

NEANS Resource Digest

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This is a monthly forum where by news and information relating to ANS issues will be presented. If you have any items you think would be appropriate for the digest please send them to Lara Gibson at eac_ans@istar.ca. Feedback on the content and layout would be appreciated. Thank you.

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News

1. Different sources have found that "spartina," a salt marsh grass on this coast is now being seen as an invasive species on the west coast of North America where it has not previously been found. It is considered a pest. This item on ENN:

<http://www.enn.com/direct/display-release.asp?id=6885>

2. Subject: FW: 11th International Aquatic Invasive Species Conference

Reports from the 11th International Aquatic Invasive Species Conference (San Diego, July 21-26) are up and on-line. Information mainly emphasizing the shipping-related talks.

Click below for full details:

http://www.cqjournal.com/Hot_Events/hot_events.htm

3. USCG seeks ballast water changes

THE US Coast Guard (USCG) is within days of recommending mandatory high seas ballast water exchange before all vessels enter US ports, says Washington lawyer Constantine Papavizas. Speaking at the Panama Maritime VI event, Papavizas, from law firm Winston & Strawn, said the USCG was expected to report to Congress "any day now" and expected its long-overdue recommendations on mandatory rules adopted "pretty quickly". The USCG-administered National Invasive Species Act (NISA), which oversees ballast water regulation, currently regulates that high seas ballast exchange is voluntary. Papavizas said NISA contained a broad safety exemption if masters decided that high seas ballast exchange was too dangerous. However he warned that the USCG had the potential to direct and delay vessels using this exemption to "safe areas" to discharge ballast water. A total of 21Bn gallons of ballast water is pumped into US harbours each year from merchant vessels, Papavizas said.

From Fairplay 26th March Lloyd's Register

4. Confirmed green crab sighting in New Brunswick.

From Dr. Andrea Locke
Research Scientist, Coastal Ecology
Environmental Sciences Section
Gulf Fisheries Centre

Hello all.

Just a quick note to let you know that Karla Ellis and team have captured a female green crab while beach seining in Baie Verte this morning. We have the specimen in the lab and there is no question of the ID. The specimen is small, about 1 inch in carapace width. It was captured at the river mouth outside Port Elgin.

Karla also tells me that they are observing Codium "all over the place" and that there are rooted plants in places where last year they saw only the floaters.

Finally, for anyone not already aware of this, I now have a large number of copies of the invasive species brochure - if you would like one or many for yourself or to hand out somewhere, let me know. Please send me a complete mailing address and how many copies you need in English and how many in French.

- Andrea.

LockeA@dfo-mpo.gc.ca

5. Moose License Plate Funds Biodiversity Conservation Projects

Excerpt from New Hampshire Fish and Game Department press release:

Since December 2000, New Hampshire drivers have registered or renewed more than 37,000 vehicles with the conservation plate, depicting a moose designed by Plaistow artist James Collins. Those sales have raised \$1.13 million for an array of projects that preserve the state's natural and historic resources. Some of the license plate dollars go directly to the NH Fish and Game Department and NH Natural Heritage Inventory for conservation projects.

Two of the New Hampshire Natural Heritage Inventory projects are focused on Natural communities. The first is the Natural Community Guide and Classification of New Hampshire - Prepare, publish and distribute a book on the state's natural plant communities. Book will help landowners, land managers, developers and the public. The second is a Guide to Visiting New Hampshire's Natural Heritage - Expand guide to locations where natural communities, such as old-growth forests, can be seen and enjoyed by the general public. To be available on the web, as well as a brochure.

6. Boaters Beware' Warns Departments

Recreational boaters on are being asked to help control the spread of some organisms which threaten the aquaculture industry. FULL STORY

<http://pei.cbc.ca/template/servlet/View?filename=bilge020702>

7. Beginning next week, watch for CQD Journal's coverage of Biofouling 2002 in San

Diego. Specialists in the fields of marine antifouling, biocides, ship coatings and more will be presenting. Notable experts such as John Lewis, Colin Anderson and Dan Minchin, to name just a few, should be presenting.

CQD Journal will be reporting on environmental topics of concern to the shipping industry. Questions to be answered include: What are scientists reporting about biocides? Are copper biocides the next substances to be banned alongside TBT? How do new regulations regarding ship hull coatings affect the invasive species problem? Will invasive species in biofouling become the newest concern for ship owners?

For a highlight of key sessions see:

http://www.cqjournal.com/Hot_Events/biofouling_7-22/biofouling_7-22.htm

Articles

1. Ecology: Vol. 83, No. 4, pp. 898:905.

EFFECT OF COMMUNITY STRUCTURE ON INVASION SUCCESS AND RATE

Thomas E. Miller, Jamie M. Kneitel, and Jean H. Burns

Although invasion has long been recognized as an important ecological process, there are very few experimental studies of invasion in natural communities and virtually no studies that determine how trophic structure affects the probability of invasion. We introduced novel protozoans and rotifers into the natural communities found in the water-filled leaves of the pitcher plant *Sarracenia purpurea*. The communities were manipulated in a factorial design of removal of predators (larvae of the mosquito *Wyeomyia smithii*) and

addition of resources (dead insects). Three of the six protozoan species successfully established populations when introduced into pitchers, suggesting that these species are migration limited. The other three protozoans and a rotifer did not successfully invade established communities, although all four are naturally found in these inquiline communities. Of the three successfully invading protozoans, two were more likely to invade when resources were added and one of those even more frequently when predators were removed. Invasion by the third was unaffected by these experimental manipulations. Similar effects of predators and resources were found on population sizes of these three species. This study is one of very few that have addressed invasion experimentally; its results suggest that a variety of factors, including migration, predation, and resource availability, can have different influences on invasion by fairly similar protozoans.

2. This item illustrates an ecological relationship developing among native and invasive species that might be of interest.

BOTULISM, AVIAN, TYPE E - USA, CANADA

Date: 03 Mar 2002

From: ProMED-mail promed@promedmail.org

Source: The Buffalo News, 1Mar 2002 [edited]

<http://www.buffalonews.com/editorial/20020301/1033487.asp>

When the first massive outbreak of Type E botulism (*Clostridium botulinum*) on the Great Lakes since the 1960s killed thousands of fish and birds along Lake Erie (2 years ago), there were many more questions than answers. But after another extensive die-off in the summer, some of the pieces of the puzzle are beginning to come together, 100 scientists and environmental advocates were told at a seminar Thursday sponsored by the New York Sea Grant and Assemblyman Richard Smith, D-Hamburg.

Scientists are coming to believe there is a relationship between 2 prolific invader species -- a small fish called the round goby and a mollusk called the quagga mussel -- and the washing up of thousands of bird and fish carcasses on the lake shoreline.

Both Canadian and US pathologists have determined the majority of the loons, gulls, mergansers, and other birds found along the lake shore were killed by Type E botulism, which is produced by a toxic bacterium and leads to paralysis and death.

An examination of stomach contents of those birds revealed their last meals were often gobies. Of 192 dead loons found on New York's Lake Erie shoreline, 59 percent were found to have eaten gobies.

"The goby is the key," said Ward Stone, the state Department of Environmental Conservation's senior wildlife pathologist. The goby is one of the few fish feeding on the