

Jasmines, a diversity of plants with fragrant flowers¹

Richard E. Weaver, Jr.² and Patti J. Anderson³

INTRODUCTION: Common or vernacular names are often given to plants because of their resemblance to a familiar object. For instance, plants of the genus *Campanula* are known as “bellflowers” because their flowers are bell-shaped and often hang like bells. Sometimes this resemblance is to another plant, so *Liriodendron* species are called “tulip trees” because their large and colorful flowers are reminiscent of the familiar garden tulips. So it is with jasmines. The genus *Jasminum*, of the Oleaceae or olive family, contains over 200 species of vines or shrubs with opposite leaves, many with fragrant flowers, native to the warmer parts of the Old World (Huxley 1992). The name “jasmine” or “jessamine” is derived from the Arabic and Persian “yasmin” or “yasaman” and probably originally referred to the species we now know as the Arabian jasmine (*Jasminum sambac* (L.) Ait). This plant, with its extremely fragrant flowers, is native to southern Asia, but it has been cultivated in the Middle East for centuries (Green 1965). The *Jasminum* species are the “true” jasmines, but eventually many plants with fragrant flowers in other genera came to be known by this same common name. To date, there are 29 plants in 12 different families known as jasmines, in addition to the *Jasminum* species. This circular includes descriptions of a selection of these horticulturally important species.

JASMINUM (Oleaceae, the olive family). Twenty or so species are commonly cultivated, mostly as ornamentals, but also for their essential oils. A few have become weedy in tropical and subtropical climates.

***Jasminum dichotomum* Vahl**, the Gold Coast jasmine, is native to tropical West Africa. It is a woody, clambering shrub or climbing vine with evergreen, glabrous, simple leaves. The white flowers, with five to seven corolla lobes arranged in a starburst pattern, are fragrant at night and are borne in small axillary panicles. The black berries are eaten by birds and raccoons (Hammer 1996), dispersing the seeds widely. In fact, the plant has become invasive in natural areas in South Florida (Florida Exotic Pest Plant Council (FLEPPC) Category 1).

***Jasminum fluminense* Vell. (*J. azoricum* L.)**, the Brazilian jasmine, was originally described from Brazil, but it was introduced there from Africa by Portuguese explorers. It is the second species that has become invasive in South Florida (also FLEPPC Category 1). It is similar to the preceding in most respects, except that its leaves are trifoliolate and glabrous, and the flowers are borne in larger clusters.

***Jasminum mesnyi* Hance**, the primrose jasmine, is a rambling shrub with long, arching, green four-angled branches. The evergreen leaves, with three glossy leaflets, are nearly sessile. Large, fragrant, often semi-double yellow flowers are borne in the leaf axils in early spring, but the bloom is often sparse. This is one of the most cold-hardy species discussed here, and it does well in sandy soils. It can be very effectively used to drape over fences or walls, especially retention walls.



Fig. 1: *Jasminum dichotomum*.
Photography credit: Top Tropicals



Fig. 2: *Jasminum fluminense*.
Photography credit: Paul L. Redfearn, Jr.
Atlas of Florida Vascular Plants

¹ Contribution No. 486, Bureau of Entomology, Nematology and Plant Pathology – Botany Section

² Emeritus Botanist, FDACS, Division of Plant Industry, P.O. Box 147100, Gainesville, FL 32614-7100

³ Botanist, FDACS, Division of Plant Industry, P.O. Box 147100, Gainesville, FL 32614-7100



Fig. 3: *Jasminum mesnyi*.
Photography credit: Top Tropicals



Fig. 4: *Jasminum mesnyi*.
Photography credit: Forest and Kim Starr,
Hawaii Ecosystems at Risk (HEAR)



Fig. 5: *Jasminum multiflorum*.
Photography credit: Asit K. Ghosh, Atlas of
Florida Vascular Plants

***Jasminum multiflorum* (Burm. f.) Andr.**, the downy jasmine, a native of India, is more of a shrub than the species described above. It tends to ramble and must be pruned regularly to maintain a neat appearance. The starlike white flowers, with six to eight corolla lobes, are borne in dense, short-stalked, axillary clusters. They are not as fragrant as those of many other jasmines, but they are produced most of the year, at least in South Florida. The simple, pubescent, evergreen leaves are narrowly ovate, with an acuminate apex and a rounded or subcordate base, and they are about 2 inches long and an inch broad.

