

THE CENTRAL/WESTERN ANATOLIAN FARMING FRONTIER

PROCEEDINGS OF THE NEOLITHIC WORKSHOP HELD AT 10TH ICAANE
IN VIENNA, APRIL 2016

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SONDERDRUCK

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Picture on the opposite page:
Neolithic pendant excavated at Çukuriçi Höyük
(photo: N. Gail/ÖAI)

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Migrating and Creating Social Memories: On the Arrival and Adaptation of the Neolithic in Aegean Anatolia

Barbara Horejs¹

Abstract: Recent studies of the earliest known Neolithic settlements on the central coast of Aegean Anatolia (Ulucak, Çukuriçi) have revealed developed Neolithic societies from the founding of the settlements onwards. Multiple pathways into the area have been discussed broadly, and it has been suggested that early 7th millennium BC migrations via terrestrial, coastal and sea routes were most probable. Along with up-to-date innovations, the colonisers came with a package of traditional and well-established Neolithic concepts. Some of them appear to be evident for dozens of centuries in the core zone before their arrival and adaptation in newly occupied regions. They are visible in aspects of materiality and technology, and moreover in a whole set of memories including traditions, beliefs, practices and world-views. So far underestimated in this maritime colonisation model was the role of regional mobile populations, which will be discussed as potential *longue durée* impacts for the creation of the new local Neolithic identities. This paper focusses on the Çukuriçi case study in defining and discussing the complex set of memories of Neolithic farmers and Mesolithic seafarers and their roles in the trajectory of Neolithic social development. This includes a well-established maritime related lifestyle, as well as external innovations and technologies that were brought by the newcomers, presumably transferred together with narratives and social strategies. This dynamic process in the first half of the 7th millennium BC led to the establishment of an agricultural community on the central Aegean coast of Anatolia, and which a few generations later was already embedded in a regional network of Neolithic villages.

Keywords: social memory, neolithisation, Çukuriçi Höyük, Mesolithic seafarers, migration, identities, western Anatolia

Introduction: The Early and Late Neolithic in Western Anatolia

In the context of the ‘farming frontier’ between central Anatolia and regions further west, as discussed in this volume and presented in detail by Jean Guilaine and Maxime Bami in their contributions,² western Anatolia functions as a potential key zone for our understanding of the postulated complex trajectories of the Neolithic way of life in Europe.³ Thanks to intensive field investigations and analyses of the Neolithic in some regions of western Turkey in the last few decades, our knowledge of early farming communities has increased enormously.⁴ Especially in the Marmara region, on the central Aegean coast, as well as in the Lakes Region, both old and new archaeological data are available, as summarised by Mehmet Özdoğan and Rana Özbal et al. in this volume.⁵ Without a doubt, there are still many gaps in our understanding of the western Anatolian Neolithic in terms of ‘empty’ geographical regions and more detailed aspects like chronologies and their synchronisations. In addition, knowledge about material culture, technological as

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² Bami, this volume; Guilaine, this volume.

³ Shennan 2018.

⁴ Selected recent publications: Özdoğan – Başgelen 1999; Lichter 2005; Katsanis et al. 2008; Özdoğan 2010; Galik – Horejs 2011; Özdoğan 2011; Reingruber 2011; Çakırlar 2012; Çilingiroğlu et al. 2012; Duru 2012; Çilingiroğlu – Çakırlar 2013; Gerritsen et al. 2013; Özbek – Erdoğan 2014; Özdoğan 2014; Takaoğlu et al. 2014; Weninger et al. 2014; Horejs et al. 2015; Reingruber 2015; Gerritsen – Özbal 2016; Hofmanová et al. 2016; Horejs 2016; Milić – Horejs 2017; Reingruber et al. 2017.

⁵ Özdoğan, this volume; Özbal et al., this volume.



Fig. 1 Excavated Neolithic sites in the east Aegean and western Anatolia dating to the 7th and 6th millennium BC. The sites of the Anatolian Aegean Coastal Group are marked with triangles (map: M. Börner/OREA 2019)

well as socio-cultural developments and many other elements are still lacking; nevertheless, the approximately 25 excavated sites dating to the 7th and early 6th millennia BC (Fig. 1) offer solid data about farming societies, mostly dating into the Late Neolithic period (6500–6000/5900 BC). During this Late Neolithic phase, it is possible to see the development of regional clusters of sites by means of geographical location as well as regional cultural commonalities.⁶ Previous analyses of the connectivity in the Izmir region during the Late Neolithic by the author led to the definition of the ‘Anatolian Aegean Coastal Group’, in which currently six Late Neolithic communities are included. This intra-regional connectivity also suggests the rise of a particular regional identity between c. 6500 and 5900 calBC.⁷

⁶ Overview of the Lakes Region and the Anatolian Aegean Coastal Group in Özdoğan et al. 2012 and the Marmara region in Özdoğan et al. 2013 and in Özbal et al., this volume.

⁷ Horejs 2016.

There is no doubt about the fully established agricultural economy and permanent house-based way of life in villages of these Late Neolithic communities in western Anatolia (Fig 1). However, only a few of them date back to the so far earliest phase of the first farmers, as argued already by several scholars.⁸ Based on the archaeological remains and the radiocarbon data, there are, up to now, about six sites in the entire Aegean and western Anatolian region to be defined as early Neolithic in their economic system and materiality; the sites are Paliambela, Franchthi, Knossos X, Çukuriçi XIII, Ulucak VI, Uğurlu VI and Barcın Höyük VIe (Fig. 2).⁹ They are radiocarbon dated to the first half of the 7th millennium, mainly between 6700 and 6600 calBC,¹⁰ and have been designated as belonging to the ‘initial’ (in Greece) or ‘early’ (in western Anatolia) Neolithic period.¹¹ They appear heterogeneous in aspects of ecological conditions (coastal/inland, cave/open-air site), settlement systems (pit complexes, houses), diet and hunting/herding strategies as well as in their raw material procurement management, and most probably in many more aspects when it comes to detailed comparison of single-site analyses.¹² However, they also show some crucial aspects in common, most of all the fact that they represent the first farming and herding communities in the entire region.¹³

As argued already elsewhere in detail, these early Neolithic pioneers based around the Aegean Sea were closely related to the long established maritime networks of the Mesolithic Aegean, and probably also to the eastern Mediterranean PPN networks.¹⁴ Significantly, the absence of evidence for experimental phases in crucial Neolithic economic subsistence strategies (farming and herding) suggests the adoption of external knowledge and practices, coming together with new people seeking new land. This ‘maritime colonisation model’ points to the arrival of new and probably small groups from areas with an established Neolithic economy on the one hand, and on the other it highlights the impact of the *longue durée* maritime connectivity of Mesolithic seafarers, only indirectly detectable in the archaeological record. The scarcity of archaeological data from inland western Anatolia prevents any consistent hypothesis at the moment, but may add to the complexity of Neolithic trajectories if we consider the potential impact of local hunter-foragers as active players within this transformation process.¹⁵ Now let us turn to a discussion of the situation in western Anatolia before agriculture became the main subsistence strategy, in order to address the main issue of this volume: farming frontiers between eastern, central and western Anatolia.

The Early Holocene Frontiers of Western Anatolia

During the early Holocene, terrestrial western Anatolia was diverse in terms of its cultural, technological and economic background in comparison to the Pre-Pottery Neolithic zones further east (Fig. 2). Whilst the Mesolithic communities in the Aegean and its coastal zones provide a different set of archaeological data, it is only partially related to inland western Anatolia.¹⁶ The lack of any early Holocene data from the southern Balkans – neither from the northern Aegean coast, nor

⁸ Horejs et al. 2015; Çevik – Abay 2016; Gerritsen – Özbal 2016; Çilingiroğlu 2017.

⁹ The site of Mavropigi in western Macedonia might be included in the future due to its potential early dating as well (Maniatis 2014; Karamitrou-Mentessidi et al. 2015).

¹⁰ Summarised in Clare – Weninger 2014 and Weninger et al. 2014. New data modelling recently published by Guilbeau et al. 2019, lead to ‘older’ dates, but situated in the same plateau of the Calibration Curve.

¹¹ Krauß 2011, 3; Özdoğan et al. 2012, 237 (chronological table); Perlès et al. 2013; Munro – Stiner 2015.

¹² Cf. Kotsakis 2014 and Kotsakis, this volume, who points out the importance of detailed site studies.

¹³ For the contextualisation in a broader development see Shennan 2018.

¹⁴ Vigne et al. 2012; Vigne et al. 2014; Horejs et al. 2015; Douka et al. 2017.

¹⁵ Takaoğlu et al. 2014; Çilingiroğlu 2017.

¹⁶ The few relations in the lithic sets of both areas have been discussed recently by Bogdana Milić (Milić 2018). For basic studies of the Aegean Mesolithic see: Perlès 1990; Perlès 2003b; Galanidou – Perlès 2003; Trantalidou 2003; Perlès 2005; Séfériadès 2007; Kaczanowska – Kozłowski 2008; Strasser et al. 2010; Sampson 2010; Sampson et al. 2010; Trantalidou 2010; Galanidou 2011; Trantalidou 2011; Carter et al. 2014; Kaczanowska – Kozłowski 2014; Özbek – Erdoğan 2014; Sampson 2014; Carter et al. 2016; Kozłowski 2016.



