# What's flowering in the Australian Alps?

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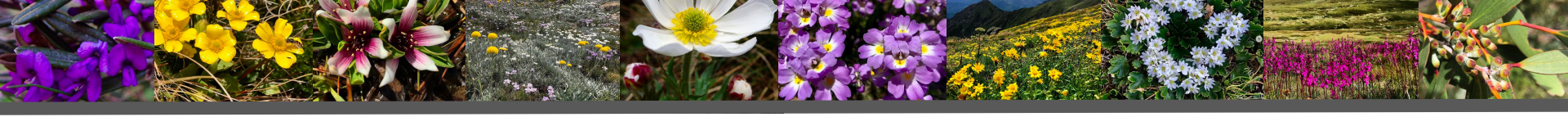


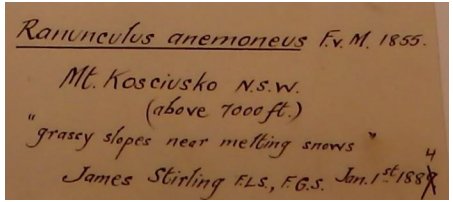
## How will climate change impact phenology in Australian alpine plants?

### Observational

*Long-term data*
12 years, >18000 data points, >120 species, weather station data

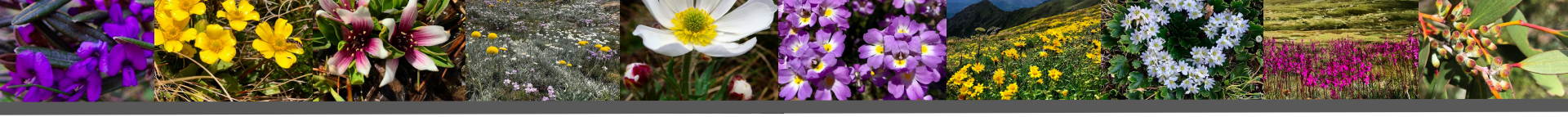
### Natural history

*Herbarium collections*
150 years, >12,000 specimens, 89 species, weather station data




### Experimental

*Winter snow cover manipulations*
2 years, >3000 observations, 10 species
60 iButtons



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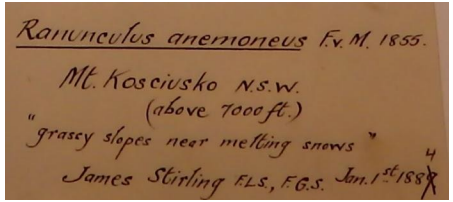


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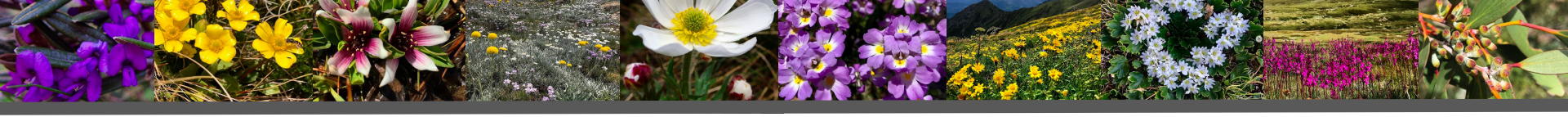
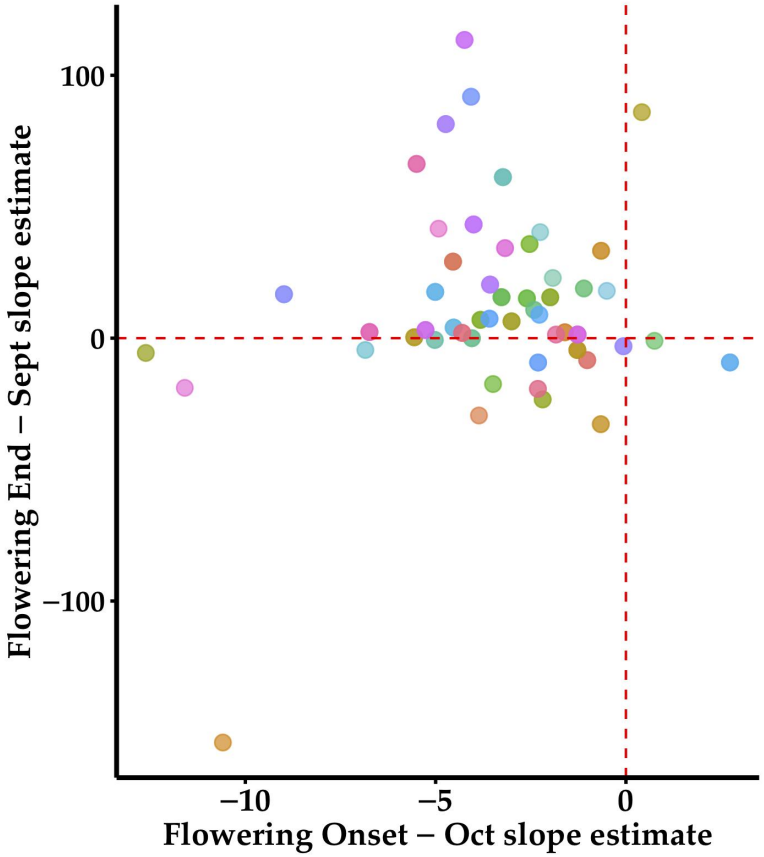


