

# WISCONSIN WILDCARDS



ALIEN INVADERS

W

# RAINBOW SMELT

## WHAT IS IT?

These slender fish are typically 6 to 8 inches long, with obvious teeth and a small fleshy fin on top of their body near the tail. They escaped into the Great Lakes from an inland lake in Michigan.

## WHAT'S THE PROBLEM?

These fish cause problems in our inland lakes, where they were probably used as bait and released. Adult smelt eat young walleye, and the young of both fish compete for the same food.

## WHAT CAN I DO?

- Learn how to identify rainbow smelt
- If you catch a rainbow smelt in an inland lake, kill it, and dispose of it in the trash
- Don't use live smelt as bait

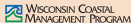
## WILD!

Fried smelt are tasty, but they smell like cucumbers when freshly caught!

[www.dnr.state.wi.us/org/caer/ce/invasives](http://www.dnr.state.wi.us/org/caer/ce/invasives)

Photo: John Lyons,  
WI DNR

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# WISCONSIN WILDCARDS



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# WHITE PERCH

## WHAT IS IT?

White perch look similar to native yellow perch and white bass, except they don't have distinctive stripes on their sides. Native to the Atlantic Coast, they invaded the Great Lakes through the St. Lawrence Seaway and the Welland Canal that bypasses Niagara Falls. They are a popular sport fish and are commercially harvested in the Eastern United States.

## WHAT'S THE PROBLEM?

They eat the eggs of native game fish like walleye and small mouth bass and compete with the adults for food and habitat.

## WHAT CAN I DO?

- Learn to identify white perch
- If you catch a white perch, kill it, and dispose of it in the trash

## WILD!

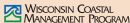
It is not really a perch, but actually a relative of the white, yellow and striped bass!

[www.dnr.state.wi.us/org/caer/ce/invasives](http://www.dnr.state.wi.us/org/caer/ce/invasives)

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# WISCONSIN WILDCARDS



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# CURLY-LEAF PONDWEED

*Potamogeton crispus*

## WHAT IS IT?

This underwater plant usually grows in lake water 3 to 10 feet deep. Its wavy leaves with fine-toothed edges make it appear “crispy.” It was accidentally introduced when common carp were stocked in North America.

## WHAT'S THE PROBLEM?

This invader grows well in cold temperatures, even under ice. It begins early in the spring, and shades out native plants, forming dense mats that make it tough to boat or swim. When curly-leaf pondweed dies back in mid-summer it releases nutrients, which can cause algal blooms and other problems. It's easily spread by boats and trailers.

## MANAGEMENT

- Physical removal
- Aquatic herbicides (with DNR permit only)

## WILD!

This plant peaks by Memorial Day, often dying back by the 4th of July!

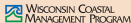
[www.dnr.state.wi.us/org/caer/ce/invasives](http://www.dnr.state.wi.us/org/caer/ce/invasives)

Main photo: V. Ramey, Center for Aquatic and Invasive Plants,  
University of Florida

Inset photo: F. Koshere, WI DNR

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## SPINY AND FISHHOOK WATERFLEAS

*Main photo shows view of fishhook (top) and spiny (bottom) waterfleas. Inset shows mass of waterfleas on a fishing line.*

### WHAT ARE THEY?

They are tiny (< ½ inch) crustacean predators that have long, spiny tails. They are native to Europe and Asia and were brought to the Great Lakes in water carried in the bottom of sea-going ships.

### WHAT'S THE PROBLEM?

They compete with small fish for food. Young fish have difficulty eating these waterfleas due to their long spiny tails. They collect in masses and foul fishing lines and equipment.

### WHAT CAN I DO?

- Learn to look for waterflea masses
- Clean waterfleas from your fishing line, and drain all water (livewells, bilges) before going to another waterbody

### WILD!

Some females can reproduce without males, and resting eggs in a dead female can survive for weeks out of water!

[www.dnr.state.wi.us/org/caer/ce/invasives](http://www.dnr.state.wi.us/org/caer/ce/invasives)

Main photo, Hank Vanderploeg, NOAA Great Lakes Environmental Research Laboratory

Inset photo: Minnesota Sea Grant

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# WISCONSIN WILDCARDS



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# ZEBRA MUSSEL

## WHAT IS IT?

These yellowish-brown clams—up to 2 inches long—have light and dark stripes on their “D” shaped shells. Native to the Baltic and Caspian Sea region of Europe, they came here in water carried in the bottom of sea-going ships.

