

OF BUGS, BENTHOS, AND AQUATIC INVERTEBRATES

Researching the use of an aquatic weevil for biological control of Eurasian water milfoil in Wisconsin

Laura L. Jester, Michael A. Bozek, Sallie P. Sheldon

There is a new chapter being written in the battle to control and contain the ever-frustrating exotic aquatic plant Eurasian water milfoil (*Myriophyllum spicatum*). The potential new weapon being researched as a biological control agent is an aquatic weevil termed the "milfoil weevil" or *Euhrychiopsis lecontei*. States such as Vermont, Washington, Minnesota and Wisconsin are currently involved in studies regarding the weevil or its use in controlling the often dense mats of Eurasian water milfoil in lakes. The most interesting aspect of using this weevil is that it is native to North America and therefore existed here before Eurasian water milfoil arrived in this country. More commonly employed biological controls use an exotic predator from the pest species' native land to control the organism. In these cases, one exotic species is used to control another. Problems can arise if the controlling exotic organism is ecologically harmful to native organisms in some unpredictable way. Because this weevil is native to North America and presumably evolved in these systems, no similar problems should occur.

Eurasian water milfoil has been observed to decline in many lakes after invading and persisting at very high levels for 10 to 15 years. Although the direct causes of the declines have not been well established, the milfoil weevil is now suspected of being at least partially responsible for some of these natural declines. In fact, some substantial declines in

Eurasian water milfoil in lakes, such as McCollum Lake in McHenry County, Illinois; Fish Lake in Dane County, Wisconsin; and Brownington Pond in Orleans County, Vermont, are being attributed to high populations of the milfoil weevil (Creed and Sheldon 1991, Kirschner 1995, Lillie and Helsel 1997).

Much is known about the lifecycle of the weevil and its herbivorous effects on Eurasian water milfoil thanks to researchers in Vermont (Drs. Sallie Sheldon and Robert Creed, Jr.) and Minnesota (Dr. Raymond Newman). The adult weevil is approximately 2 mm in length with black and yellow stripes along its back and a light ventral side (Figure 1). It spends the winter in the mud and leaf litter along the lake shore (Newman and Ragsdale 1995, Sheldon and O'Bryan 1996) and returns to milfoil beds in the spring to start laying eggs in the leafy apical meristems or growing tips of the plants, laying up



Figure 1. Adult *E. lecontei*

to two eggs per day. One, two and sometimes more tiny, yellow eggs are individually laid in a plant tip before the adult female moves onto another tip on that plant or a different plant to continue laying eggs. The larval lifestage hatches after about four days and begins to eat away at the delicate leaves and meristematic tissues of the tip where it was born (Sheldon and O'Bryan 1996).

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from the **President—**

Last month members of the NYSFOLA Board and a coalition of other organizations met with Senator Sherwood Boehlert and his staff to discuss the need and present a proposal for a \$1.2 million Statewide Nuisance Aquatic Plant program.

The statewide program would focus on managing invasive plants such as Eurasian watermilfoil, curly-leafed pondweed and other invasive species. Deliverables would include:

- * Statewide Grants Program for plant control
- * Monitoring
- * Developing new technologies for plant control
- * Pilot Projects
- * Sonar Demonstration Projects
- * Biological control of aquatic vegetation: Cornell University

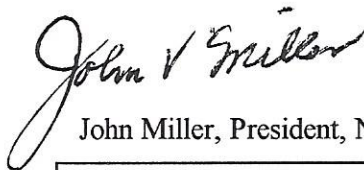
This proposal represents the hard work of a variety of organizations along with NYSFOLA. At the meeting Vice President Willard Harman and myself represented NYSFOLA, with Don Milne, President of the Coalition of Lakes Against Milfoil (COLAM), Mary-Arthur Beebe, Executive Director of the Lake George Association (LGA), and Cornell University researcher Robert Johnson in attendance.

