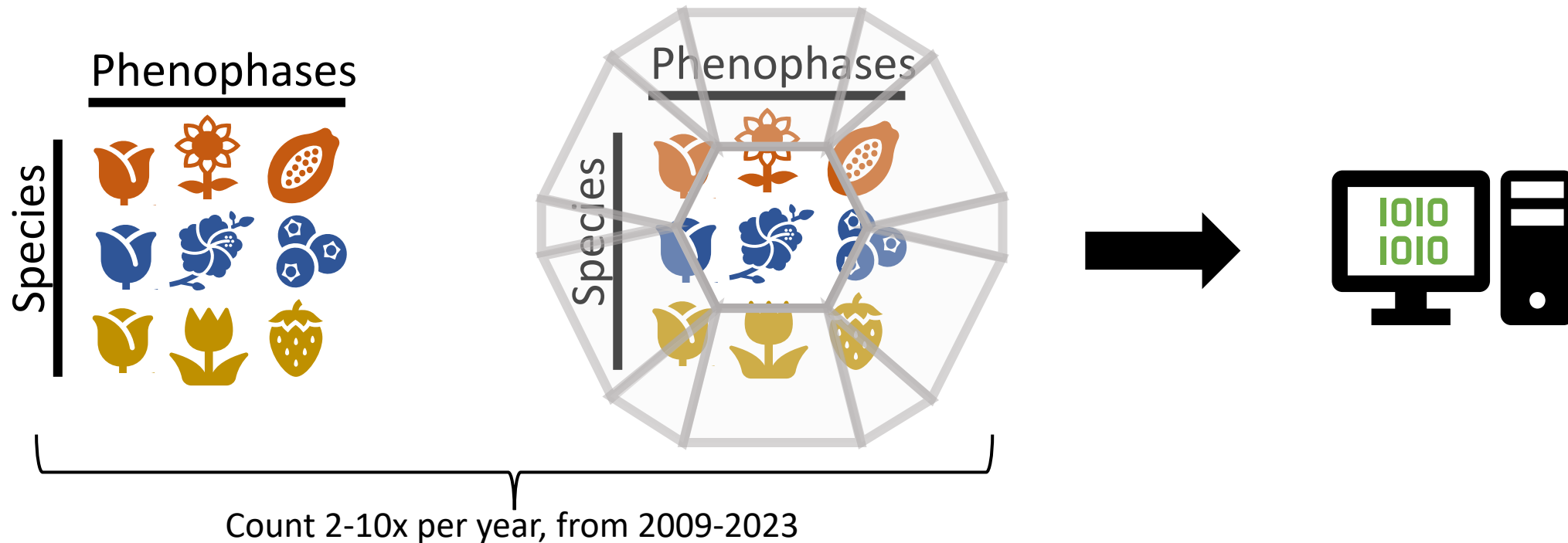


Phenology and reproductive effort in Arctic tundra plant species exposed to passive warming

