



MUSSAENDAS FOR SOUTH FLORIDA LANDSCAPES

John McLaughlin* and Joe Garofalo*

Mussaendas are increasingly popular for the showy color they provide during much of the year in South Florida landscapes. They are members of the Rubiaceae (madder or coffee family) and are native to the Old World tropics, from West Africa through the Indian sub-continent, Southeast Asia and into southern China. There are more than 200 known species, of which about ten are found in cultivation, with three of these being widely used for landscaping.

DESCRIPTION.

The mussaendas used in landscapes are open, somewhat scrambling shrubs, and range from 2-3 ft to 10-15 ft in height, depending upon the species. In the wild, some can climb 30 ft into surrounding trees, though in cultivation they rarely reach that size.

Leaves are opposite, bright to dark green, and rounded to elliptic. They are often pubescent (covered with short, fine hairs) and prominently veined (ribbed).

The principal ornamental feature of these plants is the inflorescence. The flowers are small and tubular. The corolla is five-lobed, spreading and bright yellow to white. They are borne in terminal clusters (cymes or panicles). The

surrounding calyx has five lobes, with one lobe conspicuously enlarged, leaf-like and usually brightly colored. In some descriptions this enlarged sepal is termed a calycophyll. In many of the cultivars all five sepals are enlarged, and range in color from white to various shades of pink to carmine red.

There are a few other related plants in the Rubiaceae that also possess single, enlarged, brightly colored sepals. These include the so-called wild poinsettia, *Warszewiczia coccinea*, national flower of Trinidad; and *Pogonopus speciosus* (Chorcha de gallo)(see Figure 1). These are both from the New World tropics and both are used as ornamentals, though far less frequently than the mussaendas.

The fruit is a small (to 3/4"), fleshy, somewhat elongated berry containing many seeds. These are rarely seen under South Florida conditions. In some areas of the world (e.g., tropical Africa) the fruit is consumed as subsistence food.

PROPAGATION.

Seeds, which are rarely available, germinate readily at a soil temperature of 66 - 75°F. More commonly, softwood or semi-hardwood cuttings are rooted during the Summer. Plants flower

within two yrs. In commercial production, rooted cuttings of *Mussaenda erythrophylla* can be forced into flower within 6 months. Air layering also is successful and is sometimes used as a means of propagation if only a few plants are desired.

PLANTING AND FERTILIZATION.

When you choose a planting site keep in mind that mussaendas require full sun. Some growers, however, find that flowering is better if some afternoon shade is provided.

Mussaendas are not drought tolerant plants and in the landscape will need to be watered during periods of hot, dry weather. During cool winter weather it is not necessary to water as often. By placing them in an area of the landscape with plants having similar water requirements (e.g. ixora, hibiscus or gardenia) irrigation is easier and more efficient.

Enrich the planting bed with organic matter such as well-rotted compost, sphagnum peat, or coir. Do not use black topsoil since it is too heavy. The soil should be friable and moist, but not wet. A small amount, about half the rate recommended on the label, of a complete fertilizer with trace elements, such as a palm special with trace elements, can be incorporated into the soil. The usual (and safer) recommendation is to wait six to eight weeks before applying fertilizer.

Set the plant at the same level as it grew in the container, carefully backfill the planting hole and water thoroughly. Apply a 3" covering of organic mulch such as pine bark, keeping it 3-4" away from the stem.

A slow-release fertilizer can be applied every 3-4 months, beginning six to eight weeks after planting. As with ixora, hibiscus, gardenia and other acid-loving species grown in calcareous

soils, it is also a good idea to make foliar applications three to four times per year using a nutritional spray containing all the essential trace elements, especially manganese and zinc.

COLD DAMAGE.

Where temperatures rarely fall below 60°F, mussaendas will flower year-round. Below 55-60°F plant growth slows, and below 40°F mussaendas will be damaged, with loss of leaves and flowers. Temperatures below 40°F can damage the stems, especially if the cold period is prolonged, and if it drops much below 40°F. In Miami-Dade, winter damage is commonly limited to leaf drop, with some stem die-back. During late winter, prune out any dead wood and plants should make a quick recovery by late spring.

PRUNING.

As plants flower during the warm season, faded flower clusters should be removed, especially during extended periods of wet weather to encourage further flower production, and to remove a source of possible fungal infection.

Mussaendas can stand heavy pruning and if it becomes necessary, it should be done during spring. Plants should be kept at five feet or so, particularly if they are grown as single specimens. The lower stems tend to become bare if the plants are allowed to grow much larger. By placing mussaendas at the rear of a border containing lower-growing shrubs and herbaceous perennials, the base of the plant can be concealed.

As mussaendas grow taller, many can become more scandent in habit. Rather than pruning back, they can be allowed to grow into a nearby tree for support. In an open tree, this can create an eye-catching display of color.

PESTS AND DISEASES.

Mussaendas are relatively pest- and disease-free. Scale insects are sometimes a problem, as are mealybugs and mites. Two pests recently introduced into South Florida, pink hibiscus mealybug and the lobate lac scale, can infest a multitude of plants including mussaendas.

A few fungal and bacterial leaf-spotting diseases have been reported in Florida, but are not usually a major problem.

Mussaendas can suffer nutritional problems on high pH soils like those in Miami-Dade County. Enriching the planting site with an acidic organic matter source, like sphagnum peat or composted pine bark, and maintaining a pine bark mulch will help. More effective is the routine use of nutritional sprays as directed above.

CULTIVATED SPECIES.

