

Meconella oregana – White Meconella

English name: White Meconella

Other English name: Oregon Meconella, White Fairy-poppy

Scientific name: *Meconella oregana* Nutt.

Other scientific name: N/A

Family: *Papaveraceae* (Poppy Family)

Risk status

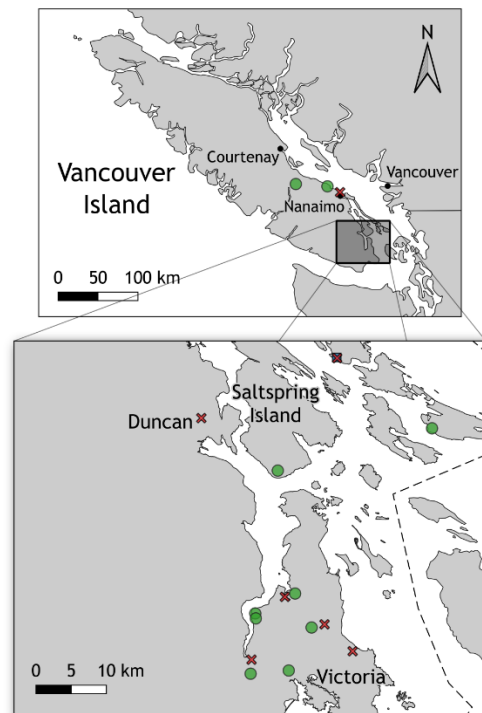
BC: critically imperilled (S1S2); red-listed

Canada: Endangered

Global: imperilled (G2)

Elsewhere: Washington, Oregon critically imperilled (S1), California imperilled (S2)

Range/Known distribution: In British Columbia, White Meconella has been reported from 15 sites (six extant) ranging from the hills above Port Alberni south along the coast and in the Gulf Islands to the Victoria area. In the United States it occurs in the San Juan Islands south through east Puget Sound to the Tacoma area. There is a gap in its distribution and then it occurs in the Columbia River Gorge. Then there is another gap until southern Oregon, where it occurs between the Coast and Cascade Mountains down to California. It appears to be absent from northern California but there are a cluster of reports from the San Francisco area. An outlier population was reported from the Los Angeles area.



Distribution of *Meconella oregana*

- Confirmed Sites
- Experimental Sites
- × Extirpated Sites

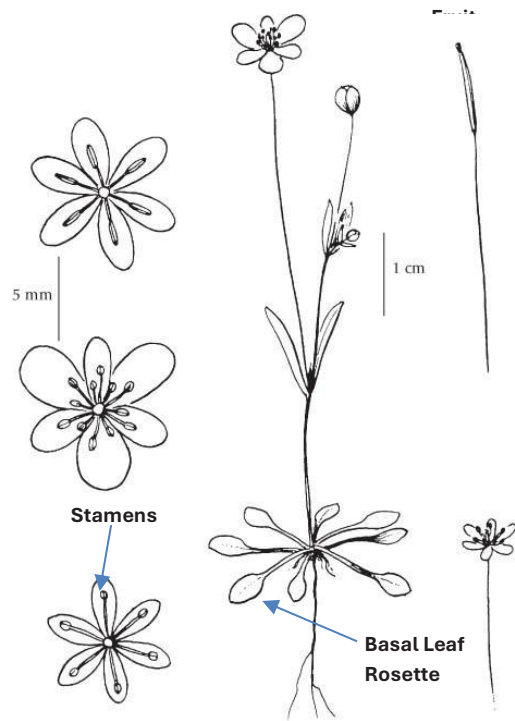
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Field description: White Meconella is a slender annual herb growing from a taproot. It has a single or branched stem and ranges from 1 to 8 cm tall when in bloom and has a blue-green appearance. The lower leaves are spoon-shaped, 3-18 mm long, and form a basal rosette. The stem leaves are lance-shaped to linear (grass-like), oppositely arranged, 5-9 mm long and sessile (unstaked). The small white flowers usually have 6 petals and 3 sepals (although irregularities in number do occur) and are borne singly at the ends of slender erect pedicels (stalks) that are sometimes longer than the main stem. The fruits are linear capsules containing numerous seeds.

