# Invasive Plants in Pennsylvania

# Bull Thistle

*Cirsium vulgare* (Savi) *Ten.*

Photo: Western New Mexico University, Dept. of Nat. Sci. & Dale A. Zimmerman Herbarium

## Background:

Thought to have been introduced to eastern North America during colonial times and western North America during late 1800s.

## Range:

This plant is native to Europe, western Asia and northern Africa. It can now be found on every continent except Antarctica, and it is present in all 50 states in the U.S., although it is not as common in the southern states as it is in the north.

pennsylvania
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
www.dcnr.state.pa.us

## Description:

Stems grow up to seven feet tall and have lance shaped, hairy leaves that are three to 12 inches long. There are lobes on each leaf, and they are tipped with stout spines. Flower heads are purple and one to two inches across. They appear from June to September.

Photo: Steve Dewey, Utah State U., www.invasive.org

## Habitat:

This plant has the ability to become established in a wide variety of areas, especially ones that have been disturbed, like clearcuts, riparian areas and pastures.

## Biology and Spread:

Bull thistle reproduces and spreads exclusively by seed. Plants produce 100 to 300 seeds per flower head, with up to 400 flower heads per plant. Seeds exhibit features that are suited for wind dispersal. Roughly 90 percent of seeds land within a distance of 1.5 times the height of the parent plant, however up to 10 percent of seeds produced do travel over 80 feet.

## Ecological Threat:

Bull thistle has the potential to form dense thickets that displace and prevent native vegetation from establishing. The spiny features of the plant also make it unpalatable to wildlife and livestock, reducing forage land available.

Photo: Steve Dewey, Utah State U., www.invasive.org

## How to Control this Species:

Prevention

Prevention should be the first goal in any control efforts for this plant. Equipment and gear need to be extensively cleaned after use in an infested area, to prevent seed transport. Use of weed-free seed should also be conducted.

Manual and Mechanical

Manual removal of plants via hand pulling, tilling and hoeing can be effective, but care should be taken to conduct these measures before flowering, in order to prevent seed production and spread. Slicing off the root crown has proven to be very effective at controlling this plant.

Chemical

Herbicides are most effective at controlling infestations when incorporated as part of a long-term, multifaceted control effort. Herbicide applications should be optimally timed in order to have the greatest effect.

Regardless of the control measures taken, reestablishing competitive, desirable vegetation to the site is critical.

## Look-A-Likes:

Native species of thistle (*Cirsium* sp.), some of which are rare, could be confused with bull thistle. Before control is attempted, the thistle species in question should be accurately identified.


Chris Evans, River to River CWMA
www.forestryimages.org

## References:

*Zouhar, Kris. 2002. Cirsium vulgare. In: Fire Effects Information System. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory:* http://www.fs.fed.us/database/feis

*Center of Invasive Species and Ecosystem Health*: www.invasive.org

## For More Information:

*DCNR Invasive Species Site:* http://www.dcnr.state.pa.us/conservationscience/invasivespecies/index.htm

*DCNR Invasive Exotic Plant Tutorial for Natural Lands Managers:* http://www.dcnr.state.pa.us/forestry/invasivetutorial/canada_thistle.htm

*Plant Invaders of Mid-Atlantic Natural Areas, National Park Service,* http://www.nps.gov/plants/alien/pubs/midatlantic/midatlantic.pdf

*Invasive Plants Field and Reference Guide, U.S. Forest Service*: http://na.fs.fed.us/pubs/misc/ip/ip_field_guide.pdf