Fig. 2 The Aegean Mesolithic and western Anatolia Pre-Neolithic sites dating between 10000 and 7000 BC and the Neolithic pioneer sites starting around 6700 BC. Pre-Neolithic sites: 1. Ağaçlı; 2. Asarkaya; 3. Belbaşı; 4. Beldibi; 5. Çalca; 7. Domalı; 9. Girmeler; 10. Gümüşdere; 11. Kalkanlı; 12. Karain; 13. Keçiçayırı; 20. Musluçeşme; 21. Öküzini; 26. Üçdutar. Epipaleolithic/Mesolithic sites: 6. Cyclops Cave (Youra); 8. Gavdos; 14. Kerame; 15. Klissoura; 16. Koukou; 17. Livari; 18. Maroulas; 19. Mordoğan; 22. Ouriakos; 23. Plakias; 24. Sidari; 25. Theopetra; 27. Ulbrich; 28. Zaimis (after Horejs et al. 2015 with modification; map: M. Börner/OREA 2019)

further inland – prevents any analyses of potential cultural overlapping zones in that area at the moment.¹⁷ Focussing on the region of our study in western Anatolia, about 15 Pre-Neolithic sites have been detected, with a small number that could be dated between 10000 and 6700 BC, mainly clustered in coastal zones (Fig. 2).¹⁸ In addition to this, new important data for the early Holocene are coming from the southwest Anatolian littoral and hinterland, which is of special interest for our understanding of the Neolithic dispersal via maritime routes, in which the southern Anatolian coast is expected to play a crucial role with hopefully new dates in the future.

So far, the archaeological evidence suggests the presence of hunter-forager communities in the late 9th and 8th millennia BC (Girmeler Cave), with continuous (repetitive? seasonal? permanent?)

¹⁷ For the geographical broader view including the Danube in the early Holocene see for example: Guilaine 2013; Gurova – Bonsall 2014, fig. 2; Krauß – Floss 2016.

¹⁸ This spatial distribution of Pre-Neolithic sites in those areas might represent regions of intensive surveys and focussed investigations, for details in the northwestern part see: Karul 2017, fig. 1.1.

domestic activities including dwellings and plastered floors.¹⁹ Çiler Çilingiroğlu has pointed to potential forager-farmer contacts between the mobile groups in southwest Anatolia (e.g. Öküzini Cave) and the farming pioneers of the Aegean.²⁰ Relations between the southwest Anatolian hunter-gatherers and Cappadocian PPN groups had also been suggested,²¹ but this contact does not appear to have led to the adoption of cultivated crops and herding subsistence strategies before the 7th millennium BC, such as in Bademağacı and Höyücek, both of which are located further inland at the Burdur plateau.²² However, the whole region is expected to provide substantial data in the future.

From the work of the experts in northwest Anatolia, a chronological or even techno-cultural definition of the lithic assemblages from surface collections seems difficult (e.g. ‘Ağaçlı Group’).²³ However, whilst the flake-based lithic industry of Üçdülar does not appear comparable with the Aegean Mesolithic chipped stone industry based on our current state of knowledge as summarised by the excavators, they do provide new data for potential overlapping zones of maritime and terrestrial mobile groups in Pre-Neolithic times.²⁴ The recent work at the site of Mordoğan on the Karaburun Peninsula suggests strong links with the Aegean Mesolithic in terms of raw material and techno-typology.²⁵ These exciting new data not only provide the first evidence for hunter-foragers in the Izmir region, but additionally offer a local Pre-Neolithic population connected with Aegean mobile groups.

The current evidence for the early Holocene in western Anatolia highlights potential contacts between the southwestern local hunter-foragers and PPN zones further east, which on the one hand demonstrate the crucial diversities between central and western Anatolia, but on the other also indicate at least occasional contacts through the ‘farming frontier’. The terrestrial-marine contact zones along the littorals of Anatolia are an important focus for understanding the complex trajectories and transformation processes. Although we are currently lacking any traces of local pathways, adaptation or experimental phases during the neolithisation process of the region in our focus, it is important to consider failed expeditions by Neolithic people or simply not yet detected early farming sites. As such, the spatial patterning of Mesolithic or Pre-Neolithic and early Neolithic pioneers might be coincidental and only represents the present state of research. I have also argued for the alternative view that the micro-regions of the first pioneer sites might have been attractive to the newcomers seeking land specifically because they were ‘empty’ areas. The central Aegean coast of Anatolia may offer future potential to look more closely at this situation with data emerging from the two pioneer sites of Ulucak and Çukuriçi located close to the coast and the Mesolithic site of Mordoğan on the Karaburun peninsula in their neighbourhood. Following the preliminary results from these sites, it is only currently possible to state the differences in lithic technology and raw material procurement between the Mesolithic and early Neolithic communities.²⁶ The broad study of the lithic raw material procurement strategies of the Çukuriçi pioneer community by Michael Brandl and Bogdana Milić has shown that local, regional as well as supra-regional sources were known and used.²⁷ Although scientific analyses of the cherts are awaited for Aegean Mesolithic assemblages and the neighbouring Mordoğan in particular, there are no indicators for the Pre-Neolithic use of the local chert sources in Çukuriçi’s vicinity so far.²⁸

¹⁹ Takaoğlu et al. 2014.

²⁰ Çilingiroğlu 2017.

²¹ Takaoğlu et al. 2014 based on sequences of plastered floors and plant processing with grinding stones in Girmeler Cave, which are both well-known practices since early PPN in central Anatolia.

²² Duru 2012; Clare – Weninger 2014, 11.

²³ Gatsov – Özdoğan 1994; Özdoğan 2008; Özdoğan 2011; Efstratiou et al. 2014; Reingruber 2016; Özbal – Gerritsen, this volume.

²⁴ Özbek – Erdoğan 2014.

²⁵ Çilingiroğlu et al. 2016; Çilingiroğlu 2017.

²⁶ Çilingiroğlu et al. 2016; Milić 2018.

²⁷ Horejs et al. 2015; Milić 2018; Schwall et al. in press.

²⁸ Scientific definition of the chert sources used during the Neolithic at Çukuriçi Höyük is given in Schwall et al. in press; Brandl in preparation.

Category	Archaeological Data	Aegean Mesolithic/ Pre-Neolithic Western Anatolia 10000–7000 BC	Pre-Pottery Neolithic Core Zones	Pioneer Sites Ulucak VI & Çukuriçi XIII 6700 BC	Anatolian Aegean Coastal Group after 6500 BC
Settlement and Architecture	House-based Community		x	x	x
	Village Life		x		x
	Rectangular Buildings		x	x	x
	Special Cult Buildings		x		
	Painted Plaster		x	x	
	Plastered Floors	x	x	x	x
Subsistence	Domestic Animals		x	x	x
	Cultivated Plants		x	x	x
	Fishing, Shell-fishing	x	x	x	x
Imported Raw Materials	Obsidian	x	x	x	x
	Exotic Shells	x	x	x	x
	Malachite		x	x	
	Ocr/Hematite		x	x	
	Native Copper		x		
Groundstones	Celts, Chisels etc.	x	x	x	x
	Grinding Stones	x	x	x	x
Stone Status Objects	Stone Vessels	x	x	x	x
	Bracelets, Rings		x	x	
	Fine Beads		x	x	x
Lithic Technology	Pressure Technology		x	x	x
	Flake Industry	x	x	x	x
	Caches of Long Pressure Blades		x		x
	Seafaring	x	x	x	x
Special Crafts	Mat, Basketry		x		x
	Textile		x		x
	Pigmenting		x	x	
	Leopard Symbols/Bones		x		x
Symbolic Representations	Animal Figurines		x		x
	Steatopygic Figurines		x		x
	“M” Shaped Figures		x		
	Skull Cult, Modelled Skulls		x		
	Phallus Symbols		x		
	Bucrania		x		

Fig. 3 The archaeological evidence of main cultural categories differentiated in Mesolithic Aegean/Pre-Neolithic western Anatolia, PPN Core Zone, Neolithic Pioneers and the Anatolian Aegean Coastal Group (after Özdoğan 2010 with modifications and additions; table by F. Ostmann/OREA)

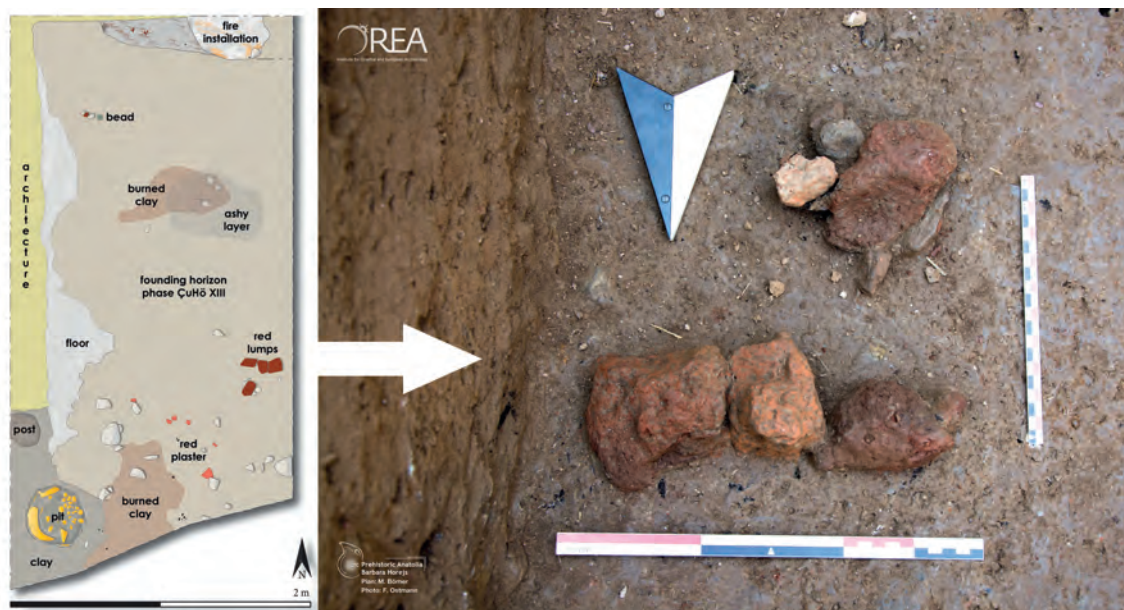


Fig. 4 Lumps for pigmenting recovered upon the founding horizon floor of the pioneer settlement phase ÇuHö XIII (photo: F. Ostmann/ERC Prehistoric Anatolia 2014, plan: M. Börner/OREA)

We might hypothesise that the Pre-Neolithic mobile seafarers explored the coastal zones around modern Izmir and were aware of its valleys, small basins, freshwater and raw material sources; however, whilst these environmental conditions were highly attractive for farming communities,²⁹ they probably did not fulfil the needs of Aegean fishermen and seafarers.

