

Microseris bigelovii – Coast Microseris

English name: Coast Microseris

Other English name: Coastal Silverpuffs

Scientific name: *Microseris bigelovii* (Gray) Schultz-Bip.

Family: *Asteraceae* (Daisy)

Other scientific names: none

Risk status

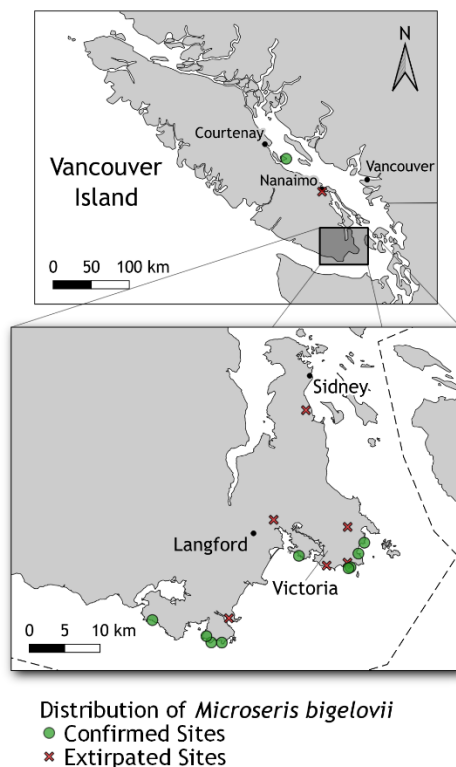
BC: imperilled (S2); red-listed

Canada: Endangered

Global: apparently secure (G4)

Elsewhere: California – reported (SR); Oregon – imperilled (S2); Washington – presumed extirpated (SX)

Range/Known distribution: The main range of Coast Microseris extends along the Pacific coastline from Santa Barbara in southern California to the mouth of the Alsea River in central Oregon. The Canadian population is about 450 km disjunct from the main population and are genetically distinct from those in California. In Canada, Coast Microseris is restricted to southeastern Vancouver Island and the Gulf Islands. There are nine extant occurrences in British Columbia and five extirpated populations. Coast Microseris was reported twice from Washington State, once in 1923 and once in 1983. Both populations were in the San Juan Islands, and both are believed to be extirpated.



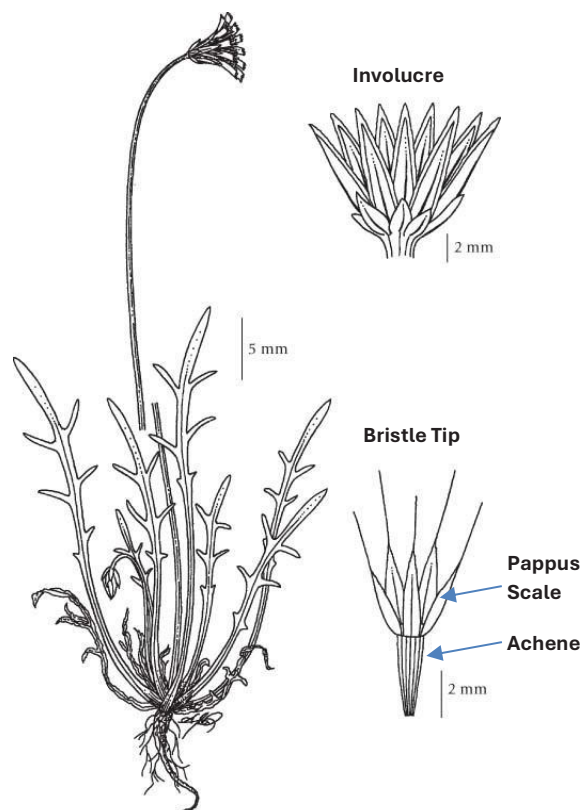
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Field description: An annual, yellow-flowered herb from a taproot. Its stems are 4-35 cm tall and consist of one to several unbranched and leafless stalks that exude a milky liquid when broken. Their habit ranges from erect to prostrate with the apex curved upward. The basal leaves, 3-25 cm in length, are smooth and hairless, varying in shape from linear to oblong-lanceolate. The leaves are untoothed in small specimens and usually coarsely toothed to lobed in specimens > 10 cm tall, and the teeth are slender to broadly tapered. It bears a single flower head with yellow to yellow-orange ray flowers. The flower head is nodding and inconspicuous until mature, at which point it opens up briefly to allow fertilization in sunny weather, and then closes. The involucre of the flower head are 6-15 mm tall with wide, lance-shaped inner bracts that are often reddish outside and black-hairy within, and outer bracts that are much shorter than inner ones. Its fruits (2.5-6 mm in length) are brown or bronze- coloured achenes that are sometimes marked with dark spots and are abruptly tapered at the base. The distinctive pappus consists of five smooth to short-haired lanceolate scales that each terminate in a sharp tip that is prolonged as a long bristle.

