

 <p>NEANS NORTHEAST AQUATIC NUISANCE SPECIES PANEL</p>	<p>Northeast Aquatic Nuisance Species Panel Resource Digest – February 28, 2003 Volume 2, Issue 3</p>
--	--

Please send items and postings for the NEANS Panel Digest to info@northeastans.org.

The next meeting of the NEANS Panel will be held on May 21st and 22nd in Bar Harbor, Maine. A workshop on ANS rapid response will be held on May 20th in conjunction with the Panel meeting. Further information will be posted at <http://www.northeastans.org> as soon as arrangements are finalized.

=====
Index

A. News

- MSX Disease Strikes Maritime Oyster Industry
- Massachusetts Aquatic Invasive Species Management Plan Approved
- North Atlantic Amphipod Invades Illinois River
- New Legislation to Prevent and Monitor Marine Invasions in New Zealand and Norway
- Potential Introduction of the Asian Oyster to Chesapeake Bay

B. Reports and Publications

- GloBallast legislative review – Final Report
- Ecological Prediction and Risk Assessment for Alien Fishes in North America
- An Ounce of Prevention or a Pound of Cure: Bioeconomic Risk Analysis of Invasive Species
- Ballast Water Treatment Evaluation Using Copper and Sodium Hypochloride as Ballast Water Biocides
- Species Introductions and Changes in the Marine Vegetation of Atlantic Canada

C. Regulation

- Canada – Annex V of the Canadian Guidelines for the Management of Ballast Water
- US – NAISA Faces Reintroduction in February

D. Upcoming Conferences and Events

- 8th Annual Cape Cod Natural History Conference
- 3rd International Conference on Marine Bioinvaders
- Environmental Future of Aquatic Ecosystems
- 16th Annual Enhancing the States' Lake Management Plans
- 12th International Conference on Aquatic Invaders

E. Other

- The Language of Bioinvasions
- Request for Proposals for Ballast Water Treatment Demonstration Program

=====
A. News

MSX Disease Strikes Maritime Oyster Industry

On Monday, November 18 2002, the *Globe and Mail* (Canada's national newspaper) carried an article on the MSX parasite attacking the Maritime oyster industry. Kevin Cox reported that MSX

has decimated oyster stocks in three sites in Cape Breton and has been found in other Maritime areas. Growers are worried about the impact of the disease reaching PEI, where oyster cultivation employs up to a thousand people. In US regions hit by the disease, a proposed solution has been to breed resistance, which can take several generations of oysters. Oyster populations in Chesapeake Bay, for example, have experienced high mortalities from MSX disease. The disease is considered a serious threat to the whole multi-million dollar oyster industry in Atlantic Canada.

The Canadian government initiated a surveillance program to determine the geographical spread of the parasite, *Haplosporidium nelsoni*. Transfers of shellfish from one site to another have been halted. It is unclear how the disease arrived in the region, but the most likely vector is ballast water. Ships travelling from infected US ports routinely discharge ballast water in the Bras d'Or Lake, Cape Breton, the epicenter of the outbreak. Sampling will be renewed this summer to determine if the disease has spread beyond the original four infected sites.

Massachusetts Aquatic Invasive Species Management Plan Approved

The Massachusetts Invasive Species Management Plan was approved in November 2002. The plan outlines a five-year strategy for state agencies and their partners to minimize damage from non-native species by preventing their introduction, informing the general public about their impacts, monitoring for new introductions, and meeting other objectives related to invasive species management. Details of the plan are available at:

<http://www.mass.gov/czm/invasivemanagementplan.htm>.

North Atlantic Amphipod Invades Illinois River

An Amphipod native to the North Atlantic has recently been found invading the Illinois River. *Apocorophium lacustre*, known as the scud or sideswimmer, is normally found in seawater, but is apparently capable of surviving in its new freshwater habitat as well. The scud is a particular concern to biologists in the area because it has been known to smother mussels and compete with mussels for food. The most likely vector of introduction was ballast water. A photos of the scud can be found at: <http://web.aces.uiuc.edu/news/scud.htm>.

