The first wave of cultivators spread to Cyprus at least 10,600 years ago

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SUPPORTING INFORMATION (SI)

SUPPORTING TEXTS

TEXT S1: THE HISTORY OF MAMMALS IN CYPRUS, SINCE THE LATE GLACIAL
(By J.-D. Vigne)(17)

The island of Cyprus emerged from the Mediterranean sea floor during the Miocene and was never connected the African or Asian continents (S1). As a result, the Upper Pleistocene terrestrial mammalian fauna was restricted to four or five endemic species (18, S2): mouse (*Mus cypriacus*; Cucchi et al. 2006), genet (*Genetta plesictoides*), dwarf elephant (*Elephas cypriotes*), dwarf hippopotamus (*Phanourios minutus*) and perhaps a shrew. Only the mouse is still living in Cyprus today as an endemic species (S3).

The upper layer of the rock shelter at Akrotiri Aetokremnos provided the earliest known evidence of human presence on the island dated to 12,776-12,461 cal BP (18, S4), i.e. Late Natufian in the northern Levant. A. Simmons (18, S5) has proposed that these human groups hunted elephants and hippos to extinction. This is, however, questioned by numerous authors (S6-12), who argue that the two native large mammals disappeared before that time, due to climatic reasons (S12-13).

In addition to thousands of hippo bones, eighteen suid bones (*Sus scrofa* ssp.) were found at Aetokremnos, concentrated in the upper layer (18). They have been directly dated to 11,746-11,396 cal BP (10,045±69 BP; AA79923, from degraded bone collagen; $\delta^{13}C$, 25.1‰) (25). These suids were 9-20% smaller than all the Near Eastern Late Glacial and Holocene wild boars, and were also significantly smaller than those of the PPN and Early Pottery Neolithic of the Near East. The most probable scenario (17, S12) is that wild boars were consciously introduced to Cyprus at the end of the Late Glacial (Natufian on the mainland), then rapidly decreased in size because of the isolation effect, and were then hunted by people who frequented Aetokremnos during the second quarter of the 12th millennium (Late Khiamian on the mainland).

Early domestic goat (*Capra aegagrus/hircus*) and cattle (*Bos taurus*) are first attested, in small quantities, together with the small Cypriot suid, in the earliest phase of Shillourokambos (10,343-10,297 cal BP on 12 charcoals)(17). The domestic dog (*Canis familiaris*) was probably also present at that time. Cat (*Felis silvestris*) is attested by one metapodial in the same layers. In the contemporaneous well 116 of Mylouthkhia (10,696-10,253 calBP), the commensal house mouse has been identified (*Mus musculus domesticus*) (28). All of these species were introduced to Cyprus by the beginning of the Early PPNB.

Starting from the Middle PPNB (10,000 cal BP) three new species of mammals appear in the layers at Shillourokambos (17): the Mesopotamian fallow deer (*Dama dama mesopotamica*), the domestic sheep (*Ovis aries*) and the red fox (*Vulpes vulpes*). It has been suggested that domestic pigs from the mainland were introduced to Cyprus around that time and that they hybridized with the local Cypriot wild boar (*21*). With the exception of cattle (and dog: only one bone), all of the mammal species which had been introduced to Cyprus since the Late Glacial were still present during the Khirokitia phase (8,747-6,992 cal BP, 6 charcoal samples) (27, S14).

TEXT S2: DESCRIPTION OF BUILDINGS 1 AND 2
(By J.-D. Vigne, F. Briois, Y. Franel, G. Willcox and J. Guilaine)

Building 1

The observations made during the excavation (36) and Figures 1 and S3-7 indicate that building 1 was a circular building 10m in diameter which was dug into the substratum. Erosion of the upper layers of the site removed the southern side of the building down to its base, but the northern limit of the building was preserved to an elevation of one meter. The building was formed by a pit which was dug into the bedrock composed of Pleistocene calcrete and colluvium deposits.

A 25cm-deep foundation ditch for the surrounding earth wall was dug into the floor of the building around its periphery. No post holes were found in the ditch and there were no traces of wooden framework in what remained of the wall. Outside the building, the archaeological layers which are more or less contemporaneous with its use are ca. 1m above the level of the floor of the building. This demonstrates that the latter was partially embedded into the ground as was the case for several PPNA buildings on the mainland (8, 23, S15-17). If the building was dug down to 1m, the volume of earth which must have been extracted can be estimated at around 70m^3 ($1.8*\pi*5^2$; Figure S7).

Three large central post holes (with caches) and several other post holes excavated into the floor of the building probably supported the central parts of the roof (Figure 1).

The foundation trench was 15cm wider in two 3m portions, one on the east side and one on the west. These are the only places where the wall has been preserved. On the west side, the portion of the trench widened on the interior side, suggesting that the wall, which was presumably the same width as the foundation trench, advanced by 15 centimeters to form a buttress (Figure 1B, 6). The angle which divided them made a right angle. On the east side, the widening of the trench was on the outside edge of the trench so would not have affected the shape of the room. The function of these two wider parts of the wall is not known.

An east-west line of post holes possibly delimits a dividing wall within the building (Figure 1B). The base of the building was level at the centre, but sloped to become 70cm higher at the edge, in the south and west. This slope could possibly be the remains of benches, which are common on the continent (8, 23, S15-17), and had been partly destroyed. The floor had numerous features which form a concentric pattern suggesting complex functions and possibly indicating that the building had a symbolic significance (Figure 1B, 6):

- Remains of a series of shallow oblong pits 20cm from the wall appear to have been arranged regularly around the building. At the southern limit of the building, they were cut by the row of recent small historical pits (mentioned above). Two of the shallow pits have been well preserved in the sout-east sector and three in the south west sector. Though they have not yet been completely excavated, they appear to have been used to place valuable objects such as flint blades, arrow heads, pendants, and stone beads. The easternmost of these pits was partially sealed by a layer of burnt clay and it may have been hidden beneath the bench. This system of caches has parallels in the collective buildings at Jerf el Ahmar (8, S15) and Tell ʻAbr (23, S17) (Euphrates valley, Syria).
- Several post holes suggest that posts followed the curve of the inner wall. It is possible (but this needs to be confirmed) that a ring of posts about a meter inside the wall supported the roof. Similar patterns have been found in the Euphrates valley (8, 23).
- A layer of burnt clay partly covering the westernmost oblong cache pit and three other burnt clay layers which were part of hearths were spaced 2 meters inside the wall in the south-east quarter of the building. These could have formed a ring within the room.
- Within the ring formed by post holes and hearths, the central area contained numerous pits, some of which are small caches for shell pendants, some small post holes, and some remain unexcavated and are thus as yet undetermined features.
- In the central part of the building, near to the central post holes, we found remains of hearths and two semi-circular pits lined with stone. It is possible that the bottoms of these pits were originally covered with earth for storage of liquids or other products. They recall some pits found at Shillourokambos (S18). These pits were part of a tradition that was maintained during the Pre-Pottery Neolithic, during the 10th millennium cal BP.

The central post holes show clear signs that the posts were removed intentionally. The volume of rubble which came from the destruction of the surrounding wall (and the roof?) which was found within the confines of the building is rather low compared with the estimated volume which constituted the wall. This suggests that the collapsed building material was either removed or eroded. The intentional destruction of the building cannot be excluded.

Building 2

The layers which resulted from the demolition of building 1 are sealed by layer SU 10.6 (Figure S5). It is approximately 20 centimeters thick, and contains well-preserved archaeological material suggesting that it may have been spread deliberately in order to level the irregular basin that was formed by the destruction of building 1. This stratigraphic episode necessarily corresponds to a second phase of development of the village.

The rest of building 2 was found above SU 10.6, represented by a stone floor (SU 10.5, Figure S5) and a thick layer of clay (SU 10.2: 0.35 to 0.40m) with various structures (earth pillar, small post holes dug into the fill of the building). Building 2 was about 5m in diameter (Figure S2). In the east-west profile (Figure S5), it is limited to the west by a mass of building earth that could be the remains of the western part of the wall of the building. The mud of this building was dark, rich in freshwater snails (*Melanopsis praemorsa*) and quite different from the light grey mud, which had fewer *Melanopsis*, which was used to construct building 1.

The floor of building 2 (101.01) is at the same level as the one of the upper PPN archaeological layers east of building 1 (Figures S5-6).

At least two phases of village construction

It appears that the village was organized around the large collective building that was destroyed, perhaps intentionally. Several scholars have observed that buildings were deliberately destroyed at PPN sites in Anatolia and Syria (8, 11, S15, S17) but that at Klimonas was not destroyed by fire. The second phase of the village lies on the ruins of building 2. If we accept the idea that SU 10.6 has been spread deliberately for settling building 2, this second phase can be dated by the charcoal samples 7 and 8 (Table 1 of the main text): the date does not differ from the date of building 1. This would mean that building 2 was built less than one or two centuries after building 1. In any event, the chipped stone industry and the fauna (exclusively of wild boar) in building 2 indicate that this second phase of building predates the earliest phase of occupation at Shillourokambos (early A phase), i.e. 10,400 cal BP. The collective building of the second village, if it ever existed, remains to be discovered. These results point clearly to at least two phases of village construction from the first half of the 11th millennium calBP.

TEXT S3: THE CHIPPED STONE INDUSTRY

(By F. Briois)

The chipped stone industries that were collected and processed during the 2011 season comprise a considerable number of specimens, with most of them coming from the large building structure St 10, , though to date the specimens have not been quantified. The systematic sieving of the sediment provided an exhaustive collection, including several microlithic tools (backed bladelets, microdrills, burin waste) and numerous other small-sized pieces of knapping waste.

The preliminary analyses of the collection, which numbers several tens of thousands of items, evidenced quantitative and qualitative differences between the main SUs that compose the filling of St 10. This is particularly true for SUs 10.2, 10.5 and 10.3, which essentially contain knapping waste and few tools. SU 10.2, which corresponds to a thick adobe deposit, yielded the smaller collection, while SUs 10.5 and 10.3 are made of very large series of flints, including overwhelmingly dominant knapping waste. Two other SUs, SU 10.6 and 10.8 west, also contain high amounts of lithic, but unlike the previous sets, they provide a much larger number of significant items, including laminar products and many tools. On the peripheral areas of St 10, the SUs 1005 and 1006 that are just at the margin give the opposite result, with a significantly higher number of tools and blades and a relatively low amount of waste. Ultimately, and based on the preliminary results, it seems clear that, after its abandonment and ruin, St 10 largely operated as a vast rubbish pit that was gradually fed over time. Other steps, such as those identified by the content of SUs 10.6 and 10.8 west, appear to result from levels of occupation, which other excavation data do not contradict.

The review of all series, whether from the St 10 or its margins, do not reveal any qualitative differences either in terms of the raw materials used or on the technological characteristics, and even less in terms of typology. Whatever series is taken into account, there is a privileged use of several varieties of translucent flint of excellent quality, together with the use of an opaque vitreous chert of good quality. Both of these materials come from nearby sources, which are located a few hundred meters northwest of the site, where the corridors of erosion have cut the massive formations of chalk and flint and chert of Lefkara. There is also the specific use of granular chert and a few blocks of chalcedony taken from the same environment. Note that obsidian is totally absent from the lithic industries that have been excavated.

In terms of production, we found a considerable number of flakes largely resulting from the simplified use of small-volume blocks. The cores, often found at an extreme state of diminution, are very often with multiple striking platforms. There are also flat cores with centripetal removals and unshaped cores reworking old thick flakes. Large flakes resulting from the earliest steps of exploitation of raw blocks from the core shaping are virtually absent. This observation suggests that these steps were performed on the source of raw material. Laminar knapping is also a strong component of these industries. It is characterized by several forms of production, the most recurrent being the knapping of small blades in unidirectional mode, starting from conical cores (Figure S9, 1). The striking platform of the core is frequently subcircular and is formed by flat centripetal removals. The angle of knapping is almost orthogonal to the striking platform. The presence of numerous core rejuvenation flakes reveals a recurrent maintenance of the striking platform at different stages of the use of the cores. The blades which were extracted from these cores were 7 to 8 centimeters long, convergent edged and with sharp extremity. Other blades are products of the opening of the cores (raw crested blades, cortical blades), products of starts (thick blades 10 centimeters or so long) or accidents (hinged or plunging blades). The surface has sometimes been corrected from the striking platform using either a facet of the pyramidal extremity of the core, or a large flat left by the negative of a plunging blade. A second type of production, not identified so far in the series from the trenches made in 2009, is a true bidirectional mode of exploitation of cores. A core from SU 10.5 is particularly significant of this mode of operation. Of quadrangular morphology, it has two opposite striking platforms tilted towards the rear part and it presents a nearly flat debitage surface on which are visible two negatives of small blades with sharp termination (Figure S9, 2). Other bidirectional cores were also identified in the SU but these occurrences are rare. They have two opposite striking platforms, tilted towards the rear extremity which is completely cortical. Lastly, a third type of blade production has been identified. It provided large and thick unidirectional blades with a trapezoidal section, whose production, based on current data, appears to have been made off-site. This is particularly the case of a blade of more than 23cm in length found in 2009 in trench 168.3.

