

SEDENTARY VERSUS NOMADIC LIFE-STYLES

The ‘Middle Helladic People’ in southern Balkan (late 3rd & first Half of the 2nd Millennium BC)

by

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INTRODUCTION (1)

Judging from the archaeological literature, one can easily get the impression that the Greek mainland, including the Peloponnese, was inhabited by a sparse and poor population during the Middle Bronze Age. Such assumptions have been based on the scarcity of settlements.

In this paper, I intend to challenge that view by suggesting that archaeological research on the mainland may have been based on preconceived ideas derived from the type of research conducted in more pre-urban centres on Crete and eastwards. I am not convinced that everybody lived a sedentary life. In this study, I will bring forward the question if also populations with more nomadic life-styles could have existed throughout prehistory, more or less invisible in the archaeological records. Groups living along a continuum from stationary farming to nomadism could, in fact, have characterized life. Further, I be-

lieve that the uneven exploration of the mainland, with the strong emphasis on the Peloponnese and in particular the Argolis, has created a skewed and incomplete picture. The fact that the Turks still occupied a considerable part of central and northern Greece into the 20th century, implied that early investigations were concentrated in southernmost Greece, and especially on the Peloponnese. These areas are still, by tradition, given a disproportionate amount of attention. However, this unfortunate situation may be rectified by drawing on work by Greek archaeologists conducted in central and northern Greece during the last few decades.

A first step towards a more complete picture is therefore to reassess the available material from the whole Greek mainland. Also, this area can only be meaningfully considered and understood with an accompanying awareness of the situation in the rest of the Balkans and around the Adriatic and the Aegean Sea. This requires us to ignore the present day political climate in discussing the archaeology of geographical areas made sensitive by the concerns of recent history (Karakasidou 2000), and to allow ourselves to be “archaeologists without borders”.

A hallmark of the Middle Helladic culture (the Middle Bronze Age on the Greek mainland, see Table 1) is the tumuli. The high expenditure in the construction of these graves and their visibility in the landscape suggest that they were important as symbols of identification and social differentiation. The tumuli

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are clearly a key to the understanding of many aspects, both material and spiritual, of the MH culture. Müller's study has suggested that the tumuli in Greece represent a Balkanic element (Müller 1989, 35). However, no comprehensive assessment has yet been carried out regarding their connection to the Balkans with their thousands of tumuli.

One big question is the change in the material culture and burial customs that took place in the last centuries of the 3rd millennium BC. These novelties may be explained by internal adaptations to new environmental circumstances, such as severe climate change or earth erosion, by indigenous groups/tribes rebelling against an increasing exploitation from the Early Helladic II agricultural centres; or the EH III/MH tumuli builders may have been new immigrants. In the first case, those native groups/tribes must have had some connections with people to the north to explain the new tumuli fashion.

This paper first presents a brief chronology for the years around the MH period, and gives a resumé of the history of research. After a short archaeological background, I then outline the Middle Bronze Age in mainland Greece, including the Peloponnese, with some general characteristics and what we know of the social organization and economy, exchange and contacts, religion and burial customs. A short summary of material from Western Macedonia from the late 3rd to the first half of the 2nd millennium is included. Next, a short odyssey, visiting neighbouring regions and people to the north is undertaken, before reaching the general discussion. After assessing main fea-

tures of the MH culture, the question of nomadization is discussed. I also include a catalogue with summary data of selected sites relevant to this study.

CHRONOLOGY

The Bronze Age on the Greek mainland, in central and southern Greece including Peloponnese and Euboea, is usually called the Helladic culture to distinguish it from the Minoan culture on Crete and the Cycladic culture in the central Aegean.

The Early Bronze Age culture of Thessaly is also often called Early Thessalian and that of Macedonia, Early Macedonian (Coleman 2000).

Ceramic studies have shown that the Middle Helladic period, the approximate four hundred years from about 2050 to 1680 BC, is a period without sudden changes in the material culture. The last hundred years, the MH III period, has been fairly well surveyed and subject to interpretation. The first part, MH I–MH II, the approximate three hundred years from the beginning and down to ca 1750 BC, has until now been regarded as a Dark Age.

Since there do not seem to have been any interruption between MH I and the preceding period, the last part of the Early Bronze Age – the EH III, I will treat the time from ca. 2200/2150 BC until the end of LH I/beginning of LH II (mature Mycenaean) ca. 1600 BC, as one uninterrupted chronological period.

In this article I follow the suggested, but still disputed, new chronology, revised due to the eruptions of the volcano on Thera, which probably took place around 1640 BC (Manning 1999. For a critical review of Manning's *A Test of Time* see Bietak 2004).

HISTORY OF RESEARCH

Owing to the lack of other remains, pottery has dominated any investigation of the MH culture. In the excavations at Troy in 1871, Schliemann came across a “dull black” ware which he believed belonged to the historical period, so he called it “Lydian ware” (Howell 1973). He found the same dull black ware at My-

Table 1. The approximate chronology used in this is based on Rutter (1993, 756). One generation is estimated to 20–25 years. The three Aegean Bronze Age cultures are about contemporary in their divisions and are also abbreviated in a to MH similar manner: EM, MM, LM for the Minoan and EC, MC, LC for the Cycladic culture.

Early Helladic I	(Abbrev.: EH I)	approx. 3150–2650 BC	=500 years or ca. 20–25 generations
Early Helladic II: early	(Abbrev.: EH II:e)	approx. 2650–2450/2350 BC	=250 years or ca. 10–12 generations
Early Helladic II: late	(Abbrev.: EH II:l)	approx. 2450/2350–2200/2150 BC	=200 years or ca. 8–10 generations
(At this time there was an intensification of major changes in the material culture; changes already present earlier, but vague)			
Early Helladic III	(Abbrev.: EH III)	approx. 2200/2150–2050/2000 BC	=150 years or ca. 6–7 generations
Middle Helladic I	(Abbrev.: MH I)	approx. 2050/2000–1950/1900 BC	=100 years or ca. 4–5 generations
Middle Helladic II	(Abbrev.: MH II)	approx. 1950/1900–1750/1720 BC	=200 years or ca. 8–10 generations
Middle Helladic III	(Abbrev.: MH III)	approx. 1750/1720–1680 BC	=50–60 years or ca. 2–3 generations
Late Helladic I – Early Mycenaean	(Abbrev.: LH I)	approx. 1680–1600/1580 BC	=80–100 years or ca. 3–4 generations

The MH III period together with LH I is also called the Shaft Grave period, referring to the graves at Mycenae (B3) where the graves in Grave Circle B have approximately been dated to MH III and those in Grave Circle A to LH I.

cenae (B3, on Map 1), where he excavated in the years 1874–1876, and when he again in 1881 found large quantities at the Bronze Age centre of Orchomenos (E4), Schliemann renamed it “Minyan Ware”, after Orchomenos’ mythical king Minyas.

In 1894 Wide found what he called “frühmykenische keramik” in the graves of a tumulus at Aphidna (C3) in Attika (Wide 1896). A re-publication of that excavation is under way by the current author, in cooperation with Dr. Michael Wedde. This pottery type has preliminarily been dated by Dickinson to the early middle MH period (Dickinson 1977, 34), and there is no reason at this point to change that (Hielte-Stavropoulou & Wedde 2002).

After the initial excavations of sites with MH material, the interest grew and articles like “The pottery called Minyan Ware” (Forsdyke 1914) and “On the Date and Origin of Minyan Ware” (Childe 1915) tried to illuminate the culture behind the pottery. In 1918 Wace and Blegen published their much referenced article “The Pre-Mycenaean Pottery of the Mainland”, (Wace & Blegen 1916–1918). Blegen conducted the excavations of the prehistoric settlement at Korakou (B9) on Peloponnese, and his publication in 1921, remained for half a century one of the best analyses of the MH pottery (Blegen 1921).

After Aphidna (C3), there were only four sites discovered with MH tumuli in Greece during the next sixty years: Athens (C2) in 1902; Elateia-Drachmani (E7) in 1906, at Kokkolata on Kephallonia (G3) in 1909 and at Steno on Leukas (G1) in 1927. From 1952 on (after the second world war and the civil war) archaeological excavations have revealed another twenty sites with MH tumuli, so the number today is around 25.

Valmin’s excavation of the MH settlement at Malthi (A2), The Swedish Messenia Expedition in 1938, has been criticized as hasty and it is true that Valmin and his team dug fast (Hägg, personal communication); about one hundred houses inside the walls in a matter of weeks. It is of course wise to be careful, but I think the situation today with an almost total negligence of the site and its material is unfortunate and perhaps also a bit unfair, since this is not the only excavation one can criticize. But let us hope that a re-examination of the Malthi material will lead to a possible supplementary publication. Malthi’s uniqueness, as the only more or less completely excavated MH settlement, makes it difficult to ignore (Valmin 1938; Hielte-Stavropoulou 2003). Several years after Valmin had crossed the Messenian landscape on horse, McDonald followed suit in 1953 and prepared the ground for the Minnesota Messenia Expedition. He and his co-worker Hope Simpson carried out an extensive interdisciplinary research, covering the larger part of western Peloponnese, with Nichoria (A10) as a key center, using air photographs and expertise in geology, palynology and anthropology. They made a review of prehistoric habitation in southwestern Peloponnese (McDonald & Hope Simpson 1961) which laid the way to the extremely useful Gazetteer over sites in the Aegean Bronze Age (Hope Simpson & Dickinson 1979).

In central Peloponnese, Caskey opened the excavations of Lerna (B1) in Argolis in 1952. From then onwards, his team from Cincinnati University has made Lerna the model-site, especially for the Early and Middle Bronze Age. Many scholars, Rutter (1983; 1995), Zerner (1978) and others, have dealt with the intriguing MH ceramic and have developed it into an excellent tool for recognizing

the MH culture, so much that the ceramic study seems to have become an end in itself with Argolis as the center of gravity.

Although we know much about the pottery, only few attempts have been made to analyze the nature of the MH society and the way of life. On a local basis, Nordquist has made a description of how life might have been at Asine (B5), a poor fishing village at the seashore of south-west Peloponnese (Nordquist 1987). But archaeological evidence from other sites like Aegina (D2), Thebes (E1) and Malthi (A2), show different pictures of the MH culture, which seems to have varied according to geographical position and economy.

Howell in his “The Origins of the Middle Helladic culture” puts more emphasis on the wider context. He finds it plausible that the “Minyan” traditions ultimately can be traced back to the Balkans via north-western Greece, and indicates that also Italy and Anatolia were influenced from the Balkan area (Howell 1973, 95).

GEOGRAPHICAL DISTRIBUTIONS OF RESEARCHED SITES

Scholars like Forsén (1992) and Rutter (1993) drew a line about the river valley of Sperchios (Map 2) and limited their research to the south of this border, ca. 50 kilometers north of the Corinthian Gulf. Hope-Simpson & Dickinson in their Gazetteer (1979) went a little further up to the north, but only Syriopoulos takes in the whole of Greece in his gazetteer where he lists Middle Bronze Age finds registered by 1990 (Syriopoulos 1994). He reports 209 sites from Peloponnese, and 264 from the rest of the Mainland. Of these 264, 158 are in Attika and Sterea Ellada (with its border north of the Sperchios river valley), 58 in Thessaly, 7 in Epirus, 39 in Macedonia and only 2 in Thrace.

A big part of Central Greece has very few registered archaeological finds, and that goes for all periods. The whole mountainous area, from the northern part of Thessaly, the whole counties of Grevenon, Pierias, Kozanis and the bigger part of the counties of Kastorias and Ioannina are virtually unexplored (Andreou *et alii* 1996). These are difficult areas to investigate. Most archaeological efforts have been concentrated on the material-rich prehistoric high tells, down at the river plains in east central Greece.

One of the few archaeologists or historians, known to have actually traversed the landscape on foot is Hammond. He came to Greece as a student in 1929 and followed in Heurtley’s footsteps (Heurtley 1939). One of Hammond’s main interests was tumuli, for which he showed great enthusiasm and published articles like “Tumulus-burial in Albania, the grave circles of Mycenae, and the Indo-Europeans” and “The tumulus-burial of Leukas and their connections in the Balkans and Northern Greece” (Hammond 1967; 1974). For some odd reason, few researchers since Hammond have shown any particular interest in tumuli and the study of tumuli has been given surprisingly little attention within the research community compared to pottery. One of the few papers is the balanced study by Müller, “Les tumuli helladiques: où? quand? comment?”. Her conclusion about the Greek tumuli is that they represent a Balkanic element that spread into the Helladic region at the end of the EH II period (Müller 1989, 35). One of the latest and most comprehensive works about prehistoric burials is “A private place: Death in prehistoric Greece”, where burial customs are



Map 1. Greek sites mentioned in the text. Both Map 1 and 2 have been drawn presenting a suggestion of the geophysical situation that probably existed in EBA, before the rivers Haliakmon and Vardar/Axios had silted up and narrowed the gulf between West Macedonia and Central Macedonia; geological research have suggested a similar situation with the river Struma and the great lake (north of the classical site of Amphipolis), which earlier had cut off Central Macedonia from East Macedonia/Thrace but now is dried out.

Key to Map 1. For more details see catalogue

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|---|--|---|
| A. Elis and Messenia on West. Peloponnese | C5 Plasi | G. Ionian Islands and Epirus |
| A1 Olympia, Altis & New Museum area | C6 Raphina | G1R Steno on Leukas the R-graves |
| A2 Malthi | C7 Brauron | G1F the F-graves |
| A3 Peristeria | C8 Kiapha Thiti | G2 Pelikata on Ithaka |
| A4 Koukirikou | C9 Thorikos | G3 Kokkolata on Kephallonia |
| A5 Pirgos: Tsouka | C10 Anavyssos: Ayios Nikolaos | G4 Grabes in Acarnania |
| A6 Lefki: Kaldamou | C11 Cave of Pan | G5 Thesprotikon |
| A7 Papoulia: Ayios Ioannis | C12 Nea Ionia | G6 The Nekromanteion at Mesopotamos |
| A8 Myrsinochori: Routsis | C13 Mount Hymettos | G7 Kastritsa |
| A9 Voidokoilia | C14 Koropi: Ayios Christos | G8 Aphiona |
| A10 Nichoria | C15 Vari: Kitsi | G9 Dodona |
| A11 Akovitika | C16 Spata: Magoula | G10 Vitsa |
| A12 Margeli: Koutsoveri | C17 (Cave of Pan) Marathon: Ninoi | G11 Doliana |
| A13 Dhraia: Koutsoveri | C18 Skala Oropou | |
| A14 Trikorfo: Kako Katarachi | C19 Bathiza | H. W Macedonia, and the area W of the Axios/Vardar River |
| A15 Ayios Floros | | H1 Kozani |
| A16 Sellas: Nekrotapheion | D. Around the SW Aegean Sea and on Euboia | H2 Dispilio/Lake Kastoria |
| A17 Konchilion: Kastro | D1 Ayia Irini on Kea | H3 Armenochori |
| A18 Meligala: Ayios Ilias | D2 Kolonna on Aegina | H4 Armissa and prehistoric sites south of Lake Vegoritis |
| A19 Parapoungion: Ayios Yeoryios | D3 Kastri on Kythera | H5 Archondiko |
| A20 Agrilovouno: Ayios Nikolaos | D4 Phylakopi on Melos | H6 Aiani |
| A21 Aetos: Palaiokastro | D5 Lefkandi on Euboia | H7 Kitrini Limni |
| A22 Aetos: Mourlou | D6 Kaloyevrovisi | H8 Koilada Xeropigado |
| A23 Kamari: Mesovouni | D7 Manika | H9 Mandria |
| A24 Sidherokastro: Sphakoulia | | H10 Tourla Goules |
| A25 Fomissa: Aspra Litharia | E. Steria Ellas | H11 Servia |
| A26 Lepreon: Ayios Dhimitrios | E1 Thebe in Boeotia | H12 Nea Nikomedia |
| | E2 Eutresis | H13 Vergina |
| B. Argolis and Corinthos on East Peloponnese | E3 Ayia Marina | |
| B1 Lerna | E4 Orchomenos | J. C and E Macedonia, E of the Axios/Vardar River |
| B2 Argos | E5 Kirrha | J1 Kastanas |
| B3 Mycenae | E6 Krisa | J2 Assiros |
| B4 Tiryns | E7 Elateia: Drachmani | J3 Sitagroi |
| B5 Asine | E8 Lianikladi | J4 Saratse |
| B6 Dendra | E9 Thermon in Aetolia | |
| B7 Mastos | E10 Dramesi: Hyria | K. Around the N-E Aegean Sea |
| B8 Corint | | K1 Palamari on Skyros |
| B9 Korakou | F. Thessaly | K2 Haghios Mamas |
| B10 Zygories | F1 Sesklo | K3 Molyvopyrgo |
| | F2 Dimini | K4 Kriaritsi Sykias |
| C. Attika | F3 Pefkaki Magula | K5 Limenaria and Skala Sotiros on Thasos |
| C1 Eleusina | F4 Ptelio | K6 Poliochni on Lemnos |
| C2 Athens | F5 Argissa/Magula | |
| C3 Aphidna | F6 Velestino | |
| C4 Vrana | F7 Tirnavos | |
| | F8 Elassona | |

discussed as an important symbol of identity, in order to explain the emphasis on the funeral in the Early Mycenaean period, but the authors do not go deep into the tumuli question (Cavanagh & Mee 1998).

As a result of his field studies, Hammond was convinced that the

mountain passages at for example Maliq (Q14 on map 3) and the valley of Haliacmon in western Macedonia (H1–H14 on map 1) had played an important role as the natural ways of communication between the Thermaic Gulf and the Adriatic Sea, ca. 200 kilometers to the west.



Map 2. The lines mark the northern limitations for: Forsén's research; ····· Rutter's; -----.

For the last 25 years, extensive surveys have been conducted in central and northern Greece; Andreou, Fotiadis and Kotsakis from the University of Thessaloniki report in their review of Aegean prehistory "The Neolithic and Bronze Age of Northern Greece" (Andreou *et alii* 1996) that 103 new prehistoric sites in Eastern Thessaly alone had been added, making the total number to be done and as Andreou, Fotiadis and Katsakis point out about western Macedonia (1996, 574), only a few tiny areas have undergone intensive surface surveys including geo-morphologic research. New discoveries in this whole area of northern Greece are of utmost importance for our understanding of the early part of the Bronze Age. Wilkie's survey, the Grevena project (Wilkie 1993), reports Bronze Age sites at higher elevations near 1000 masl (meters above sea level), and MBA sites with some pieces of "Gray Minyan" pottery are often found "on rather large, isolated hill tops". Examples of new excavations conducted are cemeteries at Kriaritsi Sykias (K4) on Chalkidiki (Asouchidou, Mantazi & Tsolakis 1998), at Tourla Goules (H10) (Ziota & Chondrogianni-Metoki 1993) and Koilada-Xeropigado (H8) in Central Macedonia (Triantaphyllou 1998) and the pile-dwelling settlement at Archontiko (H5), with its main phase between 2100 to 1900 BC (Papacuthymiou-Papanthimou & Pilali-Papasteriou 1998).

ARCHAEOLOGICAL BACKGROUND CHRONOLOGY FOR A CULTURAL CHANGE

The transition from EH II to EH III, about 2200 BC, has until now been regarded as the most probable time for the 'arrival of the Greeks'. The idea of an intrusion of Greek speaking elements, that "took over" and started to dominate earlier inhabitants, has continuously been projected back in time. To explain the collapse of the Mycenaean empire, many scholars first believed in an invasion of the Dorians around 1100 BC. After the decipherment of the texts on the Linear B tablets in 1952, it became clear that the Mycenaean script was actually an early form of Greek, so a new hypothesis of an intrusion of a Greek-speaking warrior elite around 1550 BC arose. Equipped with horses, they were thought to surround themselves with luxury goods and to build elaborate shaft graves which after some generations developed into elaborate tholos tombs. This could explain the transition to Mycenaean times in MH III/LH I, which has now been revised against the dates of the most damaging Thera eruptions, probably taking place around 1644–1636 BC (Manning 1999, 280). The end of MH and beginning of Mycenaean times is now regarded to be approximately by 1680 BC (Table 1) (consider also Bietak's recent review 2004 for a date closer to 1630 BC). However, the later recognition that there was no real break in the material culture between the MH period and early Mycenaean times made a possible new date for the immi-

gration, the ‘arrival of the Greeks’, around the EH II/III period with its changes in material culture more plausible. This event has now again tentatively been moved 30 to 40 generations back in time, by Coleman in his study “An archaeological Scenario for the ‘Coming of the Greeks’ ca. 3200 BC” (Coleman 2000).

At this point, we can assume that if the language was introduced at the end of the 4th millennium BC, then the first tumuli builders around the end of the 3rd millennium BC was either a minority of newcomers or a part of the existing population that came under strong cultural influence from the rest of the Balkans.

The situation on Peloponnese before the changes in EH II/III, ca 2200/2150 BC, shows a handful of exceptional settlements like Lerna, Tiryns and Akovitika, and Thebes in Central Greece (Nos. B1, B4, A11 and E1 on Map 1), with large buildings which have been interpreted as possible distribution centres for elites. Other large buildings are also believed to have functioned as private mansions at for example, Kolonna (D2) on the island of Aegina in the Saronic Gulf. The EH/MH settlement at Plasi (C5), at the seashore near Marathon in East Attika, also had a large mansion with dimensions comparable to the Lerna house (Mastrokostas 1970). These advanced settlements flourished around 2350 BC, against a backdrop of very small villages and isolated farmsteads. Weingarten has suggested that these developments were largely due to the arrival of foreign, probably Anatolian, traders at Lerna (B1) early in EH II: late (Weingarten 1997). There, the large, 25 meters long monumental building, the “House of the Tiles”, had staircases leading to an upper floor, where an abundance of sealing has been found in the debris of the burnt house. They can have been used to mark private ownership of surplus goods for trading.

TRANSITION. SOCIAL COLLAPSE, ENVIRONMENTAL DISASTERS, OR?

The earlier perception that the transition from EH II to EH III was marked by violent destructions on every site has been challenged by Forsén and others (Forsén 1992). Of the 26 sites she investigated (see Map 2 for the area), only 6 seem to have been destroyed in the last EH period. Many sites were already more or less abandoned.

Signs of collapse and transformation around the Aegean are widespread in the late 3rd millennium BC (Manning 1997). Troy II (L1), Kum Tepe? (L2) and Beycesultan (L3, on Map 3) among other western Anatolian sites, also suffered destruction. There is evidence of a sudden brief, yet severe increase in climatic aridity across western Asia and surrounding areas (Broodbank 2000). At a conference in 1994 on climatic change in the 3rd millennium BC, a number of scholars from different disciplines reported dramatic evidence from these times (Third Millennium BC 1997). Egypt suffered from an extremely low water level in the Nile, in the years around 2180 BC. This was probably the reason for the events leading up to the First Intermediate period, an age of disorder (Kemp 1983). A written diary from that time tells us that “all upper Egypt – is dying of hunger, to such an extent that everyone has come to eating his children; and that the entire country has become starved like a starved grasshopper, with people going to the north and to the south in search of grain” (Bell 1971). There are many more examples of unstable climate conditions; for example, from

Upper Mesopotamia (Wilkinson 1994) and from the area north of the Black Sea where Kremetski from the Institute of Geography in Moscow reports that all existing data prove that serious and relatively rapid climate shifts took place in the second half of the 3rd millennium BC. It was accompanied by changes in human economy. At the same time, agricultural communities collapsed in southwestern Ukraine and Moldova, to be replaced by nomadic cultures (Kremetski 1994). This is further corroborated by Chernykh who remarks that during the Early Bronze Age, the whole steppe and forest-zone of eastern Europe was occupied by cultures with a mobile pastoralist type of economy (Chernykh 1992, 100). Thus, draught might be an important factor, and that agrees with the faunal research for this period which shows new types of birds who prefer an arid climate (Gejvall 1969). In central Europe oak dendrochronology has shown a huge burst in end years (the year a tree dies) ca 2200 BC. Most probably it reflects a warmer climate, and drier? (Becker & Kromer 1993; Manning 1997, 518). However from observations in Greece, possible soil erosion has been attributed to over-exploitation (Halstead 1989), which could explain some of the decrease in material culture.