## WHAT'S THE PROBLEM?

They attach to all hard surfaces, including boats and docks, and clog water intake pipes. They are filter feeders, taking plankton out of the water that young fish rely on for food. They produce tens of thousands of young mussels each summer, and can cover lake and river bottoms.

## WHAT CAN I DO?

- Learn how to identify zebra mussels
- If you find zebra mussels, dispose of them in the trash
- Drain all water (livewell, bilge) before going to another waterbody

## WILD!

They are one of the **ONLY** freshwater mussels that can attach themselves to solid objects!

[www.dnr.state.wi.us/org/caer/ce/invasives](http://www.dnr.state.wi.us/org/caer/ce/invasives)

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Photo: Great Lakes Sea Grant Network

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# WISCONSIN WILDCARDS



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# EURASIAN WATER-MILFOIL

*Myriophyllum spicatum*

## WHAT IS IT?

This underwater plant grows rapidly up to 20 feet long, and has thin stems with lots of feathery-looking leaves.

## WHAT'S THE PROBLEM?

Originally from Europe and Asia, it's now a problem in hundreds of Wisconsin lakes. It forms dense stands that entangle boat motor propellers, and interfere with other water recreation. It's easily spread by boats and trailers.

## MANAGEMENT

- Physical removal
- Aquatic herbicides (with DNR permit only)
- Biological control by milfoil weevils

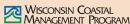
## WILD!

Out of the water it is as limp as spaghetti! This plant can spread from fragments only a few inches long.

[www.dnr.state.wi.us/org/caer/ce/invasives](http://www.dnr.state.wi.us/org/caer/ce/invasives)

Photo: Great Lakes Sea Grant Network,  
Exotic Species Graphics Library

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# WISCONSIN WILDCARDS

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# PURPLE LOOSESTRIFE

*Lythrum salicaria*

## WHAT IS IT?

This plant is 3'-7' tall and looks like a spike with small purple flowers. It likes to grow in wetlands, along lake shores, waterways, roadsides, and in other moist areas.

## WHAT'S THE PROBLEM?

Originally from Europe and Asia, this plant can grow so thick that it crowds out our native plants. Dense stands of purple loosestrife make it unsuitable for a wide variety of native wetland animals and wildlife.

## MANAGEMENT

- Hand pull small plants
- Cut and apply herbicide to stem (with DNR permit if near open water)
- Biological control by Galerucella beetles

## WILD!

One plant can produce over 2 MILLION seeds! It is able to re-sprout from broken stems that fall to the ground or into the water.

[www.dnr.state.wi.us/org/caer/ce/invasives](http://www.dnr.state.wi.us/org/caer/ce/invasives)

Photo: University of Minnesota Sea Grant

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# CROWN VETCH

*Coronilla varia*

## BASIC ID

This perennial legume has 2'-6' long stems with light pinkish-purple to white flowers. It blooms in summer, and produces long, narrow seedpods.

## IMPACTS

Native to Eurasia and Northern Africa, it has been planted along road and waterways as a bank stabilizer. It spreads rapidly via creeping stems and seeds to adjacent grasslands, and grows in dense patches, reducing native species.

## MANAGEMENT

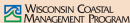
- Burn in late spring and then pull, spray, or mow
- Mow in late spring and early fall for several years consecutively
- Apply herbicide specific to legumes or broad-leaves

## FOR MORE INFORMATION

[www.dnr.state.wi.us/org/land/er/invasive](http://www.dnr.state.wi.us/org/land/er/invasive)

Photo: Kelly Kearns, WI DNR

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# WISCONSIN WILDCARDS

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# AUTUMN OLIVE

*Elaeagnus umbellata*

## BASIC ID

This large shrub can reach heights of 20', with oval-shaped 1" to 3" leaves. Leaves and twigs have coppery/silvery scales. It produces small pink to red fruits late in the season.

## IMPACTS

Native to Asia, it has been planted along highways and to provide wildlife habitat. It can become abundant in disturbed areas, fields, prairies, woodlands, and forest edges and crowds out wildflowers, shrubs and tree seedlings.

