

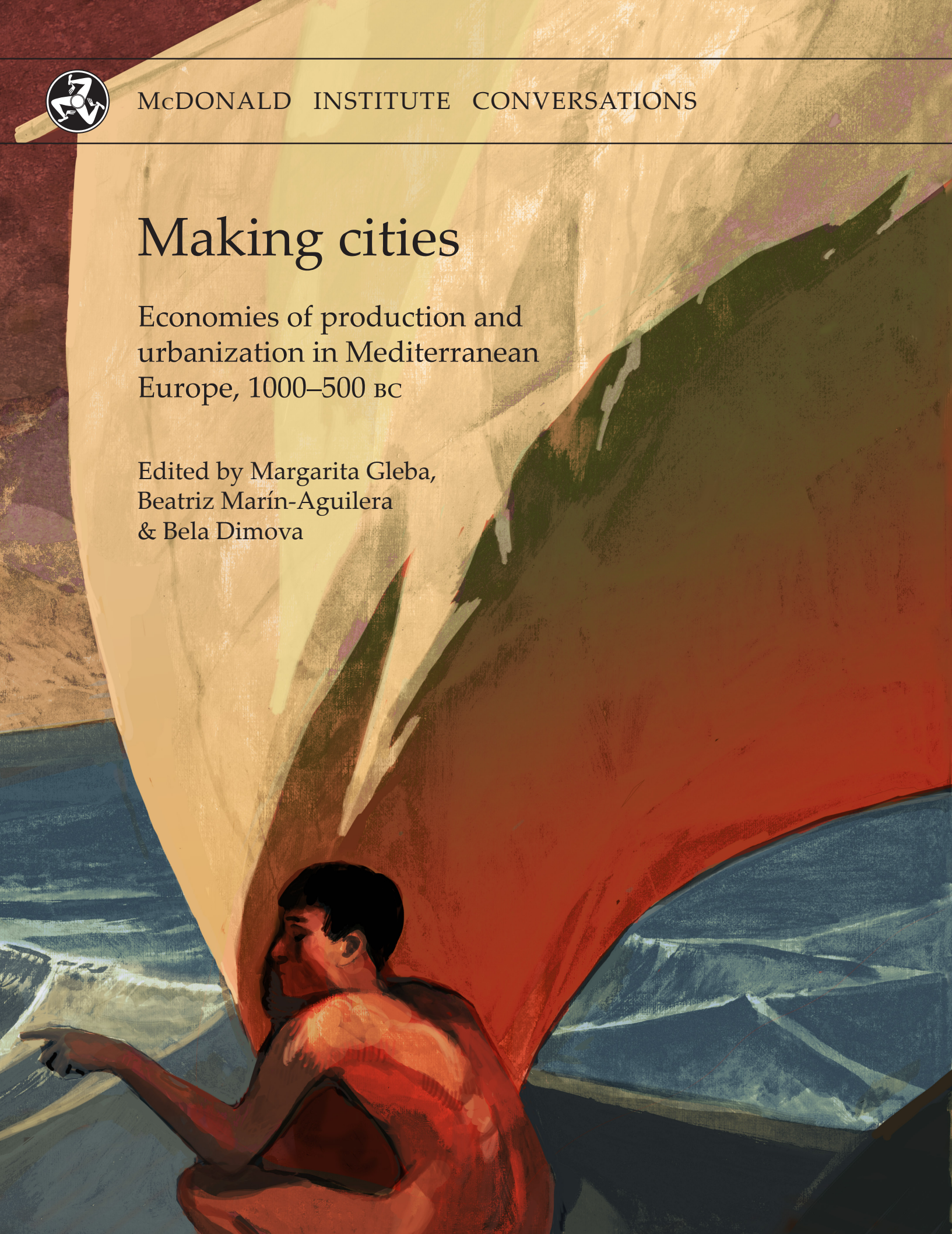


McDONALD INSTITUTE CONVERSATIONS

Making cities

Economies of production and
urbanization in Mediterranean
Europe, 1000–500 BC

Edited by Margarita Gleba,
Beatriz Marín-Aguilera
& Bela Dimova



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with contributions from

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Published by:

McDonald Institute for Archaeological Research
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Downing Street
Cambridge, UK
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(0)(1223) 339327
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McDonald Institute for Archaeological Research, 2021

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ISBN: 978-1-913344-06-1

On the cover: *Urbanization of Mediterranean Europe powered by sails*, by Kelvin Wilson.

Cover design by Dora Kemp and Ben Plumridge.
Typesetting and layout by Ben Plumridge.

Edited for the Institute by Cyprian Broodbank (*Acting Series Editor*).

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Chapter 3

Regional economies and production in the Thermaic Gulf area

Despoina Tsiafaki

Production and consumption are primary axes defining the economy and they played a significant role in the creation of wealth in the Mediterranean during ancient times. Apart from frequently considered economic aspects such as resources and craft activities (e.g. metallurgy, timber, ceramics, stone carving, agriculture, stock raising, hunting, fishing, weaving, etc.), there is an abundant range of other factors and mechanisms (e.g. non-traceable organic or inorganic materials, agreements, partnerships, collaborations, taxation, social organization, roads, harbours, etc.) that contribute directly or indirectly to the life of a society and comprise the framework of its economy. All such factors need to be taken into consideration in order to visualize and understand what we call today the 'local economy'. Furthermore, it should be remembered that economy involves the manipulation and/or transformation of material resources and it is closely related to its environment and social context (Morley 2009). Therefore, all the above factors are dependent on a series of procedures and require organization. Various socio-economic processes led from the Late Bronze Age to the formation of Iron Age societies and subsequently to their urbanization and the genesis of the city-states. The environmental conditions, which variously supported the subsistence economy of each community, also made a significant contribution.

This chapter focuses on the region of northern Greece during the Iron Age and the Archaic times. More specifically, it deals with the economies and production developed in the Thermaic Gulf using as examples a selection of settlements, including Methone, Toumba, Therme and Karabournaki.

