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Seasonal change of a snow algal community on an Alaska glacier

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Snow and ice algae are cold tolerant algae growing on the surface of snow and ice, and have been reported on many glaciers and snowfields in the world. Seasonal change of the community of snow algae was investigated on Gulkana Glacier in Alaska, U.S.A. from May to September, 2001. Snow algae appeared on the glacial surface in late spring (June) until the surface was covered with new winter snow (September). In June, the algae appeared at only lower part of the glacier. Then, the distribution of the algae extended to upper part of the glacier in summer as the snow line rose up on the glacier. The total cell volume biomass increased gradually from May to September. The community structure of the snow algae drastically changed when the surface condition changed from snow to ice. Seasonal change of the algal community will be discussed with environmental variables.