

# **The State of the Stone Terminologies, Continuities and Contexts in Near Eastern Lithics**

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and Osamu Maeda**

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# PPN predecessors: current issues in Late Pleistocene chipped stone analyses in the southern Levant

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## Introduction

Understandings of how cultural processes and change can and are articulated in the archaeological record underpin notions of our ability to identify social groups or specific cultural groups in the final Pleistocene of the southern Levant, and have at times been controversially discussed (see below). Most researchers would agree, however, that the genesis and evolution of material culture assemblages are based on a complex system of influences, which include technological constraints and choices, learned patterns of social behaviour, cultural contact and exchange of ideas, practical-adaptive considerations, specific and contextual understandings of appropriate and inappropriate behaviours, and so on. Despite this basic level of agreement, the debate about the utility of having multiple or few cultural labels lingers on in many publications dealing with this crucial period. It is clear that the differences between ‘lumpers’ and ‘splitters’ are rooted in more fundamental, theoretical, concerns which may go beyond the exercise of classifying chipped stone assemblages. In this workshop, we aimed to stimulate discussion of these, perhaps controversial, issues in order to move towards a more widely applicable outlook and framework in which to study and interpret late Pleistocene lithic assemblages. We hope this focus will also enhance the understanding of the socio-cultural processes underlying the emergence of Neolithic chipped stone assemblages, but through an examination of

the Epipalaeolithic in its own right. We hope to come away with stimulating ways to reach a more holistic conceptualisation of the late Pleistocene, one that, of course, considers more than just stone tools.

## Goals of the PPN predecessors session

Our aims in organising this session were two-fold. First, with a trend towards fewer Epipalaeolithic sites currently being excavated in the southern Levant, we felt that Epipalaeolithic research was in danger of falling by the wayside to an increasing focus on the Neolithic periods. Yet, from our perspective, if we really want to understand the Neolithic and, particularly, the impetuses for many of the major technological, social, and economic changes that are generally thought to characterise it, it requires us to contextualise them against the socio-cultural processes that occurred in the preceding Epipalaeolithic. This is especially true with regard to the emphasis placed on evidence for cultural changes which are supposed to first appear during the late Epipalaeolithic and which become further entrenched in the Neolithic, including sedentism, storage, cemeteries and semi-permanent architecture (e.g. Verhoeven 2004; Byrd 2005; although see Boyd 2006). Arguably, in comparison to the large number of substantial Neolithic sites being excavated throughout the Levant (e.g. ‘Ayn Abu Nukhayla, Wadi Faynan 16, Ba’ja, Motza, Kfar HaHoresh, Domuztepe, Shkarat M’seid, Jerf el-Ahmar, Tell Aswad, Göbekli Tepe), little new data is being generated from Epipalaeolithic sites, although there are notable exceptions (e.g. see Nadel 2002; Grosman 2003; Garrard and Yazbeck 2003; Nadel *et al.* 2004; Valla *et al.* 2004; Maher 2005; Lengyel *et al.* 2005; Grosman and Munro 2007; Maher 2007; Maher *et al.* 2007; Richter 2007). Furthermore,

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many critical research questions that directed Epipalaeolithic research in the 1980s and 1990s remain unresolved and, until we address them with both new data and new analytical approaches, remain as an impasse to an encompassing and comprehensive understanding of the long-term changes involved in the beginnings of village life and agriculture.

As a result of our own analyses of chipped stone assemblages from sites in the southern Levant, we have become increasingly concerned with how one is to deal with the plethora of diverging opinions on defining variability in Epipalaeolithic material culture and how this variability is interpreted in terms of hunter-gatherer behaviour. This was our second motivation for organising this session. The major dataset available to archaeologists studying the Epipalaeolithic is and remains the lithic assemblages, and they form the major (although, certainly not only) basis on which other cultural interpretations are based. Yet, perhaps because of the ubiquitous nature of these lithics, opinions about their analysis and interpretation remain widely dispersed and highly debated. We felt that this conference was an ideal venue for exploring the current state of Epipalaeolithic research on chipped stone and provided a setting in which to converse and move towards a broad consensus on how to understand the nature of Epipalaeolithic chipped stone variability, and what this variability might actually mean in a broader context. With this aim, we briefly situate the problems facing those who study Epipalaeolithic chipped stone industries, followed by a summary of the discussion that followed the paper presentations in which we attempt to draw out some of our wider conclusions regarding Epipalaeolithic chipped stone.

