

Life in the extreme:

Polar microbiome research from the
expedition of Captain Scott to climate change

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Polar regions are among the most remote and hostile environments on Earth. Away from the penguins along the Antarctic coasts and polar bears in the Arctic Ocean shores, glaciers and ice-free polar deserts were once considered devoid of life. We now know that these extreme environments are teeming with microscopic life that is mostly invisible to the naked eye. In fact, some polar environments are as diverse and productive as the soils and oceans of temperate climate zones. Dr Jungblut's expeditions to the polar regions have taken her to the most northern lake of North America, the bottom of ice-covered lakes in the deserts of the McMurdo Dry Valleys to glaciers on the South Georgia Islands in Antarctica. She will talk about using cutting-edge technologies, such as DNA sequencing, to explore the vast diversity of algae and microbiomes at the limits of life; investigating why they are important for polar environments and how historic herbarium algae collections from Captain Scott's Discovery Expedition can help us with climate change research.