

The LH IIIC Period in Arcadia and Imports from Southern Italy

Massimo Cultraro

In the last decades the publication of some important Mycenaean cemeteries in Achaea and Elis has revealed the presence of several bronze artefacts which show close affinities with the Late Bronze Age metalworking in the Western Mediterranean. The aim of this paper is to investigate the archaeological evidence related to the LH IIIC period in Arcadia, where some significant data could be connected with the Late Bronze Age of Southern Italy. The archaeological record examined includes a bronze sword from Palaikastro belonging to the much-discussed Naue II category, and a group of violin-bow fibulae and bronze pins, which show strong parallels with the Terramare culture and northern Adriatic metallurgical workshops. Finally, to close this picture of relations between Arcadia and the Italian peninsula, we can mention the evidence from Punta Meliso (Apulia, Italy), where diagnostic Mycenaean pottery includes a type of belly-handled amphora which was very popular in Achaea and Arcadia during LH IIIB2 and IIIC.

Evidence for contacts between Italy and mainland Greece in the Late Bronze Age is a subject of great interest for an archaeological, as well as a historical approach.¹ Its importance increases particularly when evidence for such relations is provided by the discovery of artefacts of Italian Late Bronze Age tradition in Aegean contexts.² Recent excavations both in Italy and Greece have brought to light much new, relevant material which needs to be assessed. The publication of important Mycenaean cemeteries in Achaea and Elis reveals the presence of several bronze artefacts which show close affinities with western Mediterranean metalworking in the Late Bronze Age, especially from the Balkans or the Italian peninsula.³ In the case of mainland Greece, evidence of

1. Matthäus 1980; Harding 1984; Bettelli 2002.

2. Pålsson Hallager 1985; Papadopoulos and Kontorli-Papadopoulos 2000.

3. Eder 1999; Papadopoulos and Kontorli-Papadopoulos 2000.

foreign material in the Aegean context is not limited to the north-western region of the Peloponnese, but new and important data can be recorded from Arcadia. Previously, very little evidence was available from this region, particularly concerning the period LH IIIC.⁴ The recent investigations at Palaiokastro and the publication of old excavations have added substantial, new information to our knowledge about Mycenaean Arcadia, for a long time considered a peripheral region of the Mycenaean world. The aim of this paper is to focus on some artefacts which might be related to cultural contexts not Mycenaean, especially in the late palatial phase (end of the 13th century), when Arcadia shows closer contacts with other regions of western Peloponnese, as well as with external areas in the Mediterranean world.

We may start with the most important evidence provided by the late Mycenaean settlement at Palaiokastro. Located in the Gortynia district of western Arcadia, the site occupies a strategic position along the western, right bank of the Alpheios river, where it is possible to control the main inner route from the plain of Megalopolis and, through the northern Eurotas valley, from Laconia to Elis.⁵ (Fig. 1) Near the prehistoric settlement, which was perhaps defended by a well-preserved fortification wall, there is evidence for an extensive Late Helladic III necropolis consisting of rock-cut chamber tombs and pit graves. Most of the material, which has not yet been published, belongs to LH IIIC Middle and Late.⁶

The evidence from chamber tomb no. 6 deserves attention. It consists in a long open *dromos*, with a semicircular niche at its right side; through the *stomion* there is access to the main circular chamber (diameter 5.60 m), which has a small, round cavity in the middle of the vaulted roof. (Fig. 2a) In the tomb, investigated by C. Christou in 1957, two LH IIIC vases and a group of bronzes were found. The bronze catalogue lists a long sword (Fig. 3a), two socketed spear-heads (Fig. 2b), a one-edged knife, a pin (Fig. 4a), and a wedge-shaped object, interpreted as a chisel.⁷

Apart from the two spear-heads which are related to a standard type of Mycenaean offensive weapons widely distributed in the Aegean world,⁸ the long sword belongs to the much-discussed Naue Type II category, frequently attested in the Aegean during the LH IIIC, though its origin is somewhat controversial.⁹ The example from Palaiokastro is complete and in very good condition. (Fig. 3a) The structural elements include two grooves running parallel down each side of

4. Howell 1970; Krigas 1991.

5. Hope Simpson and Dickinson 1979, 83, site B 32.

6. Demakopoulou and Crouwel 1998.

7. Demakopoulou 1969; Demakopoulou and Crouwel 1998, 274-6, pl. 52.

8. Avila 1983, 52-3, no. 110, pl. 17.

9. Catling 1961; Kilian-Dirlmeier 1993, 98; Papazoglou-Manioudaki 1994, 177-81.

the blade; the hilt is rather long with a pommel consisting of two 'ears' projecting almost horizontally and a spur protruding at the centre. The sword must have been cast in a two-piece mould; the hilt-plates, made of some perishable material (bone or wood), were secured by ten rivets, four of which are preserved.

The weapon from Palaikastro clearly belongs to Catling's Group II of the so-called Naue II cut-and-thrust swords.¹⁰ This is a class of swords which was developed in the Aegean as a modification of an earlier category of swords, which was probably introduced from Central Europe through the Adriatic routes in the second half of the 13th century B.C.¹¹

In mainland Greece swords of this class are clearly attested in the Argolid (Mycenae, Tiryns)¹² and in Achaea (Kallithea, Krini-Patras),¹³ while some examples are found in eastern Crete (at Moulíaná, Siteia, Myrsine, Karphi, Vrokastro),¹⁴ in the Cyclades (Grotta cemetery), in the Dodecanese (Kos) and in Cyprus, at Enkomi.¹⁵ To the list of known Naue II bronze swords may now be added a new example from Alpheiousa, along the valley of the Alpheios river in Elis; the context is not clear, but could be understood as a funerary assemblage.¹⁶ Including the weapon from the chamber tomb at Palaiokastro, ten Naue II bronze swords are so far known from Achaea, Elis and Arcadia, and this number is impressive if it is compared with only six from the rest of the Peloponnese.

