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TABEBUIA — OUR BEST YARD TREES

EDWIN A. MENNINGER

The Flowering Tree Man

Stuart

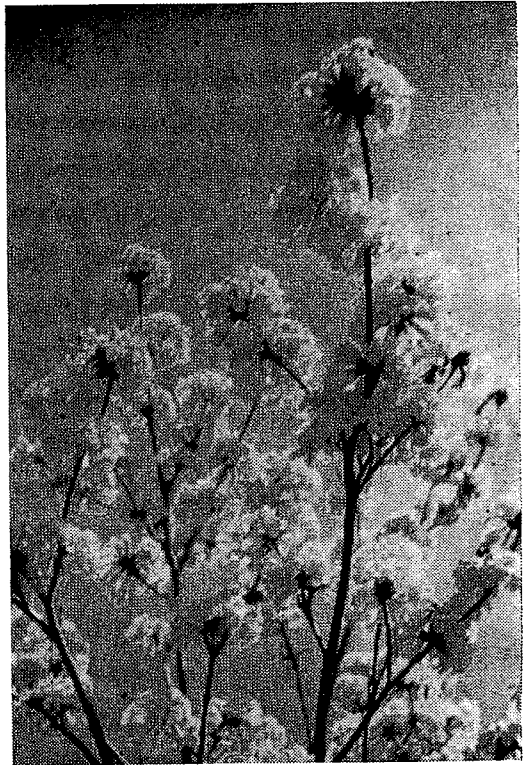
The most satisfactory flowering trees for parkway and yard planting in southern Florida belong to the genus *Tabebuia*. This Brazilian native name applies to about 150 species of broad-leaved, mostly evergreen trees from the West Indies and Central and South America. Some of them were formerly included in *Tecoma*², some still are; in this article correct botanical names are retained, but all are lumped together as *Tabebuia* trees.

Almost without exception they are showy-flowered and precocious, with trumpet-shaped blossoms, white, pink, lavender, purple, red and yellow, frequently in great profusion. F. C. Hoehne, dean of plantsmen in Sao Paulo, Brazil, in his book *City Planting of Trees*, sums up the utility of the *Tabebuia* group when he says: "To name the species most worth cultivating is easier than to exclude those not worth while", and then he suggests ten outstanding kinds for street planting in Brazil; about half of his choices are now growing in Florida too.

Of the dozen or more species under cultivation generally in Florida now, commonest is the Paraguayan silver-trumpet tree (*T. argentea*¹ Britton; Syn. *Tecoma argentea* Bur. & K. Schum.) which owes its common name to the silver-gray cast of its evergreen leaves.

Also commonly cultivated are three species that are much confused, even by botanists. Two quite different trees have been introduced into Florida under the name of *T. pallida* Miers. One of these, commonly called the

Cuban Pink Trumpet, is evergreen and it flowers on and off all year, usually with the ovate-lanceolate leaves but often while leaf change is in process. The deciduous *T. pallida* (sometimes called *T. pallida* No. 2) drops its linear-obcordate leaves (which have an iridescent oily sheen) once a year and while bare, blooms profusely, then puts on its new foliage. Many specimens of both trees are in common cultivation. The third tree, which too



YELLOW POUI (*Tabebuia serratifolia*) from Trinidad is a big timber tree at home but in Florida it is a difficult tree to grow and consequently is rare. It has spectacular yellow flowers.

(1) Based in part on an article by the author in the *Journal of the New York Botanical Garden*, June 1949.

(2) Without any apparently valid reason, *Tecoma stans* is referred by **HORTUS SECOND** to *Stenolobium Stans* and therefore is so treated here.

(3) In this article the Abbreviation T. stands for **TABEBUIA**

is often seen, is *T. pentaphylla* Hemsl., national tree of Salvador, with leaves three times as big as those of either *T. pallida*. Standley says that in Central America this tree "is

densely covered with flower panicles so as to form a giant bouquet . . . an unsurpassed display of color varying from nearly white to deep rose; in their tints the flowers recall the



CUBAN PINK TRUMPET (*Tabebuia pallida*) is a small tree, rarely 25 feet, evergreen, with heaviest bloom in April, a few flowers all year. The flowers vary from a shell pink to a deep rosy pink.

