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**NOUVELLES DONNÉES
SUR LES DÉBUTS
DU NÉOLITHIQUE
À CHYPRE**

**ACTES DE LA SÉANCE
DE LA SOCIÉTÉ PRÉHISTORIQUE FRANÇAISE
PARIS,
18-19 MARS 2015**

Textes publiés sous la direction de
Jean-Denis VIGNE, François BRIOIS et Margareta TENGBERG

SÉANCES DE LA SOCIÉTÉ PRÉHISTORIQUE FRANÇAISE

9

NOUVELLES DONNÉES
SUR LES DÉBUTS DU NÉOLITHIQUE
À CHYPRE

NEW DATA
ON THE BEGINNINGS OF THE NEOLITHIC
IN CYPRUS

ACTES DE LA SÉANCE
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Société préhistorique française
Paris
2017

À la mémoire d'Edgar Peltenburg

To the memory of Edgar Peltenburg

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Illustration de couverture : Klimonas: sub-zenithal photo of the communal building (St 10) and its entrance device (upper left), taken at the end of the 2012 excavation season. *Klimonas : vue sub-zénithale du bâtiment communautaire (St 10) et de son dispositif d'entrée (en haut, à gauche), prise à la fin de la campagne de fouille 2012. La mire mesure 1 m. Le nord est situé vers la gauche* (© M. Azéma, Passé simple).



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Ayia Varvara Asprokremnos

A late PPNA specialized site on Cyprus

Carole McCARTNEY

Abstract: The primary focus of the study of the Neolithic on Cyprus has been directed towards developments in the subsistence economy and the advent of sedentary farmers on Cyprus as elsewhere in the Levant. The very early appearance of Neolithic groups on Cyprus supports evidence from Akrotiri Aetokremnos confirming the presence of foragers engaged in seafaring by at least c. 10,500 cal. BC, an interaction with the island that contributed to the early appearance of Neolithic groups on Cyprus. The development of seafaring during the Neolithic, however, is overshadowed by the intense interest in the development of farming and permanent settlement of the island. The significance of these aspects is certainly not contradicted here, but the proposed dichotomy between mobile foragers versus sedentary island farmers fails to accommodate the evidence from Ayia Varvara Asprokremnos. A second dichotomy removes Neolithic communities from the possibility of being seafarers themselves, assigning that role to the foragers already versed in visiting the island. Though a distinction between sedentary farmers and seafaring-foragers sets up the interesting possibility of inter-communal interaction, it suggests that contemporary foragers were pre-Neolithic and the pull of farming led very recently converted foragers to forget any skills but those related to farming. These problematic dichotomies demand an overly strict separation of human groups into types where, (a) all economies that required mobility must be assigned to persistent foragers, while (b) all Neolithic groups are required to be engaged in the building of sedentary villages where they could develop agricultural techniques, but no other means of subsistence.

Instead of seeing the Neolithic as a uniform transformation from mobile to sedentary farming communities, we could look to describe the advanced processes of materialized expression developed at this time (following the pathways initiated by human communities from the Upper Palaeolithic) as one of diversification. The variability shown by early Cypriot sites in terms of geographic location, taskscape variability and even subsistence data, suggests that such a multiplicity would better describe the Neolithic transformation on the island and, indeed, elsewhere. This paper will present evidence from the late PPNA site of Ayia Varvara Asprokremnos that contradicts the model, summarized as sedentary farmers versus mobile foragers, and focuses, instead, on understanding the lack of homogeneity in Cypriot Neolithic evidence. Such variability implies that Neolithic groups on Cyprus could have developed a familiarity with the sea in order to build economies based more on exchange than farming, while maintaining a more mobile way of life than their village-based counterparts. At Asprokremnos this diversity is illustrated by a temporary and repeated dwelling in a preferred place rather than permanent settlement. Beginning with the initial occupation at the site, the built environment was marked by both temporary and permanent abandonments, and structures became less intensively constructed over time. Throughout the occupation of the site taskscape show a clear focus on craft in the production and use of both the chipped and ground stone industries as well as in the processing of pigments. The choice of site location combined with the evidence for surplus production of chipped stone and pigments suggests that the motive for occupation at Asprokremnos was resource access for the production and export of high quality raw materials.

Keywords: Neolithic, PPNA, specialization, ochre, seafaring.

