
Anne Cochrane

Biography

Dr. Anne Cochrane is a Senior Research Scientist and manager of the WA Department of Biodiversity, Conservation and Attractions' conservation seed bank. Her research interests revolve around the study of seed responses to changing environmental conditions.

SYMPOSIUM: Novel management interventions for threatened species

 Wednesday, November 29, 2017

 4:00 PM - 6:00 PM

 Wattagan Room

 Oral presentation

EcoTAS abstract

Many fire-sensitive plant species store their propagules in the soil, developing a persistent soil-stored seed bank that is an important resource for post-fire regeneration.

Ecological burns conducted to assist the regeneration of populations of these fire-sensitive species need to choose the appropriate combination of intensity and duration of heat sufficient to break dormancy and stimulate seed germination of target species. Fires of low intensity and short duration may contribute to poor regeneration; on the other hand higher intensity fires of longer duration may cause seed death. Understanding a seeds' tolerance to heat may be crucial to a successful outcome.

This study examined the response of fresh and stored seed of a physically dormant Western Australian obligate-seeding threatened species (*Acacia awestoniana*) by testing a range of laboratory-applied fire-related temperatures over two durations. The results suggest that short duration fires of moderate intensity do not successfully overcome dormancy of fresh seed, but are quite effective in overcoming dormancy in stored seed. However, if temperatures exceed 110°C for 10 mins, mortality of both fresh and stored seed is likely to be high. Developing fire regimes that have specific ecological objectives are a key challenge for conservation managers. When populations of threatened species are small, resources are limited and management actions lack species-specific supporting evidence is it possible to use the results of laboratory-based investigations to shed light on 'fire' conditions that will elicit the most effective germination response?

 **Cochrane A** ¹

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Are laboratory-based investigations enough to support on-ground management actions in a resource-limited space?



EcoTAS 2017

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Kiri (Reihana) Spraggs

EcoTAS abstract

The widespread degradation of water quality and quantity and its state of mauri, is a significant issue for Māori. This issue is represented by widespread degradation of

Open session (1)

📅 Monday, November 27, 2017

🕒 3:45 PM - 5:45 PM

📍 Sugarloaf Room

🗣️ Oral presentation