The evidence we have so far suggests that the arrival of the Neolithic way of life at the Anatolian Aegean central coast appeared abruptly, while the succeeding process of adaptation and transformation into regional Neolithic identities lasted several generations. The following discussion aims to differentiate the archaeological evidence of the ‘Anatolian Aegean Coastal Group’ chronologically to examine the potentially continued, adopted, transformed or transferred aspects of the Mesolithic-Neolithic change. Based on the case study of Çukuriçi Höyük in early and late Neolithic times, the discussion will address the important role of social memories in the complex pathway from a pioneer society into a regionally embedded Neolithic community with its particular local identity.

Continuities, Innovations, Adaptations and Transformations

The abrupt arrival of the Neolithic to the central Aegean coast of Turkey is attested at the pioneer sites of Ulucak VI and Çukuriçi XIII around 6700 calBC, and has already been presented in detail elsewhere. This contribution now focusses on the aspects of social strategies and techno-cultural know-how, which came with the newcomers and were transformed and continued or were abandoned during the succeeding centuries. Additionally, this approach aims to consider the evidence for those aspects in the archaeological record that potentially did not come with early farmers, but instead indicate other inputs or influences within a *longue durée* perspective. To avoid long descriptions of each relevant/non-relevant element, the following table will illustrate the archaeological record within cultural categories as evident in Aegean Mesolithic/Pre-Neolithic western Anatolia, in the PPN core zones, in the pioneer sites of Ulucak VI and Çukuriçi XIII as well as in the succeeding Late Neolithic ‘Anatolian Aegean Coastal Group’ (Fig. 3). Although a simple list of archaeological categories will never be able to integrate the complexity of the neolithisation process, it summarises our current knowledge about the data in a clear manner.

The dominant relations between the pioneers and the PPN world have been discussed already and shall not be repeated here.³⁰ Instead this paper will examine aspects that are evident only in the pioneer phases and seem to disappear during the establishment of local and regional Neolithic identities and concepts. Although there is evidence for the early use of red pigment in the plastering of floors (and walls as for example in Ulucak VI), there seems to have been a shift by the Late Neolithic as the practice of plastering continued, but red colours were abandoned. For example, red pigment for architectural features is only known from the founding phase in Çukuriçi XIII (Fig. 4).

Significantly, the use of red colours for living spaces disappeared around the same time that red coloured pottery was introduced in the Late Neolithic period, suggesting that the colour may have continued to have cultural significance, but within a different material sphere. It requires more scientific analyses in the future to learn more about the production technologies of these red vessels (oxidising firing procedures, red-slipped as well as red-painted jars), but we can state the importance of red in producing domestic pottery, starting around 6500 BC. A shift between the Early and Late Neolithic can also be seen in personal adornments; the evidence of malachite at Çukuriçi XIII appears as a singular phenomenon (Fig. 5),³¹ however, not accidentally as one

²⁹ For details of Çukuriçi’s environmental conditions see: Stock et al. 2015; Horejs 2017, 14.

³⁰ Çilingiroğlu – Çakırlar 2013; Arbuckle et al. 2014; Horejs et al. 2015; Douka et al. 2017.

³¹ Horejs et al. 2015.

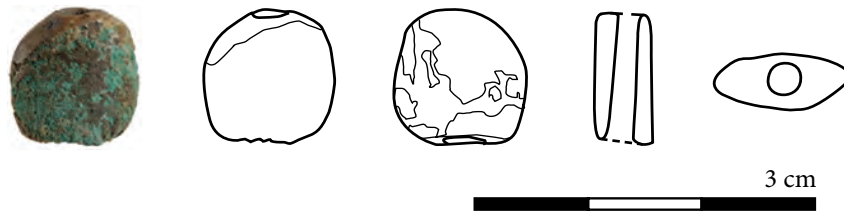


Fig. 5 Malachite bead from the pioneer settlement phase XIII at Çukuriçi Höyük, coming from a reddish clay layer located in complex 24 (inventory number: 14/2375/3/8) (M 1.5:1) (photo: N. Gail; ERC Prehistoric Anatolia, drawings: M. Röcklinger/OREA)

small mobile bead can be easily transported over long distances and kept or circulated over time.³² The same can be stated for stone bracelets and rings, both evident during the first farming generations, but not continued in the Late Neolithic. Such evidence suggests the selective adoption and abandonment of different elements of Neolithic culture. Whilst the main components of the Neolithic way of life, such as permanent house-based living, four-tier husbandry, farming with cultivated plants and various practices and technologies (storage strategies, pottery production, pressure technique in chipped stone production) came with the newcomers and remained; other practices were not continued and therefore disappeared (stone bracelets, malachite beads) or were transformed within a local context over several generations.

Impact from Mesolithic Populations?

In addition to particular archaeological material features, relations between the pioneers and early Holocene mobile groups are primarily detected through indirect evidence of learnt practice, via the communication of know-how and the adoption of particular seafaring knowledge.³³ The ‘nautical package’ of Mesolithic seafarers included not only the knowledge of routes and raw materials sources (jadeit on Syros,³⁴ obsidian on Melos), but also a maritime affinity visible in marine nutrition and marine ornaments,³⁵ evident in Çukuriçi’s pioneer community. The individual character of ornaments made of seashells suggests a personal connection of the owner to the sea; these few personal items probably reflect the impact of and connection to marine ways of life for this pioneer society, which are symbolised in individual jewellery. The use of shellfish ornaments disappears after the founding phase, which indeed might highlight more direct contact of earlier generations with maritime populations. However, fishing and shell-fishing remained important aspects in the local diet and subsistence strategy. The suggested impact of Mesolithic Aegean foragers and fishermen on subsistence, mobility and even raw material procurement strategies appears to have had a long-term effect on the local Çukuriçi community and suggests *longue durée* connectivity before and after the establishment of the first farmers on-site.³⁶ It remains an open question of how long the Mesolithic tradition of mobile seafaring groups continued during the 7th and 6th millennia and the following periods as a parallel phenomenon to the farming communities around the coast. Unfortunately, with the absence of skeletal remains and analysis from the sites within our focus area, it will not be possible to fully examine the integration of Mesolithic people into the newly settled communities. As attested in other world regions,³⁷ the process of assimilation and adoption during the neolithisation

³² Çilingiroğlu recently highlighted the common fragility, small size and mobility of the material culture in the founding phases of the pioneer sites (Çilingiroğlu 2017).

³³ Kotsakis 2008; Broodbank 2013.

³⁴ Sørensen et al. 2017.

³⁵ Rose 1995; Galanidou 2011; Stiner – Munro 2011; Horejs et al. 2015, 304, fig. 6.

³⁶ Cf. Galanidou – Perlès 2003; Galanidou 2011; Sampson 2014.

³⁷ Bollongino et al. 2013; Beau et al. 2017; Mathieson et al. 2018.



Fig. 6 Two Neolithic pendants excavated at Çukuriçi Höyük (inventory numbers: 1: 14/2365/3/1, 2: 13/5244/3/4) (photos: F. Ostmann/OREA; drawings: M. Röcklinger/OREA)

dispersal might be imagined for the Aegean Mesolithic groups as well, even though the timespan of this transformation after the Neolithic arrival is still not fully understood.

Bridging the Farming Frontier?

A well understood aspect is the frontier between the PPN phenomenon of monumentalisation, special cult buildings and complex symbolism in the core zones, all of which were not transferred to the contemporaneous early Holocene communities in western Anatolia or the Aegean. However, some aspects of special practices in probable ritual contexts on the Anatolian Aegean coast do seem to have been transferred from east to west, bridging the gap in time and space. The cache of obsidian long-blades deposited inside a Late Neolithic house at Çukuriçi X (c. 6500 calBC) previously published, reflects older PPN practices of long-blade hoarding known from PPNB Upper Mesopotamia, the Levant and Cyprus.³⁸ As published elsewhere,³⁹ the evidence of a ritual deposition of a hunted leopard within the domestic area of the Late Neolithic Çukuriçi village (phase ÇuHö VIII) was most likely related to central Anatolian concepts of taboo animals and hunting rituals in agricultural domestic societies. The leopards' special social-ritual treatment and depiction, played a role within the 'Anatolian Aegean Coastal Group' during the Late Neolithic,⁴⁰ which might reflect new connectivities of the coastal communities with inner Anatolian ones⁴¹ in the last centuries of the 7th millennium BC. This is also suggested through the introduction of Cappadocian obsidian artefacts found at western settlements. In addition to these transferred, adopted and transformed practices, we also see an increase in new symbolic representations after the pioneer phase, including figurines and amulets. Two Çukuriçi pendants shall be presented in more detail to demonstrate the new variety of Neolithic symbolism on the Anatolian Aegean coast (Fig. 6).

³⁸ Horejs et al. 2015; Milić in press.

³⁹ See our discussion of leopard hunting in Galik et al. 2013.

⁴⁰ Leopards are not only hunted at Çukuriçi and Ulucak (Çakırlar 2012, 22, tab. 3), but also depicted such as in Yeşilova (Derin 2013).

⁴¹ Hodder – Meskell 2010.