I explained to Senator Sherwood Boehlert that we have approximately 7000 lakes that serve a multi-billion dollar tourism and recreation industry, and we do not have a comprehensive program to assist local communities. With rare exceptions, property owners or lake associations pay for plant management and this results in an inefficient and piecemeal approach to addressing a nationwide problem. There is no long-term commitment to plant control because of the haphazard nature of funding and locally conducted projects could be done much better if there was more oversight provided by local universities and NYSDEC/NYSFOLA.

A proposal was drafted by Willard Harman in collaboration with the Lakes Services Section of the DEC relative to aquatic plant control and this was well received by Senator Boehlert and his staff. Additional meetings are to be arranged to proceed with this important discussion and hopefully the future will see the statewide funding of aquatic plant control.

If the grant is approved, funding would cover a three year period. The first year, pilot sonar projects would be completed at Lake George and Eagle lakes. Concurrently, Cornell University would pursue biological controls of Eurasian milfoil using moths and weevils at selected pilot lakes, while NYSFOLA/NYSDEC would catalog, quantify, and prioritize the problem of nuisance aquatic plants in our member lakes. During the second and third year, Cornell will complete research on biological control while NYSFOLA and NYSDEC assist lakes in implementing controls. NYSFOLA will continue to work hard towards our common goal of initiating a Statewide Nuisance Aquatic Plant Program.

I will keep you informed of our progress.



John Miller, President, NYSFOLA

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Aquatic Weevils

Increasing in size and stamina, the following larval instars burrow into the stem of the milfoil and eat away at the vascular tissues inside. As they consume their way down through the interior of the milfoil stem, they subject the plant to substantial damage and it usually succumbs to the effects of this grazing. The hollow portions of the stem and occasional burrowing holes along the stem effectively compromise the plant's structural integrity so that it begins to "arch" over in the water column. Once damaged, the stem can no longer transport important carbohydrates and nutrients due to the missing vascular bundle, and the tips where new growth originates are destroyed by the first larval instar. Thus, it is the larval lifestage of the weevil that has the greatest effect on the milfoil (Creed and Sheldon 1995, Sheldon and Creed 1995, Newman et al. 1996). Heavily damaged plants and fragments end up on the lake bottom.

After the larval stage, pupation also occurs totally within the milfoil stem. The two week old larva curls into a ball in a hollowed spot in the stem (i.e., the pupal chamber) and slowly transforms into the full size adult. These adults lay more eggs, the cycle begins again, and more milfoil is grazed upon. The entire lifecycle takes 26 to 31 days, depending on water temperature, and three generations a summer have been documented in Vermont (Sheldon and O'Bryan 1996).

The last generation of the summer develops the wing muscles (Newman and Ragsdale 1995) needed to get to overwintering habitat on shore; although it is suspected that "rafting" to shore on floating matter is also used as a means of transportation to shore in the fall and back again to the milfoil bed in the spring.

Studies in Vermont and Minnesota show that the milfoil weevil is definitely effective at significantly reducing the standing stock biomass of Eurasian water milfoil in the field and the laboratory (Creed and Sheldon 1993, 1995, Sheldon and Creed 1995, Newman et al. 1996). Studies indicate that the weevil's original host was the native Northern water milfoil (*Myriophyllum sibiricum*) and evidence suggests that it is either expanding its diet to include Eurasian water milfoil or undergoing a host shift (Creed and Sheldon 1994, Solarz and Newman 1996). Specificity (dietary) and oviposition (reproductive) studies show that weevils raised on Eurasian water milfoil prefer Eurasian water milfoil, while weevils raised on Northern water milfoil do not have a preference between the two milfoils (Solarz and Newman 1996).