# Observational

94% of study species phenologically sensitive to spring (September and October) mean temperature

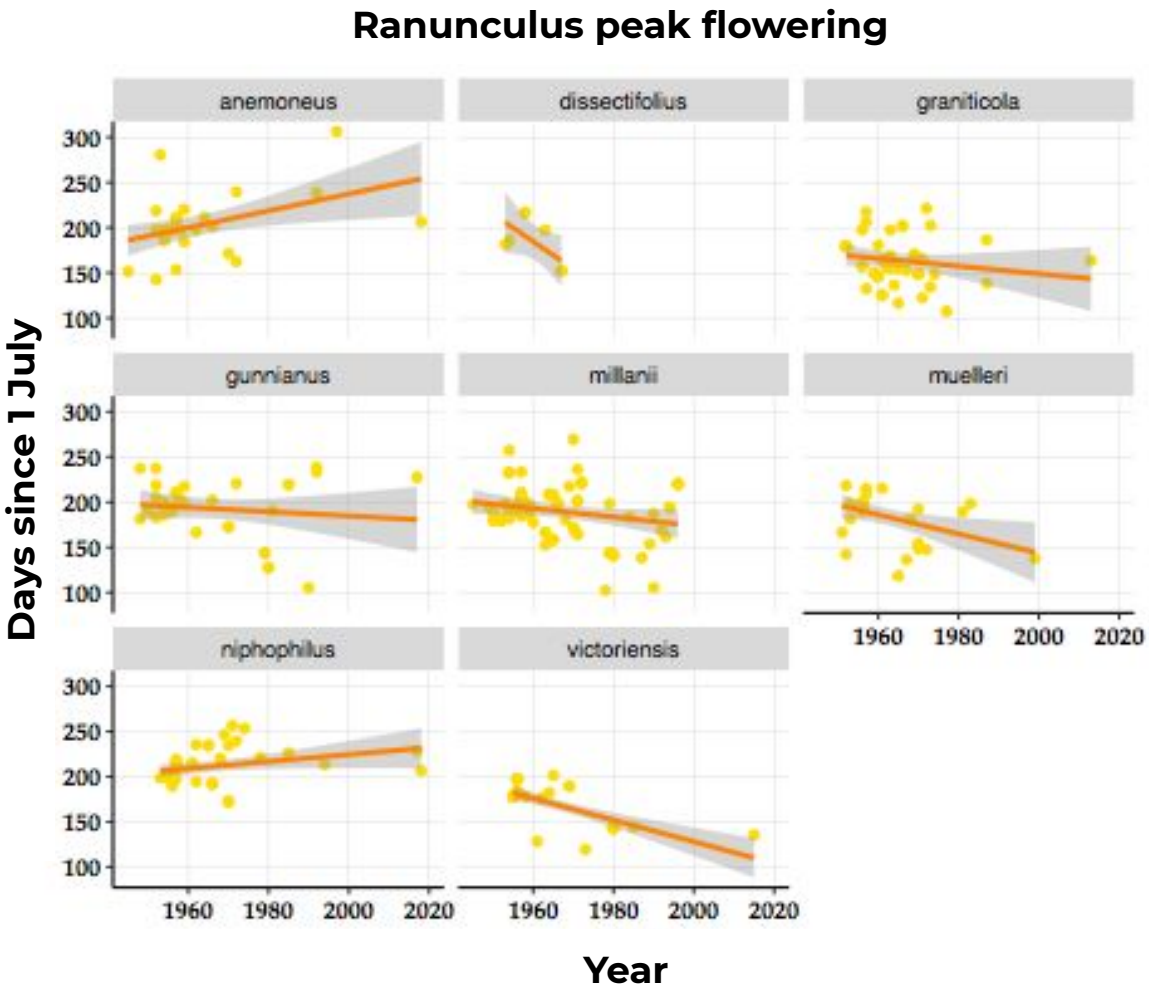
Majority exhibit earlier flowering onset and longer flowering duration with warmer spring temperatures

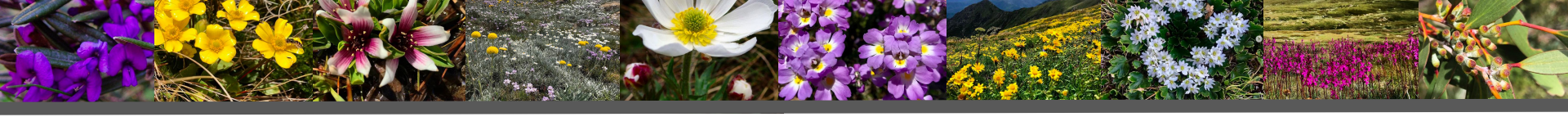


# Natural history

Peak flowering response diversity among closely related *Ranunculus* species

Negative relationships ~1 day per decade





# Take home messages

Majority of plants phenologically responsive to temperature. Indicative of future adaptive capacity?

Phenological responses can vary among closely related species. Considering many species is important as extrapolation may misrepresent data-deficient species.