

The Neolithic–Chalcolithic sequence in the SW Anatolian Lakes Region

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ABSTRACT – *This paper reviews the radiocarbon, stratigraphic and pottery evidence from five early pottery sites in SW Turkey. A comparison of the results with data from Ulucak in West Turkey indicates no significant time lag between these areas. The onset of Neolithic sites early in the 7th millennium calBC makes it difficult to link their emergence to the collapse theories applied to SE Anatolian societies at the end of the PPNB period. The chronology proposed is not compatible with allegedly contemporary developments in SE Europe.*

IZVLEČEK – *V članku predstavljamo radiokarbonske datume, stratigrafske podatke in keramiko iz petih zgodnje keramičnih najdišč v severozahodni Turčiji. Primerjava s podatki iz Ulucaka v zahodni Turčiji kaže, da ni bistvenega časovnega zamika med regijama. Pojav neolitskih najdišč v zgodnjem 7. tisočletju calBC je težko navezati na teorijo kolapsa pri južno Anatolskih skupnostih na koncu PPNB obdobja. Predlagana kronologija ni kompatibilna z domnevno sočasnim razvojem v jugovzhodni Evropi.*

KEY WORDS – *Neolithic; Anatolia; SE Europe; dating; pottery*

Introduction

The Neolithic sites in the Anatolian Lakes Region (Göller Bölgesi) in SW Turkey have played a major role in hypotheses concerning diffusion and/or migration processes from the Near East into Europe (Fig. 1). Apart from the geographic distance easily conflated in such models, a disregard of exact time is a recurrent theme, specifically in Balkan prehistories. The long-time absence of pertinent data from the intervening region of West (Aegean) Turkey made this conflation perhaps understandable, but at the same time more questionable. There was, and there still is, a tendency in Balkan prehistory to invoke a black box-like 'Anatolia' as a donor area for repeated waves of migration into SE Europe. In Romanian prehistory, for example, the 'monochrome', the Dudești, the Vădastra and the Boian stages have all been explained as caused by demic diffusion from 'Anatolia' (e.g., Lazarovici 1998.7; Lazarovici and Lazarovici 2006.391; Neagu 2000.53). Fully harmonising with this black box idea is that the connec-

tions are never precise, neither geographically, contextually, nor chronologically. The sites of Hacilar, Çatalhöyük and Canhasan are among the favoured locations. More recently, the Marmara area is beginning to be used as another potential source for explaining the 'monochrome' stage of the earliest pottery sites in Bulgaria (Elenski 2004). The painted pottery from Hacilar V–II and its correspondences with West Bulgarian sites have been used by Nikolov as the explaining factor in favour of a migration from Anatolia across the Aegean and up the Struma and Mesta rivers (Nikolov 1989.194; cf. also Lichardus and Lichardus 2003.66).

Dedicated work in the Aegean (Takaoglu 2005; Çilingiroglu and Çilingiroglu 2007; Derin 2007; Sağlamtimur 2007; Horejs 2008; Herling et al. 2008; Çilingiroglu 2009) is now beginning to complicate and refine the cultural connections between SE Europe and the alleged donor region in SW Anatolia,

suggesting the need to emphasize the importance of regional patterns of development and the non-systemic character of material culture correspondences. Recently, alleged hiatuses in the Lakes Region's site sequences (Schoop 2005) have been used to serve as evidence for climatic anomalies around 6200 calBC (better known as the 8.2ka climate event) which led to site abandonment, warfare and general turbulence in the area (Weninger et al. 2005; Clare et al. 2008.65).

Another issue related to the importance of the Lakes Region for neolithisation processes is the general thesis that after a PPNC collapse in SE Turkey (Özdoğan 2008.173), a period of turbulence involving repeated demic movements from the east to the west is reflected in an increase of sites in SW and W Anatolia, where "every component of the assemblage of the Neolithic sites in the west can be traced back to the core area of primary neolithisation in the east" (Özdoğan 2007.21; cf. Perlès 2005.280). Europe's quasi-total dependence on Turkey, the Near East and the Levant (Perlès 2005) can, consequently, be summarised as follows: "Thus, immediately after the expansion of the Neolithic way of life into the western parts of the peninsula, almost all components of the Neolithic culture seem to have gone through a stage of transformation, which provided the means for its survival in Temperate Europe." (Özdoğan 2007.21). The most famous site in the Anatolian Southwest, Hacilar, has served as model through which developments in SE Europe have been interpreted and evaluated, whereby its earlier 'monochrome' pottery and its subsequent painted pottery are still argued to have determined, mirror-like, concepts of material culture (notably pottery appearance) during the neolithisation of the Balkans (Weninger et al. 2005.100). It must have been Mellaart's two pages of cautious remarks concerning parallels between Hacilar V-II and Thessaly (Mellaart 1958.154-6) that have inspired Rodden's 'Neolithic package' list (Rodden 1965), and that was later adopted by Renfrew (1987.170, Fig. 7.9) and Perlès (2005.277, Tab. 1).

In order to critique these points of view (*i.e.* concerning dating, settlement continuity and demic move-

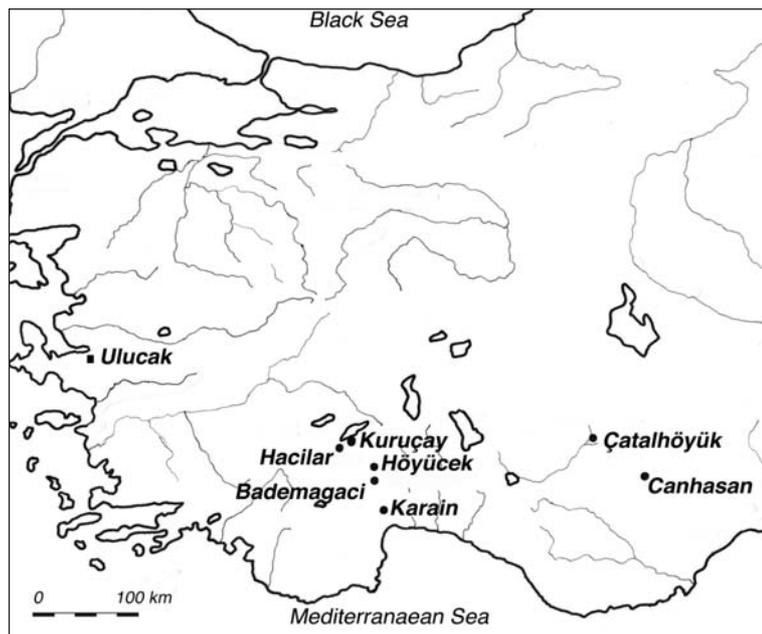


Fig. 1. Map of key sites discussed in the text.

ment across Turkey westwards), I try to get as close as possible to the lapse of time and the date of the Southwest Anatolian key area. Through this exercise, I imply that the breakdown of time, like a precise study of material culture, tends to problematise mechanistic solutions, and favours more regionalised interpretations of culture change and adaptation on a local scale to external pressures, whether from climate or 'newcomers'. I will be targeting the five excavated sites in the Lakes Region, viz. Hacilar, Kuruçay, Höyücek, Bademağacı and Karain, and comparing them briefly to the radiocarbon evidence from Western Turkey, specifically the site of Ulucak. I focus on the stratigraphic sequences and the absolute dates, and where necessary use relative dating foremost based on the pottery evidence.

