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Introduction and background

Introduction

The archaeology of the Late Bronze Age (LBA) in the southeast corner of the Balkan peninsula, commonly known as Thrace, presents some particular challenges. Standing not only between Late Bronze Age southern Aegean and Anatolian states but also central and eastern European societies from the second half of the second millennium BC, this crucial area is poorly understood. It appears that at the junction where Asia meets Europe, certain conditions and specific kinds of evidence have combined to discourage fully integrated research. The essence of the problem lies in more recent dynamics: the area has been floating between several countries, Bulgaria, Greece, and Turkey, for the entire history of Archaeology as an academic discipline (Fig. 1.1). Three different national archaeologies have consequently had a considerable impact on the study of the Bronze Age in the region. Not only have there been practical difficulties, but it is also worth emphasising that current geopolitical divisions rarely coincide with any prehistoric social pattern.

Archaeologists working in the area have often acknowledged the need for cross-border research, but such a venture has become possible only now in the twenty-first century, building upon recent advances. The available information was insufficient for most of the twentieth century and thus has resulted in limited foreign research in this problematic area, mainly by those seeking links between the Aegean and central Europe. The possibility for local research co-operation was obstructed by the complex political conditions in the region and by the strong language barrier dividing the three countries. Distribution maps often stopped at contemporary national borders, assuming a 'different' archaeology on the other side. Nevertheless, local researchers often pursued direct connections between Thrace and the southern Aegean, where, by the later part of the second millennium BC, complex political and economic systems had emerged alongside the growth of urban centres. The Upper Thracian Plain, structurally open to the Aegean through the major river valleys and the passes of the lower eastern part of the Rhodope Mountains, inspired some scholars to define the area as belonging culturally to the Mediterranean (Katincharov 1974; Treuil 1983, 2, 15-18). Others link Thrace and Macedonia with the Troad and defend the cultural, ethnic, and linguistic unity of the population (Georgiev 1987,127). One approach to the local Bronze Age tends to describe the area under study as an independent phenomenon connecting central Europe with the Aegean (Leshtakov 2006, 145). Some studies have also applied the term 'periphery' as relevant to the southeast Balkans in relation to a South Aegean 'core' during the Late Bronze Age (Bozhinova 2008, 55; Leshtakov 2006, 144; Popov Jockenhövel 2011, 280). Large sections of the northern Aegean coast and its hinterland, however, show little sign of adopting the same kinds of organisation and lifestyle and instead almost certainly developed social structures that emphasised smaller-scale and potentially more socially egalitarian principles.

One of the significant problems in approaching this topic lies in the assumption of a general cultural unity in the area from the northern Aegean coast to the Danube river and perhaps beyond. While it is true that such unity sometimes existed in this part of the Balkans, more evident in certain periods and less apparent in others, this hypothesis has not been tested with regard to the second millennium BC. The construction of cumulative concepts such as the 'Zimnicea-Plovdiv' group, which was assigned to the entire Bulgarian territory, is indeed outdated and needs consideration in the light of more recent research. The aforementioned archaeological construct is likely provoked by the lack of a neat chronological sequence caused by the insufficiency of scientific dates. Not only that of the LBA, but the chronology of the entire Bronze Age in the area is problematic. Recently obtained evidence allows us to update and reconsider the general chronological scheme that might have an impact on our understanding of the dynamics under consideration and the appearance of changes.

After underlining the pitfalls associated with characterising the LBA in the southeastern part of the Balkans, this study is organised in a way that can address some fundamental questions. First and foremost, I will present and discuss some of the principal cultural characteristics existing in the study region during the LBA, especially concerning pottery production, settlement patterns and burial practices. It is essential to understand whether we can treat the record as originating from a culturally homogenous system and if not to assess the level and the extent of the heterogeneity that is visible in the study area. The chronology is a central factor in the attempt to understand the dynamics in the region. That said, it has been nearly impossible to attempt a diachronic study. However, due to some recently available evidence, I will approach the

