

Aster borealis (T. & G.) Prov.

northern bog aster, rush aster
Asteraceae (Aster Family)

Status: State Threatened

Rank: G5S1

General Description: Adapted from Douglas et al. (1998): This perennial herb grows from a slender rhizome, which is seldom over 1/16 in. (2 mm) thick. The stems are erect, simple or branched above, hairless below, becoming hairy above, and 6 to 31 in. (15 to 80 cm) tall. The leaves are basal, reduced, and soon deciduous. The stem leaves are linear, unstalked with rounded bases, hairless, entire or inconspicuously toothed, 3/4 to 2 3/4 in. (2 to 7 cm) long, 3/4 to 3 1/2 in. (2 to 9 mm) wide, and becoming reduced above. The flowers have heads with both ray and disk flowers, are solitary (in reduced plants) to many in a short, and are usually in a broad inflorescence. The involucre is 1/4 in. (5 to 7 mm) tall. The involucre bracts are more or less graduated, oblong, abruptly sharp-pointed, hairless, and often with purplish tips or margins. There are 20 to 50 ray flowers, which are white or rarely pale bluish, and 1/2 to 3/4 in. (12 to 20 mm) in length. The disk flowers are yellow. The fruits are achenes, which are several nerved and hairy. The pappus is white.

Identification Tips: *Aster borealis* is the only member of the genus *Aster* in Washington that is slender with slender rhizomes less than 1/16 in. (2 mm) thick, leaves that are less than 1/2 in. (1 cm) wide, and that grows in cold bogs and along lake margins. All other species have very distinctive characteristics or vary from one of the aforementioned characteristics. *A. borealis* can sometimes be confused with *A. subspicatus*, but *A. subspicatus* has wider, dentate leaves. A technical key is needed to correctly identify this species.

Phenology: Flowers from July to September.

Range: This species is common in southern British Columbia and less frequently found northward. It occurs from British Columbia north to Alaska, and the Yukon Territory, east to Nova Scotia and south to New Jersey, Minnesota, South Dakota, Colorado, Idaho, and Oregon. It is known in Washington from three occurrences in Pierce, San Juan, and Pend Oreille counties.

Habitat: *Aster borealis* prefers marshes, bogs, fens, and lakesides from the lowland to subalpine zones. Associated species include *Carex* species (*Carex* spp.), and bentgrass (*Agrostis* sp.). In San

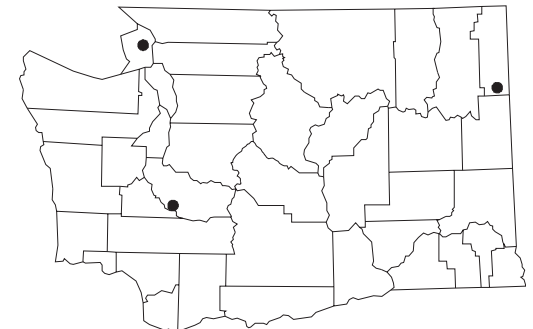
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Known distribution of *Aster borealis* in Washington



- Current (1980+)
- Historic (older than 1980)

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Photo by Robert H. Mohlenbrock

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Juan County it has been found at an elevation of 290 ft (88 m) and in Pend Oreille County at an elevation of 2360 ft (719 m).

Ecology: This species occurs in cold bogs, calcareous bogs, and calcareous fens. It is also found on open peat land and in sedge dominated open sphagnum bogs. One of the populations in Washington was found in an ecotone on the lakeward edge of a *Ledum-Spiraea* community.

State Status Comments: There are three recent known occurrences. One site is managed by the Department of Fish and Wildlife, and two are privately owned.

Inventory Needs: Additional information on the distribution of *A. borealis* is needed. Bog sand fens in Washington State should be systematically surveyed for additional populations. Documented occurrences need to be re-visited.

Threats and Management Concerns: Lakes and bogs are often subject to development or altered water regimes from timber harvest, development, etc. Other threats include hydrologic alterations, housing development, road building, and herbicides.

Comments: This species is also known as *Aster junciformis*, as listed in *Vascular Plants of the Pacific Northwest* (Hitchcock et al. 1955).

References:

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.

Hitchcock, C.L., A. Cronquist, M. Ownbey, J.W. Thompson. 1955. *Vascular Plants of the Pacific Northwest Part 5: Compositae*. University of Washington Press, Seattle, WA. 343 pp.