

woodland ragwort

Senecio sylvaticus L.

Synonyms: none

Other common names: heath groundsel, woodland groundsel

Family: Asteraceae

Invasiveness Rank: 41 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.

Description

Woodland ragwort is a taprooted annual plant that grows up to 80 cm tall. The plant is covered in abundant, fine hairs. Stems are single and unbranched or branched. Leaves are obovate to oblong, 3 to 7 cm long, 1 to 3 cm wide, one or two times pinnate, and alternate. Leaves are petiolated with irregular teeth and tapered bases; upper leaves are clasping. Each stem produces a cluster of 12 to 24 flower heads. Flower heads have 0 to 15 ray florets, which, when present are each 1 to 2 mm long. Involucral bracts are narrow and 5 to 7 mm long with short hairs and sometimes with black tips. Seeds are oblong with a white pappus (Barkley 2006, DiTomaso and Healy 2007, Klinkenberg 2010, NatureGate 2010).



Senecio sylvaticus L. Photo by F. and K. Starr

Similar species: Hultén documented 11 native *Senecio* species in Alaska. Four other *Senecio* species are tracked non-native plants in Alaska. The non-native common groundsel (*Senecio vulgaris*) can be confused with woodland ragwort. However, woodland ragwort can be distinguished by the complete absence or presence of a few, green-tipped, outer reduced involucral bracts at the base of the flower head. In contrast, common groundsel has reduced outer involucral bracts at the base of the flower head characterized by conspicuous black tips. Unlike woodland ragwort, common groundsel is glabrous or sparsely hairy (Hultén 1968, DiTomaso and Healy 2007).

Ecological Impact

Impact on community composition, structure, and interactions: Woodland ragwort may compete with native plants and may temporarily increase the density of vegetation due to its ability to establish in disturbed and often sparsely vegetated areas. It has the potential to dominate early secondary successional environments, especially in previously logged and slash-burned areas, although its abundance generally declines after two years. It can grow at densities of 90,000 plants per acre under favorable conditions. (West and Chilcote 1968, Halpern et al. 1997). In Anchorage, Alaska, it has been observed growing at lower densities on recently imported fill (Carlson pers. obs.). Woodland ragwort contains toxic pyrrolizidine alkaloids that can damage the liver in herbivores, resulting in death if enough alkaloids are consumed over several months (Christov and Evstatieva 2003, DiTomaso and Healy 2007).

Impact on ecosystem processes: Populations of woodland ragwort are usually displaced by other plants after a few years in woodland clearings (Halpern et al. 1997). Woodland ragwort may alter nutrient and water availability in the soil but is not likely to significantly alter or halt any ecological processes.

Biology and Invasive Potential

Reproductive potential: Woodland ragwort reproduces by seed only (Andel and Vera 1977). Data from the Siuslaw National Forest of coastal Oregon indicated that

each plant produces an average of 8,564 seeds (West and Chilcote 1968). Presumably, seeds survive for a long time in soil (Clément and Touffet 1990) as viable seeds were present in the seed banks of old growth forests in the Pacific Northwest, even when no germinated plants were present in the observed vegetation. The exact amount of time for which seeds remain viable is unknown (Harmon and Franklin 1995, Halpern et al. 1997).

Role of disturbance in establishment: Woodland ragwort primarily grows in disturbed areas (DiTomaso and Healy 2007). It establishes especially well on burned sites in coniferous forests and on exposed mineral soil (West and Chilcote 1968, Clément and Touffet 1990).

Potential for long-distance dispersal: Woodland ragwort seeds achieve wide dispersion (Clément and Touffet 1990). Each seed has a pappus, which facilitates wind dispersal. Seeds are sticky when wet and can be transported on animals (DiTomaso and Healy 2007).

Potential to be spread by human activity: Seeds are easily spread by human activities. The pappus can stick to people, shoes, clothing, vehicles, or machinery, especially when wet (DiTomaso and Healy 2007). This species appears to be highly associated with timber harvest in the Pacific Northwest (West and Chilcote 1968).

Germination requirements: Seeds germinate best in exposed mineral soil. Burned areas provide good conditions for the germination of woodland ragwort (Klinkenberg 2010). Seeds are not innately dormant and can germinate immediately under favorable conditions. They usually germinate in fall and the plant survives the winter as a basal rosette; however, they can also germinate in the spring (Halpern et al. 1997, DiTomaso and Healy 2007).

Growth requirements: Woodland ragwort grows very well on moist to wet, nitrogen-rich soils. It grows best in maritime climates and is shade intolerant. It is not a major agricultural weed because it prefers acidic soils. The plant flowers from mid-June to September (Klinkenberg 2010, NatureGate 2010).

Congeneric weeds: Common groundsel (*Senecio vulgaris*; invasiveness rank 35) and tansy ragwort (*S. jacobaea*; invasiveness rank 63) are both tracked and ranked as invasive species in Alaska. Additionally, desert groundsel (*S. eremophilus*) and sticky ragwort (*S. viscosus*) are known or expected to occur as invasive

species in Alaska (AKEPIC 2010). Tansy ragwort, Madagascar ragwort (*S. madagascariensis*), and Oxford ragwort (*S. squalidus*) are listed as noxious weeds in several states of the U.S. (USDA 2010).

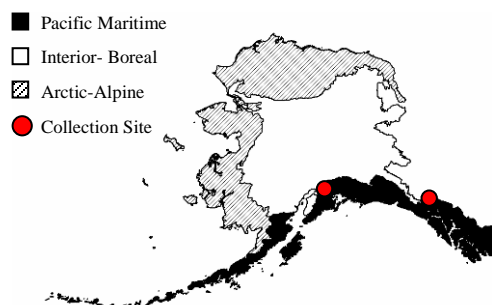
Legal Listings

- Has not been declared noxious
- Listed noxious in Alaska
- Listed noxious by other states
- Federal noxious weed
- Listed noxious in Canada or other countries

Distribution and Abundance

Woodland ragwort primarily grows in disturbed areas, waste places, and roadsides (DiTomaso and Healy 2007). In the Pacific Northwest, woodland ragwort grows very well in the early secondary succession stages of logged and slash-burned sites in coniferous forests (West and Chilcote 1968).

Native and current distribution: Woodland ragwort is native to Eurasia. Currently, populations also exist in North America and New Zealand (Barkley 2006, GBIF New Zealand 2010). Woodland ragwort is not known from arctic or subarctic regions. Populations in Alaska have been documented from Anchorage and the Klondike Highway (AKEPIC 2010).



Distribution of woodland ragwort in Alaska

Management

Although in the short-term woodland ragwort can produce many seeds, it does not generally compete with native species for more than two years. Natural successional processes will most likely result in the replacement of woodland ragwort (*Senecio sylvaticus*) by fireweed (*Chamerion angustifolium*) (Andel and Vera 1977, Halpern et al. 1997).

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