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Jerf el-Ahmar: a New Mureybetian Site (PPNA) on the Middle Euphrates

D. Stordeur, B. Jammous, D. Helmer, and G. Willcox

Discovered by T. McClellan and M. Mottram in 1989, Jerf el-Ahmar, 2 km north of the Tichrine Dam, has been excavated by a Franco-Syrian team since 1995. The site, which will be flooded in 1998, lies on two natural hillocks separated by a small wadi. An area excavation covering some 350 m², together with a number of small soundings covering a wide area, indicate that the occupation of the west mound succeeds that of the east. Two carbon 14 dates (9680 ± 90 and 9790 ± 83): 8525 to 9052 [maximum probability 8987] and 8731 to 9345 [maximum probability 9038] BC, calibrated) indicate an occupation during the first half of the tenth millennium BP.

Architecture

The architecture shows strong similarities to that of sites of the same period such as Mureybet (Period II) and Netiv Hagdud (BAR-YOSEF et al. 1991). In addition, the transition between round houses (Fig. 1), rectangular houses with rounded corners and fully rectangular houses is in evidence. The latter only occur on the more recent (west)tell. Some houses are connected, others are separated by passages or by courtyards, which in some areas are paved. Hearths found in these exterior areas are of three types: pit-hearths with pebbles, small shallow round hearths and surface hearths. In one area of the eastern tell it was discovered that the slope had been occupied. Three contemporary houses excavated in this area were found to be stepped. Of these houses, the inner house was set on the level surface, the lower second house was slightly excavated into the slope and the third and lowest was half sunken (Fig. 1).

Knapped local chalk was used as a base for the floors, while the bottom of the walls were built with a double row of stones which were superimposed by a single row of carefully knapped 'cigar'- or 'loaf'-shaped stones. These structures were finished with daub tempered with cereal chaff (mainly wild barley). Roof fragments were found in several houses that had been destroyed by fire. Impressions left by the rafters show that trunks, some split, were placed close together to support the roof (S. MARTINEZ, pers. comm.).

The finds

The lithics are comparable to the Mureybetian tradition (J. CAUVIN, pers. comm. 1994) with adzes, numerous scrapers of variable shapes, borers, drills, glossed blades and arrow heads. Among the latter were El Khiam, Helwan and Mureybet type projectile points and others were truncated or notched in form. The method of debitage poses a problem for the definition of the bipolar core. The cores definitely have two striking platforms at the opposite ends of the flaked surface. However the extraction of blades is essentially unipolar from a single striking platform. The function of the second striking platform is only to correct the distal extremity of the core (F. ABBES, pers. comm.). A microscopic examination of a preliminary sample of stone tools for traces of wear use (100-200X) indicates that they were used to harvest plants (cereals, grasses and reeds) and to prepare objects in wood, stone and skin (P. ANDERSON, pers. comm.). Traces of processing of ochre were also noted on several tools.

The most outstanding finds at Jerf el-Ahmar are some richly engraved and carved stone objects. Several fragments of stone vases and one almost complete vase (in chlorite: D. SAN-TALLIER, pers. comm.) with intricately engraved geometric decoration were recovered. In addition, there are two animal figurines representing birds of prey: one would seem to be an eagle as seen in profile, the other in chalk could be an owl when viewed from the front. Grooved stones (so-called arrow straighteners) were common (cf. STORDEUR and JAMMOUS 1995). Some have the geometric decoration found commonly on PPNA sites. However, two which came from the same house have figural representations that combine animal representations such as birds of prey, snakes and four-legged animals with some abstract signs (Figs. 2:a-b). Finally, two small flat oval stones engraved on both sides were found. One of them (Fig. 2:c) depicts a figure with round eyes suggesting an owl, which is connected with what could be interpreted as a large insect. The other side is covered by 34 horn-shaped signs with dots. The other flat stone (Fig. 2:d) depicts a association of representations including an arrow shape, zigzag lines, a snake, and other signs. On the other side a carefully engraved grid is to be found associated with a snake.

To our knowledge this type of evidence has not been found for the PPNA period. It is of great interest to our understanding of the symbolism of the period and is perhaps a kind of sign...
language. On the grooved stones, one finds an association of figures, more or less schematic, with abstract signs, which suggests they carry a message. Even more intriguing are the flat engraved stones, which on one side have an association of abstract signs and on the other a multiplication of one type of sign. This evokes some kind of record. However, in order to understand the significance one would need a large sample, and to understand the meaning would appear to be out of the question.

This is not the first time that the idea of "pictograms" have been suggested for the prehistoric period. A number of authors have reported signs engraved on finds or in cave paintings from the Upper Paleolithic period. The finds from Jerf el-Ahmar should not be considered in isolation from these, as indeed they should not be set apart from the earliest known ideograms or even the earliest writing. There is here the possibility of a vast research programme; for the moment we will concentrate on increasing the collection.

Environment
Archaeozoology.
Twenty-four taxa were identified: Badger, Fox (Vulpes vulpes, V. cana), Wild Cat, Jungle Cat (Felis chaus), Marbled Polecat (Vormela peregusna), Dog, Wild Boar, Wild Ass, Onager, Auroch, Asiatic Mouflon, Goitered Gazelle (Gazella subgutturosa, G. s. subgutturosa, G. s. marica), Mesopotamian Fallow Deer (Dama mesopotamica), Cape Hare (Lepus capensis syria-cus), East European Hedgehog (Erinaceus concolor), Long-eared Hedgehog (Hemiechinus auritus), Beaver, Indian Gerbil (Tatera indica), Short-Tailed Bandicoot Rat (Nesokia indica), Tristram's Jird (Meriones tristrami), Mouse (Mus sp.), Asian Garden Dormouse (Eliomys melanurus) and Social Vole (Microtus socialis). The most abundant are the gazelles followed by the eguids and the aurochs, as was the case for Mureybet. The dog is the only domestic animal. The gazelles, asses, foxes and hares are bigger in size than those found at Mureybet. This could be explained by environmental differences between the two sites. This is confirmed by the small mammals, for example Eliomys, Microtus socialis, and Erinaceus concolor are present at Jerf el-Ahmar and absent at Mureybet. These animals are found in areas with an annual rainfall of more than 300 mm.

Archaeobotany (cf. WILCOX 1996). The most common finds are the grains of wild barley Hordeum spontaneum (confirmed by the presence of 90 rachis fragments). This species is accompanied by H. murinum type, a smaller-grained taxon. Wild einkorn is very rare. These two types of barley are common in the area today. Of the pulses, lentils are by far the most common, but bitter vetch and pea are also present, although they do not occur as part of the vegetation today. Another group of plants could be interpreted as weeds of arable fields. This would indicate predomestic cultivation of pulses and/or cereals. A more representative sample (1996) is now being analysed which may throw light on this problem. Identifications of wood charcoal and fruits indicate that the surrounding steppe was much richer in ligneous species, the most common being almond, Pistacia cf. atlantica, Prunus microcarpa, hawthorn and Rhhamnum. This association is to be found today at much higher altitudes in areas with a higher rainfall. Oak is present but at low frequencies. The gallery forest contained alder, ash, wild vine, plane as well as willow, poplar and tamarisk, which occur today.

The environmental evidence as a whole indicates that during the occupation of the sites there was slightly more available moisture in the area than today.

Conclusion
The two campaigns at Jerf al-Ahmar have reinforced our knowledge of the Mureybetian and its cultural and regional cohesion. The area excavation is providing a plan of the juxtaposition and evolution of several houses. Deep soundings are providing a rich sample for environmental work. New finds such as the engraved stone objects offer new insights into cultural developments for the period. It is hoped that the 1997 (final) campaign will provide an equally rich array of data for this important but still little-known period.

