

orange hawkweed
Hieracium aurantiacum L.

meadow hawkweed
Hieracium caespitosum Dumort.

Introduction

Orange hawkweed and meadow hawkweed share very similar biological and ecological attributes. We treat the descriptions, legal listings, distributions, and abundances separately, but we combine the discussion of ecological impacts, biology and invasive potential, and control methods.

Invasiveness Rank: 79 The invasiveness rank is calculated based on a species' ecological impacts, biological attributes, distribution, and response to control measures. The ranks are scaled from 0 to 100, with 0 representing a plant that poses no threat to native ecosystems and 100 representing a plant that poses a major threat to native ecosystems.

orange hawkweed

Synonyms: *Pilosella aurantiaca* (Linnaeus) F. W. Schultz & Schultz-Bipontinus
Other common names: devil's paintbrush, king-devil
Family: Asteraceae

Description

Orange hawkweed is a perennial herb that has shallow, fibrous roots, stolons, and well-developed basal rosettes. Stems can reach a height of 30 ½ cm and bear up to thirty flower heads near the top. Stems and leaves exude milky latex when cut or broken. Leaves are oblanceolate to narrowly elliptic, up to 13 cm long, hairy, and almost exclusively basal. Flower heads are 13 mm in diameter. Flowers are red to orange. Seeds are oblong, purplish-black, and about 2 mm long (Gleason 1968, Hultén 1968, Royer 1999).



Hieracium aurantiacum L. Photo by UAF Cooperative Extension Archive.

Similar species: No other composite species in Alaska has dark orange to red flower heads.

meadow hawkweed

Synonyms: *Hieracium pratense* Tausch., *Pilosella caespitosa* (Dumortier) P. D. Sell & C. West
Other common names: yellow hawkweed
Family: Asteraceae

Description

Meadow hawkweed is perennial herb that grows from short, stout rhizomes and long, leafy stolons. Stems are erect, solitary, and up to 91 cm tall. They are covered in glandular, star-like hairs. Stems exude milky juice when broken. Basal leaves are well-developed, persistent, oblanceolate to spoon-shaped, entire or minutely toothed, 5 to 26 cm long, and 2 ½ cm wide. They have stalks and are covered with non-glandular hairs. One to three smaller leaves grow up the stem. Stems bear up to thirty 13 mm flower heads near the top. Ray flowers are yellow. Seeds are black and tiny (Idaho's noxious weeds 2003).



Hieracium caespitosum Dumort. Photo by M. Shephard.

Similar species: There are several yellow-flowered species of hawkweeds in Alaska. Mouseear hawkweed (*H. pilosella*) also forms basal rosettes and has stolons, but, unlike meadow hawkweed, it produces only one yellow flower head on per stem. Narrowleaf hawkweed (*H. umbellatum*) can be distinguished from meadow hawkweed by the presence of leaves on its stems, absence of persistent basal rosettes, and absence of stolons (Douglas et al. 1998). All native *Hieracium* species lack stolons.

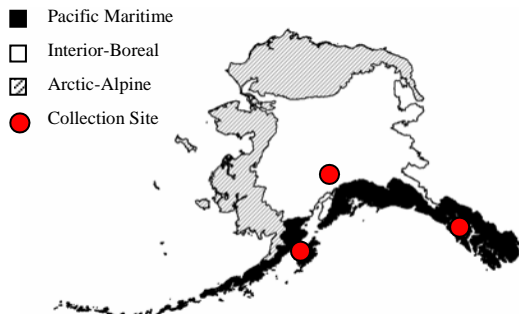
Legal Listings

- Has not been declared noxious
- Listed noxious in Alaska
- Listed noxious by other states (CO, ID, MN, MT, OR; all *Hieracium* species are considered noxious weeds in WA)
- Federal noxious weed
- Listed noxious in Canada or other countries (BC, QC)

Distribution and Abundance

Orange hawkweed invades meadows, grasslands, rangelands, pastures, and forest borders. It is commonly found in roadsides, disturbed areas, and waste places.

