

Stonefly Larvae Push-ups: A Behavioral Ecology Lab Exercise

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The behavioral response of stonefly larvae to the physiological stress of low dissolved oxygen is easy to quantify in the laboratory and lends itself to connections to water quality, animal morphology and physiology, and behavioral traits of animals. Designed for a 2 to 3 hr laboratory for animal behavior, this lab experiment can be conducted with minimal equipment and generates statistically significant results with relatively low number of replicates. The widespread availability of larval stoneflies of the Family Perlidae makes this lab possible wherever there are streams with good to excellent water quality. By using the available literature on the use of aquatic invertebrates to monitor water quality, students can connect a conspicuous and engaging animal behavior to ecological methods used widely around the world.

Keywords: stone fly larva, dissolved oxygen levels, aquatic invertebrates, behavioral ecology

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