



---

## Late Bronze Age Greece and the Balkans: A Review of the Present Picture

Author(s): J. Bouzek

Source: *The Annual of the British School at Athens*, 1994, Vol. 89 (1994), pp. 217-234

Published by: British School at Athens

Stable URL: <https://www.jstor.org/stable/30102571>

### REFERENCES

Linked references are available on JSTOR for this article:

[https://www.jstor.org/stable/30102571?seq=1&cid=pdf-reference#references\\_tab\\_contents](https://www.jstor.org/stable/30102571?seq=1&cid=pdf-reference#references_tab_contents)

You may need to log in to JSTOR to access the linked references.

---

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <https://about.jstor.org/terms>



JSTOR

*British School at Athens* is collaborating with JSTOR to digitize, preserve and extend access to *The Annual of the British School at Athens*

# LATE BRONZE AGE GREECE AND THE BALKANS: A REVIEW OF THE PRESENT PICTURE

SOME eight years after the appearance of my book in the SIMA series,<sup>1</sup> the appearance of a similar book by Anthony Harding, and of several important articles by others, makes the time ripe to review the new material corpus and the progress of research on this field.<sup>2</sup>

## CHRONOLOGY

We may start with chronological questions, where there was a question mark at the end of my book. The updating of the Thera eruption prevailing now<sup>3</sup> would be welcome to those who would like to reconcile the C-14 and the traditional chronologies; and the present-day dendrochronological dates for central Europe would prefer a slightly higher chronology for Br D, where we find most of the 'classical' comparisons with LH III B. The shift, in general, would also leave more space for the Tumulus culture development in Br B and C, in which we have much less traditional evidence for mutual contacts between the Aegean and barbarian Europe. Despite repeated changes, the dendrochronologists from South Germany, Switzerland, and France now seem to feel safe for the Late Bronze Age there,<sup>4</sup> and this evidence makes a more reliable impression than C-14, while the deep core drilling in Greenland has also made advances. I should first stress that I am grateful that radiocarbon dates exist as a corrective view from another angle, but I would hardly consider them more reliable than other evidence.

As for the Near Eastern connections of Aegean chronology, there have been good reasons to reject both major shifts and excessively minute refinements.<sup>5</sup> No big jumps seem to be

<sup>1</sup> For various information concerning new finds and studies I am especially grateful to Dr T. Bader, Dr M. Hajicosti, Prof. B. Hänsel, Prof. A. Harding, Dr I. Kilian-Dirlmeier, Prof. P. Schauer, Dr T. Taylor, and Prof. F. A. Winter. I would also like to thank Dr E. French, who invited me to publish this report in *BSA*: its first version was presented to the Columbia University Seminar led by Prof. E. Porada. The illustrations were drawn by A. Waldhauserová: they are based on the sources quoted below. Special abbreviations:

*AAE* = J. Bouzek, *The Aegean, Anatolia and Europe: Cultural Interrelations in the Second Millennium BC* (SIMA 29; Gothenburg and Prague, 1985)

*OÄBZ* = P. Schauer (ed.), *Orientalisch-ägäische Einflüsse in der europäischen Bronzezeit* (Römisch-germanisches Zentralmuseum Mainz, Monographien, 15; 1990)

<sup>2</sup> Cf. *AAE*; A. F. Harding, *The Mycenaeans and Europe* (London and Orlando, 1984); S. Hiller, 'The Mycenaeans and their northern neighbours', *Temple University Aegean Symposium*, 9 (1984), 14–30; H. A. Bankoff and F. A. Winter, 'Northern intruders in LH III C Greece: a view from the

north', *JIES* 12 (1984), 1–30. Cf. also J. Bouzek, 'Foreign relations of late bronze age Thrace and Macedonia', in *Acts of the Demokritos Foundation Conference in Xanthi (1983)* (in press).

<sup>3</sup> Cf. M. J. Aitken, P. Betancourt, H. N. Michael, and P. Warren, 'The Thera eruption: continuity and discontinuity of dating', *Archaeometry*, 30 (1988), 165–9, 169–75, 176–80, 180–1 (*pro*: the first three authors; *contra*: P. Warren, pp. 176–80); *pro* again: S. Manning, 'The bronze age eruption of Thera: absolute dating, Aegean chronology and Mediterranean cultural interrelations', *Journal of Mediterranean Archaeology*, 1 (1988), 17–82; id., *Nestor*, 19 (1992), 2511–12.

<sup>4</sup> Cf. B. Becker and E. Schmidt, 'Verlängerung der mitteleuropäischen Eichenjahrechronologie in das zweite vorchristliche Jahrtausend', *Archäologische Korrespondenzblatt*, 12 (1982), 101–6; P. Brun and C. Mordaut (eds.), *La Dynamique du bronze final en Europe (Colloquium Namours 1986)* (Namours, 1986). New, extensive survey with the main evidence: K. Randsborg, 'Historical implications: cross-studies in European archaeology 2000–500 bc', *Acta Arch. København*, 62 (1991), 89–108.

<sup>5</sup> A useful survey is that by A. Leonard, 'Some problems inherent in Mycenaean/Syro-Palestinian synchronism', in E. B. French and K. Wardle (eds) *Problems of Greek Prehistory* (Manchester, 1986), 319–31.

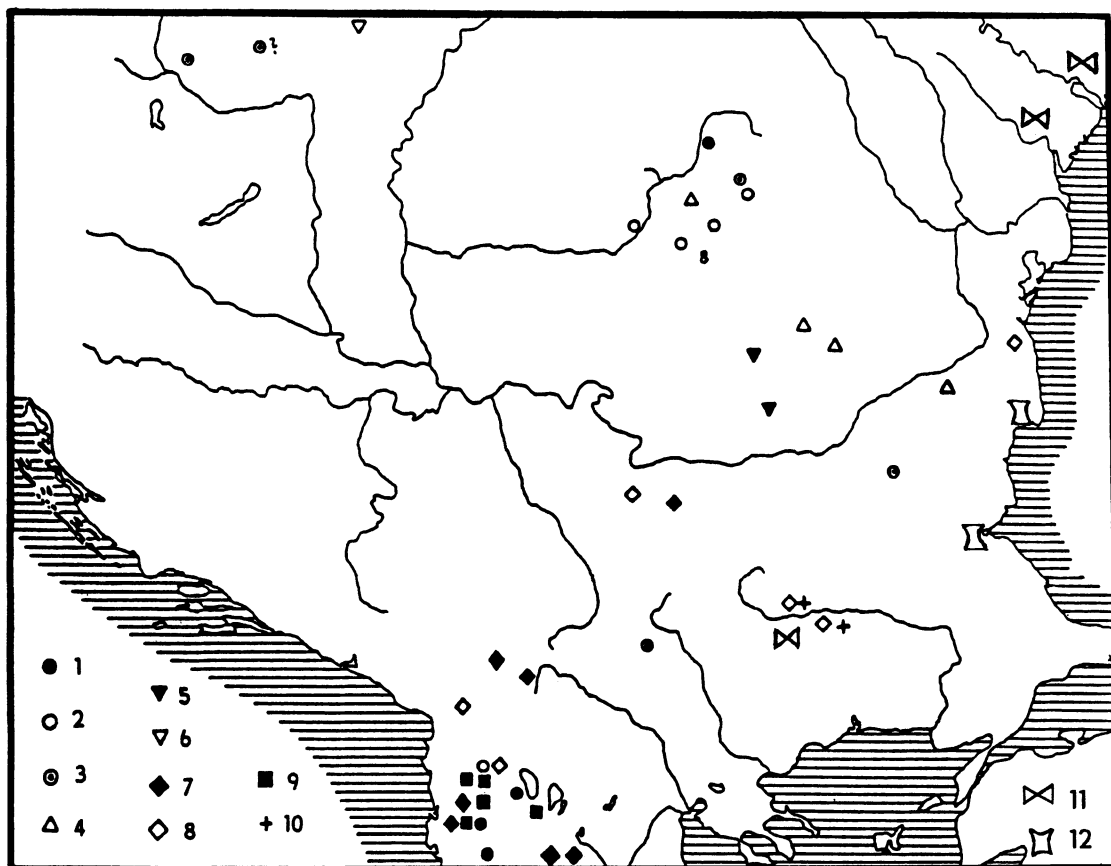


FIG. 1. Distribution of Mycenaean and related swords (1–9), long mycenaeanizing spearheads (10), double axes of Mycenaean type in bronze (11), and ingots in oxhide shape (12) in the Balkans. (1: Karo A swords, 2–3: related rapiers, 4: fragments, 5: Persinari and Rosiorii-de Vede swords, 6: Spišský Štvrtek mould, 7: Aegean type C swords, 8: their Balkan imitations, 9: Aegean D–G swords and their imitations.) (Adapted after *AAE*.)

possible, and the small differences in the precise date of the Sea Peoples' attack on Egypt do not substantially affect the precise chronology. Some degree of uncertainty in dating all archaeological find complexes (tombs, layers, and such like) are a common feature anywhere. It should perhaps be added that any system of chronology based on stylistic development should be a kind of guideline for those who would follow the same path later, not a fixed grid. This was also the case with Arne Furumark, whom I enjoyed meeting in person and hearing explain his point of view. The dogmatic interpretation of stylistic guidelines by less inspired followers often turns a wise theory into a caricature, which is only too easy to criticize.