### **Current state of research in the Epipalaeolithic**

During the 1980s and 1990s, Epipalaeolithic research seemed to be at a peak, with numerous field projects dedicated to surveying and excavating these sites as a primary goal (e.g. the Azraq Basin Early Prehistory Project, the Emergency Survey of Negev and Sinai, excavations at Hayonim and Kebara Caves and elsewhere, survey in southern Jordan and Wadi al-Hasa, and so on) and resulted in a multitude of publications (e.g. Valla 1984; Goring-Morris 1987; Belfer-Cohen 1988; Betts 1988; Coinman *et al.* 1988; Garrard *et al.* 1988; Muheisen 1988; Valla *et al.* 1989; Bar-Yosef and Valla 1991 and papers therein; Nadel and Herschkovitz 1991; Bar-Yosef *et al.* 1992; Belfer-Cohen and Hovers 1992; Clark 1992; Garrard *et al.* 1994; Nadel *et al.* 1994; Henry 1995; Nadel *et al.* 1995; Bar-Yosef and Belfer-Cohen 1999). These projects and the data they generated laid the foundations for our current understanding of the period. But, with regards to lithic industries they also highlighted several key questions that persist in Epipalaeolithic research and these are discussed below.

Scholars continue to debate in how far chipped stone assemblages and the patterns discerned in their spatial and temporal distribution can be used to identify social, ethnic or cultural groups in the Epipalaeolithic. Can this variability provide insights into the nature, genesis and evolution of these late Pleistocene groups? Can it help to explain why

some cultural traditions persist, while others change or disappear entirely?

Beginning with the now infamous ‘Neeley and Barton debate’ (Neeley and Barton 1994; Barton and Neeley 1995), we have witnessed a trend towards questioning the connection between lithic variability and cultural or ethnic variability by scholars taking an explicitly functionalist perspective. While many researchers disagreed with Neeley and Barton’s findings (e.g. Fellner 1995a; Kaufman 1995; Clark 1996; Goring-Morris 1996; Henry 1996; Phillips 1996), this debate stimulated research on wider issues, such as how much emphasis should be placed on typological systematics, technological variables, use-wear analyses, context, dating, strategies of artefact recovery, and the role of non-lithic material culture and settlement patterns in identifying cultural entities. As a result, we must now examine on what basis and to what degree we can or should group assemblages together or classify them as significantly different entities.

This latter question raises the issue of the ‘splitter versus lumpen pendulum’ (see also Olszewski 2001a; Olszewski 2001b; Olszewski 2006, 19) and whether the currently large number of cultural labels accurately describes early and middle Epipalaeolithic site inventories (e.g. Belfer-Cohen and Goring-Morris 2002; Henry 1995) in contrast to the late Epipalaeolithic, which has far fewer named entities. Others, in contrast, advocate an approach that avoids an overtly detailed cultural nomenclature, in preference to more general labels, such as non-microlithic or non-Natufian (Byrd 1994; Byrd 1998). As a consequence, our picture of the pan-Levantine landscape populated by hunter-gatherer communities, and the nature of potential interactions between them, remains vague since there appears to be great disparity between approaches to the same archaeological materials. In essence, we are still far from a ‘big picture’ of the Epipalaeolithic, and lithic studies continue to reign strong in our attempts to build one.

The noteworthy contribution of Belfer-Cohen and Goring-Morris (2002) dealt, on a large-scale, with the processes of and possible explanation for microlithic technologies in the southern Levant. Building on this work, and in a continued move away from strictly typological considerations for classifying variability and interpreting cultural affiliation, many researchers turned towards explicitly technologically focused analytical approaches. In a recent contribution to a volume dedicated to the core versus the tool question Belfer-Cohen and Grosman (2007) review varying interpretations of cores versus carinated core scrapers in the southern Levant, and suggest methods by which the analyst can assess core/scrapper attributes for typological or functional assignment. In an in-depth technological study of microlith production Marder *et al.* (2006) examined the production of Natufian lunates at ‘Ein Mallaha, and in particular were able to resolve differences in production between Early and Late Natufian phases. In a study of the largely unpublished Natufian lithics from Nahal Oren, Grosman *et al.* (2005) were able to trace a technological continuation between Natufian and Neolithic occupation at the site, and

place the previously unassigned assemblage within the Late Natufian.

Compared to typological and technological avenues, very little literature focuses on the possible functions of microliths, especially in the early and middle Epipalaeolithic (although see Tomenchuk 1985). Following others (Valla 1984; Valla *et al.* 1991), Richter (2007) argues that the use-wear traces on a wide array of Natufian microliths indicate that many of these tools served a variety of different functions. These studies suggest that we need to consider the entire spectrum of Epipalaeolithic lithic manufacture, from procurement and production to use and discard, in a holistic manner and with the aim of understanding the operations of both technical systems and their connection to other socio-cultural processes better. Aspects of social learning, technological traditions and, to some degree, a level of group identity may be 'squeezed' from these artefacts. The element of human choice *vis-a-vis* the constitution of social structures and how these were implemented and reproduced plays an important element here.

