



the Water Column

Vol. 5, No. 3

Provided free of charge to our monitors and affiliates

Winter 2001

Protecting Maine Lakes from the Threat of Invasive Aquatic Species A Progress Report

Scott Williams, Executive Director



The infestation of Maine's lakes and ponds by aggressive non-indigenous plants and animals has the potential to interfere with recreation, alter fish and wildlife habitat, degrade water quality and overshadow virtually all other lake water quality issues and concerns. This form of "biological pollution" is self-sustaining. One inadvertently transplanted plant fragment or seed from a boat trailer, or Zebra mussel larvae in a bait bucket is all that it takes to begin this environmental nightmare. Maine is the final frontier to be conquered by many of these "aquatic invaders." All of our neighboring states are embroiled in costly and frustrating battles to control invasive aquatic species (IAS).

Are Maine lakes and ponds less at risk from the threat of IAS today than they were one year ago? The answer is definitely yes. Emergency Legislation passed last April took important preliminary steps to *reduce the risk* of the infestation by invasive plants in Maine lakes. The VLMP and the Maine DEP played significant roles in crafting the law, which outlaws the transportation and the sale of eleven highly aggressive aquatic plants in Maine (The Bill was presented to the Natural Resources Committee, Chaired by VLMP Board member Senator Sharon Treat).

continued on page 5...



Thoughts from Your President

Joe Flanagan

Dear Volunteer Monitors, Board Members, and Friends of Maine Lakes,

Happy New Year to all of you, and Happy 30th Anniversary to the VLMP! As I think about what it means to be celebrating our 30th anniversary, I'm struck by what a monumental achievement that is. This is an organization that is driven by the passion and commitment of hundreds of volunteers who are dedicated to protecting Maine's lakes and ponds and who give selflessly of their time and energy to that end. It would be an understatement indeed to say that I am honored to be a part of such an extraordinary organization.

This issue of The Water Column focuses on the problem of Invasive Aquatic Plants and the VLMP's role in preventing the spread of these plants into Maine lakes and ponds. This concern will be the focus of much of our work for the coming year. As you will note, the VLMP and COLA have joined forces in this issue of the newsletter in order to bring you up to date on both organizations' efforts in this arena.

Whether you are a VLMP Volunteer, a member of COLA, or an interested lake lover, we welcome your ideas, comments and suggestions.

Thank You!

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Dear Friends and VLMP Volunteers,



Happy New Year! 2001 is an especially exciting year for the VLMP, as it marks the 30th anniversary of the Program. Since 1971, dedicated volunteers throughout the State of Maine have been working to protect Maine's 5,785 lakes through water quality monitoring and data collection. We are tremendously proud of this accomplishment and of the hundreds of volunteers who have contributed so richly to the success of this program and to the quality of Maine's environment.

The VLMP began in 1971, initially at the University of Maine, and soon after as a program of the DEP, where



it continued as part of that Department until the early 1990's. At that time, budgetary restrictions at the State level necessitated discontinuing the program as a part of State government. Rather than abandon the Program's mission, a

group of volunteer monitors rallied to keep the Program going and, in 1995, formed an independent non-profit 501(c)(3) organization, the VLMP.

The work of the VLMP is essential for preserving the character of Maine as we know and appreciate it. In addition to monitoring the water quality of approximately 380 lakes each year, the VLMP has been at the forefront of the effort to prevent the spread of invasive aquatic plants into Maine lakes. We are active in a variety of outreach and educational activities, and we enjoy strong working relationships with many

other lake and water related organizations on the local, regional, state and national levels.

Since 1995, the VLMP has had significant funding support from the Maine Department of Environmental Protection and from the United States Environmental Protection Agency. During the past year, we began working to broaden our base of financial support so that we may reduce our reliance on government funding and develop new programs that support our mission to protect Maine's lakes.

Our 30th Anniversary is an exciting event. It gives us an opportunity to reflect on our past achievements and the important role this organization has played in protecting Maine's environment. It also affords an opportunity to rededicate ourselves to this effort and to take steps to ensure that the VLMP will be around to protect our beautiful lakes and ponds for years to come.

You can be a part of this statewide network of dedicated individuals, working to protect Maine's lakes. Your contribution to the Maine Volunteer Lake Monitoring Program will strengthen our ability to protect Maine's 5,785 lakes and ponds and help us continue our work, regardless of anticipated decreases in government funding. Please consider an anniversary gift to the VLMP this year.

Thank you!