#### THE EASTERN BALKANS

The northern penetration of the Mycenaean weapons in this area can be compared to the distribution of the LBA double axes of both genuine Mycenaean and peripheral types

(FIG. 1).<sup>6</sup> The new hoard from Rădeni in Rumania,<sup>7</sup> together with the Križovlin find and the Valčitrán treasure,<sup>8</sup> mark the same area of sophisticated LBA gold toreutics as the zone of Mycenaean influence. The gold tableware and jewellery, including the new finds from Hinova in Rumania,<sup>9</sup> remind one of the Homeric figure of Rhesos, the king richer in gold than anyone else in the *Iliad* (*Il.* x. 436–41). The Mycenaean-type ingots from the Pontic coast of Bulgaria, and the LBA stone anchors from there, can perhaps be connected with the recorded tradition of a Thracian thalassocracy situated chronologically at the close of the Bronze Age.<sup>10</sup> Thrace also had much to offer in early times in the religious field, as shown by stories of Dionysos coming to Greece from the north, of Orpheus, and of the reputedly Thracian origin of several priestly families in some of the main Greek sanctuaries.<sup>11</sup>

In general terms, the culture of Greek Thrace seems to be closely related to that of southern Bulgaria (the Čerkovna and later Cepina groups according to Hänsel),<sup>12</sup> and the same seems to apply to Thasos, Samothrace, and eastern Macedonia.<sup>13</sup> The ‘Knobbed ware’ from several sites in Greek Thrace seems to document a continuous cultural development in this area from the Late Bronze to the Early Iron Age. The results of the Bulgarian excavations in the south-eastern part of that country, notably in Malkoto Kale,<sup>14</sup> along with the new sites in the island of Samothrace (both late bronze and early iron age) and the new discoveries of D. Triandaphyllos in eastern Thrace,<sup>15</sup> offer more possibilities of distinguishing local groups of this ceramic style. Malkoto Kale and surrounding sites show, generally, more features related to the Danubian tradition (softer shaping, more often fluted decoration, cf. FIG. 2), while the potteries of Greek eastern Thrace appear to be more restrictive in this sense, similarly to the sites examined in Turkish Thrace by M. Özdoğan.<sup>16</sup> The last-mentioned pottery groups, however, seem to be reasonably similar to the Trojan Knobbed ware, though earlier Trojan

<sup>6</sup> Cf. Harding (n. 2), 127–30; *AAE* 30 f., 41–7; J. Panayotov, ‘More about the Thracian–Aegean contacts in the LBA metal types’, *Pulpudeva*, 5 (1986), 148–50; S. Hiller, ‘The Mycenaeans and the Black Sea’, *Aegaeum*, 7 (1991), 207–16. For more general relations to the Transcaucasian weapons see now G. Burger, ‘Le problème de la chronologie des certaines armes en bronze transcaucasiennes’, *Arheologia Moldovei*, 14 (1991), 37–44. For Troy there is the still important *Fourth Colloquium on Aegean Prehistory* (Sheffield, 1977; in pre-printed version only). Cf. also R. F. Hoddinott, ‘Thrace, Mycenae and Troy’, *Pulpudeva*, 5 (1986), 125–32.

<sup>7</sup> A. Vulpe and V. Mihălescu-Birlin, ‘Der Goldschatz von Rădeni in der Westmoldau, Rumänien’, *PZ* 60 (1985), 47–9.

<sup>8</sup> T. F. Taylor, ‘Thracian Bronze Age and international relations’, in: *Thracian Conference: The Bronze Age in the Thracian Lands and Beyond* (Boston, 1984), 187–201; *AAE* 52, 213 f.; A. Bonev, ‘Datierung des Goldschatzes von Valčitrán’, *Studia praehistorica*, 7 (1984), 164–74; R. Katinčarov, ‘Relations actuelles entre la Thrace, la Grèce et l’Anatolie de nord-ouest à l’âge du bronze récent’, in J. Best and N. de Vries (eds), *Thracians and Mycenaeans* (Amsterdam, 1970), 68–85.

<sup>9</sup> M. Davidescu, ‘Tezaurul tracic de la Hinova’, *Thracodacica*, 2 (1981), 7–22.

<sup>10</sup> For the Thracian thalassocracy cf. C. Lazova, ‘The Thracian thalassocracy and the literary tradition during late antiquity’, *Thracia*, 8 (1988), 17–22.

<sup>11</sup> For the anchors and ingots from Bulgaria cf. *Thracia Pontica*, iii (Sozopol, 1985) and iv (Sozopol, 1988 [1991])—all acts of colloquiums organized by the Centre for Underwater Archaeology at Sozopol; for a brief survey of religious contacts see J. Bouzek, *Thrákové* (Prague, 1990), 60–73.

<sup>12</sup> Cf. B. Hänsel, *Beiträge zur regionalen und chronologischen Gliederung der älteren Hallstattzeit an der unteren Donau* (Bonn, 1976), 76–87, 213–15.

<sup>13</sup> D. Grammenos, ‘Bronzezeitliche Forschungen in Ostmakedonien’, and C. Koukouli-Chrysanthaki, ‘Die frühe Eisenzeit auf Thasos’, both in B. Hänsel (ed.), *Südosteuropa zwischen 1600 und 1000 v. Chr.* (Berlin, 1982), 89–98 and 119–44 respectively.

<sup>14</sup> M. Domaradzki, I. Karaiotov, and A. Gotzev, ‘L’habitat du premier âge du fer de Malkoto Kale’, *Thracia Pontica*, iv (1988 [1991]), 119–32.

<sup>15</sup> D. Triandaphyllos, ‘La Thrace égéenne avant la colonisation grecque’, *Thracia Pontica*, iv (1988 [1991]), 283–308; id., ‘Les sanctuaires en plein air dans la région des Cicones’, *Thracia Pontica*, iii (1985), 129–34; id., ‘Ανασκαφαί στα Πίτζια Έβρου’, *A. Delt.* 35 (1980 [1986]), Mel. 95–106. Samothrace: D. Matsas, Ch. Karadima, and M. Koutsoumaris, ‘Αρχαιολογικές εργασίες Σαμοθράκης’, *Το αρχαιολογικό έργο στη Μακεδονία και Θράκη*, 3 (1989), 607–11.

<sup>16</sup> I would like to thank M. Özdoğan for kindly providing information about his finds.

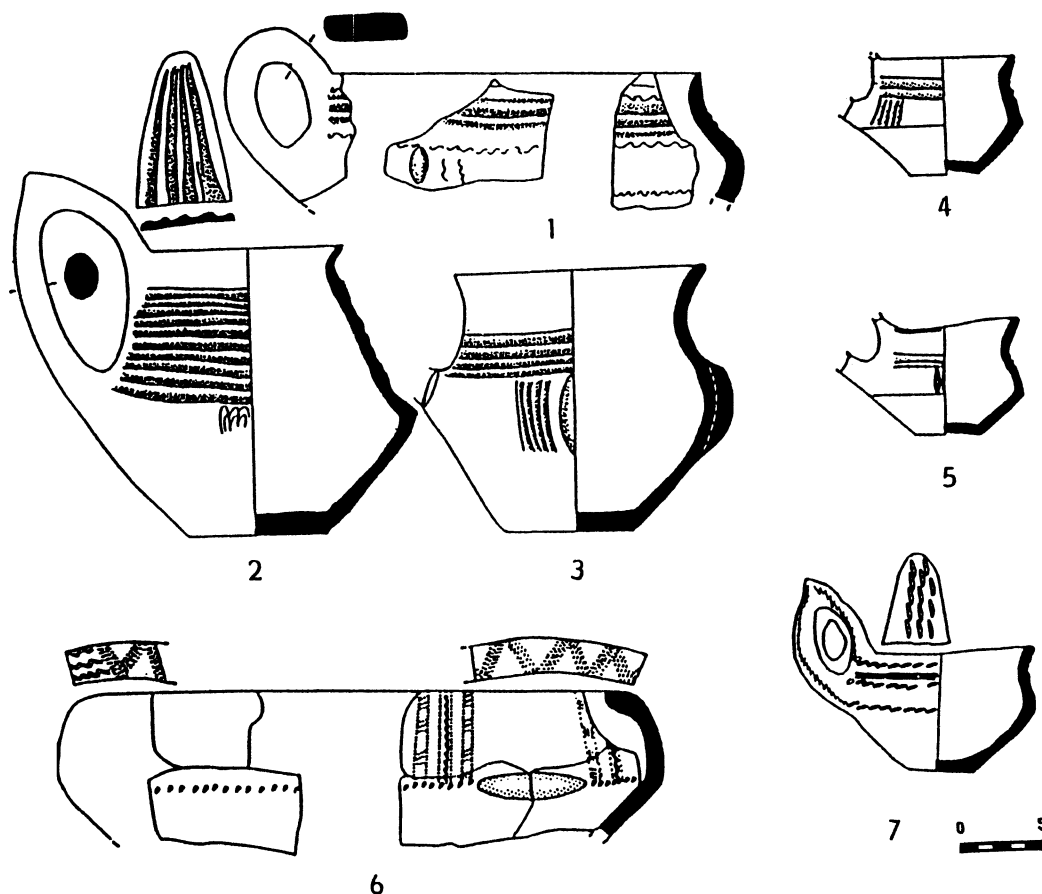


FIG. 2. Early Iron Age pottery shapes from Malkoto Kale, Bulgaria. (1–3) scale 1; (4–5, 7) scale 2; (6) scale 3. (After *Thracia Pontica*, 4 (1988).)

pottery also shows some Balkan links. The exaggeration of some traits in Trojan ware seems to have frequent parallels among groups of immigrants living in a foreign milieu. That the pottery from Gordion also shows Balkan traits, but no more knobs, can either be the result of a further shift away, or recall the fact that the Phrygians came from a more western part of the Balkans.<sup>17</sup> A parallel from the same territory is the much later Galatian ware, already lacking some qualities of the La Tène pottery, but still showing a generic resemblance.<sup>18</sup>

<sup>17</sup> G. K. Sams, 'The early Phrygian period at Gordion: toward a cultural identity', *Source: Notes in the History of Art*, 7.3–4 (1988), 9–15; for further bibliography see Bankoff and Winter (n. 2), 25 nn. 62–4.

