

Sericocarpus rigidus – White-top Aster

English name: White-top Aster

Other English name: Columbian Whitetop Aster

Scientific name: *Sericocarpus rigidus* Lindl.

Other scientific name: *Aster curtus* Cronq.

Family: *Asteraceae* (Aster Family)

Risk status

BC: vulnerable (S3); blue-listed

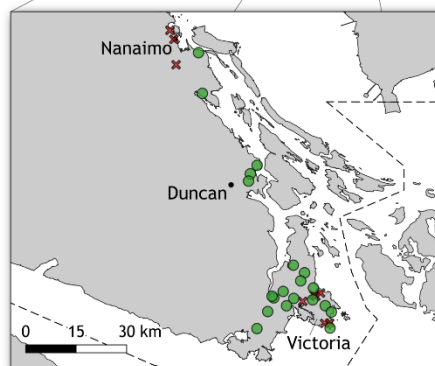
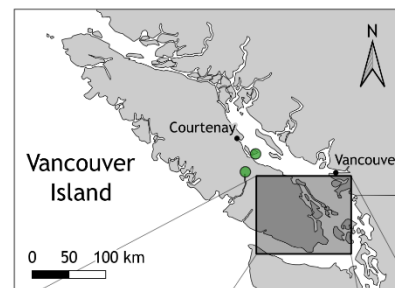
Canada: Special Concern

Global: vulnerable (G3)

Elsewhere: Washington vulnerable (S3), Oregon imperilled (S2)

Range/Known distribution: In Canada, White-top Aster occurs in the eastern lowlands of Vancouver Island and the Gulf Islands from Port Alberni and Hornby Island south through the Victoria area and west almost to Sooke.

In the United States, White-top Aster is known from the San Juan Islands and Puget Sound. There is a range gap between Puget Sound and the Willamette Valley and the Columbia River Gorge, with a disjunct population in the Klamath region just north of California.



