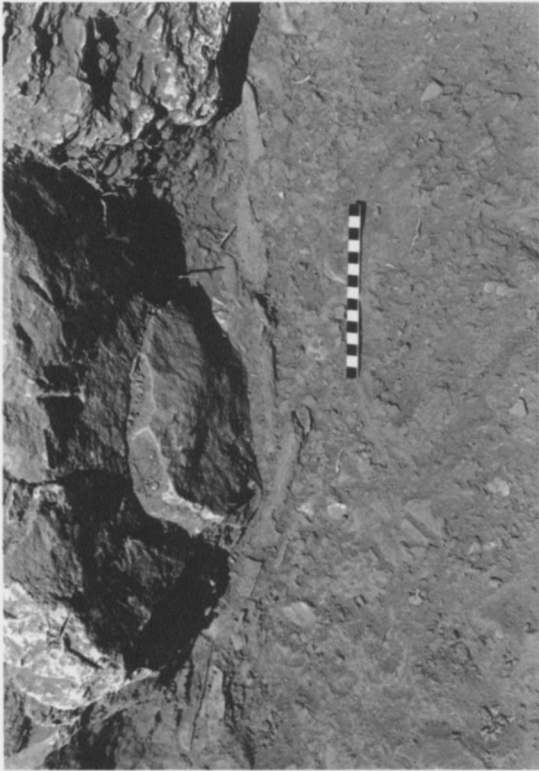


e. Grave 5. Iron weapons and tools: knife (top left), sickle V87.99 (top right), knife (center), spearhead (bottom)

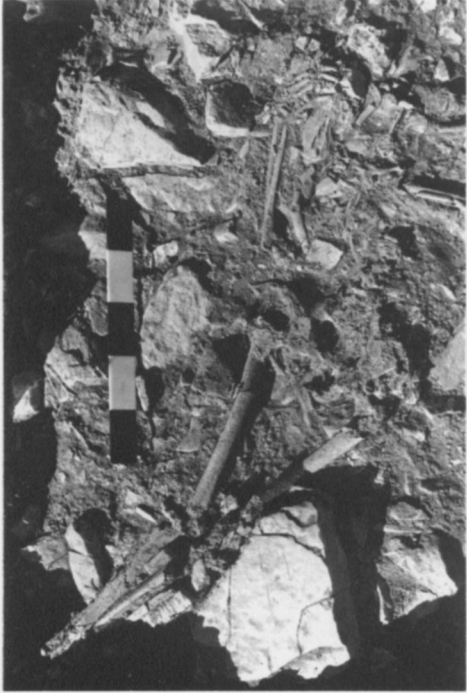


f. Grave 5. Late Geometric skyphos V87.128

Vronda

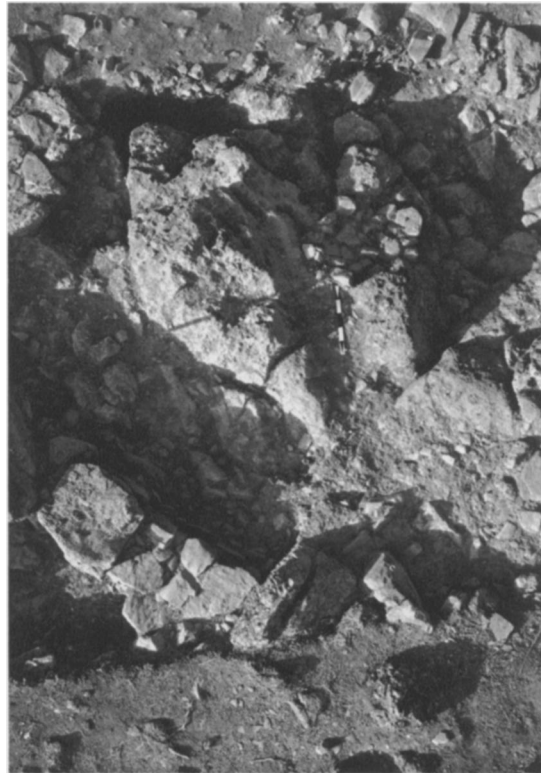


a. Grave 5. Spearheads *in situ* along northwest wall, from southeast



b. Grave 5. Skeleton from inhumation burial: legs (top left), pelvis (center), chest (bottom right)

