

Origin and Evolution of Pleistocene Lacustrine Environments of the South Kurile Islands, NW Pacific

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Pacific Institute of Geography, Vladivostok, Russia Sedimentology, detail biostratigraphy and radiocarbon Sedimentology, detail biostratigraphy and radiocarbon chronology of Late Pleistocene-Holocene lacustrine sequences of the Kunashiri and Itupup Island was studied. Late Pleistocene lacustrine environment development under active explosive volcanism (30-48 ka) was reconstructed. Diatom assemblages allow us to reconstruct hydrologically "open" and "closed" stages of development of coastal lakes, caused not so much by climatic changes, but by geologic processes in the area. Paleolake depths were connected with submerged surface relief. Ash falls supplied large amount of microelements into the lakes that caused high diatom biodiversity. Specific diatom assemblages were found in lacustrine diatomites. Some phases of vegetation development were distinguished. Dark-coniferous, small-leaved, spruce and broad-leaved forests reflect interstadial climatic conditions similar or cooler than the present. The study of some sections allow us to reconstruct natural environment development during Late Pleistocene Interstadial.

Paleogeographical events on Kunashiri Island were correlated with global changes. Middle-Late Holocene evolution of barrier lakes situated within coastal zone was reconstructed. Development of these lakes was connected with climatic changes and sea level oscillations. Some types of these lakes were distinguished. In Middle Holocene sea level rise led to formation of barrier forms and coastal lakes in river mouths. Other barrier forms appeared during small-magnitude regressions at Atlantic-Subboreal and Suboreal-Subatlantic boundaries. Diatom assemblages from lacustrine sequences allow to establish some stages of Middle Holocene lake development. The study of lacustrine sections allow to reconstruct paleolandscape changes and some paleogeographical events, well correlated with global changes.