



Meadow knapweed

Centaurea × gerstlaueri Erdner, (aka protean knapweed)

Provincial Designation:
Noxious



Cindy Roche, Bugwood.org



Washington State University Cooperative Extension

Overview:

Meadow knapweed is a short-lived perennial of the Aster family which reproduces by seed. Like the other knapweeds, it produces a rosette of leaves in its first year of growth, and then re-sprouts from its tap root each successive growing season. It develops a woody root crown, but also a cluster of somewhat fleshy roots.² It flowers July to September, and even into November in warmer climates.²

Meadow knapweed is an interfertile¹ hybrid of black (*C. nigra*) and brown (*C. jacea*) knapweeds.² Brown and Black knapweed are native to Europe and hybrids occur there also.³ Because of this, meadow knapweed plant characteristics will vary between those of the parent species.

Meadow knapweed is available in the horticultural trade. It produces both pollen and nectar and was planted for honeybees in Quebec in the late 1800s.³

Habitat:

Meadow knapweed prefers moist sites - irrigated lands and along rivers and streams.³ It grows in the sandy, loamy soils typical of grasslands and forest openings where there is sufficient moisture.

Identification:

Stems: Are single to a few erect or ascending¹, openly branched near mid-stem³, and grow 30-150 cm tall. Stems surfaces are rough and more or less covered with fine, cobwebby hairs.¹

Leaves: Basal and lower stems leaves are lance shaped or elliptical, 5-25 cm long, and have petioles. Leaf margins may be entire, shallowly dentate, or irregularly pinnately lobed. Leaves decrease in size upper stem, are sessile (no petioles), blades are more linear, and margins may be entire or dentate.¹

Flowers: Are solitary at branch tips and composed of 40-100+ florets which are purple (rarely white).¹ The base of flower heads are covered with overlapping bracts which are light to dark brown, and at the time of flowering reflect a metallic gold sheen.³ Bract margins vary from coarsely dentate to

comb-tooth like lobes which are more or less wiry.¹ Seeds are tan colored, 2.5-3 mm long finely hairy and may have a pappus of 0.5-1 mm bristles.¹

Prevention:

Seeds can be dispersed in soil, hay, water courses or by plants caught in vehicles. It is also widely available in the horticultural trade, so do not purchase or grow as an ornamental plant.

Control:

Grazing: While more palatable than other knapweeds, palatability and nutrition decline with plant maturity. Grazed plants tend to flower and produce seed on shorter plants.³ Maintaining pastures in good condition will help prevent meadow knapweed establishment. Invasive plants should never be considered as forage.

Mechanical: Small infestations can be hand pulled or dug up before seed set. The root crown must be removed to prevent re-sprouting. Mowing is in-effective as it

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sults in plants which re-flower just below the cutting height.³ Meadow knapweed does not tolerate repeated cultivation but may re-sprout following the initial pass.³ Once a seed bank has developed seasonal control efforts will be required for many years.

Chemical: Currently no selective herbicides are registered for use on meadow hawkweed. Always check product labels to ensure the herbicide is registered for use on the target plant in Canada by the Pest Management Regulatory Agency. Always read and follow label directions. Consult your local Agricultural Fieldman or Certified Pesticide Dispenser for more information.

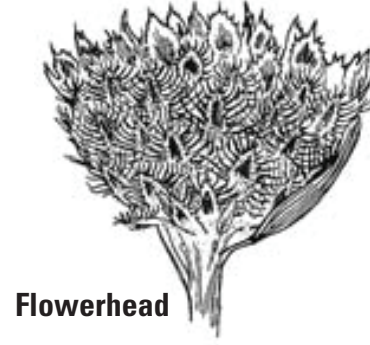
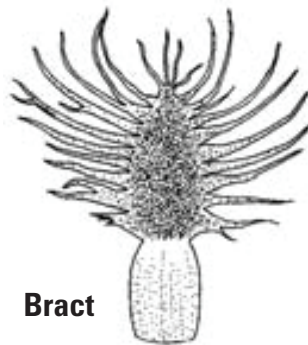
Biological: A gall fly (*Urophora quadrifasciata*) introduced to control spotted and diffuse knapweed uses the heads of meadow knapweed, decreasing seed production.³



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REFERENCES

1 *Centaurea x moncktonii* in Flora of North America. www.efloras.org

2 Identification of Knapweeds and Starthistles in the Pacific Northwest. PNW 432. Pacific Northwest Extension.

3 Ben F. Roché Jr., Ph. D., (deceased) Washington State University Extension Range Management Specialist, and Cindy Talbott Roché, M. S., former Washington State University Extension Associate. Meadow knapweed. EB1524. Washington State University Cooperative Extension.