The exceptionally long sword from chamber tomb 6 at Palaiokastro, comparable with the swords from the cemeteries in Achaea (Klauss and Krini), and the provenance context related to warrior's graves, suggest that all these examples should belong to Catling's "Group II developed".¹⁷

The swords of Catling's Group II probably have their origin in the north-west Balkans or in the Carpathian area; the group is derived from Cowen's "Erbenheim Group", which started during the Hallstatt A1 period.¹⁸ The examples from the western Balkans and Central Europe are rather different, particularly in the shape of the spur and the riveting system. The closest foreign affinities of the Arcadian sword, as well as of the examples from western Peloponnese, are to be found in Late Bronze Age metalwork from the Italian peninsula (Allerona class)

10. Catling 1961, 116-20.

11. Harding 1984, 162-5; Bettelli 2002, 134-6.

12. Catling 1956, nos. 1-5.

13. Yalouris 1960; Papazoglou-Manioudaki 1994, 177-81, figs. 3-5, pl. 26 c.

14. Catling 1961, nos. 18-22; Kilian-Dirlmeier 1993, 95-105, nos. 227-47.

15. Catling 1961, nos. 25-7.

16. O. Vikatou, in *ArchDelt* 51, 1996 [2001] B Chron., 194, pl. 62 e.

17. Catling 1961, 119-20.

18. Cowen 1955, 73-8; Harding 1984, 165.

rather than in Central Europe.¹⁹ (Fig. 3b) The affinities of the sword from Palaiokastro with the Allerona group can be specified on the following points:

- 1, the shape of the blade section as a flattened lozenge;
- 2, the thickness in the junction of blade and hand-guard;
- 3, the blood channels or ridges on the blade;
- 4, the number and the position of the rivets.

The affinity with the Italian examples becomes still closer if we accept that the Palaiokastro sword was cast in a two-piece mould, such as those of Allerona type found in Piverone, in north-western Italy.²⁰ (Fig. 3c) However, the wide distribution of the class in mainland Greece, as well as the characteristic features of this weapon, suggest that all the specimens found in the Aegean are produced by local workshops, influenced by a foreign tradition of sword-making. In the light of the archaeological record currently available, there is no definitive evidence that any of these weapons was imported, but the idea of making a metal sword, and many of the sword-shapes, did come from outside, especially from the Italian peninsula.

Indirectly, the Italian context suggests a significant confirmation of the affinities of the Palaiokastro sword with metallurgical workshops in the Italian peninsula, and it also establishes a much desired synchronism between Italian Recent/Final Bronze Age and mainland Greece LH IIIC. In the LBA site at Montegiorgio (Ascoli Piceno), a sword of Allerona type was found together with a 'Peschiera' dagger (Fig. 4c), which shows close affinities with a bronze dagger from the LH IIIC acropolis at Teichos Dymaion.²¹

All these swords of Catling's Group II seem to appear in the Aegean during the LH IIIC (Fig. 5b), and the archaeological context of the Arcadian example is very important, because it contributes to date very closely this class of weapons in the middle of the 12th century B.C.

Among the bronze objects from Tomb 6 at Palaiokastro there is a pin, with a simple shank, separated by two ridges from the biconical head ending in a small knob.²² (Fig. 4a) As K. Demakopoulou has stressed,²³ there are no close parallels for the pin from Palaiokastro in the corpus of Late Bronze Age pins from mainland Greece. However, a possible parallel could be proposed with a bronze pin from a looted chamber tomb at Platamos, in Elis;²⁴ in this case the context

19. Bianco Peroni 1970, 67-70, nos. 158-63.

20. Bianco Peroni 1970, nos. 168-70.

21. Bianco Peroni 1970, 69, no. 163; Papadopoulos and Kontorli-Papadopoulos 2000, 144, pl. 36.1-2.

22. Demakopoulou and Crouwel 1998, 276, B5, pl. 52 c.

23. Demakopoulou 1998, 276.

24. Kilian-Dirlmeier 1984, 57, no. 140.

cannot be defined, but an attribution of the cemetery to the late palatial period seems fairly likely.

The shape and the incised decoration on the two objects from Palaiokastro and Platamos show close affinities with a class of pins attested in northern Italy during the Late Bronze Age. In particular, a pin from the cremation cemetery at Fontanella Grazioli, near Mantova (Lombardia), reveals a shape and decoration similar to the example from Palaiokastro.²⁵ (Fig. 4b) The latter evidence is most important in archaeological terms, because the connection between western Peloponnese and the northern Italian province is corroborated, as remarked above, by the distribution of the daggers of 'Peschiera' type in the Argolid and Achaea during the LH IIIB-IIIC periods. (Fig. 4b) This particular class of daggers is derived from northern Italian metalworking of 'Bronzezeit D', indicating again the same area of provenience suggested for the pin of Palaiokastro.²⁶

In his recent excavations at Palaiokastro Th. Spyropoulos has explored more than 100 new chamber tombs dating from LH IIB to Submycenaean.²⁷ The material has not yet been published; the archaeologist refers to some bronze pins, some violin-bow fibulae and a new Naue II sword, in addition to that discussed above. Moreover, a large hydria contained a cremation burial together with an iron sword. Unfortunately we have no drawings of the fibulae, but the description assures that they are of the violin-bow class. This category of fibulae is attested in the cemetery at Klauss, near Patras, and in the Mycenaean acropolis of Teichos Dymaion, both in LH IIIC contexts.²⁸

Some material earlier than the Geometric period has been found in the sanctuary of Athena Alea at Tegea. This includes two LH IIIC stirrup jar fragments, an LH IIIC Psi-figurine and two bronze fibulae. One of these bronze objects is very interesting: it is an example of a Late Mycenaean violin-bow fibula, with rectangular top and flat with two holes at either end.²⁹

In this sanctuary the stratigraphical context of these objects could not be defined, and the sporadic LH IIIC finds cannot with any certainty be referred to ritual activity,³⁰ because, as we will explain below, such Late Mycenaean bronze artefacts as dress ornaments are usually attested in funerary contexts. In the case of ancient Protogeometric and Geometric sanctuaries in mainland Greece, these

