The Mesolithic site Ullafelsen in the Fotsch Valley (Tyrol, Austria) – a biomarker perspective

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The archaeology of high mountain regions got high attention since the discovery of the copper age mummy called "Ötzi" in the Ötztaler Alps in 1991. Results of former archaeological research projects show that mesolithic hunter-gatherers lived in Alpine regions since the beginning of the Holocene, 11,700 years ago (Cornelissen & Reitmaier 2016). Amongst others, the Mesolithic site Ullafelsen (1860 m a.s.l.) and surroundings represent a very important archaeological reference site in the Fotsch Valley (Stubaier Alps, Tyrol) (Schäfer 2011). Many archaeological artifacts and fire places were found at different places in the Fotschertal, which provides evidence for the presence and the way of living of our ancestor. The "Mesolithic project Ullafelsen" includes different scientific disciplines ranging from high mountain archaeology over geology, geomorphology, soil science, sedimentology, petrography to palaeobotany (Schäfer 2011). Within an ongoing DFG project we aim at addressing questions related to past vegetation and climate, human history as well as their influence on pedogenesis from a biomarker and stable isotope perspective (cf. Zech et al. 2011). Our results for instance suggest that (i) the dominant recent and past vegetation can be chemotaxonomically differentiated based on leaf wax-derived n-alkane biomarkers, (ii) there is no evidence for buried Late Glacial topsoils being preserved on the Ullafelsen as argued by Geitner et al. (2014), rather humic-rich subsoils were formed as $B_h$-horizons by podsolisation and (iii) marked vegetations changes likely associated with alpine pasture activities since the Bronze Age are documented in Holocene peat bogs in the Fotsch Valley. Nevertheless, there remain some challenges by joining all analytical data in order to get a consistent overall picture of human-environmental history of this high mountain region.


archaeological results and discussion of Mesolithic research in the Fotsch valley (Tyrol). In: Kerschner, H., Krainer, K. and C. Spötl: From the foreland to the Central Alps – Field trips to selected sites of Quaternary research in the Tyrolean and Bavarian Alps (DEUQUA EXCURSIONS), Berlin, 106-115.
