# Making a difference:

# Seed conservation, translocation and threatened plant recovery

*A. Cochrane, A. Crawford and L. Monks*
Science and Conservation Division,
Department of Parks and Wildlife,
Western Australia, Australia

## From seed to plant: Key stages and challenges in plant recovery

### Seed collection

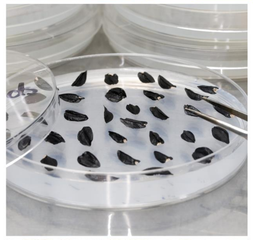
***Aims:*** collect and appropriately store sufficient quality seed with a broad genetic base for species recovery.

***Challenges:*** limited individuals, reproductive failure, low seed production, predation and/or population age.

### Seed germination

***Aims:*** determine seed viability and create seedlings.

***Challenges:*** selection of appropriate environmental cues for germination and alleviation of seed dormancy.



### Nursery propagation

***Aim:*** turn seedlings into whole plants for translocation.

***Challenges:*** pests and diseases, selecting appropriate cultural conditions e.g. nutrients and watering.

### Translocation

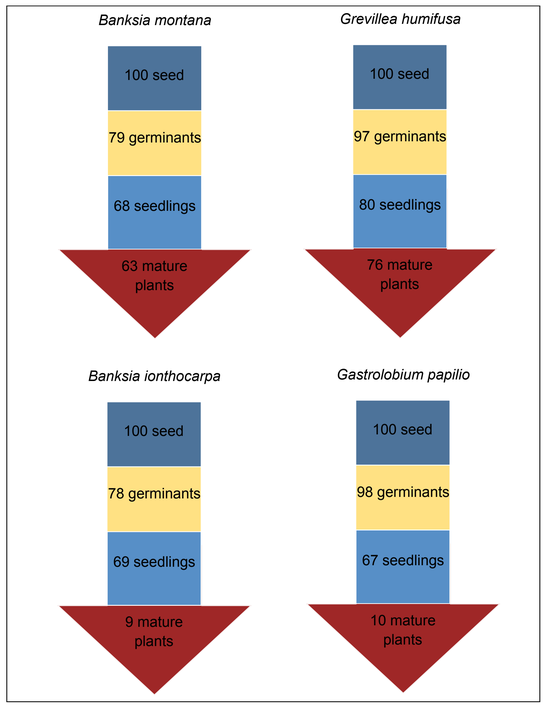
***Aims:*** increase plant numbers in sustainable populations.

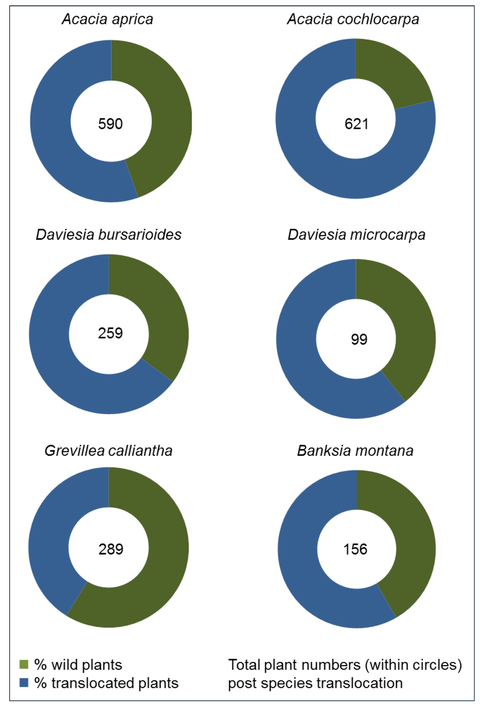
***Challenges:*** site selection, soil preparation, weed, disease and herbivore management.

Failure to address the above challenges can result in loss of genetic variability which may result in a reduction in plant fitness and the potential for adaptation to changing circumstances.

## Conservation interventions in South West Western Australia

More than 3220 collections of 1014 conservation-listed flora have been conserved in the Department of Parks and Wildlife's seed bank with plants of 65 critically threatened species translocated to 108 sites. The following examples illustrate how attrition during the recovery process can reduce final plant numbers (below left), whilst highlighting the contribution that the resulting translocated plants can make to enhancing population size and stability for six threatened species in this biodiversity hotspot (below right).




## Summary

**Plant conservation strategies** that incorporate seed conservation and translocation have resulted in an increase in threatened plant numbers in the wild. The sources and magnitude of attrition vary and potential losses are being compensated for to ensure sufficient and diverse material is available to support species recovery. The ultimate aim is to improve the conservation status of a species thereby halting loss of genetic diversity and reducing extinction risk.

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