

Hello my name is Tim Mihuc. I am an ecologist on the faculty at the State University of New York (SUNY) at Plattsburgh and serve as Director of the Lake Champlain Research Institute. I am here to support the Stamp out invasive species act. The funds generated by this legislation will help our federal partners work on key programs to stop the spread of invasive species. Briefly, what is an invasive species

As per [Executive Order 13112 \(Section 1. Definitions\)](#) an "invasive species" is a species that is:

- 1) non-native (or alien) to the ecosystem under consideration and,
- 2) whose introduction causes or is likely to cause economic or environmental harm or harm to human health.

Basically an invasive species has been transported (usually by humans) outside of its natural range of habitat (often across continents) and once it establishes can cause economic and/or environmental harm. Often invasive species displace desired native or endemic species.

Invasive species awareness is vital to preventing the spread of future potential invaders that may incur a high economic cost to our society. The proposed stamp out invasive species act will provide an avenue for funding federal invasive species prevention programs.

We have extensive knowledge of aquatic invasive species threats at our institute at SUNY Plattsburgh. In addition to our scientific research on the topic, we have even written a children's story about the invasive Fishhook and Spiny Waterflea titled "The adventures of captain fish hook waterflea". This story illustrates the pathways and vectors that both the Fish Hook and Spiny waterflea use to invade new water bodies from the Great Lakes, to Adirondack Lakes to Lake Champlain. These waterflea invaders are aquatic plankton, small organisms native to European lakes, that once present have a severe impact on the freshwater lakes they invade. Sadly our fictitious story was written to help prevent the spread of invasives, but alas both species have invaded Adirondack lakes and unfortunately at SUNY Plattsburgh we recently discovered the invasion of the Spiny waterflea ([Bythotrephes longimanus](#)) in 2014 and the Fish hook ([Cercopagis pengoi](#)) in 2018 into Lake Champlain. As is often the case with invasive non-native species, once they are in there is no effective management to remove them. Think of discovering termites in your porch, by the time you have noticed they are likely throughout your entire home.

While education programs help, we need other programs to help sever the connections these species are using to invade new areas. Connections such as canals and boat transport in aquatic systems, for example. Humans like to move around and when we do sometimes we inadvertently carry things with us that we don't even know were hitchhiking along with us. We fly, we move food in crates all over the world, we boat, we travel in vehicles all of which are vectors for invasive species to travel. This in concept is very similar to how viruses also move with us when we travel except that invasive species are in our luggage or on our boat or vehicle instead of inside our bodies.

There are new threats moving around our nation as we speak. The Round goby, a fish from Europe that eat the young of native fish, is already in the Great Lakes and in the Hudson River poised to move through the Champlain Canal into Lake Champlain and perhaps the Adirondack's. There are aquatic threats, my area of expertise, but also numerous terrestrial plants, insects and other threats. East of the Mississippi, the Emerald Ash borer (a non-native beetle that feeds on the leaves of Ash trees) is on the move. The hemlock wooly adelgid (a moth larvae) threatens most of the Northeastern US and

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could spread further. Kudzu, the non-native vine that ate the south, was introduced from Asia during the 1876 centennial celebration as an ornamental plant. It now chokes out the forest throughout the Southeastern US. Water Hyacinth, an aquatic ornamental plant, was introduced at the New Orleans world's fair in 1884 and now chokes the waterways of the south. Yellowstone National Park has the constant threat of invasive plant seeds that travel on cars and motorhomes from other regions in the US and take hold along Yellowstone roads. Sometimes we are the problem not the solution, we often still stock non-native fish such as European brown trout in our waters. We brought invasive carp to this continent centuries ago.

I can go on but you get the picture. Invasive species are a problem, one which can cause significant economic and environmental harm. Programs to prevent the spread are key. Vectors such as canals, vehicle and boat transport are a concern. The stamp out invasive species act will help educate the public and provide critical funding to help Federal agencies combat the spread of invasive species. Thank you. I'll be happy to take your questions.

Dr. Tim Mihuc