Hacilar

Time at Hacilar is hard to assess, due to the small set of radiocarbon dates available (seven usable dates). Modelling the data (see below for discussion) results in a time span of between 300 to 730 years for Levels IX-IA, covering three substantial settlement stages, each of which fell victim to a great fire (*cf.* Mellaart 1975.111). Mellaart estimated the total duration of the site at approximately 750 years (Mellaart 1970.10, 23, 24, 76, 85, 87), stretching from a 'Late Neolithic' (Levels IX-VI) through an 'Early Chalcolithic' period (Levels V-I).¹ Restructuring and conflating Hacilar's stratigraphic sequence, as I will pro-

¹ In his 1998 memoir, Mellaart contemplates the existence of a "Hacilar 0" stage recognisable in some of the illicitly excavated material from tombs in the neighbourhood, and distinct from the Hacilar I material as excavated (Mellaart 1998.58-59).

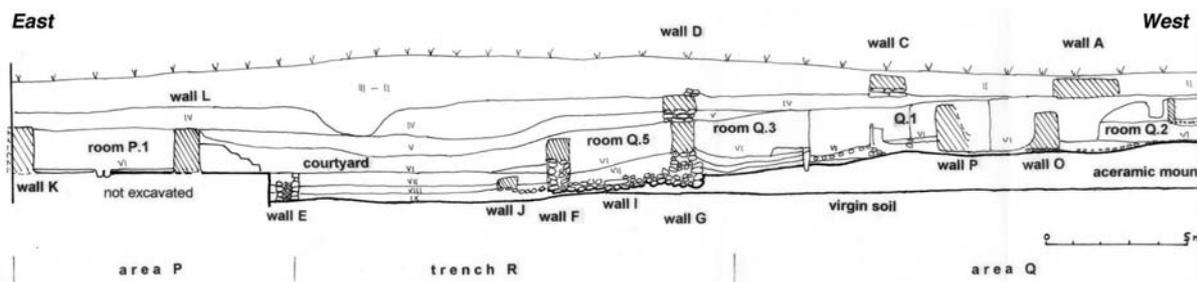


Fig. 2. Hacilar's main section (after Mellaart 1970.Fig. 38).

pose, enables a shorter duration more in line with the ^{14}C evidence.

About 10m East of the small elevation formed by the Aceramic mound, Building P.VI.1-3 (Mellaart 1970. Fig. 7) was built in a N-S orientation and probably founded on virgin soil, representing the first occupation during the Pottery Neolithic at Hacilar (Fig. 2. Walls K, L, E). Although only the remains of Level VI are excavated, I believe this building to be the latest stage of renewals of an original building created in Level IX. The buildings extending westwards confirm this sequence of events. Room Q.VI.5 having stone substructures is cut into the brim of the Aceramic mound (Wall G), the West wall foundations seemingly showing reinforcement against the pressure of the early mound. Also, the north wall of House Q.VI.5 has stone foundations cutting into the Aceramic mound, and was built during Level IX (Wall I, and Mellaart 1970.Fig. 39). This room, Q.VI.5, connects to the eastern stone wall (Wall E), which like many of the other walls in Hacilar is probably a foundation for a mud-brick wall later erased during Level VI (or missed, as seems suggested by a post slot fitted into wall E's west face, Mellaart 1970.Pls. Vb, VIIa; for full argument see Thissen 2000a.138). As the section drawing shows, Room Q.VI.5 connects via walking surfaces starting in Level IX to Rooms Q.1-4 in the West, which are built directly on top of the Aceramic mound without stone substructures, evidently deemed unnecessary here, but possibly so as not to create too big a difference in elevation between the western and eastern houses. I suggest that Hacilar Levels IX-VI are a single stratigraphic unit where all the major buildings were founded directly on virgin soil or over the Aceramic mound during what may be called Level IX, to see only refurbishings in the subsequent Levels VIII, VII and VI.² Following this reinterpretation, the finds from the combined stratigraphic unit IX-VI should

be demonstrating little development internally, and Mellaart's and subsequent writers' stress on development in the pottery should perhaps be revised (Mellaart 1970; but see Mellaart 1998.56 for a more restrained view; Schoop 2005.155-156; Reingruber 2008.430-431). The group of more or less freestanding buildings IX-VI separated by courtyards may have served several generations of families before

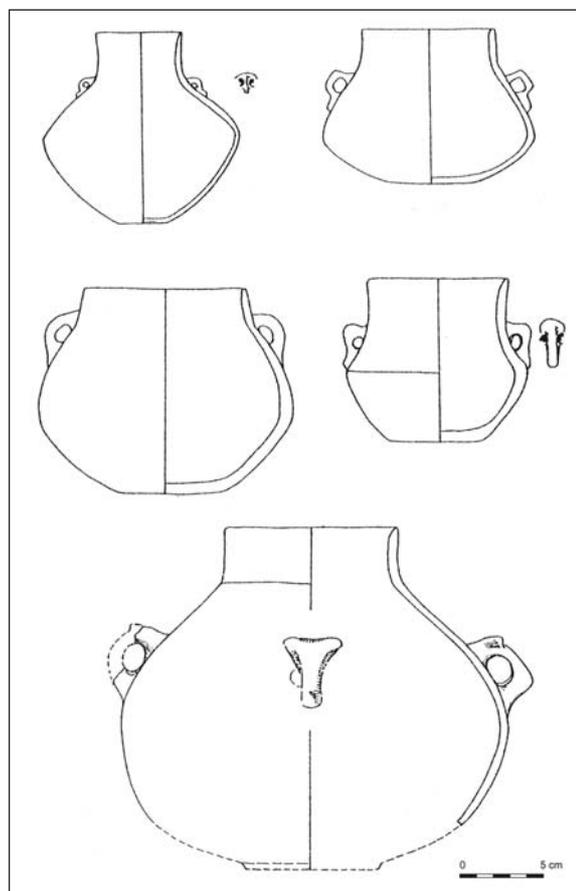


Fig. 3. Hacilar V-IIA typical pots and jars with two vertically placed strap handles, often with downward 'tongues' reinforcing attachment on the body (after Mellaart 1970.Figs. 60:23; 70:28; 75:16, 19, 22).

² Refloorings and replasterings must have been frequent (cf. Mellaart 1961.40: "Level VII is no more than an early floor of Level VI", and "Levels VIII and IX were two floors of one building level"), and room divisions, screens and storage bins may have shifted place during this period.

the settlement fell victim to a devastating fire.