Ayia Varvara Asprokremnos, un site spécialisé du PPNA récent, à Chypre

Résumé : Le principal objectif de l'étude du Néolithique à Chypre s'est longtemps focalisé sur l'évolution de l'économie de subsistance et sur l'arrivée des agriculteurs sédentaires sur l'île, comme partout ailleurs au Levant. L'apparition très précoce de groupes néolithiques chypriotes, attestée à Aetokremnos Akrotiri, confirme la présence de chasseurs-cueilleurs maîtrisant les transports maritimes au moins à partir de 10500 cal. BC, preuve d'interactions entre l'île et le continent, interactions qui ont contribué à l'apparition précoce de groupes néolithiques sur Chypre. Les recherches sur le développement de la navigation néolithique sont toutefois éclipsées par attention portée au développement de l'agriculture et à la présence permanente de populations humaines sur l'île. Il n'est

certes pas question, ici, de minimiser l'intérêt de ces problématiques. Il s'agit plutôt de mettre l'accent sur le fait que les découvertes réalisées à Ayia Varvara Asprokremnos s'accordent mal avec l'idée d'une dichotomie tranchée entre chasseurs-cueilleurs mobiles et agriculteurs sédentaires. Une autre dichotomie possible consisterait à exclure le fait que les communautés néolithiques aient pu elles-mêmes pratiquer la navigation, en assignant ce rôle aux chasseurs-cueilleurs habitués de longue date à fréquenter l'île. Bien qu'une distinction entre les agriculteurs sédentaires et chasseurs-cueilleurs navigants implique l'intéressante éventualité d'interactions intercommunautaires, elle suggère aussi que les seconds étaient pré-néolithiques et que le passage à l'agriculture ait conduit les communautés récemment converties à perdre leurs compétences initiales, excepté celles liées à la production agropastorale. Ces deux dichotomies sont donc toutes deux problématiques, car elles requièrent une séparation trop tranchée entre groupes humains, de telle sorte que a) tous les systèmes économiques associés à la mobilité soit le fait de chasseurs-cueilleurs, tandis que b) tous les groupes néolithiques auraient nécessairement construit des villages sédentaires où ils auraient développé les techniques agricoles, au détriment de tout autre moyen de subsistance.

Au lieu de voir le Néolithique comme un passage systématique de sociétés mobiles à des communautés agro-pastorales sédentaires, nous pourrions envisager l'évolution observée à ce moment, dans la droite ligne des changements impulsés par les communautés humaines au Paléolithique supérieur, comme une diversification des modalités de subsistance. La variabilité illustrée par les premiers sites chypriotes en termes de situations géographiques, de *taskscape* et même de systèmes de subsistance suggère qu'une telle multiplicité des situations permettrait de mieux rendre compte de la transition néolithique sur l'île et au-delà. Cet article présente les observations recueillies dans le site du PPNA final de Ayia Varvara Asprokremnos qui contredisent le modèle d'une opposition stricte entre agriculteurs sédentaires et chasseurs-cueilleurs mobiles, et mettent plutôt l'accent sur le manque d'homogénéité dans la documentation néolithique chypriote. Une telle variabilité implique que des groupes néolithiques chypriotes pourraient avoir développé une familiarité avec la mer afin de construire une économie fondée davantage sur les échanges que sur l'agriculture, mais cela tout en conservant un mode de vie plus mobile que celui de leurs homologues strictement villageois. À Asprokremnos, cette diversité est illustrée par l'implantation répétée d'occupations temporaires, plutôt que par l'établissement d'une occupation permanente. Depuis l'occupation initiale du site, l'environnement bâti a été marqué par des abandons temporaires ou permanents, et les structures construites sont devenues de moins en moins élaborées au fil du temps. Tout au long de l'occupation du site, les *taskscape*s mettent clairement l'accent sur la production et l'utilisation des industries de pierre taillée et polie, tout comme sur le traitement des pigments. Le choix de l'emplacement du site combiné avec la présence d'indices de production excédentaire de pierre taillée et de pigments suggère que le motif de l'occupation d'Asprokremnos était l'accès aux ressources pour la production et l'exportation de matières premières de haute qualité.

Mots-clés : Néolithique, PPNA, spécialisation, pigments, navigation.

AYIA VARVARA ASPROKREMNOS: BACKGROUND

THE SITE of Ayia Varvara Asprokremnos was discovered by the son of the former director of the Cyprus American Archaeological Institute, who then drew the attention of the author to the site in 1995. An initial analysis of a preliminary survey grab sample showed the site to have potential as an Early Neolithic site (McCartney, 1998). Following the growth of research into the PPNB of the island, the EENC project⁽¹⁾ was formed in 2005 in order to document surface sites in the wider landscape around Asprokremnos and more thoroughly survey the site itself in order to explore possible explanations for early occupation of the island's interior (McCartney et al., 2006). The site of Asprokremnos stood out, as being both chronologically distinct from the majority of lithic scatter sites and, importantly, having the greatest potential for the recovery of intact sub-surface data. Additionally, the large surface collection recovered in the 2005 season demonstrated the growing effects of deep ploughing that endangered the site. The seven seasons of excavations were conducted between 2006 and 2013 and have provided a wealth of information and a large material record that is currently under study. The evidence presented below shows the results of a preliminary phasing that illustrates the unique characteristics of the site through

time, while initial analysis of the material assemblage helps to develop the distinctive narrative of late PPNA occupation at Asprokremnos.