Identification tips: Unlike perennial *Microseris* species, with their conspicuous yellow flowers, flower heads of Coast *Microseris* are smaller and yellow to yellow-orange in colour. Coast *Microseris* is easily distinguished from the sympatric annual False Silverpuffs (*Uropappus lindleyi*), which is taller, has leaves on the lower part of its (often-branched) stems, and has an awn arising from an evident notch at the tip of the pappus scale.



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Life history: Some seeds of Coast Microseris may germinate after the onset of winter rains, and their basal leaves develop in the autumn. Other seeds do not germinate until spring. Most vegetative growth occurs in the spring and plants flower in May or June. The plants are mostly self-pollinated although insects may occasionally cross-pollinate. In certain parts of its range the species is thought to hybridise with closely related Microseris species, although hybridisation has a negative effect on fertility. Most seeds may simply fall to rest below the parent plant or may be blown in the air or along the ground, but they may become attached by their awns to fur or feathers and thus be animal-dispersed. The long- distance dispersal of Coast Microseris achenes is attributed to birds, as many occurrences are associated with colonies of coast-nesting seabirds.

Habitat: In British Columbia, Coast Microseris inhabits exposed, sparsely-vegetated pockets of soil on coastal bluffs and steep slopes. It is most closely associated with shallow, sandy soils but in some cases the soils are highly enriched by deposits of guano from coast-nesting marine birds. The associated vegetation varies from a crevice flora dominated by lichens and drought-tolerant mosses to a sparse cover of non-native grasses and forbs. Some sites are also invaded by non-native shrubs, primarily Scotch Broom* (*Cytisus scoparius*). Most sites have abundant invasive grasses such as Early* and Silver Hairgrass* (*Aira praecox* and *A. caryophyllea*), Annual Bluegrass* (*Poa annua*), Barren Fescue* (*Vulpia bromoides*) and Common Velvet Grass* (*Holcus lanatus*); as well as invasive forbs such as Subterranean Clover* (*Trifolium subterraneum*), Small Hop-clover* (*T. dubium*), Small-flowered Catchfly* (*Silene gallica*), Hairy Cat's-ear* (*Hypochaeris radicata*), Ribwort Plantain* (*Plantago lanceolata*), and Dovefoot Geranium* (*Geranium molle*).

Elevations in British Columbia: 2-100 m.

Why the species is at risk: Most populations of Coast Microseris occur in areas with abundant invasive species - mostly grasses and forbs, but also Scotch Broom* - which compete for resources (especially soil moisture, and germination sites) and which often shade it out. The other major risk comes from trampling by people and dogs, which is a serious problem at six of the nine extant sites.

What you can do to help this species: The most important step in most public areas is to direct people and pets away from populations of Coast Microseris to reduce trampling damage. Management practices should be tailored to the needs of the site. Potential management tools will depend on the specific circumstances and may require experimentation prior to implementation. Before taking any action, expert advice should be obtained, and no action taken without it.

Areas of known occurrences should be protected, and population trends at these sites monitored. The feasibility of planting seeds in new areas of suitable habitat should also be explored.

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References

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For further information, contact the Garry Oak Ecosystems Recovery Team, or see the web site at: www.goert.ca.

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*Refers to non-native species