

## Vertical changes of tree-line and site distribution: a case of early Mesolithic in northern Tyrol, Austria

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The presentation focuses on correlation between 1) palaeoenvironmental changes expressed on ice sheet regression and site distribution, and 2) vertical changes of tree-line and site distribution in the early Mesolithic in northern Tyrol in Austria. Ullafelsen open air site (ca. 112,000 - 10,650 cal yrBP ) is located in high mountain of Focher valley, Stubai Alps. Excavations have revealed that at least two different cultural traditions such as Beuronian from southern Germany and Sauveterrian from northern Italy in exactly co-existed archaeological contexts. Many lithic raw materials have also identified i.e.; flint from southern Alps, rock crystal from central Alps, radiolarite from northern limestone Alps, and hornstone from Franconian Alp (Bavaria). These materials indicated high mobility of early Mesolithic people, and they had much more wide range exchange network than the later phase of Magdalenian groups in the upper stream area of Danube river. This means the early Mesolithic people had extended their activity to the wide area that had been performed after retreatment of the ice sheet from the right bank of Danube river to the northern Tyrol. Vertical rise of climate-induced tree-line and site location have relatively strong causal relationship, and this pulled up the location of Mesolithic sites, because of their hunting strategies for Alpine Ibex (*Capra ibex*) etc., that they are favorable to inhabit at tree-line zone. These phenomena indicate a dynamic correlation between natural resource environment and human adaptations.

Keywords: northern Tyrol , Ullafelsen site, early Mesolithic, tree-line, site location