Kingdevil Hawkweed

Hieracium floribundum Wimm. & Grab (Aka Yellow devil hawkweed)
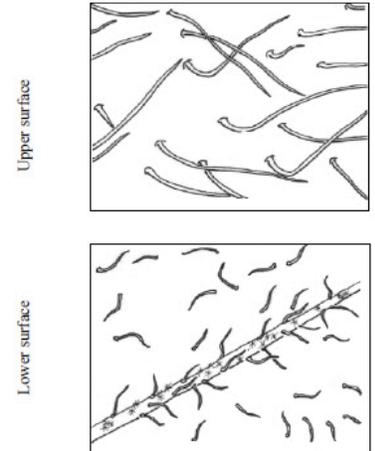
Alberta Regulation:
Unregulated

BC MOFR

BC MOFR

Upper surface
Lower surface
C. Roche

Overview:

Kingdevil 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 numerous horizontal stolons, and rhizomes underground.[2] Seeds are produced by apomixis - asexually - as non-native hawkweeds are polyploids (n=9), as opposed to the native diploid hawkweeds.[1] Occasional sexual reproduction occurs, facilitating outcrossing and hybridization.[1]

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

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.

Habitat:

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

Identification:

Stems: Are erect and leafless or with leaves only on lower part of stem and much reduced. Plants grow 15-50 cm. Stolons are present and leafy.[1]

Leaves: Basal leaves are narrowly lance-shaped. Leaves are dark green and the upper surface and margin with sparse, long, simple hairs, or hairs lacking. Lower leaf surface and midrib have short, simple hairs. No stellate hairs.[1] Stolon leaves have more hairs than basal leaves.[2]

Flowers: Yellow ray flowers are borne in loose, open clusters of 15-25. Involucral bracts have numerous stellate, glandular, and simple hairs. Achenes are ribbed with a dirty white to tawny pappus.[1]

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.

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

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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.[3]

REFERENCES

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 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.

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