



PO Box 3019
Boscawen, NH 03303
603.796.2615 • info@northeastans.org
www.northeastans.org

Meeting Summary • May 4 and 5, 2005
Urban Forestry Center, Portsmouth, NH

Panelists in attendance: Jason Baker, MA Office of Coastal Zone Management; Nancy Balcom, CT Sea Grant Extension Program; Erik Beck, US Environmental Protection Agency; Kevin Cute, RI Coastal Resources Management Council; Willard Harman, NY State Federation of Lake Associations; Michael Hauser, VT Department of Environmental Conservation; Susannah King, NE Interstate Water Pollution Control Commission; Mark Malchoff, Lake Champlain Sea Grant Program; John McPhedran, ME Department of Environmental Protection; Leslie Mehrhoff, University of CT; Marshall Meyers, Pet Industry Joint Advisory Council; Anne Monnelly, MA Department of Conservation and Recreation; Judith Pederson, MIT Sea Grant College Program; Stephen Perry, NE Association of Fish and Wildlife Agencies; Amy Smagula, NH Department of Environmental Services; Jan Smith, MA Bays National Estuaries Program; James Straub, MA Department of Conservation and Recreation; Peter Thayer, ME Department of Marine Resources; and Lisa Windhausen, Lake Champlain Basin Program.

Others present: Lindsay Anderson, NH Department of Environmental Services; Lars Anderson, USDA ARS Exotic and Invasive Weed Research; Daniel Buckley, University of ME at Farmington; Jeb Byers, University of NH; Jennifer Forman Orth, University of MA at Boston; Aaron Freeman, University of NH; Blaine Griffen, University of NH; James Haney, University of NH; Larry Harris, University of NH; Roberta Hill, ME Volunteer Lake Monitoring Program; Donald MacLean, US Fish and Wildlife Service; John Magee, NH Fish and Game Department; Susan Park, MA Office of Coastal Zone Management; Cheri Patterson, NH Fish and Game Department; Michelle Robinson, MA Department of Conservation and Recreation; Maggie Shannon, ME Congress of Lake Associations; Therese Thompson, University of NH; and Michele Tremblay, ANS Program Manager (nature resource communications)

Wednesday, May 4, 2005

Full Panel meeting: welcome, introductions, review of meeting agenda, and updates by Co-Chairs – John McPhedran, ME Department of Environmental Protection and Judith Pederson, MIT Sea Grant College Program

ANS updates and Panel business:

- *NEANS Panel Business and meeting scheduling* – Michele Tremblay. The November 2005 Panel meeting will be held in Vermont, probably in Burlington.
Action item: Michele will poll the Panel on November availability.
- *Panel membership* – John McPhedran. The group discussed addition of new members to the Panel. Several suggestions were brought up, including representatives from the Nature Conservancy, more Canadian representation, a policy representative from the Maritime Provinces, more industry representatives (aquatic plant industry, New England Nursery Association, aquatic wholesalers, New England Hydro-power, marine owners/operators,

aquaculture associations, NE Association of Marine Labs, and live seafood industry), and academia. It was suggested that industry representatives be invited to participate in meetings as an advisory group when particular issues arise.

Action item: Panelists are encouraged to submit suggestions for new panelists to *Michele Tremblay* so that she and *Don MacLean* can send letters of invitation.

- *Invasive Species Advisory Council update – Marshall Meyers.* Working groups on prevention, risk assessment, volunteer monitoring programs, and definitions/terminology have all been activated. There will be an ISAC meeting in Puerto Rico this October.
- *ANS Task Force update – Lisa Windhausen.* The ANS Task Force May meeting will be held in Monterey Bay, CA. 2 new state ANS plans will be reviewed – North Dakota and Kansas. The Task Force approved a revised Lake Champlain plan. A draft report to Congress is in review. A new policy for reviewing revised state ANS plans will be reviewed. The RIDNIS group will host a workshop the day before at UC Davis on Habitattitude. The Executive Secretary position for the ANS Task Force will probably be exempt from the current hiring freeze at US FWS.
- *Habitattitude™ partnership – Susannah King.* *Susy King* briefed the group on Habitattitude and its partnership program. Habitattitude is a public awareness campaign similar to Stop Aquatic Hitchhikers. The one requirement of the partnership is to follow the brand-use agreement. *Marshall Meyers* clarified that while anyone can join, this vote would be only for the NEANS Panel to become a partner. The motion to join the Habitattitude partnership was accepted.