Vronda



c. Building E, Room 4. Doorway to Room 1 at top left



d. Building E, Rooms 5 and 6. Wall and bench

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a. Building E, Room 7. Pottery smashed on cobblestones of courtyard, from northeast



b. Building east of terrace wall

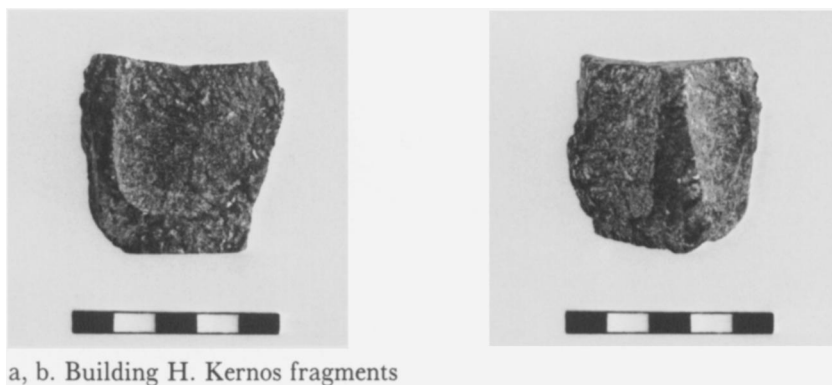


c. Building H and Grave 6 (right)



d. Grave 6 from south

Vronda



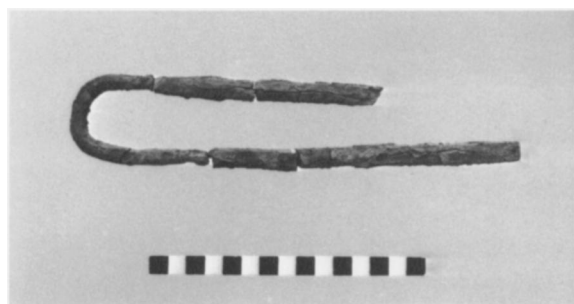
a, b. Building H. Kernos fragments



c. Grave 6. Iron objects: chisel V87.121 (top), dagger or sword (row 2, left), spearheads (row 2, right; row 3), small spear or javelin head (bottom)



d. Grave 6. Iron axehead V87.108



e. Grave 6. Iron tongs V87.114



f. Grave 6. Late Geometric skyphos fragments



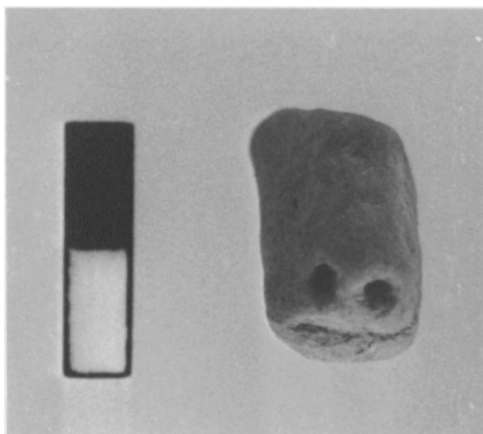
g. Grave 6. Late Geometric skyphos fragments



