

# Variable establishment of jarrah (*Eucalyptus marginata*) and marri (*Corymbia calophylla*) following bauxite mining

## Abstract:

Variability in seedling establishment during restoration of natural environment leads to undesirable mature states, which impacts the function of the future forest system and often requires additional management intervention (i.e. thinning or re-planting). The establishment densities of the two dominant canopy species in the northern jarrah forest, jarrah and marri, on a restored mine site can range from 300 to 5,000 stems/ha despite changes to restoration practices to reduce this variability. My study investigates the main ecological factors effecting establishment including an analysis of the impact of changing climate and rehabilitation practices over a 23-year period, field studies assessing patterns of mortality from seed to establishment by species and microhabitat locations, and measuring the impact of natural seed sources: in topsoil and from seed stored in the canopy of nearby forest. Results of the database analysis and two field studies, with some preliminary results on natural seed recruitment and will propose some of the primary factors causing this variability.



## Tai White-Toney

Tai White-Toney graduated from the University of Portland (Oregon, USA) with a Bachelor's degree in biology. Her honours research was on patterns of autonomy and regeneration in purple shore crabs, and involved working closely with local fishing communities. Tai's PhD research is with the University of Notre Dame Australia and Alcoa regarding the variable establishment of the two dominant canopy species after bauxite mining.