

SCAR BIOLOGY 2023 Provisional Programme *(as at 18 July 2023)*

Pre-Conference Workshops – Saturday 29 July

Location: University of Canterbury

[CLICK HERE FOR WORKSHOP INFORMATION AND DESCRIPTIONS](#)

Time	Session	Room
08.00 – 12.00	ANTOS Committee Meeting (<i>invite only</i>)	Rehua 101 Lectorial
10:00 – 17:00 <i>(full day)</i>	Sub-Antarctic Conservation: an assessment of status, trends, threats and management	Rehua 103 Project Workshop
10:00 - 11:30	Early Career Researcher Walking Tour	TBC
	<i>Break</i>	
13.00 – 17.00	Early Career Researcher Workshop	Rehua 003 Music
13.00 – 17.00	ANTOS General Workshop	Rehua 101 Lectorial
13.00 – 17.00	Understanding funding availability through EC's Horizon Europe for NZ researchers	Rehua 002 Lectorial

Pre-Conference Workshops – Sunday 30 July

Location: University of Canterbury

Time	Session	Room
08.00 – 12.00	Synthesis of Biogeographic Knowledge from Literature	Rehua 003 Music
08.00 – 12.00	Monitoring the Ross Sea region MPA	Rehua 103 Project Workshop
08.00 – 12.00	EGBAMM - expert group on birds and marine mammals	Rehua 101 Lectorial
	<i>Break</i>	
13.00 – 17.00	EGABI group (Expert Group on Antarctic Biodiversity Informatics)	Rehua 003 Music
13.00 – 17.00	Developing and applying new technology for Antarctic research	Rehua 103 Project Workshop
13.00 – 17.00	Southern Ocean Regional Ocean Acidification Collaborative Hub	Rehua 101 Lectorial
13.00 – 17.00	A coordinated approach to surveillance, monitoring and responding to Avian Influenza outbreaks in the sub-Antarctic & Antarctic Territories” (or Southern Ocean)	Rehua 002 Lectorial

All conference sessions will take place at Te Pae Christchurch Convention Centre

Pre-Conference – Sunday 30 July

Time	Session	Room
16.00	Conference Registration Opens	Level 1 – Te Pae
17.30 – 19.00	Icebreaker Function	Level 1 – Te Pae

Day 1 – Monday 31 July

Time	Session	Room		
08.30 - 09.30	Mihi Whakatau and Opening Ceremony	Auditorium		
09.30 – 10.30	Keynote 1 Huw Griffiths, British Antarctic Survey	Auditorium		
10.30 – 11.00	Morning Tea	Waitaki Room		
SESSIONS	Session 1A S. Higher predators Room: Auditorium Chair:	Session 1B O. Microbial primary production in Antarctica Room: Conway 2&3 Chair:	Session 1C I. Biogeography, species traits, and ecology for Antarctic conservation Room: Conway 4 Chair:	Session 1D G. Antarctic marine biodiversity and monitoring in a changing climate Room: Conway 5 Chair:
11.00 – 11.20	What environmental factors influence emperor penguins in the Ross Sea? Rose Foster-Dyer, University of Canterbury	Antarctica: evidence of a chemosynthetically driven continent Chris Greening, Monash University	How do extensive, long lived ozone holes affect timing of ultraviolet exposure and impact Antarctic biota? Sharon Robinson, University of Wollongong	Cryptic species diversity and implications for biodiversity monitoring: examples from Southern Ocean marine invertebrates David Clarke, La Trobe University

