Notes from fall 2022 reading group

1. Week 1: Dow *et al. 2022* and skim Gantois 2022

   (a) Curious about standardizing ... why they did it what way? Do results hold up with other methods?

   (b) What about autocorrelations in climate?

   (c) Heartwood! Roots!

   (d) What about VPDI? They should do analyses with that

   (e) They did not have much data in the end ... especially given they don't define how big an effect they expect to find or how big an effect they could detect (simulate data people!)

   (f) Why did Gantois exclude March from the spring?

   (g) Lots of good citations in Dow on other hypotheses/latitudinal variation to review!

2. Week 1: Zohner *et al. 2022* solstice pre-print

Lizzie's earlier notes below

Background: As springs shift growing seasons lengthen and plants are expected to grow longer. Especially trees, but tree rings suggest growth may not be increasing with earlier seasons in temperate zones.

Hypotheses:

1. Statistical – Non-stationarity in temperature (climate) data may make accurately estimating phenological change and tree growth change accurately difficult. Check this early and often.

2. Climate correlations – warmer springs may be associated with factors that reduce plant growth such as drought (and/or did someone write something about winter chilling?). Relates to climate hazards work.

3. Ecology – shifting competitive landscapes (or something else?)

4. Evolution – It may not be a long-term stable strategy to try to adjust growth dramatically year-to-year, so should we really expect this correlation? If this is true, you predict:

    (a) Latitudinal variation in length of growing season and tree growth. (May connect back to Ailene's Putnam – predicts species from warmer provenances would better exploit longer growing seasons?)

    (b) Species diversity: species should vary in how much they try to take advantage of inter-annual variation in climate (likely early-active species show the highest correlation? Again, Arlene's Putnam focused on this.)