

FULL ACCOUNT FOR: Cecropia peltata



**System:** Terrestrial

Kingdom	Phylum	Class	Order	Family
Plantae	Magnoliophyta	Magnoliopsida	Urticales	Cecropiaceae

snakewood tree (English), yagrumo hembra (Spanish), faux ricin (French), Common name

pisse-roux (French), bois cannon (French), pop-a-gun (English), trumpet wood (English), guarumo (Spanish), Trompetenbaum (German), parasolier (French),

trumpet tree (English), papyrus géant (English)

**Synonym** Ambaiba pelata , Kuntze

Coilotapalus peltata, Britton

Cecropia schreberiana **Similar species** 

Cecropia peltata is a fast-growing, short-lived tree that grows in neotropical **Summary** 

regions. It is light-demanding and rapidly invades disturbed areas, such as forest canopy gaps, roadsides, lava flows, agricultural sites, urban locations, and other disturbed areas. It naturally occurs in tropical Central and South America, as well as some Caribbean islands and has been introduced to Malaysia, Africa, and Pacific Islands. It may be replacing, or competing with,

other native pioneer species in some locations.



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## **Species Description**

Cecropia peltata is a neotropical tree that reaches heights of 20 m or more. Its stems are hollow, partitioned at the nodes, and bear U-shaped leaf scars. Its leaves are alternate, long-lobed, ovate, somewhat pointed, about 10-50 cm wide, dark green and scaborous above and densley white-tomentose underneath. Its staminate inflorescence is an umbellate cluster of spikes 3-5.5 cm long, consisting of many individual tubular calyces with paired stamens, while its pistillate spikes are yellowish and 2-5.5 cm long, thick, and succulent when in fruit (PIER, 2009).

### **Notes**

Cecropia peltata L was distinguished from C. schreberiana Mig. in 1988. Whereas Cecropia peltata occurs in Mexico and Central America, C. schreberiana occurs in the Antilles and northern South America (Howard, 1988; ISTF, 1997 in Brokaw, 1998; Csuhres, 2008). However, ITIS does not distinguish between the species and, in fact, states Cecropia schreberiana as the valid name for the species and indicates C. peltata as a synonym for C. schreberiana.



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## **Lifecycle Stages**

Seeds of *Cecropia peltata* require full sunlight for successful germination and with those conditions may be as high as 80-90%. Seedling leaves are pubescent on both sides, lanceolate, unlobed, and finely toothed. Seedlings are also very light demanding and seedling mortality in natural conditions is typically very high. It has been found that 99% of seedlings in forest openings die in the first year. *C. peltata* grows rapidly reaching 10-15 cm in height in 10 weeks and up to about 2 m in the first year. Reproductive maturity is reached by pistillate trees in 3-4 years and by staminate trees in 4-5 years. Maturation is dependant on allocation of resources for rapid initial height growth and factors such as the height of and proximity to surrounding vegetation with trees in open environments maturing faster than those in forest gaps. *C. peltata* usually reaches canopy height in about 10 years and its estimated life span is 30 years (Silander & Lugo, undated).

#### Uses

Cecropia peltata is popularly cultivated as an ornamental species (Bodkin 1990 in Csurhes, 2008).

## **Habitat Description**

Cecropia peltata typically inhabits forest gaps and disturbed sites (PIER, 2009), such as, along roadsides, agricultural sites, lava flows, and urban locations (Binggeli, 1999). It is a fast growing, high light demanding, pioneer species that colonizes tree fall gaps in ts native range and is capable of establishing dense stands (PIER, 2009). It is known from altitudes of 50-2700 m (Hurtado & Alson, 1995). *C. peltata* requires much rainfall and may be found in environments with 990 mm to over 3,810 mm of annual percipitation. It grows in alluvial, colluvial, and residual soils neutral to acidic in nature. Soil texture may range from heavy clay to sandy, but a clay-loam soil is optimal. *C. peltata* is also generally found in warm climates ranging from montane to tropical with mean annual temperatures of 12-24°C (Silander & Lugo, undated).

## Reproduction

Cecropia peltata is dioecious and becomes sexually mature in 3 to 5 years. Its tiny flowers are clustered on 5 to 10 cm long spikes and are wind-pollinated. On female spikes the minute one-seeded fruits form large fruit clusters which appear to take around a month to mature. A spike contains around 800 viable seeds which are about 1.9 mm long and weigh 1.6 mg. Bats and birds eat large quantities of the succulent fruits and are the main seed disperser. In Costa Rica a similar amount of fruits are consumed during the day, mainly by monkeys, and at night by bats and arboreal mammals. A large and persistent seedbank is formed in the forest soil (Bingelli, 1999). In some locations flowering and fruiting occur year-round and in others it it seasonal with a peak in either the wet or the dry season depending on location (Silander & Lugo, undated; Bingelli, 1999). C. peltata is highly productive and seed production is estimated to be as high as 1 million seeds per year (Silander & Lugo, undated)

#### **General Impacts**

Cecropia peltata forms dense stands that may compete with or displace native pioneer species and reduce species richness (Bingelli, 1999; Dumont et al, 1990). Evidence suggests it competes with and may displace tropical African pioneer species Musanga cecropioides (Bingelli, 1999).



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### **Management Info**

<u>Preventative measures</u>: A Risk Assessment of *Cecropia peltata* for Hawai'i 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 9 and a recommendation of: \"Likely to cause significant ecological or economic harm in Hawai'i and on other Pacific Islands as determined by a high WRA score, which is based on published sources describing species biology and behavior in Hawai'i and/or other parts of the world.\"

\nPhysical: Hand pulling or digging out seedlings and young trees is recommended (PIER, 2009). \nChemical: Larger trees should be cut and their stumps should be treated with herbicide (PIER, 2009). \nBiological control: C. peltata has been found to be attacked by Historis spp. and various moth species and is sometimes extensively defoliated (Bingelli et al, 1998). \n

### **Pathway**

**Principal source:** Bingelli, Pierre, 1999. *Cecropia peltata* L. (Cecropiaceae). Pacific Ecosystems at Risk (PIER), 2009. *Cecropia peltata* Regel, Cecropiaceae

Csurhes, Steve, 2008. *Cecropia*, *Cecropia* spp. Pest Plant Risk Assessment. Biosecurity Queensland Department of Primary Industries and Fisheries, Queensland

Silander, Susan R. and Ariel E. Lugo, undated. Cecropia peltata L. Yagrumo Hembra, Trumpet-Tree.

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

**Review:** 

Pubblication date: 2011-02-23

### **ALIEN RANGE**

[1] ANGOLA[1] AUSTRALIA[1] CAMEROON[1] COTE D'IVOIRE[7] FRENCH POLYNESIA[1] MADAGASCAR[1] MALAYSIA[1] NEW CALEDONIA

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Binggeli, Pierre; John B. Hall and John R. Healy, 1998. An Overview of Invasive Woody Plants in the Tropics

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Daehler, C.C; Denslow, J.S; Ansari, S and Huang-Chi, K., 2004. A Risk-Assessment System for Screening Out Invasive Pest Plants from Hawaii and Other Pacific Islands. Conservation Biology Volume 18 Issue 2 Page 360.

**Summary:** A study on the use of a screening system to assess proposed plant introductions to Hawaii or other Pacific Islands and to identify high-risk species used in horticulture and forestry which would greatly reduce future pest-plant problems and allow entry of most nonpests. Pacific Ecosystems at Risk (PIER), 2009. Cecropia peltata Regel, Cecropiaceae

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#### **General information**



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