Action item: The NEANS Panel will join the Habitattitude campaign. (Who is taking the lead?)

Other Panel business

- *Michele Tremblay* brought up the issue of funding for the Panel. \$50K from the USFWS may not be enough to maintain the current level of work. While additional funding sources are a long-term item of discussion, it was agreed that some thought must be put into it now, particular in regards to contributions from member organizations. A fundraising strategy is needed for the Panel, including federal grant sources, membership contributions, and registration fees for Panel meetings. Some funds for membership contributions might be able to come through state ANS management plans. *Kevin Cute* suggested that funds might be easier to acquire if there were specific tasks associated with them. To accept membership contributions, the Panel would need to make bylaw changes, so this will be further discussed before the November meeting. *Marshall Meyers* indicated that the Federal Advisory Committee Act restricts some funding sources.
Action item: Panelists were asked to go back to their state/organization to determine the feasibility of membership contributions.
Action item: *Michele Tremblay* will write up a brief fundraising strategy. *Susan Park* will compile funding resources. *Don MacLean* will verify that membership contributions are acceptable by the USFWS.
- The ANS Task Force research committee (via *Dorn Carlson*) has asked for a representative from the Panel. The main charge of the committee is to make recommendations for research priorities to the Task Force. *Judy Pederson* agreed to be the representative. If anyone else is interested in representing the Panel, let *Judy Pederson* know.

Highlights from New Hampshire – Stephen Perry, NH Fish and Game Department and Amy Smagula, NH Department of Environmental Services

The state ANS Management plan is being written with a draft expected this summer and a final draft expected by September. It will hopefully be ready for review by the ANS Task Force before their November meeting. NH was the recipient of a \$1M grant from EPA and

NOAA for research on variable milfoil. 6 studies were funded: ENSR (2 projects), the University of NH, USGS, the Army Corps of Engineers and Dartmouth College. *Amy Smagula* has pamphlets with aquatic plant distributions and pens available for distribution. *Steve Perry* reported that the International Association of Fish and Wildlife Agencies has implemented a pilot study on ANS communication in NH. The IAFWA followed the Stop Aquatic Hitchhikers model for outreach with a consistent message. They developed a NH page for the Protect Your Waters website and it is now online. They plan to incorporate the Stop Aquatic Hitchhikers message into all NH ANS information. Pledge cards have been developed for boaters/anglers. NH plans to establish a key coalition of state legislators for ANS issues, but they will wait until the ANS Management plan is completed. A report on the Exotic Aquatics program is now online at the NH DES website.

NEANS Panel “Implementing Rapid Response to Aquatic Nuisance Species in the Northeast: Key Components of a Successful Program” workshop update – Anne Monnelly, MA

Department of Conservation and Recreation and Susannah King, New England Interstate Water Pollution Control Commission: NEANS Panel Policy and Legislation Co-chairs

The workshop was a follow-up to the 2003 Early Detection and Rapid Response (EDRR) workshop hosted by the Panel. Presentations from 7 speakers were followed by a discussion session. *Anne Monnelly* gave the following summary of the presentations:

- *Susan Park* (MA Office of Coastal Zone Management) gave a summary of the previous workshop and discussed the Panel’s role in EDRR.
- *John McPhedran* (ME Department of Environmental Protection) described ME’s rapid response plan, which includes decision trees/flowcharts for rapid response (RR) with timelines. This plan could act as a good model for other state plans.
- *Lisa Goldman* (Environmental Law Institute) gave a review of different legislative options available to states. She suggested that states craft language to be not too broad and not too narrow. For example, she discouraged the use of a “dirty list” because it limits regulation to just listed species. The ELI has a number of publications online for assistance for states writing legislation.
- *Lars Anderson* (USDA-ARS Exotic and Invasive Weed Research, Weed Science Program, UC Davis) gave a review of California’s response to hydrilla and *Caulerpa* and CA’s emergency powers. He stressed process-orientated RR plans and getting things (like permitting) done in advance. He also warned to look for conflicts with the Endangered Species Act. Funding isn’t the only obstacle – authority and pre-planning can be more important.
- *Shippen Bright* (Maine Lakes Conservancy Institute) focused on how to get legislation passed. He stressed the importance of making the economic argument because this argument cuts across all political lines. He also reminded us to keep it simple – 78% of Americans don’t have college degrees.
- *Michaela Stickney* (Lake Champlain Basin Program) discussed the use of Memorandums of Agreement (MOUs) as an alternative to legislation. She highlighted the use of MOUs by the Lake Champlain Basin Program. MOUs can be very effective and sometimes more efficient than legislation. Investigative dockets may be a useful tool as well; when there are disagreements, it can help to get a group of researchers together with the docket to come to consensus. Trial runs are essential for RR. It is important to verify that information (contact information, for example) is correct.
- *Roy Nieder* (NH Bureau of Emergency Management) described the Incident Command System, a process that is used for responding to different types of emergency. Some components of this system could be very useful for RR planning. Successful RRs that have

occurred already use components of ICS. Unity of commands, common terminology, and communication are all essential to RR.