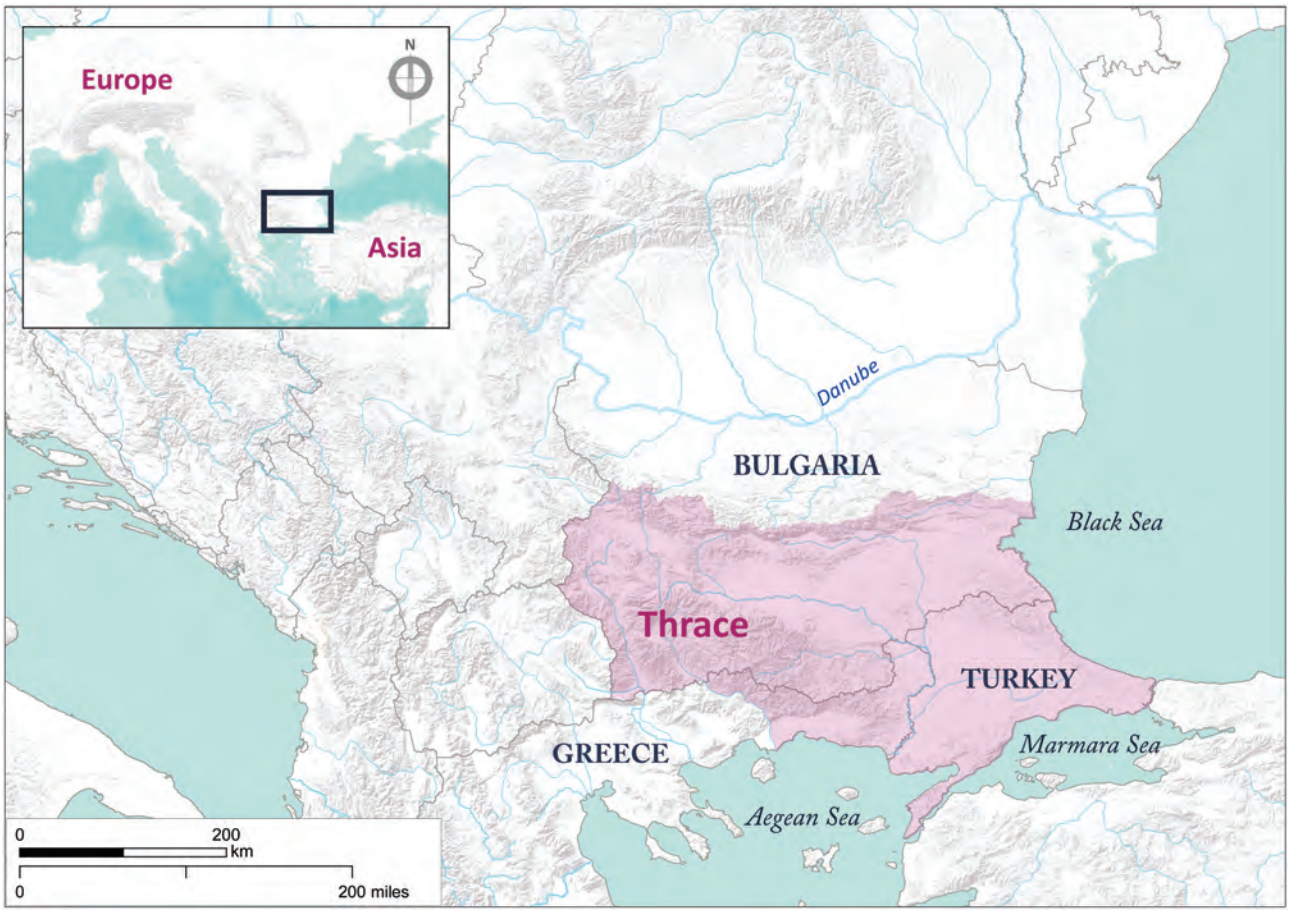

Figure 1.1. Map of the study area.

study with a refined chronological dataset, aiming to trace the formation, development and decline of the local LBA tradition(s). Based on all of the above, I will then address the nature and the extent of regional and interregional networks of social and economic interaction across the region.

Background

Today it is broadly accepted that by the end of the seventh millennium BC, a large portion of southeast Europe was already populated by Neolithic farmers, while it is evident that for a few preceding centuries an earlier Neolithic 'Balkan-Anatolian block' was in the process of formation (Hoddinott 1981, 15; Todorova 1986; 1995). As such, the southeast corner of the Balkans was playing a critical part as a bridge for transmitting Neolithic life out from Anatolia and into Europe.

The development of Chalcolithic societies marks an important later episode of Thracian prehistory (see Gimbutas 1956; 1974; Renfrew 1972). By the beginning of the Late Chalcolithic, in the Near East, the prerequisites for increased urbanisation were already present (Özdoğan 2004, 392). Simultaneously, in the Balkans, the formation of the Kodzhadermen-Gumelnitsa-Karanovo VI (KGK) complex in the south and Cucuteni-Tripolye complex in the north can be observed by the second half of the fifth millennium BC. Although somewhat developed socio-economic environments, both of the latter were different from Anatolian and Near Eastern social structures with no signs of urbanisation in the Near Eastern sense (Özdoğan 2004, 392). During that period, the eastern part of Thrace, that bridge of cultures and continents, was already left out of both cultural horizons, settled only sporadically with small non-tell settlements, while the population inhabiting the rest of the Balkans were building settlement mounds with a continuous long-term occupation.

The situation in the southeast Balkans during the period between the end of the fourth millennium and the end of the second millennium BC is puzzling in terms of the geographical extent of different cultural groups as well as their identity and sociopolitical relations. Some studies of Early Bronze Age (EBA) ethnocultural affiliations suggest a persuasive connection between northwestern Anatolian societies and what is referred to as Thrace through intermittent similarities in pottery and metal assemblages as well as local architectural traditions. However, while on the Anatolian side urban life flourished, in the Balkans several new local, as well as intrusive, cultural elements can be recognised throughout the entire EBA, including examples assigned to the Yamnaya and the Corded Ware

complexes (Panayotov 1989). In the south, the Ezero, Mihalich, Sveti Kirilovo and Yunatsite cultural groups have been defined based on mostly particularly distinctive pottery styles. A certain level of social and commercial interaction seems to have existed through communication routes within the southern Balkans and northwestern Anatolia during the EBA, but that network nearly vanished at the end of the EBA. What is known about the centuries corresponding to the Middle Bronze Age (MBA) in the southern Aegean and Anatolia is very little and represents a significant lacuna in the archaeological record and the interpretation of the regional Bronze Age dynamics. Similarly, the beginning of the LBA and the definition of the LBA are questions still challenging many researchers working in the area. In general, the characterisation of the entire Bronze Age period in this crucial area is a problem confronting any prehistorian dealing with European archaeology.

Besides these strictly archaeological challenges, the recent geopolitical environment in the region has only obstructed further any thorough research. The traditional network mechanisms of the twentieth-century archaeology have entrapped most research agendas strictly within the borders of existing nation-states. It is often the case that topographically defined units have been cut across to serve the needs of modern political agendas. The borders on any archaeological map appear as political as the current state borders are, limiting possible research syntheses. Although scholars have often acknowledged that nation-states' territories were not necessarily the best analytical or interpretative units when it comes to the study of past societies, such a bias was unavoidable, and its importance was often ignored; the practical and ideological difficulties involved to overcome it was more than the potential advantages.