Becky Welsh
Development Coordinator





the Water Column

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Printer: Curry Printers, Auburn, ME

Funding for this newsletter is made possible by grants from the US Environmental Protection Agency and the Maine Department of Environmental Protection, through Section 319 of the Clean Water Act.

 Printed on Recycled Paper



Gus - Volunteer Pup
3 years Service

Notice To COLA Members

This issue of the Water Column is being sent to lake associations and individuals through a cooperative effort between COLA and the VLMP to provide important information about the threat of invasive aquatic species to Maine lakes. Additional materials and information are available through the VLMP and COLA offices.

Visit the COLA website: www.mainecola.org
Toll Free: 1-877-254-2511



"This is a timely and important issue that needs to be addressed this year in the Legislature, and it will take everyone working together to prevent this nightmare from taking over our lakes."

Clyde Walton, COLA President

Invasive Aquatic Species & The Future of Our Lakes

Much of this newsletter is devoted to the subject of invasive aquatic species (IAS). This scourge threatens to change all that we value in our lakes and ponds, including swimming, boating and fishing, natural beauty, ecological integrity, and the huge benefit that lakes provide to Maine's economy.

The spectrum of invasive aquatic species includes plants and animals such as Eurasian milfoil and Zebra mussels. But there are many others. The news about the threat of IAS may be new information to many of us in Maine, but that is not the case in other states, where ongoing battles have been waged for decades. We are fortunate to have had very few IAS in Maine lakes and ponds, but the list of infested water bodies is growing.



A dense mat of Eurasian Milfoil

The message from lakeshore property owners, natural resource agencies, and others who have experienced the catastrophic effects of IAS is consistent. They have learned from experience that efforts to address this problem must be focused on aggressive prevention, because once a body of water becomes infested, it is nearly impossible to eradicate problem plants and animals. Paul Somers is the State Botanist for Massachusetts.

The following is a quote from him concerning the issue of aquatic invasive species in his state, and the implications of this problem for Maine:

"It is a large and growing problem for Massachusetts natural resources. Your state would be wise to act in ways that will arrest or impede the introduction or spread of these species into the relatively pristine waters you still have."

Virtually all of the other problems that threaten our lakes could be quickly overshadowed by IAS infestations. Some natural resource agencies in other states have had to completely shift the emphasis of their lakes programs as a result of IAS infestations. Many states, including NH, MA and VT are now spending hundreds of thousands of dollars every year to prevent and control invasive aquatic plants and animals. Stories abound of lake associations and towns that have had to establish an annual fund to control invasive plants – with very marginal success. Some of these ongoing control programs have been in operation for over twenty years.

This issue of The Water Column presents an overview of two initiatives for proposed legislation to address the threat of invasive aquatic species in Maine. The first is the outcome of the Invasive Aquatic Species Workgroup, a committee that was formed in compliance with a requirement of emergency legislation that was

passed last April. The VLMP served on the workgroup, along with the DEP, IF&W, DOC, and other groups. The workgroup report is intended to strengthen the existing law through recommendations that are likely to be viewed favorably by the Maine Legislature.



Trailer with aquatic plants attached at public boat landing at Lake Auburn. The presence of Variable milfoil in Lake Auburn was confirmed in August, 2000.

The second initiative is the product of a political action committee (PAC) that was formed to consider alternatives to the IAS Workgroup recommendations. The two initiatives are not seen as conflicting.

Please become familiar with the IAS threat and with ways in which we can prevent this environmental catastrophe from overtaking Maine lakes. *One way or the other, you will learn about invasive aquatic species, because they are at your doorstep.* Your awareness and knowledge about this issue is ultimately the most powerful weapon for keeping our lakes free of these aquatic invaders.

Scott Williams
Executive Director



Quality Counts!

You reach behind to your quiver. You grab the arrow with the red feathers. Your fingers nimbly position the knock against the string on your bow. You raise and begin drawing the bow back simultaneously. You eye the target and aim your weapon. The air hisses as you release the arrow. Thwaap! Dead Center! Yes! A+ for accuracy.

The next arrow you choose also has red feathers. You carefully aim and deploy your selection. The arrow finds the target and nestles itself squarely beside the first. A+ for Accuracy again! Your third arrow, another adorned with red feathers, cleanly finds its mark, rubbing 'shoulders' with arrows one and two. A+ for Accuracy, and the repeatability indicates high precision! You retrieve your arrows and nod to the next contender.