h. Grave 6. Miniature amphoriskos

Vronda

PLATE 78



a. Building F. Animal figurine:  
snout V87.70



b. Shrine material: base of snake tube



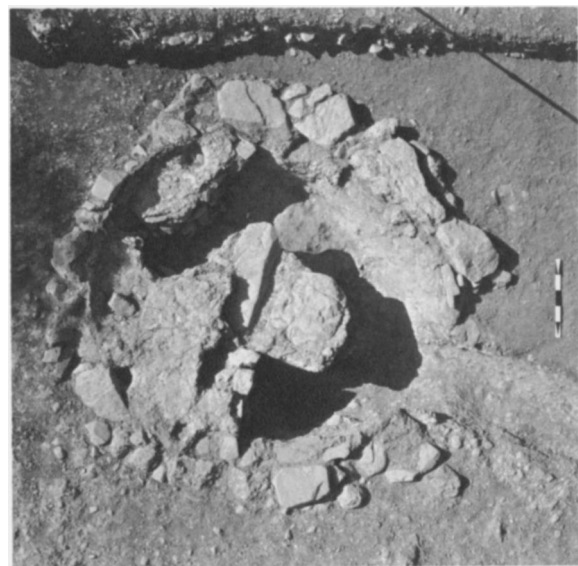
c. Shrine material: fragments of goddesses with up-  
raised hands



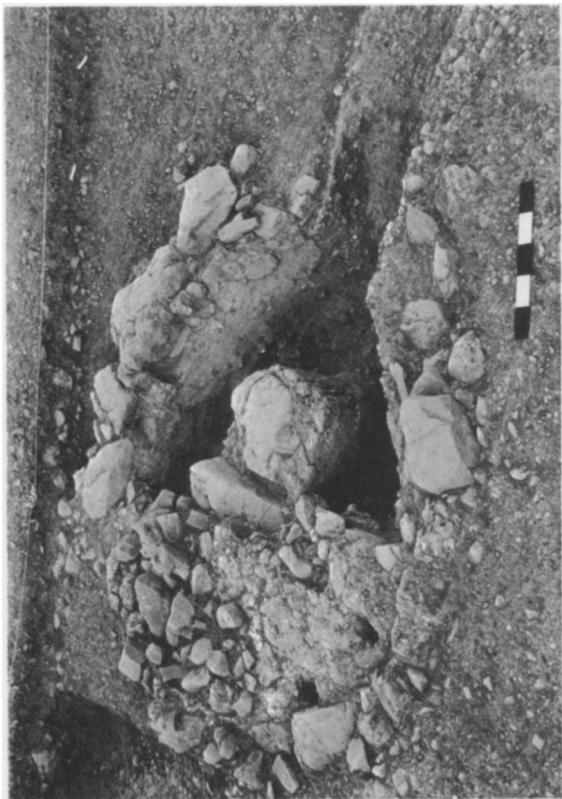
d. Shrine material: fragment of goddess showing  
braids at back of neck

