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Whiplash Hawkweed

Hieracium flagellare Willd.

Alberta Regulation: Unregulated

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Overview:

Whiplash hawkweed is a member of the Aster Family native to Europe. It is a fibrous rooted, perennial herb with a milky latex in the stems and leaves. Hawkweeds reproduce by seeds and vegetatively by long, thick, leafy[3] stolons, rhizomes, and adventitious root buds.[1] Seeds are produced by apomixis - asexually - as non-native hawkweeds are polyploids (n=9), as opposed to the native diploid hawkweeds. Occasional sexual reproduction occurs, facilitating out-crossing and hybridization.[1]

Non-native hawkweeds exhibit many characteristics of an invasive plant: high seed production and germination rates, asexual seed production, wind-dispersed seed, vegetative reproduction via rhizomes, stolons, and root fragments, and rapid growth.[1] A few invasive hawkweed species are popular ornamentals. All of these characteristics facilitate rapid colonization and monopolizing of resources. An undetected patch of hawkweed has great potential to become an un-eradicable infestation.

Hawkweeds develop a low rosette of basal leaves before producing a flowering stem. Dandelion-like flowers are borne at the ends of stems.

Whiplash hawkweed may be confused with mouse ear hawkweed, which also has silvery leaves, is the same height when in flower, and grows in mats. Although, mouse ear only has one flower per stem.[5]

Habitat:

Hawkweeds prefer well drained, coarse textured soils, moderately low in organic matter, in mesic habitats.[1]

Identification:

Stems: Are erect and branched, covered with dense, stellate (star-like), glandular or non-glandular hairs. Plants grow 12-40 cm tall.[3]

Leaves: Are mostly basal, stalked, lance to spoon-shaped with narrow bases,[1] edges are entire, 3-13 cm long, 0.5-2.5 cm wide. The upper leaf surface is dark green[1] with non-glandular, stellate hairs[3], the lower leaf surfaces have moderately dense stellate hairs and long simple hairs.[1] Stem leaves are few, reduced, or lacking.[3]

Flowers: Are borne on heads of 2-6 flowerheads.[1] Peduncles (flower stems) are stellate and sometimes glandular hairy. The round involucres are 9-13 mm in diameter with 30-40 stellate/glandular hairy bracts. Florets are composed of 90-120+ yellow petals, often with a red stripe, and 6-10+ mm long.[2] Fruits are achenes 1.5-2.0 mm long with a dirty white pappus[3] 4-5+ mm long.[2]

Prevention:

Learning to recognize hawkweeds from the many yellow-flowered members of the Aster Family is key to prevention. Hairs are an important characteristic of non-native hawkweeds and also in distinguishing between species. Stolons facilitate rapid colonization of a patch of ground

Long term management of hawkweeds requires maintaining healthy forbs and grasses - fertilization of desirable vegetation can result in out-competition of hawkweeds. Re-seed disturbance in areas susceptible to hawkweed invasion.

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Whiplash Hawkweed (Continued)

Control:

Grazing: Unknown. Invasive plants should never be considered as forage.

Mechanical: Mowing before flowering will prevent seed production of taller plants but will not inhibit reproduction via stolons and rhizomes. Hand digging of small infestations where all stolons and root can be removed may be effective. Root fragments can generate new plants, therefore any mechanical tilling/cultivation would be ineffective.

Chemical: Hexazinone, 2,4-D, and glyphosate are registered for use on *Hieracium* spp./hawkweeds. Always check product labels to ensure the herbicide is registered for use on the target plant in Canada by the Pest Management Regulatory Agency. Consult your local Agricultural Fieldman or Certified Pesticide Dispenser for more information.

Biological: The stolon-tip gall wasp *Aulacidea subterminalis* was first released in BC in 2011. Results are pending.[4]

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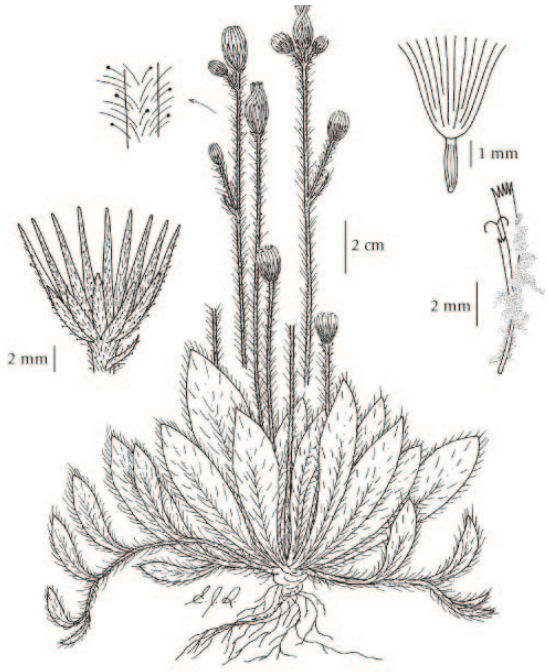

The Illustrated Flora of British Columbia

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1 Wilson, Linda. Key to Identification of Invasive and Native Hawkweeds in the Pacific Northwest. British Columbia Ministry of Forests and Range, Forest Practices Branch, Invasive Alien Plant Program.

2 Hieracium flagellare in Flora of North America. www.efloras.org. Accessed June 9, 2014.

3 Hieracium flagellare Willd. E-Flora BC: Electronic Atlas of the Flora of British Columbia. http://linnet.geog.ubc.ca/Atlas/Atlas.aspx?sciname=Hieraciumflagellare&redblue=Both&lifeform=7. Accessed June 9, 2014.

4 Target Invasive Plants and Biocontrol Agents Undergoing Screening. BC Ministry of Forests, Lands and Natural Resource Operations. http://www.for.gov.bc.ca/hra/plants/biocontrol/screenagents.htm#Hawkweedcomplex. Accessed June 10, 2014.

5 Personal comment. RoseDe Clerke-Floate. July 24, 2014.

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