

Ranunculus californicus var. *cuneatus*

English name California buttercup

Scientific name *Ranunculus californicus* var. *cuneatus*

Family Ranunculaceae (Buttercup)

Other scientific names none

Hybrids *Ranunculus* X *heimburgerae* (*Ranunculus occidentalis* X *californicus*)

Risk status

BC: critically imperilled (S1); red-listed

Canada: imperilled (N2); COSEWIC: endangered (2008)

Global: secure (G5)

Elsewhere: Washington – critically imperilled (S1); Oregon, California – reported (SNR)

Range/known distribution

California buttercup is found in southwestern British Columbia and northern Washington, disjunct from its main range in Oregon, California and Baja California. Although it is common in the southern part of its range, it is rare in Washington.

In British Columbia, there are 4 populations on 6 islands off south-eastern Vancouver Island: Trial Island/ Lesser Trial Island, Discovery Island, Alpha Islet/Griffin Island and West Chatham Island. Another population reported from Saturna Island has not been confirmed. Other previously reported populations were based on misidentification of hybrids between California buttercup and western buttercup (*Ranunculus occidentalis* var. *occidentalis*).



Distribution of *Ranunculus californicus* var. *cuneatus*

- recently confirmed sites
- unconfirmed site

Species at Risk in Garry Oak and Associated Ecosystems in British Columbia



Ranunculus californicus var. *cuneatus*

Field description

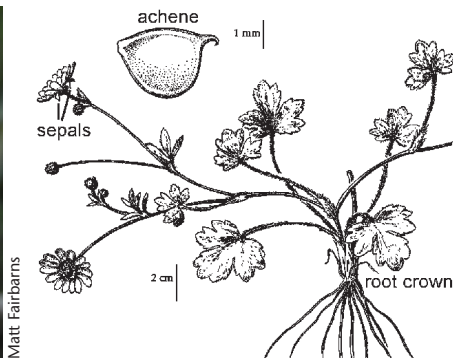
California buttercup is a **perennial (or occasionally an annual)** herb, with stems 20-60 cm long from a central root crown. There is no bulb at the base of the stems and roots do not form at the leaf nodes. The stems can be hairy or smooth and are either erect or lay flat on the ground. The **alternate leaves are 2-6 cm long and are highly variable** in shape. The first basal leaves are toothed and deeply cut but leaves that emerge later in the season have shallower lobes and longer stalks. The flowers have **9-17 shiny, lemon-yellow petals**, 7-14 mm long. The **5 sepals** per flower are softly hairy and are **bent back 2-3 cm from the base**. There are 15-40 dry single-seeded fruits (achenes) per head. The achenes are smooth, broadly egg-shaped with a stout curved beak.

IDENTIFICATION TIPS

Although a number of varieties of California buttercup have been described in Oregon and California, only variety *cuneatus* occurs in British Columbia. California buttercup can hybridize with western buttercup, producing intermediate forms that can be difficult to identify. Although the number of petals is highly variable, California buttercup usually has 9-17 petals that are 3 times as long as they are wide whereas western buttercup usually has 5 petals that are barely twice as long as they are wide. California buttercup has achenes with sharply curved, short beaks (0.1-1 mm) whereas western buttercup has achenes with barely curved, longer beaks (0.7-2 mm). The styles of California buttercup flowers are shorter (0.5-1.0 mm) than western buttercup (1.5-2.0 mm).



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Life history

Established plants are dormant during summer droughts and begin growing in late summer or early fall when the soil becomes wet from fall rains. Plants flower in April and early May. Bees are the primary pollinators, although thrips and flies pollinate other buttercup species. Only some California buttercup plants form hybrids with western buttercup, possibly because the two species prefer slightly different habitat. Hybrid plants are less fertile than either parent: only half of hybrid pollen is viable and only half of hybrid ovaries produce seed. Reproduction is by seed. In other buttercups, seed is dispersed by wind, via herbivore digestive tracts, or by adhesion to fur, feathers or clothing. Most members of this family are poisonous if eaten in large quantities, although voles eat other buttercup species.

Habitat

California buttercup occurs in moderately dry maritime meadows and coastal rocky bluffs. The plants are tolerant of salt spray. The sites are open and somewhat moist in the spring. All of the sites are within 50 meters of the coast where the influence of the ocean moderates winter temperatures. Trees and shrubs do not grow because of high winds, salt spray and thin soils that experience extreme drought in summer and are saturated with water in the winter.

Commonly associated plants include common camas (*Camassia quamash*), barestem desert-parsley (*Lomatium nudicaule*) and introduced species of brome* (*Bromus* spp.) and bluegrass* (*Poa* spp.). White triteleia (*Triteleia hyacinthina*), small-flowered catchfly* (*Silene gallica*), yarrow (*Achillea millefolium*), sheep sorrel* (*Rumex acetosella*), and creeping bentgrass* (*Agrostis stolonifera*) may also be present.

Why the species is at risk

Destruction of sensitive coastal areas has destroyed much of the potential habitat for California buttercup. The population on private land may be threatened by development. Fire suppression has altered the species composition of maritime meadows, increasing fuel loads and making potential future fires more destructive. Former grazing has modified the habitat by facilitating the invasion by exotic species that compete with California buttercup. Recreation, including trampling and mowing of an island campsite, damages vegetation in addition to compacting and eroding thin soils. Renewed harvest of camas, a traditional First Nations food crop, increases disturbance next to plants found on Indian Reservation land.





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What you can do to help this species

Management practices should be tailored to the specific circumstances at the site. Potential management tools will depend on the specific circumstances and may require experimentation prior to implementation.

Before taking any action, expert advice must be obtained and no action taken without it. Please refer to the introductory section of this manual.

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 removal of invasive species and measures to limit trampling and mowing in recreational areas. Existing populations should be monitored on an ongoing basis to determine their viability, as well as for any negative impacts stemming from excessive hybridization, trampling, camas harvesting and weed encroachment.

References

- Brayshaw, T.C. 1989. Buttercups, Waterlilies and their Relatives in British Columbia. Royal British Columbia Museum. Memoir. No. 1.
- Fairbarns, M., B. Klinkenberg and R. Klinkenberg. *In prep.* Draft COSEWIC Status Report on California Buttercup *Ranunculus californicus* in Canada, in COSEWIC assessment and status report on California Buttercup *Ranunculus californicus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa, ON.
- Klinkenberg, B. and R. Klinkenberg. 2003. Stewardship Account for California Buttercup (*Ranunculus californicus*). Prepared for the Garry Oak Ecosystems Recovery Team. Funding supplied by the Habitat Stewardship Program of the Government of Canada and the Nature Conservancy of Canada.

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.