11.20 – 11.40	A Five-Year Assessment of early fast ice break-up on Emperor Penguins Peter Fretwell, British Antarctic Survey	Response of Ross Sea phytoplankton to projected increases in iron and temperature Antonia Cristi, NIWA	South! Phylogeography of Antarctic fairy shrimp <i>Branchinecta gaini</i> and its Patagonian congener <i>Branchinecta granulosa</i> (Crustacea: Branchiopoda: Anostraca) Matěj Pokorný, Charles University	Airborne microbial communities from one of the most extreme places on Earth Sofía Galbán, Universidad Autónoma de Madrid
11.40 – 12.00	South Shetland Island Antarctic fur seals: population status, conservation threats, and distribution updates Douglas Krause, NOAA Fisheries	Antarctic snow algae - physiology and diversity Alex Thomson, SAMS	Genetic/genomic resources for biogeographic research in terrestrial Antarctica Xiaoyue Liu, University of Otago	The circum-Antarctic distribution of seafloor biodiversity: Identifying hotspots of seafloor biodiversity and priorities for future research cruises Jan Jansen, University of Tasmania
12.00 – 12.20	Surveying of values to be protected in a potential protected area with the help of unmanned aerial vehicles (UAV) Osama Mustafa, THINK	Drifting through time and space: Modelling the biomass of key phytoplankton groups in the Southern Ocean Alex Hayward, NIWA	Population connectivity at different spatial and temporal scales in the Antarctic fairy shrimp <i>Branchinecta gaini</i> Claudia Maturana, Millenium Institute Base, Cape Horn International Center	Strong genetic differentiation and selfing shape the population structure of a red macroalgal ecosystem engineer Sabrina Heiser, University of Texas at Austin Marine Science Institute
12.20 - 12.40	Variability and individual plasticity in resource use in the Antarctic apex predator, the leopard seal Emily Sperou, Baylor University	Microbial community structure predicts bacterial production across regions in a random forest regression model Elizabeth Connors, Scripps Institution of Oceanography	Life histories and ecology of several endemic Antarctic terrestrial bdelloid rotifers Melanie Borup, University of Tasmania	Cryptic species are a major yet continually unresolved contributor to Antarctic biodiversity Amy Liu, Monash University
12.40 - 13.00	Wide range distribution of baleen whales in the Antarctic based on the data from the Japanese long-term ship-based monitoring. Taiki Katsumata, The Institute of Cetacean Research	Soil microbiomes in the Windmill Islands region, east Antarctica: Winners and losers in a changing environment Belinda Ferrari, University of NSW	Historical demographics of brittle stars and the implications for conservation management Chester Sands, British Antarctic Survey	The missing depths – characterising coastal benthic communities as sentinels of changing environments Vonda Cummings, National Institute of Water and Atmospheric Research
13.00 – 14.00	Lunch			Waitaki Room

SESSIONS	Session 2A S. Higher predators Room: Auditorium Chair:	Session 2B O. Microbial primary production in Antarctica Room: Conway 2&3 Chair:	Session 2C I. Biogeography, species traits, and ecology for Antarctic conservation Room: Conway 4 Chair:	Session 2D G. Antarctic marine biodiversity and monitoring in a changing climate Room: Conway 5 Chair:
14.00 - 14.20	The what, where, and when of Antarctic fur seals' foraging behavior; linking dive behavior with prey-species targeted using machine learning Renato Borrás-Chavez, Baylor University	The influence of stream and internal diffusive nutrient loads on trophogenic zone primary productivity in Lake Fryxell, Antarctica John Priscu, Polar Oceans Research Group	Avian taxonomic, phylogenetic and functional endemism: the contribution of Antarctica and sub-Antarctic islands to the global diversity of birds Matthias Dehling, Securing Antarctica's Environmental Future, Monash University	New insights on the identity of the naked dinoflagellates that formed an unprecedented bloom in the western Antarctic Peninsula Martina Mascioni, Universidad Nacional de La Plata
14.20 - 14.40	Picky eaters? A comprehensive review of killer whale (<i>Orcinus orca</i>) predation events. Alexa Hasselman, University of Canterbury	Ice core fatty acids record seasonal phytoplankton blooms in the Ross Sea region Holly Winton, Victoria University of Wellington	Population genomics and evolutionary history of the Antarctic bivalve <i>Aequiyoldia eightsii</i> Lore Van Craenenbroeck, Royal Belgian Institute of Natural Sciences	Using a high-resolution model to understand changes in distribution of crabeater seals linked to climate change in the Southern Ocean Denisse Fierro Arcos, University of Tasmania
14.40 - 15.00	The path less studied: Modelling broad scale climate influences on male survival in the highly polygynous southern elephant seal Sophia Volzke, Institute for Marine and Antarctic Studies (IMAS) - University of Tasmania (UTAS)	High-resolution physical-biogeochemical modelling in the Ross Sea Helen Macdonald, NIWA	Biogeographic survey of soil microbial communities across Antarctica Gilda Varliero, University of Pretoria	Antarctic genomics: Advancing understanding of adaptation, evolution and diversity of Antarctic organisms Alison Murray, DRI
15.00 - 15.20	Whole shotgun metagenomics as a tool to detect pathogens, parasites and diet in Antarctic penguins Katie O'Brien, University of Bath	A glimpse into the future: How the time of year that sea ice forms influences associated microalgal communities. Jacqui Stuart, Victoria University of Wellington	Mapping photosynthetic life across Antarctica using Sentinel-2 imagery Charlotte Walshaw, The University of Edinburgh	Assessing the viability of estimating whale abundance from tourist vessels Angus Henderson, University of Tasmania

