

## common groundsel

*Senecio vulgaris* L.

Synonyms: None

Other common names: old-man-in-the-Spring

Family: Asteraceae

**Invasiveness Rank:** 36 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

Common groundsel is a small, branched, annual or biennial herb that grows 15 to 50  $\frac{3}{4}$  cm tall from a taproot. Stems are erect and solitary. Basal leaves are stalked, somewhat fleshy, usually purplish on the lower surfaces, oblanceolate to elliptic, 2  $\frac{1}{2}$  to 10 cm long, and 1  $\frac{1}{4}$  to 4 cm wide. Stem leaves are alternate, pinnately divided or irregularly toothed, and nearly glabrous or sparsely hairy with ear-like lobes clasping at the bases. Flower heads are several to numerous, 6 to 12  $\frac{1}{2}$  mm in diameter, cylindrical or conic with yellow disk florets and no ray florets. Involucral bracts are lanceolate, green, and black-tipped. Seeds are long, slender, and ridged with pappi of white hairs (Alex and Switzer 1976, Douglas et al. 1998, Whitson et al. 2000).



Flower heads of *Senecio vulgaris* L. Photo by S. Dewey.

*Similar species:* Sticky ragwort (*Senecio viscosus*) can be confused with common groundsel. Unlike common groundsel, sticky ragwort has numerous sticky hairs on its stems, leaves, and flower heads. Sticky ragwort is less common than common groundsel in Alaska. It can be found in Southeast Alaska (Furbish and Jorgensen 2001).



*Senecio vulgaris* L. Photo by R. Vidéki.

### Ecological Impact

*Impact on community composition, structure, and interactions:* Common groundsel has not been documented in undisturbed areas in Alaska (AKEPIC 2010). No perceived impacts on native plant populations have been documented. Common groundsel is poisonous to livestock (Royer and Dickinson 1999) and may be poisonous to wild animals as well. It is an alternate host for a number of viruses, nematodes, and aphids (Townshend and Davidson 1962, Heathcote and Byford 1975, Royer and Dickinson 1999).

*Impact on ecosystem processes:* It is unlikely that the presence of common groundsel causes measurable impacts to ecosystem processes.

### Biology and Invasive Potential

*Reproductive potential:* Common groundsel reproduces by seeds only. Plants require five to seven weeks to

reach the fruiting stage. Each plant produces an average of 830 seeds (Kadereit 1984), although large plants can produce over 1,700 seeds (Royer and Dickinson 1999).

*Role of disturbance in establishment:* The presence of bare ground is important for the establishment and spread of common groundsel (Bergelson et al. 1993). Germination of common groundsel can be suppressed by surrounding vegetation (Popay and Roberts 1970a).

*Potential for long-distance dispersal:* Each seed has a pappus of hairs and can be dispersed short distances by wind (Bergelson et al. 1993). Seeds are sticky when wet and can attach to fur (Royer and Dickinson 1999).

*Potential to be spread by human activity:* Wet seeds can attach to clothing and vehicles. Seeds contaminate commercial seeds and horticultural stock (Hodkinson and Thompson 1997, USDA, ARS 2006).

*Germination requirements:* Seeds of common groundsel lack innate dormancy and can germinate year round. Germination peaks usually occur in spring and fall. Light is necessary for germination. Maximum germination rates occur when the temperature is between 10°C and 20°C (Popay and Roberts 1970a, b, Hilton 1983).

*Growth requirements:* Common groundsel shows great flexibility and adaptation to different environments (Theaker and Briggs 1993). It is well adapted to agricultural and ruderal habitats (Leiss and Müller-Schärer 2001). Common groundsel is adapted to all soil textures with pH levels ranging from 5 to 8.5. This species does not tolerate shading. It can withstand temperatures down to 8.3°C (USDA, NRCS 2006).

*Congeneric weeds:* Tansy ragwort (*Senecio jacobaea*), Madagascar ragwort (*S. madagascariensis*), Ridell's ragwort (*S. riddellii*), and Oxford ragwort (*S. squalidus*) are listed as noxious weeds in one or more states of the U.S. (USDA, NRCS 2006).

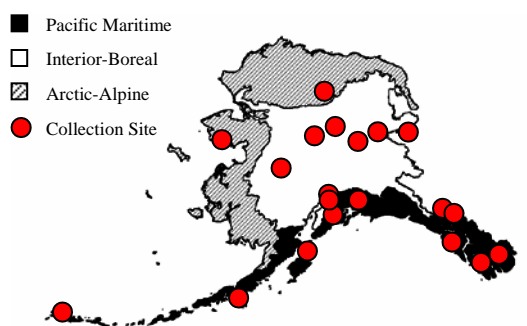
## Legal Listings

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

## Distribution and abundance

Common groundsel is a weed of disturbed areas, cultivated fields, gardens, lawns, roadsides, and waste areas (Douglas et al. 1998).

