


Prosopis juliflora

<i>Prosopis juliflora</i>	
	
Young tree	
Scientific classification	
Kingdom:	Plantae
(unranked):	Angiosperms
(unranked):	Eudicots
(unranked):	Rosids
Order:	Fabales
Family:	Fabaceae
Subfamily:	Mimosoideae
Tribe:	Mimoseae
Genus:	<i>Prosopis</i>
Species:	<i>P. juliflora</i>
Binomial name	
<i>Prosopis juliflora</i> (Sw.) DC.	
Synonyms	
Many, see text	

Prosopis juliflora (Spanish: *bayahonda blanca*) is a shrub or small tree in the Fabaceae family, a kind of mesquite. It is native to Mexico, South America and the Caribbean. It has become established as an invasive weed in Africa, Asia, Australia and elsewhere.

Description

The mesquite tree grows to a height of up to 12 metres (39 ft) and has a trunk with a diameter of up to 1.2 metres (3.9 ft). Its leaves are deciduous, bi-pinnate, light green, compounded with 12 to 20 leaflets. Flowers shortly after leaf development. The flowers are in 5–10 cms. long green-yellow cylindrical spikes, which occur in clusters of 2 to 5 at the ends of branches. Pods are 20 to 30 cms. long and contain between 10 and 30 seeds per pod. A mature



A scene of *Prosopis juliflora*

plant can produce hundreds of thousands of seeds. Seeds remain viable for up to 10 years. The tree reproduces by way of seeds, not vegetatively. Seeds are spread by cattle and other animals that consume the seed pods and spread the seeds in their droppings.^[1]

Its roots are able to grow to a great depth in search of water: in 1960, they were discovered at a depth of 53 meters (175 feet) at an open-pit mine near Tucson, Arizona, putting them among the deepest known roots.

This is said to have been introduced to Sri Lanka in the 19th century, where it is now known as **vanni-andara**, or **katu andara** in Sinhala. But given its existence and recognition even as a holy tree in ancient India Wikipedia:Citation needed, that claim is unlikely to be true as it had been mistaken for *Acacia nilotica*. The tree is believed to have existed in the Vanni and Mannar regions for a long time. This species has thorns in pairs at the nodes but thornless internodes. It may also be almost thornless.

Uses

Its uses include forage, wood and environmental management. The plant possesses an unusual amount of the flavanol (-)-mesquitol in its heartwood.^[2]

Invasive Species

Prosopis juliflora has become an invasive weed in several countries where it was introduced. It is considered a noxious invader in Ethiopia, in Hawaii, in Sri Lanka, Jamaica, the Middle East, India, Nigeria, Sudan, Somalia, Senegal and southern Africa. It is also a major weed in the southwestern United States. It is hard and expensive to remove as the plant can regenerate from the roots.^[3]

In Australia, mesquite has colonized more than 800,000 hectares of arable land, having severe economic and environmental impacts. With its thorns and many low branches it forms impenetrable thickets which prevent cattle from accessing watering holes, etc. It also takes over pastoral grasslands and uses scarce water. Livestock which consume excessive amounts of seed pods are poisoned. It causes land erosion due to the loss of the grasslands that are habitats for native plants and animals. It also provides shelter for feral animals such as pigs and cats.

In the Afar Region in Ethiopia, where the mesquite was introduced in the late 1970s and early 1980s, its aggressive growth leads to a monoculture, denying native plants water and sunlight, and not providing food for native animals and cattle. The Regional government with the non-governmental organisation FARM-Africa are looking for ways to commercialize the tree's wood, but pastoralists who call it the "Devil Tree" insist that *P. juliflora* be eradicated.^[4]

In Sri Lanka this mesquite was planted in the 1950s near Hambantota as a shade and erosion control tree. It then invaded the grass lands in and around Hambantota and the Bundala National Park, causing similar problems as in Australia and Ethiopia.

