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Epipaleolithic shell beads from Damascus Province, Syria

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ABSTRACT

This paper presents an overview of three Paleolithic sites excavated in southwestern Syria between 1999 and 2007. The sites were discovered as part of a large-scale, regional survey conducted in Damascus Province by a multidisciplinary research team from the University of Tübingen. We focus on the Epipaleolithic shell assemblages from Baaz Rockshelter, Kaus Kozah Cave and Ain Dabbour Cave, examining the distribution of species and their potential relationship to group and personal identity. The four most frequent taxa include the gastropods, *Columbella rustica*, *Theodoxus* cf. *jordani*, and *Tritia gibbosula* (formerly known as *Nassarius gibbosulus*), as well as scaphopods. Most of the shells are perforated or, in the case of scaphopods, segmented. These taxa count among the most common shell beads observed at Upper Paleolithic and Epipaleolithic sites of the Levant, although their proportions change over time. Other taxa are also present, but to a much lesser degree, and often occur as unique specimens. We compare the shell assemblages from these localities to similar contexts in Syria, Israel and Jordan. The shell taxa observed are consistent with other Epipaleolithic sites. We hypothesize that the most common shells at Baaz, Kaus Kozah and Ain Dabbour signify group identity, although the proportion of scaphopods is considerably less than that observed from the wider region. We also posit that the unique specimens are an indication of personal identity, standing in contrast to the shared group identity shown by the most common shell taxa.

1. Introduction

Marine shell constituted an important resource for prehistoric people, providing nutritional, technological and socio-cultural benefits. Shell is a durable material and, like stone, is often well preserved at archaeological sites. The recent growth in multidisciplinary studies related to shellfishing focuses on a variety of topics, including the acquisition of marine resources and changes in subsistence (e.g., Steele and Klein, 2005, 2008; Clark and Kandel, 2013; Dusseldorp and Langejans, 2013; Klein and Steele, 2013; Will et al., 2016). Another focus is the production and use of shell beads and tools in conjunction with their implicit technological and socio-cultural benefits (e.g., d'Errico et al., 2005; Bouzouggar et al., 2007; Kuhn and Stiner, 2007; Bar-Yosef Mayer et al., 2009; Zilhão et al., 2010; Douka, 2011; Douka and Spinapolice, 2012; Stiner et al., 2013; Joordens et al., 2015; Langley et al., 2016). The research also addresses shellfish biology, taphonomy and seasonality (e.g., Teske et al., 2007; Jerardino et al., 2014), as well as isotopic, chemical and experimental studies (e.g., Vanhaeren et al., 2004; Perlès and Vanhaeren, 2010; Tátá et al., 2014).

Very early evidence for the use of aquatic food resources by early hominins comes from the Turkana Basin at 1.95 Ma with the remains of turtle and catfish (Archer et al., 2014). Sporadic evidence in East Africa suggests that hominins continued to use aquatic food resources during the Early Pleistocene. Freshwater mollusks become visible in the archaeological record of Java about 500,000 years ago, as shown by the remains of shell tools and engraved shells (Joordens et al., 2015). These temporally and geographically isolated examples show that aquatic food resources have long played a role in the socio-economic systems of early hominins, and served a technological function as well.

The early record for marine shellfishing is patchy, but this behavior first appears in the archaeological record of southern Africa at about 164,000 years ago (Marean et al., 2007; Jerardino and Marean, 2010) and in Mediterranean Spain about 150,000 years ago

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(Cortés-Sánchez et al., 2011). In southern Africa during MIS 5, marine shellfishing becomes well established in the behavioral repertoire of hominins (Volman, 1978; Thackeray, 1988; Avery et al., 2008; Langejans et al., 2012; Kyriacou et al., 2015).

Between 130,000 and 70,000 years ago, perforated shell ornaments make their debut in the Levant (Vanhaeren et al., 2006; Bar-Yosef Mayer et al., 2009), northwestern Africa (Vanhaeren et al., 2006; Bouzouggar et al., 2007; Eiwanger et al., 2012) and southern Africa (Henshilwood et al., 2004; d'Errico et al., 2005, 2008). In Europe shell tools appear about 110,000 years (Douka and Spinapolice, 2012; Romagnoli et al., 2015), as do shell containers for ocher processing toolkits 100,000 years ago in southern Africa (Henshilwood et al., 2011). While marine assemblages of shellfish are more often connected with modern humans, the association of Neanderthals with shell is also clear (e.g., Stiner, 1994). Shell remains, some of which have been retouched into scrapers, are found repeatedly at southern European Neanderthal sites (Cortés-Sánchez et al., 2011; Douka and Spinapolice, 2012; Romagnoli et al., 2015), although the ornamental use of shell seems to occur less frequently (Zilhão et al., 2010).

With the onset of the Upper Paleolithic, the systematic production of shell beads becomes evident in Eurasia: more shell beads from more species turn up at a greater number of archaeological sites (e.g., Reese, 1982, 1995; Bar-Yosef, 2005; Vanhaeren and d'Errico, 2006; Álvarez-Fernández and Jöris, 2007; Stiner et al., 2013; Bosch et al., 2015; Gutiérrez-Zugasti et al., 2015). This pattern continues through the Epipaleolithic. By the late Epipaleolithic with the advent of the Natufian, shell beads are commonplace, with ever greater diversity and numbers. This intensification continues into the Neolithic with the addition of increasingly diversified technologies (e.g., Bar-Yosef Mayer, 1997, 2005; Ridout-Sharpe, 2015).

