Are Weevils the Answer?

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"Lookin' for a home. I'm lookin' for a home." (The Boll Weevil song.)

If you've been hearing a lot of talk about weevils lately, and you're old enough to remember the song about the "scourge of the south," rest assured, this is a whole different thing.

The boll weevil decimated southern farming—particularly cotton crops—since its introduction to the U.S. in 1892 and is considered to be the most destructive cotton pest in North America today.

The milfoil weevil, however, offers hope to locals anxious to keep chemicals out of Lake Pend Oreille—in particular, the questionable 2,4D—of a biological solution to the infestation of Eurasian milfoil in the lake's waters.

The milfoil weevil is a native to North America, and it tends to prefer the exotic Eurasian brand of milfoil to the relatively benign local forms of the plant.

Reports from the field offer mixed results.

The Minnesota Department of Fisheries and Wildlife reports that use of the weevil to control Eurasian milfoil has been "quite effective at some sites, (but) it has not been effective at other sites. Currently, we cannot predict when, where and how the weevils will or will not be effective."

The Washington State Department of Ecology reports that, "Researchers in Vermont found that the milfoil weevil can negatively impact Eurasian watermilfoil by suppressing the plants growth and reducing its buoyancy (Creed and Sheldon 1995). In 1989, state biologists reported that Eurasian watermilfoil in Brownington Pond, Vermont had declined from approximately 10 hectares (in 1986) to less than 0.5 hectares.

"To date, there have not been any documented declines of Eurasian watermilfoil in Washington State that can be attributed to the milfoil weevil, although Creed speculated that declines of Eurasian watermilfoil in Lake Osoyoos and the Okanogan River may have been caused by the milfoil weevil. In Minnesota, Cenaiko Lake is the only lake in that state that has had a Eurasian watermilfoil crash due to the weevil; other weevil lakes are yet to show declines in Eurasian watermilfoil."

Saratoga Lake in New York, which implemented "weevil control" in 2000, has also experienced limited success. A report states the project, "has exhibited some very limited successes, but in no cases have migration out of the treatment plots, or long-term reductions of milfoil beds, been observed." Approximately the same

results were obtained, in the same lake, at different sites, with Sonar RFP—2,4D is its active ingredient.

In Vermont, the Vermont Department of Environmental Conservation has been working with the watermilfoil weevil since 1989, “allocating more than $800,000 of state and federal funds toward research and control efforts. The weevil is currently found in 35 of the state's 49 Eurasian watermilfoil-infested lakes. Weevil introductions and augmentations have occurred in ten lakes since 1993, with over 100,000 weevil adults, eggs and larvae being introduced.” They further report that, “Biological controls such as insects, bacteria or fungi that will impact milfoil are in the experimental stages only. Their use as a milfoil control method may prove to be the control of the future.”

That might in part be due to a report from the EPA, which states that, in Lake Bomoseen, located in western Vermont, “The researchers concluded that a native aquatic weevil, *Euhrychiopsis lecontei*, was largely responsible (for decreases in Eurasian milfoil).

The University of Florida reports, “In experimental tank tests, weevil herbivory resulted in a 50 percent decline in water milfoil biomass and up to 100 percent of the plants were damaged. Further research confirms that this native weevil is a water milfoil specialist, preferring Eurasian water milfoil to all other plants.”

Middlebury (Vermont) College Professor of Biology Sallie Sheldon has been studying the relationship between milfoil and weevils for over 16 years. She determined
“that the weevils are an effective force for controlling milfoil,” according to a report for the college. “The weevils,” Sheldon says, “do not damage other plant or animal species.”

There are currently no plans for Bonner County to use weevils to address Eurasian milfoil infestation. The county began treating milfoil by chemical means this month.