

# Regional Risk: Supplement

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## Species rate of budburst calculations

1. We used data from a growth chamber experiment (Flynn2018) to determine the average number of days between budburst and leafout for our study specieses.
2. Cuttings for the experiment were made in January 2015 from two field sites: Harvard Forest (HF, 42.5°N, 72.2°W) and the Station de Biologie des Laurentides in St-Hippolyte, Québec (SH, 45.9°N, 74.0°W).
3. The experiment examined budburst and leafout for *Acer saccharum* (Marshall), *Alnus incana* (L.), *Betula papyrifera* (Marshall), *Fagus grandifolia* (Ehrh.), *Fraxinus nigra* (Marshall), and *Quercus alba* (L.) in a fully crossed design of three levels of chilling (field chilling, field chilling plus 30 days at either 1 or 4 °C), two levels of forcing (20°C/10°C or 15°C/5°C day/night temperatures, such that thermoperiodicity followed photoperiod) and two levels of photoperiod (8 versus 12 hour days) resulting in 12 treatment combinations.
4. Phenological observations of each cutting were made every 2-3 days over 82 days.
5. Phenology was assessed using a BBCH scale that was modified for trees (?).
6. We used data from *Acer saccharum* for *Aesculus hippocastanum* (?), *Alnus incana* for *Alnus glutinosa*, *Betula papyrifera* for *Betula pendula* (?), *Fagus grandifolia* for *Fagus sylvatica*, *Fraxinus nigra* for *Fraxinus excelsior* and *Quercus alba* for *Quercus robur* (?).

Supplement: Tables and Figures

Table 1: Data points collected for each species

Species	Num. of Observations	Num. of Sites	Num. of Years
<i>Aesculus hippocastanum</i>	156836	10158	66
<i>Alnus glutinosa</i>	91182	6775	66
<i>Betula pendula</i>	155251	10139	66
<i>Fagus sylvatica</i>	129133	9099	66
<i>Fraxinus excelsior</i>	92665	7327	65
<i>Quercus robur</i>	131635	8811	66

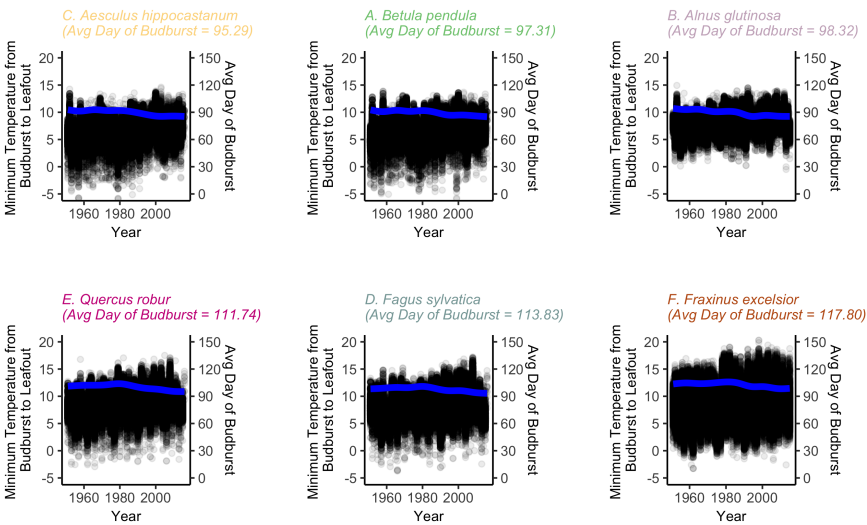


Figure 1

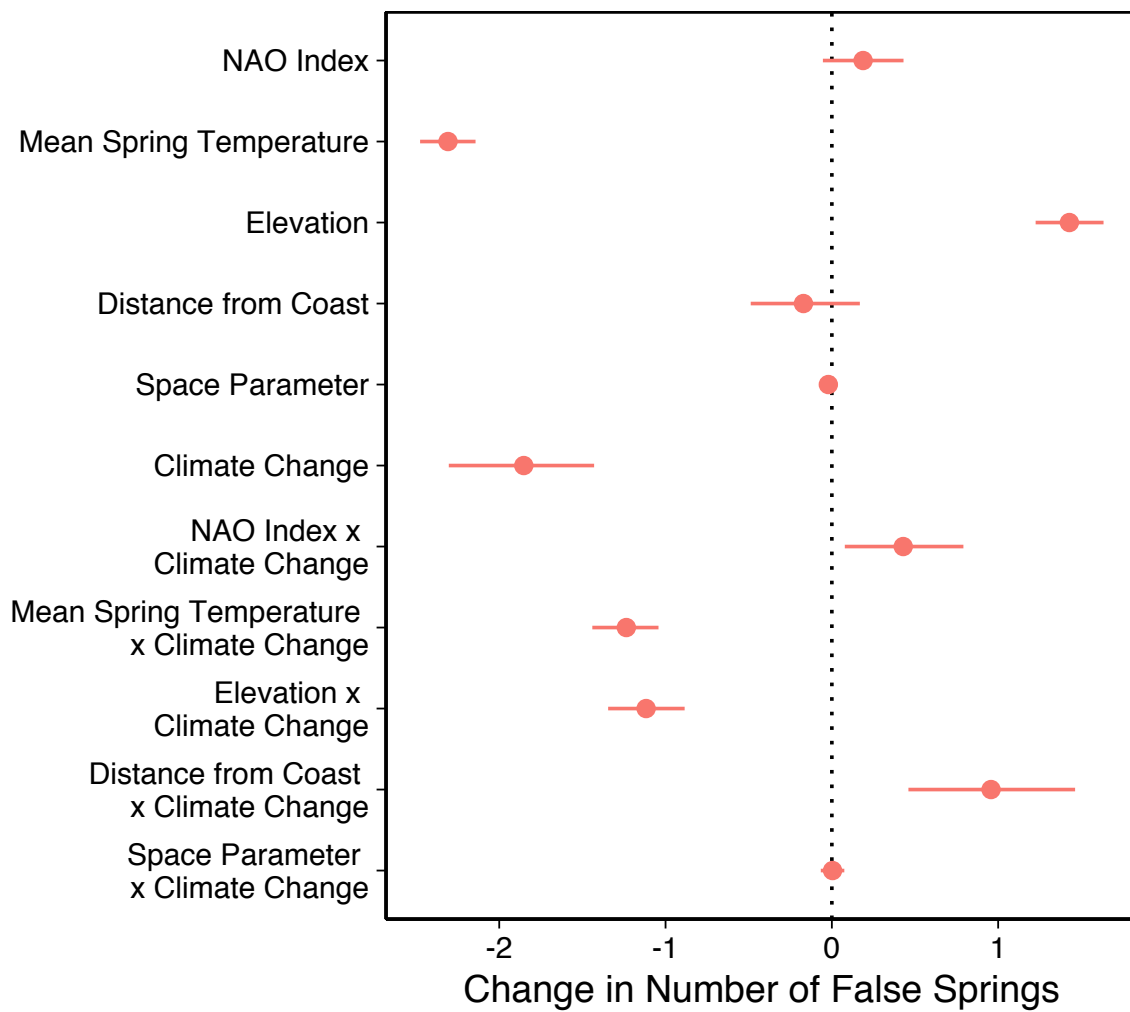


Figure 2