Quercus oleoides Schltdl. & Cham.

L.A. FOURNIER
Escuela de Biología, Universidad de Costa Rica

FAGACEAE (BEECH FAMILY)

No synonyms

Encino, encino prieto, roble, roble blanco, tesmol, tresmoles, yagpsuy

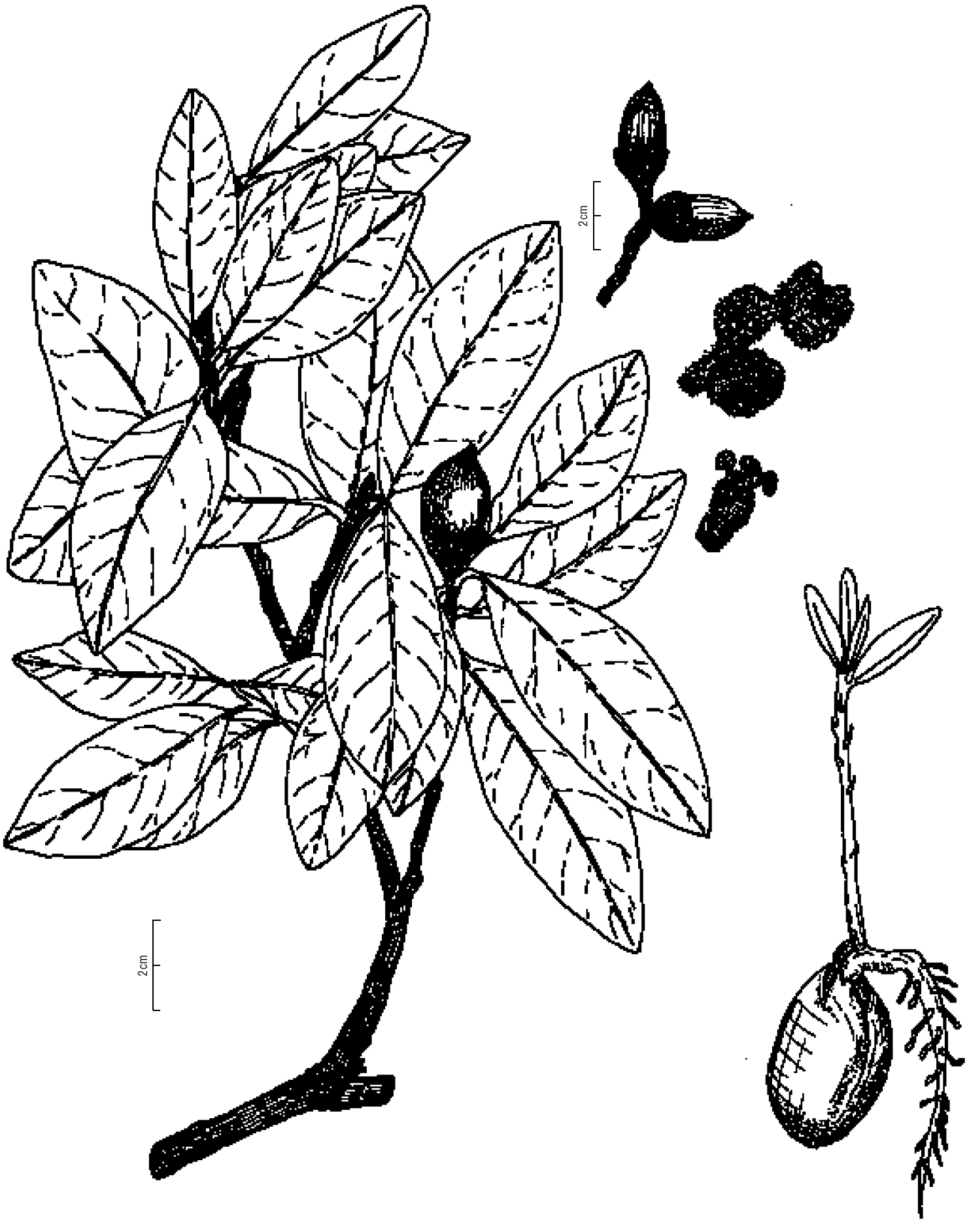
Quercus oleoides grows in dry forests and pastureland from Guanacaste, Costa Rica to Tamaulipas, Mexico in a series of distinct populations (Burger 1977, Montoya 1966). In Honduras, Belize, and Nicaragua the tree grows in association with *Pinus caribaea* Morelet in woodlands or open forests, and is sometimes more abundant when fire occurs frequently.

Quercus oleoides is a slow-growing tree, reaching 8 to 15 m in height and up to 60 cm d.b.h. This often many-branched tree has a dense crown, cylindrical trunk, and dark gray, smooth bark with some furrows. The twigs are 1 to 2 mm thick and fluted; they develop densely short-stellate-tomentose, and turn glabrate or persistently puberulent gray; the lenticels are rarely evident, the stipules caducous. Leaves are evergreen, thick, hard, 4 to 11 cm long, 2 to 5 cm wide, oblong or elliptic to slightly obovate and are pale gray with minute, canescent, stellate hairs. Their shape is obtuse to rounded and emarginate, abruptly obtuse to acute or cuneate at the base. Biological and edaphic factors appear more important to the range of distribution of the species than climatic differences (Montoya 1966). In Costa Rica, this species is very abundant in young volcanic soils developed on gray tuffs. In Mexico, it has been reported growing in sandy soils with good drainage, as well as in clay soils with poor drainage (Pennington and Sarukhan 1968). *Quercus oleoides* Schltdl. & Cham. grows from sea level up to 500 m and in climates with a range of annual rainfall of 1500 to 2500 m and an average temperature of 23 to 25 °C.

The species exhibits great variability in vegetative and reproductive characteristics (Montoya 1966). *Quercus oleoides* from Guatemala is considered related to *Q. virginiana* Mill., and *Q. sagraeana* Nutt. from Pinar del Río, Cuba, is probably a hybrid of *Q. oleoides* from Mexico and *Q. germinata* from the Southeastern United States (Muller 1955).

The wood of *Q. oleoides* is extremely heavy with a specific gravity of 0.86. Dry sapwood is white; heartwood is brown. The wood has intercrossed grains, medium texture, and little luster. The pores are conspicuous, usually solitary, and distributed in continuous strips on the transverse surface. The wood dries slowly and suffers strong contractions during the process. It is difficult to work and preserve, but has high natural durability. It is used for railway foundations, bridges, fenceposts, wine barrels, mine posts, agricultural tools, and charcoal.

Quercus oleoides flowers from December through May. Male catkins are 3 to 4 cm long, the puberulent rachis are rather closely flowered; and the anthers are about 1 mm long on very short filaments. Female catkins are 3 to 30 mm long with one to six flowers 7 mm long. Fruits mature 1 year after flowering and are single or with several others on a peduncle 5 to 50 mm thick; the cup is 7 to 12 mm long and 12 to 17 mm broad. The mature fruits have been collected from July throughout January.


2 cm
2 cm