John Marshall

John is a PhD candidate in the School of Biological Sciences at Flinders University working under Dr. M.A. Whalen and Assoc. Prof. D. Mackay, supported by an Australian Post Graduate Scholarship. John's main research focuses on the invasive potential, of fifteen (*circa*) European blackberries species of the *Rubus fruticosus* L. agg. in native vegetation, which have naturalised in Australia and are classified as one of the weeds of national significance (WONS). Invasion biology and ecology of individual species of the aggregate in native vegetation in the Australian context is poorly studied and little is known about species attributes consequently, contemporary conservation planning and management has treated the aggregate as a whole without regard to the invasive potential of individual species. Aims of the study-using field data, plant systematics, GIS and species distribution modelling methods, seeks to provide evidence to suggest refinements to the National agenda for more targeted control of these taxa to protect areas of high biodiversity value. John used the 'R' package 'Dismo' extensively in this study for species distribution modelling of the invasive weed in the Southern half of Australia and the State of South Australia (SA). Modelling outcomes were validated using new field collections of high precision data sets (300+) in the Mount Lofty Ranges SA. Results so far suggest of the 15 species only five preferential invade native vegetation. *Rubus anglocandicans* A. Newton, the most common species appears to have reached the limits of its broad population extent but several local areas are identified as being at risk. Modelling outcomes for the second most common species, *Rubus erythrops* Edees & A. Newton, found locally in SA, and only small areas of Victoria and Tasmania suggest its invasion potential to extend over much of Southern Australia. Work is continuing on the project.

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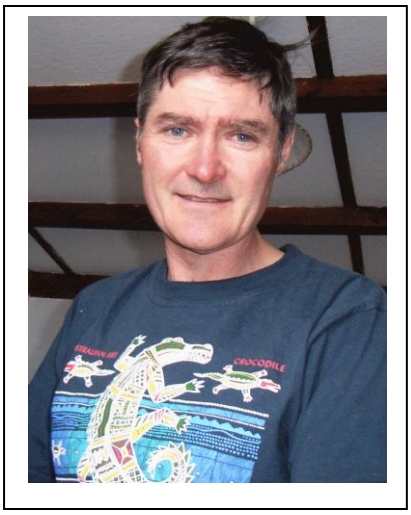
John will use the CAWS Student Travel Award to attend and present at the **EcoTas 13** conference (5th joint conference of the New Zealand Ecological Society and the Ecological Society of Australia) held in Auckland next November. John will discuss with delegates and leaders in their fields his findings and more broadly, assessment and management of invasive species.