For the follow-up discussion, attendees broke out into groups by state. They were asked how well their state was prepared for RR, what was in place, and what was lacking. Common major needs among the states included funding, staff, a formal EDRR plan, permitting, emergency powers, baseline data, resources on how to respond to specific incidents, and more regional cooperation/coordination. The group stressed the importance of working together and learning from each other. They discussed the need to help each other in development of EDRR plans and maybe even during implementation.

After presenting the workshop summary, *Anne Monnelly* and *Susy King* asked the panelists for suggestions on how the Panel could help states with EDRR implementation. *Jan Smith* suggested that points of contact be identified for each state. *Jay Baker* pointed out that the S&T committee took on EDRR for the Panel with the initial goal of creating a regional EDRR plan. However, the committee has since moved away from that and instead will identify key resources, including points of contact, a directory of taxonomists, a list of control technologies and priority species lists. *Anne Monnelly* suggested that the Panel could assist in forming a regional legislative coalition that would connect legislators throughout the NE to help push good legislation. A compilation of case studies on the Panel website was suggested as another possible resource; perhaps including a template for people to submit case studies – successes and failures. *Lars Anderson* suggested that we build a framework for regional cooperation/coordination/commitment. He also suggested the eradication of hydrilla as a mechanism to help push coordination. There was a desire to use a marine example, perhaps isolated, disjunctive populations of an “established” species such as a small population of *Codium* in one bay. For marine examples, there is much more need for interstate cooperation. Watersheds were also suggested as an opportunity for interstate cooperation.

Action item: Panelists were asked to pass suggestions on EDRR resources to the S&T committee

Action item: *Jay Baker* and *Jim Straub* will develop a one-pager on the proposed Hydrilla Eradication Project.

Northeast ANS Roundtable

Susannah King – NE Interstate Water Pollution Control Commission
NEIWPCC’s participation on the Panel is its only involvement in ANS activities.

Erik Beck – US Environmental Protection Agency

The EPA is reacting to the recent repeal of the ballast water exemption. Currently, the repeal only applies in CA, OR, and WA. EPA is considering an appeal or it may agree to repeal the exemption.

Michelle Robinson – MA Department of Conservation and Recreation

The Weed Watcher program is beginning its 4th year and this will be the 2nd year of boat ramp monitoring. Last year there were many saves; therefore, more funds were given this year to allow for more monitors. DCR is also actively working with the MA Office of Coastal Zone Management and the Massachusetts Aquatic Invasive Species working group.

Jim Straub – MA Department of Conservation and Recreation

This will be the 3rd year of the hydrilla program, which uses chemical treatment, hand pulling, and benthic matting to control hydrilla. A new method is needed for estimating hydrilla plant density to prove that the program has been effective.

Jay Baker – MA Office of Coastal Zone Management

MA CZM has 2 new publications relating to ANS. The Guide to Marine Invaders and the Citizen's Guide to Monitoring Marine Invasive Species will be used to train volunteers to monitor for marine invasive species throughout the Gulf of Maine region. 3 programs are currently in existence or being developed: Cape Cod (Americorps volunteers), the New England Aquarium, and Salem Sound Coastwatch. MA CZM is hiring a full-time ANS monitoring coordinator. 10 more marine invader ID cards are in development.

Mark Malchoff – Lake Champlain Sea Grant Project

The Aquatic Invasive Species Strategy Team is looking into AIS needs in the Great Lakes. Their website is <http://www.aisstrategyteam.org>. The team is writing an action plan and will present recommendations to Congress. *Mark Malchoff* is also working on a Champlain Canal Program for AIS barriers and is on the planning committee for the Adirondack ANS plan.

Michael Hauser – VT Department of Environmental Conservation

The Lake Champlain Basin ANS Management Plan has been approved. A bill has been introduced for a voluntary sticker program for all recreational boaters. Funds from the program would be dedicated to ANS control programs in VT. New signage will be put up at all access areas. The Lake Champlain zebra mussel monitoring program is continuing; the focus is on adult populations. The Lake Champlain water chestnut monitoring program is also ongoing. VT recently published a baitfish guide, which also discusses contradictions between laws in NY, VT, and PQ.

