

# Otway Ecological Research Forum 2024

TUESDAY 13TH AUGUST, COPACC, COLAC.



## A B S T R A C T S

### **Pathways to Resilience: Climate Adaptation in the Foothill Forests of the Otways** **Claire Feniuk – Conservation Ecology Centre**

The 'Resilient Forests' project is a collaboration between the Conservation Ecology Centre, Eastern Maar Aboriginal Corporation and Forest Fire Management Victoria. Focused on the foothill forests of the Otways, this project draws on an 'Adaptation Pathways' approach to integrate community voices into a flexible, evidence-based strategy for managing forests in the face of a changing climate.

### **Fire and ecosystem resilience in the Tall Mixed Forests of the Otways** **Matt Swan – University of Melbourne**

The Carlisle and Anglesea Heaths are among some of the most well-documented ecosystems in SE Australia however the low-elevation forests that co-occur in the same landscape are much less well known. In this talk I will outline findings from a statewide monitoring program which includes 100 sites in these forests and insights into the effects of fire history on birds, mammals and vegetation.

### **From Little Things Big Things Grow: Ecological Baselines Shaping a Shared Vision for Cape Otway's Vegetation & Wildlife** **Kay Weltz – Conservation Ecology Centre**

This talk will introduce a collaborative project, the Cape Otway Project, between the Conservation Ecology Centre, Eastern Maar, DEECA, Melbourne University, and Parks Victoria to manage Cape Otway's diverse habitats. The goal of the project is to understand the area's biodiversity, cultural values and associated fire risks, and create a shared vision for the health of Gadabanud territory. The aim is to establish pre-fire baselines for fauna, flora, and fungi across key habitats and use Adaptive Experimental Management to compare management actions against these baselines, guided by a three-year Experimental Vegetation Plan. I will share the project's results so far on ecological baselines for flora, fauna, and fungi on the Cape, and our next steps.

### **Monitoring Leafy Greenhoods on Cape Otway** **Jack Pascoe – University of Melbourne and the Conservation Ecology Centre**

A brief summary of a longitudinal study of several populations of the vulnerable leafy greenhood on Cape Otway.



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### **Boaring into the data**

**James Templeton – Conservation Ecology Centre**

In-depth analysis and insights from the Otways' feral pig program, as well as some key progress updates.

### **Artificial refuges for native mammals**

**Darcy Watchorn – Deakin University**

### **Predators, prey and fire in the Carlisle - A PhD odyssey**

**Mark le Pla – University of Melbourne**

Fire presents both opportunities and risks for species; some may benefit from recently burnt areas whereas others may be disadvantaged. Over the past few years we delivered a large-scale, multi-faceted research program in the Carlisle Heath in an attempt to further our understanding of how a range of species respond to prescribed fire. Here we discuss the range of approaches we took to address this question, the primary results of the study and the options available to land managers to achieve specific conservation goals in the future where required.

### **Gone to Ground- The Eastern Ground Parrot in the Otways Region**

**Jesse Ellis – Federation University and the Conservation Ecology Centre**

The Otways region was historically occupied by Eastern Ground Parrots (*Pezoporus wallicus*). Increasing evidence indicates that this is no longer the case, and the Eastern Ground Parrot is likely locally extinct. The extirpation of the Eastern Ground Parrot in the Otways is widely believed to be contributed to the habitat areas becoming unsuitable to support Eastern Ground Parrots. My recently completed Honours research project aimed to identify suitable Eastern Ground Parrot habitat in the Otways and investigate how this has changed over time. During this presentation, I will share with you the Otways' story of the Eastern Ground Parrot and give hope towards positive conservation outcomes in the future.

### **Can winter burning help prevent shrub encroachment?**

**Tamika Farley Lehmer – University of Melbourne**

Shrub encroachment, a pervasive phenomenon across Victoria's ecosystems, marks a transition from graminoid-herbaceous to shrub-dominated landscapes, augmenting elevated forest fuel biomass and changing the structure and function of a system. Contemporary burn regimes, often utilising high-intensity autumn burns, seem to exacerbate post-fire woody shrub recruitment.



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Alternatively, a growing body of evidence suggests that a change in the application of fire may hold the key to suppressing woody-shrubs, whilst promoting graminoids.

Considerable progress has been made in how we model plant functional types (PFTs) in response to fire, leading to enhanced predictions about how vegetation communities change with different fire regimes. These predictions are often based on the post-fire response of plants exposed to bushfires or early autumn burns. However, many PFTs are sensitive to factors related to fire-seasonality (e.g. fire-severity).

We hypothesise that fire-severity will alter the fire response of PFTs, leading to different post-fire plant communities in sites with low severity relative to those with high severity. This may have a cascading effect on vegetation communities exposed to fire-regimes occurring in winter compared to autumn. With this in mind, we have focussed on a western Victorian Heathy Woodland ecosystem exposed to a winter burning program over the last 3 years. We have conducted pre- and post-fire flora surveys and recorded fine-scale fire severity data for each site.

Here we discuss the results from this research, highlighting the significance of burning in different seasons and its relevance in supporting resilient natural systems in an era of environmental change.