The site of Asprokremnos is located at the boundary between the villages of Ayia Varvara and Mathiati, in central Cyprus (fig. 1). It is situated along the east bank of the Yialias River, which runs west to east and empties into the Famagusta Bay facing the Levantine coast. The choice of site location is not fortuitous, but is clearly linked to the availability of water, a riverine habitat that supported the wild pigs, birds, freshwater crab and turtle consumed at the site, as well as basal rocks eroded from the Troodos Mountains that, along with chalks from the surrounding hills of the Lefkara Formation, provided materials for the production of ground stone tools and vessels. The site was positioned on the boundary between the Lefkara chalks (yielding replacement cherts of various qualities)⁽²⁾ and the Pera Pedi Formation (ceding umbers and yellow ochre), while abutting exposures of the lower pillow lavas offer celadonite, a clayish green pigment known as terra verde processed at the site. Similarly, ochre pigments are available from the sulphide deposits occurring a kilometre to the east in the Mathiati-Sia ore body providing brightly coloured iron oxides and hydroxides in an startling array of hues (Troodos Geopark, annex II).

To date, seven seasons of small scale excavation have been yielded c. 3,000 kg of chipped stone, c. 20 kg of pigments and a large ground stone industry numbering

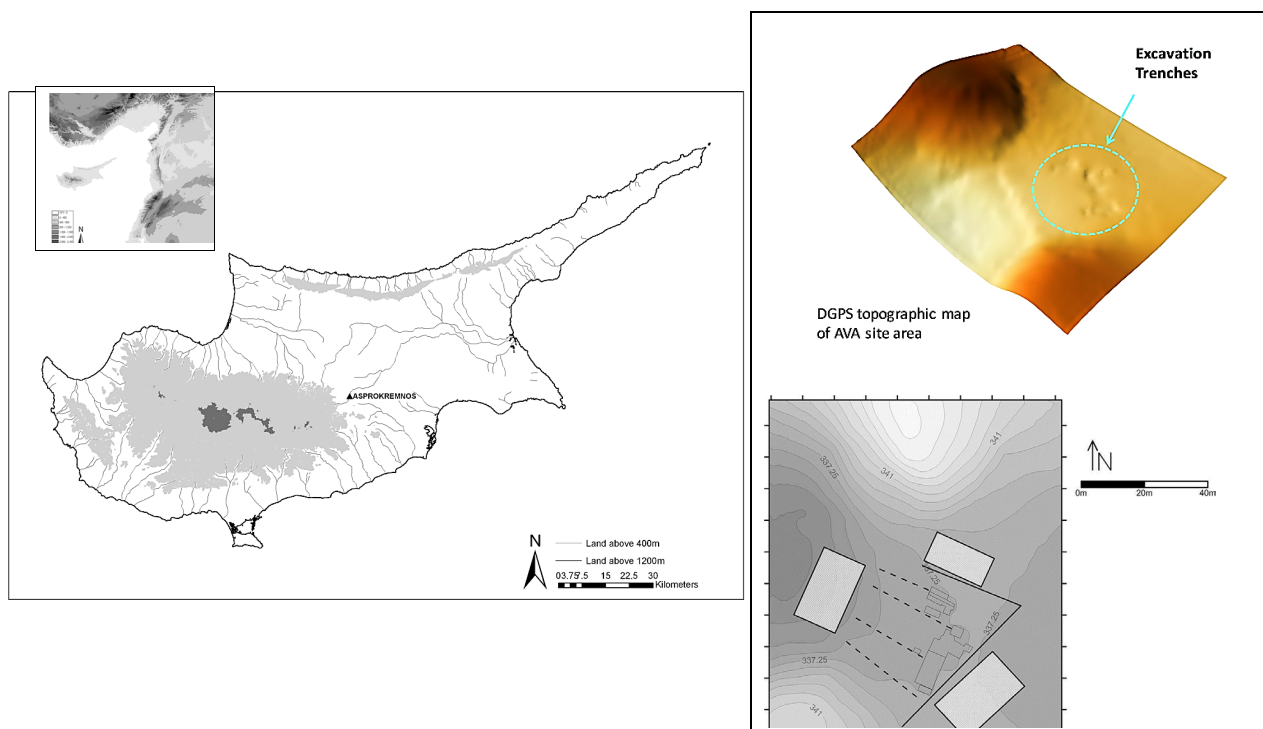


Fig. 1 – Map of Cyprus in the Eastern Mediterranean with site location and GPR survey.

Fig. 1 – Carte de Chypre en Méditerranée orientale avec l'emplacement du site et du sondage GPR.

greater than 1,300 objects made primarily of diabase. In contrast to this abundance of worked material, built structures in the excavated area of the site are limited, numbering four in total. The site is bounded to the south by a hillock that forms one edge of the saddle in which the site is situated at 337 m asl. Extensive geophysical survey using GPR conducted by S. Manning has shown the lack of occupation evidence to the north and east of the site with the only possibility of further evidence for occupation lying immediately to the west of the excavated area. The survey suggests that two possible sub-surface features might be buried in the western terrace below the main site, a possibility that needs to be tested by further excavation.

