

standardization techniques to be applied, so that multi-centennial scale variations can be preserved and reconstructed Büntgen et al. 2004).

Investigations on precipitation changes are more challenging because of the spatially heterogeneous nature of precipitation, and additionally, lower tree sensitivity to this parameter. Based on the methodological experiences from the above-mentioned studies, we are focussing on more local levels for reconstructing precipitation using a low elevation network of living and archaeological material. Additionally we will explore the possibility of reconstructing drought metrics, such as the Palmer Drought Severity Index (PDSI), on larger scales, as tree response to drought is likely stronger than that for precipitation alone in the GAR. We present a first 400-year precipitation reconstruction for the southern Swiss Alps (Locarno, Tessin) from *Quercus petraea* and put this in a broader context.

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[P] First dendrochronological synthesis on Neolithic sites of Chalais and Clairvaux (Jura, France) - methodological risks

Absolute chronology of Neolithic sites of French Jura runs from 38th to 26th c. B.C. Since the 80's, archaeological excavations made on these two lakes permitted us to study hundreds of posts. They allow us to describe the development of settlements and villages from their building to the time they were abandoned. The demographic growth was at a maximum during the 31-30th c. and showed an important cultural change at that time with the coming of settlers from others regions. The dendrochronological studies of oak (*Quercus sp.*) and ash trees (*Fraxinus exc.*) help us to define the evolution speed between Horgen and Ferrières

archaeological cultures by observing distinct changes in uses of woods.

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[L] Dendrochronological investigation on oak timber from gravel pit of Smurgainiai, Western Byelorussia

Dendrochronological investigation on subfossil oak (*Quercus robur* L.) timber from Smurgainiai gravel pit located on the bank of river Neris (Byelorussia) are presented. Collection of oak timber consists of about 100 samples. The biggest part of them was collected in the Soviet period, mainly in 1968-1972. The first radiocarbon datings were accomplished in several laboratories of the former Soviet Union and later re-dated using a liquid scintillation counter LSC-1220. The oldest found oak sample, according to its calibrated radiocarbon date, lived 5557-5336 BC. As a result of visual and statistical crossdating, tree ring series of 103 timber samples were put into eleven floating chronology fragments in the 5557 BC - 1813 AD period: 5557-5336 BC (1 sample), 4664-4491 BC (2), 4199-3838 BC (14), 3555-3110 BC (9), 3987-2877 BC (3), 1377-1294 BC (1), 1173-752 BC (10), 624 BC-277 AD (22), 336-826 AD (14), 829-1376 AD (26) and 1641-1813 AD (1). Because dated reference chronologies for oak are not constructed for Lithuania or Byelorussia, results presented are based only on radiocarbon dates and crossdating among samples.