Vronda

Vronda



a. Kiln from above



b. Kiln from north

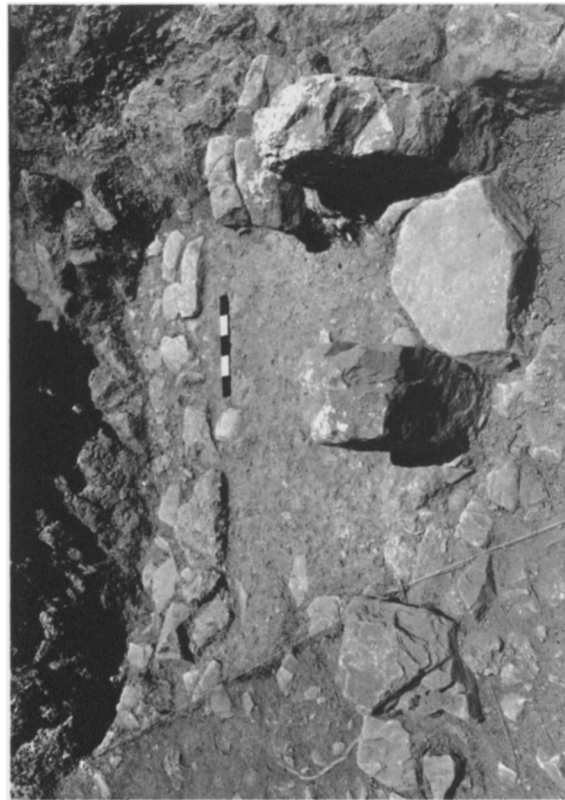


c. Kiln from northwest



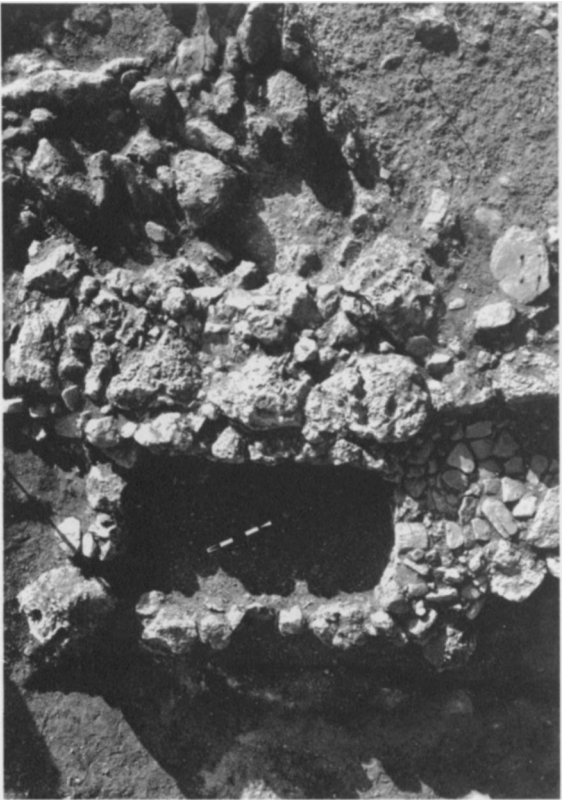
d. Kiln. Floor of firing chamber from northwest

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a. Building F. Doorway from south

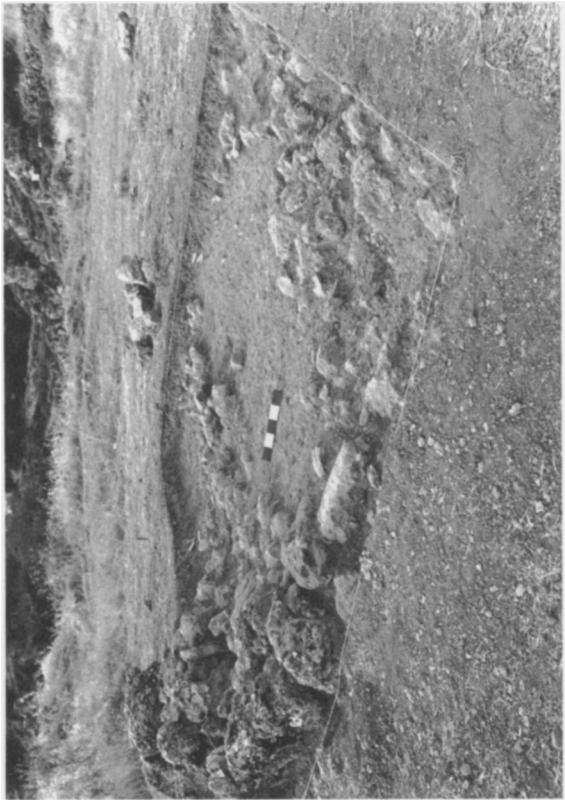
Vronda



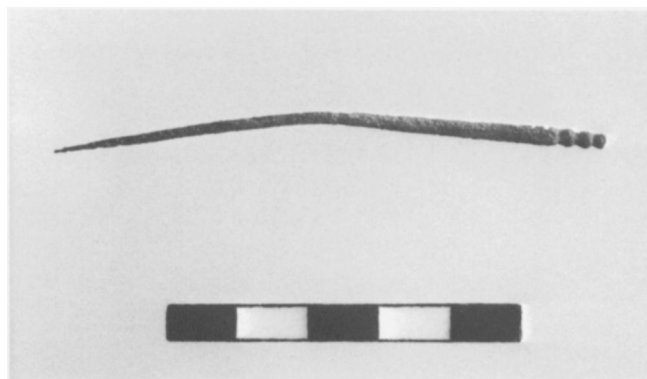
b. Grave 3



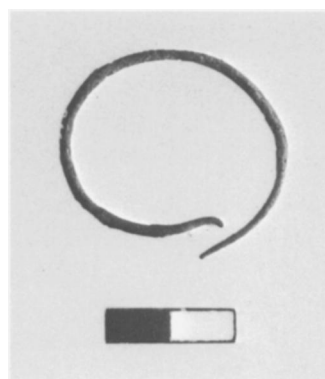
c. Grave 3. Cup and aryballos in stone fill above burials