Both pendants are made of hard black to black-greyish stone,⁴² are small in size and light in weight, worked to be viewed from the front with grooved relief, a plain flat underside, and are highly polished on the complete surface.⁴³ Both are pierced in the upper part and most likely were used as pendants, at least secondarily. The meaning of the pendant from Fig. 6.1 remains vague and can be ascribed as probably an anthropomorphic figure with plain trapezoid 'head' and straight elongated slightly out-curved corpus without any obvious sexual characteristics. The break at the lower part prevents a definition of its base.⁴⁴ The preserved part with slightly symmetrical extremities (shoulder with arms or schematic arms and hips?) is reminiscent of other schematic pendants,⁴⁵ though exact parallels can hardly be expected within this exceptional kind of art and expression. Its scale of abstraction, also known from Anatolian Neolithic statuettes, makes it additionally difficult to definitely assign it as a human, animal or fantastic creature. The concept and shape of its head corresponds to the second, clearly anthropomorphic pendant, but is also known from Neolithic animal stone amulets, especially in Greece and in the Balkans, the latter primarily have a later date.⁴⁶

The clearly anthropomorphic pendant (Fig. 6.2) represents a female figure with distinct accentuated sexual characteristics, specifically the emphasised pelvis and highlighted pubic triangle. The arms are in relief without visible hands or fingers and are bended underneath the invisible breasts. Short legs in a slightly outward direction end in oval side-facing feet. The short rectangular-shaped head does not show any internal facial grooving and remains plain with a fine polished surface. The figure is 2cm long and of high quality. It displays fine grooves and scratches, and was most likely manufactured using an obsidian blade, with the hardness of the stone material requiring such a tool.⁴⁷ This astonishing miniature female figure is reminiscent of the well-known female/divine figures from Hacilar and Çatalhöyük, for example, as well as other schematic depictions in Anatolia and the Aegean in the 7th millennium.⁴⁸ Recently Svend Hansen has argued that the distinct position of the hands under or upon the breasts is not only restricted to Anatolia and Greece, but also incorporates a different meaning than statuettes with other arm positions.⁴⁹ Comparable concepts are detectable in standing statuettes made of clay recovered in Late Neolithic western Anatolia, such as in Ulucak IV and Barcın Höyük VIa–b.⁵⁰ Although the interpretation for these kind of figures is a broad field of long-term discussion and not the focus of this contribution, I would suggest that the Çukuriçi pendant represents important aspects for the agricultural society, such as power and fertility, both embedded in a complex symbolic and mythic world.⁵¹ Probably related with the broader cultural development of domestic village life, its local production as well as its presumable use as personal ornament suggests a specific world-view linked with local communal, as well as individual beliefs and identities.

⁴² Both have been analysed by the geological expert Danilo Wolf with the result that Fig. 6.1 is made of Galena and Fig. 6.2 of a hard and tough amphibolite kind of stone.

⁴³ Fig. 6.1: object was found in a filling layer within complex 20 of phase ÇuHö XII (c. 6600 BC). Fig. 6.2: object was recovered within sediments of a filling layer in the Early Bronze Age settlement ÇuHö IV (room 41), most likely relocated within the tell by using Neolithic sediments for this low construction (see Schwall 2018, 118–163; Grasböck et al. in preparation).

⁴⁴ The measurements of the pendant from Fig. 6.1: 1.92cm long, 2.2cm wide, 0.64–0.47cm thick and 8.1g in weight.

⁴⁵ E.g. Hansen 2007, pl. 109, 10 (Achilleion).

⁴⁶ E.g. Perlès 2001, 268, fig. 12.5 (Greece); Nikolov 2006, 71 (Bulgaria).

⁴⁷ The measurements of pendant Fig. 6.2: 2.1cm long, 1.8cm wide, 0.3cm thick and 4.3g in weight.

⁴⁸ For new figurines from Çatalhöyük with a comparable concept of expression see: Meskell et al. 2016, fig. 1, 2, 5; for other sites see: Hansen 2007, pl. 65 (Hacilar); pl. 80, 1 (Orman Findanlığı); pl. 97, 9 (Ag. Georgios); pl. 99 (Sesklo); pl. 109, 8 (Malthi).

⁴⁹ Hansen 2014.

⁵⁰ Çilingiroğlu et al. 2012, fig. 8–9; Gerritsen et al. 2013, fig. 17.

⁵¹ Hansen 2007; Hodder – Meskell 2010.

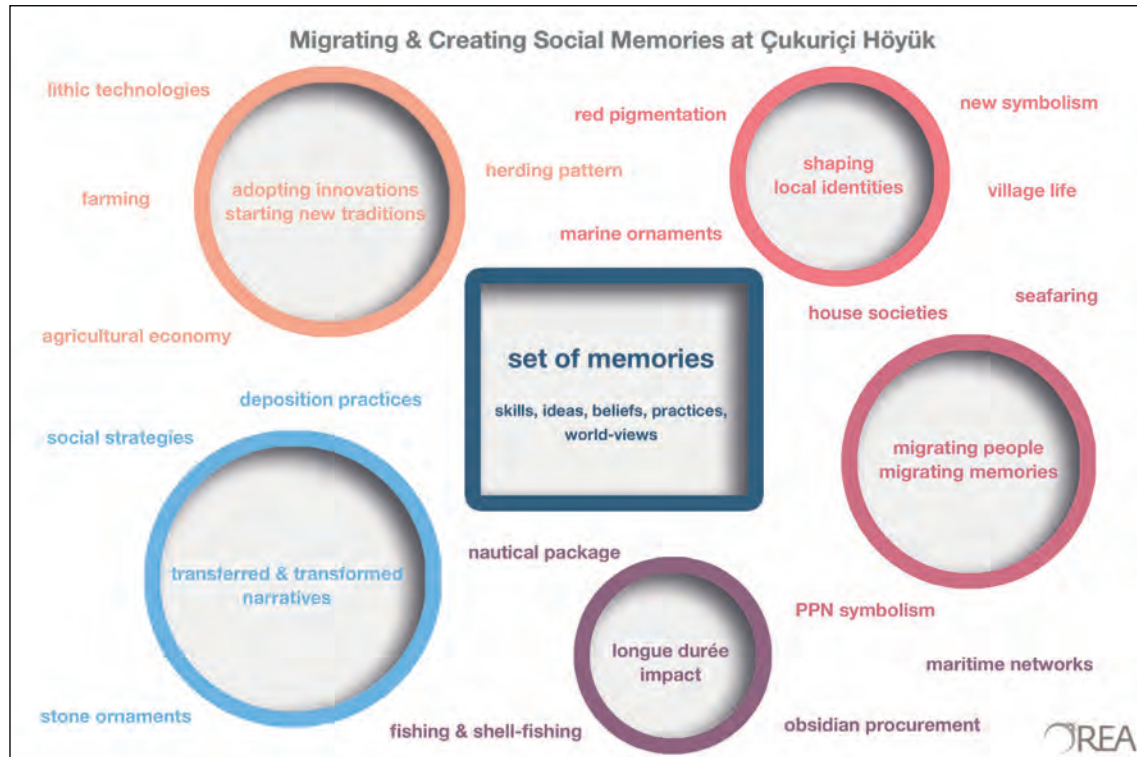


Fig. 7 Model for the complex pathways for migrating and creating social memories at Neolithic Çukuriçi Höyük (illustration: F. Ostmann/OREA 2018)

Discussion of Social Memories for Establishing the Neolithic at Çukuriçi

The archaeological and material features that have been discussed from Çukuriçi Höyük highlight a complex set of different ideas, practices and world-views that created the site-specific developments we see during the Early and Late Neolithic periods (Fig. 7). These cultural expressions incorporate different narratives, some of which show a long-lasting impact on the local agricultural societies such as the specific techno-cultural skills that are linked with know-how, experience and knowledge, and can hardly be transferred via simple copy-paste mechanisms. For example, the ‘nautical package’ and maritime affinity of the Çukuriçi settlers incorporated the experience of seafarers and fishermen, attested from both the beginning and continuously practiced during the entire Neolithic period. This *longue durée* impact of the maritime-related lifestyle is not only reflected in personal items of the pioneers, but we might additionally assume a very specific system of beliefs, myths and nautical practices created by a partially maritime society. Since the first settlers brought these traceable skills with them, which could hardly have come via inland Anatolian farmers, the Mesolithic Aegean and/or PPN eastern Mediterranean traditions seem to have been embedded in Çukuriçi’s local habits. The additional domestic skills of farming and herding display a Levantine-Mesopotamian pattern⁵² pointing to terrestrial agricultural traditions, again presumably related to specific social strategies, practices and beliefs. By facing the ‘Neolithic farming frontier’ between central and western Anatolia, I would like to argue for some shared social meanings and memories on both sides of this frontier, reflected in systems of beliefs, rituals and practices of the Neolithic house societies, both east and west of this frontier. Although the communities were undoubtedly embedded in a local context and continuously created and negotiated local identities, they were contextualised

⁵² Galik – Horejs 2011; Arbuckle et al. 2014.

in time, experience and memory in a broader sense, too. By considering the evidence for the movement of people through the transfer of skills and knowledge, we can also consider the migration of memories that would have come with these people as they moved, being part of a particular set of social-cultural and technological traditions and practices.

