

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

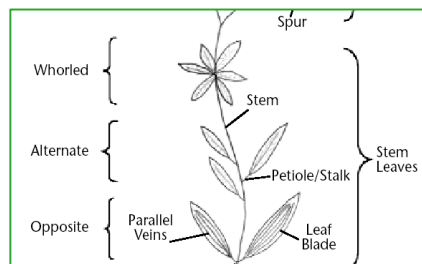
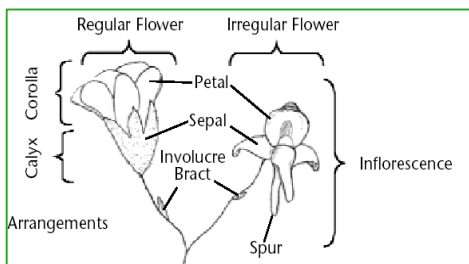
Pacific Waterleaf (*Hydrophyllum tenuipes*)

Global: G4G5 Provincial: S2 COSEWIC: N/A BC List: Red



Notes on *Hydrophyllum tenuipes*:
A member of the family Hydrophyllaceae (“waterleaf”), which includes a number of herbaceous perennials in North America. Taxonomically this family may be closely related to the family Boraginaceae (“borage”), and there is a suggestion it should be classified under borage as a subfamily. This species is one of three waterleaf species in BC, the other two being “Fendler’s” and “ballhead” waterleaf. Population sizes range from small clonal patches of approximately 1 m² to extensive colonies.

Plant Anatomy



Description

Height 20-80 cm. A deciduous perennial with solitary flowering stems. The basal, hairy leaves with long stalks are the most distinctive feature. The leaf blade is divided into 5 (rarely up to 9) toothed leaflets, with all but the lowermost pair joined together. Flowers are tiny funnel-shaped in compact clusters 5-7 mm long. Flower colour ranges from greenish-white to blue or purple. The stamens (male sexual structures) are very noticeable and extend past the petals. After flowering, tiny round capsules develop, each containing one to three seeds.

Look's Like?

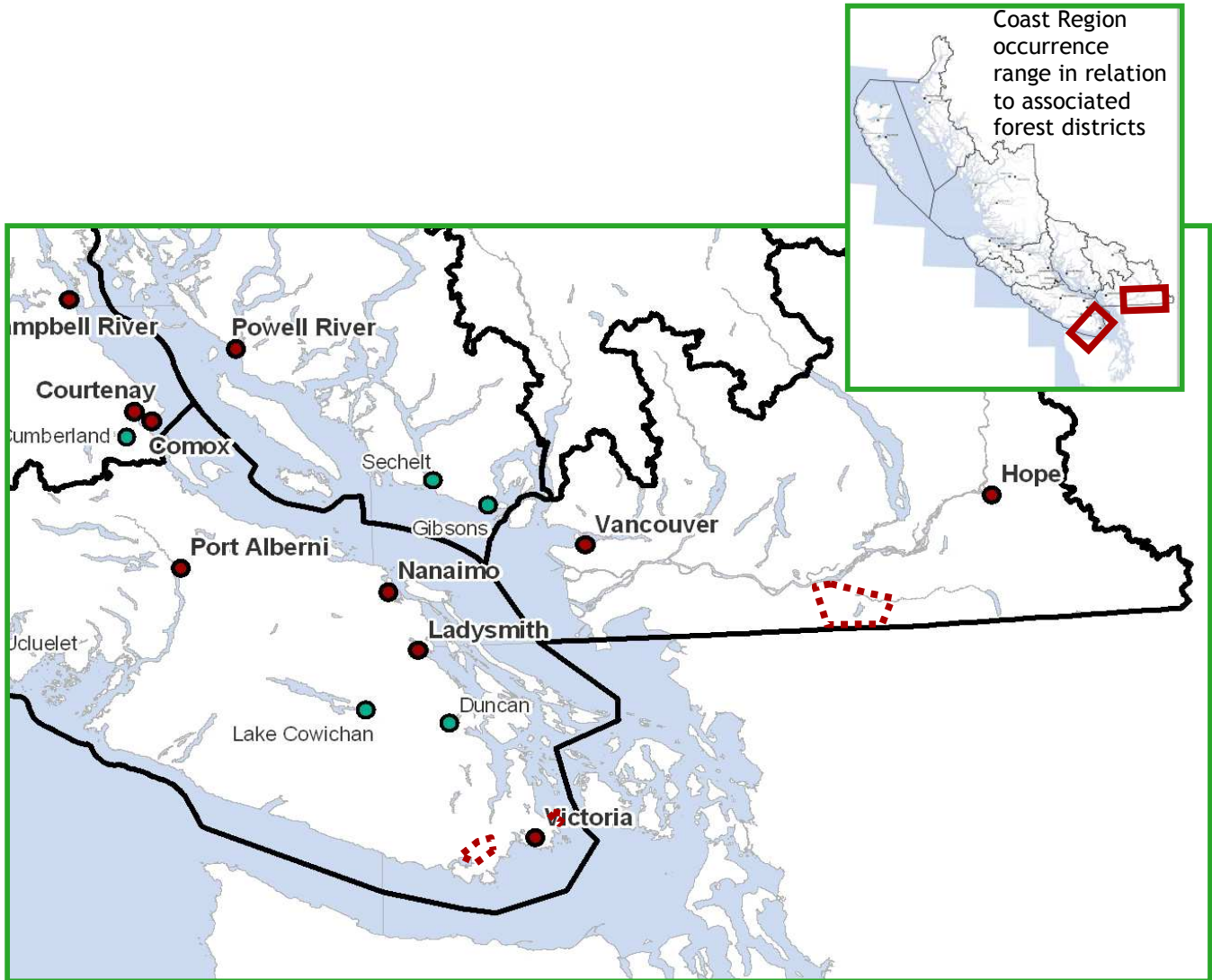
Pacific waterleaf resembles Fendler's waterleaf, a much more common species sharing its range. Leaves are the best diagnostic feature. Fendler's waterleaf has 7 to 15 leaflets in opposite pairs, while Pacific waterleaf typically has 5 leaflets with all but the lowermost pair joined together.



