Threatened flora research in the Department of Environment and Conservation: preventing extinction and enhancing recovery.

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Threatened flora research activities in the Department of Environment and Conservation are focussed on developing an improved understanding of factors and processes that are critical for the conservation of the State's threatened plants. Major objectives include: improving our understanding of genetic and ecological factors that are vital for the long term viability of threatened plant species, ameliorating key threats such as dieback and weeds, developing threatened species reintroduction methodologies and success criteria and improving our taxonomy and identification techniques. The delivery of good science based knowledge for decision making and on-ground management of threatened flora has been broadly based on team projects developed as part of the following key research themes:

- Ecology and population biology of threatened flora
- Seed biology, *ex situ* seed conservation and the Threatened Flora Seed Centre
- Management of threats and threatening processes particularly *Phytophthora* dieback, habitat fragmentation, weeds and inappropriate fire regimes.
- Conservation genetics of threatened flora.
- Experimental translocation and recovery of threatened flora.
- Taxonomy, survey and the listing of threatened flora and Priority Flora (rare and poorly known taxa)

In addition a wide range of adaptive management projects have been set up and implemented by the Department's Regional Services Division and Nature Conservation Division staff. These include assessing various recruitment methodologies including fire to recover declining populations and developing appropriate weed control, *Phytophthora* dieback and canker management strategies to prevent the loss of populations. A major challenge is the large number of threatened plant species that are Critically Endangered (139) that will require the close integration of research and immediate management actions if extinction is to be prevented in the next five to ten years.

Threatened Species Research Forum

Western Australian Ecology Centre

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A Review of WA Government Research into Threatened Species