
Big things come in small packages - *Columbella rustica* as a Mesolithic ornamental tradition in the Eastern Adriatic Coast

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Résumé

The Eastern Adriatic territory yielded many prehistoric sites, although many of them are underwater due to the sea level rise. The Preboreal (11,700 - 11,000 cal BP) was a time of rapid sea-level rise in the Adriatic region, a phenomenon that continued during the Boreal (11,000 - 9000 cal BP) with the sea levels rising from -41.5 m to -10 m between 9200 BP and 7800 cal BP. The production of beads is well documented during the Mesolithic across the entire Eastern Adriatic region. In particular, at the sites of Pupićina cave, Abri Šebri, Nugljanska cave, and Lim 001 in Istria, Vela cave on the Lošinj island, Zala cave in Lika region, Vlakno cave on Dugi otok island, and Vela spila cave on the Korčula island, marine gastropods (*Columbella rustica*, *Tritia neritea*, *Nassarius* sp.), freshwater gastropods (*Lythoglyphus naticoides* and *Theodoxus danubialis*), and animal teeth (*Cervus elaphus* canine) were selected as raw material for the production of ornaments.

To date, the largest collection of ornaments in the Eastern Adriatic area comes from Vlakno cave. At this site, most of the beads were made of marine gastropod *Columbella rustica*. In this paper we present the results from the technological and use-wear analysis carried out on the ornament assemblage from the Holocene levels (Strata 2 and 3) of Vlakno cave. In particular, we examined perforation techniques on *Columbella rustica* beads through a novel combination of (1) experimental archaeology, (2) technological and use-wear traces analysis and (3) geometric morphometrics. The identification of distinct perforation shapes and use-wear patterns on the archaeological specimens, allowed us to reconstruct the specific type of percussion technique used for producing shell beads at Vlakno cave. Moreover, the analysis of archaeological shell ornaments highlighted (a) a conspicuous amount of beads without traces associated to use; (b) the presence of numerous specimens with fractures interpreted as manufacturing accidents; and c) the presence of numerous unmodified *Columbella rustica* shells, evidence so far recorded only at Vlakno cave.

Based on such data, we discuss the possibility that during the Mesolithic Vlakno cave might have acted as a location for the acquisition of *Columbella rustica* shells and their transformation into ornaments to be distributed across the wider Adriatic region. The existence

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of specific patterns of raw material selection for the production of ornaments identified at Vlakno cave suits the wider ornamental choices documented for the region, suggesting the existence of wide social networks based on shared modalities of social identity and personhood construction during a time of uncertain environmental upheaval.

Mots-Clés: Mesolithic, Eastern Adriatic, ornaments, experimental archaeology, technological and use, wear traces analysis, geometric morphometrics