References

The Urfa-Project 1996
Klaus Schmidt, University of Heidelberg
Field work at Gürçütepe and Göbekli Tepe, two PPN sites not far from Şanlıurfa/Southeastern Turkey could be continued in autumn 1996; the project started in 1995 under the direction of the Museum of Şanlıurfa and the German Archaeological Institute at Istanbul.
At Güretütepe excavations proceeded in the working area opened in 1995 on the northern slope of the main mound by opening 5 trenches, uncovering the uppermost PPN layer (see also SCHMIDT and BEILE-BOHN, this issue, with bibliography for both sites). Field work in the 1996 season at Gobekli Tepe included the mapping of the large limestone plateaus around the tell, which are covered nearly completely with Neolithic quarries.

Several in situ architectural elements could be recognized in the quarries, the largest one – still in a quarry condition – is a T-shaped pillar of limestone, a type known from the Nevalı Çori terrazzo-building. Its dimensions are about 7 x 3 x 1 m, but an original length of nearly 9 m can be reconstructed. A moveable limestone pillar base with a size of about 3 x 3 x 1 m was found on the slope of the southeast plateau. One pit-like structure in the bedrock is not completely understood yet, but it seems certain that its cistern-like form is not associated with such a function, nor is it related to the quarrying activities. It must represent some unknown technical installation.

Continued excavation in the area where the so-called "lion" pillar was found in 1995 confirmed the interpretation of existing structures directly on bedrock as those of an atelier site. On the southern slope of the tell, two trenches were opened in order to protect an in situ pair of large T-shaped pillars that were partly dug out by farming activities and which were in immediate danger of being destroyed. Near these pillars in a stone pile made by farmers clearing large stones from the field, a larger-than-life-sized human face was found (Fig. 1).

In the trenches around the two pillars whose upper parts were exposed in 1995, several Neolithic stone walls appeared that belong to younger building phases than the pillars. The lithic industry is mainly of PPNB type, but it includes also Helwan and Neunik points. Since only the uppermost fill could be excavated so far, an exact dating of the architectural structures is not yet possible. Some limestone figures, including a lion-like animal and a bird-like form on top of a human head, were found in the fill. Unexpected was the appearance of two more pillars, one clearly in situ. The four pillars seem to be set at equal distances of 2.5 m in a southwest-northeast line. One pillar, which was excavated nearly 1 m below the T-head, shows snake reliefs instead of the arms in the Nevalı Çori examples. A detailed preliminary report of the 1996 season will be published in one of the forthcoming issues of *Istanbuler Mitteilungen des Deutschen Archäologischen Instituts*.

**Domuztepe: A Late Pottery Neolithic Site in Southeast Turkey**

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The Site (S.C.)

Domuztepe lies some 30 km south of Kahramanmaraş, approximately the same distance north of Sakçe Gözü. It was located by Elizabeth Carter in 1993 during the Kahramanmaraş regional survey carried out by UCLA. Systematic surface collections and limited soundings were made in summer 1995 and the first season of a programme of excavations was undertaken between July and September 1996 by a joint UCLA/University of Manchester team, directed by Elizabeth Carter and Stuart Campbell.

The site covers approximately 18 ha with a maximum height of about 12 m. Most of the occupation at the site is prehistoric, although later material was present on approximately a third of the site, mainly dating from late Roman to Islamic. The bulk of the surface pottery is Halaf and it seems that the entire area of the site was occupied, at least in the latter half of that period. Early Halaf and Samarran pottery also appears in small quantities as does typical local 6th millennium pottery, although the extent of the occupation in these periods cannot be established at present. Ubaid related pottery also occurs over much of the surface but at some point in the late 5th millennium the site was abandoned.

Three areas have been excavated, Operations I to III. Operation I, on the summit of the southern part of the site, is the most extensive, ca. 140 m². Two levels of rectilinear architecture, mainly preserved as stone foundations, were situated immediately below the surface. The lower level evolved through several phases and some structures are very substantial, with foundations up to 1.2 m thick, although the buildings themselves do not seem particularly large. The levels date from an immediately “post-Halaf” phase. The term “post-Halaf” is used deliberately rather than Ubaid. Much of the pottery is Halaf in technique and style but rare elements have clear Ubaid parallels. However, whether this is in any way equivalent to the so-called Halaf-Ubaid transitional further south and east is not yet clear – it may equally be a specifically local development. Alongside the Halaf pottery is a substantial proportion of burnished pottery of a clearly different tradition. In these upper levels several very fine small stone vessels were found, in three cases with spouts. Indeed, there is a surprisingly large number of stone vessels from all areas of the site. A fragment of an exceptionally fine obsidian vessel was associated with the second level, of a quality unparalleled at contemporary sites. A small sounding suggests that the underlying layers may date from the full Halaf and portions of them may be burnt.

Operation II exploits a cut made into the side of the tepe to enlarge an adjacent field and has provided a compressed stratigraphy of at least 8 distinct levels in an area of 85 m². The architecture, a single level of which was never exposed in the entire trench, varies between rectilinear and circular, at least two examples of classic Halaf tholoi being found. The pottery from all
these levels is late Halaf, perhaps dating to the second quarter of the 5th millennium, but, like Operation I, contains a significant proportion of non-Halaf burned sherds. Operation III is a sounding in the north west of the site which exposed levels that are probably broadly contemporary with the post-Halaf levels of Operation I; the most notable context is a series of dense deposits of cattle bones, possibly a butchery area.

Domuztepe lies on the very edge of the Halaf distribution and its excavation may well cast light of the mechanisms which underlie the adoption of Halaf traits over a huge area of the Near East from the end of the 6th to the mid-5th millennium (not only ceramic but architectural and possibly connected to changes in obsidian distribution). We know, in general terms, that the ceramics of the area belong in the local tradition during the 6th millennium. This local tradition was largely replaced by Halaf pottery, from dates from other sites this took place around 5,200 bc (uncal.). This appears to reflect a wider range of cultural links tying Domuztepe, and the surrounding area, to the south-east. A change in alignment occurs in the mid-5th millennium when, in pottery at least, the links seem to be less to the south-east and more to the south, towards the Amuq. Whether these changes in cultural orientation are connected with the growth of Domuztepe to its maximum size and subsequent decline and abandonment remains to be seen.

Fig. 2. Late Neolithic obsidian and flint artefacts from Domuztepe: 1 lozenge blank (obsidian); 2 ground and perforated lozenge (obsidian); 3 ground bead (obsidian); 4 blade (obsidian); 5-6 sickle element; 7 bifacially worked flake (obsidian); 8 retouched blade segment (obsidian); 9-10 transverse arrowheads; 11 scraper; 12-16 drills and perforators.

Domuztepe is much larger than most other Halaf sites, although not unique as Khazane on the outskirts of Urfa seems to be of a similar order. Its excavation provides the opportunity to examine the nature of society and economy at a large and, presumably, central site. Although any conclusions at this stage are premature, there are some hints of a comparatively rich material culture. Among the more notable finds were several Halaf stamp seals. A considerable number have now been discovered from the site, including 10 from the surface, two in a pit in Operation I, one from Operation III and six from stratified contexts in Operation II; in addition a fragmentary seal impression came from the sounding in Operation I. This is an exceptionally high number given the very limited excavation and may correlate with a greater complexity of interaction within the settlement and with neighbouring settlements.

The Lithics (E.H.)

Lithic artefacts though found regularly with Halaf ceramics are often described as "banal" or "impoverished" and are alleged to occur in reduced quantities compared to earlier periods (COPELAND 1989: 267, AKKERMANS 1993: 272). The regular but varying presence of obsidian has given rise to a certain amount of discussion (CAMPBELL 1992, AKKERMANS 1993: 273) but on the whole the industries are poorly understood (COPELAND 1995). The lithics collected during the survey and subsequent excavation of Domuztepe provide an excellent opportunity to initiate a detailed study of lithics at one site of predominately Halaf date.

