



PALEOCLIMATE AND PALEOENVIRONMENTAL RECONSTRUCTIONS ON THE NORTH KOLA PENINSULA DURING THE PAST 2000 YEARS ACCORDING POLLEN DATA

Ekaterina Nosevich (1,2), Tatjana Sapelko (3), Mikhail Anisimov (1,2)

(1) Saint-Petersburg State University (SPbGU), Saint-Petersburg, Russian Federation, (2) Arctic and Antarctic Research institute (AARI), Saint-Petersburg, Russian Federation, (3) Limnology Institute, RAS

Pollen data and radiocarbon data have enabled to reconstruct the periods of vegetation that depended on the climate changes. Records from different types of deposits allow to receive more information and to make paleoclimate reconstructions. Lake and bog sediments are the best sources for palaeoreconstruction.

Palaeoclimatic changes, tectonic and coastline movement during Late Holocene caused vegetation changes on the North Kola Peninsula. Our data from pollen records from different sites on the north coast of the Kola Peninsula covers the Late Holocene about last 2000 years. We studied different types of sediment cores in the area between 69° N and 70° N, 31°12' E and 35° E. We have studied peat deposits, small lake sediments and archaeological site on the Bolshoy Oleniy Island in Kola fjord, Barents Sea, and peat bog deposits in the Teriberka area. All the cores are studied by different methods where the core was pollen analysis. It has allowed tracking the periods of vegetation history in the tundra zone. Pollen reconstructions are confirmed by radiocarbon data. Our data was compared with other researches and we made correlations between pollen records from different lake deposits.

Modern vegetation presents south tundra type of associations. Teriberka area is unique: almost existing types of tundra landscapes are presented here in small territory, including "typical tundra" with subshrubs formations. For paleoclimate reconstructions we have studied surface samples by pollen analysis. Samples were collected in 3 regions of Kola Peninsula. Samples have been taken on the Sredniy and Rybachiyy Peninsulas (Murman region) in the south tundra with rich associations and boreal species of herbs. In the Olenegorsk region we selected vegetation associations not damaged by human and we collected surface samples on the border of forest tundra and northern taiga. In Apatity region we studied pollen records in North taiga landscapes. This data characterize regional and local conditions of vegetation development, which are very important to take into account in paleoenvironmental reconstruction and regional correlation.