



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 10  
1200 Sixth Avenue  
Seattle, WA 98101

Informational Memo

Subject: Invasive News in a Nutshell #16:  
Covering February - April, 2007

From: Joan Cabreza  
Regional Invasive Species Coordinator

To: R10 ETPA Management Team  
ecc: Internal EPA mail group & interested outside parties

*These memos originated in 2003 to update EPA regional management on the EPA invasive species program activity, but readership has expanded so greatly that I have expanded the content to provide more universal interest, although there is still a strong US Pacific Northwest and special EPA focus. Credit for any errors is entirely mine. Comments or contributions? Email me at [Cabreza.joan@epa.gov](mailto:Cabreza.joan@epa.gov)*

**This Quarter's Off-The-Wall Factoid**

A snorkeler was shot in the face after he was apparently mistaken for a swimming nutria. John Cheesman of OR underwent eight hours of surgery to remove bullet and bone fragments from his face, and William Roderick was charged with assault, being a felon in possession of a firearm, and possession of methamphetamine and marijuana. Roderick told police deputies he thought Cheesman was a nutria swimming in the Smith River, and shot him with a .22-calibre rifle. (This new tragedy comes after a previous tragedy where a nutria researcher was drowned when his waders filled with water while doing nutria surveys.) (*Oregon Register Guard, February 10; thanks to Randy Marshall, Ecology*)

**Success Story!**

The WA Department of Agriculture has declared victory in a 5-year battle against the citrus long-horned beetle in Tukwila, WA. On January 6, the agency removed a one-square mile quarantine placed in November, 2001. During this time, more than 40,000 host trees were surveyed around the quarantine zone, and 1,000 trees in the quarantine zone were removed. More than 500 residents also participated in a "chipper days" to dispose of potentially contaminated yard waste. (*For more info, go to <http://agr.wa.gov/PlantsInsects/InsectPests/CLHB/default.htm> or call 800/443-6684.*)

**EPA Initiatives and Funded Activities**

EPA-USDA Grant Opportunity: Ecological Impacts from the Interactions of Climate Change, Land Use Change and Invasive Species: This is a joint EPA-USDA Research Solicitation by the EPA STAR Program and the USDA NRI Competitive Grants

Program. The purpose is to quantitatively investigate how climate change, climate variability, and land use change:(1) influence the establishment, abundance and distribution of invasive species; (2) interact with invasive species to create feedbacks that increase their success; (3) interact with invasive species to cause threshold responses in natural and managed systems; or (4) affect the chemical, biological and mechanical management of invasive species. The EPA is interested in proposals addressing aquatic ecosystems, and the USDA is focused on in proposals addressing managed terrestrial systems. There is a **deadline of 26 June**. (*For more information, see [http://es.epa.gov/ncer/rfa/2007/2007\\_star\\_ecoimpacts.html](http://es.epa.gov/ncer/rfa/2007/2007_star_ecoimpacts.html)*).

Integrating Aquatic Invasives and the Clean Water Act (CWA). EPA HQ has developed a cooperative agreement with the Environmental Law Institute (ELI) to conduct research on integrating state approaches to aquatic invasive species with ongoing state activities under the CWA, including water quality assessments, listings, and total Maximum daily loads (TMDLs). ELI is collecting information on how states have previously addressed aquatic invasive species problems under the CWA, to assist the development of future policy options. Research primarily centers on case studies of seven states reflecting a diversity of geography, invasive species infestation, regulatory procedures, methodologies and infrastructure for addressing invasive species. ELI is examining each of these states (WA, OH, FL, IA, NY, CA, and MA) for 303(d) and 305(b) listings for invasive species impairment; determining what TMDL reports, if any, have been created for such impairments; whether the state classifies invasive species as pollutants or pollution; the circumstances under which these decisions are being made; and the legal structures supporting these decisions. ELI is also analyzing the methods outside of the Clean Water Act that states use to prevent, minimize or eradicate invasive species. A report should be available mid-late summer. (*For more information contact: [Ruf.christine@epa.gov](mailto:Ruf.christine@epa.gov)*)

Nutria Workshop. (R10 EPM funding assistance). Nutria are expanding in OR and WA, and their impacts on wetlands and restoration projects can be devastating. On April 24-25, EPA, USFWS, PSU, USGS, EPA, and the Vancouver Water Resources Education Center co-sponsored a nutria management workshop in Vancouver, WA, that attracted over 90 participants. The workshop goal was to provide information about nutria control efforts, discuss the current status of nutria in the Pacific Northwest, and lay the groundwork for development of a regional nutria management plan. Nutria experts from areas of the country where nutria management efforts are already established provided presentations on eradication techniques, local agencies discussed current management efforts in the Pacific Northwest, and a panel of restoration managers and biologists discussed their experiences. (*For follow-up on the workshop, contact Robyn Draheim <[draheim@psu.edu](mailto:draheim@psu.edu)> .*)

AK Invasive Species Working Group (AISWG). (R10 RGI grant). The AISWG was officially established in 2007, using a Region 10 RGI grant. The workgroup has a strong communication network which includes a website (<http://www.uaf.edu/ces/aiswg>), monthly statewide teleconferences, a list serv, semi-annual meetings, and quarterly newsletter. The first statewide conference is planned for November, 2007, in Fairbanks,

AK. The next meeting will occur this month. Representatives from four state agencies have been meeting to determine future funding and oversight for the AISWG once the EPA funding has been exhausted. (*For more information, visit the website or contact Michele Hebert <[ffmah@uaf.edu](mailto:ffmah@uaf.edu)>.*)