The series of tools from all the processed SUs form a very rich and varied corpus, which includes recurrent typological markers. SUs 10.3 and 10.6 provided most of the lithic material. The tool set is clearly dominated by burins on blades, most of them being angle burins on breakage. There are also dihedral burins and angle burins of truncation. The high amount of burin waste and products of reworking of burins emphasizes the high frequency of this type of tool in the series (Figure S10, 2-3). Scrapers are the second significant group of the chipped stone industries of Klimonas. They are often made on thick flakes or blades. Other scrapers are thin, often double scrapers, using flat flakes. In some cases the tool combines burin and scraper (Figure S10, 2-3). The group of notched tools forms an important third set. It is essentially composed of multiple direct, reverse or alternate deep notched items, whose status as a tool is unclear. The group of arrowheads forms the fourth large set of tools. The 2011 series comprises 106 complete or fragmented pieces among which there is a significant typological and dimensional variability. The series of arrowheads are mainly from SUs 10.3, 10.6 and 10.8. The most frequent type corresponds to a 4 to 6.5cm small arrowhead, with a short triangular tang and with an opposite extremity sharpened by bifacial oblique retouches. Other types of spikes are recorded but they appear to be much rarer: microlithic darts with tang, oval or diamond-shaped. The length of these specimens ranges from 25-30mm. A large specimen with tang is an original feature. Its primary distinguishing features are its large size (length: 9.6cm, width: 2.6cm, thickness: 8mm) and its technique that combines a form of back produced by bifacial oblique retouches with partial marginal retouches on the opposite side. The point is generated by oblique bifacial retouching. This object is absolutely intact. It probably corresponds to a foundation deposit. Among the other types of tools are drilling tools of various types, comprising microdrills made on thin bladelets, sharp drills, small bits made of burin waste and bigger drills made of small blades, some with a tang.

The specimens with sheen due to use, most likely corresponding to sickle blades, are attested by about 15 particularly significant pieces. Primarily from SUs 10.6 and 10.10 but also partly from SU 10.3, these tools were made on rough blades of various size and morphology. The active part of the tool shows a sometimes well marked sheen, which develops parallel to the edge (Figure S10, 4). Some specimens show a regularly spaced micro-denticulate all over the entire active edge. Among the rarer tools worth mentioning here are small convex-backed blades produced by bifacial oblique retouch. We must also mention the presence of some micro-bladelets with continuous marginal retouches, and a segment of a circle with a convex knapped back from SU 10.08.

TEXT S4: THE SKELETAL REMAINS OF VERTEBRATES

(By J.-D. Vigne)

Taphonomy. More than 25% of the 5,300 animal bones have been identified (n= 1,327; Table 1). All the assemblages considered were largely dominated by detritic remains, having undergone several phases of fragmentation. The first phase resulted from the breakage of fresh bones for the consumption of marrow and brain. The next phase(s) resulted from trampling on dry bone. Some remains bear clear traces of digestion by dogs (Figure S13c). Burnt bones were less than 5%. Bones used for industry were 0.1%. These faunal assemblages can be interpreted as food and domestic waste that underwent more or less complex pre-and post-depositional evolutions during the collapse and the filling up of the ruins of the successive buildings.

Faunal spectrum (Table S1). The list of vertebrates is particularly restricted and overwhelmingly dominated (94.7±1.2%) by suids (*Sus scrofa* ssp.). The only other large mammal is a small dog (*Canis familiaris*), represented by 22 specimens (1.7±0.7%). The presence of small carnivores is indicated by 19 remains of diaphysis of long bones. A first phalange allows the fox and the genet to be excluded, and unambiguously refers to a cat of comparable size to the wild cat (*Felis s. lybica*; *SI Text 7*). A shaft of tibia could suggest the joint presence of endemic genet (*Genetta plesictoïdes*). A lower jaw and a single upper molar meant that there was about the presence of mouse, but it was impossible to decide between the endemic (*Mus cypriacus*) and the commensal mouse (*Mus m. domesticus*). Birds are represented by 33 specimens (2.2±0.8%), mostly long bone diaphyses, unfortunately unidentified. Except for one tarsometatarsal and one large carpometacarpal (raptor, bustard?), they refer to small-sized bird species (Passeriforms, Columbiforms?). Freshwater tortoise (cf. *Mauremys rivulata*) is represented by five specimens, some of which are however questionable. One of the 10 unidentified lizard remains refers to a skink (cf. *Eumeces*; preliminary determination S. Bailon, CNRS). Despite water sieving, fish are represented by a single vertebra (SU 10.8).

Stratigraphic evolution. With more than 400 identified vertebrate remains, SUs 10.3 and 10.6 are the main providers of faunal remains, ahead of SU 10.8 (n= 167). As the frequencies of most of the taxa are less than 5 NISP, it was not possible to use Chi² tests for comparison. The only reliable statistic was the z test of comparison of the frequencies of suids in the different phases of the stratigraphy (Figure S13). At 5% confidence, it indicates that there is no significant difference from the top to the bottom of the fillings (z= 1.78, p= 0.07).

Suids (*Sus scrofa* ssp.). In the test sub-sample, all parts of the skeleton were represented (Table S2), with, as is usual for suids, a strong dominance of the remains of the head (including incisors: 24% of NISP). However, there was a significant deficit of the vertebrae and epiphyses of long bones, as a probable consequence of the presence of the dog in the village itself.

The sample was still too small for refined slaughter age profiles. However, counts of deciduous incisors gave an initial estimate of 209 teeth (98 upper and 111 lower) of which 84 were deciduous (36 and 48, respectively). This indicates that 40% of animals were slaughtered before 10-15 months of age (the age at which deciduous incisors are shed). This estimate appears significantly higher than that of animals slaughtered before 15 months of age in the levels of the early phase of Shillourokambos A (30%) (28). Eight perinatal specimens (scapula, humerus, femur; 2.5% of the remains of the limb skeleton) confirmed the slaughtering and consumption of young to very young animals. However, as in the early phase of Shillourokambos A, there were several extremely worn molars, indicating a low predation pressure on exploited populations. The data outline a very broad profile of slaughter which evokes hunting (especially of females with their young), rather than farming, or even control in the wild.

Nearly 250 suid remains were measured for a total of 570 metric data (Table S2). Comparisons with the extensive dataset recently published for the wild boars of the Old World (S19) indicate that all the measurements at Klimonas are much smaller than those of the modern Near Eastern wild boars (Figure S16). The difference with the Epipaleolithic wild boars, which were larger than the modern ones and more or less contemporaneous with the occupation of Klimonas, is greater still. Where it is possible to estimate, the mean difference of size varies from 9.9 to 14.8% with reference to the Near East, and from 6.3 to 14.5% with reference to modern European wild boars (Table S2). These numbers are very similar to those which have been estimated for the small wild boar from Akrothiri Aetokremnos (27). As evidenced by Figure 3 and S17, the measurements from Klimonas do not differ significantly from those of the suids of the 10th millennium at Shillourokambos, and from those of the 9th millennium at Khiirokitia.

The measurements from Klimonas have been more precisely compared with those from several archaeological sites of the Pre-Pottery Neolithic on the near mainland. The reference datasets are as follows:

PPNA: Mureybet IlIA and B (S20), Göbelkli (S21);

EPPNB: Nevali Çori III-IV (S21);

MPPNB : Nevali Çori 1-11 (S21), Mureybet IVB (S20), Aswad (58, S22), Çafer (S23) and Halula 1-9 (S24);

LPPNB: Gürcutepe (S21) and Halula 10-19 (S24);

For Çayönü (S21).

TEXT S5: THE CAT PHALANX

(By J.-D. Vigne)

The first phalanx of small carnivore from SU 10.6 is characterized by:

- In ventral view: 1) the proximal dimple that overhangs the distal articulation is deep, whereas it is shallow in *Genetta*; 2) mesial and lateral edges of the proximal phalanx are straight and regularly diverge from each other in a proximal direction, whereas they are rounded and sub-parallel in *Genetta*;
- In lateral view: 3) the dorsal and ventral sides are sub-parallel, whereas they diverge from each other in the proximal direction in *Genetta*, so much that, for the Viverridae, the proximal half of the phalanx is substantially thicker than the distal half; 4) the dorsal margin of the phalanx forms a small spout that overhangs the proximal articulation (although less pronounced than in *Vulpes*), while it is smoother in *Genetta*;
- In proximal view: (5) the epicondyles of the two mesial and lateral parts of the articular surface present non coalescing ventral edges (whereas they are coalescing in *Genetta*); the notch that they determine is semi-square, whereas it is rounded and widely open toward plantar direction in the genet.

These five criteria are present in the wild cat (*F. s. silvestris*) specimens of the Comparative Anatomy collections of the Paris National Museum of Natural History.

The measurements of this phalanx are as follows (in mm): GL= 17.84; Bp= 8.05; Dp= 4.06; KD= 3.32; Bd= 4.1; Dd= 3.52. They are consistent with the range of variation of *F. silvestris*. However, they are 30% higher than *Genetta genetta*, so too large to fit *G. plesictoïdes*, even if it seems that it was slightly larger than the modern species.

There is no doubt that this is a cat phalanx. It was discovered in a very reliable stratigraphic unit (SU 10.6). It is however necessary to find other evidence of the presence of the species at that time, but we can already argue that the cat had already been introduced to the island early in the 11th millennium BP.

TEXT S6: THE REMAINS OF MOLLUSKS

(By J.-D. Vigne)

The 223 remains of mollusks collected from the Pre-Pottery Neolithic layers at Klimonas consisted of:

- 10% of fossil shells of spondylus (*Spondylus crassicosta*; Figure S15, 6-7); these specimens were collected on a Plio-Pleistocene fossils beach of the island of Cyprus, and were present in the early phase of Shillourokambos (but few or none in the middle and latest phases), but much more rarely worked (S25). At Klimonas, they have frequently served as raw material for making objects or ornaments;
- 60% of marine shells collected dead on the seashore and used as ornaments; these are mainly dental (*Dentalium inaequicostatum*/*dentalis*: 24% of the malacofauna; Figure S15, 3); either rough or polished, or even used as beads, but also fragments of scallop shell (*Pecten jacobeus*; Figure S15, 1), *Calista chione*, turritella (*Turritella* sp.), ceriths (*Cerithium vulgatum*), dove shells (*Columbella rustica*), murex (*Hexaplex trunculus* and *Bolinus brandaris*; Figure S15, 2), and fragments of large gastropods (*Phalium/Charonia*; Figure S15, 4-5); in doubt, we also place in this category numerous valves of *Glycymeris* sp., sometimes perforated, which nevertheless may have been collected on a fossil beach like that of Moni (S25);
- 30% of freshwater snails (*Melanopsis* cf. p*raemorsa*) brought to the site with the adobe earth.

The relative proportions of these major groups differed very significantly from one stratigraphic level to another (Figure S16). The spectrum of the deeper levels is largely dominated by the shells collected on the beaches, probably because of the abundance of votive deposits in the bottom of Building 1. The spondylus are especially abundant in the filling of this building and in the sediments which resulted from its collapse. The horizons corresponding to building 2 are dominated by *Melanopsis* (suggesting a different origin of earth used for adobe in buildings 1 and 2) and dentals. SU 10.6 has a balanced spectrum, halfway between the levels above and below.

SUPPORTING FIGURES

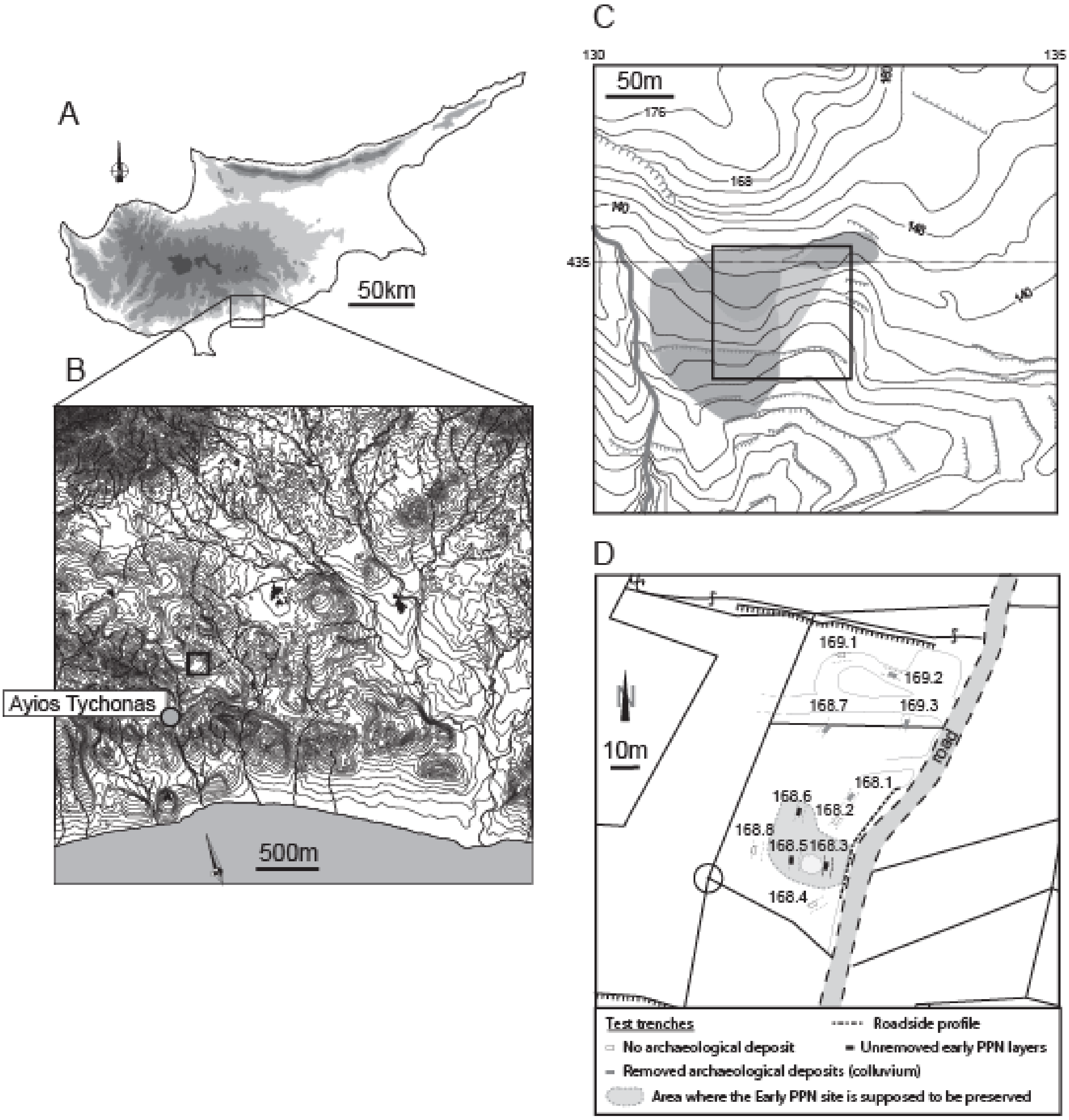


Figure S1: Klimonas site location
A, on the island of Cyprus
B, in the area of Ayios Tychonas - Pyrgos (equidistant 25 feet)
C, northeast of the village of Ayios Tychonas (area for spreading of pre-pottery flint which was identified during surveys is shown in grey; equidistant 4 meters)
D, Location of the eleven test trenches on the cadastral map (section 8) of Ayios Tychonas, CAD P. Gérard (A), P . Devèze (B, C) & JDV (D).

