

Cecropia schreberiana

System: Terrestrial

Kingdom	Phylum	Class	Order	Family
Plantae	Magnoliophyta	Magnoliopsida	Urticales	Cecropiaceae

Common name llagrumo hembra (Spanish), yagrumo hembra (Spanish), trumpet wood (English), pumpwood (English), grayumo hembra (Spanish), trumpet tree (English)

Synonym *Cecropia peltata* , auct. non L.

Similar species *Cecropia peltata*

Summary *Cecropia schreberiana* is a neotropical pioneer tree native to the Antilles and northern South America. It is strongly associated with post-hurricane, or other disturbance, colonization. It has been reported introduced in Hawaii, West Africa, Malaysia, Madagascar, and French Polynesia. It is known to establish dense stands in the Luquillo Mountains, Puerto Rico and has invasive potential to reduce biodiversity and displace native species.



[view this species on IUCN Red List](#)

Species Description

Cecropia schreberiana is a tree which typically reaches 20 m in height and 60 dbh but may grow larger. Leaves of mature trees are simple, alternate, clustered, and peltate measuring 30-75 cm wide, with 7-11 large lobes on a long thick petiole (Brokaw, 1998; Kinsey, 2006). They are dark and scabrous above and densely white-tomentose underneath. Seedling leaves are unlobed, lanceolate, slightly toothed, downy on both surfaces, and whitish underneath. Its bark is gray and smooth. It has few stout branches supporting a thin spreading canopy, with younger branches bearing triangular leaf scars. Flowers of both sexes are very small, about 1.6 mm long, very abundant, and are born on clustered spikes, or aments. Female spikes develop into multiple fruits, swollen to 5-10 cm long and 1 cm thick and containing many minute fruits, each with one achene. These small oblong seeds are about 2 mm in length (Brokaw, 1998).

Notes

Cecropia schreberiana Miq. was distinguished from *C. peltata* L. 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; Csurhes, 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*

Lifecycle Stages

Cecropia schreberiana becomes sexually mature in about 3-6 years. It has been found to mature as early as 3.3 years in more open, sunny locations and takes longer, about 5-6 years, in forest gaps where light is reduced (Csurhes, 2008). Individual trees are thought to live 30-50 years (Brokaw, 1998). It establishes an abundant seed bank from which populations quickly regenerate following disturbances such as hurricanes (Csurhes, 2008).

Uses

Cecropia schreberiana performs a key function in the reorganization of Luquillo Forest, Puerto Rico, and likely other, ecosystems after disturbance, because its abundant regeneration and rapid growth capture and store nutrients. Also, its colonizing saplings may facilitate succession to mature forest by excluding grasses, herbs, and vines that hinder forest development (Brokaw, 1998).

The light wood of *C. schreberiana* is variously used for matchsticks, boxes and crates, interior boarding and paper pulp. The hollow branches and trunks are used to make floats, gutters and trumpets. In places the leaves, latex or bark are employed in medicinal remedies (Bingelli, 1999).

In Grenada, a tea made from its leaves, along with bamboo, is used for colds and hypertension. It is also known to be used for diabetes and kidney disorders in some locations. In St. Lucia, the stem is made into a musical instrument called the ha ha. In Jamaica, it is also used to make musical instruments.

Habitat Description

Cecropia schreberiana is a pioneer species that often inhabits forest gaps and disturbed areas, such as along roadsides or riparian zones but almost never occurs in abandoned pastures or wide open locations (Wen *et al*, 2008; Zimmerman *et al*, 1995b). It is an important post-hurricane colonizer that regenerates quickly and abundantly (Brokaw, 1998; Zimmerman *et al*, 1995a). It requires a wet environment and may be found in subtropical to montane rainforest zones with annual precipitation from 990-over 3810mm. *C. schreberiana* grows in alluvial, colluvial, and residual soils with an acidic pH (Silander & Lugo, 1990). It is shade intolerant and requires much light for germination and early growth (Brandeis *et al*, 2009). It is known to inhabit altitudes from 0-1,300 m (Silander & Lugo, 1990).