Another potential factor that has received less attention than it deserves is the possibility of an expanding frontier of epidemics propagating in the newly integrated zone of urban communities across the Near East. A combination of the above factors may have led to the decline of sites and populations in EH III, at the end of the 3rd millennium in Greece.

Whatever the cause for this decline, scholars agree upon the complete change in ceramics, architecture and social organization. There is no site, from Thessaly to the Cyclades, which can show an architectural continuity after the transition from EH II to EH III; there is always a break. The change is the most significant event that has happened in Greece after the establishment of agriculture and settled life early in the Neolithic period.

After the destruction of the “House of the Tiles” at Lerna (B1) at the end of EH II, the ruin was covered by a large tumulus – without burials. Could it have been meant as a kind of instrument of conversion, to the new way of life, as a way to legitimize a take-over? (Sherratt 1995). Large-sized tumuli of a possible symbolic and/or ritual character have also been found in Olympia (A1) and Thebes (E1), dating to the end of EH II (Forsén 1992).

The newly discovered and excavated grave field at Kriaritsi Sykiyas (K4) in Central Macedonia near the waterfront of the NE Aegean Sea has a general similarity to the so-called R-graves at Steno (G1R) in the plain of Nidri on Leukas. This perhaps can help resolve some of the questions related to the EHIII/III transition in Greek archaeology, especially since the cemetery with tumuli at Steno is dated as early as the Early Bronze Age II.

CHRONOLOGICAL PROBLEMS AND SUGGESTIONS FOR DIFFERENT CULTURAL GROUPS

In order to expand our perspectives and compare the Early Bronze Age of northern Greece and central Balkan, we must consider the differences in chronological framework. Some of the late Early Bronze Age pottery in the north can most probably be contemporary with early Middle Bronze Age material in south Greece. An-

other framework has also been proposed by Sampson for Bronze Age sites on the Greek mainland outside the Peloponnese. He suggests that the last phase of the Early Bronze Age should according to the established framework only be called Early Helladic III for the Argive culture of Lerna IV (Sampson 1993, 159). The reason is that compared to Lerna (B1), contemporary sites in other regions may be different cultures with heterogeneous elements and ought therefore not to be comprised within the Argive Early Helladic III; for instance Manika Early Bronze 4 (D6) and Lefkandi I-II (D5) on Euboea, contemporary sites in Attica and Ayia Marina (E3), Orchomenos (E4) and Thebe (E1) in Boeotia (Sampson 1993, 160).

Central Greece (Boeotia) is regarded as the melting pot between local pottery shapes, features coming from Anatolia but also northern elements as apsidal house forms, terracotta hooks (so-called anchors) and shaft-hole hammer-axes of stone (Hiller 1982; Rutter 1983).

THE MIDDLE HELLADIC CULTURE

GENERAL CHARACTERISTICS OF THE MH CULTURE, WITH SOME CASE-STUDIES AND EXAMPLES

(For geographical indications see Map 1 and Key to map 1).

What do we really know from the archaeological records about the time spanning the late 3rd millennium to the first half of the 2nd millennium BC? As noted above, the earliest part of the MH has until now been regarded as a Dark Age because of the scarcity of material remains. Inhumation-graves, most totally un-furnished, are the main finds. Settlements, when found, are poorly defined and appear to have been small un-fortified hamlets.

It is not until later in the period we find a few sites with fortification walls, for instance at Kiapha Thiti (C8) in Attica, and Malthi (A2) and Peristeria (A3) in Messenia. The layout of some late Middle Bronze Age sites (citadels) on flat hilltops like fortified sites at Tiryns (B4) and Mycenae (B3) may have a predecessor in sites for instance similar to Mastos (B7) and from easily defendable campsites. The so-called Akropolis on the hill-top north of the tumulus of Aphidna (C3) may be another example. There are comparable examples from the Balkanic Early Bronze Age, for instance around Novi Pazar (N12), where such hill sites are found often with some tumuli in the adjacent area.

The general situation in Greece can be summarized in the following examples:

a) Settlement sites, with remains of houses and intramural (mostly children) graves: Malthi (A2) with

“intramural” tumulus, Lerna (B1) with ‘ritual’ tumulus, Asine (B5) with intramural tumulus, Ayia Irimi (D1), Kolonna on Aegina (D2), Plasi (C5), Kirrha (E5), Eutresis (E2), Sesklo (F1)

- b) Sites with remains of both settlement and cemetery (extramural graves): Mycenae (B3) with Grave Circle B’, Thebe (E1) with (‘ritual?’) EH tumulus burial, Thorikos (C9) with tumulus, Olympia (A1) with a ‘ritual’ EH tumulus and MH burials, Argos (B2), Pefkaki Magoula (F3), Orchomenos (E4)
- c) Sites with only graves detected. Cemeteries with tumuli, and/or other elaborate graves, but with no confirmed remains of a permanent contemporary MBA settlements: Vrana (C4), Aphidna (C3), Steno on Leukas (G1), Peristeria (A3), Ayios Ioannis (A7), Routsis (A8), Voidokoilia (A9) where the early MH tumulus is built above the debris of an EBA settlement, Elateia: Drachmani (E7), Kephallonia (G3), Argos (B2).

I would like to propose also the existence of non-permanent settlements, in the form of camp-sites. Tents do not leave deep post-holes, so they are almost impossible to detect in archaeological records but a large concentration of pottery sherds indicates a resting place over a longer time or a location of continuous return. As samples chosen because of the intensive surveys done in these restricted areas, I suggest some sites in Messenia located on spurs or flat-topped hills, with an average area of 130 m×80 m. As can be read out of the information in the Catalogue Nos. A12–A26. The same phenomenon with non-permanent settlements may also be suggested for Attica (C11–C19). As will be discussed below I believe these camp-sites can be regarded as examples of a widespread pattern, which has not yet been detected in other areas.

It is notable that not only in Greece but also in other areas around the Mediterranean during the Middle Bronze Age, the absence of urban settlements is prominent. For instance in the Levant, the MBA I period (ca 2200–2000 BC) represents a return to nomadic mode of existence.

NATURAL ENVIRONMENT

Mountains and steep hillsides account for a major proportion of the surface area. It has been estimated

that in Greece only 20% of the land is level. The valleys bite deeply into the mountain mass and are the product of erosion by water. The action of water on the porous and soluble limestone has produced numerous sinkholes, caves and underground rivers. Natural underground reservoirs supply water to innumerable springs. Most part of the annual rain fall during the winter which sets in by October. During the dry season, from May to September, there is an unbroken monotony of cloudless heat with dried up waterways. Trees grow sparsely in order to find enough water for their root systems. According to Jeskins describing the environment during Classical times (1998, 15), deciduous forests of chestnut, elm and oak were found on the wetter upper flanks of mountain ranges. In the final stages of the Neolithic and particularly during the Bronze Age, palynological evidence from Thessaly and elsewhere points to a change in upland vegetation. Willis (1994, 786), and others believe that this change could have been related to forest degradation through intensive grazing (Andreou *et alii* 1996, 559). Andreou, Foriadias & Kotsakis also reports, from the newly discovered Neolithic/EBA site in the Doliana basin at ca. 300 masl in Epirus, that though forest reduction both preceded and also followed the Neolithic occupation, the oak forests seem to have regenerated in the 4th millennium.

The nature of the terrain in areas difficult to survey with ridges and ravines, was a problem for overland travel but offered at the same time perfect cover for groups of bandits who preyed upon wayfarers, as Jeskins (1998) has described the situation in Classical times, but it could as well be valid for earlier times. Dense woodland may have been found in the areas of higher rainfall in northern and western Greece.

NEW ELEMENTS

Houses when found, are often shaped with an apsidal ending. The curved wall of apsidal houses could indicate a circular structure, a remembrance of a round hut or tent. Circular buildings have been found at Orchomenos, at Olympia in the Altis and at other places (Forsén 1992, 198) (Rutter 1993). The so-called anchor hooks as well as apsidal-ended houses and other objects were earlier regarded as new elements

introduced at the end of the Early Bronze Age (Howell 1973), after the transition to EH III, but they have now been shown to be present already in the earlier phase. For instance the two large apsidal “longhouses” at Thebe in the “Lefkandi I” culture are of EH II:late.

There are new types of pottery, both in decoration and form. Three main types of pottery are found in MH layers: Minyan ware, Matt-painted ware and Cooking ware. The typical Minyan ware is a middle-sized vessel, constituting the most characteristic and diagnostic element of the Middle Helladic. It is wheel-made and looks hard and polished, generates an effect of hematite though the smooth blue-grey surface and is slightly softened by a “soapy” feel. The angular forms, many times with a sharp carination, suggest that the original models were of metal. The few shapes of Minyan ware have sometimes decorations of engraved lines or ribs around a stemmed foot. The Matt-Painted ware, is a sandy to buff-brown ceramic, usually embellished by dark colored decorations which most probably are inspired from contemporary perishable textiles. Such patterns had been in use from Neolithic times. The geometric patterns we see for example in LBA Aiani (H6) may derive from an earlier period in Western Macedonia (Karamitrou-Mendesidou personal communication).

One common form is the basin-shaped bowl, shape A1 in Buck’s classification (Buck 1964), which is already present in early stages of MH. Such bowls are found in the first building at Eutresis (E2) (Goldman 1931, 152, fig. 209:1,2) and in the earlier phases at Lerna (B1); also at Aphidna (C3) and Argos (B2) and at Ptelion (F4). The shape is so simple and universal that no conclusions can be drawn about the derivation of the matt-painted examples. Similar bowls were made nearly everywhere during the Early Bronze Age, also up in the northern areas, in Early Bronze Age Macedonia. Early Helladic bowls with dark-on-light decoration have not yet been found bearing horizontal bands filled with zigzags or saltires, while such bowls were quite common in EC (Buck 1964).

The most abundant pottery but surely also the most utilitarian, is the coarse and undecorated cooking pot. This dull and unattractive ware has never been allotted a distinguished place on the shelves in

museums or in publications. Thousands of kilos of sherds may instead have been dumped after excavations. The cooking pot is essential in identifying major cultural changes in view of the fact that it is easy to adopt new styles in luxury goods, but elementary habits like how to prepare one's food do not change so easily.

A transition phase like the one at Lerna, but with a continuity between EH and MH with regard to the pottery, has not been distinguished at many other sites in Greece (Zerner 1978). Howell though, has defined a similar phase at Lefkandi (D5) and Nichoria (A10) (Howell 1973).

The heartland of the MH culture, defined exclusively through pottery styles, is considered to be the Peloponnese and central Greece including sites in the interior of Aetolia such as Thermon (E9) as far north as the Spercheios River valley (Map 2). "Imports" of MH pottery are common in the northern Cyclades and in Thessaly. It occurs occasionally in coastal Macedonia and Troy VI. MH pottery is also present, if rare, in the southern Cyclades and on Crete.

A peculiar type of pottery, difficult to classify, is the incised ware earlier called "Adriatic". Wide found an incised pyxis with a deckle in Pithos Grave III at Aphidna (Wide 1896; Hielte-Stavropoulou & Wedde 2002, Fig. 1. NM10.749). Maran has in his comprehensive work called attention to the similarities of, for example, some pottery at Olympia (A1) with the Cetina pottery (P3) as evidence for contacts between the Adriatic and Greece in the 3rd millennium (Maran 1987; 1998).

An interesting detail found on pottery in tumuli graves on the eastern coast of Attica is schematized horns on the handles. There are comparative examples from Troy and it appeared also in the Thracian Plain, in Ezero (M1) level V (a level in which apsidal houses have also been found). According to Hoddinott, "immigrant steppe pastoralists had popularized the horn animal cult in Moldavia" (1981). The occurrence of horns as cult symbols seems to be a universal phenomenon, familiar both from Anatolia and from Crete. In central Balkan, I saw schematized horns on pottery in the Museum at Bitoula in FYR Macedonia. At Aphidna (C3), Sam Wide found in Grave III two vessels with schematized horns on the handles. In addition to just being decorative, they

could also have an "apotropaic" function, attached on the handles to avert evil. An additional MH skyphos with such decoration on the handles was found in the elaborate stone-built Grave 2 in Tumuli I at Vrana (C4), together with ten other vessels and two spindle whorls (Hielte-Stavropoulou 1994, 7–8; 44).

New inventions in weaponry such as the shoe-socked spearheads, will be discussed in connection with metalwork. Burial under tumuli is a new element in Greece at the end of the 3rd millennium. There are about 25 sites with tumuli in Greece, some of a date early in the MH period. The tumuli phenomenon is common throughout Albania, as elsewhere in the northwest Balkans, from the beginning of the Bronze Age.

ECONOMY, PRODUCTION AND EXCHANGE

It is believed that the major effort of all members in the settlements concentrated on the crops, since preparing and tending fields with no more than digging sticks or hoes would have been fairly tough in the Aegean region (Dickinson 1994, 36). Even if the possibility to put an ox before a primitive plough helped those who could afford it, they had to worry about the weather, because either too much rain or a drought would destroy all efforts made. Halstead has suggested a development of specialized cattle-herding groups in the later Neolithic, existing in symbiosis with the agricultural communities with which they exchanged their specialized products for foods (Halstead 1987; Dickinson 1994, 37).

We know for the MH times that there is evidence for a change in husbandry compared to earlier times. Studies of sheep-bones in Greece have shown that earlier, when sheep were kept for meat and milk, very few males survived infancy. For animals more than one year old, we have rates like 1 male to 28 females in the Final Neolithic. In EH the rates are 1 male to 6 females. New breeding made a marked increase in the size of sheep and a more woolly variety possibly from the 3rd millennium. From MH times there are about equal rates and since the male sheep produce 25% more wool than females it is only natural to suspect that woollen textiles had made their appearance as an important economic factor (Halstead 1981; Bökönyi 1986).

As a contrast, in for instance Lerna (B1) there was a decrease in sheep/goats from 54,6% of all faunal remains in period Lerna I to 30% in Lerna V, while the number of pigs increased and became more common (Nordquist 1989, 26). The common economic rule that each redistribution entity produces what they know best, the doctrine of comparative advantage, may have encouraged production of pigs on the low-lying areas around Lerna to be exchanged with wool and cheese from sheep/goats from the mountains. That would mean a mixed economy with one part of the people settled as farmers and another part living a nomadic life-style practicing pastoralism. Hunting of wild animals and birds and gathering of wild herbs, roots and fruits could have been carried out by both cultivators and pastoralists as a complementary activity. Even oak acorns could be eaten by humans (Herodotus I.66 about the “acorn-eating Arcadians”).

HANDICRAFT

Woollen textiles are easy to dye in contrast to those used earlier made of flax. Natural colours could easily be produced from the available flora. Earlier garments of linen or skin would appear rather primitive in contrast to colorful woollen textiles. It may have been an excellent trading object.

The climate of Greece has not preserved textiles, but there is an example from a Bronze Age tumulus found up in the mountain in Kupres (P6) in Bosnia, and weaving looms from a loom found in for instance a room at Tiryns (B4). It is possible that the spindle whorls, laid down in graves in the Early and Middle Bronze Age, could have been a symbol of the new wealth gained by trade in the wool production. We know from later evidence that the production of textiles was of great importance in the economy of the Mycenaean palaces. Written texts on Linear B tablets from LH III times give information about flax as a special commodity, produced by paid workers at Pylos (in the area A5–A9) while woollen textiles were produced at Thebe (E1) in Boeotia. The first woollen clothes and metal weapons might in the beginning have been prestige possessions, symbols of power for a growing elite, and not for common men. So one explanation for the abundance of spindle whorls deposited in graves is that they are

metaphors for richness gained in trade; for exchange of the new commodity of colorful textiles made by dyed wool? As a comparison with Denmark, Randsborg suggests that the increasing wealth in female burials during the Bronze Age, may show an increasing importance of women’s work in farming (Randsborg 1973, 565–570). Crewes found out through her study of spindle whorls in Bronze Age Cyprus (1998, 36), that it is highly likely that it was the women that did the spinning, but that it is important to note that there may have been instances when spinning was carried out by men.

An earlier technique in producing textile that may still have continued, especially among nomads, were felting. It was not produced by the interleaving of weft and warp but by the interlocking and fusion of free woollen fibers. It can also be made by the fibers of hair of camel, goat, horse, ox or any other animal. It keeps out the cold and is waterproof, and is excellent for covering huts, e.g.

METALWORK

A hitherto more or less neglected skill of the Middle Bronze Age people was their metallurgy. Both inventiveness and craftsmanship are obvious in the unique ‘shoe-slot’ spearhead, Fig. 1, but also many traditional weapon forms survived from the EH period. The MH metallurgy was a continuation from earlier periods with inspiration from Anatolia and probably also from the north (Tripathi 1988). There are daggers of about 30–45 cm length; short swords of about 45–70 cm length and long swords ca. 70 cm and longer. Some tools, like chisels, awls and drills are simply continuations of EH types, while the function of some tools is difficult to recognize since most of them derive from tombs. The main innovations seem to have been the ‘shoe-slot’ spearheads which may have developed from an early Anatolian spearhead, and probably also the ‘barbed arrowheads’. Tripathi believes that specialized weapons like the ‘shoe-slot’ spearhead could have been made by resident smiths in Epirus (G), Leukas (G1), Dramesi (E10), Mycenae and Asine (B5) (Tripathi 1988, 119). Epirus may have enjoyed a privileged position in the Middle Helladic world, like the island of Leukas (G1) had done in the EH world, in trading the latest weapons from various sources in exchange for new metal (1988, 120).

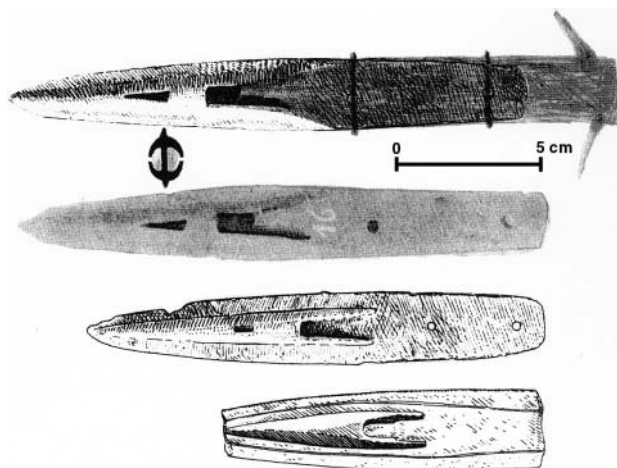


Fig. 1. 'Shoe-slot' spearheads. 1a on the top, is a suggested reconstruction (branched to stop and not pass through the game) by the present author of spearhead 1.b which was found in Grave 7 in cemetery F at Steno on Leukas (G1F); length 17,7 cm and max width 2,3 cm. Number 2 is from Grave 56 at Sesklo (F1) and 3 is a mould in stone, found in the settlement of Sesklo.

Twelve published 'shoe-slot' spearheads and two moulds have been registered by Kilian-Dirlmeier (1997, 24). These are at the following sites: On the mainland, at Vajze (Q11) in Grave 12 in Tumulus I; Vajze (Q11) in the fill of Tumulus I; at Steno on Leukas (G1F) in Grave 7 in the F-graves, MH II; at Sesklo (F1) in Grave 56 together with pottery dated to before the end of MH; at Sesklo (F1) fragments of mould in stone; at Thebe (E1) in a built cist grave; at Thebe (E1) in a grave; at Dramesi E10 in a destroyed built stone grave; at Asine (B5) near Grave MH 58 on Terrace III (remains of the wooden shaft was said to be still preserved according to Tripathi (1988, 79)) (Frödin & Person 1938, 258 Fig. 182:2); at Argos (B2) in Grave 71 in Tumulus G (Protonotariou-Deilaki 1980, 77, Fig. G, 47); at Mycenae (B3) in Grave IV in Grave Circle A. On Crete, at Malia, two spearheads in Quartier Mu; at Myrtos-Pyrgos; and fragments of a double stone mould "provisionally identified by Dr. Catling as being for one perhaps of the 'shoe socket' type", were found in LM I contexts (Catling AR 1973-74, 38).

One application for weapons like 'shoe-slot' spearheads may have been for hunting wild animals, for instance deer and boars. The Euroasian wild pig, *Sus*

Scrofa weighs between 50–200 kg. My personal experience in losing my dog to a boar in Thrace, makes the Mycenaeans' special boar spear comprehensible. The Mycenaeans had invented a special moulded cross-bar behind the blade to prevent the animal to run up the spear and reach the hunter (Morris 1990, 153). On the reconstruction in Fig. 1 of the MH 'shoe-slot' spearhead, I have left the branches on the wooden spear shaft as a suggestion for a natural cross-bar. Most probably such experimental solutions where the predecessors for the developed moulded crossbars. The Mycenaeans' passion for hunting, combat and bravery, as depicted on gold seals and tombstones from the 17th and 16th centuries, could have its root here, deep in the Middle Bronze Age. Rutter writes in his review (1993, 754 n. 32) that, Tiryns (B4) has provided unambiguous evidence for the presence of lions in Argolid, throughout the Mycenaean era. The hunting group on Fig. 2, depicture at least five men, one of whom has been killed by lions. One lion has got a spear through its body but is still attacking while at least two other lions are escaping in the opposite direction.

In classical times, Macedonian nobles had to kill a wild boar without nets before being considered a full member of their social group (Vidal-Naquet 1968, 61). Tales from various parts of the world, recorded by ethnographers, are full of warriors who could perform supernatural feats, such as catching and killing wild boars (Junker 1999, 347). In the Balkans we have Heracles with all his deeds.

The scarcity of metal in graves from the MH period, could be explained by a necessity to smelt it down in order to cast new weapons. Evidence for metal working exists already from EH times, in an ancient mine at the metallurgical field at Laurion and also in the nearby settlement on the Velatouri hill at Thorikos (C9). About 100 m north of the MH buildings where slag was found were a MH tumulus and early Tholoi (Servais-Soyez 1976). Further examples of MH slag in Greece are for example five pieces (CN W-4-8) in Nichoria (A10) dated to MH I. Structures for metal working were also found. All furnaces from this time are of a "horse-shoe" shape and have been found at other sites as well, for instance [CN F-5 and 6] at Malthi (A2), (Tripathi 1988, 110; McDonald 1975).

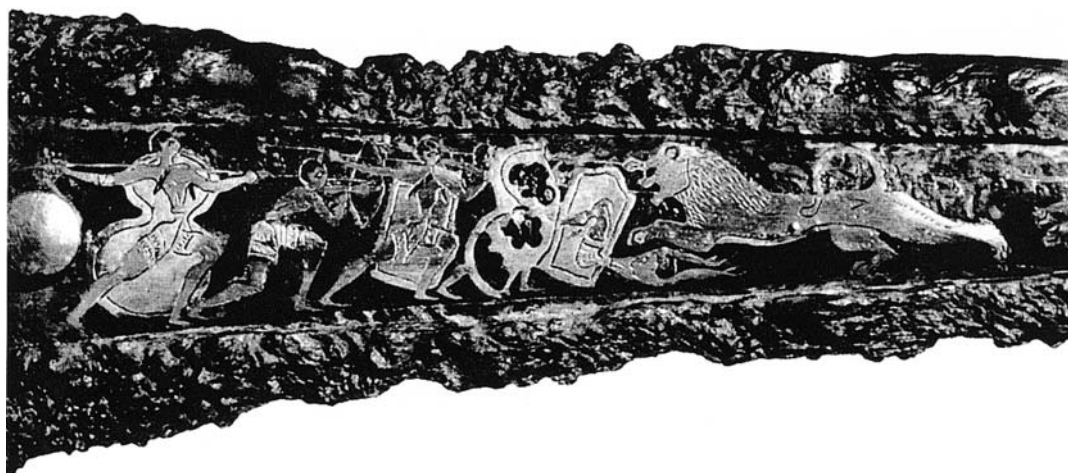


Fig. 2. Dagger blade from Shaft Grave IV at Mycenae, with lion-hunt scene from the LH I period. Bronze, inlaid with gold and silver against a background of black niello (Athens National Museum).