100th Meridian Zebra Mussel Training. (R10 EMP funding assistance). The zebra mussel training has been very well received, and has received lots of publicity! Training sessions were held in Page, UT (90 people); Salt Lake City UT (65-70); Ellensburg WA (68); Kansas City MO (state ANS coordinators); and 2 trainings in Alaska (10). Future training sessions will be held in Lake Tahoe, NV on May 15 (70-80 expected); Colorado on May 23 (75 expected); and CA (8 additional sessions, 4 of which will be this summer). In Page, the CBS affiliate attended the entire training and filmed interviews, and the ABC and NBC affiliates did pieces that included segments from the training, cuts from the video and personal interviews. EPA funded development of the video used in the training. (*To register for future trainings or to get copies of the training video, contact Bill Zook <[bjzook2@msn.com](mailto:bjzook2@msn.com)>*)

Genetic Tool and Barcoding Project (update) (EPA R10 RARE grant) Data collection for the global green crab population is complete, and genetic analysis and manuscript preparation should be complete by the end of the year. A second manuscript, describing the successful development of genetic probes for the detection of green crab larvae in mixed plankton samples, has been completed and submitted for peer review to the journal *Biological Invasions*. The genetic approach will be adopted to screen approximately 300 ballast water samples collected on the west coast by EPA contractors, and will also provide a starting point for the development of "next generation" DNA-based tools for targeted screening ("lab on a chip" shipboard-accessible technology). Additional west coast invasive species will also be genetically analyzed over the next two years to examine population connectivity and expansion dynamics of multiple invasive species with overlapping distributions from CA to BC.

Data collection for the invasive Puget Sound tunicate *Styela clava* is nearly complete, and genetic data collection has begun on the invasive amphipod species *Grandidierella japonica*, *Jassa marmorata*, *Melita nitida*, and *Ampithoe valida*. The lab has also recently received specimens of roughly 100 established west coast invasives from UW. These samples will be the first to populate a DNA barcode database that ultimately aims to include all known west coast invasive species, and will aid in the future development of DNA-based screening and monitoring tools. The barcoding project will be conducted in collaboration with Moss Landing Marine Laboratories. This multi-partnered project is being conducted for R10 by the EPA Cincinnati, OH, lab. (*For more info, contact John Darling at <[darling.john@epa.gov](mailto:darling.john@epa.gov)>*)

Economic Impact of Invasives (update) This HQ study focuses on impacts of green crab. The economic data has been collected and modeling has begun. The model is spreadsheet-based, and somewhat transferable and generic enough to allow other species to be inserted, but the modelers still need more environmental data. The work will be presented at the MIT Marine Bioinvasions Conference this month. There will also be a

workshop on costs of aquatic invasions in the great lakes this summer. (*For more information on the project, contact Sabrina Ise-Lovell at <ise-lovell.sabrina@epa.gov>*).

Last month I also forwarded a Lovell and Stone paper, *Economic impacts of invasive aquatic species: a review of the literature* to all of you on the mailing list. If you need another copy, go to the National Center for Economics website, at <http://www.epa.gov/economics>. Click “publications” and then “NCEE Working Paper Series”. There are a lot of other economic reference papers on that site as well.

NPDES lawsuit Ballast Water Lawsuit (update). EPA has entered an appeal to the court ruling, and opening briefs have been filed. The Marine Manufacturers Association has also filed an amicus brief on impacts related to recreational boating. EPA will file reply briefs, and oral arguments will be heard in the 9th Circuit in August. Meanwhile, while awaiting results of the appeal, EPA is looking at the permit options. A workgroup has been formed and we had a first meeting in April. It is important to remember that the court decision is not just limited to ballast water; it could also cover incidental discharges like bilge water discharge, engine exhaust, etc. (*Thanks to John Lishman, EPA HQ*)

Puget Sound-Georgia Basin Research Conference. This year’s conference was held March 26-29, in Vancouver, BC. There were several sessions on invasive species, and the Cincinnati lab gave a presentation on the R10 genetic tool and invasion pathways project. The Newport lab also provided a poster on the EPA/USGS PCEIS database (*For more information on the conference content, go to <http://www.engr.washington.edu/epp/psgb/call.html>*)

### **Other Federal/National Activity**

National Aquatic Invasive Species Act (NAISA). Calling invasive species the most urgent problem facing the Great Lakes, the Great Lakes Commission is urging Congress to act promptly to enact this bill, which was introduced March 1. The new legislation would reauthorize and amend the Non-indigenous Aquatic Nuisance Prevention and Control Act of 1990, and outlines a broad-based, national approach that includes:

- Requiring ships to meet an environmentally protective performance standard for ballast discharge by 2012 or treat to the best performance level available;
- Establishing a mandatory ballast water management program that includes invasive species management plans, ballast management reporting requirements, and best management practices for all ships in U.S. waters, and requiring NOBOB ships to flush tanks in the high seas before entering the Great Lakes.

- Authorizing improvement of the dispersal barriers in the Chicago Ship Canal and increasing resources for citing and construction of dispersal barrier projects and establishment of a monitoring program.

