

# BC's Coast Region: Species & Ecosystems of Conservation Concern

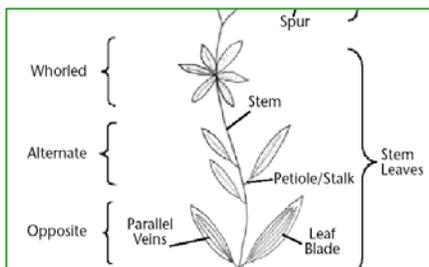
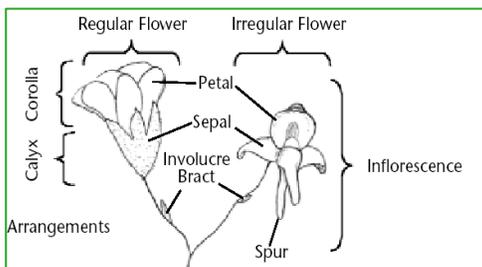
## Snake-root Sanicle (*Sanicula arctopoides*)

Global: G5 Provincial: S1 COSEWIC: E, BC List: Red



Notes for *Sanicula arctopoides*: This member of the family Apiaceae (“carrot”), is also referred to as “bear’s-foot sanicle” or “footsteps of spring.” Seven species occur within the genus *Sanicula* in BC with two, including *S. arctipodes*, being provincially red listed as well as federally listed as at risk.

### Plant Anatomy



### Description

**Height 30 cm.** Emerging from a taproot, this herbaceous perennial wildflower grows for several years, forming increasingly large rosettes, until it is large enough to flower. Once it has flowered, the plant dies. The non-flowering rosettes are low, with yellowish to yellowish-green, somewhat fleshy leaves. The small, bright yellow flowers at first form dense, pincushion-like clusters nestled in the rosettes of basal leaves. Once fertilized, the main stem elongates above the rosette, raising the developing fruit as much as 30 cm above the ground. The stems bear three-lobed, irregularly-toothed leaves which only become apparent as the stalk elongates. A star-like ring of bracts (modified leaves) may be found immediately below each flower cluster. The 2-5 mm long, dry, egg-shaped fruits are covered in hooked prickles.

### Look's Like?

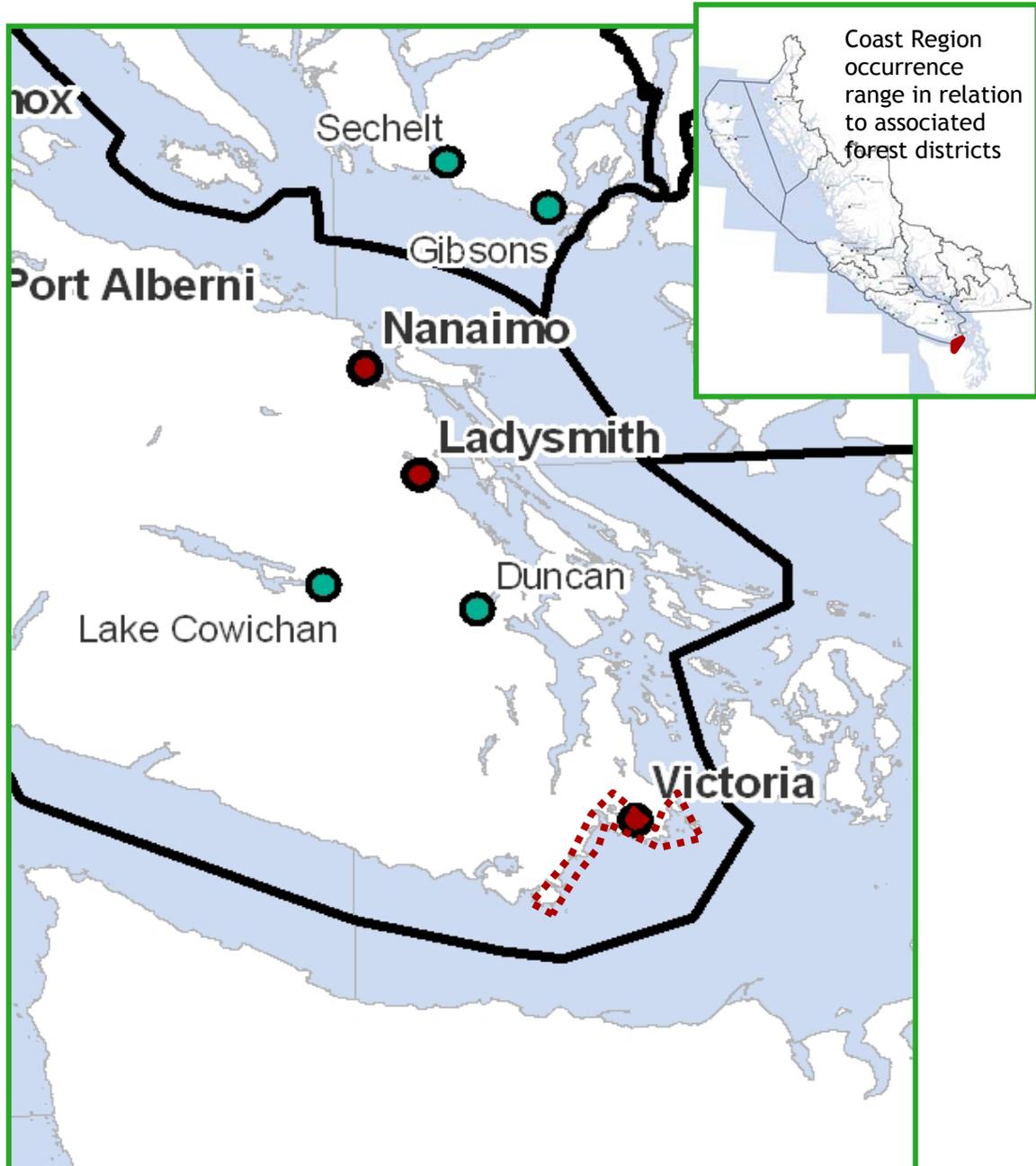
Snake-root sanicle may be found in similar habitat favoured by Pacific sanicle. Pacific sanicle has similar flower heads that range from yellow to pink, however flowers are not nestled in the basal rosette when young as with snake-root sanicle. The long flower bracts (modified leaves around the base of the flower), found in snake-root sanicle are lacking. Pacific sanicle can occur in both moist and dry sites while snake-root sanicle is restricted to drier soil regimes.