The physiognomy of the north Aegean during the Classical and Hellenistic times was undoubtedly based on and related to preceding eras (Tsiafaki 2020). The Iron Age and Archaic period, along with establishment of Greek settlements in the area, appear to be

benchmarks as well as guides for the transformation of the social, cultural and economic characteristics of the region and of its inhabitants, leading gradually to what is today called urbanization. Inconsistent powers, migrating groups and gradual changes in social, ritual and cultural practices were caused by, and at the same time resulted in, a striking multiplicity and heterogeneity. These in turn led to the development of the characteristic attributes of the area during the examined period (Vlachopoulos & Tsiafaki 2017) and contributed to the formation of its economy (Touratsoglou 2010). Even though our knowledge of the region remains very limited, especially in comparison with the south of Greece, literary sources, epigraphic and numismatic evidence and the results of archaeological excavation provide a glimpse of at least certain aspects of its organization and economy. It should be remembered that the written information comes from Greek authors, who referred predominantly to settlements located in the coastal areas rather than to places further inland, and who were primarily interested in the Greek cities and matters concerning them.

One of the coastal areas in the north Aegean that attracted the interest of the ancient authors is the Thermaic Gulf (Xydopoulos 2007; 2017). Archaeological excavations in this area have proven that it was already inhabited during the Neolithic and Bronze Age, with many of the settlements continuing in the same place or nearby, into historic times (Soueref 2011; Vlachopoulos & Tsiafaki 2017). A representative example is the site where Methone was located, inhabited continuously from the late Neolithic until 354 BC (Besios 2012, 43). Polichni and Toumba in Thessaloniki present a similar picture of settlements which extended or moved from a pronounced mound (*toumba* or *tell*) to a flatter hill (*table* or *trapeza*) during historic times (Soueref 2017; Lioutas 2018). It has also been shown that the area of the Thermaic Gulf was

densely inhabited with various active communications networks. Apart from the local communities, the arrival of southern Greek settlers played an important role in this by establishing settlements from the eighth century BC onwards, and contributing to the urbanization of the area during the following periods (Tiverios 2008; 2017; Tsiafaki 2020).

Timber, mineral deposits, productive lands and manpower (e.g. mercenaries, cavalrymen, slaves, nurses) are considered among the primary resources that attracted Greek interest in the north Aegean and, specifically, in the area of the Thermaic Gulf. Therefore, the landscape and all its resources (Casson 1968) comprised a strong foundation for the economy of the region, whereas production and consumption were of great importance for the societies living there.

Thermaic Gulf economies and production

As regards the types of sites, the area around the Thermaic Gulf (Fig. 3.1) follows the general pattern seen in northern Greece and the east Balkans. Settlement mounds, known locally as *toumbas* or tells, are a typical form of settlement already in the Bronze Age. Even though this is not the only type of settlement, a great number of the sites identified in the area during

the Late Iron Age and Archaic times are human-made mound settlements (Souref 2011; Tiverios 2017; Liou-tas 2018).

The communities settled around the Thermaic Gulf¹ developed their own economies, which probably were interdependent or interrelated with each other and enabled the circulation of materials and products (Descamps-Lequime & Charatzopoulou 2011; Vlachopoulos & Tsiafaki 2017). Aside from a well-established agro-pastoral economy, other types of occupation and activities (e.g. crafts, trade) exploited and integrated the available resources, forming a regional economy which interacted with the rest of the Aegean world. A variety of natural assets were available that helped the inhabitants to develop several activities in order to survive and satisfy their needs. The surroundings were covered with wooded hills separated by well-watered valleys, with opportunities to exploit wildlife (Casson 1968; Archibald 2013). The quality of Macedonian timber is highlighted, for example, by Theophrastos (*Περὶ φνῦτῶν ἱστορία* 5.2.1), in comparison to the wood from other regions.

The archaeobotanical and faunal remains show that agriculture and animal husbandry were some of the primary types of production (Valamoti 2018; Veropoulidou 2011). A large part of the population



Figure 3.1. Thermaic Gulf region (after Vlachopoulos & Tsiafaki 2017, 46, fig. 57 / Melissa Publishing House archive).

would have been occupied in cultivating and collecting grain, milling barley and wheat flour, fattening cattle, sheep, goats and pigs, as well as with crafts such as metalsmithing, ceramics and textile production. The metal and clay finds suggest well-developed technologies and production in the region. Arable cultivation would have coexisted with pastoralism and the hunting of wild animals.

The botanical evidence, studied in particular during recent decades, offers a detailed panorama of the local flora that consequently provides evidence for the economies related to it (Valamoti 2004; 2007; Stephani 2010, 171–97; Archibald 2013, 136–40, 285–7; Valamoti *et al.* 2018). Even though most of the remains studied so far concern prehistoric sites and the study of the Iron Age and Archaic material is very limited and still at an early stage, the information gathered offers a glimpse into local cultivation. Einkorn wheat, emmer, spelt wheat, barley and millet have been found. Legumes (lentils, bitter vetch, grass pea and beans) were a major staple of the area as in most of the Balkans. The vine appears to be the commonest variety of fruit, and was also used for wine production, as indicated by archaeobotanical study in combination with the transport *amphorae* found in the vicinity.² The information from Dikili Tash, going back to Neolithic times (Valamoti *et al.* 2018, 277), shows that wine production was a long-standing tradition in northern Greece.

The importance of domesticated animals for both agriculturalists and pastoralists, along with their contribution to the economy, has long been highlighted (Sherratt 1981; 1983). Domesticated animals were raised in an agricultural setting to produce food, wool and leather, and to work as draught animals. Sheep, goats, pigs, cattle, dogs, horses, mules and donkeys appear to be the most common species, according to zooarchaeological research, again better known from prehistoric sites. Wild animals include red deer, fallow deer, roe deer, hare, fox and badger (Veropoulidou *et al.* 2011; Archibald 2013, 139, 287–95; Tiverios *et al.* 2013, 209–10). Apart from consumption of their meat and other products (e.g. milk), secondary exploitation of animals through the production and consumption of goods such as skins, hides, furs, bones and horns should not be forgotten, along with the items made from those materials, like clothes and textiles, sandals or boots, straps, and harness equipment. Since the latter are generally not archaeologically detectable – except in iconography – it is difficult to discern whether their manufacture was limited to household needs or satisfied community and broader demands.

Horses and cattle played an important role in the economies not only of the Thermaic Gulf but also the

entirety of Macedonia and Thrace. They were used for traction as well as for transport of people and goods, and were thus the means of conveyance and communications with neighbouring regions. Furthermore, the Thermaic Gulf region was suitable for horse breeding as well as animal breeding in general (Tsiafaki in press; Tsiafaki & Evangelidis in press). It is no coincidence that ancient authors named Thrace a ‘horse land’ (e.g. Homer, *Il.* 10.436–38, 13.3–4, 14. 225–9; Eur. *Rhes.* 304; Strabo 7, frg. 47; Thuc. 2.98; Ath. 4.131.c).