Reproduction

Cecropia schreberiana is dioecious and produces wind-pollinated flowers in spikes and abundant minute seeds broadly dispersed by birds and bats. Flowers of both sexes are grouped on clustered spikes, or aments and are very small, measuring about 1.6 mm long, and abundant, an average of 15,140 per pistillate cluster. The female spikes develop into multiple green, finger-like fruits, swollen to 5-10 cm long and 1 cm thick and containing many minute fruits, each with one achene (Brokaw, 1998; Kinsey, 2006). In Costa Rica, flowering and fruiting are seasonal, lasting about nine months, with a peak of four months during the early part of the wet season (Bingelli, 1999 in Csurhes, 2008).

Nutrition

Cecropia schreberiana requires high sunlight, especially for germination and early growth (Brandeis *et al*, 2009). It is also believed to require nutrient rich soils and high nitrogen levels (Zimmerman, 1996b).

General Impacts

Cecropia schreberiana establishes very dense, almost monospecific stands in the Luquillo Mountains of Puerto Rico where it has become one of the 10 most abundant trees and its dominance is maintained by regular disturbance caused by hurricanes. It has the potential to displace or compete with native pioneer or riparian species in introduced locations (Brokaw, 1998; Csurhes, 2008).

Principal source: Brokaw, N. V. L. 1998. *Cecropia schreberiana* in the Luquillo Mountains of Puerto Rico. Botanical Review 64:91-120

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

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BIBLIOGRAPHY

18 references found for *Cecropia schreberiana*

Management information

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

General information

Aide, T. Mitchell; Jess K. Zimmerman; Luis Herrera; Maydee Rosario; Mayra Serrano, 1995. Forest recovery in abandoned tropical pastures in Puerto Rico. *Forest Ecology and Management* 77 (1995) 77-86

Summary: Available from: <http://www.bangor.ac.uk/~afs101/iwpt/web-sp3.htm> [Accessed March 25 2010]

[Brandeis, Thomas J.; Eileen H. Helmer; Humfredo Marciano-Vega; and Ariel E. Lugo, 2009. Climate shapes the novel plant communities that form after deforestation in Puerto Rico and the U.S. Virgin Islands. *Forest Ecology and Management* 258 \(2009\) 1704-1718](#)

Summary: Available from: <http://ddr.nal.usda.gov/bitstream/10113/33742/1/IND44252790.pdf> [Accessed March 25 2010]

Brokaw, V. L. Nicholas, 1998. *Cecropia schreberiana* in the Luquillo Mountains of Puerto Rico. *The Botanical Review* Vol 64. April-June 1998 no 2

Summary: Available from: <http://www.bangor.ac.uk/~afs101/iwpt/web-sp3.htm> [Accessed March 25 2010]

[Dumont, J.F., Lamotte, S. and Kahn, F., 1990. Wetland and upland forest ecosystems in Peruvian Amazonia: Plant species diversity in the light of some geological and botanical evidence. *For. Ecol. Manage.*, 33/34: 125-139.](#)

Summary: Available from: http://horizon.documentation.ird.fr/exl-doc/pleins_textes/pleins_textes_5/b_fdi_30-30/31531.pdf [Accessed March 25 2010]

Fernandez, S. Denny and Ned Fletcher, 1991. Changes in Light Availability following Hurricane Hugo in a Subtropical Montane Forest in Puerto Rico. *Biotropica* 23(4a): 393-399 1991

Summary: Available from: <http://www.bangor.ac.uk/~afs101/iwpt/web-sp3.htm> [Accessed March 25 2010]

[Fiveri, Sarita B. & Heraldo L. Vasconcelos, 2004. The Azteca-Cecropia Association: Are Ants Always Necessary for Their Host Plants? *Biotropica* Dec 2004 : Vol. 36, Issue 4, pg\(s\) 641-646 doi: 10.1646/1606](#)

Gould, W. A.; G. González, and G. Carrero Rivera, 2006. Structure and composition of vegetation along an elevational gradient in Puerto Rico. *Journal of Vegetation Science* Oct 2006 : Vol. 17, Issue 5, pg(s) 653-664

