**Goal**

To examine the effects of intraspecific plant variation on the dynamics of host-parasitoid and food-web networks.

**Overarching Question**

How does willow genotype influence the dynamics of host-parasitoid and food-web networks?

**Methods**

13 treatments (13 different willow genotypes) [think about boosting the number of genotypes)

* Genotypes significantly vary, a priori, in their C:N ratio
* 5-6 replicates per treatment

Methods

* Once a month (end of May, June, July and August), randomly select one basal stem from each tree and count the number of galls and leaf mines.
* Collect (for mature ones) or bag (still developing) all galls and leaf mines on each sampled stem.
* Collect undamaged, fully expanded leaves from each sampled stem to measure plant traits
* Count the number of fungus-killed flies and collect them for identification
* Count and collect all spiders on each stem. Collect their webs to identify their prey items.
* Record the abundance and diversity of each mobile insect species on the sampled stem (at lease the ones that are readily identifiable).
  + Consider vacuum sampling the entire stem once spiders have been collected to measure the entire community
* Haphazardly select three shoots and count the number of leaves per shoot as well as the percent leaf area removed from each
* Develop an allometric equation for each tree to estimate biomass sampled (will enable me to get biomass densities for all measure insect species).

Measurements

* Biomass density of each sampled insect species over the growing season
* Connectance and strength of linkages for both food webs and host-parasitoids over the growing season
* Plant traits that link to these food-webs and host-parasitoid networks over the growing season