

Prevention Pays: Legislation Introduced to Stop the Next Generation of Imported Invaders

By Jennifer Nalbene, Director, Navigation and Invasive Species, Great Lakes United

Extensive efforts to prevent an Asian carp invasion in the Great Lakes-St. Lawrence River system have revealed a gaping hole in U.S. importation policy. As the U.S. and Canada continue to amplify efforts to thwart the forward march of silver and bighead carp into the largest freshwater lake system in the world, a campaign to identify future invaders and block their importation into the U.S. has started.

You know the story well: in the 1970s Asian carp were legally imported to the southern U.S. by federal researchers and private fish farmers to clean waterways and fish ponds. Shortly after, they escaped into the wild and their populations exploded across the Mississippi River basin. Silver and bighead carp are now encroaching on Lake Michigan with an electric barrier system in the Chicago Sanitary and Ship Canal serving as the primary deterrent. Since 1998, hundreds of millions of dollars have been spent to stop these fish, with significant investment expected to continue for decades or longer.

The Lacey Act of 1900 is the law that governed, or failed to govern, the importation of Asian carp in the 1970s, and still governs the import of any live animal proposed to be brought into the U.S. today. It's no stretch to imagine that a law 112 years old would be insufficient to address the 21st century trade of live animals. As a leading import market, the U.S. receives hundreds of millions of live, non-native animals each year for use in aquaculture or for sale by the pet, aquarium and other industries.

The U.S. Fish and Wildlife Service regulatory implementation of this antiquated law is simply not rapid, proactive or preventative enough to provide sufficient protection against harmful non-native species. The current regulations do not require that animals being imported into the country *first* be screened for invasiveness, for diseases they might carry, or for the risks they may pose to human or wildlife health. As was the case with Asian carp, species are usually listed as "injurious" and regulations put in place to limit the spread and transport of harmful species only *after* the animals are already in the country. Further, in cases when the regulatory process is triggered via a petition or by the Department of the Interior's own accord, an injurious species listing takes, on average, four years to be finalized. Again, in the case of Asian carp, the Fish and Wildlife Service began regulatory review of the black, silver, largescale silver and bighead carps starting in 2000, listing black, silver and largescale silver as injurious in 2007. Frustrated by the slow pace and partial protection, Michigan Senator Carl Levin intervened and Congress passed a law in 2010 to put the bighead carp species on the list to ensure that they too would no longer be imported and that their possession and movement would be illegal across state lines.

The Asian carp saga illustrates that laws governing the purposeful importation of live animals need to be modernized. Responding to this regulatory gap, Congresswoman Louise Slaughter (NY), co-chair of the Great Lakes Task Force, introduced the Invasive Fish and Wildlife Prevention Act of 2012 on May 30. This legislation, H.R. 5864, would significantly strengthen the ability of the Fish and Wildlife Service to prevent new, harmful species from being imported into the country and

allows the agency to act more quickly to prevent the spread of harmful, invasive species that are already here.

The proposed legislation immediately gives the Fish and Wildlife Service greater flexibility and authority to make science-based decisions on prohibiting or restricting live animals already in trade. After implementing these improvements for five years, the Fish and Wildlife Service is directed to then propose a new mandatory "screening" system to review all novel live animals proposed for importation into the country and restrict those that pose serious risk *before* they are imported. It also gives the agency emergency listing authority, clear direction to regulate wildlife diseases and a new user fee it can charge on importers to cover a portion of the agency's costs. States' decisions are given deference in several sections of the bill, while keeping a strong federal floor in place.

Supporters of H.R. 5864 include Representatives from Great Lakes states, as well as from across the U.S., representing regions suffering from invasions of other purposefully imported species gone wild, such as the Burmese python, red lionfish, Indian mongoose and Northern snakehead. On Sept. 20, New York Senator Kirsten Gillibrand introduced the companion bill to the Invasive Fish and Wildlife Prevention Act in the Senate, S. 3606. Congress will have until the end of the calendar year to act on the legislation before it expires with the beginning of a new session in 2013.