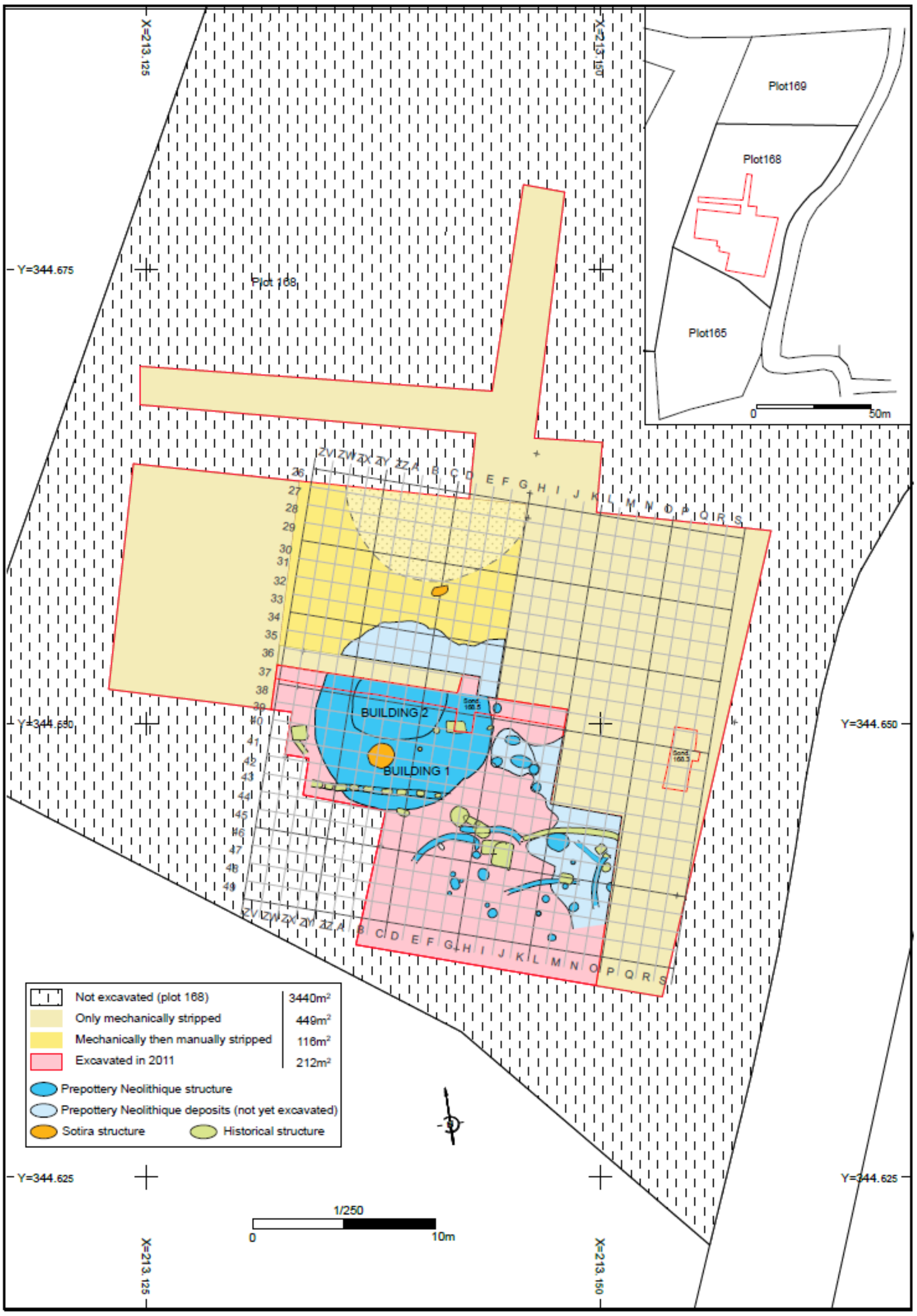


Figure S2: Map of the 2011 excavation

Excavated areas and the main archaeological features are represented. Tricking R. Touquet, CAD R. Touquet & J.-D. V.

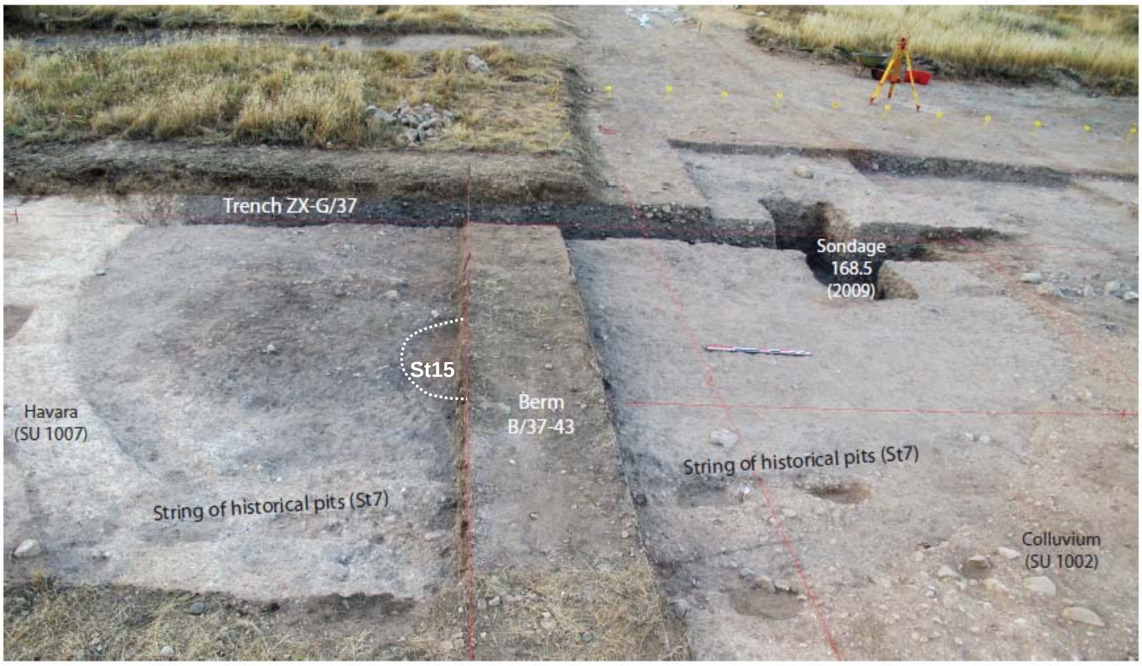
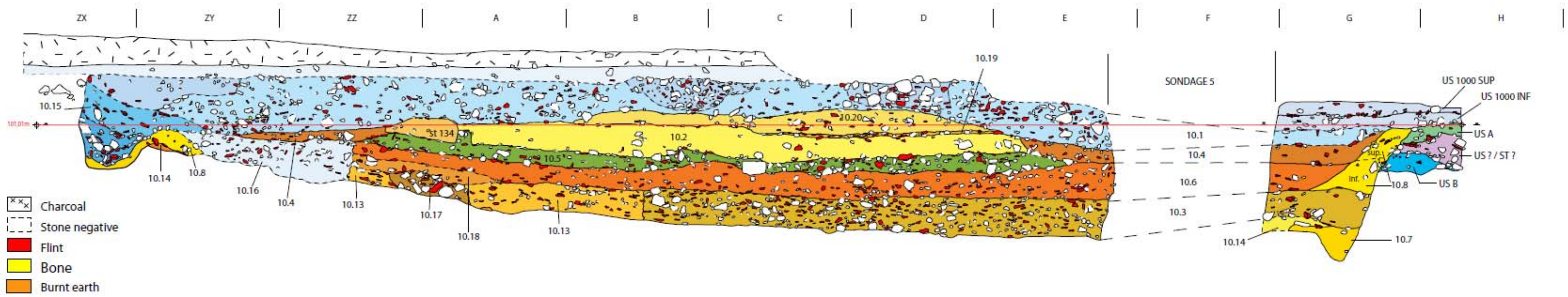


Figure S3: The first step of excavating St10
The picture is taken from South to North. The string of small pits which overlaps the southern edge of the vast circular structure dates to the historical times. The mouth of the Sotira silo (St15) is already visible under the north-south berm. Photo & CAD J.-D. V.

Figure S4: The bottom of building 1
The picture was taken from east to west at the end of the 2011 excavation season. The total diameter is 10m. In the foreground, the 2009 trench. On the left, the string of historical pits. Near the centre, the Sotira silo. Photo J.-D. V.

a



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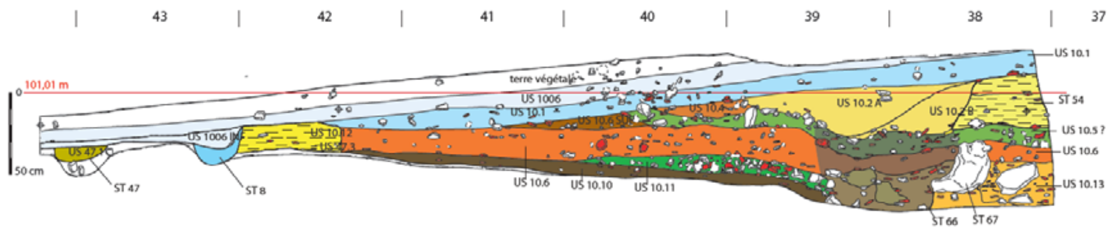

Figure S5: The two main profiles of Structure 10
a: profile ZX-G/36, North view; b: profile B/40-37, West view. Section drawing: Y.F. (1/10th), CAD: Y.F., C.M. & J.-D.V.

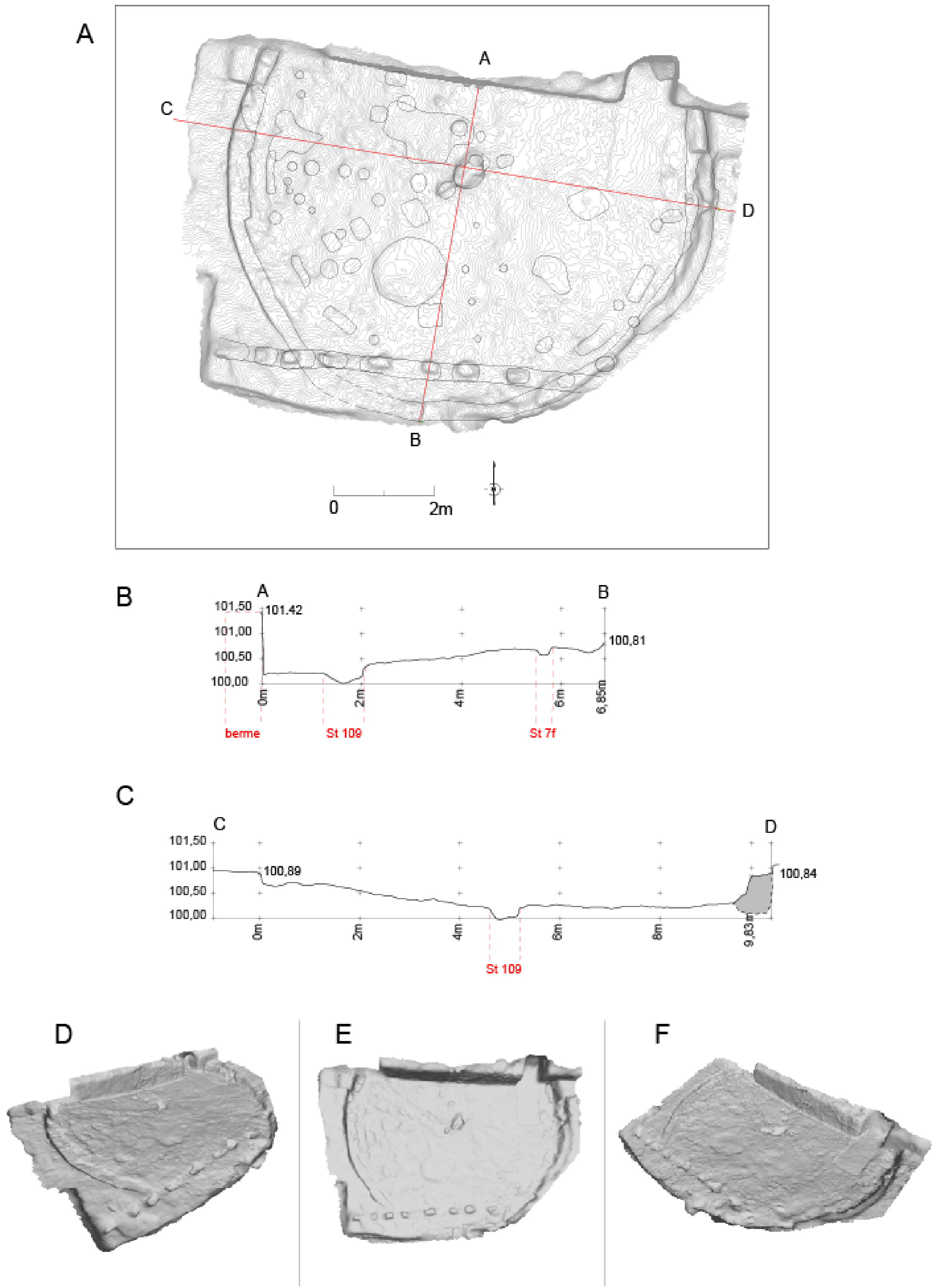

Figure S6: Topography and 3D reconstruction of building 1
3D processing: “osm-bundler ", 3D viewing: MeshLab. Survey & CAD: R. Touquet.