<sup>18</sup> Cf. A. Müller-Karpe, 'Neue galatische Funde aus Anatolien', *Ist. Mitt.* 38 (1988), 189–99; F. A. Winter, 'Archaeologically derived model for the Dorian invasion', in *Symposium on the Dark Ages* (Philadelphia, 1977), 68–71.

## THE AXIUS VALLEY AND THE WEST

A horned sword and a triangular knife, characteristic for the finds from Epirus found at Iglarevo,<sup>19</sup> now fill the gap between both old and new Albanian sites<sup>20</sup> and the Skopje sword (FIG. 1). In the Axios valley, new publications of the Kastanas and Assiros excavations<sup>21</sup> confirmed what had been mentioned in the preliminary reports. Kastanas shows more dramatic changes than Assiros. The changes in the former site (once an island in the Thermaic gulf) are contemporary with the appearance of the fluted ware (Macedonian Lausitz ware according to Heurtley)<sup>22</sup> and with the transition from mud-brick to wattle-and-daub architecture, with different house plans and changes in agriculture (new kinds of plants) and cattle-breeding.<sup>23</sup> This all seems to fit well into the general pattern of dramatic changes in the Aegean, while the Torone excavations have shown a Greek presence there from the Submycenaean period.<sup>24</sup>

North of the Greek frontier, good progress has been made in the study of EIA cemeteries, and at least some of the evidence has been published.<sup>25</sup> A survey of the local pottery style has been published by A. Hochstätter,<sup>26</sup> while the most important addition to the Epirote archaeology is the Vitsa publication by J. Vokotopoulou.<sup>27</sup> What should perhaps be stressed again are the geographical conditions. The Balkan peninsula offers only a few relatively easy routes from north to south, and even the best of them, using the valleys of the Morava and Vardar, can easily be blocked even by small military units. The Strymon and western Macedonian routes are even more difficult.<sup>28</sup> With a possible exception from the Struma valley, no new finds of Mycenaean pottery north of the present Greek frontier have been made, a feature contrasting with new finds of this class made as far west as Spain.<sup>29</sup>

<sup>19</sup> M. Durić, 'Meč iz Iglareva', *Glasnik Muzeja Kosovo i Metohije*, 14 (1984), 17–24. From Albania come new C 1 and D 2 swords (Variboti, Kelcyra): M. Korkuti, 'Deux armes de bronze trouvées à Variboti', *Iliria*, 14.1 (1984), 251–64; N. Budinaku, 'Deux armes de bronze provenant de Kelcyra', *Iliria*, 18.1 (1988), 34–50. Cf. id., 'Poignards du bronze de l'Albanie de sud', *Iliria*, 20.1 (1990), 85–97. A. Harding's PBF volume of W. Balkan swords is in press; cf. his preliminary survey, 'Late bronze age swords between the Alps and the Aegean', in A. Lippert and K. Spindler (eds), *Festschrift zum 50jährigen Bestehen des Instituts für Vor- und Frühgeschichte der Leopold Franzens-Universität Innsbruck* (Bonn, 1992), 207–14.

<sup>20</sup> For these cf. Zh. Andrea, *Kulture ilire e tumule me Pelegren es Korçës* (Tirana, 1985), and the exhibition catalogue *Albania: das Land der Illyrer* (Mainz, 1988). A useful new survey is C. Suaref, 'Presenza micenea in Albania e in Epiro: problemi ed osservazioni', *Iliria*, 19.2 (1989), 65–78.

<sup>21</sup> A. Hochstätter, *Kastanas: die handgemachte Keramik* (Berlin, 1984); B. Hänsel, *Kastanas, Grabung und Baubefund* (Berlin, 1989); id., 'Wanderungen in Südosteuropa während der späten Bronzezeit im Verhältnis zum Territorium Albanien', *Iliria*, 15.2 (1985), 223–33; K. Wardle, 'Excavations at Assiros', *BSA* 82 (1987), 313–29; 84 (1989), 447–63; id., *Iliria* 15.1 (1985), 265–70 (destruction in late 14th cent. BC). Cf. also Toumba: K. Kotsakis and S. Andreou, 'Τούμπα 1989', *Το αρχαιολογικό έργο στη Μακεδονία και Θράκη*, 3 (1989), 201–13.

<sup>22</sup> Cf. *AAE* 90f. with bibliography.

<sup>23</sup> B. Hänsel, 'Ergebnisse der Grabungen bei Kastanas in Zentralmakedonien 1975–1978', *Jahrbuch des Römisch-germanischen Zentralmuseums Mainz*, 26 (1979), 167 ff. Similarly *Nichoria*, i. 76; iii. 316, 322 f., 325.

<sup>24</sup> Latest survey: A. Cambitoglou, *AR* 1990–1, 50–1; cf. id. and J. Papadopoulos, 'Excavations at Torone', *Journal of Mediterranean Archaeology*, 1 (1988), 180–217.

<sup>25</sup> R. Pašić, 'Arheološki ispitivanja na lokalitet Suva Reka vo Gevgelija', *Žbornik Skopje*, 8–9 (1975–8), 21–52; ead., 'Nekropolata od podstaro železno vreme vo seloto Dedeli kaj Valandovo', *Žbornik Skopje*, 10–11 (1979–82), 61–4; Z. Georgiev, 'Karakterit i značenijeto na vongrobite naoduo vo južnovardarskite nekropoli ot železno vreme', *Macedoniae acta archaeologica*, 6 (1987), 37–55; id., 'Grobot 31/35 ot nekropolata Milci kaj Gevgelija', *Žbornik Skopje*, 10–11 (1979–82), 65–72; D. Mitrovski, 'Bow fibulae from the iron age sites in the Vardar valley', *Archaeologia Jugoslavica*, 24 (1987), 29–42.

<sup>26</sup> Cf. n. 21.

<sup>27</sup> I. Vokotopoulou, *Βίτσα: τα νεκροταφεία μιάς Μολοσσικής κώμης* (Athens, 1986); ead., 'Organisation et cimetières d'une village molosse', in *L'Illyrie méridionale et l'Épire dans l'antiquité (actes colloque Clermont-Ferrand 1984)* (1987), 51–4; S. Dakaris, 'Intervention', *ibid.* 31–3; F. Andreou and I. Andreou, 'Une nécropole tumulaire à Pogoni de l'Épire', *ibid.* 47–52. Spearhead and sheet bronze with Carpathian links, from Cephalenia: S. Brodbeck-Zucker, *Mykenische Funde von Kephallenia im archäologischen Museum Neuchâtel* (Bern, 1976), 89–91, pl. 15.

<sup>28</sup> Cf. J. Bouzek, 'Das Vardar-Morava Bereich in seinem Verhältnis zu Griechenland zwischen 1200 und 900 v.u.Z.', in S. Deger-Jalkotzy (ed.), *Griechenland, Ägäis und die Levante während der 'Dark Ages' vom 12. bis 9. Jh. v.Chr.* (Vienna, 1983), 211–32.

<sup>29</sup> J. C. Martin de la Cruz, 'Die erste mykenische Keramik von der iberischen Halbinsel', *PZ* 65 (1990), 49–52; Ch. Podzuweit, H. Mommsen et al., 'Eine mykenische Scherbe in Spanien . . .', *ibid.* 53–8, 59–61.



## THE NORTHERN BALKANS: ROMANIA AND THE CARPATHIAN AREA

Thorough surveys, with lists of particular items, have been published for Rumania by T. Bader<sup>30</sup> and for Austria by S. Hiller.<sup>31</sup> There is a strong possibility that the Mycenaeans obtained some of their metals, most notably gold and copper, from as far north as Transylvania,<sup>32</sup> and the number of objects dating from Br A 2(-3) in the eastern part of central Europe and the northern Balkans for which an Aegean inspiration is probable has been increased. The moulds for 'mycenaeanizing' daggers, the list of which has been enlarged by R. Wanzek,<sup>33</sup> seem to confirm the early date of the Transylvanian rapiers and of the Persinari hoard (FIG. 3); they appear to date from Br A 2 (3)-B 1, though some fragments of them were found among the scrap in later hoards.<sup>34</sup> Trade and political relations on a more sophisticated level need collaborative partners. The study of fortified settlements in the eastern part of central Europe shows more developed social stratification and craft specialization than is usually found in prehistoric societies both earlier and later in this area. Fine metalwork and other special crafts were situated in proto-urban sites with fortifications, towers, and often rectangular networks of streets and house-blocks.<sup>35</sup> Script-like signs and groups of them also appear in this area, probably having some mainly magical function, and the so-called 'loaf-of-bread idols' remind one of some sealings and tablets in the south.<sup>36</sup> The sanctuaries were decorated with spirals in relief (FIG. 4).<sup>37</sup>

## GENERAL RELATIONS BETWEEN THE AEGEAN AND OTHER PARTS OF BARBARIAN EUROPE

Relations of a more general character have been studied in several articles and one book by P. Schauer; another survey from his point of view is in his introduction to a Mainz conference volume organized by him.<sup>38</sup> He sees the East Mediterranean influences in barbarian Europe in a very general way, usually not entering into detailed comparisons of particularities in style and execution of individual objects, and avoiding problems of individual historical events. For high conical objects of gold from Germany and France (Schifferstadt, Ezelsdorf, Avanton) he sees Hittite models, and similarly for some traits of central European funeral ritual and waggons.<sup>39</sup> For the Urnfield symbolic waggons and their relation to the Aegean, two studies by

<sup>30</sup> T. Bader, 'Bemerkungen über die ägäischen Einflüsse auf die alt- und mittelbronzezeitliche Entwicklung im Donau-Karpatenraum', in *OÄBZ* 181-205.