The effect of the weevil on native aquatic plants has been researched as well. In each study, there was no significant effect on the native plants (Creed and Sheldon 1993, Sheldon and Creed 1995). In many cases, the weevil cannot survive on the native plants due to the lack of appropriate food and places to lay their eggs. And, although it can survive on Northern water milfoil, it does not have the same devastating effect on the plant as on Eurasian water milfoil (Creed and Sheldon 1993, Sheldon and Creed 1995). Reasons for this are speculative, but it may be because Northern water milfoil and the weevil co-evolved together and perhaps the native milfoil developed biochemical defenses against the weevils' herbivory. Additionally, the stem of Northern water milfoil is more robust than Eurasian water milfoil and the larvae may not always be able to consume a damaging amount of the native's vascular bundle.

Thus far, the milfoil weevil appears to be an excellent example of a biological control agent. However, some obvious questions remain, including knowledge of its geographic distribution and factors limiting its population in lakes where it is found. And, the biggest question of all: can we use this as a practical management tool for the control of Eurasian water milfoil? These are the questions being asked by a study conducted through the Wisconsin Cooperative Fishery Research Unit at the University of Wisconsin Stevens Point and supported and funded by the Wisconsin Department of Natural Resources (WDNR) and twelve individual lake organizations.

The first study objective is to determine the distribution of *E. lecontei* in Wisconsin. Prior to the beginning of this study, the weevil was known to exist in four Wisconsin lakes: Bierbrauer Pond in St. Croix County, Lake Wingra and Fish Lake in Dane County, and Devil's Lake in Sauk County (Lillie 1991, Newman and Maher 1995, Lillie and Helsel 1997). We now know that at least 45 lakes around the state harbor

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Travel the Internet with us!!!

For all the computer buffs it is now possible to contact the NYSFOLA Office by E-Mail. We try to check the mail box every evening for messages or questions that you have. We can be reached at :-

folia@epix.net

or check-out the NYSFOLA homepage at:-

http://ourworld.compuserve.com/homepages/nys_lakes

NALMS Symposium- Houston, TX. *Chapter Representative, Don Keppel*

I had the pleasure to attend the 17th NALMS Symposium at Houston Texas on December 2-5, 1997. Other NYSFOLA attendees included Lewis Stone, Willard Harman, Elaine Horstmyer, Mary-Arthur Beebe and Michael Martin. Jim Sutherland from the NYSDEC of Albany was also in attendance. Presentations during the three days that I attended included studies on wetlands, aquatic vegetation and its control, user conflicts, volunteer monitoring, biomanipulation and others.

With Approximately 30 exhibitors displaying their information, the time allocated for breaks usually kept me busy discussing with the vendors the products they displayed. A couple of the vendors also exhibit at our conferences, so it was enjoyable to speak with old friends.

The session on aquatic vegetation chemical application and how much vegetation. The fish colony etc. need this cover for

"Chemical or Biological Control?"

Presently in the United States, approximately 90% of vegetation control is done with chemicals. This is a condition that leaves an unknown future for the fish colony as well as the human race. The scientific community is progressing with the biological controls that should achieve a balance in nature and be safe for all concerns.

and its control primarily focused on tation do we want to remove from our food and protection from predators.

Volunteer Monitoring throughout the world is very similar to our CSLAP program with some programs more advanced but usually about equal or less than CSLAP. Some of the programs are based more on tributary monitoring compared to the in-lake CSLAP type. Either way it was presented as being very important on understanding our lakes and streams.

As Chapter Representative for NYSFOLA, I would like to thank Elaine Horstmyer for her years of service to NALMS as a Region II Director representing New York, New Jersey and Puerto Rico. Elaine has represented our Region for three years and now passes the baton on to Steve Souza as the newly elected Director. Possibly many of our members have had the pleasure to meet Steve at our conferences as an exhibitor and this year hopefully he will attend as the NALMS Regional Director.

What is a Watershed?

It's the land that water flows across or under on its way to a lake or stream.

