



Management of offsite effects of tree plantings: genetic risks

Amount: \$30,746 (2015 rate) tax free scholarship with possible 6 month extension plus project operational funds

Location: Hobart, Tasmania

Eligibility: Domestic and International students with First Class or Second Uppers Honours/ Masters or equivalent

Submission dates for applications are listed on <http://www.utas.edu.au/arc-forest-value/phd-project-opportunities>

About the Centre

This research project is part of the ARC Centre for Forest Value. The Training Centre will build the capacity to shift the forestry and wood products sector from a traditional, resource driven, low-technology base to a market-driven, precision-manufacturing focused industry that applies modern technologies and business approaches to the value chain from germplasm to commercial buildings, and from production to restoration plantings.

Learn more at www.utas.edu.au/arc-forest-value



Project Overview

This project will provide a genetic, ecological and silvicultural framework to guide establishment and integration of environmental plantings within multi-use production landscapes. It will be embedded in an active program of forest restoration being undertaken by Greening Australia and exploit a unique infrastructure of long-term restoration trials established in Tasmania under two ARC Linkage grants. It will address research on:

1. Establishment and management of environmental plantings, including issues of plant production, site selection and preparation, species and provenance choice, plant establishment (including direct seeding), management of plantings (including drought, frost, browsing and disease risk, and weed control)
2. Monitoring the biodiversity impacts and use of tree plantings
3. Management of offsite effects (e.g. wildling spread and pollen flow) of tree plantings

Specific Project

The large-scale translocation of species for agricultural, forestry or fisheries purposes has created numerous environmental issues world-wide which require management for industry sustainability and certification purposes. Genetic containment is one such issue, and in the case of Australian eucalypt plantations involves both 'exotic gene flow' via pollen dispersal as well as wildling establishment from seed dispersed propagules. This project will focus on the island of Tasmania where *E. nitens* was introduced in the late 1980's and by 2013 there was 208,000 ha of plantations, often close to native eucalypt forests of conservation value.

This project will (i) survey plantation boundaries island-wide to provide the base-line data on the extent of wildling and hybrid establishment for certification purposes; (ii) test current genetic risk models developed for the Tasmanian species; and (iii) develop molecular tools for hybrid identification to allow land managers to better monitor and manage exotic hybridisation for certification purposes.

The ARC Industrial Transformation Training Centre for Forest Value is supported from the Australian Research Council's Industrial Transformation Training Centres scheme (project number IC150100004).

To submit an expression of interest or for general information, please contact the Centre for Forest Value at forest.value@utas.edu.au

For information related to this project please contact Professor Brad Potts Brad.Potts@utas.edu.au or Professor Mark Hunt Mark.Hunt@utas.edu.au for more information.

Partner Organisations

