

ABSTRACT

Earth hummocks are nonsorted patterned ground types. This thesis is primarily focused on the study of temperature regime particularly during freeze-thaw process and also on factors that affect its non-uniformity. Secondary, it refers to the relation between temperature and moisture regime, morphometric characteristics of earth hummocks and their geographical expansion in the world. The information from the literature search is applied to the results from temperature and moisture measurements of the earth hummocks in depths 5 – 40 cm in the Hrubý Jeseník Mountains – Keprník peak in 2005 – 2010. The results show that many factors affect the non-uniformity of temperature regime in different parts of earth hummocks. The most important of them are: the shape of the earth hummock, the aspect orientation, the distribution and the height of snow cover, the wind exposure and the presence of vegetation. There is an interaction between the soil moisture content and the temperature regime, and they are mutually affected. The obtained results from the Keprník study area are compared with the literature data about the earth hummocks in the world.

Key words: patterned ground, earth hummock, temperature regime, moisture, regelation, Keprník peak, Hrubý Jeseník Mountains