How do watersheds work? The landscape is made up of many interconnected basins, or watersheds. Within each watershed, all water runs to the lowest point- a stream, river or lake. On its way, water travels over the surface and across farm fields, forest land, suburban lawns, and city streets, or it seeps into the soil and travels as ground water. Large watersheds like the ones for the Mississippi River, Columbia River and Great lakes are made up of many smaller watersheds across several states.

Are all watersheds the same? Not at all. Watersheds come in many different shapes and sizes and many different features. Watersheds can have hills or mountains or be nearly flat. They can have farmland, rangeland, small towns, and big cities. Parts of your watershed can be so rough, rocky, or marshy that they're suited only for certain trees, plants, and wildlife.

Your watershed community- Everyone lives in a watershed. You and everyone in your watershed are part of the watershed community. The animals, birds, and fish are too. You influence what happens in your watershed, good or bad, by how you treat the natural resources- the soil, water, air, plants and animals. What happens in your small watershed also affects the larger watershed downstream.

There are many things you and your watershed community can do to keep your watershed healthy and productive. To learn what you can do to take care of your watershed, call 1-800-THE-SOIL or your local Soil Conservation Service office.

Restoration of Atlantic Salmon to Oswego River System

The Atlantic Salmon Fish Creek Club, located in Sylvan Beach, N.Y. is currently involved in the re-introduction/restoration of Atlantic Salmon to the Oswego River System. Their main goal is to re-introduce Atlantics to their native spawning stream FISH CREEK, a still pristine stream flowing down from the Tug Hill Plateau, to Lake Oneida.

Early in 1997, they planted 10,000 fry into the East Branch of Fish Creek. They electro-shocked in August, and found 15 parr, a 50% shocking success. They, the parr, averaged 87 millimeters in length, a very good sign. From one inch at planting, to nearly four inches in only 77 days !! On November 22nd, they stocked 22,000 eggs using WHITLOCK-VIBERT boxes in MAD RIVER, a tributary of the West Branch of Fish Creek. In the spring of 1998, they hope to place over 100,000 fry into the Fish Creek System.

With the help of fisheries biologists now studying Fish Creek, the club hopes to continue their efforts to re-introduce these magnificent fish to their native waters. For thousands of years, the Atlantic Salmon moved from Lake Ontario up the Oswego River to Lake Oneida, then up Fish Creek. The Oneida Indian Nation even had a fishing village located on the creek, fish being their main food source from May to October.

Those interested in helping stock fry in the spring, may contact the Club at the following Address;

ATLANTIC SALMON FISH CREEK CLUB
P.O.BOX 67
SYLVAN BEACH, NY 13157

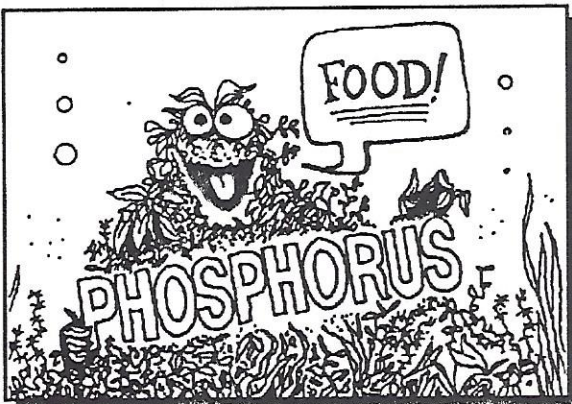
300 Volunteers needed !!

Stocking over 100,000 fry will take more than one day, and at least 300 volunteers !! If you would like to join the Club, write and ask for a membership application, one will be provided. Dues are \$10.00 per year.

submitted by: Edwin H. Crosby, President, Atlantic Salmon Fish Creek Club

What Feeds Nuisance Vegetation?