Some 8,000 lithics were recovered during surface survey in 1995 and a further 10,000 from excavation in 1995 and 1996. Our first priority was to establish the broad parameters of the lithics collected in order to formulate our strategies both of excavation and analysis. We wanted to get a general picture of the quantities and the main categories of artefact present, to look at their distribution to see if we could identify any variation across the site. To date all of the surface material and about 75% of the excavated material have already been catalogued.

In our approach to and examination of the lithic material we were anxious to follow the standards already discussed in Neo-Lithics (e.g. BAIRD et al. 1995), although we have used a more generalised relational database model and have sought to link the technological and retouch categories more specifically. The preliminary cataloguing of the material involved sorting the artefacts into general categories of cores, core trimming elements, flakes and blades, and presence and general form of retouch; flakes and blades were also sorted by size groups and by presence of cortex. The second stage of investigation will involve targeting the material from key contexts to establish technological and other details. We also intend to investigate the flint outcrops in the neighbouring hills for exploitation sites.

Even from the initial results we can suggest that different processes are present. For example, blades are the predominant blank type used for retouch, but, though there is evidence of secondary stages of production, there is little evidence of the preliminary stages of production. On the other hand all stages of flake production are represented on site and flakes are less commonly retouched, except as scrapers. The main retouched forms are small drills, backed and truncated blades, some with sickle gloss and scrapers, burins, one folliate and a few transverse arrowheads. There is also an Amuq point from the surface, one of the rare indications among the lithics of the pre-Halaf occupation. Groundstone is present in a variety of types and stones including small serpentine axes.

Obsidian of various colours (including both grey and green) is present in all contexts. Long narrow blades and blade segments predominate, but there are also flakes and chips and some retouched pieces as well as cores and core trimming elements. Some of the cores have ground striking platforms and some blades have features suggestive of pressure flaking. In addition to the tool component, it is particularly interesting that obsidian blades were shaped, ground and bored for beads, pendants, lozenge shaped plaques and vessels; there is evidence that some of these were being manufactured on site.

By comparison with earlier, contemporary and later assemblages, we hope to establish to what extent the Domuztepe assemblage represents a continuing local tradition or whether it is strongly influenced by developments elsewhere, as occurs with other areas of material culture. It is only by integrating the study of these with other aspects of the site, perhaps particularly its wider social context, that we can hope to understand the processes involved.

References


Excavations of Halaf Levels at Kazane, SE Turkey

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In the summer of 1996, a preliminary investigation of the Late Halaf levels at the site of Kazane was conducted. Kazane has
occupational levels dating from the 6th to the early second millennium bc. The excavation of the extensive post-Halaf remains is being undertaken by Dr. Patricia Wattenmaker (U. of Virginia). Our project is concerned with the Halaf period which is estimated to cover more than 10 ha. Three small soundings produced the following results:

1. One trench contained ceramic material roughly comparable to Akkarmans' "Transitional Halaf" stage from the "Burnt Village" at Sabi Abyad. This sounding is located near an ancient watercourse. Thick alluvial deposits alternate with sherd layers. Architecture was only found at considerable depth.

2. Two trenches in the southeastern part of the site contained Late Halaf remains. One trench contained the ruins of a tholos, built of hand-formed mud brick. In the other trench, a pisé wall was discovered. Only a small part of the ceramics are comparable to the finely made vessels with "Glanztonmalerei" known from Tell Halaf, Arpachiyah and other earlier sites.

3. The most astonishing aspect of the Late Halaf material culture is the chipped stone industry. We did not find a single sickle blade. However, through careful sieving of all primary and secondary contexts, a substantial number of perforators, burins, and burin spalls was recovered. Obsidian is rare, and a variety of different cherts are attested. We noted a differential distribution of tools, including perforators and burin spalls in the two Late Halaf trenches.

We hope to return to the field in the summer of 1997.

Fig. 1. Two shrines in the North Field. The one on the left was exposed in 1996 and is evidently a short-lived successor of the earlier one to the right (scale: 1 m).

Work in the North Field contributed greatly to unraveling the complex use of the area around the four-phase cult building located in 1993 (ROLLEFSON and KAFAFI 1994). Phase 1, like its successor, consisted of an apsidal building. All of the phases utilized a courtyard behind (west) the building, which originally was an abandoned MPPNB house with a lime plaster floor and walls modified by the LPPNB inheritors. Five meters to the south of this (ultimately) circular shrine, a virtual twin circular shrine was exposed, presumably the successor to the original circular building after it was abandoned; the more recent shrine was quickly erected and lasted for only a short time (Fig. 1). PPNC exposures in the North Field showed considerable re-use of earlier LPPNB structures, but severe post-depositional damage (especially by 20th century agriculture) make reconstruction of the PPNC situation very difficult.

The East Field was certainly the focus of excitement during the 1996 season:

• A "step trench" 2 m wide and 45 m long was placed along an uphill orientation near the center of the East Field, approximately 70 m north of the trenches excavated in 1995 (ROLLEFSON and KAFAFI 1996). The aims were to determine how far upslope the architectural evidence continued, as well as to see how "deep" chronologically the deposits were at the base and at the top of the incline; these aims were only partially successful, although the results were nevertheless satisfying. At the base of the Step Trench, two rooms of an LPPNB multi-level house were completely exposed in addition to a minor exposure of a third room; the house had a considerable history of renovation, for there was a blocked doorway between two rooms, as well as an oven-like stone construction in the corner of one room that post-dated the PPNC situation.

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• At the top of the test trench a 2x5 m probe exposed part of an LPPNB temple (Fig. 2), and this probe was expanded to 5x5 m to document as much of the temple as possible. The western edge of the single-room structure was eroded away but it was clear that the temple was originally at least 4 m (NS) by 5 (EW) in extent. The internal "furniture" included three standing stones at top center, the floor-altar at upper left and the low platform at upper right. At the center of the wall at bottom is the knobby top of the orthostat.

The Central Field excavations centered around the western, southern and eastern areas of the large Yarmoukian house exposed in 1994 (KAFAFI and ROLLEFSON 1995). The work showed that the Yarmoukian inhabitants were very industrious in terms of construction, destruction and rebuilding: the stratigraphic sequence is bewildering in the micro-reuse of the area during Yarmoukian times. Nevertheless, it is also clear that there were clear architectural terraces, and that population density during the Yarmoukian period was considerably lower than in the MPPNB and LPPNB periods. PPNC layers were reached in two trenches, but deeper excavation into these earlier contexts was not possible.

Fig. 2. View to the west of the LPPNB temple. The red-painted plaster altar at upper left and the low platform at upper right. At the center of the wall at bottom is the knobby top of the orthostat.
Ground stone is very abundant at the site. Small finds also indicated a substantial settlement. Although of limited duration, the 1996 season also focused on the lower terrace. A very small area at the previous excavation was tested by Najjar (1994), who documented the presence of exceptionally well-preserved architecture, some of it standing over 2.5 meters high. The objective of the current study was to further assess the site's significance and suitability for major interdisciplinary investigation. In particular, we wished to determine the settlement's boundaries, investigate a large ash pit on the eastern side of the site, and determine if large structures were present in addition to the numerous small rooms previously exposed.

