

WHERE ARE THEY?

Most invasive thistles were introduced to North America via seed from Europe/Asia. Their fluffy seeds are spread to new areas by wind, wildlife, humans, and other disturbance (Canada thistle also spreads by creeping roots).

Look for thistles in a wide variety of landscapes, from disturbed and developed areas like roadsides, yards, and agriculture fields, to natural areas like lakeshores. Depending on the species, they can grow in dry to wet conditions.

FOR MORE INFORMATION...

To report an invasive location or learn more contact your local conservation partner listed below, or go online:

www.michigan.gov/invasives
dnr.wi.gov/topic/Invasives.

Invasive Thistles

(*Cirsium spp.*, *Carduus spp.*)



Bull Thistle, © Rob Routledge, Sault College, Bugwood.org

A GUIDE TO INVASIVE THISTLE IDENTIFICATION IN NORTHERN MICHIGAN AND WISCONSIN

This brochure is produced by the Wild Rivers Invasive Species Coalition with funding in part from the WI DNR Weed Management Area Private Forest Grant, and the Michigan Invasive Species Grant Program through the Departments of Natural Resources, Environmental Quality, and Agriculture and Rural Development.



THISTLES

Wisconsin and Michigan have several species of non-native invasive thistles, as well as beneficial native species. Invasive thistles can:

- Invade open areas including fields, prairies, wetlands, forest openings, and roadsides,
- Degrade natural ecosystems,
- Displace native vegetation,
- Impact agricultural and pasture lands.

On the other hand, native thistles provide important food for native insects and birds. This guide will help to distinguish select species with key characteristics like flower size/color, leaf shape/color, and presence/absence of thorns.

NATIVE THISTLES

Here are a few of the native thistle species found in northern MI and WI.

PITCHER'S THISTLE

Cirsium pitcheri

Also called Dune Thistle, this **RARE** monocarpic perennial is **Federally Threatened** and only found on sand dunes of Great Lakes beaches.

Stems: Covered with dense, **white fuzz**; grows 3-7' tall, but usually short.

Leaves: Deeply divided into long lobes, whitish.

Flowers: Typically **white to cream**, occasionally pink/magenta, 1.5" wide, in clusters.

Photos © Christopher Noll; UW-System WisFlora. 2015



MORE NATIVE THISTLES

PRAIRIE THISTLE

Cirsium discolor

Also called Field or Pasture thistle, this biennial (or short-lived perennial) is found in full sun habitats with moderate moisture, including disturbed areas.

Stems: Covered in white hairs, 2-8' tall.

Leaves: Deeply lobed and spiny; green above but **powdery white below**.

Flowers: Light pink (rarely white), 2" wide and on individual stems, **with golden spines**.



Photos
Left: ©
Christopher
Noll; Right: ©
Derek
Anderson
UW-System
WisFlora.
2015

SWAMP THISTLE

Cirsium muticum

A biennial, native Swamp or Fen Thistle is found in full sun in alkaline swamps, wetlands, and low forests.

Stems: **Spineless**, ridged, slender, well-branched; 2-7' tall

Leaves: Deeply lobed, nearly spineless, with occasional spines on lobe tips. Lower leaf surface is usually pale green/whitish.

Flowers: Deep purple/pink, 1.5" wide, **spineless bracts**, and **white-wooly webbing**.



© Top: Emily Anderson (WRISC); Bottom: Nicole Shutt, USDA Forest Service;

CANADA THISTLE

Cirsium arvense

The only true perennial invasive thistle!

Its creeping roots spread up to 10-12' per year, forming solid, dense stands.

Plants grow 2 to 6.5 feet tall and can spread by seeds and root fragments. Canada Thistle is a fairly common invader of disturbed areas in WI and MI.

Stems: Grooved, **smooth stems** without spines or prickles seen on other species.

Leaves: Simple, alternate, lance-shaped, and irregularly lobed. Surface is **smooth but edges are wavy** and toothed with spines.

Flowers: Blooms June-September with many small, purple to pink flowers (0.5-0.75"). No spines on flower heads.

Control: Herbicides can help to kill the entire root system. Digging and cutting will only stimulate growth.



Photos top and middle: © Leslie J. Mehrhoff, University of Connecticut, Bugwood.org. Bottom: © Rob Routledge, Sault College, Bugwood.org

Legal Status MI: Noxious Weed
WI: Noxious Weed, Restricted Invasive

Invasive Thistle Species To Control!

EUROPEAN MARSH THISTLE

Cirsium palustre

A biennial or monocarpic perennial, these aggressive colonizers prefer moist soil but grow in a wide range of areas, even tolerating some shade.

Look for basal rosettes in first year plants and 2nd year plants 4-6' tall (or more). This plant is common in northern parts of WI/MI, but rare farther south.

Stems: Winged and **spiny**. Plants often covered in sticky hairs. Mature plants have a **"spindly" branching** pattern.

Leaves: Basal leaves are spiny, long, and deeply lobed, with hair on the underside. Can have red-purple edges. Adult plant leaves are 6-8 inches long near the base, shorter toward the top.

Flowers: Blooms June-August. **Clusters of 12+ small purple flowers** (up to 0.75" wide each).

Control: Plants can be killed by herbicide, digging, or pulling.

Photos by WRISC staff Jacob Coe (top), and Emily Anderson (middle, bottom)

Legal Status MI: Not Regulated
WI: Restricted/Prohibited Invasive



BULL THISTLE

Cirsium vulgare

A biennial, bull thistle can produce very large, bushy-looking plants with large taproots.

Look for basal rosettes in 1st year; 2nd year plants are typically 1-5' tall. Bull thistle is a common invader of disturbed areas across much of the US.

Stems: Winged and **spiny**, similar to European Marsh Thistle.

Leaves: **Very hairy** (coarse on top, soft underneath), deeply lobed with narrow teeth and lobes tipped with spines.

Flowers: Blooms July-August, typically a few weeks after other thistles. Purple flower heads are 1-2" wide, with bracts **tipped in long, stiff spines**.

Control: Manage seed production with mowing, or kill plants with herbicide, digging or pulling.

Top and bottom photos by Emily Anderson (WRISC), middle photo © Michael Shephard, USDA Forest Service, Bugwood.org

Legal Status MI: Noxious Weed
WI: Not Regulated



MUSK THISTLE

Carduus nutans

Also called Nodding Thistle, this biennial can reach 7' tall and produce 1,200 seeds per flower.

Less common in most of WI and MI.

Stems: Multi-branched stem that appears winged.

Leaves: Coarsely lobed and slightly wavy, with spines at lobe tips. Surface is **smooth**/waxy, not hairy.

Flowers: Red to purple, **large flower** heads, typically 1.5-3" across. Mature flowers are bent over or "nodding."

Legal Status MI: Noxious Weed
WI: Restricted Invasive



Photos above by Emily Anderson (WRISC)

PLUMELESS THISTLE

Carduus acanthoides

A biennial similar to Musk Thistle except for flowers and hairy leaves. Less common in most of WI and MI.

Stems: Tough and spiny with leaf-like spines.

Leaves: Dark green, deeply lobed, with hair on the undersides and spines along the leaf margins.

Flowers: Reddish purple, **small flowers** (0.3-1"), solitary or in clusters of 2-3. Flower bracts appear as **sharp spines**.

Legal Status MI: Noxious Weed
WI: Restricted Invasive



Photos above © Todd Pfeiffer, Klamath County Weed Control, Bugwood.org