NEAPMS 11th Annual Meeting & Conference

January 18-20, 2009

The Gideon Putnam Resort

Saratoga Springs, New York

register at www.neapms.net

Events start Monday at 3:00!

Northeast Aquatic Plant Management Society

Northeast Aquatic Plant Management Society
P.O. Box 142
Chester, New Jersey 07930

Nor'Easter

A Newsletter of the Northeast Aquatic Plant Management Society

www.neapms.net Vol. 8, No. 2 - Fall, 2009

President's Message Fall 2009

With late Fall settling in and much cooler weather the norm, I hope most of you are finished in the field and looking back on a successful year. Having just attended the NALMS conference in Hartford CT, I noticed that most of our NEAPMS members were at that conference and many were presenters. The active northeast group was well represented and most notably by Amy Smagula, a Past President, long-term board member and presently Secretary of NEAPMS who put together a great full program in her leading role in NALMS.

Our own Northeast Aquatic Plant Management 11th Annual Conference is just around the corner and will be held January 18 -20, 2010 at the Gideon Putnam Resort in Saratoga Springs, New York, the site of last year's conference. A preliminary program for the conference appears in this issue. You will note a slight change from our usual programming with more happening on Monday afternoon and the conference ending at lunch on Wednesday. I encourage all to start the conference on Monday afternoon when Dr. Barrie Hellquist will present a workshop explaining the confusing *Potamogetons* followed by Barrie's tour of Australian Water lilies. A light buffet and cash bar will follow and later, more happenings at the hospitality suite. Our Past President Marc Bellaud again put together a great program covering a wide range of fresh water ecosystem topics. Appropriately, the first presentation on Tuesday is Carlton Lane of the Aquatic Ecosystem Restoration Foundation (AERF) giving us the latest on NPDES permits and aquatic herbicides applications, what we have referred to in the past as the 6th Circuit Court of Appeals decision. This is an on-going issue that is of utmost importance to our organization, especially our management firms, manufacturers and regulators. Several presentations will follow Tuesday with the program ending with a poster session and Dr. Ken Wagner's Algal ID workshop. Our annual NEAPMS Awards Banquet will finish out the evening. Wednesday's program will start early and the conference will end with lunch and the Silent Auction announcements.

Please support our Silent Auction and participate in this activity that helps support our scholarship program. NEAPMS has one of the most, if not the most, active scholarship programs of the APMS regional societies. We have supported a large number of students through the years with monies taken in by the raffle of industry donations at the conference banquet and the Silent Auction. The quality of the research conducted by our scholarship recipients is very high and the areas of inquiry often ground breaking. We have a lot to be proud of with the program, which has been very successful, and we need to continue to support it at our conference. Please check for more information in our newsletter about the program and updates on student progress.

We encourage sponsorships and encourage exhibitors at our annual meeting and if you need more information contact Glenn Sullivan at glenn@alliedbiological.com If you want more information on the hotel or other local information contact Ann Bove at ann.bove@state.vt.us

Respectfully,
Bob Johnson, President

11th Annual Conference and Meeting

January 18-20, 2010

Gideon Putnam Resort - Saratoga Springs, New York

See inside for the Preliminary Conference Program and Register at www.neapms.net

NORTHEAST AQUATIC PLANT MANAGEMENT SOCIETY

The Purpose of the Society shall be to assist in the management of aquatic vegetation, to provide for the scientific and educational advancement of the members, to encourage scientific research in all facets of aquatic plant management, to promote an exchange of information among members, and to extend and develop public understanding in the discipline.

Mission Statement , adopted April 20, 1999

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Scholarship	Amy Smagula, Ken Wagner, Bob Johnson, Larry Eichler, Paul Lord, Barre Hellquist, Bin Zhu
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Awards	Charles Gilbert, Gerry Smith, Marc Bellaud

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U P C O M I N G E V E N T S

February 7-11, 2010
2010 Annual Meeting
Weed Science Society of America
(WSSA); Denver, CO
http://www.wssa.net/Meetings/WSSAAnnual/Info.htm

February 28- March 2, 2010
2010 Conference
Midwest Aquatic Plant Management Society
Indianapolis, IN
http://www.mapms.org/

March 28-31, 2010
Western Aquatic Plant Management Society
2010 Conference
Seattle, WA
http://www.wapms.org/wapms_conference.htm

March 3 & 4, 2010
Pennsylvania Lake Management Society
20th Annual Pond & Lake Management Conference
State College, PA
http://www.palakes.org

April 25 – 27, 2010
66th Annual **NE Fish & Wildlife Conference**
Northeast Division
Newton, Massachusetts - Marriott Boston Newton
http://www.neafwa.org/

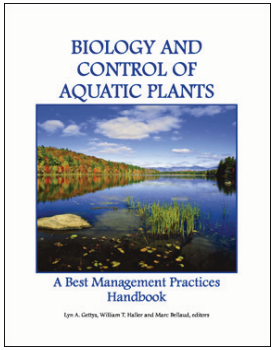
May 1-3, 2010
New York State Federations of Lake Associations
26th Annual Membership Meeting
Hamilton, New York
http://www.nysfola.org

U P D A T E D R E S O U R C E

BIOLOGY AND CONTROL OF AQUATIC PLANTS
A Best Management Practices Handbook

Lyn A. Gettys, William T. Haller and Marc Bellaud, editors

Aquatic Ecosystem Restoration Foundation
Contact Carlton Layne (clayne@aquatics.org) to order hard copies.



