

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

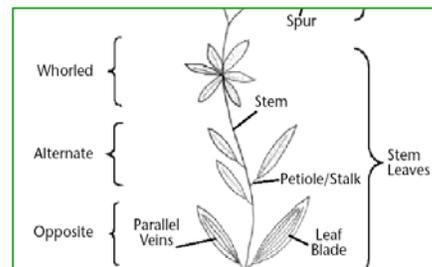
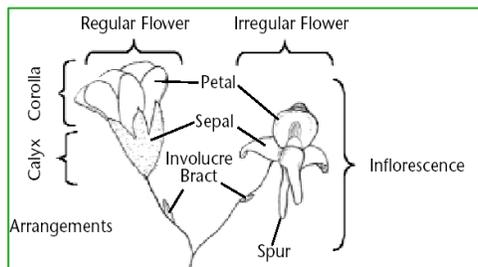
## Deltoid Balsamroot (*Balsamorhiza deltoidea*)

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



Notes on *Balsamorhiza deltoidea*: A member of the family Asteraceae (“asters, sunflowers”), the genus *Balsamorhiza* has 12 species of which 2 occur in BC. This slow-growing species is at the northernmost limit of its range in BC. The second species in the genus, arrowleaf balsamroot (*Balsamorhiza sagittata*), is restricted to the southeast interior of BC.

### Plant Anatomy



### Description

**Height up to 1 m.** An erect perennial herb with a deep woody taproot system. As with many members of the sunflower family, stems are hairy and robust, supporting one or sometimes several prominent disc-shaped, golden flower heads. Each flower head consists of 13-21 outer ray flowers (2-5 cm long), surrounding a large center of short yellow disc flowers (.5-.7 cm long). Leaves form a clump at the base of the stem and are large (up to 25 cm long and 20 cm wide), spear shaped and toothed at the margins with a prominent central vein. Small tear-drop stem leaves have similar venation and hairiness to the basal leaves. Each head produces an array of dry, smooth, .7-.8 cm long single-seeded fruits (achenes), similar to sunflower seeds. In Canada, most seeds do not fully form and are incapable of germinating.

### Look's Like?

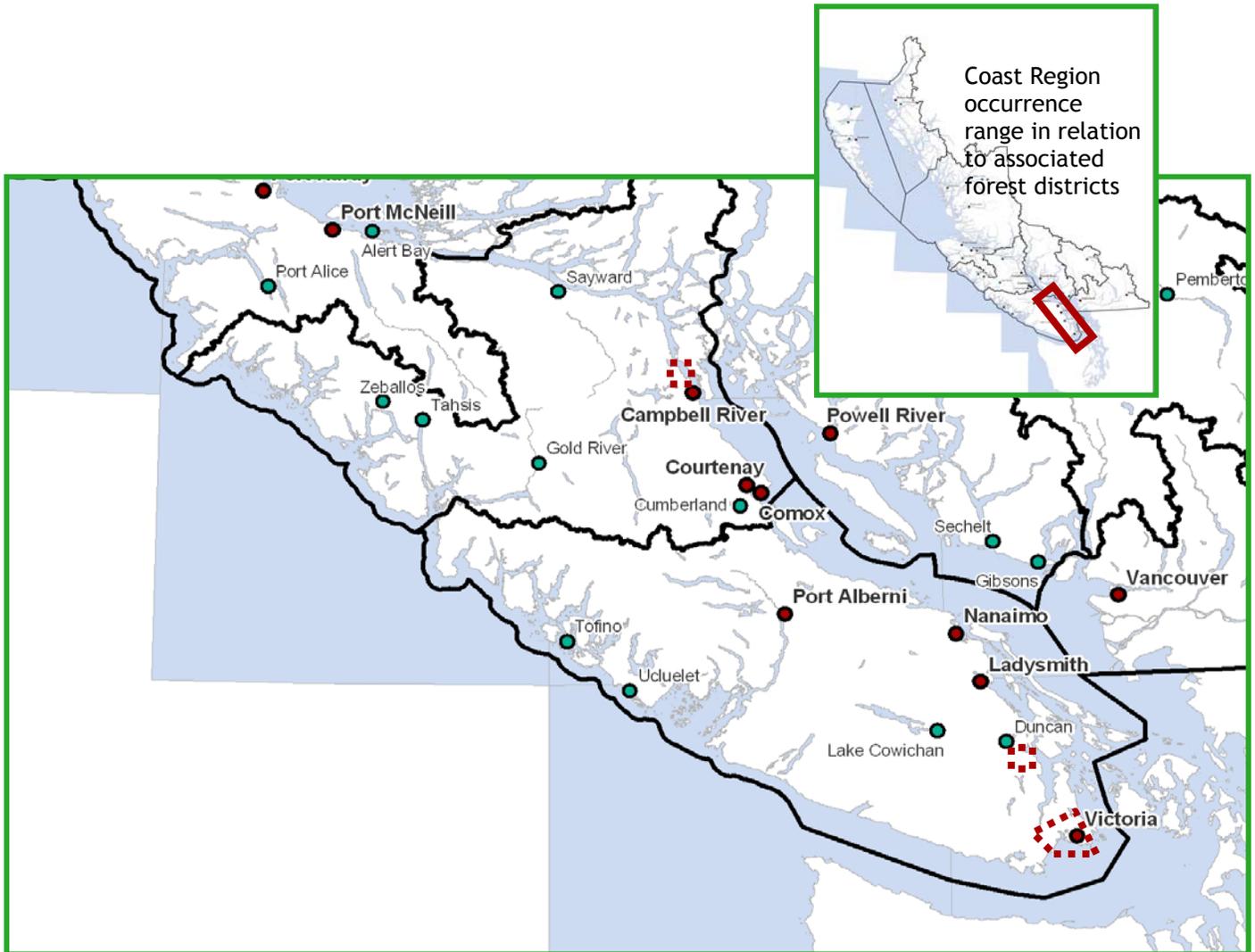
While the large golden flowers and hairy spear shaped basal leaves generally make this species easy to identify, many forms of ornamental sunflower (*Helianthus sp.*) and arnica (*Arnica sp.*) produce similar flower heads. These ornamentals are generally confined to gardens and landscaped areas and rarely spread into natural environments



