Fall 2020

Non-Native News

A newsletter of the Aquatic Invasive Species Program of Douglas County

Purple Loosestrife and Biocontrol

What is That Pretty Purple Flower?

Purple loosestrife is an aquatic invasive species found in Douglas County and throughout Wisconsin. From July through September it is easy to spot purple loosestrife flower spikes, which are found primarily in wetlands and ditches. The flowers are indeed purple, and very pretty, and that is in fact how the plant reached the United States from Europe and Asia. Seeds were deliberately brought to the US and were sold as a garden plant. Seeds also came to the Great Lakes states through the ballast water (used for stabilization) from ocean ships, which then discharged their ballast water into the port in which they docked. Along with ballast water, the seeds from purple loosestrife and other invasive species come out and are dumped into harbors where they then germinate and grow. Eventually the plant escaped gardens and has had a negative impact on native wetland plants. Today, it is illegal in most states to sell purple loosestrife plants, seeds, or to transport the plant.

Like other invasive plants, purple loosestrife quickly overtakes native wetland areas which reduces plant variety and has negative impacts on animals that rely on native plants for food, shelter and nesting.

2 Million Tiny Seeds

One mature purple loosestrife plant can create millions of seeds per year! These seeds are tiny specks and drift on the water, are carried by the wind, or spread by wildlife and humans. Pieces of the roots and stems can create new plants making it the perfect aquatic invasive species!

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Purple loosestrife flower spikes
Photo: kingcounty.gov

Purple loosestrife seeds
Photo: mda.state.mn.us

Purple loosestrife can take over native wetlands Photo: theoec.org

Biocontrol

Biocontrol is short for “biological control” and is the science of controlling insects, plants and other living things with an organism. In short, it is the use of one species to control another. Years of research and testing are conducted before a living organism is used as a biocontrol in the environment. Scientists need to be certain that a creature from another country will, for example, eat only the desired plant, and not harm native plants.

Cella Beetles to the Rescue

Sometimes, when you have an invasive species from another country, scientists need to look to that country to find a predator that has co-evolved with it. In this case the predator is a leaf eating beetle called Galerucella calmariensis (“Cella” for short) that comes from Europe. Purple loosestrife is a host plant for Cella and this is the only plant that the beetles eat. The adult beetles eat the leaves which will weaken the plant but will not totally eradicate it. The beetles need to be re-established every few years. The females lay eggs on the leaves and stems from May to July. The hatching larvae feed between the leaves or flower buds and are hidden from predators. While the larvae feed, the leaf begins to look like a window pane. The larvae mature into adults and can fly for several miles searching for new purple loosestrife plants to feed on. When Cella beetles feed on purple loosestrife, they weaken the plant and lessen its’ ability to flower and make seeds.

Cella beetle eating purple loosestrife
Photo: Dara Fillmore

Scientists, school students, and volunteers have raised Cella beetles and released them into populations of purple loosestrife. To view a brief video of the release of hand raised Cella beetles click the link. Cella

Dara Fillmore works for the Wisconsin DNR in Superior and has taught people how to raise the Cella beetles. These volunteers have released hundreds of beetles into purple loosestrife areas. Dara says, “I was very happy to see much more beetle damage this year at the locations we did releases at last year!”

Bryan Crum (center) and Dara Fillmore (right) from WDNR are assisted by Anna Hall (left) from the Lake Superior NERR as they take volunteer-raised Galerucella beetles out for release onto invasive purple loosestrife on the St. Louis River in 2019. Photo: WDNR

Since 1997 volunteers in Wisconsin have been raising Cella beetles and releasing them into purple loosestrife infested wetlands. The process takes several steps.

First, a permit application must be submitted to the Wisconsin DNR because it is illegal to move purple loosestrife plants. Then, purple loosestrife plants are dug up and potted in the spring. The potted plants are then placed in a plastic “kiddie pool” filled with water and each plant is covered with netting to form a tent (see photo next page).

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Tents keep the beetles from escaping
Photo: WDNR

The beetles are collected from wild plants and 8 to 10 beetles are released into each tent. By June those 8 to 10 initial beetles will multiply to 800 to 1,000 beetles! In late June to early July the beetles are ready to be released to wild plants.

If you are interested in volunteering to raise and release Cellas, contact WDNR Water Resource Management Specialist:

Dara Fillmore: dara.fillmore@wisconsin.gov
715-392-7825.

