



Deglaciation and post-glacial environmental evolution in the Western Massif of Picos de Europa

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This study examines the process of deglaciation of the Western Massif of Picos de Europa through field work, geomorphological mapping, sedimentary records and absolute datings of ^{14}C . This massif has several peaks over 2,400 m a.s.l. (Peña Santa de Castilla, 2,596 m; Torre Santa María, 2,486 m; Torre del Mediu, 2,467 m). It is composed mainly by Carboniferous limestones. This area has been intensively affected by karstic dissolution, Quaternary glaciers and fluvio-torrential processes (Miotke, 1968; Moreno et al, 2010; Ruiz-Fernández et al, 2009; Ruiz-Fernández, 2013). At present day, periglacial processes are active at the highest elevations (Ruiz-Fernández, 2013).

We have identified four main glacial stages regarding the deglaciation of the massif: (i) maximum advance corresponding to the Last Glaciation, (ii) retreat and stabilization after the maximum advance, (iii) Late Glacial, and (iv) Little Ice Age. Sedimentological studies also contribute data to the understanding of the chronological framework of these environmental changes. The datings of the bottom sediments in two long sequences (8 and 5.4 m) provided a minimum age of $18,075 \pm 425$ cal BP for the maximum advance stage and $11,150 \pm 900$ cal BP for retreat and stabilization in the phase following the maximum advance. The ongoing analyses of these sequences at very high resolution will provide new knowledge about the environmental conditions prevailing since the deglaciation of the massif.

References

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