

# Short-rayed Aster

## *Symphotrichum frondosum*

### Asteraceae (Sunflower Family)

- Status: Red / Endangered
- Best Survey Time: July to September
- 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.



Figure 3 Disturbed lakeshore habitat along Osoyoos 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

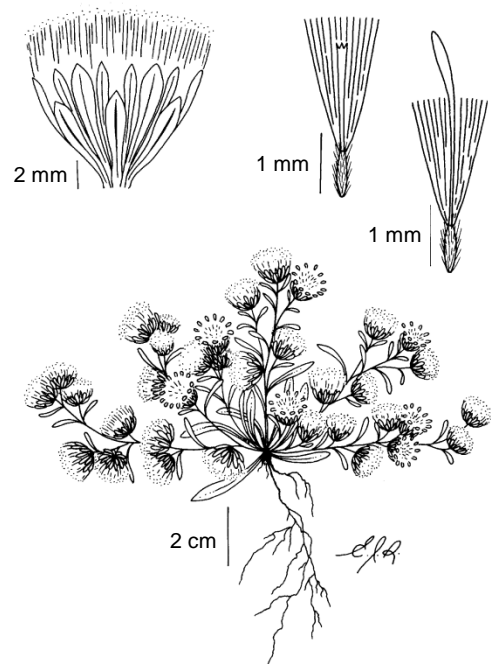


Figure 4 Illustration of *S. frondosum* (Douglas et al. 1998)

# *Symphotrichum 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 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 *Symphotrichum 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
- Provincial methods for when and how to conduct rare plant surveys, as well as guidance on mitigation measures for this species can be found in *Guidance for Plant Species at Risk in the Okanagan: Foreshore, Riparian & Wetland Developments*
- Report any sightings to the BC Conservation Data Centre ([cdcddata@gov.bc.ca](mailto:cdcddata@gov.bc.ca)) and MFLNRO Ecosystems Section ([josie.symonds@gov.bc.ca](mailto:josie.symonds@gov.bc.ca))

## REFERENCES

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