

The fruit are edible and have a long history of being used by native people. While the raw fruit is generally not desirable as it can have a mealy texture and bland flavour, some selections produce fruit with a bright orange/red, creamy-textured flesh with a pleasant tart flavour. The fruit is often processed into jams, preserves or dried.

The leaves and bark have been used as an astringent and are reputed to be useful in the treatments of stomach aches and for urinary tract irritation. All parts of the plant are a source of ethyl gallate, which has exhibited strong antibiotic activity. The bark is a rich source of tannins and has been used medicinally, as a dye and as a preservative.

The strawberry tree or madrone is a very popular ornamental tree for landscaping in its native range. The plant has not been grown as a commercial fruit crop. Chad Finn

Further reading

Stuart, M. (1979) *The Encyclopedia of Herbs and Herbalism*. Orbis Publishing, London.

Arctostaphylos uva-ursi bearberry

Bearberry or kinnikinnick, *Arctostaphylos uva-ursi* (L.) Spreng. (*Ericaceae*), has a circumboreal distribution. Most *Arctostaphylos* species (i.e. *Arctostaphylos patula* Greene, *Arctostaphylos viscida* Parry, *Arctostaphylos glauca* Lindl. and *Arctostaphylos nevadensis* A. Gray) are native to western North America. All *Arctostaphylos* are evergreen groundcovers (0.1 m tall) or shrubs (2–4 m). Leaves of *A. uva-ursi* are elliptical, about 2 cm long, glossy and dark green. Within other species the leaves range in colour from grey-green to light green and the leaves vary in size and shape. The stems of many *Arctostaphylos* species develop a cinnamon-coloured bark as they age.

Arctostaphylos is always found in acidic soils that are well drained. *Arctostaphylos uva-ursi* is common in dry, open woodlands, while many of the *Arctostaphylos* species are native to the harsh environments of coastal dunes or the high deserts.

Flowers are very typical of the *Ericaceae*. The hermaphroditic flowers are tubular with a fused white to pink corolla. Flowers typically open in spring, however, in mild coastal areas open flowers may be found on plants throughout much of the winter. Flowers are borne in groups and require insect pollination in order to successfully set fruit.

The fruit vary in colour from species to species, however typically they are orange to red. The fruit ripen in summer to autumn and can stay on the plant for a long time after ripening before rotting.

The fruit of all species of *Arctostaphylos* are edible, however they are not highly desirable as they tend to be bland, mealy and dry. While commonly consumed by native peoples, they have never been commercially harvested for the fruit. Fruit were eaten fresh, dried, mashed with water and strained for a drink, mixed with animal fats or fish eggs, or used in soups or porridges.

Native people had many uses for *Arctostaphylos* beyond food. Leaves, stems or fruit were combined in various ways and either prepared as an infusion or dried and powdered to treat skin wounds or to use as an analgesic, a cold remedy, a preventative for miscarriages or as a kidney tonic, as well as for many other ailments. Dried leaves were smoked either alone or

in combination with tobacco with some tribes reporting a narcotic effect. Surprisingly, given the widespread use of *Arctostaphylos* in native cultures as a medicine, very little work has been done to better analyse this crop's potential benefits to society today.

Arctostaphylos species have been extensively used as landscape plants. Many selections of *A. uva-ursi* are available in the nursery trade that vary in their vigour, flowering habit, fruit colour and leaf colour. Many of the species that are native to near desert regions are commonly used as landscape plants in dry climates where native plants are preferable to landscape plants with high water demands. Chad Finn

Further reading

Kruckeberg, A. (1982) *Gardening with Native Plants of the Pacific Northwest: an Illustrated Guide*. University of Washington Press, Seattle, Washington.

Moerman, D.E. (1998) *Native American Ethnobotany*. Timber Press, Portland, Oregon.

Macleania rupestris uva camarona

Uva camarona, *Macleania rupestris* A.C. Smith (*Ericaceae*), is also known as cacaguito, hualicon ilucho and uvo in Colombia. It is found in Nicaragua, Costa Rica, Panama, Venezuela, Colombia, Ecuador and Peru.

Uses and nutritional composition

The fruit is edible and can be either sweet or insipid. Occasionally the fruit is sold in local markets either fresh or as jam. The fruit is eaten fresh for lung trouble and a decoction of fruit is taken for the nerves. A hot poultice of leaves is applied to bruises.

Botany

TAXONOMY AND NOMENCLATURE The synonyms are *Macleania ecuadorensis* Horold, *Macleania laurina* Blake, *Macleania nitida* Horold and *Macleania popenoei* Blake. *Macleania* has about 50 species found from southern Mexico south along the mountain highlands into Peru. The centre of diversity is western Ecuador.

DESCRIPTION This epiphytic or terrestrial shrub is 0.6–2 m tall, often with branches up to 6 m long. It does occur rarely as a small tree, often with a basal tuber up to 1 m in diameter. The stem and twigs are normally glabrous or with white hairs to 0.8 mm long. The leaves are oblong, elliptic, ovate-elliptic to ovate (4–8 cm by 2–5 cm). The axillary inflorescence is a short raceme with between ten and 20 glabrous flowers on a stout rachis with overlapping swollen nodes. The flower clusters are often pointing backwards and the glabrous calyx is 5–7 mm long, on a swollen receptacle that is deep red to crimson. The cylindrical or bottle-shaped corolla is 13–19 mm long and 6–9 mm in diameter, deep red or pinkish red at the base, paler or yellowish or white distally. The ten stamens are 9–16 mm long with distinct filaments each 2–5.5 mm long. The anthers are 8–14 mm long. The style is usually 20–30 mm long and exserted. The fruit is a spherical, glabrous dark blueish-black berry, 12–15 mm in diameter.