



Paleorelief and glaciation: mutual interaction in the Corsican alps

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In the mountain chain of the Variscan part of Corsica (western Mediterranean realm), two generations of Miocene paleorelief are distinguished. The older and higher one plays an important role for the formation of large ice-fields. During the Würmian glaciation large plateaus above 1600 m a.s.l. responded sensitively to temporal undulations of the snowline. As the elevation of the snowline dropped below a critical threshold, a large ice cap formed due to self-amplification. During MIS 4 and MIS 3, the entire Tavignano plateau (central Corsica) was covered by a large ice field several times. Outlet tongues modified the paleorelief by transfluence across local drainage divides, e.g. at Lake Creno or the Colga valley. During the LGM (MIS 2), only about half of the plateau was covered with ice, as glacier tongues from the larger surrounding tributary valleys reached the main valley of the central plateau. Preservation of terminal moraine ridges was favored by the flat open space of the plateau. These ridges testify several glacier advances during the LGM. Early Würmian bedrock erosion of the plateau was followed by Late Würmian deposition of large amounts of moraine sediments. Additionally, sediments of a glacial lake, impounded by the terminal moraines of the LGM, leveled the relief.