15.20 - 15.40	Foraging in a Changing Climate: Assessing the Energetic Viability of Adélie Penguin Prey Switching Emilija Reuter, University of Canterbury	Taxon-specific phytoplankton growth and microzooplankton grazing in the Ross Sea region: the race between diatoms and prymnesiophyceae Karl Safi, NIWA	Population connectivity and phylogeography of Southern Ocean marine predators: what do we know and what are we missing? Jane Younger, University of Tasmania	Bioregions of change: mapping patterns of environmental variability and change in the Southern Ocean Matt Pinkerton, NIWA
15.40 - 16.00	The trophic ecology and foraging niches of seabirds and seals on Macquarie Island Julie McInnes, Institute for Marine and Antarctic Studies, University of Tasmania		Return of the prodigal son to the ancestral home in Antarctica: Bipolar biogeographical pattern of a new fish leech (Hirudinea) Serge Utevsky, V.N. Karazin Kharkiv National University	An expert-driven framework for applying eDNA tools to improve biosecurity in the Antarctic Leonie Suter, Australian Antarctic Division
16.00 - 18.00	Poster Session 1			Waitaki Room
18.00	End of Conference Day			
19.00 - late	ECR Trivia Quiz Night - Kaiser Brew House, Riverside Market			

Day 2 – Tuesday 1 August

Time	Session			Room
09.00 – 10.00	Keynote 2 Dr Cassandra Brooks - University of Colorado Boulder Antarctic Marine Protected Areas: Conserving Biodiversity and Building International Diplomacy in the Global Oceans			Auditorium
10.00 – 10.30	Morning Tea			Waitaki Room
SESSIONS	Session 3A P. Antarctic microbial ecology <i>Sponsored by Sustainable Microbiology</i> Room: Auditorium Chair:	Session 3B A. Patterns and processes in the Antarctic benthos Room: Conway 2&3 Chair:	Session 3C U. Acclimation, adaptation, and resilience of Antarctic flora and fauna - Marine Room: Conway 4 Chair:	Session 3D C. Climate signals from the Southern Ocean Room: Conway 5 Chair:
10.30 – 10.50	Adaptation and resilience of the terrestrial Antarctic microbiome in the face of climate change Maria Monteiro, University of Waikato	More than meet the eyes: the complex biogeographical history of the Southern Ocean littorinid genus <i>Laevilitorina</i> Claudio A. González Wevar, Universidad Austral De Chile	Antarctic amphipods have the largest eggs of all species across the globe Lloyd Peck, British Antarctic Survey	End-of-Century CMIP5 and CMIP6 Physical and Biogeochemical Projections for the Ross Sea Continental Shelf and Ross Sea Marine Protected Area Graham Rickard, NIWA
10.50 – 11.10	Molecular indicators of environmental change in an Antarctic Polar Desert Lesley-Ann Giddings, Smith College	Strong correlations of sea ice cover with macroalgal cover along the Antarctic Peninsula: ramifications for present and future benthic communities Chuck Amsler, University of Alabama at Birmingham	Evidence for rapid temperature acclimation in Antarctic marine invertebrates Amy Moran, University of Hawai'i at Mānoa	Protection of emergent carbon- and species-rich habitats is key to synergistically mitigate climate change and limit nature-loss David Barnes, British Antarctic Survey
11.10 – 11.30	Viral diversity of different Antarctic terrestrial environments Rafael Gonzalez-Serrano, Centro de Biología Molecular Severo Ochoa	Challenges for the Antarctic marine benthos: Human pressures and natural hazards Conxita Avila, Universitat De Barcelona	Combine effects of elevated temperature and acidification in Antarctic marbled rockcod, <i>Notothenia rossii</i> Seungyeon Lee, Korea Polar Research Institute, University of Science and Technology	Advancing paleoclimate reconstructions of sea-ice extent and phytoplankton: A multi-archive approach Emma de Jong, Victoria University of Wellington
11.30 – 11.50	Bacterial Diversity of Dalke Glacier and nearby lakes at Antarctica Hongpeng Cui, China University of Geosciences	Does ice cover impact macroalgal chemical composition in the Western Antarctic Peninsula? Hannah Oswald, University of Alabama at Birmingham	Thermosensor proteins in Antarctic notothenioid fishes Julia York, University of Texas at Austin	Sea ice concentration decline in an important Adélie penguin molt area Annie Schmidt, Point Blue Conservation Science

