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Special aspects of the formation of subfossil pollen assemblages from Ketoi Island (Central Kuril Islands)

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Abstract. The composition and ratios of main components of pollen assemblages from the surface layer of peatlands, soils, lake sediments, and alluvial silts in different parts of the Ketoi Island were analyzed. The island, despite its small size, is distinguished by a complex organization of the landscapes. The pollen spectra represent well the local vegetation at the sampling sites, regardless of the genesis of sediments. Pollen brought from adjacent territories does not have a significant effect on the composition of pollen spectra. The spectra from soil deposits in the southeastern part of the island are represented by heather pollen; in the southwestern part, by tree pollen, mostly Siberian dwarf pine, alder, and birch pollen. Among nonarborescent pollen, Asteraceae and Ericaceae are dominant. The pollen spectra obtained from pioneer soil in the western part of the island consist of club moss spores (*Lycopodium clavatum*), which represent communities on overgrown rockfall deposits. The assemblages of the surface layer of peatlands contain large amounts of sedge and grass pollen. The pollen spectra from alluvial silts represent the vegetation of small valleys, where alder, dwarf pine, and Erman's birch along the sides are common. The pollen spectra from the sediments of small lakes represent local biotic communities very well. Allochthonous pollen of dark coniferous and broad-leaved trees is present in the spectra in small quantities, except for two samples. This pollen was brought from the southern islands, including those of Japan. The data obtained can be used for paleogeographic reconstructions in the analysis of the formation of pollen spectra on small oceanic islands.

Keywords:

island landscapes, pollen analysis, vegetation, alluvial and lacustrine silts,

peatland, pioneer soils, Kuril Islands

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