## MANAGEMENT

- Hand-pull young plants in early spring
- Cut stems and apply herbicide to stumps
- In large patches, spray foliage with brush herbicide

## FOR MORE INFORMATION

[www.dnr.state.wi.us/org/land/er/invasive](http://www.dnr.state.wi.us/org/land/er/invasive)

Photo: Elizabeth Czarapata

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# WISCONSIN WILDCARDS

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# LEAFY SPURGE

*Euphorbia esula*

## BASIC ID

This perennial has stems 6"-36" tall, with bluish-green leaves and yellow-green flowers. It has a milky white sap that can cause dermatitis.

## IMPACTS

Native to Eurasia, leafy spurge can dominate native grasslands and pastures. It prefers sunlight and dry, light soils but can occur in a wide variety of sites. It is toxic to cattle.

## MANAGEMENT

- Hand-pulling is not effective because the entire root system, which can reach 15 feet deep, must be removed
- Apply specific herbicides repeatedly over many years
- Biological control via insects and goats

## FOR MORE INFORMATION

[www.dnr.state.wi.us/org/land/er/invasive](http://www.dnr.state.wi.us/org/land/er/invasive)

Photo: Elizabeth Czarapata

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# SPOTTED KNAPWEED

*Centaurea maculosa* (syn. *C. biebersteinii*)

## BASIC ID

This biennial or short-lived perennial's flowering stems range from 2' to 4' in height. Small thistle-like, pinkish-purple flower heads occur at the tip of each stem.

## IMPACTS

Native to Eurasia, it was introduced accidentally through seed stock. It invades roadsides and fields and can be very invasive in dry prairies, barrens, and dunes. It produces a chemical that kills neighboring plants.

## MANAGEMENT

- WEAR LEATHER GLOVES—Pulling with bare hands is believed to cause illness!
- Dig or pull entire root system
- Treat with hot prescribed burns
- Apply herbicide specific to broadleaf or composite plants

## FOR MORE INFORMATION

[www.dnr.state.wi.us/org/land/er/invasive](http://www.dnr.state.wi.us/org/land/er/invasive)

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Photo: WI DNR

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# JAPANESE KNOTWEED

*Polygonum cuspidatum*

## BASIC ID

This herbaceous perennial has hollow, bamboo-like stems, heart-shaped leaves and greenish-white flowers. It forms large clones that range in height from 4' to 10' and can cover several acres. It spreads vegetatively through long rhizomes.

## IMPACTS

Originally from Japan, this plant invades stream banks, lakeshores, wetlands, grasslands, and woodlands. Emerging early and growing tall, it prevents sunlight from reaching native plants.

## MANAGEMENT

- Small stands—cut repeatedly over many years
- Large stands—spray new foliage with herbicide

## FOR MORE INFORMATION

[www.dnr.state.wi.us/org/land/er/invasive](http://www.dnr.state.wi.us/org/land/er/invasive)

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# COMMON REED GRASS

*Phragmites australis*

## BASIC ID

This perennial reed grass, with gray-green leaves, is found most often in large colonies, ranging in height from 6' to 13'. It has a large light-brown to purple flower spike that appears between July and September.

## IMPACTS

It is native to every continent except Antarctica, but research indicates that most aggressive stands are not native. It is found most commonly in and near marshes, swamps, fens, shorelines, and roadside ditches growing in thick patches. It blocks out native species.

## MANAGEMENT

- Apply herbicides to young leaves or cut stems
- Cut repeatedly over several years

## FOR MORE INFORMATION

[www.dnr.state.wi.us/org/land/er/invasive](http://www.dnr.state.wi.us/org/land/er/invasive)

Photo: Kelly Kearns,  
WI DNR

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# CAT-TAILS

*Typha* species

## BASIC ID

These perennial aquatic plants can grow up to 10'. *Typha latifolia* (1), the broad-leaved cat-tail, has pale green leaves about ½" wide. Leaves of *T. angustifolia* (3), the non-native narrow-leaved cat-tail, are deeper green and about ¼" wide. The non-native species has an upper male flower spike and lower female spike. *T. x glauca* (2) is a hybrid, blending the characteristics of *T. latifolia* and *T. angustifolia*.

