Data attack plan Fall 2018

Lab work

* Weigh and burn all filters
  + Use weights (and surface area/ liters) to calculate AFDM of particulate for food experiment and from water samples (n= 144)
* Wing length (and mass?)
  + Mosquitoes from food experiment (n=40?)
  + Subset from the emergence traps (n= 8 ponds X 30 = 240 at least)
* Count and sex
  + A few emergence trap samples (n=5?)
* Egg dissections
  + Sweep net samples (n=100 but many have no gravid females)
* Larval growth rates (experiment and field)
  + Weigh larvae from all ponds (n = 8 ponds X 30 n X 5 dates = 1,200)
  + Weigh larvae from all experimental treatments (n=50?)
* Water nutrient analyses
  + Prep samples to run for DOC, Total N, Total P (n= 72)\*\*\*
* C:N of detritus
  + Grind plant tissue
  + C and N analysis\*\*\*\*\*
* Larvae gut content analyses\*\*
  + Have to send samples away
* Detritus microscopy
  + Get some nice images of the detritus w/ biofilm
  + Talk to microbial ecologists about further analyses of this biofilm

Datasets

* Larvae food experiment
  + Dependent variables: Final instar stage, # days till pupation, # days till emergence, # days alive, survival
  + To do: Size at emergence, larval growth rates
* Larvae feeding observations
  + Enter data
  + How to analyze behavioral data that are repeated measures?\*\*
* Larvae count data
  + Graph by pond (done)
  + To do: Calculate per capita mortality, predator data
  + \*\*\*have count data from other invertebrates but don’t know what to do with it. Multivariate analyses? Some are 0/1 and some are counts.
* Larvae growth rate data
  + To do: Weigh larvae (A LOT of them) and calculate growth rates.
* Pond data
  + Analyze the YSI data (entered)\*\*\*\*\*
  + Calculate AFDM of FPOM from filters
  + Multivariate analyses of pond data (YSI +size, depth, FPOM) == what makes a good mosquito pond
* Pond temperature data
  + Compile Hobo logger data from all ponds
  + Analyze 2017 and 2018 data?
  + Spatial measurements from thermocouple\*\*\*\*\*
* Biofilm experiment
  + To do: Calculate the amount of biofilm accumulated with and without mosquito grazing
* Emergence traps
  + # and size of emerging mosquitoes
* Fecundity
  + Calculate fecundity across locations and time
  + Analyze the 2017, 2018 data together (and maybe Lauren’s from 2012?)
* C02 traps
  + Done: Comparisons w/ other years, Plot abundance over season
  + To do: Pull out weather data from 2018 from the 2 weather stations
  + Analyze the 2017 and 2018 data together