In May 2013, researchers from WSL made a sensational discovery in the Zurich Binz district: more than 250 Scots pine stumps of up to 14,000 years in age. There is reason to hope that the ancient wood might help to expand the current tree-ring chronology by about 1,500 years, bringing it back to the end of the last Ice Age, about 15,000 years ago. This would provide further insight into the climate history of Central Europe. Each tree ring may contain useful information about the temperature and precipitation at the time of its formation. WSL doctoral student Frederick Reinig, who is working with the Binz wood, gives an update on progress of the work: “It seems that some of the data necessary to finally complete the chronology are currently still missing.”

New finds required
For this reason, the WSL researchers are still searching for new discoveries of wood that might be hidden in the ground, preserved in meter-thick layers of clay since the end of the last Ice Age. “Every tree counts,” Reinig says. Even small finds could be of great importance if they help to fill gaps in the existing chronology. The ring widths of subfossil trees found in construction sites or gravel pits are measured and anatomically analyzed at the WSL. In a best-case scenario, it might even be possible to extract ancient DNA from these samples. The researchers, who are collaborating with research institutes in Potsdam, Freiburg i. Br., Hohenheim and Mannheim, would be extremely grateful for information on new finds. Their sampling efforts do not affect the progress of any construction work.

The first finds have already been reported: together with forestry services and construction companies, the researchers were able to excavate about 150 samples of pine, spruce and oak from Celerina (GR), Engi (GL) and Aigle (VD) in 2015. $^{14}$C measurements at ETH Zurich’s Laboratory for Ion Beam Physics show that the samples are up to 9,000 years old – although several older ones are still required. (rlä)

www.wsl.ch/more/subfossilwood

Extraction of wood discs from ancient oaks that had been preserved for several thousand years in lake sediment at a gravel pit in Aigle.