Native and current distribution: Orange hawkweed is indigenous to the British Isles and Europe from southern Scandinavia east to Russia and south to the Mediterranean Sea. It was introduced to North America as an ornamental and medicinal herb before 1818. It grows in 33 states of the U.S. and throughout much of Canada (USDA 2010). It has also established in eastern Asia and New Zealand. This species has been documented from the Pacific Maritime and Interior-Boreal ecogeographic regions of Alaska (Hultén 1968, AKEPIC 2010, UAM 2010).



Distribution of orange hawkweed in Alaska.

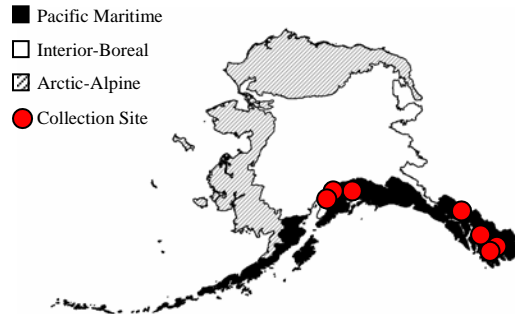
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Distribution and Abundance

Meadow hawkweed invades meadows, rangelands, pastures, and forest borders (Idaho's noxious weeds 2003). It is commonly found in roadsides, disturbed areas, and waste places (Douglas et al. 1998).

Native and current distribution: Meadow hawkweed is native to northern, central, and eastern Europe. It was likely introduced to the United States in 1828. It grows in 30 states of the U.S. and throughout much of Canada (USDA 2010). It was first reported in the Pacific Northwest in 1969. Meadow hawkweed has been documented from the Pacific Maritime and Interior-Boreal ecogeographic regions of Alaska (AKEPIC 2010, M. Shephard – pers. com.).



Distribution of meadow hawkweed in Alaska.

Ecological Impact

Impact on community composition, structure, and interactions: Orange hawkweed and meadow hawkweed establish dense monocultures, which lower biodiversity and reduce the forage value of grasslands for grazing animals. These species are successful competitors and crowd out native pasture and rangeland species (Pratcher et al. 2003). *Hieracium* species are allelopathic (Murphy and Aarssen 1995). Orange hawkweed and meadow hawkweed hybridize freely with native and non-native *Hieracium* species (Rinella and Sheley 2002).

Impact on ecosystem processes: These species likely reduce soil moisture and nutrient availability (J. Snyder –pers.com.).

Biology and Invasive Potential

Reproductive potential: Orange hawkweed and meadow hawkweed reproduce sexually by seeds and vegetatively from stolons, rhizomes, and root buds. These species typically produce 12 to 30 seeds per flower head and roughly 50 to 600 seeds per plant. Each plant sends out four to eight stolons every season. Plants can resprout from any fragments left in the soil. Seeds of orange hawkweed remain viable in the soil for up to seven years. Infested areas can have extensive seed banks (Idaho's noxious weeds 2003).

Role of disturbance in establishment: Orange hawkweed and meadow hawkweed grow readily in

cleared areas in forests. Mowing promotes flowering and vegetative spread.

Potential for long-distance dispersal: Seeds are adapted to dispersal by wind, animals, and humans.

Potential to be spread by human activity: Seeds can be transported by vehicles, animals, and clothing. Orange hawkweed is often planted in urban areas as an ornamental.

Growth requirements: Orange hawkweed and meadow hawkweed grow on well-drained, coarse soils that are moderately low in organic matter. These plants prefer full sun or partial shade (Noxious Weed Control Program 2004).

Congeneric weeds: Mouseear hawkweed (*H. pilosella*), tall hawkweed (*H. piloselloides*), and narrowleaf hawkweed (*H. umbellatum*) are each considered noxious weeds in one or more states of the U.S. or provinces of Canada (Royer and Dickinson 1999, Invaders 2010, USDA 2010).

Management

Mechanical methods, such as mowing, cutting, or digging, do not effectively eliminate infestations of orange hawkweed or meadow hawkweed. Treatment with selective herbicides is the most effective control method. Controlled areas should be monitored for several years after treatment because populations may re-establish from root fragments and seed banks. No biological control agents are currently available.

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