<sup>31</sup> S. Hiller, 'Österreich und die mykenisch-mitteleuropäische Kulturbeziehungen', *ÖJh* 61 (1991-2), Hauptblatt, 1-19; cf. also H.-G. Hüttel, *Bronzezeitliche Tensen in Mittel- und Osteuropa* (PBF xvi. 2; 1981).

<sup>32</sup> E. M. Davis, 'The gold of the shaft graves: the Transylvanian connection', *Temple University Aegean Symposium*, 8 (1983), 32-8. Cf. O. T. P. K. Dickinson, *The Origins of Mycenaean Civilisation* (1977), 53 f.

<sup>33</sup> B. Wanzek, 'Eine Gussform für einen Dolch mykenischen Typs von der unteren Donau', *Zeitschrift für Archäologie*, 25 (1991), 1-28.

<sup>34</sup> Cf. *AAE* 31-5.

<sup>35</sup> Cf. a survey by A. Jockenhoevel, 'Bronzezeitlicher Burgenbau in Mitteleuropa: Untersuchungen zur Struktur frühmetallzeitlichen Gesellschaften', in *OÄBZ* 209-28.

<sup>36</sup> Latest survey: G. Trnka, 'Neue unbekannte Brot-leibidole aus Österreich', in *Festschrift zum 50jährigen Bestehen des Instituts für Vor- und Frühgeschichte der Universität Innsbruck* (1992), 615-22.

<sup>37</sup> Cf. *AAE* 71-6.

<sup>38</sup> 'Orient im spätbronze- und früheisenzeitlichen Occident', *Jahrbuch des Römisch-germanischen Zentralmuseums Mainz*, 30 (1983), 175-94; id., 'Spuren des orientalischen und ägäischen Einflusses im bronzezeitlichen nordischen Kreis', *ibid.* 32 (1985), 123-95; id., *Die Goldkegel der Bronzezeit* (Römisch-germanisches Zentralmuseum Mainz, Monographien, 8; Bonn, 1990).

<sup>39</sup> P. Schauer, 'Der vierrädrige Wagen im Zeremonialgeschehen und Bestattungsbrauch der orientalisches-ägäischen Hochkulturen und ihrer Randgebiete', in *Vierrädrige Wagen der Hallstattzeit* (Römisch-germanisches Zentralmuseum Mainz, Monographien, 12; Mainz, 1987) 1-25 and n. 31.

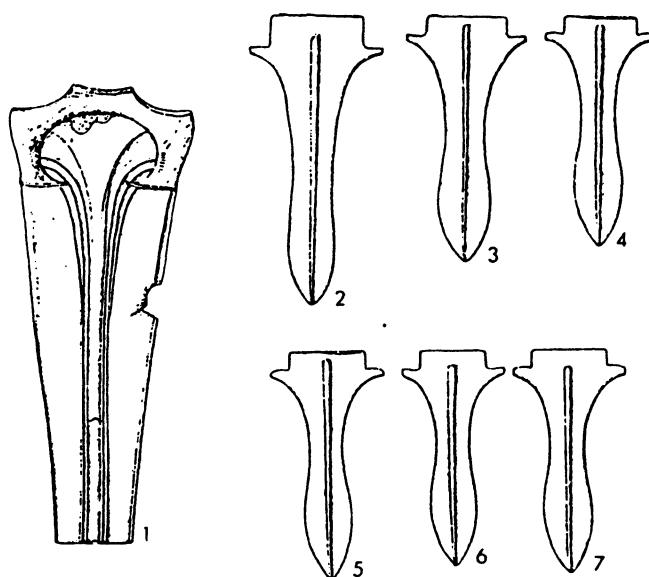


FIG. 3. Perșinari, district Pitești, Rumania. Sword fragment and daggers of gold. (After Condurachi, *Monuments archéologiques en Roumanie* (1966) and T. Bader in *OABZ*.)



FIG. 4. Salacea near Otomani, Rumania. Clay spiral decoration from the Otomani culture sanctuary. (After Ordentlich, *Satu Mare: studii si comunicari* (1972).)



Ch. Pare are important.<sup>40</sup> Some new finds from Anatolia were added to the discussion by B. Kull,<sup>41</sup> but without substantial new results for chronological comparisons. The search for metal was apparently an important reason for long-distance relations; even the Trojan war is sometimes seen in this context.<sup>42</sup>

H. Thrane has recently reexamined bronze age relations between Scandinavia and the Mediterranean.<sup>43</sup> The chariot (FIG. 5) and the folded stool (FIG. 6) are derived from an ultimately East Mediterranean inspiration, but the relations were usually indirect, as is shown for bronze objects of similar inspiration taken over via central Europe.<sup>44</sup>

Much happened in the field of Italic relations with the Aegean and Cyprus; both appear to have been more intensive than was supposed earlier. Most notably, Sardinia has yielded many new finds,<sup>45</sup> and Fratesina in northern Italy appears to have been a centre for transmitting glass technology to the Urnfield culture.<sup>46</sup> Some LH III c pottery was manufactured in Italy.

East Mediterranean relations with France and the British Isles have also been summarized, with more optimistic results, by J. Briard, A. Harding, C. du Gardin, and G. Eogan.<sup>47</sup> Notably, the richer amber finds from France, the crescent twisted earrings (FIG. 7), 'Cypriot' daggers, 'flesh-hooks' (FIG. 8), and glass objects<sup>48</sup> offer more solid evidence than was available earlier. The pattern of distribution reminds one of the later Phoenician (and Phocaeen) trade routes.<sup>49</sup> Many more amber spacers are known from France, and the LH I-II amber most probably came to the eastern Mediterranean via that country (FIG. 9), while the distribution of Tiryns-type amber beads and intertwined gold 'wheels' (FIG. 10) makes a central European route more probable for LH III B-C amber.<sup>50</sup>

<sup>40</sup> Ch. Pare, 'From Dupljaja to Delphi: the ceremonial use of the waggon in later prehistory', *Antiquity*, 63 (1989), 80-100; id., 'Der Zeremonialwagen der Urnenfelderzeit: seine Entstehung, Form und Verbreitung', in *Vierrädrige Wagen* . . . (n. 39), 25-68. Cf. S. Piggot, *The Earliest Wheeled Transport from the Atlantic Coast to the Caspian Sea* (London, 1983), 105-37; and J. Littauer and J. H. Crouwel, *Wheeled Vehicles and Ridden Animals in the Ancient Near East* (Leiden and Cologne, 1979), 166 ff. For European relations of chariots see V. Messerschmidt, 'Der ägäische Streitwagen und seine Beziehungen zum nordeuropäisch-vorderasiatischen Raum', *APA* 20 (1988), 31-44.

<sup>41</sup> B. Kull, 'Untersuchungen zur Mittelbronzezeit in der Türkei und ihre Bedeutung für die absolute Datierung der europäischen Bronzezeit', *PZ* 64 (1989), 48-73.

<sup>42</sup> E. F. Bloedow, 'The Trojan war and Late Helladic III c', *PZ* 63 (1988), 23-52. Cf. also M. J. Mellink (ed.), *Troy and the Trojan War* (Bryn Mawr, 1984 [1986]).

<sup>43</sup> *OABZ* 165-79.

<sup>44</sup> Cf. *AAE* 82.

<sup>45</sup> Cf. esp. *XXII convegno di studi sulla Magna Grecia (Taranto 1982): Magna Grecia e il mondo miceneo: nuovi documenti*; F. Lo Schiavo, E. McNamara, and L. Vagnetti, 'Late Cypriot imports in Italy and their influence on local bronzework', *BSR* 53 (1985), 1-63; L. Vagnetti and F. Lo Schiavo, 'Late bronze age long distance trade in the Mediterranean: the role of the Cypriots', in E. Peltenberg (ed.), *Early Society in*

*Cyprus* (Edinburgh, 1989), 217-63, with bibliography also for Sardinia. Cf. also H. v. Hase, 'Ägäische Importe im zentralen Mittelmeergebiet in späthelladischer Zeit (SH I-SH IIIC)', in *OABZ* 80-108.

<sup>46</sup> A. M. Bietti Sestieri, 'The "Mycenaean connection" and its impact on the central Mediterranean societies', *Dialoghi di archeologia*, 6.1 (1988), 23-51.

<sup>47</sup> C. du Gardin, 'La parure d'ambre à l'âge du bronze en France', *Bulletin de la Société de Préhistoire de France*, 83 (1986), 546-80; J. Briard, 'Les influences d'Égée et du Proche-Orient dans la chalcolithique et l'âge du bronze de la Bretagne', *OABZ* 124-36; A. Harding, 'The Wessex connection: developments and perspectives', *OABZ* 139-54; G. Eogan, 'Possible connection between Britain and Ireland and the East Mediterranean region during the Bronze Age', *OABZ* 155-63.

