



**AMRF**  
AUSTRALIAN MOUNTAIN  
RESEARCH FACILITY



PhD opportunities at Deakin University

## **Determining the resilience of Australian alpine plants and communities in a future climate**



The Australian Alps are among the most vulnerable to climate change worldwide. Alpine plant communities are already showing signs of climate stress, are under threat from exotic pest plants and animals, and are recovering from a legacy of stock grazing. There is urgent need for progressive management strategies to maximise restoration success through consideration of future soil water availability, plant thermal tolerances, and the adaptability of functionally important species. To bolster the resilience of alpine landscapes under climate change we must understand the interactions between the physical and biological processes underpinning the health of alpine environments and adaptability of alpine plant communities.

The [Australian Mountain Research Facility](#) brings together leading institutions and researchers across four states and territories to produce world-leading ecosystem, evolutionary and biophysical science to guide adaptive management of High Mountains across Australia. It supports research to assess the extent and effects of changing climate, water and fire regimes on ecosystem processes and their feedbacks and provide a structure for integrated research, management, and governance of Australia's mountains.

Excellent PhD candidates with a background in ecological science, population genetics and/or botany/zooiology are sought to join our highly collaborative AMRF-aligned project team to explore the climate resilience of alpine plant and invertebrate communities through field and laboratory experimentation. Projects are based at **Deakin University** Burwood or Warrnambool campus, co-funded by the Australian Research Council and our industry partners Parks Victoria, Royal Botanic Gardens Victoria, Mount Hotham Alpine Resort, and Southern Alpine Resort Management Board.

Within the **eXtreme Plant Ecology Research Team** and the **EcoGenetics Lab** both in the [Centre for Integrative Ecology](#) with Susanna Venn, Adam Miller, Virginia Williamson, and Adrienne Nicotra (ANU), we seek 3 PhD candidates to work on the following projects:

- 1) Heat and frost tolerance of regenerating alpine plants and interactions with drought (Deakin Burwood)
- 2) Adaptive genomics, plasticity and regeneration strategies of alpine plants (Deakin Warrnambool or Burwood)
- 3) Alpine plant water relations with drought (Deakin Burwood)

Applicants are expected to have an excellent grade (e.g., H1 or HD) in an Honours or MSc research program and proven skills in scientific writing. Successful candidates will be awarded a 3-year PhD scholarship (~AU\$28,000 p.a. tax free), commencing Spring 2021 or by negotiation. Australian and New Zealand residents will be prioritised due to Australia's current border restrictions.

**Interested candidates should contact us via email:**

Susanna Venn ([Susanna.venn@deakin.edu.au](mailto:Susanna.venn@deakin.edu.au)) or Adam Miller ([a.miller@deakin.edu.au](mailto:a.miller@deakin.edu.au))

Australian and NZ students: 22 Oct at Deakin,

[Centre for Integrative Ecology, Deakin](#) | [Susanna Venn](#) | [Adam Miller](#)



**eXtreme  
plant ecology  
research team**