



Australian
National
University

PhD exit seminar: Chemical ecology and pollination biology of the Australian cycad *Macrozamia communis*

Thursday 19 September 2013, 1pm

Thomas Wallenius Peakall Lab, Division of Evolution, Ecology and Genetics

Gould Seminar Room, (Rm 235) Gould Building (Bldg. 116), Linnaeus Way, ANU



Cycad pollination typically involves an obligate interaction, in which a specialised insect herbivore feeds, oviposits and pollinates during a short period of cone pollen-shed and receptivity. Two key traits of cycad reproductive biology, cone thermogenesis and emission of volatile organic compounds, are thought to mediate dispersal and colonisation behaviours of the insect pollinators. However, the interrelationship of these two cone traits and the physiological responses of pollinators to them have received little attention. For my PhD thesis, I investigated

cone thermogenesis and volatile emission in the Australian cycad *Macrozamia communis*, and the behavioural and antennal responses of the weevil pollinator *Tranes lyterioides*. The research focused on: the interaction between thermogenesis and emission levels of four main volatiles in pollen-shedding male and receptive female cones; behavioural responses of *T. lyterioides* weevils to varying concentrations of the four main volatiles, other volatiles and cone odour; and the antennal responses of *T. lyterioides* weevils to varying concentrations of the four major volatiles and their blends. My seminar will present further details of the experimental findings and provide conclusions of the research in context of current cycad pollination hypotheses.

Presented by

Research School of
Biology

ANU College of
Medicine, Biology
& Environment

Contact details

E ajay.narendra@anu.edu.au T 02 612 54799
This lecture is free and open to the public

EEG seminar information:
<http://biology.anu.edu.au/News/events-eeg.php>

CRICOS# 00120C

PUBLIC LECTURE