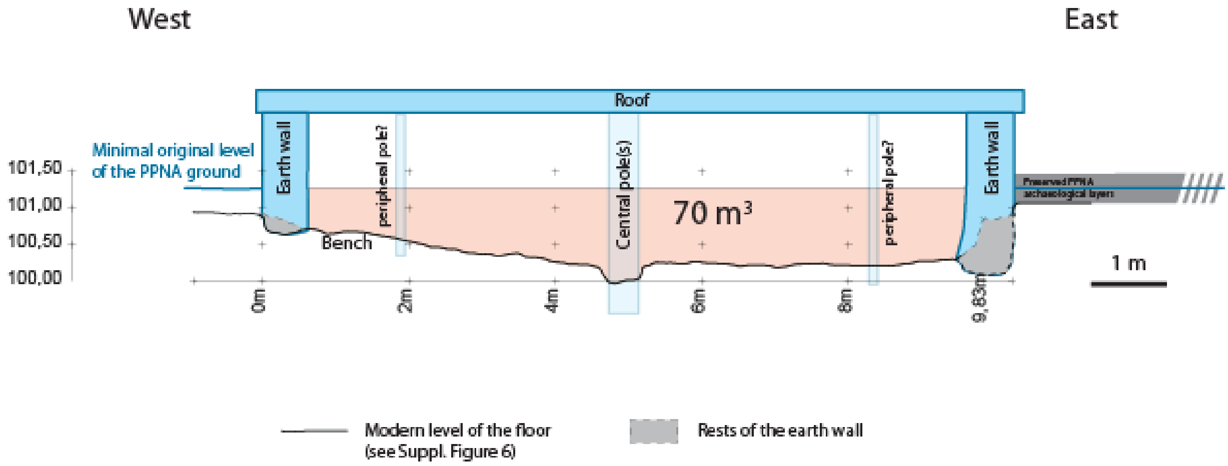

Figure S7: Estimating the volume excavated for building 1
This East-West profile of the building is the one where the earth walls are thicker.
The northern limit of the building indicates that the modern level of the ground is 1m higher than the lowest level of the floor of the building. Therefore, taking into account the fact that the diameter of the building is 10m and that it was embedded 1m into the ground, the volume excavated can be estimated at 70 cubic meters. Drawing J.-D. V.

Figure S8: General view of the South-East section, adjoined to Building 1
Building 1 appears top left of the picture. Photo J.-D. V.

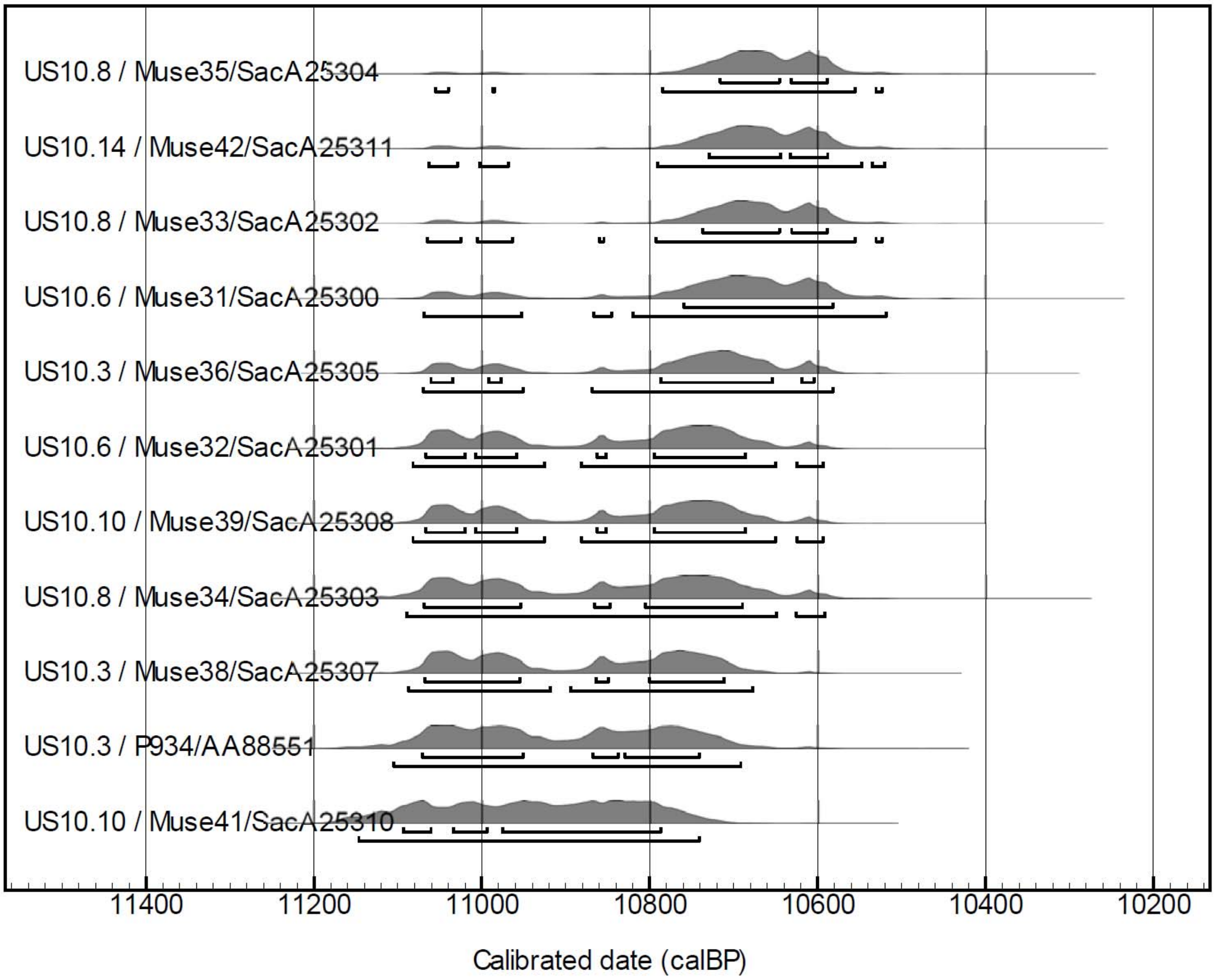

Figure S9: Radiocarbon dating

The radiocarbon dates of the eleven charcoals from Klimonas were calibrated using Oxcal v4.1.7 (S26); r:5 Atmospheric data from (39).

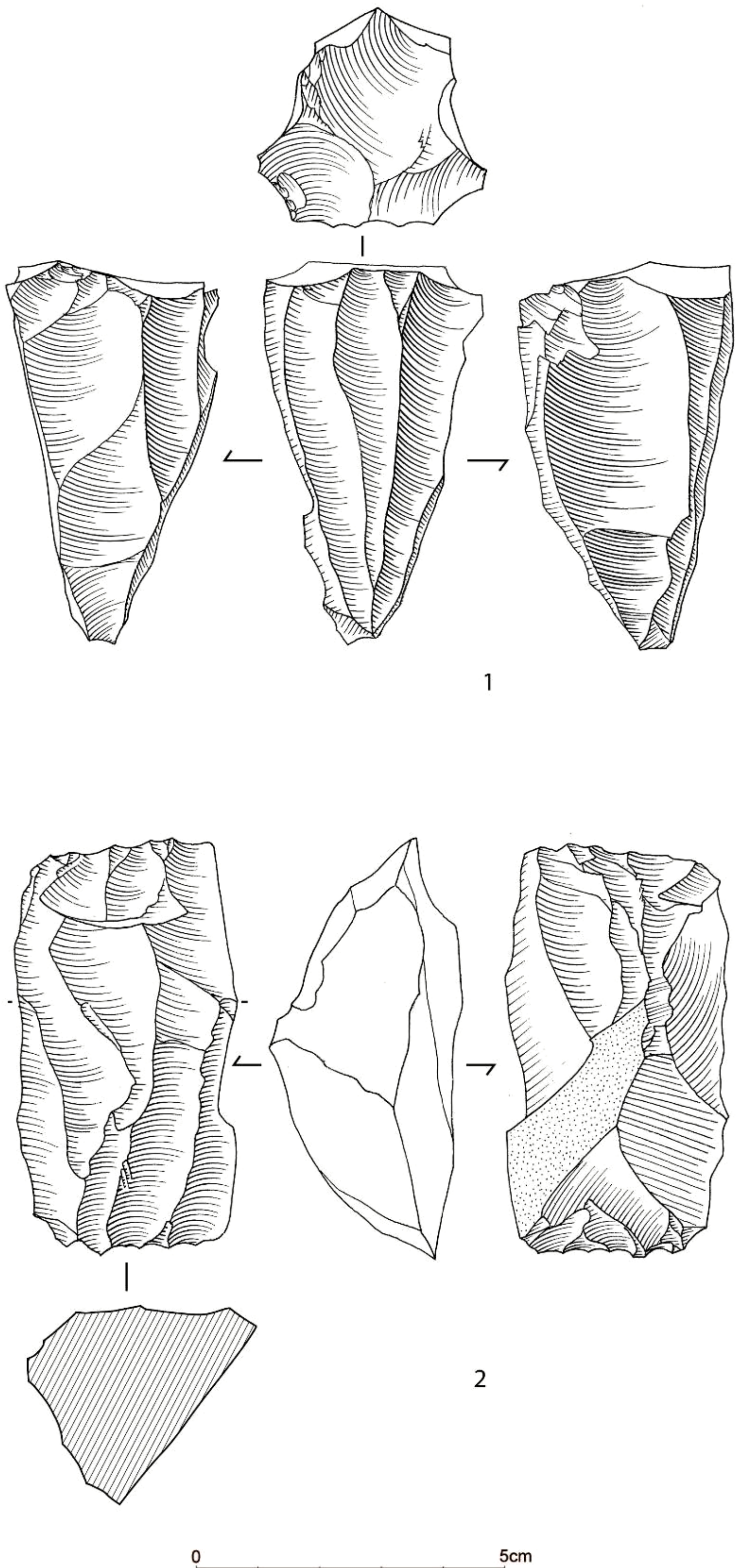

Figure S10: Two types of flint cores from Klimonas.
1: Conical blade core with unidirectional removals; 2: bipolar blade core. Number 1 comes from Sd 168.3, Number 2 comes from St 10, SU 10.5. Drawing F. Briois.

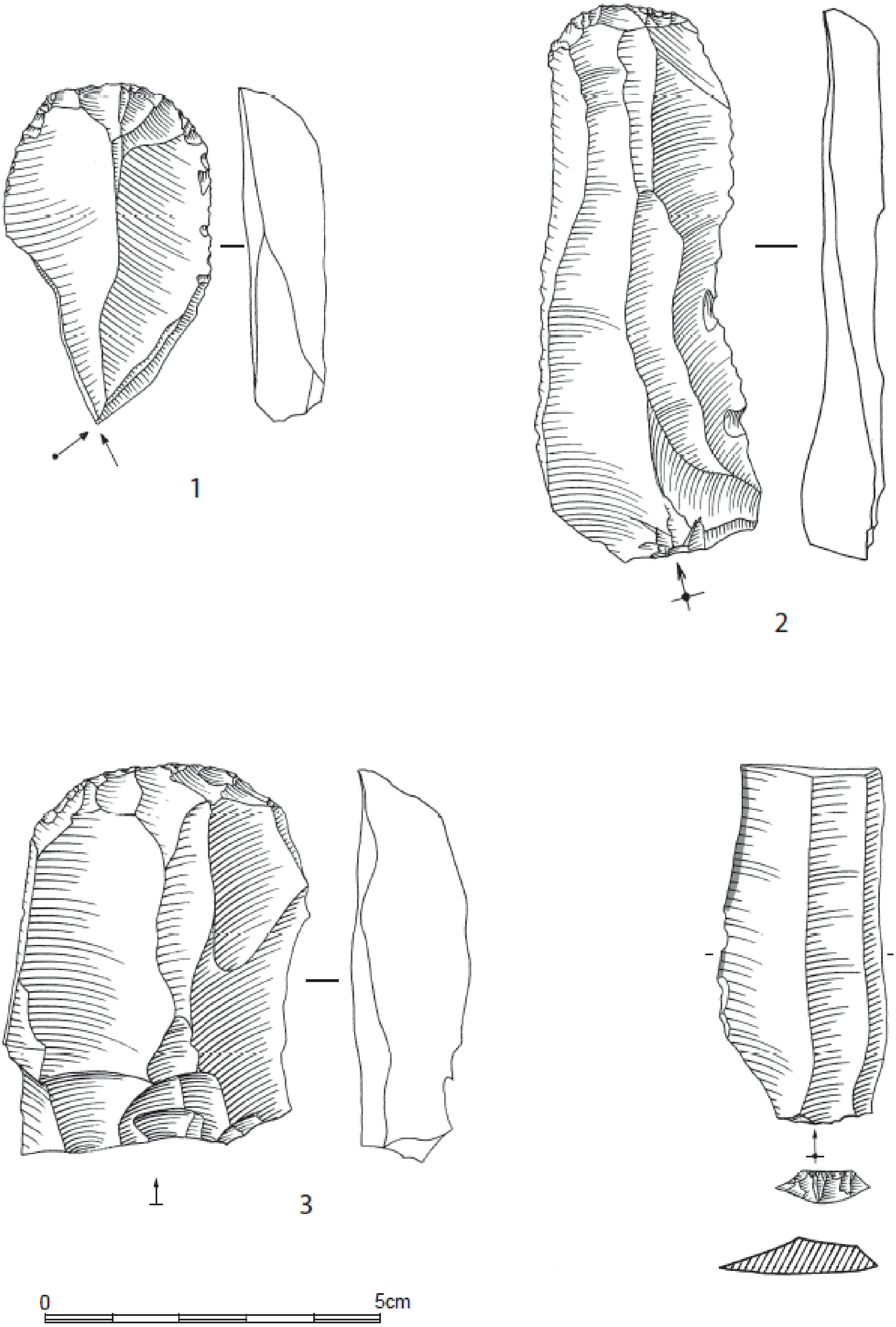

Figure S11: Some flint tools of Klimonas

1: Burin-scraper; 2, 3: Scrapers; 4: Blade with gloss. Numbers 1, 2, 3 comes from Sd 168.5 and Number 4 comes from Sd 168.3. Drawing F. Briois.

