

AQUATIC INVADERS

Program Text NORTHEAST

The following is designed to serve as an example of a story line for the Aquatic Invaders program as it is conducted at facilities in the northeastern United States. The focus is on freshwater environments. Please take some time to become familiar with species of concern in your region by browsing through the Aquatic Invaders CD-ROM. Feel free to adapt the story to reflect invasive species and pathways of introduction and spread for your area. Coastal facilities that focus on marine environments may treat the 'lake' as a harbor or estuary.

EDUCATOR: How many people here today are from the Northeast? Do you live here, or visit here because you enjoy the beaches, lakes, streams, rivers or other outside places? If you like being outdoors, you may be interested to know that these places are changing.

I want to tell you a story, and I'll need the help of some volunteers to help you understand how our outdoor places are changing and what that means to us.

Select 6 volunteers from the audience.

Educator: Each of our volunteers represents a native species in the Northeast. Who can name some freshwater native Northeastern plants and animals? (*Use yellow pond lily or white water-lilies, pickerel-weed, chain pickerel, yellow perch, pumpkinseed, redbreast sunfish, golden shiners, or brown bullhead.*)

Place a blue 'N' around the neck of each volunteer. Introduce them as you place the letters.

EDUCATOR: Each empty chair represents a niche, or home, for our native species. There are six niches and six species. Is everyone familiar with musical chairs? When I begin the music, our volunteers will begin the game. There is no need to rush, since we know there is a niche for everyone.

Make sure to emphasize NO RUNNING or PUSHING. Start track two on Biodiversity & Billy B., the Biodiversity song. Stop the music when you are ready for the volunteers to sit.

Educator: While our native species get comfortable in their niches, let me tell you about the lake where they live. Our whole neighborhood stretches around this lake. It's a beautiful lake where I love to go to swim and fish. (*Point to the banner and talk about the different fishes, dragonflies, and frogs.*) In fact I like fish so much I have a home aquarium. How many of you have a home aquarium?

If you own an aquarium you know how much work it can be to keep it clean and feed the fish. I decided the last time I went on vacation that it was too much trouble to ask someone else to care for my aquarium. I thought it would be a great idea to release the goldfish and Brazilian elodea from my aquarium into the lake. That way I could still visit them! In the Northeast, many introduced species survive (at least those that don't mind cold winters!), so I am sure that my pet goldfish and plants will do just fine! In fact I read that the state fisheries staff in Connecticut estimate that goldfish have become established in 6% of Connecticut lakes, primarily the result of pet and bait releases, so I'm not the first person to let their goldfish go!

Hold up your 'aquarium' and remove a goldfish and some plants and set them aside. Ask for two more volunteers from the audience. Introduce the volunteers when they arrive and hang a red 'I' around each of them. Explain that one person represents the introduced goldfish and one represents the elodea. 'I' stands for introduced. Have the six 'N's stand with the two new 'I's and explain there will be another round of musical chairs. There is still the same amount of habitat available, but new species have been introduced. NO PUSHING or RUNNING! Start the music and complete another round.

IF BOTH OF THE VOLUNTEERS WITHOUT A CHAIR ARE AN 'N,' SKIP TO '*'.

IF ONE OR BOTH OF THE VOLUNTEERS WITHOUT A CHAIR IS AN 'I':

EDUCATOR: It looks like the introduced species didn't find a niche. In reality many of these introduced species reproduce more quickly, can tolerate environmental extremes, and eat many different things. They have an advantage over native species, so we need to give them an advantage in this game. The 'I' gets to go to any 'N' in a chair and take its seat.

*** The 'I' now represents an invasive species, because it is able to take over native habitat after being introduced.** The displaced 'N's can help us see how our lake is beginning to change by each removing a piece of habitat and standing to the side.

Each displaced 'N' removes a section of the banner's top layer, thus exposing a section of the bottom layer to show the habitat has been changed.

Now, I've so enjoyed the free time I have without the burden of caring for my aquarium that I've decided to take up water gardening. I ordered some really neat aquatic plants from the internet from somewhere down south, and put them in my water garden, which is right near the lake. Now I have pretty flowering plants in my garden, including some pink water-lilies. I thought they'd look nice in the lake, along with the white and yellow lilies already growing there. I noticed that there was another plant mixed in with the pink water-lilies. I thought I might wreck the lilies if I tried to separate them, so I put them in the lake along with the water-lilies.

