



CELEBRATING THE INTERNATIONAL POLAR YEAR: LOOKING TO THE PAST TO SEE THE FUTURE

You are invited to attend two **FREE PUBLIC LECTURES** to celebrate the recently concluded International Polar Year, the 4th in a sequence of polar years dating back to 1882. The IPY was a major scientific program that brought together scientists from over 60 nations to investigate the full range of natural and social research topics in the Arctic and Antarctic.

Date: 7:30-9:00 pm Thursday 5 November 2009

Venue: Royal Institution of Australia, Exchange Place, Adelaide 5000, <http://www.riaustralia.org.au/science/home.jsp>

Dr Ian Allison will present:

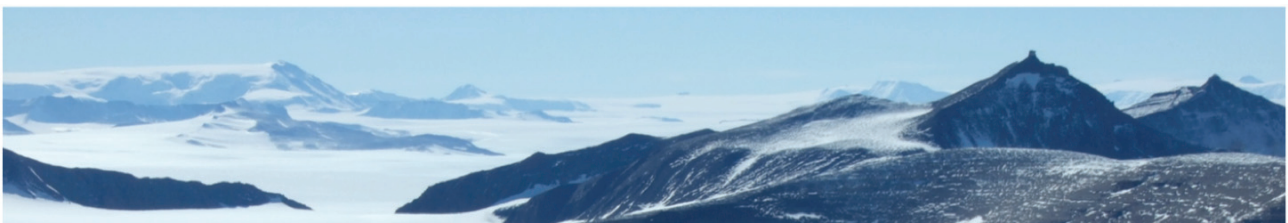
Climate of the Antarctic and Southern Ocean: Scientific advances during and beyond the International Polar Year 2007-08

Dr Mark Stevens will present:

Biological signatures in Antarctica: A window into the past, to predict the future.

For further information contact Prof. Bob Vincent, Ph 8303-5758, robert.vincent@adelaide.edu.au

Sponsored by the *Australian Academy of Science* and the *Australian Antarctic Division*



Dr Ian Allison

Climate of the Antarctic and Southern Ocean: Scientific advances during and beyond the International Polar Year 2007-08

Abstract: Scientific advances during the IPY included new assessments of changes to the mass of the Greenland and Antarctic ice sheets and their contributions to rising sea level. Significant changes in the temperature and salinity of the Southern Ocean were also observed. Consequences for large-scale climate processes are discussed, as will IPY-inspired future directions for Australian Antarctic research.

Ian Allison is leader of the Ice, Atmospheres and Climate Program at the Australian Antarctic Division. He has been actively involved for many years in international collaboration in Antarctic science through bodies such as the Scientific Committee on Antarctic Research and the World Climate Research Programme. Most recently he was co-Chair of the Joint Committee for the International Polar Year 2007-2008, a lead author of the IPCC Fourth Assessment Report, and he is currently the President of the International Association of Cryospheric Science.

Dr Mark Stevens

Biological signatures in Antarctica: A window into the past, to predict the future

Abstract: Only about 0.3% of Antarctica is free of ice. The terrestrial and freshwater ecosystems are generally small and isolated, and the biota of ancient origins. How have these systems survived during past ice ages when the continent was potentially totally covered with ice? A new paradigm is discussed that links biological findings with Antarctic geology and glacial history. Looking at responses of the biota to past climate change may not only allow us to better model the physical changes to Antarctica, but make it possible to predict biotic responses to climate change in Antarctica.

Mark Stevens gained his Ph D in 2003 in New Zealand and is now a scientist at the South Australian Museum. He travels extensively to the sub-Antarctic islands and the Antarctic continent to study the terrestrial invertebrates and ecosystems. Mark continues his Antarctic work through research projects with the Australian Antarctic Division and in late 2009 he will again join a New Zealand-led expedition to the Dry Valleys of the Transantarctic Mountains, for a final season on an IPY project 'Predicting biocomplexity in Dry Valley ecosystems'.