Proximity to the sea also favoured the exploitation of marine fauna, as is clearly demonstrated by the archaeological remains. Already in prehistoric times it appears that the local inhabitants took advantage of fish, shellfish and other types of marine resources as part of their diet or as raw material to satisfy other needs (e.g. ornamentation, household or craft activities) (Veropoulidou 2014). The existing evidence proves a continuation of this exploitation down to historic times (Tiverios *et al.* 2013, 207–10; Theodoropoulou 2017). During the Iron Age and Archaic periods, marine resources are a recognizable component of faunal assemblages and they were integrated with the everyday life of various communities (e.g. Methone, Toumba, Karabournaki) through their consumption either as edible items or via craftsmanship and other purposes.

Craft production was also important in the economies of the Thermaic Gulf, at least from the Late Bronze Age onwards. The material remains suggest that various workshops operated within the settlements, not only satisfying household and local community needs but also, in certain cases, circulating their products at a regional level. Consequently, craft production (e.g. metalworking, pottery, purple dyeing) was probably carried out by skilled artisans who specialized in certain types of products, although not necessarily as a full-time occupation.

Large-scale craft production of an artisanal character can be traced in the earliest *apoikiai*. The excavation of the ‘Ypogeio’ in Methone, for example, has brought to light various classes of artefacts, such as metal objects, pottery, glass vases, faience pendants, ivory, bone and deer horns, that can be linked to extensive workshop activities, from the establishment of the settlement, according to its excavator (Besios *et al.* 2012). Based on the unearthed finds, it has been suggested that Early Iron Age Methone was an artisanal centre (as it was in later periods), and that it covered not only the local needs of the site, but also supplied products to the communities located in inland Macedonia and the Balkans (Besios 2017).

The long-standing tradition of local craft production and probably its continuation from prehistoric

times can be seen at Toumba in Thessaloniki, where the production of purple dye from shellfish has been recognized (Veropoulidou *et al.* 2005; 2008) as well as bronze and gold smithing (Mavroeidi *et al.* 2004) from the Bronze Age with a continuation in the Iron Age. The production of purple dye at Toumba seems to have been on a small scale to satisfy household requirements, as at Ayios Mamas, another site in northern Greece where the craft occurs during this period (Becker 2008). In Toumba, production of purple dye appears to have continued through to historic times, as indicated by the material remains from the plateau formed around its base by the deposits of the Iron Age settlement (Soueref 2009, 348; Veropoulidou 2012, 105; Chavela forthcoming). This continuity is not necessarily suggestive of a long-standing tradition, but it might reflect a lucrative occupation. This is further supported by the fact that similar purple dye production has been recognized in Archaic and Classical times within a different but nearby settlement, located in the vicinity of Thessaloniki (Misailidou-Despotidou 2017, 333). It appears that this was a developed and/or common craft in the Thermaic Gulf, directly related to textile production.

The numerous weaving tools (e.g. loom weights, spindle whorls, spools), ubiquitous at most of the sites,³ reflect a considerable textile production in the region covering at least domestic and/or community demand, whether or not weaving was a part-time or full-time activity (cf. Dimova 2016 for the broader region). The extent of this activity is further highlighted by the Thracian wools and patterned textiles mentioned in the literary sources (Hall 1989, 137–8). Even though seldom preserved, a variety of textiles, in addition to garments, had to be produced to satisfy personal and household needs (e.g. covers, carpets, sails, etc.). Yarn was probably produced from the wool of sheep, which were common in the area, and flax (Valamoti 2011).

Metalworking developed in the metal-rich region of northern Greece, something clearly proven by the

numerous bronze and, in particular, iron remains found across the excavated sites. In the Thermaic Gulf, apart from weapons (Fig. 3.2), tools, and utensils found equally frequently in residential and public areas (Vlachopoulos & Tsiafaki 2017), grave offerings present a great variation and abundance indicative of the popularity of the craft. Ornaments and jewellery are often unearthed from burial contexts, indicating the expertise of the region in metalworking beyond primary needs. Also worthy of note are the miniature iron and bronze replicas of carts, wagons, furniture or spits (Fig. 3.3), all of which accompanied the deceased in cemeteries such as Pydna, Therme, Sindos and Archontiko, just to mention those in the Thermaic Gulf (Chrysostomou 2009; Manakidou 2010, 181–4).

The production of ceramics was also a major occupation within the communities of the Thermaic Gulf, as demonstrated by the identified local categories of pots, their quantities, and the multiple sites with direct evidence of local ceramic production: vessels of various types were in great demand to satisfy the need for storage, cooking, serving and consumption (Panti 2008; Kefalidou & Tsiafaki 2012; Tiverios *et al.* 2012; Adam-Beleni *et al.* 2013). Local pottery, both wheel- and hand-made, has been excavated at most sites in large quantities, indicating technological know-how, specialization, and a certain continuity from earlier periods. Specific categories of pots (e.g. transport *amphorae* with sub-Geometric decoration, ‘silvery’ pottery, ‘eggshell’ pottery, greyware) were made and are found in the settlements of the area, illustrating a demand for those types as well as the tastes, contacts and influences of the region (Adam-Veleni *et al.* 2013). Large storage vessels, such as *pithoi*, were also produced until the Late Archaic and maybe even in the Classical period. They are found individually or in groups placed in storerooms (*pitheones*) in several settlements (e.g. Karabournaki, Polichni, Toumba, Sindos). They are part of a pattern of storage in the wider region since the Bronze Age, as is shown by examples in Assiros, Kastanas and



Figure 3.2. Iron sword, grave offering, Nea Philadelphia cemetery, late sixth century BC (after Vlachopoulos & Tsiafaki 2017, 309, fig. 613 / Melissa Publishing House archive).



Figure 3.3. Miniature iron wagon, grave offering, Sindos cemetery, late sixth century BC (after Vlachopoulos & Tsiafaki 2017, 53, fig. 76 / Melissa Publishing House archive).

Toumba in Thessaloniki (Margomenou *et al.* 2005). Remains of pottery workshop installations have been unearthed in different settlements (Fig. 3.4), illustrating certain aspects of this craft (Adam-Veleni *et al.* 2013; Tsiafaki 2019).