Likewise, it is tenable to treat Hacilar Levels V–IIA/B as another stratigraphic unit, largely built directly over the destruction level of Level VI. Level IIA walls are sitting directly on top of Level VI ones and can be connected to Level V walls stratigraphically (Fig. 2, walls A, D). Moreover, the overall orientation and layout of houses between Levels IX–VI and IIA were maintained. Levels V–III are not found in the western excavation area, and seem to represent minor adjustment stages restricted in scope and location within an original IIA settlement (*cf. Thissen 2000a. 140–141* for full argument). Conceptually, the pottery is changing from a dominance of holemouth vessels with small or tubular suspension lugs often set in fours in the Level IX–VI unit (*Mellaart 1970.Fig. 46*), to a ceramic assemblage where manipulation, tactility and ways of carrying are guided (or perhaps defined) by vertical strap handles set in twos on necked pots and jars in Levels V–IIA/B (Fig. 3).³ This handling system was already in use during the earlier unit (*Mellaart 1970.Figs. 48. 25, 26; 53.9; 59.7, 13*), but not yet popular. Its full adoption in the Level V–IIA/B unit and the concomitant change in vessel forms suggest new ways of vessel use and possibly changing cooking habits. Emerging attitudes vis-à-vis material culture in terms of the pottery decoration first occurring in Levels IX–VI are also becoming more pronounced in this second stage, suggesting a rethinking of visibility and symbolism through specific ceramic categories including carinated bowls and (water?) jars (*Mellaart 1970.Fig. 65*). Profound shifts are even stronger in Hacilar I, where a restructuring of the settlement, involving a denial of previous building history, a different pottery which makes use of new clay sources, and changing concepts of pottery form have led Mellaart to claim ‘newcomers’ (*Mellaart 1975.118; 1998. 55*) to have been responsible for the reoccupation of

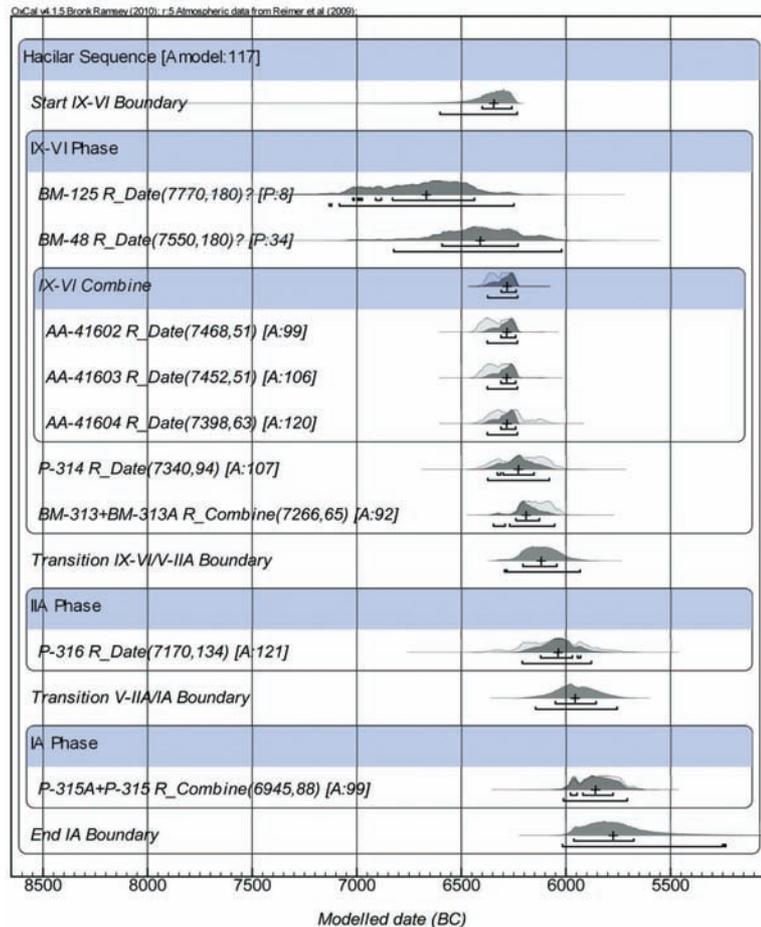


Fig. 4. Hacilar ¹⁴C dates contiguous boundary model. BM-125 and BM-48 treated as outliers due to large stdev; AA-samples combined stemming from a single tree. Dark grey distributions show modelled dates, the light grey areas signify the original, individually calibrated distributions. Median indicated by + sign.

the site. However, water-jar manipulation concepts may have continued the tradition matured in the previous occupation (*Mellaart 1970.Figs. 110.4, 7; 111.18, 19*), and this may also have been the case for cooking pots (*Mellaart 1970.Fig. 110.1–3, 5–6, 8*). This would strengthen the idea that the gap between the destruction of Level IIA/B and the building of the large new settlement of Level I was not very wide, as is also suggested by the ¹⁴C data.

Applying a phase-boundary model to the Hacilar sequence, and conceiving the main stratigraphic units as defined above as contiguous (including Level IA), this results in a good fit of the data with an overall agreement of 117% (Fig. 4).⁴ The early start of IX–VI is generated primarily by, and might be distorted by, the three AA samples all taken from a single tree

³ Mellaart has gone so far as to label such vertical lugs as ‘Hacilar handles’ (*Mellaart 1958.143*).

⁴ All calculations in this paper are based on the IntCal09 calibration curve (*Reimer et al. 2009*), and carried out with OxCal v.4.1.5 (*Bronk Ramsey 2009*). In this article, ¹⁴C measurements are standardly rounded by 10, ranges are quoted with 1σ confidence intervals.

(from which, incidentally, also BM-48 was taken). (These three dates have their probability distributions combined, yielding 6380–6250, Acomb 115,8%.)⁵ It must be remembered that after IIA was burnt, the settlement was reused during Level IIB; likewise, after the IA destruction, the site was reoccupied (Levels IB–ID) – for which no dates are available. If we may trust these dates, few as they are, they establish three things: firstly, 'Late Neolithic' Hacilar Levels IX–VI date to the 3rd–4th quarters of the 7th millennium calBC; secondly, 'Early Chalcolithic' Levels V–IIA still largely fall in the late 7th millennium as well; and thirdly, only Level I is definitely datable to the conventional 'Chalcolithic' (read: 6th millennium calBC) (its first two, or else three centuries, if we want to account for a post-IA occupation) (Tab. 1).

Even though the conventional labels used in Anatolian prehistory as Late Neolithic and Early Chalcolithic are rather arbitrary, taken together they denote a highly dynamic time frame seeing the destruction, rebuilding and relocation of settlements, as well as changing concepts towards pottery use and function, and investing in symbolic detail. These patterns in material culture will have reflected changing food habits and varying concepts of presentation and status. How is the situation at the neighbouring site of Kuruçay Höyük, of which recently Çilingiroğlu rather aptly stated – arguing against its excavator's claims – that it would be rather "perverse" not to see some contemporaneity between both settlements (Çilingiroğlu 2009:285)?

Kuruçay Höyük

Also for Kuruçay, a case can be made to combine/conflate building remains – and hence material cul-

Phase Boundaries	calBC (1 σ)	Median
Start Levels IX–VI	6410–6250	6350
Transition IX–VI / V–IIA	6210–6040	6120
Transition V–IIA / IA	6060–5850	5960
End Level IA	5970–5670	5780

Tab. 1. Hacilar: grouping of dates into bounded phases using the median as point estimator for the start and end of the phases.