The nutrient that is usually most crucial for the growth of lake vegetation is phosphorus. In addition to watershed sources of phosphorus, in-lake sources of phosphorus loading can also promote plant and algae growth. Usually in-lake phosphorus remains bound to sediment on the bottom of the lake, but under certain conditions this nutrient is released and becomes available to support plant production or algae blooms. For instance, underwater currents from outboard motors can stir up bottom sediments in shallow lakes and release nutrients to be available for algae. When bottom dwelling plants are cut or die off, phosphorus from the plants is released into the water column to be used by suspended algae or phytoplankton and support algae blooms.



Because nuisance growths of both plants and algae can result from excessive nutrient inputs from the watershed as well as from inside the lake, control strategies need to target all potential sources. A nutrient budget, which assesses phosphorus sources and sinks in the watershed and lake, can help pinpoint those areas to target for nutrient control. Although the cost of a detailed nutrient budget may seem high, in the long run, this up-front investigation can save time and money.

This is a part of "Lake Talk" produced by Conservation Technology Information Center,

"WATERWORKS" would appreciate information on your Lake Association. I plan to have a page set aside each issue for a different Association. Let's make your's next! Forward your write-up to the office by mail, fax, E-mail or pony express, but start now. Pictures can be included.

Thank you, Editor



Ask Dr. Lake

Dr. Lake was unable to transmit his information this issue and the next issue will find the electronic problems corrected. Sorry. Therefore these pages will be used for other information.

Littoral Zone— News from around the State

Judge Takes a Hard Look at Herbicide Use on Lakes

What began nearly a year ago as a routine permit application by the Glen Lake Protective Association to use copper sulfate to control nuisance algae has turned into a drawn-out legal battle. The results of this case could likely set a precedent raising the issue about who is best suited to determine use impairment in a specific waterway, individual lake users or New York State.

This all began last year when the members of the lake association overwhelmingly voted to use *copper sulfate* to control filamentous algae in Glen Lake. A routine notification of lakeshore residents sparked a hearing process that began in August. It took only two of the hundreds of property owners to challenge the application, which DEC had approved.

The two dissenters and a panel of experts took the case before DEC Administrative Law Judge, Kevin Casutto, who overturned DEC's approval to use *copper sulfate*, criticizing the agency for approving pesticide permit applications in the State's waterways without adequate consideration of other alternatives or the articulation of need for the control technique at each waterway.

In the past, lake associations have routinely gotten permits from New York State to apply *copper sulfate*. When applied on a regular basis, low doses of copper sulfate can control the growth of nuisance algae in lakes. DEC has issued permits for copper sulfate based on a general environmental impact statement, which does not specifically assess the conditions of a specific lake or describe the need for algae control on that specific waterbody. DEC has routinely issued permits for copper sulfate on many lakes in New York State such as Miller Pond in Granville, Little Troy Park Pond, Ballston Lake and Loughberry Reservoir in Saratoga Springs and Edgecomb Pond in Bolton Landing.

The Glen Lake Association is considering appealing the Judge's ruling. It's President, Christine Mozell, stated her disagreement with the Judge's decision pointing out that the State environmental law does not specifically require need to be proven and "no criteria for need has been established by law" to control nuisance algae. The decision as to whether algae constituted a use impairment has been determined by the lake users, not New York State, which does not have specific standards or guidance addressing algae and other nuisance aquatic plants.

Lake associations would be wise to follow this issue closely as it may have broad implications for future management decisions.

Call for NYSFOLA Volunteer Lakes and Watersheds !!!

NYSFOLA/NYSDEC is seeking EPA grant funds to aid three or more NYSFOLA member lake associations and their watersheds in developing Watershed Management Plans. Four NYSFOLA lakes are currently funded in this program. Watershed Management Plans are a first step toward seeking grant monies from the NYS Environmental Bond Act or other governmental grants.

The three successful candidate NYSFOLA lakes and their watersheds will need to have an active water sampling program, such as CSLAP, to help them compile a state-of-the-lake-report. Your Water Quality Coordinating Committee and other State, County and Town agencies should have a positive interest in this application. Each Watershed Management Committee will survey the interests and needs of their watershed's "stakeholders" and then develop a list of priorities for their watershed.

