

EE. Musk Thistle (“Nodding Thistle”) (*Carduus nutans*)

Key Characteristics:

Musk thistle is a member of the Sunflower family. Introduced from Eurasia, it is a winter annual or biennial which reproduces by seed. The first year's growth is a large, compact **rosette** from a large, corky **taproot**. The second year stem is erect, spiny, 2 to 6 feet tall. The waxy **leaves** are dark green with a light green midrib and mostly white margins. Purple or magenta **composite flowers** sit solitary on stems, nodding when mature, with pinecone-like prickly bracts below.



Locations:

This species of thistle was once very widespread in Pitkin County but has been drastically reduced by the Seed Head Weevil, *Rinocyllus Conicus*. The plant still occurs on Hwy-133 and in a few areas in Old Snowmass.

Biological control:

When possible, it is best release more than one type of insect on a weed since each type may work on a different part of the plant. Insects currently available for Musk Thistle control include:

- **Musk Thistle Seed Head Weevil**, *Rhinocyllus conicus*, is widespread in Colorado. Larvae of this insect destroy developing seeds but are not 100 percent effective by themselves. The weevil normally impacts seed production by about 50 percent. Herbicides can be combined with weevils if the insects are allowed to complete their life cycles. Unfortunately, *R. conicus* will also attack native thistle populations.
- **Thistle Rosette Weevil**, *Trichosiocalus horridus*, attacks the crown area of musk thistle rosettes and weakens the plant before it bolts. This weevil has reduced stand density in areas where it has become well established.
- **Defoliating Beetle** (*Cassida rubiginosa*) eats the leaves of Canada, Musk, Plumeless Thistles.

Cultural control:

Mitigate soil disturbance and encourage desirable plant growth.

Mechanical control:

Mowing, cutting, digging, pulling or cultivation are all effective if done prior to flowering.

Chemical control:

The best timing for chemical control is when plants are in the rosette or early bud stages. Effective control may require applications in both the spring and fall. Contact Pitkin County Land Management Department for more specific information about herbicide products, application rates, and equipment calibration.

Native Look-Alikes:

There are several Native Thistles in Pitkin County which may be confused with Musk Thistle. See Appendix B for more information about Native Thistles.