Currently, as the region is somewhat more accessible for cross-border research, an approach incorporating topographic units to provide a spatial framework seems more appropriate. Although studies based on grouped data corresponding to geographical areas are also problematic because of issues such as ecological fallacy (see Openshaw 1984), replacing political units with topographically defined ones offers at least a less anachronistic methodology. Spanning three contemporary nation-states, the study area employed in this research represents an attempt to overcome bias prompted by ill-defined divisions. The section below offers an attempt to briefly outline some of the geographic characteristics of the area relevant to this research.

Geography

The southeastern corner of the Balkan peninsula constitutes a geographic region, often referred to as Thrace, which is geomorphologically and climatically diverse. Furthermore, it is the primary contact point between Asia and Europe as well as the natural link between mainland Europe, the Aegean, the Black Sea and Anatolia (Fig. 1.2). For this reason, it has been traditionally considered a critical zone and a cultural bridge transmitting people, ideas and things (Özdoğan 2004, 390).

Leaving aside the historical baggage a term such as Thrace usually carries, I will employ it here when appropriate but avoid overly detailed geographic definitions throughout the study. Generally, the extent of the area engaged in the current research spans the Balkan Mountains to the north, the Aegean to the south, the Black Sea and the Marmara Sea to the east and the valley of Strymon River to the west. Within these limits, the area can be abruptly divided into several sub-regions: 1) Sub-Balkan Fields[1], 2) Upper Thracian Plain[2], 3) Sakar Mountains, 4) Strandzha (tr. Istranca) Mountains, 5) southwest Black Sea coast, 6) Tekirdağ Uplands 7) Rhodope Mountains, 8) Lower Maritsa (gr. Έβρος, tr. Meriç) Valley and Ergene Plain, 9) western Thrace and the northern Aegean hinterland, and 10) Struma (gr. Στρυμόνας) Valley. Such segmentation has often predisposed different living conditions, caused by a combination of features such as drainage and water balance, soils, vegetation, raw materials, natural routes or other environmental factors.

Topography

The northernmost zone of Thrace, traditionally referred to as the 'Sub-Balkan Fields' is geomorphologically enclosed by the large natural barrier of the Balkan Mountains to the north and the hilly forests of Sredna Gora to the south, where it borders the 'Upper Thracian Plain' (Fig. 1.2). Several rivers fragment both sub-regions into plains consisting of mostly alluvial terraces with altitude reaching 400 m a.s.l. (Galabov et al. 1977, 228-9, Kiradzhiev 1990). This considerably flat terrain does not enclose any orographic barriers that have the potential to obstruct movement.

The eastern part of the Upper Thracian Plain, all the way to the Black Sea coast, consists of small hills, hilly valleys, and low fields. This area is discrete, uniting the flow accumulation of the middle stream drainage of Tundzha to the lower slopes of the Sakar Mountains. Because of the Sakar's low mountainous topography, the transition between the two sub-regions is smooth, although the mountain's elevation reaches 865 m a.s.l. (Borislavov 1999, 46). The Sakar are surrounded by two other mountain ranges – the Rhodope Mountains and the Strandzha Mountains, separated from them by two of the largest rivers in the area, Maritsa and Tundzha. The Sakar's slopes are steep, mostly denuded of forests and sharply dissected by the valleys of the numerous river tributaries, which makes them uninhabitable and less suitable for agriculture. The highest part of the mountain, however, consists of a row of flat plateaus forming a long ridge, providing topographic advantages for human occupation. Geomorphologically similar to the Sakar

[1] bg. Подбалкански полета или Задбалкански котловини.
[2] bg. Горнотракийска низина.