Creating Social Memories

The creation of social memory⁵³ and its impact on Neolithic communities and identities has been discussed in different aspects for the Levant and Anatolia by several scholars in recent decades. It has been argued by Ian Kuijt that for the PPNB Levant, we are probably facing a kind of ‘standardisation of social memory in communities’, not only in burial patterns.⁵⁴ Kuijt further argues for a long-term maintenance of similar practices within and between contemporaneous settlements throughout the Levant and Anatolia in the 8th millennium BC. A particularly important aspect of his model of similar practices in early Neolithic communities is the continuity in location of buildings. The practice of continuous rebuilding of houses one upon the other over centuries is not only a social pattern in the PPNB Levant, like in ‘Ain Ghazal, Beidha or Jericho. This particular practice is also observable in central Anatolia, like in Aşıklı and Çatalhöyük, where it has widely been discussed by Ian Hodder, Bleda Düring and others.⁵⁵ The commemorative aspect for creating social memories in an agricultural society argued by Ian Hodder and Craig Cessford⁵⁶ is also evident in the Çukuriçi Late Neolithic settlement. The case of house rebuilding and replacements within the settlement phase ÇuHö X has no practical reason,⁵⁷ but demonstrates a potential socio-functional meaning through potentially creating social memories for these house-based communities. The evidence for Çukuriçi house replacements additionally points to the shaping of a specific identity as well, again most likely related to its house-based entities over several generations.⁵⁸

Transferred Memories

The preservation of knowledge over generations is crucial in establishing and conserving traditions including distinct strategies (rituals, practices) embedded in the social memories of a group, family or community. The caching of long blades at Çukuriçi presumably represents such an expression of social memories transferred from PPNB Upper Mesopotamia and the Levant. This assemblage reflects external and former traditions, but also shows local adaptations in the production of these long blades through the use of the main local raw material, which is in our case Melian obsidian. Within the concept of memory, it is also possible to explain some other exotic elements related to non-local traditions. The stone bracelet of probable local production from Çukuriçi XIII finds its best parallels in PPN objects of Central Anatolia and Upper Mesopotamia and can be seen as a commemorative personal ornament, related with distinct values and meanings for its owner(s). These transferred and adopted memories illustrated in blade-caching and

⁵³ I understand social memory in terms of a social and cultural phenomenon in following for example Howard Williams, who analysed material culture in aspects of commemorative technologies and worked out incorporated and invoked narratives of archaeological objects (Williams 2013). There is a wide debate in anthropology about the misleading use and understanding of memory, which is suggested to be replaced by the terms ‘recollection’ or ‘evoking’ (e.g. Bloch 2012). I would still prefer ‘social memory’ as an established concept in archaeology (e.g. Chesson 2001; Van Dyke – Alcock 2003; Assmann 2008; Sommer 2014).

⁵⁴ Kuijt 2000; 2001.

⁵⁵ Hodder – Cessford 2004; Asouti 2006; Hodder 2007; Düring 2011; Düring 2014.

⁵⁶ Hodder – Cessford 2004.

⁵⁷ Bami et al. 2016.

⁵⁸ Souvatzi 2008; Hodder 2013, 351 argued for additional complex ties between groups and houses beyond the biological ones, such as co-eating and co-burying groups.

personal jewellery are related with the transfer of innovative technologies from the PPN zone, leading to a long-term impact on Neolithic societies. This is further attested through the lithic package, as defined by Milić, which incorporated not only distinct PPN tool types (or concepts of makings such tools) brought by the pioneers, but also, and more importantly, the knowledge and expertise of the new pressure technique for their production.⁵⁹ Finally, the established farming and herding subsistence economy practiced by the Çukuriçi pioneers represents agricultural skills, including the breeding of the domestic pig, brought in with the newcomers most likely via coastal and/or maritime dispersal. Indeed, one might imagine particular traditions, practices and beliefs as essential social strategies of this early agricultural community, which at present we have failed to fully consider in our interpretation of the archaeological data.

This complex set of memories presumably led to a contradictory accumulation of different skills, ideas, beliefs, practices, technologies and world-views in the pioneer societies of early 7th millennium BC Çukuriçi. Migrating and mobile people with particular memories were creating a society, shaping and negotiating its own local identity. This complex trajectory includes a regionally well-established maritime-related lifestyle as well as innovations and technologies that were brought by external communities and then adopted, presumably transferred together with narratives and social strategies. This dynamic process in the first half of the 7th millennium BC led to the establishment of an agricultural community on the central Aegean coast of Anatolia; a few generations later it was already embedded in a regional network of Neolithic villages. The phenomenon of migrating and creating social memories of a pioneer society might shed some light on the arrival and adaptation of the Neolithic on the Anatolian Aegean coast.

The evidence discussed from this case study not only indicates far-reaching shared meanings, it also importantly provides evidence for the transferral of social strategies and new cultural contexts in the Aegean, and their adoption for creating new local identities. These strategies were probably originally embedded in a complex system of beliefs, rituals and social patterns in the PPNB zones and are partially still detectable many generations later. We have argued for a maritime colonisation in the early 7th millennium via routes from the eastern Mediterranean to the eastern Aegean, probably based on Mesolithic sea networks. The model of migrating social memories within this Neolithic dispersal might bridge the gap between the PPN core zones and early Neolithic Aegean and western Anatolia, not in terms of chronology but certainly in terms of culture.

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References

Arbuckle et al. 2014

B. S. Arbuckle – S. W. Kansa – E. Kansa – D. Orton – C. Çakırlar – L. Gourichon – L. Atıcı – A. Galik – A. Marciniak – J. Mulville – H. Buitenhuis – D. Carruthers – B. De Cupere – A. Demirergi – S. Frame – D. Helmer – L. Martin – J. Peters – N. Pöllath – K. Pawłowska – N. Russell – K. Twiss – D. Würtenberger, Data sharing reveals complexity in the westward spread of domestic animals across Neolithic Turkey, *PLoS One* 9, 6, 2014, e99845. doi: 10.1371/journal.pone.0099845.

Asouti 2006

E. Asouti, Evolution, history and the origin of agriculture. Rethinking the Neolithic (plant) economies of South-west Asia, *Levant* 45, 2, 2013, 210–218. doi: 10.1179/0075891413Z.00000000025.

⁵⁹ Milić – Horejs 2017; Milić 2018; Milić in press; Guilbeau et al. 2019.

Assmann 2008

J. Assmann, Communicative and cultural memory, in: A. Erll – A. Nünning (eds.), *Cultural Memory Studies. An International and Interdisciplinary Handbook* (Berlin, New York 2008) 109–118.

Beau et al. 2017

A. Beau – M. Rivollat – H. Réveillas – M-H. Pemonge – F. Mendisco – Y. Thomas – P. Lefranc – M-F. Deguilloux, Multiscale ancient DNA analyses confirm the western origin of Michelsberg farmers and document probable practices of human sacrifice, *PLoS One* 12, 7, 2017, e0179742. doi: 10.1371/journal.pone.0179742.

Bloch 2012

M. Bloch, *Anthropology and the Cognitive Challenge* (Cambridge 2012).

Bollongino et al. 2013

R. Bollongino – O. Nehlich – M. P. Richards – J. Orschiedt – M. G. Thomas – C. Sell – Z. Fajkošová – A. Powell – J. Burger, 2000 years of parallel societies in Stone Age Central Europe, *Science* 342, 6157, 2013, 479–481.

Brami et al. 2016

M. Brami – B. Horejs – F. Ostmann, The ground beneath their feet. Building continuity at Neolithic Çukuriçi Höyük, *Anatolian Studies* 66, 2016, 1–16.

Brandl in preparation

M. Brandl, Neolithic Çukuriçi Höyük Chert. Characterisation, Provenance Studies and Economy (in preparation).

Broodbank 2013

C. Broodbank, *The Making of the Middle Sea. A History of the Mediterranean from the Beginning to the Emergence of the Classical World* (London 2013).

Carter et al. 2014

T. Carter – D. A. Contreras – S. Doyle – D. D. Mihailović – T. Moutsiou – N. Skarpelis, The Stelida Naxos Archaeological Project. New data on the Mesolithic and Middle Palaeolithic Cyclades, *Antiquity* 88, 341, 2014, Project Gallery. Online <<http://journal.antiquity.ac.uk/projgall/carter341>> (last accessed 9 Aug. 2018).

Carter et al. 2016

T. Carter – D. D. Mihailović – Y. Papadatos – C. Sofianou, The Cretan Mesolithic in context. New data from Livari Skiadi (SE Crete), *Documenta Praehistorica* 43, 2016, 87–101.

Chesson 2001

M. S. Chesson (ed.), *Social Memory, Identity, and Death. Interdisciplinary Perspectives on Mortuary Rituals* (Washington 2001).

Clare – Weninger 2014

L. Clare – B. Weninger, The dispersal of Neolithic lifeways. Absolute chronology and rapid climate change, in: M. Özdoğan – N. Başgelen – P. I. Kuniholm (eds.), *The Neolithic in Turkey. New Excavations and New Research. Vol. 6: 10500–5200 BC. Environment, Settlement, Flora, Fauna, Dating, Symbols of Belief, with Views from North, South, East and West* (Istanbul 2014) 1–65.

Çevik – Abay 2016

Ö. Çevik – E. Abay, Neolithisation in Aegean Turkey. Towards a more realistic reading, in: Yalçın 2016, 187–197.

Çakırlar 2012

C. Çakırlar, The evolution of animal husbandry in Neolithic Central-West Anatolia. The archaeozoological record from Ulucak Höyük (ca. 7040–5660 cal. BC, Izmir, Turkey), *Anatolian Studies* 62, 1, 2012, 1–33.

Çilingiroğlu 2017

Ç. Çilingiroğlu, The Aegean before and after 7000 BC dispersal. Defining patterning and variability, *Neo-Lithics* 1/16, 2017, 32–41.

Çilingiroğlu – Çakırlar 2013

Ç. Çilingiroğlu – C. Çakırlar, Towards configuring the neolithisation of Aegean Turkey, *Documenta Praehistorica* 40, 2013, 21–29.

