

Lotus formosissimus

English name Seaside birds-foot trefoil

Scientific name *Lotus formosissimus*

Family Fabaceae (Pea)

Other scientific names none

Risk status

BC: critically imperilled (S1); red-listed

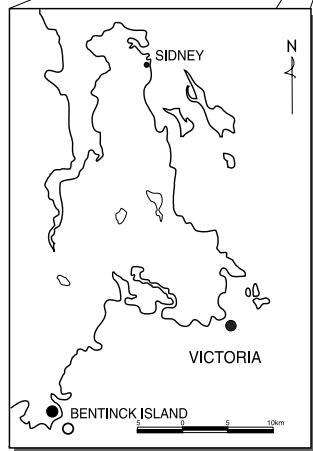
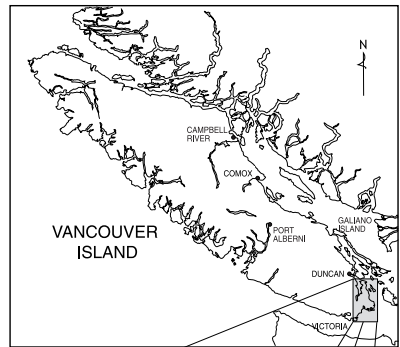
Canada: endangered (N1); COSEWIC: endangered

Global: secure (G5)

Elsewhere: California – not yet ranked (S?); Oregon and Washington – reported (SR)

Range/Known distribution

Seaside birds-foot trefoil occurs along the westcoast of North America west of the Cascade Mountains from southern British Columbia to Oregon and west of the Sierra Nevada Mountains to Monterey County in California. In Canada, it is restricted to the Victoria area on southeastern Vancouver Island and nearby islands. Currently, there are only 2 known occurrences and 5 unconfirmed historic localities in British Columbia.



Distribution of *Lotus formosissimus*.

● recently confirmed sites

○ unconfirmed sites

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Field description

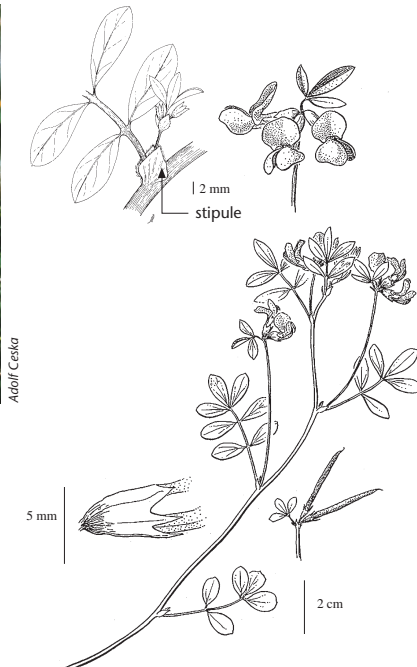
A yellow and pink- to purple-flowered, sprawling perennial herb 20-50 cm long. The compound leaves comprise two pairs of small egg-shaped leaflets with a single terminal leaflet (6-20 mm). **Small leaflike stipules** (triangular bracts) **occur where the leaves join the stem**. Three to nine **pea-like flowers** 10 - 15 mm long occur in clusters along the stem. The **upper petal is yellow, the two side petals are pink-purple and the lower petal is purple-tipped**. The sepals form a tube 5-6 mm long and end with teeth that are slightly shorter than the tube. The fruit is a pea-like linear pod, 2-3 cm long with a few seeds.

IDENTIFICATION TIPS

The yellow and pinkish-purple pea-like flowers and the leaf-like stipules of *Lotus formosissimus* are distinctive. *Vicia* species resemble *L. formosissimus* by their sprawling stems and similar leaf arrangement however leaves of *Vicia* are smaller and have a tendril at the end of the leaf. Other *Lotus* species of Garry oak and associated ecosystems are distinguished from *L. formosissimus* by having black glands instead of leaflike bracts at the base of the leaves.



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Life history

Shoots appear in late winter. Flowers appear in May and June. Fruit matures by the beginning of July when stems begin to die back. In shaded, damp conditions, the plants remain green for longer periods and its fruit matures later. *Lotus formosissimus* flowers require cross-pollination to produce viable seeds. Seeds are dispersed in the autumn and either germinate in the spring following dispersal the previous autumn, while others remain dormant in the soil until conditions are appropriate for germination.

Habitat

Lotus formosissimus occurs in dry sites where Garry oak (*Quercus garryana*) occurs in open stands on deep soils. It also grows in mixed grass-dominated meadows or on rock outcrops that experience summer drought conditions. It may be associated with shrubs such as kinnikinnick (*Arctostaphylos uva-ursi*), salal (*Gaultheria shallon*), oceanspray (*Holodiscus discolor*) and Nootka rose (*Rosa nutkana*). Commonly associated herbaceous species include brome (*Bromus* spp.), red fescue (*Festuca rubra*), wild strawberry (*Fragaria virginiana*) and tiny vetch* (*Vicia hirsuta*). On Bentinck Island it is associated with the red-listed species snake-root sanicle (*Sanicula arctopoides*). Elevations: 0 – 10m.

This species may be associated with nitrogen-fixing bacteria. It is absent in habitat where introduced grasses form a thick turf that may inhibit seedling establishment.

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Why this species is at risk

Lotus formosissimus is limited by the availability of suitable habitat. Habitat conversion, particularly the residential development of grass-dominated meadows, is the most direct and immediate threat. Fire suppression, leading to the invasion and expansion of other native and non-native species, may have also contributed to the decline of *L. formosissimus*. The Rocky Point populations suffer from grazing by cows, deer or rabbits.

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. Please refer to the introductory section of this manual.**

If possible, secure protection for the two known localities. Conduct management-oriented research on fire responses and propagation. Consider re-introduction to historic sites where conditions have been established which favour its persistence.

References

Ryan, Michael and George W. Douglas. 1994. Status Report on the Seaside Birds-foot Lotus *Lotus formosissimus* (Fabaceae) in Canada. COSEWIC. Ottawa, ON. 19 pp.

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.