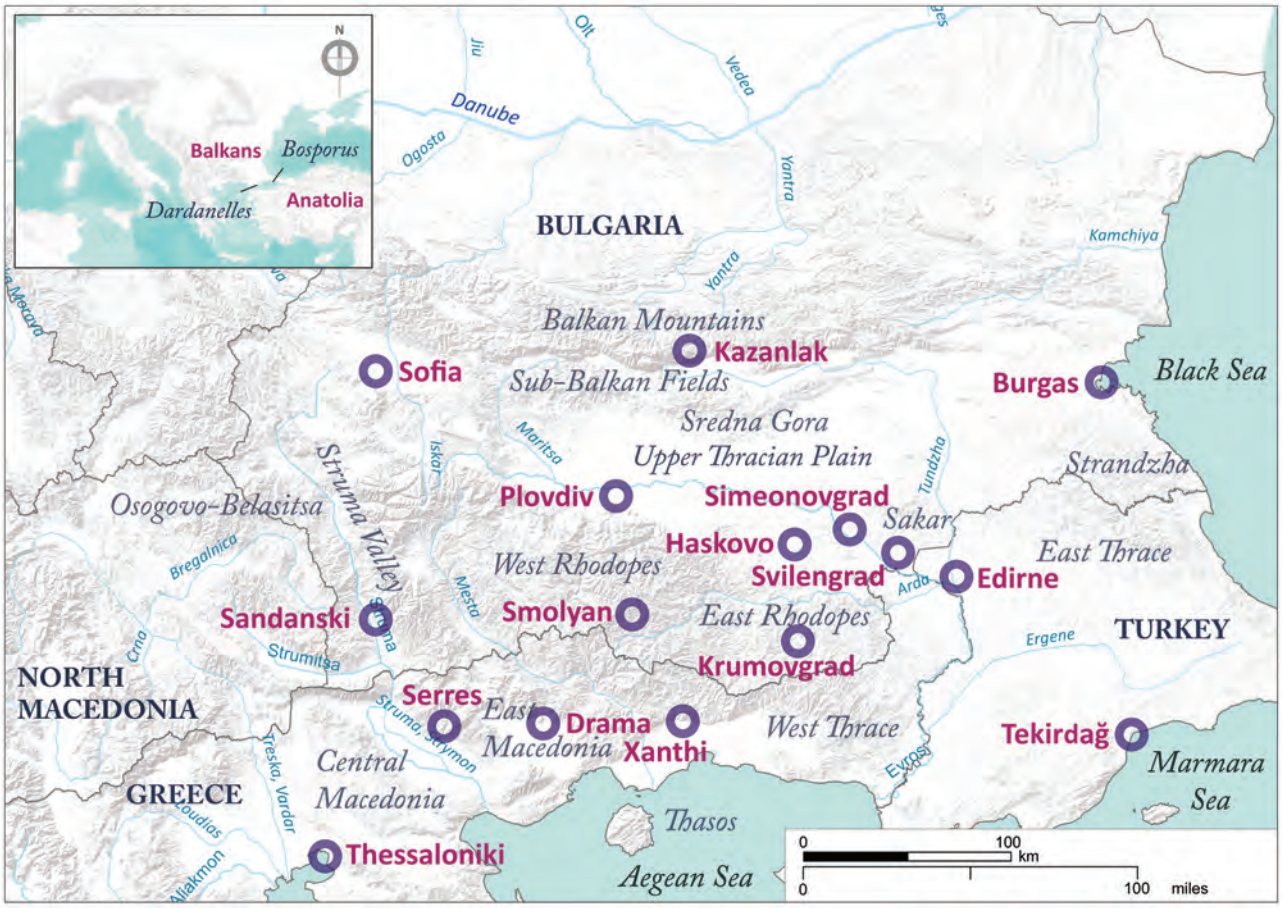

Figure 1.2. Map of the area with main places mentioned in the text.

Mountains are the Strandzha Mountains, defined by their low, sprawling hills, dissected by river valleys. Along the eastern half of the Strandzha, stretches a comfortable saddle, facilitating natural passage. This mountain range is currently geopolitically divided by the international border between the Republic of Turkey and the Republic of Bulgaria.

The Black Sea coast of Thrace stretches from Cape Emine to the Bosporus, which includes parts of Balkan Mountains, the Gulf of Burgas, and Medni Rid in Strandzha Mountains (Galabov et al. 1977, 328; Popov and Mishev 1974). It should be noted that a significant portion of the coast along with the entire Gulf of Burgas was subject to intensive sinking, also recorded in historical times, and this submergence was accompanied by a substantial accumulation of alluvial material (Baltakov 1988, 232), significantly obstructing any archaeological enterprise. Similar is the morphology of the shores of the Bosporus, the Sea of Marmara, and the Dardanelles, once functioning as riverbeds (Erol 1976; Ustaömer and Robertson 1995; 1997) and later played the role of a passage-way between the Mediterranean and the Black Sea.

Tekirdağ uplands are the southern uplands behind the Marmara coast, which reach the Gelibolu peninsula to the southwest. On the northeast, the area is connected to the lower slopes of the Strandzha Mountains and constitutes the isolated watershed between the Ergene Plain and the Marmara coast. Gelibolu, on the other handconversely, is a small plateau deeply dismembered partitioned by numerous streams. The inland landscape is small-featured and hilly, reaching an altitude of 426 m a.s.l., naturally protected by the coast consisting mainly of cliffs and narrow gorges (Erol 1976; Robertson and Dickson 1984).

To the west, the Tekirdağ uplands meet the Ergene Plain and the lower Maritsa Valley. The areas of both basins consist of small hills composed of compact tertiary and later sediments, along with many smaller valleys prone to become marshy most of the year. A flood plain has also formed above the point of confluence of both rivers. Further upstream, there are many marshy tracts between one or the other edge of the plains and their riverbanks, raised by flood deposits. Two major right-hand tributaries, Luda Reka (gr. Ερυθροπόταμος, tr. Kızıldelisu) and Arda (gr. Άρδας, tr. Arda) join the Maritsa at Edirne and, along with its main left-hand tributary, Ergene, draining the slopes of the Strandzha Mountains, periodically flooding the area (Ayanov 1938, 13, 26). The origins of the Maritsa Valley itself, in its section south of Edirne, stem from the sinking of the land blocks that produced the North Aegean Basin (Angelova et al. 1993, 41-59). Moreover, at its lowest portion, the Maritsa is divided into three parallel

rivers instead of flowing in a single channel. Because of this and due to its high-water state, the river forms a significant natural barrier.

The Rhodope Mountains are a part of the Rilo-Rhodope mountain chain, which is the oldest landmass on the Balkan Peninsula. The average altitude of the entire mountain range is 785 m a.s.l. It is geomorphologically split into the 'eastern' and 'western' Rhodopes, divided by the rivers Kayakliyka, Borovitsa, Arda and Chepinska (Batakliev 1963; 1969). The western part is significantly higher and more substantial, constituting ca. 66 per cent of the entire Rhodope range (Deliradev 1953) with typical mountainous topography, while the eastern part is hilly and considerably lower in elevation. The average altitude of the western Rhodopes is 1150 m a.s.l., but many peaks and ridges reach 1500 m a.s.l. and above, while the average height in the Eastern Rhodopes is only 329 m a.s.l. with the highest distribution of landforms ranging between 200 and 600 m a.s.l. Broad tectonic basins with vast fields located on top of high ridges, surrounded by deep river valleys, define the geological look of the western Rhodopes. The northern part of the western Rhodopes is considerably lower and the river valleys are wide and shallow, which makes it more inhabitable, while their middle streams in the heart of the mountain range are deep with steep and rocky slopes. The eastern Rhodopes, by contrast, are broken into broad plains, divided by three mountain ridges. Although still mountainous in structure and appearance, the relatively low terrain of the eastern Rhodopes facilitates both movement and living conditions.

