

## White-topped aster (*Sericocarpus rigidus*)



### THREATENED



Flowers (left), habit (center), and habitat (right) of white-topped aster. Photos by Melissa Carr (left and center) and Rebecca Currin (right). If downloading images from this website, please credit the photographer.

### Family

Asteraceae

### Taxonomic notes

Synonym: *Aster curtus*

### Plant description

White-topped aster is a perennial herb from slender creeping rhizomes, with generally unbranched stems topped by terminal clusters of flowering heads. Flowering stems are 10-30 cm tall, non-flowering stems about half as tall. Plants are glabrous except for scabrous-ciliolate leaf margins. Leaves are alternate and evenly distributed along the stem, oblanceolate, tapering to an essentially sessile base, with the upper and lowermost leaves reduced and the largest leaves (2.5-3.5 cm long) occurring along the center third of the stem. Flowers are arranged in compact clusters of 5-20 small heads. Ray flowers are typically two (1-3), 0.1-0.3 cm long, white, and shorter than the pappus; disk flowers are mostly 9-21 and are white to pale yellow with purple anthers. Involucres are 0.7-0.9 cm high and narrow, the bracts imbricate in several series, with a strong midrib or slight keel, chartaceous below and with spreading light green herbaceous tips.

### Distinguishing characteristics

White-topped aster co-occurs with *Symphyotrichum hallii* and overlaps in range with other related species, including *Sericocarpus oregonensis*. The rare white-topped aster is distinguished from these species by its more compact cluster of flower heads, fewer (1-3) and smaller (shorter than the pappus) ray flowers, its abundance of creeping rhizomes, and its generally smaller habit (*S. rigidus* is 10-30 cm tall, whereas *S. hallii* is 20-100 cm tall and *S. oregonensis* is 40-120 cm tall). Additionally, *Sericocarpus rigidus* is restricted to prairie habitats, while *S. oregonensis* usually occupies more upland, woodland habitats.

### **When to survey**

Surveys for white-topped aster should be completed when the species is in flower, from the end of July through early September.

### **Habitat**

The majority of white-topped aster populations, those occurring in western Washington, are found primarily on gravelly, glacial outwash soils. The southernmost populations of Oregon occupy deep, poorly drained clayey soils, and the northernmost populations of British Columbia occupy very shallow soils overlying bedrock. The species occurs in open, grassy, seasonally moist prairie and savannah habitats, at elevations ranging from about 30-380 m (90-1250 ft). The species is occasionally found in partially shaded areas under *Quercus garryana* and *Arbutus menziesii* canopies.

White-topped aster is frequently associated with various grasses (*Agrostis capillaris*, *Aira praecox*, *Anthoxanthum odoratum*, *Cynosurus echinatus*, *Dactylis glomerata*, *Deschampsia cespitosa*, *Festuca idahoensis*, and *Poa pratensis*), forbs (*Symphotrichum hallii*, *Camassia leichtlinii*, *Campanula rotundifolia*, *Leucanthemum vulgare*, *Erigeron decumbens*, *Eriophyllum lanatum*, *Fragaria vesca* ssp. *bracteata*, *Hypochaeris radicata*, *Juncus patens*, *J. tenuis*, *Plantago lanceolata*, *Potentilla gracilis*, *Prunella vulgaris* var. *lanceolata*, *Sidalcea campestris*, and *Viola adunca*), shrubs (*Cytisus scoparius*, *Holodiscus discolor*, and *Symphoricarpos albus*), and trees (*Arbutus menziesii*, *Fraxinus latifolia*, and *Quercus garryana*).

### **Range**

White-topped aster is found in the Willamette Valley in Oregon northwards through the Puget Trough region of western Washington to the southern portion of Vancouver Island, British Columbia, Canada. The majority of extant populations occur in Washington.

### **Oregon counties**

Clackamas, Lane, Linn, Marion, Multnomah (historic record)

### **Federal status**

Species of Concern

### **Threats**

Habitat loss due to urban and agricultural development and habitat degradation caused by invasive species, anthropogenic hydrologic alterations, and disturbance regime alterations pose the greatest threats to the survival of white-topped aster. Studies indicate that competition from non-native species significantly restricts population recruitment in white-topped aster. Additional threats to the species include seed predation by insects and inbreeding depression.

### **Conservation planning**

A U.S. Fish and Wildlife Service [Recovery Plan for prairie species of western Oregon and southwestern Washington](#) (pdf document, 9.63 MB) was released in 2010 and addresses conservation needs of white-topped aster.

### **Did you know?**

Reproduction in this species probably occurs primarily through vegetative means via underground creeping rhizomes. It is therefore difficult to distinguish genetically distinct individuals without excavating entire plants. Thus, population size assessments for white-topped aster are often based on numbers of stems present within a

population, rather than numbers of individual plants.

### **Current/Recent ODA projects**

Developing population density estimates for nine rare Willamette Valley prairie species

### **References**

Cronquist, A. 1955. *Aster* in: C. L. Hitchcock, A. Cronquist, M. Owenby and J. W. Thompson, editors. Vascular plants of the Pacific Northwest. Part 5. University of Washington Press, Seattle.

Currin, R., M. Carr, and R. Meinke. 2008. Developing population density estimates for nine rare Willamette Valley prairie species. Report prepared for U.S. Fish and Wildlife Service, Region 1, Portland, Oregon. Oregon Department of Agriculture, Salem, Oregon.

Douglas, G. W., G. B. Straley, D. Meidinger, and J. Pojar. 1998. Illustrated flora of British Columbia vol. 1: Gymnosperms and Dicotyledons. Ministry of Environment, Lands and Parks, Victoria, British Columbia, 436 pp.

Meinke, R.J. 1982. Threatened and endangered vascular plants of Oregon: An illustrated guide. Unpublished report for the U.S. Fish and Wildlife Service, Region 1, Portland, Oregon. Oregon Department of Agriculture, Salem, Oregon.

OFP (Oregon Flora Project). 2010. Oregon Plant Atlas.  
<http://www.oregonflora.org/atlas.php>. Accessed December 10, 2010.

ORBIC (Oregon Biodiversity Information Center). 2010a. Rare, threatened and endangered species of Oregon. Institute for Natural Resources, Portland State University, Portland, Oregon. 105 pp. Available at  
<http://orbic.pdx.edu/documents/2010-rte-book.pdf> (pdf document, 971 kB). Accessed December 10, 2010.

ORBIC (Oregon Biodiversity Information Center). 2010b. ORBIC element occurrence database. Portland, Oregon.

Semple, J. C. and M. R. Leonard. 2006. *Sericocarpus*. In: Flora of North America Editorial Committee, eds. 1993+. Flora of North America North of Mexico. 16+ vols. New York and Oxford. Vol. 20, pp. 101-105. Available at  
[http://www.efloras.org/florataxon.aspx?flora\\_id=1&taxon\\_id=130148](http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=130148). Accessed December 21, 2010.

USFWS (U.S. Fish and Wildlife Service). 2010. Recovery Plan for the prairie species of western Oregon and southwestern Washington. U.S. Fish and Wildlife Service, Portland, Oregon. xi + 241 pp. Available at  
[http://ecos.fws.gov/docs/recovery\\_plan/100629.pdf](http://ecos.fws.gov/docs/recovery_plan/100629.pdf) (pdf document, 9.63 MB). Accessed September 9, 2010.