ABSOLUTE CHRONOLOGY AND SITE PHASING

A tight cluster of ^{14}C dates on six different charcoal samples from securely stratified contexts is associated with the late PPNA occupation of the site, providing a secure absolute age range from the late 10th through the mid 9th millennia cal. BC, contemporary with the site of Klimonas located to the southwest (Vigne et al., 2012 and this volume). The range of calibrated calendar ages at the 95.4% probability level begins at 9141 cal. BC and runs to 8569 cal. BC—the overall range of ages at 2σ or 95.4% confidence is 9141–8569 cal. BC or 11090–10518 cal. BP (Manning et al., 2010; McCartney et al., 2010). While additional ^{14}C samples remain to be fully

analysed, these six dates, when viewed stratigraphically, begin to establish a temporal sequence of occupation for the site (fig. 2).

The four structures found at the site do not form a small village or hamlet, but were used sequentially with a single large structure dominating each of three main phases. The earliest phase is marked by structure F300, as yet undated, which lies beneath the earliest date currently available 8940–8779 cal. BC obtained from context 426, part of a layered dump of stone tools, burnt stone and animal bone that sealed F300 beneath. To the east of F300 lies a substantial dump dominated by chert waste that provides the next two series of dates. The first came from the fill (context 130) of a small pit dug into natural F126 at the base of the northern part of the chert dump giving an average date of 8730 cal. BC. This pit feature was then buried by a series of chert layers (contexts 105, 101 and 99), sealing F126 below and giving an average date of 8579 cal. BC. These two phases are linked stratigraphically to the second significant structure at the site, F848, located immediately south of the chert dump. Finally, following the abandonment of F848, a distinct dark purple Pera Pedi sediment buried F848. This sediment provided a new type of task-scrape (*sensus* Ingold, 1993; described below) contemporary with the third substantial structure F840, situated to the south of F848, and possibly a small neighbouring structure F541 lying immediately to the west.

Closer examination of the three more substantial structures F300, F848 and F840 illustrates a clear decline in the intensity of construction over time. All three structures are circular, semi-subterranean features, but vary

PRELIMINARY ASPROKREMNOS SEQUENCE

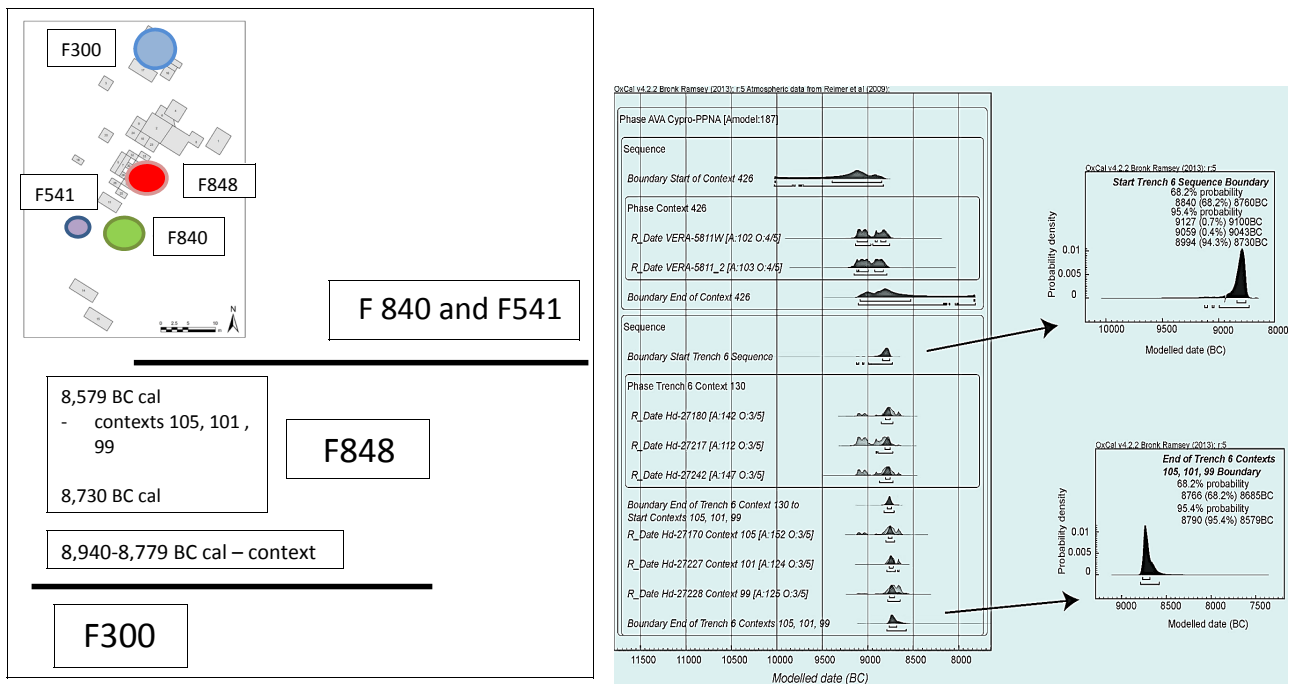


Fig. 2 – Schematic view of chronological sequence.