11.50 – 12.10	Microbial diversity in Antarctic Dry Valley soils across an altitudinal gradient Pedro Lebre, University of Pretoria	Developing a new bioregionalisation of seafloor fauna for the Ross Sea region David Bowden, NIWA	Thresholds of escape response to acute thermal exposure in Antarctic marine ectotherms match acute thermal limits Simon Morley, British Antarctic Survey	Antarctic seafloor seeps: A signal of climate sensitivity on coastal margins? Sarah Seabrook, National Institute of Water and Atmospheric Research (NZ)
12.10 – 12.30	ASGARD: The impacts of Antarctic Submarine Groundwater Discharge on coastal margin geochemistry, microbial diversity, glacial flow and climate sensitivity Jill Mikucki, University of Tennessee	The polychaete reefs of Ellis Fjord, Vestfold Hills, east Antarctica: protecting a unique and vulnerable nearshore marine community. Jonathan Stark, Australian Antarctic Division	Effect of temperature on the utilization of endogenous lipid reserves by Antarctic marine invertebrate embryos and larvae Ming Wei Aaron Toh, University of Hawai'i at Manoa	A view into the future: Methane Seeps and Melting Sea Stars in the High Antarctic Andrew Thurber, Oregon State University
12.30 – 13.30	Lunch			
SESSIONS	4A P. Antarctic microbial ecology Room: Auditorium Chair:	4B A. Patterns and processes in the Antarctic benthos Room: Conway 2&3 Chair:	4C U. Acclimation, adaptation, and resilience of Antarctic flora and fauna - Marine Room: Conway 4 Chair:	4D Q. Pelagics, mesopelagic, and demersals of the Southern Ocean Room: Conway 5 Chair
13.30 – 13.50	In Extremis – Revealing the Unique Microbial Diversity of Antarctica's Geothermal Refugia Stephen Noell, University of Waikato	Climate cascades affect coastal Antarctic seafloor ecosystem functioning Drew Lohrer, NIWA	Iron overload- induced Ferroptosis in two Antarctic fishes: Notothenia coriiceps and Notothenia rossii Phuong Thi Nguyen, Korea Polar Research Institute	Comparing mesopelagic and epipelagic diet in Euphausia superba using two methods. Luke Brokensha, IMAS
13.50 – 14.10	A seasonal comparison of prokaryotic diversity and photoheterotrophy in surface waters of the West Antarctic Peninsula Wade Jeffrey, University of West Florida	Iceberg scour monitoring shows fundamental relationships between disturbance and seabed spatial competition David Barnes, British Antarctic Survey	Large temperature effects on early embryonic cleavage of four species of Antarctic marine invertebrate Graham Lobert, University of Hawai'i at Mānoa	The influence of feculence: Swimming behaviour and Grazing rate changes of Antarctic krill (Euphausia superba) in the presence of guano Nicole Hellessey, Georgia Institute of Technology
14.10 – 14.30	Characterising >7,000- and >180,000-year-old microbial communities in Antarctic permafrost using a low-biomass decontamination protocol Jacob Anderson, University of Otago	Examining the connectivity of Ross Ice Shelf habitats through the lens of the benthic microbial communities Alexis Marshall, University of Waikato	The impact of rate of warming in heatwaves on the biological functions of the Antarctic sea urchin Stereochinus neumayeri Lloyd Peck, British Antarctic Survey	KRILLPODYM: a mechanistic, spatially resolved model of Antarctic krill distribution and abundance David Green, Institute for Marine and Antarctic Studies, University of Tasmania

14.30 – 14.50	Making the Invisible Visible: Field Microscopy and Filmmaking in Antarctica Ariel Waldman, McMurdo Dry Valleys LTER	A genetics perspective: identifying how Southern Ocean benthic invertebrates use physical stepping-stones for dispersal Nicola Rodewald, James Cook University	Temperature and immunostimulants modify the expression of cellular stress response genes in the Antarctic Harpagifer antarcticus and sub-Antarctic Harpagifer bispinis Julia Saravia, Universidad Austral De Chile	Modelling Krill Energy Budgets: Growth, Reproduction and Metabolism in Response to Environmental Change Haiting Zhang, Institute for Marine and Antarctic Studies, University of Tasmania; College of Marine Sciences Shanghai Ocean University
14.50 – 15.10	Unraveling the microbiome and metagenome-encoded properties of an Antarctic ascidian Alison Murray, DRI	Seasonal and latitudinal variation in macroalgal associated assemblage fatty acid composition Julie Schram, University of Alaska Southeast	Antarctic fish embryos as a model to study the impact of climate change at a critical life history stage Margaret Streeter, University of Houston	Spatial distribution of Antarctic krill and ice krill in the Ross Sea region Marine Protected Area during summer Wuju Son, Division of Polar Ocean Sciences, University of Science and Technology
15.10 – 15.30	Adaptive microbial assemblages and their biogeochemical processes in Lake Bonney of the Dry Valleys, Antarctica Hanbyul Lee, Kopri	Polychaete community distribution: the challenge of predicting functional and taxonomic patterns using bioregionalization approaches Friederike Weith, University Rostock	Inorganic carbon uptake strategies in Antarctic seaweeds: implications for seaweed resilience to ocean acidification Pamela Fernandez, Universidad De Los Lagos	Do parasites matter in Southern Ocean ecosystems? Insights from metabarcoding symbionts within krill Alison Cleary, BAS & AAD
15.30 – 17.30	Poster Session 2			Waitaki Room
17.30	End of Conference Day			
17.30 - 19.00	FieldFutures Workshop - RSVP required			Conway 4, Te Pae
18.00 - 19.30	Public Talk Awesome Antarctica Speaker Series - Four continents x four stories			Tūranga, Christchurch Central Library

