



**Northeast Aquatic
Nuisance Species Panel**
Resource Digest – September 27, 2004
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Please send items and postings for the NEANS Panel Digest to ans@ecologyaction.ca.

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A. News From the Northeast

The Battle for Bare Hill Pond: A Case Study in Weed Control

Two opinion pieces published in the Harvard Press give an excellent summation of one town’s deliberations on how to control milfoil, fanwort, and water chestnut in a eutrophic pond. The article describes the advantages and disadvantage of various control techniques, including draining a portion of the pond (which is dammed), dredging, decreasing nutrient inflows, hand-pulling, and the introduction of sterile grass carp. The scientific and political debate outlined in the article is extremely enlightening to those interested managing aquatic weeds. To see what the town decided to do to control their weed problem, go to <http://www2.townonline.com/harvard/opinion/view.bg?articleid=87916> and <http://www2.townonline.com/harvard/opinion/view.bg?articleid=92039>.

Restoration of MA Salt Marshes Helps Fight Phragmites

At places like Mill Pond and Eastern Point in Gloucester, Massachusetts, efforts to restore tidal salt marshes have created a noticeable change in vegetation by helping to restore native plants to areas overrun with phragmites. The restoration efforts, which have taken place at various places in the state of the past few years, have also resulted in other changes in tidal areas, including re-establishing habitat used by shorebirds and a reduced unattractive odors arising from overgrowth of algae. For the full story, see http://www.boston.com/news/local/articles/2004/09/19/salt_marsh_restorations.

Knocking the “Green is Good” Philosophy

Jamie L. Myers, National Park Service, reminded readers of the *Poughkeepsie Journal* that although the Japanese knotweed found growing on the borders of lakes and streams may seem to be an innocuous part of the natural landscape, this prolific invader actually has a damaging effect on riparian zones, crowds out native plants, and reduces food and habitat of native birds and animals. For the full story, see <http://www.poughkeepsiejournal.com/sections/environment/stories/en090504s1.shtml>.

B. Coming Soon to a Watershed Near You Pet Owners with Habitattitude™

The Pet Industry Advisory Council (PIJAC), US Fish and Wildlife Service, the National Oceanic and Atmospheric Administration, and Minnesota Sea Grant have formed a national coalition to encourage aquarium owners to adopt a conservation attitude by preventing the introduction and spread of invasive animals and plants. The new program includes information packets that will be available at aquarium stores, aquatic retail outlets, hobby magazines, and nursery and landscape businesses. There is also a new Habitattitude™ website, to be found at <http://www.habitattitude.net>. The PIJAC, which represents 90% of the US

aquarium trade, has committed to provide \$1.1 million for the initiative, a substantial contribution that leveraged a further \$400,000 in funding from government agencies. For the full story, see http://biz.yahoo.com/prnews/040923/lath090_1.html.

Resetting the Compass

One of the largest “Roll On/ Roll Off” (RORO) container ships in the world, the Atlantic Container Line’s *Atlantic Compass*, will soon be installed with ballast water treatment technology. Through a partnership between Ecochlor, Inc. and the Atlantic Container Line (ACL), the *Atlantic Compass* will be testing out Ecochlor’s patented treatment technology, known as Ecopod™ Ballast Water Treatment System. The technology uses chorine to destroy marine organisms found in ballast water. For the full story, see http://biz.yahoo.com/prnews/040902/neth006_1.html.

NPR Coverage of Invasive Species Issues

On August 30, US National Public Radio (NPR) carried a story by John Neilson on successful (and not-so-successful) attempts to combat invasive species. To listen to the digital audio record of the broadcast, go to <http://www.npr.org/templates/story/story.php?storyId=3879383>.

IUCN Asks You to “Zoom on the Invasives”

The International Union for Conservation of Nature (IUCN) and Fuji Film are looking for pictures that best illustrate the impact of invasives on livelihoods and ecosystems. The top ten photos will be printed in as posters and presented at the IUCN’s World Conservation Congress this November. First prize in the competition is \$1000 (US) and second prize is a copy of the IUCN’s publication “The Red Book: The extinction crisis face to face.” Amateur and professional photographers are invited to submit their work. The deadline for submissions is October 22, 2004. For further details, see http://www.sur.iucn.org/competition/concurso_awards.htm.

C. Policy and Legislation

CCFAM Approves Canada’s Action Plan on Aquatic Invasives

At the annual meeting of the Canadian Council of Fisheries and Aquaculture Ministers (CCFAM), held in Whitehorse, Yukon on September 24, 2004, the CCFAM approved the Aquatic Invasive Species Task Group’s proposed “Canadian Action Plan to Address the Threat of Aquatic Invasive Species.” The action plan is part of a national strategy to address aquatic and terrestrial invasive species. With this approval, the Task Force has been given the go ahead to develop implementation strategies to fulfill the goals laid out in the action plan. For more details, see

<http://www.aquacomgroup.com/index.cfm?fuseaction=main.dspReadImportNews&ID=95>.

