

Beaked Spike-rush (*Eleocharis rostellata*)

Cyperaceae (Sedge Family)

RANGE

- Found in Mexico and the Caribbean, sporadically through the United States and into southern Canada in Ontario and British Columbia
- In B.C., known from the South Coast, a few scattered sites in the Thompson Okanagan Region and further east in the Rocky Mountain Trench

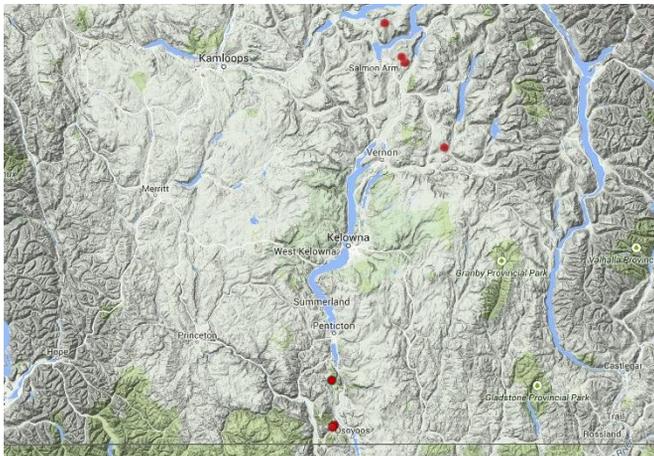


Figure 1 Thompson Okanagan Region distribution of *Eleocharis rostellata* (modified from BC CDC 2014)

HABITAT

- In B.C., found along coastal estuaries and seasonally wet calcareous or saline meadows
- In Thompson Okanagan Region, occurs in Interior Douglas Fir and Bunchgrass Biogeoclimatic Zones
- Associates include tufted clubrush (*Trichophorum cespitosum*), brown beak-rush (*Rhynchospora capillacea*), giant helleborine (*Epipactis gigantea*) and sedges (*Carex* spp.) and rushes (*Juncus* spp.) that can survive in mineral-rich environments



Figure 2 Calcareous wetland habitat near Salmon Arm, B.C.



Figure 3 Saline meadow habitat north of Oliver, B.C.

LIFE HISTORY

- Perennial herb that produces some flowering stems that elongate and root into new plants when they reach the ground; also reproduces by achenes dispersed during high water
- Most likely dispersed over longer distances by waterfowl and small mammals
- Over time, dense stands are formed that are somewhat resistant to competition by native and non-native species

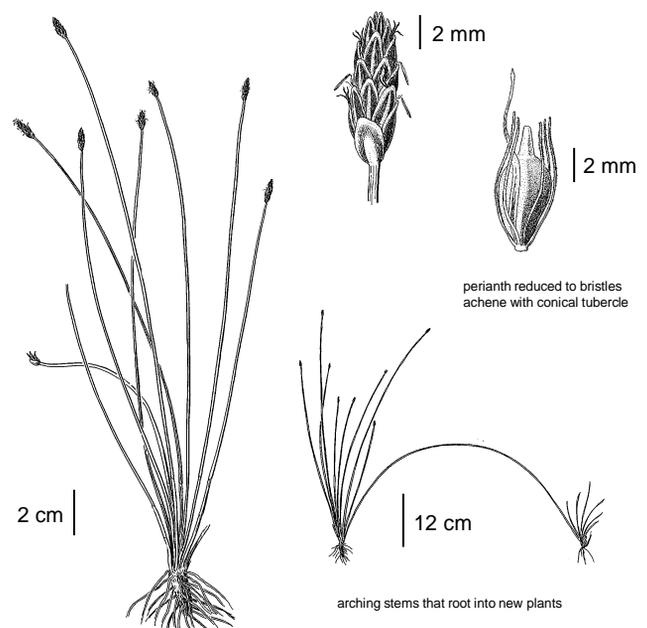


Figure 4 Illustration of *Eleocharis rostellata* by Jeanne R. Janish (Hitchcock et al. 1969)

Eleocharis rostellata (continued)

DESCRIPTION

General

- Densely tufted perennial from short ascending rhizomes, with some stems greatly elongating to 1 m or more, arching over, then rooting into new plants

Leaves

- Leaves reduced to sheaths around the abundant and photosynthetic flowering stems

Flowers

- Flowers numerous in elliptic, terminal spikes, with 10 to 25 flowers hidden behind straw-coloured to reddish scales with blunt tips and clear margins
- Perianth (sepals and petals) reduced in width to mere bristles, usually well-developed and surpassing top of achene

Fruits

- Mature achenes olive to pale brown and up to 2.8 mm long
- Tubercles (projection at top of achene) conical in shape, steep-sided, 0.75 mm long



Figure 5 Close-up of a patch of *Eleocharis rostellata* with numerous arching culms; inset shows close-up of a flowering spike

IDENTIFICATION TIPS

- Early in the growing season, with the absence of mature achenes and before the long stems form, *Eleocharis rostellata* is most similar to the widespread common spike-rush (*Eleocharis palustris*), a species with less wiry stems, a creeping (rather than tufted) habit and less of a preference for mineral-rich sites
- Late in the growing season when the culms begin to arch over, beaked spikerush becomes unmistakable; the narrow, conical tubercle is quite a distinct feature
- When walking through mature stands, a snapping sound can be heard as the rooted culms are broken by strides



Figure 6 Mature achenes (left) with relatively long perianth bristles and steep-sided tubercles, and a single flowering scale (far right) with blunt tip and clear margins

GENERAL THREATS AND GUIDANCE

- **Avoid development in areas with known occurrences of *Eleocharis rostellata* through project relocation or redesign**
- Protect wetland habitats from disturbance and development, and maintain natural cycles of water fluctuation
- Monitor the effects of climate change and succession on the availability of suitable habitat
- 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 (cdccdata@gov.bc.ca) and FLNR Ecosystems Section (josie.symonds@gov.bc.ca)

REFERENCES

- B.C. Conservation Data Centre. 2014. <http://a100.gov.bc.ca/pub/eswp/>
- Douglas et al. (editors). 1999. *Illustrated Flora of British Columbia*. Vol. 6. B.C. Min. Environ., Lands and Parks, and Min. For., Victoria, B.C.
- Hitchcock et al. 1969. *Vascular Plants of the Pacific Northwest*. Univ. Washington Press, Seattle, WA
- Klinkenberg, Brian (editor). 2014 E-Flora BC <http://linnet.geog.ubc.ca/Atlas/Atlas.aspx?sciname=Eleocharis%20rostellata>

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