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# Mesolithic lifeways on the shores of Skadar Lake: the evidence from Seocka pećina, Montenegro

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Apart from notable exceptions, such as the Danube Gorges and the Adriatic coast, the evidence of Mesolithic occupancy in the Balkan Peninsula is generally scant. Consequently, the eastern Adriatic and its hinterlands (the territory of present-day Montenegro), where several caves and rock shelters with Mesolithic sequences have been discovered, represents one of the key areas for understanding regional Early Holocene adaptations and lifeways. However, previous archaeological research has mainly been focused on karstic features in the northern, mountainous parts of Montenegro. Over the course of the ERC Project *The Transmission of Innovations: Comparison and Modelling of Early Farming and Associated Technologies in Europe (EUROFARM)*, Mesolithic deposits were recorded for the first time in the Skadar Lake area, at the cave site of Seocka pećina. The cave is located on a small, low peninsula defined by a meander of the Rijeka Crnojevića (the River of Crnojević) flowing into the northern part of the lake. Various site-formation processes at play (the erosion linked to human-induced deforestation) led to the disturbance of sediments, i.e. to the mixing and redeposition of materials from layers originally located towards the entrance of the cave. Nevertheless, a certain stratigraphic coherence was noted, including chipped stone tool finds (including bladelets) and faunal remains originating from wild animals (red deer, roe deer, chamois, wild boar, beaver, badger; some of them with butchery marks) and fish. The bones were dated by an extended series of AMS dates between 8750 and 7080 cal BC, which, along the total absence of domestic species, suggests that the bulk – if not all – of faunal material and the occupancy of the cave can indeed be related to the Early Holocene. Moreover, Seocka pećina is currently the only known Mesolithic site in the Balkans located in a lacustrine environment, thus providing unique opportunities to explore particular, site-specific adaptations of local hunter-gatherer-fisher communities and their interactions with the landscape. In this paper, we present the results of the analysis of the faunal assemblage from Seocka pećina, with a special focus on fish remains. Given the complex taphonomic history of the site, we look into the taxonomic composition of the fish faunal sample, the skeletal element distribution, fish size classes and bone taphonomy, in order to determine whether the accumulated remains can be unequivocally attributed to organized fishing activities. Due to the wide variety of aquatic habitats, the ichthyofauna of Skadar Lake and its catchment area is characterized by great biodiversity and an extraordinary high degree of endemism, being

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one of the most notable Balkan ecosystems in that respect. The north-western part of the lake and its floodplains, including the mouth of Rijeka Crnojevića (where the site is located), historically represented some of the best fishing spots in the region. Numerous deep lacustric springs with consistent water temperature attract various cyprinid species to aggregate in autumn and winter, whereas the swift Rijeka Crnojevića represents an optimal habitat for salmonids, which migrate to the lake in spring. The representatives of these two families have been identified in the fish faunal assemblage from Seocka pećina. In case of some cyprinid species (namely the common nase), the occurrence of sporadic clustering of bones of uniform colour, originating from several individuals of similar size, indicate that shoals of fish were targeted during the spawning season and that their remains were deposited in a single or closely related events. It seems plausible that the location of Seocka pećina was chosen by Mesolithic communities precisely because of its proximity to prolific fishing spots and ample opportunities for seasonal fishing. In addition to providing new evidence of Mesolithic fishing practices, seasonality and settlement within a specific lacustrine landscape, this study has important implications for exploring the regional diversity of Early Holocene adaptations in the Balkans.

**Keywords:** Seocka pećina, Skadar Lake, Mesolithic, fish remains, fishing, seasonality, lacustrine environments, Montenegro, the Balkans