A training workshop will be held at the annual NYSFOLA conference in May 1998 at Hamilton, NY for the volunteers from the three primary lakes/watersheds selected and the three runner-ups. Runner-ups if not funded in 1998, will have priority status for 1999 funding. Even though a list of eligible lakes was compiled previously we need to have interested NYSFOLA lakes apply or **renew** their availability at this time. The time frame for completion of this project will probably extend into mid-summer 1999 or later.

Interested applicants should contact Donald Keppel, Treasurer at 1-800-796-FOLA or Dr. George Kelley Chair, NYSFOLA Watershed Advisory Committee, at 315-852-6431 for additional information.

Application deadline is March 1, 1998. Successful watershed applicants will be notified by March 15, 1998.

Even if you applied for a Watershed Project in 1997, it is necessary to reapply to reaffirm your interest!!!

Aquatic Weevils

E. lecontei, and that number rises each week. Through our searches and those by WDNR lake and fish managers, we have discovered that the weevil is geographically widespread among Wisconsin lakes containing Eurasian water milfoil. In fact, it has been found in every lake sampled so far, except Silver Lake in Waupaca County.

The second objective is to determine limnological and geographical characteristics which influence the abundance of *E. lecontei* in lakes. Although the jury is still out on what factors limit its population, data collected thus far indicate a wide variation in weevil densities from different lakes. During the summer of 1996, densities were collected from 14 lakes and ranged from <0.01 to 1.91 weevils per stem of Eurasian watermilfoil. These data indicate that there are two distinct levels of weevil densities in these lakes. The natural break in densities between 1.01 and 0.33 weevils per apical stem may have ecological significance, but the reason is currently unknown. Perhaps certain environmental conditions, such as lake characteristics or milfoil abundance or architecture, must exist before weevil populations can increase to densities high enough to cause a significant decline in *M. spicatum*. Alternatively, perhaps the numbers relate to population dynamics of the organism. Additional collections of *E. lecontei* densities continued through the summer of 1997 and will soon be analyzed. Their associations with environmental conditions may reveal factors that limit weevil population growth and help explain this discontinuity in densities.

The third objective in this study, and the one that has many people excited, is to determine if this insect can be used as a practical management tool for controlling Eurasian water milfoil in the future. With the cooperation and local cost-share funding from twelve lake organizations around Wisconsin and the Wisconsin Department of Natural Resources, we were able to augment actual weevil populations in certain milfoil beds of these lakes in order to measure the effect on their plants. We suspect that we are simply speeding up a process which occurs naturally and has been seen in the lakes previously mentioned (McCullum Lake, Fish Lake and Brownington Pond).

Work on this objective began last summer (late August 1996) during peak plant biomass, when we sampled the milfoil in these lakes to determine the background levels of plant biomass, stem density, the degree of branching and the abundance of native plant species in each of the milfoil beds to be stocked. We also determined the background (i.e., pre-augmentation) densities of the weevil in 1996 and again early in 1997.

In June 1997, thousands of adult weevils were collected from Fish Lake in Dane County, Wisconsin, and sent to Vermont to lay hundreds of thousands of eggs in a culturing facility run by Dr. Sallie Sheldon and Matthew Roy. In July 1997, each study lake received one of three stocking densities; one, two, or four weevils per plant of milfoil. Bundles of milfoil tips and stems with weevil eggs and larvae were returned to Wisconsin from the culturing facility. These bundles were then tied onto rooted milfoil in designated plot areas in each study lake. As the eggs and larvae developed into adults, they move onto the milfoil around them and spread through the bed.