Among the local pottery types, *exaleiptra* – special containers for perfumes, ointments or cosmetics – appear to hold a prominent position (Saripanidi 2012; 2019). They imitate imported versions (e.g. from Corinth) and are widespread as grave offerings within the cemeteries of the region. The perfume industry (cf. for example Corinth with its perfume vases) was well developed at the time due to the extensive use of scents, creams and cosmetics (Aktseli & Manakidou 2001; Verbanck-Piérard *et al.* 2008; Bodiou *et al.* 2008). The local flora in combination with imported perfumes, spices and resins (Merousis 2012) supported the local production (Saripanidi 2012, 286–7), not only of fragrances but also of pharmaceuticals.

Chalastra (Manakidou 2017, 27–9) was a town in the area of Lake Pikrolimni, where the *Chalastraion nitron*, famous in antiquity, was formed or dissolved over a period of nine days (Plato, *Republic Testimonium* 1–2). The existence and exploitation of at least one known source of natron (sodium carbonate) at Lake Pikrolimni suggests the production of pharmaceutical goods, which are not easily traceable nowadays. Apart from medical purposes, natron was used for dyeing and glass production, among other things. Therefore, the presence of sodium carbonate does not leave many doubts about the potential for the operation of glass workshops in the region (Dotsika *et al.* 2011; Manakidou 2017, 27–9).

Exchange and trade appear to have played a significant role in the economy of sites around the

Thermaic Gulf at least from the Archaic period, based on the material evidence (Archibald 2013; Vlachopoulos & Tsiafaki 2017). Circulation of products such as scarce materials (alum, dyes, pigments, building stone), cereals, wine and other bulk foodstuffs, animal products, timber, metals, salt and ceramic products seems to have been a common activity between coastal areas and inland. This required the existence of a certain degree of organization and mechanisms to support and run it. The development of coinage that took place in the broader area of north Aegean from the sixth century BC onwards proves the existence of formal procedures and rules for exchange (Kremydi 2011; Paunov 2015). Furthermore, trade produced tangible and intangible assets that contributed to the local economy.

Several of the sites in the region were coastal harbour settlements (e.g. Mende, Herakleion, Sane, Potidaia, Methone, Aineia, Therme, etc.) that acted simultaneously as recipients and as exit points for commodities from inland areas (Soueref 1998). Based primarily on the ceramics found in them, the settlements were apparently used and supplied by commercial networks of ship-owners, merchants and perhaps producers. There must have been an interdependence between coastal and inland settlements, that used their own routes (roads, rivers) to connect, in order, as Thucydides states (1.120.2), to secure the export of their surplus products and to receive in return goods imported by sea. Exchange, however, also took place between settlements within the same region, as is shown, for example, by the pottery produced and distributed in the Thermaic area. Much of this involved short distances covered by cattle carts and/or horses. Waterways, such as the rivers

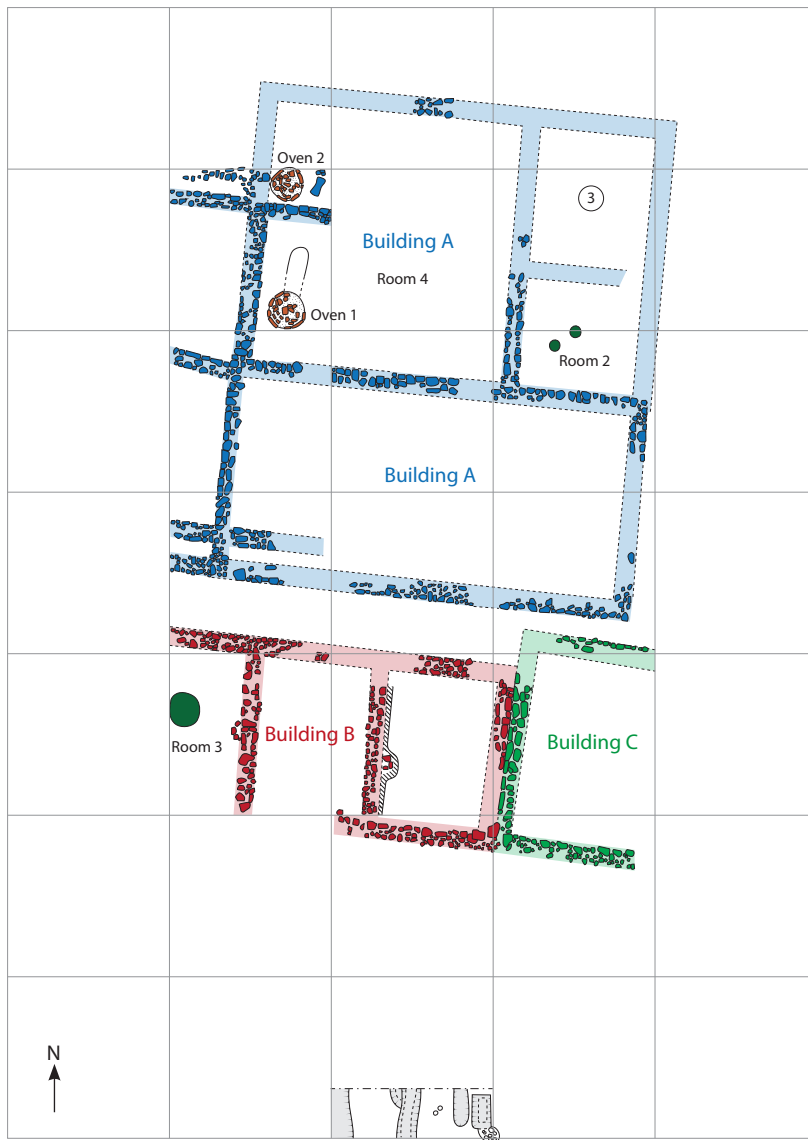


Figure 3.4. Methone. Pottery kilns in Building A at Sector B (Adam-Veleni et al. 2013, 90, fig. 1).

Haliakmon, Loudias and Axios, could have acted as transport arteries for the various goods, creating in turn other types of occupations and economies.

