

Botany and Zoology Dept.
INVITED SPEAKERS
Research Seminar Series



2024



Wednesday 12th June | 1:00-2:00 PM |
Venue: Broom Hall, rm2020, Natural Sciences Building

Prof. Steven Chown
Director, Securing Antarctica's Environmental Future (SAEF),
Monash University, Australia



Biodiversity informatics for Antarctic environmental conservation.

Abstract: Antarctica's Future is Everyone's Future. Antarctica and its surrounding Southern Ocean are almost entirely removed from everyday thought. They're remote, isolated, largely unpopulated, and rarely feature in the news. Yet the continent and its surrounding ocean are an intimate part of our daily lives. They regulate the climates we experience and have a large influence on climate extremes. Much of the excess carbon dioxide and heat we generate through our activities is absorbed by the Southern Ocean. The Antarctic Ice Sheet contains 58 m of sea level rise were it to melt entirely. We are already committed to 30-40 cm of global mean sea level rise, meaning that within many lifespans, 1 in 100-year floods will become annual. Sea level rise could be as much as 2 m by 2100. The extra contribution will come from the Antarctic, but we remain uncertain about when we might expect such an addition, and what it's exact size will be. Planning for the best has never been a good risk mitigation strategy. Antarctica is also home to some of the world's most extraordinary biodiversity. While we may be used to its value in western culture, appreciation for its life has a much longer history with first peoples. That biodiversity is now significantly under threat from changing climates, human activities and their interaction. The nations representing the majority of the world's people have agreed, since the 1950s, to safeguard Antarctica and the Southern Ocean. That agreement has kept the continent and its surrounding oceans free from military conflict and relatively intact as the Earth's last great wildernesses. Those values too are now under threat. Antarctica's Future is a choice. We have not yet made that choice, though seem set on a poor one. Choosing a better one will mean choosing a better life for all of us. Making the Antarctic a regular thought in our daily lives is the way to do so. Antarctica's Future is Everyone's Future.

Short bio: Prof Steven Chown leads a nationally and globally collaborative ARC Special Research Initiative. His research is in ecology, physiology, and conservation biology. Translation of science into policy is a major focus. His research concerns biodiversity variation through space and time, and the conservation requirements for mitigating the impacts of environmental change. He co-developed the field of macro-physiology – the investigation of large-scale patterns in and processes underlying physiological variation and their ecological implications. He has worked in Australia, Africa, the Asia-Pacific, the UK, and in the Antarctic, where he has over 30 years of field experience. For many years Steven represented the international Scientific Committee on Antarctic Research (SCAR), of which he was also President (2016-2021), at the Antarctic Treaty Consultative Meetings, providing scientific advice on a broad range of environmental and science policy matters. He has been National Delegate to SCAR for both Australia and South Africa. He provides a range of advice to international Antarctic programs through advisory committees and boards.