

Paper Number: 2760

Changes in rodents associations from cave sediments (Romania) during the Upper Pleistocene main climatic events

Alexandru, P

Institute of Speleology Emil Racovita Bucharest Romania

Small mammal species and their assemblages have long been recognized as indicators of the past ecological changes. Forecasting the response of species and communities to environmental change is a priority for multiple disciplines in the natural sciences. In looking toward the future, much can be learned from examining faunal response under past episodes of environmental change.

Rodents are one of the most important elements of the fossil fauna from Pleistocene epoch in Europe. In connection with others elements and methods like vegetation and isotopic analyses rodents are very useful tools for the reconstruction of the paleoclimate and paleoenvironment. Their rapid evolution at that time makes them very useful index fossils in the stratigraphy of the continental sediments. The most valuable feature of the small mammals is their large populations and their very precise climatic preferences and adaptations.

From geographical point of view, Romania is placed in the middle of the migration routes between western-central Asia and Africa, through Anatolia (Turkey) to central Europe. Our researches, based on systematic survey on fossil faunas reveal the high similarity between climatic oscillations, level of the sea and faunal changes.

We use fossil fauna discovered in few caves Dobrogea (eastern Romania). A succession of two consecutive main faunal assemblages were identified corresponding to various climatic oscillations of the last glacial cycle. Isotopic stage 4 and 3 are characterized by the presence of a large sized subspecies of grey steppe lemming *Lagurus lagurus dobrogeticus*. A large-sized *Microtus nivalis* is also present suggesting tundra environment.