Lisa Windhausen – Lake Champlain Basin Program

An ANS Advisory Committee has been formed and recently held its first meeting. Its 2 main focuses are EDRR planning and spread prevention. The Program is also addressing the alewife challenge with \$20K for survey efforts and a workshop. The barrier to using rotenone in VT is a problem, so the Program will assist the Dept. of Health in their risk assessment. The State of the Lake conference will result in a public document on Lake Champlain that also addresses ANS.

Kevin Cute – RI Coastal Resources Management Council

RI has hired an intern to work on the state ANS management plan.

John McPhedran – ME Department of Environmental Protection

ME is continuing its volunteer courtesy boat inspections and plant patrols this summer. An advertising campaign will target weekly papers in ME. Eurasian water milfoil is in ME as of last fall. ME DEP is working on control projects for that, hydrilla, and curly leaf pondweed. ME DEP is also working on variable milfoil control, mostly with funding support for local projects. *John McPhedran* distributed the ME Sportsman Show flyer describing the sticker program.

Judith Pederson – MIT Sea Grant Program

Copies of the Ballast Water Proceedings are now available. The MIT Sea Grant Program has received funds for 4 outreach programs: the bait trade (marine focus), ballast water/hull fouling, the live seafood trade, and a diver monitoring program. Rapid assessment survey data are on the web with a GIS map. A similar set-up will be developed for diver data, but will be separate from the verified rapid assessment data. Ballast water management forms have been mapped out for MA.

Peter Thayer – ME Department of Marine Resources

There is a bill in the legislature that would require relevant state agencies to prevent the introduction of invasive species. This bill specifies ballast water as a potential vector for introductions. The bill may change in the working session. If passed, it would require the Department of Environmental Protection and the Department of Marine Resources to submit a report to legislature regarding invasive species. The ME Marine Invasives Working Group has been created. Representatives from state agencies, academia, etc... are identifying issues and developing strategies. The group produced a color pamphlet on ME marine invasions. The Cobbs Cook Bay Rapid Assessment Survey is scheduled for the first week in August. The group has also submitted a proposal for monitoring marine and freshwater invasions including educator and volunteer training. Bowdoin College is hosting a middle-school teacher workshop for monitoring invasives. DMR is looking into flow-through SW systems as a vector for invaders.

Michele Tremblay – natresource communications

The Upper Merrimack Monitoring Program found variable milfoil in the watershed so they are planning a pilot project to monitor the species and to create a filter to prevent its movement/spread. The group is working with *Amy Smagula* for training. There will be hand-pulling sessions in June or July.

Les Mehrhoff – University of CT

The Invasive Plant Atlas of New England (IPANE) group finished training sessions for volunteers. They will continue with advanced training sessions. IPANE is currently tracking 110+ species with 450-600 volunteers. The 2nd IPANE/NIPGro Summit meeting will be in September at the Sheraton Framingham Hotel. A call for papers has gone out for this 2-day symposium. There is support money available for students who wish to attend.

Nancy Balcom – CT Sea Grant Extension Program

The CT management plan is well underway and is expected to go to the governor in September. *Jane MacLellan* and *Tim Sinnott* are planning a joint program for ANS issues in Long Island Sound. CT is developing *Grateloupia* watch cards for divers. Some NE species of interest will be added to the “Nab the Aquatic Invader” detective education program because it is currently focused on the Great Lakes. CT is also looking at the economic impacts of fouling invasives on the marine aquaculture industry. A new poster and cards on the “Invasive Species of LIS” and ID cards for marina operators have been created to help identify fouling organisms.

Willard Harman – NY State Federation of Lake Associations

The recent Federation meeting had many ANS outreach materials and talks. The NY Exotic Nuisance Species Task Force ANS subcommittee has submitted reports to the main task force. Major recommendations included creating infrastructure.

Jan Smith – MA Bays National Estuary Program

Rapid Assessment Surveys are being planned for 2006. The Salem Sound Coastwatch volunteer monitoring programs are also being developed. The Program received Sea Grant funding for a multi-lingual outreach program and is working with Salem Sound Coastwatch and McGill University on a project to develop an invasive species dispersal model using green crabs and working with volunteers.