Your brother steps up for his turn. He has arrows with green feathers. You were with him when he bought them at that upscale sporting goods store out west. They were costly but the sign indicated unsurpassed precision. Your brother aims and releases. You can tell by the expression on his face that he is not pleased with the result. He selects a second and checks the business end. Apparently seeing no problem, he aims...more slowly this time...and gently releases. You follow the arrow with your eyes as it settles in less than a hair from the first. A bit



dismayed, your brother grabs a third arrow. Again he inspects the potential projectile. Satisfied, he draws, releases and in disgust, walks to the target to retrieve his goods.

The third arrow damaged the first one during the process. Sure. The arrows may be known for their

precision, but what about accuracy? All three landed, well grouped for sure, but consistently biased toward the bottom of the outermost red circle. You walk toward him and begin the kibitzing.

You had both taken the 10 week Archery course offered at the local fish and game club. Initially, neither of you could even hit the target. The arrows landed to the right, to the left, below or behind the bull's eye...no precision...no accuracy...it didn't matter if the arrows originated in a bargain basement or were 'top of the line'. Then you learned the lingo, spent endless hours practicing with the club's equipment, comparing different styles and weights, and beginning to get an appreciation for the fine art of purchasing 'good' arrows. You both thought you were ready and well equipped for this competition.....what went wrong???

Take Home Messages:

Accuracy is how close you come to the mark.

Precision is how repeatable you are.

Low levels of bias are a prerequisite for repeatable accuracy.

And what happened to our friend with the green feathered arrows? He made an equipment choice that was not appropriate for the distance between the target and himself. ...kinda like taking a Secchi disk reading without waiting for your eyes to adjust to the dark...consistently yielding underestimate of the true result.

It is not only the experience we have but the procedures we follow and the quality of our equipment that yields data of high quality...accurate, precise and unbiased...the goal of all our workshops.

Linda Bacon
Maine DEP Advisor



Development News.....

Becky Welsh, Development Coordinator

The VLMP has recently been awarded two grants to support its IAP Prevention Education efforts. The Maine Community Foundation's Rural Grants Program and the Morton-Kelly Charitable Trust will be supporting outreach efforts, as well as development and publication of an identification key for Maine invasive species. This key will be produced on waterproof paper, making it an indispensable part of every boater's on-board equipment.

New Grants Help IAP Effort

Two other Foundations, the Norcross Wildlife Foundation and the Sweet Water Trust's Watershed Action Program have also supported the VLMP's IAP efforts through funding for new equipment—our new boat, motor and trailer and a dissecting microscope with video feed—and identification kits.

Accomplishments

To Date:

In addition to legislative action, hundreds of volunteer lake monitors, state agency staff, nongovernmental organizations, lake associations and private citizens have worked with us to help spread the word about the threat of IAS. Some of the agencies, groups and individuals that have joined forces with the VLMP against this threat include:

- Maine Departments of
 - Environmental Protection
 - Inland Fisheries & Wildlife
 - Conservation
 - Maine Outdoor Heritage Fund
 - University of Maine George J. Mitchell Center for Environmental and Watershed Research
 - Maine Congress of Lake Associations
 - Water Utilities:
 - Portland Water District (Sebago Lake)
 - Auburn Water District
 - Cobossee Watershed District
 - Maine Lakes Conservancy Institute
 - Lakes Environmental Association
 - Numerous individual lake associations
 - Towns:
 - Lovell, Casco, Otisfield, Belgrade,
 - Maine Bass Federation
 - Trout Unlimited
 - Maine State Police
- For the past two years, the VLMP has made spreading the word about the threat of invasive aquatic species a priority. The following are some of the IAS prevention efforts that have occurred during that time:

* Many of the public boat landings on lakes throughout Maine are now posted with warning signs that were developed by the VLMP.

* Several hundred invasive aquatic plant information and identification kits have been distributed to volunteer monitors, lake associations, towns, state agencies, the Maine Legislature, and others.

* An effective invasive aquatic plant prevention slide show has been presented to numerous lake associations, towns, fish and game clubs, agencies, the Maine Legislature, and other groups throughout the state.

* Last summer the VLMP conducted an invasive aquatic plant information and identification workshop for volunteers. This traveling workshop will be available to volunteer monitors, lake associations, and other interested groups in 2001.

* During the past two years, VLMP staff has received dozens of plant specimens for identification. This important "screening" service is provided to volunteer monitors, lake associations and others.

* Over 100,000 "Warning to Boaters" flyers designed by the VLMP and the Maine DEP have been distributed throughout Maine to lake associations, town offices, marinas, tourist information bureaus, fishing clubs, and others.

* In August 2000, large invasive plant warning signs were posted at major entry roads throughout Maine. The signs warn boaters against bringing invasive plants into the state.