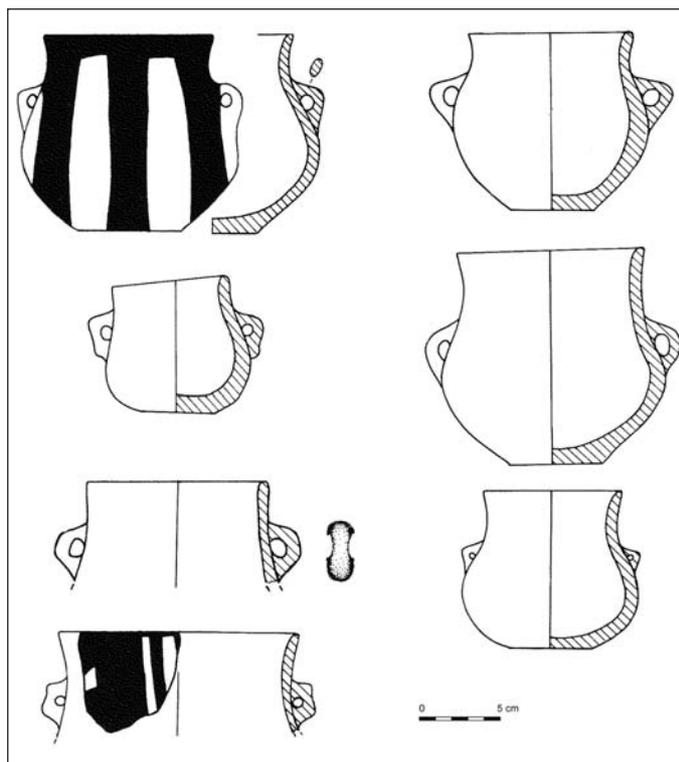


Fig. 5. Kuruçay Level 11 üst, two-handled pots (after Duru 1994.Pls. 73. 7–11; 74.1, 3).

ture. From basal Levels 12 up to and including Level 10, similar elevations averaging at about 6m in the main excavation area (E-G/4–7), taken on the (single) stone foundation walls, suggest just a single, major building horizon, obviously with adjustments and rearrangements. If accepted, it follows that Kuruçay was also occupied south of, that is outside of, the alleged fortification of Levels 12–11 (cf. Duru 1994.Pl. 30).⁶ Even the SW rectangular structure from Level 8 (no. 2) has similar elevations, and some walls from Level 9 have elevations only slightly higher than these. Consequently, it is conceivable that large tracts of the pre-Level 7 walls from Kuruçay are associated with one another. The stratigraphic complexity of the site and the absence of mud-brick superstructures are not aided by excavation methods. There is a general absence of systematic profile sections (but cf. Duru 1994.Pls. 8.1; 17.1), and stone foundations from higher levels remain standing during the dig (e.g., Duru 1994.Pl. 20.1), prohibiting a clear overview. In terms of orientation and use of space, Kuruçay Level 7 breaks with the previous tradition, radically overlaying the older settlement(s) in a N–S orientation. The monocellular, isolated or chained rectangular units are exchanged

⁵ Full details on all data used in this paper can be found in Table 6 and on the CANeW website: <http://www.canew.org/data.html>.

⁶ Also speaking against the idea of a fortification are the openings in the so-called towers, interpreted as doors, and facing the area extra muros (Duru 1994.12, Fig. 1).

for sturdier square units having inner buttresses, without obvious floor-level entrances (*Duru 1994.Pl. 24*). Elevations of the stone foundations are generally higher than the earlier levels, assuring that the stratigraphic sequence of Level 7 is definitely later than the 12–8 assembly. The difficult stratigraphic record of Kuruçay is one of the main reasons the pottery as presented (*Duru 1994*) shows a strong mix of what at the neighbouring site of Hacilar is separated between Hacilar V–IIA and I. At Kuruçay, pottery with Hacilar I characteristics turns up massively in Level 7, but it occurs consistently from the basal levels upwards as well (e.g., *Duru 1994.Pl. 58.2; 65.10–14; 92, etc.*). Simultaneously, painted pottery in the Hacilar V–II style is found in Kuruçay 7 (*Duru 1994.Pl. 165–166*), which Duru regards as intrusions (e.g., *Duru 1982.22; 1983.42*). Schoop has interpreted this circumstance by inserting the whole Kuruçay sequence in an alleged gap between Hacilar V–II and I (*2005.190, Fig. 4.9; also Clare et al. 2008.71–72*); however, this is not supported by the ¹⁴C dates (below).

Regarding pottery, from Level 13 onwards at Kuruçay, the typical vertical strap handles known from Hacilar since Level VIII, but dominant there during the V–IIA/B unit, occur up to Level 7 (horn handles or down-turned ones) (Fig. 5). Together with a decrease in tubular lugs and the presence of the Hacilar V–II painted style, the pronounced presence of vertical handled pots suggests that the whole sequence of Kuruçay parallels perhaps the tail-end of Hacilar VI, as well as the V–IIA/B period. The predominance of vertical handled pots even in Kuruçay 7 would place that occupation at the very end of Hacilar II or the beginning of Hacilar I.

The Kuruçay ¹⁴C data are very ambiguous and do not fit into a phase model, where the Level 7 date is earlier than the two dates from Levels 12 and 11, which, themselves, are nearly mutually exclusive on the 1σ level (Fig. 6). There is also a Level 13/12 date from a wash-down deposit, even earlier. The samples do not have an exact provenance and context. Within conventional wisdom, where Kuruçay 7 would be about contemporary to Hacilar I given the pottery and architecture, the Level 11 date may have an original provenance as from Level 7, whereas the Level 7 date may stem from the earlier unit (12 or

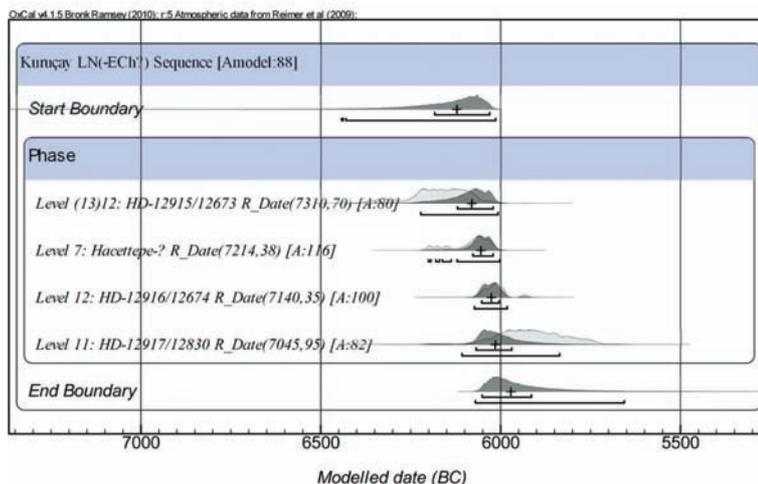


Fig. 6. Kuruçay ¹⁴C dates boundary model, where all dates are treated as deriving from a single phase.

later). Alternatively, the Level 7 date is from ‘old wood’ (*Reingruber 2008.447*), or is intrusive from older levels, as Duru thinks (*Duru 1994.114*). The latter is indeed plausible in view of the mixing of the pottery in all levels. The only secure procedure is to regard all dates (including the Level 7 one) as resulting from a short series of events following my conflation of the pre-Level 7 deposit, and thus providing a terminus post quem for Level 7. Conceived thus, all of ‘Late Neolithic–Early Chalcolithic’ Kuruçay dates to a time frame mostly filling the 61st century calBC, and agrees rather well with the span reached for the Hacilar V–IIA stratigraphic unit when considering the median estimators (Tab. 2).

The earlier extreme of the modelled start boundary of 6190 calBC would suggest that Kuruçay was founded somewhere during the final years of Hacilar IX–VI, subsequently continuing life contemporary to Hacilar V–IIA/B. The Kuruçay dates would confirm the final 7th millennium date for the ‘Early Chalcolithic’ painted pottery style in the Lakes Region.

Höyücek

Of the four ¹⁴C dates available from this site, only two can be used, where dates HD-14219 and 14218 do not fit the boundary model and are treated as outliers (Fig. 7). On the basis of the radiocarbon dates,

Phase Boundaries	calBC (1σ)	Median
Start	6190–6030	6120
End	6060–5910	5970

Tab. 2. Kuruçay: grouping of dates into bounded phases using the median as point estimator for the start and end of the phases.

