



Royal Society of New South Wales

2009 Monthly Lecture Series
Studentship Awards Presentation

Wednesday, 2nd December 2009

6:30pm Roger's Room, St. Paul's College
University of Sydney



Danielle Sulikowski: Department of Brain, Behaviour and Evolution, Macquarie University.

Spatial cognition and foraging ecology of the noisy miner

Danielle has investigated the spatial cognitive abilities of the noisy miner bird. She found that the natural distribution of rewards can be used to predict the variation seen in the birds' performance and strategies they use to complete tasks. Danielle's experiments were based on the assumption that cognitive mechanisms, as the proximate determinants of behaviour, have been shaped by evolution, to allow animals to behave in functionally adaptive ways.



Isa Chan: School of Chemistry, The University of New South Wales.

Molecular Interactions and Chirality

Chirality, or 'handedness', is the structural characteristic of a molecule that cannot be superimposed on its mirror image. It is essential to the proper functioning of living systems. Devising more efficient methods in the generation of chirally pure compounds has been of great interest in contemporary chemistry and beneficial to many key areas of science. Isa's current research involves systematically revealing new types of weak non-covalent interactions. An alicyclic diol example will be presented, whose structure is determined simply by the solvent chosen for crystallisation.



Tamara Keeley: Faculty of Veterinary Science, University of Sydney and Taronga Conservation Society of Australia.

Maintaining the Genetic Diversity of the Tasmanian Devil: Development of Assisted Reproductive Technologies

The steep decline in population of the Tasmanian devil has led to research into species preservation through artificial insemination of cryopreserved spermatozoa. Tamara has developed methods to improve sperm viability and motility after cryopreservation. Tamara's research also includes the study of reproductive and stress hormones in the faeces of captive female devils.

St Paul's College: take the City Road entrance directly opposite the Darlington Centre. Go through the entrance flanked by two sandstone pillars and proceed north-west along the driveway for 200 metres (keeping the oval on your right) until you come to a 4 m high archway. Park beside the oval and walk through the arch and across the quad to the Cloisters. Parking is free.