* In August 2000 the Maine Turnpike Authority agreed to distribute boater warning flyers to all vehicles with boats/trailers entering the State through the Kittery toll booths. The MTA has estimated distribution of the flyer to be approximately 20,000 per week during the summer months.

* The Maine State Police has produced a recorded IAS prevention warning message that plays



A swimmer becomes entangled in Variable Milfoil on Messalonskee Lake. image taken for the PSA developed by the Maine DEP and the VLMP

Maine DEP and VLMP

continuously during the summer months on the information/emergency AM radio frequency on the Maine Turnpike.

* The Maine DEP and VLMP have produced a Public Service Announcement video that has been distributed to TV stations throughout Maine. This video and another is available to volunteer monitors and lake associations upon request.

* The news media has taken great interest in the issue of invasive aquatic species. Several high-profile television news clips have been shown and numerous local and statewide newspaper articles were published during the past year.

* The VLMP and MEDEP have worked directly with lake associations, towns and individuals in communities with lakes that have become infested with variable-leaf Milfoil. We have assisted in the design and implementation of plans to attempt to eradicate and to control the spread of this aggressive plant.



Volunteers assemble a plastic barrier to prevent the spread of milfoil in Cushman Pond

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Additional Protection in 2001:

The emergency law that was passed in April required the Departments of Environmental Protection and Inland Fisheries and Wildlife to form an Invasive Aquatic Species workgroup. **The purpose of the workgroup was to evaluate the new law and recommend ways in which it might be strengthened and made more effective**, and to report back to the Legislature in January 2001. VLMP Executive Director Scott Williams was a participant in the workgroup, which met several times throughout the summer and fall.



This Maine lake supports a healthy population of native beneficial plant species

The workgroup recommendations are comprehensive, involving six areas related to the prevention of invasive aquatic plant (IAP) introductions in Maine. Some of the recommendations are legal, or budgetary in nature, requiring formal legislative approval. Other recommendations may be enacted through existing state agency rule making procedures. The following are some of the highlights of the workgroup report. A three-page summary and the complete report are also available from the VLMP office or through these Maine DEP websites:

<http://janus.state.me.us/dep/blwq/doclake/vm.htm#inv>
<http://janus.state.me.us/dep/blwq/comment.htm>
(this file will contain the final report of the workgroup)

Emphasizing the fact that the threat of IAS introductions to Maine waters is a "serious environmental and economic threat." the report begins with the acknowledgement of several immediate needs:

- * Central leadership – is needed to coordinate the efforts of agencies and organizations throughout Maine in addressing the threat. The workgroup recommends that the IAS issue be moved to a level that is commensurate with its threat to Maine's environmental and economic health.

- * Public education – is a critical need, especially as future action by the legislature is likely to be directly in proportion to public knowledge and support. Many of the workgroup recommendations are aimed at raising public awareness and understanding of the IAS threat.

- * The formation of a permanent Invasive Species Committee (ISC) to operate under the Land & Water Resources Council. (The LWRC is an existing group that consists of the Commissioners of the State natural resource agencies).

- * Develop a comprehensive "Invasive Aquatic Species Management Plan" for the State of Maine. The Plan would qualify Maine for funding under the Federal Invasive Species Act. It also would ensure that policy and legal changes are identified to the Governor's cabinets on a regular basis so this issue will get the attention it deserves.

The following is a synopsis of the six key recommendations of the workgroup:

- 1. The identification of additional nuisance biological threats to State waters, including animal species:** A number of additional

Lake Data
on
the Web



Maine Lake Water Quality data are available through

PEARL

(Public Educational Access to Resources on Lakes)

sponsored by the :

University of Maine

George J. Mitchell

Center for

Environmental and

Watershed Research

Maine DEP

VLMP

Please visit PEARL at:

www.pearl.spatial.maine.edu

Use the "comments" option to send your suggestions on how to improve this service.

animal species and microorganisms pose a potential threat to Maine waters.

- 2. Further education, awareness and prevention efforts that are needed to stop the introduction and spread of invasive species:** The workgroup recommendations include establishing a volunteer network of "Volunteer Invasive Plant Patrollers" to monitor lakes for IAS and provide education at the community level. The group recommended establishing a consistent message to raise public awareness, and a major public education initiative.

continued on the next page...



3. Methods to control the spread of invasive species, should any become established in the State, including quarantine authority:

The workgroup recommended strategic lake surveys for invasive species in high risk areas, the development of a "rapid response" protocol to address newly infested lakes, setting standards and guidelines for state and local officials to use in the control of established infestations, and developing a formal process to manage public access in infested waters.

