

Byrsonima crassifolia

wild cherry, nance, murici

HBK.

Simaroubaceae

LOCAL NAMES

English (wild craboo, wild cherry, savanna serrette, golden spoon, nance); French (quinquina des savannes); Portuguese (muruci-da-praia, murici-do-campo, mirixi, murici); Spanish (manero manteco, nananche, manteco merrey, nance verde, crabo, chaparro de sabana, manteco sabanero, chaparro de chinche, nance agrio, nancen, nanche, nanche de perro, nanchi, nancito, nantzin, peraleja hembra, peralejo, peralejo blanco, peralejo de sabana); Trade name (murici, wild cherry, nance)

BOTANIC DESCRIPTION

Byrsonima crassifolia is a slow-growing large shrub or tree to 10(-20) m tall, varying in form from round-topped and spreading, to narrow and compact; trunk short or tall, crooked or straight. Young branches densely coated with russet hairs.

Leaves opposite, ovate to elliptic or oblong-elliptic, 3.2-17 cm long and 4-7 cm wide, rounded or pointed at the apex, blunt or pointed at the base; leathery, usually glossy on the upper surface and more or less brown- or grey-hairy on the underside.

Flowers borne in thinly or conspicuously red-hairy, erect racemes, 10-20 cm long, 1.25-2 cm wide; petals 5, yellow at first, changing to dull orange-red.

Fruit peculiarly odorous, orange-yellow, round, 8-12 cm wide, with thin skin and white, juicy, oily pulp varying in flavour from insipid to sweet, acid, or cheese-like. There is a single, fairly large stone, containing 1-3 white seeds.

BIOLOGY

In Mexico, *B. crassifolia* blooms from April through July and the fruits are marketed in September and October. In Puerto Rico, the tree blooms and fruits continuously from spring to fall and in Brazil from December-April.



flowers (TopTropicals.com)



tree (TopTropicals.com)



flowers (TopTropicals.com)

ECOLOGY

B. crassifolia is limited to tropical and subtropical climates. In central and south America, the tree ranges from sea level to 1 800 m altitude. The tree is native and abundant in the wild, sometimes in extensive stands, in open pine forests and grassy savannas, from southern Mexico, through the Pacific side of Central America, to Peru and Brazil; also occurs in Trinidad, Barbados, Curacao, St. Martin, Dominica, Guadeloupe, Puerto Rico, Haiti, the Dominican Republic and throughout Cuba and the Isle of Pines. It is highly drought-tolerant. Trees are tolerant of a wide range of environments, from the coastal Caribbean, the semi-desert regions of northeastern Brazil, the humid tropical lowlands and the middle elevations (1,000 m) of central and south America.

BIOPHYSICAL LIMITS

Altitude: 0-1 800 m

Soil type: In Mexico, the tree is often found on rocky ground. It grows well on sandy and alkaline-sandy soils. It is well suited for restoration of infertile and burned-over land.

DOCUMENTED SPECIES DISTRIBUTION

Native: Argentina, Barbados, Belize, Brazil, Colombia, Cuba, Dominica, Dominican Republic, El Salvador, Guadeloupe, Guyana, Haiti, Honduras, Mexico, Peru, Puerto Rico, Surinam, Trinidad and Tobago, Venezuela

Exotic: Philippines, United States of America



The map above shows countries where the species has been planted. It does neither suggest that the species can be planted in every ecological zone within that country, nor that the species can not be planted in other countries than those depicted. Since some tree species are invasive, you need to follow biosafety procedures that apply to your planting site.

Byrsonima crassifolia

HBK.

Simaroubaceae

wild cherry, nance, murici

PRODUCTS

Food: The fruits are eaten raw or cooked as dessert, or may be included in soup or in stuffing for meats. The fruits are often used to prepare carbonated beverages.

Apiculture: In Costa Rica, the flowers provide one of the few sources of nectar for honeybees in the month of June.

Fuel: In Brazil, the wood is chosen for the hot fire over which people smoke the stimulant paste of guaraná (*Paullinia cupana*) because the burning wood has a pleasant odour. In some areas it is used for making charcoal.

Fibre: The bark yields a strong fiber.

Timber: The sapwood is greyish, the heartwood reddish-brown, heavy, coarse-textured, tough, and highly prized for boat ribs though it is brittle and only medium-durable. It is usually available only in small sizes and is used for tool handles, turnery, cabinetwork, furniture and small-scale construction.

Tannin or dyestuff: The bark contains 17-28 % tannin and 3 % oxalic acid. It is employed in tanning, giving the leather a light-yellow tone. The fruit is high in tannin, especially when unripe and sometimes used in dyeing. The fruit skin imparts a light-brown hue to cotton cloth.