Çilingiroğlu et al. 2012

A. Çilingiroğlu – Ö. Çevik – Ç. Çilingiroğlu, Ulucak Höyük. Towards understanding the early farming communities of Middle West Anatolia. The contribution of Ulucak, in: Özdoğan et al. 2012, 139–175.

Çilingiroğlu et al. 2016

Ç. Çilingiroğlu – B. Dinçer – A. Uhri – C. Gürbıyık – I. Baykara – C. Çakırlar, New Paleolithic and Mesolithic sites in the Eastern Aegean. Karaburun Archaeological Survey Project, *Antiquity* 90, 353, 2016, Project Gallery 1–6. doi: 10.15184/aqy.2016.168.

Derin 2013

Z. Derin, En yaşlı Anadolu Parsı, *Bornova Kent Dergisi* 3, 2013, 22–27.

Douka et al. 2017

K. Douka – N. Efstratiou – M. M. Hald – P. S. Henriksen – A. Karetsou, Dating Knossos and the arrival of the earliest Neolithic in the southern Aegean, *Antiquity* 91, 356, 2017, 304–321.

Duru 2012

R. Duru, The Neolithic of the Lakes Region. Hacılar – Kuruçay Höyük – Höyücek – Bademağacı Höyük, in: Özdoğan et al. 2012, 1–65.

Düring 2011

B. S. Düring, *The Prehistory of Asia Minor. From Complex Hunter-Gatherers to Early Urban Societies* (Cambridge 2011).

Düring 2014

B. S. Düring, Constructing the present past in the Anatolian Neolithic, in: S. Souvatzi – A. Hadji (eds.), *Space and Time in Mediterranean Prehistory* (New York, London 2014) 120–137.

Efstratiou et al. 2014

N. Efstratiou – P. Biagi – E. Starnini, The Epipalaeolithic site of Ouriakos on the island of Lemnos and its place in the Late Pleistocene peopling of the East Mediterranean region, *Adalya XVII*, 2014, 1–23.

Galanidou 2011

N. Galanidou, Mesolithic cave use in Greece and the mosaic of human communities, *Journal of Mediterranean Archaeology* 24, 2, 2011, 219–242.

Galanidou – Perlès 2003

N. Galanidou – C. Perlès, *The Greek Mesolithic. Problems and Perspectives*, *British School at Athens Studies* 10 (London 2003).

Galik – Horejs 2011

A. Galik – B. Horejs, Çukuriçi Höyük. Different aspects of its earliest settlement phase, in: R. Krauß (ed.), *Beginnings – New Research in the Appearance of the Neolithic between Northwest Anatolia and the Carpathian Basin. Papers of the International Workshop 8th–9th April 2009, Istanbul Organized by Dan Ciobotaru, Barbara Horejs and Raiko Krauß, Menschen – Kulturen – Traditionen* 1 (Rahden 2011) 83–94.

Galik et al. 2013

A. Galik – B. Horejs – B. Nessel, Der nächtliche Jäger als Beute. Studien zur prähistorischen Leopardenjagd, *Prähistorische Zeitschrift* 87, 2, 2013, 261–307. doi: 10.1515/pz-2012-0017.

Gatsov–Özdoğan 1994

I. Gatsov – M. Özdoğan, Some Epipaleolithic sites from NW Turkey. Ağaçalı, Domalı and Gümüşdere, *Anatolica* 20, 1994, 97–120.

Gerritsen et al. 2013

F. A. Gerritsen – R. Özbal – L. C. Thissen, The earliest Neolithic levels and Barcın Höyük, northwestern Turkey, *Anatolica* 39, 2013, 53–92.

Gerritsen – Özbal 2016

F. A. Gerritsen – R. Özbal, Barcın Höyük and the pre-Fikirtepe neolithisation of the eastern Marmara Region, in: Yalçın 2016, 199–208.

Grasböck et al. in preparation

St. Grasböck – T. Bratschi – B. Horejs – Ch. Schwall, Çukuriçi Höyük 4. Stratigraphie und Architektur der frühen Bronzezeit. Mit Beiträgen von B. Eichhorn, S. Seren und D. Wolf, *Oriental and European Archaeology* (in preparation).

Guilaine 2013

J. Guilaine, The Neolithic transition in Europe. Some comments on gaps, contacts, arrhythmic model, genetics, in: E. Starnini (ed.), *Unconformist Archaeology. Papers in Honour of Paolo Biagi*, BAR International Series 2528 (Oxford 2013) 55–64.

Guilbeau et al. 2019

D. Guilbeau – N. Kayacan – Ç. Altınbilek-Algül – B. Erdoğan – Ö. Çevik, A comparative study of the Initial Neolithic chipped-stone assemblages of Ulucak and Uğurlu, *Anatolian Studies* 69, 2019, 1–20.

Gurova – Bonsall 2014

M. Gurova – C. Bonsall, 'Pre-Neolithic' in Southeast Europe. A Bulgarian perspective, *Documenta Praehistorica* 41, 2014, 95–109.

Hansen 2007

S. Hansen, Bilder vom Menschen der Steinzeit. Untersuchungen zur anthropomorphen Plastik der Jungsteinzeit und Kupferzeit in Südosteuropa, *Archäologie in Eurasien* 21 (Mainz 2007).

Hansen 2014

S. Hansen, Neolithic figurines in Anatolia, in: Özdoğan et al. 2014, 265–292.

Hodder 2007

I. Hodder, Çatalhöyük in the context of the Middle Eastern Neolithic, *Annual Review of Anthropology* 36, 2007, 105–120.

Hodder 2013

I. Hodder, From diffusion to structural transformation. The changing roles of the Neolithic house in the Middle East, Turkey and Europe, in: D. Hofmann – J. Smyth (eds.), *Tracking the Neolithic House in Europe. Sedentism, Architecture and Practice* (New York, Heidelberg, London 2013) 349–362.

Hodder – Cessford 2004

I. Hodder – C. Cessford, Daily practice and social memory at Çatalhöyük, *American Antiquity* 69, 1, 2014, 17–40.

Hodder – Meskell 2010

I. Hodder – L. Meskell, The symbolism of Catalhöyük in its regional context, in: I. Hodder (ed.), *Religion in the Emergence of Civilization. Catalhöyük as a Case Study* (Cambridge 2010) 32–72.

Hofmanová et al. 2016

Z. Hofmanová – S. Kreutzer – G. Hellenthal – C. Sell – Y. Diekmann – D. Díez-del-Molino – L. van Dorp – S. López – A. Kousathanas – V. Link – K. Kirsanow – L. M. Cassidy – R. Martiniano – M. Strobel – A. Scheu – K. Kotsakis – P. Halstead – S. Triantaphyllou – N. Kyparissi-Apostolika – D. Urem-Kotsou – C. Ziota – F. Adaktylou – S. Gopal-an – D. M. Bobo – L. Winkelbach – J. Blöcher – M. Unterländer – C. Leuenberger – Ç. Çilingiroğlu – B. Horejs – F. A. Gerritsen – S. J. Shennan – D. G. Bradley – M. Currat – K. R. Veeramahl – D. Wegmann – M. G. Thomas – C. Papageorgopoulou – J. Burger, Early farmers from across Europe directly descended from Neolithic Aegeans, *Proceedings of the National Academy of Sciences of the United States of America* 113, 2016, 6886–6891.

Horejs 2016

B. Horejs, Aspects of connectivity on the centre of the Anatolian Aegean coast in 7th millennium BC, in: B. P. C. Molloy (ed.), *Of Odysseus and Oddities. Scales and Modes of Interaction between Prehistoric Aegean Societies and their Neighbours*, *Sheffield Studies in Aegean Archaeology* 10 (Oxford 2016) 143–167.

Horejs 2017

B. Horejs, Çukuriçi Höyük 1. Anatolia and the Aegean from the 7th to the 3rd Millennium BC. With contributions by C. Britsch, S. Grasböck, B. Milić, L. Peloschek, M. Röcklinger, C. Schwall, *Oriental and European Archaeology* 5 (Vienna 2017).

Horejs et al. 2015

B. Horejs – B. Milić – F. Ostmann – U. Thanheiser – B. Weninger – A. Galik, The Aegean in the early 7th Millennium BC. Maritime networks and colonization, *Journal of World Prehistory* 28, 4, 2015, 289–330.

Kaczanowska – Kozłowski 2008

M. Kaczanowska – J. K. Kozłowski, Chipped stone artefacts, in: A. Sampson, *The Cave of the Cyclops. Mesolithic and Neolithic Networks in the Northern Aegean, Greece. Vol. I: Intra-site Analysis, Local Industries, and Regional Site Distribution*, Prehistory Monographs 21 (Philadelphia 2008) 169–178.

Kaczanowska – Kozłowski 2014

M. Kaczanowska – J. K. Kozłowski, *The Aegean Mesolithic. Material culture, chronology, networks of contacts*, Eurasian Prehistory 11, 1–2, 2014, 31–62.

Karamitrou-Mentessidi et al. 2015

G. Karamitrou-Mentessidi – N. Efstratiou – M. Kaczanowska – J. K. Kozłowski, Early Neolithic settlement of Mavropigi in western Greek Macedonia, Eurasian Prehistory 12, 1–2, 2015, 47–116.

Karul 2017

N. Karul, Northwest Anatolia. A border or a bridge between Anatolia and the Balkans during the Early Neolithic Period?, in: Reingruber et al. 2017, 7–18.

Katsanis et al. 2008

M. Katsanis – S. Tsipidis – K. Kotsakis – A. Kousoulakou, A 3D digital workflow for archaeological intra-site research using GIS, *Journal of Archaeological Science* 35, 2008, 655–667.

Kotsakis 2008

K. Kotsakis, A sea of agency. Crete in the context of the earliest Neolithic in Greece in: V. Isaakidou – P. D. Tomkins (eds.), *Escaping the Labyrinth. The Cretan Neolithic in Context*, Sheffield Studies in Aegean Archaeology 8 (Oxford 2008) 49–72.