Distribution of *Sericocarpus rigidus*
● Confirmed Sites
* Extirpated Sites

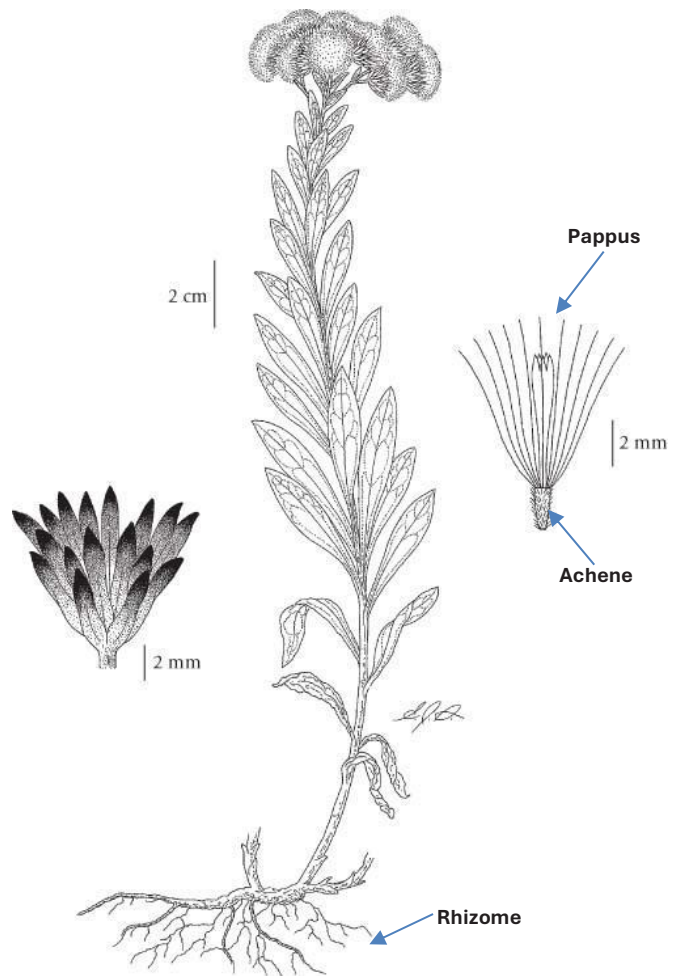
Sericocarpus rigidus – White-top Aster

Field description: White-top Aster is a rhizomatous perennial that may form large clones. Buds on the slender rhizomes are each capable of producing a single, erect, usually unbranched stem up to 30 cm tall. Many of the shoots are shorter and don't produce flowers. There is no basal rosette of leaves and the lower stem leaves usually wither by the time the plant is in flower. The stem leaves are entire, 2.5-4.0 cm long, oblanceolate, and taper to a sessile base. The foliage is almost smooth although the leaves may have very small hairs along their margins and lower midrib. The inflorescence is a compact cluster of flowering heads. The involucre is 5-9 mm long and consist of several series of bracts. The heads contain 1-3 inconspicuous, white ray flowers and 9-21 pale yellow disc flowers. The achenes are densely-hairy and have a white pappus.

Identification tips: When in flower, White-top Aster is easily distinguished from other members of the Aster family within its range in British Columbia by the whitish disk and ray flowers and by the small number of very short ray flowers that are obscured by the involucre bracts.



Sericocarpus rigidus



Sericocarpus rigidus – White-top Aster

Life history: White-top Aster persists in long-lived clones that expand and contract over the years depending on growing conditions. It is easy to propagate from rhizome divisions. It relies upon seeds to disperse beyond the extent of its clones. The seed has a well-developed pappus that allows it to drift on the wind. Seeds germinate in the late winter or spring, after a period of cold, moist weather breaks their dormancy. Initially, the seedlings are very small and produce weak roots that are often unable to penetrate surface organic material to reach the mineral soil below. In garden environments, some plants may flower in their first year. In nature, it probably takes a few years before they become sufficiently vigorous to flower. Close monitoring of well-mapped patches over a 20 year period suggests that it rarely establishes new clones.

Shoots may break dormancy with the arrival of winter rains but in some areas they remain dormant until late winter or early spring when soil temperatures begin to rise. The proportion of stems that produce flowers varies considerably from site to site and from year to year. White-top Aster begins to flower as early as July and may continue to flower into September. It is self-fertile but seed-set is greater when flowers are insect-pollinated. Late-flowering plants may produce achenes whose pappus bristles entangled in the damp late-summer weather, forming a sodden mass that precludes long-distance dispersal. The shoots die back between September and November.

Black-tailed Deer (*Odocoileus hemionus*) and introduced Eastern Cottontail Rabbits* (*Sylvilagus floridanus*) may graze on White-top Aster but experimental evidence and careful observation provide conflicting evidence regarding the significance of grazer exclusion on plant vigour. Insects grazing on achenes may cause significant seed mortality.

Habitat: In Canada, White-top Aster occurs in meadows and Garry Oak or Douglas-fir woodlands and open forests. Native shrubs such as Tall Oregon-grape (*Berberis aquifolium*), Ocean-spray (*Holodiscus discolor*), and Common Snowberry (*Symphoricarpos albus*) are sometimes present but rarely abundant. The native herbaceous layer is dominated by perennial forbs such as Pacific Sanicle (*Sanicula crassicaulis*), Great and Common Camas (*Camassia leichtlinii* and *C. quamash*), Yarrow (*Achillea millefolium*), Woolly Sunflower (*Eriophyllum lanatum*), Spring Gold (*Lomatium utriculatum*), Yampah (*Perideridia montana*) and Field Chickweed (*Cerastium arvense*). Native bunchgrasses such as California Oatgrass (*Danthonia californica*), Long-stoloned Sedge (*Carex inops*), and Alaska Onion grass (*Melica subulata*) are often present and occasionally abundant. The moss layer is often sparse but Broom Forkmoss (*Dicranum scoparium*), Oregon Beaked Moss (*Kindbergia oregana*), and Rough Goose Neck Moss (*Hylocomiadelphus triquetrus*) may be present and are occasionally abundant.