D. Reports, Publications, and Web-based Resources

Evolution and Invasion – Making the Links

An article in the “Concepts and Synthesis” section of this month’s *Ecology*, John Lambrinos points out that there is growing evidence that biological invasion ecology goes hand in hand with evolutionary change in introduced and native species. Lambrinos recommends greater exploration of the links between evolution and invasion ecology.

Lambrinos, J.G. 2004. How interactions between ecology and evolution influence contemporary invasion dynamics. *Ecology*. 85: 2061–2070.

Carlton Featured in *ActionBioscience*

Jim Carlton, eminent invasive species biologist and member of the NEANS Panel, was interviewed in last month's edition of the American Institute of Biological Sciences' *ActionBioscience*. In the interview, Carlton highlights some of the major impacts and vectors for aquatic invaders and talks about how the public can help deal with invasives through monitoring and preventing of introductions. For the full interview, go to <http://www.actionbioscience.org/biodiversity/carlton>.

Redistributing the Weight of the IMO's Ballast Water Convention

In an interesting perspective in the journal *Bioscience*, John Drake and Reuben Keller suggest that nations with less wealth may pay more to comply with the IMO's new ballast water convention than wealthier nations. This is because poorer countries tend to export more raw materials and import larger volumes of ballast water than wealthier nations. Drake and Keller suggest there are several solutions to this problem, including diplomatic agreements, regulation, and economic incentives.

Drake, J.M. and R.P. Keller. 2004. Environmental justice alert: do developing nations bear the burden of risk for invasive species? *Bioscience*. 54: 718.

One of These Things is NOT Like the Others

By performing a meta-analysis on aquatic invasion impacts recorded in seven areas (the Laurentian Great Lakes, Hudson River, Chesapeake Bay, San Francisco Bay, Port Philip Bay, Potomac River, and New Zealand Coast), Anthony Ricciardi and Susanna Atkinson were able to demonstrate that invasive species with the greatest impact on native species are more likely to be derived from genera not found in the host environment.

Ricciardi, A. and S.K. Atkinson. 2004. Distinctiveness magnifies the impact of biological invaders in aquatic ecosystems. *Ecology Letters*. 7: 781-784.

Modeling Mussels

By modeling how dreissenid mussels like the zebra mussel redistribute nutrients and energy in nearshore ecosystems, researchers have found a possible explanation for recent outbreaks of green algae in the Great Lakes. In order to fully understand the impacts dreissenid mussels, more information on nutrients consumed by mussels and the export of materials from the benthic community are required. The model, referred to as the "nearshore phosphorus shunt," also gives preliminary evidence that further decreases in phosphorus inputs in the lakes are required to decrease impacts of dreissenid mussels.

Hecky, R.E., R.E.H. Smith, D.R. Barton, S.J. Guildford, W.D. Taylor, M.N. Charlton, and T. Howell. 2004. The nearshore phosphorus shunt: a consequence of ecosystem engineering by dreissenids in the Laurentian Great Lakes. *Canadian Journal of Fisheries and Aquatic Science*. 61: 1285-1293.

Jumpin' Jellies: Invasive Jellies in the Gulf of Mexico Come from Afar

It seemed likely that an invasive jellyfish (*Phyllorhiza punctata*) observed in outbreaks in the Gulf of Mexico since 2000 was derived from the nearby Caribbean population, brought to the region by natural transport or attached to the hulls of ships. However, a multivariate analysis of morphological similarities amongst global populations of the jellyfish has demonstrated that the population in the Gulf is more similar to populations found on the west coast of North America or in its native Australian range.

Bolton, T.F., and W.M. Graham. 2004. Morphological variation among populations of an invasive jellyfish. *Marine Ecology Progress Series*. 278: 125-139.

Clam versus Clam: The Relative Merits of Native versus Non-native Prey Species

The prolific Asian clam (*Potamocorbula amurensis*), has displaced clam species like *Macoma balthica* in San Francisco Bay. Native clams were formerly prey of several species such as sharks, rays, sturgeon, flatfish, crabs, and several diving ducks. In a test of the relative energetic value of the introduced clam and the effort expended by the Lesser Scaup duck (*Aythya affinis*) in consuming this prey, researchers show that the introduced species has higher nutritional value and is easier to forage (because it is found nearer to the sediment surface) than the native *Macoma balthica*. There is still cause for concern about the impacts of Asian clam, however, because this species accumulates toxins more readily than native clam species.

Richman, S.E. and J.R. Lovvorn. 2004. Relative foraging value to Lesser Scaup ducks of native and exotic clams from San Francisco Bay. *Ecological Applications*. 14: 1217–1231.