4. Enforcement of the prohibitions in the Maine Revised Statutes, Title 38, section 419-C:

The current law has a few weak areas. The workgroup recommended strengthening language pertaining to the enforcement of the law, including the removal of warnings provisions after two years. The recommendations also included an increase in fines to an upper limit of \$1,500, which more meaningfully corresponds to the risk to lake resources.

5. The status of cooperation from other state agencies in educating the public about invasive aquatic species:

The workgroup recommended strengthening support and cooperation for IAS prevention efforts from state agencies, support at the cabinet level to insure that inter-agency cooperation will occur, and support for the continuation of the efforts of the IAS workgroup through the Invasive Species Committee.

6. Recommendations for necessary funding to support the prevention and control of invasive aquatic species:

The workgroup recommended establishing an ongoing comprehensive program to implement recommendations by funding at a first-year cost of \$185,000. It recommended creating a statewide coordinator position to develop the comprehensive Aquatic Species Management Plan, and to oversee the implementation of the workgroup and ISC recommendations.

Note: The State of Vermont has fewer than 10% of Maine's lake resources, and a much smaller population. Yet, that state currently spends more than the

amount proposed above just on IAS staff salaries. Prevention and control funding efforts in Vermont have exceeded three million dollars in recent years. Financial support for the recommendations of the IAS Workgroup is vital to the Maine DEP Lakes Program.



Volunteers examine a fragment of variable milfoil at a VLMP workshop .

"If the Legislature passes the Workgroup recommendations without the needed appropriations, the overall efforts of the DEP lakes section will be significantly diluted. We will be faced with dismantling significant parts of the lakes program that were re-built in the 1990's." Roy Bouchard, MEDEP

The recommendations of the workgroup represent a balanced approach to the IAS issue. They include a wide variety of prevention and control options, consistent with current knowledge, blending public and private interests. Legislation has been introduced (LR 1398) which would implement the recommendations listed above.

Another legislative initiative has been proposed by a political action committee (PAC), known as "Save Maine's Lakes." The PAC proposal (LR 464) includes many of the IAS workgroup recommendations. It includes recommendations to establish a new cabinet-level council, mandatory boat inspection programs throughout Maine, model municipal ordinances for IAS prevention, a grants program to support municipal funding, and the authorization of municipalities to develop local ordinances to address IAS prevention. The comprehensive invasive aquatic species management plan proposed by the IAS workgroup would address many of the specific elements of the PAC initiative. It is possible that the Maine Legislature will hear additional initiatives in the next several weeks. There are presently five bills proposed, including LR 1098, 2011 and 2246.

The final product may include the best recommendations of each.



Legislative action is an important component in a long-term strategy to reduce the risk of infestation of Maine lakes from IAS. However, personal awareness and individual actions taken to prevent infestations are just as critical. The mandatory inspection of every boat and trailer that enters Maine from other areas may or may not be feasible at this point in time for a number of political, economic and pragmatic reasons. But, *responsible individual voluntary preventive efforts can substantially reduce the risk of IAS infestations.* The VLMP and MDEP will continue to work with organizations and the public to develop a strategy of awareness and individual action to reduce the risk of IAS infestations. This endeavor will only be effective if lake monitors, lake associations, communities and others make a strong commitment to keep Maine lakes free of this very real threat.

FRIGHTENING FACTOIDS

About Aquatic Invaders



- ✿ A one-inch plant fragment, or a single seed carried on a boat or trailer can begin the infestation of an entire lake. Invasive species, unlike other forms of pollution, are self-sustaining.
- ✿ An invasive plant population in a lake can double or triple in size every year.
- ✿ Invasive plants are forever! There are very few documented cases of successful eradications.
- ✿ Some of the control measures used to fight invasive aquatic plants are nearly as destructive to lakes as the plants themselves. Control measures may threaten rare or endangered species in a water body.



