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Symbolism among the last hunter–fisher–gatherers in northern Iberia: Personal ornaments from El Mazo and El Toral III Mesolithic shell midden sites

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ABSTRACT

L. obtusata and *Trivia* sp. shells were systematically used for personal ornamentation by groups who occupied northern Iberia during the Mesolithic. The shells from El Mazo and El Toral III (Asturias, Spain) offer a unique opportunity for investigating raw material procurement, selection strategies, and manufacture processes developed by Asturian Mesolithic societies for beads production. By combining taphonomic, morphometric, and microscopic analyses, our results show that the shells were introduced and transformed in the caves. Mollusk consumption at the sites and bead manufacture indicate that the sites were occupied for both economic and symbolic purposes. The use of similar shell beads by contemporaneous societies located in different environments (coastal and interior) and relying on drastically different subsistence strategies mirrors the complex circulation network developed by Mesolithic foraging societies.

1. Introduction

The study of littoral adaptations among past foraging societies has become a frequent topic of archaeological investigations over the past 10 years (Meehan, 1983; Cunha et al., 2002; Bartosiewicz et al., 2010; Marean, 2014; Rick et al., 2014). The development of marine and estuarine economies is seen as a major technical, social and cultural adaptation of past human societies (Binford, 1968; Erlandson, 2001; Bicho and Haws, 2008; Balbo et al., 2011; Colonese et al., 2011). Ethnoarchaeological studies have highlighted many different regional cultural trajectories among the coastal foraging communities (Ambrose, 1967; Andersen, 2000; Thompson et al., 2004; Sealy, 2006; Clune and Harrison, 2009; Biagi, 2013).

Along the Cantabrian coast (northern Iberia), systematic coastal exploitation by hunter–fisher–gatherer societies is attested from the Upper Paleolithic (Madariaga de la Campa and Fernández Pato, 1985; Ortea, 1986; Gutiérrez-Zugasti et al., 2013a) and culminated in the central part of the region with the development of the Asturian Mesolithic, characterized by the abundance of shell middens located in rockshelters and caves, and the appearance of characteristic cobble picks termed "Asturian picks" (Gonzáles-Morales, 1982; Clark, 1983). Diet of the Asturian populations has been investigated and characterized as based on the collection of a variety of marine mollusks, but mainly focused on limpets (*Patella depressa* and *P. vulgata*), topshells (*Phorcus lineatus*) and mussels (*Mytilus galloprovincialis*) (Gutiérrez-Zugasti, 2009). Marine fishes, crustaceans and echinoderms were also collected and consumed (Gutiérrez-Zugasti, 2009; Fano et al., 2013). Marine resources were complemented with terrestrial mammal preys, including cervids and wild boar (Gutiérrez-Zugasti et al., 2011; Marín-Arroyo, 2013). Richness of food remains is counter balanced by the scarcity of lithic and bone industries, leading to some scholars to interpret the Asturian shell middens as task specific areas closely linked to inland sites (Straus, 1979; Clark, 2004) and, more recently, to open-air habitation areas located in front of the rockshelters that remain almost unknown (Arias et al., 2015). However, evidence from Mazaculos II (Gonzáles-Morales et al., 1980) and from El Toral III and El Mazo (Gutiérrez-Zugasti et al., 2011, 2014; Noval Fonseca,