New Legislation to Prevent and Monitor Marine Invasions in New Zealand and Norway

In November, a marine survey and monitoring program designed to detect new exotic species was announced in New Zealand. This has made New Zealand the first country to develop a national surveillance program. The program is both monitoring for new species and targeting specific species that pose a significant threat to New Zealand's marine environments. For more information, contact: Dr Graeme Inglis (Phone +64 21 65 6773), Dr Don Robertson (Phone +64 4 386 0519) or Geoff Baird (Communication Manager Phone +64 4 386 0543).

In response to public pressure, the Norwegian Environment Minister recently committed to take the lead on developing a regional approach to ballast water regulations in the North Sea. They announced that they will make the development of the IMO ballast water convention a priority, and draft national legislation making the exchange or treatment of ballast water mandatory. They have also announced plans to evaluate ballast water treatment facilities in Norwegian ports.

Potential Introduction of the Asian Oyster to Chesapeake Bay

Several groups in the Chesapeake Bay region, including the Virginia Institute of Marine Science and the Virginia Seafood Council, have been investigating the possibility of intentionally introducing the Asian oyster, *Crassostrea ariakensis* to the region. The purpose of the introduction would be to replace the native species *C. virginica* as the primary commercial species in the Bay. *C. virginica* populations in the area have been decimated by diseases including MSX disease and Dermo, to

which *C. ariakensis* shows greater resistance. There is a great deal of controversy about the potential risks and benefits of introducing the new species. To read about the results of a workshop held to discuss this topic, see the Atlantic States Marine Fisheries Commission (ASMFC) website, <http://www.asmfc.org/PUB/Special Reports/SR 74 Asian Oyster Workshop.pdf>

B. Reports and Publications

GloBallast Legislative Review - Final Report. McConnell, M. 2002. GloBallast Monograph Series No.1., IMO London.

GloBallast (the IMO's Global Ballast Water Management Program) has several recent publications available on its website, including this review and analysis of the legal and administrative environment relating to ballast water management in six pilot countries around the world. More information is available at: <http://globallast.imo.org>.

Ecological Predictions and Risk Assessment for Alien Fishes in North America. Kolar, C.S. & Lodge, D.M. *Science*, 298, 1233 - 1236, (2002).

A recent article in *Science* reported on a new model designed to predict the likelihood of a species invading a new habitat. The model is based on invasive fish in the Great Lakes, so it should be of particular interest those of us interested in freshwater systems in the Northeast. It is hoped that the model will be a tool to help focus prevention efforts.

An Ounce of Prevention or a Pound of Cure: Bioeconomic Risk Analysis of Invasive Species.

Leung, *et al.* *Proc. R. Soc. Lond. B*, 269, 2407-2413, (2002).

This paper presents a quantitative bioeconomic modeling framework to analyze risks posed by non-indigenous species to economic activity and the environment. The model is applied to zebra mussels (*Dreissena polymorpha*), and shows that society could benefit by spending up to US\$324 000 a year to prevent invasions into a single lake with a power plant.

Further information is available at <http://www.pubs.royalsoc.ac.uk>.

Ballast Water Treatment Evaluation Using Copper and Sodium Hypochlorite as Ballast Water Biocides. In 2001, BMT Fleet Technology Ltd. and ESG International Inc. (both from Canada) undertook research into the use of copper and sodium hypochlorite as ballast water biocides, on contract to the State of Michigan (USA) Department of Environmental Quality. The final report of this work is now available and can be downloaded at http://www.fleetech.com/download_ballastreport.htm.

Species Introductions and Changes in the Marine Vegetation of Atlantic Canada. Chapman, A.S., R.E. Scheibling, and A.R.O. Chapman.

In *Alien Invaders in Canada's Waters, Wetlands and Forests*. Five species of seaweeds and approximately 12 species of invertebrates have invaded shorelines in this region since the early 19th century. Some of the aliens have had major, sometimes devastating, effects on native communities and on the harvest of commercial species. The chapter discusses several important invasive species and talks about the interactions that have led to widespread takeover of nearshore kelp beds by the invasive *Codium fragile* *ssp. tomentosoides*. More information is available at:

http://www.nrcan.gc.ca/cfs-scf/science/alien/index_e.html.

C. Regulation

Canada: Annex V of the Canadian Guidelines for the Management of Ballast Water.