25. Carancini 1975, 229, no. 1665.

26. Bettelli 2002, 133.

27. Blackman 1997, 33-4.

28. Papadoupoulos and Kontorli-Papadoupoulos 2000, 143-4.

29. Voyatzis 1990, 210, B243; *ead.* 1995, 273.

30. Voyatzis 1995, 281.

items need not necessarily mark the beginning of cult activity and could be considered as heirlooms or survivals.³¹

The material mentioned above and the affinities with some examples from Achaea suggest that the fibula from Tegea should be dated to LH IIIC Middle. Mary Voyatzis includes a similar, unpublished example from Gortsouli, north of Tegea.³² There is also a violin-bow fibula of this type from the sanctuary at Lousoi, which can be related to the LH IIIC fibulae class, although the archaeological context is not definitive.³³ (Fig. 4d)

For the Late Mycenaean fibulae category, an important study by K. Kilian³⁴ has confirmed the chronological position of the violin-bow category in LH IIIB2 and IIIC, and it is generally accepted that this class is typologically earlier than the arched variety. As for the examples from Tegea and Lousoi, the couple of holes could be connected with a system of fixing a bronze plaque above the arc; this type reminds of Kilian's "Blattbügelfibeln" group, frequently attested in western Peloponnese and the Ionian islands during LH IIIC Early and Middle.³⁵ (Fig. 5a)

Although there is as yet no definitive solution to the problem of its origin,³⁶ this group of fibulae is very likely derived from metallurgical models of northern Italy or the Balkan peninsula. The Arcadian variety with two holes on the flat parts is more common in central and north-eastern Italian LBA than in the Balkan province.³⁷ It resembles some examples from the Terramare culture, which is the same cultural assemblage recalled above in the classification of the 'Peschiera' daggers from Achaea.³⁸ (Fig. 4c) It is worth noting that the Adriatic province of Italy has been mentioned in defining the typological parallels for the pin and the Naue II sword from Tomb 6 at Palaiokastro.

To corroborate the affinities of some LH IIIC bronzes with Italian metallurgical models, we might add a new piece of evidence from Achaea: in an LH IIIC Early chamber tomb at Klauss, a two-edged bronze razor was found.³⁹ (Fig. 4e) This object has no parallels in the Aegean and recalls the 'Scoglio del Tonno' razor type attested in the Italian peninsula during the Recent and Final Bronze Age.⁴⁰ The ellipsoid shape and the oval central opening, bordered by high

31. Snodgrass 1971, 277-8.

32. Voyatzis 1990, 210.

33. Reichel and Wilhelm 1901, 52, no. 76; Voyatzis 1990, 210, pl. 169.

34. Kilian 1985.

35. Kilian 1985, 173-89, figs. 5-7.

36. Bettelli 2002, 133.

37. Bietti Sestieri 1973, 405-6; Kilian 1985, 176-8.

38. Peroni 1996, 248, figs. 48.4 and 51.8.

39. Papadopoulos and Kontorli-Papadopoulos 2000, 144, pl. 36.4.

40. Matthäus 1980, 115, Abb. 3.

flanges, show close affinities with some razors of the Adriatic area and the north-western Terramare culture.⁴¹ The rarity of this type in the Aegean world suggests that the bronze razor from Klauss should be considered a product of South Italian metallurgical workshops.

To sum up the results of this analysis, it appears that during LH IIIC Arcadia, as well as the areas of north-western Peloponnese, entertained close relations and contacts with the coastal Adriatic regions of the Italian peninsula. The absolute chronology of LH IIIC is a notoriously thorny question, since fixed points are hard to identify and correlations are made difficult by the development of many regional styles.⁴² There is some evidence to suggest that in north-western Greece the Mycenaean tradition is likely to have lasted much longer than elsewhere. According to T. Papadopoulos and other scholars,⁴³ the end of LH IIIC in north-western Peloponnese, and so in Arcadia, is contemporary with the early Protogeometric phase in Attica reaching down to the end of 11th century. In this phase north-western Peloponnese develops its own regional pottery style, showing influences from other parts of mainland Greece as well as from Crete, the Dodecanese and the eastern Aegean.⁴⁴ Together with the emergence of a unique local style, the second important element characterizing LH IIIC in north-western Peloponnese is the wide network of relations between local centres and external areas, as stated above.

To close this picture of relations between Arcadia and the Italian peninsula, the evidence from Punta Meliso can be mentioned. (Fig. 5c) The site is one of two small headlands jutting out from Capo Santa Maria di Leuca, the easternmost point of the Salentine peninsula in Apulia.⁴⁵ Remains of an LBA fortified settlement with oval huts have been discovered on the top terrace; the material is represented by a variety of local 'impasto' pottery and a large number of Mycenaean sherds.

The more diagnostic Mycenaean pottery includes a type of belly-handled amphora (FS 58), which is extremely popular in Achaea and Arcadia in LH IIIB2 and IIIC.⁴⁶ (Fig. 5d) A significant feature is the globular body, while its canonical counterpart from the Argolid has an ovoid shape. As M. Benzi and G. Graziadio have suggested,⁴⁷ similar examples recorded in Elis, Arcadia, western Messenia

41. Bianco Peroni 1979, 9-11, nos. 37-52.

42. Deger-Jalkotzy 1998; Mountjoy 1999, 38-55.

43. Papadopoulos 1978-79, 184-5; Snodgrass 1971, 399.

44. Mountjoy 1999, 296.

45. Bettelli 2002, 26, site 42.

46. Benzi and Graziadio 1996, 97, PM 1, fig. 2.5.

47. Benzi and Graziadio 1996, 106.

and the Ionian islands (Kephallenia) confirm that these belly-handled amphorae are peculiar for LH IIIC workshops in western Peloponnese.

The other pottery assemblage from Punta Meliso shows close links with local styles in north-western Greece, like the deep bowls (FS 285) and kraters (FS 282) showing typologically and stylistically affinities with the LH IIIC pottery production from Achaia, Elis and Arcadia.

