Abstract

This work is focused on the problematics of high latitudes in Cretaceous and Paleogene. The introduction describes and defines high latitude regions as well as their main characteristics nowadays. This allows one to achieve a better understanding of the substantial differences of these regions nowadays and in the geological past.

The work itself then provides a brief description of the palaeographic position of the Arctic and Antarctic regions, their palaeoclimatic situations, organisms inhabiting their terrestrial and marine environments and their adaptation mechanisms. Further, a more detailed review of the land plants is presented.

The last part is dedicated to the specific survival strategies of the land plants in the polar regions during the warm geological periods. On the basis of the studied literature, this work attempts to answer the questions: which strategy for adaptation to the high latitudes was used by the plants and whether being evergreen or deciduous was more effective on survival during the long and relatively warm polar nights. In conclusion, the relevance of the research of high latitude regions during the Cretaceous and Paleogene greenhouse type of climate is introduced in relation to the possible future consequences of the global warming.

Key words: Cretaceous, Paleogene, land plants, high latitudes, Antarctic, Arctic.