

## ABSTRACT

The phenotype dynamics of arvicolid rodents during the terminal stages of the Vistulian glacial and the earliest Holocene was investigated with aid of a detailed morphometric analyses of extensive dental material from three sedimentary series of that age. The particular attention was paid to the record from a section in Býčí skála cave, Moravian karst, which demonstrated details of the Pleistocene/Holocene transition (12.4-8.4 ky BP) with extraordinary resolution. It revealed that dramatic rearrangements in community structure were accompanied by significant rearrangements of the phenotype dynamics in all arvicolid species. Despite some trends specific for particular species, some common features were identified as well. One of them was a rapid turnover in phenotype structure by the end of Younger Dryas, at time of the Preboreal event. (11.7-11 ky BP), the other was associated with the extensive shifts in community structure and habitat diversity at terminal stage of the Preboreal (9.7-9.3 ky). The core arvicolid species of Preboreal communities, *Clethrionomys glareolus*, *Microtus arvalis*, *M. agrestis* and *Arvicola terrestris*, exhibited repeated fluctuations during that stage (11-9,3 ky BP) both in abundance and phenotype characteristics, supposedly related to serial invasion events during that time.

**Keywords:** Paleontology, evolution, voles, teeth, glacial, holocen, Býčí skála, *Clethrionomys glareolus*, *Arvicola terrestris*, *Microtus arvalis*, *Microtus agrestis*, *Microtus gregalis*