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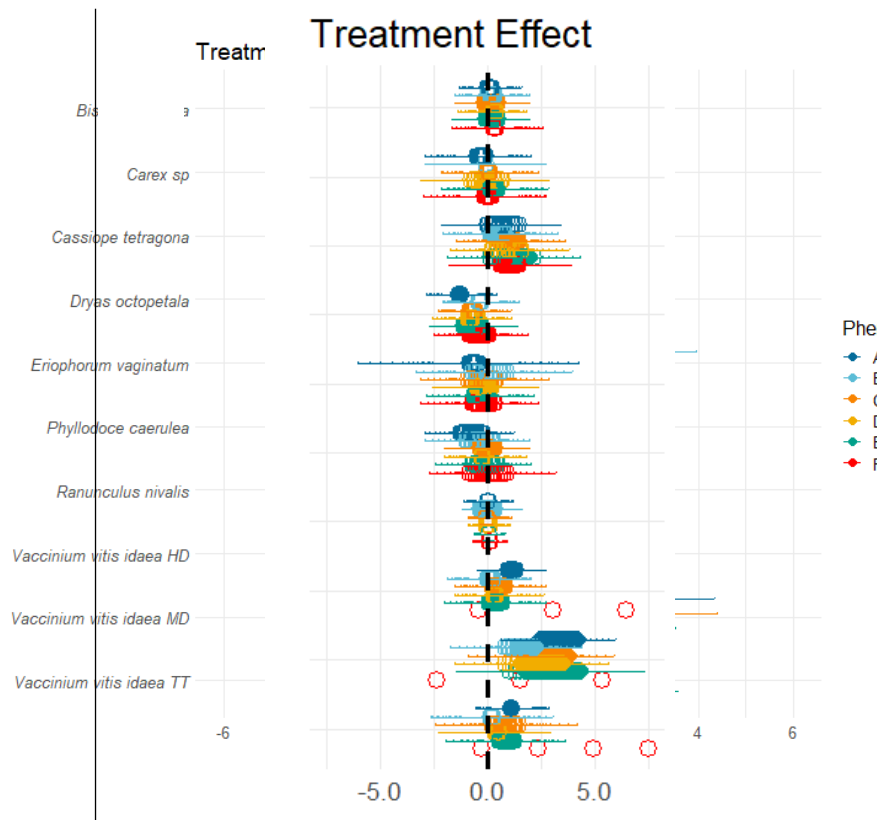
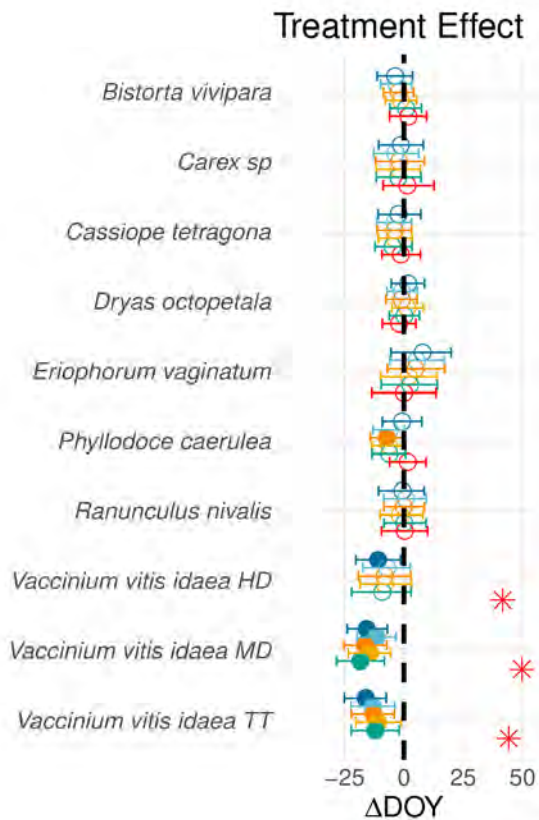
Snapshot phenology of timing and abundance of 6 phenophases related to reproduction for 8 common Arctic species was collected between 2009-2023. This data was used as input for generalizable Bayesian models which allowed us to assess the impact of passive warming, as well as change over time, on the timing and abundance of these phenophases.

Phenology

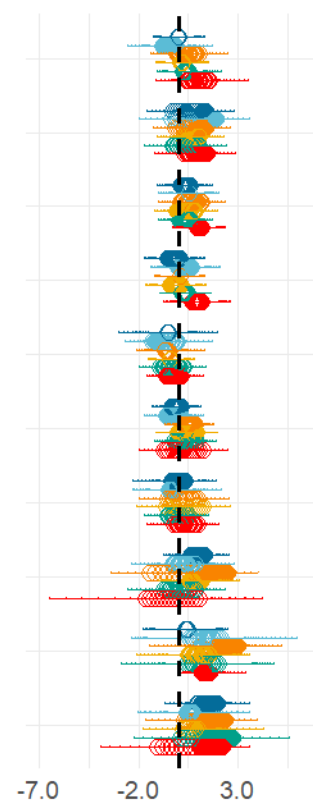
Total abundance

Max. abundance

Phenophase A B C D E F
 CI contains zero Yes No



Treatment Effect



- Most species increased the abundance of each phenophase in all plots. Maximum abundance tended to increase in both OTC and control plots, however, the maximum abundance of Cassiope phenophases declined over time. Vaccinium showed a decrease consistently between OTC and control plots.
- Reproductive effort tended to increase in both OTC and control plots, however, the maximum abundance of Cassiope phenophases declined over time. Vaccinium in the tussock tundra community had the most consistent treatment differences.
- Regardless of treatment, OTCs were higher than control, the maximum abundance of Cassiope phenophases declined over time. Vaccinium in the tussock tundra community had the most consistent treatment differences, except for in Eriophorum, Phyllodoce and Ranunculus.