

# Short-rayed Aster (*Symphyotrichum frondosum*)

## Asteraceae (Sunflower Family)

Status: Red / Endangered 

Best Survey Time: Jul to Sep 

General Habitat: Foreshore 

### RANGE

- Widespread in North America from British Columbia east to Colorado (USA) and south to Baja California (Mexico)
- In B.C., found in the south Okanagan Valley at Osoyoos Lake, Vaseux Lake, Skaha Lake and Max Lake



**Figure 1** B.C. distribution of *S. frondosum* (BC CDC 2013)

### HABITAT

- Open sandy soil along lakeshores in the Bunchgrass Biogeoclimatic Zone, including moist to dry drawdown zones of sandy beaches and saline zones around lakes and ponds that become exposed in summer and early fall
- Associates include rayless alkali aster (*S. ciliatum*), tufted white prairie aster (*S. ericoides*, spike-rushes (*Eleocharis* spp.) and rare foreshore plants



**Figure 2** Open sandy lakeshore habitat along Vaseux Lake, B.C.

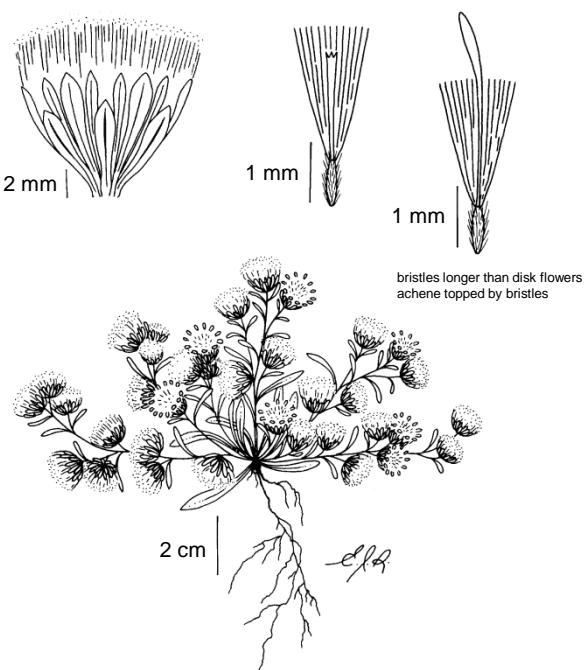


©2014 Josie Symonds

**Figure 3** Sandy lakeshore habitat along Skaha Lake, B.C.

### LIFE HISTORY

- Annual species that grows each year from seed, germinating following water drawdown in late June or July and flowering from July into September
- Achenes (containing seeds) produced from September to October, then released into seed bank
- Does not reproduce vegetatively, so population survival depends on seeds and seed bank
- Seed dispersal by wind, water, waterfowl or small mammals
- May be subject to annual population fluctuations due to varying environmental conditions



**Figure 4** Illustration of *S. frondosum* (Douglas et al. 1998)

# *Symphyotrichum frondosum* (continued)

## DESCRIPTION

### General

- Small to medium-sized annual herb
- Branched, usually 2 to 30 cm (up to 60 cm) tall stems grow annually from a small taproot
- Branches may be erect or spreading out over soil

### Leaves

- Alternate, oblanceolate (broader towards to top) or narrowly elliptic leaves, up to 6 cm long
- Often fringed with small hairs along margins

### Flowers

- Flower heads borne on larger plants in open, short-branched inflorescences, each surrounded by overlapping, green, oblanceolate leaf-like bracts, 5 to 9 mm long
- Flower heads composed of two types of flowers, pink or white narrow and strap-like ray flowers each 1.5 to 2 mm long, and yellow tubular disk flowers

### Fruits

- Fruits are achenes, each topped by numerous soft bristles that are longer than the disk flowers and highly conspicuous in the autumn



Figure 5 Branched, somewhat prostrate plant

## IDENTIFICATION TIPS

- Characterized by broad, leaf-like floral bracts, narrow ray petals, and low, sprawling growth habit
- Rayless alkali aster (*S. ciliatum*) often co-occurs in the same habitats but has erect, taller stems, much shorter often inconspicuous rays, and narrow sharply pointed floral bracts
- Hybrids with *S. ciliatum* occur in mixed populations; these are recognizable by their intermediate traits: showier rays than *S. ciliatum*, but a more erect growth form than *S. frondosum*, and involucre bracts that are intermediate in shape, size and how tightly they overlap



Figure 6 Close up of flower head with pink ray flowers

## GENERAL THREATS AND GUIDANCE

- **Avoid development in areas with known occurrences of *Symphyotrichum frondosum* through project relocation or redesign**
- Protect open lakeshore habitats by minimizing beach maintenance activities, avoiding permanent trail creation, excluding livestock and ATV, and removing invasive species
- Follow provincial methods for when and how to conduct plant species at risk surveys
- Follow provincial policy and guidance on how to avoid, minimize, restore and offset impacts to plant species at risk and their habitats
- Report any sightings to the B.C. Conservation Data Centre ([cddata@gov.bc.ca](mailto:cddata@gov.bc.ca)) and FLNR Ecosystems Section ([josie.symonds@gov.bc.ca](mailto:josie.symonds@gov.bc.ca))

## REFERENCES

- B.C. Conservation Data Centre. 2013. <http://a100.gov.bc.ca/pub/eswp/>
- COSEWIC. 2006. COSEWIC assessment and status report on the short-rayed alkali aster *Symphyotrichum frondosum* in Canada. COSEWIC, Ottawa, O.N.
- Douglas et al. (editors). 1998. *Illustrated Flora of British Columbia*. Vol. 1. B.C. Min. Environ., Lands and Parks, and Min. For., Victoria, B.C.
- Klinkenberg, Brian (editor). 2013. E-Flora BC. <http://linnet.geog.ubc.ca/Atlas/Atlas.aspx?sciname=Sympyotrichum%20frondosum&redblue=Both&lifeform=7>
- NatureServe. 2010. <http://www.NatureServe.org/explorer>

## ACKNOWLEDGEMENTS

*Symphyotrichum frondosum* Plant Species at Risk Fact Sheet developed by Josie Symonds, based on content produced under contract by Terry McIntosh and review comments from Brenda Costanzo, Orville Dyer and Curtis Bjork