The Atlantic Sub-Committee for the Management of Ballast Water is a multi-stakeholder group which has been working for the last couple of years on drafting regulations to control the release of ballast water off the Atlantic Canadian Coast. After intense debate, a draft of the guidelines was sent to the national offices of Transport Canada in Ottawa this January. If approved, the guidelines will:

- name several vulnerable areas (such as the Bay of Fundy, the Bras d'Or Lakes, and the Baie de Chaleur) where ballast water discharge is discouraged; admonish ships not to take on ballast in areas known to host invasive species like the clubbed tunicate;
- contain a commitment by Transport Canada to monitor for compliance and perform more research; and
- discourage ships from using an alternative exchange zone in the Gulf of St. Lawrence, an exchange zone that is endorsed by guidelines pertaining to ships travelling to the Great Lakes.

NAISA Faces Reintroduction in February

The National Aquatic Invasive Species Act is to be reintroduced in February, as one bill in the Senate and two bills in Congress. Among other provisions, the Act will require all new ships to have ballast water treatment capability and would require all vessels to employ identified best management practices. There has been discussion related to identifying "hydrologically distinct waters," in which shipping can ply without treating or exchanging ballast water, under the assumption that species will be able to spread within these areas through natural dispersion regardless of ballast water movement. The four upper Great Lakes were cited as an example. It hasn't yet been decided how these areas will be delineated. To read the text of the bill go to: <http://www.nemw.org/biopollute.htm>.

D. Upcoming Conferences and Events

March 15, 2003 • West Barnstable, Massachusetts

8th Annual Cape Cod Natural History Conference

Presentations will include professional or personal studies or observations concerning the identification, ecology, behavior, status, or distribution of local plants, animals, or natural communities on Cape Cod. For more information, contact the Wellfleet Bay Wildlife Sanctuary, phone: (508) 349-2615, fax: (508) 349-2632, email: mlowe@wellfleetbay.org

March 16-19, 2003 • La Jolla, California

3rd International Conference on Marine Bioinvasions

This upcoming conference will be focused on the incidence, effects, and management of exotic species in coastal, estuarine, and marine ecosystems. The conference will feature papers in all areas related to marine bioinvasions for oral presentations and posters. More information is available at: <http://www.sgmeet.com/mb>.

March 23-27, 2003 • Zurich, Switzerland

Environmental Future of Aquatic Ecosystems

"Leading scientists from around the world are to predict the potential alternative state(s) of each of the 21 marine and freshwater ecosystems by the year 2025 with respect, in particular, to climate change, human population growth and fisheries decline." More information is available at: <http://www.icef.eawag.ch>.

April 23-25, 2003 • Chicago, Illinois

**16th Annual National Conference: Enhancing the States' Lake Management Programs,
Developing & Implementing TMDLs for Lakes and Reservoirs**

For more information, contact Bob Kirschner, phone: (847) 835-6837, fax: (847) 835-1635,
email: bkirschn@chicagobotanic.org

June 9-12, 2003 • Windsor, Ontario

12th International Conference on Aquatic Invasive Species

“This annual four-day conference is widely considered the most comprehensive international forum for the review of accumulated scientific knowledge on the impacts of aquatic invasive species, presentation of the most recent field research, technologies for control and mitigation, discussion of policy to prevent new introductions, and approaches to effective public education and outreach initiatives.” More information is available at: <http://www.aquatic-invasive-species-conference.org>.

E. Other

The Language of Bioinvasions

Kim Todd is an environmental writer and author of *Tinkering with Eden: A Natural History of Exotics in America*. She wrote an opinion piece in Grist Magazine discussing language used in the field of bioinvasions. Some scientists and philosophers have accused invasive species biologists of using racist ideology and language, making this a timely and relevant issue for those of us who write or talk about biological invasion. The article can be found at:

<http://www.gristmagazine.com/soapbox/todd110602.asp>.

Upcoming Request for Proposals for Ballast Water Technology Demonstration Program

A draft request for proposals for the NOAA-Fish and Wildlife Service-Maritime Administration (MARAD) 2003 Ballast Water Technology Demonstration Program has been posted on the internet, at: <http://www.nsgo.seagrant.org/research/nonindigenous>. This is only a draft and may change significantly before an official notice is published in the Federal Register.