- Creating education and outreach programs; supporting development of State Management and Early Detection Plans; stepping up research, and providing \$150million per year for aquatic invasive species research. ([http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110\\_cong\\_bills&docid=f:s725is.txt.pdf](http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110_cong_bills&docid=f:s725is.txt.pdf)), or for more information, contact Tim Eder at <teder@glc.org>

National Lakes Survey. Region 10 was able to insert invasive species into the National Lakes Survey. The field protocols for EPA's National Lakes Survey will include the collection of presence data for invasive plant species and zebra mussels. The species list was developed by cross-walking a number of state and national lists. The list was kept somewhat short so that it would be doable considering the time allowed and the expertise of the field crews. As of February 22, the invasives species list for National Lakes Survey included 16 plants and one animal: Eurasian watermilfoil (*Myriophyllum spicatum*), Hydrilla, Zebra mussels (*Dreissena polymorpha*); Curly pond weed (*Potamogeton crispus*); purple loosestrife (*Lythrum salicaria*); African waterweed (*Lagarosiphon major*); knotweeds all exotics including Japanese, Bohemian, Giant and Himalayan (*Polygonum cuspidatum*, *P. bohemian*, *P. sachalinense*, *P. polystachyum*); European water chestnut (*Trapa natans*); hairy willow herb (*Epilobium hirsutum*); water hyacinth (*Eichornia crassipes*); parrot feather (*Myriophyllum aquaticum*); yellow floating heart (*Nymphoides peltata*); giant salvinia (*Salvinia molesta*); and flowering rush (*Butomus umbrellatus*). States are encouraged to record data on additional species that are of concern at a state scale. (Thanks to Lil Herger, R10)

Ballast Water Reporting. The US Coast Guard held public meetings the week of March 12 in Chicago and New Orleans, to seek comments on its current ballast water management reporting and recordkeeping requirements. (Learn more at <http://a257.g.akamaitech.net/7/257/2422/14mar20010800/edocket.access.gpo.gov/2006/pdf/E6-18903.pdf>)

National Invasive Species Management Plan and Strategic Plans (Update) The National Invasive Species Council is still working on the draft national management plan. It will be routed for official agency occurrence in a few weeks. The council is also trying to arrange a meeting of the "true" (politically appointed) Council members in May. The Aquatic Nuisance Species Task Force (ANSTF) National Strategic Plan is now posted on their website at <http://www.anstaskforce.gov/plan.php>. (Thanks to Mike Slimak, EPA HQ)

Invasive Species Grants. On March 9, the USDA announced that it is seeking applications for grants and cooperative agreements in its 2007 *Program of Research on the Economics of Invasive Species Management (PREISM)* Competitive Award Program. The two priority research areas for 2007 are (1) Efficient Prevention and Management of Invasive Species, and (2) International Dimensions of Invasive Species Management. Applications are due **by May 7, 2007** (For more information, contact Craig Osteen at <[COsteen@ERS.USDA.gov](mailto:COsteen@ERS.USDA.gov)>, or go to <http://www.ers.usda.gov/Briefing/InvasiveSpecies/PREISM.htm>)

APHIS Genetically Engineered Materials Policy. The US Department of Agriculture published a new policy, *Responding to Low Level Presence of Regulated Genetically Engineered Plant Materials*, on March 20, 2007. The policy applies to genetically engineered plant materials which may occur in commercial seeds or grain. (See the March 20 Federal Register, pp.14649-14651). (Thanks to Bobbye Smith, R9.)

Hull Fouling. The IMO treaty addresses ballast water but does not address hull fouling. So New Zealand and Australia are developing a paper related to hull fouling that will be presented at the July IMO meeting. It is still draft. (*Thanks to Henry Lee, Newport Lab*)

Bee Colony Collapse Disorder (CCD). A multi-agency Colony Collapse Disorder Workgroup has been established out of Pennsylvania to work on the problem of failing bee populations. Many adult bee populations have suddenly disappeared or become reduced to small clusters. The bee problem was first reported in FL in 2006, but it has become a problem in many countries, and it is not yet clear what is causing the die-off. Large commercial migratory beekeepers are reporting losses of 50-90%, and beekeepers in the NE and PNW are also affected. Pollen from genetically engineered plants, and specifically Bt corn, that incorporate Bt (*Bacillus thuringiensis*, a natural pesticide), have been suggested as a potential cause of CCD. But the weight of evidence based on a multitude of studies now argues strongly that the current use of Bt corn is not associated with CCD. EPA is involved in this through the ORD Environmental Fate and Effects Division. (*For more information, contact Russ Jones at <jones.russell@epa.gov >.*)

National Invasive Weed Awareness Week. The Invasive Weed Awareness Coalition hosted the eighth Weed Awareness Week on February 25 - March 2. The week focused on sharing invasive weed information with federal officials at the highest levels and collaborating with experts to address this national and global environmental concern. The Secretaries of Agriculture and Interior were also invited to address attendees at special briefings. Attendees come from varying backgrounds and professions, but share the common goal of controlling invasive weeds to protect native ecosystems. *For more info see: [http://www.nawma.org/niwaw/niwaw\\_index.htm](http://www.nawma.org/niwaw/niwaw_index.htm) ) (Thanks to Barb Okorn, R)3*

Izaak Walton League (IWL) Clean Boats Campaign. Every day, boaters and anglers unknowingly introduce harmful invasive species into their favorite lakes and streams, via boat hulls, propellers, muddy boots, and other equipment. IWL is launching the Clean Boats Campaign to raise awareness of this problem and educate boaters and anglers on properly cleaning their gear. The campaign kicks off with a \$2,500 sweepstakes for a boater's shopping spree and other prizes. Participants enter the sweepstakes by visiting [www.cleanboats.org](http://www.cleanboats.org) <<http://www.cleanboats.org/>> and taking the Clean Boats Challenge to test their knowledge on cleaning their boats. Clean Boats Campaign public service announcements are also available for download and use. (*For more information on the Clean Boats Campaign, contact Leah Miller at <[lmiller@iwla.org](mailto:lmiller@iwla.org)>*)

