



Glacial history of Corsica (western Mediterranean) from Wuermian to Holocene

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Investigation of glacial deposits and trimlines in Corsica enabled us to provide a new reconstruction of different advances of glaciers during the Würmian and Holocene. Glaciation was widespread in the Corsican high central mountain chain during the Wuermian and lasted in high areas until the Little Ice Age. First results of ^{10}Be -exposure dating revealed the maximum glacier advance in the late Wuermian (MIS 2). Therefore, succeeding smaller advances have to be younger. Further dating will be done to provide a broader data basis for the maximum glacier advance and to get more information about the younger advances.

To extract palaeoclimate information from ancient glaciers, we apply the accumulation area ratio-method (AAR) with a standard ratio of 0.6 for the size of the ablation area relative to accumulation area to map the ELA. This method is reasonable for wet-based temperate glaciers with the typical hypsometry of Alpine glaciers. The difference between the ancient regional ELAs and the present one gives an ELA draw-down, which in first approximation is transformed to a temperature difference calculated on the base of a free atmosphere lapse rate of $6\text{ }^{\circ}\text{C}/\text{km}$. Maximum lowering of the Wuermian ELA by 1200 to 1400 m indicates that mean annual temperatures were lowered by 7 to $8\text{ }^{\circ}\text{C}$. Local differences in the ELA elevation are interpreted to show preferred paths of cold or warm air masses, and areas with enhanced moisture advection, triggered by intensified Genoa cyclons. For younger glacier advances lowering of temperature was approximately 3.5 and $3\text{ }^{\circ}\text{C}$, respectively.