**[TM Griffith](https://onlinelibrary.wiley.com/action/doSearch?ContribAuthorStored=GRIFFITH%2C+T+M) &** [**MA Watson**](https://onlinelibrary.wiley.com/action/doSearch?ContribAuthorStored=WATSON%2C+M+A)**. 2005. Stress avoidance in a common annual: reproductive timing is important for local adaptation and geographic distribution. Journal of Evolutionary Biology,** [**18,**](https://onlinelibrary.wiley.com/toc/14209101/2005/18/6) **1601-1612.**

Direction of selection on flowering time differed between two latitudinal regions with different climate – earlier flowering increasing fitness at the cooler site but not at the warmer.

**MC Hall, JH Willis. 2006. Divergent selection on flowering time contributes to local adaptation in *Mimulus guttatus* populations. Evolution, 60, 2466-2477.**

Direction of selection on flowering time differed between two altitudinal regions – earlier flowering increasing fitness at the montane site but intermediate flowering times favored at the coastal site.

**SJ Franks, S Sim, AE Weis. 2007. Rapid evolution of flowering time by an annual plant in response to a climate fluctuation. Proceedings of the National Academy of Sciences, 104, 1278-1282.**

Experiments showed that summer drought selected for earlier flowering in an annual plant. (This has also been shown in several studies with other annuals)

**DR Campbell, JM Powers. 2015. Natural selection on floral morphology can be influenced by climate. Proceedings of the Royal Society B: Biological Sciences, 282: 20150178.**

Selection for flower length was driven by climate and was stronger in years with later snowmelt. 10 years of data on selection on floral traits, other than phenology (claimed to be the longest time series).

**JD Thomson. 2010. Flowering phenology, fruiting success and progressive deterioration of pollination in an early-flowering geophyte. Philosophical Transactions of the Royal Society B: Biological Sciences, 365, 3187-3199.**

*Results a bit hard to grasp*. Later snowmelt correlated with later flowering. Fruit set diminished by late frosts in some years, most frequently for earlier flowering cohorts. Pollen limitation strongest in middle cohorts but also in the early cohort.

**EJ Austen, L Rowe, JR Stinchcombe… 2017. Explaining the apparent paradox of persistent selection for early flowering. New Phytologist, 215, 919-1286.**

Asks what maintains ongoing directional selection for early flowering, and suggests four non‐mutually exclusive processes can help to reconcile the apparent paradox of selection for early flowering:

* selection through other fitness components may counter observed fecundity selection for early flowering
* asymmetry in the flowering‐time–fitness function may make selection for later flowering hard to detect
* flowering time and fitness may be condition‐dependent
* selection on flowering duration is largely unaccounted for

**[JT Anderson, DW Inouye… 2012. Phenotypic plasticity and adaptive evolution contribute to advancing flowering phenology in response to climate change. Proceedings of the Royal Society B: Biological Sciences, 279, 3843-3852.**

Observational data 1973-2011 show that flowering phenology advanced significantly over the period and that warmer temperatures and earlier snowmelt was associated with an earlier flowering. Selection favored earlier flowering in contemporary environments.]