d. Xerambela. Byzantine farmstead



a. Bronze pin V87.93

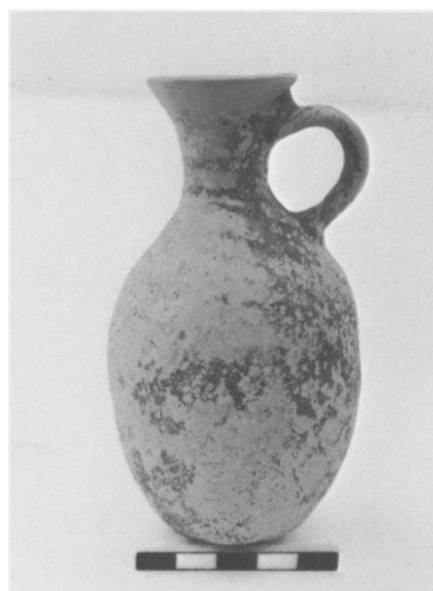


b. Bronze earloop V87.137



c. Cup V87.33 from above burial

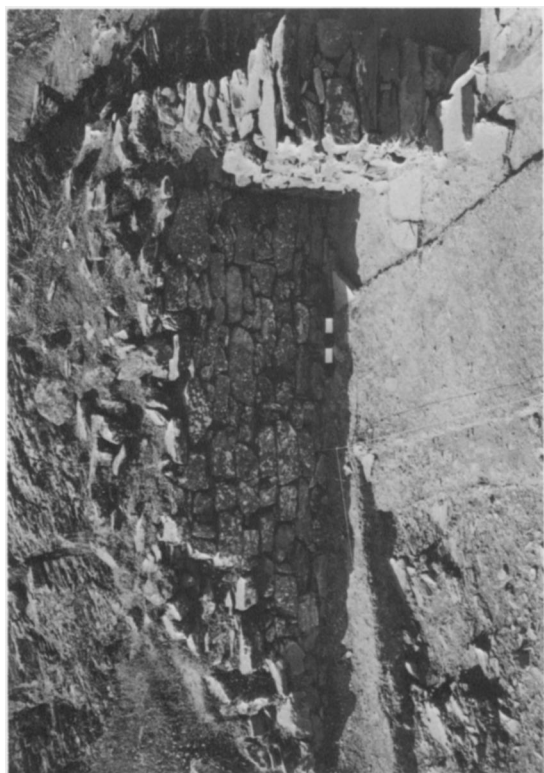
Vronda, Grave 3



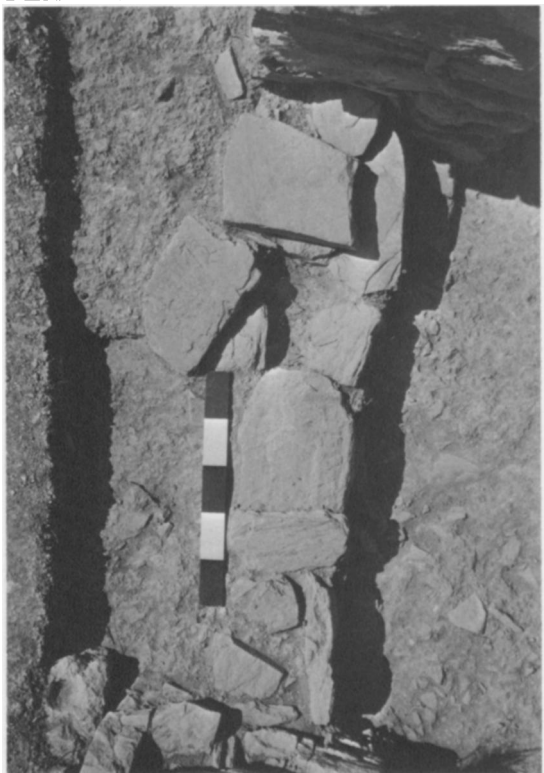
d. Aryballos V87.32 from above burial



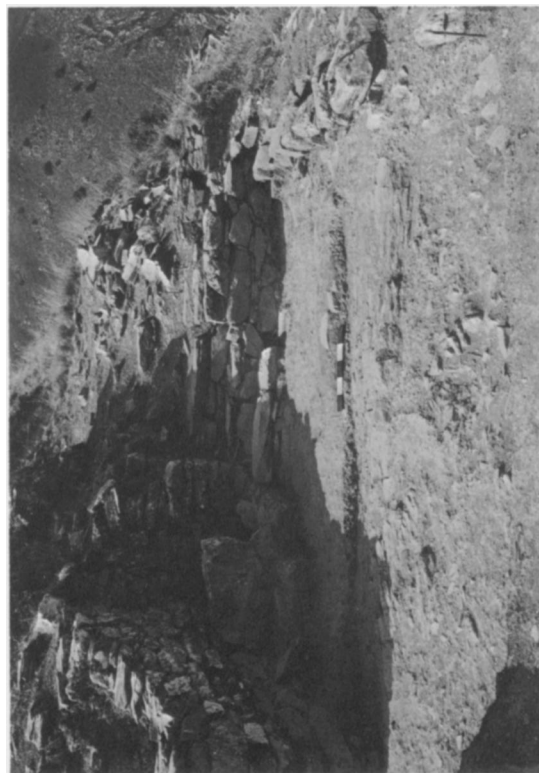
e, f. Xerambela. Byzantine coin, obverse and reverse



a. Room 7. Floor levels from north



b. Room 7. Threshold from west



c. West of Room 7. Stairs from north

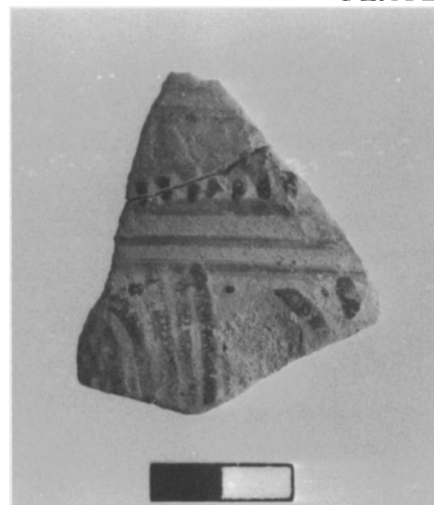