Kotsakis 2014

K. Kotsakis, Domesticating the periphery. New research into the Neolithic of Greece, *Pharos* 20, 1, 2014, 41–73.

Kozłowski 2016

J. K. Kozłowski, The Mesolithic of the Aegean Basin. Cultural variability, subsistence economy, interregional links and seafaring, in: Krauß – Floss 2016, 41–64.

Krauß 2011

R. Krauß, Neolithization between northwest Anatolia and the Carpathian Basin. An introduction, in: R. Krauß (ed.), *Beginnings – New Research in the Appearance of the Neolithic between Northwest Anatolia and the Carpathian Basin. Papers of the International Workshop 8th–9th April 2009, Istanbul Organized by Dan Ciobotaru, Barbara Horejs and Raiko Krauß*, Menschen – Kulturen – Traditionen 1 (Rahden 2011) 1–7.

Krauß – Floss 2016

R. Krauß – H. Floss (eds.), *Southeast Europe before Neolithisation. Proceedings of the International Workshop within the Collaborative Research Centres SFB 1070 “Ressourcenkulturen”, Schloss Hohentübingen, 9th of May 2014*, RessourcenKulturen 1 (Tübingen 2016).

Kuijt 2000

I. Kuijt, Keeping the peace, ritual, skull caching, and community integration in the Levantine Neolithic, in: I. Kuijt (ed.), *Life in Neolithic Farming Communities. Social Organization, Identity, and Differentiation* (New York, Boston, Dordrecht, London, Moscow) 137–164.

Kuijt 2001

I. Kuijt, Meaningful masks. Place, death, and the transmission of social memory in early agricultural communities of the Near Eastern Pre-Pottery Neolithic, in: M. S. Chesson (ed.), *Social Memory, Identity, and Death. Interdisciplinary Perspectives on Mortuary Rituals* (Washington 2001) 80–99.

Lichter 2005

C. Lichter, Western Anatolia in the Late Neolithic and Early Chalcolithic. The actual state of research, in: C. Lichter (ed.), *How Did Farming Reach Europe? Anatolian-European Relations from the Second Half of the 7th through the First Half of the 6th Millennium calBC*. Proceedings of the International Workshop, Istanbul 20–22 May 2004, *Byzas* 2 (Istanbul 2005) 59–74.

Maniatis 2014

Y. Maniatis, Radiocarbon dating of the major cultural phases in prehistoric Macedonia. Recent developments, in: E. Stefani – N. Merousis – A. Dimoula (eds.), *Proceedings of the International Conference on '100 Years Research in Prehistoric Macedonia 1912–2012'*, Archaeological Museum of Thessaloniki (Thessaloniki 2014) 205–222.

Mathieson et al. 2018

I. Mathieson – S. Alpaslan-Roodenberg – C. Posth – A. Szécsényi-Nagy – N. Rohland – S. Mallick – I. Olalde – N. Broomandkhoshbacht – F. Candilio – O. Cheronet – D. Fernandes – M. Ferry – B. Gamarra – G. González Fortes – W. Haak – E. Harney – E. Jones – D. Keating – B. Krause-Kyora – I. Kucukkalipci – M. Michel – A. Mittnik – K. Nägele – M. Novak – J. Oppenheimer – N. Patterson – S. Pfrenkle – K. Sirak – K. Stewardson – St. Vai – St. Alexandrov – K. W. Alt – R. Andreescu – D. Antonović – A. Ash – N. Atanassova – K. Bacvarov – M. Balázs Gusztáv – H. Bocherens – M. Bolus – A. Boroneanț – Y. Boyadzhiev – A. Budnik – J. Burmaz – St. Chohadzhiev – N. J. Conard – R. Cottiaux – M. Čuka – C. Cupillard – D. G. Drucker – N. Elenski – M. Francken – Borislava Galabova – G. Ganetsovski – B. Gély – T. Hajdu – V. Handzhyiska – K. Harvati – T. Higham – S. Iliev – I. Janković – I. Karavanić – D. J. Kennett – D. Komšo – A. Kozak – D. Labuda – M. Lari – C. Lazar – M. Leppek – K. Leshtakov – D. Lo Vetro – D. Los – I. Lozanov – M. Malina – F. Martini – K. McSweeney – H. Meller – M. Mendišć – P. Mirea – V. Moiseyev – V. Petrova – T. D. Price – A. Simalcik – L. Sineo – M. Šlaus – V. Slavchev – P. Stanev – A. Starović – T. Szeniczey – S. Talamo – M. Teschler-Nicola – C. Thevenet – I. Valchev – F. Valentin – S. Vasilyev – F. Veljanovska – S. Venelinova – E. Veselovskaya – B. Viola – C. Virag – J. Zaninović – S. Zäuner – P. W. Stockhammer – G. Catalano – R. Krauß – D. Caramelli – G. Zariņa – B. Gaydarska – M. Lillie – A. G. Nikitin – I. Potekhina – A. Papathanasiou – D. Borić – C. Bonsall – J. Krause – R. Pinhasi – D. Reich, The genomic history of southeastern Europe, *Nature* 555, 7695, 2018, 197–203. doi: 10.1038/nature25778.

Meskell et al 2016

L. Meskell – C. Nakamura – L. Der – C. Tsoraki – M. Arntz, Figurines, in: *Çatalhöyük 2016 Archive Report*, 137–150. Online <http://www.catalhoyuk.com/sites/default/files/media/pdf/Archive_Report_2016.pdf> (last accessed 20 Apr. 2018).

Milić 2018

B. Milić, Lithics and Neolithisation. Çukuriçi Höyük in Anatolia and the Aegean (PhD Diss. University of Tübingen, Tübingen 2018).

Milić in press

B. Milić, An addendum to the PPNB interaction sphere. The lithic package from 7th millennium BC Çukuriçi Höyük in western Anatolia. In: L. Astruc – C. McCartney – F. Brioso – V. Kassianidou (eds.), *Near Eastern Lithic Technologies on the Move. Interactions and Contexts in Neolithic Traditions. 8th International Conference on PPN Chipped and Ground Stone Industries of the Near East, Nicosia, November 23rd–27th 2016, Studies in Mediterranean Archaeology CL (in press) 485–502.*

Milić – Horejs 2017

B. Milić – B. Horejs, The onset of pressure blade making in western Anatolia in the 7th millennium BC. A case study from Neolithic Çukuriçi Höyük, in: *Horejs 2017*, 27–52.

Munro – Stiner 2015

N. D. Munro – M. C. Stiner, Zooarchaeological evidence for Early Neolithic colonization at Franchthi Cave (Peloponnese, Greece), *Current Anthropology* 56, 4, 2015, 596–603.

Nikolov 2006

V. Nikolov, *Kultura i Izkustvo na Praistoricheska Trakiia* (Plovdiv 2006).

Özbek – Erdoğan 2014

O. Özbek – B. Erdoğan, Initial occupation of the Gelibolu peninsula and the Gökçeada (Imroz) island in the Pre-Neolithic and Early Neolithic, *Eurasian Prehistory* 11, 1–2, 2014, 97–128.

Özdoğan 2008

M. Özdoğan, An alternative approach in tracing changes in demographic composition, in: J.-P. Bocquet-Appel – O. Bar-Yosef (eds.), *The Neolithic Demographic Transition and its Consequences* (Dordrecht 2008) 139–178.

Özdoğan 2010

M. Özdoğan, Westward expansion of the Neolithic way of life. Sorting the Neolithic package into distinct packages, in: P. Matthiae – F. Pinnock – L. Nigro – N. Marchetti (eds.), *Proceedings of the 6th International Congress of the Archaeology of the Ancient Near East, 5 May – 10 May 2009, »Sapienza«, Università di Roma. Vol. 1: Near Eastern Archaeol-*

ogy in the Past, Present and Future. Heritage and Identity. Ethnoarchaeological and Interdisciplinary Approach, Results and Perspectives. Visual Expression and Craft Production in the Definition of Social Relations and Status (Wiesbaden 2010) 883–897.

Özdoğan 2011

M. Özdoğan, Archaeological evidence on the westward expansion of farming communities from eastern Anatolia to the Aegean and the Balkans, *Current Anthropology* 52, 4, 2011, 415–430.

Özdoğan 2014

M. Özdoğan, The quest for new criteria in defining the emergence and the dispersal of neolithic way of life, in: C. Manen – T. Perrin – J. Guilaine (eds.), *La transition néolithique en Méditerranée. Actes du colloque Transitions en Méditerranée, ou Comment des Chasseurs Devinrent Agriculteurs* (Toulouse 2014) 77–89.

Özdoğan – Başgelen 1999

M. Özdoğan – N. Başgelen (eds.), *Neolithic in Turkey. The Cradle of Civilization. New Discoveries, Ancient Anatolian Civilizations Series 3* (Istanbul 1999).

Özdoğan et al. 2012

M. Özdoğan – N. Başgelen – P. Kuniholm (eds.), *The Neolithic in Turkey. New Excavations and New Research. Vol. 4: Western Turkey* (Istanbul 2012).

Özdoğan et al. 2013

M. Özdoğan – N. Başgelen – P. I. Kuniholm (eds.), *The Neolithic in Turkey. New Excavations and New Research. Vol. 5: Northwestern Turkey and Istanbul* (Istanbul 2013).

Perlès 1990

C. Perlès, *Les Industries Lithiques Taillées de Franchthi (Argolide, Grèce). Tome II, Les Industries du Mésolithique et du Néolithique Initial* (Bloomington, Indianapolis 1990).

Perlès 2001

C. Perlès, *The Early Neolithic in Greece* (Cambridge 2001).

Perlès 2003a

C. Perlès, An alternate (and old-fashioned) view of neolithisation in Greece, *Documenta Praehistorica* 30, 2003, 99–113.