SCHOLARSHIP UPDATES

Kimberly Lellis-Dibble

University of Rhode Island, Department of Natural Resources Science
Title: "Effects of plant invasions on trophic transfer, nekton fitness, and aquatic ecosystem function in the Northeast"
Research Update:

This has been a busy summer for both field and laboratory research. In the field in July and September, I collected samples of *Fundulus heteroclitus*, *Ruppia maritima*, macrophyte (*Phragmites australis, Spartina patens, S. alterniflora, Distichlis spicata,Typha latifolia, Juncus gerardii*, etc.), microalgae, and suspended particulate matter from the Drake's Island restoration site in Wells, Maine. I have taken additional samples and collected water quality data at several other reference and *P. australis* invaded sites in the Northeast.

In the laboratory, I have processed the macrophyte, microalgae, macroalgae, and SPM samples and prepped my samples for stable isotope analysis (our mass spectrometer is currently being repaired, so I have not had the opportunity to run the samples). I have also conducted a lipid analysis on adult *F. heteroclitus* white muscle and liver tissue to determine fish condition in the restoring, invaded, and reference marshes. Samples of white muscle and liver tissue were prepped for stable isotope analysis and will be run when the machine has been repaired. I have also removed and cleaned the sagittal otoliths from adult *F. heteroclitus* heads, which will be analyzed further to determine growth rate and age of fish in invaded, reference, and restoring salt marsh systems.

Jeremy Farrell

RPI
Darrin Fresh Water Institute
Title: Expanding Hydroacoustic Technologies to Accurately Identify and Map Eurasian Watermilfoil and other Aquatic Plant Assemblages

My field season sponsored by the NEAPMS scholarship has so far included 3 lakes across a trophic status gradient in an effort to refine my hydroacoustic algorithm for identifying Eurasian Water Milfoil. To date I have visited Lake George (oligotrophic), Lake Hortonia (mesotrophic) and Saratoga Lake (Eutrophic). In each of these water bodies we have completed a series of transects through native plant beds as well as the Eurasian Water Milfoil. I have not yet analyzed the data from the transects we have completed but plan to this winter. I intend to submit an abstract for a poster at the annual meeting in January as I gave an oral presentation last year and do not yet have enough new analyzed data to warrant a full oral presentation yet.

Lori Benoit

University of Connecticut, Storrs
Title: A molecular genetic approach to evaluate herbicide resistance and vectors of spread for populations of the invasive aquatic plant *Hydrilla verticillata* (Hydrocharitaceae) in the northeastern United States

Microsatellite markers: I am still in process of mass screening over 400 hydrilla samples for a number of microsatellite markers.
ITS data: As reported at the 2009 NEAPMS conference, genetic evidence from the nuclear ITS region shows that U.S. monoecious hydrilla is a likely hybrid of two different strains of hydrilla. To trace the ancestry of the U.S. monoecious biotype I have been amplifying and cloning the ITS gene from a small number of worldwide populations, but needed more samples from additional worldwide accessions, particularly SE Asia. To facilitate this investigation, Paul Madeira at the USDA ARS Invasive Plant Research Lab sent to me this August samples of hydrilla DNA representing 23 worldwide accessions, many from SE Asia. I am in process of amplifying, cloning and sequencing these new samples.
PDS gene: As reported at the 2009 NEAPMS conference, all Northeast hydrilla populations tested to date lack the PDS mutations that confer herbicide resistance.

CONNECTICUT

Nancy Murray, Connecticut DEP

Hydrilla (*Hydrilla verticillata*)
New location found- Southwest CT DEP-Inland Fisheries, while conducting a triploid grass carp evaluation, collected an aquatic plant sample that was positively identified as Hydrilla. DEP did a whole lake survey to determine the species extent. An aquatic plant control contractor was immediately hired by the landowners to conduct diver assisted hand pulling to remove the plants.

Fairfield County-During the second year of the Silvermine River Hydrilla Cooperative Agreement with the University of Connecticut, herbicide applications were conducted at three waterbodies. Data on biomass was collected from the three treatment areas and three control areas. Data will be analyzed over the next few months. A hand pulling event was also conducted along a section of the Silvermine by UCONN students and professors. A total of 310 pounds of Hydrilla was collected and then incinerated.