Stephen Perry – NE Association of Fish and Wildlife Agencies

The second component of a multi-state grant is related to developing a NE Regulation and Enforcement Action Plan for ANS. This action plan would help agencies in the NE with regulation and enforcement. The draft plan includes an ANS related resolution to the directors of the NEAFWA and a resolution on genetically modified fish.

Marshall Meyers – Pet Industry Joint Advisory Council

The Habitattitude program has sent mail surveys to citizens in 4 cities and plans to do a broader web-based survey to gauge peoples understanding of the issue before the program is widely marketed. A post-program survey will help to gauge the success of the program. 28 million pet owning households will get a mailing in mid-summer. The website for the program is <http://www.habitattitude.net>. Ads have been run in trade magazines and will begin in consumer magazines. Habitattitude has gained permission from Disney to use the character Nemo in its program. Fish bags are being printed. Habitattitude is also working on a “turn-in” program for people to return illegal fish with immunity. Joe Starinchak visited New Zealand to promote the program. There has also been interest from Canada, Mexico, and the UK. The Strange Days on Planet Earth website polled users on the most popular ideas for solving environmental problems and Habitattitude ranked first for invasive species solutions.

Research Priorities for the ANS Task Force and National Sea Grant Program – Judith Pederson, MIT Sea Grant College Program

Dorn Carlson (ANS Task Force and National Sea Grant Program) is interested in the high priority research issues for the NE region. The list of top priorities from the Task Force research committee were:

1. Pre-invasion
 - a. Vectors
 - b. Risk assessment
 - c. Reduction/prevention
2. Pre- and post-invasion
 - a. Systematics/taxonomy
 - b. General ecology/biology/biogeography
 - c. Whole ecosystem management/theories
 - d. Regulatory/legal framework
 - e. Education/political science issues/socioeconomic issues
3. Post-invasion
 - a. Long-term monitoring and surveillance
 - b. Rapid response/eradication (e.g. testing pesticides on species, particularly ESA)
 - c. Species management
4. Factors that influence invasion (biotic/abiotic)
5. Generalizations from current invasions (e.g. taxonomic groups, feeding groups, etc...)
6. Environmental economics
7. Ballast water issues

Other key issues brought up by panelists were

- Terminology
- Methods of detection
- Non-zebra mussel projects
- Promoting projects that think “outside the box”
- Small model systems

Thursday, May 5, 2005

Committee updates

Communication, Education, and Outreach (CEO) Committee – Michael Hauser and Amy Smagula

The product review policy is in review; it will first go to the steering committee and then to the whole Panel. Key rings are available from *Jim Straub* and *Anne Monnelly*. Thanks to *Michelle Robinson* for getting them produced. A new tri-fold brochure about the Panel is in draft. It may be useful when trying to raise additional funds for the Panel. The brochure may include information on the problem of ANS, examples, history over time, why it is a big issue now, economics, before/after pictures, benefits of a regional effort, and Panel goals including hydrilla eradication. A graphic artist is needed for design work. Proposed additions to the website include a water chestnut page, a color photo of a boat showing how to perform an inspection, and fun children's games. The website revision is underway and the CEO committee will soon be looking to the other committees and to the rest of the Panel for content. State-specific pages will be created as a different gateway to the information, so state content will also be needed.

Policy and Legislation (P&L) Committee – Anne Monnelly and Susannah King

The Workshop was successfully completed (see summary above). The proposed workshop on ballast water and NPDES is now off the agenda. The legislative review by the Panel intern has been completed and reviewed. The legislative summary is going to be updated. The committee will be compiling state and national ANS legislative updates to put on the website. The committee plans to be involved with legislative issues related to the hydrilla eradication project.

Science and Technology (S&T) Committee – Jay Baker and Jim Straub

There was some concern that the S&T committee is becoming too web oriented; therefore, it hopes to work more closely with CEO to share some of the tasks. The priority ANS species list are up on the website. Distributional lists, categorized by geography and species, will also be put up and will be focused on NEANS species. A species alert page is being developed. The "hot-topic page" has been changed and will now be based on the Panel meeting's "Spotlight on Species" to be updated biannually. A volunteer monitoring network with 3 pilot groups in MA is being developed to populate the MarineID database. MA CZM will be hiring a full-time volunteer manager that will also manage the database. A regional rapid response plan is being developed that will include information on a regional reporting network, risk assessments, and species profiles for likely invaders. Both a national and a regional taxonomist list are near to completion. The committee will identify several tiers of identification; however, a perfect identification will not always be necessary before going ahead with EDRR. *Don MacLean* suggested that we connect our database with one that Pam Fuller is working on at the USGS. The committee is also considering creating a database on research expertise. The hydrilla eradication project will be a major task for the committee. The project will attempt to eradicate hydrilla from the entire NE region. The science for such eradication exists, but the committee asked for the Panel's help in communication and coordination. *Jay Baker* will write a one-pager as a starting point. The project is a great way for the Panel to move from coordination to implementation.

