

## **Studying Biocontrols for Mile-a-minute Weed**

### **Issue:**

Mile-a-minute weed (*Polygonum perfoliatum* L., family Polygonaceae) is widely distributed Using Biocontrols for Mile-a-minute weed throughout Asia, but is not considered a noxious species there. Found in Pennsylvania in 1946, the aggressive weed has since become established in much of the northeastern United States. Covered with spines, this alien invasive weed grows quickly, rapidly out-competing and displacing native plant species in some habitats, yet there are limited control options. Biological controls are a good way to control *P. perfoliatum*.

### **What has been done:**

In 2002, *Homorosoma chinensis*, a weevil that feeds extensively on mile-a-minute weed in China, was tested in quarantine for host specificity. The weevil was tested on 25 plant species in the family Polygonaceae, including representatives of all subfamilies and tribes, and 5 species in closely related families. In a related study, feeding damage by this weevil at four levels was simulated in a field trial on mile-a-minute plants, beginning when plants were small, medium-sized or large. Although adult weevils fed to some degree on 12 species in addition to mile-a-minute, they laid eggs only on mile-a-minute, and newly hatched larvae were only able to feed and survive on mile-a-minute. Simulated feeding damage killed 100 percent of small plants, 56 percent of medium-sized plants, and 6 percent of large plants, and reduced both seed production and biomass of survivors.

### **Impact:**

This weevil may be a good biological control agent for introduction into the United States, since it offers more effective control and environmental alternative to less successful herbicides.

### **Primary impact area:**

Research

### **Funding source:**

USDA Forest Service

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