Waterchestnut (*Trapa natans*)

Connecticut River-CT-DEP (main stem river and coves from Hartford downstream) and USFWS ("hot" spots in the Hartford area) completed their annual survey of the CT River in Connecticut for water chestnut. This year, both DEP and USFWS staff found significantly fewer plants than in previous years. Surveying/harvesting activities were hampered by higher than usual flows for much of the summer.

Yellow floating heart (*Nymphoides peltata*)

New location found- This site was reported from a pond in Pachaug State Forest. CT DEP staff hand pulled the relatively small population and will plan to conduct control work next year. The root system extended into the pond substrate and had rootlets growing at the submersed internodes; no wonder this plant grows so well.

Eastern CT Private Pond-The second year of chemical control was conducted in August with the assistance of the DEP Wildlife Division-Wetlands Management/Mosquito Control Program.

As with most states, funding for invasive plant programs has declined significantly. CT DEP is attempting to make progress by working with towns, private land owners, universities and others.

MASSACHUSETTS

Marc Bellaud, Aquatic Control Technology, Inc.

Without a doubt the biggest news from Massachusetts this year was the first documented find of Zebra Mussels (*Dreissena polymorpha*) at Laurel Lake located in Lee and Lenox. This 170-acre lake is located in the Berkshires is a popular fishing destination. Zebra mussels were discovered near the state boat ramp in early July. The State responded quickly by immediately closing the boat ramp to help prevent any further spread, and by developing an Interim Zebra Mussel Action Plan. These tasks were a joint effort of the Massachusetts Department of Fish and Game and the Department of Conservation and Recreation (DCR).

DCR, Lakes and Ponds Program continued rapid response efforts by funding a Phase I evaluation of high risk Berkshire Lakes. Primary goals of the study were to document the presence or absence of zebra mussels in these lakes and to develop a data base of physical and chemical parameters for lakes that might be at risk. Zebra mussels are currently established in Laurel Lake's outlet stream and further downstream in the Housatonic River. Check for updates on DCR's website http://www.mass.gov/dcr/watersupply/lakepond/lakepond.htm.

One positive development of the zebra mussel discovery was State Senator Downing filed a Bill titled "An Act Protecting Lakes and Ponds" that would make it illegal to transport any aquatic invasive species (AIS) in Massachusetts. It would also prohibit the launching of a boat that was in infested waters in the prior 30 days and was not properly decontaminated. The bill would subject offenders to fines and possibly jail time.

Other AIS news included the documentation of hydrilla (*Hydrilla verticillata*) in two more ponds in Massachusetts. There are now three public waterbodies and two private backyard ponds that are infested with hydrilla in Massachusetts. DCR assisted with ongoing control efforts at Long

The Connecticut Agricultural Experiment Station's Invasive Aquatic Plant Program

Gregory J. Bugbee
Department of Environmental Sciences, CT Agricultural Experiment Station

Connecticut is home to more than 3000 named lakes and ponds. These bodies of fresh water are among the State's most valuable natural resources. One of their greatest threats is the establishment and spread of invasive aquatic plants. The Connecticut Agricultural Experiment Station (CAES) began its Invasive Aquatic Plant Program (IAPP) in 2003 with funding from the United States Department of Agriculture. The main goals were to determine the extent of CT's invasive aquatic plant problem and investigate novel control strategies. To quantify the presence of invasive aquatic and native species, CAES IAPP has since surveyed 162 lakes and ponds (Figure 1). Over 100 species of plants have been documented with 13 being classified as invasive. Approximately two-thirds of the lakes and ponds contained one or more invasive species. Georeferenced transects have been established in each water body where plant species, abundance, depth and sediment type are recorded for future reference. Some of the severest impacts from invasive species are in CT's largest lakes such as Candlewood, Lillinonah and Zoar, where Eurasian watermilfoil (*Myriophyllum spicatum*), minor naiad (*Najas minor*) and curly leaf pondweed (*Potamogeton crispus*) account for nearly 75 percent of the entire area covered by aquatic plants. The results of the CAES IAPP lake surveys are available at www.ct.gov/caes/iapp. CAES IAPP has also developed an aquatic plant herbarium that contains pressed plants encompassing one of each plant species from each lake and a frozen plant tissue bank for future genetic analysis.

