



RSB Director's seminar series: Molecular evolution in plants: from mutations within individuals to evolving lineages

Friday 6 November 12.30–2pm

Event to be followed with cheese and fruit platters

Speaker

Rob Lanfear

Macquarie University Sydney.

Location

Slatyer Seminar Room

R.N. Robertson Building

46 Sullivans Creek Road

The Australian National University

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This lecture is free and open to the public

RSB event information:

biology.anu.edu.au/news-events



DNA sequences contain an incredible wealth of useful information. But our ability to use this information hinges, in large part, on understanding molecular evolution. Surprisingly, our understanding of molecular evolution in plants remains very patchy. In this talk, I'll present new findings on the causes and consequences of molecular evolution in plants, ranging from the origin of mutations in individuals to their fixation in evolving lineages.

I will focus on our recent efforts to track mutations as they accumulate within individual plants. We have developed an approach that allows us to record the entire history of somatic mutations within an individual plant. This work

reveals some fundamentally important features of evolution in plants. I will discuss the consequences of this work for how we understand plant ecology and evolution, and show how the accumulation of somatic mutations in individual plants is linked to much longer-term patterns of change across the entire radiation of flowering plants.

Biography: Rob Lanfear is a senior lecturer in genomics and an ARC Future Fellow at Macquarie University in Sydney. He earned a BSc in Ecology, an MSc in Artificial Intelligence, and a DPhil in Developmental Biology. For the last seven years (many of them at ANU), he has worked primarily on understanding long term patterns of molecular evolution, combined with developing methods for phylogenetics and comparative biology. In the last couple of years he has focussed increasingly on unravelling the causes and consequences of somatic mutation in plants.

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