d. West of Room 7. Bin from east

Kastro



a. Room 7. Middle Geometric decorated sherds



b. West of Room 7. Late Geometric cup rim



c. West of Room 7. Late Geometric (?) cup rim

Kastro



d. West of Room 8. Terracotta figurine K87.39



West of Room 8: e, f, and g



e, f. Heads of terracotta figurines K87.43 and K87.44



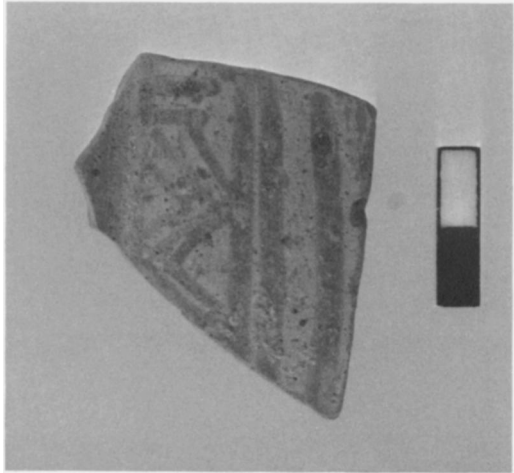
g. Terracotta vessel and lid K87.41



a. East of Room 13. Column base from east



b. False peak. Portion of room from north



c, d. East of Room 13. Late Geometric decorated sherds



Kastro