If the copper import from the Black Sea area diminished by the end of the Early Bronze Age (Doulas 2000, pers. comm.), it can have been profitable to seek import from, or to explore and use for trade, the copper resources in eastern Epirus and in central Macedonia, north of Edessa. Further to the north, besides the metal ore in Transylvania and in the Carpathian, there were copper mines also in use from Neolithic times onwards, both Rudna Glava (N1) in Serbia and Ai Bunar (M3) in Bulgaria.

A prehistoric metal-processing centre has been discovered in the hilly area between Brestovacka Banja and Bor (south of Beograd). The extramural cemetery at nearby Trnjane, with 41 graves, had urns deposited in the center of a circular area built of gravel and broken stones. Large pieces of dross (slag) were frequently built into the stone constructions encircling the urns (Jonanović 1996).

Evidence of MH metal working like horse-shoe shaped furnaces, moulds, crucibles and slag have been found from MH I times on. The technique was not introduced with the cultural change in EH III since Greece had regular metal workshops already in the EH II period, for instance at Raphina (C6) on the east coast of Attica (Theocharis 1951–53; 1953/54) or at Saratsi (J4) where slag, a crucible and even gold were found in EBA contexts (Heurtley 1939, 26–31).

EXCHANGE AND CONTACTS

Long distance exchange had been in process already from Neolithic times. Obsidian, for example, is found frequently in some larger Vinca sites (N2) (Hodder 1990, 170). From 2500–1500 BC on, bronze is a universal medium of exchange in central and southern Europe (Sherratt 1997, 502).

In a response to desperate needs for making weapons, the search for metal may have promoted the development of trading contacts among the MH people. We have for instance an imported Anatolian dagger at Dodona (G9). Aegean trading activity on the mainland, and MH activity in general have been considerably underestimated (Dickinson 1977, 166).

Common trading objects may have been wool (both as raw material and as ready made woollen textiles), ox hides, dried meat, lard, herbs, spices, wax and honey. Special trading objects may have been luxury items such as metals, gold and semi-precious stones, ready made jewellery, shells, pigments and other perishable goods. It is possible that medium-distance trade was in the hands of nomadic groups.

At the same time it was an opportunity for the exchange of ideas and knowledge, either through local migrants who moved within a home region containing familiar places and people or through circular mi-

grants who departed regularly, perhaps annually, from their familiar region in order to increase wealth or prestige. Exotic trade goods might have been carried by such circular migrants. Long-distance trade by river, sea, and even land caravan was in luxury items, manufactured goods high in value-to-weight ratio, mainly precious ores from mountain regions but also goods from emerging centres.

Mainland Greece was not so isolated in the Middle Bronze Age as has been supposed (Tournavitou 1995). The importance of exchange is indicated in the late MH/early Mycenaean period by the prominence of lead weights in various contexts and of balances of which some elaborate sets in gold have been found in the Shaft Graves at Mycenae (Dickinson 1994, 304). Lead weights have also been found at Malthi (Valmin 1938).

There are no traces that the Amber Route between the Baltic and the Aegean led through the Carpathian Basin even if amber does occur in the Middle Bronze Age of the Carpathian Basin (Makkay 1994). Makkay believes that the amber exchange-trade, instead of going through the Central Balkans and down the Vardar-Morava valley, went along the Black Sea coast or down the Adriatic coast. Another possible item for trade may have been the Boar tusk helmets. There are examples from graves in Hungary, either locally manufactured or imported (Makkay 1994, 49).

COSMOLOGY, BURIAL CUSTOMS & SOCIAL ORGANISATION

Regarding religion, defined as the ensemble of mythic narratives that explain the origin of a people and their destiny, we know nearly nothing. I can only repeat the words of Robin Hägg, as the expert on Mycenaean religion. “The Middle Helladic population of mainland Greece did practice some kind of religion and we should be prepared to admit the possibility that their religious activities could have been of a nature that would not have left any traces in the archaeological record” (1997, 13).

For rituals, I have suggested that the location in the landscape and the arrangement of the tumuli cemeteries reveal that, besides representing a burial type for display of social distinction, as an additional function the tumuli surroundings might be considered

as ceremonial stages (Hielte-Stavropoulou 2001, 103–111). Since rituals performed at regular intervals help regulate the social and economic processes of society, it is an essential element occurring in Neolithic and Bronze Age cultures.

The earliest “written” evidence in Greece, the Homeric poems from about 700 BC, does not present any coherent theology for the afterlife. These early Iron Age narratives depict the aftermaths of the Bronze Age War at Troy, many generations after the MH people. Homeros’ dead seem to be shadowy and frightening, visible and in appearance resembling their former selves “bearing still their bloody gear”. After drinking blood they regain memory of their experiences while alive, and are able to speak with the living. When Odysseus wanted to consult Teiresias, the blind seer of Thebes, he had to perform different rituals:

“I spaded up the votive pit, and poured libations round it to the unnumbered dead: sweet milk and honey, then sweet wine, and last clear water; and I scattered barley down. Then I addressed the blurred and breathless dead, vowing to slaughter by best heifer for them ... and burnt the choice bits on the altar fire. For Teiresias I ... sacrifice a black lamb, handsomest of all our flock, ... letting the black blood stream into the well-pit; and “burnt offerings of flesh to the gods below – to sovereign Death, to pale Perséphonê”

(Homeros, in Book XI of the *Odyssey* in translation Fitzgerald 1990, 186).

We do not know how much had changed during the centuries. Evocative offerings for the ancestors’ spirits in MH times may be alleged from the pits outside the graves or through the necks of the broken amphora which stand in receiving positions in Tumulus I at Vrana (Hielte-Stavropoulou 1994, 51). Burnt offerings to evoke the gods may have been carried out on the so-called altar in between the tumuli at Vrana (Marinatos 1970; Hielte-Stavropoulou 2001).

ELITE BURIALS, COMMON BURIALS AND PERHAPS NO BURIAL AT ALL

The MH burial custom is single inhumations, either in cists or in a simple pit. Also when people were buried outside the settlement in so-called extramural cemeteries, the built graves were usually covered by

a burial mound made of earth or stones. In tumuli burials, the dead person can either be laid down in a central initial grave above which the mound was erected, or in a grave later built into the mound. Inhumations in a pithos placed down in the fill of the tumulus also occur. Earlier conceptions that there were no pithos burials in the north, have been proved wrong by research in the last decades in west Macedonia. Examples of Early Bronze Age pithos burials in the Haliakmon valley has for instance been found at (H10) Toula Goules (Ziota & Chondrogianni-Metoki 1993).

What we tend to omit is that the intra mural burials, inside the settlements, in most cases are of children. The death of most adults, with subsequently removal of their bodies, have left few traces since only a fraction of the population seems to have been buried in the extramural cemeteries. A total of 1.473 registered graves during 345 MH-years give us only 4,3 burials each year. My estimations in Table 2 are built on Cavanagh & Mee (1998).

Burials in tumuli represent only 10% of the discovered graves and only ca. 2% of the total (20% of the burials in tumuli) were placed in a central grave; only one person (male) out of 50 buried received such a distinction.

Even if Greece was sparsely inhabited, the burial statistics in Table 2 can only represent a small fraction of the whole population. The situation gives me associations to a contemporary text from the Isin-Larsa period (ca. 2020–1763 BC) in literate Sumeria, in which an allegory tells what to expect from the pastoral nomads in the Syrian Desert (Chiera 1924): “He eats uncooked meat, through his whole life he does not possess a home, and even his dead companion he does not bury”. Such typical stigma for polis-less peripheral groups (Cherry 1988, 29) were also placed on a territorial group living in Aetolia in north-west Greece in classical times. The Aetolians are depicted

as “eaters of raw meat”, they lived “under the old condition” (Thucudides 426 BC, 3.94.5; 1.5.3), and their reputation as being mainly primitive mountaineers with a natural passion for piracy and brigandage may perhaps also be applied to other groups in the whole of southern Balkan.

The few cases of secondary burial, can reflect occasions when death came on the move and the bones (after an immediate air-burial) were collected and carried around, for example wrapped in a textile packet, until the group returned to the tribe’s special place for a funeral ceremony. Here we can remember Herodotus’ account of how the northern tribes (the Scythes?) treated their dead, though he surely had misunderstood why they carried around the bones in a cloth.

There are only a few documented secondary burials from our period, for instance at Vrana (C4), Asine (B5), and on Kephallonia (G3), but the modes and conditions of bones have not always been researched thoroughly at excavations.

SOCIAL ORGANIZATION

From the late MH period, there seems to be a common elite style over a large region with decentralized stratified societies built on individual wealth; small chiefdoms in competition with each other in showing off wealth and power. In some regions tumuli continue to be built in the LH while others convert exclusively to tholoi. Going back some generations, we can speculate what circumstances led to the boom in splendor displayed in the shaft graves at Mycenae and at other sites at the end of the MH and the beginning of the LH. The foundation for that development in social structure and economic growth had most probably already been set in the previous centuries.

There is again no problem in identifying the persons buried in the elaborate shaft graves at Mycenae

Table 2. Approximate number of MH I-MH III burials discovered on the Mainland.

	Pit & Cist-graves	Pithos-burials	Tumuli	Built Graves	Total
Nos. of Burial Sites with grave types	76	16	23+	3	118
Nos. of Burials:	at least 1.265	45 + all those placed in tumuli	ca. 5–6 burials/ tumulus=ca. 150	18	1.473
in %	85%	3%	10%	1%	100%



Fig. 3. Tombstone found in association with Shaft Grave V in Grave Circle A at Mycenae. Height 1.35 m. (Athens National Museum).

as “elites”, and most probably also the single inhumations in the central graves in tumuli. These alleged elite burials during the Middle Bronze Age period I and II, in a central inhumation grave covered by a tumulus, has no equivalence either on Crete or on the Cycladic islands, where burials seem to have taken place in multiple graves.

Grave Circle A, is believed to have its origin in a tumulus from an Early Bronze Age date (Protonotariou-Deilaki 1990). Schliemann had hoped to find the grave of Agamemnon but found instead the large and rich shaft graves with splendid grave goods in gold. The earlier, simpler graves placed in his way down to the elaborate deep shaft graves, were destroyed in the process. These famous shaft graves from the 17th to 16th century BC were marked by seventeen tombstones of which at least eleven were decorated (Fig. 3).

The network of spirals in the upper panel gives me association to an earlier (wood carved?) spiral decoration found stamped in clay at Lerna, Tiryns and Zygories at the end of EH II.

The symbolic messages of the warlike bravery and character of the chief buried in graves under such stones, where the interpretation of the designs was intended for an illiterate people, are impressive.

The social differentiation of the people in these graves is also reflected by access to metal work of special craftsmanship. Among all luxury goods there are a most remarkable collection of weapons, swords and especially daggers, often lavishly decorated. One item of special interest is the wooden box covered with gold-foil decorated in “nomadic” style (Vermeule 1975, 24, figs. 26–27). Vermeule regards also another “un-Aegean” looking piece as an obvious link to “northern nomad” ideology. It is a sword with engraved “flying steppe horses” (Vermeule 1975, 24, fig. 59). Dickinson suggests that the Shaft Grave material represents a mainland tradition, even if many items in the Shaft Graves can be paralleled in the material culture from both Crete and Thera (1994, 185). The material remains from the graves of the people buried at Mycenae give clear indications of their social identity as being members of a wealthy and powerful clan. Elaborate examples of graves a century earlier, from Middle Bronze II, i.e., the 18th century BC, are published by Imma Kilian-Dirlmeier in her recent study “Das Mittelbronzezeitliche Schachtgrab von Ägina”. Both the grave from Aegina and the grave from Thebes she compares it with, are equipped with weapons like swords, daggers, spearheads, knives and arrowheads. In the graves were pieces of boar-tusks, apparently attached to leather to form a helmet of the standard type, of which several have been recovered on the Mainland, in other words typical warrior-attributes. The dead man on Aegina is described to be about 22–26 years old and quite tall, about 173 cm (Manolis & Neroutsos 1997, 172; Kilian-Dirlmeier 1997). The average length of the men buried in Grave Circle B at Mycenae was 169,5 cm, much taller than the average man in their local contexts. So we can assume that those buried in these elaborate graves, were all very well fed.

Ergonomic observations of the man in the so called warrior-grave on Aegina tells us that he had used his hands, for agricultural or other work, and most prob-

ably the right. He had healed injuries and muscle insertions, especially on the right arm, supposedly because of weapon-use (Manolis & Neroutsos 1997, 176). He was buried wearing a gold diadem. The island of Aegina was in a very strategic position for the intensive sea trade-routes going on during the Shaft Grave period (Graziadio 1998, 39).

Conventional archaeological evidence for chiefly identities is personal weaponry in male burial goods, but such material is absent in the early part of the MH period. Keeping in mind this culture's strong expression of military achievements at a later stage, the absence of such finds is intriguing. That weapons are not present in graves, does not necessarily mean that they did not possess and use them. All those robbed and disturbed graves of adults buried in eye-catching graves may distort the picture. If we allow ourselves to speculate freely one might suggest incidents in insecure times when it was legitimate to go down and pick up the weapons from an ancestor's grave, in order to use its power to defend the lives and interest of the family and clan. The weapons may also have been directly inherited by the first borne sons as a token of their new responsibility over the family. For example, in the MH cemetery at Argos (B2), only 6 out of 93 graves contained some kind of weapons. The longest sword, 83 cm, had been deposited in a tumulus-grave, with a small child, 6 years old. The sword was bent and the child was laid down in a prone position (Protonotariou-Deilaki 1980).

The most obvious evidence for elite rank, the tholos tomb, is most probably both in social and structural aspects a continuation of the tumulus from the end of the MH period. As with most expressions of Mycenaean culture, the tholos was first considered to have been influenced by the Minoans on Crete, but is accepted now by most scholars to have developed out from Helladic grave structures. There are already primitive forms of a corbelling technique in some early tumuli, for instance at Aphidna, together with evidence of early tumuli which in late MH or early LH have the middle part rebuilt in the form of a tholos, for instance at Vaidokoilia (A9). There is no doubt about the message of social distinction with the elaborate tholoi. The need to demonstrate social differentiation may have been the main reason for the increasingly elaborate tombs, most prominently expressed in the so-called Treasury of



Fig. 4. The Middle Helladic Tumuli I & II at Vrana (C4), situated on the border between the mountains and the grasslands/fields, on the southern slope to the Charadra creek (After *Prakt* 1970, pl. 8).

Atreus at Mycenae in LH IIIB. Of 96 of the tholoi tombs listed in Pelon's work (see Table 3), only 3 seem to be from the MH period; 12 from LH I; 30 from LH II; and 51 tholoi from LH III (Pelon 1976). Except for the building techniques the burial contexts can also

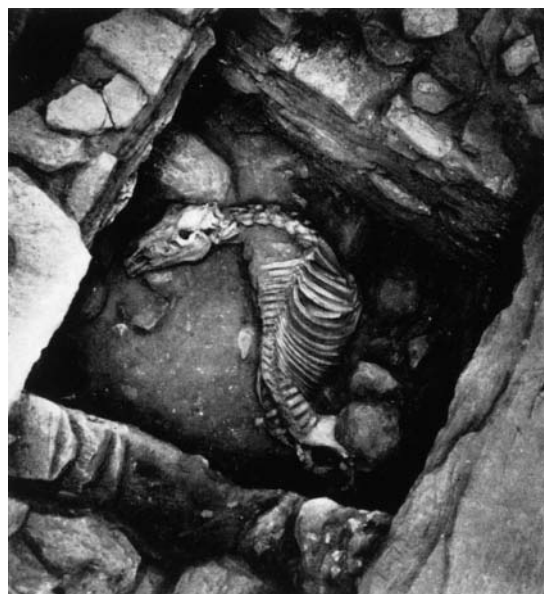


Fig. 5. The horse skeleton in Grave 3, Tumulus I at Vrana (After *Prakt* 1970, pl. 15b). Note that the horse was found without legs and shoulders.

give evidence of social differentiation as at the LH II tholos at Vrana with a pair of horses sacrificed and deposited in the upper part of the 25 m long dromos (Stikas 1958, 15–17).

A horse (Fig. 5), with the legs and part of the shoulders missing, were found in Tumulus I (to the left on Fig. 4), at Vrana (C4). The paleontological examination by Melentis showed it to be an *Equus przewalskii*, about eight years old (Marinatos 1970, 13). It was most likely a sacrifice, presumably made to the burial in the central grave but Themelis questioned its authenticity and argued for a modern date of the horse (1974, 242–244). The uniqueness of the find in 1970 may have been the reason why a MH date was not easily accepted. Some years later, in excavations of 1976 and 1977, four horses were found in burial contexts at Dendra in Argolis (Payne 1988, 103; Hielte-Stavropoulou 1994, 8, 53–56).

ARCHAEOLOGICAL MATERIAL FROM NORTH GREECE

Chronological equivalence between northern and southern Greece can be complicated since the late phase of the Early Bronze Age in the north can be contemporary with the early Middle Bronze Age in the south. The earlier phase in Greek Macedonia, the transition from Neolithic to Early Bronze Age, was gradual with some changes in settlements patterns. Neolithic sites, in the form of mounds, continued to be occupied in the Bronze Age but not one of the flat extended settlements remained in use. The houses were now more densely placed and had supporting terraces and perimeter walls. Building material and techniques remained unchanged and the houses were usually rectangular with multiple rooms. The economy of the settlements were still based on farming and stock raising. Bones from domesticated horses have been found in Early Bronze Age Servia (H11) in Western Macedonia.

In a greater context, evidence of wild horses have been registered in the Adriatic Early Neolithic period; and even previous evidence of wild horses in the Adriatic zone has been found at the Early Mesolithic site of Kopacina on Brac (Schwartz 1988, 64–65). At least from the 4th millennium BC, there is possible evidence for the domesticated horse at Alikemektepesi

in the steppe to the south of the rivers Kura-Araxes in Caucasus (Cernykh 1992; Mallory 1989) and at Dereivka south of the river Dneiper north of the Black Sea.

Northern Greece demonstrates changes in pottery; plain wares predominate the first half of the Bronze Age. The earlier painted decoration from the Neolithic period ceased, which can be interpreted as an important difference in the social role of pottery. Vases are no longer designed for display, but only for use. This very plain ware is perhaps the reason why Middle Bronze Age pottery is so hard to recognize in northern Greece. In contrast to the south, it has no distinctive characteristics. “True” Middle Bronze Age pottery has only been detected at a few sites, notably at Molyvopyrgos and at Aghios Mamas in Chalchidiki, where Minyan pottery, the hallmark of the MH period in South Greece, has been found. In Western Macedonia, a phenomenon with a diffuse MBA period seems to occur. The Early Bronze Age seems to transfer directly into Late Bronze Age, but Karamitrou-Mendesidi (pers.comm.) believes that it is more a problem of identification of MBA pottery, since the datable Minyan Ware is usually missing.

New systematic excavations in Greek Macedonia, in for example, the Toumba of Archondiko (H5, 4 km east of Yannitsa) have yielded buildings, with both stone foundations and timber post frames, with fireplaces and local pottery from the end of the Early Bronze Age/early Middle Bronze Age, dated to the beginning of the 2nd Millennium. Also the prehistoric settlement Assiros (J2) in the Langada basin north of Thessaloniki, with its thick clay-mass walls, can be dated to around 2000 BC.

The results from the research made on oral health like tooth wear at Koilada (H8), showed for the Early Bronze Age people a diet based on protein represented by meat consumption; in contrast to Late Bronze Age/Early Iron Age people which had lived on sugar-rich sources as fresh or dried fruits, honey, soft plants and domesticated plants rich in starch (Triantaphyllou 1998, 160).

The people living around the Aegean Sea and in Anatolia (Nos. K1–K6 and L1–L4 in the Catalogue), on the North Aegean islands, at Poliochni on Limnos (K6), at Kum Tepe (L2), Troy (L1) and Beycesultan (L3) in Western Anatolia, were most probably in-

volved in intensive trade. A contemporary example from the years 1950–1750 BC is the Assyrians with their organized commerce and trading stations just outside the gates of Kültepe (Kanesh) (L4) and other sites on the Konya plateau in Central Anatolia. These merchants employed donkey caravans, and imported tin, goat hair felt, cloth, garments, ornaments and perfumes from Assyria and exported goods made of silver and gold (Özgül 1986). As a compensation the Assyrians paid rent and taxes to their local rulers. It would only be natural to expect long-distance contacts between the North Aegean Sea, western Anatolia and the Balkans.

THE SOCIAL ENCOUNTERS OF TUMULI;
THE HYPOTHESIS OF THEIR FUNCTION AS ELITE
GRAVES TESTED ON CONTEXTS IN LATE BRONZE
AGE AND EARLY GEOMETRIC TIMES

The tumuli may have functioned as gathering places at strategic positions at the fringe of the mountains. The jointly erection of a monumental tumulus over a tribe leader's grave would initiate pilgrimage to an ancestors grave. The burial area created a natural meeting place for exchange of goods and the performance of religious rituals.

External trade may have been conducted by the nomadic/semi-nomadic elements at their natural meeting places with other tribes during the summer

pasture up in the mountains. Cultural traditions, experiences and ideas were easily transmitted at such meeting points, as well as the possibility to find a suitable partner for marriage, hence the spread of pottery styles if we accept the general hypothesis that in most cases the women produced the pottery.

The emphasis on mobility, military prowess, and the maintenance of a spectrum of subsistence options that balanced herding with limited cultivation, assured survival. I believe that it was this element in Bronze Age Greece that persisted between the short-term peaks of dynastic domination, of what seems to be a more or less overall control from the Mycenaean centres. Perhaps it was not only a queer “coincidence” that the “chieftains graves” in the early Iron Age returned in the shape of tumuli, Table 3.

As mentioned earlier, once the tumuli burial tradition had appeared, it continued without interruption throughout the late Bronze and Early Iron periods in some areas, like for instance in Albania (Q). In Greece, for the centuries from 1550 BC to 1100 BC, the urge for such monumental tombs in most cases took their form of tholoi instead. But some tumuli in Greece, especially in the northern border areas, seem to have continued to be in use until the end of the Late Bronze Age. There seem to be a revival of the tumuli custom at the end of the Mycenaean period. We see the return to tumuli as an important part of an elaborate burial custom at Leukandi

Table 3. Assumed conversion between tumuli-tholoi as elite graves during the 2nd millennium B.C. The durations are estimated on Shelmerdine's chronology (1997, 540).