Nomenclature

Vernacular names

Prosopis juliflora has a wide range of vernacular names, although no widely used English one except for "mesquite", which is used for several species of *Prosopis*. It is called *bayahonda blanca* in Spanish and *bayarone Français* in French. Other similar names are also used, including *bayahonde*, *bayahonda* and *bayarone* but these may also refer to any other Neotropical member of the genus *Prosopis*. The tree is known by a range of other names in various parts of the world, including *algarrobe*, *cambrón*, *cashaw*, *épinard*, *mesquite*, *mostrenco*, or *mathenge*. Many of the less-specific names are because over large parts of its range, it is the most familiar and common species of *Prosopis*, and thus to locals simply "the" *bayahonde*, *algarrobe*, etc.

"Velvet mesquite" is sometimes given as an English name, but properly refers to a different species, *Prosopis velutina*.

Names in and around Indian Subcontinent, where the species is widely used for firewood and to make barriers, often compare it to similar trees and note its introduced status; thus in Hindi it is called *angaraji babul*, *Kabuli kikar*, *vilayati babul*, *vilayati khejra* or *vilayati kikar*. The *angaraji* and *vilayati* names mean they were introduced by Europeans, while *Kabuli kikar* (or *keekar*) means "Kabul acacia"; *babul* specifically refers to the Gum Arabic Tree (*Acacia nilotica*) and *khejra* (or *khejri*) to *Prosopis cineraria*, both of which are native to South Asia. In Gujarati it is called *gando baval* and in Marwari, *baavlia*. In Karnataka, in Kannada it is known as "Ballaari Jaali" meaning Jaali, local name, abundant in and around Bellary district. In Tamil Nadu, in Tamil language it is known as *cheemai karuvel* (சீமகைக் கருவலை), a quite literal equivalent of *vilayati babul*. A vernacular Tamil name is *velikathan* (வலைகாத்தான்), from *veli* (வலை) "fence" + *kathan* (காத்தான்) "protector", for its use to make spiny barriers. In Andhra Pradesh, in the Telugu language it is known as *mulla tumma* (ముల్ల తుమ్మ) or *sarkar tumma*.

In the Wayuu language, spoken on the La Guajira Peninsula in northern Colombia and Venezuela, it is called *trupillo* or *turpío*.^[5]



Prosopis juliflora inflorescences and leaves, Krishna Wildlife Sanctuary (Andhra Pradesh, India)

Synonyms

This plant has been described under a number of now-invalid scientific names:

- *Acacia cumanensis* Willd.
- *Acacia juliflora* (Sw.) Willd.
- *Acacia salinarum* (Vahl) DC.
- *Algarobia juliflora* (Sw.) Heynh.

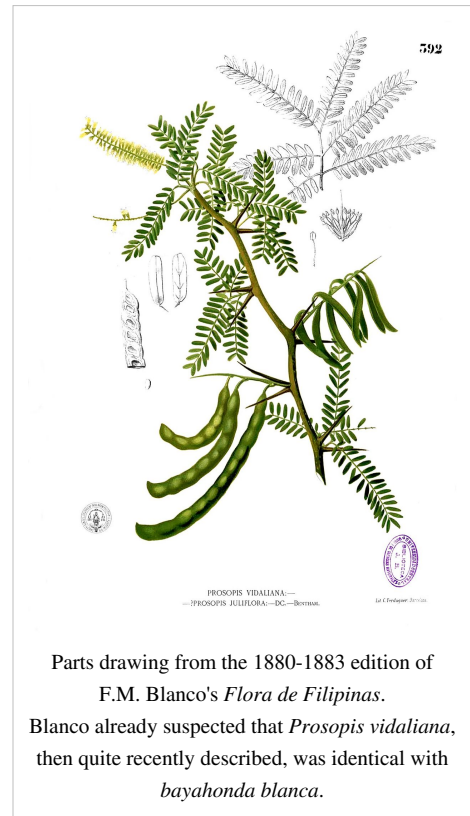
Algarobia juliflora as defined by G. Bentham refers only to the typical variety, *Prosopis juliflora* var. *juliflora* (Sw.) DC