Ancient Therme and its harbour

The Thermaic Gulf takes its name from Therme, described by Hecataeus as a *polis hellenon Threikon*, 'a polis of Greeks Thracians' (FGrHist 1, F 163). The interpretation of this phrase has been the focus of much discussion in contemporary scholarship, due to its ambiguous meaning; it might be read as referring to a mixed population of Greeks and Thracians, or else simply Greeks living in Thrace (Xydopoulos 2007, 44–7). Nevertheless, Therme was a major coastal settlement mentioned by various literary sources (Hansen & Nielsen 2004, 818–19 no. 552). Based on current

research, it seems that Therme was a 'town in clusters' (*komedon*), meaning that different communities were dispersed around or near a central one (Tiverios 2009, 394). This model was not unusual for the region, and it has been suggested, for example, that Aegae also followed it (Kottaridi 2006, 777–8; 2017, 192). In earlier times, it seems that the central settlement of Therme would have been located at Toumba in Thessaloniki, but in Archaic times, its harbour, placed in the contemporary Karabournaki, could have also played an important role.

The settlement (Fig. 3.5), located on a plateau (*trapeza*) that forms a low mound (*toumba*) in modern Karabournaki, was directly related to the harbour that was probably the reason for its foundation. After a few sporadic excavations in earlier times, the site has been systematically excavated for the last 25 years, bringing



Figure 3.5. Ancient settlement at Karabournaki, aerial view (O. Kourakis, © Ephorate of Antiquities of Thessaloniki City).

to light various aspects of its life and providing information about the social and economic organization of the communities living around the Thermaic Gulf (Tiverios *et al.* 2003a; Tiverios 2009; Manakidou & Tsiafaki 2017). Situated on a promontory in the centre of the Thermaic Gulf, in the area of modern Thessaloniki, Karabournaki or Little Karabournou preserves the remains of an ancient site including a settlement, harbour and cemeteries that extended to the area that surrounds the bottom of the hill. The mound appears to be a multi-phase site, dating at least from the Late Bronze Age down to the Roman era, which flourished in the Geometric and particularly in the Archaic period.

The area was used as a military camp continuously from the nineteenth century until the late 1980s. Consequently, the various military constructions that took place on the top of the mound have destroyed the later phases of the ancient settlement, and in particular the post-Archaic layers. There were also a significant number of horse burials during the twentieth century. Modern construction and horse burials have caused severe damage to the architectural remains of the ancient settlement (Tsiafakis 2010, 379–80).

Trade played a key role in the existence of the site and its economy. The archaeological remains provide clear evidence for this. Due to its harbour, the settlement, which preserves permanent architectural features (Tsiafakis 2010), developed trade activities within the Aegean and possibly as far as the Levant (for the Aegean–Levantine connection, see Rollinger 2020). Among the large quantities of pottery unearthed at the site are imports from the most important centres of the ancient Greek world. Euboean and Attic wares are some of the earliest Geometric painted fine pottery imports (Tiverios 2004, 296), with East Greek pottery (e.g. from Chios, Samos, Miletos, north Ionia and Aeolia) dominating in the early Archaic period, while Corinthian and Attic products follow in date (Tsiafaki

2012a; Manakidou 2003; 2013). Numerous examples of transport *amphorae* originated from the same or other regions (Filis 2012; Tsiafaki 2012b). Some sporadic Cypriot and Phoenician pottery fragments along with a plethora of ceramic grinding bowls (*mortaria*), probably originating from the eastern Mediterranean, indicate that the inhabitants of Therme had familiarity with the products of the Levant. Carian inscriptions concerning commercial activities complete the geographical map of the regions represented at the site through their ceramics (Adjego *et al.* 2012). To all of this should be added similar ‘local’ categories of ceramics (Manakidou 2010). The term ‘local’ in this case does not refer solely to the site itself but also to the broader region that includes and extends beyond the area of the Thermaic Gulf, embracing Chalkidiki. Thus, a number of networks interacted here, enabling all the activities and mechanisms needed for getting goods in and out of the region.

The settlement developed in line with its role as a trading centre. Therefore, it is possible that its buildings or their individual rooms could be multifunctional, especially since the excavated architectural remains to date indicate that workshops and residential structures were placed within the same areas (Tsiafakis 2010).

Within the site a storage system developed that apparently served the needs and demands of the time. This system was based on: 1) architectural facilities – storerooms and storage pits; and 2) storage vessels including various shapes of pots, primarily *pithoi* and transport *amphorae* (Tsiafakis 2010; 2013).

Storerooms (*pitheones*) are common: more than 15 different storerooms preserving *pithoi in situ* can be identified with certainty so far in the settlement (Fig. 3.6). The contemporary disturbance of the architecture mentioned above unfortunately does not allow an estimation of the total number of the *pithoi* stored in each room but the preserved examples in combination with the surrounding walls indicate the existence of



Figure 3.6. Ancient settlement at Karabournaki, storeroom with pithoi (pitheonas 27-100d) (Photo Archive of the Karabournaki Excavation).

more than 10 *pithoi* in each cellar. We cannot yet conclude with certainty how these forms of storage were related to the community, whether they belonged to individual households or to wider social groups, or if they were connected to the commercial activities and character of the settlement. The storerooms, however, are indicators of social organization and are permanent and stable environments meant for long-term use. Although it is not currently clear what was stored within the *pithoi*, cereals are a possibility, although liquids cannot be excluded. Cereals of course could also be stored in other receptacles such as pits, bins or baskets made of perishable materials and so not preserved. The production of such storage containers should be added to the activities of the inhabitants, even if it was limited to household level.

Sporadically, circular stone-paved courtyards are found; these could be used as processing areas related to household or broader activities (e.g. threshing floors, wine production), or as foundations of granaries (Tsiafakis 2010, 382). This type of structure also occurs in sites nearby, such as Toumba and Polichni, as well as Mende in Chalkidiki (Vokotopoulou 1990, 400; Soueref 2011, 331; Lioutas 2018, 216).