To achieve these objectives, we excavated at four areas of the site. We also mapped the site with a Total Distance Station. The four areas studied included:

1. The upper terrace, where the earlier excavations concentrated on rooms exposed by wadi erosion. This portion of the site contains the best preserved architecture, exhibiting at least three major building phases. Many of the rooms exhibit curving walls and do not appear to conform to expected PPNC patterns. Most of the rooms previously excavated are also quite small. In 1996 we opened up one 5x5 m unit and were fortunate to expose part of a very large room more substantial than others, and it may have a cult status, although this is a tentative conclusion. The excavated portion contains a series of three well-constructed wall niches and a floor-level opening that may have functioned as a drain. There also appear to be floor features, but only half of the room was excavated, and we did not remove the plastered floor at this stage. In addition to this room, portions of two other rooms were also exposed. One of these was excavated to a depth of ca. 3 m below present ground level. We further exposed a room first excavated during the initial season. This was a small "D" shaped structure with a niche reminiscent of an "altar". Immediately in front of this niche is a burnt area.

2. The southern edge of the site. Two units were excavated here with the hope of documenting the southern boundary of the settlement. The first was a small testing near the beginning of the season. The second was excavated, removing a plastered floor at a depth of ca. 3 m. The second area was a 5x5 m unit. Here, a series of roughly parallel walls was exposed, each deeper than the other. The function of these is presently unclear, but they are thick and may have formed successive retaining walls to protect the settlement from erosion or to channel rain water.

3. The eastern ash pit. During the previous excavation, ash lenses were exposed at the eastern boundary of the site. We excavated a testing in this sector, excavating a roughly 2x2 m pit. The results from this small exposure are intriguing. The ash deposit is roughly 1 m thick, and near its bottom is a series of small pits. These may represent the basal level of the site, perhaps reflective of the original settlement's foundation. One PPNA-like projectile point (similar to an El-Khiam point) was also recovered. This, along with a large number of bladelets, could indicate a substantial antiquity to the site.

4. The lower terrace. A very small area at the previous excavations on the lower terrace also was excavated, removing a plastered floor. The results were not significant.

References

KAFAFI Z. and ROLLEFSON G.

Current Investigations at Ghwair I, A Neolithic Settlement in Southern Jordan

Alan H. Simmons and Mohammad al-Najjar
Univ. of Nevada (Las Vegas) and the Dept. of Antiquities, Amman

The Department of Anthropology at the University of Nevada, Las Vegas, and the Jordanian Department of Antiquities conducted a brief (mid-October-early November, 1996) joint excavation at the Pre-Pottery Neolithic B settlement of Ghwair I in southern Jordan. The small settlement sits on a hillside at the junction of Wadi Ghwair and Wadi Feinan. It had previously been tested by Najjar (1994), with documentation of the presence of exceptionally well-preserved architecture, some of it standing over 2.5 meters high. The objective of the current study was to further assess the site's significance and suitability for major interdisciplinary investigation. In particular, we wished to determine the settlement's boundaries, investigate a large ash pit on the eastern side of the site, and determine if large structures were present in addition to the numerous small rooms previously exposed.

To achieve these objectives, we excavated at four areas of the site. We also mapped the site with a Total Distance Station. The four areas studied included:

1. The upper terrace, where the earlier excavations concentrated on rooms exposed by wadi erosion. This portion of the site contains the best preserved architecture, exhibiting at least three major building phases. Many of the rooms exhibit curving walls and do not appear to conform to expected PPNC patterns. Most of the rooms previously excavated are also quite small. In 1996 we opened up one 5x5 m unit and were fortunate to expose part of a very large room more substantial than others, and it may have a cult status, although this is a tentative conclusion. The excavated portion contains a series of three well-constructed wall niches and a floor-level opening that may have functioned as a drain. There also appear to be floor features, but only half of the room was excavated, and we did not remove the plastered floor at this stage. In addition to this room, portions of two other rooms were also exposed. One of these was excavated to a depth of ca. 3 m below present ground level. We further exposed a room first excavated during the initial season. This was a small "D" shaped structure with a niche reminiscent of an "altar". Immediately in front of this niche is a burnt area.

2. The southern edge of the site. Two units were excavated here with the hope of documenting the southern boundary of the settlement. The first was a small testing near the beginning of the season. The second was excavated, removing a plastered floor at a depth of ca. 3 m. The second area was a 5x5 m unit. Here, a series of roughly parallel walls was exposed, each deeper than the other. The function of these is presently unclear, but they are thick and may have formed successive retaining walls to protect the settlement from erosion or to channel rain water.

3. The eastern ash pit. During the previous excavation, ash lenses were exposed at the eastern boundary of the site. We excavated a testing in this sector, excavating a roughly 2x2 m pit. The results from this small exposure are intriguing. The ash deposit is roughly 1 m thick, and near its bottom is a series of small pits. These may represent the basal level of the site, perhaps reflective of the original settlement's foundation. One PPNA-like projectile point (similar to an El-Khiam point) was also recovered. This, along with a large number of bladelets, could indicate a substantial antiquity to the site.

4. The lower terrace. A very small area at the previous excavations on the lower terrace also was excavated, removing a plastered floor. The results were not significant.

References

KAFAFI Z. and ROLLEFSON G.

Current Investigations at Ghwair I, A Neolithic Settlement in Southern Jordan

Alan H. Simmons and Mohammad al-Najjar
Univ. of Nevada (Las Vegas) and the Dept. of Antiquities, Amman
like items, both of which are incised.

Paleoecology is a major focus of the study. Paleobotanical samples were taken and are presently under analysis by R. Neef. Fauna is being studied by P. Croft, and includes caprine, cattle, small carnivores, pig, and one or more species of bird.

Chronology clearly is important to this site. Several radiocarbon samples are presently under analysis. There are three determinations from the previous excavation. These are: 8812 ± 61 BP, or 7950-7870/7815-7705 BC-calibrated (Hd 17219-17541); 8627 ± 46 BP, or 7690-7660/7635-7540 BC-calibrated (Hd 17220-17550), and 8528 ± 89 BP, or 7575-7485 BC-calibrated (Hd 17221-17359). The first two determinations are from the upper terrace, and the last is from the lower terrace.

In summary, our brief investigation of Ghwair I has further documented the settlement’s significance. Of particular interest is the possible PPNA component. We hope to be able to expand our studies in the near future, examining the relationship of a possibly periphery function to the site in relation to larger core settlements.

Reference
NAJJAR M.

Where are the Microlithics? Lithic Technology and Neolithic Chronology as seen from the PPNA occupation at Dhra', Jordan

Ian Kuijt, University of California at Berkeley

Introduction
Although identified in the late 1970s as an extensive aceramic Neolithic site, Bennett’s (1980) limited test excavations at the site of Dhra’ did not lead to a clear understanding of site chronology or the scale of past occupation. Based on excavations conducted in 1994 (KUJT and MAHASNEH 1995) and subsequent laboratory analysis of materials, it is now clear that there was a major PPNA period village settlement at Dhra’ roughly contemporaneous with the Pre-Pottery Neolithic A period occupations at Jericho, Netiv Hagdud, Gilgal, and ‘Iraq ed-Dubb. Situated on an alluvial terrace on the south side of the Wadi ‘Ain Waida’, across from the Pottery Neolithic settlement of ‘Ain Waida’, the settlement covered an area of approximately 80x50 m with oval or circular stone and mud structures visible on the surface and exposed by excavations (KUJT 1994a, KUJT and MAHASNEH 1995; n.d.). This report discusses the results of the 1994 excavation results at Dhra’ and comments upon the implication of these results in understanding the chronological framework of the PPNA in the south-central Levant.

Excavation at Area I and Excavation Unit One
The 1994 excavations at Dhra’ focused on Area I, previously sounded by Bennett (1980), and Excavation Unit One placed in a previously unsampled area of the settlement. Work at Area I focused on 1) removing earlier slumped material from the base of the trench with a bulldozer to a depth of 4 m; 2) cleaning and drawing a 9 m profile of the trench down to sterile sediments; and 3) excavating a 0.5 m section of the entire profile for the collection of artifacts, radiocarbon samples, paleobotanical samples and faunal remains. This excavation employed units of 1x0.5 m excavated in 15 cm levels. All sediments were screened though 2 mm mesh and all cultural materials were collected.