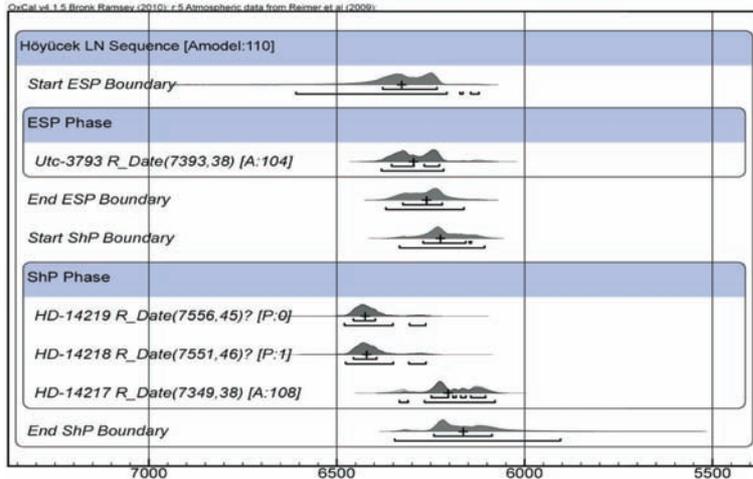


Fig. 7. Höyücek ¹⁴C dates sequential boundary model. (HD-14219, room 4; HD-14218, room 3; HD-14217, room 2 – p.c. Gül-sün Umurtak, April 2010.)

one could defend the view that Höyücek’s Shrine Phase (‘ShP’) as well as the allegedly wattle-and-daub deposit underlying it (Early Settlements Phase, ‘ESP’) parallel the Hacilar IX–VI stratigraphic unit, but pre-date the occupation at Kuruçay. Höyücek’s subsequent village (Sanctuary Phase, ‘SP’) has not been radiocarbon dated, but will have followed immediately, given the continuation of material culture, except for the introduction of painted pottery in the Hacilar V–II style. Such an estimate would confirm the still mainly 7th millennium cal BC association of this material reached when dating Hacilar V–IIA and Kuruçay 12–8. However, also the younger ShP date (HD-14127) was taken from a wooden post, and the date result may also have suffered from the old wood effect. The pottery from both the Shrine and the Sanctuary Phases has important aspects in common, notably the vertical strap handles on pots and jars (Fig. 8), as well as the typical feature of fenestrated ring bases. I argue that the handle sets suggest an important shift in tactility and manipulation patterns that reflect changing vessel-use concepts, probably involving cooking methods. I assume that within the SW Anatolian Lakes Region, these changing concepts from a previous assemblage of food processing vessels dominated by tubular or knoblike suspension lugs must have been more or less contemporary. If so, this would provide us with a tool with which to date the sites more precisely.

Since vessels with two vertical strap handles are conspicuously present in both main phases of Höyücek, this could suggest two things: first, that the Shrine Phase and the Sanctuary Phase are very close in

time; and secondly, that the single ¹⁴C date for the Shrine Phase is possibly too old, and the actual date of the phase is more probably contemporary with the Kuruçay pre-Level 7 deposit, as well as the final years of Hacilar VI and the beginning of the Hacilar V–IIA unit. Perfect parallels exist between the Shrine Phase and Hacilar VI in terms of the pottery, but most of these can also be found in Hacilar V–II.7 Consequently, Höyücek’s boundary model and its median estimators possibly give a misleading picture, and it is probably the tail-ends of both start and end boundaries for the Shrine Phase – viz. 6140 calBC and 6080 calBC

resp. – that make a better fit considering the pottery parallels (Tab. 3). Höyücek’s Early Settlements Phase will have run largely contemporary with the Hacilar IX–VI stratigraphic unit. The undated Sanctuary Phase, finally, would – immediately ensuing – fall into the 61st millennium calBC.

Bademağacı

Importantly, vertically placed strap handles set in twos on pots and jars are largely absent from the Bademağacı assemblages as published up to now (the site is still being excavated). Instead, manipulation and tactility are resolved by tubular lugs, which are often large, with vessels often having only two (Fig. 9). Parallel vessels are also part of the repertoire of Hacilar IX–VI (Mellaart 1970.Figs. 46.5; 49.12–13; 54.10; 55.8), and are yet another solution to the manipulation of what are most obviously cooking pots (flat bases, easily accessible orifices, sturdy lugs high up near the rims). Pots with vertical strap handles occur only very rarely at Bademağacı (Duru 2002.Pl. 17.5; 2004.Pl. 24.1). The ¹⁴C dates largely confirm the parallelism with early Hacilar, at

Phase Boundaries	calBC (1σ)	Median
Start ‘ESP’	6380–6230	6330
End ‘ESP’	6330–6210	6260
Start ‘ShP’	6280–6140	6220
End ‘ShP’	6250–6080	6160

Tab. 3. Höyücek: grouping of dates into bounded phases using the median as point estimator for the start and end of the phases. See text for validity of estimations.

7 The fenestrated ring/disk bases from the ShP and SP stages (Duru 1995.Pl. 19.8–9), compare with Hacilar IIB (Mellaart 1970. Fig. 90.32–33). Also in Kuruçay (Levels 10–9, Duru 1994.Pl. 108.21–25).

least as far as Bademağacı Levels 4A-1 are concerned (Fig. 10). The basal Level 9 date is on a long wiggle section of the IntCal 2009 calibration curve, between 7000-6700 calBC. With a start in the early 64th C calBC for Level 4A, a beginning of Bademağacı at about the tail end of that wiggle (6700 calBC) seems more likely (Tab. 4).

Karain

The cave site at Karain is very close to Bademağacı, and partly contemporary, judging from the ¹⁴C evidence, and therefore likely to yield a similar cultural assemblage. This is difficult to ascertain, since the pottery presented by Seeher (1989) is mixed, as is often the case at cave sites (Reingruber 2008:452). Three dates suggest intermittent use of the site between the mid 7th and the beginning of the 6th millennium calBC (Fig. 11). Among the pottery, the tongue-shaped handles (Seeher 1989.Figs. 1.4; 2.7-8) suggest a final 7th millenium date contemporary with the Hacilar V-II unit, and some of the painted material would correspond to Hacilar I (Seeher 1989.Fig. 3.9-17). Other red slipped profiles of dishes, holemouth and S-shaped pots with vertically pierced knobs high up on the vessel shoulders parallel Bademağacı Levels 4B-2 and basal Hacilar (Seeher 1989.Figs. 1.12, 18; 2.1).

Ulucak

The Ulucak ¹⁴C data are rather difficult to interpret, since many seem too old or too young for their context in relation to the stratigraphy (cf. Çilingiroğlu 2009:44-48). Therefore, sequencing the dates is virtually impossible and the result presented in Fig. 12

Phase Boundaries	calBC (1σ)	Median
Start 4A	6420 - 6280	6370
Transition 4A / 4	6390 - 6260	6330
Transition 4 / 4-3A	6350 - 6240	6290
End 4-3A	6290 - 6210	6250
Start 1	6260 - 6160	6210
End 1	6230 - 6110	6170

Tab. 4. Bademağacı: grouping of dates into bounded phases using the median as point estimator for the start and end of the phases, starting with Level 4A.

