

Native and exotic thistles: Who's Jeckyl, who's Hyde?

Five species of exotic thistles are found in Montana, and some of them are quite problematic across a variety of habitats. In addition to exotic thistles, there are ten thistles native to Montana that can be difficult to distinguish from the troublesome exotics! Why is it important to distinguish exotic from native thistles? Exotic thistles can spread quickly, especially with disturbance, they have poor forage value, and their sharp spines can injure livestock and limit recreational activities. In contrast to exotics, native thistles are rarely or ever reported as invasive and play an important role in the ecosystem. For example, birds feed on thistle seed, and some birds time their nesting around thistle flowering because they use the downy seeds to line their nests. Bees, wasps, flies and beetles feed on thistle pollen and become food sources for other wildlife, and some native thistles are forage for deer and elk. In addition, native thistles fill a niche in the plant community. Consider the innocuous native wavyleaf thistle, *Cirsium undulatum*, which may occur on roadsides. It's often sprayed because it's assumed to be a troublesome exotic; once removed the resulting open niche may be filled by an exotic plant that may be noxious (or just obnoxious!) and hard to control. Answer the following questions to distinguish exotic thistles from native thistles. When in doubt, contact the MSU Schutter Diagnostic Lab (406-994-5150; <http://diagnostics.montana.edu>) for help with identification, and try sending a photo to plantid@montana.edu (a less painful option than submitting a plant).

1) Does the thistle have rhizomes?

Yes? It's the exotic Canada thistle (*Cirsium arvense*), the only rhizomatous thistle in Montana. Heads are small and clustered, and there are no spiny wings on stem.

No? Continue to question 2.

2) Does the thistle have spiny wings the entire length of the stem?

Yes? It's one of four exotic thistles. Review the key diagnostic features and photos below.

Bull Thistle (*Cirsium vulgare*). Narrow, needle-like bracts, green foliage.

Musk thistle (*Carduus nutans*). Broad triangular bracts point outward or down, heads are often nodding. There may be an expanse immediately below the flower head without spiny wings, but you will see them lower on the stem.

Plumeless thistle (*Carduus acanthoides*). Flower heads in clusters so each flower stalk is ≤ 0.75 inches, each head measures ≤ 1 inch in diameter

Scotch Thistle (*Onopordum acanthium*). Foliage silver gray in appearance, plants may grow up to 12 feet tall, spiny wings especially prominent.



Exotic thistles, except Canada, have spiny wings on the stem

No? You likely have a native thistle. To read descriptions of native thistles see "Manual of Montana Vascular Plants" (2012) by Peter Lesica. To confirm identity, submit it to the MSU Schutter Diagnostic Lab.



Bull thistle (LT Kok)



Musk thistle (B Haynold)

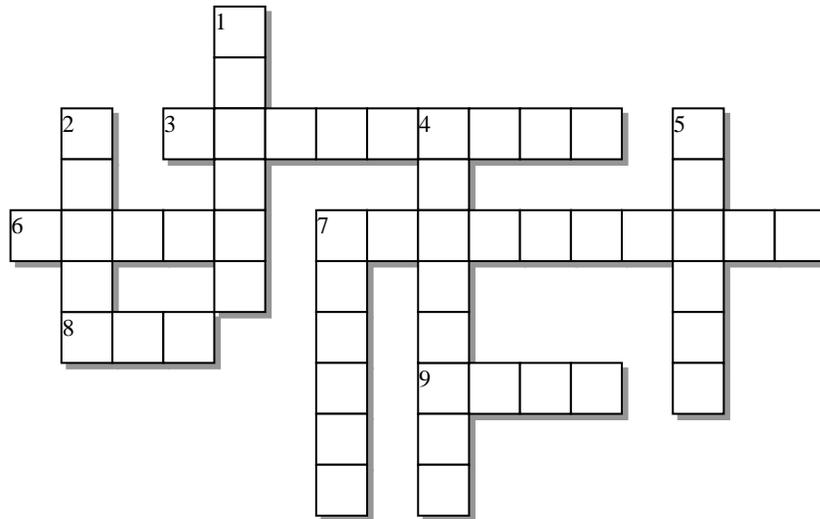


Spiny Plumeless (G Piper)



Scotch thistle (S. Dewey)

Weed Post Puzzle: Text your knowledge of Native and Exotic Thistles



Across:

- 3 - Some birds time their nesting around this stage of thistle growth
- 6 - Removing a native thistle opens up a _____ for other species to fill in
- 7 - Native thistles have a spine on the stem here or there, but they are not rhizomatous and they lack these along the entire stem length (two words)
- 8 - These large ungulates often feed on native thistles
- 9 - This thistle has bracts that are broad at the base, forming a triangular bract unlike any other native or exotic thistle

Down:

- 1 - Bees, flies and wasps feed on thistle _____
- 2 - There are _____ as many native as exotic thistles in Montana
- 4 - Spiny plumeless thistle has small clustered heads like Canada thistle, but it has spiny wings the entire stem length and no _____
- 5 - The only rhizomatous thistle in Montana
- 7 - This thistle is the poster child for spiny wings, and check out that silvery gray foliage

Solutions are posted to the MSU Extension Invasive Rangeland Weed website:

<http://www.msuextension.org/invasiveplantsMangold/extensionsub.html>

