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## **The impact of the Quaternary glaciations on the Durmitor mountains (Montenegro) as understood from detailed geomorphological mapping**

Amaury Frankl (1), Klaas Annys (1), Velibor Spalević (2), Milic Čurović (2), Dragan Borota (3), and Jan Nyssen (1)

(1) Department of Geography, Ghent University, Belgium ([amaury.frankl@ugent.be](mailto:amaury.frankl@ugent.be)), (2) Forestry Department, University of Montenegro, Montenegro, (3) Department of Forest Management Planning, University of Belgrade, Serbia

In the Balkans, few studies exist that highlight the impact of the Quaternary glaciations on the landscape. However, the impact of the Quaternary glaciations was important and the glacial imprint remains well preserved in the limestone massifs where karst hydrology prevails. This study presents a detailed geomorphological map at scale 1:10,000 that was prepared of the northeastern Durmitor mountains (2523 m a.s.l.) and the plateau Jezerska Površ (47 km<sup>2</sup>, Dinaric Alps, Montenegro). Mapping occurred from an intensive fieldwork campaign and remote sensing analysis, and was finalized in a GIS environment. The basic components of the legend are (i) processes/genesis, (ii) materials, (iii) morphometry/morphography, (iv) hydrography, (v) vegetation and (vi) anthropogenic features, that are organized as a box-of-bricks type of legend (AGRG-system). The geomorphological setting of the area consists of Mesozoic limestones which were eroded physically by Quaternary glacial and periglacial activity and chemically during interglacials. Glacial deposits of three Middle to Late Pleistocene glacial phases exist on the plateau, only scarcely dissected by meltwater channels. In the mountains, Holocene glacier retreat left behind a series of well-preserved recessional moraines and a static glacier remains in the cirque head. The presented map serves as a valuable tool for Quaternary research in the Durmitor Mountains, and serves as an example on the interaction between glacial and karst processes.

**Keywords:** Debeli Namet glacier, Dinaric Alps, Geographic Information System (GIS), Glacial landforms, Karst.