USDA NRCS
United States Department of Agriculture
Natural Resources Conservation Service

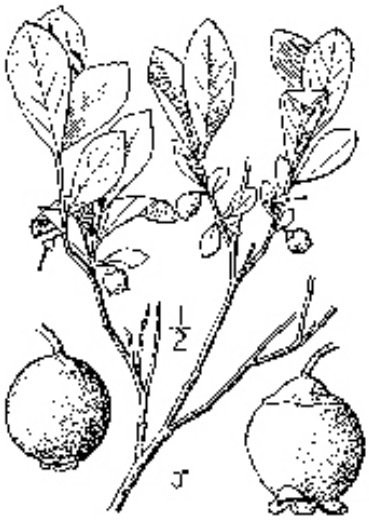
Plant Guide

CASCADE BILBERRY

Vaccinium deliciosum Piper

Plant Symbol = VADE

Contributed by: USDA NRCS National Plant Data Center & Oregon Plant Materials Center



Jeanne Russell Janish
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Abrams & Ferris (1960)

Alternate Names
Blue-leaf huckleberry, little huckleberry, Rainer bilberry

Uses
Ethnobotanic: Traditionally, Cascade bilberry fruits were eaten raw and fresh, or were cooked, mashed, and dried in the sun in cakes. Columbia Plateau Indians of Washington dried surplus berries slowly over a fire kept smoldering in a rotten log (Filloon 1952). This method of drying the berries preserves the bulk of the Vitamin C content in the fruits (Norton et al. 1984:223). The dried berries are sometimes mixed with pounded salmon and a good portion of salmon oil, making a delicious dish.

After the huckleberry feast, the *Sahaptin* people of the Columbia plateau traveled to the productive berry fields higher in the mountains for a series of day, overnight, or weekend trips. The knowledge of the location of the berries is part of an Indian family's inheritance (Hunn 1990). Special berry picking baskets include "Klikitat baskets" of cedar root decorated with bear grass and bitter cherry bark. Each family would harvest and store approximately four or five pecks (ca. four to five gallons) of dried berries for winter use (Perkins n.d. (1838-43), Book 1:10). Hunn (1990) estimates that there were 28-42 huckleberry harvest days in a year. This resulted in a total annual harvest of 63.9-80.2 kg/woman/year from the Tenino-Wishram area, and 90 kg/woman/year from the Umatilla area. The net result was a huckleberry harvest yield of 31 kcal/person/day in the Tenino-Wishram area and 42 kcal/person/day for the Umatilla area (Hunn 1981: 130-131). *Vaccinium* species contain 622 Kcal per 100 gm huckleberries, with 15.3 gm carbohydrate, 0.5 gm fat, 0.7 gm protein and 83.2 gm water (Hunn 1981:130-131).

In the fall, after the harvest, it was common for the *Sahaptin* to burn these areas to create favorable habitat (Henry Lewis 1973, 1977). Fire creates sunny openings in the forest and edges that foster the rapid spread of nutritious herbs and shrubs that favors the huckleberries (Minore 1972:68).

The leaves and berries are high in vitamin C. The leaves and finely chopped stems contain quinic acid, a former therapeutic for gout said to inhibit uric acid formation but never widely used because of mixed clinical results. The leaves have been widely used to lower or modify blood sugar levels. Many herbalists maintain that bilberry-leaf tea may be useful in stabilizing blood sugar levels in cases of diabetes, and medical research has shown that consumption of the leaf extract decreases blood sugar levels shortly after administration. Taken on regular basis, bilberry tea will gradually help alleviate both glycosuria and hyperglycemia and has a benign but useful effect as an adjunct treatment to diabetes mellitus. The leaves are believed also to stimulate appetite, and have astringent and antiseptic qualities that are useful in urinary disorders.

Other Uses: Cascade bilberry has a particularly sweet berry, and is prized for its flavor. The berries are eaten fresh, baked in pancakes, pies, and muffins, canned, frozen, or made into jams and jellies. Berries are usually picked in late July or August. The leaves can be used fresh or dried to make a tea.

Elk and deer browse the foliage of cascade bilberry. Flowers attract butterflies and other insects. For

several species of grouse, huckleberries and bilberries are among the most important summer and early fall foods. Chipmunks, black bear, mice, scarlet tanagers, bluebirds, thrushes, and other songbirds eat berries. Deer and rabbit browse freely on the plants.

Description

General: Heath Family (Ericaceae). Cascade bilberry is a low, bushy shrub less that 4-dm tall. The branches are slightly angled; young branches are grayish and minutely pubescent, turning purplish with age. The leaves are obovate, 2-4 cm long, finely dentate, very glaucous, and rounded at the apex. The flowers are solitary, pinkish, urn-shaped blossoms in the axils of the leaves. The dusky blue berries are > 9 mm in diameter.

Distribution

For current distribution, please consult the Plant Profile page for this species on the PLANTS Web site. Cascade bilberry grows in alpine meadows, subalpine coniferous woods, and near the coast at elevations from 600-2000 m. The range of *Vaccinium deliciosum* is from southern British Columbia to northern California, in the Klamath Range and the northern high Sierra Nevada Mountains.

Establishment

Live Plant Collections: Take cuttings from rhizomes in early spring or late summer and autumn. Dig up the rhizomes and cut them into lengths of 10 cm or longer. Place the cuttings in vermiculite at 21° C. Once the roots are established and meristematic activity is initiated, the small cuttings may be moved to individual pots with a peat sand soil mixture (1:1) potting soil. The soil should be kept fairly moist. When the plants are of a desired size, they can be planted in areas with moist soils and partial shade.

Seed Collections: Collect the berries in late summer or early fall. Clean the seeds by macerating in water, floating off the pulp, then allow the seeds to dry. Seeds require no stratification and can be sown on a moist peat surface. Temperatures of 18° C (for 12 hours) during the day and 13° C (for 12 hours) are ideal for germination. Seven weeks after germination, change temperatures to 20° C (for 14 hours) and 14° C (for 10 hours). Fertilize seedlings 10 weeks after germination. After the seedlings are 12 weeks old, transplant to a peat sand (1:1) media in individual pots (Minore and Smart 1978). The soil should be kept fairly moist.

Management

This plant grows very rapidly in moist, shady conditions. If summer drought occurs, the plants should be watered so roots are kept fairly moist.

Traditional Resource Management: Management of this plant includes the following: 1) occasional burning to stimulate new growth; pruning the branches after picking the berries to stimulate new growth and fruit production the next growing season; and 3) ownership of cascade bilberry shrubs provides the basis for careful tending and sustainable yield of valued resources.

Cultivars, Improved and Selected Materials (and area of origin)

This plant is available from some native plant nurseries within its range. Contact your local Natural Resources Conservation Service (formerly Soil Conservation Service) office for more information. Look in the phone book under ”United States Government.” The Natural Resources Conservation Service will be listed under the subheading “Department of Agriculture.”

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