- ✿ Lake associations and towns in other states have been battling Eurasian milfoil for decades! Approximately 8-10 Million dollars in public money is spent fighting this plant every year.
 - ✿ Invasive aquatic plants can compete with and eliminate beneficial native aquatic plants.
 - ✿ The introduction of a single invasive species to a lake can virtually ruin recreational opportunities, alter fish and wildlife habitat, affect water quality and lower shoreline property values.
 - ✿ Recent research in Vermont shows that invasive plants can cost shore line landowners on infested lakes over \$12,000 each in lost property values!
 - ✿ Maine's neighboring states spend hundreds of thousands of dollars each year to prevent and control the spread of IAS.
 - ✿ All of the New England States, as well as 41 other states and six Canadian provinces are battling Eurasian milfoil, water chestnut, and a broad group of other invasive species.
- ✿ Hydrilla can be even worse than Eurasian milfoil (EWM)! This aquatic invader can completely overtake a population of EWM! From 20-30 million dollars in public money is spent every year battling Hydrilla in the US.
 - ✿ Massachusetts spends over \$290,000 annually on grants for local lake projects, most of which is spent battling invasives in their 298 infested lakes.
 - ✿ The cost of aquatic invaders could be enormous to Maine. If only a fraction of Vermont's infestation occurred in Maine's southern five counties, the property loss value alone would exceed \$11 million, and control costs could reach \$2-4 million/year! This does not even take into account losses to tourism, water sports activities, and massive alteration of aquatic habitat.

The most effective and inexpensive approach to the problem of invasive aquatic species is PREVENTION.

Maine lakes and ponds are threatened by a number of potential problems related to human activities, including excess algae growth from watershed development, contamination by toxics such as mercury, gas and oil residues, sedimentation from soil erosion, and others.

The infestation of a lake by an invasive species has the potential to overshadow all of these!



5th
Annual
VLMP
Meet-
June 23

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1

Marks the 30th Anniver-

**Maine Volunteer Lake
 Monitoring Program**

*Spectacular Raffle,
 an Exciting Silent Auction and
 more....*

Share your memories! Send us your photos and stories about your monitoring experiences.

Please send all materials to the VLMP office no later than March 30.

*Does the boat landing on your lake
 have a Warning Sign Posted?*

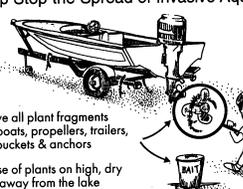
*How about the new red sticker
 stating "it's the LAW"?*

*Help Spread the Word on
 Invasive Aquatic plants*

*Please contact the VLMP office
 to request the update sticker or a sign*

Thank You!

BOATERS
Watch Out For Hitchhiking Plants!
 Protect Your Lakes-
 Help Stop the Spread of Invasive Aquatic Plants



Remove all plant fragments from boats, propellers, trailers, bait buckets & anchors
 Dispose of plants on high, dry land away from the lake

It's the LAW
 Fines up to \$500

Invasive Aquatic Plants

- Damage fisheries
- Are unsightly
- Ruin swimming areas
- Replace useful native plants
- Spread from very small pieces
- Foul motors and propellers

Avoid giving a ride to ANY aquatic plants!

Invasive lake plants CAN RUIN your enjoyment of this lake!

For further information CONTACT
 Volunteer Lake Monitoring Program
 (207)225-2070



Place the new Red sticker here

Wanted



Volunteers to assist in managing the VLMP office.

Tasks include answering phones, filing, cleaning, organizing materials and equipment, etc.

Volunteer Monitor's Perspective

Cushman Pond



This story about the invasion of a small pond needs to be told and retold because it is an outstanding example of what volunteer efforts, coordinated by

dedicated professionals, can accomplish when met with a critical environmental situation. It also emphasizes the need for every individual who uses Maine waterways in any manner to be constantly on the alert for anything that might signal a negative change in the environment.

In 1995, two residents of Cushman Pond in Lovell took a casual canoe ride around the shoreline and observed for the first time a strange and sinister plant, growing in approximately three feet of water. Normal water turbidity and a shaded shoreline had apparently kept the plant well hidden for a year or more until it had grown to dinner table size, with long bottle-brush shaped tentacles, and red stems. Further investigation disclosed other smaller plants located along several hundred feet of shoreline in water depths up to about eight feet.

It was soon determined that Cushman Pond was infested with Variable leaf watermilfoil, a plant well-known in NH, VT and MA, where it has reached nuisance levels. Only a few Maine lakes are known to contain this particular species of milfoil, which is a cousin to the more notorious and highly aggressive Eurasian watermilfoil.

The Maine DEP was informed of the discovery, and because it appeared that the pond had only recently become infested, early detection offered hope for controlling the plant before it reached problem proportions. An intensive program to control the milfoil was started in September, 1997 as a joint effort by the VLMP, Maine DEP, IF&W, volunteers who were residents of Cushman pond, the Kezar Lake Watershed Association and the Town of Lovell. A decision was made to attempt aggressive removal of the plant through the limited application of an aquatic herbicide. Volunteers created several plastic curtains to surround the plants, scuba divers used rocks for ballast to seal the bottom of the curtain, and the DEP provided a floating boom to keep the top above the water surface.