Figure S12: Other stone tools from Klimonas

Klimonas, 2011. Some stone artifacts: 1, a shaf-straightener (SU 1000, H-37); 2, picrolite bead (St 68, F-42); 3, picrolite bead (St 47, E-43); 4, fragment of shaf-straightener (SU 47.2); 5, greenstone polished micro-axe (St 57). Photos: J. Daujat & J.-D. V., CAD: J.-D. V.

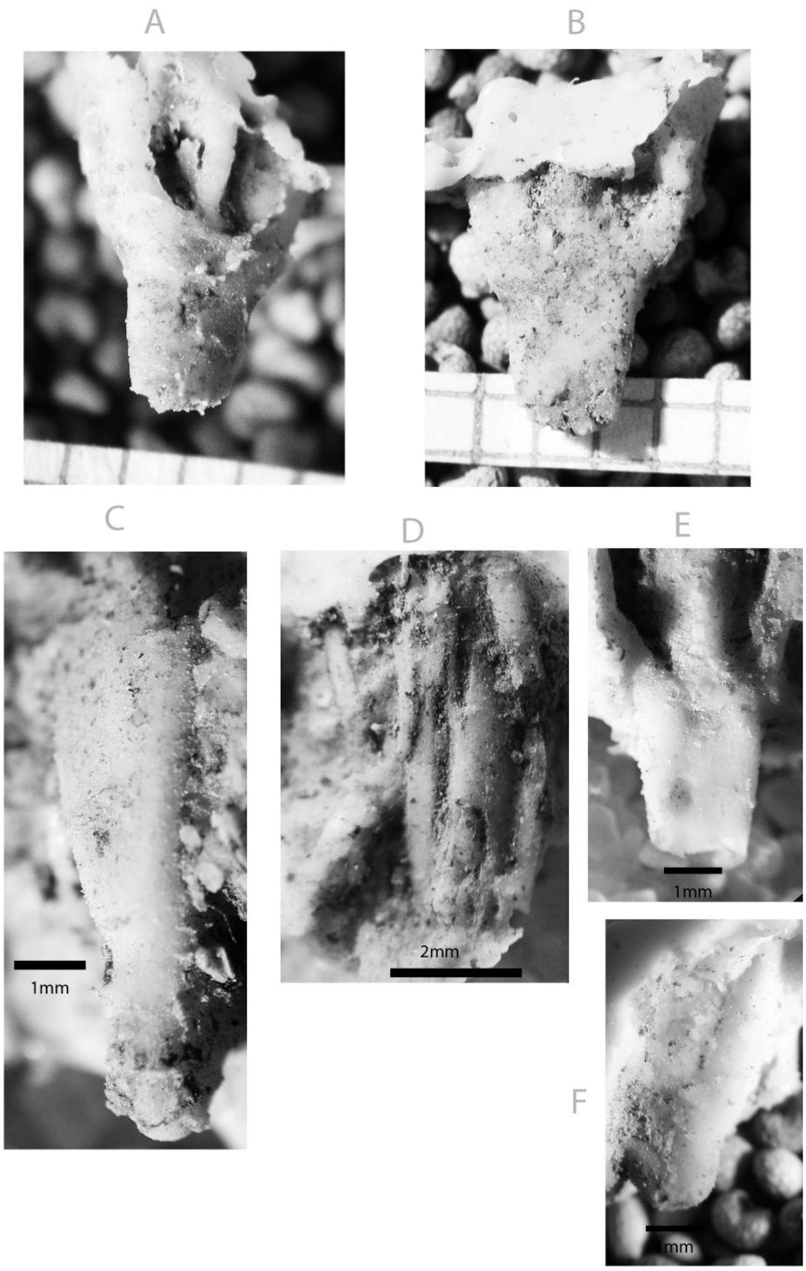

Figure S13: Seed remains from Klimonas

Photos of silicone casts obtained from impressions left by cereal chaff fragments recovered from baked building earth at Klimonas. Chaff is frequently found as a tempering material on PPNA sites on the continent (7, 16, S27) and suggests large- scale use of cereals. These finds are confirmation of the use and presence of cereal at Klimonas. A (front view) and B (back view) are photos of a spikelet fork of emmer showing the widely separated glumes. C is a spikelet seen in lateral view with rounded keels on the glume. D shows broken fragments of awn and other chaff fragments. E and F are other examples of emmer spikelet forks. A, B and F come from SU 10.3, Passe 3, PR 09. C, D and E come from St 10, SU 10.3, D/38, PR9.

The wild or domestic status of these finds depends on excellent preservation of the abscission scars (see (25) for identification criteria). In A, B and E the scar resembles the domestic form, however we cannot be sure whether this is due to damage. C and D resemble more the wild form. On mainland PPNA sites morphological domestication has not been identified. Given the nature of the casts and problems of distinguishing wild and domestic, we must wait until more material is examined before we can provide reliable information with regard to the domestic status of these finds. Scales are 1mm with the exception of D and F which are 2mm. The casts were made using vinyl polysiloxane precision impression material. Photos were taken through a low-power binocular microscope with a digital camera. Photos : George Willcox.

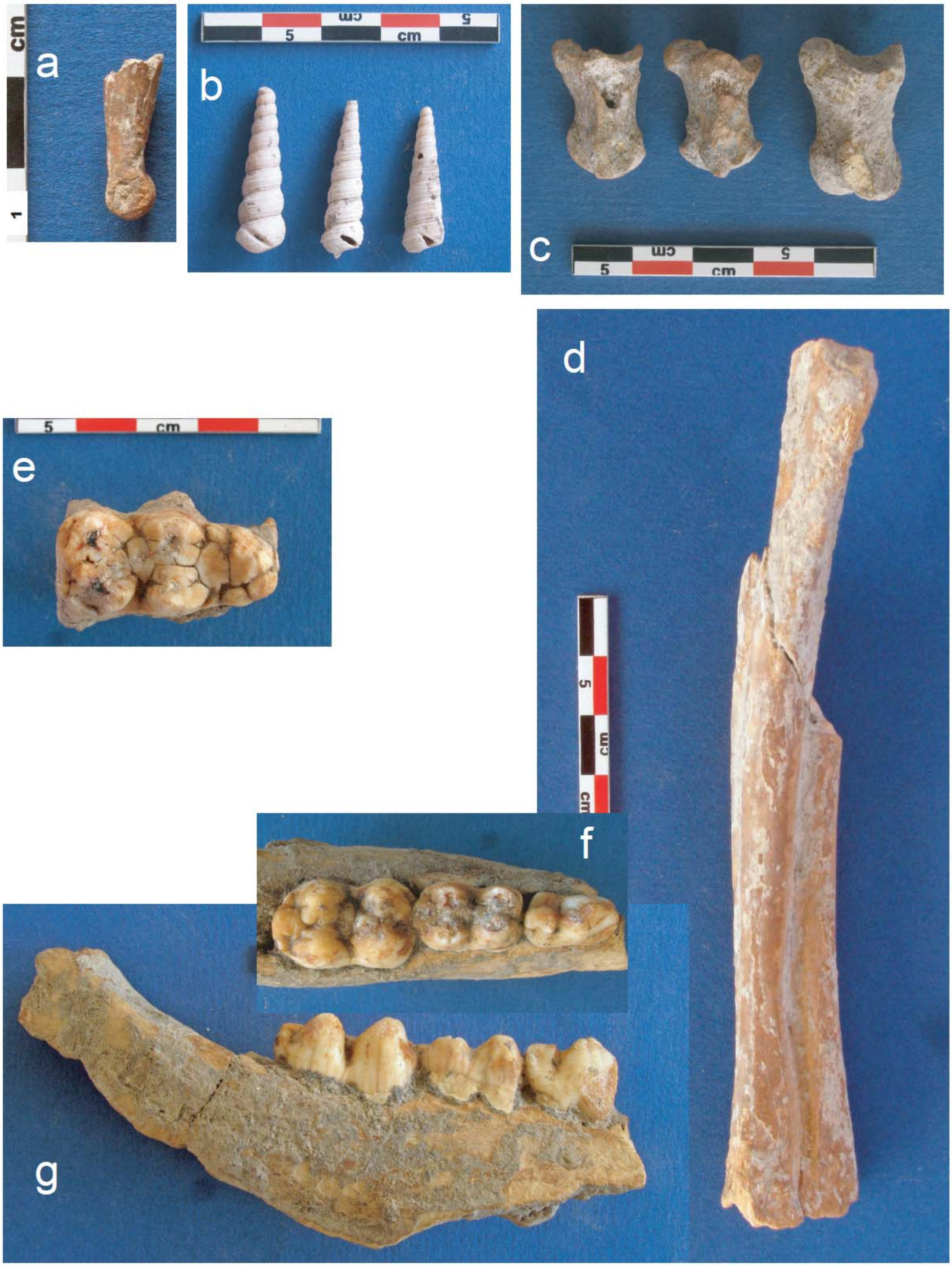

Figure S14: Some faunal remains
a, first phalanx of a small adult domestic dog (lateral view); b, three *Turritella* sp. shells holed on their last turn; c, suid second phalanges, the two on the right with heavy digestion marks; d, cranial view of the suid left tibia with parallel grooves for extracting a bone stick; e, occlusal view of a right upper third molar of suid; f, occlusal view of a right lower third molar of suid; g, occlusal view of a right suid mandible; h, lateral view of the same portion of mandible (same scale; photos & computer graphics: JDV).

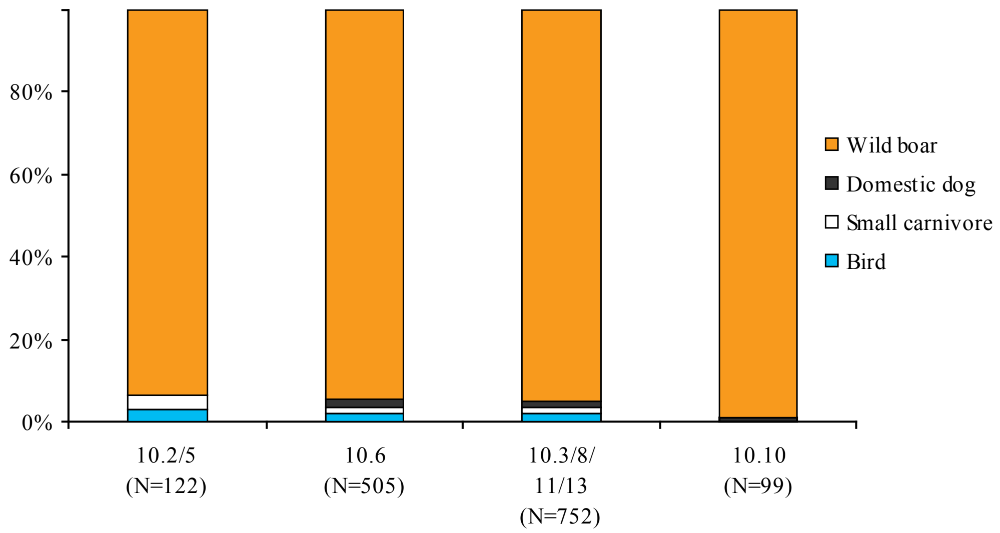

Figure S15: Taxonomic spectra of the main stratigraphic units
Stratigraphic units are grouped by phases and arranged from the latest to the earliest (left to right). Frequencies are in percentages of NISP.

