Lab 12 – Trophic Chain Dynamics, 2

Lab instructors will need to retrieve their vials from wherever they were stored (217 or 373A) prior to class.

Students will be collecting data from the experimental microcosms that were established two weeks ago. Begin by reminding students about the background for the lab – that we are examining population dynamics (regulation), how initial densities may affect growth or decline of populations over time, and whether this differs depending on position in the trophic chain (producer vs. consumer).

Students will need to count the living brine shrimp in their jars first, and then use the specs to estimate algal density. Be sure to remind students to always swirl their jars to resuspend the algae before collecting a sample.

After collecting data from all their microcosms, they need to calculate percentage changes, as well as means and standard errors (= SD/√n) for each treatment. They draw a graph of the results, compute a t-test or ANOVA and answer questions. You will likely need to help students with ANOVA and/or t-test. **Be sure you understand how to do this in Excel before class.** The laptop bank will be available, and those machines have the "Data Analysis Toll Pak" installed.

After students write summary data (treatment, means & P-values) on chalk board, review the results with the class. Discuss general trends, similarities and differences among treatment combinations, and solicit & discuss hypotheses to explain the patterns observed.

Again, this exercise is new, so be prepared for things to go not as planned. I'm very interested in hearing more about your experiences because I don't have an opportunity to teach the lab. I may stop in on your class to take some photos.