Day 3 – Wednesday 2 August

Time	Session	Room
	Networking and Field Trip Day	

Day 4 – Thursday 3 August

Time	Session				Room
08.30 - 09.15	Address by Tā Tipene O'Regan				Auditorium
09.15 - 09.45	Cultural presentation - David Brennan - Ngāi Tūāhuriri				Auditorium
09.00 – 10.00	Keynote 3 Michael Stevens				Auditorium
10.00 – 10.30	Morning Tea				
SESSIONS	Session 5A S. Higher predators Room: Auditorium Chair:	Session 5B M. Polar Research by and with First Nations People Room: Conway 2&3 Chair:	Session 5C R. Technological advances, development, and applications Room: Conway 4 Chair:	Session 5D D. Drivers of terrestrial biodiversity now and into the future Room: Conway 5 Chair	
10.30 – 10.50	Responses to change: ecophysiology and demography of Antarctic baleen whales Logan Pallin, University of California Santa Cruz	The need for Mātauranga practices in Antarctica Tane Karepa, Ngati Toa	Hauwai 20: An autonomous biosampler for year-round, under sea ice biological collection and physical measurements in the Antarctic Stephen Cary, University of Waikato	Life in Antarctica's saltiest pond? Microbial persistence in Don Juan Pond and implications for cryptic habitats on Earth and Mars Jill Mikucki, University of Tennessee	
10.50 – 11.10	Building a Catalog of Antarctic petrel (<i>Thalassoica antarctica</i>) Nesting Sites and their Breeding Abundances using Worldview-3 Imagery Kate Blackwell, Stony Brook University	Murihiku ki Te Tonga Research & Monitoring Programme Riki Nicholas, Murihiku Regeneration	KaKE: A Long Term Marine Ecosystem Monitoring Project Commencing in East Antarctica Rob King, Australian Antarctic Division	Long-term impact of paraglacial processes on soil microbial communities in ice-free landscapes of maritime Antarctica Mincheol Kim, Korea Polar Research Institute	
11.10 – 11.30	Using various Acoustic analysis techniques in assessing the vocal activity patterns of leopard seals In the Bransfield Strait, Antarctica Andrea Bonilla, Cornell University	Panel discussion – First nations people in polar science	Lab-In-A-Suitcase: Rapid, field-based portable wildlife disease surveillance in the Southern Ocean. Meagan Dewar, Federation University Australia	Environmental drivers of terrestrial Antarctic biodiversity Jasmine Lee, British Antarctic Survey	

11.30 – 11.50	Looking at the details: Compound specific stable isotopes tell the diet history of east Australia migrating humpback whales Jasmin Groß, Alfred Wegner Institute for Polar and Marine Research		Remotely piloted aircraft systems for non-destructive health mapping of terrestrial polar vegetation: showcasing East Antarctic moss beds Ryan Haynes, University of Tasmania	Long-term effects of climate and environmental pressures on East Antarctic moss beds Georgia Watson, University of Wollongong; School of Earth, Atmospheric and Life Sciences
11.50 – 12.10	Disparate dispersal behavior of fledgling Adelie penguins from two colonies on Ross Island Grant Ballard, Chief Science Officer		Intelligent Sensing Platform for Monitoring Antarctic Mosses: Addressing the Challenges of Remote Data Collection in Extreme Environments Krystal Randall, Securing Antarctica's Environmental Future - University of Wollongong	Drivers of species richness are sensitive to grain size on a sub-Antarctic island Joshua Tsamba, University of Pretoria
12.10 – 12.30	Beneath the Antarctic sea-ice: Fine-scale analysis of Weddell seals behavior and predator-prey interactions, using micro-sonar data in Terre Adélie. Adelie Antoine, LOCEAN/CNRS		Enhancing Antarctic Conservation with Advanced Remote Sensing and Machine Learning Techniques for ASPA Scale Mapping and Monitoring Barbara Bollard, University of Wollongong	Islands in the ice: Potential impacts of habitat transformation on Antarctic biodiversity Sharon Robinson, Securing Antarctica's Environmental Future, University Of Wollongong
12.30 – 13.30	Lunch - Waitaki Room		SOOS Censusing Animal Populations from Space - Boardroom	
SESSIONS	Session 6A S. Higher predators Room: Auditorium Chair:	Session 6B F. Drivers of pelagic patterns and processes Room: Conway 2&3 Chair:	Session 6C N. Vulnerability and management in the Southern Ocean Room: Conway 4 Chair:	Session 6D J. Toward better understanding and management of terrestrial Antarctica Room: Conway 5 Chair
13.30 – 13.50	Migratory connectivity of a key Southern Ocean species, the Antarctic fur seal Mary-Anne Lea, IMAS, University of Tasmania	Tropical teleconnections through the Amundsen Sea Low impact Antarctic toothfish recruitment within the Ross Gyre Erik Behrens, NIWA	Progress with CCAMLR's krill fishery management approach Steve Parker, CCAMLR	Options for the Annexes: Data-driven environmental conservation for the Antarctic Steven Chown, Monash University

