English name: Fern-leaved Desert-parsley

Other English name: Coastal Chocolate-tips, Fernleaf Biscuitroot

Scientific name: *Lomatium dissectum* (Nutt.) Mathias & Constance

Other scientific name: *Leptotaenia dissecta Nutt.*

Family: *Apiaceae* (Carrot Family)

Risk status

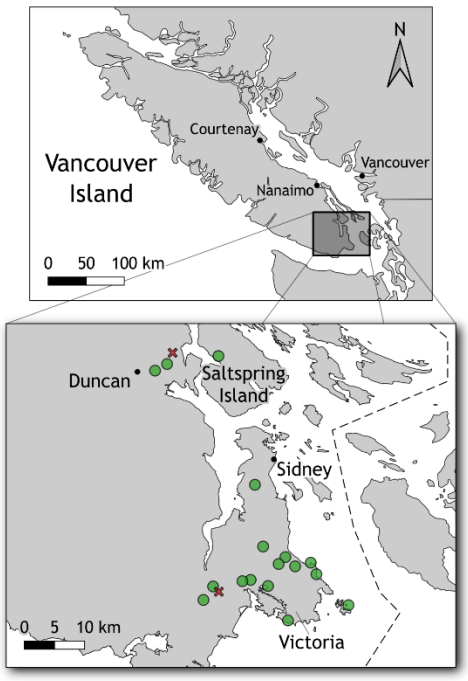
BC: imperilled (S2); red-listed

Canada: Endangered

Global: secure (G4)

Elsewhere: Washington, Oregon, California not ranked (SNR); Idaho vulnerable (S3)

Range/Known distribution: In Canada, there are nineteen known populations of Fern-leaved Desert-parsley – all extant - at low to medium elevations on Salt Spring Island, in the Cowichan Valley, and the Victoria area. In the United States it is found in the Olympic Mountains and the Puget Trough, south through the Cascades, to northern California. There is a disjunct population in west-central Idaho.

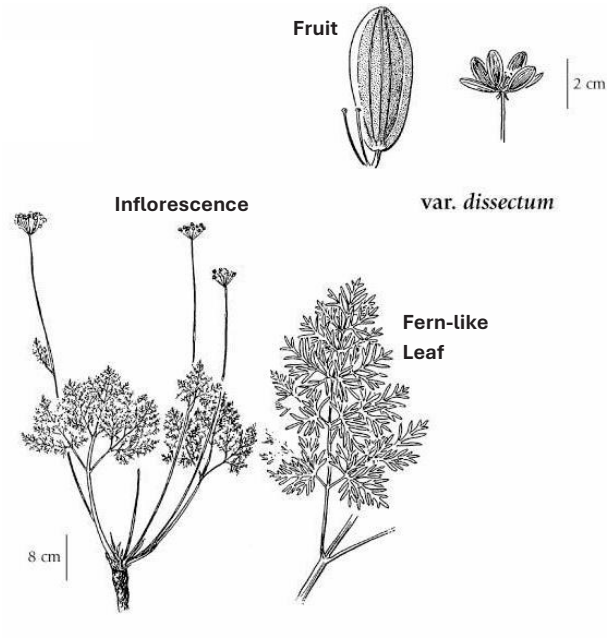


Distribution of *Lomatium dissectum*
● Confirmed Sites
× Extirpated Sites

Field description: Fern-leaved Desert-parsley is a large perennial herb from a stout taproot. Each root crown may produce several flowering stalks ranging from 50 to 150 cm tall. Most of the leaves are basal and are large (up to 35 cm wide), triangular in outline, and 1-3 times dissected (divided), giving them a distinct fern-like appearance. A few smaller leaves occur on the stems. The reddish-maroon (or occasionally yellow) flowers are arranged in compound umbels (round topped clusters) consisting of 10-30 main branches at the ends of long peduncles (stalks). The fruits, which look like dill seeds, are oblong or oval, 8-18 mm long, glabrous (smooth), with corky-thickened wings (margins).

Identification tips: Fern-leaved Desert-parsley is similar to Carrot-leaf Desert-parsley (*Lomatium multifidum*) but the latter doesn't occur in coastal B.C. Without flowers, Fern-leaved Desert-parsley may be confused with Pacific Hemlock-parsley (*Conioselinum pacificum*) or Poison Hemlock (*Conium maculatum*), which are both robust plants with similar stems and leaves, but the other two species have white flowers. The stems of Poison Hemlock are purple-blotched, and its foliage has a disagreeable musty smell when crushed. Poison Hemlock is extremely poisonous, as its name suggests.