<sup>48</sup> J. Henderson, 'Glass production and bronze age Europe', *Antiquity*, 62 (1988), 435-51; N. Venclová, *Prehistoric Glass in Bohemia* (Prague, 1990), 35-44.

<sup>49</sup> H.-G. Niemeyer, 'Die Phönizier und die Mittelmeerwelt im Zeitalter Homers', *Jahrbuch des Römisch-germanischen Zentralmuseums Mainz*, 31 (1984), 1-94; J. M. Blázquez Martínez and M. P. García Gelabert, 'Ägäische Einflüsse auf das Gebiet des oberen Guadalquivir', *OABZ* 109-23.

<sup>50</sup> Cf. now C. W. Beck and J. Bouzek (eds), *Amber in Archaeology: Acts of the 2nd International Conference on Amber (Liblice, 1990)* (Prague; in press).

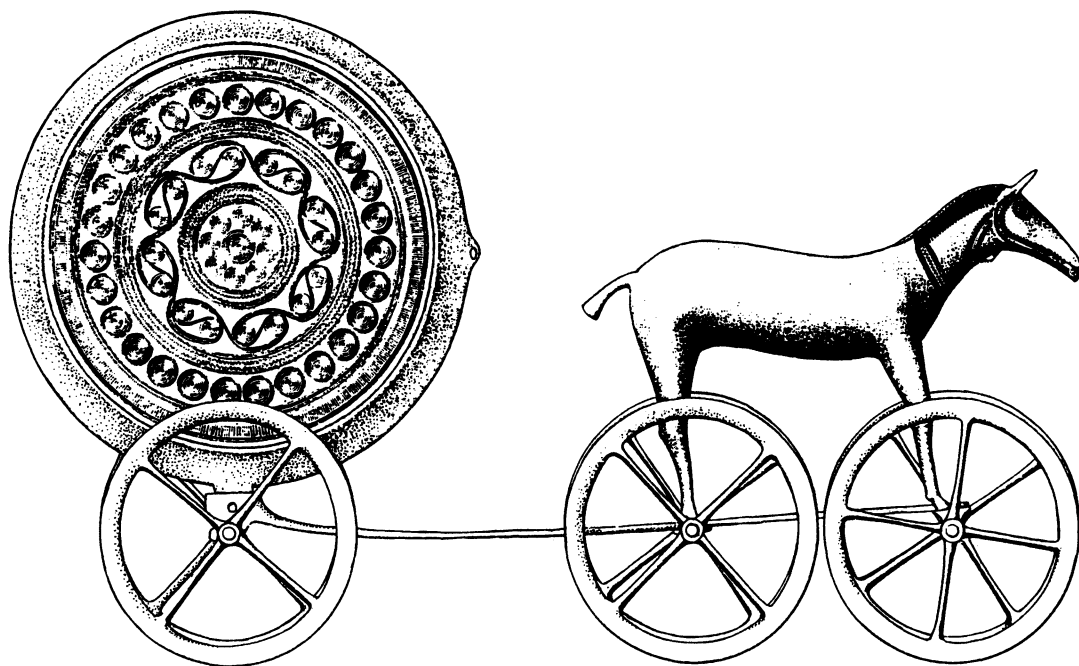


FIG. 5. The sun chariot from Trundholm, Denmark. (After H. Thrane, in *OABZ*.)

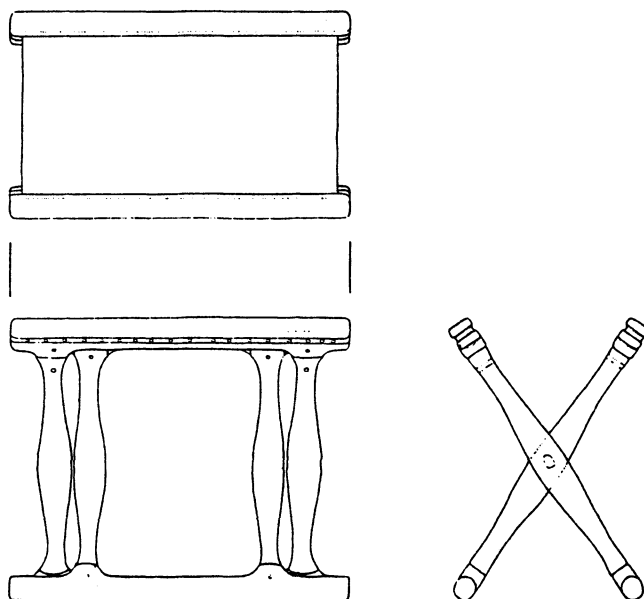


FIG. 6. Reconstruction of the folded stool of ash wood from Guldhøj, Vandrup, Denmark. (After H. Thrane, in *OABZ*.)

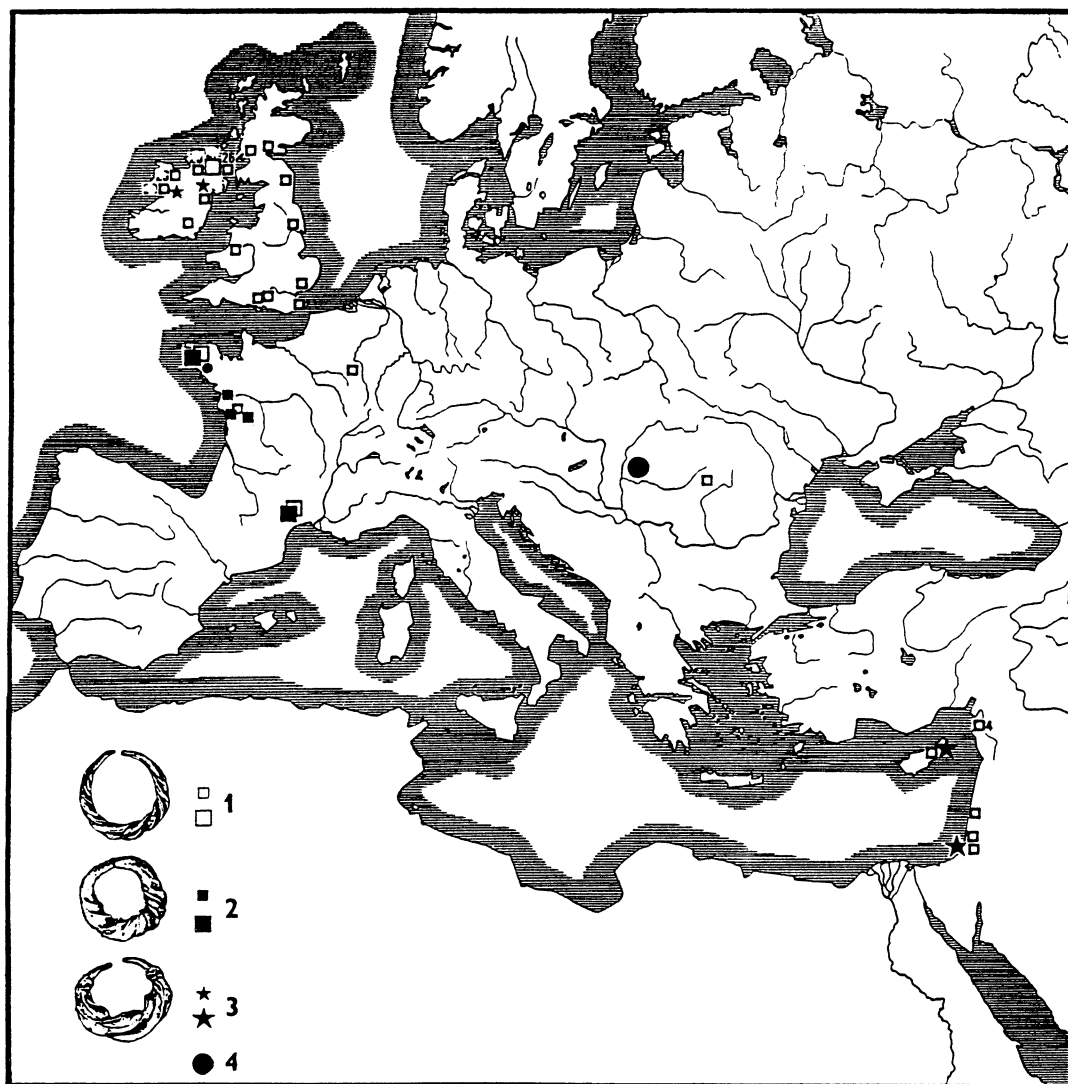


FIG. 7. Distribution of crescentic earrings in Bronze Age Europe. (1–3) variants 1–3 after Eluère; (4) earrings from the Hungarian and Rumanian hoards. (Adapted after J. Briard, in *OĀBŽ*.)

#### SOUTHWARD SHIFTS OF EUROPEAN 'CULTURES' IN THE EARLY URNFIELD PERIOD

There are three shifts of the central European cultures to the south that can be recognized relatively clearly. The first is the penetration of elements deriving from the area around the eastern Alps to what became, under this influence, Protovillanovan Italy. This happened in Br D, when a similar shift of the Urnfield culture also arrived in Bosnia and Serbia (early Mediana), and Heurtley's Lausitz ware (now so richly known from Kastanas and Assiros)<sup>51</sup> is

<sup>51</sup> Cf. n. 21; *AAE* 190 f., 214 f.

