



Australian Government
Bureau of Meteorology

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CHANGING CLIMATE, CHANGING ECOLOGY

Australia's warming climate is already changing its ecology, and "citizen scientists" are being called on to help monitor it.

Dr Lynda Chambers, a senior researcher with the Centre for Australian Weather and Climate Research, the Bureau of Meteorology's joint research arm with CSIRO, said Australia's range of climates, from arid to alpine to tropical, made Australians uniquely placed to investigate the influence of climate on plants and animals,

Dr Chambers is a scientific advisor to ClimateWatch, an online community network set up to record ecological changes occurring in people's backyards, parks and surrounding bushland.

Dr Chambers said changes in rainfall and temperature across Australia were already triggering changes in the established flowering times, breeding cycles, migrations and distributions of the country's flora and fauna, both native and introduced.

Dr Chambers will present an overview of the impacts of climate change on Australia's terrestrial biodiversity at Greenhouse 2011, a biennial conference hosted by CSIRO next week in Cairns.

Last year, a University of Melbourne study showed a one-degree increase in Melbourne's temperature had led to the common brown butterfly emerging from its cocoon 10 days earlier than it did mid-last century.

"Butterflies are an excellent barometer of climate change," said Dr Chambers. "Other potential indicator species include birds, frogs and plants."

"As far as we are able to tell, we haven't lost any species to climate change yet, but we do expect that general increases in temperature and regional decreases in rainfall will make certain species more vulnerable."

Species deemed to be at risk of climate change include the golden bowerbird, the mountain pygmy possum, the little penguin and Victoria's avian emblem, the helmeted honeyeater.

"The changing climate is throwing up a few surprises," Dr Chambers said. "For example, in recent years we've seen penguin colonies affected by fire in Victoria, which is something penguins appear ill-prepared for."

Drying conditions inland are also expected to see greater influxes of birds such as ibises and cockatoos in coastal cities.

Under ClimateWatch, people choose to monitor one or more common species and record their observations online. There are 120 key indicator species to choose from, comprising 35 birds, 34 plants, 18 insects, five mammals, six sea creatures, 10 frogs, eight reptiles and four spiders.

ClimateWatch is based on similar projects overseas and is supported by the Bureau of Meteorology, the Earthwatch Institute, the University of Melbourne and the Rural Industries Research and Development Corporation.

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For further information, or to arrange an interview, please contact:
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For background information on ClimateWatch see www.climatewatch.org.au
For more on the Greenhouse 2011 conference see www.greenhouse2011.com