

CREEPING BUTTERCUP

Ranunculus repens L.

Family: *Ranunculaceae* (Buttercup).

Other Scientific Names: None.

Other Common Names: None.

Legal Status: Not categorized.



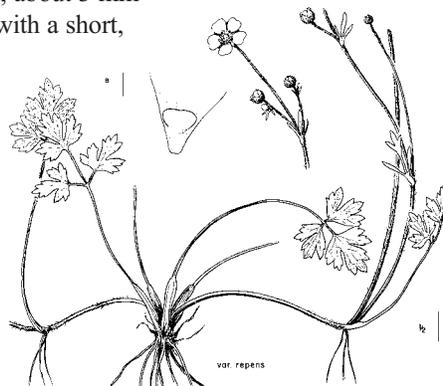
Identification

Growth form: Perennial forb.

Flower: Flowers are borne on long stalks (up to 15 cm long) at branches and at the end of the stems. The typical buttercup flowers are bright yellow with 5 or more petals. Each petal is 6–18 mm long and 5–12 mm wide. The sepals are greenish and soon drop off.

Seeds/Fruit: The seeds are clustered in a globe- to egg-shaped head 5–10 mm long and 5–8 mm wide (Douglas et al. 1999). The seeds are egg-shaped to circular, strongly flattened, about 3 mm long, and tipped with a short, curved beak.

Leaves: Basal leaves are borne on stalks up to 40 cm long. Each leaf has 3 parts, with each leaflet either lobed or



divided again. Stem leaves are alternate. The lower stem leaves are similar to the basal leaves with long stalks, but the leaves become smaller, simpler, and stalkless moving up the stem.

Stems: The slightly hairy stems are usually hollow and can be up to 1 m long. Some stems are erect, but each plant usually has one or more stems (stolons) that creep along the ground and root freely at the nodes.

Roots: Slender, shallow, fibrous roots.

Seedling: No information available.



Similar Species

Exotics: Creeping buttercup is the only introduced buttercup with a creeping habit. Tall buttercup (*Ranunculus acris*) is sometimes confused with creeping buttercup, and both grow in the same habitats. Tall buttercup has a more upright growth habit and deeply incised leaves.

Natives: Macoun's buttercup (*Ranunculus macounii*) resembles creeping buttercup and shares similar habitats. It has hairy stems and smaller flowers (4–6 mm long and 3–5 mm wide).

Impacts

Agricultural: A common weed of grain and forage crops that depletes the soil of potassium and other nutrients, causing deficiencies in associated crops (Lovett-Doust et al. 1990). This plant is most problematic in BC on poorly drained permanent pastures, where it reduces carrying capacity. Many buttercups contain an acrid juice that causes oral and gastrointestinal inflammations in livestock (Frankton and Mulligan 1970).

Ecological: Colonizes disturbed areas. It is usually found in heavy, wet clay soils but can also survive in sand or gravel when moisture is adequate (Lovett-Doust et al. 1990). It often grows by streams, swamps, and ponds, and in seepage areas. It can dominate disturbed riparian areas, forest openings, and along paths.

Human: Occasionally used as a ground cover in ornamental plantings.

Habitat and Ecology

General requirements: Adapted to a wide range of climatic zones, except during prolonged droughts. It grows along stream banks, ditches, roadsides, lawns, meadows, pastures, and cultivated crops. It commonly occurs in poorly drained disturbed habitats.

Distribution: Present in all of the province's agricultural reporting regions except for the Omineca and Peace River districts. It occurs across Canada and the US, where it is distributed in a band extending mainly between 30° and 50° N (Lovett-Doust et al. 1990).

Historical: Introduced from Eurasia.

Life cycle: Plants overwinter as leafy rosettes with a crown and roots in mild climates such as those of BC, or as roots with a crown where winters are more severe (Lovett-Doust et al. 1990). In spring, lateral stolons are produced that spread, root at the nodes, and produce small clone plants. This process is repeated until autumn, when the stolon internodes wither and the new

plants become independent. Some plants flower and set seed during the growing season. Seeds overwinter and germinate the following spring.

Mode of reproduction: Primarily by rooting along stolons but also from seed.

Seed production: There are less than 100 seeds/plant, and only about 25% of flowering plants set seed.

Seed bank: Seed densities can be up to 12,000 seeds/m² in pastures (Lovett-Doust et al. 1990). New seeds appear to be dormant and germinate sporadically over the year. Buried seeds can remain viable for up to 5 years.

Dispersal: Seeds are dispersed by wind, birds, rodents, and livestock. Vehicles and human activities also spread the seeds. Plants fragment easily, and any human activities that disturb soils could spread the weed.

Hybridization: Little evidence of hybridization.

Management

Biocontrol: None.

Mechanical: Repeated tillage over several years may reduce root reserves and control the plant on cropland, but root fragments easily regenerate (Muenscher 1955).

Fire: Not effective.

Herbicides: Glyphosate, MCPA, and 2,4-D are effective with spring and autumn applications while crops are dormant. Mecoprop provides effective control in turf. Consult the most recent edition of BC Ministry of Agriculture, Food and Fisheries Crop Production Guides for specific recommendations. **Before applying herbicides, read the label for full use and precautionary instructions.**

Cultural/Preventive: Seed disturbed areas to perennial grasses and forbs. Manage grazing animals to maintain a perennial plant community that can provide competition. Improve drainage.

Integrated Management Summary

Use tillage, hand-pulling, and herbicides, as appropriate. Prevent new infestations by seeding disturbed areas, managing grazing animals to maintain perennial plant communities, and seeding disturbed areas.

References

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Frankton, C., and G. A. Mulligan. 1970. Weeds of Canada. Publication 948. Ottawa: Canada Department of Agriculture.

Lovett-Doust, J., L. Lovett-Doust, and A. T. Groth. 1990. The biology of Canadian weeds. 95. *Ranunculus repens*. Canadian Journal of Plant Science 70: 1123–1141.

Muenscher, W. C. 1955. Weeds. 2d ed. Ithaca, NY: Cornell University Press.