Title: Seed banking supports plant conservation in the wild Author: <u>Anne Cochrane</u>, Andrew Crawford Institution: Department of Biodiversity, Conservation and Attractions

South-West Western Australia has a rich endemic flora facing numerous threats. For over 25 years, the Department of Biodiversity, Conservation and Attractions' Threatened Flora Seed Centre has been collecting and conserving seed of the State's conservation-significant species. To date, seed samples from 80% of the State's threatened flora has been conserved. These collections provide insurance against extinction in the wild and have been used to establish translocations for more than 50 threatened plant species. Despite these successes, there are still many challenges for seed conservationists to adequately conserve species *ex-situ*, and much to be learnt. Many of the collections are small and may only represent one population or few individuals. Where wild harvest has proven difficult, the establishment of seed orchards has increased the quantities of seed in storage, facilitating future on-ground recovery actions such as translocation, whilst providing additional safe havens for these species. Ongoing seed research into dormancy-breaking treatments is generating more reliable germination for many species previously considered problematic. Research into temperature effects on seed germination is providing evidence of how seeds may cope with a changing climate. Seed conservation is an effective and cost-efficient means of supporting species in the wild. A continuing commitment to maintaining existing collections, collecting unrepresented species, improving the size and genetic diversity of species already stored, seed research and careful utilisation in species translocations is required to deliver good plant conservation outcomes for future generations.