Washington Watch

In July, the President signed into law a transportation bill that included the provisions of the Stop Invasive Species Act (H.R. 4406 and S. 2317), which directs the U.S. Army Corps of Engineers to complete a study in 18 months on the feasibility of full separation of the Great Lakes and Mississippi River watersheds in the Chicago area and at other points to prevent the introduction or establishment of populations of AIS. The secretary of the Army has 90 days following enactment of the bill to submit to Congress milestones for completing such a plan and an outline of the funding necessary for the study. H.R. 5864 and S. 3606, the Invasive Fish and Wildlife Prevention Act of 2012, was introduced by Representative Louise Slaughter [NY-29] and Senator Kirsten Gillibrand [NY]. The Act provides the U.S. Fish and Wildlife Service with the authority to improve federal regulatory processes for imports of live non-native animals to prevent economic and environmental harm and harm to human or animal health. The U.S. Coast Guard released its final rulemaking on *Standards for Living Organisms in Ships' Ballast Water Discharged in U.S. Waters* on March 16. The final rule establishes a standard equivalent to the International Maritime Organization (IMO) standard for the allowable concentration of living organisms in ships' ballast water discharge. The Coast Guard has until Jan. 1, 2016, to determine whether a more stringent standard is feasible. **Contact:** Erika Jensen, Great Lakes Commission, 734-971-9135, ejensen@glc.org.

Around the Basin

ILLINOIS: Illinois Dept. of Natural Resources (DNR) remains fully engaged with Asian carp work throughout the Illinois River and Chicago Area Waterways or CAWS. Efforts in the CAWS include detection of fish with traditional and experimental fisheries gear as well as monitoring with contracted commercial fishers. Contracted commercial fishers with DNR biologists have removed over 600 tons of Asian carp below the electric dispersal barrier since 2010. These and other efforts across the basin are reported online regularly at asiancarp.us. There has not been collection of bighead or silver carp above the electric dispersal barrier since a lone fish was caught in Lake Calumet in 2010. That fish was thought to come from an urban pond stocked with channel catfish (asiancarp.us/news/bigheadponds.htm). Illinois is freshening up its aquatic invasive species (AIS) message and will begin promoting this in fall 2012-spring 2013 to a wide audience. **Contact:** Kevin Irons, Illinois DNR, 217-557-0719, kevin.iron@illinois.gov.

INDIANA: Eric Fischer was recently appointed AIS program coordinator for the Indiana DNR Division of Fish and Wildlife. Lake Manitowish hydrilla eradication is in its sixth year; five consecutive years of treatment has reduced the hydrilla tuber population by 99.5 percent. Eradication of parrot feather at Meserve Lake in northeast Indiana began in fall 2008 and has been successful in no new occurrences. Indiana DNR has given final approval for a Prohibited Invasive Aquatic Species listing of 28 species, prohibiting sale, distribution and transport of some of the worst aquatic invasive plants. The state is entering the second year of an Asian carp study using acoustic tags to track spawning, movement and habitat use in the Wabash River system, providing data to assess Asian carp preferences below the potential watershed connection at Eagle Marsh. **Contact:** Eric Fischer, Indiana DNR, 317-234-3883, efischer@dnr.in.gov.

MICHIGAN: Michigan's AIS State Management Plan is under revision. The draft plan was released for public review in spring 2012 and the final plan is expected in 2013. Several response actions regarding Asian carp were recently taken including seizure of live grass carp being sold; response to a report of live grass carp in an inland lake followed by surveys of that water body; and response to silver carp eDNA detections in Michigan waters of Lake Erie. Michigan's AIS Advisory Council, created by law in 2011, is working on recommendations on AIS and organisms in trade, the management of *Phragmites*, and funding for the state's AIS program. The council has already made recommendations for the state's Section 401 certification of the U.S. EPA Vessel General Permit and the draft AIS State Management Plan. **Contact:** Sarah LeSage, Michigan Department of Environmental Quality, 517-241-7931, lesages@michigan.gov.