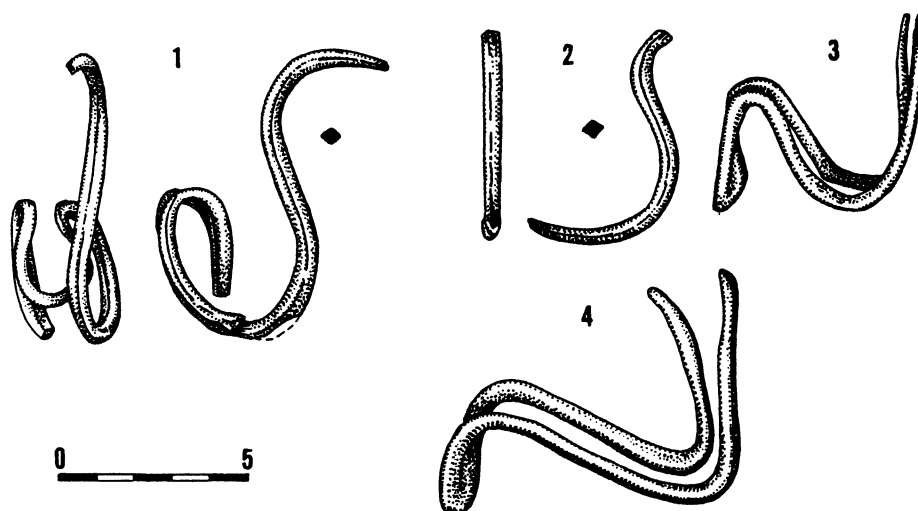


FIG. 8. Flesh-hooks from Brittany. (1) Boncayo, Langoelan, Morbihan, (2) Kergadavarn, (3-4) L'Aber Vracht, both in Plouguerneau, Finistère. (Adapted after J. Briard, in *OABZ*.)

above all an offshoot of that province. It should be stressed that the weaponry and some elements of dress which became popular in these areas, as well as in South Italy and Greece, give the impression of deriving from final Tumulus (Br D 1) tradition.<sup>52</sup> The other impact was from the territory of the Gáva culture in eastern Hungary and eastern Slovakia.<sup>53</sup> This brought agricultural civilization up to the western Ukraine, but the culture also penetrated southwards along the Danube, where another province with predominantly fluted pottery was formed. This Danubian province, in turn, influenced the more southerly cultures, both in Bulgaria and Macedonia.

In the field of bronze objects, we can see that the large province of the Urnfield bronzework, embracing the northern part of the Balkans up to Transylvania, and also Villanovan Italy, includes in the central Balkans only the Vardar and Struma valleys, and not the eastern part of Bulgaria and Greek Thrace, which were no longer parts of this koine.<sup>54</sup>

It is hardly an accident that the two territories most affected by an influx of population from the north are among those parts of the Balkans from which migrations to Anatolia are recorded in literary sources: that of the Brygi, who later became the Phrygians, migrating from the Axios valley to central Anatolia, and that of the Moesi from the Central Balkan-Danubian area to the north-western part of Anatolia. In their new territory the Moesi were called Mysi.<sup>55</sup>

<sup>52</sup> Cf. S. Hood, 'Northern 'barbaric' elements in early Greek civilisation', *Concilium Eirene XVI* (Prague, 1982), iii. 98-103; *AAE* 242.

<sup>53</sup> Cf. J. Paulik, 'K problematike východného Slovenska v mladšej dobe bronzovej', *Žbörník SNM Bratislava*, 62 (1968), 3-43.

<sup>54</sup> Cf. H. Müller-Karpe (ed.), *Geschichte des 13. und 12. Jh. v. Chr.* (Jahrbuch des Instituts für Vor- und Frühgeschichte der Universität Frankfurt, 1975); *AAE* 241 f.

<sup>55</sup> Cf. N. G. L. Hammond, *A History of Macedonia*, i (Oxford, 1972), 30-1.

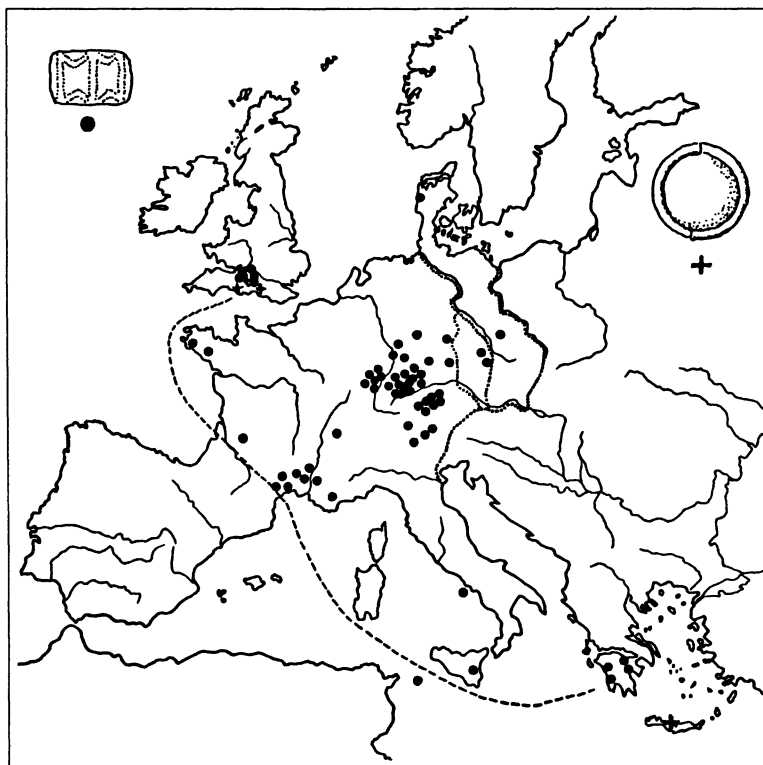


FIG. 9. Distribution of amber space-beads (full circles) and of amber discs laced with gold (crosses) in Europe. Interrupted and dotted line = supposed amber routes of the Bronze Age. (Adapted after Bouzek, in *Amber in Archaeology* (n. 48)).

#### PIERIA AND THE AREA OF THE GREAT LAKES

The culture of early iron age Pieria, best known from the cemetery of Vergina but also from Dion and other places, is in many ways similar to the Greek Submycenaean. The identification of Vergina with the earliest Macedonian capital, Aigai, is now generally accepted. The funerary ritual relations are further supported by the identification of many EIA tumuli in central Greece and the Peloponnese;<sup>56</sup> the metal objects and their selection are very similar, and the same can be said for the basic shapes of pottery, though they are handmade in Vergina, and wheel-turned and painted in Greece. Some fluted bowls and kantharoi from Vergina, however, show a resemblance to those from the Axios valley, and the pins, bracelets, finger-rings, belt-bosses, the earliest weapons, and the diadem all give the impression of being inspired ultimately by the latest Tumulus culture repertory.<sup>57</sup> It is worth

<sup>56</sup> R. Hägg, *Die Gräber in der Argolis in submykenischer, protogeometrischer und geometrischer Zeit* (Uppsala, 1974) (cf. *Gnomon*, 1979, 505); S. Müller, 'Les tumulus helladiques: où? Quand? Comment?', *BCH* 113 (1989), 1–42.

<sup>57</sup> J. Bouzek, 'Macedonia and Thrace in the early Iron Age', in *Ancient Macedonia*, iv (Thessaloniki, 1983 [1986]), 123–32; *AAE* 97, 117, 163, 169.

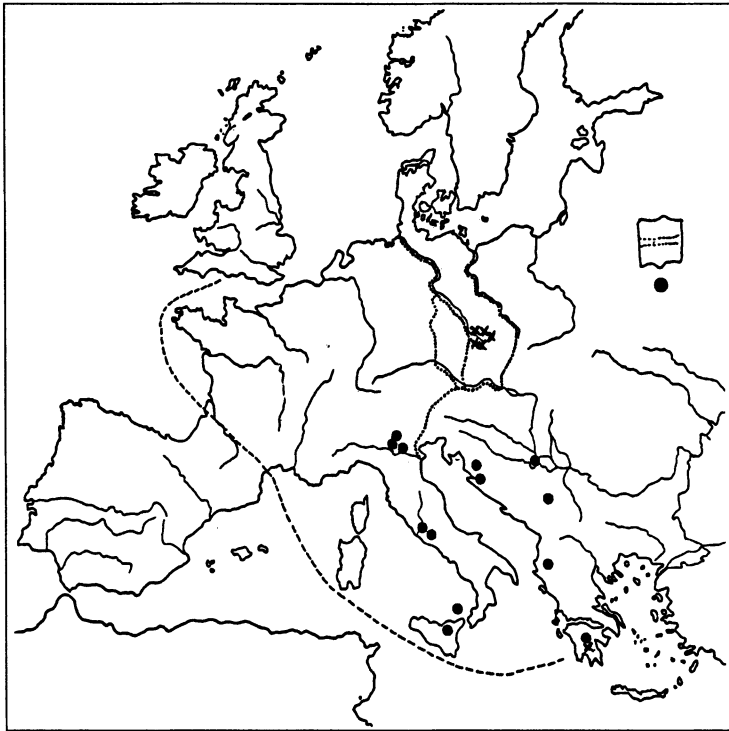


FIG. 10. Distribution of the Tiryns type amber beads (full circles) and of gold figure-of-eight objects of gold related to the Tiryns wheel (x) in Late Bronze Age Europe. Interrupted and dotted lines = supposed Late Bronze Age amber routes. (Adapted after Bouzek, in *Amber in Archaeology* (n. 48)).

recalling that earlier scholarship sometimes supposed the homeland of the Dorians, and even of other Greeks, to be in roughly the same territory, but at present the alternative hypothesis connecting these phenomena with some of the non-Greek Sea Peoples has become much more widely accepted, under the influence of Fritz Schachermeyr and his followers.<sup>58</sup>

The area of the great lakes around the frontier between the former Yugoslavia, Greece, and Albania had mainly tumuli and cist graves (cf. note 20 above), but also a specific painted pottery with both Anatolian (Phrygian) and Italic (Apulian) connections.<sup>59</sup> The relationship, however, need not have been in the Late Bronze Age only, for in Anatolia and in Italy we have

<sup>58</sup> F. Schachermeyr, *Ägäische Frühzeit*, v–vi (Vienna, 1981–3).

