

Spotted Knapweed (*Centaurea stoebe*)

Overview

Spotted knapweed is a biennial or short-lived perennial plant in the sunflower family. A native of Eurasia, it was introduced as a contaminant in forage seed. This plant is one of the most problematic plants in North America. It loves disturbed soil and readily invades grass fields and rangeland.

Spotted knapweed crowds native species and reduces forage quality for wildlife and livestock.

Infestations in Yukon are found on the Alaska Highway (southwest of Teslin) and on the South Klondike Highway near to the Yukon/BC border. It is also suspected in Whitehorse.

Spotted knapweed is widespread in BC, where it has taken over 40,000 hectares of rangeland. In Alaska, spotted knapweed is found in several locations including Haines.



Infestations in Yukon are small and can be hand-pulled. Once established, this weed is extremely difficult to control.
Photo: J. Cardina, Bugwood.org

Identification

Flowers: The thistle-like flowers are born singly at the end of branches. Flowers are pinkish-purple, rarely white.

Stems: Flowering stems grow up to 1 meter tall from a stout, elongated taproot. The stems are branched above the middle.

Leaves: Rosette leaves are deeply lobed. Stem leaves may be slightly lobed or linear, they are not prickly. Leaf size decreases towards the tip of the stem.

Seed: Seeds are brownish in color and have a short tuft of bristles at the tip, enabling wind dispersal. Seeds have an extremely hard seed coat and are viable for at least 5 -10 years. One plant can produce up to 1,000 seeds.



Bracts on the flower's base have black tips, distinguishing it from other knapweeds.

Photo: M. Rasy, Bugwood.org

Similar Species

Corn flower (*Centaurea cyanus*) is an annual garden plant that is sometimes found in "wildflower" mixes or planted as an ornamental. It is occasionally found on roadsides but is not known to persist.

Habitat

Spotted knapweed is commonly found on well-drained soils. It can be found in disturbed areas but also invades relatively undisturbed natural areas.

Ecological Impact

Knapweeds tend to form dense stands, dominating sites, reducing biodiversity and forage production. They produce chemicals that hinder growth and germination of other plants. Knapweed infestation can also increase surface run-off and sedimentation.

Prevention

Because of its limited distribution, spotted knapweed is a high priority species for early detection and rapid response in Yukon.

- Caution is necessary when using hay from road ditches or known infested areas.
- The seeds continue to mature after pulling. All plant parts should be placed in a clear plastic bag, left in the sun to kill the seed and brought to the landfill where the bag should be buried.
- Spotted knapweed seeds can only be destroyed through hot fire incineration.



*Spotted knapweed typically forms a basal rosette of leaves in its first year.
Photo: L. Wilson, Bugwood.org*

Control

Mechanical: Hand-pull small infestations prior to seed set. Use gloves to prevent skin irritation. To prevent re-sprouting you have to remove entire crown and as much of the root system as possible. Infestation sites will have to be revisited for many years until the seed bank is depleted.

Chemical: Several herbicides are effective on spotted knapweed. Contact Yukon's Agriculture Branch for more information.

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*Infestations often form monocultures.
Photo: L.L. Berry, Bugwood.org*