Lipids: An edible fat is extracted from the fruits with boiling water in Magdalena, Colombia. *B. crassifolia* flowers produce abundant lipids instead of nectar. Several species of *Centris* bees collect this oil.

Alcohol: The fruits are often used to prepare an acid, oily, fermented beverage known by the standard term *chicha* applied to assorted beer-like drinks made of fruits or maize. By distillation, a rum-like liquor called *Crema de nance* is produced in Costa Rica.

Poison: Fresh branches are cut into small pieces and thrown into streams to stupefy fish; or they are crushed at the edge of shallow waters so that the juice spills into the water, for the same effect.

Medicine: The bark of *B. crassifolia* is used to treat skin infections and gastrointestinal disorders by the Mixe Indians of Mexico, bark infusion is taken to halt diarrhoea, as a febrifuge and to promote menstruation. It is considered beneficial in pulmonary complaints, cases of leucorrhoea, indigestion, and allegedly tightens the teeth where the gums are diseased. In Belize, it is taken as an antidote for snakebite. In Guyana, the pounded bark is poulticed on wounds. Mexicans apply the pulverized bark on ulcers.

Other products: Twenty-two compounds were isolated and identified from a MeOH extract of the leaves of *B. crassifolia* (collected from Mexico), including 6 triterpenes (betulinaldehyde, betulin, betulinic acid, lupeol, oleanolic acid, and ursenaldehyde), 2 sterols (beta-sitosterol and its glucoside), 6 flavonoids (catechin, epicatechin, guaijaverin, hyperin, quercetin and its 3-O-[6"-galloyl]galactoside), an aromatic ester (methyl gallate), 4 amino acids (alanine, aspartic acid, proline, and valine), 2 non-protein amino acids (pipecolic acid and 5-hydroxypipecolic acid), and a novel sulfonoglycolipid. Betulin, betulinic acid, hyperin, quercetin, and ursenaldehyde exhibited spasmogenic activity on isolated rat fundus. Hyperin, pipecolic acid and 5-hydroxypipecolic acid showed noncompetitive antagonism to serotonin (5-HT) in the same preparation.

SERVICES

Soil improver: The tree improves soil under its crown through accumulation of soil organic matter and K.

Ornamental: While in flower, the tree is quite ornamental with showy orange and yellow inflorescences.

Byrsonima crassifolia

wild cherry, nance, murici

HBK.

Simaroubaceae

TREE MANAGEMENT

B. crassifolia is a fire resistant tree, occurring where burning is frequently undertaken towards the end of the dry season. The tree is considered to have an intermediate to high resistance to drought. Although it is a tolerant species to infertile soils, it has shown a better performance under cultivation techniques using increased organic matter and weeding.

FURTHER READING

Bejar E and Malone MH. 1993. Pharmacological and chemical screening of *Byrsonima crassifolia*, a medicinal tree from Mexico. Part I. *Journal of Ethnopharmacology*. 39(2): 141-158.

Bejar E, Amarquaye A, Che CT, Malone MH and Fong HHS. 1995. Constituents of *Byrsonima crassifolia* and their spasmogenic activity. *International Journal of Pharmacognosy*. 33(1): 25-32.

CABI. 2000. *Global Forestry Compendium*. CD-ROM. CABI

Espana SM, Velez de Marsicovetere PV and Caceres A. 1994. Plants used in Guatemala for the treatment of gastrointestinal disorders. 5. Vibriocidal activity of five American plants used to treat diarrhea. *Fitoterapia*. 65(3): 273-274.

FAO. 1983. *Food and fruit bearing forest species. 3: Examples from Latin America*. FAO Forestry Paper. 44/3. Rome.

Garcia LL, Fojas FR, Castro IR, Venzon EL, Sison FM and Capal TV. 1987. Pharmaceutico-chemical and pharmacological studies on a crude drug from *Lagerstroemia speciosa* (L.) Pers. *Philippine Journal of Science*. 116(4): 361-375.

Garriz PI. 1986. Study of some morphological characters of nance (*Byrsonima crassifolia* L.). *Centro Agricola*. 13(4): 82-91.

Geiss F, Heinrich M, Hunkler D and Rimpler H. 1995. Proanthocyanidins with (+)-epicatechin units from *Byrsonima crassifolia* bark. *Phytochemistry*. 39(3): 635-643.

<http://www.hort.purdue.edu/newcrop/morton/nance.html>

SUGGESTED CITATION

Orwa C, A Mutua, Kindt R, Jamnadass R, S Anthony. 2009 *Agroforestry Database: a tree reference and selection guide version 4.0* (<http://www.worldagroforestry.org/sites/treedbs/treedatabases.asp>)