

Orthocarpus bracteosus – Rosy Owl-clover

English name: Rosy Owl-clover

Other English name: none

Scientific name: *Orthocarpus bracteosus* Benth.

Other scientific name: none

Family: *Orobanchaceae* (Broomrape Family)

Risk status

BC: critically imperilled (S1); red-listed

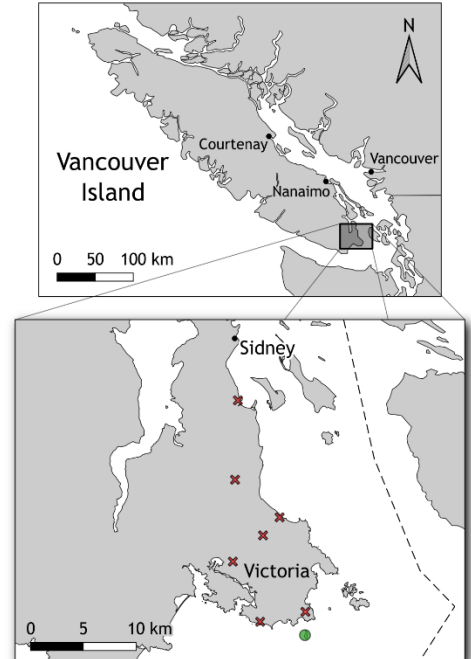
Canada: Endangered

Global: vulnerable (G3?)

Elsewhere: Washington imperilled (S2), Oregon not ranked (SNR), California critically imperilled (S1), Maryland, New York not native (SNA)

Range/Known distribution: In Canada, Rosy Owl-clover has been reported from seven locations in the Victoria area, of which only one is extant.

In the United States, it is known from three historic populations in the San Juan Islands and the Bellingham area. There is a gap between there and the next nearest populations, just north of the Columbia River Gorge. From there it extends south in the Willamette Valley, to a wide swath of Southern Oregon. In California, it is restricted to a handful of locations in the northern Sierra Nevada and the northeast corner of the state.



Distribution of *Orthocarpus bracteosus*
● Confirmed Sites
× Extirpated Sites

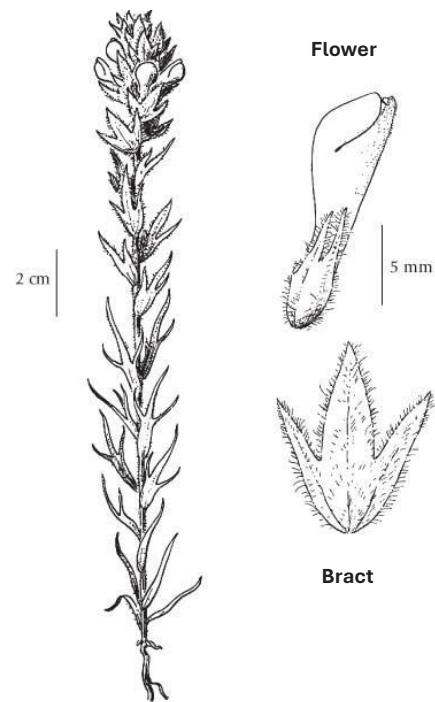
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Field description: Rosy Owl-clover is an annual herb from an erect stem 5-40 cm tall, slender, simple, or branched above. The foliage is short-hairy and usually purple-tinged. The leaves are alternate, stalkless, linear to lance-shaped and 1.5-3.5 cm long. They have short spreading hairs and sometimes have gland-tipped hairs. The upper part of each leaf is 3-cleft. The flowers form a compact, prominently-bracted terminal spike, 3-15 m long. The flower bracts are densely glandular-hairy, with three terminal lobes and all green or more often purple-tinged above. The flowers are usually rose-purple but a white-flowered form, which was once recognized as variety *albus*, has white flowers. The lower lip of the flower is not evidently 3-pouched. On Trial Island, the white-flowered form sometimes appears in small numbers amongst the normal rose-coloured form.

Identification tips: Within its Canadian range, Rosy Owl-clover is not easily confused with any of its relatives when in flower. Its purple flowers distinguish it from the others – Dwarf Owl-clover (*Triphysaria pusilla*) may have purplish-brown flowers, but they are far smaller, and the lower lip is strongly 3-pouched.



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Life history: Rosy Owl-clover is an annual. Its seeds germinate in May as the vernal seeps where it occurs become moist rather than saturated and their soil warms up. The plants grow slowly but are in flower as early as late May. Flowering ends as the soil dries out and plants begin to wither – usually in June or early July in the vernal seeps on Trial Island although flowering plants were collected as late as August or early September from now-extirpated sites in the prairies by Elk Lake in the 1920's and 1930's. The seeds gradually shake out of the dehisced pods, and by late summer the pods are usually empty. Rosy Owl-clover is an outbreeder, pollinated by bumblebees and perhaps other insects.

Rosy Owl-clover is a hemiparasite (root parasite): it forms rudimentary root systems which attach to the roots of other species and form attachments to the host plant's xylem system, extracting water and mineral nutrients. The green leaves of Rosy Owl-clover photosynthesize, providing it with all the metabolites it needs to grow and mature.

Habitat: The single extant population, on Trial Island, grows in a large vernal seep. Other native species present include Pretty Shootingstar (*Primula pauciflora*), Spanish-clover (*Acemispou americanus*), Yellow Monkeyflower (*Erythranthe guttata*), Heal-all (*Prunella vulgaris*), Blinks (*Montia fontana*), Slim Plantain (*Plantago elongata*), and Thrift (*Armeria maritima*).

Old herbarium specimens, collected from meadows and prairies in Oak Bay and near Elk Lake from the 1890's to the 1950's are much larger. Those meadows and prairies, where they still exist, often have dense swards of invasive grasses so that habitat type may no longer be available to Rosy Owl-clover. The natural vegetation of those meadows was not recorded.

Why this species is at risk: In the past, the greatest threat to known populations of Rosy Owl-clover was habitat loss to residential and recreational development (and perhaps invasive species). The remaining populations are currently threatened by trampling (by people, pets, and geese), and competition with invasive species for soil, nutrients, and germination sites. The vernal pools and seeps where it occurs are highly susceptible to climate change: summer droughts are predicted to start earlier in the year and become more severe this will likely lead to the loss of many spring seeps and pools where Rosy Owl-clover occurs.

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.

Management needs include protection of the populations from trampling through the use of fences and the control of non-native, non-migratory Canada Geese. Little can be done to control the invasive species which occur in the same vernal pools and seeps where Rosy Owl-clover occurs,

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but invasive woody species such as Scotch Broom* (*Cytisus scoparius*) and English Ivy* (*Hedera helix*) can be removed from the periphery of these habitats to prevent it from being shaded out.

References

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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.