Japanese cherries and are equally beautiful." Bailey's *Hortus Secund* confounds the confusion surrounding these three trees by calling them identical.

Other *Tabebuia* trees now commonly planted in Florida, though on a smaller scale because more recently introduced and not so well known, are:

- T. palmeri* Rose. Bright Pink. Mexico.
- T. guayacan* (Seem.) Hemsley. Yellow. Panama.
- T. rosea* (Bertol.) DC. Pink. Colombia.
- T. serratifolia* (Vahl) Nicholson. Yellow. Trinidad.
- T. chrysantha* (Jacq.) Nicholson. Yellow. Colombia.
- T. avellanadae* (*Tecoma ipe* Mart.) y *T. Dugandii*. Rose to purple. Northern South America.

Here are seven reasons why these *Tabebuia* trees are termed most satisfactory in Florida:

(1) They produce their floral display in winter or early spring when the tourist population is at its height. *T. palmeri* begins blooming in December and the other species keep up the procession of beauty through May. Al-

though the flowering periods are usually two to three weeks, the evergreen *T. pallida* blooms almost continuously for eight or ten weeks — March to May — and repeats with a shorter period later in the year. Several species flower when only three or four feet high. Most species of *Tabebuia* are evergreen, but even those that drop their leaves do so when flowers are ready to bedeck the limbs, so that the trees are almost never bare, even in winter.

(2) With the exception of *T. donnell-smithii*, all the species being grown in Florida are small enough to find place in the average yard and not to outgrow their location.

(3) No diseases or pests of any kind appear to attack the *Tabebuia* now in cultivation.

(4) The glossy-leaved *Tabebuia* are sufficiently salt-resistant to permit their use in landscaping of waterfront homes. A considerable number of the trees are in successful

(4) Several *Tabebuia* have been transferred to the genus *Cybistax* and three of these are cultivated in Florida. *C. donnell-smithii* F. N. Rose (Syn. *T. donnell-smithii* J. N. Rose) often grows to 100 feet; in Mexico it is called Prima Vera. *C. chrysea* (Blake) Siebert (Syn. *T. chrysea* Blake) with lovely yellow flowers, is much used as a street tree in Barranquilla, Colombia. The green-flowered *C. antisyphilitica* Mart. is a strange and beautiful Brazilian tree.



BRAZILIAN TRUMPET (*Tabebuia ipe*, or *T. avellanadae*) is a smaller yard tree, bearing deep pink to purple flowers on leafless branches in March.

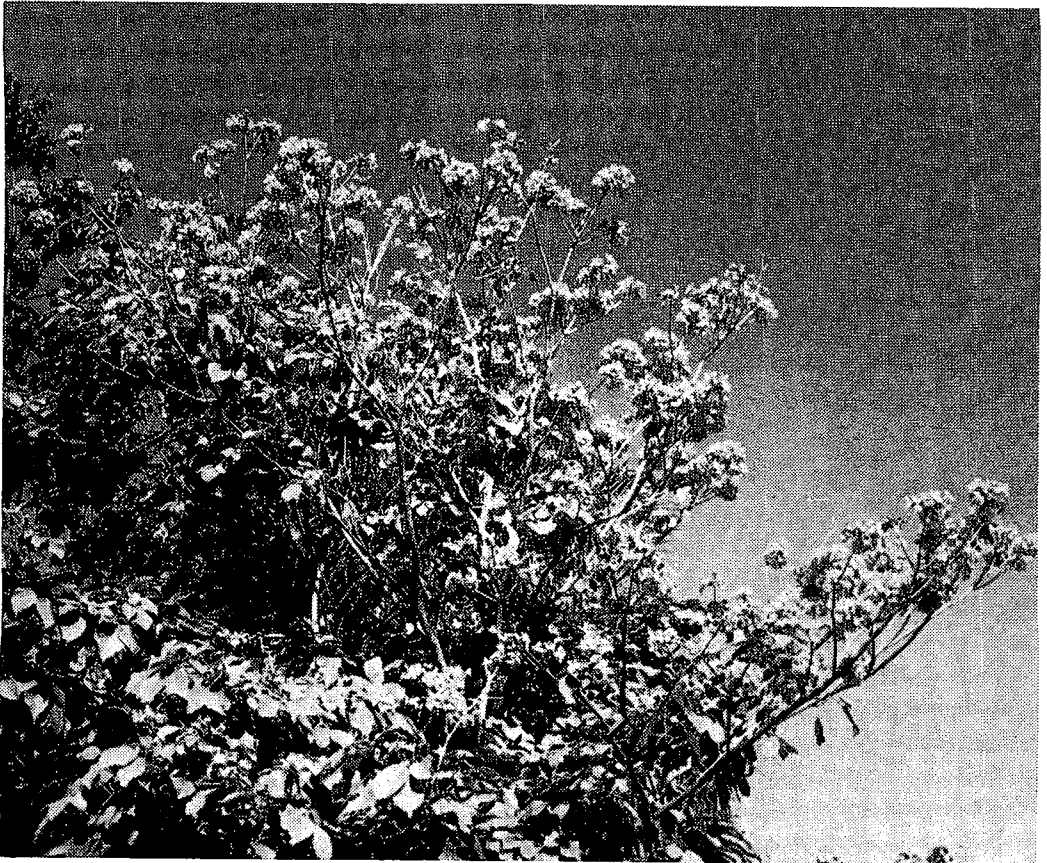
cultivation around homes in Palm Beach where salt spray from the trade winds over the Gulf Stream is a considerable factor.

(5) Some species of *Tabebuia* withstand inundation for extended periods without damage. At Fort Lauderdale, Fla. in June 1947, specimens of *T. rosea* and *T. pentaphylla* were covered by flood waters for six weeks without injury. *T. aquatilis* (E. Mey.) Sprague & Sandwith of northern Brazil, grows naturally in inundated savannas and reaches a height of 100 feet or more. *T. insignis* (Miq.) Sandw. is indigenous to swampy forests of the Guianas and Venezuela.

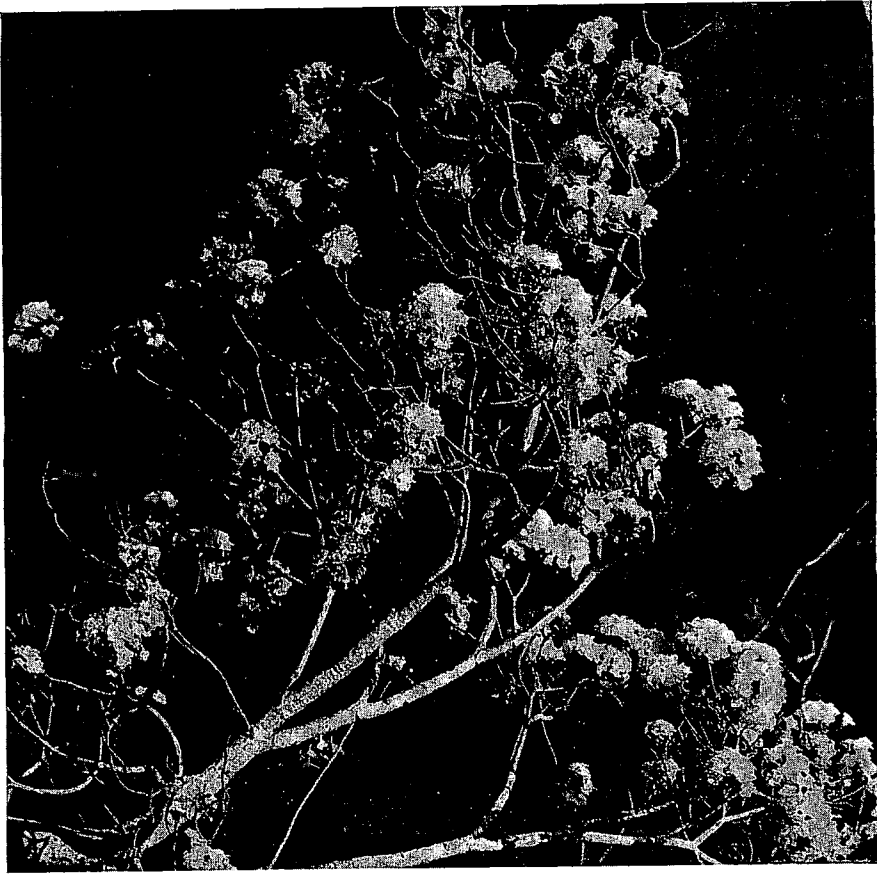
(6) Other species are particularly suited to dry regions. *T. leucoxyloides* DC. thrives in Trinidad in "very dry and exposed situations," and *T. serratifolia* is a very slow-growing Trinidad forest tree, found only on dry hillsides with gray wood so hard that it weighs 70 pounds

per cubic foot. (Compare balsa 7 pounds, cork 13, oak 40, mahogany 45, ebony 73.)

(7) Some species of *Tabebuia* are sufficiently hardy to thrive in central and north Florida. This has long been known to be true of *T. argentea*. In Orlando, Florida mature specimens of *T. umbellata* Sandwith, thrive despite occasional low temperatures of 26° or a little less. This species was brought from Brazil by Mulford Foster, distinguished authority on bromeliads, and is now much used as a street tree by the City of Orlando Parks department. It flowers extravagantly in April. There are a few trees of other species of *Tabebuia* in cultivation experimentally in other parts of northern Florida and preliminary conclusions are that the deciduous types that grow at high elevations in their native habitats (and therefore are in some measure inured to cold spells during their dormant periods) will



MEXICAN TRUMPET (*Tabebuia palmeri*) bears a profusion of wine red flowers from December fitfully into March when heaviest. Temperatures to 32 degrees three times in winter of 1958-1959 failed to check bloom.



SILVER TRUMPET (*Tabebuia argentea*) gets its name from the silver-gray foliage. The flowers are brilliant yellow in March, so that the tree is sometimes referred to as "Gold tree".

probably survive the winter temperatures of all parts of Florida and areas with similar climate.

Because some of the *Tabebuia* provide lumber of exceptional beauty of grain and color, and because others furnish timber of great durability, many of the natural stands of the trees in Central America and elsewhere have been slaughtered. In Salvador at least one species has been saved from extinction only by the organization of the Society for the Beautification of the Highways of Salvador, which has grown many thousands of seedlings and planted them along the roadsides of the nation.

Timber experts, not interested in the ornamental quality of the trees, classify *Tabebuia* on an economic rather than a botanical basis,

and recognize three degrees of hardness and durability:

(a) The White Cedar group, in which the wood resembles birch. (*T. insignis*, *T. aquatilis*).

(b) The Roble group, with brownish, medium hard wood resembling plain sawed oak, not very durable in contact with the ground (*T. pentaphylla*.)

(c) The Lapacho group, embodying a large number of species with olive-brown, more or less oily, very dense timbers containing an abundance of sulphur-like deposits (lapachol compound). The wood is highly resistant to decay. Standley records of *T. guayacan*: "Some of the beams of the cathedral of Old Panama are said to have been of this wood and to have remained sound although exposed to the

weather for 250 years." Other important members of this group are *T. avellaneda*, *T. palmeri*, *T. serratifolia*, *T. lapacho* (K. Schum.) Sandwith, *T. barbata* (E. May) Sandwith.

Although it is beyond the scope of this presentation to refer to all known species of *Tabebuia*, attention can be drawn to those offering most promise for ornamental planting in the warmer parts of the United States. The ten Brazilian species selected by Hoehne for street planting are:

T. alba (Cham.) Sandwith—Specific name is from the white fuzzy leaves. Yellow flowers.

Tecoma caraiba. Mart.—A very beautiful tree, with large yellow flowers.

Tecoma chrysotricha Mart.—A beautiful tree of good form and abundant yellow flowers.

T. eximia (Miq.) Sandwith—Dark red flowers.

T. avellaneda—Red, reddish or purple flowers, precocious and ornamental when in bloom.

T. impetiginosa (Mart.) Standley—Large tree of rapid growth. Red flowers.

T. lapacho—Pink flowered. Of most beautiful appearance.

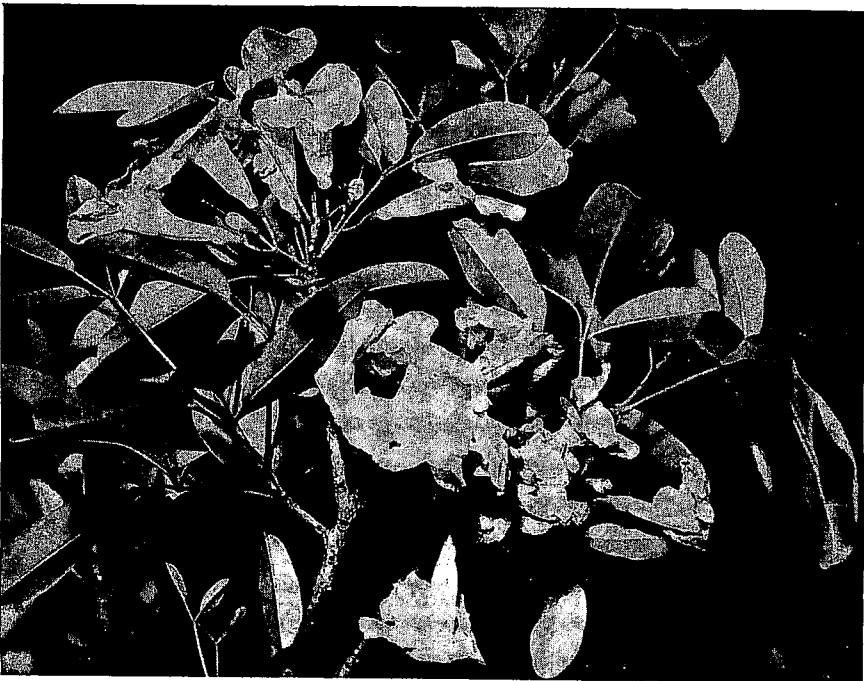
T. leucoxylla—Wonderful in possessing white flowers in great number. (The flowers of the West Indian species are sometimes rosy pink, and in Trinidad the color is described as "pale mauve with yellow throat").

T. ochracea (Cham.)—Very elegant; large yellow flowers.

T. umbellata—Yellow flowers, medium height, slow growth, but easiest of all to transplant.

There are a number of Central American species that are described in glowing terms but which have never been introduced into the United States. These include *T. spectabilis*, of Colombia which is described by Macmillan⁵; *T.*

(5) Armando Dugan of Colombia, S. A. an authority on the *Tabebuia*, writes. "Of course, *T. spectabilis* (Pl. et Lind. ex Pl.) Nicholson, which you call Showy Trumpet Tree was originally described from the mountains of northeastern Colombia at 8000 feet, a rather high altitude for *Tabebuia*. The tree reported under *spectabilis* has only been found in Colombia once or twice since it was described in 1887. I have seen no Venezuelan specimens corresponding to the original description."



ROSY TRUMPET (*Tabebuia rosea*) flowers with the leaves for three weeks about the first of March. The tree has a tendency toward fastigiate growth. Flowers are China rose, fading to crimson.

aesculifolia Hemsl. described by Rehder as having "orange red flowers with yellow spots on three lower lobes" (this may be confused with *Godmania aesculifolia*, a related tree with greenish-yellow flowers); and *T. stenocalyx* Sprague and Stapf., with large white flowers—one of the few species of *Tabebuia* with simple leaves; most species have 3, 5 or 7 leaflets.

Other West Indian species which have already been brought into cultivation include:

T. haemantha DC.—Puerto Rican tree with small red or crimson flowers. This has been hybridized with *T. pallida* to produce a tree with large burgundy red flowers.

T. glomerata. Urb.—Puerto Rican tree with clustered bright yellow flowers.

There are at least 50 other species in the West Indies. Britton describes two red-flowered species in Puerto Rico with simple leaves. *T. rigida*. Urb. and *T. schumanniana*, Urb. The Harvard Botanical Garden in Cuba has found special merit in three other West Indian species. *T. heterophylla*, DC. Britton, and *T. lepidota* (H. B. K.) Britton both with pale pink blossoms, and *T. sawallei* Britton. a shrubby patio type with tiny mauve flowers.

Because *Tabebuia* trees seed sparingly or not at all in Florida and because the papery seeds must be caught before the pods fly open, propagation of some species is slow. Some



FOSTER'S TRUMPET (*Tabebuia umbellata*) was introduced to Florida by Mulford B. Foster of Orlando, the bromeliad specialist, and the tree has proved so hardy in that area that the Orlando park department plants it extensively as a street tree. Flowers are bright yellow.

however, can be grown from cuttings. The number of trees planted in Florida is rapidly increasing as public interest in their winter-blooming quality mounts.

Two other handsome yellow-flowered trumpet trees are grown extensively in Florida, and must be included here.

One is *Tecoma gaudichaudii* DC, which was introduced from Colombia 30 years ago by the U. S. Department of Agriculture as P. I. 107836. It is an arborescent shrub or small tree with simple, coarsely serrated leaves and large yellow flowers in ample terminal clusters. It blooms several times a year, is excellent for street planting, does not get too big. It is often is confused with the next entry (contributed by Irma R. Byers).

The Yellow Elder (*Stenolobium stans* Seem.; *Tecoma stans* (L.) H. B. K.; *Tecoma mollis* H. B. K.; *Tecoma stans velutina* DC.) is the glory of southern gardens in autumn. It is a large upright shrub or small tree which must be kept in the background because of its size. A glimpse of its brilliant color from the street is so enticing that one finds oneself invading yards and alleys in order to stand near this

tree and enjoying the dazzling beauty of its golden blossoms.

The end of every branch has a large panicle with as many as 60 open flowers at one time. The buds at the ends of the panicles continue to open as the old flowers drop, extending the blossoming season over a period of four or five weeks. The yellow flowers are bell-shaped with a two-inch tube, five rounded and reflexed lobes as well as orange stripes running down the throat. The flowers are fragrant and attract humming birds and bees. The leaves are compound with five to seven narrow sharp-pointed serrate leaflets three inches in length and yellow-green in color.

This small tree, which has a spread and a height of 20 feet has narrow seed pods which are six to eight inches long. When these pods are cut off before maturing it will bloom intermittently throughout the year.

Propagation is accomplished by seed. The plants begin to bloom when about a year old.

When used as cut flowers the stems should be split or crushed and put into deep water in a cool, dark place for three or four hours before being arranged in a vase. They have a luminous quality that makes these sprays seem like liquid gold in the house.

CONTROLLING GLADIOLUS BOTRYTIS BUD ROT WITH OZONE GAS

R. O. MAGIE

Gulf Coast Experiment Station

Bradenton

In the cool, damp weather of the past three Florida winters, Botrytis blight of cut flowers has been severe. Freeze-damaged gladiolus were especially vulnerable because the fungus, *Botrytis gladiolorum* Timm., attacked the damaged tissue and produced clouds of seed-like conidia which lodged in the flower buds (3). The fungus invaded the tender petals often causing a rot which developed after the apparently healthy flower spikes were packed and shipped.

Botrytis diseases of gladiolus, chrysanthemums, lilies and other cut flowers in Florida

are most severe in winter and spring months. Recommended spray programs are effective in controlling the disease on leaves and on the outside of buds. However, conidia are often carried inside the flower buds and between the petals by rain. Fungicidal sprays are then ineffective because they cannot be forced inside the buds in time to prevent many of the infections. After infections are visible, fungicides do not cure them and the rot spreads to other flowers in the package, even though held in cold storage.

Since flowers with bud rot are unmarketable, gladiolus growers lost about one million dozen flower spikes during the past three years. Several fungicidal dips have been recommended during the past 10 years for controlling the bud rot (1, 2, 3). After the spikes arrive in the packing house, the flower heads