## Advances in plant conservation biology: Implications for flora management and restoration

## Symposium program and abstracts

Perth, Western Australia 25-27 October 2005

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## ASSESSING TRANSLOCATION SUCCESS FOR THE CRITICALLY ENDANGERED *LAMBERTIA* ORBIFOLIA SUBSP. ORBIFOLIA.

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Translocation, the deliberate transfer of plant regenerative material from one area to another for conservation purposes (Vallee *et al*), is still in its infancy as a management tool in Australia. The goal of translocation is to establish viable, self-sustaining populations (Guerrant 1996). The difficulty is in setting goals that enable realistic assessment of whether the translocated population will be able to persist in the long-term. In Western Australia many of the species with

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translocation programs are long-lived woody perennials with life cycles linked to disturbance events, such as fire. With long intervals between generations there is a need for a methodology that enables us to predict the likelihood of the new population being able to persist. Combined with criteria such as survival, growth and reproduction of the new population, we have used mating system analysis to predict whether the translocation of *Lambertia orbifolia* subsp. *orbifolia* is likely to be successful. *L. orbifolia* subsp. *orbifolia* is a critically endangered large woody shrub confined to three populations in south-western Australia. Translocation to a new secure location was seen as essential action to assist in the recovery of the taxon. The translocation also allowed for the experimentally testing and refinement of establishment techniques for future translocations of this and other taxon. Short- and long-term success criteria were formulated to assess whether the translocation was likely to result in a viable self-sustaining population. Short-term criteria, such as the survival of plants, production of flowers and viable seed as well as natural recruitment of second generation plants have all been met six years after translocation commenced. The potential for persistence of the new population in the long-term was assessed using mating system analysis and comparing this with the parameters found in the natural populations of this taxon.