

Citizens' Guide
to
Nuisance Species
in
Kentucky

Guide Overview

The “Citizens Guide to Nuisance Species in Kentucky” was created to help Kentucky deal with the many problems associated with nuisance species. The purpose of the guide is to describe nuisance species problems in Kentucky and to provide educational information that can help prevent new introductions and the spread of nuisance species already in state.

What are nuisance species?

Non-native species, sometimes referred to as exotic, alien, or non-indigenous species, are species that have moved outside their native range. Approximately 15% of these species become serious “nuisances” and threaten native species and interfere with important commercial, agricultural, and recreational activities. Thus, they are called “nuisance species.” In their native environments, these species have “checks and balances,” such as predators, parasites, diseases, and competitors, that prevent them from dominating that environment and becoming “nuisances.” However, when they are introduced into a new environment, those natural “checks and balances” usually do not exist. This gives nuisance species a head start on native populations. Furthermore, Kentucky’s native species are not used to living with these new species, so oftentimes, they do not know how to eat them or compete against them. These advantages help populations of nuisance species grow to large numbers, and they can quickly outcompete and overrun native species. You may have seen for yourself or heard stories of zebra mussels completely covering hard surfaces in a lake, Eurasian watermilfoil plants forming mats so thick that people can no longer boat, fish, or swim, and bush honeysuckle crowding out all other plants in a forest. These are just three examples of nuisance species threatening Kentucky’s natural heritage.

How do nuisance species get here?

Some nuisance species, like zebra mussels, are introduced as far away as the Great Lakes and make their way through shipping canals and rivers to Kentucky. Others, like the Bighead carp, were intentionally stocked in other states, and made their way to Kentucky up the Mississippi River. Some nuisance species, like bush honeysuckle, were introduced in the eastern U.S. and have since spread westward to Kentucky. Garden and aquarium retailers and hobbyists, anglers, boaters, hunters, hikers, as well as horseback riders, can also introduce or spread nuisance species.

How do they spread?

After they reach Kentucky, nuisance species can hitch rides attached to boats, vehicles, and their associated equipment that we move around the state. Anglers can also unwittingly transport them in bait buckets and live wells. Anything that moves across the state, including birds, has the ability to carry nuisance “hitchhikers.” Once introduced, some nuisance species are able to move without any help. Fish can swim into

neighboring waters, and seeds and fragments of plants can move with wind currents or be carried in floods to new locations.

Why should we care?

Once established, nuisance species have major impacts on Kentucky and our ability to enjoy our beautiful state. These impacts are biological, economical, and aesthetic.

Biological impacts - Nuisance species have the ability to change Kentucky's habitats and the plants and animals that live in them. For example, plants like Eurasian watermilfoil form dense mats that shade out native plants. Zebra mussels smother the shells of native mussels making it difficult for them to survive, and they consume the tiny plants and animals that young fish eat as food. Forests overrun by nuisance plants like garlic mustard no longer support animals that depend on native plants for food and shelter.

Economic impacts – The costs to control nuisance species are extremely high and can further deplete limited management resources. Nuisance species can increase costs to business interests when they interfere with commercial fishing, aquaculture operations, logging, and agricultural operations. Furthermore, tourism dollars are lost when recreational experiences such as hunting, hiking, fishing, swimming, and boating are no longer possible or pleasant.

Aesthetic impacts – We must consider the loss of aesthetic value due to nuisance species that is felt by every citizen and/or visitor to Kentucky. For example, what dollar amount equals not being able to share a favorite hunting or fishing spot with a child or grandchild? How many future memories will be lost because hiking areas have been degraded? Although biological and economic loss can be measured through losses of biodiversity and dollar amounts, aesthetic loss to current and future generations cannot.

Is Kentucky vulnerable?

Make no mistake, Kentucky, with its abundance of aquatic and terrestrial resources, is vulnerable. We share a common border with seven other states (Missouri, Illinois, Indiana, Ohio, West Virginia, Virginia, and Tennessee), making their problems our problems and vice-versa. The state's mild climate and variety of habitats provide many opportunities for adaptable and tolerant nuisance species to thrive. Furthermore, the popularity of boating, fishing, hunting, hiking, horseback riding, gardening, and aquariums in the state assures the spread of nuisance species unless we all work together and take effective action as soon as possible.