Wasters, a large quantity of sun-dried handles meant for cups, misfired vases, and lumps of clay provide evidence for the remains of at least one pottery workshop, which was active from at least the seventh century BC (Tsiafaki & Manakidou 2013; Tsiafaki 2019, 101–2). They all belong to a specific type of local ware, made in the area of the Thermaic Gulf, mainly sympotic shapes with particularly thin walls, which is conventionally called ‘eggshell’ (Fig. 3.7); this specific waste batch dates to the sixth century BC (Tiverios 1996, 414; 2012, 180; Panti 2008, 182–92, 248–9; 2012, 257–64; Chavela 2012, 254–5; Tsiafaki & Manakidou 2013; Sari-panidi 2013; Tsiafaki 2019, 106). The cup appears to be the primary shape, accompanied by *phialae*, *olpae*, mugs and ladles. Nevertheless, other shapes and categories look as if they are related to this group, or they were at least produced by the same workshop(s). It is possible that the production exceeded the community needs and it was oriented to a regional market in the sites around the Thermaic Gulf, where it is mainly found, with some sporadic examples known from Chalkidiki and Thasos. But these are exceptions (Panti 2008, 228), and it seems that the type almost exclusively fulfilled the demands and aesthetics of the inhabitants in the



Figure 3.7. 'Eggshell'-type vases made at the pottery workshop at Karabournaki (Photo Archive of the Karabournaki Excavation).

area of the Thermaic Gulf, indicating that they may have had common cultural behaviour and social traditions, not necessarily shared with Chalkidiki or Aegean Thrace.

Although other production centres could also have been active in the region, the occurrence of this pottery type around the Thermaic Gulf in combination with the remains at Karabournaki suggest that: a) the type was common in the area; b) it was a result of advanced technological knowledge and specialization; and c) the Karabournaki workshop had a professional aspect and could produce large quantities of vessels, reflecting an artisanal character beyond household production. Based on the fabric, types and quantity of the material remains, it can be safely suggested that the workshop produced other categories of local vessels as well, such as 'monochrome' ware or some of the *oinochoe* types that occurred in the area and are found in large numbers at Karabournaki. It is possible that some of the coarseware and the handmade vessels were also manufactured here, along with other ceramics (e.g. loom weights, lamps) in order to fulfil the needs of the community. The quantities of local wares related to the production centre at the Karabournaki settlement imply the existence of more than one workshop to satisfy the requirements of the community, its visitors and export to the regional market.

Various construction materials were also being produced at the site, such as mudbricks and ceramic roof tiles, in order to fulfil the needs of building activities. Regarding in particular the loom weights at the site, as a rule, they are carefully made, perhaps

at the pottery workshop located at the settlement – a practice known in the area already from Geometric times, as demonstrated by the Torone workshop (Papadopoulos 2013).

Metalworking appears to be another craft practiced on the site (Fig. 3.8). The remains of a metal workshop, active at least in the seventh century BC, were also unearthed within the residential area (Tiverios *et al.* 2007; Tsiafakis 2010, 386; Sanidas *et al.* 2015). A few pits and a certain amount of slag and clay vessels with metal residue on the bottom suggest the existence of at least one organized workshop with specialization and technological knowledge. The remains indicate that the workshop produced a variety of objects such as tools for farming and other activities as well as various weapons, knives, etc. Furthermore, the moulds (Fig. 3.8d) found spread over the site are another indication of specialization and they attest to the production of various small objects. It appears that iron was the principal metal worked, with bronze following. Iron is among the most common minerals and was fundamental at the time: it was used in most aspects of daily life as almost all activities would involve the employment of iron tools. For the moment, the source and the origin of the metal itself are not known, but mineral ores containing iron were widely distributed in the region. The workshop(s) would possibly have produced the objects required by the inhabitants, sailors, merchants or various visitors. Given the mobility at the site, due to its role as a commercial centre and a harbour, iron smithing must have been in high demand. The analysis of the slags and the rest of the metal finds (Sanidas *et*



Figure 3.8. Karabournaki settlement: a, b) metal workshop; c) clay vessel for immersion of iron objects found at the metal workshop; d) moulds for metal objects from the settlement (Photo Archive of the Karabournaki Excavation).

al. 2015) supports this suggestion and indicates the existence of more than one workshop active at the site, perhaps even in the same area due to the fact that their waste was discarded at the same place.

Textile production and other related activities are attested by the significant number (more than 450 to date) of loom weights and other textile tools such as spindle whorls, spools and pierced sherds (Fig. 3.9). The multiple use and function of textiles either as purely utilitarian or as indicators of status (political, social, economic, etc.) leave no doubt that it was an important craft here, even if it cannot be said yet how extensive this production was. Taking into

consideration the harbour and the commercial activity at the site, textile production had to satisfy needs beyond household demand.

The most common loom weight types found at Karabournaki are the pyramidal and discoid types. The preliminary study of them by †Dr. Joanne Cutler suggests that a range of textiles could have been produced at the site, from fine, dense, balanced fabrics, to thicker, more weft-faced fabrics (based on the method in Mårtensson *et al.* 2009). The best-suited for making the latter is a thicker type of weight, the cuboid, which also occurs here, even though it is not as common as the others. Worthy of note is a group of at least seven



Figure 3.9. Weaving tools from the Karabournaki settlement (Photo Archive of the Karabournaki Excavation).

circular/lenticular weights which were painted black (Fig. 3.9c). They were found together within one of the beehive-shaped semi-subterranean pits (trench 22–91d, SE pit) which often occur at Karabournaki (Tsiafakis 2013). The assemblage of objects found there, with a great number of transport *amphorae* and large vessels, goes beyond household needs and points to another function (e.g. storage or exchange activities).

Also of interest are a few examples of ‘fiddle-shaped’ weights, which are very light and would be suitable for making balanced textiles with fine thread. This type of weight is known mainly from the Balkans. It is found at a few sites in northern Greece (e.g. Argilos), modern-day Bulgaria and Serbia; it also appears in the Cyclades (Dimova 2016; Marion 2016). At our current state of knowledge, the earliest examples come from Argilos and those from inland regions only appear in the fifth century BC. Moreover, a known example from the settlement at Makri, near Alexandroupolis, is dated not before Classical times (Efstratiou & Kallintzi 1994, 74, fig. 62). One of the

Karabournaki ‘fiddle-shaped’ weights carries a stamp depicting a satyr (Fig. 3.10) (Tiverios *et al.* 2015). This might be an indication of personal property, although the other ‘fiddle-shaped’ weights found at the site do not carry any stamps or signs. The weights in combination with the so-called ‘Thracian’ type of handmade pottery unearthed at the settlement might suggest that among the community there were weavers and technologies from a different cultural tradition (Cutler 2012). Furthermore, this recalls Euripides’ *Hecuba* (1150–4), where the weaving skills of the Edonians are praised.