Ornamental 'Dwarf' Sunflower

**Distribution**

*Elevations sea level-260 m.* Native to western North America, deltoid balsamroot ranges from California to British Columbia, where it grows in varied though generally mountainous habitat. In the Coast Region deltoid balsamroot is restricted to the southeastern side of Vancouver Island from Victoria to Campbell River. Currently, there are 8 known occurrences and at least 8 (and possibly as many as 12) more populations have been extirpated. Plants have been experimentally re-introduced to one of the extirpated sites just north of Duncan.



Deltoid Balsamroot (*Balsamorhiza deltoidea*), known range of population occurrences (red-dotted line) for the Coast Region

### Habitat Preferences

This species grows with a variety of herbs and grasses including species of fescue, stonecrop, woolly sunflower and camas. Artificial cultivation has been successful where grazing by slug species is controlled.



### Critical Features

Seasonal drought and very well-drained soils seem to be key habitat requirements for deltoid balsamroot to persist.

This species is associated with dry Garry oak woodlands and meadows on exposed aspects, with rocky well-drained sand or gravel soils.

### Seasonal Life Cycle

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		Plant emerges March-April Flowering March until late May Die-back mid-July*									
									Rooting system overwinters		

Die-back in response to drought occurs in late spring or early summer depending on the incidence of rains.

### Threats

- ◆ The preferred ecological associations of this species are geographically limited and subject to loss of natural or historic maintenance regimes (e.g. browsing of shrubs by deer, 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 and may contribute to negative changes in soil moisture and chemistry.
- ◆ Habitat loss, encroachment and fragmentation may contribute to local extirpation events due to genetic isolation and increased vulnerability to disease.
- ◆ Impacts from land management practices (e.g. mowing or pesticide application) and outdoor recreation activities (e.g. trampling).
- ◆ Competition from other plant species (native and introduced) through succession, especially tall grasses and shrub species.
- ◆ Herbivory or seed/bulb predation by introduced species (e.g., slugs, squirrels, rabbits, feral sheep)

### Conservation & Management Objectives

- ◆ Apply conservation and management objectives as set out in the “Recovery Strategy for Multi-Species at Risk in Garry Oak Woodlands in Canada” as well as actions to minimize threats identified in the COSEWIC assessment and update status report on this species.
- ◆ 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.
- ◆ A targeted inventory is needed to determine if undiscovered populations exist elsewhere within the Coast Region.
- ◆ Conduct outreach to raise awareness of this species and how to identify it to improve distribution knowledge
- ◆ 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.
- ◆ Suitable areas need to be identified for reintroduction or population enhancement. This species does not produce large quantities of seed but seed are easy to germinate.
- ◆ Effective long-term control and reduction in competition from invasive or aggressively spreading vascular plants (e.g. invasive grasses, Scotch broom, common snowberry) 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] [Updated August 4 2009 ]. Conservation Status Report: *Balsamorhiza deltoidea*. B.C. MoE. COSEWIC. 2009. [Internet] COSEWIC assessment and update status report on the Deltoid Balsamorhiza *Balsamorhiza deltoidea* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 22 pp.
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- 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

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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.

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