Fig. 2 – *Vue schématique de la séquence chronologique.*

significantly in construction detail. Feature 300 was not only the earliest structure at the site but also the most elaborately constructed (fig. 3). The steep-sided structure was dug into the soft ‘havra’, a natural, erosional sediment above the bedrock, and had a diameter of 5m. The floor of the structure was not plastered in any way nor were there any sequential ‘floors’ discernible. Investment in the building of this structure can be seen, however, in the wall construction. A broad channel was excavated at the base of the wall around the structure’s interior circumference except a west facing segment interpreted as the entrance. Postholes were then dug into this channel at regular intervals. Because the structure was burned during its final abandonment, evidence of the superstructure was preserved in the form of post impressions embedded within a mud plaster (fig. 4). Clusters of smaller postholes and stake holes, particularly along the northern side of the structure, suggest the possibility of a loft, while larger two pits located more centrally were lined with a thick clay plaster.

In contrast to the above, the second major structure F848 was more simply constructed (fig. 5). The half of the structure exposed to date has a diameter of 4.5 m. F848 is shallow (c. 20 cm), but like F300 had a broad channel was dug at the base of the wall that encircles a flat trampled earth floor. There is no evidence of the in-wall posthole superstructure seen in F300, nor were there clusters of smaller postholes and stake holes dug into the base of the structure. Instead, there were irregular pits positioned in the central part of the floor, which were typically filled with concentrations of ground stone tools, primarily grinders and pounding tools. Continuing

the above trend, the third significant structure F840 is a simple hemi-spherical pit 4.5 m in diameter (fig. 6). There was little on the floor, but a singular central post-hole and a concentration of river stones, some of which had been used as grinding tools. The total lack of elaboration in the structural form completes a sequence of architectural change marked by an antithesis of elaboration, implying that any potential initial thoughts of permanent settlement had been quickly replaced by frequent temporary re-occupation.

NON-CONTINUOUS OCCUPATION

A discontinuous temporality both within and between the structures implies repeated cycles of activity (perhaps seasonal) at Asprokremnos rather than permanent occupation. This is shown, in particular, by the detailed sequences of layering of occupation sediments in F300 and across the central chert dump. As noted above the occupation sediments at the base of F300 lack any coherence as distinct ‘floors’. Instead, patches of ash, trampled earth and occupation lenses accumulated in a relatively random manner. Significantly, usable tools lying beside one ashy lens were buried by subsequent layers as activity within the structure shifted randomly with each visit (fig. 7). This characteristic of the deposition as well as two significant wall collapses (one in the NW edge and the other along the SE section of wall) illustrate periods when the structure appears to have been lying dormant between visits. The storage of larger



Fig. 3 – F300 at the end of excavation.

Fig. 3 – F300 à la fin de la fouille.



Fig. 4 – Detail of wall of F300 with burnt post impressions.

Fig. 4 – Détail du mur de F300, avec des traces de poteaux brûlés.



Fig. 5 – F848 at the end of excavation.

Fig. 5 – F848 à la fin de la fouille.



Fig. 6 – F840 at the end of excavation.

Fig. 6 – F840 à la fin de la fouille.

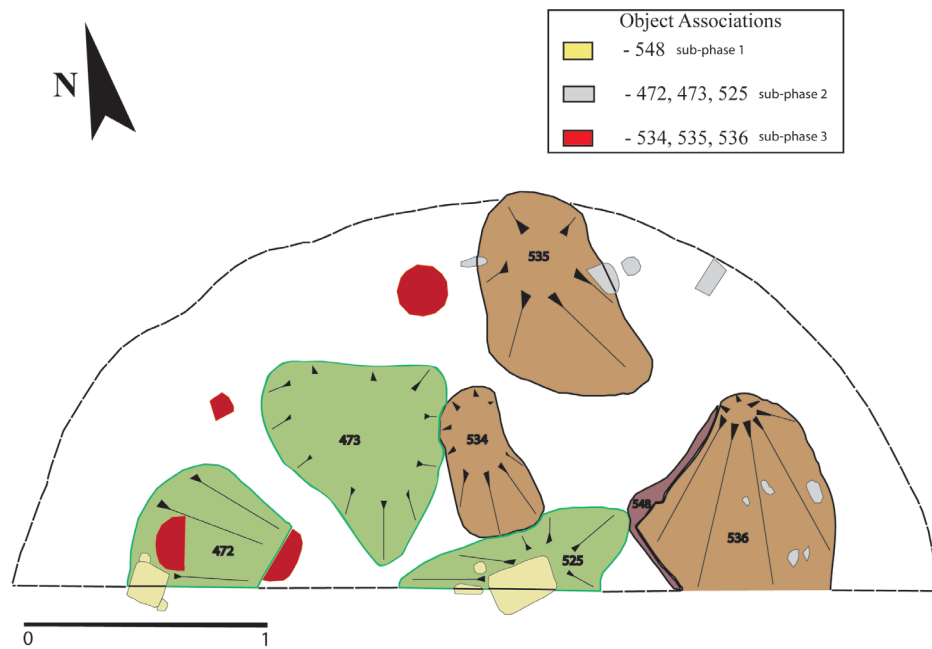


Fig. 7 – Ash lenses in F300.

