

Honours project at the University of Tasmania, Hobart

Evolution of adaptive syndromes in *Eucalyptus*



The marked difference between juvenile and adult foliage in *E. globulus* (Hudson et al. 2014. G3 4, 1235-1245.)

- Study iconic eucalypts
- Utilise existing robust phylogenies
- Internationally recognised research group

This project will reconstruct the evolution of key adaptive traits that have made eucalypts so successful. Some of the most obvious traits may have contributed to the high adaptability of species (e.g. the very marked phase change from juvenile to adult foliage).

This project will exploit a new molecular phylogeny of eucalypts to reconstruct the relative timing of the evolution of key traits, and will test whether these traits are correlated with each other in time, whether they show evolutionary linkage with major features of the environment such as climate, soils, fire frequency and spatial distribution. It will involve analysis using phylogenetic methods, along with data mining of existing databases and literature, potentially supplemented with field and laboratory measurements of key functional traits.



Distribution of growth habit (mallee / tree) in the phylogeny of subgenus *Eucalyptus* (Rutherford et al. 2016. *Aust. Syst. Bot.* **28**, 326-354.)

The **Eucalypt Genetics Group at UTAS**, led by Profs Potts and Vaillancourt, has a world-class interdisciplinary research programme that investigates the evolutionary and ecological forces that shape diversity in *Eucalyptus*.

The Group consistently publishes in high impact journals, with recent publications in *Nature*, *New Phytologist* and *Molecular Biology and Evolution*.

The Group collaborates with other universities and research institutions in Australia and internationally that can bring other skills to a supervisory team.

Learn more at www.eucalyptgenetics.com

For more information about this project please contact:



Prof. Brad Potts
B.M.Potts@utas.edu.au



Assoc. Prof. Greg Jordan
Greg.Jordan@utas.edu.au



Dr. Rebecca Jones
Rebecca.Jones@utas.edu.au



Dr. Dorothy Steane
Dorothy.Steane@utas.edu.au