

***Ribes sanguineum* Pursh.**

Halkomelem (Island): sp'áa?

Halkomelem (Upriver): sp'èth (berries); sp'èetthètp (plant); q^wlíyas (flower)

Ucwalmícwts (Lílwat): q^wlís (berries); q^wlís-az' (plant)

English name: red-flowering currant

Family: Grossulariaceae (Currant family)

Identifying characteristics:

Red-flowering currant is a deciduous shrub with an erect habit reaching between 1 to 4 m high (Figure 1). Stems are smooth, crooked with reddish-brown to grey bark, and the young growth has fine hairs but no prickles (Turner, 1995; Pojar and MacKinnon, 2004).

The alternately arranged dark green leaves are 2 to 6 cm in length (Figure 2). Leaves are 2-7 cm long with five palmate, coarsely toothed rounded lobes (Douglas et al, 1999). The veins on the leaves make the leaves look wrinkled (KPU, 2015). The foliage has a distinct aroma (Turner, 1995), which is released on hot summer days.



Figure 1. *Ribes sanguineum*.



Figure 2. Flowers and leaves

The closely set elongated flower clusters are the main attraction of this native shrub (Figure 2). They bloom in early spring the same time the leaves emerge and are a distinctive rose color ranging from pale-pink to deep-red (Pojar and MacKinnon, 2004). The plant in Figure 2 was in full bloom at Logan Creek on April 9, 2019. The small (6-9 mm in diameter) berries are short-stalked, round, hairy, blue-black glaucous (waxy coating), and ripen in early to mid-summer (Douglas et al, 1999).

Distribution:

Globally, the natural distribution of red-flowering currant is restricted to western North America from southwest British Columbia south through Washington, Idaho, and Oregon to California (Figure 3). Natural range and occurrence decrease as elevation and precipitation and continentality (movement away from the coast) increases (Douglas et al, 1999).

R. sanguineum is mostly found mostly west of the Coast, Cascade and California Coast mountain ranges south to Santa Barbara County, California. There are also small relict populations in northern Idaho (Gonzalves and Darris, 2008).



Figure 3. Distribution map for *R. sanguineum*.

Habitat:

R. sanguineum is a hardy (to -20°C), shade-intolerant woody shrub species occurring in early seral and open canopy Douglas-fir (*Pseudotsuga menziesii*) dominated forests in well-drained soils from sea level to approximately 1800 m (Gonzalves and Darris, 2008; USDA, 2019). Habitat also includes forest edges, dry rocky slopes, and disturbed sites. In fire-prone landscapes, it quickly sprouts from seed and root crowns and helps forest succession after fire.

Plant species most associated with *R. sanguineum* in dry, sunny habitat include (Green and Klinka, 1994): arbutus (*Arbutus menziesii*), hairy manzanita (*Arctostaphylos columbiana*), kinnikinnick (*Arctostaphylos uva-ursi*), and *Sambucus cerulea* (blue elderberry). In partial shade with mesic soils *R. sanguineum* can occur with bigleaf maple (*Acer macrophyllum*), bitter cherry (*Prunus emarginata*), Douglas-fir (*Pseudotsuga menziesii*), grand fir (*Abies grandis*), baldhip rose (*Rosa gymnocarpa*), evergreen huckleberry (*Vaccinium membranaceum*), June plum (*Oemleria cerasiformis*), mock-orange (*Philadelphus lewisii*), salal (*Gaultheria shallon*), vine maple (*Acer circinatum*), sword fern (*Polystichum munitum*), oceanspray (*Holodiscus discolor*), and saskatoon (*Amelanchier alnifolia*). We have used this ecological knowledge to inform our plantings to repair the upland areas of Logan Creek.

Wildlife Value:

In BC red-flowering currant leaves are a preferred larval food plant for the Zephyr Anglewing butterfly (*Polygonia zephyrus*), along with *Rhododendron albiflorum* (white-flowered rhododendron) (Shepard and Guppy, 2001). Adult butterflies do not reproduce immediately, but hibernate overwinter in sheltered areas such as hollow trees, stumps, and debris piles. They mate and lay eggs early in spring, timed to hatch as the leaves emerge. Feeding on leaves continues until July or August when the next generation of adults emerge. On Logan Creek, we have observed plants browsed by Columbian black-tailed deer (*Odocoileus hemionus columbianus*) and feral non-native rabbits.

The hanging clusters of flowers are sought for nectar by hummingbirds, and various other insects including native bees, that require nectar in the early spring. Numerous frugivorous birds such as American robin, finches, and towhee as well as small mammals consume the ripe berries (USDA, 2019). Branches provide nesting habitat for songbirds and cover for small mammals.

Pests and Diseases:

Red-flowering currant is fairly resistant to most insect and disease pests of this genus but is susceptible to currant borer (*Synanthedon tipuliformis*) and oak root fungus (*Armillaria mellea*), also known as armillaria root rot. Seedlings may be susceptible to damping off disease if over-watered.

Red-flowering currant is an alternate host (USDA, 2019) for the second state of white pine blister rust (*Cronartium ribicola*), which is only a “problem” for pine forest management in the inland range of *R. sanguineum*. White pine blister rust is considered a serious plant disease in Asia, Europe, and North America. It causes both felt-blight and early defoliation of *Ribes* species in areas of severe infestation. Where the pathogen does not reproduce well there is little impact on commercial *Ribes* fruit crops (Geils, Hummer, & Hunt, 2010).