Excavation of the upper meter in Area I revealed intact architectural and ceramic evidence for an Early Bronze Age I (EBI) period occupation but no ceramics from the Pottery Neolithic period. Excavation of sediments below the EBI horizon provided evidence for an extensive PPNA occupation, including several semisubterranean oval residential structures cut into sterile col-luvium reoccupied several times around 10,000 b.p., and covered by at least 2 m of later cultural deposits.

Similar to the earliest PPNA period semisubterranean structures at Jericho, Structure II was originally constructed by removing a large volume of sterile sediments to form a circular or oval pit, lining the edge of the structure with mudbricks and stones, and laying down a rough mud floor. A radiocarbon date of 9,940 ± 180 bp (ISGS-3278) from floor deposits associated with one of several early occupations of Structure II, as well as a radiocarbon date of 9,960 ± 110 bp (ISGS-2898) from an extramu-

Fig. 1. Chipped and ground stone tools from Excavation Unit One, Dhra’, Jordan. a-c multi-notch El-Khiam points; b,c single notch El-Khiam points; d, e ground slate gorget; f, h borers; g, i ground stone axe; j, e scraper/sidescraper.

Excavation Unit One, 4.5x1.5 m in area, was placed in the previously unexplored south side of the settlement. Only 20% of the excavated sediment from this unit was sieved through 2 mm mesh for later analysis. Excavation of the upper 10 cm of cultural deposits resulted in the recovery of a few EB ceramics, a single sickle blade from the Pottery Neolithic, and considerable PPNA lithic material. Only PPNA period diagnostic chipped stone tools were recovered below the upper 10 cm of deposits. Excavation of Unit One led to the discovery of part of a well preserved circular stone structure designated as Structure I. It appears to have been approximately 3 m in diameter with well constructed stone walls preserved to a height of 85 cm. Wall construction employed cobblestones 20-30 cm in size, and intact and dissolved mud brick was found on top. At the base of the wall was a possible bench, constructed of large flat stones placed on top of each other and radiocarbon dated to 9,610 ± 170 b.p. (ISGS-3277). Although excavations in this area were halted before reaching sterile deposits, eroding cultural deposits 5 m to the south of the site suggests that at least 1 to 1.5 m of earlier PPNA cultural deposits underlie Structure I.

Lithic Industry
Excavations at Area I and Excavation Unit One recovered an extensive collection of ground and chipped stone tools. In Area I, chipped stone tools recovered within and outside of Structure II include El-Khiam points, numerous awls/borers on flakes and bladelets, multiple adzes/chisels, and two large limestone picks. Other materials include conical and pyramidal bladelet cores,
basalt pestles and other ground stone objects, a small piece of coral, and pieces of a polished bone awl. Detailed analysis of these materials is still in process. Excavation Uni: One produced an extensive lithic assemblage dating to the PPNA (Table 1). In descending order of frequency, formed tools include El-Khiam points (Fig. 1:a-d,f), borers (Fig. 1:g-h), retouched flint pieces, several complete or fragmentary bifacial chisels scrapers (Fig. 1:j) and sickle blades. Other items included two large picks, a portion of a ground-stone adze (Fig. 1:1), multiple basalt pestles, basalt grinding stones, and several hammerstones. A single polished greenstone bead and a ground stone slate gorget (Fig. 1:e) were recovered inside Structure I.

Table 1. Frequency of tool types from Excavation Unit 1 (4.5x1.5 m), Structure I, Dhra’, Jordan.

<table>
<thead>
<tr>
<th>Type</th>
<th>Upper 10 cm</th>
<th>Above</th>
<th>Inside</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>El-Khiam point</td>
<td>4</td>
<td>32</td>
<td>20</td>
<td>56</td>
</tr>
<tr>
<td>Sallibya point</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Multi-knoot point</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Undiagn. point fragm.</td>
<td>1</td>
<td>11</td>
<td>11</td>
<td>23</td>
</tr>
<tr>
<td>Borer</td>
<td>7</td>
<td>8</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>Sickle blade</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Scraper</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Retouched blade</td>
<td>4</td>
<td>6</td>
<td>14</td>
<td>24</td>
</tr>
<tr>
<td>Retouched fragment</td>
<td>6</td>
<td>1</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>Notches</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Double tool</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Bilateral tool</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>24</td>
<td>25</td>
<td>76</td>
<td>125</td>
</tr>
</tbody>
</table>

Analysis of the chipped stone industry at Dhra’ provides important new insights into the chronology and stone tool technology for PPNA period village occupations in the southern Levant. Based partially on the presence or absence of microlithic tools, specifically lunates, from Sallibya IX, Jericho, and El-Khiam, Crowfoot Payne (1983) argues that the PPNA of the south-central Levant should be divided into two facies: an earlier phase with microlithic tools, termed the Khiamian, followed by the Sultanian period when microliths had effectively disappeared. Paradoxically, this interpretation now appears to be contradicted by data from other sites, as lunates are absent at some PPNA settlements radiocarbon dated to the earliest stages of the PPNA (e.g., Gilgal I and Gesher) while lunates are present at other PPNA settlements dated to the later stage of the PPNA (e.g., Netiv Hagdud). In addressing this interpretive quandary and the soundness of the chronological subdivision of the PPNA, Nadel and Garfinkel note that typological variation among flint assemblages is open to diverse interpretation, and that the presence and absence of lunates and microliths at PPNA settlements are the result of interassemblage variability and differential sampling of roughly contemporaneous PPNA settlements (GARFINKEL and NADEL 1989, NADEL 1990). I have recently argued on the basis of data from the excavations of ‘Iraq ed-Dubb that the presence of lunates at some PPNA settlements and not others is due to the mixing of derived Late Natufian materials with those from the PPNA. Modifying the preliminary pre-laboratory analysis of chipped stone materials of ‘Iraq ed-Dubb (KUJT et al. 1991), detailed study of the spatial distribution of diagnostic artifacts indicates that Hagdud truncations (see BAR-YOSEF et al. 1987 for a detailed definition) and Khiam points come from PPNA occupational levels (dated to c. 9,950 bp) while the lunates are associated with the Late Natufian occupation radiocarbon dated between c. 11,300 to 10,500 bp (KUJT 1994a; 1994b; n.d.). Recent field work at ‘Ain Darat (GOPHER 1995) reiterates this patterning, in which lunates are absent from settlements dated only to the PPNA but are found at settlements with both PPNA and Late Natufian occupations. Excavations at Dhra’, as well as an examination of the collective regional patterning, provide further support for arguments that lunates were not produced in the PPNA.

It should also be noted that the 1994 excavations at Dhra’, in which over 18 m² of PPNA period deposits were screened through 2 mm mesh, no Hagdud truncations were recovered. It is not at all clear how, or if, this is linked to the absence of lunates. It is possible that variation in the distribution of Hagdud truncations was the result of differential functional activities at some settlements, archaeological sampling, or perhaps technological adaptations at settlements situated in marginal environmental areas. Whatever the underlying reason for this variability, the absence of lunates and Hagdud truncations from Dhra’, with dated PPNA primary contexts associated with intact architecture and a large sample size of the chipped stone assemblage, underline the argument that there is need to reexamine the validity of the chronological and cultural subdivision of the PPNA into the Khiamian and Sultanian phases proposed by Crowfoot Payne (1983).

