

Effects of altered snowmelt timing on flowering phenology of Arctic plants

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Abstract

Climate warming is driving rapid shifts in tundra vegetation.

Keywords: phenology, climate change, arctic, tundra, plant ecology

Introduction

Climate warming is driving rapid shifts in tundra vegetation (Arft *et al.* 1999). This study uses data from Blume-Werry *et al.* (2017), accessed from Dryad, to plot flowering phenology of several Arctic plant species in Northern Sweden (Blume-Werry *et al.* 2017). In this study, snowmelt timing was manipulated by manually removing snow from experimental plots. Flowering phenology was recorded throughout the growing season. An improved understanding of how species will react to warming is imperative in tundra environments where climate warming is driving rapid shifts in vegetation.

Methods

Researchers collected data on three different plant species from 2005-2007 in the Italian Alps. Air temperature was manipulated experimentally and phenophases were recorded for *Cardamine alpina*, *Leucanthemopsis alpina*, and *Veronica alpina* throughout the growing seasons. In this paper, I plot the data by species.

Results

The phenological development of *Cardamine alpina*, *Leucanthemopsis alpina*, and *Veronica alpina* all increased with temperature (Fig. 1).

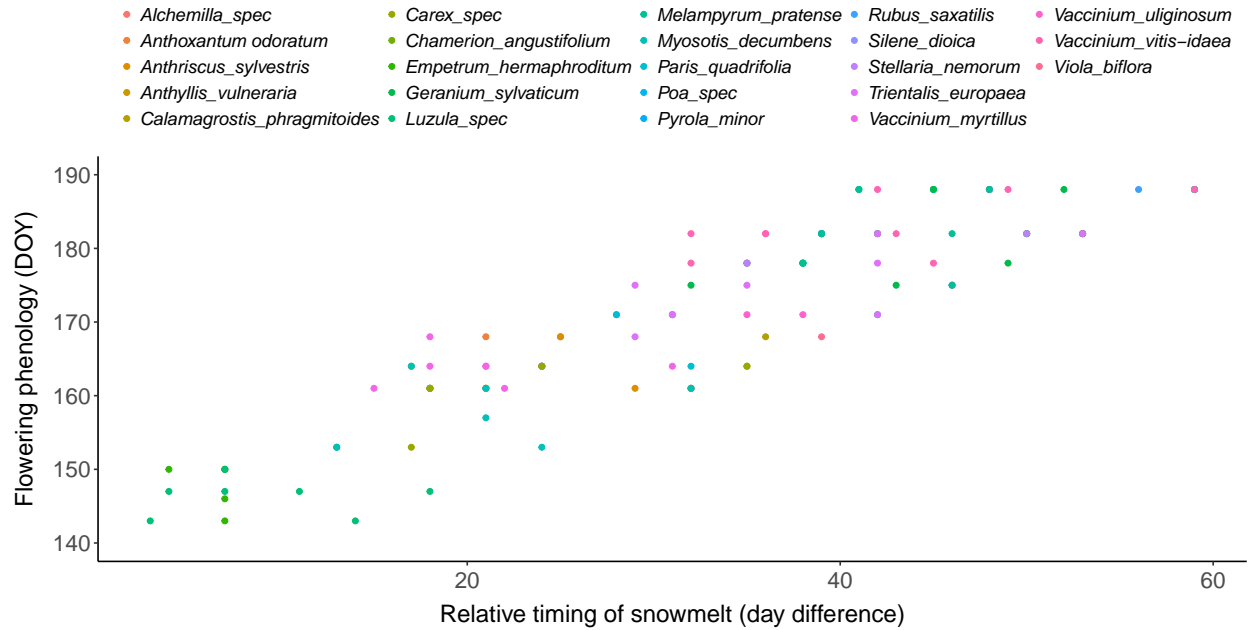


Figure 1. Phenological development as a function of temperature for three alpine species, *Cardamine alpina*, *Leucanthemopsis alpina*, and *Veronica alpina*.

Discussion

Species specific responses.

Conclusions

This is important for reasons.

Acknowledgements

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References

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