In sum, a significant area of Epipalaeolithic research, particularly as regards lithic studies, revolves around how to interpret variability in the microlithic tool classes, and whether or not we can meaningfully discern cultural patterns from this data. This debate is long-standing (e.g. Bar-Yosef 1970; Bar-Yosef 1975; Bar-Yosef 1981; Goring-Morris 1987; Belfer-Cohen 1989; Neeley and Barton 1994; Barton and Neeley 1995; Fellner 1995a, Fellner 1995b; Henry 1995; Kaufman 1995; Goring-Morris 1996; Phillips 1996) and continues to undergo scrutiny. With an ever-increasing number of industries, facies, and complexes being named, Olszewski (2001a; Olszewski 2006) and others now directly address the splitter-lumper dichotomy and advocate a critical re-assessment of the validity of these names (see also Olszewski this volume). In addition, functional attributes (Richter 2007) and rigorous statistical approaches (Stutz and Estabrook 2004) to microlithic assemblages, as well as non-lithic lines of evidence (e.g. see papers in Goring-Morris and Belfer-Cohen 2003; Delage 2004; Hardy-Smith and Edwards 2004; Pirie 2004; Boyd 2006) are increasingly adding to this debate.

We think that the papers presented in the PPN Predecessors session contributed valuably to these particular issues. Although, no definitive answers to these questions are put forward here, the PPN session and discussion it stimulated reinforce the shared importance we place on addressing how we define assemblages and understand variability in current and future Epipalaeolithic research. The PPN session served, not only as an opportunity for presenting new lithic data, but also contributed to our understanding of the role of chipped stone in our reconstructions of Epipalaeolithic and emerging Neolithic societies. In that spirit, it provoked an open discussion of data and ideas where, in the words of one of our participants (N. Goring-Morris), we talked to each other, in order to motivate and promote continued interest in the Epipalaeolithic.

### Can we reach a consensus?

Four papers were presented in this session: two data-driven papers presenting preliminary results and analyses from new excavation seasons in eastern Jordan and north-western Syria, and two more synthetic papers exploring current research themes in the Epipalaeolithic. A further paper included in the present volume, but not discussed here in detail (Delage this volume), debates the issue of Natufian lithic industry expediency, arguing that the Natufian lithic industry reflects a complex set-up of operational sequences. Here, we contextualise these papers and the general discussion that followed the presentations within the framework of the research issues mentioned above. Generally, the papers centred around three main topics. What do we mean by social identity and how can it be assigned on the basis of the archaeological evidence, specifically chipped stone? How should Epipalaeolithic entities be defined and on what basis should nomenclatures be kept or abandoned? Specific issues arising from the individual papers were also discussed.

A general agreement was reached by session participants that the formation of Epipalaeolithic chipped stone assemblages – as any other such assemblage – is the result of many complex factors, including and not limited to human agency as mediated through practical and social parameters, environmental and landscape variables, raw material availability and use, taphonomic processes, and artefact recovery methods (see in particular Delage this volume). At the same time, given that there are clear cases in which an argument can be made to exclude other factors of assemblage composition, in particular with regards to technology and microlith typology, social-cultural parameters influencing the manifestation of lithic assemblages can, and should, be discussed (e.g. Delage this volume). Numerous participants stressed that cultural tradition, which remain loosely defined here, must be considered a decisive aspect in explaining the nature and longevity of some assemblages. As stressed in the paper by Richter (this volume), and by Bar-Yosef and Goring-Morris during the discussion, the socially-embodied learning of technological traditions of how to reduce a core, produce blanks, and retouch microliths, is key to linking the characteristics of lithic assemblages to such cultural patterns. It remains open to debate, however, as to how far such patterns or "traditions" can be related to social or ethnic identities. Recognising that an array of social identities may have existed in the Epipalaeolithic, and likely encompassed multiple dimensions of identity such as ethnicity, gender and other ideologies, the problem of correlating or relating any of these to patterns in chipped stone assemblages remains unresolved. However, Bar-Yosef in particular, suggested that we require a more explicitly anthropological perspective on stone tool production and that we should use this to address these issues more adequately.