Perlès 2003b

C. Perlès, The Mesolithic at Franchthi. An overview of the data and problems, in: Galanidou – Perlès 2003, 79–87.

Perlès 2005

C. Perlès, From the Near East to Greece. Let's reverse the focus. Cultural elements that didn't transfer, in: C. Lichter (ed.), *How Did Farming Reach Europe? Anatolian-European Relations from the Second Half of the 7th through the First Half of the 6th Millennium calBC. Proceedings of the International Workshop, Istanbul 20–22 May 2004, Byzas 2* (Istanbul 2005) 275–290.

Perlès et al. 2013

C. Perlès – A. Quiles – H. Valladas, Early seventh-millennium AMS dates from domestic seeds in the Initial Neolithic at Franchthi Cave (Argolid, Greece), *Antiquity* 87, 2013, 1001–1015.

Reingruber 2011

A. Reingruber, Early Neolithic settlement patterns and exchange networks in the Aegean, *Documenta Praehistorica* 38, 2011, 291–305.

Reingruber 2015

A. Reingruber, Preceramic, Aceramic or Early Ceramic? The radiocarbon dated beginning of the Neolithic in the Aegean, *Documenta Praehistorica* 42, 2015, 147–158.

Reingruber 2016

A. Reingruber, Coastal and riverine Thrace during the Mesolithic and the Neolithic, in: K. Bacvarov – R. Gleser (eds.), *Southeast Europe and Anatolia in Prehistory. Essays in Honor of Vassil Nikolov on his 65th Anniversary* (Bonn 2016) 93–104.

Reingruber et al. 2017

A. Reingruber – Z. Tsirtsoni – P. Nedelcheva (eds.), *Going West? The Dissemination of Neolithic Innovations between the Bosphorus and the Carpathians*. Proceedings of the EAA Conference, Istanbul, 11 September 2014, *Themes in Contemporary Archaeology* 3 (London 2017).

Rose 1995

M. Rose, Fishing at Franchthi Cave, Greece. Changing environments and patterns of exploitation, *Old World Archaeology Newsletter* 18, 1995, 21–26.

Sampson 2010

A. Sampson, *Mesolithic Greece: 9000–6500 BC. Palaeoenvironment, Palaeoeconomy, Technology* (Athens 2010).

Sampson 2014

A. Sampson, The Aegean Mesolithic. Environment, economy and seafaring, *Eurasian Prehistory* 11, 1–2, 2014, 63–74.

Sampson et al. 2010

A. Sampson – M. Kaczanowska – J. K. Kozłowski, The Prehistory of the Island of Kythnos and the Mesolithic Settlement at Maroulas (Krakow 2010).

Schwall 2018

C. Schwall, Çukuriçi Höyük 2. Das 5. und 4. Jahrtausend v. Chr. in Westanatolien und der Ostägäis, *Oriental and European Archaeology* 7 (Vienna 2018).

Schwall et al. in press

C. Schwall – M. Brandl – T. Gluhak – B. Milić – L. Peloschek – L. Sørensen – D. Wolf – B. Horejs, From near and far. Stone procurement and exchange at Çukuriçi Höyük in western Anatolia, *Journal of Lithic Studies* (in press).

Séfériadès 2007

M. Séfériadès, Complexity of the processes of Neolithisation. Tradition and modernity of the Aegean world at the dawn of the Holocene period (11–9 kyr), *Quaternary International* 167–168, 2007, 177–185.

Shennan 2018

St. Shennan, *The First Farmers of Europe. An Evolutionary Perspective* (Cambridge 2018).

Sommer 2014

U. Sommer, Kulturelles Gedächtnis, in: D. Mölders – S. Wolfram (eds.), *Schlüsselbegriffe der Prähistorischen Archäologie*, *Tübinger Archäologische Taschenbücher* 11 (Münster, New York 2014) 151–155.

Souvatzis 2008

S. G. Souvatzis, *A Social Archaeology of Households in Neolithic Greece. An Anthropological Approach* (Cambridge 2008).

Sørensen et al. 2017

L. Sørensen – P. Pétrequin – A.-M. Pétrequin – M. Errera – B. Horejs – F. Herbaut, Les limites sud-orientales des jades alpins (Grèce et Turquie) / The south-eastern limits of Alpine jades (Greece and Turkey), in: P. Pétrequin – E. Gauthier – A.-M. Pétrequin (eds.), *Jade. Objets-signes et Interprétations Sociales des Jades Alpins dans l'Europe Néolithique*, Tome 3 (Toulouse 2017) 491–520.

Stiner – Munro 2011

M. C. Stiner – N. D. Munro, On the evolution of diet and landscape during the Upper Paleolithic through Mesolithic at Franchthi Cave (Peloponnese, Greece), *Journal of Human Evolution* 60, 2011, 618–636.

Stock et al. 2015

F. Stock – L. Ehlers – B. Horejs – M. Knipping – S. Ladstätter – S. Seren – H. Brückner, Neolithic settlement sites in western Turkey. Palaeogeographic studies at Çukuriçi Höyük and Arvalya Höyük, *Journal of Archaeological Science Reports* 4, 2015, 565–577.

Strasser et al. 2010

T. Strasser – E. Panagopoulou – C. Runnels – P. Murray – N. Thompson – P. Karkanis – F. McCoy – K. Wegmann, Stone Age seafaring in the Mediterranean. Evidence from the Plakias region for Lower Palaeolithic and Mesolithic habitation of Crete, *Hesperia* 79, 2010, 145–190.

Takaoğlu et al. 2014

T. Takaoğlu – T. Korkut – B. Erdoğan – G. Işın, Archaeological evidence for 9th and 8th millennia BC at Girmeler Cave near Tlos in SW Turkey, *Documenta Praehistorica* 41, 2014, 111–118.

Trantalidou 2003

K. Trantalidou, Faunal remains from the earliest strata of the Cave of Cyclops, Youra, in: Galanidou – Perlès 2003, 143–172.

Trantalidou 2010

K. Trantalidou, Dietary adaptations of coastal people in the Aegean archipelago during the Mesolithic period. The macrofauna assemblages of Maroulas on Kythnos, in: A. Sampson – M. Kaczanowska – J. K. Kozłowski (eds.), *The Prehistory of the Island of Kythnos and the Mesolithic Settlement at Maroulas* (Krakow 2010) 163–177.

Trantalidou 2011

K. Trantalidou, From Mesolithic fisherman and bird hunters to Neolithic goat herders. The transformation of an island economy in the Aegean, in: A. Sampson (ed.), *The Cave of the Cyclops. Mesolithic and Neolithic Networks in the Northern Aegean, Greece. Vol. II: Bone Tool Industries, Dietary Resources and the Paleoenvironment, and Archaeometrical Studies*, *Prehistory Monographs* 31 (Philadelphia 2011) 53–101.

Van Dyke – Alcock 2003

R. M. Van Dyke – S. E. Alcock, Archaeologies of memory. An introduction, in: R. M. Van Dyke – S. E. Alcock (eds.), *Archaeology of Memory* (Oxford 2003) 1–10.

Vigne et al. 2012

J.-D. Vigne – F. Briois – A. Zazzo – G. Willcox – T. Cucchi – S. Thiébaut – I. Carrère – Y. Franel – R. Touquet – L. Martin – C. Moreau – C. Comby – J. Guilaine, First wave of cultivators spread to Cyprus at least 10,600 yrs ago, *Proceedings of National Academy of Sciences of the United States of America* 109, 22, 2012, 8445–8449.

Vigne et al. 2014

J.-D. Vigne – A. Zazzo – T. Cucchi – I. Carrère – F. Briois – J. Guilaine, The transportation of mammals to Cyprus sheds light on early voyaging and boats in the Mediterranean Sea, *Eurasian Prehistory* 10, 1–2, 2014, 157–176.

Weninger et al. 2014

B. Weninger – L. Clare – F. Gerritsen – B. Horejs – R. Krauß – J. Linstädter – R. Özbal – E. J. Rohling, Neolithisation of the Aegean and Southeast Europe during the 6600–6000 cal BC period of rapid climate change, *Documenta Praehistorica* 41, 2014, 1–31.

Williams 2013

H. Williams, Death, memory, and material culture. Catalytic commemoration and the cremated dead, in: S. Tarlow – L. Nilsson Stutz (eds.), *The Oxford Handbook of the Archaeology of Death and Burial* (Oxford 2013) 195–208.

Yalçın 2016

Ü. Yalçın (ed.), *Anatolian Metal VII. Anatolia and Neighbours 10.000 Years Ago. Volume in Honour of Mehmet Özdoğan* (Herne 2016).

The adoption of agriculture and settled village life is one of the most important transitions in prehistory, long viewed as one of the most essential 'revolutions' in human history. While traditional grand narratives of agricultural origins and dispersals still remain relevant today, decades of excavation and investigation in western Asia are increasingly challenging and reinterpreting these narratives, revealing diverse pathways in the emergence of Neolithic communities. This volume, arising from a workshop organised at the 2016 ICAANE conference in Vienna, uses new research and theories to shed light on the diversity of early farming communities beyond the Near East, in Anatolia (the Asian part of Turkey) and the Aegean basin. The volume proposes that these regions represent one of the first farming 'frontiers' between the agricultural economies in central Anatolia in the 9th millennium BC and farming communities in western Anatolia and the Aegean, which emerged around two thousand years later. The thirteen contributions collected in this volume highlight the diverse trajectories by which societies transitioned to farming on the periphery of one of the great centres of food-plant and animal domestication of the Old World, and allow for the re-evaluation of long-established models in the field of Neolithic archaeology, integrating the area into broader narratives about one of the essential transformations in human history.