The goal of the final project for this class is for you to bring together all of the skills that you have accumulated over the semester: analysis and presentation of data, literature search, and writing scientific papers. You will be receiving a data set and metadata (what each variable is, something about how it was collected). From this data set you should formulate at least 2 hypotheses that can be tested statistically. This should lead to the creation of at least 2 graphs. You will write up a brief scientific paper using your understanding of good science writing.

**Process (25% of project points)**

As you have been doing all semester, you should be making copious notes in your notebook as you analyze your data. I would suggest that you try to ‘map’ your game plan prior to starting. What are your hypotheses? How will you test each of these? How to interpret the output? How will you graph your data? Remember that you need to test for the assumptions of your statistical test before you perform it. I encourage you to discuss your data analysis plan with either Rachel or me. You will also need to explore the literature related to your question. The final part of your process grade will be your annotated R code saved to your Google Drive as FinalProject.R in your Scripts folder.

**Written Report (75% of project points)**

Your final written report will be a relatively short primary literature paper including an intro, methods, results, and discussion section. It should contain a very brief introduction to your study (motivation) that ends with **two hypotheses or questions**. You do not need to have detailed data collection methods, but your description of data analysis methods should be fully developed and comparable to the papers we have examined over the semester. You should then present **two graphs** and a paragraph or two about results. Finally, you should have a concise discussion section with an appropriately sized resolution. You will be given a formatted template to use to write your report. **YOU SHOULD PRINT YOUR REPORT PRIOR TO TURNING IT IN TO MAKE SURE THAT YOUR GRAPHS LOOK GOOD WHEN Sized AND PRINTED.** You will need to change the formatting in your R code to make sure that the quality of the graph is good for the final product (consult the advice and handouts you were given throughout the term). Finally, use good writing practices that we talked and read about this semester (use Schimel!). You should cite at least 5 articles (total) in your introduction and discussion using the Ecology format.

On the day your project is due you will turn in: a hard copy of the report, your notebook, and your R code should be saved to your Google Drive. Due dates are as follows:

**Wednesday section:** 9 am on Tuesday, April 19
**Friday section:** 9 am on Thursday, April 21.