

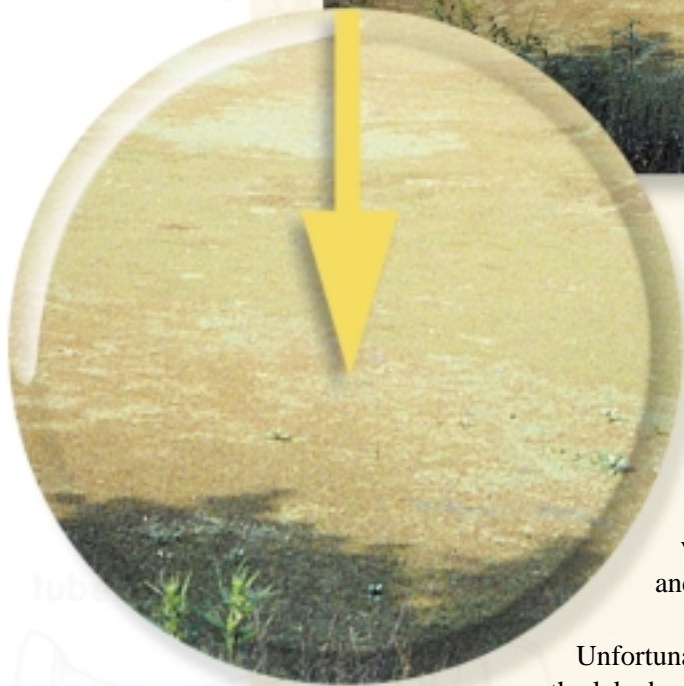
Before...



AQUATIC NUISANCE SPECIES

After

Think of all the reasons you're a boater: the recreational opportunities that water offers, the stunning scenery of Oregon's lakes, rivers and bays, the excitement of fishing, of wildlife viewing. . . the list could go on.



All of these things depend on the delicate natural balance of aquatic ecosystems. Introducing non-native plants and animals into Oregon's waters can upset the balance, hurting the environment and jeopardizing all of the things that make our waterways special.

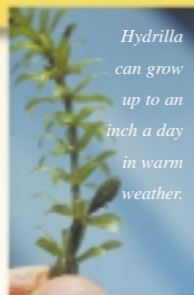
This lake illustrates what a harmful non-native or "nuisance" species can do. The aquatic weed hydrilla was introduced into it and within a short time choked out native vegetation, displaced fish stocks and made boating, swimming and water skiing next to impossible.

Unfortunately, the weed was more than likely introduced into the lake by a boater.

Aquatic Nuisance Species

Aquatic nuisance species most often spread between waterways by hitching a ride on boats and trailers. When transplanted into waters without natural predators, competitors or diseases, these non-native organisms can proliferate, displacing native species and damaging the water resource.

Once established, aquatic nuisance species are costly and difficult to control or eradicate. The best means of protecting Oregon's waterways is prevention. This is where boaters play a key role.



Hydrilla can grow up to an inch a day in warm weather.



Mitten Crab *(Eriocheir Sinensis)*



Some aquatic nuisance species can survive up to two weeks out of the water.

Mitten crabs have spread throughout the San Francisco Bay estuary, causing serious ecological and commercial problems. Their populations have shut down water facilities, affected native fish, and disrupted recreational and commercial fishing. Mitten crabs burrow into riverbanks, where they may cause erosion. This species is also associated with a human lung parasite.

The mitten crab is dark brown and is about the size of a man's hand. It gets its name from a distinctive fur-like covering on its pinchers. One mitten crab was found in Oregon in the Columbia River in 1996. And one is more than enough.

HERE'S WHAT YOU CAN DO:

INSPECT

Inspect your boat and trailer. Remove any plants and animals you see before leaving any waterbody.

DRAIN

Drain your motor, live well and bilge while on land before leaving any waterbody.

EMPTY

Empty your bait bucket on land before leaving any waterbody. Never release live bait into a waterbody, or transport aquatic animals from one waterbody into another. Use of live bait is prohibited in most Oregon waters -- see Oregon Fishing Regulations for details.

RINSE

Rinse your boat, trailer and equipment to kill harmful species that were not visible at the boat launch. It's best to use high-pressure, hot water. A garden hose will work if no other option is available.

AIR-DRY

Air-dry your boat and equipment for as long as possible. Five days is optimal.



Hydrilla *(Hydrilla verticillata)*

Hydrilla is the most dreaded of aquatic weeds in the U.S. Native to Africa, Australia and parts of Asia, it was introduced into Florida in the 1960s. It grows in dense mats that can blanket a lake or river, effectively choking it to death by depriving it of oxygen and sunlight. Hydrilla has invaded Washington and California, but has not yet been found in Oregon.

The long, stringy hydrilla can be identified by its spear-shaped, saw-toothed leaves and peanut-sized tubers at the roots. It is green and generally has five leaves in a whorl around the stem and produces tiny white flowers.

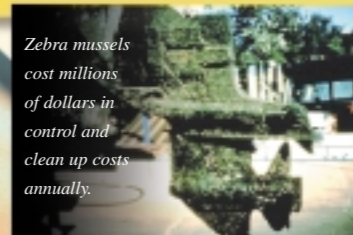


Zebra Mussel *(Dreissena Polymorpha)*

There are dozens of aquatic nuisance species that can harm Oregon's waterways. The ones listed in this brochure are considered among the most threatening. Learn to recognize these organisms. Following this checklist after each outing will prevent the spread of these and other aquatic nuisance species. Please be extra careful if you've been boating outside of Oregon or are trailering from the mid-west.



Zebra mussels cost millions of dollars in control and clean up costs annually.



Oregon has no known zebra mussel populations -- and we'd like to keep it that way. The zebra mussel has wreaked havoc in the mid-western and eastern United States since its introduction into Lake Erie in 1988. The destructive

power of these miniature mussels -- they average about the size of your thumbnail -- lies in their sheer numbers. Their colonies have sunk navigation buoys, clogged water intakes at power plants and on boats, and have blanketed entire shorelines with their shells.

The zebra mussel has a "D" shaped shell. Young zebra mussels look like black pepper and feel like sandpaper when attached to a boat surface.



BOATERS BEWARE:

Aquatic nuisance species can hurt you too!

They Can:

- Damage your boat and motor
- Displace commercial and game fish
- Prevent water recreation
- Raise taxes and fees through control and clean-up costs
- Ruin the natural beauty of a lake, river or seashore

*What should you do if you find an aquatic nuisance species?
Report when and where you found it to one of these agencies:*

Oregon Department of Fish and Wildlife,
503-872-5260

Oregon Department of Agriculture,
503-986-4621



For more information on aquatic nuisance species and
how boaters can help, check our web site at
www.osmb.state.or.us

Photographs: Before/After - courtesy SePro; Zebra motor - Steve Krynock; Weeds on trailer Ladd Johnson, NOAA; Zebra mussel in hand - Charles Ramcharan, WI Sea Grant; Hydrilla - courtesy IFAS, Univ. of Florida; Mitten crab - courtesy Kathy Heib, CA Department of Fish and Game. Illustrations: Hydrilla - IFAS, Center for Aquatic Plants, Univ. of Florida; Trailer - MN Sea Grant.