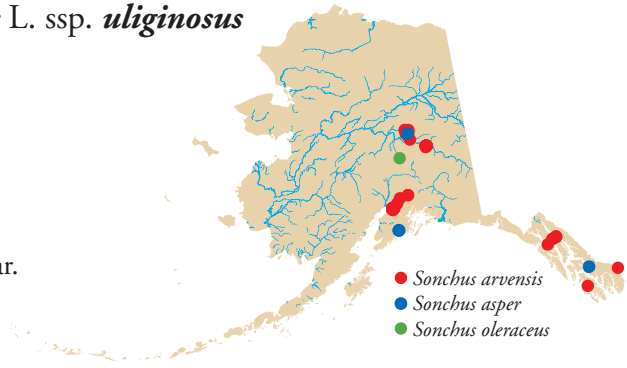
Perennial Sowthistle

Sonchus arvensis L. ssp. ***uliginosus*** (Bieb.) Nyman



Alternate Names

moist sowthistle

Synonyms

Sonchus arvensis L. var. *glabrescens* Guenth., Grab. & Wimmer
Sonchus uliginosus Bieb.

Description

Despite the common name, sowthistles resemble dandelions more than they do the true thistles. Perennial sowthistle usually grows 2–4 feet high and has an extensive horizontal root system that grows up to 10 feet deep. All parts of the plant contain a milky white juice. Early in the season, the plant is a basal rosette that could be mistaken for dandelion. Leaves are alternate, lanceolate, and 2½–16 inches long, with a clasping base and soft prickly margins that vary from deeply toothed to nearly entire. The flowerhead is bright yellow and 1–2 inches wide. The floral bracts are green with white margins. Seeds are dark brown and prominently ridged and wrinkled, with a tuft of soft white pappus bristles. Subspecies *uliginosus*, found in Alaska, lacks the glandular hairs on floral bracts and flower stalks that are generally present on perennial sowthistle.

UAF Cooperative Extension Service photo by Michael Rasy

Perennial sowthistle flowers.

UAF Cooperative Extension Service photo by Michael Rasy

Perennial sowthistle flowers.

Similar Species

Annual sowthistle (*S. oleraceus* L.) is another exotic species in Alaska. It can be distinguished from perennial sowthistle by the presence of a short taproot rather than long horizontal roots.

Ecological Impact

At high densities perennial sowthistle can drastically reduce water resources and possibly decrease native plant diversity (Butterfield et al. 1996). It is also host to a number of plant pests. This species is acceptable feed for rabbits and other foraging animals (NWCB 2003). Perennial sowthistle may modify or retard the successional establishment of native species (Butterfield et al. 1996).

Biology and Invasive Potential

Perennial sowthistle reproduces by seed and horizontal roots. Each plant can produce 4,000 to 13,000 seeds that can remain dormant in the soil for up to six years. Viability is commonly under 40% (Royer and Dickinson 1999). Spreading rootstocks are the primary means of invasion into new areas as plants are capable of producing new plants from buds on the rhizome up to 2 feet in depth.

UAF Cooperative Extension Service photo by Michael Rasy

Roadside infestation of perennial sowthistle.

(Royer and Dickinson 1999, Rutledge and McLendon 1996). Perennial sowthistle seeds possess hairs and are spread by wind or may become attached to animals (Butterfield et al. 1996). Seeds can also be moved on vehicles and farm equipment and may contaminate commercial seeds and hay (NWCB 2003, Butterfield et al. 1996). Seeds germinate at ¼–1¼ inches deep, and the optimal temperature is between 77° and 86°F. Plant cover and litter promote germination. Although perennial sowthistle is adapted to a variety of soils, it prefers rich, non-compacted, moist, and fine-textured soil with pH levels ranging from 5.2 to 7.2. This plant can survive temperatures to 3.2°F (Butterfield et al. 1996, Rutledge and McLendon 1996). Perennial sowthistle is listed as a noxious weed in 20 of the United States and five Canadian provinces. It has also been declared a federal noxious weed in the United States and Canada and a prohibited noxious weed in Alaska (Alaska Administrative Code 1987).

XID Services photo by Richard Old

Annual sowthistle.

Distribution and Abundance

Perennial sowthistle is common in gardens, cultivated crops, roadsides, and fertile waste areas. It may also occur on disturbed sites of prairies, woods, meadows, lawns, streams, and lake shores (NWCB 2003, Butterfield et al. 1996, Gubanov et al. 1995). This species is native to Europe, western Asia, and Iceland. It has spread widely throughout the northern United States and southern Canada and has also established in South America, Australia, and New Zealand. The first report of perennial sowthistle in North America was from Pennsylvania in 1814 (Butterfield et

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Annual sowthistle.

al. 1996). Its first known occurrance in Alaska was reported in Hoonah in 1979 (ALA 2004). It has since been found in Fairbanks, Delta, Anchorage, Juneau, and Prince of Wales Island (AKEPIC Database 2004).

Management

Biological, chemical, manual, and mechanical control methods all have been used on perennial sowthistle. Mowing or cutting to reduce seed production and root reserves should be done a few times per season for several years. When hand-pulling, use a shovel and take care to get as much of the root as possible. Tillage may increase numbers by breaking up the rhizomes into separate pieces that can grow into new plants, while tillage that buries all root fragments more than a foot deep is reported to be effective. This weed is relatively resistant to many, but not all, common broadleaf herbicides (Butterfield et al. 1996, Rutledge and McLendon 1996). Annual sowthistle may be controlled through hand-pulling or cutting prior to flowering. Herbicide application is unnecessary except for large infestations.

XID Services photo by Richard Old

Leaf and stem of perennial sowthistle.

Notes

Perennial sowthistle is a relative of chicory, and its roots have been used to make a coffee-like beverage. Because of the high hydrocarbon content of its milky sap, it has been investigated as a source of oil for manufacture of plastics and pharmaceuticals.

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Leaf and stem of annual sowthistle.