

Invasive Plants in Pennsylvania

Black, Brown and Spotted knapweed

Centaurea nigra L., *C. jacea* L. and *C. stoebe* L. spp. *micranthos*



Brett Pifer, DCNR - BOF

Background:

These species are native to Europe and Russia. No one is sure when brown knapweed (*C. jacea*) was introduced to North America. Black knapweed (*C. nigra*) and spotted knapweed (*C. stoebe*) were introduced in the late 1800s.

Range:

C. stoebe can be found throughout 48 states. *C. jacea* and *C. nigra* exhibit similar ranges in the U.S., including the northeastern states and MT, ID, WA, OR and CA.

Habitat:

These plants are common in open fields, roadsides, woods and disturbed habitats.

Description:

These herbaceous plants are either biennial or perennial with pink to purple flowers that are roughly half an inch across and resemble small pineapples. They flower from June through October. Plants grow one to four feet high. They typically form a basal rosette of leaves in the first year and flowers in subsequent years. Individual plants can live up to nine years.



Brett Pifer, DCNR - BOF

Look-a-Likes:

Knapweeds may be confused with thistles (*Cirsium* spp.), especially from a distance. Most thistles in Pennsylvania are invasive species, however there are some native thistle species that are rare in the state, so before any control is attempted, the species in question should be accurately identified.

Biology and Spread:

These plants' seeds are spread by wind, on people's shoes, via livestock, on vehicle tires, or in contaminated soil or hay. Their heavy taproot makes removal difficult.

Ecological Threat:

Knapweeds have the potential to rapidly spread throughout introduced areas, displacing native vegetation and reducing the amount of available forage for wildlife and livestock. They may also degrade soil and water resources by increasing erosion and surface runoff.



Deric Case, DCNR - BOF



How to Control this Species:

Prevention

The first line of control should be preventing the spread of these plants to non-infested areas. Prevention measures include cleaning clothing and equipment after entering infested areas, forbidding livestock to graze when seeds are mature and ready for dispersal, and using certified weed-free hay.

Manual and Mechanical

Plants may be manually removed from the ground, ideally when the ground is wet, so long as care is taken to remove the entire plant, including the deep taproot. Mowing will reduce the number of flowers and seeds but will not eliminate the plants.

Chemical

For larger populations, chemical control may be the most effective choice, although it can be costly and difficult to implement successfully. A three percent solution of triclopyr herbicide mixed with water can be applied to the leaves in early spring or fall. This should be repeated several times a year for two or more years.



Above: *Centaurea jacea* (Brown knapweed)



Above: Brown knapweed (LEFT) versus Spotted knapweed (RIGHT)

Photos by Brett Pifer, DCNR - BOF