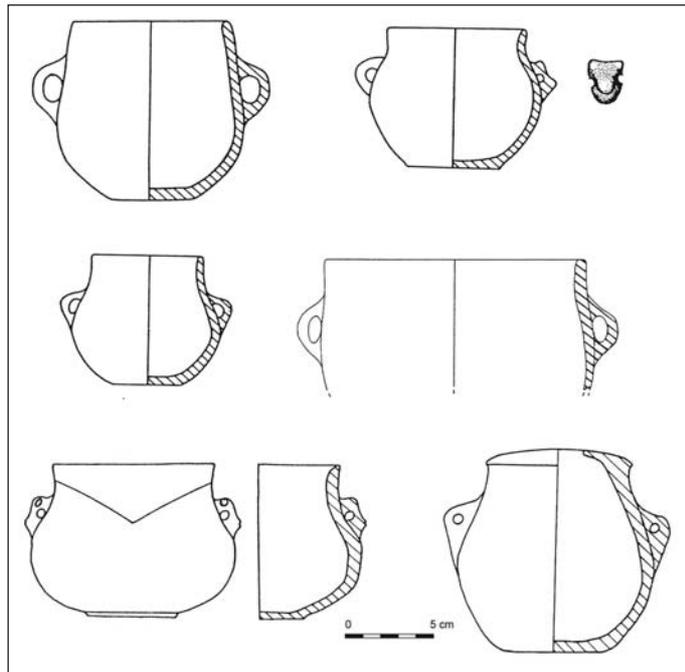


Fig. 8. Höyücek selected vessels with two vertically placed strap handles from the Shrine Phase and Sanctuary Phase (after Duru and Umurtak 2005).

has an Agreement of 0%, and must therefore be treated with the utmost caution. Be that as it may, barring the two earliest dates from Level VI which take the site back into the first half of the 7th millennium calBC⁸, Ulucak Vf may have started about halfway through the 65th century calBC, and the village may have existed down to 5800 calBC (Tab. 5). Within the poor radiocarbon sequence, some stable points exist, allowing for termini post and ante quem. Level Vb, for example, was burnt and can be securely

Phase Boundaries	calBC (1σ)	Median
Start VIa	6810-6650	6740
Transition VIa / Vf	6460-6430	6450
Transition Vf / Ve	6450-6430	6440
Transition Ve / Vd	6450-6390	6420
Transition Vd / Vc	6340-6290	6320
Transition Vc / Vb	6330-6270	6290
Transition Vb / Va	6230-6100	6180
End Va	6080-5970	6030
Start IVi	6040-5930	6000
End IVi	6010-5890	5940
Start IVb	5930-5810	5870
End IVb	5880-5740	5800

Tab. 5. Ulucak: grouping of dates into bounded phases using the median as point estimator for the start and end of the phases (full data in Çilingiroğlu 2009).

8 An age currently confirmed by more dates from Level VI (Çiler Çilingiroğlu, p.c. April 2010).

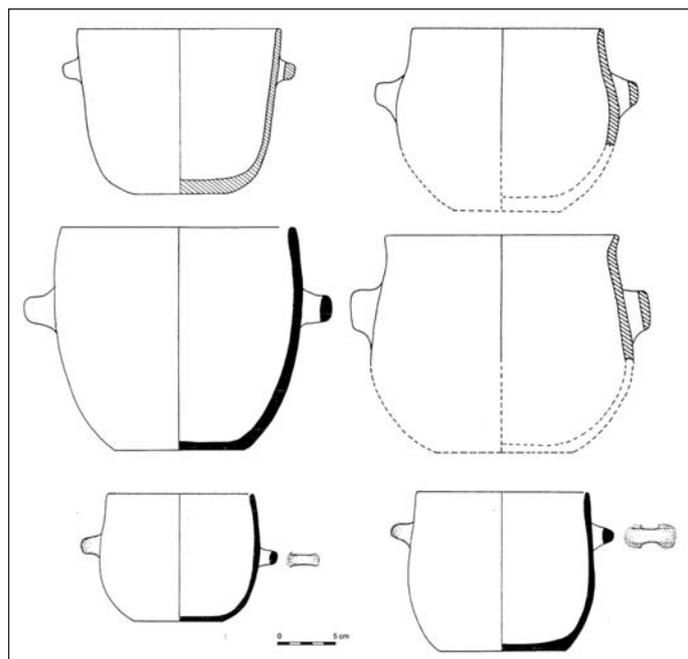


Fig. 9. Bademağacı selected pottery with two opposing horizontal (tubular) lugs (after Duru 1997.Pls. 12.1–2; 15.7; 2000.Pl. 6.1; 2004.Pl. 23.4–5).

dated on a four times combined date as having ended anywhere between 6230–6100 calBC. This would make the Vb village contemporary with Hacilar’s early unit IX–VI and Bademağacı Level 1.

Regarding pottery, there are clear links between Ulucak and the Lakes Region primarily in the earlier part of the sequences (*i.e.*, the Hacilar IX–VI and Bademağacı units), but whereas in the Lakes area new concepts concerning vessel use and manipulation emerge towards the end of the 7th millennium, together with a fashion for painted bowls and jars, development in the West was much more gradual. Tubular lugs and vertically pierced knobs determine ideas about the handling of vessels and vessel use as much in the later stages of Ulucak as they did in the early levels. Vertically placed strap handles are very rare in Ulucak, where they occur during Levels Va–IVb (Çilingiroğlu 2009.Pls. 16.4; 20.23; 28.16; 37.14, 16, 17), a range confirming contemporaneity with Kuruçay 12–8 and Hacilar V–IIa/IA. Also, Ulucak’s impresso pottery (Çilingiroğlu 2009.85, Fig. 4.1) fits this date, making it contemporary also with Ilıpınar phases IX–VIII having similar impresso pottery (Thissen 2001.Figs.

33–43). Ceramic traditions may have been stronger and more stable in the West than they were in the Lakes area. Importantly, painted pottery, like the brilliant material from Hacilar V–II and I, is conspicuously absent in Ulucak, as it is at all Turkish Aegean sites explored until now (Lichter 2005.64; 2006.34–36; Herling *et al.* 2008.21).

Conclusions

The data presented lead me to several preliminary observations. Both in the Lakes Region and in Western Turkey, pottery Neolithic sites are at least as early as 6400 calBC (Fig. 13). The deep deposits at Höyücek, Bademağacı and possibly an occupation level at the Karain cave, all in the Southwest, and those present in Ulucak in the West, still seem to carry pottery, although there may be less and less at succeeding levels (*cf.* the Bademağacı evidence – Duru 2002.583). The dating evidence for these basal levels at Bademağacı and Ulucak is still ra-