Great Lakes Interagency Agreement. The Great Lakes Terrestrial Invasive Species Committee is a multi-agency committee formed under the direction of the Midwest Natural resources Group. In 2006, it developed a collaborative 9-element action plan to address terrestrial threats. The Committee has also developed an interagency MOA between the various federal agencies that lays out objectives and specific work tasks. [ed. Note: This might be a model other areas of the country would like to consider.] (*See <http://mnr.gov/committees/gltisc/index.htm> to get a copy of the plan and MOA. Thanks to John Perrecone R5.*)

## Activity In Pacific Northwest States

New ANS Guide to the Columbia Basin. Scott Wiedemer of OR Sea Grant is developing a handy field booklet, *On the Lookout for Aquatic Invaders; an Identification Guide for the Pacific Northwest*. This 60 page booklet describes 28 freshwater, riparian and marine plants and animals found in the Columbia Basin. Each species comes with great pictures (!), and a discussion of the background, distribution, spread mechanism, impacts, and habitat. It will be spiral bound, to facilitate field use. The purpose is to help community groups increase their understanding of ANS and to initiate monitoring efforts for species of most concern in their watersheds. Final production is expected this summer. [ed.note: Although similar, this is NOT the same Columbia River guide discussed in previous Nutshells] (For more information, contact Sam Chan <samuel.chan@oregonstate.edu> or Scott Wiedemer <wiedemes@onid.orst.edu>)

WA Democrat's Aquaculture Resolution. On April 28, the WA State Democratic Central Committee (WSDCC) unanimously passed resolution 070428 - WSDCCRES - 340 -05, *Banning Expansion of Private Aquaculture in State and Federal Waters*. The resolution cited the potential spread of diseases and parasites, entrapment and death of marine mammals and birds; introduction of non-native species; colonization of wild fish habitat; net loss of ocean productivity; lack of containment of antibiotics, pesticides, algacides and fish waste; and conflicts with commercial and recreational marine activities as reasons for the resolution. It also referenced the National Offshore Aquaculture Act of 2007, HB2010, that "allows privately owned fish feedlots in our federally managed waters...for which "scientific assessments of risks and impacts, as required by the National Environmental Policy Act, have not been prepared prior to introduction of this legislation to Congress", states that "a socio-economic assessment of impacts on fisheries dependent communities, businesses or tribes has not been prepared" and that "H.R. 2010 would only allow states to "opt out" to twelve miles, so Washington's ban on production of genetically engineered fish would be circumvented". The resolution concluded with a request for a "moratorium or ban on expansion of privately owned, industrial aquaculture operations in state and federal waters, and for an upholding of the state ban on production of genetically engineered fish in federally managed waters." (Thanks to Kevin Anderson, PSAT)

Public Awareness Modules. The USFWS is considering development of public awareness materials that explain what invasive species are and why they are important. The project is envisioned to have a central module with associated modules on various species, which could be used by people such as teachers or speakers as a basis for developing presentations and similar activities. (For more information, Contact Doug Zimmer at <Douglas\_zimmer@fws.gov>.)

ID ANS Plan. *An Aquatic Nuisance Species Plan for Idaho: A supplement to Idaho's strategic plan for invasive species* is now under review and comments will be received until May 10. The state invasive species council met on April 27, and decided that after review/inclusion of the public comments, the plan will be sent to the National ANS Task Force. (For more information, contact Fred Partridge at <fpartridge@idfg.idaho.gov>.)

Knotweed Proposals (update). The WA Department of Agriculture (WSDA) recently solicited proposals for projects to control invasive knotweed in WA. WSDA anticipates providing resources through interagency agreements or purchased service contracts, and expect work to begin after July 1, 2007, and ending by June 30, 2008. *(For information about the WSDA knotweed control program contact State Knotweed Coordinator Marshall Udo at <MUdo@agr.wa.gov> or visit <<http://agr.wa.gov/PlantsInsects/Weeds/Knotweed/Knotweed.htm>>)*

Invasive Species Seminar. Sam Chan of Oregon State University is holding a weekly spring term seminar series “Invasive Species and Unfolding Effects” in Eugene, OR. Classes run from April 4-June 13, and provide 1 credit. The seminars involve a number of speakers and deal with a variety of contemporary invasive species issues, from impacts to predicting invasions, forensics of tracing introductions, illegal sales, and other topics. *(For more information on the series and possible associated materials, contact Sam Chan at <Samuel.chan@oregonstate.edu>)*

Fifth Annual No Ivy Day. No Ivy Day is May 5. Started in 2003, as an annual day to focus attention on English ivy problems, this coordinated assault on invasive ivy is centered in Portland, OR, *(the birthplace of the No Ivy League!)*, but work parties will be active at various locations around the world. Between 3500 and 5000 trees have been rescued each year. Ivy vines are cut and stripped off the tree's lower trunk and pulled from a six foot circle around the tree, which makes ivy in the upper reaches of the tree die and prevents re-growth up the tree. Normally, several hundred acres of ground ivy are cleared and truckloads of litter and debris found in the ivy are removed during this annual event. *(For more information on No Ivy Day check out <http://www.NoIvyLeague.com> and click on No Ivy Day! May 5, 2007 or call Sandy Diedrich at 503-823-3681)*