Period	Type of monument	Duration	X years/between each new Tholos	Tholoi/25 years
MH I–II	Tumuli	–		
MH III	Tumuli	3 tholoi (the early tholoi seem experimental)		
LH I	(Tumuli)	12 tholoi in about 100 years (ca. 1680–1580 BC)	8,3 years/tholos	3 tholoi/generation
LH II	Tholoi	30 tholoi in about 170 years (ca. 1580–1410 BC)	5,6 years/tholos	4,4 tholoi/generation
LH IIIA	Tholoi	24 tholoi in about 75 years (ca. 1410–1335 BC)	3,1 years/tholos	8 tholoi/generation
Sum. LH I–IIIA	=66	in 345 years	5,2 years/tholos	4,8 tholoi/generation
LHIIIB	Tholoi	18 tholoi in about 150 years (ca. 1335–1185 BC)	8,3 years/tholos	3 tholoi/generation
LHIIIC	Tholoi	9 tholoi in about 120 years (ca. 1185–1065 BC)	13,3 years/tholos	1,8 tholoi/generation
Sum. LH IIIB–IIIC	=25	in 270 years	10,8 years/tholos	2,3 tholoi/generation

(Besides tholoi during mature Mycenaean times, chamber tombs were also built and used for multiple burials)

After 1065 BC, from Sub-Mycenaean and Proto-Geometric times, there was a return to/ or new introduction of – tumuli. The Mycenaean custom of multi-burials for family groups, in tholoi and chamber tombs, comes to an end and single burials becomes the prevailing mode again, similar to the situation before the Mycenaean times.

(D5) on Euboia, where a man was buried with four sacrificed horses together with a woman. She was possibly also sacrificed, since an elaborate knife was found by her neck. This return to the old tumuli fashion may be a key to what happened at the end of the Mycenaean era. Whatever the initial reason for the period of decline, be it earthquake, erosion/over-exploitation of the soil, plague or social upheavals, the deciphered Linear B tablets from ca. 1250 BC at Pylos give information about the need for extra (military) guards of the coastline. Either ruled by a family or a group of aristocrats, the Mycenaean citadels at Argos, Mycenae, Pylos and Thebe had been in control of large areas. After the total collapse in late LH IIIC, some new pottery called “barbarian ware” appear on the scene and the standard cooking-pot-jug is now utterly alien in its handmade and burnished fabric (Popham 1994, 303). One plausible interpretation is that groups of people living at the fringes of these citadels-states came back into the plains and took over, perhaps in cooperation with subjugated agricultural workers. This course of events has yet not been verified, but history has a tendency to repeat itself. The effects of peoples humiliated, literally forced to press their faces deep into the earth, retaliate when their oppressors power have weakened. Human natural responses and reactions cannot be omitted in an attempt to put the pieces of the past together.

Summing up on the MH people it comes clear that the preserved evidences of their material culture give a picture of a society with skills in metallurgy, hand-crafts and subsistence, with a contact net for exchange and trade. A fully developed economy is prerequisite for a society with the social differentiation we see expressed through elite burials already from an early stage in the period. The lack of writing, before the emergence of the Linear B texts from the second half of the 2nd millennium, put a veil over other immaterial expressions, for instance social behavior and personal activities like: postnatal care, education, language, dancing, music, feasting, joking, gestures, greetings, hospitality, visiting, etiquette, ethics, psychological needs to communicate and express feelings, dream interpretation, faith healing, magic, food taboos, sexual restrictions, law and penal sanctions. Such human universals are supposed to be more or

less independent of both geographical location and whatever economic mode of existence practiced, either sedentary or living in a more or less nomadic life-style (Murdock 1945; Brown 1991). Bo Gräslund has stressed the need to pay attention to the importance of kinship structures and the system in choosing marriage partners (2001, and personal communication), institutions that have had a severe impact on human history.

THE NEIGHBOURS TO THE NORTH THE THRACIANS

The Indo-European speaking Thracian tribes may in prehistoric times have occupied the entire area from the river Danube down to northern/central Greece and from the Black Sea to the Adriatic Sea. The Greek historian Herodotus, who gave a public reading of his History in Athens in 446 BC describing the causes of the Persian Wars, must of course be read with a pinch of salt, but he reflects the spirit of his time. He tells us that the population of Thrace is greater than any country in the world, except India, and if the Thracian tribes could be united under a single ruler they would be the most powerful nation on earth, and no one could cope with them. Their peculiar behavior leads them to sit down and mourn over a new born baby having in mind all the suffering the infant must endure now that it has entered this world. However, when someone dies, they bury him with merriment and point out all the miseries he has at last escaped. They allow their young daughters to have connections with any man they please, but watch their wives very strictly. They consider tattooing a mark of high birth, and the only deities they worship beside the war god Ares, are the wine god Dionysos and Artemis, the goddess of wild animals. Herodotus continues, telling us how a rich Thracian is buried. It is custom to lay out the body for three days, during which, after a preliminary period of mourning, a feast is held and all sorts of animals are slaughtered for the purpose. Then the body is buried, with or without cremation, a mound is raised over it, and elaborate games set on foot (Herodotus Book V, 8). His description sounds very similar to the Homeric description of how a burial is conducted in the Iliad, and indeed, the Thracians took part in the alleged

“war” at Troy ca. 1260 BC, on the side of Troy against the Achaeans (the Greeks on Peloponnese).

North of the Thracians, beyond the river Danube, there was according to Herodotus “a boundless tract of uninhabited land”, but some tribes called “Sigynnae” conducted trade from this area and almost to the Veneti on the Adriatic by using some rugged horses (Herodot Book V, 9). Perhaps the main trading object, among other items, could have been metal and the trade routes a continuation of earlier communications.

My point in inserting Herodotus as an ‘eyewitness’, is to remind us that the Balkans throughout the ages have been a shifting mosaic of different tribes and people. The western borders of the Thracian tribes were probably sometimes in prehistory central/west Macedonia, including Mount Olympos and down the valley of Tempe in Thessaly and the river Peneios. Towards the end of prehistory, the Thracians are believed to have been pushed back eastwards by the Illyrians; and after the Illyrians came Macedonian tribes, led by King Perdikkas I ca. 640 BC. They captured the territory from the rivers Peneios to the Halakmon and also the Axios/Vardar river, and subjugated or expelled the Thracian tribes.

The reason why these Thracian tribes give such an obscure impression is that they have left very little archaeological vestiges. They seem so have been victims of the Classical Greeks’ and the Romans’ need for mockery. Aelian says that they did not know how to write and that they considered the use of letters most shameful (Aelianus ca. AD 215), and Aristoteles says scornfully that the Thracians did not know how to count beyond four. They were regarded as barbarians and gluttonous; bloodthirsty and fearing nothing; and to have a passion for drinking and horses. Their most honourable activities were warfare. In this they resemble the ideal from late Middle Helladic/Early Mycenaean times, with the ideology of power expressed in scenes with lions and horses of the tomb-stones (Fig. 3) found in the Grave Circles at Mycenae. Euripides describes the Thracians as “*dysmachotatoi*” (extremely hard to fight) in his play *Hecuba* from 424 BC.

Concerning the Macedonians, the Athenian orator Demosthenes, in the years of the Macedonian expansion under Philip II (359–336 BC), referred to Grec-

e’s northern neighbours as “barbarians”, claiming that they had only recently ceased to be shepherds. This is corroborated by Alexander’s speech to the Macedonian soldiers. When he needed their support he reminded them that his father took them down from the mountains where they lived wildly, dressed in animal hides, to a civilized life.

THE BALKANS IN GENERAL

After a period with a shift to increasing pastoralism and less permanent settlements around 3500–3000 BC, Balkan was marked by thousands of tumuli (Vasic 2001, 51). In Hungary alone there are reported over 3.000 tumuli (Ecsedy, 1979). In Romania, studies have shown that the males in tumuli burials were more robust-appearing and up to ten centimeters taller than the average (native?) population. That is reminiscent of the situation in Greece at the end of the Middle Helladic period, with the tall size of the warlords buried in the Shaft Graves at Mycenae and on Aegina. Their outstanding length can of course be the result of better nourishment, so it does not necessarily point to immigration.

As comparative examples to the EH and MH cultures in Greece I will briefly refer to some of the significant sites from the part of Balkan situated south of the river of Danube and north and north-west of the Greek border. They are listed in the Catalogue from M1 to Q17, and on Map 3.

A general trait of the Bronze Age on central Balkan, according to Chapman, is that between the areas of major occupation lie large areas of usually fertile land, with relatively low densities of finds and monuments. It is often not clear whether isolated cairns have burial as well as stone clearance functions. Higher-than-average density of pottery scatters may indicate cumulative use of short-term rural huts. If I understand Chapman correctly, he means that there is no evidence for a full use of the landscape in this period, so any notions of pressure on the land by the population would be wrong (1988, 8).

BULGARIA; NR. M1–M18 IN THE CATALOGUE

The chronology of some post-climax Copper Age (Eneolithic) sites in south-eastern Europe may after



Map 3. Map over southern Balkan: Bulgaria, Central Balkan, the Adriatic coast and inland and Albania, showing archaeological sites referred to in the text.

calibration of C14 dates using the OxCal 2.18 method be contemporary with the Early/Middle Bronze Age cultures in Greece. For instance the so

called ochre-graves (Pit-grave culture with some instances of ochre) in NE Bulgaria and SE Romania on the Black Sea coast and in eastern Hungary with C14

Key to Map 3. For further descriptions, go to the Catalogue (For sites numbered A1–K8, see key under Map 1).

L. N-E Anatolia	N. Central Balkan:	P. Adriatic Coast and Inland
L1 Troy	Serbia, Kosovo, FYR Macedonia,	P1 Brijuni on Istria
L2 Kum Tepe	Bosnia Herzegovina, Croatia,	P2 Lika
L3 Beycesultan	Slovenia	P3 Cetina
L4 Kültepe on the Konya plateau	N1 Rudna Glava, Cu mine	P4 Brnica/Gaj
	N2 Vinča	P5 Crkvina Mede/Doljani
M. Bulgaria	N3 Bela Crkva in w.Serbia	P6 Kupres in Bosnia
M1 Ezero	N4 Belotič in w.Serbia	P7 Mala Gruda in Mont. (Montenegro)
M2 Junazite	N5 Dragačevo in w.Serbia N6 Bujanj at	P8 Velika Gruda near Tivat
M3 Ai Bunar, Cu mine	Niš in central Serbia	P9 Tivat in Mont.
M4–M6 Cluster of Necropolis around	N7 Gorešnica (near the village of	P10 Orah in Mont.
Šumen	Markova Sušica), Skopje	
M7–M8 Cluster of Necropolises around	N8 Gradište-Pelince near Kumanovo	Q. Shqipërija or Albania
Tolbuhin	(east of Skopje)	Q1 Shtoj
M9 Plačidol I	N9 Several sites on tributaries east of the	Q2 Kukös, Cu slag
M10 Plačidol II	Vardar river	Q3 Korcë, Cu slag
M11 ŽglarciOrljak	N10 Karamani (ca. 7 km NE of Bitoula)	Q4–Q7 – 08 in the Mati river valley: Lac,
M12 Poručik Gešanovo	N11 Radobor (ca. 15 km NE of Bitoula)	Bazje, Bruc, Burel and – Q8 Midhe
M13 Trojanovo around Stara Zagora	N12 Hillforts in the Novi Pazar area in	Q9 Pazhok
M14 Dolno Zarane	central Balkans	Q10 Barč
M15 Goran Slatina	N13 Glasinac	Q11 Vajzë
M16 Tarnava around Vraca	N14 Vuečdol and the Vučedol Culture in	Q12 Dukat
M17 Varna	Ljubljansko Barje in north Serbia,	Q13 Piskovë
M18 Belogradec near Varna	Croatia and Slovenia	Q14 Maliq
		Q15 Vodhine
		Q16 Konispol
		Q17 Rechove, Cu mine

dates like 4320–3400 BP, which prove after calibration to cover the period between 3030 BC to 1510 BC (Chapman 2000, 243–245; Ecsedy 1979). As an example of the chronological problem, the late Early Bronze Age in Bulgaria is dated to have occurred between 2570/2530 cal. BC and 2200/2100 cal. BC. After that, there is a hiatus of about 500–600 years, imprecise due to the lack of archaeological material (Boyadziew 1995, 178), before the start of the Late Bronze Age, at for instance (M2) Junazite (Merpert 1993). As mentioned earlier, a similar phenomenon with a diffuse Middle Bronze Age period seems to occur in northern Greece. There, the Early Bronze Age seems to transfer directly into Late Bronze Age but it can more be a problem of identification of the Middle Bronze Age pottery of northern Greece, since the datable Minyan Ware is usually missing from the archaeological contexts.

In his summary in English, of the *Pit-Grave Culture in the Bulgarian Lands* in 1989, Panajotov, on pages 168–169, gives examples from eighteen cemeteries with

one 109 tumuli dating from the Early Bronze Age. Some of these have been schematically presented in the Catalogue, Nos. M4–M16 and M18. The main characteristic from this phase is that no settlements can be reliably associated with this so-called Pit-Grave culture or southern extension of the Yamna culture (Panajotov 1989, 169). One of the richest cemeteries is Goran-Slatina (M15). The economy suggests a high dependency on stockbreeding and it has been argued that the Yamna/Pit-grave culture (c. 3600–2200 BC) reflects one of the earliest developments of semi-nomadic pastoralism (Mallory 1997, 651). Characteristics for their burials are a shaft, (yama, ‘pit’), roofed with a timber or stone slab covering the grave, above which a mound was erected (Mallory 1989, 129). The horse was often used in rituals associated with these burials (cf. the earlier referred sacrificed horses both at Vrana (C4) Fig. 5, and at Dendra (B6)).

The Neolithic and Early Bronze Age site of Ezero (M1) continues to ca. 1900 BC (Sochacki 1992, 31)

and belonged to the circum-Pontic metallurgic zone (Cernykh 1992). Ezero's strategic position made it a junction for Anatolia and the Aegean centres, as well as for Balkan, Danubian, Carpathian and even very distant east European ones. Ezero was protected by its systems of fortifications and Sochacki believes that Ezero functioned as a sort of bastion protecting the north-western Anatolian and the northern Aegean centres against the disturbances widely noticeable in the whole area ("withstanding the attacks from the 'barbaric' peoples of Europe") during the Early Bronze Age (Sochacki 1992, 32). Some elements from the steppes seem to have become integrated and the Ezero culture constituting then an ethnic amalgam of local inhabitants mixed with people mainly from Anatolia (Sochacki 1992, 36). Large apsidal houses comparable to Sitagroi (J3) in NE Greece and pottery comparable to Troy (L1) have been found at Ezero. A small detail but perhaps of some importance is that Ezero as well as Aphidna (C3) and Vrana (C4) on the coast of East Attica had pottery with attached decorative, "apotropaic", horns.

Bulgaria also holds "Prunkgräber" in the later Bronze Age, containing imports from the south. Nikolov (2001, 21) reports that abundant archaeological material has been discovered in recent investigations conducted in the Rhodope mountains.

CENTRAL BALKANS: SERBIA, KOSOVO, FORMER YUGOSLAVIAN REPUBLIC OF MACEDONIA, BOSNIA HERZEGOVINA, CROATIA AND SLOVENIA;
NR. N1-N14 IN THE CATALOGUE

The difficult political situation of modern times has hampered the archaeological research but updated information was for instance presented in papers at the international Symposium in Struga (FYR Macedonia) in 1997 with the title: Macedonia and the neighbouring regions from 3rd to 1st Millennium BC. For instance Jevtic (1999, 73), points to clear resemblance with the latest, third phase of the EBA in Thrace. He takes as an example the Bubanj-Hum III group, in the upper Morava area (N6) with Junasite period VIII-VII in the Maritsa valley (M2).

The Bubanj culture (N6) of Central Serbia, with its two-handled sauce-boat(s) shaped vessels, seems to have contacts with, e.g., Troy (L1) with corresponding

gold vessels (Milojčić 1949, fig. 10.8). Other, to Aegean familiar pottery forms, are the bowls with incurved and emphasized rim. We know nothing about their burials and have no clear house-planes, but some evidences of posts and trodden floors hint to some sort of rectangular houses (or shelters?). Clay spindle-whorls, often ornamented, are new objects, unknown in the older Vinča culture. This Bubanj culture's phase III seems to be contemporary with or a little later than the Early Bronze Age in Greece, as the imitations of EH material demonstrate.

The Belotić-Bela Crkva group (N3, N4 & N5) has been identified almost exclusively by its burials under tumuli (Garasanin 1982b). The tumuli of Belotić (N4) and Bela Crkva (N3) were rarely over 20 m in diameter and not very high. The inner core of the tumuli consisted of a cairn of stones, for example Belotić no.15, where also a small area ringed with stones served as an enclosure for burial gifts. The tumuli of Belotić (N4) contained both inhumations and cremations, but at Bela-Crkva and Dragačevo (N5) there were only inhumations.

At the Bela Crkva Tumulus I (N3), there are also remnants of possible sacrificial rites at the base of the mound (Garasanin 1982b, 173).

At Dragačevo (N5), cists of irregular stones were found in the upper part of the tumulus. Above this layer, the surface of the tumulus was covered with stones and a pot was placed on the top. In Greece, such installations to mark the graves and for offerings have been detected at for instance Drachmani (E7) and Aphidna (C3).

Around Novi Pazar (N12) in central Balkan three hill forts have been found. The hill fort "Juzac", on an altitude of 1100 masl, occupies a dominant rocky peak above the source of Raska river. The hill fort at Postenje has, in a distance of 2 km, a monumental tumulus situated high above the valley of Raska river (Jevtic 1999). The pottery is EBA with, for example, horseshoe-shaped handles (cf. pottery at Pelikata (G2) on Ithaka and in Epirus (G4-G10)).

A large center of Bronze and Iron Age cultures is on the Glasinac plateau (N13), south-east of Sarajevo in Bosnia. The Glasinac culture affected also neighbouring areas like eastern Serbia and northern Albania. The substantial cemeteries at Glasinac holds about 20.000 graves. Characteristic traits of the culture are

tumuli usually measuring ca. 10 m in diameter and a total lack of settlements or only poorly known defensive sites. It is also interesting that no weapons have been found in the graves. The Glaciac culture probably merged into the Illyrians, the major Indo-European group of the East Adriatic.

The Vučedol (N14) culture lasted throughout the 3rd millennium and spread all the way to the Adriatic coast. Settlements were built on barely accessible hills and fortified hill settlements also begin to appear. These people occupied themselves with cattle-breeding and farming, producing metalwork through clay moulds. Among their pottery they had cult vessels, as for example the stylized three-legged dove vases.

West of Vučedol, in Croatia, there seem to have been considerable changes that took place around 3500 BC involving nomadic cattle-breeders associated with horses and wooden four-wheeled wagons. The Baden culture is represented here, indicating the beginning of the Copper Age on Croatian territory. The population mostly lived in sod-houses with vessels, shiny, black, and polished. A new type of metal, copper mixed with arsenic, makes its entrance.

ALONG THE ADRIATIC COAST AND INLAND (NR. P1–P10 IN THE CATALOGUE)

The prehistory in the Adriatic region, as well as the entire former Yugoslavia is relatively poorly researched due to the political circumstances. In the following, some of the available material is presented.

In the northern Adriatic, on Istria (P1), the Brijuni cultural group is also present in the earlier half of the Bronze Age, characterized among other things by the beginning of the construction of hill forts.

Archaeological excavations of a grave on Istria, probably datable to the later Brdo-Dalj group “15th to 14th cent. BC” (Rendic-Miočević 1997, 22–24), have revealed a sword and other “Shaft Grave objects”. These finds are regarded to have a direct connection with the Helladic culture in Greece (Bernhard Hänsel, pers.comm.).

In Middle Bronze Age/Late Bronze Age contexts from the cave of Bezdanjaca near Vrhovine in Lika (P2), among other items, very well preserved wooden spoons have been found deeply buried in the barely accessible cave. In the area of Lika (P2),

as well as in northern Dalmatia, in the territory of former Liburni, Early Bronze grave mounds have been identified (but not excavated?). In central Dalmatia and its hinterland, more intensive investigations have enabled the Cetina (P3) culture group to be distinguished. The characteristic Cetina pottery with its stamping technique has been shown to be significant in showing long-distance connections during the late phase of the Early Bronze Age (Maran 1998), for instance the earlier mentioned incised ware at Olympia (A1).

The Middle Bronze Age people buried in the over fifty tumuli at Kupres (P6) in Bosnia Herzegovina, only about 40 km east of the Cetina river, were single inhumations. Especially the man in Tumulus Nr. 16 at Kupres was laid down in an exquisite coffin made of wood (Benac 1986). His body was covered with animal hide and the grave is reported to have been equipped with woollen(?) textiles. Tumulus Nr. 37 at Kupres contained an oval cenotaph grave measuring 1.85×1.60 m with tiny traces of burned woollen textiles. The body-less grave was covered by a mound of monumental dimensions, ca. 35 m in diameter and up to 4 m high. Two daggers of 25.5 cm and 23.4 cm length, made in wood, must have been symbolic grave goods; Early Bronze Age pottery was found with links to the Cetina culture (P3) but also to the Vučedol culture (N14) as well as the Belotić-Bela Crkva group (N3–N5) in west Serbia (Benac 1986). Further influence to the east of the EBA Cetina-culture is recorded in some of the barrows at Glasinac (N13) (Jevtić 1999, 74).

Maran points at the similarities in metalwork between the R-graves at Steno on Leukas (G1R) and the tumuli of Mala Gruda (P7) and Velika Gruda (P8) in Montenegro of a contemporary EH II date (1998, 330–331). One example is the golden “Lockenringen”. Spiral rings of gold, often joined together, are also found in the tumulus at Aphidna (C3), at Eutresis (E2) and at Sesklo (F1).

The tumulus discovered at Tivat (P9) in the bay of Kotor in Montenegro north of the Albanian border, is dated to the Early Bronze Age. It is of large dimensions with a pyre inside, following the contour of the mound. Under the pyre was a sacrificial pit and under the pit was a central cist containing a contracted skeleton. Among the finds were a gold

dagger, a silver axe with a tubular shaft hole and a ring of the so-called “noppenring” type. Garasanin connects the axe and the ring with the Steppe-Pondic region, but classifies the pottery as belonging to the (local?) Dalmatian tumuli groups (Garasanin 1982b, 174).

SHQIPËRIJA-ALBANIA, THE LAND OF THE ILLYRIANS;
NOS. Q1-Q17 IN THE CATALOGUE

The Albanian Bronze Age shows a new cultural assemblage, entirely different from the earlier Eneolithic period (Prendi 1982). The tumuli culture from Central Balkan and the Adriatic seems to have spread southward into Albania, as for example some of the tumuli at Shtoj (Q1), with pottery comparable to the EBA cultures of the western Balkans like for instance Kotorac-Cetina (P3) and Ljubljana.

The Middle Bronze Age in Albania is estimated to begin around MH II.

Albania had a tradition in primal building techniques; huts were made out of woven branches of reeds coated with earth. Such huts, mostly rectangular in shape, were found in the Early Bronze Age settlement at Maliq (Q14). This building technique seems quite similar to how the nomadic pastoralists Saracatsans until ca. AD 1930 built their round huts, both summer and winter. The EBA people at Maliq had built in horseshoe-shaped types of ovens with a hearth in front of the opening and with chimneys to take away the smoke above the roof, as suggested by a terracotta miniature model of a stove found in the earliest Bronze Age levels at Maliq.

Cf. horseshoe-shaped structures at Vinca, (N2) and perhaps the horseshoe-shaped fireplace in the central

building at Malthi (A2), interpreted as an “altar”, was a common oven.

Albania has strong copper working traditions since the Eneolithic period. The richness of copper and other metals are especially concentrated in the ore bearing strata of Kukës (Q2) and Korçë (Q3). Influx of the Aegean metallurgical products becomes evident in MBA III (Prendi 1998, 95). The tumuli appear in Albania, especially in the Elbasan area (Q9), from the Early Bronze Age until the Late Bronze Age. Once the tumuli had appeared in Albania, they continued to be in use without interruption throughout the late Bronze and Early Iron periods (cf. Table 3).