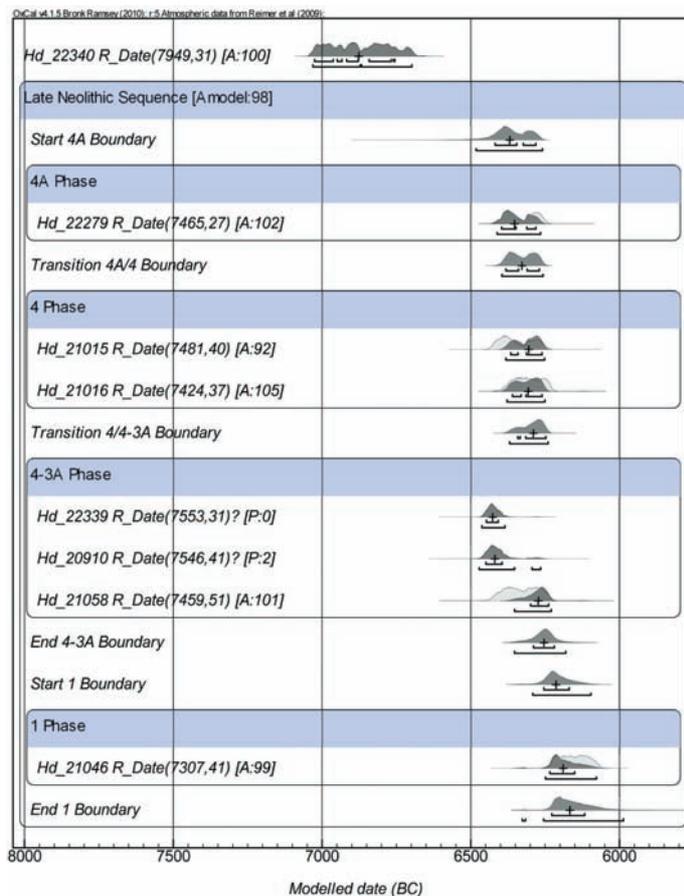


Fig. 10. Bademağacı ¹⁴C dates sequential boundary model, phase 4–3A to phase 1 contiguous. Phase 4–3A dates Hd–22339 and Hd–20910 treated as outliers.

ther poor, but suggests that technologically sophisticated pottery may have been in use as early as 6700 calBC.

Judging from the conceptual similarities between the early potteries of Bademağacı 4A-1, Hacılar IX-VI and Ulucak V – mainly evident from shapes, handle sets and surface treatments – technological knowledge and shared ideas concerning manipulation and vessel use were widespread at the beginning of the 2nd half of the 7th millennium calBC, encompassing an area stretching from (parts of) Aegean Turkey to the Lakes Region, including the Antalya area (Karain). They may well have gone back earlier. It is only at about the later part of the 6^{2nd} century calBC that West and SW begin to diverge, as best seen in changes in the handle sets applied to pots and jars in the SW; meanwhile, in the West, traditions are being maintained and continued into the 6th millennium calBC.

Given the parallel development both in time and material culture in both areas, starting during the first half of the 7th millennium calBC, there is little support for migration or diffusion models claiming a general East–West direction across Anatolia and finding their origin in a collapse at the end of the PPNB period. If a demic movement is not at the base

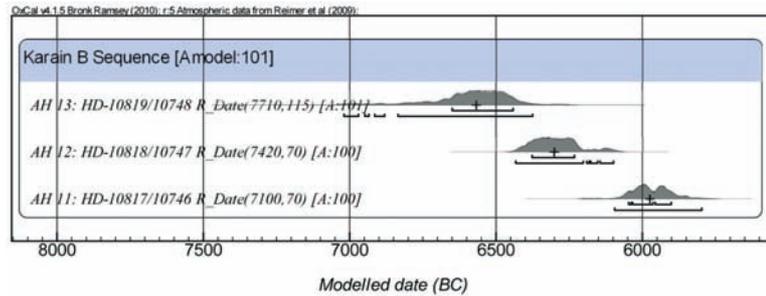


Fig. 11. Karain ¹⁴C dates, calibrated individually.

of the Neolithic in SW and Aegean Anatolia, this necessarily discredits any additional movement into Europe (read: Greece) from the western parts of Turkey as merely yet another step in such a process. I do not oppose the idea of migration into Greece, but I think this to have been a small-scale, local, even peripheral event isolated from the grand sweep of collapse models. The neolithisation of Thessaly and the Peloponnesus were, most likely, separate and unconnected events (Thissen 2000b), and these events took place several centuries later than the first occupations bearing pottery in the Turkish Aegean (Reingruber and Thissen 2008).

The dating evidence gathered in this paper does not straightforwardly confirm (or deny) the 8.2ka climate event to have been a direct influence on the occupation histories either of sites in Aegean Turkey or the Lakes Region. The sequences at Hacılar and Höyücek probably continue across the 6200 calBC point, despite the burning of individual villages (Hacılar IX–VI, Höyücek’s Shrine and Sanctuary Phases). Villages appear to have been rebuilt and reused. It is equally difficult to prove that the definitely major shift in concepts of dealing with pottery and in cooking methods, and the emerging predilection for ‘fantastic’ painted bowls and jars, were also linked to 8.2ka, since the germs of this methodological shift and the idea of enhancing visuality and symbolic language by means of ceramics were already present in the preceding occupations. Nor is such a shift demonstrable in Ulucak, where tradition is more stable or conservative, and painted pottery very rare.

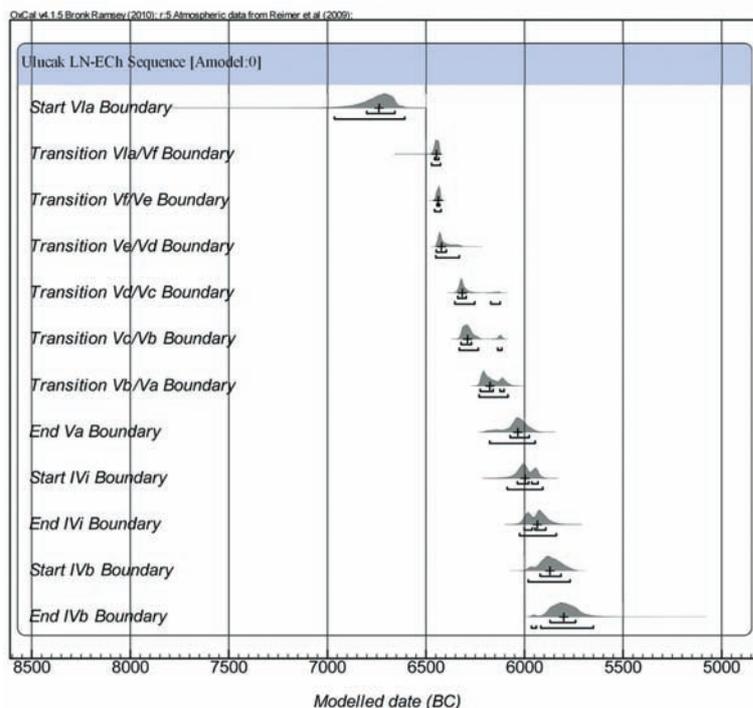


Fig. 12. Ulucak ¹⁴C dates boundary model (for full dates refer to Çilingiroğlu 2009:536–537).

In the Balkans, pottery starts being used, in massive quantities immediately, in the 61st century calBC at the earliest (Thissen 2009), at a time that

in SW Anatolia painted pottery began to appear in some quantity (Hacılar V-IIA/B, Kuruçay 12-8, Höyücek Sanctuary Phase). This so-called Monochrome

stage in SE Europe thus postdates the SW Anatolian 'monochrome' stage by a few centuries. Additionally, the painted decoration motifs in Bulgarian contexts

