

How Do Invaders Affect Lake Monticello?

Invasive species can change the nature of our lakes and ponds and cost the community many thousands of dollars to combat.

Hydrilla, an aquatic plant commonly used in aquariums, flourished when inappropriately dumped into the lake. It choked swimming areas and clogged boat propellers. LMOA introduced costly sterile grass carp into the lake to keep the Hydrilla under control, but must continue to monitor and periodically add more grass carp as required.

Asian clams, currently on the increase in the main lake, attract muskrats, which burrow into the dams and shoreline, compromising soil stability and weakening vital structures. Muskrats also chew boat motor parts, causing fuel spills into the lake and costly repairs.

Time will tell if alewives, gizzard shad and koi that have been spotted in the lake in recent years will pose a threat to our bass population. They reproduce rapidly and compete for food, and some of the larger fish even feed on bass young.

Other particularly troubling species, such as zebra mussels, snakeheads and Eurasian milfoil, are not yet present but could cause severe destruction to the lake's ecosystem if we don't keep them out. We must make every effort to protect our lakes and ponds, now and in the future.

What Can We Do?

- Carefully clean all watercraft (no matter the type or size) after they have been in waters other than our lakes. LMOA Policy 21.06 describes what to do.
- NEVER introduce non-native plant and animal species into the lake, ponds, streams and drainage ditches. The practice may disrupt the ecological balance of the lake and is against state and federal law without a special permit.
- NEVER dump the contents of bait buckets, garden ponds or aquariums into the lake or streams. Give them away or discard them in the garbage or on the ground at least 50 feet away from the lakes, ponds, streams or drainage ditches.

Invasive Species That Threaten Our Lake

NAME & ORIGIN	PROBLEMS THEY CREATE	HOW THEY ARE SPREAD
<u>Species already present:</u>		
Alewife – fish usually found farther north	Reproduce quickly; can grow to several feet long; sometimes have massive die-offs in winter or early spring, creating a health hazard and noxious smells	Bait buckets; fishermen who inadvertently or purposefully introduce them
Asian clams	Increase damaging muskrat population by providing more food; can clog water pipes	Unknown source
Cattails – common invasive native wetland plant	Fill in the lake quickly; interfere with boating and swimming; attract muskrats	Windblown seeds, boats, migratory birds
Gizzard shad – fish not normally found in this area	Over produce, reducing food available for native species; may become large enough to eat young bass	Bait buckets; fishermen who inadvertently or purposefully introduce them
Koi – fish from China commonly used in fish ponds, aquariums	Reproduces quickly; interferes with native spawning beds; competes with native species	Fish ponds, aquariums
Water hyacinth, lily pads – natives and alien plants that cover the water	Cover the water cutting off light for necessary algae in food chain; interfere with boating and swimming; crowd out and kill beneficial native plants	Aquariums, fish ponds, migratory birds
<u>Species not yet seen:</u>		
Eurasian Milfoil – plant from Asia	Interfere with boating and swimming; cover sandy areas needed for spawning	Aquariums, fish ponds, migratory birds, watercraft and equipment, bait buckets
Phragmites (reed) – common shoreline plant	Reproduces extremely fast, crowding out other shore plants; fills in a body of water very quickly	Plantings, seeds carried in bait buckets, boats, equipment, migratory birds
Snakeheads – fish from China	Voracious predator on fish of all kinds; known to eat ALL the fish in a lake	Bait buckets, aquariums
Zebra mussels – clam relative from Caspian Sea in Asia	Clog water intakes, boat outtakes, docks, boat bottoms; can cover any solid surface	Watercraft of all types and related equipment, water recreation equipment, fishing equipment (including bait buckets) and swimwear

Is OUR LAKE UNDER SIEGE?

YES! There are species of plants and animals that are invading waterways across the United States and threaten Lake Monticello's lakes and ponds as well. Some were brought from other countries, either accidentally or intentionally for other purposes, and have no natural enemies to keep them in check. Some are native to the United States, but have been inappropriately placed in situations that accelerate their growth and invasive tendencies.

Of immediate concern are the invasive Asian clams, gizzard shad, alewives, koi, Hydrilla and water hyacinth that already are present, and zebra mussels and others that have not yet colonized the lake but could be devastating if introduced. Even the muskrat that feeds off Asian clams can destabilize our dams and shorelines.



Hydrilla

Source: University of Florida, Center for Aquatic and Invasive Plants

FOR MORE INFORMATION

See these websites:

<http://www.invasivespeciesinfo.gov/unitedstates/va.shtml>

— General website with access to information on all invasive species threatening Virginia.

<http://www.vnps.org/links.htm#invasive> – Virginia Native Plant Society list of invasives. This website will also tell you appropriate native species to plant.

http://www.dcr.virginia.gov/natural_heritage/invspinfo.shtml —

Virginia Department of Conservation and Recreation information on invasive species

Zebra Mussels



Examples of three common shell varieties



The size of the zebra mussel is tiny compared to the enormity of damage it can cause.

Photo source: U.S. Department of Interior, U.S. Geological Survey website <http://nas.er.usgs.gov>

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HELP!

WE'RE BEING INVADED AND OUR LAKE IS AT RISK!

How We Can
Help Protect Our Lake