WA Tunicate Training workshops. The Puget Sound Action Team is sponsoring tunicate training workshops around Puget Sound, in March-June. Training is oriented toward recreational divers and teaches them how to identify three invasive tunicate species and what to do if they find them. Workshops are free and last 1.5 hours. *(For more information on locations, contact Kevin Anderson <[kanderson@psat.wa.gov](mailto:kanderson@psat.wa.gov)> or Janna Nichols <[jannan@pnwscuba.com](mailto:jannan@pnwscuba.com)>)*

WA Ballast Water (BW) Report On March 20, the WA Ballast Water Workgroup sent their report *Ballast Water Management in WA State: Recommendations for improvement*, to the legislature. Key recommendations to the legislature included: provide stable funds to administer and enforce the BW program; update the BW penalty and enforcement structure; redefine and extend the role of the BW workgroup; and direct the group to work with Oregon to integrate programs between states and along the Columbia River. Recommendations to the WDFW included aligning state BW regulations with regional, national and international requirements; improving BW report requirements; improving BW treatment technology approvals process; demonstrating BW treatment is environmentally friendly and cost effective; and identifying essential research questions to improve BW management and policy. *(The report is available on the PSAT website. Go to [www.psat.wa.gov](http://www.psat.wa.gov), then to “publications”, and then to “action team publications”)*

AK Invasive Species Film Festival. This year's *AK Forum on the Environment* was held in Anchorage on February 12-16. It included a very successful invasive species film festival, featuring several films developed in the Pacific northwest. Films included *Invaders From the Sea* (IMO -BBC production); *AK Knotweed Public Service Announcement* (Black Dog Productions); *Don't release a pest* (USC Sea Grant); *Restoring the Balance: Removing the Black Rat from Anacapa Island* (Full Frame productions); a zebra mussel film *It only Takes One* (Pacific States Marine Fisheries Commission); a mitten crab video, *You Ought to Tell Somebody* (OR Sea Grant); and a roadside weed video *Dangerous Travelers* (USFS). Kudos to Lisa Ka'aihue for such a great idea! (Contact Lisa at <kaaihue@pwsrcac.org>)

WA Invasive Species Council (update). The new WA state Invasive Species Council held its third meeting on March 20. The meetings so far have focused primarily on organizational matters and receiving briefings from various existing groups. We have also begun development of a questionnaire that will be sent to a variety of state and regional groups to begin to piece together a more complete picture of invasive species activity in WA. We have also begun work on a state strategic plan. The next Council meeting will be held May 17. Meeting minutes, Council members, and other information are available on our new website at: [http://www.iac.wa.gov/invasive\\_species/default.htm](http://www.iac.wa.gov/invasive_species/default.htm).

New Aquatic Invasive Species Permit. Ecology has begun developing a permit to allow the chemical treatment of invasive species such as zebra mussels, spiny water fleas, and marine tunicates. Staff is still recruiting interested parties for a technical advisory committee. Membership will be limited to approximately 20 people. (Anyone interested in serving on this committee, should contact Kathy Hamel at [kham461@ecy.wa.gov](mailto:kham461@ecy.wa.gov).)

WA ANS Committee (update): The Committee is attempting to finalize the non-native species Watch List (apparently quite controversial), and we hope to present both it and the draft Early Detection and Rapid Response Plan developed last year, to the Invasive Species Council this summer. We have also been working to revise the 2001 State ANS Plan. The Committee held its semi-annual meeting on April 23; the next full committee meeting will be in October. (For more information on the ANS committee, meeting minutes, or to become a member of the committee, contact me at: <[cabreza.joan@epa.gov](mailto:cabreza.joan@epa.gov)>.)

Western Society of Weed Science (WSWS) Conference. The 2007 annual WSWS conference was held in Portland, OR, on March 13-15. A special Invasive Knotweed Symposium was "piggy-backed" onto the meeting, and several renowned international experts discussed the biology, physiology, ecological impact and management of various problematic knotweed species. (For additional information, go to the WSWS website at <http://www.wsweedscience.org/>.)

King County Noxious Weed Management Workshops. Two free workshops will be held from 8:00-12:00, in Kenmore and Kent, WA, on **May 8 and 9** respectively. Topics include noxious weed identification and growth cycles; identification, habitat, prevention, control and permit issues, control recommendations for roadside, grassland, riparian, and woodland noxious weeds; and innovative tools, methods and strategies for reducing

herbicide use. Accreditation of 4 credit hours is available. (*Register for either session with Sasha Shaw at < [sasha.shaw@metrokc.gov](mailto:sasha.shaw@metrokc.gov)>.*)

Communication Workshop. A workshop, “*Communicating Effectively about Aquatic Nuisance Species*”, was held in conjunction with the March 72<sup>nd</sup> North American Wildlife and Natural Resources Conference in Portland, OR, March 19. (*For more information about the conference, visit The Wildlife Management Institute at <http://www.wildlifemanagementinstitute.org>*)

Wildlife Society Invasive Species Workshop. The 2007 joint annual meeting of the WA and OR chapters of the Wildlife Society met in Pendleton, OR, on April 10-13. An Invasive Species Workshop was held in conjunction with that to explore impacts of invasives on native wildlife. They looked at new emerging invaders, management approaches, and funding implications. (*For more information, contact Jim Gores, at <[James.K.Gores@state.or.us](mailto:James.K.Gores@state.or.us)>*)