Select two more volunteers from the audience. Introduce the volunteers when they arrive and hang a red 'I' around each of them. Explain that one person represents the introduced pink water-lilies and one represents the other plant, which is Hydrilla. Have the four 'N's and two 'I's stand with the two new 'I's and explain there will be another round of musical chairs. There is still the same amount of habitat available, but new species have been introduced. NO PUSHING or RUNNING! Start the music and complete another round.

EDUCATOR: If there are any 'I's left standing guess what they get to do? Why? (*These new introduced species are invasive.*) The displaced 'N's can help us see how our lake is changing by each removing a piece of habitat and standing to the side. Hydrilla has been found in several lakes and ponds in the Northeast, and literally clogs these water bodies. States such as Florida, that have a lot of Hydrilla-infested water bodies, spend millions of dollars annually just to remove the plant from Florida waterways, and the cost for control in Northeastern lakes and ponds is beginning to increase. (Adults, much of this is paid for with your tax dollars!!!)

I've got so much free time now I get to go fishing more often. I took my boat to a different lake this morning to try my luck. At the boat launch, I noticed a sign warning me about cleaning my boat and something about zebra mussels too, but I was in a rush to get launched, catch some shiners for bait, and get fishing! So, I didn't really pay attention to the sign. Unfortunately, I had poor luck fishing in that lake, so this afternoon I brought my boat back home to my lake to try fishing there. I brought the bait bucket which had water and some of the shiners I'd caught this morning. As I was putting my

boat in the water, I noticed that the boat propeller and trailer had a bunch of plants caught on them, but since I really wanted to catch fish, not clean the boat, I didn't do anything about them. I'm sure it's not a big deal, right? Those plants are really pretty, so maybe it would be nice to see them spread to other lakes. At the end of the day, I dumped the bucket of water and fish into the lake by my house. After all, I had nowhere to keep them and I didn't want to kill them.

Select two more volunteers from the audience. Introduce the volunteers when they arrive and hang a red 'I' around each of them. Explain that one person represents the introduced Eurasian watermilfoil and one represents the zebra mussel larvae that were dumped with the bait bucket water. (Zebra mussels attach to hard substrates in large reefs, and even attach to the plants in the water. They foul boat hulls and docks, and change the ecosystem dynamics with their ability to filter much of the plankton out of the water.) Have the two 'N's and four 'I's stand with the two new 'I's and explain there will be another round of musical chairs. There is still the same amount of habitat available, but new species have been introduced. NO PUSHING or RUNNING! Start the music and complete another round.

EDUCATOR: If there are any 'I's left standing guess what they get to do? Why? The displaced 'N's can help us see how our lake is changing by each removing a piece of habitat and standing to the side.

I went out to my lake today and noticed it had completely changed.

Why did it change? *Audience responses: YOU introduced new species!*

- *NEVER introduce plants or animals into the wild.*

What could I have done instead of putting my pets and plants into the pond?

Audience responses: They may or may not recognize solutions here and can be prompted to:

- *Check with local pet stores to take unwanted pets.*
- *Put water plants in a plastic bag and freeze, then discard them.*
- *Dispose of unused bait in the garbage.*
- *When possible use native plants and bait so you don't have this problem!*
- *Clean your boat and drain your bilge before moving your boat to a different body of water.*

EDUCATOR: Let's give our volunteers a round of applause and let them take a seat. (*Give volunteers bookmarks and/or stickers as they leave to reward them!*) The introduction of new species to native habitats is a threat to ecosystems worldwide.

No matter where you are from there are things you can do to be part of solving this problem. Please take one of these bookmarks with resources to inform you about introduced species that become invaders in your area. These 'invasive' species not only change the way your backyard wilderness looks, BUT ALSO they can impact your local economy and change your way of life.

Please take a moment to complete the evaluation cards and drop them by the door as you exit.

Thanks for coming – and help spread the word!

THE END