13.50 – 14.10	Where to live? Landfast sea ice shapes the presence of emperor penguin colonies around Antarctica Adelie Antoine, LOCEAN/CNRS	The impact of simulated diel vertical migration and sea ice drift on the connectivity of Antarctic krill Cassandra Brooks, University of Colorado Boulder	A circumpolar benthic bioregionalisation for the Antarctic continental shelf derived from seafloor imagery. Nicole Hill, Institute for Marine & Antarctic Studies, University Of Tasmania	A horizon scan of emerging and novel threats to the conservation of the Antarctic Zachary Carter, University of Adelaide
14.10 – 14.30	Variability in the ecophysiology of leopard seals across the Southern Ocean (and beyond) Sarah Kienle, Baylor University	Combining multiple stable isotope methods to elucidate upper ocean hydrographic and biogeochemical processes in the Southern Ocean Sarah Bury, National Institute of Water & Atmospheric Research	Measuring the construction impact of the extension of the British Antarctic Survey Rothera research station wharf Simon Morley, British Antarctic Survey	Current state of Antarctic biodiversity monitoring Shae Jones, University of Wollongong
14.30 – 14.50	Starting young: spatial segregation from first trips to sea between two sympatric Southern Ocean predators Mia Wege, Department of Zoology & Entomology, University of Pretoria	Linking high-frequency ocean dynamics with biological production in a coastal environment at Harmony Point – South Shetland Islands Andrea Pinones, Austral University of Southern Chile	Designing Marine Protected Areas (MPAs) for the CCAMLR Domain 9 region in the Southern Ocean Anne Boothroyd, University of Tasmania	Structure and Dynamics of Antarctic Governance Larissa Lubiana Botelho, Queensland University of Technology
14.50 – 15.10	South Polar Skua Reproductive Success Breeding on the Antarctic Peninsula and the Antarctic Silverfish Component of Their Diets Nina Karnovsky, Pomona College	Using animal-borne sensors and an ocean reanalysis to improve our understanding of the impact of environmental variability on Patagonian toothfish Stuart Corney, Institute for Marine and Antarctic Studies	Monthly whale abundance estimates in the southwest Atlantic: Implications for management organisation CCAMLR and IAATO Angus Henderson, University of Tasmania	The cost of area protection in Antarctica Justine Shaw, Queensland University Of Technology
15.10 – 15.30	Movement and foraging ecology of South Pacific humpback whales in the Southern Ocean Leena Riekkola, The University of Auckland	How do Southern Ocean eddies affect the distribution of micronekton? Alice Della Penna, University of Auckland	Identifying Vulnerable Marine Ecosystems in the Southern Ocean: circumpolar model prediction and vulnerability index quantification Charley Gros, IMAS	Ice Age: Come on kids, you can play extinction later Mark Stevens, South Australian Museum
15.30 – 16.00	Afternoon Tea			