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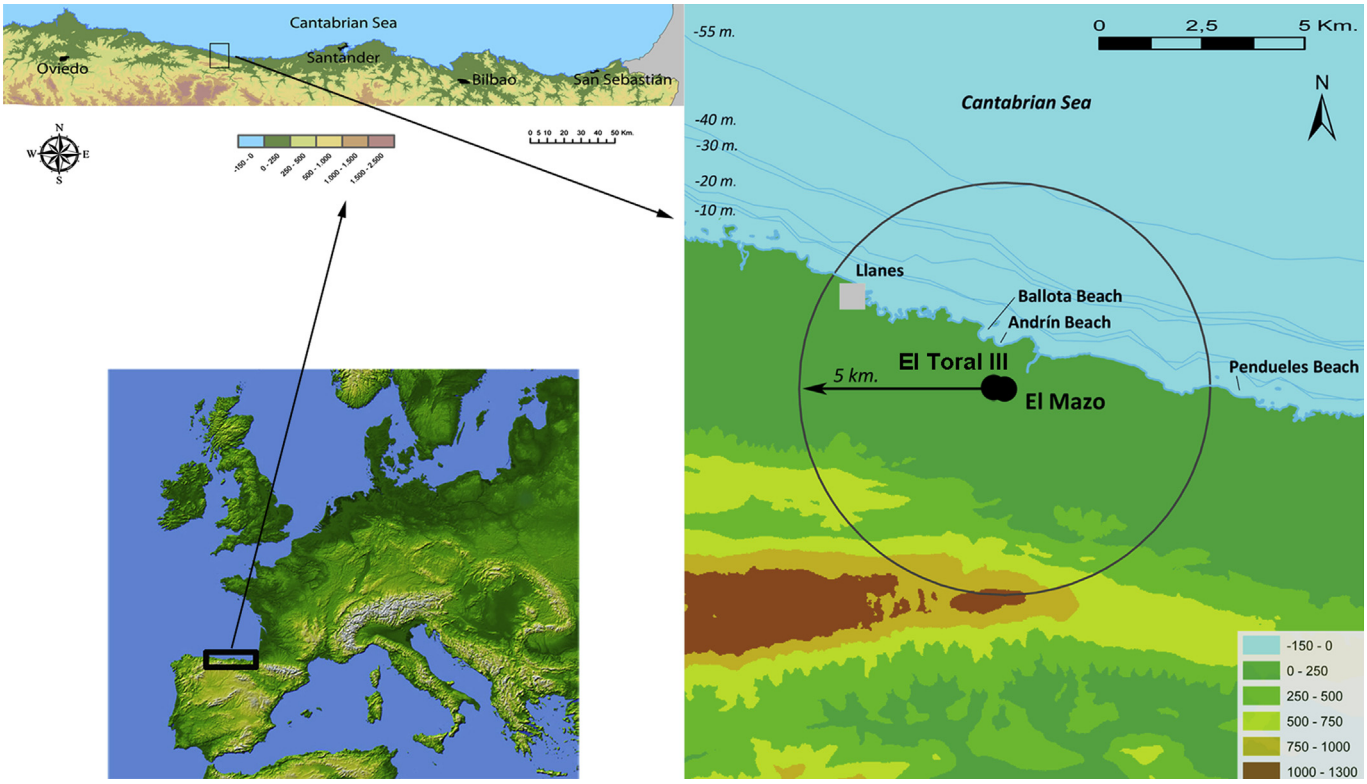

Fig. 1. Location of the Mesolithic sites of El Mazo and El Toral III.

2014), have identified archaeological structures, such as living floors, hearths and post holes inside the shell middens (as well as remains derived from diverse subsistence activities), characterizing them as residential sites. The settlement patterns show that Asturian sites are located less than 5 km from the coastline (Bailey and Craighead, 2003). Paralleling the development of the Asturian coastal societies, the presence of contemporaneous foraging communities in the inland mountainous area is attested (Arias, 2005–2006). The two populations developed specific economic and technical features, linked to the adoption of drastically different diets. The Asturian coastal population produced the shell middens and subsisted on a mixed terrestrial–marine diet while the inland population was focused on terrestrial resources (Arias, 2005–2006). Presence of two distinct foraging populations, which relied on contrasted systems of subsistence and coexisted in a limited area of Northern Spain, provides an opportunity to explore interactions that occurred among segmented foraging societies at the end of the Mesolithic.

It has recently been shown that personal ornaments analysis can contribute in the identification of the territorial organization of societies (Komšo and Vukosavljević, 2011; Rigaud et al., 2014). The presence of this category of artifact at Asturian sites offers new insights on another aspect of the material culture disconnected from the economic activities conducted at the shell middens. In this paper, we aim to determine how coastal adaptation led Mesolithic societies to adopt specific raw material and techniques for the manufacture and use of their personal ornaments. To do so, we study the taxonomy, morphometry, technology and use-wear of several personal ornaments discovered at two Asturian shell middens, El Mazo and El Toral III, and then discuss the organization of the manufacturing process and how this data fit in the regional and European contexts.

2. El Mazo and El Toral: location, description and stratigraphy

El Mazo and El Toral III caves are located in the town of Andrín, belonging to the Council of Llanes, in East Asturias, Spain. The current distance from the sites to the coastline is respectively around 700 m and 1.4 km. During the Mesolithic, this distance would have varied due to the rise in sea level. However, in the last 9000 years, this distance did not exceed 5 km (Fig. 1).

El Mazo rockshelter extends approximately 18 m long and 7 m deep. Two test pits were performed in the inner area of the rockshelter and also in the outer platform during 2009 and 2010 (Fig. 2). Two square meters were excavated in the inner area of the rockshelter (squares V15 and V16) and all the sediment was sieved (4 and 2 mm meshes). Six major stratigraphic units (SUs) were identified corresponding to shell midden deposits: SUs 100/101, 102, 103, 104, 105, 106 and 107. Some of these units included minor units or depositional events that were identified on the profiles at the end of the campaign 2010. Unit 100/101 was formed by two different layers. Units 102 and 106 were composed by archaeological material mixed with carbonate, while Unit 104 was a hearth. Unit 103 included also unit 112, and unit 105 included two additional units: 113 and 120. Finally, Unit 107 was formed by units of similar chronology (110, 111, 114 and 115) identified in subsequent campaigns (see Gutiérrez-Zugasti et al., 2013a,b; Gutiérrez-Zugasti et al., 2014). Radiocarbon dates and archaeological material place the formation of the shell midden during the Mesolithic (Table 1).