References


The “Other” Lithics: Ground Stone from Tor al-Tareeq, Jordan

Jane Peterson, Marquette University

Variability in Levantine ground stone assemblages has often been linked with significant adaptive changes, both in terms of the increasingly intensive use of plant foods and as a criterion for inferring more sedentary occupations. Despite their utility in both structural and behavioral inferences, ground stone assemblages continue to be some of the most unevenly reported, loosely classified, and under-analyzed aspects of material culture. An example from the Epipaleolithic site of Tor al-Tareeq in west central Jordan demonstrates that more comprehensive and standardized treatments of early Epipaleolithic ground stone assemblages, despite their small size and sporadic distribution, can yield important results.

Tor al-Tareeq (WHS 1065)

Excavations at Tor al-Tareeq were undertaken in 1984 as part of the Wadi Hasa Paleolithic Project (CLARK et al. 1988, NEELEY et al. n.d.). A cluster of six radiocarbon dates finally dates the major portion of the deposit to the early Epipaleolithic phase (c. 20,000-14,500 bp). The site appears to have been the locus of intensive reoccupation episodes during the early Epipaleolithic by virtue of its setting, exposure, density of deposits, hearth features, and myriad accumulations (NEELEY et al. n.d.). The presence of a Pleistocene lake and numerous freshwater springs in the vicinity was most certainly environmental features that made the site locale attractive.

During two field seasons in 1984 and 1992, excavations and surface collections at Tor al-Tareeq recovered 13 ground stone implements. A series of five bedrock grinding features, heavily
As Epipaleolithic sites in the Levant are discovered, our archaeological map becomes more complex, reflecting both regional and settlement system variability. In the past, researchers have emphasized chipped stone assemblages as monitors of this variability. But the Tor al-Tareeq example indicates that ground stone tools can provide complementary information germane to discussions of seasonality, mobility, and the social units of production. This conclusion reinforces the need to re-examine ground stone implements more thoroughly.

References


A LPPNB-Variant of Byblos Points from Gürçütepe II – “Palmyra Points”? Klaus Schmidt and Manuela Belle-Bohn University of Heidelberg

In 1994 the Turkish-American excavation team at Kazane Höyük (e.g. WATTENMAKER and MISIR 1993) identified near Kazane, a few kilometers east of the centre of Saniurfa (Southeastern Turkey), a west-east alignment of four PPN/PN settlement mounds, the largest one called Gürçütepe. A water pumping station and the booming development of the town started to destroy these important sites. Under the direction of the Museum of Sanliurfa and the German Archaeological Institute in Istanbul, salvage excavations began in 1995 and 1996 at the highest

Fig. 1. Ground stone pestle (Specimen 112) from Tor al-Tareeq (by M. NEELEY).

Ground Stone Assemblage

All tools can accurately be described as expedient. The pestles and hand stones were formed on cobbles, available in the nearby wadi, and were not formally shaped by chipping, pecking and grinding, but reduced only by use (Fig. 1). The same is true of the single free-standing mortar that was formed on an unmodified limestone boulder.

Fig. 2. Freestanding basin quern/mortar (Specimen GS-I) from Tor al-Tareeq.

Tool flexibility is another description that comes to mind in characterizing the assemblage. None of the tools represent specialized forms, unlike the deep vessel mortars and carved pestles reported from sites within the Mediterranean vegetational belt. Among the mortars, several specimens can be described as composite tools (sensu WRIGHT 1992) by virtue of two distinct use surfaces (Fig. 2). One use surface consists of a relatively large but shallow elliptical depression with traces of continuous circular striations that suggest rotary grinding motions. A smaller cupmark depression with signs of battering is centered within the larger surface. These expedient querns/mortars may represent multifunctional tools used for multi-stage processing or tools that were re-used/re-cycled over time. The pestles, hand stones, mortars, and composite tools comprise a ground stone tool kit that could have been used to accomplish a wide range of unspecialized processing tasks.

Elsewhere I have suggested that the lack of specialization may reflect a mixed season occupation model in which groups returned to productive locations repeatedly, but not always at the same time of year (PETERSON n.d.). Unspecialized tools could be used to process whatever plant foods happened to be available: nuts, chenopod and amaranth seeds, or hydrophytic roots and tubers. These resources were all represented in the pollen samples from the site (NEELEY et al. n.d.). A model incorporating less seasonally restrictive movements in certain Epipaleolithic contexts is supported by these data.

Few early Epipaleolithic sites contain ground stone (18% according to WRIGHT 1992). This indicates that plant processing was a feature of a select group of sites. Furthermore, assemblages appear to consist of few tools. Attempts to quantify the density of ground stone tools among Epipaleolithic sites are hampered by severe reporting problems (PETERSON n.d.). For the few sites that report ground stone and volume of excavation fill adequately, several sites in more arid, steppe environments stand out as having high ground stone densities: Tor al-Tareeq, Jilat 6, and Uwaynid 16 (PETERSON n.d.). It would appear that processed plant resources played an important role in areas outside the Mediterranean vegetational zone. These findings need to be incorporated into settlement models, which in the past have emphasized animal resources.

Bedrock grinding features seem ideal for relatively mobile plant-using groups where site reoccupation is anticipated. The two groups of bedrock mortars at Tor al-Tareeq provide interesting spatial data. First, they are located approximately 100 m east of the main habitation loci rather than on the escarpment directly to the north. This reflects a degree of spatial segregation of processing activities at the site (cf. JACKSON 1991). One set of three cupmark mortars suggests a task group of three individuals working side by side. The second cluster of two distinctive mortars (one cupmark and one mortar/quern) may indicate multi-stage processing by a single individual or two individuals dividing processing tasks. As data relevant to group composition and task organization are rare, these bedrock features are important and need to be examined carefully.

Concluding Remarks

As Epipaleolithic sites in the Levant are discovered, our archaeological map becomes more complex, reflecting both regional and settlement system variability. In the past, researchers have emphasized chipped stone assemblages as monitors of this variability. But the Tor al-Tareeq example indicates that ground stone tools can provide complementary information germane to discussions of seasonality, mobility, and the social units of production. This conclusion reinforces the need to re-evaluate and analyze ground stone implements more thoroughly.
mound, now called Gürçütepe II. During the 1995 field season the tells had been numbered from east to west as Gürçütepe I–IV. Only the surface material of Gürçütepe I includes some neolithic pottery of the Balikh type; Gürçütepe II–IV are PPN mounds (Schmidt 1995, 1997; Gerber 1996; Beile-Böhn et al. 1997).

At Gürçütepe II in the uppermost building layer, parts of three large rectangular houses with stone foundations and tauf walls, as well as one tauf building without stone foundations, were exposed. The small finds include many ground stone artefacts, borers for stone bowl production and clay and limestone figurines. The main characteristics of the lithic industry are Byblos points, usually of silex, and obsidian Çayönü-tools. Until now no 14C dates are available, but the architectural remains and the lithics tentatively allow us to date this layer to Çayönü’s Large Room phase (e.g. Özdoğan 1995).

Within the group of the Byblos points, many pieces with an unusual proximal burin blow at the ventral face had been observed (35% of Byblos points). As the retouch of the tang often cut the burin scar, these burins clearly can be determined as a part of the fabrication process of these points and not as a reuse of points as burins. It is clear that the shaping of the tang starts with a longitudinal burin blow, which removed part of the bulb. The position of this burin scar is always at the left basal corner of the blade, seen from ventral face (Figs. 1-2).

It is exactly this kind of the shaping of the tang that has been described as “Palmyran Retouch” by S. Fujii (1986), who emphasised that the Palmyran retouch seems to be restricted to the production of tanged points. Fujii mapped about ten sites with Palmyran retouch (Fujii 1986: Fig.1), which are chronologically restricted to a late Syrian facies of the PPNB. A similar use of burin blows to shape a thinning of the artefact has been described by Y. Nishiaki with the “corner-thinned blades” from Tell Kashkhoshok II (Nishiaki 1990).

