

Boncuklu and Pınarbaşı: from forager to farmer in central Anatolia

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In 2022, we conducted the 16th and final excavation season of the Boncuklu project and renewed excavations at Pınarbaşı, one of the very few known Epipalaeolithic sites on the Anatolian plateau.

Boncuklu excavations

The emergence of sedentism, cultivation and herding in central Anatolia remains relatively unexplored compared to the ‘fertile crescent’ area to the south and east. Interlinked with this is significant debate about the nature of the spread of farming from the Near East into Europe. Models include colonisation by migrant farmers, probably attested in some cases such as Cyprus, the adoption of domesticates by indigenous foragers (possibly with some local domestication) and hybrids of these two models. That central Anatolia was one of the first areas to witness the spread of farming from southwest Asia to the west has long been considered. However, the specific mechanisms involved and their consequences for indigenous foragers and their landscapes have rarely been evaluated, due to the lack of clear evidence in the archaeological record. In addition, scholars have not yet documented effectively the transition from small-scale cultivation to larger-scale mixed farming as part of this process. The Boncuklu project seeks to document these phenomena and what it meant for foragers to be caught up in these processes.

This final excavation season in 2022 will be followed by a study season in 2023. Even though we have excavated for a decade and a half now, radical new results are emerging, significantly changing understandings of the appearance of sedentism and cultivation in central Anatolia.

The specific goals of the final phase of excavation were: (1) to understand the earliest occupation of the site and the emergence of sedentism and cultivation; (2) to develop better understanding of development of buildings and open spaces at the site and ritual activity associated with these different spaces; and (3) to investigate possible evidence for social differentiation or institutionalised corporate activity.

Results of the 2022 season

(1) In regard to our aim of documenting the nature of the earliest occupation, dates from the lowest levels in Area M clearly showed it to be almost a millennium earlier than previous earliest dates from the site. Before, the earliest evidence for cultivation in central Anatolia was ca 8300 BC at Boncuklu and Aşıklı Höyük. This therefore allows us the exciting opportunity to look at the development of sedentism and cultivation on the Konya plain over the long term. We

detected the probable presence of residential structures with light organic superstructures (in contrast to the later mudbrick buildings), possibly seasonally occupied, in the earliest levels. These buildings were set in cuts and had plaster floors, albeit the floors seemed less substantial than those of later structures. Nevertheless, some floors had red ochre applied to them, as with later structures.

A number of probable exterior surfaces and pit linings in these early levels had hard concretions adhering to them. These were not found in later levels and seem to be precipitates, probably formed in seasonally damp conditions but also probably in damp contexts with high phosphate content, as might occur in the presence of human and other organic waste. As well as the evidence for structures set in cuts, there was evidence of larger pits with linear hearths and a series of small oval installations that seem to have been a mixture of external hearths and settings for baskets. These features are also different from those seen in later levels. Both external surfaces and floors of structures had dense concentrations of phytoliths from matting or vegetation laid down in the stead of mats.

The chipped stone assemblages show differences from the later phases. Zooarchaeological work this season identified an early focus on wild boar relative to later levels, and archaeobotanical studies suggest we may well be able to pinpoint the appearance of crops within this long early sequence at the site, earlier than previously identified, and understand better its relationship to the adoption of sedentary behaviours. The results of ongoing studies of this material will profoundly change our understanding of the appearance of sedentism and farming during the later tenth–ninth millennium cal BC, potentially developing as early as parts of the ‘fertile crescent’ to the south.

(2) Our excavations also focused on a long-lived building, Building 21. In particular, we concentrated excavation on the kitchen or dirty area of B21, which was extensively and intensively remodeled during early phases in the life of the building. No evidence of ritual practice was found in this kitchen area, in keeping with other buildings.

In Area M, we focused on investigating possible ritual deposits/installations of animal bone related to a sequence of buildings, B26 and B16. As well as documenting more of a burnt roof of B16, we also detected a foundation deposit for this building, a large pit filled with well-preserved fragments of aurochs, including leg fragments and horn cores (see photograph). This in turn directly overlay a cattle bucranium attached to earlier B26. We documented more of an additional building on the south side of Area M, B24, which



Foundation deposit of wild cattle horn and body parts.



Building 31 pit structure.

had a series of red floors late in its life and was cut into by a large pit which resulted in a major reworking of its floor. In open spaces in M, we excavated a child burial, confirming the repeated use of open spaces for burial.

(3) Much work focused on the excavation of B22 and a succeeding structure, B31. We targeted B22 because of its good preservation and our initial assessment, which suggested it was potentially of unusually large size, with unusual internal features. This season we established that the structure was a fairly average-sized building, ca 5.3 × 3.4 m (see photograph). However, unusual features were confirmed, in that there was no hearth in the northwest, at least in the final phase of the building; rather, there was a more oven-like structure at the southeast end of the building. Floors were unusually thin and relatively fine plaster. In short, whilst this building had unusual features perhaps representing chronological developments in the nature of domestic structures, there remains no evidence for communal buildings or unusually large residential structures at Boncuklu.

B22 was succeeded by a unique structure, B31. It consisted essentially of a pit structure of irregular sub-oval character that was relatively long and narrow (see photograph). Whilst other buildings were constructed with foundation cuts, those were then lined either with mudbricks or plaster; B31 was not. In addition, all other buildings have relatively regular oval ground plans. Whilst the north and south sides of the B31 pit

were more or less parallel, the northwest end of the structure formed a curvilinear protrusion to the north. Whilst there were no plaster walls or evidence of mudbrick, the structure had a superstructure, at least of light materials, probably roofing material, found burnt and collapsed on one of the late floors. A deep sequence of floors was detected, some of the earliest reached had yellow and red paint on them to form blocky patterning. Spreads of hackberries were detected within the later use phases of the pit. This adds substantially to the repertoire of building types documented to date.

