



Growth reactions in different deciduous trees after debris-flow and snow avalanche activity

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Tree-ring based analysis of the frequency, magnitude or extent of past debris-flow, snow avalanche or flooding activity have almost exclusively been performed with conifers so far. This is partly because they generally attain higher ages in areas affected by geomorphic processes and especially because the analysis of tree rings can be more easily achieved and with generally more accuracy. In sectors that are very heavily affected by events, conifer trees are normally missing and these areas are, thus, not considered in dendrogeomorphological studies.

In the frame of the fundamental research activities of the Laboratory of Dendrogeomorphology (www.dendrolab.ch), we are currently investigating several broadleaved tree species in order to determine their suitability for dendrogeomorphological research and to identify wood anatomical characteristics related to past geomorphic disturbance. At the moment, research focuses on the following species: birch (*Betula sp.*), alder (*Alnus sp.*), elder (*Sambucus nigra*), poplar (*Populus sp.*) and willow (*Salix sp.*). Investigations are being performed with more than 500 cross-sections, wedges and increment cores of trees that were standing on different snow avalanche and debris-flow cones in the Valais Alps.