

GEOMORPHOLOGICAL ASPECTS OF THE OCCURRENCE OF MOLDAVITES IN THE CENTRAL EUROPE

ABSTRACT:

In the presented paper, geomorphological aspects of the occurrence of moldavites are evaluated. The origin of moldavites in the Miocene and position of their main finding places in Czechia is described. For studies and documentation of morphology of the surface of moldavites was used the collection of the Faculty of Science at Charles University. Special attention during field geomorphic survey of finding places of moldavites was paid to the localities between settlements Ločnice, Nesměň and Chlum nad Malší. Main features of the natural environment were identified as well as recent changes of landforms caused by prohibited and legal extraction of moldavites. All notable finding places of moldavites in the southern Bohemia are affected by these anthropogenic changes of the landscape.

It is discussed that absence of moldavites in some denuded areas of the region where they are occurring can indicate a range of rocks exhumation since the upper Miocene. On the contrary, it is suggested that morphostratigraphical significance of sporadic findings of moldavites many kilometres from primary localities is limited by a low resistance of the shape and volume of moldavites in relation to fluvial transport. However, very promising are possibilities of micromorphological research of moldavites in accessible collections which are up to now omitted. These geomorphological studies can be above all concentrated on 1) the extent of preservation and types of surface of moldavites extracted at original sites of incidence and also on characteristic features of their weathering, 2) changes of micromorphology of moldavites caused by transport to a short distance both by slope processes and fluvial transport to sites of their present deposition.

KEYWORDS: Geomorphology, occurrence of moldavites, morphostratigraphy of landforms, impact crater Ries, central Europe