The area between lower Mesta (gr. Νέστος) and lower Maritsa, often referred to as western Thrace or Greek Thrace, is a structural basin. It consists of deep-cut river valleys and basins collecting the waters from the surrounding mountains to the north. There are broad alluvial valleys to the north and vast marshes to the south of the area. It is divided by the lagoon of Lake Vistonis and Porto Lago Bay into an eastern and a western part. The latter differs by the absence of large streams and consists of high coastal hills with a separate drainage system independent from that of the lower flow of the Mesta. The northern margin reaches the area of modern Komotini and ends with the southern edge of the western Rhodopes, while the southern boundary is formed by the northern Aegean coast, including the island of Thasos.

To the west, the lower Mesta-Maritsa basin meets the lowest section of the Struma River. In general, the Struma Valley can be roughly divided into two parts: the northern upper stream and southern lower stream. The upper stream cuts into the Osogovo-Belasitsa mountain chain and runs through the southwestern corner of the Republic of Bulgaria. Its western limit is the international land border with the Republic of North Macedonia. The area consists of a river gorge with steep slopes enclosed by the Rila and Pirin Mountains from the north and the east. The average altitude of the area is ca. 806 m a.s.l. The southern part of the area consists mostly of the delta and the marshy areas of its hinterland on the Greek side of the Greek-Bulgarian border. As a whole, the terrain of the Struma basin is a mixture of mountains and valleys, where the middle stream has a higher altitude than the upper one.

Geology and natural resources

Geologically the study area is as diverse as it is topographically. The Sub-Balkan Fields and the Upper Thracian Plain are tertiary sedimentary plains consisting of mostly alluvial terraces, defining the flat appearance of the terrain. Thick quaternary and river layers cover the tertiary seabed (Donchev and Karakashev 2002). The Sakar Mountains consist of a dome-like structure formed by a massive volcanic (batholith) core, surrounded by high-grade metamorphic rocks, namely gneiss, amphibolite, and schist (Kamenov et al. 2010). To the east, the Strandzha Mountains are a metamorphic complex, the northern end of which is an 'east-west-trending flysch-volcanic zone' (Yılmaz et al. 1997). The Strandzha are also known for their karst landscape, although their highlands are composed of masses of gneiss and granite.

Paleogene deposits and related volcanic and tuff constitutions take a central place in the geomorphological plan of the eastern Rhodopes (Georgiev 2007; Vaptsarov 1962, 75; Vaptsarov 1964). Metamorphic rocks, mostly gneiss, schist, marble, and amphibolite with volcanic intrusions, form the entire mountain range. In the eastern Rhodopes, there are also quartzite and diabase. This metamorphic layer is often covered sediment and volcanic rocks, mostly sandstone, conglomerate, limestone, andesite, and tuff (Michev et al.1980, 412). The western Rhodopes sub-region consists mainly of vast masses of granite plutonium covered by a set of metamorphic rocks and occasionally sandstone, conglomerate or tuff (Marchev et al. 1998; Yaranov 1960, 97).

Flatbeds of yellowish sandstones, chalky and marly limestone and marls contour the shores of the Dardanelles. The Black Sea coast of the Strandzha was formed predominantly by Upper Cretaceous volcanic rocks (andesites and andesite tuffs) in layers of marine sediments, where solid andesites, granites and conglomerates form rocky capes (Galabov et al. 1977, 328; Popov and Mishev 1974). The Tekirdağ upland, locked in between the Strandzha, the Rhodopes, and the Sakar higher massifs, is a sedimentary basin (Görür and Okay 1996). The predominant rocks are a sequence of micaceous sandstone and shale (Okay 2008, 37).

To the west, the lower Maritsa Valley and the Ergene Plain consist of small hills composed of soft tertiary and later sediments, along with many valleys prone to be marshy during most of the year. The simple pattern of the valleys is evidence for the geological youth of the drainage system. Old lake deposits of soft limestone, marl and gravel fill the basins of the lower Maritsa Valley and the

Ergene lowland, while the area between the lower Maritsa and Mesta consists of mostly conglomerate and weaker tertiary sediments which at height transition to crystalline rocks.

Different rock formations participate in the geological structure of the entire Struma basin. Along the upper stream, the majority of rocks consist of old metamorphic rocks, mainly gneiss, schist and amphibolite. In the highlands, sandstone, and more importantly, limestone, dolomite, and conglomerate are more common (Galabov et al. 1977, 404-410). The area is also highly seismic, causing the appearance of numerous high-temperature water springs.

Besides the variety of geological settings distributed across the study area, there are some exploitable ore deposits and natural mineral sources. Although consisting of mostly alluvial terraces, the Sub-Balkan Fields, for example, contain deposits of copper, manganese and pyrites (Galabov et al. 1977, 229-231, 223-226). With similar geomorphology and sporadic copper deposits, the Upper Thracian Plain also has the distinct advantage offered by mineral water springs located near Plovdiv, Stara Zagora and Simeonovgrad (Borislavov 1999, 38). As a highly karstic area, the Upper Struma Valley also contains hot mineral sources (Michev et al. 1980, 19).

The Sakar area is deficient in minerals, except for some auriferous river streams. In contrast, the Strandzha are known to contain iron and copper deposits, with evidence of exploitation of some of the copper ores in the area during the fifth century AD (Konyarov 1953, 18; Raychevski 1986, 318). During the 1970s, there were more than fifty copper ore deposits and separate ore sections registered in this area. (Chernykh 1978, 61-62). Near the Slivarovo village, there are also gold deposits (Archibald 1998, 23), without evidence for extraction in the past. Several copper-rich ore deposits appear in the low mountainous areas of the Black Sea coast (Borislavov 1999).

The complicated geological processes in the eastern Rhodopes are the reason for the formation of specific ores and minerals. Along with the abundance of copper ores, there are also isolated deposits of obsidian, near Dzhebel. There are iron ores accumulated in the region of Haskovo, and silver and gold deposits around Madzharovo, Zvezdel, and Sedefche (Nikolaev at al. 1976). More recently, gold mines have been excavated near Krumovgrad with evidence of exploitation during the second millennium BC (Popov and Jockenhövel 2011; Popov et al. 2011a; 2011b; 2015; 2017; Popov and Nikov 2014). Furthermore, most of the rivers and streams all over the Rhodope Mountains are auriferous (Archibald 1998, 21-22, fig. IX).

