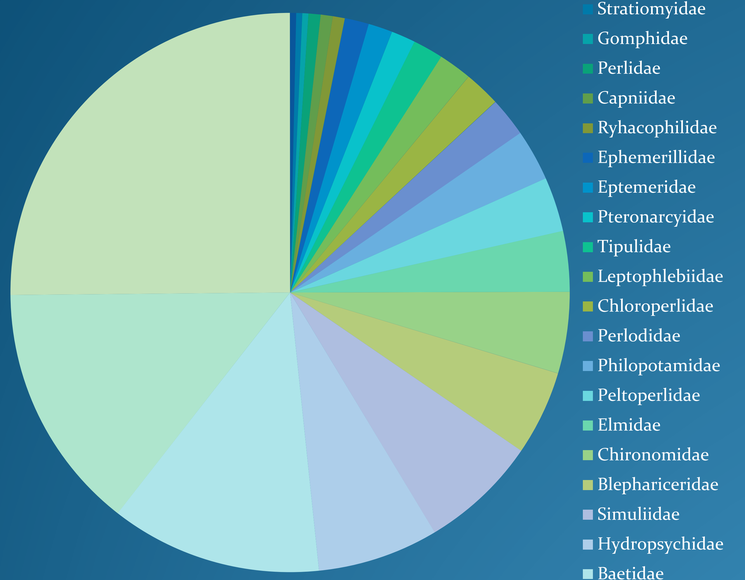
What Bugs Bugs?

Diversity of Macroinvertebrates in East Orange Branch

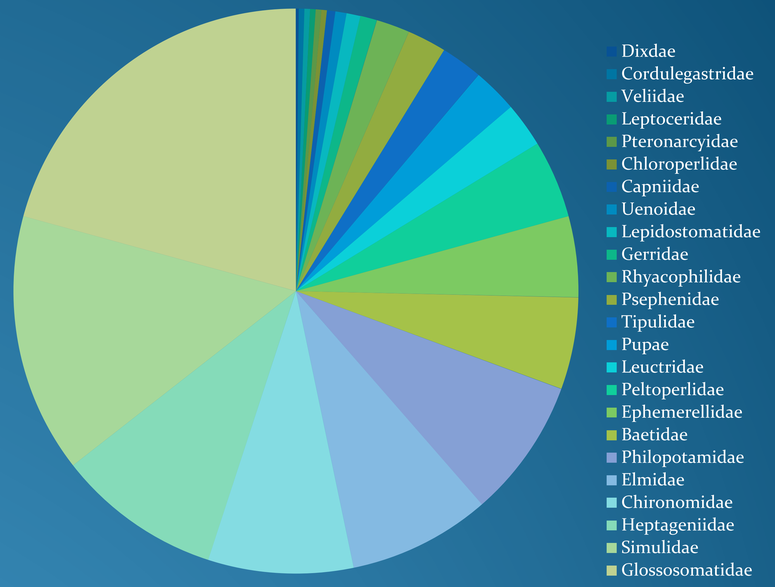


The different types of macroinvertebrates tell us how healthy the stream is. For example: Some species can only survive in clean water, while others thrive in polluted. The orders Ephemeroptera, Plecoptera, and Trichoptera are examples of macroinvertebrates that require a more healthy and pristine stream for a habitat.

The EPT Index is the number of species from the orders that are more sensitive to pollution. The orders that are used are Ephemeroptera, Plecoptera, and Trichoptera. We found that the ratio of EPT to Chironomidae for the East Orange Branch is 450 to 27 while Halls Brook is 600 to 52. Based on these ratios, both of the streams are in respectable conditions.

Some of the things that can effect the EPT include water quality and conditions, pollution, the amount of sand in a stream, and the stream's surroundings. These factors are what "bug bugs".

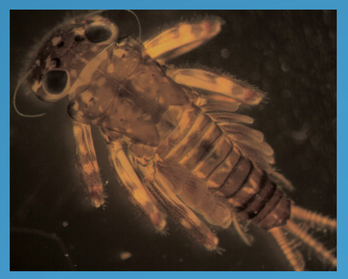
Diversity of Macroinvertebrates in Halls Brook



Chironomidae

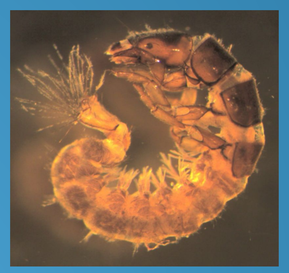
This is one of the families that is an indicator of pollution because of its high tolerance. The Chironomidae family made up eight percent of the samples from Halls Brook and five percent of the samples from East Orange Branch.

Ephemeroptera



Plecoptera

Trichoptera



The Ephemeroptera, Plecoptera, and Trichoptera are orders that can indicate a healthy stream because they are more environmentally sensitive in comparison to other macroinvertebrates. In both the East Orange Branch stream and Halls Brook, the Ephemeroptera, Plecoptera, and Trichoptera were found in large numbers as seen above in the pie charts.

WORK CITED:
Saint Michaels College. "Macroinvertebrates of Vermont Rivers." *Macroinvertebrates of Vermont Rivers*. Vermont EPSCoR and The National Science Foundation, 2008. Web. 28 Mar. 2012. <http://academics.smcvt.edu/Vermont_rivers/>.