Developing novel techniques to successfully manage invasive aquatic plants is an important aspect of CAES IAPP. The longest running test is on the use of 2, 4-dichlorophenoxyacetic acid (2, 4-D) to control variable milfoil (*Myriophyllum heterophyllum*) in Bashan Lake, East Haddam, CT. Prior to this testing 2, 4-D was not registered for variable milfoil and little was known on what kind of control it would provide. The first tests with the "salt" formulation of 2, 4-D (Aquacide®) proved less than encouraging, however, further work with the ester formulation (Aqua-Kleen®, Navigate®) proved promising. A spring application of the 2, 4-D ester formulation, at the maximum rate of 200 lbs/acre, controlled nearly all the treated variable milfoil within two weeks. The following year the rate was reduced to 100 lbs/acre with similar results. Testing of nearby groundwater wells showed no contamination and analysis of lake water showed 2, 4-D levels declined to below irrigation and drinking standards within two weeks. In the following years, September applications of 2, 4-D ester were tested with results similar to the spring applications. This proved to be advantageous as swimming and irrigation was largely over and many boats and floating docks were removed from treatment sites. Today, Bashan Lake has been largely restored to pre-invasion conditions but yearly control is still needed as occasional variable milfoil regrowth occurs. Other herbicide trials have demonstrated successful control of fanwort with spot treatments of granular fluridone (Sonar SRP®) and control of curly leaf pondweed and Eurasian watermilfoil with early spring treatments of diquat dibromide (Reward®). CAES IAPP is also monitoring watermilfoil weevil (*Euhrychiopsis lecontei*) introductions in two lakes and grass carp in one. Yearly surveys on Candlewood Lake are documenting the effects of winter drawdown on the plant community.

Education and outreach are an important part of the CAES IAPP program. Invasive aquatic plant identification and management workshops are given to government officials, lake associations and other interested groups. Aquatic plant surveys and onsite visits are available on request to asses the aquatic plant community and help develop invasive plant management strategies.

RHODE ISLAND
Katie DeGoosh, Rhode Island DEM

For the third summer, the Rhode Island DEM Office of Water Resources has continued our seasonal statewide scan for aquatic invasive species in order to better map the distribution of AIS in RI. We continue to update this list on our website (http://www.dem.ri.gov/programs/benviron/water/wetlands/pdfs/invasive.pdf).

New infestations of note this summer were water chestnut (*Trapa natans*) in Chapman Pond (in southern RI) and Central Pond/Turner Reservoir (at the northeastern border with MA). Previously, water chestnut had only been documented in two locations mid-state. New infestations of Brazilian waterweed (*Egeria densa*) were also documented in two ponds in the Pawcatuck and Moosup River watersheds.

DELAWARE/MARYLAND
David Harden, Restoration Ecology

Both Delaware and Maryland are looking at the recent pesticides/NPDES permitting court rulings, but are waiting for further guidance from EPA, particularly to see what the general permit conditions will be. There are no additions to regulations or new invasive species in either state since the last newsletter.

MASSACHUSETTS. con't

Pond in Barnstable – the first hydrilla infestation site – and funded the first year of a hydrilla management program at Hobomock Pond in Pembroke.

Special thanks to Tom Flannery from the DCR Lakes and Ponds Program for providing this information.

MAINE
John McPhedran, Maine DEP

Infestation status: Hydrilla strikes again; Eurasian watermilfoil control continues
Maine's 30 documented infestations grew by one in 2009 with the discovery of hydrilla (*Hydrilla verticillata)* in 4,686-acre Damariscotta Lake in Jefferson. Once again, a trained volunteer spotted a suspicious plant, this time in a small (< 0.5 acre) cove of Damariscotta while surveying the shoreline near his property. The Maine Volunteer Lake Monitoring Program and DEP worked to confirm the identification and conduct initial response.

Since the discovery in mid-September, DEP installed fragment barriers to prevent spread from the cove, installed benthic barriers, and is attempting to manually remove hydrilla and tubers. The Damariscotta Lake Watershed Association is coordinating volunteer surveys of the remainder of the lake. As of this writing approximately 50% of the lake has been surveyed and no additional hydrilla site has been found. This is likely the first confirmed hydrilla infestation in a large northeastern lake.

DEP's response to the Pine Tree State's second-ever case of Eurasian water milfoil (*Myriophyllum spicatum*) in Salmon Lake, discovered in August 2008 in a headwater in the Belgrade lake system in central Maine, continued apace with manual removal and benthic barrier deployment early in 2009. The plant still appears to be confined to the 6-acre outlet cove of the lake.

After tallying an ever-increasing number of plants with each dive, DEP determined that an herbicide application was needed to achieve maximum suppression of the population with the objectives of

preventing spread to other waters and allowing a return to manual removal in 2010.

The herbicide 2, 4-D was applied in September 2009 by Aquatic Control Technology, Inc. to the outlet cove of Salmon Lake. Initial results are promising but true efficacy won't be known until spring and early summer 2010.

Meantime, local lake groups continue extraordinary efforts to manage variable milfoil (*M. heterophyllum)* and curly leaf pondweed (*Potamogeton crispus)* in southern Maine lakes. Variable water milfoil is known from 26 waters (2 of these are the hybrid with *M. laxum*) while curly leaf pondweed is limited to one water body.

NPDES Permitting Requirement
Maine's Waste Discharge Licensing Program and Maine DEP's current General Permit for application of herbicides to control invasive aquatic plants, developed pursuant to State requirements, are protective of non-target organisms and resources, and meet or exceed NPDES standards. The existing General Permit is strictly a Maine Waste Discharge License at this time. When the General Permit is modified to meet the 2011 deadline for compliance with NPDES, no substantive changes will be necessary to ensure compliance with both NPDES requirements and Maine law.

