

## BITTER CHERRY

*Prunus emarginata* (Dougl. ex Hook.) D. Dietr.

Plant Symbol = PREM

Contributed by: USDA NRCS National Plant Data Center



Brother Alfred Brousseau  
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### Uses

**Ethnobotanic:** The edible fruits are bitter and best used in jams. A green and dark gray dye was obtained from the fruits and leaves. The bark was used for making baskets that were watertight and resist decay (Moerman 1998). The thin outer bark was used to make mats, ropes, arrows, and as an ornament on bows (Ibid.).

Several native North American tribes used bitter cherry to treat a variety of complaints. An infusion of the bark was used in the treatment of tuberculosis (Moerman 1998). A decoction of the root and inner bark was taken daily as a treatment for heart troubles (Ibid.). An infusion of the bark, combined with crab apple (*Malus* spp.), was used as a cure all tonics in treating colds and various other ailments (Ibid.). An infusion of this species' rotten wood was used as a contraceptive.

**Wildlife:** *Prunus emarginata* is a valuable species for elk, mule deer, and black bears. The fruits are eaten by small mammals, rodents, and various birds. This species is preferred by sheep and cattle.

**Agroforestry:** Bitter cherry is used in forested riparian buffers to help reduce stream bank erosion, protect aquatic environments, enhance wildlife, and increase biodiversity.

### Status

Please consult the PLANTS Web site and your State Department of Natural Resources for this plant's current status, such as, state noxious status and wetland indicator values.

### Description

**General:** Bitter cherry (*Prunus emarginata*) is a native, deciduous shrub, four to twelve feet high, or sometimes a small tree up to thirty feet high (McMinn 1939). The leaves are oblong to oval, fine toothed, and rounded at the tip. The flowers are fragrant, blooming between April and May, in clusters of five to twelve. The bark has a generally smooth dark brown surface marked by horizontal light gray interrupted bands and by rows of oblong orange colored lenticels (Sargent 1961).

**Distribution:** Bitter cherry often forms extensive thickets on moist slopes and along stream banks in the transition and Canadian life zones in the coast ranges, the mountains of southern California and in the Sierra Nevada (McMinn 1939). It extends northward to Idaho and British Columbia and eastward to Nevada and Arizona (Ibid.). For current distribution, please consult the Plant profile page for this species on the PLANTS Web site.

### Adaptation

*Prunus emarginata* is frequently abundant in very dense; uniform stands, on steep, rocky slopes, and can be found along valley bottoms next to streams (Mozingo 1987). It establishes easily in disturbed moist areas and prefers open sandy or gravelly sites. This species succeeds in full sun or partial shade but grows best in a sunny position. Bitter cherry does not tolerate much shade competition from other trees.

### Establishment

**Propagation from Seed:** Seed is best sown as soon as it is ripe, in the fall, in an open frame on a seedbed

(Heuser 1997). It is important to protect the seeds from mice or any seed-eating creatures. This species requires a period of two to three months cold stratification. The seeds can be slow to germinate, sometimes taking up to eighteen months. When the seedlings are large enough to handle, they can be placed into individual pots. Grow seedlings in an open frame or greenhouse their first winter and plant into their permanent positions in late spring or early summer of the following year.

*Propagation from Softwood Cuttings:* Cuttings should be done in the spring or early summer in the early morning. Take cuttings about five to ten centimeters long, just above the node. Put cuttings in plastic bags to prevent moisture loss (Heuser 1997). They must not be allowed to wilt. Trim the cuttings below the lowest node to remove the lower leaves leaving three or four at the tip (Ibid.). A rooting hormone maybe applied to improve rooting before planting. Insert the cuttings in the rooting medium up to half their length so the leaves don't touch each other. The cuttings root in two to three weeks, after which they can be potted (Ibid.).

### **Management**

This species is a member of the genus that produces a poison, hydrogen cyanide, which gives almonds a characteristic flavor. This toxin is mainly found in the seeds and leaves and has a bitter taste. Hydrogen cyanide can stimulate respiration and is beneficial in the treatment of cancer. It is also known to cause respiratory failure and death in some instances.

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

Available through 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."

### **References**

- Britton, N.L. 1908. *North American trees*. Henry Holt & Company, New York, New York.
- Carter, J.L. 1997. *Trees and shrubs of New Mexico*. Mimbres Publishing.
- Farrar, J.L. 1995. *Trees of the northern United States and Canada*. Iowa State University Press, Ames, Iowa.

Heuser, C.W. 1997. *The complete book of plant propagation*. The Taunton Press, Newtown, Connecticut.

Howell, J.T. 1949. *Marin flora: manual of the flowering plants and ferns of Marin County, California*. University of California Press, Berkeley & Los Angeles, California.

McMinn, H.E. 1951. *An illustrated manual of California shrubs*. University of California Press, Berkeley & Los Angeles, California.

Moerman, D. 1998. *Native American ethnobotany*. Timber Press, Oregon.

Mozingo, H.N. 1987. *Shrubs of the Great Basin: a natural history*. University of Nevada Press, Reno, Las Vegas, & London.

Pojar, J & A. MacKinnon 1994. *Plants of the Pacific Northwest coast: Washington, Oregon, British Columbia, and Alaska*. Lone Pine Publishing, Redmond, Washington.

Preston, R.J. Jr. 1947. *Rocky Mountain trees*. 2<sup>nd</sup> ed. Iowa State College Press, Ames, Iowa.

Preston, R.J., Jr., 1989. *North American trees*. 4<sup>th</sup> ed. Iowa State University Press, Ames, Iowa.

Rehder, A. 1990. *Manual of cultivated trees and shrubs: hardy in North America*. 2<sup>nd</sup> ed. Dioscorides Press, Portland, Oregon.

Sargent, C. & C. Sprague 1922. *Manual of the trees of North America*. Vol. 2. Dover Publication, Inc., New York, New York.

Vines, R.A. 1960. *Trees, shrubs, and woody vines of the southwest*. University of Texas Press, Austin, Texas.

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