Ballast Water (BW) Committee – Judith Pederson and Erik Beck

The committee plans to collect more data on ship movement and ballast water discharge so that it can put out information on ballast water exchange zones. They hope to get an intern, hosted by EPA. Another project is a set of ballast water fact sheets on the recent lawsuit decision, the Coast Guard/EPA interface, and ballast water regulation in the US. The

committee is looking for more members and will try to recruit new panelists. They also plan to deal with hull fouling and sea chest issues. The committee is considering a name change to reflect other vectors of introduction, such as the Boat and Shipping Vector committee.

Early Detection Rapid Response initiative – Susan Park, NOAA Coastal Management Fellow for the NEANS Panel, hosted at the MA Office of Coastal Zone Management
Susan Park presented an update on her Fellowship project on EDRR planning for MA and the NE. Her project goals are to establish a reporting and verification network, to develop an advisory list of high-risk species, to develop and support monitoring activities for early detection, and to develop generic and species-specific rapid response plans. She is using MA as a model for these efforts by first developing protocols for MA and then gathering resources and guidance for the NE Region. These resources will be made easily available via the Panel website and will ultimately aid in development of EDRR protocols throughout the NE region. A NE Regional Reporting Network is being developed with 2 representatives (1 freshwater and 1 marine) from each state/province. A regional and international taxonomist list has also been developed and identification resources have been compiled. A draft risk assessment protocol has been developed for MA that can be used both pre-invasion to rank the relative risk of potential invaders and post-invasion to determine the threat of an unexpected invader. A demonstration project is being planned for the Chinese mystery snail on Johnson's Pond, MA, to test the ideas involved in EDRR planning.

Training focus: Volunteer management

Attracting and Keeping Volunteers – Michele L. Tremblay, nature resource communications
Michele Tremblay introduced us to the basics of working with volunteers. Volunteers are valuable because their sense of stewardship is strong, they have valuable local knowledge, they are stakeholders on many levels, and they appreciate the resource. It is important to recognize why people volunteer and to know the different skills and abilities of each volunteer. Involving volunteers from the early stages (study design and planning) will get them engaged and allows you to determine the skill level and interest of each volunteer. A key formula in working with volunteers is: Recruit + Reward/Recognize = Retain. It is valuable to recruit experienced and well-rounded people. People with experience in PR, desktop publishing, media relations, accounting, etc... are always valuable. Students and stakeholders are usually good volunteers. Events can help to recruit volunteers. Keys to having a successful event include inviting an interesting speaker, having hands-on activities, offering fun and other incentives, and publicizing with press lists, flyers, and big signs. A key element to retaining volunteers is to analyze their participation. Make sure that the right volunteer is doing the right activity. Also recognize the various terms of service of different volunteers (short-term, long-term, on-call). Rewarding and recognizing volunteers is a valuable tool for retaining them. Personal thank-you notes go a long way to keeping volunteers involved. Referrals are a great way to recruit new volunteers. Consider creating business cards for your organization so that volunteers can pass them out to friends and family. Feedback is essential for retention. Ask volunteers how they discovered your organization. Use evaluation forms, suggestion boxes, and focus groups to gauge the success of your program. Incorporate this feedback in future planning. Another way to engage volunteers is to share the data; volunteers who see the results of their hard work will be more likely to continue. It is important to motivate volunteers by involving them throughout the process, from planning to final results. When people leave, do an "exit interview" to find out how you can improve the project and to ask for referrals. Keep volunteers informed of the program even after they leave.

The Nuts and Bolts of a Volunteer Program – Maggie Shannon, Congress of Lake Associations

Maggie Shannon discussed her involvement with the Courtesy Boat Inspection (CBI) program in ME. The program trains courtesy boat inspectors and developed manuals for samplers. The program was difficult to get started, but when it got going, it took off. The program recruited volunteers through person-to-person communication. They started with a list of potential volunteers and then organized a workshop. A call record was kept for each communication with potential volunteers. She stressed the importance of collecting and analyzing data into a report that can be used as PR to present to the state to receive more funding. The CBI program is easy to teach, easy to replicate, and once it gets started, it will be a great source of volunteers.