For more information, please check the IASP's website or email milfoil@maine.gov.

NEW HAMPSHIRE

Amy Smagula, New Hampshire DES

New Hampshire is preparing to do what we must to be compliant with NPDES requirements. We have participated in an EPA webcast on the topic to become familiar with what EPA plans to do in terms of implementing this requirement, and we have provided feedback to Region 1 EPA for what NH's needs may be relative to coverage by a NPDES permit. We will continue to monitor EPA's progress and will react appropriately when the time comes so that we do not see a lag in our ability to use aquatic herbicides to control exotic aquatic plants.

New Hampshire will see some increased funding to the Exotic Species Program as a result of 2009 legislative activity. In the last edition of the Nor'Easter I reported that NH was working on legislation to increase boat registration fees to provide more money to exotic plant control (among many other programs that would benefit from this bill). The legislation did pass, providing us with another $250,000 annually for milfoil control and prevention activities. Roughly $150,000 annually will be added to what we already spend (between $60K and $100K) on control practices, and another $100,000 will go towards prevention activities (like our LakeHost program and other beneficial programs to help slow the spread of exotic plants).

I am glad to report that we had no new infestations of exotic plants in NH in 2009, though we did see *Didymosphenia geminata* spread to a couple new tributaries that flow into the already infested Connecticut River. Mohawk Brook in Pittsburg and Sims Brook in Colebrook now have *Didymo* present and matting, bringing the list of *Didymo*-infested waterbodies up to three in NH, including the Connecticut River.

NEW YORK

Scott Kishbaugh, New York DEC

Like most northeastern states, New York is closely reviewing the 6th Circuit Court ruling and recent EPA guidance regarding the Clean Water Act and pesticides permitting. And like most northeastern states, New York was delegated authority to develop a NPDES permitting program, so new CWA-compliant pesticides permitting will need to be consistent with both state pesticides and SPDES regulations. While it is anticipated that the existing state pesticides permits largely address many of the concerns raised in the lawsuit, it is also anticipated that the move to a new permitting program will not be seamless.

New York is fully immersed in the national economic crisis, facing reduced tax revenue and a call for a 10% reduction in non-personal services for all state agencies. This will no doubt have a significant effect on spending for invasive species management, even when the funds from the state Environmental Protection Fund and local assistance monies are eventually shaken free. The state Invasive Species Eradication Grants program, which provides upwards of $1M annually in matching funds to municipalities and not-for-profits for aquatic plant management, has been suspended. State contracts for several of the Partnerships for Regional Invasive Species Management (PRISMs) and the Invasive Species Research Institute are bogged down. However, the process for ranking the invasiveness of exotic species-the Four Tier List process- continues to make progress, which is fortunate, because the march of invasives into New York State does not recognize budget problems.

The number of lakes with verified hydrilla identifications doubled since the start of the year, with the fifth through eighth lake all found on Long Island, and two more Long Island waterbodies are awaiting verification. Hydrilla was found in Lake Ronkonkoma, the largest lake on Long Island, leading to a Newsday feature story and the subsequent admission of an intentional hydrilla planting in a small Long Island pond. The pond owner thought she was improving water quality by planting *Anacharis.* Unfortunately, little progress has been made on hydrilla control, or even containment, even though most of these infestations have been on public (county) land. The remaining response strategy- watch and hope, with some measures to inspect boats and prevent additional spread- is at best a stopgap measure.

As for other invasives, *Egeria densa* has been found in New York state for more than 100 years, but for the first time it has been the subject of several targeted management projects in 2009, from herbicides to grass carp to suction harvesting. *Myriophyllum heterophyllum* has been elevated in invasiveness status by the Adirondack PRISM, due to increasing concern about its persistence within the region, highlighted by the VWM finding in Lake Placid.

VERMONT

Ann Bove
Vermont DEC

Who knew? The comprehensive aquatic nuisance species bill introduced in 2008 and re-introduced in January 2009 was not expected to make it out of the 2009 legislative session but surprisingly, at the 11th hour, it did. Although two funding mechanisms were eliminated from the bill, the bill, signed into law by the governor in May 2009, includes a number of important changes related to aquatic plant management. Beginning July 1, 2010, Vermont's existing transport prohibition law is expanded to include *all* aquatic plants or aquatic plant parts. The law also authorizes the issuance of aquatic species rapid response general permits (for both chemical and non-chemical methods), with coverage available to the commissioners of the Departments of Environmental Conservation and Fish and Wildlife in emergency situations. Rapid response general permits also take effect July 1, 2010.

***VIP* refresher offered.** Vermont's early detection network, *Vermont Invasive Patrollers* was expanded this year to provide on-site training with an in-the-water component to any certified VIP. The refresher was well received and will be offered again in 2010.