### **Vegetation change in the Carlisle Heath** **Michael-Shawn Fletcher - University of Melbourne**

### **Fire, Fauna and Fighting Extinction: Impact of prescribed fire on long-nosed potoroos in the Carlisle Heath** **Stephanie Sytli - University of Melbourne**

Inappropriate fire regimes are a major threat to biodiversity. Prescribed fire is often used to mitigate wildfire risks, however the response of many species to this strategy is poorly understood. We used a control-impact study to quantify the response of the vulnerable long-nosed potoroo (*Potorous tridactylus*) to prescribed fire in the Carlisle Heath. This research highlights an important landscape which should be managed for potoroo conservation.

### **Determine the optimal scat collection method in the Otways** **Jack Pascoe - University of Melbourne and the Conservation Ecology Centre**

### **Murnong on Maar** **James Templeton - Conservation Ecology Centre**

Discussion of the contemporary and pre-colonial distribution, community ecology and threats to murnong (*Microseris* sp.) across Eastern Maar territory.



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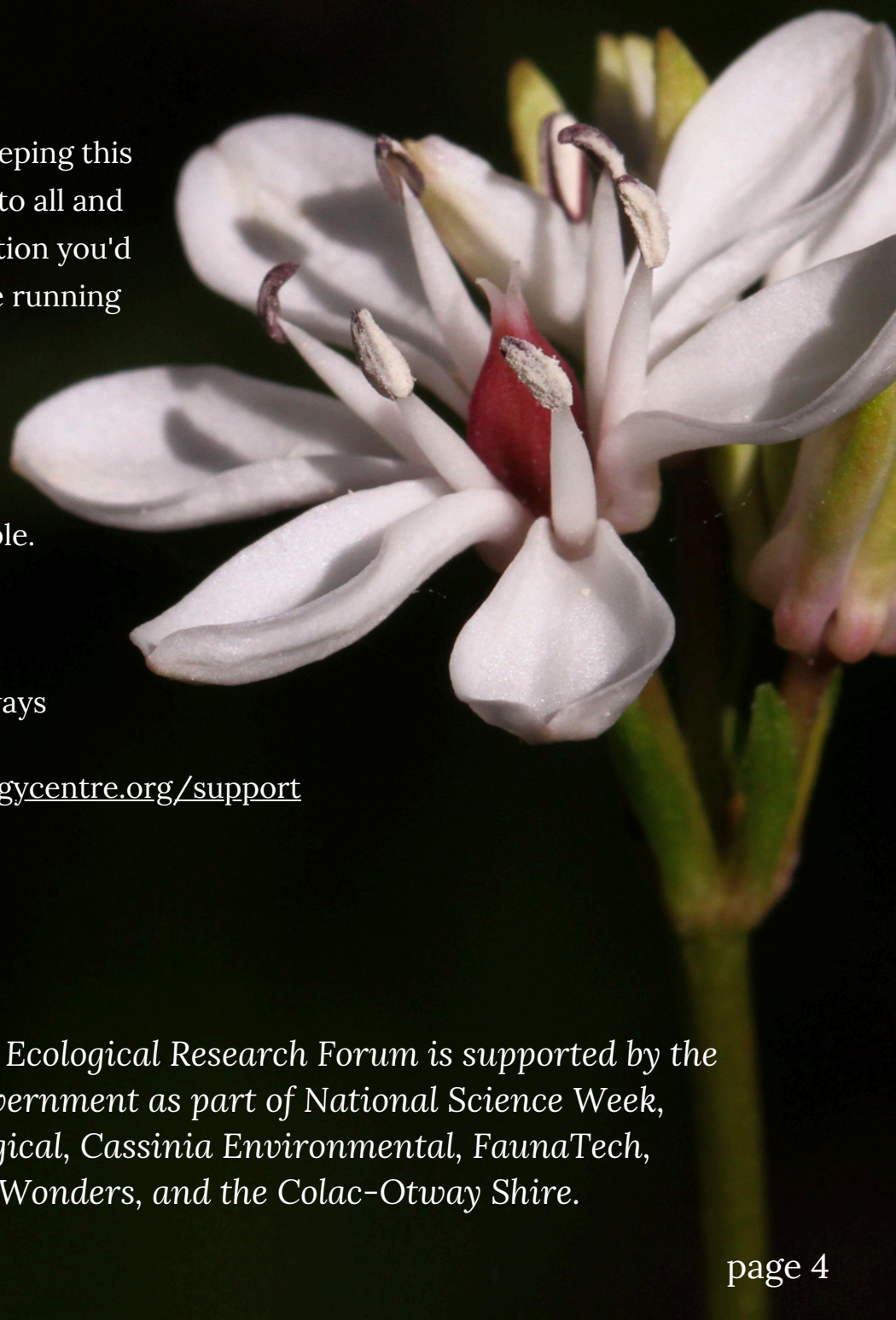
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The Otways Ecological Research Forum is brought to you by the **Conservation Ecology Centre**, a not-for-profit organisation working collaboratively and innovatively to deliver solutions to the most urgent conservation challenges in the Otways region.

We are committed to keeping this annual event accessible to all and appreciate any contribution you'd like to make towards the running costs, or our broader environmental work. We are a registered charity, all donations over \$2 are tax-deductible.

Please visit our website to find out the various ways you can support us:

[www.conservationecologycentre.org/support](http://www.conservationecologycentre.org/support)



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