Identification tips: White Meconella superficially resembles several other small, white flowered annuals with opposite leaves (e.g. *Moenchia erecta* and *Sabulina pusilla*) for which it could be mistaken. White Meconella can be distinguished from most of these by its unusual combination of 6 petals and 3 sepals, the latter which are shed as the flower opens.



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Life history: White Meconella is a short-lived annual. Its seeds remain dormant in the soil from when they are shed until the following spring. Germination dates vary considerably among years, suggesting dormancy is not broken by daylength but rather by temperature, after a period of stratification. Germination may begin as early as late December, but usually seems to peak in late February or March. Flower buds may be detectable by mid March however flowering tends to peak in late March or early April. Fruits begin to change colour and ripen by late April or early May and most seeds are usually dispersed by late May or early June. Most plants produce 1-4 flowers, but exceptionally robust individuals may produce up to 12 capsules. Each capsule contains about 15-20 tiny seeds. The seeds lack structures to aid in dispersal and likely fall close to the parent plant.

Habitat: In Canada, White Meconella tends to occur in seeps on relatively flat microsites on steep, south to southwest-facing slopes. They favour shallow (< 6 cm thick soils) in very short herbaceous and mossy vegetation. A diverse assemblage of native species has been found in patches of White Meconella, including Harvest Brodiaea (*Brodiaea coronaria*), Blue-eyed Mary (*Collinsia parviflora*), Grassland Saxifrage (*Micranthes integrifolia*), Blinks (*Montia fontana*), Wallace’s Selaginella (*Selaginella wallacei*), and White Tritelia (*Tritelia hyacinthina*); along with Gray Rock Moss (*Niphotrichum canescens* ssp. *latifolius*) and Red Thread-moss (*Imbricbryum miniatum*).

Why this species is at risk: The habitat favoured by White Meconella attracts builders wishing to create “view properties”. Three of the largest populations in Canada, comprising as much as 85% of the national population, are on private properties that have attracted developers, and five of the nine extirpated populations appear to have been lost to development.

Invasive species, primarily annual grasses and herbs, form a slightly taller vegetation layer that shades out White Meconella and competes for light and soil. Frequent competitors include Early Hairgrass* (*Aira praecox*), Smooth Brome* (*Bromus hordeaceus*), Hedgehog Dogtail* (*Cynosurus echinatus*), Common Stork’s-bill* (*Erodium cicutarium*), Small-flowered Catchfly* (*Silene gallica*), and Barren Fescue* (*Vulpia bromoides*). Scotch Broom* (*Cytisus scoparius*) also presents a major threat because even though it struggles to survive on the shallow soils where White Meconella grows, it easily roots in adjacent rock fissures and patches of deep soil and thus may compete for moisture and reduce light availability.

Three populations are very close to popular trails and could easily suffer from trampling.

Over the medium to long-term, the greatest threat comes from climate change. The vernal seeps that White Meconella depends on are particularly susceptible to the predicted increase in the length and severity of spring and summer droughts, and with very weak powers of dispersal the species is unlikely to migrate to newly available microsites which may have previously been too wet.

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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.

The most valuable short-term actions include protecting habitat from development, re-aligning trails to direct people away from White Meconella, and removing invasive weeds without disrupting the White Meconella plants or the thin soil they depend on.

A reliable seed source is needed, and this can be achieved by establishing a vigorous captive population. This seed can be used to augment existing populations and establish new ones.

References

- B.C. Conservation Data Centre. 2024. BC Species and Ecosystems Explorer. B.C. Minist. of Environ. Victoria, B.C. Available: <https://a100.gov.bc.ca/pub/eswp/> (accessed Mar 14, 2024).
- COSEWIC 2005. COSEWIC assessment and status report on the white meconella *Meconella oregana* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 25 pp. (www.sararegistry.gc.ca/status/status_e.cfm).
- Fairbarns, M. 2008. Demographic and phenological patterns of *Meconella oregana* (White Meconella). Natural Resources Canada, Victoria, B.C. 33 pp.
- Parks Canada Agency. 2013. Recovery Strategy for the White Meconella (*Meconella oregana*) in Canada. Species at Risk Act Recovery Strategy Series. Parks Canada Agency, Ottawa. vi+ 31pp

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.