What can I do to help?

The Kentucky nuisance species management plan identified key groups that are most likely to cause introductions and/or spread of nuisance species in Kentucky. Targeting and educating these and other groups, such as K-12 students, should help prevent the introduction and spread of nuisance species. The following is a list of target groups and

what these groups can do to help prevent introductions and spread. Always remember, the single most important way to prevent biologic, economic, and aesthetic loss in our state is to stop new introductions and the spread of nuisance species. Together, we can do it!

Anglers and boaters

Prevention:

- Only use live bait captured from the water body being fished.
- If using purchased live bait, never dump unused bait into the water body being fished (“bait bucket release”). Dump leftover bait on land, away from the water.
- Avoid boating or trolling through heavily vegetated areas. Cut motor and pole if possible.
- Never intentionally (and illegally) release any nuisance species.
- Remove any visible plants and animals from your boat, trailer, truck and other equipment (anchors, centerboards, rollers, axles, propellers, waders, etc.) before leaving any water body.
- Drain water from the motor, live-well, bilge and transom wells, and any other water from the boat and equipment before leaving any water body.
- Rinse boats, trailers, and equipment (including live-wells, bilge, and cooling systems) thoroughly with hard spray or HOT (105 degrees) water, like that found at a do-it-yourself carwash.
- Disinfect live wells, bilges, anchors, bait buckets, boat trailers and nets with a saltwater solution (1.25 cups of salt per 10 gallons of water) or hot water at least 105 degrees Fahrenheit. Don't drain this solution into lakes or streams. It can harm aquatic life.
- Dry boats, motors, trailers, and equipment thoroughly in the hot sun before using them again.

Hunters, hikers, and horseback riders

Prevention:

- Remove any visible plants and seeds from transportation sources, equipment, dogs, and clothing before leaving any area.
- Backcountry hunters and hikers using pack animals, and horseback riders should feed those animals only with locally certified hay. Out-of-state hay could easily contain nuisance species seed.
- Switch to bulb-shaped, or strap anchors on decoys since they won't collect submersed or floating plants as easily.
- Rinse transportation sources and equipment thoroughly with hard spray or hot (105 degrees Fahrenheit) water, like that found at a do-it-yourself carwash. Wash your dog with clean water and brush its coat.
- Due to the threat from CWD it is currently illegal to bring live cervids (including, but not limited to deer, elk, reindeer, and moose) into Kentucky from out of state sources. Whole carcasses of cervids harvested in CWD-positive states may not come into (or pass through) Kentucky unless the brain and spinal column have

been removed. For more information please visit www.kdfwr.state.ky.us/cwdfaq.asp.

- Never bring firewood into Kentucky from Michigan, Illinois, Indiana, Maryland, Missouri, Ohio, Pennsylvania, Virginia, West Virginia, and Wisconsin. These states are under a federal quarantine that restricts the movement of firewood out of those states. Furthermore, Kentucky state parks have banned firewood from these states. This effort is to control the spread of the emerald ash borer, an insect that threatens Kentucky ash trees.

Gardening and aquarium enthusiasts

Prevention:

- Do not release anything from the aquarium or garden (water, plants, fish or animals) into or near a body of water or storm drain. Explain to your children how you could be hurting all of the streams and lakes around the country and killing other plants, fish, and animals that already live in the water.
- Contact aquarium and garden retailers for proper handling advice or for possible returns.
- If you cannot find a home for the critters in your aquarium or water garden, freeze overnight and bury them. Dump any water into the toilet or yard, far away from storm drains.
- Make sure all gardens are properly contained.
- Verify that the plants and critters you buy for your yard, garden, or aquarium are not nuisance species. Replace nuisance species plants with non-nuisance alternatives or native plants. Some good Kentucky native alternatives can be found at the Kentucky Exotic Pest Plant Council website (www.se-eppc.org/ky/leastwant.htm).

There are other ways for individuals and groups to take action and stop the spread of nuisance species, from starting their own boat launch education program to helping remove nuisance plants. For more information contact Michael Mahala at michael.mahala@uky.edu or 859-523-9474.