New plant sightings confirmed late in the growing season. Late August and September brought confirmations of nine new sightings of invasive plants already known from the state: *Trapa natans* from one lake without public access; *Hydrocharis morsus-ranae* from one lake (no public access) and one stream; *Najas minor* from two lakes, only one with public access; *Myriophyllum spicatum* from two small ponds with no public access; and *Myriophyllum heterophyllum* from Missisquoi Bay in northern Lake Champlain. The *M. heterophyllum* confirmation is only the second in the state; the first, in Halls Lake near Vermont's eastern border with New Hampshire was confirmed in 2008.

***Myriophyllum heterophyllum* (VLM) rapid response efforts successful to date.** Although 23 additional VLM infestation sites were confirmed in 84-acre Halls Lake in 2009 bringing the total to 24, only two areas contained more than individual plants. In 2008, roughly 52 cu.ft. of *M. heterophyllum* was removed by hand from a 3-acre cove late in the growing season. The tally for 2009, from this 3-acre cove plus 23 other sites, is less than 5 cubic feet. Similar search and removal efforts are planned for 2010.

Rapid Response Plan approved. The Lake Champlain Basin Aquatic Invasive Species Rapid Response Action Plan, a two-year effort, was approved in May. In essence, the plan is an administrative blueprint for appropriate state, federal and provincial agencies to work in partnership to facilitate rapid control or eradication of invasive species in Lake Champlain Basin waters. The next step is for each jurisdiction – Vermont, New York and Quebec - to appoint members to a new Rapid Response Task Force to help implement and oversee rapid response actions.

NPDES Permits Shortly after the 6th Circuit Court Ruling, the Department of Environmental Conservation assigned a staff attorney to follow the status of the ruling and advise on the implications to Vermont's program. The Department will continue to issue aquatic pesticide permits as we have in the past (as defined by current Vermont statute) and for the foreseeable future; we are not planning on issuing NPDES permits for these projects at this point in time.

NEW JERSEY:
Glenn Sullivan
Allied Biological Inc.

The New Jersey Invasive Species Council met this past August, and for the first time had participation from the Aquatics field in the person of Hollie Ezze, head of the NJDEP's Aquatic Pesticide Permitting program. The group was originally formed with representation from Agriculture and the Nursery and Landscape industry, but no input from Aquatics. Current invasive plant problems on two of the state's major lakes may have gotten Aquatics a seat at the table. The Council's August gathering focused on approval of a draft of the NJ Strategic Management Plan for Invasive Species. No details are yet available on this plan. The Council also introduced a website (http://www.nj.gov/dep/njisc/index.htm) constructed by NJDEP to better serve the public. The site is still being developed, but includes information on Eurasain watermilfoil and Water Chestnut among other terrestrial and wetland plant invaders.

NJDEP is steadily increasing its focus on aquatic invasive species, and Ms. Ezze has expressed the Department's interest in tracking invasives through the aquatic pesticide permitting process. Current permit forms do require the identification of target species, so the data is being collected. The Department has also put a good deal of effort into making its new GIS layer available to the public, which provides information on aquatic pesticide permitted sites at a click of the mouse. It's unclear if target plant species will be included in the public information. The Aquatic Pesticide site layer is not active as of yet.

The Pesticides Program is also planning to coordinate with the state's Volunteer Monitoring Program on its invasives tracking initiative. The Volunteer Monitoring Program holds an annual Summit, has had presentations on invasive species in prior years and additional focus was expected in the summit on November 18 & 19, 2009. More information on the Summit and this year's presentations can be found by emailing the coordinator, Ms. Danielle Donkersloot at Danielle.Donkersloot@dep.state.nj.us

NJDEP is working on the inter-departmental coordination and integration of NPDES permits with the state's Aquatic Pesticide Permits. At a recent meeting, NJDEP staff indicated a relatively workable solution was a possibility. Specifically, if the Conditions accompanying an Aquatic Pesticide Permit could be drafted into Regulation, then the NPDES requirements would be met by the Pesticide Permit document. This solution is still under review, but if employed, the incorporation of NPDES permits may be a manageable process for the state's lake owners.

In the Fall, 2008 update, we noted a newly discovered infestation of Water Chestnut in Lake Musconetcong, a 300+ acre lake owned by the state in northern NJ. This past September, the Musconetcong Watershed Association and the NJ Department of Parks coordinated a two-day hand removal effort focusing on water chestnut. Over thirty Parks employees put in a full day's work, removing an estimated 2 tons of weeds. The following day 25 volunteers from the Association, Trout Unlimited and the local community removed another 7 tons of weeds from areas that the Board's harvesters were apparently unable to access. This project is the largest, coordinated hand removal of invasive aquatic plants in the state in recent memory. Water chestnut is becoming a more noticeable invader throughout the state. Additional pocket infestations are being found in lakes in the northern part of the state, and are mostly being removed by hand. Some larger waterbodies in the central part of the state have also been found to support established water chestnut popluations, particularly in the upper reaches of dammed lakes.

