

**BFS Technical Report # 18<sup>1</sup>**

**AUGMENTATION OF THE  
“AQUATIC MACROPHYTE MOTH”  
(*Acentria ephemerella*)  
INTO LEBANON RESERVOIR FOR  
CONTROL OF EURASIAN WATER-MILFOIL  
(*Myriophyllum spicatum*) AND FOLLOW-UP  
MONITORING OF FISH, INSECTS AND  
WATER-MILFOIL**

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## ABSTRACT

The recreationally impeding, exotic aquatic macrophyte Eurasian water-milfoil (EWM; *Myriophyllum spicatum*) has been the target of control attempts in North America using physical, chemical, and biological methods. Much recent focus has been on the use of the latter, particularly the use of herbivorous insects. This technical report describes our attempt to augment existing populations of an EWM herbivore considered to have control potential in the Northeast U.S: the aquatic aquatic macrophyte moth (*Acentria ephemerella*). Approximately 22,000 moth larvae were introduced into three sets of experimental plots, which had been paired with control plots, in Lebanon Reservoir, Madison County, NY. All plots were monitored throughout the 2001 growing season for EWM density, biomass, stem length and herbivores. Results show poor recruitment of aquatic macrophyte moths after emergence of the initially introduced larvae with no significant control of EWM. Fish were suspected to be preying on the introduced moths leading to another season's work contrasting the fish, EWM, and insects found in Otsego Lake, a lake with well controlled EWM, with those same communities found in Lebanon Reservoir. Bluegills (*Lepomis macrochirus*) were identified as the most likely significant control on EWM herbivores. Recommendations are provided regarding future research which should facilitate understanding of EWM herbivore impacts and the impacts of fish that might interfere with their herbivory.