In the western part of these mountains there are numerous locations with iron and gold ore deposits, as well as copper, lead-zinc and silver (Archibald 1998, 22, fig. IX), but without any indication for extraction in the prehistory. On the other hand, numerous mineral springs related to the Neogene tectonic processes exist in the western Rhodopes. A large group of springs flows near Velingrad, and another one close to the northern periphery of the mountains, which draws its waters from the Upper Thracian Plain. Marble, limestone, and volcanic tuff are currently extracted from the area as another type of natural resource used in construction (Michev et al. 1980, 414).

Climate

Thrace is climatically transitional, which predefines living conditions as different from those in the Aegean and continental Europe. Immediately north of the Aegean Sea lies 'Europe beyond the olive trees' (Leshtakov 2006, 142; Yaranov 1940, 10-12), which hosts specific climatic characteristics defined by a mix of mountains, plateaus, valleys, and plains, cut by several large rivers Vardar (gr. Άξιος), Maritsa, Struma, and Mesta. A significant climatic barrier for the area was and still is the Balkan Mountains, a substantial single factor that affects local microclimatic conditions by preventing the northern currents penetrating the areas south of the mountain range. Its elevation defines the existence of a 'north' and a 'south' in the Balkans, where the south is warmed much earlier in the year than the north. In the neighbouring area just north of the Balkan Mountains, the climate is entirely continental, consisting of cold, wet winters (with temperatures as low as -30 degrees Celsius) and cooler summers. The south is much warmer in the summer and reaches 38 degrees Celsius, even in the area of the Rhodope Mountains, which, in turn, stop the dry southern winds. As a result, a trans-continental climate prevails in the space between the Balkan Mountains and the Rhodopes, where the corresponding Black Sea coast differs only through its warmer winters. The Black Sea has a mitigating effect on the climate of the shoreline, where autumn is more temperate than spring and the winter months have average temperatures above 0 degrees Celsius. On the south coast, there is also an interweaving of the Black Sea with Mediterranean climatic influence. The Black Sea strongly influences and has a climatic impact on the weather in the Strandzha region and the Ergene Plain (Ayanov 1938, 10, 21).

The Upper Thracian Plain also has typically mild winters favourable for sustainable agriculture. The relatively low relief of the eastern Rhodope Mountains sharply increases the influence of the zonal hydro-climatic factors by its differentiation as a separate geographical unit (Galabov et al. 1977, 209-219). The sub-region is extensively open to the east and southeast in the direction of the Mediterranean. To the north, the mountains' slopes steeply descend towards the Upper Thracian Plain. The steep slopes and the frequent heavy winter rainfalls, contribute to the intensity of the present-day erosion processes. South of the Rhodopes, the climate is slightly wetter and milder than it is further south in the Aegean, however, as in the

rest of modern Greece, the summer rainfall is significantly low (Archibald 1998, 18).

The climate along the Struma Valley changes from continental to Mediterranean in the direction of north to south, and it is favourable for a variety of agricultural uses. Although it allows the intrusion of northern Aegean air currents along with olive trees and citruses in large part of the area, in the highlands, similar to the western Rhodope range, the climate acquires an entirely mountainous character and precludes the cultivation of Mediterranean crops (see Popova 2009; Popova and Bozhilova 1998).

Soils and vegetation

The entire Upper Thracian Plain, and to an extent the Sub-Balkan fields, are known for the quality of the arable land. The most fertile black chernozems and mollisols, similar to those in Ukraine, Moldavia, and the Carpathians, can be found along the valleys of Maritsa and Tundzha, as well as in the Strandzha Mountains. Unlike the fertile valleys of the rivers in the Upper Thracian Plain, the valleys of the Struma basin are stripped of fertile soils. Most represented are alluvial and cinnamon forest soils and only by exception are there chernozems (Minchev 1980). Alluvial deposits cover almost entirely the lower valleys of Struma, Maritsa, Mesta and the Ergene basin due to their marshy appearance.

Large areas of the eastern Rhodopes are also alluvial, mostly along the river valleys dissecting the landscape, but cinnamon forest soils and occasional mollisols are covering the highlands in the northern part of the mountains (Shishkov and Kolev 2014). The soil coverage in the western Rhodopes consists mainly of brown forest and cinnamon forest soils (Galabov et al. 1977, 165-405).

The range of rock compositions in the Sakar region consists of a variety of soils, amongst which the cinnamon-forest soils dominate. The most unequivocal evidence of trans-Mediterranean climate in the Stranzdha region is the presence of podzolised soils, a relic soil type, formed in a once warm and humid environment (Borislavov 1999, 48). The soil coverage consists of brown forest soils in the western part and secondary brown forest soils in the eastern part of the sub-area (Galabov et al. 1977, 209-219).

There is not much known about the vegetation of the study area in the prehistory, but there is some research to provide insight. The paleobotanical record in the Sub-Balkan Fields indicates that in the past the region was covered by deciduous forests, mainly oak (Borislavov 1999, 61). There is evidence that in the past woodlands covered the Sakar Mountains, even if today it is almost completely deforested. It seems that dense forests covered the slopes of the Strandzha range until the beginning of the twentieth century, making it highly impenetrable (Ayanov 1938, 10, 21). An opinion exists that the climate in the Drama plain was suitable for oak forests during all prehistoric periods, as well as olive cultivation from the second millennium BC onwards (Nikolova 1999).