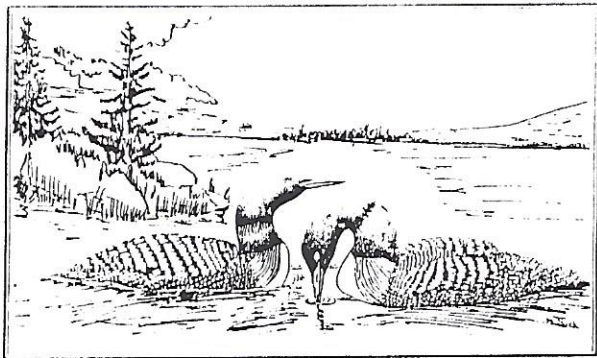
The different weevil levels will be evaluated for their effect on the milfoil in the treated plot areas. The milfoil were measured again in late August 1997 for biomass, stem density, degree of branching and abundance of native plants. In this way, we hope to quantitatively determine the effect each stocking level had on the milfoil bed and evaluate the feasibility of using the weevil as a control measure for milfoil. Additional milfoil and weevil samples will be taken during 1998 in the study lakes and the results should be available sometime in early 1999.

This research may also help us understand the limitations of using the weevil as a biological control agent. As with most predator/prey relationships, a cycle is established: after the prey declines, the predator population declines, often allowing the prey to resurge, followed by a growth in the predator population, and so on. Perhaps the weevil will not be able to control the milfoil every year, and may need to be augmented more than once in a several year period. There is also the lag time between weevil augmentation and actual control of the milfoil. While natural or augmented populations may be high, the effect is not immediate (such as with the use of chemicals). It takes a matter of weeks for the larvae to consume enough milfoil to cause a substantial decline. Other factors which may limit the use of the weevil include various biotic factors such as Fish communities (some fish are known to feed on adult weevils), and the amount of shoreline development which could influence overwintering success. Additionally, there is not currently a commercial source of the weevil for augmentation purposes and cost effectiveness is still unknown.

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One kind word can warm three winter months!!

LOON LAKE by Helen Sick



Loon Lake, a 141 acre, half-moon shape mountain lake, elevation of 1720 feet is located in the foothills of the Allegany Mountains in the northern part of Steuben County. It is one of three Loon Lakes in New York State and was named for the unique birds that migrate here each spring and fall. We were lucky enough to have a pair of Loons raise their little ones in the summer of 1992.

The lake bottom is about half gravel and the balance is muck. The depth is from 5 to 50 feet with considerable weed growth in the shallow areas. The shore and surrounding hills are mostly gravel. A stream that only flows in the spring or if we have a heavy rain, brings a considerable

amount of sediment and nutrients. The lake is spring fed for the most part and has no visible outlets. It is the theory of geologists that there are two sub-terrain outlets and that the water flows to the north underground and joins with the Genesee River and also flows to the south underground to the Conhocton River. We have one privately owned small island with a foot bridge to shore and the rocky remains of another that once supported 10 elm trees and a picnic area. There is a unique 10 acre area called "**Devils Hole**" that is about 50 feet from the lake shore and is from 10 to 35 feet below the water level of the lake but it does not hold water.

The lake was sprayed in 1962 with sodium arsenite solution -this only kept the weeds down for a couple of years. We did consider Sonar as an experimental application in the fall of 1996 but did not proceed with it.

POPULATION: In 1880 there were only three cottages and in 1919 only 15. Today we have at least 159 homes or cottages and a couple of lots. In 1997 we had 38 year around residents and several families make this their summer home and migrate to a warmer climate in the winter.

Two separate organizations cooperate to provide benefits to our lake.

THE AQUATIC PLANT GROWTH CONTROL DISTRICT is funded by a \$2.05 per thousand of assessed value, collected by the Town of Wayland. This money goes to purchase, maintain and operate weed harvesting equipment. We purchased our harvester in 1985 and harvest the weeds from mid June until September each year. Our truck takes the weeds away from the lake for disposal. Many use them as fertilizer for gardens. Our truck also picks up leaves and small brush around the lake twice each spring and fall. We feel this has been very successful in removing nutrients from our lake.