Offensive Defense: Plant Invasions Prevent Colonization

By studying the impacts of the weed known as Japanese honeysuckle (*Lonicera japonica*), researchers demonstrated that the exotic vine prevents other species from immigrating to invaded areas, rather than replacing plants already present in the system through competitive displacement. They were also able to show that some species were more inhibited from colonizing invaded habitats than others.

Yurkonis, K.A. and S. J. Meiners. 2004. Invasion impacts local species turnover in a successional system. *Ecology Letters*. 7: 764-769.

Invasion Driven Evolution

By comparing bladder campion (*Silene latifolia*) plants that grow in North America with plants found in the native European range, researchers demonstrated that native strains possess “weedier traits” (flower earlier and have higher reproductive potential) than plants from Europe. North American plants were also more susceptible to fungal infection, fruit predation, and aphid infestation than their native confreres. This study provides evidence for the “enemy release” hypothesis, which proposes that invasive species become prolific in their introduced range because of a release from predators and disease.

Wolfe, L.M., J.A. Elzinga, and A. Biere. 2004. Increased susceptibility to enemies following introduction in the invasive plant *Silene latifolia*. *Ecology Letters*. 7: 813-820.

Predators and Island Birds

In an article published in the September 24, 2004 edition of the journal *Science*, researchers show that birds found on islands with more introduced mammalian predators are more likely to be extirpated than birds found on islands with fewer introduced predators. The researchers were also able to demonstrate that the number of bird species currently threatened with extirpation is unrelated to the number of introduced predators. This is due the so-called “filter effect,” whereby those species susceptible to predators have become extinct or extirpated, leaving behind more resistant species. Despite the decreased effect of former introductions on extinction probabilities, new introductions will continue to threaten endemic bird populations, especially on islands with few or no introduced predators.

Blackburn, T.M., P. Cassey, R.P. Duncan, K.L. Evans, and K.J. Gaston. 2004. Avian extinction and mammalian introductions on oceanic islands. *Science*. 304: 1955-1958.

E. Upcoming Conferences and Events

October 4 – 8, 2004, London, United Kingdom

The Ballast Water Working Group of the International Maritime Organization (IMO) Meeting

The goal of this meeting is to work on the 13 guidelines that make up the international convention on ballast water management.

October 7, 2004, University of Connecticut, Storrs, CT

The Silent Invaders: Identification & Management of Invasive Plants

This symposium, hosted by the Connecticut Invasive Plant Working Group (CIPWG), will focus on identification of invasive plants and control techniques. Deadline for registration is August 31, 2004. For more details, see <http://www.hort.uconn.edu/cipwg>.

October 18 to 22, 2004, Vancouver, BC

North American Plant Protection Organization Annual Meeting

This year's meeting will feature a plenary talk by Nobel Laureate Kary Banks Mullis on tools in pest detection. There is a day devoted to industry: government meetings, discussion of the nursery trade, quarantine and certification systems, and invasive species issues. For more details, see <http://www.nappo.org/>.

October 19 - 20, 2004, Fort Collins, CO

2nd International Rodent Summit

The US Department of Agriculture / Animal and Plant Health Inspection Service / Wildlife Services is hosting the second international conference on invasive rodents. Sessions on the agenda include: island rodent eradications, rodenticide risk assessment, and nutria damage and management. For more information, see <http://www.aphis.usda.gov/ws/nwrc/symposia/rodents/index.html>.

October 21, 2004 - Groton, MA

Nashua River Environmental Education Alliance Science Workshop

Second- and eighth-grade science teachers are invited to attend "Don't Mess with My Web!" a workshop on invasive species education techniques. The workshop will provide science teachers with information and activities they can use to educate students about invasive species. The workshop will be held from 9 AM TO 3:30 PM. at the Nashua River Watershed Association (NRWA) River Resource Center, 592 Main Street (Route 119). Attendance at the workshop will earn teachers 6.5 PDPs. The fee of \$60 includes lunch and a walk in the NRWA's Nature Trail. To register for the workshop, call 978.448.0299.

October 22 - 23, 2004, New Orleans, LA

Eighth International Wildlife Law Conference

The theme of this year's conference is *Protecting Species in the World's Coastal and Marine Regions: The Role of Law, Science and Management*. Proposals are sought for a variety of ecological policy issues, including invasive species. For further details, see <http://www.internationalwildlifelaw.org/index.shtml>. Proposals and questions should be submitted to: Wil Burns, conference coordinator at jwlp@internationalwildlifelaw.org or phone: 650.281.9126. Presenters will have their presentations recorded in *the Journal of International Wildlife Law and Policy*.

