

Behavioral Responses of Larval *Glossosoma Intermedium* (Trichoptera: Glossosomatidae) to Added Case Load

by

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ABSTRACT

Larval *Glossosoma intermedium* (Trichoptera: Glossosomatidae) are lotic macroinvertebrate grazers. They have specialized mouthparts for scraping periphyton from stream substrates. When periphyton levels on stream cobbles decline, *G. intermedium* graze periphyton from conspecific cases. This foraging behavior may reduce the metabolic costs of searching for high resource patches, but may also include risks. I analyzed the behavior of larvae carrying experimentally supplemented case loads. My null hypothesis was that added case load would not alter larval locomotion. This was tested in laboratory flumes using time-lapse video photography. Experimental groups included a control, a treatment group with cases carrying a drop of superglue and a treatment group carrying an additional, empty case. Among the treatments, I compared the percentage of time in motion, distance traveled, and larval velocity. The treatments showed that larval travel was impaired by added case load. There was no significant difference in travel behavior between the superglue and the added-case treatments. These results suggest that case grazing provides a high resource patch for the rider, but that this behavior may be costly to the carrier.