

Methods and Materials for Behavioral Study of *Leptocerus americanus*

by

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ABSTRACT

The La Crosse River marsh is integrally important to the local community in La Crosse, Wisconsin and surrounding areas. It serves to educate and expose the public to the natural ecological beauty of the region, while providing opportunities for wildlife habitat as well as public recreation. The marsh habitat is a shallow, heavily vegetated aquatic system with fluctuating depths as a La Crosse River backwater area. The sample area is a *Sparganium* marsh with heavily vegetated waters. *Ceratophyllum demersum* and *Elodea* sp. are found widespread throughout the marsh. *Leptocerus americanus* (long horned caddisfly) has been found living in association with *Ceratophyllum* sp. (coontail) throughout the marsh. This trichopteran has a holarctic and oriental distribution and is relatively widespread in the United States. In past studies the larvae have also been found in association with *Ceratophyllum* sp. (Wiggins 1996).

Leptocerus americanus is relatively unique, as it creates a silk case that may aid in its swimming ability (Mackay and Wiggins 1979). There is little known about the biology of this species its activity patterns. Obtaining a greater understanding of this species contributes to a greater understanding of the ecology of aquatic organisms (Wiley and Kohler).

Leptocerus americanus is a significant component of the local ecosystem and yields many opportunities for biological studies. The tendency of *L. americanus* to show diel periodicity in its vertical movements and activity will be determined. The diel patterns will be the primary focus of the experiment however, the overall activity patterns of *L. americanus* will also be studied to better understand the lifestyle and habits of this important marsh organism.

A full study on the activity budget and activity patterns of *L. americanus* was not completed, thus we will present the materials and methods followed by a discussion. The objective of this paper was to outline and describe the procedures for performing a behavioral study on *L. americanus*.