Summing up about Balkan, we have observed that many cultural groups of Balkan seem to have had similar habits as the Middle Helladic people in burying some individuals in tumuli, of which many required thousands of man-hours to construct. Many other aspects of the Balkan cultures have been omitted in this study since the archaeological material from this period is highly concentrated on graves.

There seems to have been some peaceful intrusion of new burial habits in the Coțofeni culture stage III, in southern Romania (Map 3). The earlier habit with cremation graves in simple pits is now sometimes changed to single inhumations covered by a tumulus.

South of the Danube we find burial customs with single graves in tumuli: in the Early Bronze Age Bela-Crkva group in Central Balkan (N4); along the Dalmatian coast during the Early and Middle Bronze Age; in the Plain of Kupres (P6) and on other Bronze Age sites in Bosnia; in the tumuli near the Adriatic Sea in Montenegro (P7 – P10) with grave contents comparable to the R-graves at Steno on Leukas

Table 4. Cross-cultural response to food shortages and mass infections (Dirks1980, 27–30).

The first phase, the so-called alarm phase, is characterized by hoarding, emigration, increased hostility and political unrest.

The second phase, the resistance phase, is distinguished by general depression and social life becomes progressively atomistic. Efforts to procure nourishment expand into previously unexploited niches, competition intensifies and antagonistic encounters increase. Protection measures develop to guard over the food stores and gardens.

A hypothetical example: Over 200 different impressions in clay from sealings were found in the excavation of the huge building at Lerna, destroyed at the end of the EH II period (Weingarten 1997). Could their function have been to identify the ownership of food storage?

The third and final, the exhaustion phase: The family ceases to function as a redistributive, protective entity. Individuals begin to fend exclusively for themselves.

(G1R) dating to EH II; and in Shqipërija (Albania; Q) where many tumuli show a continued use from the Early Bronze Age into the Iron Age.

DISCUSSION OF SOUTHERN BALKAN INCLUDING GREECE, IN THE LATE 3RD MILLENNIUM AND THE FIRST HALF OF THE 2ND MILLENNIUM BC

As noted above, tumuli with single graves appeared in the Balkans in the early to middle part of the 4th millennium BC. By 3500–3000 BC, Balkan was marked by thousands of tumuli and at the same time a shift to increasing pastoralism (or perhaps better called nomadic pastoralism according to my definition in Table 6) and less permanent settlements occurred (Ecsedy, 1979). The occurrence of single monumental graves could indicate a shift towards an elite warrior culture conquering and exploiting an earlier sedentary population. Roughly this happened at the same time as the domesticated horse appeared (Sherratt 1983; Anthony 1994) and one could speculate that the new elite utilized the horse for warfare. This more violent picture contrasts with Bailey's "softer" hypothesis that the appearance of tumuli-burials in the Balkans in the 4th and 3rd millennia BC may have played a similar role to that fulfilled by household villages during the preceding millennia, that the graves in the tumuli resemble rooms in the house, and the tumuli-cemetery represents the feeling of a village (2000, 278). Rather the tumuli could represent the symbols of domination of the new masters and be their ceremonial gathering places.

In Greece early ceremonial tumuli appeared about 2200 BC and by 2000 BC tumuli with central single graves were widespread on the Mainland. At the same time, as in the Balkans, we see a decrease of permanent settlements in the archaeological records.

Since no tumuli have been found at the southern fringe of Greece, either in the Cyclades or on Crete, the most probable explanation is that the tumuli-building people on the Greek mainland during the Early and Middle Bronze Age had their connections to the north. In fact, the contact between Crete and the Mainland seems to have been very sporadic at the end of the 3rd and the beginning of the 2nd millennium BC. The scarcity of evidence of exchange is illustrated by the situation at the Minoan colony Kas-

tri (D3) on the island of Kythera, near the coast of Peloponnese, where only a few MH sherds have been found. The same goes for the seaside centre of Lerna (B1) with only a few Minoan sherds, and is illuminating for the situation.

In interpreting the upheavals and changes at the end of the 3rd millennium BC, it is of interest to consider how mankind reacts to disasters or catastrophes in general (Table 4). These universal reactions may serve as a logical background for the assumed depopulation during the Middle Bronze Age, irrespective of the reasons, be it war, severe climatic changes, environmental disasters or epidemic diseases.

Droughts, floods, earthquakes and epidemics causing large-scale die-offs, have repeatedly affected populations. Environmental conditions are not stable over time. Especially a climatic change can with some years of crop failure mean life or death for many people. Even in our time, in AD 2002, a period of two-three years with bad harvests would suffice for whole populations to be obliterated if no help arrives from outside. Imagine then the desperation and upheavals such disasters would have caused in prehistoric societies (see the earlier mentioned example from Egypt). Diseases develop and spread when large numbers of people live closely together. A social and economic system with smaller units like mobile pastoralists or nomadic farmers (Tables 5 and 6) was stronger in survival in periods with epidemic diseases and/or food scarcity. Adams argues that pastoralism repeatedly served as the indispensable source of ecological flexibility and resilience in the aftermath of natural or socially induced disasters (1981, 11).

Summing up, it is clear that nomadization, with a return to diversified subsistence, remained an option for many of the rural households, either the collapses were social or environmental.

The insight of Wace and Blegen (1918) of some eighty years ago has withstood the test of time; the Middle Bronze Age sees a new identity in Greece. However, they did not consider the possibility of several contemporary groups of people with different life-styles, as an answer to the scarcity of finds from the material culture.

Oystein LaBianca has in his study on food system cycles in Trans-Jordan observed that the less nomadic the households, the more extensive its non-movable

facilities (1990, 83). It may be that it is not easy to convert that empirical finding to: the less non-movable facilities, the more nomadic the mode of existence, as an explanation of the scarcity of evidence from material culture, but perhaps it is worth contemplating.

THE QUESTION OF NOMADIZATION

I believe that it is time to consider that there was a big, more or less invisible, part of the population on the Greek peninsula that either had gone through a gradual nomadization process during the Early and Middle Bronze Age, or perhaps never had adopted a sedentary way of life. Hunting of wild animals and birds and gathering of wild herbs, roots and fruits are carried out by both cultivators and pastoralists as a complementary activity, but could as well have remained the main subsistence for some groups.

I will use ethnoarchaeology as a research strategy in order to answer archaeological questions, but first present a short history of research about pastoralist studies in Greece.

Part of the rural population, settled farmers, was always engaged in herding. The term “pastoralists” refers to groups who subsist mainly on animal husbandry (Finkelstein 1992, 134). Discussions about pastoralism in Greek prehistory have been concentrated on if and, in such a case, what different types of transhumant pastoralism can have been practiced in prehistory.

Transhumance, as a mode of existence, is documented already by Sophocles in his tragedy *Oedipus Rex* performed around 430 BC. In this play, two

shepherds meet on Mount Kitairon, where they have their herds grazing through the summer. One is a slave, and the other is a hired worker. In other words, the herders are both of inferior status and this is probably how this mode of existence was looked upon already from classical times in Greece.

Archaeology in the Mediterranean has been at the helm of the enchantment the western civilization has felt for the beauties of Classical Greece and Rome. Renewed feelings of pride and enthusiasm came with Schliemann’s excavations of Troy from 1870 and the treasures he found at “golden Mycenae”. Evans’ excavations of “The Palace” of the mythological king Minos at Knossos on Crete continued the tradition, but it is now recognized that such “palaces” were much more than royal residences. It is only human to be fascinated by outstanding features but this has unfortunately led to an over-focus in research on the spectacular. The simple life of the majority of common people have left few, if any traces, either in the material culture or in the written records and has thus gone unnoticed in the classical archaeological tradition.

The question of transhumance in classical times is not whether it existed in ancient Greece; the question is entirely one of its extent and importance (Isager & Skydsgaard 1992, 100).

Attempts to transform our knowledge of transhumance during classical times to be valid also for the prehistoric periods, have caused intense discussions among experts like e.g. Halstead (1981, 1989, 1990; 1994), and Chang (1988; 1993a; 1994, Chang & Tourtellotte 1993b). Sherratt’s well-known model of the secondary products’ evolution (1981;

Table 5. Definitions of Pastoralism and Transhumance.

Pastoralism refers to the general keeping of animals, but can also refer to the social organization based on livestock raising as the primary activity in contrast to, for example, farming.

Transhumance (from humus=earth) refers to seasonal movement of livestock, and esp. sheep, between mountain and lowland pastures, either under the care of herders or in company with the owners.

For *Pastoral Transhumance* there is a diversity of examples, of which the following two have been practiced until recently in Greece:

Nomadic pastoral transhumance as practiced by the Sarakatsani. The Greek-speaking Sarakatsani lived until recently in round and easily constructed huts of poles and reeds, so-called *konáki*, both in summer and at the winter pastures. I will also present the Sarakatsani in Table 6 and as a case-study below.

Transhumant diversified pastoralism as practiced by the Arománi (Vlachs), is presented as a case-study below.

1983), as an explanation for the change from a meat-based economy to an economy based on the exploitation of animals for milk, wool and traction as well as for meat, has unfortunately blocked the discussions into artificial developmental stages. Animals have been exploited for milk, meat, fibers and transport (not traction) already from the very beginning of the Neolithic (Chang 1994, 358; Greenfield 1988a, 573; 1988b). It is not the scope of this paper to go in to these discussions; I can only note that I miss the aspects of different nomadic modes of subsistence.

Prescott, in his article dealing with early pastoralism in Norway, points to the fact that reasoning in earlier research had often been permeated by an “either-hunter-or-farmer mentality” (Prescott 1995, 168). In Greece, discussion has been limited to farming and different stages of transhumant pastoralism.

While studying the different aspects of the subject, I found the vocabulary confusing. Authors can have a different use of the terminology of transhumance, pastoralism and nomadism. For instance, Wace and

Thompson’s book of the Vlachs has the title, *The Nomads of the Balkans* (1914). The use of the term Nomads in this case is misleading since the Arománi (Vlachs) who practiced transhumant pastoralism in a diversified form, moved between permanent houses and thus did not live a nomadic life. The real nomads in Greece were the smaller folk group of the Saracatsans.

In order to avoid misunderstandings in my discussions, I would like to present definitions as follows in Table 5 & Table 6.

Turning to the ethnoarchaeological case-studies: the Arománi (Vlachs), with their transhumant diversified pastoralism, returned every summer to a particular mountain village where they had permanent homes and grazing rights (Wace & Thompson 1914). One hypothesis is that the Arománi have descended from roman soldiers (deserters?) that stayed on in the mountains of Balkan and adopted a nomadic mode of existence. The earliest record of spoken Arománi goes back to the 6th century AD but the language

Table 6. Definitions of Nomads.

Nomadization, is the process whereby a group of people gradually adopts a nomadic mode of existence. While sedentarization usually involves food system intensification, nomadization usually involves food system abatement (LaBianca 1990, 33).

A *nomad* is a member of a wandering people; a people with no fixed residence but wandering from place to place, usually seasonally and within a well-defined territory in order to secure a food supply.

The *pastoral nomads*, who carry their food on the hoof, are common both in Africa and in Asia. In Greece, the pastoral nomads Sarakatsani had no permanent place to return to, but built their round huts at new places both winter and summer.

But not all nomads are pastoralists. There are many forms of nomadic life:

Nomadic farmers, practicing shifting cultivation by rotation.

Example: The Iban of Sarawak may spend 20 years in cyclic movement over a periodically cleared and cultivated territory (Dyson-Hudson 1971, 10).

Nomads, may carry their skills and weapons with them, and so survive on the move by hunting. Humans have repeatedly gathered to hunt and butcher animals. For the longest part of human history populations have survived by movements rather than in permanently settled communities.

Nomads may carry their tools and products as they move, and so survive by trading or offering services.

Example: The Gypsies and the wandering Hindu artisan group called Gaduliya Lohars, living in their bullockcarts and working as blacksmiths (Ruhela 1971).

Non-pastoral nomads, combining the last categories; often living in symbiosis with other economic modes. Case-study: The Solubba of Arabia. They represent an archaic survival of a very ancient life-style. Groups of Solubba hunter-gatherers continued to exploit the steppe and desert regions long after the establishment of settled communities in the fertile areas of the Near East. They had developed sophisticated techniques for capturing large flocks of animals. They sometimes moved over large distances. In their hunt for gazelles they even reached as far north as Palmyra in the summer. The Solubba were also regarded as skilled crafts-men; as blacksmiths making axes and scythes, in mending pots and working in wood. Their clothes were made out of animal hides. Until recently they were found in small groups living in a form of symbiosis with the Bedouin tribes (Betts 1989).

does not seem to have been written before the 18th century AD when a Greek script was employed (Wace & Thompson 1914, 2), so this hypothesis may be difficult to either prove or contradict. But the language, both in its vocabulary and structure, is clearly descended from Latin and closely allied to Romanian. It contains a number of foreign words and phrases borrowed from Slavonic, Albanian, Greek and Turkish. Wace & Thompson note that the men, owing to the necessities of trade, have been bilingual (1914, 2). A large group of these people had their gathering centres at Tyrnavos (F7) and Elassona (F8) during the winter, places which today have grown to be regional cities with cheese as a main product. In the summer they all travelled to the mountainous area of northern Pindus, to Samarina north of Vitsa (G10). Other groups living during the winter in the plains of southern Macedonia also used to travel up to Samarina.

The first mention of the Arománi (Vlachs), in what is now Greek territory, is about AD 976 when they were said to have slain the brother of Samuel, Tsar of Bulgaria. The event is supposed to have taken place northwest of the lake Kastoria (H2). After this first mention, references to them become frequent and several large districts were called Vlachia. Thessaly and Southern Macedonia were for several centuries called Great Vlachia, and Little Vlachia comprised parts of Acarnania, Aetolia and Epirus. Similarly in Dalmatia, on the Adriatic coast, there were two districts known as Great and Little Vlachia (Wace & Thompson 1914, 257).

As seem obvious in the case of the Arománi, such groups of people travelled freely over a large part of the Balkans.

During prehistory, I see the possibility of a co-existing relationship, perhaps not always peaceful, between groups of people practicing all kinds of modes for existence. Agriculturalists in combination with transhumant pastoralists, sharing the landscape with people practicing different forms of nomadism (Table 6), both in Greece and in the whole of southern Balkan.

It is a well known fact that nomadic pastoralism has been overlooked too long in archaeological research (Cribb 1991), and if we take away the pastoralistic aspect the situation becomes even worse. As mentioned above, the Classical view of herders as an

inferior social class may in its continuation have been a reason for their insignificant role in historical records until recently. Such evaluations contrast with those of the Maasai in today's East Africa. They appraise the importance for the family in sending the brightest son to be responsible for the herd and let the less brightest be sent away to school (The Economist 2002). We find the same traditions with the Saracatsans. They choose their most clever son or the most skilful herders to find the best pastures for the ewes.

Examples from ethnoarchaeology show that in the course of a century in the Middle East, tribes formerly engaged in horizontal camel pastoralism gradually shifted their emphasis to agropastoral transhumance, then to mixed agropastoralism, and finally, today, to commercial agribusiness. Individual households could gradually within some generations become more nomadic or more sedentary without any dramatic change in the cultural behavior. Humans have a determination to survive as best they can. For instance, the pastoral people Karimojong in northeast Uganda lost almost all their cattle to disease and drought about hundred years ago. To stay alive they hunted elephants for meat, and found out that they could exchange the tusks for cattle from visiting traders. Within a generation they were back in the cattle business again. Such flexibility is common with humans, even if it creates a problem for anthropologists and archaeologists since it confuses the labels we put on separate economic types. It has been convenient to distinguish the cultures by giving definite labels like "hunting societies", "agricultural societies" or "pastoral societies", ignoring all the different types of mixed subsistence within and around societies.

To explain the evolution of Western civilization, it has been handy to imagine "stages" of social development. We operate with evolutionary "ladders" leading from bands to tribes to chiefdoms to states as if the development was totally predictable and an unavoidable goal for mankind. There may always have been groups that resisted such processes and found their freedom and identity in a nomadic life, not believing that the ruling classes provided essential services in order to be supported by the subjects. Freedom, even if it means trouble with the political authorities, ranks high among nomad values. The

freedom for an individual and also for the leader to make and break alliances ensures that the group can go wherever it will survive best. Feelings like pride and the urge to be held in honour, are difficult to detect and put labels on but can be as important as economic reasons.

Honour, is a determining factor of the Greek-speaking Sarakatsani (Cambell 1964; Hielte-Stavropoulou 1985). These people lived until recently in a social organization of family groups, represented by a male headman, called Tsélikas. They practiced nomadic pastoral transhumance (Table 5 and 6) from the Pindus Mountains in western Greece (Map 1) to Varna (M17) in N-E Bulgaria by the Black Sea.

They moved from the lowland pastures of the winter months to the highland pastures of the summer months and lived in easily constructed huts. They started their journey for the mountains usually after the feast of Aghios Georgios on the 23rd of April and back, down to the plains, around the 26th of October, at the feast of Aghios Dimitri (Kabbadias 1991). In the winter they lived outspread and isolated on the plains, in order to avoid competition for the scarce pasture, planning for social events like weddings and other feasts that usually took place during the summer at the gatherings up in the mountains.

Each family group chose together with the other family groups they wanted to join for the large summer camp, a chief whose task it was to prepare and negotiate the interests of the cooperative group. The payment Tselikas got for his leadership, was not payment in material goods. More valuable was respect and honour. Priceless sentiments that we cannot detect by an archaeological excavation. For most of the times they lived peacefully and had good relations with other Sarakatsani groups, as well as with the Arománi speaking Vlachs. They were realists and had accepted the fact that violence is a potent force in human society, and that a group with a reputation for swift retaliation is attacked less frequently, so they encouraged the boys to learn to be valiant and rewarded them for demonstrating aggressive tendencies (Hielte-Stavropoulou 1985). They found it realistic to believe that conflicts of interest between individuals are inevitable, simply because the nature of some of life's resources ensure that individuals can achieve certain goals only at the expense of other individuals.

Such knowledge and practical realizations were taught as lessons to the youngsters around the hearth at evenings. Grandfathers boasted about the pleasure of eating the lamb stolen the preceding night from the non-related neighbour, convinced that he would do the same if he got the opportunity. The Saracatsani had a very clear social structure and differentiation within the family. It was of utmost importance for the function of the group that everyone knew their place in the family and took their part of responsibility. The frequent decampments – to be on the move with large herds of animals, children and necessary utensils, in many times unfriendly areas and the quick building of new huts, required a tradition in organization.

I deliberately do not refer to their problems many times in finding money to be able to pay rent for suitable pasture land, since this is hardly relevant for prehistoric times.

The differences between sedentary and nomadic social-economic conditions is, according to Barth in his study on the nomads in southern Iran (Persia in 1964), that in the village there is an extreme gulf between the privileged and wealthy landowners and the practically property-less peasantry; but in the tribe, common tribesmen are subject to their chief, but retain considerable rights and freedoms. They have enough privately owned capital to permit them to be self-employed. In the wider Persian status system, tribesmen thus occupy a position intermediate between landowner and peasant. Only the very few at the top and the bottom of the nomadic economic spectrum are at all comparable to the sedentary people, and only for them can one see any motives that might encourage sedentarization (Barth 1964).

The conclusions we can make from the ethnoarchaeological examples above are that throughout history, mankind has used the landscape by adapting to different modes of existence to enhance survival and prosperity.

LINKING THE ETHNOARCHAEOLOGICAL PICTURE WITH THE LANDSCAPE

The Greek landscape is mountainous, and even today only 30% of the country's total area is under cultivation with poor fertility in many cases. Availability



Fig. 6. The MH settlement Malthi (A2) from the south. The county of Messenia (the area covered by the sites A2–A26 on Map 1) holds at least fifteen more sites situated on hilltops, overlooking (controlling?) the valleys and the surrounding area (Photo: the author).

of water is a problem with only a third of the cultivated land under irrigation (McDonald 1991). As a regional example, only about 17% of the surface of Peloponnese was cultivated in 1930. The rest provided pasture, animal fodder, timber and stone (Statistics 1930). That stock-raising until recently still was important in this kind of landscape, can be read out from a register of conditions in keeping sheep and goat on the Peloponnese forty years ago: a) 1.100.000 sheep and goats were maintained at villages throughout the year; b) 146.000 were wintering in villages but moved to other pastures seasonally (transhumance); and c) 222.000 were constantly on the move, herded by nomadic shepherds (Statistics 1959). The b) and c) elements used to be much larger in times when animal foodstuffs for winterfeeding were not manufactured or bought.

In prehistory, Halstead has suggested an extensive land clearing in central and northern Greece during the later 4th and early 3rd millennia and increased husbandry of sheep and goats (Halstead 1981). But according to Van Andel & Runnels Neolithic pollen records do not reflect any major woodland clearing (1995, 485). There seems to be an opening for larger areas of pastures from about 2000 BC.

ARCHAEOLOGICAL EVIDENCE FOR NOMADIC GROUPS

A more concrete base for the assumptions of some kind of a nomadic life-style in Greece, instead of the alleged pastoralism in the form of organized transhumance as the only complement to agriculture, is mainly built on the frequency of flat hilltops strewn with shattered MH sherds. These locations have a similar setting in the landscape with an average size of ca. 130 m×90 m. They all seem to overlook the surrounding area, so as to be in control of the situation in the valley below, Fig. 6. I believe that these flat hilltops can have functioned as temporary resting places, as camp-sites. As a test I have chosen the two areas Messenia on the western Peloponnese and east Attica, which have been extensively surveyed. The 24 possible camp-sites listed in the Catalogue are as follows: 15 camp-sites (A12 to A26) in Messenia and 9 camp-sites (C11–C19) in Attica.

They are all reported as strewn with MH sherds and with no architectural remains. As illustrated on Map 1, these sites are located a bit from the coast and outspread at certain distances from another. Malthi (A2), situated on a similar flat hilltop, might have started as a campsite and due to its central position



Fig. 7. The hill site Mycenae in Argolis (B3) overlooking (controlling?) the plain and surrounding area.

in the Soulima Valley gradually developed into a central site, with its later fortification. Mycenae may be another such example, Fig. 7.

Both Messenia and Attica have also remains of some sites with MH buildings. In Messenia, in addition to Malthi, there is Nichoria (A10) with evidences for metal working. In Attica, the settlement Plasi (C5) had a MH house of large dimensions with a furnace (Mastrokostas 1970).

The reported MH sherds found shattered on the hilltops in both areas can be anything from early MH I to late MH III, that is about 350 years or 16 generations, so it seems impossible to associate the campsites with settlements. In any case, the hypothesis of co-existence between sedentary people in farmsteads and nomads is supported.

Tents, where the skeletal poles have been drawn up at the decampments, do not leave deep postholes, so they are almost impossible to detect in the archaeological record. Childe certainly was right when he expressed the difficulties in detecting nomadic cultures: "Pastoralists are not likely to leave many vestiges by which the archaeologist could recognize their presence. They tend to use vessels of leather and basketry instead of pots, to live in tents instead of exca-

vated shelters or huts supported by stout timber posts or walls of stone or brick" (Childe 1936). However, the encampment found in the mountains at Thesprotikon in southern Epirus, with its round huts made mainly of poles and thatch, may have been a typical Middle Bronze Age semi-permanent settlement (Dakaris 1971). It seems to be sheer luck that these were detected which was due to the half circle of flat stones that functioned as a foundation because of the sloping ground. The sherds from incised lids or bowls (Early Bronze Age 3600–3100 BC?) in connection with traces of a hut at Doliana (G11) in Epirus (Dousougli & Zachos 1994; Andreou et alii 1996), can be compared with pottery similar to Balkan/Central Europe, middle (classical) Baden culture. There are also the round or in some cases oval huts at Orchomenos (E4), Tiryns (B4) and Olympia (A1).