Summary: Available from: <http://www.bangor.ac.uk/~afs101/iwpt/web-sp3.htm> [Accessed March 25 2010]

Guzman-Grajales, Sandra M. and Lawrence R. Walker, 1991. Differential Seedling Responses to Litter After Hurricane Hugo in the Luquillo Experimental Forest, Puerto Rico. *Biotropica*, Vol. 23, No. 4, Part A. Special Issue: Ecosystem, Plant, and Animal Responses to Hurricanes in the Caribbean (Dec., 1991), pp. 407-413

Summary: Available from: <http://www.bangor.ac.uk/~afs101/iwpt/web-sp3.htm> [Accessed March 25 2010]

[Integrated Taxonomic Information System \(ITIS\), 2010. *Cecropia schreberiana* Miq.](#)

Summary: Available from: http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=565052 [Accessed March 25 2010]

Lugo, Ariel E., 2004. The outcome of alien tree invasions in Puerto Rico. *Frontiers in Ecology and the Environment* Volume 2, Issue 5 (June 2004) pp. 265-273

Summary: Available from: <http://www.bangor.ac.uk/~afs101/iwpt/web-sp3.htm> [Accessed March 25 2010]

[Silander, Susan R. and Ariel E. Lugo, undated. *Cecropia peltata* L. Yagrumo Hembra, Trumpet-Tree](#)

Summary: Available from: http://www.na.fs.fed.us/pubs/silvics_manual/Volume_2/cecropia/peltata.htm [Accessed March 25 2010]

[USDA, NRCS, 2010. *Cecropia schreberiana* Miq. Pumpwood. The PLANTS Database \(<http://plants.usda.gov>, 26 March 2010\). National Plant Data Center, Baton Rouge, LA 70874-4490 USA.](#)

Summary: Available from: <http://plants.usda.gov/java/profile?symbol=CESC9> [Accessed March 25 2010]

Waide, Robert B., Jess K. Zimmerman, and F. N. Scatena, 1998. Controls of Primary Productivity: Lessons from the Luquillo Mountains in Puerto Rico. *Ecology* Volume 79, Issue 1 (January 1998) pp. 31-37

Summary: Available from: <http://www.bangor.ac.uk/~afs101/iwpt/web-sp3.htm> [Accessed March 25 2010]

[Weaver, L. Peter, 2002. A Chronology of Hurricane Induced Changes in Puerto Rico s Lower Montane Rain Forest. *Interciencia* May 2002 vol 27 No 5](#)

Summary: Available from: <http://redalyc.uaemex.mx/ezproxy.auckland.ac.nz/pdf/339/33906807.pdf> [Accessed March 25 2010]

[Wen, Shiyun; Ned Fletcher and Jess K. Zimmerman, 2008. Acclimation of tropical tree species to hurricane disturbance: ontogenetic differences. *Tree Physiology* 28, 935-946](#)

Summary: Available from: <http://treephys.oxfordjournals.org/cgi/reprint/28/6/935.pdf> [Accessed March 25 2010]

[Zimmerman, Jess K.; John, B. Pascarella and T. Mitchell Aide, 1995b. Barriers to Forest Regeneration in an Abandoned Pasture in Puerto Rico. *Forest Ecology and Management*. Volume 77, Issues 1-3, September 1995, Pages 65-76](#)

Summary: Available from: <http://chiron.valdosta.edu/jbpascar/Research/AdobeArticles/RestorationEcology.pdf> [Accessed March 25 2010]

Zimmerman, Jess K.; T. Mitchell Aide; Maydee Rosario; Mayra Serrano and Luis Herrera, 1995a. Effects of land management and a recent hurricane on forest structure and composition in the Luquillo Experimental Forest, Puerto Rico. *Forest Ecology and Management* Volume 77, Issues 1-3, September 1995, Pages 65-76

Summary: Available from: <http://www.bangor.ac.uk/~afs101/iwpt/web-sp3.htm> [Accessed March 25 2010]