As compared with other LH IIIC pottery from South Italy, the Punta Meliso assemblage shows peculiar stylistic features and cannot be described as 'provincial Mycenaean'. Chemical and thin-section analyses have demonstrated that the Mycenaean pottery from Punta Meliso was produced locally, suggesting the presence *in loco* of Mycenaean craftsmen.⁴⁸ If we accept this conclusion, Punta Meliso will provide meaningful evidence for the establishment in Apulia of a small group of Mycenaean refugees, probably coming from Achaia and Arcadia. This interpretation is in keeping with recent assessments of Italian-Aegean relations and with the analysis of metallurgical production, which supports the diffusion throughout the Aegean world of bronzes of mainland European models;⁴⁹ we can conclude therefore that some Aegean people had established themselves in an Adriatic coastal site during the first half of the 12th century B.C., while at the same time Italian craftsmen, such as bronzesmiths, migrated in the opposite direction.⁵⁰ In LH IIIC mainland Greece, the appearance of fibulae, pins or two-edged razor-knives, such as the example from the Late Mycenaean cemetery at Klaus in Achaia (see above), can be explained more easily in terms of western Mediterranean people getting established *in loco* than by changes in the dressing fashions of Peloponnesian communities. After the collapse of the palace system, full-time specialist artisans once entirely supported by the palatial economy would now be looking for other ways to sustain themselves by the production of items useful to new elite. The evidence from the large Mycenaean cemeteries at Patras, Krini ad Klaus in Achaia strongly confirms that specialist artisans originating from Italian regions were established in western Peloponnese since LH IIIB2.

This phenomenon should be connected with the introduction of the Naue II swords (Fig. 3), which became very successful cutting and thrusting weapons, replacing the old-fashioned Aegean types F and G. It is worth noting that the warriors buried in Achaia and Arcadia were equipped with a Naue II sword and a spear-head of the common Creto-Mycenaean type. According to the reconstruction by I. Kilian-Dirlmeier,⁵¹ the joint use of sword and dagger, which

48. Benzi and Graziadio 1996, 126.

49. Bettelli 2002.

50. Bietti Sestieri 1973, 406-12.

51. Kilian-Dirlmeier 1993, 144-61.

had characterized the combat technique of LH II-III A Mycenaean warriors, apparently declines during LH IIIB2, when the cut-and-thrust sword and spear constitute the fulcrum of the new armament, probably accompanied by shield and greaves.

The characteristic LH IIIC swords, if compared to the Mycenaean weapons of the palatial period, suggest some changes in the techniques of fighting. The blades are shorter and wider; their graduated sections strengthen the edge of the blade as well as its length. Unlike long, straight swords, their leaf-shaped blades are particularly suited to pull-cuts, elliptical cutting actions. Such weapons are designed for the close-quarter, multi-opponent combat situations of a *melee*. In other words, they are weapons of war, not of ritualized combat.

It is difficult to establish the social identity of such swordsmen. Swords of Naue II type, as well as other weapons, have been related to mercenaries or auxiliary troops;⁵² however, it seems extremely hazardous to imagine western Peloponnese in LH IIIC occupied exclusively by foreign mercenaries, even if they were integrated in the local communities. The evidence from the cemeteries in western Peloponnese, especially from Krini and Palaikastro, suggests that these warriors equipped with powerful, offensive weapons had a high military and/or social rank.⁵³ The rich chamber tomb 6 at Palaikastro belongs to Class 1 in Cavanagh's classification,⁵⁴ imitating a tholos tomb with a relieving triangle cut in the rock over the doorway, while the round cavity in the middle of the vaulted chamber is an imitation of a tholos profile.⁵⁵ (Fig. 2a)

From the present evidence, it remains to conclude that during LH IIIC the region of Arcadia provides a complex cultural and social framework similar to the adjacent landscapes Achaea and Elis. During the first half of the 12th century Arcadia shows close affinities with the rest of western Peloponnese, as well as the Argolid. Recent chemical analyses of a group of LH IIIC sherds found at Palaikastro have suggested that some pieces might be imports from foreign workshops, maybe from north-eastern Peloponnese or the Argolid.⁵⁶ Arcadia also appears to have been densely populated and the population dislocated in scattered settlements, each with a corresponding cemetery where the largest tombs were destined for local rulers. The scarce evidence of LH IIIA-B Arcadia⁵⁷ does not help us to reconstruct settlement and territory organization of those periods, and so to define more clearly those changes which possibly

52. Drews 1994, 147-9.

53. Deger-Jalkotzy 1999, 121-31, esp. 130.

54. Cavanagh 1987, 168-9.

55. Danielidou 2000.

56. Mommsen, Beier and Hein 2002, 624.

57. Howell 1970; Krigas 1991.

took place during the transition from the palatial system to the post-palatial period. Alternatively, evidence from LH IIIC funerary contexts confirms that well-equipped warriors, especially swordsmen, have increased in number and have operated in a new socio-economic reality that has apparently undergone changes maybe since the end of LH IIIB. The Mycenaean tradition of the material found in the Arcadian cemeteries suggests that these people were late Mycenaean, whereas the appearance of dress accessories and weapons which are not Mycenaean support the idea of foreign elements circulating in western Peloponnese since LH IIIB2.⁵⁸ In this scenario, it is possible that specialist metalworkers, coming from the Italian peninsula, introduced new elements to the growth of existing Arcadian settlements, establishing a more dynamic relationship between bronze-smiths and the members of a new upper class. The techniques of manufacturing these weapons, and the diffusion of their use as symbols of power and social status, may be among those new elements. Considering this general archaeological picture, I would conclude that the great variety and abundance of bronze objects in the Geometric sanctuaries in Arcadia⁵⁹ cannot simply be accidental, but might indicate the preservation of older Late Bronze Age metalwork heritage, in which contributions from the western Mediterranean, especially from the Italian peninsula, were highly remarkable.