Reproduction and Propagation:

The best and easiest source of plants from the wild are to transplant seedlings from self-sown plants. Seedlings are often found where disturbance has created a suitable seed bed for bird-disseminated seed (Kruckeberg & Chalker-Scott, 1996).

In nature, *Ribes* seeds normally stratify on the ground and germinate in spring following dispersal. Dispersal is by birds and small mammals and may benefit germination by stomach acid scarification prior to defecation. Seeds can remain viable in the soil for several years (Pfister and Sloan, 2008). There are about 626 clean seeds per gram of which about 62% are viable (Pfister and Sloan, 2008). After harvesting and removing the flesh, seeds require 100 to 140 days cold moist stratification at 0°C to 2°C (Pfister and Sloan, 2008). Sow in rich moist potting soil, in flats protected from predation. After germination, prick out and shift to larger pots until they reach transplantable size.

Vegetative propagation with cuttings is successful with soft wood in spring, semi-hard wood in summer, and hard wood collected during the dormant season (Pfister and Sloan, 2008). Rooting may improve by including a ‘heel’ of older wood and using bottom heat, mist, or IBA rooting hormone. Cuttings will produce a flowering shrub in 2 to 4 years (Anderson & Toogood, 1999). Best results come from nodal-stem cuttings with 7 to 10 inches of new growth retaining the top 2 leaves (Anderson & Toogood, 1999). Hardwood cuttings can be taken in fall and placed in sand where they root easily (Anderson & Toogood, 1999).

Ethnobotany:

There are sixteen different *Ribes* species in BC, and though many of have greater food uses than red-flowering currant, *R. sanguineum* has been part of Indigenous diets for ten millennia (Kennedy and Smith, 2016). The berries were eaten fresh as a thirst quencher, and dried by various Coast Salish groups such as the Saanich, Cowichan (Turner, 1995), and Sechelt, but they were not highly regarded because of their lack of flavor and tartness (Pojar and MacKinnon, 2004). Coast Salish peoples collected and ate the fruit raw; while in the Fraser Canyon, Interior Salish peoples

mashed, dried, and stored the berries for winter eating, including flavouring soups (Hinton & McKenzie, 2002; Moerman, 2010). In Halkomelem-speaking areas, the berries were also said to bring rain if picked; “rain flower” being an attribution assigned to various plants in Northwest Coastal nations (Turner, 2014).

Interaction and Human Interest:

“Sanguineum” means blood-red, referring to the colour of the flowers. Red-flowering currant was first noticed by Archibald Menzies in Puget Sound in 1793, and introduced to British horticulture by the botanist David Douglas in 1826 (Kruckeberg & Chalker-Scott, 1996). Pfister and Sloan (2008) note that the first horticultural use was in 1818. Douglas took seeds back to England where the shrub is now a prized ornamental plant (Kruckeberg & Chalker-Scott, 1996).

Red-flowering currant is hardy in USDA zones 5 to 8. More than a dozen named cultivars and hybrids with other *Ribes* species are available as container stock from nurseries. Disease resistant selections of red-flowering currant are used in commercial currant fruit breeding programs to introduce greater resistance to anthracnose, powdery mildew, and currant stem borer (USDA, 2019).

Popular cultivars include ‘White Icicle’ (early white flowers) (Figure 4), ‘Pinky Pig’ (pink flowers), and ‘King Edward VII’ (compact with deep red flowers).



Figure 4. ‘White Icicle’ flowering currant.

If placed closely together in a row, red-flowering currant can be used as an attractive hedging plant (Ferguson, 2005). The fact that it grows well in dry soils makes red-flowering currant a perfect drought-tolerant plant for garden edges. Since it attracts hummingbirds and butterflies it is an essential shrub for butterfly gardens. It can be planted as a mass planting or used as a specimen plant to give a splash of colour in the early spring. Red-flowering currant flowers concurrently with yellow-flowering *Mahonia aquifolium*, tall Oregon-grape. Plant close together for complementary and pleasing colour contrasts (NW Plants, 2012).

The berries of red-flowering currant have been tested and found to have anthocyanins, which are important for plant biology, and are of medicinal interest because of their antioxidant capacity for free radical scavenging and metal chelating potential, as well as other preventative health

benefits such as reducing the risk of cancer, cardiovascular disease, and improving vision (Jordheim et al, 2007).

Recipe:

Red-flowering Currant Fruit Leather

Fruit leather is a contemporary take on the process Interior Salish Peoples used to make and preserve red-flowering currant fruit by mashing, spreading, and drying into cakes.

Equipment

Bucket

Masher

Food dehydrator or mesh screens if sun drying

Instructions

Harvest fruit when ripe, wash in a bucket or bowl, and pour off debris. Because the fruit is tart or astringent, mix with any other fruit ripe at the same time to add sweetness. Mash into a smooth pulp.

Spread fruit pulp on a dehydrator sheet and dry for about 12 hours. If sun drying, pour onto a screen, and cover with another screen to prevent fruit flies, wasps or other opportunists from contaminating. Dry in the sun until leathery. Depending on the other fruit that has been added, the result will have a delightful fruity flavour, with a texture just like “store bought”.

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Images:

Figure 1, 2 and 4: K. Dunster

Figure 3: USDA, NRCS. (2019) The PLANTS Database. Plant profile for *Ribes sanguineum* Pursh, redflower currant. Retrieved from <https://plants.sc.egov.usda.gov/core/profile?symbol=RISA>