GLOBAL INVASIVE SPECIES DATABASE

FULL ACCOUNT FOR: ***Eugenia uniflora***

Eugenia uniflora 简体中文 正體中文

System: Terrestrial

Kingdom	Phylum	Class	Order	Family
Plantae	Magnoliophyta	Magnoliopsida	Myrtales	Myrtaceae

Common name

Cayennekirsche (German), Surinaamsche kersh (English, Surinam), cerisier de Cayenne (French), Florida cherry (English), cayenne cherry (English), pitanga (Spanish), Brazilian cherry (English), cerises-cotes (English, Guadeloupe), cerese à côtes (English, Guadeloupe), nagapiry (Spanish), cerezo de Cayena (Spanish), pitanga-da-praia (Portuguese), Surinamkirsche (German), guinda (English, El Salvador), cereza quadrada (English, Colombia), pendanga (English, Venezuela), monkie monkie kersie (English, Surinam), cerise de pays (English, French Guiana), cerise de Cayenne (English, French Guiana), zoete kers (English, Surinam), Surinam cherry (English), cerise carée (English, French Guiana), French cherry (English), Barbados cherry (English), red Brazil cherry (English), kafika papalangi (English), kafika palangi (English), kafika (English), menemene (English), venevene (English), ñanga-piré (English, Argentina), cerisier carré (French)

Synonym

Eugenia michelii , Lam.
Eugenia brasiliana , (L.) Aubl.
Myrtus brasiliana , L.
Myrtus brasiliana , L. var. *normalis* Kuntze
Plinia pedunculata , L.f.
Plinia rubra , L.
Stenocalyx michelii , O. Berg
Stenocalyx uniflorus , (L.) Kausel

Similar species

Eugenia spp.

Summary

Eugenia uniflora is an evergreen shrub that can reach tree like proportions. It is a hardy species that can thrive in a variety of habitats, both in its native and introduced range. Eugenia uniflora can quickly reach thick densities which affect understorey light levels, subsequently changing micro-environments. It is also known to host recognised pests and pathogens.

view this species on IUCN Red List

Species Description
Eugenia uniflora is an evergreen, multi-branched shrub (sometimes classified as a small tree) with slender, spreading branches and resinously aromatic foliage. It can reach heights of 10 m. Young stems are often covered with red hairs and dark red new foliage. The leaves of this species are opposite, simple, short petioled, oval to lance shaped, 2.5-8cm long, shiny and dark green above while paler below and with margins entire. The opposite leaves are bronze when young; turn deep-green and glossy when mature; and turn red in cold, dry winter weather. Long-stalked flowers are borne singly or as many as 4 together in the leaf axils and have 4 delicate, recurved, white petals and a tuft of 50 to 60 prominent white stamens with pale-yellow anthers. The flowers are fragrant and about 13mm across. *E. uniflora* fruit are fleshy, juicy, orange-red berries 4cm wide and are depressed-globose, conspicuously 8-ribbed, and contain 1-3 seeds. The fruit turns from green to orange as it develops and, when mature, bright red to deep-scarlet or dark, and purplish maroon (\"black\") when fully ripe. The skin is thin, the flesh orange-red, melting and very juicy. (FLEPPC, 2005; and Morton, 1987).

Notes
On Tahiti, invasive species such as the carnivorous snail *E. rosea* have impacted much of indigenous species or habitats. However, thanks to the extreme ecological conditions in altitude, this invasive species have not reached higher elevation where endemic fauna still occur. On Mount Aorai, second highest peak of Tahiti (2066 m), the impact of *E. rosea* reaches a maximum altitude of 1400 m. Above this altitude, endemic gastropod species are still found alive and some remain to be described (Gargominy 2008). The 2006 two surviving Raiatean partulid lineages (*Samoana attenuata* and *Partula Meyeri*) were discovered on the upper slopes of Mount Tefatua, the highest peak on the island. The unexpected discovery of these two surviving montane populations raises the possibility of preserving some fraction of Raiatea's endemic tree snail diversity in the wild (Lee *et al*. 2008).

Uses
Eugenia uniflora is ecologically important in its endemic range as a pioneer species in the restinga ecosystem. Thus, the species has been used to recover and manage disturbed and fragmented areas. Initial steps to understand the genetic diversity of *E. uniflora* are now being undertaken, due to its ecological versatility and wide economic application (Salgueiro *et al.* 2004).
Ripe fruits can be eaten out-of-hand and can be made into pie or sauce or preserved whole in syrup. They are often made into jam, jelly, relish or pickles. Brazilians ferment the juice into vinegar or wine, and sometimes prepare distilled liquor. Seeds are extremely resinous and should not be eaten. The strong, spicy emanation from bushes being pruned irritates the respiratory passages of sensitive persons. The leaves have been spread over the floors of Brazilian homes. When walked upon, they release their pungent oil, which repels flies. The bark contains 20 to 28.5% tannin and can be used for treating leather.
Medicinal Uses: In Brazil the leaf infusion is taken as a stomachic, febrifuge and astringent. In Surinam, the leaf decoction is drunk as a cold remedy and, in combination with lemongrass, as a febrifuge (Morton, 1987).