Maine's Volunteer Lake Monitoring Program – Roberta Hill, Maine Volunteer Lake Monitoring Program

Roberta Hill presented information on Maine's Volunteer Lake Monitoring Program (VLMP). The program has existed for 35 years for monitoring water quality. It is a stand-alone program associated with ME DEP. In 2003, the VLMP created a venue for the sub-issue of invasive aquatics, the ME Center for Invasive Aquatic Plants (MCIAP). The MCIAP hosts the Invasive Plant Patrol (IPP), an early detection team for aquatic plants in ME lakes. *Roberta Hill* suggested that important groups to involve in lake monitoring include agency personnel, lake associations, municipal officials, teachers/students, professionals, fishing clubs, civic groups, general public, and the press for good media coverage. The IPP Program uses boat sticker funds to allow the program to be free to participants. The program partners with local host groups for their training sessions. The MCIAP has created the Maine Invasive Plant Field Guide and provides plant ID support for volunteers. They run a basic ID/survey course but also host some advanced workshops like hand-pulling, dive surveys, advanced plant ID, etc... Volunteers find that field training sessions are very helpful and enjoyable (basic ID/survey course but in the field.) It is important to customize your workshop for different sectors. MCIAP also offers a certification program. There are now 1250+ patrollers that have been trained since 2002. 249 waterbodies were screened in 2004. The program has also developed a "Friend or Foe" teacher toolkit. An on-line IPP Workshop is being developed. An online aquatic plant herbarium will be available at www.mciap.org/herbarium. For more information, contact mciap@mainevlmp.org.

Salem Sound Coastwatch Volunteer Monitoring Programs – Jan Smith representing Salem Sound Coastwatch

Salem Sound Coastwatch (SSCW) has been involved in volunteer monitoring for many years, starting with water quality and then salt marsh monitoring. After discovering that Salem is a hot spot for marine invasions (during the 2000 Rapid Assessment Survey), SSCW started monitoring tidepools and docks to look for both presence and abundance of native and non-native species. SSCW offers a general introduction workshop to communicate the various volunteer opportunities as well as very detailed workshops on specific monitoring programs. Robert Buchsbaum aids in training and ID. Teachers in MA need continuing education credits and SSCW has given these credits. They maintain a library of ID materials (field guides and taxonomic ID). SSCW actively uses the internet, as it is a great tool for coordination and communication. To recognize volunteers, there is an annual volunteer dinner that reports on results and recognizes volunteer efforts. Also, SSCW members and volunteers get discounts at local sporting good stores and such. SSCW has provided their program as a template for other marine monitoring efforts.

Discussion

The Journal of Extension (www.joe.org) is a free site that contains a lot of research on volunteers.

It was suggested that programs might want to “audit” the volunteers to determine their level of confidence/competence. Quality assurance and quality control (QA/QC) can be an issue for volunteer monitoring programs. It was suggested that the Panel create guidance for using the many existing protocols for QA/QC to allow for transferable protocols between programs. Quantifiable data is a good goal; however, QA/QC of biological monitoring for volunteers will be difficult to measure. The EPA often works with QAPPs and may be able to offer assistance with QAPP for volunteer monitoring plans that come from federal funds or otherwise require QA/QC.

A question arose on what to do with collected materials. How should groups dispose of collections? Perhaps the Panel could also provide guidance on this matter.

It was suggested that the various volunteer monitoring programs in the region could come together at a volunteer summit. It could bring all the volunteers together to communicate and coordinate similar protocols. Therefore, reporting would be similar and data would be regional.

EPA/NEIWPC held a summit like this. It is unlikely that volunteers would actually attend the summit, but maybe coordinators/directors could meet.

Panelists raised the issue of how to identify volunteer data (vs. professionally collected data) in databases. This data could somehow be flagged, such as in the metadata.

Panelists suggested participating in a web forum for volunteers or creating such a forum on the Panel website. *Michele Tremblay* subscribes to a listserv forum for volunteer monitors.

Unfinished business

Jim Straub has key rings left for distribution.

There was no public comment.