The variety of the weaving tools within the settlement proves that diverse textiles were produced on site. It might also be an indication of collaboration and mixing of cultural traditions in weaving (Dimova 2016, 657).

Concentrations of loom weights and spindle whorls appear in certain spaces and require further investigation (Fig. 3.11). However, the current data do not point to a specialized textile workshop or a space



Figure 3.10. Loom weight with stamp depicting a satyr, Karabournaki settlement (J. Cutler).

dedicated solely to that activity. Yet, the grave offering from the cemetery of Karabournaki provides us with actual textile remains preserved along the entire length of the surface of an iron spearhead (Morgan 2014, 248–9, fig. 5; Cutler & Gleba 2014). Based on the analysis, it seems that the fibre of the textile is of animal origin, most likely sheep wool, since ovicaprids represent more than half of the faunal remains from the settlement, according to the study by Angelos Gotsinas. Moreover, the archaeobotanical remains from the site do not include, so far, any flax according to the study by Sultana Valamoti and Eugenia Gkatzogia, although flax did occur in the region in the Neolithic and Bronze Age (Valamoti 2011). Additionally, the popularity of wool over other fibres such as flax (Gleba 2014) could suggest its use for the textile production at Karabournaki.

Even though muricid shells are not absent from the settlement, there is no evidence for the production of purple dye at the site. According to Tatiana Theodoropoulou, who has studied the material, the number of shells in combination with their preservation does not suggest this type of processing, but rather that they were consumed for other reasons. The colouring of the locally produced fabric could also be done with a variety of plant and animal-based dyes, fixed with mineral mordants.

The archaeobotanical and zooarchaeological remains fit within the same framework as presented

earlier for the entire Thermaic Gulf. Sheep, goats, cattle and pigs appear to be – in this order – the most common species. Sheep and goats represent so far over 50 per cent of the studied animal bones. The primary consumption of meat is clear, although secondary uses (e.g. dairy, wool) are also likely.

The grape remains in combination with the large number of transport *amphorae* indicate possible wine production (Tiverios *et al.* 2003b, 192; Valamoti 2003). In addition, the large quantities of unearthed drinking vessels, and especially the locally made ‘eggshell’ pots, suggest a considerable use of drinking material culture.

Next to agriculture and animal husbandry, fishing should be added as another occupation of the inhabitants, with the possible existence of a fish market based on the commercial character of the site and the seasonal visitors here (e.g. sailors, merchants, inland producers). Some objects in the form of loom weights but made of schist, a stone commonly found at the site, could have been used for activities such as fishing. Among the small finds there are also some small, figure-of-eight-shaped objects (21 in number) with one flat surface that might have been used as fishing net weights. The proximity to the sea, as well as the remains of fish and seashells, support the assumption that there was high fish consumption (Tiverios *et al.* 2013). The dominant species of mollusc is cockle (*Cerastoderma glaucum*), with a range of other marine animals present in the

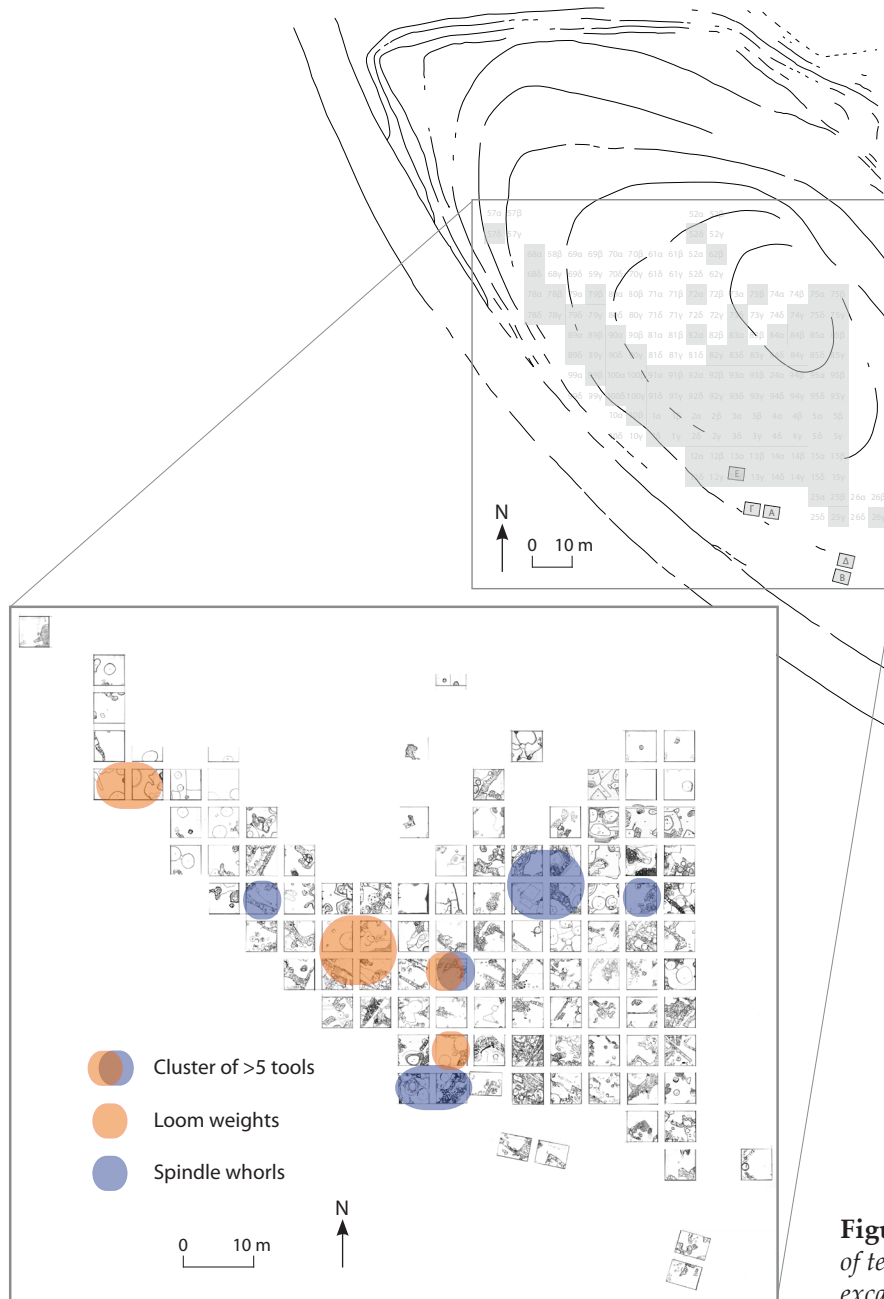


Figure 3.11. Karabournaki: distribution of textile production tools within the excavated area (B. Dimova).

