

Life, Earth & Environment Seminar Series

When: Wednesday 29th July, 12 – 1 pm

Where: Natural Resources Building, Lecture Theatre 1 (EM1)

Risks and rewards: the ecology of boom-bust cycles in arid Australia

Professor Chris Dickman

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Episodic floods or heavy rains in arid environments usually herald pulses of productivity that trigger 'booms' in the numbers of consumer organisms and dramatic but short-lived increases in local and regional biodiversity. But these times of reward can also be times of great risk, providing opportunities for invasive plants and animals to move into arid regions at the expense of native biota. As 'bust' times of low resources begin, wildfires often sweep through large areas and provide further opportunities and hazards for biota. In this talk, I will describe long-term (25-year) trends in vegetation, lizards and small mammals in the Simpson Desert, central Australia. I will also show the responses of these groups to flooding rains, droughts and wildfire, and discuss the likely effects of climate change on boom and bust cycles and the management options that may help to mitigate these effects.

Biography

Chris Dickman has long been fascinated by patterns in the distribution of living things, and by factors such as invasive pest species that affect biological diversity. His current work focuses on small vertebrates in arid environments, and a range of other projects in applied conservation and management. Currently holder of an ARC DORA Award, Chris has published extensively and has supervised more than 40 Honours, 30 Masters and 50 PhD students over the last 25 years. He also serves on several scientific advisory panels for conservation/research organizations, and was the NSW Plant and Animal Scientist of the Year in 2010.