Massimo Cultraro

CNR – Istituto per i Beni Archeologici e Monumentali

Via A. di Sangiuliano 262

I – 95124 Catania

Italy

58. Bettelli 2002, 134.

59. Voyatzis 1995.

BIBLIOGRAPHY

- Avila, R.A.J. 1983. *Bronzene Lanzen und Pfeilspitzen der griechischen Spätbronzezeit*. Prähistorische Bronzefunde V.1. Munich.
- Benzi, M., and G. Graziadio. 1996. "The Last Mycenaean in Italy? Late LH IIIC Pottery from Punta Meliso, Leuca." *SMEA* 38: 95-138.
- Bettelli, M. 2002. *Italia meridionale e mondo miceneo*. Grandi contesti e problemi della protostoria italiana 5. Florence.
- Bianco Peroni, V. 1970. *Le spade nell'Italia continentale*. Prähistorische Bronzefunde IV.1. Munich.
- Bianco Peroni, V. 1979. *I rasoi nell'Italia continentale*. Prähistorische Bronzefunde VIII.2. Munich.
- Bietti Sestieri, A.M. 1973. "The Metal Industry of Continental Italy 13th-11th Century, and its Aegean Connection." *PPS* 39: 383-424.
- Blackman, D.J. 1997. "Archaeology in Greece 1996-97." *AR* 43: 1-125.
- Carancini, G.L. 1975. *Gli spilloni nell'Italia continentale*. Prähistorische Bronzefunde XIII.2. Munich.
- Catling, H. 1956. "Bronze Cut-and-thrust Swords in the Eastern Mediterranean." *PPS* 22: 102-25.
- Catling, H. 1961. "A New Bronze Sword from Cyprus." *Antiquity* 35: 115-22.
- Cavanagh, W.G. 1987. "Cluster Analysis of Mycenaean Chamber Tombs." *Aegaeum* 1: 161-9.
- Cowen, J. D. 1955. "Eine Einführung in die Geschichte der bronzenen Griffzungenschwerter in Süd-Deutschland und den angrenzenden Gebieten." *BerRGK* 36: 52-155.
- Danielidou, D. 2000. "Ὁ θαλαμωτὸς τάφος 84 τῶν Μυκηναίων." *ArchEph* 139: 161-78.
- Deger-Jalkotzy, S. 1998. "The Last Mycenaean and Their Successors Updated." In S. Gitin et al. (eds.), *Mediterranean Peoples in Transition. Studies in Honor of T. Dothan*: 114-28. Jerusalem.
- Demakopoulou, K. 1969. "A Mycenaean Bronze Sword from Arcadia." *AAA* 2: 226-8.
- Demakopoulou, K., and J.H. Crouwel. 1998. "Some Mycenaean Tombs at Palaiokastro, Arcadia." *BSA* 93: 269-83.
- Drews, R. 1994. *The End of the Bronze Age. Changes in Warfare and the Catastrophe ca. 1200 BC*. Princeton.
- Eder, B. 1999. "Ancient Elis in the Dark Age." In *Η περιφέρεια του Μυκηναϊκού κόσμου, Ἀ διεθνές διεπιστημονικό συμπόσιο Λαμία 1994*: 263-8. Lamia.
- Harding, A.F. 1984. *The Mycenaean and Europe*. London.
- Hope Simpson, R., and O.T.P.K. Dickinson. 1979. *Gazetteer of Aegean Civilization in the Bronze Age: The Mainland and the Islands*. SIMA 52. Göteborg.
- Howell, R. 1970. "A Survey of Eastern Arcadia in Prehistory." *BSA* 65: 47-127.
- Kilian, K. 1985. "Violinbogenfibeln und Blattbügelfibeln des griechischen Festlandes aus mykenischer Zeit." *PZ* 60.2: 145-203.
- Kilian-Dirlmeier, I. 1984. *Nadeln der frühhellenischen bis archaischen Zeit von der Peloponnes*. Prähistorische Bronzefunde XIII.8. Munich.
- Kilian-Dirlmeier, I. 1993. *Die Schwerter in Griechenland, Bulgarien und Albanien*. Prähistorische Bronzefunde IV.12. Stuttgart.

- Krigas, E.J. 1991. "LH Socio-political and Economic Activity in Central and Eastern Peloponnese - with Special Emphasis on Arcadia: An In-depth Study." In W.H. Waldren *et al.* (eds.), *11th Deyá International Conference of Prehistory. BAR-IS 574*: 321-40. Oxford.
- Matthäus, H. 1980. "Italien und Griechenland in der ausgehenden Bronzezeit." *JdI* 95: 109-39.
- Mommsen, H., Th. Beier and A. Hein. 2002. "A Complete Chemical Grouping of the Berkeley Neutron Activation Analysis Data on Mycenaean Pottery." *JAS* 29: 613-37.
- Mountjoy, P.A. 1999. *Regional Mycenaean Decorated Pottery*. Rahden/Westf.
- Pálsson Hallager, B. 1985. "Crete and Italy in the Late Bronze Age III Period." *AJA* 89: 293-305.
- Papadopoulos, T.J. 1978-79. *Mycenaean Achaea. SIMA 55*. Lund.
- Papadopoulos, T.J., and L. Kontorli-Papadopoulos. 2000. "Four Late Bronze Age Italian Imports in Achaea." In P. Åström and D. Sühnenhagen (eds.), *Periplus. Festschrift für H-G. Buchholz. SIMA 127*: 143-6. Jonsred.
- Papazoglou-Manioudaki, L. 1994. "A Mycenaean Warrior's Tomb at Krini, near Patras." *BSA* 89: 71-200.
- Peroni, R. 1996. *L'Italia alle soglie della Storia*. Rome and Bari.
- Reichel, W., and H. Wilhelm. 1901. "Das Heiligthum der Artemis zu Lusoi." *ÖJh* 4: 1-89.
- Snodgrass, A.M. 1971. *The Dark Age of Greece*. Edinburgh.
- Voyatzis, M.E. 1990. *The Early Sanctuary of Athena Alea at Tegea. SIMA-PB 97*. Göteborg.
- Voyatzis, M.E. 1995. "Geometric Arcadia." In Ch. Morris (ed.), *Klados. Essay in Honour of J.N. Coldstream. BICS Suppl. 63*: 271-83. London.
- Yalouris, N. 1960. "Mykenische Bronzeschutzwaffen." *AM* 75: 42-67.