Further attributes are observable within the group of Byblos points with Palmyran retouch from Gürçütepe II. The blank usually exhibits a strong twisting or torsion viewed from the bulbar end. A similar phenomenon also is characteristic for the the Chalcolithic lithic industry of Egypt (e.g. Rizkana and Seeher 1988; Schmidt 1986). This torsion seems to be the result of a specific kind of core orientation during the blank production, as the (removed) striking platform and the bulb are in an oblique position to the longitudinal axis of the blade (cf. Fujii 1986: Note 1). The position of the bulb is always acentric in the left part of the ventral face. This explains why the burin blows, which remove part of the bulb, are never at the right ventral edge. The degree of this torsion, i.e., the angle between the plane of the distal and the proximal end, which has been called $d$ (Schmidt 1986), is mostly around 20°, though extreme examples reach more than 45°. As this kind of primary industry seems to be used only for blank production for these points, the twist should be an attribute in close connection with the use of these points.

Some further observations can be made. In some examples the tip of the point is not retouched at all (Fig. 2:1–2). Often the tip of the blade is slightly curved to left. Several examples show at the same position as the Palmyran retouch a dorsal scar like a second burin facet, but it could also be part of the blank processing (Fig. 2:1–5). The comparison of the length/width and length/weight diagrams of all (complete) Byblos points (Fig. 3a) and the points with Palmyran retouch from Gürçütepe II (Fig. 3b) demonstrates that the values for this variant are clustered close together. The use of a specific blank type and the unusual way of shaping the tang are not used for a wide spectrum of points but for a specific type. As the weights are clustered around 8gr, these points should be arrowheads (cf. Schmidt 1996).
As all the observations made within this group of Byblos points from Gürçütepe II seem to be true also for most of the other Byblos points with Palmyran retouch, the separation of that group under the name "Palmyra points" is proposed. Their characteristics are, as described, a proximal burin blow partly removing the acentric bulb at the left ventral edge and a torsion of the blade. As Palmyran retouch was already dated to the final Syrian PPNB by Fujii, and since the Palmyra points from Gürçütepe II can be attributed to a building layer which seems to be parallel in date with Çayönü Large Room phase, a new fossilis directeur for Upper Mesopotamian-North Syrian PPBNB industries might be established. So far the Palmyra points are completely absent at Göbekli Tepe, a PPN site several kilometers northeast of Gürçütepe, where PPBNB does not seem to be exist (Schmidt 1995, 1997; Gerber 1996; Beile-Bohn et al. 1997).

Bibliography


More "Pillow-Shaped Pieces" from PPBNB Basta

Bo Dahl Hermansen and Hans Georg Gebel
Carsten Niebuhr Institute, Copenhagen University and Seminar für Vorderasiat. Altertumskunde, Free University of Berlin

The outstanding pieces published in this issue from PPNA Jerf el-Ahmar encourage us to present similar but later examples from Late PPNB Basta. The few pieces from Basta, of which we illustrate two from the 1992 season, certainly represent a distinctive but rarely attested PPNB artefact class that we expect is imperfectly described as a "shaft straightener". Most (but not all) of these tablet or "pillow-shaped" pieces, made of what looks like chlorite (no mineralogical identifications have been made yet), show the grooves typical of "shaft straighteners".
Notes and News from Excavations

Çatal Höyük 1996, Anatolia
A fourth season of fieldwork at Çatal Höyük on the Konya Plain took place during August and September 1996. The project is directed by Prof. Ian Hodder (University of Cambridge), and field directed by Dr. Roger Matthews (British Institute of Archaeology at Ankara). During the 1996 season excavation continued in two areas of the site. At the base of the area excavated by Prof. Mellaart in the 1960s a 20x20 m square was cleared and opened, with the aim of long-term exploration of the earliest levels of occupation. In the North Area a single Neolithic building was almost completely excavated. The building had three main phases, starting its life with a classic "shrine" plan, similar in many respects to shrines excavated in the 1960s, with plat-forms, red-painted walls and other decorative features. After some alterations, the south half of the building was deliberately destroyed by fire and only the north half continued in occupation until final abandonment. At least 37 individuals were buried under the floors of the building, including many children. The last burial in the building had its head missing. Excavations will continue in 1997. (communicated by Roger J. Matthews)

Dja'dé 1996, Syria
The field season in Dja'dé this year was limited due to financial restrictions, but the work carried out was quite impressive: study of materials, completion of the excavation of a multiple tomb under an early PPNB house (with at least two burial phases and 15 individuals) and some work in the deep sounding. (communicated by Eric Coqueugniot)

es-Seyyeh 1996, Central Jordan
A new Jordanian Neolithic site was found by the Wadi az-Zarqa/ Wadi adh-Dhuayli Survey Project, 1996 (Universities of Rome, and Yarmouk University, Irbid; co-directors: Zeidan Kafafi and Gaetano Palumbo). The survey area covers the lands between the northern periphery of Zarqa near Amman, the village of Hashemiyeh, and the confluence between the Wadi az-Zarqa and the Wadi adh-Dhuayli. This year's work concentrated on the survey of Pleistocene river terraces, the soundings at a Neolithic site, and the detailed survey of an Early and Middle Islamic site. An Epipaleolithic and a Bronze Age site threatened by expanding agricultural activities were also studied in detail.

The soundings at the Neolithic site of es-Seyyeh, on the right banks of the Zarqa river, near the village of Sukhne, have revealed at least two layers of occupation, dated to the Pre-Pottery Neolithic C (PPNC) and to the Pottery Neolithic (Yarmoukian) period. The soundings revealed the deposit to be of great archaeological potential, with well stratified deposits reaching a depth of over 3 m despite the heavy disturbances suffered by the site due to road works and agricultural activities. Beaten earth floors, remains of structures, and a plethora of artefacts were recovered, allowing establishment of a provisional chronostratigraphic sequence for the transition between Pre-Pottery and Pottery Neolithic in this region of Jordan.

Future campaigns will develop the research initiated this year along the lines of the inter-disciplinary collaboration between Yarmouk and Rome Universities. (communicated by Zeidan Kafafi and Gaetano Palumbo)

Choga Bonút 1996, Khuzestan
The joint Iranian Cultural Heritage Organization - Oriental Institute of the University of Chicago expedition to Choga Bonút excavated below Archaic Susiana 1 deposits and reached the so-called "Formative Susiana" remains under which there were occupational debris with some classes of pottery that should be Formative. Below this there is a class of coarse ware that is apparently the earliest class of pottery. Therefore, Ms. Kaniou's Formative will have to be "Archaic 0". We also have some 3 m of aceramic deposit with typical round fire pits, paved with pebbles, many blades and microliths, some obsidian, stalk and T-shape figurines, many small geometric tokens, etc. We have collected seeds and bones for analyses. Although we did not find architecture, the presence of lumps of straw-tempered mudbricks indicate that the aceramic level had some kind of solid architecture. (communicated by Abbas Alizadeh)

Request for Cooperation in Research
(from Eric Coqueugniot): I am currently working on the use of obsidian during the late periods (Bronze and Iron Ages, Roman period, etc.), and I am interested in all archaeological and bibliographic information concerning obsidian objects other than tools and weapons. Please reply to Eric Coqueugniot, Maison de l'Orient Mediterranee, CNRS/Universite Lyon 2, UPR 7537 - Equipe no 17 du C.R.A., 7 rue Raulin, F- 69365 LYON Cedex 07, fax (33) (0) 72 72 08 65, email: Eric.Coqueugniot@mom.fr.

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QUINTERO, LESLIE A.

SÖFFNER, WALTER

This dissertation contains a morphometric discussion of Neolithic gazelles and caprines from: Sabra 1 (Natufian, PPNA-EPNPB), Shaqarat Musai'id (MPPNB), adh-Dhaman (MPPNB), Basta (1984-sounding, LPPNB), Ba'ja 1 (1984- sounding, LPPNB) (all soundings by H.G. Gebel; adh-Dhaman: H.P. Uerpmann).