Fendler's Waterleaf

Distribution

Elevations <1500 m In BC the species is restricted to a few populations in the Fraser Lowlands (Sumas Mountain, Cultus Lake/Vedder Mountain area) and southeastern Vancouver Island (Goldstream and Sooke/Mount Douglas Park area).



Pacific Waterleaf (*Hydrophyllum tenuipes*), known range of population occurrences (red-dotted line) for the Coast Region

Habitat Preferences Found in riparian zones, lowland and hillside seepages, floodplains within deciduous and mixed woodlands, and trail borders and forest edges with moist saturated soils.



Critical Features Pacific waterleaf is a shade-loving species that requires high spring light levels with deep summer shade and well-developed, deep, organic soils. Distinct associations with bigleaf maple have been documented in Fraser Lowland populations and with Oregon ash south of the border in the US.

This species is strongly associated with moist soil regimes found in and around water and seepage zones.

Seasonal Life Cycle

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
				Flowering early spring							
				Capsule production and seed dispersal							

Plants spread vegetatively by above-ground rhizomes to form clonal colonies, but will also spread by seed.

Threats

- ◆ Major populations occur in areas under significant development and land clearing pressures (e.g. logging, residential development and road expansion). Almost half of the known populations in the Fraser Lowlands occur on Sumas Mountain where they are threatened by intensive subdivision development. Some populations may have become extirpated before even being documented.
- ◆ Disturbance or damage from recreational activities (trail building, mountain biking).
- ◆ In other areas (e.g. Goldstream Provincial Park) park maintenance activities and trail management threaten local populations.
- ◆ This species restricted ecological associations (riparian zones and floodplains) make it vulnerable to land use activities that alter site hydrology.
- ◆ Uncontrolled harvesting of plants and seeds. This species is used for native plant gardening and in landscaping for erosion control.

Conservation & Management Objectives

- ◆ 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:

- ◆ Concerted efforts to assess and identify status and threats to extant populations is needed if this species is to be considered for listing with COSEWIC.
- ◆ Promote habitat connectivity by retaining old growth and mature forest stands where possible, implement land use planning process which avoid or mitigate potential impacts or disturbance to this species and its habitat associations (e.g. changes to hydrological regimes from increased impervious surfaces).
- ◆ Minimize invasive species spread and establishment into riparian areas. Establish effective ecological buffers and awareness programs that reduce opportunities for yard waste dumping or direct planting of non-native species by residents.
- ◆ Implement integrated pest management approaches that protect populations from herbicide spray drift or fertilizer application from land clearing and land management activities.
- ◆ Avoid trampling and soil compaction as this species has a narrow threshold for changes to soil conditions.
- ◆ Work with land use managers to reduce impacts to nearby populations from development of recreational trails or facilities as well as associated activities, especially intensive activities such as mountain biking.

This species 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

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¹Original account prepared by Cindy Sayre.

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

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