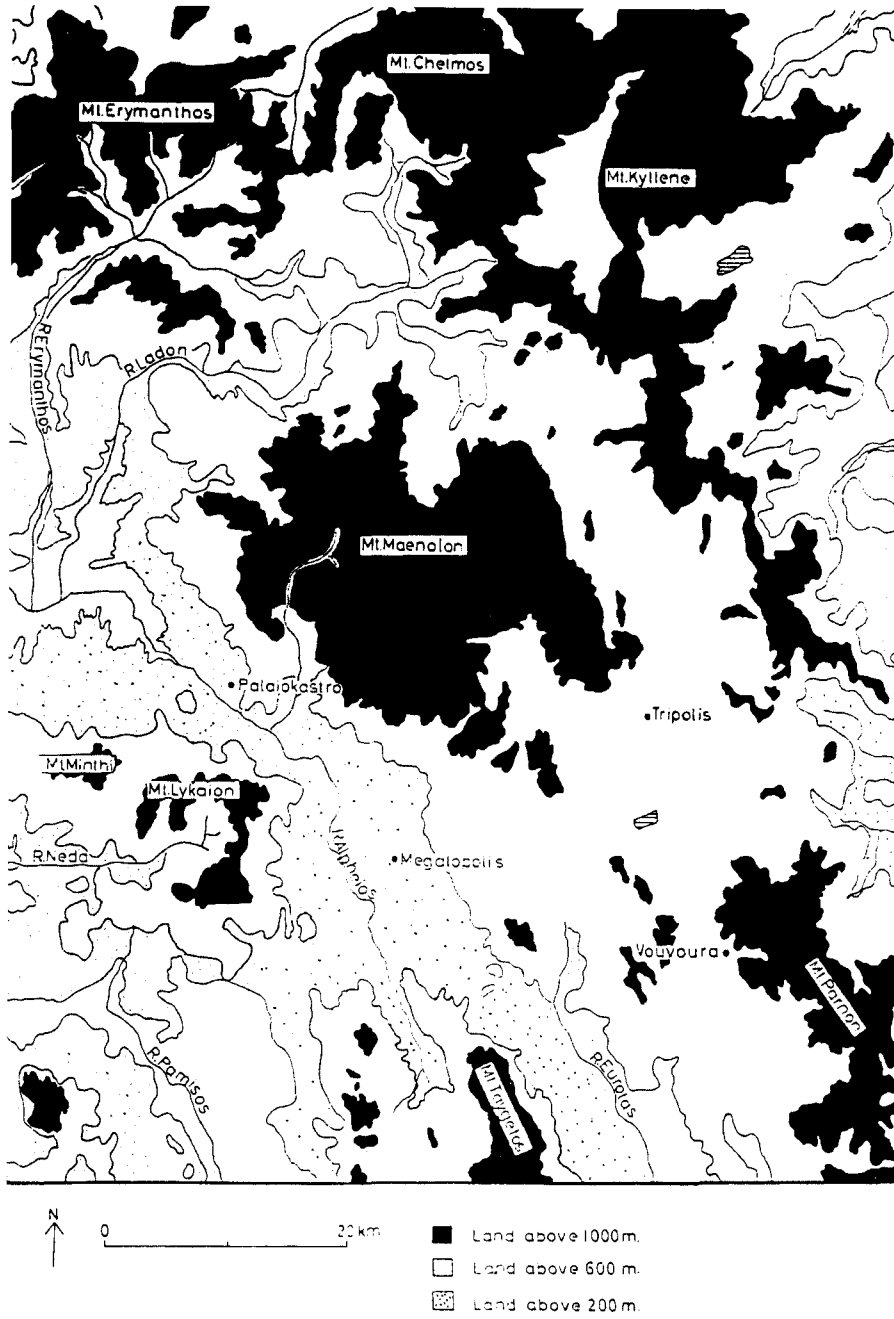


Fig. 1. Map of Mycenaean Arcadia. (After Mountjoy 1999, fig. 102.)