Fig. 7 – Lentilles de cendres dans F300.

tools such as querns is apparent by their being inverted and placed, along with clusters of hand tools, near the edge of the wall. The act of storing tools by inverting larger querns, clustering smaller hand tools in piles or within small pits is illustrated in each of the structures uncovered at the site, suggesting that each was discontinuously occupied in their own turn.

Layers of deposition in the central dump comprise lenses of pristine unworked blades and other *débitage* (with little sediment in between) that provided a huge store of potentially usable material. Many of the ornaments and special items like the three incised shaft-straightener fragments discarded at the site were deposited in this central dump. Clear clusters of dumping activity were discernible as different sections of the dump came into and went out of use. These lens clusters were typically separated by alluvial sediments (at times relatively thick), suggesting that the periods of disuse occurred during the wetter winter months. These sterile lenses as well as the fact that the site is chilled by mountain winds in the winter suggest seasonal occupation in the late spring and/or summer months. The dark purple sediment sealing F848 and a small hollow immediately to the south were two further working areas where again large stone tools were inverted and hand tools were stored in clusters sometimes centrally or at the feature's edge. With the construction of structure F840, the notion of residence in the structure appears to be clearly abandoned. Starting from the base of the hemi-spherical pit forming the structure hollow, a substantial pile of river stones, ground stone tools as well as animal bone and chert tools were deposited. This pile of stones with bone and broken chert tools appears to have been used as a raw material store for future use. That the structure was

not merely a midden or store is demonstrated by a cluster of stone tools placed along the north-western segment of the feature (fig. 8). Here, at a time when deposition had progressed to the point where a broad bench had formed around the central stone pile, a number of grinders and anvils lay both right and left of a central 'seat'. Additionally, a neatly placed row of grinders was positioned at the foot of the bench. In this context, the discard, storage and work place merged, leaving a rare example of primary as well as secondary deposition.

One further characteristic, the permanent abandonment of the successive structures at Asprokremnos, is illustrated by each structure in turn. In both F300 and F848 thick burnt sediments (c. 20 cm thick) bury the latest occupation activity in each structure. These two structures also show abandonment 'gifts' of anthropomorphic stone objects placed on top of the burned sediments. For F300 this act of bidding farewell was accomplished by a small (10 cm tall) stone bust (G382) placed on its side, while a much larger (31 cm tall) stone statuette (G848), also placed on its side and accompanied by a stone sphere and two flat river rolled cobbles, was used to celebrate the final abandonment of F848 (fig. 9). A similar behaviour involving the leaving a special object on top of the post-abandonment fill was shown subsequently in both F840 and the more diminutive F541, though the type of object was altered in each case. In F840 a unique baked clay 'toggle' was placed on top of the final fill of the feature, while in F541 a large (5.6 cm) incised bluish green stone pendent was placed, again face down, on top of the final fill. The similarity of the behaviour, despite the alteration of the object type, suggests that a culturally linked meaning was shared by each of these structure abandonment events.



Fig. 8 – Work bench in F840.

Fig. 8 – Banc de travail dans F840.



Fig. 9 – Stone concentration marking the abandonment of F848.

Fig. 9 – Concentration de pierres marquant l'abandon de F848.

MATERIAL CULTURE

Subsistence data from Asprokremnos is poor in comparison with that of Klimonas, but the faunal sample displays a similar pattern of wild pig, bird, freshwater crab and turtle in all phases of occupation. Flotation samples have been taken for every in situ context, but their analysis not yet completed. Whether or not cultivated cereals were present at the site, preliminary analysis of the chipped stone assemblage shows that glossed tools are comparatively rare (1.3%) and initial use-wear analysis suggests reeds as well as cereals were cut using the glossed tools (Ktori, 2010; McCartney, 2011, p. 66).

There are clear parallels between the Asprokremnos and Klimonas assemblages in terms of artefact types and technologies, but differences in the dominant arrowhead types, figurines, the ground stone assemblage and site plan indicate that the people occupying these sites were from distinct groups, in spite of the clear late PPNA broad cultural relationship (Manning et al., 2010; McCartney et al., 2010 with references; McCartney, 2011; Vigne et al., 2012). While the assemblage of Klimonas reflects the settlement character of that site, at Asprokremnos the structure of the assemblage is uniquely related to the character of the production taskscapes of the site.

The chipped stone assemblage shows a very high degree of skill that was employed to generate an immense amount of lithic waste, cores and tools. The cores are heavily dominated by unidirectional pyramidal examples used for the production of standardized prismatic blades. Most cores were heavily reduced and exhausted due to diminutive size rather than knapping error. The majority of the material worked is very high quality, though the knappers were able to achieve the same results even when more moderate quality granular Lefkara chert was employed. The intensity both of the amount of material worked and the complexity of the *chaîne opératoire* used, the standardization of the products and the use of a centralized dump for lithic waste imply specialization (Olausson, 1993; Barsilai and Goring-Morris, 2007; Gebel, 2010). Outside of the central lithic dump in all structures but F541 (where a number of *débitage* lenses were recorded) as well as in the work areas that post-date F848, only small samples of chipped stone artefacts dominated by tools were recovered.