Lomatium dissectum



Life history: Leaves emerge in early spring and growth is usually restricted to the period when sufficient moisture is available. In British Columbia, flowering occurs in March and April. Most umbels contain a mix of male flowers and flowers with both male and female reproductive structures. Its early flowering makes it an important species for early spring pollinators. It appears to be pollinated by bees. Solitary ground-nesting bees in the genera *Andrena* and *Micrandrena*, as well as overwintering queens in the bee genera *Halictus* and *Lasioglossum*, may be important native pollinators. Honeybees may also pollinate Fern-leaved Desert-parsley. The above-ground part of the plant generally dies back by mid- summer. Seeds may continue to mature on the senescent shoots as the summer progresses. When the seeds are dispersed, they have under-developed embryos. The embryos develop rapidly at temperatures of 3.4 to 5.5° C. Seeds require about 16 weeks of cold, damp weather to germinate abundantly. Seed germination occurs in the very early spring, with seedlings producing only two to three leaves in the first year.

Plants tend to remain vegetative while increasing the number of leaves and taproot size for one to several years, and individual plants often do not flower over consecutive years.

Deer, rabbits, and rodents will graze on Fern-leaved Desert-parsley. Its foliage may be attacked by leaf miners, gall-causing flies, and rusts and it can be a host plant for aphids attended to by ants. Seed weevils may attack the fruits and in one case a seed crop of plants from Alpha Islet was discovered to be almost entirely destroyed by insects.

Habitat: In Canada, Fern-leaved Desert-parsley is found on well-drained soils in a mix of vegetation types including open meadows, shrublands, and woodlands of Garry Oak (*Quercus garryana*) and Douglas-fir (*Pseudotsuga menziesii*). Associated species may include native shrubs such as Ocean Spray (*Holodiscus discolor*), Dull Oregon-grape (*Berberis nervosa*), Nootka Rose (*Rosa nutkana*), Common Snowberry (*Symphoricarpos albus*) and Trailing Blackberry (*Rubus ursinus*), although woody species are often absent. Native forbs are often abundant, including camas (*Camassia quamash* and *C. leichtlinii*), Barestem Desert-parsley (*Lomatium nudicaule*), Pacific Sanicle (*Sanicula crassicaulis*), Western Buttercup (*Ranunculus occidentalis*), Yarrow (*Achillea millefolium*), Menzie's Larkspur (*Delphinium menziesii*), Woolly Sunflower (*Eriophyllum lanatum*), Chocolate Lily (*Fritillaria affinis*), and Field Chickweed (*Cerastium arvense*). Native graminoids tend to be less common, but may include Tufted Hairgrass (*Deschampsia cespitosa*), Blue Wildrye (*Elymus glaucus*), California Brome (*Bromus carinatus*), and Beach Red Fescue (*Festuca rubra ssp. pruinosa*). Mosses and lichens are rarely abundant except in pristine areas where Maritime Reindeer Lichen (*Cladonia portentosa*) may form large tufts.

Why this species is at risk Over 95% of Garry Oak and associated ecosystems have been lost to development since European settlement began in the 19th century and is likely a similar proportion of Fern-leaved Desert-parsley populations were lost in the process. Populations along roads and on private property remained threatened by development. Fire suppression, and concomitant forest and shrubland ingrowth, appears to be a threat to some of the remaining populations. Similarly, predator control and the associated increase in deer populations have probably increased grazing pressure. The remnant population at Beacon Hill Park in Victoria may have been much larger before the mowing was introduced to reduce the severity and extent of ground fires. The greatest threat comes from invasive species. These include shrubs such as Scotch Broom* (*Cytisus scoparius*), Himalayan Blackberry* (*Rubus armeniacus*), English Ivy* (*Hedera helix*), and Spurge Laurel* (*Daphne laureola*). Invasive grasses also pose a major threat, including Orchard Grass* (*Dactylis glomerata*), Common Velvet Grass* (*Holcus lanatus*), Barren Brome* (*Bromus sterilis*), Kentucky Bluegrass* (*Poa pratensis*), and Tall Oatgrass* (*Arrhenatherum elatius*). Invasive forbs tend to be less of a threat although Common Dandelion* (*Taraxacum officinale*), Hairy Cat's-ear* (*Hypochaeris radicata*), Common Vetch* (*Vicia sativa*), and Ribwort Plantain* (*Plantago lanceolata*) are often present.

What you can do to help this species 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.. Public and private landowners should be made aware of new populations of this species if they are discovered, and appropriate management practices suggested.

Populations on private land should be protected and monitored. Invasive shrubs should be removed. Controlling ingrowth by native trees and shrubs is an expensive ongoing endeavour, as is controlling herbaceous weeds, but both should be considered where populations of Fern-leaved Desert-parsley are at risk of extirpation.

References

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

*Refers to non-native species