SOCIAL ENCOUNTERS

Nomads are people who rely on movement to survive, and this movement leaves recognizable marks on their culture and form of society (Dyson-Hudson 1971). Cribb (1991) and Nandris (1988) have stated that also seasonal pastoralism is an important social



Fig. 8. Detail from the 'Siege Rhyton' in silver, found in Shaft Grave IV (LH I) at Mycenae, depicting an attack and defense scene. Existing height 23.2 cm (it has been badly restored) (Athens National Museum).

mechanism and not merely an economic one. These statements seem evident from the ethnoarchaeological studies presented above – of the Arománi and the Saracatsani people south of the Danube on Balkan, and of the examples from the near east and central Asia.

As a plausible explanation for the decrease in settlement patterns, I suggest a new society model for the MH period with a high degree of the population living more or less on the move. The unfortified hamlets we find in the early part of the period can perhaps be interpreted as an indication of peaceful co-existence with an exchange relationship. As a modern comparison, nomads in eastern Turkey were exchanging salt with the villagers as recently as the late 1930s (Crawford 1978, 130).

Ethnoarchaeology has shown that it can be difficult for nomadic pastoralists to maintain stable exchange and trade relations with agriculturalists because they do not always have sufficient products to offer in ex-

change. Historical nomads solved this problem by exerting their military and social advantages over their sedentary counterparts. As the surplus of the nomadic pastoralists grew and their investment became more concentrated in herds, so did their vulnerability to lose it to raiders. For protection they may have employed a specialized group of warriors from their own society. Different ranks emerged gradually. At the same time, even chiefs herded, combining manual and managerial economic functions (Mann 1986, 59). A symbiotic relationship between nomadic pastoralists and agriculturalists can be a balanced coexistence, as described for the Pathans and the Baluchi by Barth (1956; 1967), but it can also develop to an exploitive relationship with the nomadic pastoralists forming a warring elite extracting tribute from the peasant population (Kristiansen 1998, 186). As mentioned before, the development of weaponry (and fortifications in some areas) over the course of the later 3rd and the 2nd millennia BC may reflect increasing inter-group conflicts (Gilman 1991, 162).

The illustrations in Fig. 8 and Fig. 9, give a hint of turbulent moments, both in the 17th–16th centuries BC and in the 12th century BC. We have no information what was the cause of such mobilisation in LH I, Fig 8. Textual evidences about unsettled times comes from the LH IIIB period (Table 3), in the earlier mentioned Linear B Tablets found at the 'Palace' of Pylos (near A6 on Map 1) in Messenia, containing lists of supplies for men sent out to guard the coasts (and the surrounding area?). Similar evidence comes from Tiryns (B4), with lists of men, wheels and armour, among other items (Shelmerdine 1997, 563).

Nomadic people have played a role, not only in raiding and trading, but also in supporting chieftdom evolution (Junker 1999, 207). As a mythological comparison, Thukydides tells that only after King Minos on Crete had made an alliance with the pirates dominating the Aegean Sea, did he gain control over the trade (in EBA?). The same pattern may have occurred in the later part of the Middle Helladic period. To rule through a rétinue of warriors in order to gain control, undermine, and exploit the farming communities through tribute and taxation, is a general pattern to accentuate decentralized stratified societies (Kristiansen 1991, 19). Chiefs that used such methods became later transformed into petty-kings. They had

set themselves apart from the agrarian substratum and in the same process developed a landless peasant class.

A small part of the population may have been certain individuals with a special skill in handicraft (cf. the non-pastoralist-nomad group in Table 6). They may have stopped for a few days at farmsteads, helping with casting new tools and weapons, mending pottery in return for food and some provisions. An early example of such a mobile individual may be the owner of the cylinder seal, which at the end of EH II left the same decoration impressed in clay at three different sites in the north-eastern Peloponnese: Lerna (B1), Tiryns (B4), and Zygories (B10). The impressed motive shows dogs fitted into two rows of spirals. Such potters' cylinders were probably carved in wood and Sinclair Hood regards them to be of native manufacture of the Mainland and not from Cretan influence, because of the simple designs of zigzag lines and spirals (1978, 214). Cf. the spirals on Fig. 3.

How different groups of people have been able to live in peace sharing the landscape has been shown by, for instance, Leach in his study *Political systems of highland Burma* (1954). Another example comes from the Carpathian basin, where small groups of tumulus-builders had settled on the open low terraces of the extensive flood plains. "Competition with the indigenous agrarian populations was largely avoided since the use of the light plough had opened up the surrounding terraces and foothills, leaving the plains depopulated. By the mid-third-millennium, the two groups had merged into a single cultural community in the north-east Carpathian basin, with a mixed economy of agriculture and stock-raising" (Sherratt 1994, 261).

In the conglomerate of nomadic life-styles for some groups, seasonal transhumance for others, and vulnerable agriculture in the river valleys and at high places for yet others, needs for identity may have become of dominant importance. Group identification may have been strongly marked and encoded both in portable artefacts and in appearances like hair-styles and dressing. We can compare with the clothes still worn by nomadic people, from the Sami in northern Scandinavia, the Saracatsani and Arománi in the Balkans, the nomads in the Near East and in Central Asia, usually made in (water-repellent, felted) wool



Fig. 9. The Warrior Vase from Mycenae, LH IIIc. Height 42.7 cm (Athens National Museum).

and decorated by colorful bands. This means a kind of worn social identification.

The history of south-east Europe is a merging nexus of successive waves of nomadic groups, where tracing of a single line of national ancestry is impossible, except as an act of mythical ethnic identification. As a comparison from present day Romania, at least twelve major ethnic groups of diverse cultural background live side by side, including, of course, the service groups of gold-panners and tinkers, the Sigeuners, as the inheritors of the Thracian metalworking tradition (Taylor 1998, 409).

The nomads and pastoralists probably played an active role in trading networks, and there may be a correlation between the roads used and the distribution of burial monuments.

CONCLUSION

As I have suggested already from the beginning, evidence from the Balkans as well as from local campsites in Greece, combined with empirical evidence from ethnography and assessments of the landscape, allow us to propose that both settled farmers and groups of people, living in a variety of modes of existence ranging from nomadic pastoralists to non-pastoral nomads (Table 6), were present on the Greek mainland during the MH period. To test this hypothesis, more regional collaboration in the Balkan area is needed as well as more detailed surveys in the areas

in the north and up in the mountains in Greece. Before a clearer picture can be made about the decrease in settlements and changes in the material culture at the end of the 3rd millennium, we are wise to include the possibility of nomadization.

Maybe we have to reconcile ourselves with the

words of the poet Horace: “Many heroes lived before Agamemnon, but all are overwhelmed in unending night” (The odes and epodes, Book IV 9, 25–26), but nevertheless we must assume that science will steadily reveal more of the MH culture in the future.

CATALOGUE

In this catalogue, special emphasis has been put on getting a comprehensive overview of sites north and northwest of the Greek border (see the Bibliography). Well-known sites, like Mycenae (B3), is only treated briefly. However, much of the material from outside Greece has not been published internationally but is found more scattered in internal reports and theses, often in the native lan-

guage. Some important information might therefore be missing. In spite of this, I believe that the material can be useful in analysing southern Balkan during the first half of the Bronze Age. The sites are numbered as on Map 1 and Map 3 (for abbreviations see Bibliography).

IN GREECE

A. ELIS AND MESSEIA ON W PELOPONNESE

No.	Site-name	Position in landscape; Architect. remains	Tumuli & other graves; Human remains	Metal (A few examp.)	Chronology Pottery & other finds	References & Notes
A1	Olympia, Altis and the New Museum area	NW of the Kronion hill; Apsidal megara	EH ritual tumulus; 6 Pithos burials		Incised pottery Early MH, incl. EH III. Maran argues for connection between Olympia and Westbalkan; “Cetina-Culture” and East-Bosnia and West-Serbia, Maran (1998) 326	(Kyrieliis 1990, 184) (Gazetteer, 94 (B 71)) (AA 1971, 392 fig. 77Ab) The Classical site was identified in the 18th century and has been under excavation since
A2	Malthi, hilltop site, in the Soulima Valley	Settlement of about 100 houses (rooms) with their “back” against a wall surrounding the settlement	Intramural small cemetery with a central grave bordered by slabs (tumulus?) inside the south entrance			(Valmin 1938) (Gazetteer, 167 (D 222)) The S. part of the wall may be from a LBA date
A3	Peristeria	In a reserved valley, on the s. bank of the Kyparissia river		4 knives	First occupied in MH times; 42 arrow-heads	(Gazetteer, 167 (D 200)) Habitation size 200×100 m
A4	Koukirikou	On a hill top 500 m W of Peristeria	Tumulus, 16×20, h. 3–4 m. Pithos burials		According to the excavator, the pithos burials give an early MH date	(Marinatos 1964b, 92–93, pl 85,b) (Pelon 1976,77). Le homme n’a pas livré de sépulture
A5	Pirgos: Tsouka	Two tumuli on the top of a ridge	Tumulus 12×9 m, h. 5 m; 200 m to NE is a similar but smaller tumulus			(Gazetteer, 134 (D 18))

Continued.

No.	Site-name	Position in landscape; Architect. remains	Tumuli & other graves; Human remains	Metal (A few examp.)	Chronology Pottery & other finds	References & Notes
A6	Lefki: Kaldamou	On a ridge, opposite and w of Ano Engli-anou	Six large MH tumuli, 25×15 m to 10×8 m, h. 3–5 m		Whole horizontal pithoi, cf Papoulia	(Gazetteer, 133 (D 14)
A7	Papoulia: Ayios Ioannis	On a hill top	Tumulus, 13 m i diam. Pithos burial in centre and a small horseshoe-shaped structure		MH or EH? Pithoi, set horizontally in the mound, facing outwards, cf Voidokoilia	(Marinatos 1954, 311; – 1955, 254) (<i>ArchDelt</i> 24 (1969) B 143, 145) (Gazetteer, 144 (D 52)
A8	Myrsinochori: Routsis	On a ridge	Two (three?) tumuli containing pithoi		MH or EH?	(Gazetteer, 145 (D 54)
A9	Voidokoilia	The tumulus, of an early date is built upon EBA settlement layers	Large pithoi-graves are radiant placed in the tumulus		EH or MH?	(Korres 1978, 175) There is possibly a 2nd tumulus
A10	Nichoria	Important MBA site		×		(<i>Excavations at Nichoria</i> , 1978) Foundry (Gazetteer 167 (D 151)
A11	Akovitika	Close to the present coast line; Large and small EH II buildings				

Examples of possible MH – camp-sites in Messenia, located on spurs or flat-topped hills with an average area of 130 m×80 m with numerous MH sherds, mostly coarse wares, but no architectural remnants, with the walled (A17) as an exception. Temporarily resting-places/camp sites? Most of the descriptions are taken directly from Gazetteer, 157ff., GAMS, M I, M II, M III and MME

No.	Site-name	Position in landscape	Size of area & remains	Chronology Pottery & other finds	References & Notes
A12	Margeli: Koutsoveri	On top of rounded hill, in a small remote valley	150 m in diam. Only pottery! Ordinary camp-site?	MH pottery and coarse ware “which appear to be MH or in the MH tradition” (Gaz) Perhaps also some LH	(GAMS No. 187) (Gazetteer, 157 (D 116) (MME No. 116) (<i>ArchDeltion</i> 24 (1969) B, 143) (M I, 235)
A13	Dhraina: Koutsoveri	On the flat top on a rocky spur which projects westward over a small upland valley	120×80 m NW-SE Only pottery! Ordinary camp-site?	MH sherds mainly coarse, and LH III	(Gazetteer, 158 (D 119) (MME No. 119; M III, 144)
A14	Trikorfo: Kako Katarachi	On the top and the SE terraces of a low hill	150×120 m NE-SW Only pottery! Numerous BA sherds Ordinary camp-site?	Coarse ware of MH type and one LH III piece	(Gazetteer, 159 (D 121) (MME No. 121; M III, 157)
A15	Ayios Floros	On the w slopes of a rocky knoll	150–80 m E-W A few BA sherds sparsely strewn Ordinary camp-site?	MH coarse ware resembles that of Magreli (A12)	(GAMS No. 177) (Gazetteer, 162 (D 134) (MME No. 134; MII, 236; M III, 159)
A16	Sellas: Nekrotapheion	On the top and upper south terraces of a high spur projecting W over a remote valley; The site “commands the valley and interior pass”	150×80 m Ordinary camp-site?	MH coarse ware and probably LH	(Gazetteer, 168 (D 202) (MME No. 202; M III, 133) The place controls the access to SE Messenia through the Kyparissia river valley?

Continued.

No.	Site-name	Position in landscape	Size of area & remains	Chronology Pottery & other finds	References & Notes
A17	Konchilion: Kastro	In the mountainously terrain, about six to seven kilometers south of Malthi. On the summit and upper W slope on a flat-topped hill	Ca. 150×70 m NNE-SSW Ruins of a thick wall, made of large rough stones that “may be ancient”	MH and LH III recognized among sherds distributed over an area with ruined thick walls of large rough stones	(Gazetteer, 169 (D 203), “typical hill fort of the Malthi type” (<i>MME</i> No. 203) (<i>M III</i> , 144) Hope-Simpson & Dickinson in Gazetteer, 169, compare the site with Malthi (A2) (Gazetteer, 170 (D 206) (<i>MME</i> No. 206) (<i>M III</i> , 143)
A18	Meligala: Ayios Ilias	On the top and the W and SW slope on the highest point	At least 80×50 m Very worn BA sherds spread over the area Ordinary camp-site?	MH incised ware and LH III	(Gazetteer, 171 (D 213) (<i>MME</i> No. 213) The place was considered a “typical small hill settlement” and chosen for detailed survey and environmental study (<i>MME</i> 24 and Pocket Map 2–3; <i>M II</i> , 231) (Gazetteer, 172 (D 215) (<i>MME</i> No. 215) Cf, the MH ear-shaped lug with similar found at Malthi (<i>M II</i> , 231, <i>M III</i> , 143)
A19	Parapoungion: Ayios Yeoryios	On the flat top and upper S terraces of the high spur. Considered a “typical small hill settlement”	Ca. 100×60 m Ordinary camp-site?	Much MH incised ware and some LH III	(Gazetteer, 175 (D 225) (<i>MME</i> No. 225) (<i>M III</i> , 140)
A20	Agrilovouno: Ayios Nikolaos	Hilltop, on the S tip of a long spur. Controls the access to the NW branch of upper Pamisos valley	Ca. 190×40 m Upper slopes on S and E are covered in sherds and stones Ordinary camp-site?	MH coarse ware dominates	(Gazetteer, 176 (D 228) (<i>MME</i> No. 228) (<i>M III</i> , 140)
A21	Aetos: Palaiokastros	Upper NE and E terraces of the steep conical hill	Ca. 100×80 m BA sherds strewn Ordinary camp-site?	MH incised ware	(Gazetteer, 178 (D 237) (<i>MME</i> No. 237) (<i>M III</i> , 136)
A22	Aetos: Mourlou	The top and upper slopes of a rounded hill	Ca. 120×100 m Strewn sherds Ordinary camp-site?	MH	(Gazetteer, 179 (D 243) (<i>MME</i> No. 243) (<i>M III</i> , 130)
A23	Kamari: Mesovouni	On the top and upper slope of the Mesovouni hill, near stream	Ca. 130×70 m Ordinary camp-site?	Representative MH sherds and coarse ware	(Gazetteer, 180 (D 245) (<i>MME</i> No. 245) (<i>M I</i> , 231; <i>M III</i> , 130) A prehistoric Acropolis?
A24	Sidherokastro: Sphakoulia	A large place controlling a fertile upland valley on the flat top and the upper W and S terraces of the ridge on the north side of the Aulon valley	Ca. 100×70 m Strewn with BA sherds Ordinary camp-site?	MH and LH IIIB	
A25	Fonissa: Aspra Litharia	Mainly on the W slopes of a spur that projects northward from the range of the Neda valley	Ca. 100×60 m Only a few characteristic sherds were found Ordinary camp-site?	MH and LH	
A26	Lepreon: Ayios Dhimitrios	On a high and steep spur, overhanging a deep and fertile valley	Ca. 150×100 m Sherds of good quality were abundant over the whole hilltop Ordinary camp-site?	EH II, MH and LH II-III	

B. ARGOLIS AND CORINTHOS ON E PELOPONNESE

No.	Site-name	Position in landscape; Architect. remains	Tumuli & other graves; Human remains	Metal	Chronology Pottery & other finds	References & Notes
B1	Lerna	MH settlement site, with remains of apsidal houses	Large ceremonial tumulus built above the destroyed EBA layers. Intramural (mostly children) graves		Same “running dogs” decor as at (B4) and (B10) made by Mobile artisan in EH?	(Rutter 1995) (Gejvall 1969)
B2	Argos	On a slope	Tumuli	×	Basin-shaped bowls (BCH 30, 1906, 2 figs. 27, 28, 29; p. 23 fig. 40, p. 25 fig. 37)	(Protonotariou-Deilaki 1980) ×) ‘Shoe-slot’ spearhead in Grave 71 in Tumulus G
B3	Mycenae		Early “tumuli”, C?, and a EB pre-decessor beneath Grave Circle A?	×		(Protonotariou-Deilaki 1990) (Mylonas 1966) ×) ‘Shoe-slot’ spearhead in Grave IV in Grave Circle A
B4	Tiryns				“Running dogs” decor made by mobile artisan in EH?	(Dickinson 1994)
B5	Asine	At the foot of a slope	Tumulus	×		(Nordquist 1987) ×) ‘Shoe-slot’ spearhead near Grave MH 58 on Terrace III (remains of the wooden shaft still preserved at the time of excavation?) (Frödin & Person 1938, 258 fig. 182:2) (Persson 1930) (Åström 1986) (Protonotariou-Deilaki 1990) (Payne 1988)
B6	Dendra	At the foot of a mountain slope	Tumuli with sacrificed horses			(Gazetteer, 39)
B7	Mastos	Some people for instance from the Berbati valley, may due to soil erosion, have moved to more fertile areas on a higher hill, Mastos, suitable for herding			EH III – MH ceramics	
B8	Corinth					(Blegen 1921)
B9	Korakou					(Blegen 1921)
B10	Zygories				“Running dogs” decor made by mobile artisan in EH II?	(Blegen 1928)

C. ATTIKA

No.	Site-name	Position in landscape; Architect. remains	Tumuli & other graves; Human remains	Metal	Chronology Pottery & other finds	References & Notes
C1	Eleusina		Extensive MH/LH cemetery. 92 MH graves			(Mylonas 1975)
C2	Athens	South slope of Acropolis	Small tumulus		Ceramic bowl(s), rim decor. similar to the Aphidna large bowls (pers. comm. K. Demacopoulou)	Excavated 1902
C3	Aphidna, in the pass connecting north Attica with Boeotia	On a slope on the south bank of the Charadra river; MH sherds are widespread on the Kotroni acropolis, c. 1.5 km NNE of the tumuli	MH tumulus with 13 graves, cists and 6 pithoi; There may be a similar mound (tumulus?) ca. 100 m NW of the tumulus and a series of smaller mounds to NE on the lower slopes leading down to the artificial lake.	×	Zoomorphic rhyton Fragmentary obsidian blade “Un-orthodoxy” pottery	(Wide 1896) (<i>Prakt</i> 1900, 65) (Dickinson 1977, 98) (Hielte-Stavropoulou & Wedde 2002) (Gazetteer, 220 (F 54) ×) 1 silver ring, 6 gold rings, silver and bronze fragments
C4	Vrana	At the foot of the mountain, on the south bank of the Charadra river	At least seven tumuli, in a cluster on the south bank of the Charadra creek, ca. 9 km SE of Aphidna.	Bronze knife; Silver ring		(Gazetteer, 218 (F 49) (Marinatos 1970) (Stikas 1958) (Pantelidou-Goufa, forthcoming) (Hielte-Stavropoulou 1994 & 2001)
C5	Plasi, ca. 3.5 km east of Vrana in the plain of Marathon ca 600 m from the sea	Among the MH ruins is a large mansion (EBA?) of “palatial dimensions analogous to the Lerna palace”	A MH cist grave and a potters kiln found inside the building 1970; also bases of wooden columns that had supported the roof and traces of door frames, when work was resumed in 1984		The MBA/early LBA material is contemporary with Vrana. Also, an unpublished beak-spouted jar (in the Museum of Vrana) comparable to Thera LM IA	(Mastrokostas 1970) (Gazetteer, 219 (F 51)
C6	Raphina	A low hill on the N side of the bay;		×	Bothroi dug into a house on the hill contained EH III? or early MH? Pottery	(Gazetteer, 217 (F 45) ×) Widespread traces of bronze-working activity, from the EH period?
C7	Brauron	In a small bay, on a low hill ca. 160×80 m; Remains of a large house, attributed to MH			Duck-vase of Phylakopi I-type	(Gazetteer, 214 (F 38)
C8	Kiapha Thiti					(Hans Lauter 1988, in <i>Aegeum</i> 3)

Continued.

No.	Site-name	Position in landscape; Architect. remains	Tumuli & other graves; Human remains	Metal	Chronology Pottery & other finds	References & Notes
C9	Thorikos			× Litharge in a late MH layer		(Gazetteer, 209 (F 25) ×) Metal already extracted from "Mine 3", in EBA II
C10	Anavys-sos: Ayios Nikolaos	High rocky head-land ca. 1.5 km W of Anavyssos salt-pans. The headland ridgetop measures ca. 100×30 m	MH cist tombs eroded by the sea, with a mass of fine MH pottery near them		Good quality MH Mattpainted, Minyan and polychrome, found all over the headland and esp. on the N slope below the Hellenistic? fortifications	(Gazetteer, 208 (F 23) "The site was abandoned at the end of MH"

Examples of possible MH – camp-sites in Attica, usually located on spurs or flat-topped hills with MH sherds, but no architectural remnants. Temporarily resting-places/camp sites? Most of the descriptions are taken directly from Gazetteer 1979, 157ff. and GAMS 1965.