- *Desmanthus salinarum* (Vahl) Steud.
- *Mimosa juliflora* Sw.
- *Mimosa piliflora* Sw.
- *Mimosa salinarum* Vahl
- *Neltuma bakeri* Britton & Rose
- *Neltuma juliflora* (Sw.) Raf.
- *Neltuma occidentalis* Britton & Rose
- *Neltuma occidentalis* Britton & Rose
- *Neltuma pallescens* Britton & Rose
- *Prosopis bracteolata* DC.
- *Prosopis cumanensis* (Willd.) Kunth
- *Prosopis domingensis* DC.
- *Prosopis dulcis* Kunth var. *domingensis* (DC.)Benth.

C.S. Kunth's *Prosopis dulcis* is Smooth Mesquite (*P. laevigata*), while *P. dulcis* as described by W.J. Hooker is Caldén (*P. caldenia*).

- *Prosopis vidaliana*
Fern.-Vill. Wikipedia: Verifiability

Prosopis chilensis was sometimes considered to belong here too, but it is usually considered a good species these days. Several other authors misapplied *P. chilensis* to Honey Mesquite (*P. glandulosa*).



Footnotes

- [1] Lalith Gunasekera, *Invasive Plants: A guide to the identification of the most invasive plants of Sri Lanka*, Colombo 2009, pp. 101-102.
- [2] Unusual amount of (-)-mesquitol from the heartwood of *Prosopis juliflora*. Sirmah Peter, Dumarcay Stephane, Masson Eric and Gerardin Philippe, *Natural Product Research*, Volume 23, Number 2, January 2009 , pp. 183-189 (<http://www.ingentaconnect.com/content/tandf/gnp/2009/00000023/00000002/art00009>)
- [3] "Mesquite (*Prosopis* species)" Department of Sustainability, Environment, Water, Population and Communities, Canberra, at <http://www.environment.gov.au/biodiversity/invasive/weeds/publications/guidelines/wons/pubs/prosopis.pdf>
- [4] Caroline Irby, "Devil of a problem: the tree that's eating Africa" (<http://www.dankalia.com/ethiopia/tree.htm>) (accessed 14 January 2009)
- [5] Villalobos *et al.* (2007)

References



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- Duke, James A. (1983): *Prosopis juliflora* DC. (http://www.hort.purdue.edu/newcrop/duke_energy/Prosopis_juliflora.html). In: *Handbook of Energy Crops*. Purdue University Center for New Crops & Plant Products. Version of 1998-JAN-08. Retrieved 2008-MAR-19.
- International Legume Database & Information Service (ILDIS) (2005): *Prosopis juliflora* (<http://www.ildis.org/LegumeWeb?version~10.01&LegumeWeb&tno~15750&genus~Prosopis&species~juliflora>). Version 10.01, November 2005. Retrieved 2007-DEC-20.
- Villalobos, Soraya; Vargas, Orlando & Melo, Sandra (2007): Uso, manejo y conservacion de "yosú", *Stenocereus griseus* (Cactaceae) en la Alta Guajira colombiana [Usage, Management and Conservation of yosú, *Stenocereus griseus* (Cactaceae), in the Upper Guajira, Colombia]. [Spanish with English abstract] *Acta Biologica Colombiana* **12**(1): 99-112. PDF fulltext (<http://www.scielo.org.co/pdf/abc/v12n1/v12n1a8.pdf>)

External links

- *Prosopis juliflora* (http://www.westafricanplants.senckenberg.de/root/index.php?page_id=13&preview=true&searchTextMenue=Prosopis+juliflora&search=Wikitemplate) in West African plants – A Photo Guide. (<http://www.westafricanplants.senckenberg.de/>)