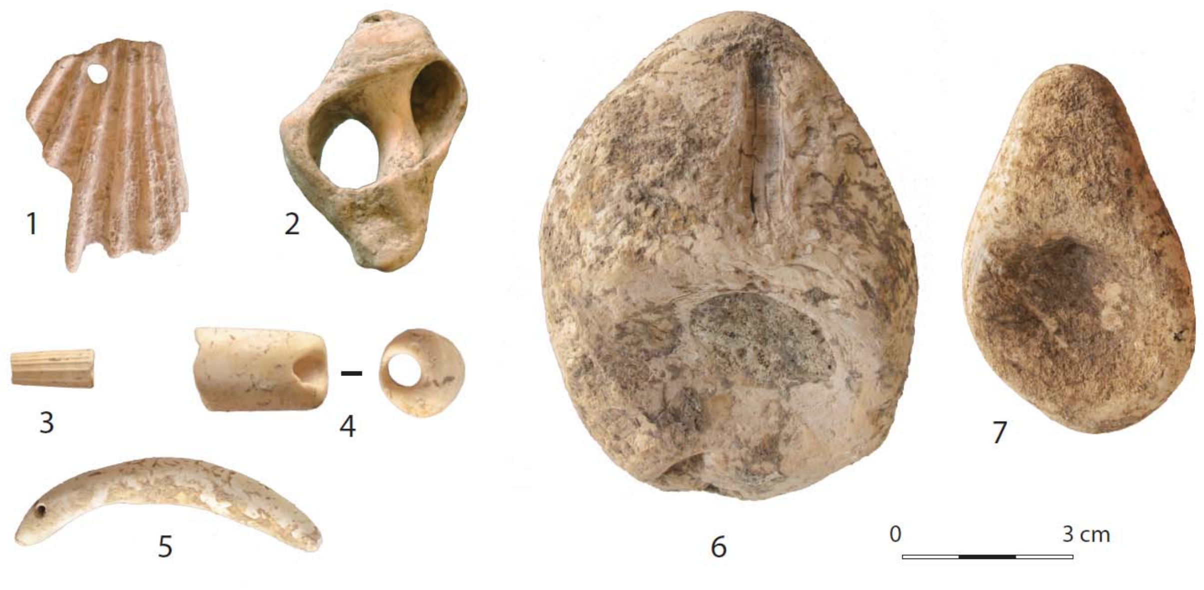

Figure S16: Some shell pendants
1, pendants made in the left (flat) valve of a scallop shell (*Pecten jacobaeus*; St 75); 2, rolled murex (*Bolinus brandaris*, SU 10.10, F-40); 3, bead shaped in a large dental (*Dentalium inaequicostatum*; St 10-east, SU 10.6); 4, large portion of a large bead shaped in a very large shell (SU 10.3, E-38; *Phalium/Charonia*); 5, arched pendant perforated at both ends, shaped in a large shell (*Phalium/Charonia*; St 47); 6, right valve of fossil spondylus (*Spondylus crassicosta*, SU 10.11, C-39): the vertical groove which show the female sex is natural, it is the insertion of the hinge ligament; 7, right valve of a very rolled fossil spondylus (*Spondylus crassicosta*, SU 10.8, B-39), appearing as a small spoon. Photos and CAD J.-D. V.

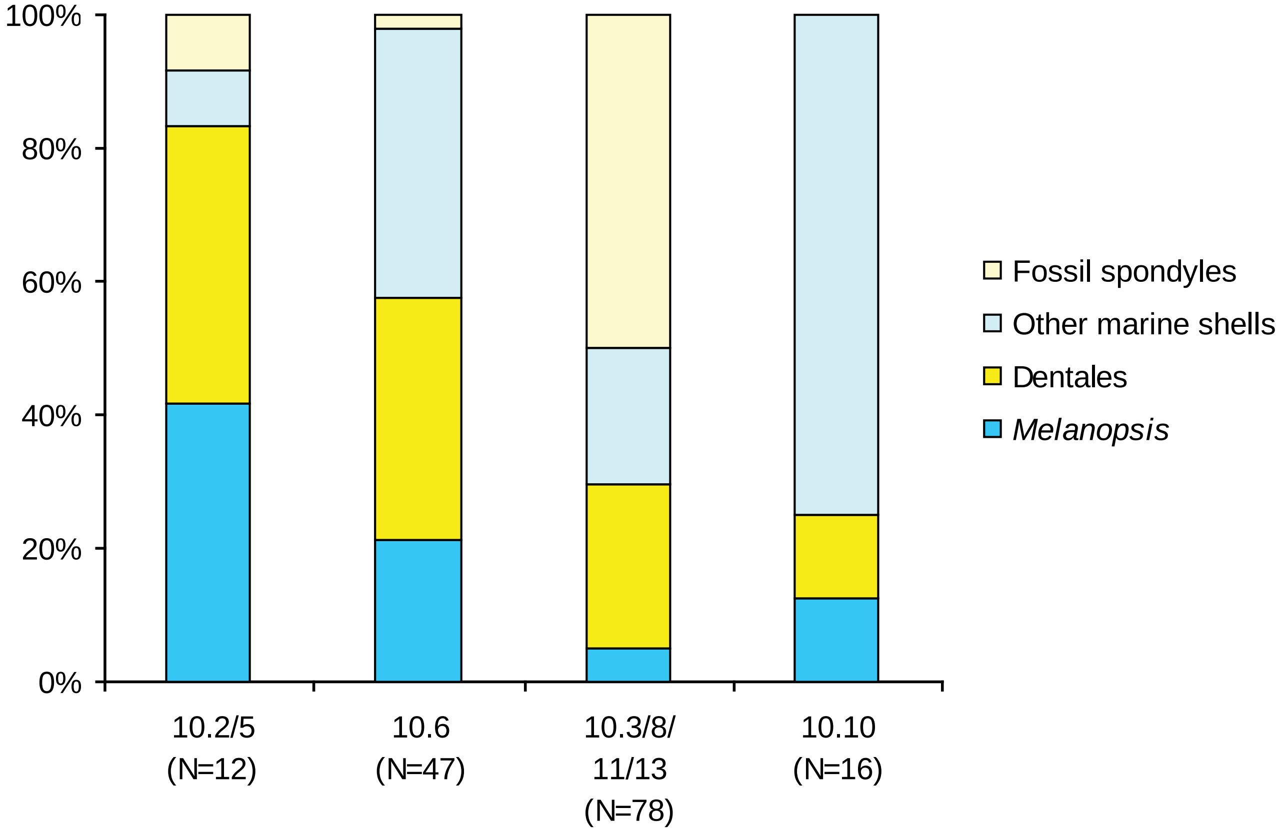

Figure S17: Proportion of the principal mollusk taxa
In the main stratigraphic units. Frequencies are given in percentage of NISP.

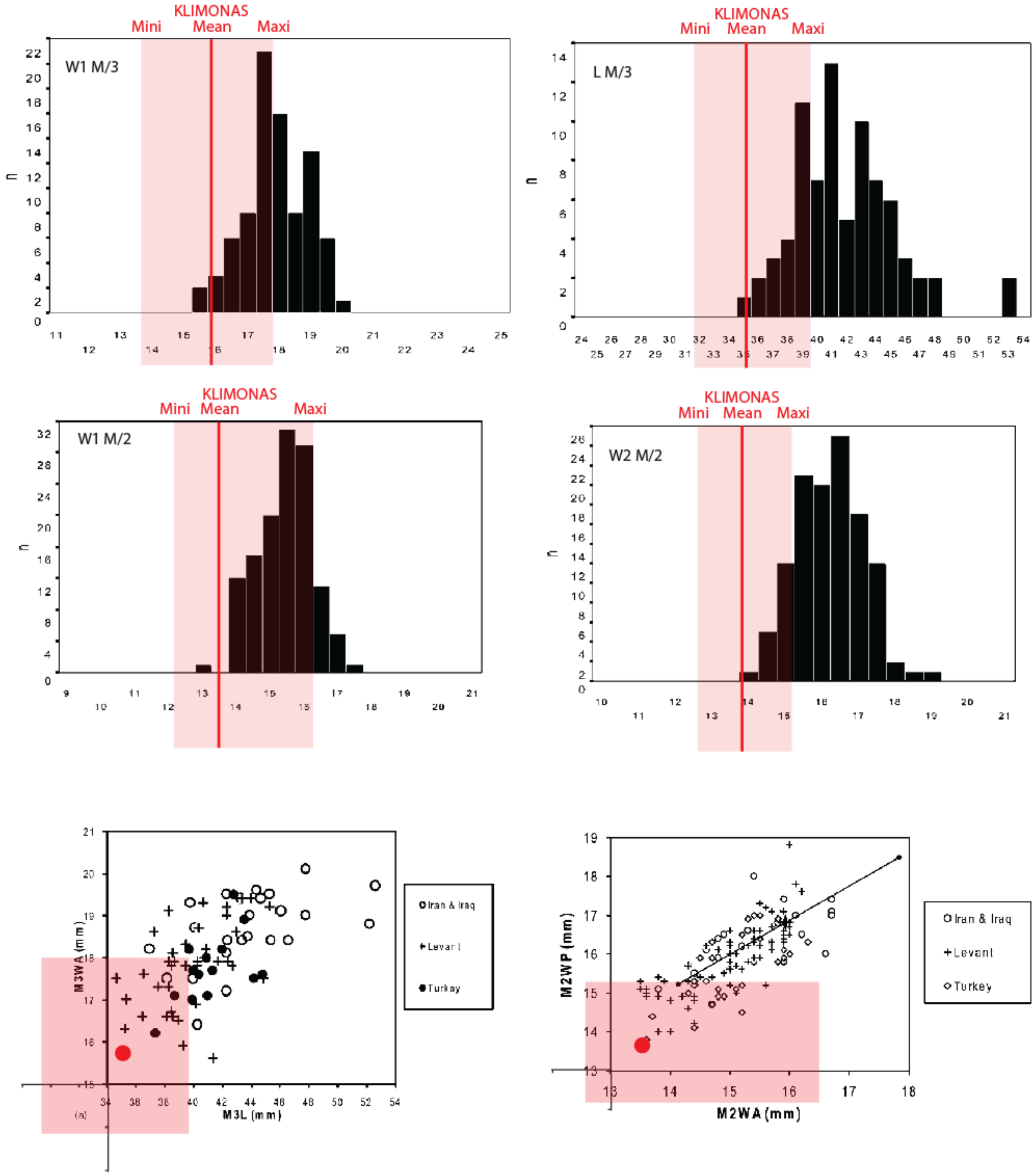

Figure S18: Comparisons of Klimonas boars and modern wild boars of the Middle East
The lower and upper limits of the pink rectangle are the minimum and the maximum measurements observed at Klimonas according to Table S3. The red lines and dots are the mean for Klimonas. They are pasted on the diagrams for the Middle East by Albarella and al. (S19), who studied the most extensive set of morphometric data of wild boar in the Old World. The Klimonas measurements are much smaller than the mean of the measurements of the modern wild boars in the Middle East. The oblique line on the M2 scatter diagram corresponds to one of the rare datasets for the Upper Epi-Palaeolithic wild boars in the Near East (Ksar Akil, Lebanon). It shows that the Late Glacial and Early Holocene Near Eastern wild boars were in general larger than their modern counterparts.

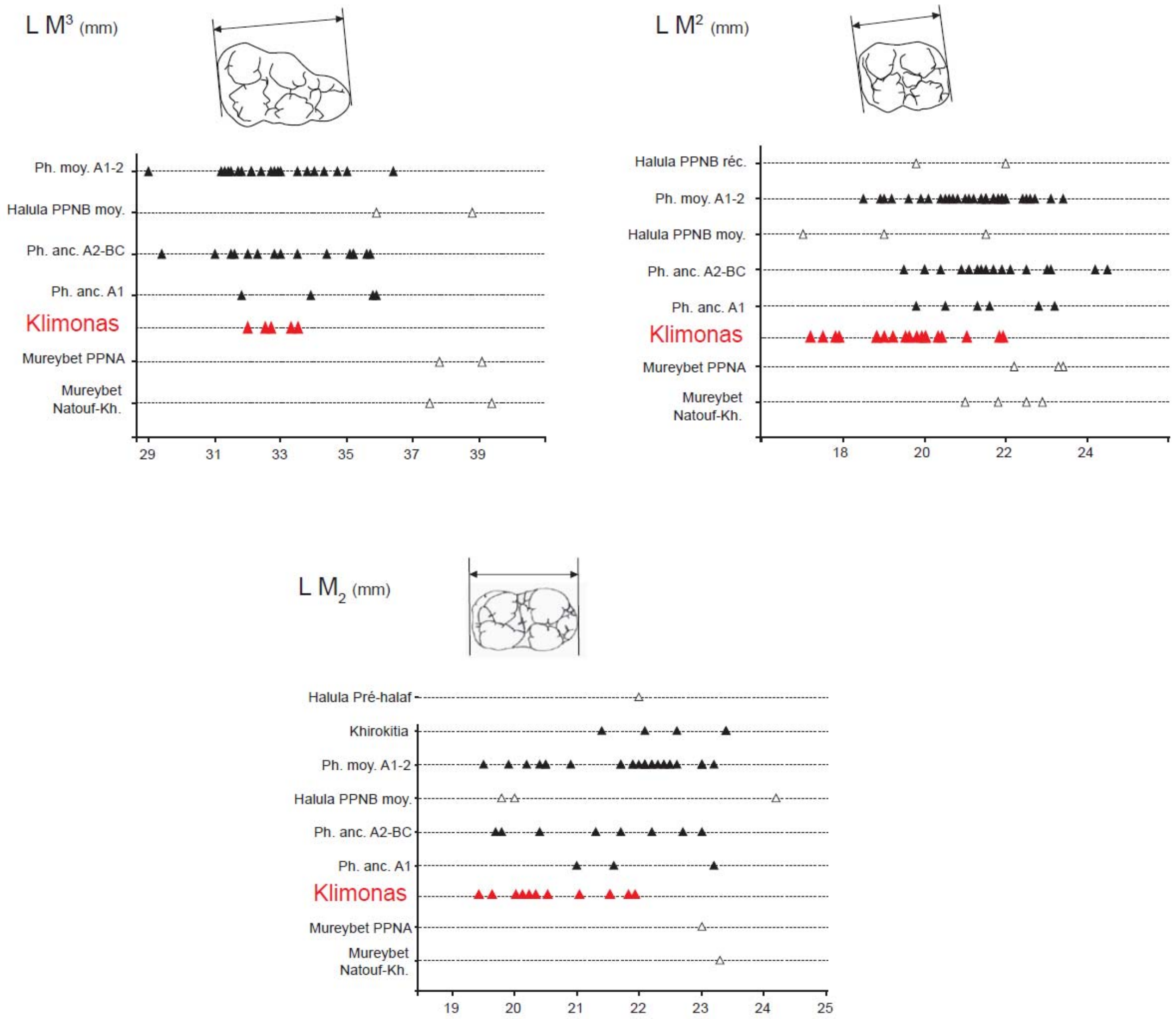

Figure S19: Additional archaeological morphometric comparisons for PPN suids

Comparisons between some of the measurements of the suids at Klimonas and Pre-Neolithic and Pre-Pottery Neolithic sites of the Near East mainland. Early/Middle Ph., Phases of Shillourokambos (after 26); PPN, Pre-Pottery Neolithic. Khirokitia is after (S10). Mureybet is after (S20). PPNB data for the talus are from (S22-23, S24).

