

HAIRY MANZANITA

Arctostaphylos columbiana

Piper

plant symbol = ARCO3

Contributed By: Santa Barbara Botanic Garden & USDA, NRCS, National Plant Data Center



Brother Alfred Brousseau
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Uses

Bear, deer, coyote, foxes and other small mammals and a wide array of birds utilize the fruits of hairy manzanita. A tea made from the bark was used by some Native Americans to treat diarrhea. The crooked wood of central stems and lower branches are used in several cottage industries, including lamp stands and other decorative woodcrafts. Although somewhat difficult to grow, several selections of hairy manzanita and hybrids with kinnikinnick are occasionally cultivated.

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: Heath Family (Ericaceae). Hairy manzanita is an erect much-branched evergreen shrub or small tree 1-3 m high, with a broad, rounded, dense canopy. It does not have a basal burl and consequently does not crown sprout after fire. The bark of young twigs is densely white-hirsute, but the mature bark is smooth and dark red-brown. Leaves have short petioles and oblong to broadly elliptic blades that are 2.5-6 cm long, 1.5-3 cm wide, pale gray-green, and tomentose on both sides. The flowers, which open from March to May, are arranged in short, dense panicles with leaf-like bracts that are lanceolate, 5-15 mm long, and hirsute. The urn-shaped corollas are white, sometimes tinged with pink, and 6-7 mm long. The fruit is strongly depressed-globose, 7-11 mm in diameter, hairy when young, but becoming smooth and reddish brown, with a mealy pulp that encloses several, hard-walled seeds.

Hybrids between hairy manzanita and the prostrate kinnikinnick (*Arctostaphylos uva-ursi*) are called *Arctostaphylos x media*. This hybrid and various backcrosses, especially to kinnikinnick, have a spreading form, dense foliage, and pink flowers.

Distribution

Hairy manzanita inhabits well-drained, rocky slopes below 2500 feet from southern British Columbia south to northwestern California. For current distribution, please consult the Plant Profile page for this species on the PLANTS Web site.

Establishment

Adaptation: It is a common associate in successional coastal shrub communities, but also occurs as an understory shrub in coniferous forests ranging from the coast to the western slopes of the Cascade Range. Its general geographic range is characterized by cool, relatively dry summers and wet winters with precipitation ranging from 50 to 120 inches per year. Hairy manzanita prefers well-drained, acidic soils in open sunny sites. It has a mild frost tolerance, but a low tolerance for frozen soils. Fire may be important to successful seed germination and establishment, especially in coastal shrub communities and relatively open forest communities.

Natural Establishment: *Arctostaphylos columbiana*, like most manzanita species, requires insect visitation to ensure seed-set. Bees that grasp the flower and shake it by actively beating their wings pollinate the flowers. This process, like shaking a salt and pepper container, permits efficient collection of the pollen, which is used for food. Fruits are dispersed primarily

by animals, which presumably aid germination by digesting the fruit and softening the outer seed coat. However, natural germination is sporadic except after fire, which cracks the hard coat of seeds that have accumulated in the litter layer. Hairy manzanita prefers loose, well-drained soils and, like other members of the heath family (Ericaceae), has an obligate relationship with mycorrhizal fungi.

Seed Propagation: Propagation from seed is difficult, because of the thick, bony seed walls and low rates of germination (less than 10%) without treatment. However, if propagation from seed is desired, treatment must ensure that the seed coat is broken without damaging the embryo. Individual seeds may be filed with a steel file, but larger quantities can be treated by placing them into a container of boiling water that is removed from the source of heat after 1-2 minutes. Seeds also respond well to burning, which is accomplished by firing a 4-inch deep layer of combustible leaves and twigs over a flat planted with seeds. These treatments crack the seed coats but may reduce viability. Treated seeds should be stratified in a moist mix of milled sphagnum and beach sand for 2-8 months until they germinate. Other techniques, including use of sulfuric acid to soften the seed coat, may enhance germination, but also requires special precautions against spillage and contamination.

Vegetative Propagation: Vegetative propagation is preferred over seeds. Cutting terminal shoots that include 1-2 inches of the woody stem from the previous year most easily propagates hairy manzanita. Cuttings work best if taken between January and March and should be dipped in a rooting hormone before being placed in a moist sand-peat mixture. Cuttings need to be kept moist by regular watering or misting until roots appear. Once rooted, they should be transplanted into small containers using potting soil, to allow for proper root development. Manzanitas generally do not transplant well, so they should be grown to vigorous conditions in one-gallon containers and then moved to a permanent position in the late fall or early winter. Relatively slow growth rates during the first few years can be expected. If plants are used in an urban landscape, the use of organic-rich soils and acidified fertilizers is recommended.

Management

Under natural conditions, no special management is required to maintain established manzanitas. Either scarified seeds or well-rooted container plants may be used to re-vegetate cleared sites. In the urban landscape, several horticultural techniques should be used to ensure healthy plants. All manzanitas should

be planted higher than the surrounding soil to prevent crown rot, which can result from excessive water and soil moisture, especially during the summer. Overhead watering should also be avoided because it tends to encourage fungal diseases (e.g., *Botryosphaeria*) that cause branch die-back and leaf spot.

Manzanitas are also susceptible to gall-producing aphids (*Tamalia*), which cause young leaves to curl and cease growth. Periodic watering every 4-6 weeks will keep foliage healthy without weakening plants. Mulching is desirable to control weeds, retain soil moisture, and reduce the need for irrigation. Rock mulches have proven more successful than organic mulches. Pruning should be avoided and used only to remove dead wood and diseased branches.

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

Please check the Vendor Database, expected to be on-line through the PLANTS Web site in 2001 by clicking on Plant Materials. This species is available from native species nursery.

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