MINNESOTA: The Minnesota DNR issued a grant for the production of a documentary on AIS to educate boaters and other recreational users. Through a competitive process, the DNR awarded the \$50,000 grant to Lindner Media Productions. Three products were developed including a 25-minute documentary, a shortened 12-minute version and a one-minute trailer. The documentary covers the problems associated with invasive species and what boaters and anglers can do to help prevent their spread. Zebra mussels, quagga mussels, Asian carp and Eurasian watermilfoil are the focal species. Two thousand DVDs were produced for distribution and the products are posted at www.mndnr.gov/invasives. **Contact:** Luke Skinner, Minnesota DNR, 651-259-5650, luke.skinner@dnr.state.mn.us.

NEW YORK: The New York State invasive species program is implemented by an agency council and nongovernment advisory committee. The New York Invasive Species Research Institute was created in collaboration with Cornell University. An Invasive Species Clearinghouse website was developed by New York Sea Grant and an iMapInvasives GIS database was created in collaboration with New York Natural Heritage Program. Four Partnerships for Invasive Species Management now receive major support from the state; staff are working to contract with the four remaining partnerships. A comprehensive education and outreach program is being developed with Cornell University. Certification conditions are being developed for the draft 2013 U.S. EPA Vessel General Permit to meet state water quality standards. Management of a large hydrilla infestation in the Cayuga Lake Inlet is ongoing in collaboration with local stakeholders. Aquatic plant workshops were held for local partners during the 2012 season. Recent detections of AIS include spiny water flea in the Champlain Canal and Lake George; *Didymo* in Schoharie Creek; and water chestnut in Chautauqua Lake. New legislation requires the Dept. of Environmental Conservation (DEC), in cooperation with the Dept. of Agriculture and Markets, to take action on non-native animal and plant species. **Contact:** Dave Adams, NY DEC, 518-402-9149, djadams@gw.dec.state.ny.us.

OHIO: Ohio is currently revising their AIS State Management Plan to address the quickly changing AIS landscape. The plan will go through internal and external review and will incorporate a rapid response component. Ohio and Indiana hosted a rapid response tabletop exercise in Ft Wayne, Indiana in August. State, federal, university and nongovernment organizations participated in this exercise that included instruction on the Incident Command System and a mock planning exercise dealing with a specific AIS scenario. Ohio is currently monitoring for Asian carp in the Ohio River and Lake Erie using traditional collection methods and eDNA. Ohio is working closely with the U.S. Army Corps of Engineers to determine the threat of several hydrologic connections to pass AIS between the Mississippi River and Great Lakes basins. Ohio continues to work with partners to combat *Phragmites* and hydrilla. **Contact:** John Navarro, Ohio DNR Division of Wildlife, 614-265-6346, john.navarro@dnr.state.oh.us.

ONTARIO: The Ontario Invasive Species Strategic Plan was released in July. The plan is led by the Ontario Ministry of Natural Resources (MNR) in collaboration with other provincial ministries. The plan outlines Ontario's approach to invasive species focusing on goals of prevention, early detection, rapid response and management/adaptation. MNR continues to lead control programs for European water chestnut in the Ottawa River and water soldier in the Trent Severn Waterway. An aquatic invasive plant management workshop was coordinated with experts from Canada and the U.S. to share best management approaches and work to improve Ontario's capacity to address these threats. Enforcement of provincial prohibitions of live Asian carp continue to be a priority. In June, cooperative enforcement efforts of the MNR and Canada Border Services Agency resulted in fines totaling \$50,000 for possessing live Asian carp in Ontario. **Contact:** Francine MacDonald, Ontario MNR, 705-755-5136, francine.macdonald@ontario.ca.

