

Thistles

By Megan Lowery, West Greeley Conservation District

Several non-native species of thistle which threaten agriculture and natural areas have created a bad name for all thistle species including native species that provide value for pollinators, seed feeders, wildlife browsers, and native plant diversity. Because people assume all thistles are bad, the good, native species are often pulled, mowed, or sprayed with herbicides indiscriminately. In Colorado, there are 15 native and 5 non-native thistle species. The native species include Flodman's thistle, Platte or prairie thistle, wavyleaf thistle, and yellowspine thistle; while the non-native species include bull thistle, Canada thistle, musk or nodding thistle, and Scotch thistle.

Flodman's thistle (*Cirsium flodmanii*) is a rare plant found only in eastern Colorado. It is found in moist meadows, pastures, and disturbed areas from 4,800-8,500 feet in elevation. The leaves are highly lobed with wavy margins and with a grayish coloring on the underside. Flowers are deep purple in color. Plants have a solitary flowering head. This species is easily confused with Canada thistle.

Platte or prairie thistle (*Cirsium canescens*) is found statewide on sandy or gravelly soils in upland prairies from 3,500-9,000 feet in elevation. This species is biennial, meaning the first year's growth is a rosette and bolts and flowers the following season. Leaves are blue-green in color and are long-decurrent on the stem, meaning the leaves continue down the stem beyond the point of attachment. Phyllaries (bracts are the base of the flower) are tipped with a yellow, reflexed spine (bending away from the flowering head). Flowers are yellowish-white or rarely pale lavender or pink.



Flodman's thistle

Wavyleaf thistle (*Cirsium undulatum*) is found statewide on sandy, gravelly soils of canyon bottoms, foothills, and sagebrush communities from 3,500-9,000 feet in elevation. This species can be either a biennial or a short-lived perennial. Leaves are grayish in color, highly lobed with wavy margins, and are not long-decurrent on the stem. Flowers are purple or cream in color with narrow phyllaries with reflexed spines. This species is confused with yellowspine thistle, but has a solitary flowering head.

Yellowspine thistle (*Cirsium ochrocentrum*) is found on the eastern plains and Middle Park of Colorado at dry locations of prairies and the piedmont valley from 3,500-9,000 feet in elevation. This species can be either a biennial or a short-lived perennial.

Leaves are deeply lobed with prominent yellow spines and have a long-decurrent leaf base on the stem. Individual stems are densely leafy. Flowers are reddish purple, purple, pink, or rarely white. Phyllaries have stout, yellow, reflexed spine tips that darken as they mature. Yellowspine is often confused with wavyleaf thistle, but forms clumps with multiple stems.

Bull thistle (*Cirsium vulgare*) is a noxious (Colorado Noxious Weed List B) weed found statewide in wet, shaded areas. It is a large biennial, growing up to six feet in height during the second season's growth. Leaves are clasping, deeply lobed, spiny, hairy, and decurrent. Flowers are purple and phyllaries are cobwebby-pubescent (hairy).

Canada thistle (*Cirsium arvense*) is a noxious (Colorado Noxious Weed List B) weed found statewide. It is a perennial which reproduces via seed and rhizomes (underground horizontal roots). Leaves have shallow lobes, wavy margins, and

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cobwebby hair. Flowers are pink, purple, or rarely white with appressed phyllaries (lying flat against the flowering head). Canada thistle can reach heights of up to six feet tall.

Musk or nodding thistle (*Carduus nutans*) is a noxious weed (Colorado Noxious Weed List B) found statewide. It is a biennial that can reach heights of up to eight feet tall. Leaves are somewhat lobed, wavy, margins outlined in white prominent, and a light green mid-vein with long-decurrent base. Flowers are purplish with one flowering head per stem and subtended by broad, spreading, pinecone-line bracts.

Scotch thistle (*Onopordum acanthium*) is a noxious weed (Colorado Noxious Weed List B) found statewide in disturbed sites and roadsides. It is an extremely spiny biennial that can reach heights up to 12 feet tall. It can form dense stands too thick for livestock or wildlife to walk through. Leaves, particularly in the rosette stage, are covered with white hair giving them a blue-gray appearance. Flowers are large and purple with cobwebby, reflexed phyllaries which appear spine-like.

Non-Native Thistle Control

All four non-native species are found on the Colorado Noxious Weed List B. Species on this list have been identified as requiring a management plan to stop their continued spread with local governments

Continued on page 8

CAN YOU ID THESE THISTLES?

⇒ Match the name with the correct photo.

- Scotch thistle—noxious
- Bull thistle—noxious
- Platte or Prairie thistle—native
- Wavyleaf thistle—native

Answers are on page 8.



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and citizens encouraged to manage these species.

Bull, musk, and Scotch thistles are biennial, taprooted plants, reproducing prolifically from seed. The key to managing these species is to prevent seed production and eventually the seed bank in the soil will be depleted. Seed viability is approximately 10 years which requires long term management. Once flowering has begun, plants or seed heads should be bagged and disposed of to prevent seed dispersal.

Canada thistle is a perennial species often requiring several seasons of management for effective control. Due to reproduction via rhizomes, mechanical treatments (hand pulling, shallow tillage, and mowing) are often ineffective or even counterproductive unless the outbreak is very small or caught very quickly. Several seasons of herbicide application or long term biological control (insect agents or grazing) will weaken the plant and allow for effective management.

Other species are often mistaken for thistles, particularly prickly lettuce (*Lactuca serriola*) and prickly poppy (*Argemone polyanthemus*). These species have wavy, spiny leaves similar in appearance to many thistles. Before controlling any species, it is important to properly identify the plant.

Canada thistle control, CSU Factsheet

www.ext.colostate.edu/pubs/natres/03108.html

Musk thistle control, CSU Factsheet,

www.ext.colostate.edu/pubs/natres/03102.html

CAN YOU ID THESE THISTLES?

answers

B: Scotch thistle—noxious

D: Bull thistle—noxious

C: Platte or Prairie thistle—native

A: Wavyleaf thistle—native