The 25-75 percent quartiles are drawn using a box, the median is shown with a horizontal line inside the box, and the minimal and maximal values are shown with short horizontal lines.

SUPPORTING TABLES

		10.2/5 (N=122)	10.6 (N=505)	10.3/8/ 11/13	10.10 (N=99)	Total	%
Fish	Teleostea			1		1	0.1
Fresh water tortoise	cf. *Mauremys rivulata*	2	1	2		5	0.4
Lizards/Skink	Squamata	2	5	2		9	0.7
Bird	Aves	3	9	15	0	27	2.0
Mouse	*Mus* sp.		2			2	0.2
Small carnivore	Felidae/Viveridae	4	5	9		18	1.4
Cat	*Felis s. lybica*		1			1	0.1
Domestic dog	*Canis familiaris*	0	11	10	1	22	1.7
Wild boar	*Sus scrofa* ssp.	103	432	640	82	1257	94.7
Total identified		110	460	674	83	1327	100.0

Table S1: Frequencies of the vertebrate taxa
Frequencies of the main taxa and other archaeozoological statistics for the main stratigraphic units of buildings 1 and 2. Frequencies are number of identified specimens (NISP).

	NISP	%
Head	492	56.5
Other axial parts	67	7.7
Anterior Limb	114	13.1
Posterior Limb	89	10.2
Limb extremities	109	12.5
TOTAL	871	100.0

Table S2: Frequency of the major regions of the suid skeleton
For all the stratigraphic units of buildings 1 and 2 (test sub-sample; "Extremities" group the metapodials and phalanges; NISP, Number of identified specimens).

Maxillar and Upper teeth	M3		M2		M1		Dp4	
Reference	L	W	L	W	L	W	L	W
KL11-St10-US10.6	32.5	18.7	19.5	15.3	15.3	14.8		
KL11-HK/38-41-Surf.	33.5	18.2	20.3	17.0	15.3			
KL11-St10-US10.6	32.7	19.9	19.9	16.3	14.7	14.2		
KL11-St10-SE-St10.5			21.8	20.0	15.1	15.4		
KL11-HK/38-41-Surf.	33.3	19.0	21.9					
KL09-168.5 (-15/-30)	32.0	18.5						
KL11-St10-B38-US10.13	32.0	19.5						
KL11-St10-US10.6	30.0							
KL09-168.5 (-30/-55)			17.8	16.5				
KL09-168.5 (-30/-55)			18.8	17.0				
KL09-168.5 (-85/-100)			17.9	16.1				
KL11-St10-US10.6			21.0	15.9				
KL11-St10-SE-US10.6			19.0	16.0				
KL11-St10-US10.6			19.2	16.6				
KL11-St10-B38-US10.13			19.6	15.9				
KL11-St10-E39-US10.10-Déc.1			20.0	16.3				
KL11-St10-F41-US10.8-Déc.2			18.8	16.5				
KL11-St10-C38-US10.3-Déc.3			20.4	16.9				
KL11-St10-G38-US10.8 (worn out)			17.2	17.4				
KL11-St10-SE-US10.6			19.8	17.0	16.4	13.8		
KL11-St10-SE-US10.6			17.5	17.9	14.8	14.6		
KL11-St10-E38-US10.3-Déc.3			20.0	17.0		14.4		
KL11-St10-US10.6					17.6	14.8		
KL11-St10-SE-St10.5					18.1	16.3		
KL11-St10-SE-US10.6					15.6	13.1		
KL11-St10-SE-US10.6					17.6	15.1		
KL11-St10-D39-US10.3-Dec.1					15.4	13.4		
KL11-St10-E39-US10.10					15.2	12.9		
KL11-St69-(US10.10)					15.3	14.0		
KL11-St10-ZZ38-US10.3-Déc.2					15.7	13.1		
KL11-St10-SE-US10.6						14.0		
KL11-St10-SE-US10.6					14.1	13.6	13.1	10.9
KL11-St10-G38-US10.3					15.9	13.0	13.0	11.2
KL11-St10-F40-US10.8-Déc. 1						13.5	10.7	
KL11-St10-SE-US10.6							12.2	10.4
KL11-St10-SE-US10.6							14.0	11.9
KL11-St10-SE-US10.6							12.9	12.5
KL11-St10-G38-US10.8							12.5	10.7
KL11-St10-D39-US10.3-Dec.2							13.5	11.4
KL11-St10-US10.6							13.4	11.0
KL09-168.5 (-30/-55)							14.0	11.9
KL11-St10-US10.6							13.1	11.0
KL11-St10-SE-US10.6								
KL11-St10-G38-US10.3								
Number of measurements	7	6	19	18	16	18	11	10
Mean	32.3	19.0	19.5	16.8	15.7	14.1	12.9	11.3
Standard deviation	1.2	0.6	1.3	1.0	1.2	0.9	0.9	0.6

Mandible and Lower Teeth	M/3				M/2			M/1			Dp/4			
Reference	L	W1	W2	W3	L	W1	W2	L	W1	W2	L	W1	W2	W3
KL11-St10-US10.6	36.0	15.0	15.9	14.2			14.7							
KL11--C37.3	32.8	15.5	14.5		19.0		13.6	15.3	9.9					
KL11-DG/36-US1000	34.6	16.2	15.3	12.5	19.6	13.6	13.5	15.4	9.7	10.8				
KL11-St10-US10.6	33.9	16.4	15.6	13.0	20.0	13.2	15.3							
KL11-St10-SE-US10.6	39.4	18.0	15.7	13.6	19.4	16.6	15.2							
KL11-St81	39.2	16.5	16.1	12.6				14.7	9.2	9.5				
KL11--C37.2	35.3	15.1	15.3	12.8										
KL11-St10-ZZ37.2	35.8	16.5	14.4	12.7										
KL11-St10-US10.6	36.7	16.7	15.6	12.7										
KL11-DSt10-C38-US10.3-Déc1	33.8	13.8	14.3	11.1										
KL11-St10-C39-US10.3-Déc.1	33.2	15.6	14.4	11.9										
KL11-St10-F40-US10.10	35.2	15.3	14.4	13.0										
KL09-168.5 (-30/-55)	31.7	15.3	14.7											
KL11-St10-US10.6					20.5	13.7	13.8							
KL11-St10-C37.4(US10.3)					21.8	13.6	12.7							
KL11-St10-SE-US10.6					20.3	12.5	13.3							
KL11-DSt10-C38-US10.3-Déc1					20.2	12.2	12.6							
KL11-St10-AB/38-US10.3-Déc1					21.9	14.3	14.6							
KL09-168.5 (-30/-55)					21.5	13.6	13.6	15.0	9.7	10.3				
KL11-St10-G38-US10.8					19.0	12.4	13.7	16.9	9.8	11.7				
KL11-St10-B40-US10.11base					20.1	13.2	13.1	15.2	9.4	10.6				
KL11-HK/38-41-Surf.					18.7	14.4	13.5		9.2	11.0				
KL09-168.5 (-55/-70)					21.5							5.6	7.1	7.6
KL11-Surface								15.8	9.3	10.2				
KL11-St10-US10.6								15.5						
KL11-St10-US10.6								16.0	9.8	10.8				
KL11-St10-SE-US10.6								15.5	9.3	9.7				
KL11-St10-SE-US10.2/10.3								15.4	9.0	9.7				
KL11-St10-SE-US10.6								15.6	9.1	10.8				
KL11-St10-SE-US10.6								17.1	9.9	10.4				
KL11-St10-SE-US10.6								16.0	10.0	10.3				
KL11-St10-SE-US10.6								16.8	8.9	8.8				
KL11-St10-SE-US10.6								15.0		10.0				
KL11-DSt10-C38-US10.3-Déc1								15.4	9.3	10.0				
KL11-St10-D39-US10.3-Dec.1								15.0	9.2	9.7				
KL11-St10-US10.3-Déc.3								15.2	8.4	8.7				
KL11-St10-B38-US10.13								15.2	9.1	9.7				
KL1-St10-B38/40-US10.13								15.3	9.5	9.7				
KL11-St10-US10.6								16.1	9.6	10.0	19.5	5.5	7.5	7.6
KL11-St10-F40-US10.8-Déc. 1								15.9	9.6	10.0	18.0	6.0	7.3	8.6
KL11-EG/38-41-US1000								16.5	10.0	10.4	20.2	6.3		8.9
KL11-St10-SE-US10.6											17.5	5.8	6.9	7.7
KL11-St10-SE-US10.6											19.6	6.2	8.0	8.7
KL11-St10-SW-US10.3											18.6	6.3	7.2	8.6
KL11-St10-F40-US10.10											18.0	5.7	7.0	8.0
KL11-St10-E38-US10.3-Déc.3											17.9	7.8	7.0	5.6
KL11-St10-C38-US10.3-Déc.3											17.8	6.2	7.4	8.1
KL11-St10-E40-US10.3-Déc.1											17.5	5.4	6.5	7.4
KL11-St10-SE-US10.6													7.2	8.3
KL11-St10-F40-US10.8-Déc. 1													6.9	8.0
KL11-St10-SE-US10.6														8.5
KL09-168.5 (-30/-55)														10.9
Number of measurements	13	13	13	11	14	12	14	24	23	23	10	11	12	15
Mean	35.2	15.8	15.1	12.7	20.3	13.6	13.8	15.7	9.4	10.1	18.5	6.1	7.2	8.2
Standard deviation	2.3	1.0	0.7	0.8	1.1	1.2	0.8	0.6	0.4	0.7	1.0	0.7	0.4	1.1
Europe (without islands) n	109	158				277	273							
(after Albarella et al. 2009) mean	39.8	17.3				14.6	15.3							
% size reduction	11.6	8.5				6.8	9.8							
Middle East n	78	84				125	117							
(after Albarella et al. 2009) mean	41.3	18.1				15.1	15.9							
% size reduction	14.8	12.5				9.9	13.2							

Humerus	Bd	BT	H	HTC
KL11-Tranchée W	41.9	36.9	31.9	21.8
KL11-St10-US10.6	44.4	36.6	29.5	20.8
KL11-St10-C37.4(US10.3)		36.4	29.6	19.4
KL11-P38-41-Tranchée		36.2	33.2	22.3
Number of specimens	2	4	4	4
Mean		36.5	31.1	21.1

Ulna	KTO	TPA	BPC
KL09-168.3 (Tamis)		42.0	23.0
KL11-St10-CDE/37-Surf	30.5	36.9	21.1
KL11-St10-US10.6	30.6	42.6	25.5
KL11-DG/38-41-US1000		41.6	24.5
KL11-HK/38-41.surf		33.5	21.4
KL11-EG/38-41-US1000?		41.5	21.7
KL11-I34-US1004		39.1	22.5
KL11-St10-C38-US10.3-Déc.3		34.8	
Number of specimens	2	8	7
Mean		39.0	22.8

Radius	Bp	KD
KL09-168.5 (-85/-100)		21.0
KL09-168.5 (-85/-100)		18.8
KL11-St10-CDE/37-Surf	31.7	19.5
KL11-HK/38-41.surf	39.8	
KL11-HK/38-41.surf	33.0	
KL11-St10-SE-US10.6	32.5	
KL11-St10-SUS10.6	34.6	21.2
KL11-St10-SUS10.6	33.7	20.0
KL11-St10-E38-US10.3-dec1	27.4	
KL11-St10-E38-US10.3-dec1	27.2	
Number of specimens	8	5
Mean	32.5	20.1

Talus	GLl	GLm	Tm	Tl	Bd
KL09-168.5 (-30/-55)	44.3	40.1	23.3	24.2	25.7
KL09-168.5 (-30/-55)	44.9	39.4	21.5	23.2	26.0
KL11-St10-SE-US10.5	49.1	42.0	24.0		
K11-St10-SE-U10.6			24.4		
KL11-St10-G38-10.3-Déc.2	42.6	39.5	22.9		
KL11-St10-E39-US10.3	47.3	42.7	24.1	27.8	28.4

Calcaneus	GL	GB
KL09-168.5 (-85/-100)		26.0
KL11-HK/38-41	81.8	24.9
KL11-St10-C38-US10.3-Déc1	91.7	30.0
KL11-St10-DE/41-42-US10.8		26.2