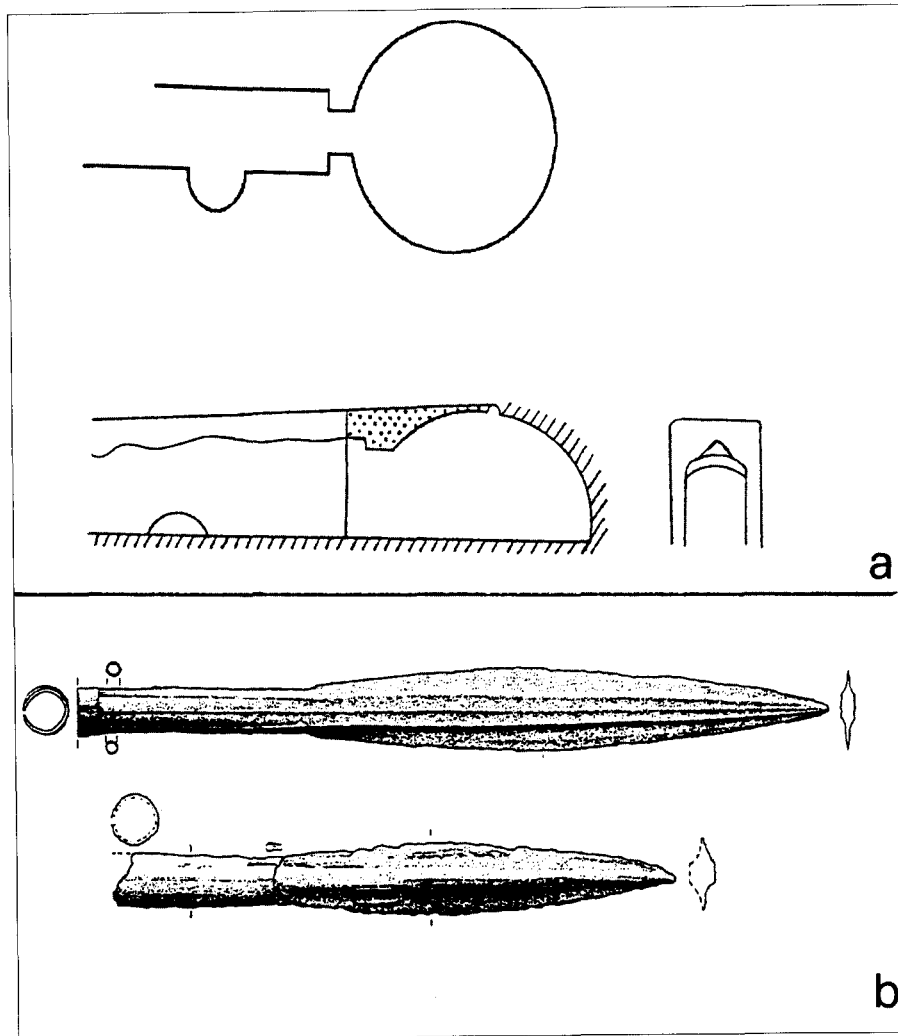


Fig. 2. a) Palaiokastro, Tomb 6: plans and sections (not in scale); b) bronze spearheads from Palaiokastro, tomb 6. (After Demakopoulou and Crowel 1998; a, fig. 5; b, figs. 7-8.)

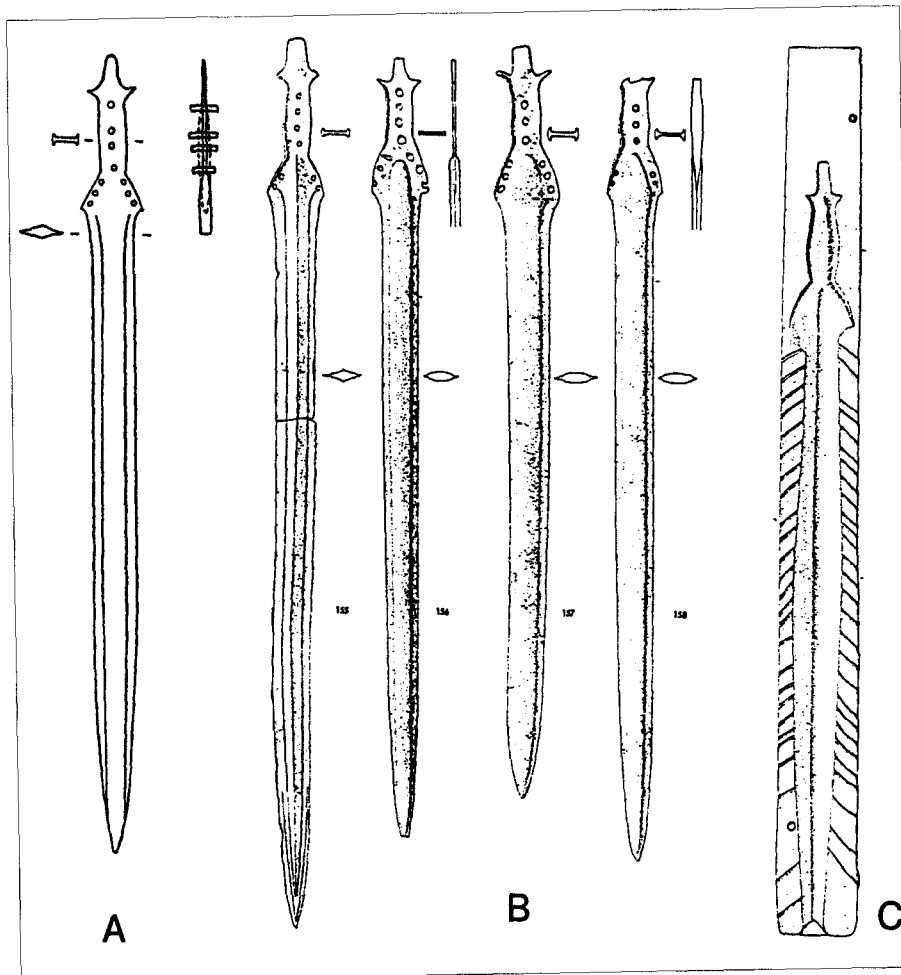


Fig. 3. a) Palaiokastro, Tomb 6: bronze sword (after Demakopoulou and Crouwel 1998, fig. 6); b) Allerona type swords from LBA Italy (after Bianco Peroni 1970, pl. 22.155-58); c) stone mould for casting Allerona type swords, from Piverone (Turin) (after Bianco Peroni 1970, pl. 25.170).