Habitat Description
Eugenia uniflora is endemic to Brazil, occurring in areas of medium and large levels of rainfall. It can also be found in different vegetation types and ecosystems, including forests, restingas (The restingas ecoregion along the Brazilian Atlantic coast are characterized by sandy dunes with shrubs and low forests further inland), arid and semiarid environments in the Brazilian north-east. *E. uniflora* is, in general, a hardy species that is adaptable to all soil conditions that are not subject to flooding and is found in tropical and subtropical regions (FLEPPC, 2005; Morton, 1987; and Salgueiro *et al.* 2004).
Young plants are damaged by temperatures below -2.22º C, but well-established plants have suffered only superficial injury at -5.56º C. The plant revels in full sun. It requires only moderate rainfall and, being deep-rooted, can stand a long dry season. *E. uniflora* grows in almost any type of soil-sand, sandy loam, stiff clay, soft limestone-and can even stand water logging for a time, but it is intolerant of salt (Morton, 1987).

Reproduction
Eugenia uniflora is hermaphrodite with white flowers pollinated by insects. The flowers are small having four petals and lots of yellow stamens. Flowering happens twice a year, in January and September, and fruit ripening occurs in February and October, approximately five to six weeks after flowering. Seeds remain viable for not much longer than a month and germinate in 3 to 4 weeks. *Eugenia uniflora* seedlings grow slowly; some begin to fruit when 2 years old; some may delay fruiting for 5 or 6 years, or even 10 if in unfavourable situations. The fruits develop and ripen quickly, only 3 weeks after the flowers open (Morton, 1987; and Salgueiro *et al.* 2004).

General Impacts
Because of its hardy nature *E. uniflora* can invade a wide variety of habitats and can achieve such thick densities that it affects light levels and can change the microenvironment of an invaded habitat. This species is also known to host recognized pests and pathogens and is therefore an undesirable species to allow in native habitats where it has invaded (Forbes, 2006; and PIER, 2005).

Management Info
Preventative measures: A Risk Assessment of *Eugenia uniflora* for Hawaii and other Pacific islands was prepared by Dr. Curtis Daehler (UH Botany) with funding from the Kaulunani Urban Forestry Program and US Forest Service. The alien plant screening system is derived from Pheloung *et al*. (1999) with minor modifications for use in Pacific islands (Daehler *et al.* 2004. The result is a score of 12 and a recommendation of: \"Likely to cause significant ecological or economic harm in Hawaii and on other Pacific Islands as determined by a high WRA score, which is based on published sources describing species biology and behaviour in Hawaii and/or other parts of the world.\"
Chemical: Kline and Duquesnel (1996) report that using the Cut Surface method of chemical application with Garlon 3A at 50% concentration or a 10% concentration of Garlon 4 achieved a rating of \"Good\" control. Basal bark application of Garlon 4 at 10% concentration only received a rating of \"Moderate\" control.
Biological: Research into the biological control of *E. uniflora* has not been conducted, but certain invertebrates and diseases are known to attack this species. *E. uniflora* are highly attractive to Caribbean and Mediterranean fruit flies, but the incidence of infestation was found to vary greatly from location to location, with some plants being unmolested. Scale insects and caterpillars occasionally attack the foliage. Diseases encountered in its invasive range in Florida are leaf spot caused by *Cercospora eugeniae*, *Helminthosporium* sp., and *Phyllostica eugeniae*; thread blight from infection by *Corticium stevensii*; anthracnose from *Colletotrichum gloeosporioides*; twig dieback and root rot caused by *Rhizoctonia solani*; and mushroom root rot, *Armillariella (Clitocybe) tabescens* (Morton, 1987).

Pathway
E. uniflora is widely planted in central and south Florida, especially for hedges (FLEPPC, 2005).*E. uniflora* was introduced for ornament and edible fruit before 1931(FLEPPC, 2005).

Principal source: Salgueiro *et al.* 2004. Even population differentiation for maternal and biparental gene markers in *Eugenia uniflora* , a widely distributed species from the Brazilian coastal Atlantic rain forest
Morton, 1987 *E. uniflora*

Compiler: National Biological Information Infrastructure (NBII) & IUCN/SSC Invasive Species Specialist Group (ISSG)

Review:

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ALIEN RANGE

[2] AMERICAN SAMOA **[1]** AUSTRALIA

[1] BAHAMAS
[1] CAYMAN ISLANDS
[9] COOK ISLANDS
[1] DOMINICAN REPUBLIC
[6] FRENCH POLYNESIA
[1] HAITI
[1] INDONESIA
[1] JAMAICA
[1] MARTINIQUE
[5] NEW CALEDONIA
[1] NORFOLK ISLAND
[1] PAPUA NEW GUINEA
[1] PUERTO RICO
[1] SAINT BARTHELEMY
[1] TONGA
[1] UNITED STATES MINOR OUTLYING ISLANDS
[1] BERMUDA
[1] CHRISTMAS ISLAND
[1] CUBA
[2] FIJI
[1] GUADELOUPE
[2] INDIA
[2] ITALY
[2] MARSHALL ISLANDS
[2] MICRONESIA, FEDERATED STATES OF
[1] NIUE
[1] NORTHERN MARIANA ISLANDS
[1] PITCAIRN
[1] REUNION
[1] SAMOA
[16] UNITED STATES
[3] VIRGIN ISLANDS, U.S.

Red List assessed species 1: EN = 1;

Coffea myrtifolia **EN**

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