The treatment initially appeared to eliminate the plants, but the following summer, many more were discovered around the shoreline. Another form of control was needed. Using scuba divers, snorkelers, and other volunteers, a program was started to locate

and remove plants by hand, and to mark the location of each plant removed. The hand removal was accomplished by a team of volunteers, with guidance from VLMP and DEP staff. In 2000, grant funding was obtained for a full-scale project that provided the allowance to hire professional divers, and purchase equipment and supplies to support a more intensive program.

A tremendous amount of volunteer labor valued at many thousands of dollars, along with professional help, has been expended in an effort to control the milfoil invasion in Cushman pond. This effort has helped us to learn more about milfoil's habits and to be able to remove plants without further spreading fragments. We have developed an effective means of screening to guard against outlet stream-flow, which could infest downstream waterways including Kezar Lake. And we have worked hard to inform the public in nearby watersheds and throughout Maine about this threat.

So far, our efforts have been relatively successful.

"It had grown to dinner table size, with long bottle-brush shaped tentacles and red stems"

Plants are located and removed several times each summer, using special techniques to minimize fragmentation and to strictly control the disposal of removed plants and carefully mark locations where plants have been removed. We have satisfied the premise that a plant properly removed is not likely to re-grow in the same spot. People are becoming more diligent, and are constantly on the lookout for strange plants that need to be reported to those who can initiate action. Although there have been no other known occurrences of this form of milfoil in the Kezar lake watershed to date, vigilance by anyone who swims, fishes, boats, or just enjoys being near the water will have to continue because the milfoil is not gone!

Maine has nearly 6,000 lakes and ponds, and 32,000 miles of rivers and streams, which are used by thousands of people every year. The greatest advantage we can achieve is to insure that those people are well informed as to the potential danger of invasive aquatic plants, how to recognize these plants and participate in a reporting network so that responsible action can be taken with **no** delay.

Gerry Nelson
Volunteer Monitor & Resident of Cushman Pond



VLMP Initiates Volunteer "Invasive Plant Patroller"

For the past two years VLMP and Maine DEP staff have met with groups of volunteers, lake associations, and others to raise public awareness about the threat of invasive aquatic plants in Maine lakes. Next summer the VLMP will initiate a new volunteer invasive "plant patroller" program. Training workshops will be offered to volunteer monitors and others who are interested in spreading the word about invasive aquatic species, and who would like to receive special training in identification. Workshops will be offered at the VLMP office in Turner, and in regions of the state where interest is high.

The early detection of an invasive plant can *increase* the likelihood of eradication and *decrease* the risk of the plant spreading to other areas of a lake. Throughout the U.S., volunteer monitors are very active serving as sentinels to sound the alarm about aquatic invaders. According to *The National Directory of Volunteer Environmental Monitoring Programs*, 156 of the 772 programs listed include monitoring for invasive species. Volunteers in these organizations help to identify and sometimes remove invasive aquatic plants and animals.

Vermont and New Hampshire have operated volunteer invasive species monitoring programs since 1997 and 98 respectively. The programs have been very effective. Volunteers in Vermont were the first to identify Eurasian milfoil in nine of the state's 53 known milfoil-infested lakes. In one Vermont lake, a trained volunteer was responsible for identifying

water chestnut early enough to allow the Department of Environmental Conservation to eradicate the plant by hand removal! In New Hampshire, over 100 water bodies have active "Weed Watching" programs, with anywhere from 2 to 50 volunteers per lake. Other states throughout the country also have active volunteer programs. Last summer, approximately 30 trained volunteers monitored nearly



Taking a Break: A Volunteer diver searches for variable milfoil 150 lakes and ponds in Massachusetts, resulting in the discovery of five infestations of water chestnut. Volunteers in the Wisconsin Department of Natural Resources Self-Help Lake Monitoring Program watch for milfoil while conducting their routine lake monitoring. Wisconsin volunteers discovered three of the five new Eurasian water milfoil infestations found in the northern part of the state last year!

Becoming a volunteer Invasive Plant Patroller does not require a large investment of time or money. It is not necessary for volunteers to be able to identify *all* lake plants. Recognizing the most threatening invasive species (four in Maine) is all that is required. Periodically monitoring areas of a lake where inva-

sive species are likely to be introduced, or where habitat is favorable can make a difference.

Another important role for volunteer Invasive Plant Patrollers and lake associations is to help inform the public about the threat of aquatic invasive species. One very effective activity is the distribution of information at public boat landings, particularly on summer weekends, when boat traffic is heavy.