No.	Site-name	Position in landscape	Size of area & remains	Chronology Pottery & other finds	References & Notes
C11	Cave of Pan	On Mount Parnes, ca. 4 km N of Chasia	Camp-site?	MH Matt-painted sherds and some LH IIIC	(Gazetteer, 220 (F 56) (AE (1906) 100)
C12	Nea Ionia	The low hill of Nemesis	Ca. 160×120 m Camp-site?	Some MH coarse ware	(Gazetteer, 202 (F 5)
C13	Mount Hymettos		Camp-site?	EH/MH pottery. Obsidian	(Gazetteer, 205 (F 14)
C14	Koropi: Ayios Christos	A hill that constitutes a natural acropolis	The flat upper part is ca. 200×90 m and a further ca. 200×90 m on the terraced S slope. Camp-site?	MH Minyan ware (in the BSA collection); and a LH I/II jug	(Gazetteer, 215 (F 40)
C15	Vari: Kitsi	Prominent hill at the S end of the Mesogeia plain	A small knoll on top ca. 60×30 m and up-per W and NW terraces ca. 150×100 m Camp-site?	The place is covered in sherds. MH is well represented and there are some EH II and LH III	(Gazetteer, 208 (F 22)
C16	Spata: Magoula	On a low rounded hill	Ca. 200×100 (LH chamber tombs cut into the foot of the hill)	MH sherds thinly spread over the surface of the hill	(Gazetteer, 215 (F 42)
C17	Cave of Pan Marathon: Ninoi	In the foothills W of modern Marathon	Camp-site?	Occupation from Neol. and all phases of the Bronze Age; copper & bronze chisel	(Gazetteer, 221 (F 53)
C18	Skala Oropou	A low mound ca. 500 m from the sea and near the edge of the coastal plain	Camp-site?	MH Grey Minyan and Mattpainted ware, and a few EH III and LH III sherds	(Gazetteer, 221 (F 57)
C19	Bathiza	On a high isolated rock on the N side of the river Asopos	Camp-site?	EH II and MH pottery	(Gazetteer, 221 (F 58)

D. AROUND THE S-W AEGEAN SEA AND ON EUBOIA

No.	Site-name	Position in landscape; Architect. remains	Tumuli & other graves; Human remains	Metal	Chronology Pottery & other finds	References & Notes
D1	Ayia Irini on Kea		Tumulus just outside the gate			(Overbeck 1989)
D2	Kolonna on Aegina		Well equipped "warrior grave", some generations earlier than the Grave Circles at Mycenae	×	Kolonna VII–IX on Aegina is neither MH nor MC but rather intermediate between the two, like Ayia Irini on Keos was during the EBA	(Kilian-Dirlmeier 1997) ×) Bronze weapons
D3	Kastri on Kythera					
D4	Phyla-kopi on Melos				The general source for obtaining obsidian from Neolithic times on	
D5	Lefkandi		Early Iron Age grave within large building with sacrificed horses		Also MH	
D6	Kaloyero-vrisi		Extensive EBA cemetery with Cycladic affinities			(Sampson 1988)
D7	Manika on Eubolia				MH	(Sampson 1988)

E. STERIA ELLAS

No.	Site-name	Position in landscape; Architect. remains	Tumuli & other graves; Human remains	Metal	Chronology Pottery & other finds	References & Notes
E1	Thebe in Boeotia	Early apsidal houses from an EH II date; The brick-built EH II? Ritual? Tumulus?, on top of the Amphion hill	Beneath the Mycenaean megaron was 17 graves found as part of a large MH cemetery. Many had its opening at one side	×		(Demacopoulou 1975–76) (Konsola 1985) (Spyropoulos 1972, 127) ×) 'Shoe-slot' spearheads in graves
E2	Eutresis	Large and well-built EH houses. Destroyed by fire in EH III. At least seven complete MH houses, some with paved forecourts	Intramural burials 2 pithoi-burials, children. Traces of textile		"Early MH material difficult to identify. Rhyton of a bull. The three MH layers are of an advanced date, including vases similar to Phyl I types. Caskey 1960: "Sauceboats are not found; the tankard is very common, as is the bowl with out-turned rim (for shape bowl se pl. IX,4)". A layer of burnt debris, which had been recorded by the earlier excavators as overlying the remains of EH III in almost all parts of the site, was clearly observable in Trench B. Undoubtedly a major disaster overtook Eutresis at this time	(Goldman 1931) (<i>BCH</i> 1959, 67) (<i>AR</i> 1958, 10–11) (Caskey, <i>Hesperia</i> 29, 1960, 126–) The 1958 suppl. excav. by Caskey discovered a curved wall, a section of an EH round building ca. 6.50 m in diam with a shaft in the middle more than 3 m deep. Evidence for wooden post-hole buildings in EH III levels (Goldman 1931, 28, fig. 32)

Continued.

No.	Site-name	Position in landscape; Architect. remains	Tumuli & other graves; Human remains	Metal	Chronology Pottery & other finds	References & Notes
E3	Ayia Marina	North side of the Kephisos river; A low mound ca. 120×100 m, occupied from Neol. to MH period & LH IIIC	3 cist-graves		(Syriopoulos 1994) According to J. Maran, Ayia Marina FH III has “ritz- und einstichverzierter Keramik” comp. to CetinAKultur? <i>Arch Kor.blatt</i> 17 (1987), 78. Deep pre-MH layers but also MH habitation	The EH remains are amongst the most important in the region. (<i>PRAKT</i> 1910, 163–; 1911, 205–) (Gazetteer no. 456)
E4	Orchomenos	Settlement area ca. 500 m×200 m. Small round Neol. huts 2–6 m in diam. Apsidal houses in EH	Tumulus-like Structure (LH III?) (<i>AM</i> 30 1905, 130); North of the “Treasury of Minyas” were (1972) some late MH tombs containing goods of Shaft Grave type?		MH cist graves with minyan ware	(Schliemann, <i>JHS</i> 2, 1882, 122) (Bulle 1907) (AAA 3 1970, 263; 6 1973, 392; 7 1974, 313)
E5	Kirrha	The EH III–LH IIIB settlement flourished in the MH I period and declined in MH II and early MH III	Highpoint in late MH III with solid buildings; Intramural graves: EH pithos burial MH pit and cist burials	×		(Dor <i>et alii</i> 1960) (AAA 6 1973, 70–) (Nikopoulou, AAA 1968) ×) Tin mines between Kirrha and Krisa may have been in use in the EH period (<i>JHS</i> 49, 1929, 89–)
E6	Krisa	First occupation of the site in the beginning of MH period. Apsidal storeroom. Small LH I megaron	Intramural cist graves		Minyan and Matt-Painted pottery	(Dor <i>et alii</i> 1960)
E7	Elateia: Drachmani	On a hilltop in the Kephisos Valley; Mound west of the modern village. Neol., EH, MH and LH IIIAB	In a small mound north of the site, an early MH single burial (woman?) covered with stones; Indications of sacrifice at the time of burial. An elaborately decorated Matt-Painted vase was placed on top of the burial mound, perhaps for later offerings or as a marker. Cf the large bowls above the 6 pithos graves in the tumulus of Aphidna	×	Pottery, similar to Cretan MM wares?	(<i>PRAKT</i> 1909, 402–) (Revue des Etudes grecques 25, 1912, 254–) According to (Blegen & Wace, 1931, 311) offerings in a pit, ashes and burnt material (cerials), cf the offeringpit above grave IV in Grave Circle A at Mycenaea ×) In grave: Gold earrings, hair coils, bronze knife

Continued.

No.	Site-name	Position in landscape; Architect. remains	Tumuli & other graves; Human remains	Metal	Chronology Pottery & other finds	References & Notes
E8	Lianokladi	Left bank of the Spercheios River; Settlement on a low mound 200×140 m. MH apsidal house incl. storeroom containing pithoi;	2 cist-graves	×	Neol., EH, MH (and LH periods)	(Gazetteer no. 473) (AAA 6 1973, 395) (AR 1973–4, 20–21) ×) Copper ore in the area (Sampson 1988)
E9	Thermon in Aetolia					(Romaioi 1915 & 1916)
E10	Dramesi: Hyria	300×75/100 m great mound (camp site?) 15 m or more, high above the level of the plain	“Underground structure”, probably grave since “human bones found together with Mycenaean pottery”	×	The surface is strewn with EH, MH and LH pottery fragments. Two MH vessels, one askos and one Matt-painted skyphos?	(Blegen 1949) ×) “Spearhead, with a socket on each face for the fastening of a split shaft”, a so called ‘shoe-slot’ spearhead

F. THESSALY

No.	Site-name	Position in landscape; Architect. remains	Tumuli & other graves; Human remains	Metal	Chronology Pottery & other finds	References & Notes
F1	Sesklo	Both Sesklo and Dimini have a strategic position in the broad pass between the Thessalian plain and the Sea. Dist. to waterfront ca. 5–10 km	More than 170 MBA (MH?) graves, built of small stones or unburnt bricks. Single-graves. Deads in hocker-position, most on left side	×	The Neol. Settlement abandoned from the 4th Mill Minyan cup with swing-handles etc.	(Andreou 1996) (Syriopoulos 1994) (Theocharis 1953/54) ×) ‘Shoe-slot’ spearhead in Grave 56, together with pottery dated to before the end of the MH; and fragments of mould in stone
F2	Dimini	Late Neol. settlement			Abandoned at the beginning of the 3rd millennium	Probably only a farm-building, the megaron in the main court, continued to be used by a stock-raising family (Maran 1992)
F3	Pefkaki-Magula				Central Bronze Age site, broad alleged connections, e.g. the Adriatic	
F4	Ptelio	Apsidal house			Pottery. Basin-shaped bowls (Praktika 1951, 136, fig. 6)	(Maran 1992) (Andreou <i>et alii</i> 1996)
F5	Argissa Magula		Ca. seven MH graves		Corded ware (Listed in Hanschmann & Milojevic, 321–35)	(Syriopoulos 1994, 626); (PraktArch (1951) 129–141; (1952) 164–171, 173–179; (1953) 123; Argissa IV (I), 133)

Continued.

No.	Site-name	Position in landscape; Architect. remains	Tumuli & other graves; Human remains	Metal	Chronology Pottery & other finds	References & Notes
F6	Velestino					(Hanschmann & Milojevic 1976) (Andreou <i>et alii</i> 1996) (Andreou <i>et alii</i> 1996)
F7	Tirnavos	On the highland, west of mount Olympos	Still a centre for the pastorals			
F8	Elassona	On the highland, west of mount Olympos	Still a centre for the pastorals			

G. IONIAN ISLANDS AND EPIRUS

No.	Site-name	Position in landscape; Architect. remains	Tumuli & other graves; Human remains	Metal	Chronology Pottery & other finds	References & Notes
G1R	Steno on Leukas the R-graves	In a valley	33 built circular platforms of stone surmounted by tumuli. Pithoi or small cist; The cremations are often incomplete. Al-ready Hammond, <i>BSA</i> 69 (1974) 137, but also Maran (1998) 334, point to the similarity when it comes to the “Verbrennungsplatzen” in the inner core of the tumuli, with the Belotic-Bela-Crkva (N5) group in West-Serbia	× “Locken-ringen, in gold”	Decorated bone tubes, similar to those from e.g., the tombs at Chalandriani	(Dörpfeld 1927) ×) “Lockenringen” of Leukas type have been found in Grave 1 at Velika Gruda (P8); Grave 8 in T.1 at Tarnava (M20). (Maran (1998) 331) “Lockenringen”, have also been found in Pithos Grave 3 at Aphidna (Wide 1894), Elatiea mm? The metal weapons, mainly daggers and spearheads are closely similar to those of the “royal” Tumulus of Mala Gruda (P7) in Montenegro (Dörpfeld 1927) (Tripathi 1988) ×) ‘Shoe-slot’ spearhead, in Grave 7, MH II (Heurtley 1948)
G1F	Steno on Leukas, the F-graves	On a slope?		×		
G2	Pelikata on Ithaka	On a ridge			Pottery with horseshoe-shaped handles is found on Ithaka, as well as in Epirus (G4–G10)	
G3	Kokkolata on Kephallonia					
G4	Grabes in Acarnania	In a cave in a cliff on the hill just south of the ancient city			Prehistoric remains	(Benton, <i>BSA</i> 1934, 1938, 194)

Continued.

No.	Site-name	Position in landscape; Architect. remains	Tumuli & other graves; Human remains	Metal	Chronology Pottery & other finds	References & Notes
G5	Thesprotikon	On a hillock (near the Ayios Athanasios Church)	Group of circular structures with stone foundations about 6 m in diameter		Local prehistoric pottery of a Bronze Age date and a "bored stone celt"	(<i>BCH</i> 1954, 135) (Dakaris 1971, 203) Cassopaia, 29 "The thickness of the walls are 0,5–0,7 m and are built of flat stones (fig. 48). The stone construction is confined to one side of the circle, to bring the circular space of the hut to a plain level. The hut was then made of wood and straw"
G6	The Nekromanteion at Mesopotamos		There may be a tumulus		MBA coarse ware	
G7	Kastritsa				MBA coarse ware with plastic décor and a dark brown or black monochrome ware, called K2, resembl. typical Minyan coarse ware	Knobs, warts, 'horse-shoe shaped moulded grips' (cf Central Balkan) (Dakaris 1951 & 1952) (Evangelidhis 1935, 195 C, pls 2–9)
G8	Aphiona	On Kerkyra			Stone shaft-hole hammer axes	(Howell 1973, 90) (Sordhinas 1965; 144–5; 1968, 80–83; 1969, 410–14)
G9	Dodona			×	Stone shaft-hole hammer axes	(Howell 1973, 90) ×) Imported Anatolian dagger
G10	Vitsa					Vitsa. The cemeteries of a Molossian settlement?
G11	Doliana				EBA?	(Dousougli & Zachos 1994) (Andreou <i>et alii</i> 1996)

H. W MACEDONIA, AND THE AREA W OF THE AXIOS/VARDAS RIVER

No.	Site-name	Position in landscape; Architect. remains	Tumuli & other graves; Human remains	Metal	Chronology Pottery & other finds	References & Notes
H1	Kozani	Apsidal houses				(<i>Ergon</i> 1960, 96 ff, 1963, 41 ff)
H2	Dispilio	Down at the Lake Kastoria, piles, wattle and daub				(<i>AAA</i> 1968)
H3	Armenochori 5 km NE of Florina	In the south part of the Pelagonia plain; Chalkolithic to Middle Bronze Age in 8 successive habitation layers.			Two-handles "Krüge" in phase 3, with exact parallels to Bubanj III-group" Maran (1998), 336. Cf. Aslanis (1985), 306. Such two-handles	(Heurtley 1939, 57–9). After 65 years was excavation resumed in 1996 and 1997 by Pan. Chrysostomou (1998). He compares Armenochori layer

Continued.

No.	Site-name	Position in landscape; Architect. remains	Tumuli & other graves; Human remains	Metal	Chronology Pottery & other finds	References & Notes
		EBA 1, layer VII, destroyed or abandoned, covered by a 50–70 cm layer VI without finds. EBA 2, layer V, 30–40 cm, sparse with pottery 2500–2400 B.C., destroyed by fire			“Krüge” continue in use from EBA 2 into the MBA in Northern Greece. Maran (1998), 336	III, end of EBA, with Serbia (H11), Period IA at Kastana (J1), Haghios Mamas (K3), Level IV/Va–b at Sitagroi (J3), Maliq IIIa (Q14) and Karamani IIIa–b (N11) in Pelagonia in FYR Macedonia. EBA 3, layer III, 30–50 cm, left denser cultural remains. Pottery possibly to store 900 litre. Evidence that the economy at the end of EBA was based on agriculture, stockbreeding supplemented by hunting and fishing. Palaibotanical remains revealed einkorn, possibly emmer, lentils, chickpeas, and acorns. (Chrysostomou, 1998, 341, 350). The MBA, layer II, has been destroyed by the modern cemetery (Petsas, <i>BCH</i> 1954, 140 (AR 1953,159) (Hammond, 1973) (Hammond, Macedonia 266–267 ...) (Syriopoulos, 1994) (Excavations 1980, 104 (Lake Vegoritis)
H4	Armissa and other Prehistoric sites north of Lake Vegoritis	At the NE shore of the diminished lake (earlier called Lake Ostrovo)	Tumulus at ‘Nisi’, and ‘Tsairia tis Ekklesias’, diam. 11,5 m bordered by upright-standing plaques; Twelve graves			(Papaethymiou-Papanthimou, A. & A. Pilali-Papasteriou 1998)
H5	Archondiko, near Yannitsa	Pile-constructed village between 2100–1900 B.C. Also remains of buildings with stone foundations, as well timberpost framed dwellings	Richly ornamented, incised pottery is characteristic of the period, triangles, spirals, braids filled with white paste		End of EBA – beginning of MBA. Five samples of C14 for sector IG has given the dates 2300–2000 B.C. Samples of C14 from sector ID has given the dates 2138–1942 B.C., which the excavators consider to be the main phase of the settlement	
H6	Aiani					
H7	Kitrini Limni					
H8	Koilada (Xeropigado)					(AEMT 1998)

Continued.

No.	Site-name	Position in landscape; Architect. remains	Tumuli & other graves; Human remains	Metal	Chronology Pottery & other finds	References & Notes
H9	Mandria	“Dysvato ypsoma” (inaccessible hillock) south of the modern village of Aiani; area 6,80×15 m	28 graves of which 16 in pithoi and 12 cist graves, some floors strewn with pebbles. Anakomides and cremations		Pottery comparable to MBA at Goules (H 10). Some important differences and other characteristics gives also a somewhat later date, in the early LBA	(Karamitrou-Mendesidi 2000, 178; and personal comm.)
H10	Tourla Goules		41 burial in pithoi (probably) under tumulus		Pottery: Cf. Armenochori (H3) and Maliq (Q14)	(Ziota & Chondrogianni-Metoki 1993)
H11	Servia	Now under water			There was a long break in settlement (min. 2500 years) after the destruction of phase 7. For the first EBA, Phase 8, no structures are recorded, but seven “structures” from later EBA. Horse remains	(AAA 5, 1972, 27 ff) (AAA 6 1973, 419 ff 7, 1974, 351 ff) (Ridley & Wardle 1979, 229) (Rhomiopoulou <i>et alii</i> 2000)
H12	Nea Nikomedia Emanthia	10 km NE at Veroia at the edge of the now drained lake of Yiannitsa; wattle and daub	Burials in shallow pits outside the houses		5 female figurines in shrine? 12 m ²	(<i>Balkan Studies</i> 5, 1964, 114ff) (<i>Antiquity</i> 38, 1964, 294ff)
H13	Vergina	The common constellation of pottery: A jug placed near the head and a bowl or small amphora placed by the feet. A LH III B bowl in Tumulus LXV	Of the 107 excavated tumuli, most of them were from the Hellenistic period. The 36 prehistoric tumuli contained at least 340 early Iron Age graves. Syriopoulos (1994) refer that according to Hammond, the oldest graves in Tumulus Z and in other tumuli, must be dated to the MBA period		According to Andronikos some vessels may have LH IIIB “originals” as prototype (Andronikos 1969, fig. 24 & 25). The bowl LXV 61 (LH IIIB?, Furumark, Fig. 15, nr. 295) in Petsas report seems comparable to one from Assiros (Wardle 1980, fig. 55 & 58) (Assiros, p. 252, fig. 14, 31). (Some LBA pottery may have been heirlooms). Most material, both pottery and metalwork (Praktonian bronzes) have more affinities to the Illyrian early Iron Age and the Glasinac culture up in Bosnia-Serbia	(Petsas 1961–62; Petsas 1963) Andronikos noted that the earth in the tumuli was not local but had been brought in from a distance (Hammond, 1991 noted that the oldest graves in Tumulus Z and in other tumuli, must be dated to the MBA period). Andronikos remarked that he never found both spearheads and swords in the same grave, and he thus drew the conclusion that they were equally valuable as fighting weapons (Andronikos 1969). x) The prehistoric tumuli contained an abundance of metal finds, both jewellery and weapons like so-called “Griffzungen- und Vollgriff-schwert” but also of Nau II type up to a length of 80 cm

J. C AND E MACEDONIA, E OF THE AXIOS/VARDAR RIVER

No.	Site-name	Position in landscape; Architect. remains	Tumuli & other graves; Human remains	Metal	Chronology Pottery & other finds	References & Notes
J1	Kastanas	At the bank of the river Axios (Vardar). The water level was higher during the Bronze Age so Kastanas was at that time situated on an island in the Axios River; Oval-shaped settlement-hill, 120×50 m, 17 m above the surroundings			The bottom layer 26, is placed upon a thin humus-layer covering the flooding-layer. The layers 24–20 are from the EBA. Phase 23–22b is comparable to Armenochori III (H3) in EBA 3. Layer 12 held the most Mycenaean pottery of a mature age Stratified ceramics also comparable to Argissa-Magoula (F5) (Andreou 1996, 557)	Excavations 1975–87 by the German Institute and K. Romiopoulou (DAI 1975–78) Hänsel; B)
J2	Assiros	Thick clay-mass walls			Ca. 2000 BC	(Wardle 1980)
J3	Sitagroi	Apsidal house of wooden construction			Level Va, 2350–2130 BC (Chapman 2000, 243–245)	(Renfrew <i>et alii</i> 1986)
J4	Saratsi			×	EBA	(Heurtley 1939, 26–31) ×) Clay crucible and gold

K. AROUND THE N-E AEGEAN SEA

No.	Site-name	Position in landscape; Architect. remains	Tumuli & other graves; Human remains	Metal	Chronology Pottery & other finds	References & Notes
K1	Palamari on Skyros	Newly discovered early settlement				
K2	Haghios Mamas On Chalkidiki in Central Macedonia				Sherds of Corded Ware and MBA pottery	(Howell 1973, 106) Certain ornamental motives, like horizontal rows of triangular notches under the beaker rim were discovered in the earliest layers. Hagios Mamas (Aslanis 1985) and Jevtic (1997) 84, points to the similarities with the pottery of the EBA Hillforts in the Novi Pazar area (N8)
K3	Molyvopyrgos				According to Wardle, Molyvopyrgos is the only site (in Northern Greece) with good Gray Minyan; and therefore definitely of a MBA date	(Wardle 1975, 209)

Continued.

No.	Site-name	Position in landscape; Architect. remains	Tumuli & other graves; Human remains	Metal	Chronology Pottery & other finds	References & Notes
K4	Kriaritsi Sykias	By the Gulf of Aghios Oros, on the Thissonian peninsula in Chalkidiki; An EBA settlement layer of 30–40 cm, was found and excavated in 1999–2000, about 500 m NW of the cemetery	The cemetery found in 1997, covers 400 m ² , and has a height of 41 masl. One large tumulus covered 30 individual smaller tumuli with exclusively cremations, belonging to the Early Bronze Age		The comparison with Leukas is not made on pottery styles, but on chronology, grave structures and burial customs	This newly excavated cemetery is the only one to be compared with the EH II tumuli field at Steno on Leukas (G1R) with such a narrow cluster of smaller tumuli. At Leukas there are both cremations and inhumations (Asohidou, Mandazi & Tsolakis 1998) (Asohidou <i>et alii</i> 2000) (The eforat at Kavala)
K5	Skala Sotiros on Thasos		Anthropomorphic statues			(D. Malamidou & S. Papadopoulou, The prehistoric Settlements at Limenaria: The Early Bronze Age AEMT, 11 (1997), 585–594)
K5	Limenaria on Thasos	Wall in fish-bone technique, cf. Troy and Lerna				(Bernabo-Brea) (Benvenuto) (<i>Poliochne kai e proime epoche tou chalkou sto boreio Aigaio</i> , 1997, Dumas & La Rosa, eds.)
K6	Poliochni on Lemnos	A large, strategic EBA-MBA settlement				

OUTSIDE PRESENT DAY GREECE

L. N-E ANATOLIA

No.	Site-name	Position in landscape; Architect. remains	Tumuli & other graves; Human remains	Metal	Chronology Pottery & other finds	References & Notes
L1	Troy					
L2	Kum Tepe	West of the Scamander river, near the hill of Hissarlik	Study result of 90 skeleton points to a mixed population (Eva Zengel 1990, 53)			Excavated 1932–1938 by the Univ. of Cincinnati under the direction of C. Blegen
L3	Beycesultan	Central Bronze Age settlement				(Lloyd & Mellart 1969) (Mellart & Murray 1995)
L4	Kultepe on the Konya plateau					(Ozguc 1986)

M. BULGARIA

The Pit-grave culture, characterized by single burials under tumuli and in some occasions by ochre in the graves, in NE Bulgaria, SE Romania, the Black Sea coast and eastern Hungary: 4320–3400 BP, after calibration 3030–1510 B.C.