Pınarbaşı: Epipalaeolithic on the Anatolian plateau

Baird's excavations in 2004 established Pınarbaşı as the only excavated and one of the very few known Epipalaeolithic sites on the Anatolian plateau, and dated the occupation to 14000–11000 cal BC, the late Epipalaeolithic. This is clearly key to understanding the subsequent appearance of sedentism and agriculture in the area and interesting in terms of relationships to the Epipalaeolithic of the 'fertile crescent'. Only a small area was excavated in 2004, but burials and a long occupation sequence were discovered. Given the small area sampled, questions remained about mobility/residential practices, presence of structures/facilities on site, nature and degree of plant exploitation (it seemed very limited) and extent of burials at the site. In addition, the latest dated occupation was just before the Younger Dryas, a 1,000-year cold phase preceding the amelioration of the Holocene. It would be important to know whether or not the high elevations of the Anatolian plateau in the Younger Dryas saw human occupation, not least in terms of understanding population expansion and the appearance of sedentism at beginning of the subsequent Holocene. Further, we were not clear we had reached the bottom of the Epipalaeolithic occupation in 2004, although deposits had changed in nature, so we wanted to investigate the possibility of earlier occupation.

The aim of the renewed excavation was also to establish the degree and nature of damage caused by a large looting pit dug (probably in 2014) into the rock shelter in the area of the trenches excavated in 1994, 1995, 2003 and 2004 – named Area B in previous excavations.



Building 22.



Pınarbaşı excavation area.

Epipalaeolithic. It was established that the looters' pit had damaged part of the earliest Late Neolithic deposits left by the 2004 excavations and had penetrated Epipalaeolithic deposits to a substantial depth in the northeast of Area B. However, to the west of the looters' pit within Area B, a substantial part of the Late Neolithic deposits were preserved. The looters' pit also likely disturbed Epipalaeolithic burials given the amount of probable human remains in its upcast. Fortunately, we determined that large areas of Epipalaeolithic deposits remain undamaged.

We were able to excavate several lenses of accumulated Epipalaeolithic sediments, to a depth of 0.38 m. These were overlapping lenses of silty sediment with high concentrations of rock face shatter and variable quantities of ashy and artefactual material. Nevertheless, artefacts and ecofacts were found in all contexts. The earliest features identified within these deposits seemed to represent hearths, including in situ burning against a large stone and a later semi-circular alignment of stones with burning on their undersides. A number of human infant vertebrae were found, suggesting a burial which had been cut away by the looters' pit, Epipalaeolithic disturbance of burials or distinctive Epipalaeolithic secondary mortuary treatments.

In 2004, the southern half of Area B was excavated until two burials were revealed, cut into and underlain by a distinctive sediment that was yellower and sandier than that which characterised the overlying Epipalaeolithic deposits. We were able to open this part of Area B in 2022 and confirmed that it had not been damaged by the looters' pit. We continued to excavate here to ascertain if the distinctive yellower sandy sediment also contained occupation. A number of features were cut into this deposit, of which one, a small oval pit cut along the edge of the rock face, was the burial of a small child, Grave 21. The burial was lined with ochre, which also covered the child's skull and skeletal elements. The thorax and stomach area contained a large number of marine shell beads. These beads had also been painted with ochre. This grave seems to have cut into an underlying burial of an adult, whose bones became visible in

the base of the grave. Given the two previous burials excavated in 2004 and the burials disturbed by the looters' pit, we can have some confidence in suggesting that there is an extensive and long-lived Epipalaeolithic cemetery at Pınarbaşı dated to 14000 cal BC and earlier, much of which remains intact in the south part of Area B and underneath the surviving Late Neolithic in its western parts. Further, we have demonstrated that there remains a sequence of Epipalaeolithic activity extending earlier than that documented in 2004, and this is very promising for further excavation.

Preliminary work on the archaeobotanical remains by Andy Fairbairn shows promising indications of plant exploitation beyond the limited evidence from the 2004 work. Ozlem Sarıtaş and Louise Martin's work on the zooarchaeology also provides significant additional evidence from the small earlier excavations. The occupation deposits in situ are unique on the Anatolian plateau, and the existence of a complete cemetery unassociated with habitation structures is also an exceptional discovery.

Late Neolithic. Late Neolithic deposits representing a mobile herder-hunter occupation contemporary with Çatalhöyük were preserved in the western part of Area B as excavated in 2004. We excavated part of a building wall (building B4), and investigated early fills of or preceding an oven in B4 and a small temporary hearth near the edge of the building. We also excavated deposits which preceded B4: some plastered bones representing post-consumption rituals of the type documented previously were recovered from the earlier Late Neolithic deposits.

Byzantine period. In Area E we excavated a Byzantine structure, B7, apparently a residential structure remodelled several times and associated with a probable Byzantine-period grave.

Conclusions. A combined Epipalaeolithic settlement and large cemetery is unique on the Anatolian plateau. It requires further documentation and protection – a fact made especially clear as, even while we worked, looters continued to dig holes in the small höyük area, with its very important tenth- to ninth-millennium occupation, the earliest evidence of post-Palaeolithic, probably sedentary occupation on the plateau.



Epipalaeolithic child burial with some shell beads.