

## **Abstract**

This thesis looks at the comparison between grain micromorphology of moraines, debris flows and similar accumulations. Moraine samples were taken in the Černé jezero Lake area, Bohemian Forest, in the Velická dolina Valley, High Tatras, and in the Labský důl Valley, Krkonoše Mts. Samples of debris flows and unverified accumulations were taken in the Důl Bílého Labe Valley, Krkonoše Mts., and further samples of accumulations were obtained from the valley of Prudký potok Stream, Králický Sněžník Mts., the valley of Vražedný potok Stream and Velká Kotlina, Hrubý Jeseník Mts.

Sediments were examined under electron microscope and their morphological characteristics and influence of the environment were identified and described. Calculated exoscopic moraine standard was used for comparison of examined forms of relief using distance coefficients, statistical analysis were carried out which identified diagnostic characters for distinguishing moraines and debris flows. There was also calculated exoscopic standard for different types of moraines (frontal, lateral, basal). This research highlighted the differences between moraines and debris flows, and between different types of moraines. The study also proved that typical glacial microtextures, that are generally accepted, occur at similar levels on grains of moraines as well as debris flows and similar accumulations. This investigation was supported by: GAUK 32107, KJB300460803.

**Key words:** glacial sediments, exoscopy, quartz grains, surface morphology, morains, debris flows