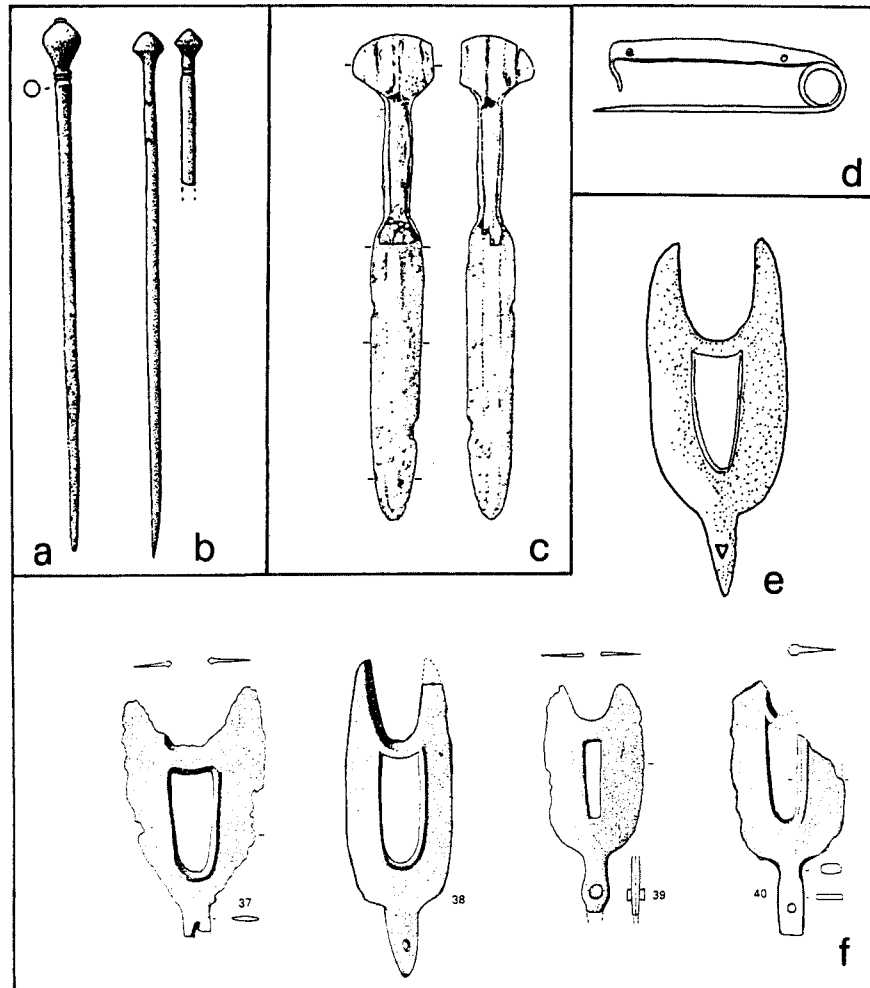


Fig. 4. a) Palaiokastro, tomb 6: bronze pin (after Demakopoulou and Crouwel 1998, fig. 9); b) bronze pins from LBA Italy (after Carancini 1975, pl. 52.1665); c) Teichos Dymaion, bronze dagger of Peschiera type (after Papadopoulos 1978-79, fig. 358); d) Lousoi, bronze violin-bow fibula (after Reichel and Wilhelm 1901, fig. 76); e) Klaus, bronze razor (after Papadopoulos and Kontorli-Papadopoulos 2000, pl. 36.4); f) examples of 'Scoglio del Tonno' type razors from LBA Italy (after Bianco Peroni 1979, pl. 4).

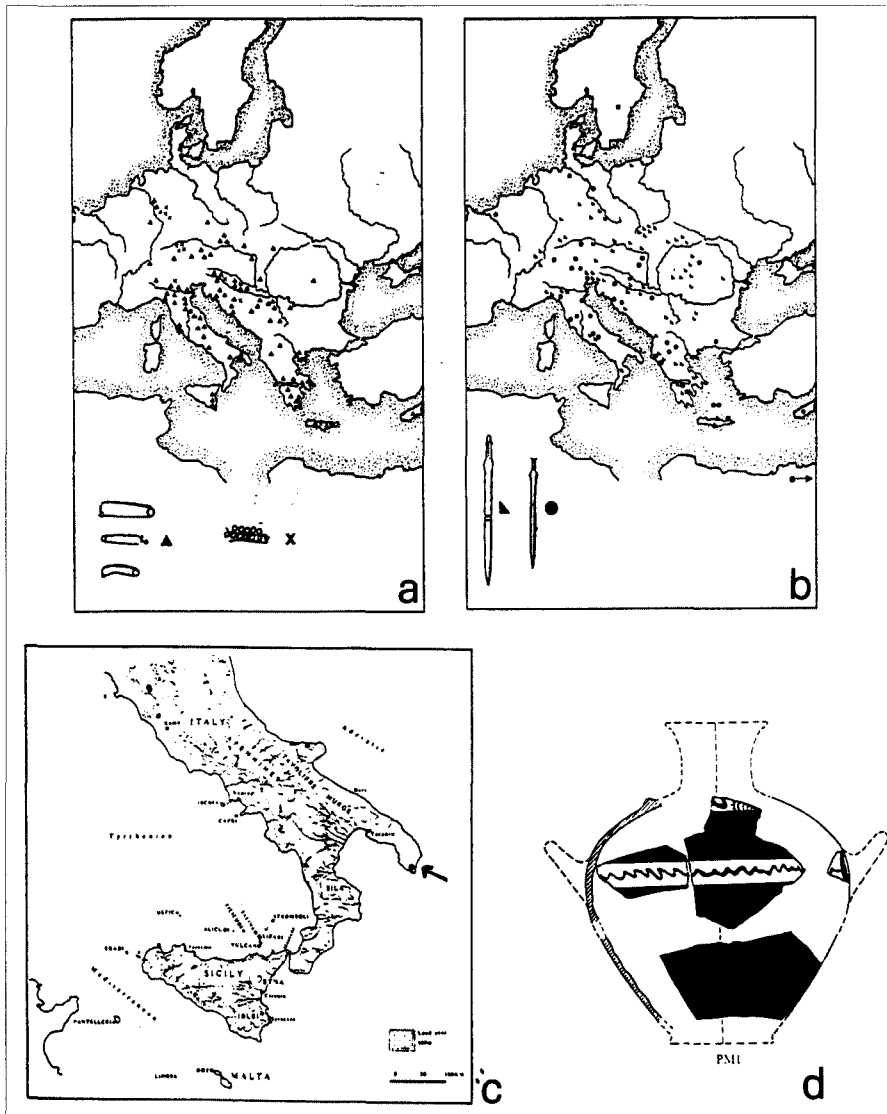


Fig. 5. a) distribution of European model fibulae in LBA (after Bettelli 2002, fig. 58.3); b) distribution of Naue II swords in LBA (after Bettelli 2002, fig. 58.4); c) map of South Italy with indication of Punta Meliso; d) LH IIIC belly-handled amphora from Punta Meliso, in the north-west Peloponnesian tradition (after Benzi and Graziadio 1996, fig. 2.5).