Spotlight on Species: Alewives

Background on alewives – John Magee, NH Fish and Game Department

John Magee presented background information on the alewife, *Alosa pseudoharengus*. The species is native to New England and can be found on the Atlantic coast from Newfoundland to N. Carolina. They feed on zooplankton and small fish. In NH, there are 2 life histories; the anadromous form is native and not in freshwater in the winter (they migrate inland April to June and return to the ocean in the fall) while the land-locked form is considered non-native. While the land-locked form has long been reported in NH (in Cabot pond?), the species may not be native. It has been introduced as a feeder fish for trout/salmon since rainbow smelt were extirpated. They grow to 10-12 inches in length; the land-locked form is generally smaller. They can weigh up to ½ lb and their life span is 5-6 years. There has been a question as to whether alewives are a problem. The land-locked form could have a negative effect on aquatic food webs, could impact nutrient import/export and nutrient balance, could impact the smelt fishery (compete for habitat), and are thought to be responsible for thiamine deficiency syndrome in salmonids, which causes eggs to not develop and hatch. Salmonids could be stocked to control alewives.

Potential Impacts of Alewife on Water Quality – Dr. James Haney, Chair of Zoology, University of NH Center for Freshwater Biology

In normal systems, daphnia and other zooplankton (e.g. cladocerans, rotifers) graze on phytoplankton (including naturally occurring but potentially dangerous cyanobacteria.) In general, the larger zooplankton (daphnia, cladocerans) are much more efficient grazers.

Normally, some young-of-the-year (YOY) fish graze on daphnia, but not enough to affect zooplankton grazing. Daphnia keep the phytoplankton standing crop small, so water clarity is high and there are less phyto-problems. However, YOY with the addition of alewives are extremely efficient at removing zooplankton, particularly the larger zooplankton. The smaller zooplankton cannot control the large phytoplankton populations, decreasing water clarity and increasing phyto-problems. Plankton surveys in many ponds have shown that both the average body size and the density of zooplankton are reduced in ponds with alewives. Smelt populations also reduce the size and density of zooplankton, but not nearly to the extent that alewives do. Phyto-problems include cyanobacteria blooms and their toxins. In 1999, several dog deaths were attributed to dogs eating or drinking cyanobacteria from lakes. Cyanotoxins are liver and nerve toxins. If zooplankton are reduced, cyanobacteria may have blooms. A study of Townhouse Pond (a pond with alewives and low densities of zooplankton) showed unexpected high concentrations of microcystins (a type of cyanotoxin.) Cyanobacteria need shallow water with lots of nutrients to cause a bloom; therefore, alewives are only facilitators and not the cause of these blooms.

Anadromous Fish Restoration – Cheri Patterson, Marine Fisheries Division, NH Fish and Game Department

The term “river herring” refers to both blueback herring and alewives, which usually occur together. The Marine Fisheries Division uses fish ladders to get the anadromous river herring above dams. Fish ladders were first put in during the late 1960s and early 1970s. The ladders are open from April to June. The young migrate out to the ocean between July and October. These alewives are valuable because they are good food for fish all throughout their life cycle. They are also good bait for lobstermen and striped bass fishermen. The Marine Fisheries Division monitors returns of river herring in 7 rivers systems. Supplemental stocking is also done; these are most often in-river transfers (moving fish over barriers). The Division has plans to put in more fish ladders in the future.

Discussion

Since many waterbodies have had long-term water quality monitoring, it was suggested that water quality data be compared to alewife presence and stocking. The relationship between nutrients, alewives, rainfall, etc... needs to be better studied.

The results of a study on the affects of land-locked alewives in Lake George, ME can be found on the Maine website.

Several questions were raised: What is the difference between land-locked and anadromous alewives? How do you make a land-locked alewife? Why is Lake Erie not dominated by alewives like the other Great Lakes?

It is thought that the Great Lakes/Finger Lakes land-locked alewives may be native, but they are probably non-native to NH and ME.

Unity Pond (NY?) is stocked with alewives and sometimes they cannot leave the pond because of water quantity issues, so alewives in that situation could be net IMPORTERS of phosphorus.

The problems associated with alewives seem very lake-specific and case-specific. Because the fish are anadromous and the cyanobacteria blooms are seasonal, the timing of the fish migration may affect whether blooms occur. If fish leave early, zooplankton might have time to recover and graze down a bloom.

Is the Lake Champlain population anadromous or land-locked? Could they have come in through fish passages from Lake Richelieu?

It is very important to keep in mind the difference between the land-locked and anadromous forms; it is very important to restore anadromous alewives for many reasons. Commercial fisherman would be very upset if alewives were called “invasive.” More studies are needed on the impacts of this species. For example, under what conditions might anadromous fish cause problems? Or land-locked fish?

Meeting summary prepared by Susan Park