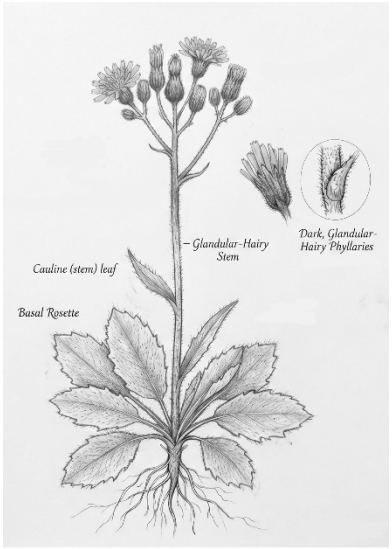
Polar Hawkweed

Hieracium atratum

ALBERTA REGULATORY STATUS:
WEED CONTROL ACT
PROHIBITED NOXIOUS

Last Updated: May 2026



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Overview:

Native to Europe, Polar hawkweed is a member of the Aster family. It is a fibrous-rooted, perennial herb with milky latex in the stems and leaves. Invasive hawkweeds were first detected in western Canada approximately 50 years ago.[1] It is not known to be present in Alberta.

Recent taxonomic revisions have divided hawkweeds into two genera: *Pilosella* and *Hieracium*.[1] In Alberta, invasive hawkweeds belong to the genus *Pilosella*, while *Hieracium* includes both native and invasive species.[1] *Hieracium* hawkweed species do not have stolons (runners) but do have stem leaves in contrast to the *Pilosella* hawkweed species.

Invasive *Hieracium* species reproduce both by seed and vegetatively through short underground stems (rhizomes), and occasional regrowth from root fragments.[1] Plants produce yellow, dandelion-like flower heads that mature into fluffy, wind-dispersed seeds. Most invasive hawkweeds produce viable seed without pollination, meaning a single plant can start a new infestation.[1] While sexual reproduction is possible, it is not the primary mode of reproduction; hybridization between species is believed to occur.[1] Flower heads may continue to mature viable seed even after plants have been pulled. Seed longevity for polar hawkweed is unknown but seeds from *Pilosella* species can remain viable in the soil for up to seven years.[2]

Polar hawkweed is identified by its narrow basal leaves with a few coarse, outward-pointing teeth, only 2–4 stem leaves, and flower heads with many dark, sticky hairs on the bracts.[1]

Habitat:

Prefers to grow in open, high-elevation environments such as mountain grasslands, dwarf-shrub heaths, loose scree slopes, and exposed rocky terrain. These habitats are bright, sun-exposed and largely free of canopy cover.[1]

Identification:

Stems: Upright and branch near the top. Plants are typically 20–40cm tall. This species **does not produce runners** (stolons).[1]

Leaves: Basal leaves are narrowly oval and taper abruptly into a leaf stalk. The margins have a few coarse teeth that point outward. The upper surface of the leaves has many simple hairs, while the underside has fine, star-shaped hairs. There are usually only 2–4 smaller leaves along the stem.[1]

Flowers: 2–10 yellow flower heads arranged in a loose cluster. The bracts below each flower head have many dark, (sometimes) sticky gland-tipped hairs and simple hairs, with only a few star-shaped hairs.[1]

Seeds: Ribbed and topped with a dirty white to light brown tuft of hairs that allows them to disperse by wind.[1]

Lookalike species: Polar hawkweed may be confused with other native and introduced species in the genus Hieracium. Some invasive species in the genus *Pilosella* can also appear similar but can often be differentiated by the lack of stem leaves. Native and introduced hawksbeard species (*Crepis*) may

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resemble hawkweeds due to their yellow, dandelion-like flower heads, but they differ in leaf shape and other structural characteristics.

Impacts:

Hawkweeds' rapid growth and ability to exploit disturbed ground allow them to spread quickly and dominate sites. Even small, easily overlooked patches can develop into persistent infestations that are difficult to control. Dense mats can form, displacing native vegetation and overtaking yards, gardens, pastures and natural areas. Some studies suggest that invasive hawkweeds may also release chemicals into the soil that inhibit the growth of surrounding plants (allelopathy),[2] which may further contribute to their ability to dominate sites. In BC, invasive hawkweeds were projected to cause up to $60 million per year in economic damages by 2020 if left unmanaged, driven by impacts to forage production, biodiversity, recreation, and human health.[4]

Prevention:

Reduce the risk of establishment by maintaining healthy, competitive plant communities and regularly monitoring high-risk areas, including properly identifying unknown species before they spread. Prevent introduction and movement by working from clean sites to infested sites, cleaning equipment and gear between locations, and minimizing soil disturbance. Use weed-free products where available, avoid generic wildflower seed mixes, and obtain seed certificates for large-scale seeding to assess for potential contaminants.

Control:

Effective control of invasive hawkweeds requires repeated treatment and ongoing monitoring, using an integrated approach to address both seed production and aggressive vegetative spread. Plants should be treated before flowering to prevent seed production. If flowers or buds are present, they should be removed and properly disposed of to prevent viable seed development. Root systems must be fully removed or effectively controlled to prevent regrowth from fragments. Pulled material must be bagged and disposed of in a landfill or incinerated, as plants can continue to produce viable seed after removal. Maintaining healthy, competitive vegetation helps reduce reinfestation, while regular monitoring is essential to detect regrowth and new seedlings from the seed bank. Cleaning equipment is also key to prevent the spread of seeds and root fragments.

Grazing: Can be an effective IPM tool in some contexts; however, significant knowledge gaps remain regarding the response of specific invasive plants to grazing, including appropriate stocking rates, palatability, and potential toxicity to livestock. For hawkweeds, including polar hawkweed, there is currently insufficient information to recommend targeted grazing as a management approach.[5]

Mechanical: Mowing before flowering will prevent seed production of taller plants but will not inhibit reproduction via rhizomes. Hand digging of small infestations, ensuring all roots are removed, may be effective. Root fragments can generate new plants; therefore, any mechanical tilling or cultivation is not recommended. If manually removed while flowering hawkweeds may still produce viable seed, so timing and disposal are important considerations to prevent seed dispersal.

Cultural: Long-term management of hawkweeds requires maintaining healthy plant communities. Fertilizing and seeding desirable vegetation can help outcompete hawkweeds.[1] Use caution when sourcing seed, requesting a certificate of seed can help reduce risk of contamination.

Chemical: Registered herbicides for managing hawkweeds in Canada may include products containing active ingredients such as 2,4-D, acetic acid, aminopyralid, aminocyclopyrachlor, chlorsulfuron, dicamba, florpyrauxifen, glyphosate, hexazinone, MCPA, metsulfuronmethyl, pelargonic acid, and picloram.[6] Some herbicide products list specific hawkweed species on their labels, always check the product label to confirm that the herbicide is registered for use on the target plant in Canada. Consult your local Agricultural Fieldman or Certified Pesticide Dispenser for more information.

Biological: While biological control research and some agent releases have targeted invasive Pilosella hawkweed species, there is no specific biocontrol agent documented or established for polar hawkweed at this time.[7]

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