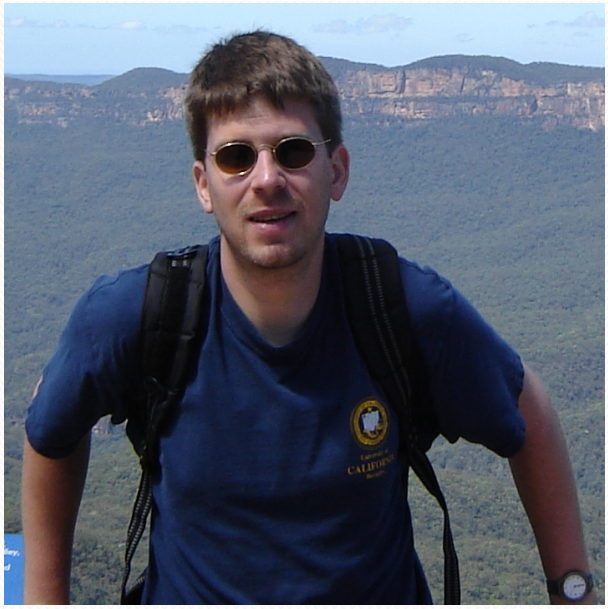
ANU Seminar

EVOLUTION, ECOLOGY, & GENETICS
RESEARCH SCHOOL OF BIOLOGY

Thursday 2nd June 2011, 1pm

The genetic basis of variation in foliar plant secondary metabolites in Australian *Myrtaceae*



Dr. Carsten Külheim

Evolution Ecology and Genetics
The Australian National University

Eucalyptus trees, as well as other Myrtaceae, are well known for their high foliar content of several classes of secondary metabolites and these have a strong effect on the feeding patterns of many species of marsupials and some insects. Best known are the essential oils, which are mostly a mixture of terpenoids, but eucalypts also contain significant concentrations of flavonoid and formylated phloroglucinol compounds. Quantitative and qualitative variation within and between species in all these groups is large. Much of this variation is under strong genetic control with heritabilities of between 0.3 and 0.9 for all three groups of compounds. As well as being important ecologically the terpenes in particular are valued as industrial and medicinal products and Australia supports a strong essential oil industry focused on *Eucalyptus* and *Melaleuca* foliar oils.

My research seeks to unravel the genetic basis of variation of terpene- based essential oils both within and between species of Australian Myrtaceae. I have applied a variety of high throughput methods including next-generation sequencing for SNP discovery and genotyping, and transcriptome analysis, SNP genotyping with the Sequenom MassARRAY platform and transcript quantification with the Fluidigm Biomark system.

For further info please contact:
Dr Paul Waters, 02 6125 8367, paul.waters@anu.edu.au

THE AUSTRALIAN NATIONAL UNIVERSITY

Seminars are held in the Gould Wing Seminar Room, Building 116 Daley Rd, ANU
ALL STAFF AND STUDENTS ARE WELCOME TO ATTEND