<sup>59</sup> Cf. *AAE* 193–4; E. Akurgal, *Phrygische Kunst* (Ankara, 1955); id., *Die Kunst Anatoliens von Homer bis Alexander* (Munich, 1961), figs. 67–70; E. M. de Juliis, *La ceramica geometrica della Daunia* (Firenze, 1977); id., 'Un antico simbolo solare nel ceramica geometrica daunia', *Arch. Class.* 23 (1971), 31–57; D. G. Yntema, *The Matt-painted Pottery of Southern Italy* (Utrecht, 1985). Cf. *La civiltà dei Dauni nel quadro del mondo antico: atti del XIII convegno di studi etruschi ed italici* (Manfredonia 1980)

(Firenze, 1984), esp. contributions by E. de Juliis (pp. 153–62), M. L. Nava (pp. 163–87), and F. Lo Schiavo, 'Magna Grecia, Epiro e Macedonia nell'età di bronzo' (pp. 213–48). For cross-Adriatic relations cf. esp. R. Peroni, 'Magna Grecia, Epiro e Macedonia nell'età del bronzo', in *Magna Grecia, Epiro e Macedonia: atti del 24 convegno Magna Grecia 1984* (1985), 199–236; A. Benac, 'Iliri i Apuli', *Godišnjak Sarajevo*, 26 (1988), 43–69.



the stylistically developed painted pottery only later; later contacts must also have existed. But probably the basic motifs of decoration were transmitted in other materials, such as textiles, in earlier times. They were usually meaningful symbols for their users: behind the koine of Geometric styles a kind of religious movement is apparently hidden, worshipping a solar deity and/or hero (cf. FIG. 5), which spread with the Urnfield cultures across a large part of Europe and also reached the Aegean and the Levant.<sup>60</sup>

#### BRONZEWORKE AND POTTERY OF EUROPEAN INSPIRATION IN LH III B-C GREECE

For fibulae, a survey by the late K. Kilian<sup>61</sup> confirmed their chronological position and the fact that actual imports are fairly rare, as was shown earlier for other bronze objects.<sup>62</sup> However, the inspiration for their production and the prototypes still seem to have come from the NW Balkan–North Italic province. A similar situation seems to have existed for pins, even if their homeland was situated slightly further north: they were probably ultimately of late Tumulus culture inspiration. The material collected by I. Kilian-Dirlmeier is very useful, but it has shown only how few and how late the Mycenaean predecessors of the new forms in Greece are.<sup>63</sup> Her hypothesis of a local origin for the pins and the wearing of them is hardly acceptable. As far as gold jewellery is concerned, besides the Pylos diadem,<sup>64</sup> the Delos sheet gold fragments<sup>65</sup> show a European inspiration.<sup>66</sup> New Sicilian finds in the Syracuse Museum confirm an East Sicilian participation in this koine,<sup>67</sup> which also included symbolic objects connected with an ‘Apolline’ solar hero (FIG. 5).

For the handmade burnished Ware, the discussion between D. B. Small and J. B. Rutter<sup>68</sup> seems to me to have confirmed that there are much better arguments for accepting a foreign origin for this ware in the Aegean than an indigenous one. In addition, more traces of foreign influence on Late Mycenaean pottery are listed by Rutter than were recognized earlier.<sup>69</sup>

#### PROTOGEOMETRIC INCISED WARES IN THE AEGEAN

The best parallels for the Attic Incised ware dolls come from the frontier area between Rumania, Serbia, and Bulgaria (Dubovac–Žuto Brdo–Čirna, etc.). This culture seems to have moved southwards in c.1000 BC. The South Bulgarian Cepina group shows traces of this

<sup>60</sup> Cf. J. Bouzek, ‘Böhmen, Mähren und Österreich in der Urnenfelderzeit’, *Mitteilungen der Anthropologischen Gesellschaft in Wien*, 118–19 (1988–9), 219–27.

<sup>61</sup> ‘Violinbogen- und Blattbogenfibeln des griechischen Festlands aus mykenischer Zeit’, *PZ* 60 (1985), 145–203. Cf. P. van Elen Masi, *Le fibule dell’Italia settentrionale* (PBF xiv. 5; Munich, 1986).

<sup>62</sup> *AAE* 122, 143–5.

<sup>63</sup> I. Kilian-Dirlmeier, *Nadeln der frühhelladischen bis archaischen Zeit von der Peloponnes* (PBF xiii. 8; Munich, 1984); ead., *Archäologischer Korrespondenzblatt*, 14 (1984), 281–91; add I. Mylonas-Shear, *The Panagia Houses of Mycenae* (Princeton, 1989), 116–18.

<sup>64</sup> *Palace of Nestor*, iii (1973), 16, fig. 108 a–d; *AAE* 170, fig. 87. 12.

<sup>65</sup> G. de Santerre and J. Tréheux, ‘Rapport sur le dépôt égéen et géométrique de l’Artémision à Délos’, *BCH* 71–2 (1947–8), 208–10, nos. 48, 48 bis, pl. 37. 8, 18–19.

<sup>66</sup> Cf. P. Schauer, *Goldkegel der Bronzezeit* (Mainz, 1986).

<sup>67</sup> Panoply with greaves, from Madonna del Picino tomb 26; horned handles with birds and bosses, from the Thapsos settlement.

<sup>68</sup> D. B. Small, ‘Hand-made burnished ware and prehistoric Aegean economics: an argument for indigenous appearance’, *Journal of Mediterranean Archaeology*, 3.1 (1990), 3–23; J. B. Rutter, ‘Some comments on interpreting the dark-surfaced hand-made burnished ware of the thirteenth- and twelfth-century BC Aegean’, *ibid.* 29–49. Cf. also B. Feuer, *The Northern Mycenaean Border in Thessaly*, (BAR S176; 1983).

<sup>69</sup> For the ‘Italic’ ware cf. esp. L. V. Watrous, ‘A preliminary report on imported “Italian” wares from the late bronze age site at Kommos on Crete’, *SMEA* 27 (1989), 69–80; L. Vagnetti (ed.), *Magna Grecia e il mondo miceneo* (Taranto, 1982), 37–9; B. Hallager, ‘Crete and Italy in the Late Bronze Age III period’, *AJA* 89 (1985), 293–305; L. Vagnetti, ‘A Sardinian askos from Crete’, *BSA* 84 (1989), 355–60.

tradition, including one fragmentary idol of the same class, which inspired the 'dolls' from Attica and Euboea, although the actual influence was probably transmitted through wooden items; the preserved 'dolls' are apparently clay imitations destined for funerary purposes. In Greece they have been found in cremations of women (along with clay beads, etc., also imitating wooden jewellery); they probably served some function in grave ritual, and can be connected with a religious movement.<sup>70</sup>

From the Greek islands there are several classes of incised pottery showing ornaments similar to painted Geometric vases, but mostly these motifs are in isolation, stressing their symbolic significance. They are known in different varieties from Naxos, Andros, the Dodecanese, and other places, and some of them seem to have remained popular until the seventh century BC.<sup>71</sup> Those from the Dodecanese seem to be related to the so-called Dorian ware of the Argolid.<sup>72</sup> Many of the ornaments follow the line of solar symbolism, known in Greece since the time of the destruction of Mycenaean palaces (or slightly before), and they may be an expression of a folkloric religious tradition of that kind in different parts of the Greek world, rather than directly linked together. Many of them are handmade, but some wheel-made.<sup>73</sup>

Even more interesting for our subject is the dark age Black Slip ware from the Aegean and Cyprus; it represents another pottery tradition, now mainly connected (for good reasons) with Sea Peoples, Pelasgians, and similar groups.<sup>74</sup> Besides some grey ware of Italic character from western Crete, one Sardinian vessel was also identified there.<sup>75</sup>

#### CLIMATIC CHANGES

Climatic development during the Late Bronze Age is now better known from central Europe,<sup>76</sup> but we have at least some additional knowledge from the Mediterranean.<sup>77</sup> A favourable, warm and relatively dry, climate was characteristic of most parts of central Europe

<sup>70</sup> *AAE* 200 f. New survey of the Central Balkan group: M. Chichidianu-Sandor and I. Chichidianu, 'Contributions to the study of the Gîrla Mare anthropomorphic statuettes', *Dacia* 34 (1990), 53–76.

<sup>71</sup> Cf. now also A. Cambitoglou *et al.*, *Zagora*, ii (Athens, 1988), 228 f., pls 216 c–d, 270; M. Andreaki-Vlasaki, 'Γεωμετρικά νεκροταφεία στο νομό Χανίων', in *Πεπραγμένα του Ε' διεθνούς κρητολογικού συνεδρίου*, i (1985), 10–33.

<sup>72</sup> J. Bouzek, 'The beginnings of the protogeometric pottery and the "Dorian ware"', *Op. Ath.* 9 (1969), 45–52; B. G. Frizell, *Asine*, ii. 3 (1986), 82 f.