Even more than the chipped stone industry, the ground stone industry highlights the specialized character of the Asprokremnos site. The ground stone assemblage recorded for Asprokremnos to date comprises 1,357 objects. Basal stone dominated by diabase was used predominantly for querns, grinding slabs, anvils, grinders and pounders. A small number of stone vessels were created from calcareous stone along with crude small vessel wasters, cup-marked stones and large chalk tablet cutting-boards. Importantly, a substantial number of objects belong to all ground stone types exhibit ochre residues. In F300 the processing of ochre is indicated by ochre residues on a large quern recovered from the floor of the structure where



Fig. 10 – Quern from F300 with ochre residue.

Fig. 10 – Meule de F300 portant des résidus d'ocre.

it had been stored upside down (fig. 10). Tools of this kind more typically associated with the processing of cereals, were used at Asprokremnos for ochre grinding instead. Though comparatively few of the ground stone objects recovered from F300 exhibited pigment residues ($n = 28$), a substantial lump of fused ochre nodules represents a deliberate hoard placed within a large hemi-spherical stone bowl left in situ when the final conflagration precipitated the final abandonment of the structure. With F848 the variability of ground stone types became less diverse. The dominant types from this structure comprise predominantly grinders (approximately 1/3 of which exhibit ochre residues) as well as grinding slabs and pounding tools. This trend is exaggerated in the subsequent structure F840 where grinders (more than 50% of which exhibited ochre residues) clearly overshadow the ground stone sample from the structure (fig. 11). In sum, the focus on the processing of pigments that began with the earliest phase of

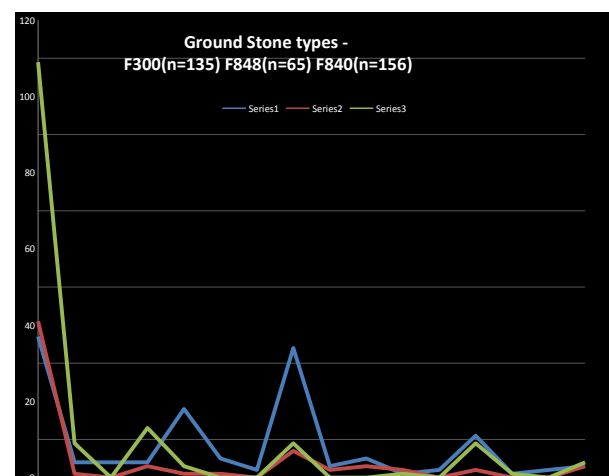


Fig. 11 – Ground stone tool diversity from structures F300, F848 and F840.

Fig. 11 – Outils en pierre polie provenant des structures F300, F848 et F840.

occupation of the site became the increasingly dominant activity pursued.

The increasing ochre specialization is clearly illustrated above F848, where a series of layers of a dark purple Pera Pedi sediment, clearly belonging to a different geomorphological episode, provide evidence of one of two ochre working spaces currently unique in Cyprus. Flat chalk slabs arranged around a roughly circular pile of burnt stone and sediment mixed with ash mark the centre of the larger workshop taskscape (fig. 12). To the north and northwest shallow sterile pit features and sets of small stake holes border the hearth area (the base of two of these features can be seen in fig. 5). Across the workshop area ochre nodules of many different colours were scattered along with a small number of chipped stone tools including scrapers and unretouched, utilized blades. The enigmatic chalk slabs when turned over were revealed as ‘cutting-boards’ that exhibited both ochre residues and cut-marks. The combined assemblage from this area of the site suggests that ochre processing and the tanning of pig skins took place at the site.

DISCUSSION

The stock of knowledge first developed by the late Pleistocene/early Holocene foragers on Cyprus

would have included sea routes, their seasonality, available marine and terrestrial resources, and, thanks to the work of J.-D. Vigne and colleagues (Vigne et al., 2009 and 2014), we know that this knowledge incorporated the transfer of pigs to the island by foragers, with additional species following throughout the Neolithic. Seascape exploration went hand in hand with landscape exploration from which high quality translucent chert (not locally available on the Akrotiri peninsula) appearing together with picrolite indicate knowledge of the terrestrial terrain beginning in the late Epipalaeolithic. Subsequent development of the sites at Klimonas and Asprokremnos appears to enhance this local knowledge, while bringing a novel late PPNA material culture to Cyprus. The PPNB sites of Shillourokambos, Mylouthkia, Tenta, Ayis Yeorkis and Akanthou suggest the expansion of sea routes with new faunal, floral and material culture transfers to the island. The exchange of obsidian became more intensive at this time (Briois and Astruc, this volume), while a local Cypriot Neolithic was taking root. This evidence suggests that we should consider the development of the Cypriot Neolithic as additive, with the development of local identity not in isolation, but from definition in relation to the older mainland identity in an act of becoming. By the Khirokitian a more Cypriot Aceramic Neolithic identity was well-established, though a shift in the island-mainland interaction from the Northern Levant is shown by the decline of



Fig. 12 – Ochre working area stratified above F848.

