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[Gold Standard in Milfoil Removal \(http://ossipeelake.org/news/2008/07/16/gold-standard-in-milfoil-removal/\)](http://ossipeelake.org/news/2008/07/16/gold-standard-in-milfoil-removal/)

Posted on July 16th, 2008 at 6:51 PM By [Ethan Wilensky-Lanford \(http://ossipeelake.org/news/author/ethan-wilensky-lanford/\)](http://ossipeelake.org/news/author/ethan-wilensky-lanford/) [3 Comments \(http://ossipeelake.org/news/2008/07/16/gold-standard-in-milfoil-removal/#comments\)](http://ossipeelake.org/news/2008/07/16/gold-standard-in-milfoil-removal/#comments)

Concord – July 16, 2008 – This summer the state Department of Environmental Services has unveiled a new weapon in its battle against the invasive aquatic plant milfoil. The DAMM - Diver Assisted Milfoil Machine - is a double-pontoon raft the size of a swimming platform. It is the third generation of a gold-sluicing machine that sucks just enough water to collect weed pieces divers pull out of the underwater soil, but not enough to push the raft across the water.

“You basically have an underwater vacuum cleaner,” said Mark Richardson of Divemaster’s Diver Services, who worked with the department to design and build the system.

The underwater vacuum cleaner has taken three years to perfect. Meanwhile, its adversary - milfoil, a peaceful-enough looking plant so hearty it was once standard goldfish habitat - has grown stronger. It grew into a strong network in Concord’s Turkey Pond and has all but taken over Captain’s Pond, in Salem. It grew in 63 bodies of water in the state and became especially thick in Meredith, Moultonboro Bay and, perhaps most visibly, Gilford’s Smith Bay.

Left untreated, a milfoil infestation can destroy a lake. The plummy plants grow an inch a day in sunlight and are strong enough to have survived through three years in a dried-up pond in Brookfield. A key problem, according to Jody Connor, the department’s top lake expert, is that all the milfoil has to go somewhere. When it decomposes, it uses most or even all of the dissolved oxygen in the water, which can destroy a lake’s ecosystem. The weed is so stringy and strong that it can snarl a boat’s propeller. Children have drowned after getting snared in milfoil patches.

The department bought its first suction harvester, as the DAMM rig is technically called, in 2006. That model had two vane pumps that fed into sluiceways originally designed to separate gold from whatever else was sucked up. The milfoil collection retrofit required people on board to hold burlap bags at the end of each sluiceway. To make matters extra tricky, the massive discharge from the pumps rocketed the raft around the water.

“It was a fiasco,” Richardson said.

The next summer, he and Connor designed a raft 12 to 14 feet long and about 10 feet wide. Instead of using sluiceways to filter out the milfoil, the system used only one pump to shoot water down into a net. That worked, but the raft was too large to easily move. It spent most of last summer in Smith Bay, before a brief stint in Moultonboro. This year’s raft is smaller. The department can pull it onto a standard boat trailer.

Yesterday, two divers prepared to pull the weed out near Gilford’s town dock in Glendale. Milfoil needs strong sunlight to grow. In Lake Winnepesaukee, that means it survives in the first 20 feet below the surface.

Scott Ashley and Walter Henderson donned their wetsuits and went underwater. The water between the floats quickly clouded so that their brightly colored tanks and buoyancy compensators could not be seen from the surface.

“This area is too silted up,” Henderson said. “We can’t work this spot anymore.”

With that, he and Ashley flopped onto their backs, hung onto lines and kicked the raft over to another float. There they tied the raft off and got to work. Megan Cook, a department intern, raked the sopping green mass out of a mesh bag that hung from the raft’s floor. In an hour and a half, the crew cleared about 70 gallons of the weed. It came up clumped with fishing line, lures and a freshwater mussel.

The department measures the plant by dry volume in order to chart the invader’s movement, growth and, hopefully, decline. In Smith Cove, divers removed 3,000 gallons of milfoil last summer. Workers have already cleared almost that much from the cove this year, after a push to pull out the weed before heavy Fourth of July boat traffic spread it through the lake.

“It is a lot better,” Connor said. “People have called and told me last year was the first time that they could actually see the bottom.”

Richardson was the first diver in the state to earn a special weed-control certification. It is important to train divers before they try to pull up milfoil, Connor said, because more harm than good can be done with improper care. Sections of the plant can easily drift away and re-grow. The department has certified about 50 people in the past two summers and will have a fourth six-hour class starting Aug. 23.

Richardson has already begun work on the fourth-generation suction harvester, which will be small enough to put in the back of a pickup truck. If his suspicions are right, there should be quite a market for milfoil eradication systems in the years to come.

Alliance Note: Suction harvesting is being used in Danforth Pond this summer, and an article will appear here later this month.

3 Responses to “Gold Standard in Milfoil Removal”

1. **Mark Story** at 10:01 pm on July 20th, 2008

Curious if anyone has heard of the the Milfoil Weevil being used in NH?
Sounds like it is being used across NA, including VT and ME.

<http://www.enviroscienceinc.com/cgi-bin/displayContent.pl?type=section&id=253&gclid=CPmqIN7tz5QCFQObFQodzE99jw>
(<http://www.enviroscienceinc.com/cgi-bin/displayContent.pl?type=section&id=253&gclid=CPmqIN7tz5QCFQObFQodzE99jw>)

2. **Alliance Staff** (<http://ossipeelake.org>) at 8:33 am on July 21st, 2008

Mark: The weevil is being used for Eurasian watermilfoil, which is a different species from most of the milfoil in NH, including what's in our lake. I think DES has experimented with weevils, but I'm not sure. I'll ask them and post back here when I get a response.

3. **Alliance Staff** (<http://ossipeelake.org>) at 11:05 am on July 21st, 2008

Here is the reply from DES:

Hi David- You are correct. Eurychiopsis (the weevil) feeds only on the Eurasian milfoil. Dr. Sally Sheldon has done extensive research on them, including on variable milfoil, and they just do not eat it. We are working with UNH to explore alternative bio controls, but it will be a long time in coming to be able to research them and be sure they're safe for non-target species. Amy

~~~~~  
Amy P. Smagula  
Limnologist/Exotic Species Program Coordinator  
NH Department of Environmental Services

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## Weather



### Ossipee Lake

Temperature: 21°F

Clouds: Overcast

## About this post

This entry was posted 6 months, 2 weeks ago and is filed under [Concord Monitor](http://ossipeelake.org/news/category/concord-monitor/) (<http://ossipeelake.org/news/category/concord-monitor/>).

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