If you are interested in attending a Plant Patroller workshop next summer, or if your lake association is interested in sponsoring a workshop for your lake, please contact the VLMP as soon as possible. Volunteer lake monitors throughout the US are expanding their knowledge and understanding of lake ecosystems and the threats that they face, while performing an invaluable public service. You could save your lake from the menace of invasive aquatic plants and animals with only a small time commitment. Please consider joining the volunteer *Invasive Plant Patroller* team.

☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆
☆☆ Early Detection ☆☆☆
☆☆ Means PREVENTION! ☆☆☆
☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆



2001 QA/QC WORKSHOPS

Looking Towards Spring

<u>DATE</u>	<u>LOCATION</u>	<u>MAP # - SECTION</u>
May 19	KENNEBEC	Map 20
May 19	AROOSTOOK <i>St. Froid Lake, Quimby</i>	Map 63, A-4
June 2	OXFORD <i>Pennesewassee Lake, Norway</i>	Map 11, D-1
June 2	YORK <i>Little Ossipee, Waterboro</i>	Map 2, A-4
June 9	ANDROSCOGGIN <i>Bear Pond, North Turner</i>	Map 11, B-4
June 9	SOMERSET <i>Embden Pond, Embden</i>	Map 30, E-3
June 16	WALDO <i>Sheepscot Pond, Palermo (Mary Hitching's Camp)</i>	Map 13, B-4
June 16	CUMBERLAND <i>Raymond Pond, Raymond (Charlie Turner's Place)</i>	Map 5, B-2
June 23	VLMP ANNUAL MEETING	
June 30	FRANKLIN <i>Clearwater Pond, Industry</i>	Map 20, B-1
July 7	PENOBSCOT <i>Pushaw Lake, Old Town</i>	Map 33, E-2
July 8	PISCATAQUIS <i>Sebec Lake, Greeley</i>	Map 32, A-2
July 14	HANCOCK <i>Toddy Pond, Orland</i>	Map 23, E-3
July 15	ST. CROIX <i>Lewy Lake, Princeton</i>	Map 36, B-2

All workshops begin at 9 a.m. and will be held at public boat landings unless otherwise indicated.

WEBSITES of INTEREST



<http://www.mainedep.com> (Extensive lake education information)

<http://www.umaine.edu/waterresearch> (University of Maine, George J. Mitchell Center for Environmental and Watershed Research)

<http://pearl.spatial.maine.edu> (PEARL, Public Educational Access to Resources on Lakes)

<http://www.gwi.net/~cola> (Maine Congress of Lakes Associations)

<http://www.mlci.org> (Maine Lakes Conservancy Institute)

<http://www.nalms.org> (North American Lakes Management Society)

<http://www.dnr.state.wi.us.org/water/fhp/lakes> (Wisconsin Lakes Partnership)

<http://wow.nrri.umn.edu/wow/index.html> (Water on the Web, state of the art monitoring equipment deployed in lakes and real time data available along with in-depth educational material. It allows interested people to track lake conditions and learn more about lakes.)

<http://www.dnr.state.wi.us/org/water/fhp/papers/lakes.pdf> (Information about buffers and riparian management from Wisconsin)

<http://www.pca.state.mn.us/water/lake.html> (This Minnesota site has good information about lakes)

<http://www.anr.state.vt.us/dec/waterqc/ans/ans-index.htm> (Vermont Department of Conservation information on Invasive aquatic species)

<http://www.aquat.ifas.ufl.edu/welcome.html> (University of Florida site contains good links and information on IAS)

<http://www.ecy.wa.gov/programs/wq/plants/> (Washington State information on freshwater plants)

<http://www.fw.umn.edu/research/milfoil/milfoilbc.html> (Minnesota website with information regarding research on controlling IAS)



Maine Milfoil Summit

March 2, 2001

St. Joseph's College, Standish

*For more information, contact Lakes Environmental Association
(207) 647-8580 or lakes@megalink.net*

2001

The Maine Water Conference



*Will be held
at the
Augusta
Civic Center
On
May 3*

*For More information
Contact the
MWC Organization
Committee
at (207)581-3244
or*

WRILINES@maine.edu



The **Water Column** is the newsletter of the Maine Volunteer Lake Monitoring Program, and is published quarterly. Please address questions or comments to:

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We also welcome phone calls: (207) 225-2070. Email- vlmp@megalink.net

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***Inside this Issue: Invasive Aquatic Species,
The Future of Maine Lakes?***

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