

# Freshwater Ecology Lab Reports

Biology 3371; Dr. Dirnberger; Kennesaw State University

## Lab #4 - Stream Ecosystem

In this lab report, include introduction, methods, results, discussion sections, and literature cited (the whole she-bang).

In your Introduction, you should fully develop the theoretical basis for the distribution of functional feeding groups in a temperate stream system. This will include a discussion of the sources of organic carbon and how those inputs are modified as we go from smaller to larger streams. It should end with a clear prediction for what we would expect to find at our Stamp Creek sites. The logic and clarity of your introduction will be a major component of your final grade for this assignment.

### **Observations:**

Stream sure look different than lakes and wetlands. Water is moving fast and in one direction.

### **Hypothesis:**

Strong, unidirectional flow and the transformation of organic matter by organisms results in distinctive zonation in biological communities from upstream to downstream

### **Predictions:**

You make the predictions for this lab. The stream we are looking at is typical of many streams in that upstream areas are more forested and downstream areas tend to be more open (flood plains, agriculture....).

Your predictions should deal with the relative abundance of invertebrate functional groups among the three sampling sites (*upstream* at the small tributary entering Stamp Creek, *midstream* at Stamp Creek, and *downstream* the Etowah

River below the dam). Where (and why!) would you expect to find the greatest percentage of shredders, etc.

In the Methods, be sure to include description of sites, location, and date of sampling.

In the Results, be sure to describe trends in your graphs

In the Discussion, be sure to use the physical and chemical parameters measured in stream water (especially those that relate to the state of particulate and organic matter) to support the trends you see in the biological community. For instance, how might the ratio of fine organic matter to total organic matter support your explanation of why functional feeding groups differ along the stream.

Include **Literature Cited**. Be sure to cite at least one source from the primary literature (i.e. refereed scientific journals) and indicate where within the body of your text (e.g. (Smith and Jones 2006))

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