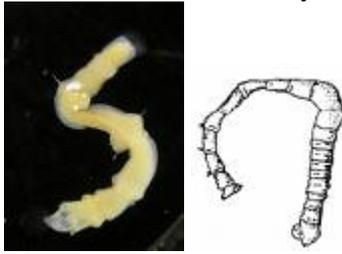
King County, WA, Grant Proposals Solicited. The KC Department of Natural resources and Parks is soliciting grant proposals for community projects that protect or improve watersheds, streams, rivers, lakes, wetlands, tidewater and upland habitat. Projects must have a demonstrable positive impact on waters and lands of King County, but Snohomish County projects in watersheds flowing toward Lake Washington are also eligible. Project examples include water quality protection measures, water re-use demonstration projects, stream, lake, wetland and shoreline restorations (think invasives here!), long-term stewardship of a body of water, restoring an urban forest, creating new wildlife habitat, etc. There are ‘Micro-grants’ up to \$500, ‘Small Change for a Big Difference grants’ up to \$2,500 and competitive grants up to \$50,000. **The deadline for all applications is May 15, 2007.** (*For more information visit the Grant Exchange website at: <http://dnr.metrokc.gov/wlr/pi/grants.htm> or contact Ken Pritchard at <[Ken.Pritchard@METROKC.GOV](mailto:Ken.Pritchard@METROKC.GOV)>*)

### **Recent Pacific Northwest Invasions**

New USGS NAS alerts: New Pacific NW alerts include Eurasian water-milfoil (*Myriophyllum spicatum*), new to Boise County, ID, found in a small pond along the Payette River, ID; and yellow floating-heart (*Nymphoides peltata*), new to Yakima County, WA, found in an unnamed pond. (*To receive alerts on new species sightings in your area, go to <http://nas.er.usgs.gov/AlertSystem/default.asp>.*)

Bamboo Worm (*Clymenella torquata*). This benthic polychaete worm was “formally” noted in the NAS Alerts as being newly found in Samish Bay, Skagit County, WA, but in actuality, oyster growers have been aware of it for several years. The infestation covers about 100 acres. It is believed to have been brought in sometime in the 1930s, when oyster growers imported oyster seed from the east coast. In comparison to the native *Clymenella*, which is comparatively solitary, densities of *C. torquata* have been known to reach up to 3000/m<sup>2</sup>. It is a bioturbator that burrows into firm sand bottoms, softening the substrate. The main impact seems to be interfering with oyster production, because

oysters placed on the sand surface will sink into the sand and suffocate. WDFW held a workshop on the worm in Mount Vernon on February 23, and attracted a diverse



audience of about 25 people.

Some limited information on this specimen is available at: <http://nas.er.usgs.gov/queries/SpResults.asp?SpeciesID=2634> and at: <http://nas.er.usgs.gov/queries/specimenviewer.asp?SpecimenID=237110>. (For more information, contact Russ Rogers at <rogerrr@dfw.wa.gov>.)

**Quagga Mussel Update.** On January 6, the first quagga mussel population west of the 100th Meridian was found at the Las Vegas Boat Harbor, at the southern end of Lake Mead, NV, 1,000 miles farther west than any previously known infestation. The mussel is being taken seriously: on March 7, Southern CA's largest water supplier drained the 242-mile CO River Aqueduct and dispatched a highly trained search party to check for the presence of mussels. The 100th Meridian Workgroup has also held conference calls and focused on updating the Columbia Basin Response Plan. The Plan is available online. Go to [www.100thmeridian.org](http://www.100thmeridian.org), then click on River Basin Teams, and then on Columbia River Basin). See the 100th Meridian paragraph (above), for enforcement efforts, and Nutshell #15 for more background on this issue. Contact <Paul\_Heimowitz@fws.org> or Stephen Phillips <Stephen\_phillips@psmfc.org> for the latest information.)

**Puget Sound Tunicate Report.** The Puget Sound Action Team report to the legislature "Washington State's response to invasion of non-native tunicates: accomplishments, challenges and next steps" was published in February. (A copy is available on the PSAT website. Go to [www.psat.wa.gov](http://www.psat.wa.gov), then to "publications", and then to "action team publications" or contact Kevin Anderson <kanderson@psat.wa.org>)

### **Other New Publications, Workshops, Conferences and Materials**

**Training Guide for Pathway Definition, Risk Analysis and Risk Prioritization:** The January, 2007 *Training and Implementation Guide for Pathway Definition, Risk Analysis and Risk Prioritization* is now available on-line at the National Aquatic Nuisance Species Taskforce (ANSTF) website. The purpose of pathway risk analysis is to provide scientific analyses and policy recommendations to support the National Invasive Species Council's Management Plan. The guide defines invasive species and pathways as they relate to federal regulatory functions, but addresses only risk analyses for unintentional man-made pathways. (See the guide at [http://anstaskforce.gov/Documents/Pathways\\_Training\\_and\\_Implementation\\_Guide\\_Jan\\_2007.pdf](http://anstaskforce.gov/Documents/Pathways_Training_and_Implementation_Guide_Jan_2007.pdf)) (Thanks to Kevin Anderson, PSAT)

New Cookbook: This was too fun to pass up!