One new plant that has the potential to become invasive, swollen bladderwort, (*Utricularia inflata*) has been found this summer in the northwest corner of the state, coexisting with *M. heterophyllum*.

PENNSYLVANIA
Jack Harnish, Pennsylvania Lake Management Society

First of all, kudos to our terrestrial brethren in Pennsylvania, who have eliminated Plum Pox virus from the state after ten years of effort and millions of dollars. The obligatory ceremonial announcement with federal, state, and other participating agencies at the state capital was delayed until October 29th because of the agonizing 101 day state budget battle.

Speaking of budget battles, there were a number of cuts to various government and NGO agencies that will have an impact on invasive species related efforts. It was announced at the October Pennsylvania Invasive Species Council (PISC) meeting that the Sea Grant budget from the state was cut by $189,000. In addition, the DEP's Citizen Volunteer Monitoring Program was discontinued, and the DEP's Stormwater budget was completely zeroed out. The ripple effect of the budget cuts extended to the the state's 66 Conservation Districts. All of these cuts will have a detrimental effect on AIS education/outreach programs and field operations.

Also as a result of budget battles, review and approval of the PISC Management by the Governor's Office has been delayed.

On the positive side, the funding for the PISC remained intact. This is good news because statewide IS coordination and program development can continue.

The following is a summary of some AIS project related items mentioned at the October PISC meeting:

1. The PISC website is being updated, and a candidate list of invasive species was presented for inclusion on the website. On the aquatic side, the list included: Plants - Purple Loosestrife, Waterchestnut, and Didymo (This list has great potential for immediate expansion.); Invertebrates – Zebra/quagga mussels; Vertebrates – Northern snakehead, Round goby; Pathogens – Viral hemorrhagic septicemia (another good bet for this list is the new kid on the block, *Prymnesium parvum*).
2. The PA Fish and Boat Commission is pursuing efforts to update regulations to include risk assessment in species detection activities.
3. The Fish and Boat Commission unveiled a sign template for general use on the subject of curtailing the spread of aquatic invasive species. An interesting twist to the template is that the template can be easily modified to reflect local or regional AIS concerns. This was made possible through source data acquired through the licensing process.
4. Efforts on development of a PA field guide were given a boost with the award of a $10,000 grant from the Mid Atlantic Panel on AIS (MAP).
5. New infestations of water chestnut are being reported and eradication efforts are underway with the help of many volunteers.
6. Zebra mussels have been discovered in the lower Susquehanna. The infestation is under investigation. (Did the infestation skip the middle reaches of the river!?).
7. Now for the big elephant in the tent – Marcellus Shale gas extraction operations. *Prymnesium parvum*, better known as Golden Algae, was detected in Dunkard Creek in western Pennsylvania. It is suspected of causing a significant fish kill over a stretch of 35 miles in the creek. An article written by Don Hopey in the October 4, 2009 Pittsburg Post-Gazette, covering the fish kill, was circulated at the PISC meeting. Expressions of concern were abundant and passionate at the meeting. The kicker is the possible source of the contamination; namely, the aforementioned Marcellus Shale operations. As you all know, unless you were sleeping under a mattress, this extraction activity is getting a huge play in the Appalachians, especially in Pennsylvania. The fish kill was a highly visible incident, but what about the less visible hitchhikers and 'accidental' releases of contaminated water? The fear is that the entire state's water resources are at risk from algae contamination, the accelerated spread of less visible invasive plants, and the spread of other non-native organisms. (The risk doesn't end at our borders folks). It is beyond the scope of this article to go further into detail, but the search is on for the guilty, the scramble is on for updated regulations and local ordinances, and you can be assured that the natives here are getting very restless.

In-state AIS related upcoming events as of October 20, 2009:

Rapid Response Mock Exercise – October 28-29, State College
PISC Quarterly Meeting – January 20, 2010, Harrisburg
Pennsylvania Lake Management Society (PALMS) Conference – March 3-4, State College

N E A P M S
11TH ANNUAL MEETING
JANUARY 18-20, 2010
PRELIMINARY PROGRAM

Monday January 18, 2010

3:00 – 5:00 PM	**Aquatic Macrophyte Workshop: Potamogetons** C. Barre Hellquist, Ph.D, MA College of Liberal Arts
5:00 – 6:00 PM	**Australian Water-lilies: The Tropical Wonders** C. Barre Hellquist, Ph.D, MA College of Liberal Arts
5:00 – 7:00 PM	**Registration Table Open**
7:00 – 9:00 PM	**NEAPMS Presidential Reception** Light buffet and cash bar will be offered
9:00 – Wee hours	**NEAPMS Hospitality Suite**

