Glaciological and geocryological investigations in Antarctic oases

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The Antarctic glaciations is the result and the witness of the global climate change in past. The territories of the Antarctic oases, situated at the junction of the ice sheet and ice shelves keep records of the dynamics of the glaciations of the Antarctic. The records of the developments in past are represented by the relief forms and by the bottom deposits of the reservoirs. The report presents the generalization of the scientific data on the glaciological and cryological investigations of the Antarctic oases for the whole period of their exploration (beginning of XXth century–2008) based on published results and archival/corpus documents—research records of scientific expeditions. The topics of research activities per region with timing of the investigations are systematized. Considerable attention was paid to the reconstruction of palaeoclimate conditions and to study of the evolution of polar ecosystems under the influence of present climate change. The main obtained results are planned to be presented as well as perspective of future research. Analysis of the reported data on reconstruction of the evolution of environment in Antarctic based on wide spectrum of paleogeographical methods, glaciological and geocryological investigations, shows that despite considerable amount of the data obtained, a number of questions requiring further investigations remains. Uppermost these are the discrepancy in the estimation of the age of the Antarctic oases (the duration of the present ice-free period for the territories) and the absence of a generally accepted theory of the Antarctic oases’ genesis and evolution.