Natural routes

The mixed set of landscapes of relatively small valleys and vast plains divided by mountain chains, which lies between the northern Aegean coast and the Balkan Mountains, has had a profound impact on the subsistence systems on the extent of interaction between the cultural groups of the area, throughout the ages. The segmentation described above naturally encourages the occurrence of local as well as interregional routes. Since the early prehistoric times, the region has been a crossroad of human communication and occupation, where east meets west and north meets south. It is the link between Anatolia and mainland Greece as well as the bridge between the whole Aegean world and the farmlands of the Lower Danube (Elster and Renfrew 2003, 6). Placed strategically at the crossroads of Europe and Asia, the area has proven both a tempting object of conquest and a passageway. The straits of Bosporus and Dardanelles have routinely played a dual role as both a dividing corridor between the Mediterranean and the Black Sea and a connecting link between the two continents. All this has preconditioned the existence of local as well as interregional routes, with the region being culturally and climatically transitional between the Mediterranean and central Europe.

We learn from historical sources that both main and auxiliary roads existed in the region in the first millennium BC (Brownson 1998, Xen. Anab. 6.3; Jones 1924, Str. 7.7.4), some of which might be considered as likely to have been functional still earlier. It is known that the main Roman arteries crossing the Balkan Peninsula were already long-established, convenient routes. Little is known about the Via Pontica, but its trajectory can generally be traced from north to south, along the west coast of the Black Sea. The Via Egnatia crossed the northern Aegean coast and connected the Adriatic coast with the Bosporus. The Via Diagonalis also started from the Bosporus area but travelled towards the Danube via the valleys of Maritsa and Morava, passing through modern Serbia (Popovic 2010). Hellenistic sources also mention distances to Philippi and Amphipolis from different places in the northern Aegean (Collart 1935; Koukouli-Chryssanthaki 2001). Thucydides describes a thirteen-day trip between Byzantion (Istanbul) and Vitosha Mountain (near Sofia, 2.97.2). An inscription from Pistiros further offers information about a road linking Upper Thrace and Thasos through Maroneia and Apollonia Pontica (Valeva et al. 2015).

Natural routes link the Upper Thracian Plain and the northern Aegean through the valleys of Mesta, Maritsa and the Black Sea littoral via the Straits (Batakliev 1942; Delchev 1965, 10; Leshtakov 2006, 144; Stuard 1997; Nikolova 1999). A maritime route between the south and the north has been proposed to explain the distribution of

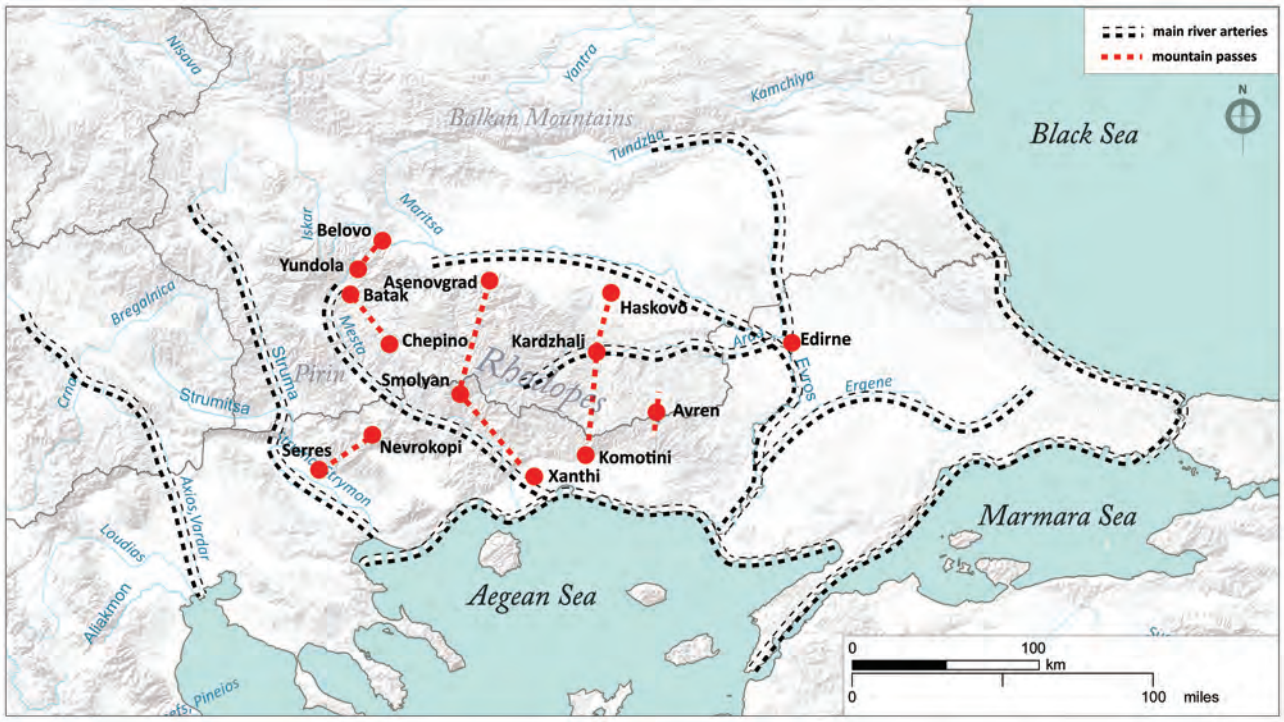

Figure 1.3. Map of the region indicating natural routes following main river arteries (black dotted lines) and mountain passes (red dotted lines), associated with present-day locations.

oxhide ingots and stone anchors (Velkov 1972; Leshtakov 2007a). Imported objects exist from throughout the first millennium BC, tracing the entire area of the western Rhodopes to the Upper Thracian Plain (Archibald 1998, 14), complemented by some second millennium BC Aegean weaponry finds (Bonev 1988; Leshtakov 2011; Panayotov 1980; 1981). This evidence suggests that communication arteries through the western Rhodope passes existed with or without continuity during both the first and the second millennia BC.