“...Perhaps it's time to put all of those grumbling stomachs and gnashing teeth to work in a way that benefits, rather than hinders, biodiversity conservation. To this end we've provided gourmet recipes from some of the world's finest chefs, as well as some great old standards and our own kitchen tested inventions. .... Get out there and catch yourself a mess of nutria, the scourge of our southern wetlands, using one of the great recipes provided to us by noted Louisiana chef Philippe Parola . . . Serve it with a side of pasta slathered in a pesto based on the ecologically noxious but wonderfully edible garlic mustard. Wash it down with some homemade kudzu blossom wine, and top it off with a slice of Japanese knotweed pie. The cookbook is printed on heavyweight stock and spiral bound for convenient use in the kitchen. [ed note: I ordered it and it's great!] (*Order it from [www.bradfordstreetpress.com](http://www.bradfordstreetpress.com).*)

*Didymosphenia algae*. The Federation of Fly Fishers has generated some good materials on Didymo; a white paper, "Increase in nuisance blooms and geographic expansion of the freshwater diatom *Didymosphenia geminata*: ecommendations for response", is now available at: <http://www.epa.gov/region8/water/didymosphenia/>. The Ultimate Didymo Resource CD, containing the technical white paper, a video documentary, and several information resources about aquatic invasive species is also available from the Federation of Fly Fishers. The CD aims to provide not only up-to-date scientific knowledge, but helpful information for use in outreach efforts. (*For copies of the CD contact Leah Elwell at 406-222-9369 X102 or <[conserve@fedflyfishers.org](mailto:conserve@fedflyfishers.org)>*)

Wildland Weed Inventory and Mapping Techniques Workshop. UT State University will hold this workshop **May 15-18**, in Boulder, CO. The workshop is designed for small groups (6-10 persons), and allows maximum hands-on experience and close interaction with instructors. Training is personalized to individual interests, objectives, and resources in both classroom and field. Topics include establishing weed mapping objectives; matching field methods to project objectives; NAWMA and other mapping standards; data categories and data dictionaries; use of point, line, and polygon mapping methods; basic GPS principles and operation; orienteering and map-reading fundamentals; defining the search target (area, species, size); detection resolution,

margins of error; effective search patterns and coverage; estimating patch size and canopy cover; documenting non-infested areas; quality assurance and record keeping; and field hazards and safety procedures. Registration for the 4-day workshop is \$300, which includes the cost of all instructional materials and field trip transportation. For more info, contact Steve Dewey <steved@ext.usu.edu > or 435/797-2256) or Kim Andersen <kandersen@cc.usu.edu> or 435/797-2637) (*Thanks to Steve McGonigal, WDOA*)

FHWA Online Newsletter. The Federal Highway Administration publishes an online newsletter called *Greener Roadsides*, which often covers invasive plant issues. (*Check out the website at: <http://www.fhwa.dot.gov/environment/greeneroadsides/index.htm>*)

New BLM Weed Curriculum. The "*Alien Invasions - Plants on the Move*", a weed curriculum for grades K-12, is now online. Developed by BLM staff and a host of experts, this curriculum has been pilot tested in schools throughout Oregon with very positive results. Check it out at [http://www.weedinvasion.org/weeds/weed\\_home.php](http://www.weedinvasion.org/weeds/weed_home.php) (*Thanks to Vern Holm, Northwest Weed Management Partnership*)

New Highway Publication: The National Cooperative Highway Research Program document: *Synthesis 363: Control of Invasive Species* explores the extent to which state departments of transportation are identifying actions that affect the spread of invasive species, preventing introduction, tracking status and locations in a timely and ongoing manner, controlling found populations, restoring invaded habitats, conducting research, and sharing lessons learned. The report documents successful practices and lessons learned, and synthesizes the state of the practice in developing Integrated (Roadside) Vegetation Management, along with physical, chemical, biological, and cultural control mechanisms. See [http://gulliver.trb.org/news/blurb\\_detail.asp?id=7305](http://gulliver.trb.org/news/blurb_detail.asp?id=7305) to order a copy or download for free. (*Thanks to steve McGonigal, WDOA*)

Nature Conservancy (TNC) Forest Health Paper. The TNC has produced a recent paper *An Ounce of Prevention: How to stop Invasive Insects and Diseases from Devastating U.S. Forests*. Invasive insects and plant diseases are taking a disastrous toll on U.S. forests, and imported nursery stock and wood packaging material are major pathways. Of about 25 forest pests and diseases introduced since the middle of the 19th Century, 19 have probably reached the U.S. on imported live plants, and half of those pests and diseases entered the country in the past 35 years. APHIS has recently adopted regulations requiring treatment of wood packaging, but regulations governing plant imports were largely written a generation ago. APHIS has now begun revising its regulations, and the report outlines some of the challenges inherent in this rulemaking. It also suggests one possible approach to minimizing the risk of pest introductions associated with plant imports. TNC welcomes dialogue on the report. (*To obtain a pdf copy, go to: <http://www.nature.org/initiatives/forests/files/ounceofpreventionsingle1.pdf>*) (*Thanks to Elaine Somers R10, for forwarding this TNC email from Faith Campbell*)

USDA Grant Workbook: The document *USDA Grant and Partnership Programs* often addresses invasive species research, prevention, control and technical assistance. (*Find it at: <https://kd.erc.usace.army.mil/Documents/index.cfm?id=3618>*)

New Tunicate Treatment Manual. An important New Zealand Didemnum removal treatment manual has just been completed and placed online at the Woods Hole Oceanographic Institution Didemnum website. It has lots of photos of the treatments, their success and cost. For more information you can contact the author Aaron Pannell at <aaron@marlmussel.co.nz> This website is also really nice, and has great tunicate photos as well. Obtain a copy of the manual at <http://woodshole.er.usgs.gov/project-pages/stellwagen/didemnum/index.htm> and click on “recent didemnum papers”, then scroll down to the New Zealand Marine Farming Association, Inc. report, March 2007. (Thanks to Gretchen Lambert, UW.)