THE LOON LAKE COTTAGE OWNERS ASSOCIATION is funded by a \$10 annual membership dues. This organization has 10 directors striving to have a director from each area around the lake. The officers and at least 2 directors are elected each year at the annual meeting. We are an advisory board to The Aquatic Plant Growth Control District. We publish a 16 page directory annually, 5 newsletters and plan the summer activities.

Some of the recreational activities are: on the 4th of July- Boat Parade with prizes, Paddle Boat Races with prizes, and Fireworks. Also on the 4th of July we set 2 hours time for sail boats with no motorized boats allowed. An Annual meeting, Lawn Sale, Semi-Annual informational meetings with a Pot Luck Supper are also conducted yearly.

The Town of Wayland will be celebrating its' Sesquicentennial (150 years) in 1998 so we will be using that as the theme for our summer activities this year.

The present Association was started in 1983 and has been a member of FOLA since 1984. We were a part of CSLAP program but discontinued it in 1988. In 1995 we did start up the Secchi Disk program and in 1997 became a part of a new 5 year CSLAP Program.

We have come a long way, and as many other lakes, there are still mountains to climb.

Helen Sick can be reached at; 2968 Laf-a-lot Rd., Wayland, NY 14572

Editors note; Please send in a one page article similar to this for publication in following issues of "WATERWORKS"

CSLAPennings

Due to technical problems this week the usual report from Scott Kishbaugh was not received relative to the activities of CSLAP. I have been in recent conversation with Scott and the funding for the program is currently installed to add more lakes to this years schedule. Numerous lake associations have requested the privilege of joining this sampling protocol and generally most of the present applicants will be accepted.

Again this year an all day training session will be conducted at the annual conference to be held May 1-3, 1998 at The White Eagle Conference Center, Hamilton, NY. At this session all new accepted lake associations should have their volunteers in attendance. It is this training that the volunteer will need to proceed with the sampling season. The training is only given at this time and without trained volunteers your lake association will not be allowed to proceed with the sampling season. The training session will be held on Saturday only, make sure your volunteers are available for that program. If others want to attend these sessions they will be gladly accepted.

One requirement to be accepted in this program is that your association is a current member of NYS-FOLA for the year prior and all the years that you continue with this program. Therefore be sure your membership fees are current and that the necessary volunteers are trained. If you have any questions contact the NYSFOLA office or Betsy Hohenstein at 518-457-3345.

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Aquatic Weevils

With all of these questions looming ahead, we can say that already much more is known about *E lecontei* in Wisconsin than just a year and a half ago. We know that it is geographically widespread throughout the state, that its densities vary greatly among lakes, and that some natural collapses in Eurasian water milfoil coincide with high weevil populations. As more data are collected and analyzed, the "milfoil weevil" story will continue to unfold. Perhaps the fate of the often frustrating Eurasian water milfoil will be left to the use of biological control in some lakes rather than chemicals and mechanical harvesters.

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Laura Jester holds a bachelor's degree in water resources from the University of Wisconsin-Stevens Point, where she is currently a candidate for the degree of Master of Science in fisheries and aquatic ecology. She has worked in various capacities for the Wisconsin Department of Natural Resources and for the Wisconsin State Laboratory of Hygiene. Laura says, 'I believe my love for the outdoors and concern for the environment stem from growing up on the edges of the Kettle Moraine State Forest near Eagle, Wisconsin.' Laura is married and has recently moved from Wisconsin to the Minneapolis area.

Drs. Michael Bozek and Sallie Sheldon are professors in their respective Universities and serve on Laura's graduate studies committee.

editors note: This article is a reprint from the NALMS "LAKELINE" magazine, November 1997 issue, with some deletions. I wish to thank Laura Jester for her work on this article and to remind all of our New York state residents that studies are also being carried on by Robert Johnson of Cornell University.

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