421

TAXONOMICAL AND ECOLOGICAL STUDIES ON THE PIONEER SOIL ALGAE FROM DEGLACIATED AREAS OF MARITIME ANTARCTICA

A.K. Massalski, I.Yu. Kostikov, M.A. Olech

[1]Swietokrzyska Academy, Kielce, Poland, [2]Kyiv National University, Kyiv, Ukraine, [3]Jagiellonian University, Krakow, Poland

As a result of local climate warming and deglaciation the processes of colonization and succession in the ice denuded areas can be observed. Soil algae can be considered as the first colonizers in such areas. Algae, despite of being one of the main elements of Antarctic ecosystem, are still relatively little known. Limited knowledge about Antarctic algae makes the progress of other scientific investigations more difficult. These studies are the part of the multidisciplinary international programme concerning soil algae existing in the Antarctic environment. Investigations are carried out on the base of materials collected at the time of field studies conducted during Polish Antarctic Expeditions to the Henryk Arctowski Station organized by the Department of Antarctic Biology, Polish Academy of Sciences. Investigations encompassed selected terrestrial biotopes from the contemporary glacier moraines of various ages on King George Island. The aim of these investigations is detailed studies on taxonomy and ecology of algae and their role in the processes of plant colonization and succession. Considering the specific character of this group of organisms, it is imperative to include in the investigations the laboratory cultures and ultrastructural studies (TEM) to follow various stages of taxa life cycles. Preliminary studies revealed several interesting species some of which are new for Antarctica. Knowledge of species and ecological diversity of algae having a significant meaning in the functioning of Antarctic tundra, will allow us to monitor the changes occurring in the Antarctic terrestrial biotopes.