assemblage, such as *Cerithium vulgatum* or horns, *Hexaplex trunculus*/*Bolinus brandaris* or purple-dye shells, *Pinna nobilis* or penshell, *Arca noae* or Noah's arks, *Mactra glauca* or grey trough shell, *Venus verrucosa* or warty venus, *Ostrea edulis* or flat oyster, *Donax trunculus* or wedge clam, and *Solen marginatus* or razor shells (Tiverios *et al.* 2013, 207; Theodoropoulou 2017, 671–2). Based on the latest study by Tatiana Theodoropoulou, the marine fauna is local and all types are found across different trenches. Worthy of note is the large quantity of all the aforementioned species and the absence of mussels. In addition to consumption, which appears

to be their principal purpose, they may also have had additional uses as ornaments, or utensils such as ladles, spoons, pestles, lamps or other tools related to kitchen and shop activities.

It is not always possible to clearly understand or predict to what extent these activities satisfied household needs, covered the demands of the entire community or even extended beyond the borders of the settlement and generated exports across shorter or longer distances. Nevertheless, they provide an adequate picture of the activities that took place at the site and help us to understand, to a certain extent,

its economy and geographical and possibly cultural background. The archaeological data leave no doubt that the inhabitants of Therme developed subsistence strategies that took full advantage of the rich environmental resources surrounding them. It also provides information about aspects of the site's organization that indicate the presence of an infrastructure that would lead later to the urbanization of the area. Karabournaki was one of 26 settlements unified by Kassander for the foundation of Thessaloniki in the late fourth century BC.

Conclusion

Based on the existing archaeological data and the information extracted from the literary sources, it is clear that the area around the Thermaic Gulf was occupied by numerous interrelated settlements. The natural resources and the material remains suggest that the communities living there took full advantage of their location and environment and extensively exploited it. The agro-pastoral activities along with hunting, fishing, the use of other resources of the region and various crafts (ceramics, metalworking, glassmaking, textile production, etc.) formed a major part of the local economy. Production and consumption were supplemented by different activities, procedures and regulations. Trade and commercial activities also played an important role, extending the local economy to the regional level and beyond. The natural harbours within the Gulf facilitated to a great extent the transportation and commercial networks within the Aegean and as far as the Levant. The diversity of imported products and their long duration give the local harbours an international and cosmopolitan character due to the luxury products that were exchanged there. Those harbours appear to be part of an overall organization and structure necessary for the existence of the local communities (Soueref 2009; Gimatzidis 2017, 285–7). Even if we cannot distinguish 'professions' and 'professionals' amongst people probably engaged in multiple activities within the same spaces, which also likely had multiple uses, a certain degree of specialization within those communities is clearly reflected through the presented material remains; this is paralleled by similar development in other places at the same time (Mazarakis-Ainian 2012).

A variety of excavated small objects reflects a number of activities along with numerous no longer traceable items. The settlement at Karabournaki, for example, would be a place where visitors could eat, rest and buy everything they might need. Therefore, a great range of artefacts from clothing to shoes and ship or harness equipment could have easily exceeded household production and be manufactured in small

workshops that would satisfy the needs of all those people, contributing to the economy of the site.

The Iron Age and Archaic periods seem to continue routines and infrastructures already existing in earlier times and they appear to be prosperous eras for the societies living around the Thermaic Gulf. Their economies were built on the circulation of products and the material remains point to a secure environment for those transactions and pre-existing arrangements to cover the practicalities needed. Additionally, they are equally indicative of the economic and social structures, which present features of the urbanization recognized in the following periods. The emergence of urban communities, namely *poleis* such as Olynthus and Pella, with conspicuous public spaces, buildings and squares, could not have developed if there had not been a solid background created in the Iron Age and Archaic period.

Acknowledgements

This chapter is dedicated to Joanne Cutler. The work was supported by the project *Computational Science and Technologies: Data, Content and Interaction/Technologies for Content Analysis in Culture*, MIS code 5002437, which is implemented under the Action Reinforcement of the Research and Innovation Infrastructure, funded by the Operational Programme Competitiveness, Entrepreneurship and Innovation (NSRF 2014–2020) and co-financed by Greece and the European Union (European Regional Development Fund). For useful discussions, information and suggestions, I would like to thank Dr. M. Gleba, Dr. T. Theodoropoulou, Dr. K. Chavela and Dr. B. Dimova, as well as the anonymous reviewers.

Notes

- 1 A large number of publications relating to sites in the Thermaic Gulf can be found at the digital repository ARENA: <http://arena.ipet.gr/>
- 2 An indicative example for the studied period is the settlement located in Karabournaki, as suggested by the combination of archaeobotanical evidence (grape pips and skins) and the local transport *amphorae*. See Valamoti 2003; Tiverios *et al.* 2003b, 192.
- 3 The excavation data presented at the annual meetings Αρχαιολογικό Έργο στη Μακεδονία και στη Θράκη (ΑΕΜΘ) are indicative of the situation.

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Making cities

Large and complex settlements appeared across the north Mediterranean during the period 1000–500 BC, from the Aegean basin to Iberia, as well as north of the Alps. The region also became considerably more interconnected. Urban life and networks fostered new consumption practices, requiring different economic and social structures to sustain them. This book considers the emergence of cities in Mediterranean Europe, with a focus on the economy. What was distinctive about urban lifeways across the Mediterranean? How did different economic activities interact, and how did they transform power hierarchies? How was urbanism sustained by economic structures, social relations and mobility? The authors bring to the debate recently excavated sites and regions that may be unfamiliar to wider (especially Anglophone) scholarship, alongside fresh reappraisals of well-known cities. The variety of urban life, economy and local dynamics prompts us to reconsider ancient urbanism through a comparative perspective.

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*Published by the McDonald Institute for Archaeological Research,
University of Cambridge, Downing Street, Cambridge, CB2 3ER, UK.*

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Cover artwork by Kelvin Wilson.

Cover design by Dora Kemp and Ben Plumridge.

ISBN: 978-1-913344-06-1



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ISBN 978-1-913344-06-1



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