October 26 - 29, 2004, St. Andrews-by-the-Sea, NB

The Gulf of Maine Summit: Committing to Change

The agenda of the Summit includes setting priorities for the Gulf of Maine Council's 2006-2011 Action Plan, developing tools to help communities act to protect and restore the Gulf of Maine watershed, improving reporting mechanisms and indicators, setting priorities for research, integrating environmental monitoring via the Gulf of Maine Ocean Observing

System, and improvements to state, provincial, and federal regulatory and planning programs. For more information, see <http://www.gulfofmainesummit.org/about.html>.

November 3 - 5, 2004, Victoria, BC

24th International Symposium of the North American Lake Management Society

The theme of this symposium is *Lakes - habitat for fish, habitat for people*. The meeting will have sessions on introduced aquatic species, lake restoration, and managing aquatic plant problems. Dates to remember are: September 17, 2004: early bird registration ends and October 15, 2004: the last day to register. For more information see <http://www.nalms.org/symposia/victoria/index.htm>.

November 8 - 10, 2004, San Francisco, CA

Third International Conference on Invasive *Spartina*

This conference will focus on the latest research and complex management issues surrounding the intertidal interloper. There will be aerial and ground tours of wetlands, as well as discussion of the hybrid form of *Spartina* that threatens San Francisco's estuary. For more information, please see www.spartina.org.

November 9 - 10, 2004, Saratoga Springs, NY

Northeast Aquatic Nuisance Species (NEANS) Panel Meeting

Agenda Now Available Online

The biannual meeting of the NEANS Panel will be held at the Gideon Putnam Hotel and Conference Centre in Saratoga, New York. The agenda of this meeting is now available online, and includes a spotlight panel on sea lamprey. Please look for updated information at <http://www.neans.org/meetings.htm>.

November 15 - 19, 2004, Cape Town, South Africa

XIth International Conference on Harmful Algae

This year's conference will focus on the topics of taxonomy and biogeography, population dynamics, physiology, biochemistry, and monitoring and management of harmful algal blooms. Deadline for abstract submission is May 31, 2004. For more details, please see <http://www.botany.uwc.ac.za/pssa/hab2004>.

November 17 - 30, 2004, Bangkok, Thailand

3rd IUCN World Conservation Congress

World Conservation Union (IUCN) meeting has "invasive species of the world's waters" as one of the major themes for the marine section. For more details see <http://www.iucn.org/congress/index.cfm>.

November 29 - December 1, 2004, Winnipeg, MB

Canadian Weed Science Society Meeting

For more details, contact Gary Turnbull, Dow AgroSciences Canada, Inc., 39 Scurfield Blvd., Winnipeg, Manitoba, R3Y 1G4, Tel: 204.488.5757, Fax: 204.488.5788. The website of the Canadian Weed Science Society is <http://www.cwss-scm.ca/>.

December 6 - 10, 2004, Orlando, FL

First National Conference on Ecosystem Restoration (NCER)

The first conference on ecological restoration will bring together people dealing with all aspects of ecosystem restoration. Focus topics include: Science Synthesis and Scaling, Detecting Change Across Scales, Planning Restoration, Adaptive Management, Effective

Science Communication Within and Beyond Restoration Programs, and National Priorities for Ecosystem Restoration. For more information, see <http://conference.ifas.ufl.edu/ecosystem>.

February 7 – 10, 2005, Honolulu, HI

Weed Science Society of America Annual Meeting

Few details are available yet, but for more information, contact Rhonda Green at rgreen@allenpress.com. The Weed Science Society of America's website is <http://www.wssa.net/society.html>.

April 4 – 6, 2006, St. Louis, MO

Fifth National Integrated Pest Management Symposium

Fifth National Integrated Pest Management Symposium, *Delivering on a Promise*, will explore the latest methods in controlling pests in a variety of settings. For up-to-date information on the symposium, visit the website: <http://www.ipmcenters.org/ipmsymposium>. To receive future notices about the symposium, send your e-mail address to ipmsymposium@ad.uiuc.edu.

April 19 - 20, 2005, Reno, NV

Invasive Species: Their Ecological Impacts and Alternatives for Control

The focus of this meeting is the monitoring and assessment of invasive species. Topics covered will include prevention of the introduction and spread of invasives, identification of standards to meet technical and regulatory requirements, and identifying invasive species research needs. For more details see <http://www.astm.org/cgi-bin/SoftCart.exe/index.shtml?L+mystore+cxpl5647>.

E. Other – Funding Opportunities

National Fish and Wildlife Foundation's "Pulling Together Initiative"

The National Fish and Wildlife Foundation (NFWF) has announced its 2005 Request for Proposals in its "Pulling Together Initiative" (PTI). Grants will be given to support the formation of local Weed Management Area (WMA) partnerships. Pre-proposals are due October 29, 2004. For more information about application deadlines, program priorities, and detailed instructions regarding application procedures, visit the NFWF PTI website, <http://www.nfwf.org/programs/pti.htm>.