

FRESH OFF THE ICE

Antarctic summer reports 2023–2024



TUESDAY 12 MARCH

Main Conference Room, NIWA,
310 Evans Bay Parade, Kilbirnie

IN-PERSON* OR ONLINE*

5.00 – 6.00 pm Nibbles & drinks

6.00 – 7.30 pm Presentations



LIV CORNELISSEN

A two-month voyage in the Ross Sea through the eyes of a first-time traveller

This summer I got to board the Laura Bassi, an Italian icebreaker, to complete a loop of the Ross Sea. During this collaboration with the Italian team, we carried out measurements and deployed instruments that will measure the ocean state throughout the year. We are trying to get an understanding on the processes in the current and past climates, so we can make a better projection of the changes that will shape our future. During my talk I will take you along on my journey and give an insight of the work that goes on behind the scenes, accompanied with amazing photos of the landscape and wildlife.



SYDNEY DEAN

Are there solar-powered bacteria in annual sea ice in McMurdo Sound?

We deployed coloured acrylic sheets for ~3 months (long-term) and 24-hours (short-term) to investigate the effect of the wavelength and intensity of light on the bacterial community beneath sea ice. On ice, we observed a) reduced biomass under all coloured treatments (but not in the trend we predicted), b) higher chlorophyll-a readings under non-treated sea ice, and c) differences in ice thickness and biomass quantity across the three locations. I look forward to sharing these interesting (and somewhat perplexing!) results and our new investigative questions with you.



CRAIG STEWART

Measuring basal melting of the Ross Ice Shelf

The ice shelves that fringe Antarctica play an important role in stabilising the grounded ice sheet but are vulnerable to ocean-driven melting from below. Basal melt rates of the world largest ice shelf, the Ross Ice shelf, are currently low on average, but higher where warm surface water can access the ice base in the north-western part of the shelf. To investigate this process NIWA installed a network of 12 ApRES radars in 2021. This talk describes the servicing and maintenance of this network undertaken in December 2023.



LIZ KELLER

Getting to the bottom of it all at Discovery Deep

Discovery Deep is on the western edge of the Ross Ice Shelf and is one of the deepest areas of the Ross Ice Shelf ocean cavity, where sediment layers on the seafloor are likely to be the thickest. It is proposed as a future drilling location to collect a deep sediment core containing a record of past climate. In the second of two field seasons so far, our team of five scientists camped on the ice shelf for 3 weeks, collecting geophysical data to characterise the sedimentary basin underneath the ice shelf and to find the best location to collect a core. Come along with us on our search for the bottom!



Presented by the Wellington branch of the New Zealand Antarctic Society in association with the National Institute for Water and Atmospheric Research (NIWA) and Te Herenga Waka, Victoria University of Wellington.



*Please RSVP for either in-person or online attendance by emailing NIVP@antarcticsociety.org.nz

Or by filling in this form:

