Tabebuia rosea (Bertol.) DC.

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BIGNONIACEAE (BIGONIA FAMILY)

Couralia rosea (Bertol.) Donn. Sm. (Botanical Gazette 20: 9; 1895); *Sparattosperma rosea* (Bertol.) Miers (Proceedings of the Royal Horticultural Society of London 3: 99; 1863); *Tabebuia mexicana* (C. Mart. ex DC.) Hemsl. (Biologia Centrali-Americani, Botany. 2: 495; 1882); *Tabebuia pentaphylla* (L.) Hemsl. (Biologia Centrali-Americani, Botany 2: 495; 1882); *Tabebuia punctatissima* (Kraenzl.) Standl. (Tropical Woods 36: 18; 1933); Tecoma evenia Donn. Sm. (Botanical Gazette 20[1] 8; 1895); *Tecoma mexicana* C. Mart. ex DC. (Prodromus Systematis Naturalis Regni Vegetabilis 9: 218; 1845); *Tecoma punctatissima* Kraenzl. (Repertorium Specierum Novarum Regni Vegetabilis 17: 221; 1921); *Tecoma rosea* Bertol. (Novi Commentarii Academiae Scientiarum Instituti Bononiensis 4: 425; 1840)

Amapa, amapa rosa, amapola, apamate, cachahua, cul, hokab, ícotl, kokab, li-ma-ña, macuelis de bajo, macuelizo, macuil, macuilís, macuilixuatl, maculigua, maculís, maculishuate, maculiz, maculiz prieto, mano de león, maqueliz, maquile, maquilicua, maquilís, matilisquate, mayflower, orumo, palo blanco, palo de rosa, palo yugo, primavera, roble, roble blanco, roble colorado, roble de sabana, roble de San Luis, roble de yugo, roble del río, roble macuelizo, roble morado, roble prieto, roble sabanero, rosa morada, satanicua, tural, yaxté (Gentry 1992, Pennington and Saruhkán 1968, Pittier 1957, Record and Hess 1949, Standley 1938)

Tabebuia rosea is native to continental America and common from wet lowlands to dry uplands, from southern Mexico to Venezuela and coastal Ecuador (Gentry 1992). The species can be found in essentially pure stands, as isolated trees, or in a mixed forest (Longwood 1971).

Tabebuia rosea is a tall, fast-growing tree reaching 25 to 30 m high and 1 m d.b.h. The crown is wide, stratified, and irregular, with a few thick, horizontal branches; the bole is straight, sometimes channeled at base. Branching is sympodial; twigs are subtetragonal (Gentry 1992). The bark is gray, blackish or grayish brown, rough and narrowly fissured vertically, with corky ridges (Gentry 1992); the inner bark is creamy or pinkish, fibrous, bitter, with a mint odor, and 20 to 30 cm thick (Pennington and Saruhkán 1968, Salas 1993). Leaves are decussate, compound, digitate, long petiolate, and deciduous. Each leaf has five leaflets unequal in size; the central leaflet is the larger. Petioles and petiolules are pulvinate. They are elliptic-oblong, obovate, or oblong-ovate, with acute or acuminate apex, entire margin, and obtuse base. Leaflet surface is lepidote adaxially and abaxially, although sometimes it can be glabrous (Salas-Estrada 1993, Whitmore and Hartshorn 1969). Leaves are dropped March through June. *Tabebuia rosea* is found in deep and superficial soils, but grows better in well-drained soils with a light texture. The soil pH is variable. Although the species grows in a great variety of habitats, it is frequent in periodically inundated forests or soils with moderate or low drainage. The elevation range is from sea level to 1200 m, the temperature 20 to 30 °C, and the annual rainfall above 500 mm.

The sapwood is creamy, yellowish or brownish; the heartwood is light brown with a grayish or golden hue (Longwood 1971). The wood is strong and quite heavy; the basic specific gravity is 0.48 to 0.60. Fine brown lines of parenchyma give the wood a distinctive figure on the radial surface and a feather-like pattern in the tangential surface (Longwood 1971). It has medium to coarse texture, straight or interlocked grain, and medium luster and is tasteless and odorless in dry condition. Air seasoning is fast and causes small surface checking and slight warping (Longwood 1971). The wood is easy to work except in planing and has a moderate rate of shrinkage (intermediate: between mahogany and black walnut) (Longwood 1971). The wood can be sawed, shaped, bored, and

turned with excellent results; planing requires some care to avoid torn and chipped grain (Longwood 1971). Natural durability is medium. The wood is moderately resistant to white-rot fungi, resistant to brown-rot fungi, and susceptible to termite and marine borers (Herrera and Morales 1993, Longwood 1971). Wood preservation is easy. The wood is used in general construction, for furniture, interior trim, paneling, cabinetwork, flooring, boat decking, millwork, handles of sporting goods, agricultural implements, paddles, shingles, face veneers, carts, boxes, and crates (Herrera and Morales 1993, Longwood 1971). It is classified as a structural wood type B (Herrera and Morales 1993). The species has been used as an ornamental and shade tree, but it can be used with success in commercial plantations (Pennington and Saruhkán 1968).

Flowering occurs in January and February, and pollination is entomophilous. Flowers are hermaphrodite, zygomorphic, and solitary or grouped in small, lax, terminal inflorescences, with a pair of bracts subtending each dichotomy (Gentry 1992). Flowers are large and showy. The calyx is greenish or greenish brown, tubular, and bilabial. The corolla is basally funnelform-campanulate, pentalobed, membranaceous, with the limb spreading; it is whitish at base and pink, magenta, or almost white distally, with a yellow throat opening (Gentry 1992). The androecium has four stamens, didynamous, with tecae divaricate, alternating with the corolla lobes and inserted in the corolla tube. A staminode is also present. Anther dehiscence is longitudinal. The gynoecium is surrounded by a thick nectary. The ovary is linear and bilocular with many ovules biseriate in each locule; the style is long and the stigma, bifid.

Fruits mature February through April. The fruit is a long, slender, linear-cylindrical, brown, bivalve, loculicide capsule that is linear or linear-oblong, 18 to 35 cm long, 15 mm in diameter, and attenuate at both ends; the calyx is persistent (Flores 1999, Gentry 1992, Salas 1993). Seeds are whitish, thin, with broad, hyaline-membranaceous wings; seed dispersal is anemochorous.

Fruits are collected from the tree before opening. The seeds are removed from the pods and can be stored at ambient temperature and humidity for several months. Seeds average 40,000 to 45,000 per kg; water content in fresh seeds is 12 to 13 percent. Seed behavior is orthodox and the percentage of germination varies from 75 to almost 100 percent.

Seeds do not require special treatment. Germination occurs either in shade or direct sunlight, provided humidity is kept stable. Germination is epigeal and seedlings are phanerocotylar. Seed imbibition lasts 24 hours; root emergence occurs 3 to 4 days after sowing.

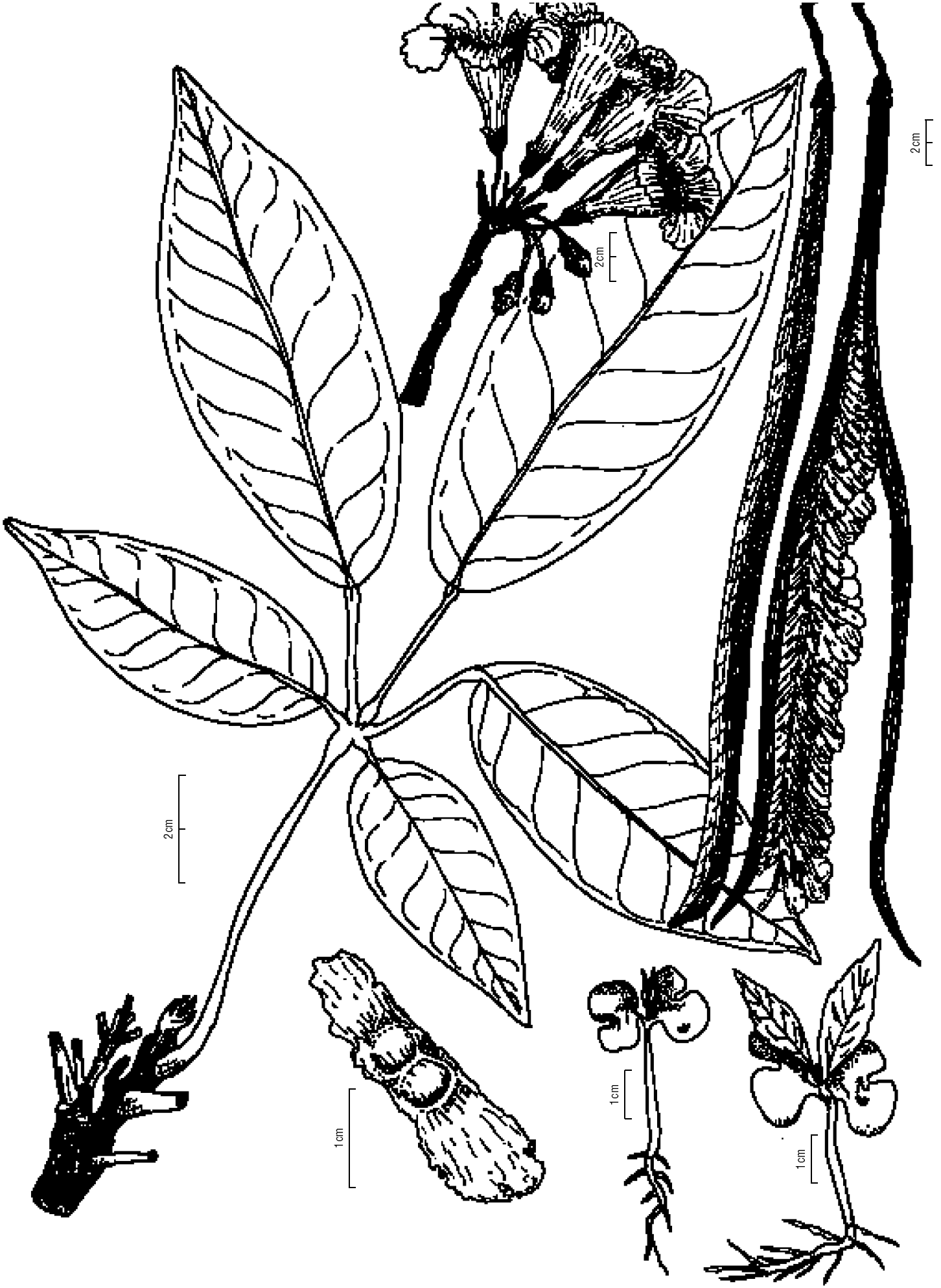
Seeds can be sown under partial shade in beds or plastic bags filled with humid sand or a mixture of soil and sand. Seedling development is fast and the small seedlings can be transplanted to plastic bags 8 days after sprouting. Outplanting can be done when seedlings are 3 to 5 months old. The planting distance used in monospecific plantations is 3 by 3 m (González and others 1990) and survival is above 80 percent. *Tabebuia rosea* can also be planted as a pseudostick (Nichols and González 1991b). The trees do not require pruning, and no predators or parasites damaging seedlings have been reported. The tendency to stem bifurcation exhibited by juveniles in plantations must be controlled with appropriate silvicultural practices (Nichols and González 1991b).

Seedling survival is 98 percent in plantations in Sarapiquí, Heredia, Costa Rica. Average annual increase in d.b.h. is 1.7 cm and average increase in height is 1.5 m (González and others 1990). Ten-year-old juveniles reached 9.4 cm d.b.h. and 8.7 m in height in a monospecific plantation located in Pejibaye, Pérez Zeledón, Costa Rica.

ADDITIONAL INFORMATION

Tabebuia rosea was previously identified as *T. pentaphylla* (L.) Hemsl. in several Central American countries. *Tabebuia pentaphylla* grows in the Antilles (Holdridge and Poveda 1975).

Because the wood is similar to oak, it has been called roble, which means oak (Holdridge and Poveda 1975). The wood has some resemblance to white ash (*Fraxinus americana*) (Longwood 1971).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