Pacific Sanicle

**Distribution**

*Elevation: 0-20 m.* In North America this species is limited to disjunct populations along the Pacific Northwest from central California to the northern end of its range on the southeastern tip of Vancouver Island. Of the 15 historic occurrences documented along a narrow coastal distribution in the Greater Victoria area (from Bentinck Island northeast to Sidney), 3-4 are now confirmed extirpated including Cattle Point and Chain Island, and 4 new populations have been discovered since the federal recovery strategy was completed in 2006.



Snake-root Sanicle (*Sanicula arctopoides*), known range of population occurrences (red-dotted line) for the Coast Region

### Habitat Preferences

As with many marine headland and Garry oak meadow species, snake-root sanicle is tolerant of continuous sun, wind and salt spray and favours southern, eastern or northeastern aspects. Other associated native wildflowers include common camas, Puget Sound gumweed, white triteleia and bare-stem desert-parsley. These communities also tend to contain large amounts of invasive alien grasses such as Kentucky bluegrass and brome species. Populations also occupy seasonal seepages that occur on slightly sloping exposed rocky outcrops along the shoreline that dry up toward the end of summer.



Snake-root sanicle is generally restricted to exposed maritime and upland meadows with little or no shrub or tree overstory.

### Critical Features

Snake-root sanicle is distinctly shade intolerant and is usually found growing within communities that form headland meadows and grasslands near the ocean. Trees, shrubs and other species which can create shade canopies are distinctly lacking.

### Seasonal Life Cycle

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Germination January-February, flowering occurs in second year - peaks March-April											
					Fruits evident mid-may, ripen June seeds continue to be dispersed well into October						

Plants die-back during summer/fall drought periods, re-sprouting if late summer rains occur. Plants grow slowly through the winter. The prickly fruit are dispersed by animal transport or wind dispersed when dried stems break off.

### Threats

- ◆ The preferred ecological associations of this species are geographically limited and subject to loss of natural or historic maintenance regimes (e.g. use of fire by First Nations). Suppression or removal of these mechanisms has contributed to spread and encroachment of invasive and competitive vascular plant species which may also contribute to changes in soil moisture and chemistry.
- ◆ While this plant appears to have robust recruitment rates and relatively good survival within existing populated sites, fragmentation effects from adjacent development may be a barrier to seed dispersal and colonization to other suitable sites.
- ◆ Impacts from land management practices (e.g. mowing or pesticide application) and outdoor recreation activities (e.g. trampling).
- ◆ Competition for nutrients and shading from associated vascular plants and subsequent expansion of other more shade tolerant species.