No.	Site-name	Position in landscape; Architect. remains	Tumuli & other graves; Human remains	Metal	Chronology Pottery & other finds	References & Notes
M1	Ezero in the Sliven district, Bulgaria	200×145 m, h. 10 m, about 50 houses, both rectangular and apsidal	Some intramural burials of adults and children in jars		There are late layers e.g., Karanovo VII, –2130 B.C., contemporary with EBA III	3.300 m ² excavated by G.I. Georgiev & Merpert et al. 1952–1971 (Lichardus 1985, 39) (Merpert 1993)
M2	Junazite in SW Bulgaria, between Stara Planina and the Rhodopes mountain systems	Linked through river valleys to: Northern Greece, Central Balkan and Danube. Fortified acropolis 140×100 m, 4–5 dwelling-houses and granaries (for the elite?). Four hectares of settlement below	In the destroyed Final Eneolithic houses, whole families buried, 7/house, Man and Woman and Children, 46 skeletons with skull traumas, pottery, gold ornament, figurines, etc. All are conserved under the EBA layers		Upon the bones of their predecessors, the “new-comers”, the EBA “ancestors of the Thracians” left 9 layers. After 9th layer, (transition EBA to MBA), the number of Anatolian analogies sharply decreases. MBA 8 layers. After the 17 Bronze Age layers, comes a thin “amorphous” layer, then follows “Thracian Hallstatt” 13th century B.C.	
M3	Ai Bunar, in the district of Stara Zagora	Living quarters on top of a disused and infilled opencast	The miners graves were in the dis-used and infilled opencast	× Cu mine	The miners tools consisted of bones from deer and copper tools. Certain reasons lead to the assumption that already in the 4th mill. miners might have represented an ‘independent professional group’	Excavated by Cernych 1971–1974 (Cernych 1978) The mining activity was probably immense
M4– M6	Around Šumen	On a plain, ca. 75 km W of Varna and the Black Sea	Cluster of necropolises with 24 or more tumuli, for example: Madara Carevbrod-Endže Kalugerica			(Panajotov 1989, 168) Madara with 6 tumuli. Carevbrod-Endže with 2 tumuli excavated where 7 graves contained 9 skeletons. Kalugerica with 8 tumuli, aligned in a row, cont. more than 14 inhumations & 2 cremations (Panajotov 1989) (Bailey 2000, 246–) Smolnica with 7 tumuli. Kavarna with 4 tumuli, where the smaller tumuli surrounded the larger one
M7– M8	Around Tolbuhin		Cluster of necropolises with ca. 40 tumuli, for example: Smolnica Kavarna			

Continued.

No.	Site-name	Position in landscape; Architect. remains	Tumuli & other graves; Human remains	Metal	Chronology Pottery & other finds	References & Notes
M9	Plačidol I, around Tolbuhin		6 tumuli of which 4 had been excavated until 1989 (Panajotov). The highest are almost 8 m high; The smaller tumuli surrounded the larger one. Grave 2, keno-taph?, burnt wood	×	4 solid wooden wheels in T.I, grave 1. Anthropomorphic stone sculptures; T I, grave 1 BP 4170±50. T I, grave 2 BP 4260±60. Pit-Grave Culture	(Panajotov & Dergachov 1984) (Panajotov 1989) (Bailey 2000, 246–) Rescue excavation by I.Panajotov & V. Dergachov. ×) Copper spiral and silver beads found below head of 35–40 years old man
M10	Plačidol II, located 110 m SE of Plachidol I		The 3 smaller tumuli surrounded the larger one. 4 Tumuli of which the larger one, 42 m in diameter, was more than 3 m high; 10 individual inhumations and one body-less pit		Anthropomorphic stone sculptures; Probably to be dated to the Pit Grave culture	(Panajotov 1989) (Bobceva) (Bailey 2000, 246–) Excavated by Bobceva
M11	Žeglarci- Orljak		4 tumuli (of which one is excavated); 4 graves		Pit-Grave Culture	(Panajotov 1989)
M12	Poručik Gešanovo		15 tumuli in alignments of 3 rows		Probably Pit-Grave culture	(Bailey 2000, 246–)
M13	Trojanovo	Around Stara Zagora	1 tumuli; 2 graves			
M14	Dolno Zarane		10 tumuli (2 excavated); 10 pit graves		Ochra; associated with the end of Pit-Grave culture	(Panajotov 1989)
M15	Goran-Slatina		8 tumuli, align. in two rows and separated into groups and spaced 80–250 m apart; 34 inhum. graves. Crouched position on their back, S-SW direction		Towards the end of EBA I. Many grave goods	(Panajotov 1989)
M16	Tarnava around Vraca		20 tumuli, of which 3 had been excavated until 1989. 10 inhumations and 3 cremations; heads to the west (Panajotov 1989, 168)		Most graves furnished (Magur-Cotofeni III)	(Nikolov 2001) (Panajotov 1989)

Continued.

No.	Site-name	Position in landscape; Architect. remains	Tumuli & other graves; Human remains	Metal	Chronology Pottery & other finds	References & Notes
M17	Varna		300 graves investigated and 20%, i.e., about 60 graves, were symbolic=kenotaphi	×	The cemetery is dated to the last centuries of the 5th millennium (Nikolov 2001)	Both kenotaph Grave 2 and kenotaph Grave 3 had five goldrings in left and three rings in right ears, diadems on the foreheads, discs covered the eyes, foil on mouths (Makkay 1993 (1989). ×) Large quantities of gold jewelry and copper tools
M18	Belogradec around Vrana		10 tumuli of which the 7 were excavated (by Tončeva) contained Bronze Age graves		The beginning is associated with the Pit-Grave culture	(Panajotov 1989, 169)

N. CENTRAL BALKAN: SERBIA, KOSOVO, FORMER YUGOSLAVIAN REPUBLIC OF MACEDONIA, BOSNIA HERZEGOVINA, CROATIA, SLOVENIA

No.	Site-name	Position in landscape; Architect. remains	Tumuli & other graves; Human remains	Metal	Chronology Pottery & other finds	References & Notes
N1	Rudna Glava, in the mountain massive near Bor in NE Serbia	On a round shaped hill in a river valley		×	Ceramics, vessels and a ceramic sacrificial altar. Transition from older to younger Vinca-culture (D), ca. 4500 B.C.?	Excavated by B. Jovanovic 1968–1970 (Jovanovic, 1980) Cu mine. The most intensively investigated early mine in Central Balkan, with about 30 shafts, up to 20 m deep. Rudna Glava has helped to prove the autonomy and scale of copper metallurgy in the region. Malachite and azurite were extracted by using antler picks and stone pounds to break up deposits which may already have been weakened by the fire-heating and cold water technique. The mine was still in use during the Roman period, when iron was extracted (Stanojevic 1996, 7)

Continued.

No.	Site-name	Position in landscape; Architect. remains	Tumuli & other graves; Human remains	Metal	Chronology Pottery & other finds	References & Notes
N2	Vinča, on the banks of the Danube, near Belgrade in Serbia	Stratigraphy of 9.30 m. The prehistoric village of Vinča seems to have had an interval (6 m) between the last settlement of period B2 and the following period. The layers in period C, from 5.80 m to 4.50 m, has "blackish-grey pottery with rippled and polished decoration" (Milojčić, 1949). In period Vinča D, 2.50–1.50 m, the houses had several rooms with an apse-like room built close to a rectangular main room. Vinča E (Baden-Bronze Age culture), 1.50–0.60 m			There were horseshoe-shaped ovens in the houses. Such horseshoe-shaped ovens had been in use since the foundation of the settlement. One piece was found at the depth of 8.20 m	Excavated by MM Vasic 1908–1912, 1924, 1928–1932. (Milojčić 1949, 280)
N3	Bela Crkva in W Serbia	The site is beyond the valley of the river Jadar, a tributary of the Drina	Tumuli diam. usually max 20 m. Only inhumations in contracted positions, but a cremation was found at the base of the mound, believed to be connected with sacrificial rites			(Garasanin 1982)
N4	Belotić in W Serbia	At e.g. Belotic 15, is a small area, ringed with stones; Believed to have served for burial gifts	Tumuli max 20 m in diam. Both inhumations and cremations. The cremations have body and offerings "in situ" on the burning spot			(Garasanin 1982, 173)
N5	Dragačevo in W Serbia		T. diam. max 20 m. Only inhumations in contracted positions			(Garasanin 1982) Cists of irregularly placed stones were found in the upper part of the tumulus. The surface of the tumulus was covered with stones and a pot was placed on the top. Cf. Aphidna (C3) and Drachmani (E7)

Continued.

No.	Site-name	Position in landscape; Architect. remains	Tumuli & other graves; Human remains	Metal	Chronology Pottery & other finds	References & Notes
N6	Bubanj near Niš, Central Serbia	In the valley of Juzna Morava	Tumuli		Characteristic pottery of Bubanj III are cups with two handles	(Vasic 2001) (Garasanin 1982, 148–172)
N7	Gorešnica near the village of Markova Sušica, Skopje		Necropolis with inhumations ^{a)}		MBA/LBA. Marble pommel of a sword, found near the pelvis	(Kolistrkova Nasteva 1996) (Mitrevski 1997) ^{a)} For instance, in a cist, there is a burial in a “clenched/crouched position on the right side”
N8	Gradište-Pelince near Kumanovo, (East of Skopje)	Fortified settlement, at the top of a dominant hill. The site is naturally protected by steep slopes. An intra-mural cult place was named Dve Mogili, by the digging team (Trajovska). From later times, there is remains of an Iron Age fortification, (Mitrevski 2001, 95)	At about 200 m high, along the top ridge, the cult place is naturally bordered by volcanic stonestretching north-south and the deep river beds of Pcinja and Bistrica at the west and east sides of the hill. The central part, the highest rock, had been levelled and built up as a circular flat surface with the help of layers of clay and river stones, creating an altar, of 6 m in diameter. (Mitrevski)	×	The EBA-MBA pottery has certain analogies both to the Armenochori culture (H3) in the south and Junazite (M2) to the east, (Trajovska 1999, 61 and T. I–IV). Much of the EBA pottery is equipped with horse-shoe-shaped handles. Also numerous fragments of pottery and thrown away animal bones among the ashes. Trajovska points to the fact that the pottery finds indicate both a chronological and cultural link between the earliest layer of the settlement and the (round?) sacral structure	Lenka Trajovska reports (1999) about the research activities 1989, 1990 and 1994, when an area of 380 m ² had been investigated. Mitrevski (2001, 94–95), also in a lecture in Athens with additional information about the finds and the altar construction. ^{×)} Large quantity of slag among the ashes upon the altar
N9	Several sites East of the Vardar river	The sites are situated particularly along the valleys of the river Vardar's left tributaries			These settlements from Eneolithic times on, show completely new features in regard to the older Neolithic culture in the same area	(Mitrevski 2001, 92) The settlements are placed on naturally protected positions, convenient for defense (Mitrevski 2001) (Heurtley 1939)
N10	Karamani ca. 7 km NE of Bitoula	In the NE part of the Pelagonia plain, where earlier Neolithic sites like Porodin flourished			Karamani IIIa–b is contemporary with EBA 3 at Armenochori, layer III at the end of EBA, (H3) and Maliq IIIa (Q14), (Chrysostomou 1998)	
N11	Radobor ca. 15 km NE of Bitoula	A typical settlement-toumba with many cultural layers from EBA and MBA			In an EBA layer a system of several pottery kilns full of hundreds of new baked vessels was found	(Mitrevski 2001) Unpublished, but after 3 subsequent excavation campaigns with plenty of material, it seems to have been a substantial economic settlement within the Armenochori (H3) group

Continued.

No.	Site-name	Position in landscape; Architect. remains	Tumuli & other graves; Human remains	Metal	Chronology Pottery & other finds	References & Notes
N12	Hillforts in the Novi Pazar area in Central Balkan	Hillfort Ras, 800 masl. Hillfort Juzac, 1100 masl, on a dominant rocky peak, above the source of Raska river	At a distance of 2 km from the Postenje hillfort is a monumental tumulus, high above the valley of Raska river		The EBA horizon at Ras has no metal finds but one half of a polished stone-axehammer with circular haft opening, part of anchor-shaped pendants, a few small conical and biconical spindle-whorls, a pottery model of a wheel (Jevtic 1999, 75). EBA pottery with horse-shoe-shaped handles and certain ornamental motives, like horizontal rows of triangular notches under the beaker rim, were also discovered in the earliest layers of Hagios Mamas (K2) (Aslanis 1985)	Jevtic 1999, 73–84: “Certain elements characteristic for the EBA hillforts in the Raska valley could be identified also at the EBA settlements of the Greek mainland”: Conical bowl with slightly inverted rim, thin barbotine, button-like, ribbon-like and tunnel-like handles were found at Kritisana and Vardaroftsa, Also at EBA Servia (phase 8) (H11)
N13	Glasinac, east of Sarajevo in Bosnia		More than 20.000 tumuli (but some may be simple stone cairns without burials)		In use from EBA until late Iron Age	(Hammond 1982, 652)
N14	Vučedol near Vukovar in W Strem	Vučedol is on a barely accessible hill top, wooden palisade for defense?; Houses at V. seem to have had a wooden framework with walls of wattle and daub, some with absidal ends	Large number of bothroi and intramural burials	×	The Vučedol Culture in Ljubljansko Barje in north Serbia, in Croatia and in Slovenia, ca. 2920–1900 B.C. Decorated dove-shaped ritual vessels, small clay female figurines and horn-shaped ‘altars’. Two-handled goblets	Excavated by R.R. Schmidt 1938 (Schmidt 1945) (de Laet 1967) (Chapman 2000, 243–245) ×) Copper-working is well-developed, and the two-piece moulds were used for tools and axes

P. ADRIATIC COAST AND INLAND

No.	Site-name	Position in landscape; Architect. remains	Tumuli & other graves; Human remains	Metal	Chronology Pottery & other finds	References & Notes
P1	Brijuni on Istria			Sword	‘Shaft Graves’ objects, means contact with Mycenae?	(Rendic-Miocevic 1997) (Bernhard Hänsel, pers. comm)
P2	Lika, e.g., the Cave of Bezdanjaca near Vrhovine		Tumuli have been identified (but not excavated?)		MBA-LBA Wooden spoons have been found deeply in the barely accessible cave	

Continued.

No.	Site-name	Position in landscape; Architect. remains	Tumuli & other graves; Human remains	Metal	Chronology Pottery & other finds	References & Notes
P3	Cetina, with the sources of the Cetina river in Dalmatia		The Cetina culture is best known from a series of elite burials under barrow, in central Dalmatia		Finely flaked arrow-heads and archers' wrist guards. Decorated beakers and other drinking gears, 3rd millennium B.C. About pottery of Cetina type in Greece, see Maran 1998	(Della Casa 1995) The EBA Kotorac-Cetina Culture had a great impact on western Balkan. Finds of Cetina pottery among rock-cut tombs in Puglia in Italy demonstrate the extent of the network in which Adriatic elites now participated
P4	Brnica/Gaj	Located on the karst plain between three prehist. hillforts	Cemetery with 18 tumuli		Pottery decorations typical for the Cetina culture dates the tumuli to the EBA	(Archeologia Jugoslavia, Archaeological Reports, Site 52, Ljubljana 1986)
P5	Crkvina Mede/Doljani	On a plateau above the right bank of the Una river on the west slopes of Veliki Ljutoc Mt.	20 tumuli. Tumulus no. 16 measures 9×8,5 m; Ritual context with pieces of charcoal, fragments of pottery*, burnt soil in an area (diam ca. 2 m) in the northern part		*106 fragments of prehistoric Vessels, e.g., a large horseshoe-shaped relief EBA	(Archeologia Jugoslavia, Archaeological Reports, Site 53, Ljubljana 1986)
P6	Kupres in Bosnia, ca. 60 km W of Sarajevo S of Vrbas, a tributary to Sava-Donau	In a broad plain with small rivers, on ca. 1.130 masl between mountains. There are no Bronze Age settlements found in the valley, but some "gradinas" (fortifications?)	At least 51 tumuli are outspread in the plain. Tumulus no. 16, 27,5 ×31 m, h. ca 3,6 m, with a single, central grave. Inside: Male 170 cm, 60 years old, buried without clothes and ornaments but decked with animal hide. He was laid in an elaborated cist/ casket? made in wood		C14-date for Tumulus 16=3660±120= 1670±120 B.C. Relations with Cetina ca. 60 km to the East? (There is only ca. 40 km to the Cetina river) Also in T. no.16: a woven blanket, wool?	(Benac 1986) Of the 51 tumuli: 6 Tumuli with diam 35–45 m 5 Tumuli with diam 25–35 m 15 Tumuli with diam 15–25 m 25 Tumuli with diam 15 m or smaller
P7	Mala Gruda in Montenegro		Tumulus 35 m in diameter and ca. 4 m high; One central grave with inhumation. Traces of fire and ritual burials	×	Two indications of Vučedol culture (Lichardus 1985, 85)	Excavated 1970–1971 (Parovic-Pesikan 1976 (1972) (Primas 1996) ×) Dagger and 5 earrings in gold, a socket axe in silver, plaques in copper (Primas 1996)
P8	Velika Gruda	Near Tivat in Montenegro	Tumuli			(Primas 1996)

Continued.

No.	Site-name	Position in landscape; Architect. remains	Tumuli & other graves; Human remains	Metal	Chronology Pottery & other finds	References & Notes
P9	Tivat in the bay of Kotor		Tumulus of large dimensions. Under a layer of stone there was a pyre following the contour of the mound. Under the pyre was a sacrificial pit and under that was a central cist containing a contracted skeleton (Garasanin 1982, 174)	×	EBA. The pottery is connected with the types found in the Dalmatian tumuli	(Garasanin 1982) ×) Gold dagger, silver axe with a tubular shaft hole and a "Noppen"-ring
P10	Orah		Tumuli			

Q. SHQIPËRIJA OR ALBANIA

Most tumuli in Albania are dated to the Iron Age and these are not considered in this study, except for those who also have an earlier phase.

No.	Site-name	Position in landscape; Architect. remains	Tumuli & other graves; Human remains	Metal	Chronology Pottery & other finds	References & Notes
Q1	Shtoj	Some 160 tumuli are known (Korkuti & Petruso 1993, 716); Many with an EBA central pit grave. Most of the Albanian tumuli have been in use from the Early Bronze Age down to the Iron Age	Tumulus 6, ring of stones, ca. 15 m in diam, built in several phases. 1) small mound of stones and soil 11 m diam h.=0.44 m, one central grave. The earliest burial, Grave 15, in the center of the tumulus was a pit grave, set deep under the floor of the tumulus. Above this central pit grave, was a central cist grave, Grave 14. ^{a)} Tumulus 10: Stone and earth, 23 m in diam, h. 1.60 m, was surrounded by three concentric rings of stones: 6.50, 10.80 and 19 m in diam. Central pit grave similar to Grave 15 in T.6. Tumulus 10, also held three stone-built graves		T. 6:14, ceramic with peculiar handles and incised décor. Cf. Kotorac-Cetina culture of EBA Dalmatia. T.10: Pottery cf. Ljubljana culture of EBA central Adriatic; Figurines (4 female, 1 male and 1 child) laid out in a circle with their heads towards the center in association with a small clay pot and bones from a small animal	(Koka 1990, <i>Iliria</i> , 20:1, 27ff) (Korkuti & Petruso 1993, 717–718. T.6, fig. 12; T.10, fig. 13.) (Maran 1998, 329, n. 232–240) ^{a)} About cists "built" above central pit graves, cf. Vrana, Grave 1 and Grave 1a in Tumulus I (Marinatos 1970; Hielte-Stavropoulou 1994); perhaps also Grave I at Aphidna (Wide 1896)

Continued.

No.	Site-name	Position in landscape; Architect. remains	Tumuli & other graves; Human remains	Metal	Chronology Pottery & other finds	References & Notes
Q2	Kukös Kukës		Tumuli with the “same burial rites as the southern ones”, since EBA (Prendi 1998)	× Cu slag	Typical Cetinians patterns and decoration	(Prendi 1998, 99)
Q3	Korcë			× Cu slag		(Korkuti 2001)
Q4-8	Sites in the Mati river valley	Lac, Bazje, Bruc, Burel and Midhe	Tumuli sites	×		(Prendi 1982, 218) ×) Q8 Midhe has produced a sword. According to Prendi, the Midhe sword, as well as the sword at Pazhok (Q9), were probably manufactured by native craftsmen in some local workshop
Q9	Pazhok in Elbasan		25 tumuli. The Central tomb in Tumulus I, a pit dug 1.3 m below surface level, contained ox-skull and bones from another animal. The grave had two skeletons but held no offerings beside the animals	×	The first three tumuli of Pazok are EBA (and not MBA) according to Prendi 1998, 95; also pers. comm. The dead person in Grave 7 had beside a sword also a (kefti) cup MM III/LH I. (The “Vaphio” cup, is the earliest Mycenaean import according to Prendi 1998)	(“Studia Albanica” 1964) (Hammond, BSA 62 (1967) 77–, pl. 18 & 19) Bodinaku gives a EBA date for the Central tomb in T.I (Bodinaku 1996) (Bodinaku, personal comm.) ×) Abundant metallic objects (Prendi 1998)
Q10	Barç in the Korca district		Central grave placed on an elliptical platform		EBA pottery, Maliq IIIb	(Andrea 1985) (Bodinaku 1996, 14) The three water-jugs are, according to Bodinaku, typical of the EBA tumuli in Belotic-Bela-Cerkvec in Serbia. (See also Maran 1998)
Q11	Vajzë		Four large tumuli up to 24 m in diam; Tumulus A, Grave 12 had a mixture of Minoan and Mainland weapons	×	The 2 shoeslotted spearheads are illustrated in CAH III:1, 1982, fig. 40,7 & 9	(Hammond 1972) (Prendi 1982, 217) ×) In tumulus I, a big bronze dagger of Italic type shows trans-Adriatic contacts. ×) MM III/Shaft-Grave period swords, 2 ‘shoeslot’ spearheads – and 1 slotted spearhead

Continued.

No.	Site-name	Position in landscape; Architect. remains	Tumuli & other graves; Human remains	Metal	Chronology Pottery & other finds	References & Notes
Q12	Dukat in Vlora		Tumulus no. 2, Central grave covered with remains of sacrificed animals; also cairn of stones		EBA accord. to Prendi 1998, 101	(Prendi 1998; 1982, 211) (Bodinaku 1996, 14)
Q13	Piskovë in the upper Vjosa valley in the Permet district		Tumulus with Central grave, pit grave with inhumation, dug 1.5 m below ground level		EBA pottery, Maliq IIIa phase; Ochre colour on the upper part of the dead person, the skull and the soil around	(Bodinaku 1996, 12–13)
Q14	Maliq	Pile-dwellings			Coarse ware, similar to the K2 ware of Epirus found in level IIIa at Maliq. Bones from deer and wild boar show that hunting, like fishing, played an important role in the economy (Prendi, 1982, 235). Anthropomorphic figurines in the MBA layers are comp. to Shtoj (Q1)	(Prendi 1966) (Prendi 1982) (Prendi <i>et alii</i> (1988; 1989) (Prendi, personal comm.)
Q15	Vodhine	The Kseria valley has at least three cemeteries of tumuli	Double tumuli	× Dagger LH I		
Q16	Konispol	Cave 400 masl, ca. 50 m long and (max) 6 m wide			Late Neol. painted pottery of Maliq I style. MBA pottery comparable to Maliq IIIc. BA ware is in gray and gray-black and a few with incised patterns. Terracotta anchors in the E BA layers.	(Korkuti & Petruso 1993, 715–716)
Q17	Rechova in the area of Korytsas		Some 285 tumuli in the area date back to from the LBA to the Middle Ages (Prendi 1998, 101)	× Cu mine	The large number of metal tools found at Maliq and at Kamnik is evidence of the developed metallurgy in the area	(Korkuti 2001, 109) (Prendi 1998)

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AEMT = To Archaïologiko ergo ste Makedonia kai Thrake. Thessalonike.
ArchMak = Archaia Makedonia.
MAA = Macedoniae Acta Archaeologica. Skopje.

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 MME *The Minnesota Messenia Expedition*
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