

Contents:

Microbiological research on James Ross Island focused on rock-inhabiting fungi Monika Laichmanová, Ivo Sedláček	4
Recent progress in understanding paraglacial landslides Tomáš Pánek	6
Biological soil crusts – engineer of arid and semiarid areas Klára Řeháková, Kateřina Čapková	7
Extreme processes shaping Arctic coasts in a period of rapid paraglacial landscape transformation Mateusz Czesław Strzelecki	8
Influence of large-scale atmospheric variability patterns and sea ice on air temperature on James Ross Island, Antarctica Klára Ambrožová, Kamil Láska	10
Geophysical methods for assessing physical and mechanical properties of frozen soils Ivan Agapkin, Pavel Kotov, Andrey Koshurnikov	11
Spatial variability of soil organic carbon and active layer thickness along a latitudinal transect from taiga to tundra of Western Siberia Anna Bobrik, Natalia Petrzik and Matvey Tarkov	13
Variability of the vertical ozone profiles at the Marambio Base, Antarctic Peninsula Region Klára Čížková, Martin Staněk, Ladislav Metelka, Kamil Láska	14
Hydrological modeling based on multiple data approaches in Boreal region with diverse permafrost conditions Li Han, Lucas Menzel	16
Past and present of Arctic terns' studies Tereza Hromádková, Michaela Syrová, Martin Briedis, Václav Pavel	17
Taxonomy, ecology and biogeography of diatoms (Bacillariophyta) of two isolated sub-Antarctic islands Barbora Chattová, Bart van de Vijver	18
On the origin and evolution of proglacial lake Ragnar, central Spitsbergen Jan Kavan	19
Environmental factors influencing Svalbard reindeer (<i>Rangifer tarandus</i>) populations as seen through antler characteristics Jan Kavan, Veronika Anděrová	20
Influence of atmospheric circulation on total cloud cover and cloud types in central Spitsbergen Sebastian Kendzierski, Leszek Kolendowicz, Marek Półrolniczak, Kamil Láska, Katarzyna Szyga-Pluta	22
Effect of freezing-thawing on CO₂ fluxes from soils in the field manipulation experiment Dmitry Khoroshaev, Irina Kurganova, Valentin Lopes de Gerenu	23
Quantification of Holocene nivation rates on Cape Lachman, James Ross Island Michaela Kňažková, Daniel Nývlt, Filip Hrbáček	25
Snow cover in the Arctic city of St. Petersburg in winter in conditions of global warming Evgenia Kolodiaznaia	27
The chlorophyll fluorescence of Antarctic lichen <i>Dermatocarpon polyphyllum</i> Michaela Marečková, Miloš Barták	29
Introduction to the 2018 field study of braided Monolith and Keller streams, James Ross Island, Antarctica Lenka Ondráčková, Radim Stuchlík, Daniel Nývlt	30
Use of Structure-from-Motion for morphometry analyses of nivation structures on James Ross Island Jakub Ondruch, Michaela Kňažková, Filip Hrbáček	31
Surface structures characteristics of Antarctic lichens studied by a digital microscope approach	32

Profile carbon distribution in soils of typical landscapes of Western Siberia

Anna Rubenovna Sefilian, Olga Yurievna Goncharova

Peak-summer CO₂ balance on a thawing permafrost peat mire in northern Norway

Isak Haldorsson Slettebø, Hanna Lee, Casper Tai Christiansen, Joachim Reuder

The genome sequence of *Pseudomonas prosekii*, a novel Antarctic bacterium

Kateřina Snopková, Kristýna Dufková, Darina Čejková, Ivo Sedláček, David Šmajc

Heavy metal and polycyclic aromatic hydrocarbon contamination in soil from Longyearbyen, Svalbard

Thomas Stehrer, Anna Polášková, Markus Himmelsbach, Wolfgang Buchberger, Achim Walter Hassel, Jan Philipp Kolender, Petra Luláková, Josef Elster

Convection of air in the snow cover of sea ice, at the base of the Ice Station "Mys Baranova".

Aleksandra A. Sumkina, Peter V. Bogorodskii

Climate variability during MIS-11 (370–440 ka BP) from the isotopic composition (δD , $\delta^{18}O$, $\delta^{17}O$) of Vostok ice core

Arina Nikolaevna Veres, Alexey Anatolyevich Ekyakin, Diana Olegovna Vladimirova, Anna Vladimirovna Kozacheck, Vladimir Yakovlevich Lipenkov, Alexandra Andreevna Skakun