Lab. no.	Date BP	calBC (1 σ)	Material	Level	Provenance (ref.)
Bademağacı (1. Duru 2002.588; 2. Duru 2004.558)					
Hd-22340	7949 \pm 31	7030-6760	C	Early Neolithic I/8	Deep sounding C5/III.5, limestone plaster floor (2)
Hd-22279	7465 \pm 27	6400-6260	C	Early Neolithic II/4A	nd (2)
Hd-21015	7481 \pm 40	6420-6260	C	Early Neolithic II/4	nd (1)
Hd-21016	7424 \pm 37	6370-6240	C	Early Neolithic II/4	nd (1)
Hd-22339	7553 \pm 31	6450-6400	C	Early Neolithic II/4-3A	nd (2)
Hd-20910	7546 \pm 41	6450-6390	C	Early Neolithic II/3	nd (1)
Hd-21058	7459 \pm 51	6400-6250	C	Early Neolithic II/3	nd (1)
Hd-21046	7307 \pm 41	6230-6100	C	Early Neolithic II/1	nd (1)
Hacılar (1. Barker and Mackey 1960.29-30; 2. Ralph and Stuckenrath 1962.145-6; 3. Barker and Mackey 1963.107-8; 4. Mellaart 1970.92-5)					
P-314	7340 \pm 94	6350-6070	C	IX	Area E, hearth throwout (2, 4)
BM-125	7770 \pm 180	7010-6440	C	VII	Area P, corner post of a room (3, 4)
BM-48	7550 \pm 180	6600-6230	C	VI	Area P, burnt post or beam (1, 4)
P-313A	7350 \pm 85	6350-6080	C	VI	Area E, ashes from hearth (additional NaOH pretreatment) (2, 4)
P-313	7150 \pm 98	6210-5900	C	VI	Area E, ashes from hearth (acid pretreatment) (2, 4)
P-313 and P-313A from same sample. R_Combine: 7266 \pm 64 BP (6220-6060 calBC at 1 σ)					
P-316	7170 \pm 134	6220-5910	C	IIA	Area N, room 4, roof beam (2, 4)
P-315A	7047 \pm 221	6210-5710	C	IA	Roof beam, room 5 (additional NaOH pretreatment) (2, 4)
P-315	6926 \pm 95	5960-5720	C	IA	Roof beam, room 5 (acid pretreatment) (2, 4)
P-315A and P-315 from same sample. R_Combine: 6945 \pm 87 BP (5970-5730 calBC at 1 σ)					
Hacılar . Decadal samples from a single tree sequence (same as BM-48) (Maryanne Newton/Peter Kuniholm, p.c. 12 November 2001)					
AA-41602	7468 \pm 51	6410-6250 C (juniper)	VI		Area P (C-TU-HAC-1A)
AA-41603	7452 \pm 51	6390-6250 C (juniper)	VI		Area P (C-TU-HAC-1B)
AA-41604	7398 \pm 63	6380-6220 C (juniper)	VI		Area P (C-TU-HAC-2)
Höyücek (Duru and Umurtak 2005.226; p.c. Gülsün Umurtak, April 2010)					
Utc-3793	7393 \pm 38	6360-6220	AB	Early Settlement Phase 2	nd
HD-14219/14007	7556 \pm 45	6460-6390	C	Shrine Phase	Post (1990 season) Room 4
HD-14218/14002	7551 \pm 46	6460-6390	C	Shrine Phase	Post (1990 season) Room 3
HD-14217/13822	7349 \pm 38	6260-6100	C	Shrine Phase	Post (1990 season) Room 2, Square J/5
Karain (Albrecht et al. 1992.131)					
HD-10819/10748	7710 \pm 115	6660-6440	C	AH 13	Cave B
HD-10818/10747	7420 \pm 70	6380-6230	C	AH 12	Cave B
HD-10817/10746	7100 \pm 70	6050-5900	C	AH 11	Cave B
Kuruçay Höyük (1. Duru 1983.47; 2. Duru 1994.89)					
HD-12915/12673	7310 \pm 70	6240-6080	AB	13	Test trench A, B or C (2)
HD-12916/12674	7140 \pm 35	6050-5990	AB	12	nd (2)
HD-12917/12830	7045 \pm 95	6020-5830	AB	11	nd (2)
Hacettepe-?	7214 \pm 38	6200-6010	C	7	nd (1)

Tab. 6. Radiocarbon dates used in the text, sites in alphabetic order. Abbreviations used: C = charcoal, AB = animal bone; nd = no information available.

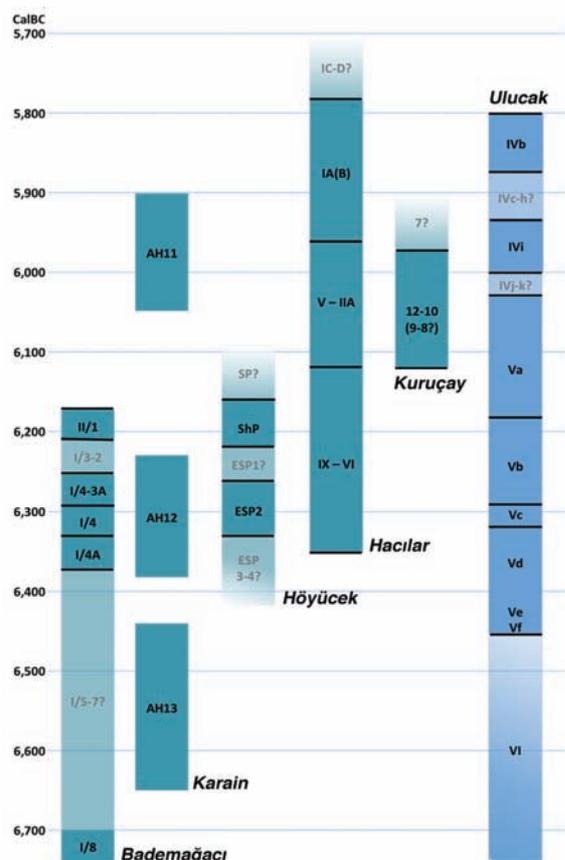


Fig. 13. Absolute chronological chart based on median estimators (black demarcators) of phase boundaries (see text). Transparent shades and fading represent absence of dates. NOTE: Höyücek ShP and SP are probably contemporary with final Hacilar VI/V-IIA and Kuruçay 12-10(9-8?) rather than the earlier range as provided by the boundary model (cf. Höyücek discussion).

that are supposedly a matter of ‘imports’, or indeed a sign of demic diffusion, are likewise incompatible

in date with their Anatolian counterparts, where the Balkan examples date to the 59th/58th centuries calBC at the earliest. Kovačevo’s handful of sherds with motif similarities to painted bowls from Hacilar V-IIA (Lichardus-Itten *et al.* 2006.87, 94, Pl. 2) are labeled as ‘rare’ and deviating from the rest of the painted ceramics (Lichardus-Itten 2009.17; following the ‘import’ idea also Chohadzhiev 2007.96). Similar motifs occur on a few sherds from Rakitovo (Macanova 2000.Pl. III.5). All sites clearly postdate the 7th/6th millennium calBC transition, and the sherds discussed are embedded in pottery assemblages very different from those of the Lakes Region. The idea of imports is tenable, and perhaps it is better to see such vessels as having played a role in exchange systems involving status products. Many other items of an elusive (truly a “liste à la Prévert” – Perlès 2005.277; cf. Çilingiroğlu 2005) ‘Neolithic package’ (cf. the subsumed objects in Özdoğan 2008.Figs. 1-9) by their very exclusivity do fit a Balkan-Aegean-Anatolian exchange system better than migration models.

I believe that the Lakes Region and West Turkey developed along lines largely independent from Central and SE Anatolia. From what was at first a conceptually coherent material culture based on shared know-how and categorisation patterns, as exemplified by attitudes to pottery, trajectories vis-à-vis vessel manipulation diverged towards the end of the 7th millennium calBC – as more regionally determined patterns of pottery use testify; I believe this divergence reflected changing patterns in cooking and food processing. These changes were both dynamic and structural in the Anatolian Southwest, but can be hardly observed in contemporary West Turkish site contexts.

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