Fig. 12 – Zone de travail de l'ocre stratifiée au-dessus de F848.

obsidian imports and the appearance of engraved stones with parallels in the Southern Levant (McCartney, 2007).

More specifically, the evidence collected to-date by the EENC Project and ongoing research at the late PPNA site of Ayia Varvara Asprokremnos permits the investigation of an alternative temporality to contemporary Klimonas wherein Neolithic seafaring may be explored. It has been suggested by J.-D. Vigne et al. (2014, p. 66) that voyaging between Cyprus and the mainland had to have been relatively frequent in order to permit the multiple introductions of faunal species that we see in PPN sites on the island and to avoid the divergent evolution of domestic mice. They impose a new dichotomy, however, following A. J. Ammerman (2010) linking voyaging to forager seafaring specialists, who acted as ferrymen for the land-loving Neolithic farmers (Vigne et al., 2014, p. 167–70). Though a distinction between sedentary farmers and seafaring-foragers sets up the interesting possibility of inter-communal interaction, it suggests that contemporary foragers were pre-Neolithic and the pull of farming led very recently converted foragers to forget any skills but those related to farming. A singular dichotomy between inland farmers and coastal foragers fails to account for inter-site variability such as the use of limpets in the diet of coastal PPNB inhabitants at Mylouthkia or the specialized mineral focus at inland late PPNA Asprokremnos. It is similarly impractical to look for a singular opposition that spans the PPNA to the Late Neolithic in particular as both final PPN Cap Andreas and LN Paralimni show economies combining terrestrial and marine resources. Additionally, as suggested by E. Peltenburg (2004, p. 19): “...island communities probably had their own links with kin, allies and trading partners on the mainland,” and we should consider whether all groups occupying the island were indeed ‘colonists’ rather than explorers and specialists looking for commodities for exchange with such mainland partners.

The focus on Neolithic seafaring entails the necessity of considering two-way traffic between Cyprus and the Levant (Vigne et al., 2014, p. 166). Direct evidence such as the animal transfers and exotic materials like obsidian clearly illustrate that exchanges were pursued via movement across the sea. But in relying on subsistence data and the presence/absence of exotic material indicators like obsidian, do we overlook other kinds of evidence? The site of Asprokremnos provides a clear example of intensive resource exploitation that can be viewed as the use of the island of Cyprus for more than just settlement during the Neolithic. This interpretation implies first, that different Neolithic groups crossed to Cyprus for a variety of reasons rather than an exclusive goal of sedentary farming, and second, that seafaring need not have

been the sole domain of forager ferrymen. The Neolithic was revolutionary for more than subsistence change. The exponential growth of material culture that accompanied greater sedentism requires that we also consider early specialized production and exchange as part of the broader Neolithization process.

Evidence provided by Asprokremnos shows that this economic diversity also arrived early to the island of Cyprus. Mineral pigments processed at the site and perhaps stored and transported in leather bags were produced in large surpluses that clearly exceeded the needs of the people occupying the site. To date only two objects excavated from Asprokremnos were decorated with ochre (the figurine left with the F300 abandonment and a stone bowl fragment showing faint red parallel painted lines).

The comparatively small ochre finds from Klimonas does not equate with the large surplus and production evidence at Asprokremnos (J.-D. Vigne, personal communication). Ochre and other mineral pigments were often traded over long distances in antiquity, a type of exchange that fits well the evidence from Cyprus currently available. The choice of site location, site plan and development, object types and the production of large surpluses of both ochre and chipped stone blades and fine arrowheads combined suggest that mineral and stone commodities, not farm land, were the focus of habitation at Asprokremnos (Gebel, 2010). This surplus, together with evidence for repeated abandonments, implies that the occupants of the site were craft specialists who likely operated within the broader Eastern Mediterranean sphere. The fragile nature of pigments like ochre and the ubiquitous availability of iron oxides as well as cherts (flint) make sourcing comparisons a daunting prospect, but one possible mainland client is suggested by a couple of red coloured arrowheads from Göbekli Tepe (Schmidt, 2011, fig. 3) that would be at home in the Asprokremnos assemblage.

NOTES

- (1) The EENC is an international collaboration between the University of Cyprus, Cornell University and the University of Toronto under the direction of Dr. C. McCartney and Dr. V. Kassianidou, Prof. S. Manning, and Dr. S. Stewart respectively. The responsibility for views expressed in this paper, however, rests solely with the author.
- (2) The term ‘chert’ is used here following the designation used by the Geological Survey of Cyprus. Cherts worked at Asprokremnos are typically of a very high quality frequently called flint elsewhere. The use of the term flint in Cypriot Archaeology to designate the object type, however, has rendered the latter meaningless in terms of material quality.

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