MÜLLER-NEUHOF, BERND

This thesis analyzed the chipped lithics materials from a sounding into the Yarmoukian layers of Abu Snelsleh, southeast of Amman (excavations by R. Bernbeck, S. Kerner, and R. Lamprichs).

RASSMANN, P.

New and Forthcoming Books

MOLIST MONTÀNA M.


Forthcoming Warsaw Proceedings

Hans Georg Gebel and Stefan K. Kozlowski
Seminar für Vorderasiatische Altertumskunde of Free University of Berlin, and Institute of Archaeology, Warsaw University

At last, some 38 contributions are expected for the Proceedings of the Second Workshop on PPN Chipped Lithic Industries, to be published in mid-1997 as:

Five expected contributions still have not been received. An even more serious reason of publication delay is that most of the articles were submitted in a rather inconsiderate way, especially concerning the format rules of the series. Considerable editing efforts also had to be invested into many of the illustrations, and substantial work was necessary for language editing of about a fourth of the contributions, for which we editors dearly thank our colleagues Gary Rollefson, Deborah Olszewski, Elizabeth Hildebrand, Eric Coqueugniot, Lorraine Copeland, and Remy Boucharalat. At the moment we have begun sending out of proofs.

As a pre-view, the proceedings will contain:

Stefan K. Koźlowski and Hans Georg Gebel: Preface

Adjacent Interaction Spheres and Taxa Discussions

Frank Hole: A Syrian Bridge Between the Levant and the Zagros?

Josef Garfinkel: Critical Observations on the So-called Ksiamian Flint Industry

Michal Kubusiewicz: Early Holocene Lithic Industries of Northeastern Africa

Galina F. Korobkova: The Djętunian Industry of Southern Turkmenistan

Galina F. Korobkova: The Neolithic Stone Industries of Southern Caucasus

Vadim Masson: The Cultural Zones of Central Asia and the Variations of the Late Chipped Stone Industries

Karol Szmyczak and Tatiana Gretchkina: The Perspectives of the Studies on the Early Neolithic of the Kyzylkum Desert. Ayakagarma "The Site" and Other New Collections

Klaus Schmidt: Helwan in Egypt: A PPNA Site?

Janusz Koźlowski: Techno-Morphological Changes in the Early Holocene Lithic Industries in South-Eastern Europe

Karol Szmyczak: PPN Flint Assemblages with Microliths: What Do We Find, What Do We Lose?

EPNNB- Problems

Avi Gopher: What Happened to the EPNNB? An Introduction

Gary O. Rollefson: An EPNNB Settlement in the Wadi el-Hasa, Central Jordan

Pre-PPN Traditions

Stefan Karol Koźlowski: The Trietianian "Mesolithic" Industry of the Caucasus, Transcapecia, Eastern Anatolia, and the Iranian Plateau

Ivan Gatsov: Epipalaeolithic Sites from NW- Turkey

Stefan Karol Koźlowski: From Zawi Chemi to Mfełat

Deborah Olszewski: The Lithic Transition To the Early Neolithic in the Zagros Region: Zarzian and Mfełatian Industries

Elisabeth Hildebrand: Changes in Methods and Techniques of Blade Production during the Epipalaeolithic and Early Neolithic in the Eastern Fertile Crescent

Ofer Bar-Yosef: Late Pleistocene Lithic Traditions in the Near East and Their Expression in Early Neolithic Assemblages

Anna Belfer-Cohen and Nigel Goring-Morris: The Late Epipalaeolithic as the Precursor of the Neolithic: the Lithic Evidence

Specializations in Raw materials, Industries, and Tool Kits

Galina F. Korobkova: The Blades with "Mirror-Like" Polishing: Myth or the Reality?

Leslie A. Quintero: Flint Mining in the Pre-Pottery Neolithic: Preliminary Report on the Exploitation of Flint at Neolithic 'Ain Ghazal in Highland Jordan

Philip J. Wilke and Leslie Quintero: Neolithic Millstone Production: Insights from Research in the Arid Southwestern United States

Hans Georg Gebel: Chipped Lithics Production in the Basta Crafts System

Tamar Noy and Stefan K. Koźlowski: A Basket of Flint Artefacts from House 11, Gilgal I

Phil J. Wilke: Bullet-Shaped Microblade Cores of the Near Eastern Neolithic: Experimental Replicative Studies

Yoshishiro Nishiyaki: Side-Blow Blade-Flakes from Tell Kashkashok II, Syria: a Technological Study

Lorraine Copeland and Marc Verhoeven: Bitumen-Coated Sickle-Blade Elements at Tell Sabi Abyad II, Northern Syria

Manuela Beile: The Glossed Blades from Nevali Çorî: Preliminary Results

Patricia Anderson and François Valla: Insights into Activities of Hayonim Terrace Natufian / Les pieces lustrées de la Terrace de Hayonim (Natufien évoluté), des faucilles?

Klaus Schmidt: Nevali Çorî: Chronology and Intrasite Distribution of Lithic Tool Classes. Preliminary Results

Tamar Noy: Long Sickle Blades. A Case of Cultural Change in the PPN in the Southern Levant

Industries Reconsidered/ New Industries

Isabella Caneva, Cristina Lemorini, and Daniela Zampetti: Lithic Technology and Functionality Through Time and Space at Çayönü Jalal Raifî: Remarques sur l'industrie lithique Néolithique de İran (10.000-6.000 av. J.-C.)

Eric Coqueugniot and Patricia Anderson: L'industrie lithique d'El Aoui Safa, un nouveau site Khiamien à l'Est du Jebel el 'Arab (Désert Noir, Syrie du sud)

Miquel Molist and Acnau Ferrer: Industries lithiques pendant la période 8000-7500 B.P. à Tell Halula dans le cadre d'Études moyen Syrien


Abstracts of Contributions

Summary Issues

Hans Georg Gebel and Stefan Karol Koźlowski: The Fertile Crescent in the Southwest Asian Chipped Lithics Interaction Spheres

Conferences

Neolithic Issues at the BANEA Conference Held at Oxford

The British Association for Near East Archaeology (BANEA) held its 1996 meetings at Oxford University from 12 - 14 December 1996. Of the 17 papers presented at the conference, only one dealt with prehistory: "Cultural Diversity in the Early Neolithic - The Case of Jericho ('Ain es-Sultan)", by Hans-Dieter Bienert (Head, German Protestant Institute for Archaeology in Amman). Among the ca. 10 posters presented were three that treated Neolithic themes. These included "The Changing Role of Obsidian in the Late Pottery Neolithic" by Elizabeth Healey (Manchester University), "Domuztepe" by Stuart Campbell (Manchester University), and "Jordan: Early Neolithic Experiments in Proto-Urban Life" by Hans-Dieter Bienert (GPIA-Amman), Hans Georg Gebel (Freie Universität Berlin), and Gary Rollefson ('Ain Ghazal Research Institute). The next BANEA conference is scheduled for mid-December 1997 at the University of Durham. (communicated by Gary O. Rollefson)

Upcoming Conference: The Origins Of Agriculture And Domestication of Crop Plants in the Near East at an International Symposium of Plant Biologists and Archaeologists to be held in Aleppo, Syria, 10-14 May 1997

Preliminary replies and further information: Dr. Jan Valkoun, ICARDA, POB 5466, Aleppo, Syria, email: J.Valkoun@egnet.com

Contact in Europe: George Willcox, CNRS, Institut Préhistoire Orientale, Berrias, F- Juliès 07460, Fax 0033 75393161

Leaflet with further information available. Preliminary replies expected until 31st of Dec.


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