

# Almendro Almendro Tree

Almendro amarillo  
(Spanish)

*Dipteryx panamensis*

Family: Fabaceae  
Genus: Dipteryx

## Distribution

Endemic to southern Nicaragua, Costa Rica, Panama and Columbia

## Habitat

It is an emergent tree growing primarily in the lowlands of the Atlantic plains, in alluvial or sandy soil, occasionally in acid or clay soil.

## Description

A dense, tall tree, whose trunk forks repeatedly resulting in a graceful, rounded crown. It can reach heights of over 45 metres and is one of the most impressive jungle trees in Costa Rica's rainforest.

## Adaptations

The fruits must be carried far from the parent tree and buried to have any chance of growing into a mature tree. The wood is so dense, it resists termites.



This tree is quite abundant in the northern region of Costa Rica where, until 1999, it averaged two trees per hectare with diameters larger than 50 cm.

The species grows on very humid plateaus. It is quite abundant in humid and very humid tropical forests, where temperatures vary between 24° and 30° C. It can be found at elevations ranging from 20 to 1300 m above sea level, in areas where annual rainfall is more than 3500 mm. This slow-growing tree does best in clearings and well-illuminated forest edges, grasslands and ranchlands.

The hard wood is covered by smooth, grey-red-brown bark. Yellowish leaf stalks contain over ten leaflets to a group. This deciduous tree typically loses its leaves following the dry season. The tree begins to flower and set fruit when it is 11 to 12 years old. Purple flowers bloom at the end of its branches in early summer, after the onset of the rainy season. The fruit, weighing 18 to 26 grams, contains a single seed encased in a thick, wooden pod covered by a thin layer of sweet, green pulp. In a good year, trees can produce 20 or more fruits per square metre of crown. Individual trees alternate good and poor years.

Flowers last only one day, opening up just after sunrise. They produce most of their nectar in the first two hours. Pollination is performed by at least 13 species of bees. Seed dispersal is aided by fruit bats that chew off the pulp and drop the seeds from feeding roosts far from the parent tree. Agoutis then carry off and bury some of the seeds.

### Animal Connections

The life cycle of the great green macaw is totally dependent on the almendro tree, which supplies the majority of its food and nesting habitat. Cavities in the tree collect water that the birds drink. Wherever the tree disappears, the parrot is no longer found.

The almendro tree offers habitat, shelter and nourishment to an incredible number of creatures, accommodating almost one thousand different life forms. More than 60 animal species depend on its fruits.



### Economic Value

Used for bridges, railroad ties, hardwood flooring, and marine construction in waters infested with marine borers.

The wood is heavier than water and is considered one of the heaviest woods in the world. It rates high in mechanical resistance, making it very valuable in the manufacture of sporting goods. However, it was not used commercially until the mid-1980s, when special carbon steel blades necessary to deal with its density, were introduced.

### Status/ Threats

It is heavily logged in Costa Rica. Only for the fact they were too tough for saws and mills at the time did any of them survive the logging boom of the 70s and early 80s. Many were left standing alone in clear-cut fields.

In September of 2008, a law was passed by Costa Rica's Sala IV constitutional court, which prohibits the cutting of the almendro tree, specifically in a sprawling region of northern Costa Rica. This protection is due in part to the fact the highly endangered great green macaw uses the tree almost exclusively as a nesting site. The Ministerio de Ambiente y Energía was ordered by the court to spread the word to all its regional officials, thus effectively protecting the tree and the parrot throughout the country. It annuls an earlier order issued by the director of the Área de Conservación Arenal Huetar Norte that allowed the tree to be harvested.

### Caño Palma

An almendro tree used to grow near the boathouse.

The great green macaws would visit it when it was in fruit. Later, when the canal widened and lapped at its roots, a family of otters took up residence underneath it. Finally it fell into the canal and was removed. Seedlings are now being grown for future plantings in the COTERC reforestation program.

### References

Fournier, L.A., *Dipteryx panamensis* (Pittier) Record & Mell. Retrieved September 19, 2008 from [http://www.rngr.net/Publications/Sala IV gives protection to a tree that parrots love](http://www.rngr.net/Publications/Sala%20IV%20gives%20protection%20to%20a%20tree%20that%20parrots%20love). Retrieved September 19, 2008 from <http://www.amcostarica.com/wednesday.htm>

Canadian Organization for Tropical Education and Rainforest Conservation  
[www.coterc.org](http://www.coterc.org)