European Alien Species Expertise Registry The Taxonomic Databases Working Group listserv invites experts of any kind of expertise on alien species (e.g. distribution, data collections, policy, taxonomy etc.) to visit the European Alien Species Expertise Registry at [www.europe-aliens.org](http://www.europe-aliens.org). It claims to be one of the largest expertise registries, with information on nearly 1500 experts from 89 countries and more than 2800 taxa. The expertise registry contains details for individual experts with respect to taxonomic expertise, geographic units, and thematic areas (such as distribution, conservation, restoration, ecology, economical impact, genetics, legislation, administration, management, control, pathways, transportation, physiology, and risk assessment. This large registry is of considerable value when searching for expertise and for making contacts world-wide. Register at [www.europe-aliens.org](http://www.europe-aliens.org), then click on *Alien Species Expertise Registry*. The registry is self explanatory, and takes only 5 minutes. Go to: <http://lists.tdwg.org/mailman/listinfo/tdwg>. To subscribe to the listserv, mailto: <tdwg-request@lists.tdwg.org> subject=subscribe (From WSDA news release; thanks to Mike Louisell.)

Finally Some Good News About Carp. Drought is taking a toll on the introduced European carp in the South Australia Murray River system. Scientists have discovered that when wetlands dried out, the native fish leave before they become stranded, but non-native carp stay behind and become trapped. Some carp even swam against the out-flowing water as they tried to get deeper into the wetlands, and sealed their fate. Scientists believe the native fish have become adapted to drying cycles and can interpret their environment, while the carp cannot. (Paraphrased poorly From the Australian March 26 Country News.)

Online Aquatic Invasive Species (AIS) Reporting - Rapid reporting is key to promoting a rapid response to new species introductions. MA CZM and the MIT Sea Grant Program recently developed an online AIS Sighting Submission Form to report new non-indigenous species sightings in MA. It is the single stop for citizens, field monitors, fishermen, or anyone else who would like to report an unfamiliar species. The form reports freshwater and marine plant and animal species by email to the MA AIS Reporting Network. After providing your contact information and the location and date of your sighting, you can upload a photo. For more information, see CZM's AIS website, or contact Jay Baker at <jason.baker@state.ma.us>. (From the May 2007 CZ-Mail...Thanks to Brian Melzian, EPA HQ)

Webpage. The USDA National Agricultural Library has a nice webpage with activities you can do to combat invasives. It also links to volunteer activities by state and has some video clips too. Check it out at <http://www.invasivespeciesinfo.gov/news/whatyou.shtml>. (Thanks to David Winandy for sharing this)

UC Davis Weed Science School. UC Davis will hold an intensive 2-1/2 day course **September 24-26**, focusing on the mode and mechanism of herbicide activity in plants and the fate of herbicides in the environment. The school is designed for those involved in consulting, research, development, or sales of agricultural chemicals in the private and public sectors. Emphasis is on important weeds and herbicides registered for use in CA, and topics are presented in a lecture and hands-on format. The course fee is \$550 (if received by 9/10/07), and provides 20.5 hours of continuing education credit. (To register, visit <http://wric.ucdavis.edu> and click on "Weed Science School" or contact the UC Weed Research & Information Center at [wric@ucdavis.edu](mailto:wric@ucdavis.edu) or (530) 752-1748.)

Marine Bioinvasions Conference. The Fifth International Marine Bioinvasions Conference will be held at Massachusetts Institute of Technology in Cambridge, MA, **May 21-24**. The conference will examine marine bioinvasion vectors, patterns, ecological and evolutionary consequences, economic impacts, biosecurity approaches, and natural and invasion impacts on biodiversity. (For more information, see <http://web.mit.edu/seagrant/bioinvasion2007/index.html>)

International Invasive Species Conference. The 15th International Conference on Aquatic Invasive Species will be held **September 23-27**, in Nijmegen, The Netherlands. (For more info, contact <[Elizabeth@theprofessionaledge.com](mailto:Elizabeth@theprofessionaledge.com)>)

International Symposium on Managing Vertebrate Invasive Species. USDA APHIS will host *Managing Vertebrate Invasive Species* in Fort Collins, CO, on **August 7-9**. Topics include early detection and rapid response, pathways analysis, prevention, management or eradication, invasions and impacts, economics, resource recovery, public education, research needs, and global initiatives. (For more info, contact <[kathleen.a.fagerstone@aphis.usda.gov](mailto:kathleen.a.fagerstone@aphis.usda.gov)>)

New Zealand Mud Snail (NZMS) Conference. The 5th USA NZMS Conference will be held **June 26-28** at UC-Davis, CA. The conference information is available on the NZMS website (<http://www.esg.montana.edu/aim/mollusca/nzms>).

WRP annual meeting: The Western Regional Panel of the ANSTF will hold its 2007 annual meeting on **September 11-13**, in Honolulu, HA. (For more information contact Tina Proctor at <[bettina\\_proctor@fws.gov](mailto:bettina_proctor@fws.gov)>).

*Sorry for the ever-increasing length of this newsletter.  
The topic is just exploding! To subscribe or unsubscribe,  
email me at <[cabreza.joan@epa.gov](mailto:cabreza.joan@epa.gov)>*