The detailed review of the use of various industry labels by Olszewski (this volume) in the case of Wadi al-Hasa, and Belfer-Cohen and Goring-Morris (2002) on a regional Levantine scale, demonstrates that some labels for cultural entities appear misconstrued. Many of the session participants conceded that at present the plethora of cultural labels

was, at best, confusing and, at worst, counter-productive. A review of currently available data suggested to Olszewski (this volume and see Olszewski 2006) that the term Qalkan for the early Epipalaeolithic industries of eastern and southern Jordan is ill-defined. As it is based on the presence/absence of an extremely rare tool type, the Qalkan point, it cannot be used securely to define a cultural entity and should be henceforth abandoned. Goring-Morris and Belfer-Cohen reiterated this sentiment and emphasised that our industry or complex labels must be based on scrupulous study of large datasets from numerous, well-defined and well-dated sites and must consider multiple lines of evidence. The participants' feeling was that it was insufficient to define an industry on the basis of just a few seemingly diagnostic tool types. Indeed, it seems that a general consensus was reached by the participants to discontinue the use of the term Qalkan, at least outside of southern Jordan. It was also noted that the use of other labels, that have a very narrow geographical or temporal range, require much more verification before they are widely accepted or applied in a much broader sense.

In discussing the various terms used for the Epipalaeolithic occupations at Tor at-Tariq, Olszewski (2006; this volume) grapples with the issue of industry naming and comes up with several possible solutions, including that generic labels are unhelpful, but also that the microburin divide, that is, the apparent spatial difference in use of the microburin technique in the Early Epipalaeolithic, with its early appearance east of the Rift Valley and absence west of the Rift Valley, seem to hold (see also Stutz and Estabrook 2004; Olszewski 2006). Again, consensus was reached by the participants that avoidance of naming industries or using generic names (i.e. Byrd 1994) is as equally, if not more, unhelpful as over-naming, because it obscures too much detail and inhibits resolution of widespread temporal and spatial variability.

Nishiaki (this volume) presented new data from recent excavations by the University of Tokyo on the late Epipalaeolithic of north-western Syria, at the site of Dederiyeh Cave. The presence of several phases of semi-subterranean circular dwelling, a blade-based lithic assemblage with Helwan lunates and other features of the southern Levantine Natufian, shell beads from the Mediterranean and Red Seas, suggests that during the Late Epipalaeolithic connections between this area and the south may have been stronger than previously assumed. Although sharing attributes of both the Upper Euphrates and southern Levant, the evidence presented for interaction with Natufian groups from outside of the immediate region of the site highlights the potential complexity of exchange and interaction over vast distances during the Epipalaeolithic. This further suggests a significant level of cultural variability in a once-seemingly homogenous Late Epipalaeolithic cultural landscape.

Goring-Morris and Belfer-Cohen provided us with an explicit structure for the Epipalaeolithic, based on several decades of excavation and compiled from the in-depth analysis of literally hundreds of Epipalaeolithic assemblages. Aside from advocating explicit and clear geographical and temporal definitions – in order to facilitate discussion in

which we all speak about the same things – they outlined their conceptual framework for the Epipalaeolithic as it has built up, been refined and evolved over the years. Indeed much of the discussion for this session was focused around the issues brought up during their paper, including the use of (and for some participants, caution for) a cultural-historical paradigm, consideration of basic stratigraphy, incorporation of absolute dating and seriation, as well as attempts to elucidate typology, tool function, and reconstruct the *chaîne opératoire*. One issue touched upon, but not elaborated, revolved around methodology in lithic analysis. It was clear from the session contributions and participants' comments that further advances in defining both lithic tool types and industries or complexes must be made. This was especially apparent in Nishiaki's presentation, where our adherence to specific tool types (i.e. Helwan lunates) as 'belonging' to specific southern Levantine cultural entities (i.e. the Early Natufian) obscures the nature of relationships between the southern Levant and areas to the north, and indeed, requires further scrutiny as these tools (and other non-lithic features) appear in assemblages outside the 'Natufian homeland'. Although no consensus was firmly established and the session served best to highlight work in progress, agreement on some issues was reached (see above) and it was stressed that we can only (and should) work towards this goal through continued collaboration and communication.

#### **Where do we go from here? Future avenues of research**

Here is what we, and we hope other participants, took away from the session – a commitment to move towards a more widely applicable outlook and explicit framework in which to study and interpret late Pleistocene lithic assemblages and the widely-acknowledged importance of incorporating new methods of analysis, including scientific analyses of all kinds, to reach a more holistic conceptualisation of the late Pleistocene, or the 'big picture', if you will.

We want to point out that we do not advocate that lithics alone hold the answers to any of the questions raised, just that we have highlighted them, perhaps over other lines of evidence because of the nature of the workshop. We are now in a good position to be able to incorporate a wide range of related lithic data in our attempts to address some of these above-mentioned questions about Epipalaeolithic entities, including use-wear studies, refitting studies, residue analysis, and so on. Integration of these data with that obtained from other avenues, such as faunal and floral or isotopic analyses of seasonality or sedentism, skeletal analyses from the mortuary record, or landscape studies to reconstruct past environmental parameters, all provide complementary datasets useful for addressing the issues raised during this session, namely, better discerning cultural and biological affinities.

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and we owe that fact to both the presenters and all of those who attended.

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