



The Beauty in Discomfort

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There I was in my room: warm, snuggled up in a sweatshirt with the heat on high, while outside my window, I watched a bundle of leaves blown away by the strong, cold 30°F winds. Observing the leaves reminded me that it was peak growth time for lotic water inhabitants, which made me ponder if I could catch some macroinvertebrates on my own. I was at home due to the pandemic, and I had not been able to make it to any of the class field trips to collect bugs in-person. It was time to take action. The sense of adventure pulsed through my veins as I grabbed a fishing net and white tub headed to a local stream flowing out of Bullough's Pond near my house in Newton, MA.

The greatest development phase for freshwater macroinvertebrates occurs in late fall and winter since this is when the greatest amount of allochthonous sources of energy, like leaves and other debris, fall into the water to provide large amounts of organic matter. I completely understood this concept when I arrived at the stream.



Bullough's Creek, MA; photo by L. Samuels

The stream was full of decaying plants and branches, and furthermore, the water was very dark compared to when I visited it last at the end of the summer, indicating that it contained lots of nutrients and sediment.

After many empty nets, I finally spotted life. A leech was swimming in my white tub, and though in pictures leeches are not the most beautiful sight, this one was fascinating as it snaked back and forth in the water and clung to the tub with its suckers.

I chose to include this picture because it displays the energy transfer of lotic systems. Leaves enter the water, which are then degraded by microorganisms and macroinvertebrates, and then we, humans (indicated by my hand), benefit from the water due to these energetic relationships. Though my hands felt like they were freezing over, observing the leech and the overview of energy transfer in this lotic system while enjoying the splendor of the stream was worth the discomfort.