*Native and current distribution:* Common groundsel is native to Europe and North Africa, but it currently has a nearly worldwide distribution. This species has been documented in all three ecogeographic regions of Alaska (AKEPIC 2010).



Distribution of common groundsel in Alaska

## Management

Common groundsel can be controlled by tillage in fall and early spring. Mowing or grazing before seed set will prevent infestations from spreading. Herbicides are effective at controlling common groundsel (SAF 2000).

## References:

- AKEPIC database. Alaska Exotic Plant Information Clearinghouse Database. 2010. Available: <http://akweeds.uaa.alaska.edu/>
- Alex, J.F. and C.M. Switzer. 1976. Ontario weeds. Ontario Agricultural College, University of Guelph, Guelph, Ontario. P.p.165-166.
- Bergelson, J., J.A. Newman, E.M. Floresroux. 1993. Rates of weed spread in spatially heterogeneous environments. *Ecology*. 74. 999-1011.
- Douglas, G.W., G.B. Straley, D. Meidinger, J. Pojar. 1998. Illustrated flora of British Columbia. V. 1. Ministry of Environment, Lands and Parks Ministry of Forests. British Columbia. 364 p.
- eFloras. 2008. Published on the Internet <http://www.efloras.org> [accessed 18 October 2010]. Missouri Botanical Garden, St. Louis, MO & Harvard University Herbaria, Cambridge, MA.
- Furbish, C.E. and J. Jorgensen. 2001. Exotic plant survey of the Chilkoot Trail Unit, Klondike Gold Rush National Historical Park. Natural Resources Management Program. 49 pp.
- Hilton, J.R. 1983. The influence of light on the germination of *Senecio vulgaris* L. *New Phytologist* 94: 29-37.
- Hodkinson, D., K. Thompson. 1997. Plant dispersal: the role of man. *Journal of Applied Ecology*. 34. 1484-1496.
- Hultén, E. 1968. *Flora of Alaska and Neighboring Territories*. Stanford University Press, Stanford, CA. 1008 p.
- Invaders Database System. 2010. University of Montana. Missoula, MT. <http://invader.dbs.umt.edu/>
- ITIS. 2010. Integrated Taxonomic Information System. <http://www.itis.gov/>

- Kadereit, J.W. 1984. Studies on the biology of *Senecio vulgaris* L. ssp. *denticulatus* (O.F. Muell.) P.D. Sell. New Phytologist. 97. 681-689.
- Leiss, K.A. and H. Müller-Schärer. 2001. Adaptation of *Senecio vulgaris* (Asteraceae) to ruderal and agricultural habitats. American Journal of Botany. 88. 1593-1599.
- Popay, A.I. and E.H. Roberts. 1970a. Ecology of *Capsella bursa-pastoris* (L.) Medik. And *Senecio vulgaris* L. in relation to germination behaviour. The Journal of Ecology. 58. 123-139.
- Popay, A.I. and E.H. Roberts. 1970b. Factors involved in the dormancy and germination of *Capsella bursa-pastoris* (L.) Medik. And *Senecio vulgaris* L. The Journal of Ecology. 58. 103-122.
- Royer, F., and R. Dickinson. 1999. Weeds of the Northern U.S. and Canada. The University of Alberta press. 434 pp.
- SAF - Saskatchewan Agriculture and Food. 2000. Common groundsel (*Senecio vulgaris*). Available: <http://www.agr.gov.sk.ca/default.asp> [April 17, 2006].
- Theaker, A.J. and D. Briggs. 1993. Genecological studies of groundsel (*Senecio vulgaris* L.) IV. Rate of development in plants from different habitat types. New Phytologist 123: 185-194.
- University of Alaska Museum. University of Alaska Fairbanks. 2003. <http://hispidamuseum.uaf.edu:8080/home.cfm>
- USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. URL: <http://www.arsgrin.gov/cgi-bin/npgs/html/taxon.pl?33708> [17 April 2006].
- USDA, NRCS. 2006. The PLANTS Database, Version 3.5 (<http://plants.usda.gov>). Data compiled from various sources by Mark W. Skinner. National Plant Data Center, Baton Rouge, LA 70874-4490 USA.
- Welsh, S. L. 1974. Anderson's flora of Alaska and adjacent parts of Canada. Brigham University Press. 724 pp.
- Whitson, T. D., L. C. Burrill, S. A. Dewey, D. W. Cudney, B. E. Nelson, R. D. Lee, R. Parker. 2000. Weeds of the West. The Western Society of Weed Science in cooperation with the Western United States Land Grant Universities, Cooperative Extension Services. University of Wyoming. Laramie, Wyoming. 630 pp.