

# *Quercus copeyensis* C.H. Mull.

L. A. FOURNIER

Escuela de Biología, Universidad de Costa Rica

## FAGACEAE (BEECH FAMILY)

*Quercus costaricensis* f. *kuntzei* Tret, *Q. copeyensis* Muller emend E. Little,  
*Q. aata* auctores in herbs as to Costa Rica

Roble, roble barcino, roble blanco, roble colorado

*Quercus copeyensis* ranges from central Costa Rica (Talamanca range) to Chiriquí, Panama.

*Quercus copeyensis* is a slow-growing tree between 8 and 35 m in height and 1 m d.b.h. The crown is rounded with dark green foliage, the bole is usually straight, and the gray bark forms flat scales. Leaves are alternate, simple deciduous, and often clustered at the end of the branches. The lamina are quite variable: 4 to 15 cm long, 2 to 6.5 cm broad, elliptic to oblong, obovate or occasionally oblanceolate, bluntly acute to rounded at the apex, tapering to obtuse, cuneate or slightly rounded base, and drying stiffly chartaceous to subcoriaceous. In its range *Q. copeyensis* is the dominant tree of the wet, evergreen, lower montane and montane rainforest between 1810 and 3000 m. *Quercus copeyensis* grows in silty-clay, deep soils of low fertility and a very low pH (3.5 to 4.6) (Camacho and Orozco 1998). The annual rainfall in the distribution range of this species is 2500 to 3200 mm, and the average annual temperature varies from 12 to 18 °C.

*Quercus copeyensis* wood varies from heavy to very heavy with a specific gravity of 0.59 to 0.63. As it dries, the sapwood changes from white-yellow to pale brown; the heartwood from pink to brown-red. It is difficult to work and although it dries with moderate speed, serious defects develop during the process. Difficult to treat with preservatives, the wood has a natural resistance to decay. The wood is used for docks, pilings, bridges, railway foundations, poles, mine posts, flooring,

charcoal, and wine barrels. For many years (1940 to 1970) *Q. copeyensis* was the most important raw material for charcoal in Costa Rica, but substantial reductions of its natural stands rendered the species less important (Kapelle 1996).

*Quercus copeyensis* flowers in February and September, and fruits mature in April, June, July, and October (Jiménez and others 1996). Male spikes are catkins 3 to 12 cm long, and the flowers become distinct on the glabrous or sparsely puberulent rachis. Female spikes are 2 to 6 cm long and 2 mm thick. Each spike has 4 to 10 flowers. Fruiting spikes are 2 to 8 cm long and 20 mm broad at the apex. The cup tapers gradually to the base, is thin at the edge, and reportedly encloses one-third to one-half of the mature acorn.

## ADDITIONAL INFORMATION

*Quercus copeyensis* is included in the white oak group. The gray bark with flat scales marks this species as a white oak and distinguishes it from *Q. costaricensis* Liebm., a black oak with similar foliage.

In central Costa Rica, *Q. copeyensis* attains an immense size and is the tallest tree along the Panamerican Highway where it traverses the Talamanca range.

*Eutachypter psidii* (Lep., Lasiocampidae) reportedly attacks the foliage of this species (Arguedas and others 1993).