SESSIONS	Session 7A S. Higher predators Room: Auditorium Chair:	Session 7B B. Advancing data-driven Antarctic science Room: Conway 2&3 Chair:	Session 7C T. Acclimation, adaptation, and resilience of Antarctic flora and fauna - Terrestrial Room: Conway 4 Chair:	Session 7D L. Humans in Antarctica Room: Conway 5 Chair
16.00 – 16.20	A circumpolar analysis of habitat-use variation among humpback whales in the Southern Ocean Ryan Reisinger, University of Southampton	Updates on the SCAR Antarctic Biodiversity Portal GBIF Hosted Portal Anton Van de Putte, Royal Belgian Institute of Natural Sciences	The Complete Plastome of Antarctic Moss <i>Andreaea regularis</i> : Insights into Plastome Evolution and Phylogenetic Relationships Within Bryophyta Syahril Sulaiman, Korea Polar Research Institute	Citizen science and Antarctic Tourism: What engages people and why? Hanne Nielsen, University of Tasmania
16.20 – 16.40	Long-term stability in the circumpolar foraging range of a Southern Ocean predator between eras of whaling and rapid climate change Emma Carroll, University of Auckland Waipapa Taumata Rau	Environmental DNA (eDNA) of Antarctic krill: what eDNA abundance and fragmentation can tell us about distribution, habitat use and biomass Leonie Suter, Australian Antarctic Division	Plastic gene expression and resilience of natural populations of <i>Lyallia kerguelensis</i> in the Kerguelen subantarctic Islands Peter Lockhart, Massey University	Minimizing whale ship strikes around the Antarctic Peninsula: promoting stewardship and developing best practices for Antarctic tour operators Ross Nichols, University of California, Santa Cruz
16.40 – 17.00	Foraging Behavior, Diving Physiology and Habitat Selection of Leopard Seals in the Antarctic Peninsula Daniel Costa, Institute of Marine Science	Modelling the Hydrological Connectivity of the McMurdo Dry Valleys: A Tool for Predicting Future Biogeography Tamara Pletzer, University of Otago	Morphological Analysis of Transgenic Mosses Overexpressing an AP2-like Gene of an Antarctic moss <i>Sanionia uncinata</i> Suyeon Seo, Kopri, UST	When the extreme becomes routine: How extreme environments inform personnel selection, retention, adaptation, health and performance for all Kimberley Norris, University of Tasmania
17.00 – 17.20	Constructing reliable food web networks: data resolution and structure Georgia Mergard, University of Tasmania- Institute for Marine and Antarctic Studies		Assessing the Impact of Climate-Driven Changes on Biodiversity in the McMurdo Dry Valleys Andrew Blakemore, Brigham Young University	
17.20 – 17.30	End of Conference Day			
18:30 – Late	Symposium Dinner			Castro's

Day 5 – Friday 4 August

Time	Session				Room
09.00 – 10.00	Keynote 4 Dana Bergstrom, University of Wollongong - Is Antarctic science worth the carbon miles?				Auditorium
10.00 – 10.30	Morning Tea				
SESSIONS	Session 8A Q. Pelagics, mesopelagic, and demersals of the Southern Ocean Room: Auditorium Chair:	Session 8B B. Advancing data-driven Antarctic science Room: Conway 2&3 Chair:	Session 8C T. Acclimation, adaptation, and resilience of Antarctic flora and fauna - Terrestrial Room: Conway 4 Chair:	Session 8D E. Vulnerability of Antarctic marine ecosystems to invasive species and diseases Room: Conway 5 Chair	
10.30 – 10.50	Seasonally-resolved food web models of the Ross Sea region using stable isotopes as balancing constraints Matt Pinkerton, NIWA	Exploring distribution controls and future extent of snow algae on the Antarctic Peninsula using species distribution models. Andrew Gray, University of Edinburgh	The March 2022 Weather Anomaly Drove Aseasonal Thaw and Response of Soil Communities in the McMurdo Dry Valleys, Antarctica John Barrett, Virginia Tech	Vulnerability of the Antarctic coastline to non-native species from buoyant drift objects Hannah Dawson, Unsw	
10.50 – 11.10	Climate change, fisheries management, and modelling changes in fish community structure in the Southern Ocean Joel Williams, Imas University of Tasmania	Using point process models to understand and forecast the distributions of bryophytes in a changing Antarctica Gabrielle Koerich, University of Canterbury	Resilience of the Antarctic moss <i>Bryum argenteum</i> : investigating acclimation and physiological plasticity in the context of the climate variability hypothesis Claudia Colesie, University of Edinburgh	The vulnerability of Antarctic coasts to colonisation by dispersing flora and fauna Ceridwen Fraser, University of Otago	
11.10 – 11.30	Gastric evacuation and changes in appetite-related genes in Antarctic black rockcod, <i>Notothenia coriiceps</i> Jihun Kim, Korea Polar Research Institute	Machine-Learning-Assisted Identification, Extraction, and Synthesis of Antarctic Biogeographical Knowledge Charles Lee, University of Waikato	Bringing the Past to Life: Investigating Changes in Vegetation in Antarctic Specially Protected Areas Using AI and Historic Photographs Barbara Bollard, University of Wollongong	A risk assessment for marine invasive species near Australia's Antarctic stations Oakes Holland, Queensland University of Technology	
11.30 – 11.50	Developing a high-throughput genetic method to elucidate the diversity and abundance of zooplankton from Southern-Ocean Continuous Plankton Recorder (CPR) collections Georgia Pollard, University of Waikato	A continent-wide detailed geological map dataset of Antarctica available for cross-discipline research Simon Cox, GNS Science	Synthesis of current biological monitoring efforts in continental Antarctica Abigail Borgmeier, Brigham Young University	Olfactory and visual communication system of non-native winter crane fly, <i>Trichocera maculipennis</i> , colonizing Antarctic sewage facilities in King George Island Kye Chung Park, New Zealand Institute for Plant and Food Research	