First phalanx (axial)	GL	Bp	Dp	KD	Bd
KL09-168.3 (Tamis)	35.3		16.4		
KL09-168.5 (-15/-30)		17.3			
KL09-168.5 (-50/-70)					15.1
KL11-St10-US10.4	34.7	15.9	16.5	12.5	14.6
KL11-St10-US10.6				12.6	15.9
KL11-DG/38-41-US1000	40.8	18.5	21.3	15.3	17.7
KL11-St10-D39-US10.3-Déc.1				13.2	15.5
KL11-St10-F40-US10.10	39.9	17.5	18.5	14.1	15.5
KL11-St10-B38-US10.13	37.6	18.5	18.5	14.5	16.1
KL11-St8b	36.5	16	16.65	11.8	14.5
KL11-St10-B39-US10.8-Déc.2	39.6	21.6	20.3	15.1	17.4
Number of measurements	7	7	7	8	9
Mean	37.8	17.9	18.3	13.6	15.8
Wild boar Paris Basin (n= 3)	43.8	19.9	19.53	14.7	17.6
% size reduction	13.7	10.2	6.3	7.0	10.3

Second phalanx (axial)	GL	Bp	Dp	KD	Bd
KL09-168.5 (-30/-55)	27.2	17.1	16.2	12.8	13.9
KL11-St10-SE-US10.6	24.8	18.4	16.9	14.3	16.3
KL11-P38-41-Tranchée	25.4	16.6	15.5	12.9	13.3
KL11-St10-SE-US10.6	25.3	18.4	17.0	15.1	15.3
KL11-St10-C38-US10.3-Déc1	23.5	15.4	14.2	12.1	13.5
KL11-St10-G39-US10.8	24.6	16.3	15.2	12.0	13.9
KL11-St10-E39-US10.3-Déc.2	27.6	17.7	16.8	13.8	14.4
KL1-St10-B38/40-US10.13	23.7	16.7	14.6	12.4	13.6
Number of measurements	8	8	8	8	8
Mean	25.3	17.1	15.8	13.2	14.3
Wild boar Paris Basin (n= 4)	27.7	18.8	18.9	15.6	17.3
% size reduction	8.8	9.2	16.4	15.8	17.5

Third phalanx (axial)	Ld	DLS	MBS	H
KL11-St10-B37.1	28.8	29.4	10.2	13.5
KL11-St10-C/39-40-US10.11	32.4	31.2	12.0	15.1
KL11-St10-G40-US10.10	30.5	29.5	10.9	13.0
KL11-St10-D38-US10.3-Déc.3	34.6	35.6	12.8	15.5
Number of measurements	4	4	4	4
Mean	31.6	31.4	11.5	14.3
Wild boar Paris Basin (n= 4)	33.8	34.9	13.4	16.2
% size reduction	6.6	10.0	14.5	11.9

Table S3: Main measurements of the suids’ teeth and bones

In mm, according to the international standards (38).

Atlas (Vertebra)	GL	Lad	B fcr	H
KL11-St10-G38-US10.8	34	13.3	38.4	25.0

Lumbar vertebra	Rank	PL	Bfcr	Bfcd
KL11-St10-G38-US10.8	3-4th	26.6	21.7	21.0

Metacarpus	Rank	GL	Bp	KD	Bd
KL11-St10-G38-US10.8	3rd	63.4	7.4	5.9	8.1
KL11-St10-G39-US10.8	5th		9.0	5.5	9.1

Calcaneus	GL	GB
KL11-St10-G40-US10.10	41.25	15.9
KL11-St10-G/39-40-US10.8	41,0	16.7

Talus	GL	Bp
KL11-St10-SE-US10.6	24.5	14.6

Metatarsus	Rank	GL	Bp	KD	Bd
KL11-St10-E/41-42	4th	75.8	8.9	6.9	9.4

First Phalanx	GL	Bp	Dp	KD	Bd	Dd
KL11-St10-US10.6	24.1	9.7	8.6	6.2	7.8	6.3
KL11-St10-US10.6	25.8	8.5	7,0	4.5	7,0	5.45
KL11-St10-SW-US10.1	27.5	8.9	7.35	4.9	7.8	5.95

Table S4: Main measurements of the dog bones
In mm, according to the international standards (38).

Sample #	Year excav.	Feature	Square meter	Stratigraphic Unit	Remark	Indentification
1	2009	168.1			Fond	
2	2011	St10 tranchée	B37		ss AJ -1	
3	2011	St10 tranchée	A37		ss AJ -2	
4	2011	St10 tranchée	A37		ss AJ -3	
5	2011	St10 tranchée	B37		ss AJ -3	
6	2011	St10	B39	10.4	banquette	*Quercus* (deciduous)
7	2011	St10-SE		10.6		*Pistacia* sp.
8	2011	St10-SE		10.6		*Pistacia* cf. *terebinthus*
9	2011	St10-SE		10.6		cf. *Prunus*
10	2011	St10	F41	10.8 déc. 2		*Pistacia* sp.
11	2011	St10	ZY-38	10.8 base		cf. *Pistacia*
12	2011	St10	ZZ-ZY/38-39	10.8		*Pistacia* sp.
13	2011	St10 tranchée	C37	10.3	ss AJ -4	*Pistacia* sp.
14a	2011	St10 tranchée	C37	10.3	ss AJ -4	*Pistacia* sp.
14b	2011	St10 tranchée	C37	10.3	ss AJ -4	*Quercus* (deciduous)
15	2011	St10	A37	10.3		*Pistacia* sp.
16	2011	St10	D40	10.3		*Pistacia* sp.
17	2011	St10	B/38-40	10.3/10.13		*Pistacia* sp.
17bis	2011	St10	ZZ38	10.3		*Pistacia* sp.
18a	2011	St10	D38	10.3 Déc. 2		*Quercus* (deciduous)
18b	2011	St10	D38	10.3 Déc. 2		? (Vitrified)
19a	2011	St10	D38	10.3 Déc. 2		*Pistacia* sp.
19b	2011	St10	D38	10.3 Déc. 2		*Quercus* (deciduous)
20a	2011	St10	D38	10.3 Déc. 3		*Pistacia* sp.
20b	2011	St10	D38	10.3 Déc. 3		*?*
21	2011	St10	D39	10.10		*Pistacia* sp.
22	2011	St10	G40	10.10		*Pistacia* sp.
23	2011	Fait 69		10.10		*Pistacia* sp.
24	2011	St 81		10.14		*Quercus* (deciduous)

Table 5: Botanical determination of the charcoals
By S. Thiébault.

REFERENCES FOR SUPPORTING INFORMATION

S1. Held, S. O. 1989. Colonization cycles on Cyprus 1: The biogeographic and paleontological foundations of early prehistoric settlement. *Report of the Department of Antiquities Cyprus* 1989, 7-28.

S2. Boekschoten, G. J., & P. Y. Sondaar. 1972. On the fossil mammalia of Cyprus. *Proceedings of the Kononklijke Nederlandse Akad. van Wetenschappen* Ser. B 75:306–308.

S3. Cucchi, T., A. Orth, J.-C. Auffray, S. Renaud, L. Fabre, J. Catalan, E. Hadjisterkotis, F. Bonhomme, and J.-D. Vigne. 2006. A new endemic species of the subgenus *Mus* (Rodentia. Mammalia) on the Island of Cyprus. *Zootaxa* 261:1-36.

S4. Simmons, A.H., and R. Mandel. 2007. Not such a new light: A response to Ammerman and Noller. *World Archaeology* 39:475-482.

S5. Simmons, A.H. 1988. Extinct pygmy hippopotamus and early man in Cyprus. *Nature* 333:554-557.

S6. Bunimovitz, S., and R. Barkai. 1996. Ancient bones and modern myths: ninth millennium BC hippopotamus hunters at Akrotiri *Aetokremnos*. Cyprus. *Journal of Mediterranean Archaeology* 9(1):85-96.

S7. Olsen, S. 1999. Investigation of the *Phanourios* bones for evidence of cultural modification. In Faunal extinction in an island society. A. Simmons, ed. New York, Boston, Dordrecht, London, Moscow: Kluwer Acad. / Plenum Publ.

S8. Vigne, J.-D., 1999. The large "true" Mediterranean as a model for the Holocene human impact on the European vertebrate fauna ? Recent data and new reflections. In *The Holocene history of the European vertebrate fauna. Modern aspects of research*. N. Benecke, ed. Pp. 295-322. Berlin: Deutsches Archaologisches Institute für Eurasian.

S9. Binford, L. 2000. Review of 'Faunal extinctions in an island society: pygmy hippopotamus hunters of Cyprus' by A. H. Simmons. *American Antiquity* 65:771.

S10. Davis, S. J. M. 2003. The zooarchaeology of Khirokitia (Neolithic. Cyprus), including a view from the mainland. In *Le Néolithique de Chypre*. J. Guilaine and A. Le Brun, eds. Pp. 253-278. Athens: Ecole Française d'Athènes (*Bulletin de Correspondance Hellénique*, supplément 43).

S11. Ammerman, A. J., and S. S. Noller. 2005. New light on Aetokremnos. *World Archaeology* 37(4):533-543.

S12. Wasse, A. 2007. Climate, economy and change. Cyprus and the Levant during the Late Pleistocene to mid-Holocene. In *On the margins of Southwest Asia: Cyprus during the 6^th^ to 4^th^ millennia BC*. Joanne Clarke, ed. Pp. 44-63. Oxford: Oxbow Books.

S13. Bromage, T., W. Dirks, H. Erdjument-Bromage, M. Huck, O. Kulmer, R. Öner, O. Sandrock, and F. Schrenk. 2002. A life history and climate change solution to the evolution and extinction of insular dwarves: a Cypriot experience. In *World islands in prehistory: international insular investigations.* W. Waldren, and J. Ensenyat, eds. Pp. 420-427. Oxford: Archaeopress (*British Archaeological Reports, international Series* 1095).

S14. Davis, S. J. M. 1994. Even more bones from Khirokitia: the 1988-1991 excavations, in A. Le Brun (ed) *Fouilles récentes à Khirokitia (Chypre) 1988-1991* (Edition Recherches sur les Civilisations), Paris: ADPF, pp. 305-334.

S15. Stordeur, D., 2000. New discoveries in architecture and symbolism at Jerf el Ahmar (1997-1999 Syria) *Neo-lithics 1/00,* 1-4.

S16. Stordeur, D. 2006. Les bâtiments collectifs des premiers néolithiques de l'Euphrate. Création, standardisation et mémoire des formes architecturales., *in* P. Butterlin, M. Lebeau, J.-Y. Monchambert, J.-L. Montero-Fenollos, et B. Muller (eds), *Les espaces syro-mésopotamiens. Dimensions de l'expérience humaine au Proche-Orient. Hommage offert à Jean Margueron*, Bruxelles, Brepolls, Subartu 17 p. 19-31.

S17. Yartah, T., 2005. Les bâtiments cummunautaires de Tell 'Abr 3 (PPNA, Syrie). *Neo-lithics*, 1/05 : 3-9.

S18. Guilaine J., Briois F. and Vigne J.-D. (eds), 2011. *Shillourokambos. Un établissement néolithique pré-céramique à Chypre. Les fouilles du Secteur 1*, Editions Errance/ Ecole Française d' Athènes, Paris, 1248 p.

S19. Albarella, U., Dobney, K. & Rowley-Conwy, P., 2009. Size and shape of the Eurasian wild boar (Sus scrofa), with a view to the reconstruction of its Holocene history. Environmental Archaeology 14, 2 : 103-136.

S20. Gourichon, L., and D. Helmer. 2008. Etude archéozoologique de Mureybet. In *Tell Mureybet. un site néolithique dans le Moyen Euphrate syrien.* J. J. Ibañez, eds. Pp. 115-227. Oxford: Archaeopress (*British Archaeological Reports, international Series*).

S21. Peters, J., A. von den Driesch, and D. Helmer. 2005. The upper Euphrates-Tigris basin: Cradle of agropastoralism? In *First Steps of Animal Domestication. New archaeozoological approaches.* J.-D. Vigne, J. Peters, and D. Helmer, eds. Pp. 96-124. Oxford: Oxbow Books.

S22. Helmer, D., and L. Gourichon. 2008. Premières données sur les modalités de subsistance dans les niveaux récents (PPNB moyen à Néolithique à Poterie) de Tell Aswad en Damascène (Syrie). Fouilles 2001–2005. In *Archaeozoology of the Near East VIII.* E. Vila and L. Gourichon, eds. Pp. 120-151. Lyon: Maison de l'Orient Méditerranéen.

S23. Helmer, D., 2008. Révision de la faune de Cafer Höyük (Malatya, Turquie): Apports des méthodes de l'analyse des mélanges et de l'analyse de Kernel à la mise en évidence de la domestication, in *Proceedings of the 8th International Symposium on the Archaeozoology of southwestern Asia and adjacent areas* (Archaeozoology of the Near East VIII), edited by E. Vila, L. Gourichon, A. Choike and H. Buitenhuis, pp. 169-195. Lyon: Maison de l'Orient.

S24. Saña Segui, M. 1999. *Arqueología de la domesticacíon animal. La gestión de los recursos animales en Tell Halula (Valle del Éufrates – Siria) de 8.800 al 7.000 BP*. Barcelona: Universitat Autònoma de Barcelona (*Treballs d'Arqueologia del Pròxim Orient* 1).

S25. Serrand N. et Vigne J.-D. (avec la coll. De A. Lauriat-Rage), 2011. La malacofaune et les crustacés : subsistances et matières premières. In : Guilaine J., Briois F. et Vigne J.-D. (dirs), *Shillourokambos. Un établissement néolithique pré-céramique à Chypre. Les fouilles du Secteur 1*, Editions Errance/ Ecole Française d' Athènes, Paris, p. 807-833.

S26. Bronk Ramsey, C. 2009. Bayesian analysis of radiocarbon dates. *Radiocarbon* 51, 1, 337-360.

S27. Willcox, G. & Fornite, S., 2002. Impressions of wild cereal chaff in pisé from the tenth millennium at Jerf et Ahmar and Mureybet : northern Syria. *Vegetation History and Archaeobotany*, 8: 21-24.
