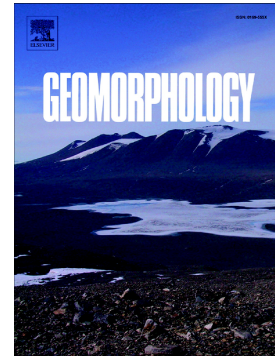


## Accepted Manuscript

Low-altitude permafrost research in an overcooled talus slope–rock glacier system in the Romanian Carpathians (Detunata Goală, Apuseni Mountains)

Răzvan Popescu, Alfred Vespremeanu-Stroe, Alexandru Onaca, Mirela Vasile, Nicolae Cruceru, Olimpiu Pop



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**LOW-ALTITUDE PERMAFROST RESEARCH IN AN OVERCOOLED TALUS  
SLOPE–ROCK GLACIER SYSTEM IN THE ROMANIAN CARPATHIANS  
(DETUNATA GOALĂ, APUSENI MOUNTAINS)**

**Răzvan POPESCU<sup>1</sup>, Alfred VESPREMEANU-STROE<sup>2\*</sup>, Alexandru ONACA<sup>3</sup>, Mirela  
VASILE<sup>1</sup>, Nicolae CRUCERU<sup>4,5</sup>, Olimpiu POP<sup>6</sup>**

<sup>1</sup> Research Institute of the University of Bucharest, 36-46 Mihail Kogălniceanu Blvd., 050107 Bucharest, Romania

<sup>2</sup> Faculty of Geography, Bucharest University, 1 Nicolae Bălcescu Blvd., 010041 Bucharest, Romania

<sup>3</sup> Department of Geography, West University of Timișoara, 4 Vasile Pârvan, 300223 Timișoara, Romania

<sup>4</sup> Faculty of Geography, "Spiru Haret" University, 13 Ion Ghica, 030045 Bucharest, Romania

<sup>5</sup> "Emil Racoviță" Institute of Speleology, 13 Calea 13 Septembrie, 050711 Bucharest, Romania

<sup>6</sup> Faculty of Geography, Babeș-Bolyai University, 5-7 Clinicilor, 400006 Cluj-Napoca, Romania

**Abstract**

Ground and air temperature monitoring, geophysical soundings and dendrological investigations were applied to a basaltic talus slope–rock glacier system from Detunata site in the Apuseni Mountains (Western Romanian Carpathians) to verify the presence of sporadic permafrost at 1020–1110 m asl, well below the regional limit of mountain permafrost. The near  $-0^{\circ}\text{C}$  mean annual ground surface temperatures imposed by the large negative annual thermal anomalies of the ground (up to  $7.4^{\circ}\text{C}$ ), together with the high resistivity values and the occurrence of trees with severe growth anomalies, support the presence of permafrost at this location. Temperature

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\* Correspondence to: Dr. Alfred Vespremeanu-Stroe, Faculty of Geography, Bucharest University, 1 N. Bălcescu Blvd., sector 1, 010041 Bucharest, , Romania. E-mail: fred@geo.unibuc.ro

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