Natural routes in the heart of the Rhodope Mountains can be traced mainly through the major river valleys (Fig. 1.3). The Mesta Valley in the western Rhodopes appears to be relatively easy to pass until the area south of Nevrokopi where it becomes too narrow; one can reach the Drama Plain at this spot through the Zarnevski Pass. The Mesta Valley is a convenient way to cross the mountain since from its upper course the route continues northwards through Yundola, along with the valley of the river Yadenitsa to Belovo where it enters the Upper Thracian Plain.

Another natural connection exists between the modern towns of Smolyan and Xanthi and from there, along the valley of the Chepelarska River, one could easily approach the area of Assenovgrad to the east and the Maritsa Valley. There is also a natural connection between the towns of Nevrokopi and Serres. The river valley of Matnitsa serves to link the plain of Batak with Chepino. Some scholars describe these routes as utilised by the seasonal migrants, the Yurutsi, who summer in the Rhodopes and lead their flocks to winter in the Aegean lowlands (Batakliev 1942). Migrant artisans, mainly tailors and masons, exploited the same routes when transferring from the Pirin and the Rhodope Mountains to the Aegean Sea in the late nineteenth century. There are several other paths in this area, long used by transhumant herdsmen, the nomads of the Balkans (Wace and Thompson 1912).

In the eastern Rhodopes, the direction of the river system changes from north-south to east-west. This change provides relatively convenient connections in the east-west direction; the major tributaries of the river Arda cross the mountain range here in a north-south direction. A convenient pass is a depression located along the river Suyutliyka in the middle of the valley of Ardino. It is a natural link between the modern towns of Kardzhali and Haskovo, connected with the south along the river valley of Varbitsa and through the pass of Makaza leading to Komotini. The lowest and most suitable passage in the eastern Rhodopes is indeed Makaza, which joins Kardzhali with Komotini (Batakliev 1942, 20). Here, together with the Avren Pass, one meets conditions to cross over the eastern part of the mountains and to connect the Upper Thracian Plain with the Aegean. The natural longitudinal road in the eastern Rhodopes follows the valley of Arda. This road is known to be used by the tailors (abadzhii), who would come down from Smolyan to Edirne (Batakliev 1942, 199). Further west, the Axios Valley is considered the main route joining south with north (Theocharis 1971), leaving the Struma Valley a secondary choice (Elster and Renfrew 2003).

The Maritsa River constitutes the main drainage network, which was navigable by small rafts in the past. There is evidence for the transport of goods between the northern Aegean coast and the Thracian hinterland along the Maritsa (Archibald 1998, 13). Many also consider the valley of Maritsa the most convenient route from Asia Minor to the central parts of the Balkan Peninsula and, from there, to central Europe. The economic and strategic importance of this valley as a route has made an impact on the concentration and location of settlements in prehistory. Along its full length, this route crosses other paths between north and south through the Rhodopes and the Balkan Mountains and thus acts as a hub of different influences and goods approaching from different directions. Leshtakov offers a method for reconstruction of the meridional pathways between the Upper Thracian Plain and the Aegean in prehistory (Leshtakov 2006). He linked reconstructions of the paleoenvironment, geomorphology and palaeoclimatology, complemented by data about certain shepherd groups (Yurutsi, Karakachani, Vlachi and Bulgari) and their seasonal migrations, ethnographic sources and local history. The author argues that the entire Rhodope Mountains could be crossed over, in a south-north direction, in less than ten days (Leshtakov 2006, 144). Concerning ethnographic examples from the nineteenth century, Leshtakov suggests that people were able to sail along the Maritsa River from the area of modern Pazardzhik to the delta in 5-6 days, with the return journey taking less than a month (Delchev 1965; Stuard 1997). According to Nikolova (1999, 24), the western and highest part of the Rhodope range was not a severe barrier to contacts and interaction between the north and the south. The Rhodope passes were the usual way to connect western Upper Thrace with the northern Aegean. Theocharis argues, however, that prehistoric inter-communications between the Aegean Thrace and inland Thrace were problematic because of the Rhodope mountain barrier, which obstructs movement from south to north and vice-versa. Accordingly, the Mesta valley can hardly be described as a pass, since it is mostly hilly and mountainous with relatively high elevation. However, the Theocharis saw the value of the river system – the Èvros, Strymon and their main tributaries, namely the Tundzha and Arda – and links it to the still more critical route leading from Axios to Anatolia (Theocharis 1971, 144).

Nevertheless, even if one would typically assume that the ancient routes followed the most convenient and easily passable locations, having desirable physical and geographical features (Theodossiev 2000, 16), it is essential to bear in mind that the cultural and potentially cosmological nature of human choices across the landscape. 'The knowledge of the 'natural' routes of exchange over mountain-passes, through river valleys or over the sea is usually taken as granted, thereby unconsciously transferring today's such a familiar geographical impression of the world to the distant past …. Moreover, M. H. Helms has reminded us that notions of space and distance are culturally created.' (Maran 2007, 4; Helms 1988).

Several aspects emerge from the preceding discussion. The region of Thrace was exceptionally suitable for habitation, with water sources, fertile soils, accessible raw materials, generally mild climate, varied relief and vegetation, and a direct connection with the Aegean and the Black Sea. Such geographic and ecological factors often determined a range of prehistoric developments in the Balkans, but it is challenging to isolate, for instance, only 'lowland agricultural' or 'mountain cattle' groups (Delchev 1965, 7-12). It seems possible that various micro-regions throughout the prehistory have consistently favoured a mixed inter-regional economy (Earle 1997, 65; Nikolova 1999, 23). In particular, I will argue in the following chapters that the period between 1600 and 1000 BC was the time when a degree of 'connectivity of micro-regions' existed (Purcell and Horden 2000).