Mussaenda erythrophylla (figure 2) is native to West Africa, where it can grow to 30 ft as a scandent shrub. It is usually found in woodlands, where it often grows into surrounding trees. In cultivation it usually grows no more than 10 ft.

It is commonly called Ashanti blood or red flag shrub. These names refer to the blood red color of the enlarged sepals. The remainder of the flower is composed of a five-lobed, tubular, white to cream corolla with a red, felt-like center (figure 3). Although not as immediately striking as the cultivars described below, which have many more enlarged, colorful sepals, the contrast between the white corolla and the deep red sepals is most satisfying.

M. erythrophylla has an open, sprawling habit and requires careful pruning to maintain it as a low, spreading shrub. Alternatively, it can be allowed to grow and given support, such as a trellis or an adjacent tree.

Because of the conspicuous red bracts, *M. erythrophylla* has been suggested as a year-round landscape substitute for the poinsettia (*Euphorbia pulcherimma*), which provides color for only part of the year. Mussaendas also are far less prone to diseases and pest problems than are poinsettias.

Mussaenda philippica is native to The Philippines, and is known commonly as virgin tree or, less often, tropical dogwood, and forms a shrub or small tree 9 to 15 ft tall. The dark green leaves are similar to those of *M. erythrophylla*, though less ovate and not as prominently veined. The flowers, which are borne in terminal cymes, consist of a yellow, tubular corolla with one lobe of the calyx greatly enlarged and leaf-like. It is white and showy, though not as striking as the bracts of *M. erythrophylla*. If you are more familiar with temperate climate landscape plants you may notice a resemblance of the flower clusters to those of the Japanese climbing hydrangea (*Schizophragma hydrangeoides*), which also has clusters of small white flowers with enlarged peripheral white sepals.

Mussaenda frondosa (Dhobi tree) is found from Indo-China to Malaysia. It is somewhat smaller and more upright than the above two species, 6 to 9 ft tall, with an equal spread. The foliage is a lighter green, and the terminal flower clusters have orange to yellow, tubular corollas with a single white enlarged calyx lobe. This species is often grown in clumps.

Mussaenda incana, native from India to Malaysia, is much smaller than the above mussaendas, growing to no more than 3 ft. It has flat-topped flower clusters (corymbs), with bright yellow corollas and a single enlarged calyx lobe that is yellow to cream. In the landscape it is most effective in mass plantings. Look for the cultivar 'White Wings'.

Mussaenda glabra is also found from India to Malaysia and at 2 ft is even shorter than *M. incana*. It is commonly known as dwarf mussaenda, and is used to best advantage massed in a border. This is the most cold tolerant of the cultivated musseandas and is sometimes treated as an annual in the Gulf Coast states. The tubular corolla is orange to red with an enlarged white calyx lobe.

CULTIVARS.

A number of very showy cultivars have been developed, mostly in The Philippines and Thailand. The majority are derived from *M. philippica*, and they are far more common in cultivation than the other species.

M. 'Aurorae' (syn. *M. philippica* 'Aurorae') is named after Dona Aurora, the wife of a former president of the Philippines. It is much showier than the wild type, having all five calyx lobes greatly enlarged, white and pendant. The corolla is a deep golden yellow and is often hidden by the profusion of enlarged bracts. *M. 'Aurorae'* is used as a specimen. Flowering can be enhanced by deadheading (removing faded flowers). Although it does not produce seed, the pollen is fertile and this cv has been used in the breeding of a number of outstanding cultivars in crosses with *M. erythrophylla* and *M. frondosa*.

M. 'Queen Sirkit' (figure 4) was developed by backcrossing the F1 hybrid between *M. 'Aurorae'* and *M. erythrophylla* to *M. 'Aurorae'*. It is among the most spectacular of mussaendas, with all five calyx lobes enlarged up to 3½", in shades of ivory to pale pink (figure. 5). These large flower clusters (panicles) are somewhat fragile; during heavy rain they can become heavy, causing smaller branches to break. They also are prone to break off the plant during high winds.

None of this detracts from the overwhelming effect of this shrub in full bloom. At least one author has suggested that the constant year-round display of color risks becoming boring! In Miami-Dade, unless there is an exceptionally mild winter, flowering stops between late December and April.

There are other cultivars with large, showy sepals which are seen less frequently in our area. These include *M. 'Rosea'*, deep pink; *M. 'Dona Luz'*, pink edged red; *M. 'Dona Imelda'*, bright pink; and *M. 'Dona Leonila'*, creamy white.

There is some confusion regarding the identity of many mussaendas presently in cultivation. Many plants being sold as *M. erythrophylla* are in fact cultivars.

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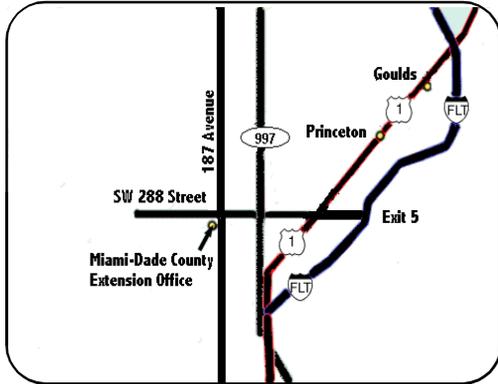
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EXTENSION



Figure 1. *Pogonopus speciosus*



Figure 2 *Musseanda erythrophylla*



Figure 3 *M. erythrophylla* inflorescence showing red Calycophylls and white 5-petaled flower



Figure 4 *Musseanda* 'Queen Sirkit'



Figure 5 *Musseanda* 'Queen Sirkit' showing 5-petalled tubular flower and pink calycophylls