11.50 – 12.10	Circumpolar sampling reveals high genetic connectivity of Antarctic toothfish across their spatial distribution Dale Maschette, Institute for Marine and Antarctic Science	The SCAR Antarctic Terrestrial Biodiversity Database Jasmine Lee, British Antarctic Survey	Canopy climates: the key to understanding Antarctic moss physiology and tipping points under extreme events Krystal Randall, Securing Antarctica's Environmental Future - University of Wollongong	The one who takes your breath away in the polar region Norhidayah Rosman, AIMST University
12.10 – 12.30	Zooplankton in the ecosystem and carbon cycle of the Ross Sea Svenja Halfter, NIWA	How uncertain and biased is our knowledge of terrestrial Antarctic biodiversity? Charlotte Patterson, Queensland University of Technology	Molecular insights into the necrosis induction process by a novel phytopathogenic fungus, <i>Varicosporium elodeae</i> , in Antarctic plants Jungeun Lee, Korea Polar Research Institute	Risk of Avian Influenza in Southern Ocean Meagan Dewar, Federation University Australia
12.30 – 13.30	Lunch			
SESSIONS	Session 9A Q. Pelagics, mesopelagic, and demersals of the Southern Ocean Room: Auditorium Chair:	Session 9B H. Impacts and management of local and long-distance pollution Room: Conway 2&3 Chair:	Session 9C T. Acclimation, adaptation, and resilience of Antarctic flora and fauna - Terrestrial Room: Conway 4 Chair:	Session 9D K. Emerging Antarctic biological archives Room: Conway 5 Chair
13.30 – 13.50	Investigating the impacts of environmental variability in the Heard and McDonald Islands Toothfish fishery. Nicole Hill, Institute for Marine & Antarctic Studies, University of Tasmania	Nitrogen cycle complications in diesel contaminated soil Kristopher Abdullah, University of New South Wales	Mechanisms of long-term recovery from freezing in the Antarctic midge, <i>Belgica antarctica</i> Cleverson Lima, University of Kentucky	Antarctic mosses as high-resolution archives of microclimate Melinda Waterman, University of Wollongong, Australia
13.50 – 14.10	Year of the Skate: An update on skate research in the Ross Sea region Brittany Finucci, NIWA	Species-, feeding type- and habitat-dependent intake of microplastics in Polar marine invertebrates Julian Blumenroeder, University of Hull	Sub-lethal versus lethal freezing differentially impacts ability of recovery from freeze-thaw injury in <i>C. quitensis</i> explored through transcriptomics KYUNGWON MIN, Korea Polar Research Institute	Adélie Penguin Foraging Behavior over Millennia: Insights from Multiple Stable Isotope Analyses ($\delta^{13}\text{C}$, $\delta^{15}\text{N}$, and $\delta^{34}\text{S}$) Megan Reaves, University of Canterbury

14.10 – 14.30	Life beneath the ice: jellyfish and ctenophores from the Ross Sea, Antarctica, with an image-based training set for machine learning Gerlien Verhaegen, University of Greifswald	Where science meets policy: The Antarctic Clean-up Manual as a case study in protecting the Antarctic environment Tim Spedding, Australian Antarctic Division	Genomic and phenotypic characterization of a red-pigmented <i>Massilia</i> strain isolated from a dry valleys microbial mat Jacob Shaffer, University of Tennessee - Knoxville	Genomic evidence for West Antarctic Ice Sheet collapse during the Last Interglacial Period Sally Lau, James Cook University
14.30 – 14.50	Physiological and behavioral drivers of niche differentiation in young Antarctic fishes and implication for performance in future oceans Amanda Frazier, University of California, Davis	Application of drone technology to support waste management system in Antarctica Kyungho Lee, Korea Polar Research Institute	Transcriptome analysis of time dependent manner on cold stress in <i>Deschampsia antarctica</i> Hyodong Lee, Korea Polar Research Institute	
14.50 – 15.10	Antarctic toothfish <i>Dissostichus mawsoni</i> as a bioindicator of trace and rare earth elements in the Southern Ocean? José Queirós, University of Coimbra	Microplastic: An Insidious Invader of Antarctic Soil Kenneth Carroll, Brigham Young University		
15.10 – 15.30	Change in mesozooplankton community structure of the Ross Sea region Marine Protected Area during summer Sung Hoon Kim, Korea polar research institute			
15.30 – 16.00	Conference Closing Ceremony			