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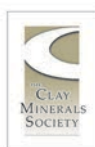


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Book of abstracts



The relation of weathering of granitoides and soil organic matter formation in the alpine terrain depending on altitude, The High Tatras, Slovakia

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The aim of this study is to determine the development of weathering in the alpine terrain depending on altitude. The basic physical and chemical properties of soil, mineralogy of soil and clay fraction and $\delta^{13}\text{C}$ of organic matter were determined for that purpose. The study of mineral composition (XRD analysis) was also performed with the aim to track source areas for mountain lakes (tarns) sediments (Veľké Hincovo pleso, 1946 m a.s.l and Popradské pleso, 1494 m a.s.l). The contribution belongs to complex paleolimnological study of High Tatras tarns with aim to determine a timing of the glacier disappearance and amplitude of climatic and ecological changes on the glacial/interglacial boundary (<http://www.geo.sav.sk/en/depovyt-apvv-15-0292/>).

The samples were collected along the altitudinal gradient from 1540 to 2350 m a.s.l that includes four altitudinal zones: supramontane zone with tree line at 1550 m a.s.l (one sample), subalpine zone with dwarf pine (*Pinus mugo*; two samples); alpine zone with rocky terrain and alpine meadows without trees (one sample) and subnival zone with rocky terrain and occasional snow also during the summer months (one sample). The bedrocks of studied areas are biotite-muscovite granodiorites to granites and biotite tonalite to granodiorites and glacier sediments derived from mentioned rocks (Nemčok et al., 1993). The soils the studied profile were dominated by undeveloped leptosols (rankers) and partly by podzol (determined base on FAO, 2014). The similar soil groups were defined by Kopáček et al, (2006). The initial stages of soil development are caused by their young age, the glacier retreat are predicted about 10000 cal BP and by alpine climate.

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