Tuesday January 19, 2010

8:30 – 9:30 AM	**Continental Breakfast**
8:15 – 9:45 AM	**Registration/Exhibits**
9:45 – 10:00 AM	**Welcome** Robert Johnson, NEAPMS President
10:00 – 10:30 AM	**Status of NPDES Permitting Activities for Aquatic Herbicides** Carlton Layne, AERF
10:30 – 11:00 AM	**Operational Monitoring of Herbicide Dissipation Following Applications of Renovate OTF (granular Triclopyr) in Multiple Northern Lakes** Mark Heilman, SePRO Corporation
11:00 – 11:30 AM	**Control of Monoecious Hydrilla with Endothall** Sarah L. True, North Carolina State University
11:30 – 12:00 AM	**Patten's Unpatented Methods for Controlling *Myriophyllum spicatum L.*** Robynn Shannon, UCONN
12:00– 1:00 PM	**Lunch**
1:00– 1:30 PM	**Industry Updates**
1:30 – 2:00 PM	**Mid-Summer Water Quality and Macrophyte Communities in Brackish and Freshwater Ponds on Nantucket Island: Management Considerations in a Restrictive Environment** James W. Sutherland, Ph. D, NYS DEC (retired)
2:00 – 2:30 PM	**Interactions Between Eurasian Watermilfoil and Native Water Stargrass in Cayuga Lake, New York** Bin Zhu, University of Hartford
2:30 – 3:00 PM	**Alismataceae: The Water-plantain or the Arrowhead Family** C. Barre Hellquist, MA College of Liberal Arts
3:00 – 3:30 PM	**Break/Exhibits/Posters**
3:30 – 4:00 PM	**Cyanobacteria Neurotoxins and Amyotrophic Lateral Sclerosis** Elijah Stommel, M.D., Dartmouth Hitchcock Medical Center
4:00 – 4:30 PM	**Toxic Blue-Green Algae: What Every Lake Manager Should Know** TBD
4:30 – 5:00 PM	**NEAPMS Business Meeting/APMS Updates** Robert Johnson/NEAPMS BOD Members & Carlton Layne, APMS Past President
5:00 – 6:00 PM	**Algal Identification Workshop** Ken Wagner, Ph.D, AECOM
5:00 – 6:00 PM	**Poster Session** (same room as algae workshop)
6:00 – 7:00 PM	**Attitude Adjustment Reception**
7:00 – 9:00 PM	**NEAPMS Awards Banquet**
9:00 – Wee hours	**NEAPMS Hospitality Suite**

N E A P M S
11TH ANNUAL MEETING
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PRELIMINARY PROGRAM

Wednesday January 20, 2010

7:30 – 8:30 AM	**Continental Breakfast**
8:30 – 9:00 AM	***Dreissena* in Massachusetts: A Look at the Background and Response to Zebra Mussels in the Bay State** Tom Flannery, MA DCR
9:00 – 9:30 AM	**Lake Champlain Basin Rapid Response Action Plan for Aquatic Invasive Species** Meg Modley, Lake Champlain Basin Program
9:30 – 10:00 AM	**Does Plant Growth Regulation Have a Fit in Aquatic Plant Management, and Can We Make it Work?** Bo Burns, BASF
10:00 – 10:30 AM	**Break/Exhibits/Posters**
10:30 – 11:00 AM	**Whole Lake, Early Spring Applications of Endothall combined with Low Dose 2,4-D for Selective Control of Eurasian Water-milfoil and Curly-leaf Pondweed** John G. Skogerboe, USAERDC
11:00 – 11:30 AM	**Response of *Myriophyllum heterophyllum* and Non-Target Plants to Two Different Concentrations of 2,4-D BEE** Erika Haug, Aquatic Control Technology, Inc.
11:30 – 12:00 AM	**Promising Data for the Control of Aquatic Weeds from Two New Aquatic Herbicides: Clipper and Tradewind** Jill Calabro, Valent USA
12:00 – 1:00 PM	**Lunch and Silent Auction Announcements**
1:00 PM	**Adjourn** *(remember to drop off your completed conference survey at the registration desk!)*
1:15 PM	**NEAPMS Board of Directors Meeting**

Proposed Technical Poster Presentations

Examining the Ability of Hydroacoustics to Identify Eurasian Watermilfoil Across a Trophic Gradient
By: Jeremy Farrell, Darrin Fresh Water Institute

The State University of New York College at Oneonta Announces a Master of Science in Lake Management
By: Bill Harman, SUNY Oneonta

A Molecular Genetic Study of *Hydrilla verticillata* in the Northeast
By: Lori Benoit, UCONN

NEAPMS SILENT AUCTION

WE NEED YOUR HELP!

A tradition at annual NEAPMS meetings, all proceeds from the SILENT AUCTION go directly to the NEAPMS Scholarship Fund.

Please consider donating an item to the Silent Auction at our upcoming 11th Annual Meeting.

Need help with ideas? Feel free to contact:

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