PENNSYLVANIA: The invasive diatom *Didymo* was confirmed in the Youghiogheny River in southwestern Pennsylvania. The extent of this alga was previously limited to the upper Delaware River in the northeastern corner of the state. Zebra mussels have established a large reproducing population in Canadohta Lake in Crawford County and were detected in the Susquehanna River near Berwick. Tubenose gobies were collected from Presque Isle Bay, marking their first documented occurrence in Pennsylvania waters of Lake Erie. The Pennsylvania Dept. of Environmental Protection (DEP) is monitoring for Asian carp eDNA in the Allegheny, Monongahela and Ohio rivers and in Presque Isle Bay. Samples are currently being analyzed by the U.S. Geological Survey. Pennsylvania Sea Grant completed a new AIS prevention sign targeted at anglers and is finalizing an AIS field guide covering over 60 species of plants, fish, invertebrates, pathogens, algae, and reptiles. **Contact:** Jim Grazio, Pennsylvania DEP, 814-217-9636, jgrazio@pa.gov.

QUÉBEC: The Ministry of Natural Resources and Wildlife (MRNF) will soon publish a strategy on exotic invasive wildlife and is currently developing an action plan to implement the strategy. Ongoing actions by MRNF include monitoring an Asian clam infestation in the Gentilly power plant area in the St. Lawrence River; an early detection network in the St. Lawrence River; education, outreach and training for sport fishermen; and a website on invasive species. Regulations have been modified to prohibit the possession of 18 live AIS (including Asian carp) and to prohibit the import of fish for use as bait. The Ministry of Sustainable Development, Environment and Parks (MDDEP) is continuing a water chestnut eradication program in the Montérégie area. Water chestnut abundance has significantly decreased since the program began in 2001; however, new infestations have been detected in the southwestern part of the province. MDDEP is working with conservation groups to monitor invasive plants in St. Lawrence River wetlands. **Contact:** Isabelle Simard, Quebec MDDEP, 418-521-3907, isabelle.simard@mddep.gouv.qc.ca.

WISCONSIN: Parrot feather, water hyacinth and water lettuce have been found in the Mississippi River, Pool 5. Managers are beginning to believe that water hyacinth and water lettuce are able to survive mild Wisconsin winters as this is the second year in a row they have been found. Neither species is currently regulated in the state but this may change as a result of these findings. Wisconsin's statewide AIS monitoring program is in its second year. The objective is to document AIS, determine rate of spread and enable managers to respond rapidly to new infestations. Two hundred lakes each year are surveyed by boat and snorkel with the assistance of many partners who also play an active role in AIS prevention, containment and control. Transient boaters were invited to participate in focus groups held around the state to provide information on boater understanding of laws, preference to publications and outreach materials, motivations, accuracy of AIS knowledge and concerns for the future. This information will be used to guide communication, outreach and education; see dnr.wi.gov/lakes/invasives/FocusGroups.aspx. **Contact:** Bob Wakeman, Wisconsin DNR, 262-574-2149, robert.wakeman@wisconsin.gov.

Great Lakes Panel Update

The spring 2012 meeting of the Great Lakes Panel on ANS was held in May in Rochester, N.Y., in conjunction with the Northeast Panel on ANS. The meeting featured a joint session on the trade of live organisms as a pathway for AIS. The fall Great Lakes Panel meeting is scheduled for Dec. 4-5, 2012, and will be held in Ann Arbor, Mich. Meeting information is available online at www.glc.org/ans/panel.html. **Contact:** Erika Jensen, Great Lakes Commission, 734-971-9135, ejensen@glc.org.

ANS Task Force Update

The 2013-17 ANS Task Force Strategic Plan was approved by the Task Force at their May 2012 meeting in Annapolis, Md., following review by Task Force member agencies, ex-officio members, and regional panels. The new plan is available at www.anstaskforce.gov. The fall Task Force meeting will be held Nov. 14-15, 2012, in Arlington, Va. Meeting information is available at www.anstaskforce.gov/meetings.php. **Contact:** Susan Mangin, ANS Task Force Executive Secretary, U.S. Fish and Wildlife Service, 703-358-2466, Susan_Mangin@fws.gov.