



# DEPARTMENT OF EDUCATION

DEPARTMENT OF HOMELAND SECURITY  
UNITED STATES COAST GUARD AUXILIARY



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### **COPING WITH NON NATIVE NUISANCE SPECIES**

In any habitat a favorable balance of factors is critical to each individual organism's success. Any introduced factor that causes an unbalance will in all probability change the carrying capacity of the habitat and possibly result in the extinction of one or more species.

There are many examples of disruptions in the natural order by the introduction of a species, floral and/or biota that was not native to the area. Australia was over run by rats so they imported cats. The rats' population declined while the number of cats increased bringing a new set of problems. Periwinkle snails were introduced in this country as a food source. They were eaten and enjoyed in Europe but when they were offered on menus of American restaurants, they were ignored. The result was a new species in competition for available resources at the shore. Lampreys appeared in the Great Lakes. These are primitive parasitic eel like fish have a suction cup type mouth lined with sharp teeth. They attached themselves to the sides of fish, like sea trout and whitefish, rasp away the skin and suck out blood until the fish dies, then they look for another host. The flowering rush, a perennial plant from Europe and Asia, was introduced in the mid west as an ornamental plant which grows to the point where it crowds out native species of vegetation.

The lamprey is native to coastal regions of both sides of the Atlantic ocean. They found their way to the Great Lakes through the Weeland Canal circa 1921. Other non native species can be transported to our shores in various ways such as is in the bilge water of incoming vessels. When unloading, ocean going vessels adjust their hydrodynamic characteristics by changing their centers of buoyancy. Today vessels do this by changing the water level in their ballast tanks. When this water is pumped on board it comes with the complete water borne population of the area. This includes mature, juvenile, larva, veligers and eggs. These organisms are transported to other ports and discharged into the environment. The zebra mussel has been in the news a great deal lately. These organisms migrated from their native Black and Caspian Seas to Europe via man made canals. They resided in the fresh waters of western and central Europe for almost twenty years then wound up in a ballast tank and came to this country. First discovered in the Lake St. Clair in June 1988. They quickly spread to Lake Erie, Lake Ontario, and the St. Lawrence River. Since then they've all over the Great Lakes and a growing number of US and Canadian Canals and still spreading.

The exotic species, more often than not, have no predator, i.e., they are not in the existing food chain, and they grow to large numbers until eventually they become dominant and use up most of the available nutrients. Or they may be the predators, eating up all the native species. Large populations can also foul up human projects. The afore-mentioned zebra mussels are without predators and they coat vessel bottoms impairing the vessel's headway decreasing economic fuel consumption. They also clog intake ports at power plants restricting or stopping the water flow required to cool and precipitate the used steam back to liquid.

Exotic specie upheavals also apply to plants. Exotic species may find their new environment richer in nutrients than their original habitat and grow to such great proportions that they cover the water surface preventing light penetration, resulting in decreased photosynthesis and a decrease in oxygen content resulting in the death of a number of native species. It should be noted that in trying to eliminate plants, exotics species may be introduced to help alleviate the problem. As an example carp are introduced who eat up the vegetation. These carp are sterile and do not reproduce therefore there is no danger of them becoming a nuisance species.

We as boaters have a responsibility to prevent the spread of these nuisance species. One aspect is the bait we use. If you catch your own bait where you fish, there's no problem. However if you get your bait from the local bait shop you have no idea where it came from. Rusty crayfish are native to streams in the Ohio, Kentucky and Tennessee regions. However, their range was broadened considerably by fishermen who used them for bait. These crayfish can severely reduce lake and stream vegetation, depriving native fish and their predators of cover and food. So do be careful not to get rid of your unused bait overboard at the end of the day if it didn't come from the area.

If you trailer your boat, canoe, kayak, personal water craft or any other platform that goes from one body of water to the other, before leaving the water access area

- remove plants and animals from your boat trailer and accessory equipment
- drain your live wells, bilge water and transom wells
- Empty your bait bucket on land
- Wash you boat down thoroughly. If possible. let dry three days before going into another body of water
- Flush your motor
- Learn what these invading organisms look like and report any findings to your local authority.

By curtailing the entrance of non native nuisance species we are protecting our environment.

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