Or contact:
Purple Loosestrife Biocontrol Coordinator
608-266-0061

Waterfowl Hunters Can Help Prevent the Spread of Aquatic Invasive Species

The 2020 waterfowl hunting season is fast upon us in Douglas County. In the Northern Zone, hunting for wild ducks begins September 26th. Since duck and goose hunters often use boats, canoes and kayaks to access their hunting sites or hike into wetlands, aquatic invasive species (AIS) prevention needs to be part of the hunting ritual.

Photo: mtstandard.com

Waterfowl hunters are a unique water user group with a real power to make a difference. By using artificial blind materials instead of plants, whether they happen to be native or not, they can prevent seeds and plant parts from spreading from one location to another.

As duck hunters know, a lot of mud can end up on gear, dogs, waders and boats! Removing as much mud as possible helps lower the risk of moving invasive pests, such as purple loosestrife seeds, pieces of Eurasian Water Milfoil, and the eggs or larvae of tiny invaders, such as spiny water fleas.

Don't Forget the Dog!

Don't foget to check your dog! Checking under a hunting dogs' vest can yield a surprising amount of seeds and tiny animals like snails that should be removed.

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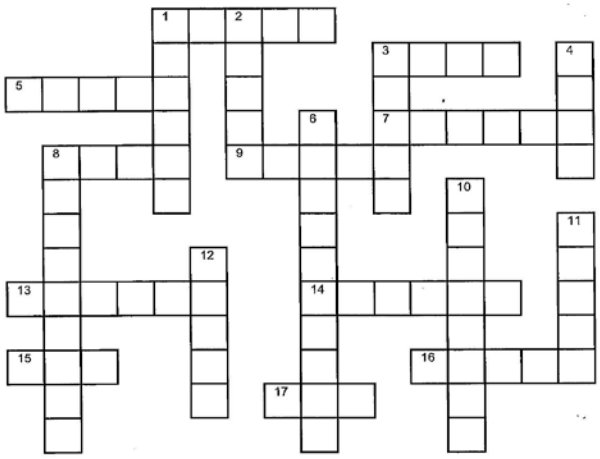
Preventative Actions

Just a few minutes of preventative action can protect our waters from invasive species. Before launching into and leaving a water body, hunters should:

- **Inspect** waders, boats, trailers, motors and hunting equipment, including boots, blinds, and dogs
- **Remove** all plants, animals, and mud to the best of their ability
- **Drain** all water from decoys, boats, motors, livewells and other hunting equipment
- **Never move** plants or live fish away from a water body
- A special consideration for waterfowl hunters is to remove all seed heads and roots when using vegetation for duck blinds. It is important to note that it is illegal to use Phragmites (known as Common Reed) in counties where the plant is listed as prohibited by NR40. In general, these counties include the western half of Wisconsin. Phragmites is an aggressive perennial and a non-native plant that out compete native plants and displaces wetland animals. Phragmites is easy to identify because it grows up to 18 feet tall and has large grass-like flowers and seed heads.

INVASIVE SPECIES CROSSWORD

Use your invasive species knowledge by filling in the crossword puzzle.



ACROSS

1. Seeds can get a free ride to somewhere new on bike and vehicle _____.
3. Fluffy seeds are blown by this.
5. Quagga and _____ mussels can attach themselves to boats and trailers.
7. _____ invasive species to 1-888-WEEDSBC.
8. If you find an invasive plant, do this, roots and all.
9. _____ patches of invasive plants are easier to control than large ones.
13. Name for kinds of plants and animals that have lived in an area for a very long time.
14. Places where we grow plants and where some can escape from.
15. _____ can make a difference!
16. Propellers and trailers for these can move invasive aquatic plants and mussels.
17. This is fed to horses and can contain invasive plants.

DOWN

1. Slow the spread by not riding bikes and ATVs off of these.
2. Many plants spread from these underground plant parts.
3. Invasive species come from other parts of the _____.
4. _____ such as goldfish and turtles can be invasive – don't let them loose!
6. Throw burrs picked off your pets and laces into one of these (2 words).
8. Invasive species spread so easily because there are few of these to eat and kill them.
10. Be sure to only burn _____ that was found near your campsite.
11. Invasive plants often each produce thousands of these.
12. _____ pigs cause damage to native plants by digging around for food.

Answers