**Pheno-Demo: datasets and potential questions**

**RMBL LTREB Datasets**

Flower/fruit phenology and demography (to varying degrees) for individually marked plants of three long-lived perennial herbs: Delphinium nattalianam (DENU), Lupinus bakeri (LUBA), Erigeron speciosus (ERSP)

* For DENU and LUBA
  + 2019-2024 (6 years, 5 transitions)
  + Multiple transects, but only one site per species (different sites for the two species); DENU = 2 1X10m transects, LUBA = 4 2X10 m transects
  + Data
    - X,Y location
    - Survival/recruitment (was a plant new, did it survive or die since previous year) once per year
    - Number of flowers 2 or 3 times/week
    - Plant size once per year
    - Aborted flowers or stalks once per year
    - Browsing by mammals noted when seen
* For ERSP
  + 2019-2023 (5 years, 4 transitions)
  + 4 transects, 2 each at two different sites
  + Data
    - X,Y location
    - Survival, which was 100% and recruitment which was 0%
    - Number of flowers 2 or 3 times/week
    - Plant size once/year
    - Aborted flowers once per year
    - Browsing noted when seen

**Questions**

* Does synchrony of an individual’s flowering with the rest of the population influence individual seed set (was an REU project Lauren someone, FSU student, started)
* Are there correlations between individual phenology and growth and survival within or across years
* Are differences in vital rates (growth, survival, fruits) linked to differences among individuals in phenological responsiveness (i.e. reaction norm slopes) or average phenology (i.e. reaction norm intercepts) within or across years.