



## **Quaternary ledoyoms in the mountains of southern Siberia**

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In the 1930s V.P. Nekhoroshev identified intermontane depressions in the Altai mountains that he suspected to be completely filled by glaciers from the surrounding mountains at the time of maximum glaciation. He called such depressions "ledoyoms," or "ice bodies." Some basins already contained lakes when the glaciers advanced into them; in others the valley glaciers impounded lakes when they advanced into the basins. The advancing glaciers in this case became floating or grounded "shelf" glaciers at their lower ends, and some—singly or with neighboring glaciers—armored completely the surface of the "catch lakes." Thus, ledoyoms may develop as: (1) ice only, with no related lake. (2) catch lakes, with both glaciers and related lakes. (3) aufeis ledoyoms; (4) ice-dammed lakes lacking glacial ice cover. During the last glacial maximum some Altai lakes were covered with glacial ice for thousands of years. They consisted of a thick lens of lake water covered by lake ice, aufeis, glacier ice, snow and firn, and became independent centers of glaciation with subradial ice outlets. Possible modern analogs are the subglacial lakes under 3-4 km of glacier ice at Dome B, Dome C, and Vostok Station in Eastern Antarctica.