## IMPACTS

Only *Typha latifolia* is native here. All species can be aggressive because of their abundant seeds and rhizomes, but the non-native species present the greatest threat. They can dominate shorelines, ditches and wetlands and crowd out other plants important to fish and wildlife.

## MANAGEMENT

- Fluctuate water levels
- Cut, graze, or burn and apply selective herbicides

## FOR MORE INFORMATION

[www.dnr.state.wi.us/org/land/er/invasive](http://www.dnr.state.wi.us/org/land/er/invasive)

Photo: (R) Kelly Kearns  
(M, L) Elizabeth Czarapatta

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# ASIAN LONGHORNED BEETLE

*Anoplophora glabripennis*

## BASIC ID

Adult beetles are jet black with white spots, long antennae, and are up to 1¼" long. The worm-like larvae are cream-colored, can be nearly 2" long, and are found under the bark of many species of trees.

## HISTORY

Native to Asia, this insect was probably imported in cargo shipment packing material. It hasn't been found in Wisconsin, but occurs in Illinois and New York.

## HABITS

Eggs are laid on trees in the summer. Larvae hatch and feed under the bark in the summer and fall. Adults emerge from trees in the spring through large round holes. There is probably one generation per year.

## MANAGEMENT

Contact the Plant Protection Section (DATCP) at 1-800-462-2803 or your regional DNR forest health specialist.

## FOR MORE INFORMATION

[www.na.fs.fed.us/spfo/alb](http://www.na.fs.fed.us/spfo/alb)

Photo: Kenneth R. Law,  
USDA APHIS PPQ

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# EMERALD ASH BORER

## *Agrilus planipennis*

*Inset photo shows galleries made by the emerald ash borer under tree bark.*

### BASIC ID

Adult beetles are narrow, metallic green, and about ½" long. The worm-like larvae are cream colored, up to 1" long, and are found under the bark of ash trees.

### HISTORY

Native to Asia, this insect was probably imported in cargo shipment packing material. It hasn't been found in Wisconsin, but occurs in Michigan, Ohio and Canada.

### HABITS

Eggs are laid on ash trees in the summer. Larvae hatch and feed under the bark in the summer and fall. Adults emerge from trees in the spring through D-shaped exit holes, and can be seen from mid-May to late July. There is probably one generation per year.

### MANAGEMENT

Contact the Plant Protection Section (DATCP) at 1-800-462-2803 or your regional DNR forest health specialist.

### FOR MORE INFORMATION

[www.na.fs.fed.us/spfo/eab](http://www.na.fs.fed.us/spfo/eab)

Photo: David Cappaert,  
Michigan State University

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# HEMLOCK WOOLLY ADELGID (HWA)

*Adelges tsugae*

## BASIC ID

This foreign pest has not been found in Wisconsin, but is common in the eastern and northwestern U.S. HWA attacks only hemlocks. This tiny insect produces a white cottony material at the base of hemlock needles. Feeding causes needles to drop prematurely and eventually kills the hemlock.

## MANAGEMENT

There are few effective pesticides for HWA and none that are practical for forests. The best protection is to keep it out of Wisconsin. Buy only hemlock certified free of HWA.

## FOR MORE INFORMATION

Contact the Plant Protection Section (DATCP) at 1-800-462-2803 or your regional DNR forest health specialist.

Photo: Dennis J. Souto,  
USDA Forest Service

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# WISCONSIN WILDCARDS



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# MOVING FIREWOOD

*Antheraea polyphemus*

## THE ISSUE

Trees killed by insects or fungi may harbor these organisms for months after the tree has died. Moving infested firewood can introduce pests to new areas. Many forest pests including the fungus that causes oak wilt, the gypsy moth and emerald ash borer have all been transported on firewood.

## MANAGEMENT

Don't move firewood for a minimum of one year after a tree has died or until the bark has fallen off. To hasten bark deterioration, stack firewood in a sunny location and cover it with a 4mil or thicker plastic or tarp. Secure the plastic around the base of the pile to keep emerging insects from escaping. Heat from the sun will deteriorate the bark. Also, don't move firewood that harbors gypsy moth egg masses.

## FOR MORE INFORMATION

Contact your local DNR forest pest specialist.

Photo: USDA Forest Service,  
J. Cummings Carlson

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