<sup>73</sup> Late, from Astypalia: P. Michalaki-Kollia, 'Céramique incisée de la tradition géométrique trouvée dans l'île d'Astypalie', in S. Diez and I. Papachristodoulou (eds), *Archaeology in the Dodecanese* (Copenhagen, 1988), 225–44. For later Argive handmade pottery see N. Kourou, 'À propos de quelques ateliers de céramique fine, non tournée du type "argien monochrome"', *BCH* 111 (1987), 31–53.

<sup>74</sup> V. Karageorghis, 'Barbarian ware', in *Acts of the International Archaeological Symposium 'Cyprus between the Orient and Occident'*, Nicosia 1985 (1986), 246–58. Cf. *AAE* 198 and the clay spools which often come from similar contexts. **Pylos**: J. Coleman, *Excavations at Pylos in Elis* (Princeton, 1984), pl. 39;

**Palaikastro-Maa** (Cyprus): V. Karageorghis, M. Demas *et al.*, *Excavations at Maa-Palaikastro 1979–1986* (Nicosia, 1988), pls 54–5. **Ras Ibn Hani** (Syria): M. Bounni *et al.*, 'La VIIe campagne à Ras Ibn Hani (Syrie)', *Syria*, 58 (1981), 268 f., fig. 34. Cf. *AAE* 187.

<sup>75</sup> Cf. n. 69.

<sup>76</sup> Cf. A. Harding (ed.), *Climatic Changes in Later Prehistory* (Edinburgh, 1982), notably contributions by K.-D. Jaeger with V. Ložek, 'Environmental conditions and land cultivation during the Urnfield Bronze Age in central Europe' (pp. 168–78), and by J. Bouzek, 'Climatic changes and central European prehistory' (pp. 179–91).

<sup>77</sup> Cf. H. E. Wright, jun., 'Paleoecology, climatic change and Aegean prehistory', in N. C. Wilkie and W. D. Coulson (eds), *Contributions to Aegean Archaeology: Studies in Honor of W. A. McDonald* (Minneapolis, 1985), 183–96; R. A. Bryson, H. H. Lamb, and D. L. Donley, 'Drought and the decline of Mycenae', *Antiquity*, 48 (1974), 46–50; A. Snodgrass, 'Climatic change and the fall of the Mycenaean civilisation', *BICS* 22 (1975), 213–14. For favourable climate in 8th cent. BC, ending in a drought, see notably J. R. Green, 'Zagora: population increase and society in the late eighth century bc', in *Εὐμνοσία: Ceramic and Iconographic Studies Presented to A. Cambitoglou* (Sydney, 1990), 41–6.

during the Urnfield period, while there were years of drought in the Mediterranean, and also in the steppes of Upper Eurasia, at least for some time. However, more detailed observations from features dated by archaeological context and by dendrochronology show a more detailed picture of climatic development in central Europe: a dry and warm phase in late Br C, followed by a moist one at the beginning of Br D (connected with the Peschiera floodings of the North Italian lacustrine sites). Then came a rather long warm, dry period, from late Br D to the beginnings of Ha B 1. From Ha B 2 on it was already too dry in some parts of the Hungarian plain, but still favourable in most areas (this was, in fact, the peak of the climatic optimum). This period was followed by a shorter cooler phase in Ha B 1, and then by another dry phase with large-scale chernozem formations. The end of the Urnfield culture in Ha B 3 is again marked by a rapid shift to a cooler, moister (Atlantic) climate, which was one of the main causes of the disappearance of the Urnfield culture.<sup>78</sup>

This development was connected with a rapid rise of population in central Europe, halted for the first time by the Peschiera interphase, and then again by the drying up of some areas in the Carpathian cauldron during Ha A. Both phenomena led to shifts of the increased population. As the droughts in the Mediterranean brought serious problems to the LBA economy there, the balance of power between European barbarians and the Mediterranean civilizations changed.<sup>79</sup> The already 'sclerotic' palatial system collapsed after attempts to resist, which included both the strengthening of fortifications and the integration of the first barbarians as mercenaries. The first attacks reported in the literary sources were by sea (Pylos, Ugarit, the Hittites); for the subsequent larger invasions by land there are no more written documents, only later traditions.<sup>80</sup>

#### ARCHAEOLOGICAL AND HISTORICAL PARALLELS FROM COMPARABLE MIGRATION PATTERNS

A comparative study of archaeological traces left after other invasions attested both archaeologically and historically may narrow the field of possible interpretations of the LBA evidence, by showing what can be expected after a given pattern of archaeological changes.<sup>81</sup>

In the case of invasion of a lower culture into a culturally more developed territory, much depends on the size of the invading group as against the native population. The complete eradication of the earlier culture is an extreme case, known only from small communities surrounded by a culturally different milieu (like Greenland's Vikings); this had hardly happened in history on a larger scale.

When a large group of newcomers is nearly or completely in the majority in the new society, and where the remnants of the old population are of a lower social standing, the taste

<sup>78</sup> Cf. J. Bouzek, 'Climatic changes: new archaeological evidence from the Bohemian Karst and other areas', *Antiquity* (in press); for Switzerland see M. Gamper and J. Suter, 'Postglaziale Klimaschwankungen in den Schweizer Alpen', *Geographica Helvetica*, 2 (1982), 105–14; for the Caucasus area see esp. *Glacier Variations and Marine Accumulations in the Caucasus: Results of Researches of the International Geophysical Project* (Moscow, 1984).

<sup>79</sup> Cf. already R. Carpenter, *The Discontinuity of Greek Civilisation* (Cambridge, 1966); J. Bouzek, *Homerisches*

*Griechenland* (Prague, 1968), 84–7.

<sup>80</sup> Cf. F. Schachermeyr, *Ägäische Frühzeit*, iv–v (Vienna, 1981–3); *AAE* 222 with n. 42.

<sup>81</sup> More fully, J. Bouzek, 'Invasions and migrations in the bronze age Aegean: how to decipher the archaeological evidence', in *Acts of the 6th International Colloquium on Aegean Prehistory* (Athens, 1987) (in press); id., 'The problem of migrations in Mycenaean Greece', in *Acts of the 2nd Mycenaean Congress (Rome, 1991)* (in press).

of the newcomers will tend to prevail, and a regression of the old culture towards a more primitive social and artistic level will be the result. The craftsmen of the old local population are made use of. Invading 'barbarians' do not like to do more work themselves than is necessary, so they readily make use of the more skilled natives who can be told what to produce and how, according to the new masters' will and taste. In such a case the artistic style changes more or less substantially, though it also adapts earlier available models and takes over those techniques of craftsmanship which are considered useful by the new lords, though not those which are too sophisticated for them. The Germanic occupation of France by the Franks may serve as an example.

Small groups of warlike invaders usually influence armour, weapons, and male dress fashion, while larger groups, bringing their womenfolk with them, also affect women's fashions; nevertheless, the techniques of the local craftsmen are preserved. A complete change of population practically never happens in the case of settled agriculturalists.<sup>82</sup> Even if, as a consequence of a cruel war, all men carrying weapons have been killed or have abandoned their country, most of their women and children will stay behind, so that about two-thirds of the former population remains. More often, however, even some of the male population surrender and are integrated into the new system in various ways. In Greece, there is the Dorian model of subjugated populations, strictly applied in Sparta and Greece, and the Ionian model of incorporating foreign elements into the 'normal' society without apparent difficulty while granting them almost equal, or equal, rights.

As for language, there exists a rule that invaders without their womenfolk usually lose their language in two generations: everyone takes their 'mother tongue' from their mother. If the group is larger and brings its women with it, the language of the invaders does not disappear so easily: at the least, it will influence some features of the native tongue, even if the latter prevails, as in the case of the Germanic tribes in the Latin-speaking countries or the Protobulgars in Bulgaria. Larger groups which establish a long-lasting political domination may implant their language among the population invaded, as was the case, for example, in Hungary with the Hungarians or in Anatolia with the Turks.

Using comparative evidence of invasions, we can fit the situation towards the end of the Mycenaean culture and after its fall into this model at virtually all points. There are close parallels, for example, in France and northern Italy towards the end of the Great Migrations period, and slightly later in Greece at the time of the Slavonic penetration.<sup>83</sup>

## CONCLUSIONS

Growing knowledge in several fields, such as climatic development and archaeological theory, seems to confirm the general feeling of many specialists dealing with this period of Greek and Balkan prehistory, even if their arguments were sometimes weak and have later been criticized. The holistic attitude, approaching questions from different angles, now appears one of the fruitful ways of enlarging our knowledge in different fields. In our present field, this

<sup>82</sup> Cf. N. G. L. Hammond, *Migrations and Invasions in Greece and Adjacent Areas* (Park Ridge, NJ, 1976), 161–3; K. Prag, 'Ancient and modern pastoral migration in the Levant', *Levant*, 17 (1985), 81–8; E. Sherratt, 'Immigration and

archaeology: some indirect reflections', in *Acta Cypria*, ii (Gothenburg, 1992), 316–48.

<sup>83</sup> Cf. M. S. F. Hood, 'Some exotic pottery from Greece', *Slovenská archeológia*, 26 (1988), 93–8.

combination of approaches seems to confirm that the crisis at the end of the Late Bronze Age in Greece, Anatolia, and the Balkans was connected with an influx of new populations, though substantial local traditions were also kept alive both in Greece and Thrace. The joint effort of traditions and innovations during the formative period of the Dark Age prepared the birth of the new Iron Age society whose crowning achievements were Greek culture, philosophy, and art.

*Institute for Classical Archaeology, Charles University, Prague*

J. BOUZEK