



Southern Africa Association for the Advancement of Science
Suider-Afrika Genootskap vir die Bevordering van die Wetenskap

Public Lecture Series

The resilience of ecosystem function: lessons from birds



Speaker: Graeme Cumming
Percy FitzPatrick Institute, University of Cape Town

On: Wednesday, 5 March 2014

At: 17:15 (to 18:15)

Venue: Sci-Enza, Hatfield Campus, University of Pretoria
(Note: Please use the Prospect Street entrance. See
<http://s2a3.org.za/directions.php> for directions and a map.)

An emerging paradigm in conservation biology focuses on the relationships between biodiversity and human wellbeing. People depend on ecosystems for a wide range of cheap and renewable goods and services. For example, ecosystems provide food, fuel, fibre, climate regulation, and clean water. With a major extinction event currently under way, it is of critical importance that we understand how, and whether, the ecosystem services that humanity depends upon can cope with species loss. A large body of existing research on ecosystem function uses an ecosystem ecology approach that relies on quantifying nutrient pools and fluxes, as in global climate models and carbon storage analyses. I will use three different avian examples (the impact of protected areas on avian functional groups; the influence of large termitaria on avian communities in Miombo woodlands; and the resilience of a wading bird community to a sewage influx) to explore elements of the relationship between avian community composition and ecosystem function, focusing on the importance of keeping organismal perspectives present in research on ecosystem service provision. I conclude with a brief discussion of future research needs and challenges in understanding how changes in ecological communities may translate into changes in ecosystem service provision.

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