Despite a marked diversity of species among shellfish remains, the earliest preserved bead assemblages are dominated by the gastropod *Nassarius* (Bar-Yosef Mayer, 2015), which in this paper will be referred to as *Tritia*, in keeping with the latest genetic study of this genus (Galindo et al., 2016). This pattern appears to be widespread, whether the site is located in the Levant, the Maghreb, or southern Africa. In the Levant, the preference for *Tritia gibbosula* (formerly known as *Nassarius gibbosulus*) continues into the beginning of the Upper Paleolithic, most notably at Üçağızlı (Stiner et al., 2013) and Ksar 'Akil (Bosch et al., 2015). However, it is only during the Aurignacian that beads of *Tritia* become common in Europe (Vanhaeren and d'Errico, 2006).

During the early Upper Paleolithic a new identity emerges, as modern humans increasingly selected another gastropod, *Columbella rustica*, over *T. gibbosula* at several Levantine sites including Üçağızlı, Ksar 'Akil and Manot Cave (Stiner et al., 2013; Bosch et al., 2015; Tejero et al., 2016). At Sefunim Cave we see an overwhelming preference for *C. rustica* during the Levantine Aurignacian (Shimelmitz et al., 2017). While other species may abound, for example *Phorcus turbinatus* and *Glycymeris* sp. at Ksar 'Akil (Bosch et al., 2015), we generally note a predominance of one or two species in a given assemblage. Furthermore, the distance of a site from the coastline likely plays a role in the abundance and frequency of shell species. Based on ethnographic studies, sites further away from a coastline tend to yield fewer shell remains (Bigalke, 1973).

During the late Epipaleolithic, scaphopods (often of the genus *Antalis* sp. from the Mediterranean, or *Dentalium* sp. from the Red Sea and fossil occurrences) become the key signature of Natufian assemblages (Reese, 1982, 1995; Bar-Yosef Mayer, 2005, 2008; Kurzawska et al., 2013). Then as the Neolithic begins, it seems that no single species predominates (Bar-Yosef Mayer, 1997; 2005); rather, variability in shell species becomes the hallmark. However, some sites may demonstrate this trend starting already in the Epipaleolithic (e.g., Stiner et al., 2013: Fig. 7).

In this article we present three Epipaleolithic sites in southwestern Syria located about 90 km from the Mediterranean coastline. We describe the molluscan assemblages recovered from these excavations and compare the results with selected sites dating to the end of the Pleistocene. We hypothesize about the nature of shell beads as they might relate to group and personal identity at a time when patterns of subsistence began to change in the Levant.

2. Research history

The Tübingen-Damascus Excavation and Survey Project (referred to as TDASP using its German acronym) was conceived as a long-term, multidisciplinary research initiative to investigate the archaeology and paleoenvironment of southwestern Syria. From 1999 until 2010, the TDASP team focused its efforts in the foothills of the Anti-Lebanon Mountains in the Qalamun region around the villages of Jaba'deen, Ma'aloula and Yabroud, 40–60 km northeast of Damascus (Fig. 1). Further plans in the field were curtailed by the onset of war in Syria.

The project built upon Rust's (1950) pioneering work in Wadi Skifta at Yabroud and benefited from surveys conducted by Suzuki and Kobori (1970) and Bakdach (2000), as well as further excavations by Ralf and Rose Solecki (1966, 1987/1988). Over the course of eleven years, TDASP's systematic surveys documented 598 new localities between elevations of 800 and 2350 m above sea level, spanning the Lower, Middle and Upper Paleolithic, the Epipaleolithic, and even the Neolithic (Conard, 2006; Bretzke et al., 2011).

The survey led to the identification of three stratified Paleolithic sites which yielded shell remains (Fig. 1). The first site, Baaz Rockshelter, was identified on the first day of field work in May 1999. The TDASP team excavated at Baaz in the autumns of 1999, 2000 and 2004, recovering finds from the Upper Paleolithic, Epipaleolithic and Neolithic occupations (Conard, 2006; Hillgruber, 2010; Bretzke et al., 2017). Excavations at the second site, Kaus Kozah Cave, ran from 2004 to 2006 and yielded materials from Middle Paleolithic, Epipaleolithic and Neolithic contexts (Conard, 2006; Hillgruber, 2010; Conard et al., 2013). The third site, Ain Dabbour Cave, was identified in 2005, and excavated in 2006–2007, with finds attributed only to the Geometric Kebaran (Conard et al., 2008; Hillgruber, 2010).

The survey region is located in the eastern foothills of the Anti-Lebanon Mountains at the southwestern end of the Palmyrides chain. The three excavated sites range in altitude from1430 to 1530 m above sea level and are situated at the base of a northeast-southwest trending, Oligocene limestone cliff that stretches from An-Nabk, south to Damascus. We identified seven main geomorphic zones that mirror the topography and constrain how Paleolithic people made use of the landscape [see Dodonov et al. (2007) for clarification of terms]. Baaz is a shallow rockshelter along a prominent stretch of the cliffline, rising more than 100 m above the lowlands. The site is situated high above Wadi Jaba'deen, a conduit that connects the lowland hills and fans (1200–1400 m) with the highland hills and plateau (1600–1800 m). Kaus Kozah is a deep cave with two adjacent entrances, and people mainly occupied the terrace in front of the entrances. The site is located on the cuesta behind the cliffline and lies above Wadi Ma'aloula, providing a well-protected vantage point and affording easy access to the highland hills and plateau. About 20 km to the northeast, and just 2 km from Yabroud, Ain Dabbour is located along an important valley that