### Conservation & Management Objectives

- ◆ Apply conservation and management objectives for this species as set out in the “Recovery Strategy for Multi-species at Risk in Maritime Meadows Associated with Garry Oak Ecosystems in Canada”.
- ◆ Collection activities should be limited and apply practices identified in the Province’s “Voucher Specimen Collection, Preparation, Identification and Storage Protocol: Plants & Fungi.” Inventory activities should consider approaches and references identified in E-Flora’s Protocols For Rare Vascular Plant Surveys.

### Specific activities should include:

- ◆ Assess actual level and extent of threats to existing populations.
- ◆ Monitor existing populations on an ongoing basis to assess viability and reduce potential disturbance from land use activities. Where suitable habitat occurs, work with land managers and land owners to ensure development or recreational activities do not disturb or encroach on sensitive areas.
- ◆ Consider historic distribution as part of developing a reintroduction program to suitable sites.
- ◆ Conduct outreach to raise awareness of this species and how to identify it to improve distribution knowledge
- ◆ Effective long-term control and reduction in competition from invasive or aggressively spreading vascular plants (e.g. invasive grasses, Scotch broom) must form part of strategies to protect and recover populations. Disturbance to rare plant species and communities must be minimized during control activities.

This species is listed under the Federal Species at Risk Act (SARA) and may be subject to protections and prohibitions under the BC Wildlife Act. Habitat for this species may also be governed under provincial and federal regulations including the Fish Protection Act and Federal Fisheries Act as well as Regional and local municipal bylaws.

### Content for this Factsheet has been derived from the following sources

- B.C. Conservation Data Centre. 2010. [Internet] Species Summary Report: *Sanicula arctopoides*. B.C. MoE.
- E-Flora. 2010. [Internet] Electronic Atlas of the Plants of British Columbia
- Fairbarns, Matt. 2010. Aruncus Consultants [Personal comm.]
- Garry Oak Ecosystems Recovery Team. 2002. Species at Risk in Garry Oak and Associated Ecosystems in British Columbia. *Sanicula arctopoides*.
- Ministry of Environment, Lands and Parks Resources Inventory Branch. 1999. [Internet] Voucher Specimen Collection, Preparation, Identification and Storage Protocol: Plants & Fungi. Standards for Components of British Columbia's Biodiversity No. 4b
- Parks Canada Agency. 2006. Recovery Strategy for Multi-species at Risk in Maritime Meadows Associated with Garry Oak Ecosystems in Canada. In Species at Risk Act Recovery Strategy Series. Ottawa: Parks Canada Agency. 93 pps.
- Polster, D. et al. 2006.[Internet] Develop with Care: Environmental Guidelines for Urban and Rural Land Development in British Columbia. Prepared for the BC Ministry of Environment. Victoria (BC).
- Proulx, Gilbert et al. 2003. A Field Guide to Species at Risk in the Coast Forest Region of British Columbia. Published by International Forest Products and BC Ministry of Environment. Victoria (BC).
- USDA /NRCS. 2010. [Internet] The PLANTS Database
- Washington Department of Natural Resources, Washington Natural Heritage Program and the U.S.D.I. Bureau of Land Management. 2003. *Sanicula arctopoides* H. & A., "bear's foot sanicle". 2pps.

**Prepared by:** Pamela Zevit of Adamah Consultants and Matt Fairbarns Aruncus Consulting for the South Coast Conservation Program (SCCP) in partnership with: International Forest Products (Interfor), Capacity Forestry (CapFor) and the BC Ministry of Environment (BC MoE), E-Flora and E-Fauna the Electronic Atlas of the Flora and Fauna of BC, Species at Risk & Local Government: A Primer for BC. Funding for this factsheet was made possible through the Sustainable Forestry Initiative (SFI): <http://www.sfiprogram.org/>

Every effort has been made to ensure content accuracy. Comments or corrections should be directed to the South Coast Conservation Program: [info@sccp.ca](mailto:info@sccp.ca). Content updated August 2010.

**Image Credits** Snake-root Sanicle and close-up: Eric Hunt, Pacific Sanicle: Beedle um bum Flickr, Habitat: M. Diane Rogers, Plant anatomy graphic: Gilbert Proulx. Only images sourced from "creative commons" sources (e.g. Wikipedia, Flickr, U.S. Government) can be used without permission and for non-commercial purposes only. All other images have been contributed for use by the SCCP and its partners/funders only.