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# Hidden foods, health and lifestyles in the Mesolithic Balkans: Data from dietary debris, microbiota and groundstone technology

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## Résumé

In the last decade, advances in bioarchaeology and ancient technology studies have provided new data for rethinking Mesolithic food and foodways. Within the scientific approaches most recently developed for exploring dietary strategies, the study of ancient dental calculus and the functional analysis of material culture have certainly emerged for their potential to unveil specific food preferences and modalities of food processing. In particular, micro-fossils preserved in the mineralized plaque and organic residues entrapped on different categories of tools involved in the preparation of food have challenged persistent narratives of hunter-gatherer-fisher diets as dominated by protein intake, revealing the persistent role of plants in the dietary strategies of Holocene foragers. Metagenomic studies of dental calculus have also provided insights into health status through the reconstruction of oral microbiota and its interaction with ancient human diet. However, only rarely bioarchaeological and material culture studies have been combined in the study of Mesolithic foodways. Here, we discuss the results of the microscopic and metagenomic analyses on the dental calculus record of 48 individuals from 4 different sites from the Danube Gorges area in Serbia. We take a long-term diachronic perspective—from the start of the Holocene up to the period of forager-farmer interactions at the end of the seventh millennium cal BC. Evidence from dental calculus is integrated to functional data obtained through the use-wear and residue analysis of ground stone technology used at the Mesolithic sites for processing foods. Our results indicate that in the course of the Early Holocene, local foragers used a specific range of wild edible plants. This familiarity with and knowledge of a spectrum of plant species might have played a role in enabling the introduction and swift acceptance of domesticated plant foods towards the end of the Mesolithic

**Mots-Clés:** Diet, plant food processing, health status, lifestyles, dental calculus, microbiome, groundstone technology, Mesolithic Danube Gorges

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