Why this species is at risk: In the past, the greatest threat may have come from habitat loss as native meadows were developed for residential, transportation and recreational uses. Many populations may have been destroyed without ever being reported. Populations on private land are still under threat from development.

More recently, invasive species and forest encroachment have become a greater threat. At many locations White-top Aster suffers considerably from suppression by native trees and shrubs have

***Sericocarpus rigidus* – White-top Aster**

encroached into meadows and open woodlands because of fire suppression, and by invasive shrubs such as Scotch Broom* (*Cytisus scoparius*) and Gorse* (*Ulex europaeus*). Invasive plants, particularly grasses such as Sweet Vernal Grass* (*Anthoxanthum odoratum*) and Kentucky Bluegrass* (*Poa pratensis*), may be abundant and compete strongly for moisture and nutrients.

Many populations occur in parks, where they often suffer from trampling.

Increasing populations of Black-tailed Deer and Eastern Cottontail Rabbits*, free of pressure from predators, heavily graze on some populations.

What you can do to help this species:

Invasive species, particularly Scotch Broom*, can be controlled. Populations close to trails may be protected with fencing. Measures can be taken to control populations of Black-tailed Deer and Eastern Cottontail Rabbits.

References

- B.C. Conservation Data Centre. 2024. BC Species and Ecosystems Explorer. B.C. Minist. of Environ. Victoria, B.C. Available: <https://a100.gov.bc.ca/pub/eswp/> (accessed Mar 15, 2024)
- Bigger, D. S. 1999. Consequences of patch size and isolation for a rare plant: Pollen limitation and seed predation. *Natural Areas Journal* 19: 239-24
- Clampitt, C.A. 1987. Reproductive biology of *Aster curtus* (Asteraceae), a Pacific Northwest endemic. *American Journal of Botany* 74(6): 941-946.
- Clampitt, C.A. 1993. Effects of Human Disturbances on Prairies and the Regional Endemic *Aster curtus* in Western Washington. *Northwest Science* 67(3): 163-169.
- COSEWIC. 2009. COSEWIC assessment and update status report on the White-top Aster *Sericocarpus rigidus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 26 pp. (www.sararegistry.gc.ca/status/status_e.cfm) Parks Canada Agency. 2006.
- Engelstoft, C. 2005. The impact of grazing on white-top aster by Black-tailed Deer and Eastern Cottontail following Scotch broom removal in Mill Hill Regional Park, 2004. Capital Regional District Parks Division, Victoria. 57 pp.
- Fairbarns, M. 2005. Demographic and phenological patterns of *Sericocarpus rigidus* (white-top aster). *Natural Resources Canada, Victoria*. 17pp.
- Gamon, J. and D. Salstrom. 1992. Report on the status of *Aster curtus* Cronquist. Washington Natural Heritage Program. Washington Department of Natural Resources, Olympia.
- Giblin, D. E., and C. W. Hamilton. 1999. The relationship of reproductive biology to the rarity of endemic *Aster curtus* (Asteraceae). *Canadian Journal of Botany*. 77: 140-149.
- Kaye, T.N. and K. Kuykendall. 2001. Germination and propagation techniques for restoring rare Pacific Northwest prairie plants. pp. 213-224 in, Reichard, S.H., P.W. Dunwiddie, J.G. Gamon, A.R. Kruckeberg, D.L. Salstrom, (eds.) *Conservation of Washington's Native Plants and Ecosystems*. Washington Native Plant Society, Seattle, Washington.
- Recovery Strategy for Multi-Species at Risk in Garry Oak Woodlands in Canada. In *Species at Risk Act Recovery Strategy Series*. Ottawa: Parks Canada Agency. 58 pps.

For further information, contact the Garry Oak Ecosystems Recovery Team, or see the web site at: www.goert.ca

Line art Copyright © Province of British Columbia. All rights reserved. Reprinted with permission of the Province of British Columbia. www.ipp.gov.bc.ca. Photograph reprinted with permission of Matt Fairbarns.

Sericocarpus rigidus – White-top Aster

© 2024

*Refers to non-native species