

Hannah Etchells

Biography

Hannah is a PhD candidate with a not-so-secret past life. After studying design and working in the arts, she decided to go back to uni to study botany and ecology, researching the ecological impacts of catastrophic wildfires in southwest Australia.

EcoTAS abstract

Wildfires in the forested regions of southwest Australia are predicted to increase in both frequency and severity with projected changes in climate. While karri (*Eucalyptus diversicolor*) forests are considered relatively fire tolerant, there are few published studies of karri forest response to high severity fire and their capacity to persist under future fire regimes is uncertain. In January 2015, the largest and most severe karri forest fire on record burnt 98,000 ha near Northcliffe, Western Australia, including extensive areas of

Forest Ecology (2)

📅 Thursday, November 30, 2017

🕒 11:00 AM - 1:00 PM

📍 Cypress #3

📣 Speed Talk

👤 **Etchells H**¹, Grierson P¹,
McCaw L², O'Donnell A¹

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Australia, Perth WA, Australia

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Manjimup WA, Australia

Karri (*Eucalyptus diversicolor*) forest
regeneration following catastrophic
wildfire

old-growth karri forest. This study quantified the effects of differing fire severity on the recruitment and survival of karri seedlings, the mortality of mature karri trees, and the composition of the understory plant community following the fire. Mature karri tree mortality was 87% greater at high fire severity sites than at other sites, indicating that karri trees may have an upper limit to their fire tolerance. Burnt sites had significantly different understory community composition than unburnt sites, and dominant understory shrub, *Trymalium odoratissimum*, was entirely absent from one extremely high fire severity site. Fungal community composition also appeared to be considerably altered by extreme severity fire. These findings suggest that karri forests may have a fire resilience threshold, which is consistent with recent studies undertaken in different fire-adapted forest types burnt by severe fire, both in Australia and elsewhere. This study further highlights the need for long-term research into the effects of climate change and severe wildfire on forest ecosystems worldwide.



EcoTAS 2017

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EcoTAS17 Presenters

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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