***Jasminum officinale* L. f. *grandiflorum* (L.) Kob.**, the Spanish jasmine, is native to the Himalayas, but it was taken to Europe centuries ago, prized for the distinctive, sweet, delicate scent of its flowers. It is the plant cultivated in the south of France for its essential oils which are extracted in lard from fresh flowers in a process known as *enfleurage*; the purified oil is widely used in perfumery. A similar but smaller-flowered plant, the typical *J. officinale* or poet's jasmine, is a highly prized ornamental, especially in Europe. Neither prosper in Florida's hot and humid climate. Both are shrubs with evergreen, pinnately compound leaves with five to nine leaflets, and white, five-parted flowers borne in large, open, axillary compound cymes.



Fig. 6: *Jasminum officinale*.
Photography credit: Top Tropicals

***Jasminum sambac* (L.) Ait.**, the Arabian jasmine, is native to southern Asia, but is widely cultivated around the world. Although it is a tropical plant, it is root-hardy into northern Florida. The leaves are simple, ovate or broadly elliptic, and occasionally borne in whorls of three. The waxy flowers are borne in small terminal and axillary clusters. They are normally five to seven parted, but in 'Grand Duke of Tuscany,' one of the most popular cultivars, they are fully double and resemble small gardenias. The dried flowers of this species are used to flavor jasmine tea. The Arabian jasmine has escaped cultivation in South Florida and is occasionally invasive (FLEPPC Category II).



Fig. 7: *Jasminum sambac* 'Grand Duke of
Tuscany'. Photography credit: Top Tropicals

CESTRUM (Solanaceae, the nightshade family). This is a genus of approximately 175 species widely distributed in tropical America (Mabberley 2008). They are shrubs or small trees with alternate leaves. The tubular flowers are variable in color, from greenish, to golden yellow, to deep red. In some species, they are small and not showy, but they are often intensely fragrant. These fragrant species are commonly known as "jasmines." These are tropical plants, and they are usually killed to the ground by even a few degrees of frost, but as long as the soil does not freeze, the roots survive, sending up new shoots which bloom by midsummer each year.

***Cestrum diurnum* L.**, the dayblooming jasmine, is native through much of tropical America and has become widely naturalized elsewhere in the tropics and subtropics. It may grow as much as 30 feet tall in the wild. The elliptical leaves are 3-5 inches long, with an obtuse or acute apex, and are evergreen in warm climates. The diurnally fragrant, white flowers with reflexed corolla lobes are less than an inch long and are borne continuously in long-stalked axillary racemes. They are followed by black or blue-black berries which are attractive to birds. This species has become naturalized in a few counties of South Florida, and it is listed as an invasive (FLEPPC Category II).



Fig. 8: *Cestrum diurnum*. Photography credit: Keith Bradley, Atlas of Florida Vascular Plants

***Cestrum nocturnum* L.**, the nightblooming jasmine (or dama de la noche), is native to the West Indies, and it naturalizes less readily than the preceding. It grows to 15 feet tall. The leaves are similar to those of *C. diurnum*, but they are usually a bit longer, and the apex is acuminate or less often acute. The flowers are borne in flushes in terminal, leafy panicles. They are yellowish-green, about an inch long, and the corolla lobes are not reflexed. Their fragrance, noticeable only at night, is sweet and almost overpowering. The berries are white when mature, but they are infrequently produced in much of Florida.



Fig. 9: *Cestrum nocturnum*. Photography credit: Asit K. Ghosh, Atlas of Florida Vascular Plants

GELSEMIUM (Loganiaceae, the logania family, or Gelsemiaceae). This is a small genus of three species, with two in the southeastern United States and one native from Southeast Asia to western Malesia (Mabberley 2008). All are twining vines with opposite leaves, and all parts are seriously toxic if ingested.

***Gelsemium sempervirens* (L.) W.T. Aiton**, the Carolina jasmine, is native throughout most of the southeastern United States from Virginia to Texas. During its period of bloom, in late winter and early spring, it is a conspicuous part of the landscape in northern Florida where it is a common plant. The beautiful, bright yellow, tubular flowers with five corolla lobes are borne singly or in small clusters in the axils of the glossy, lanceolate, evergreen leaves. The flowers smell strongly of freesias. A similar species, *G. rankinii* Small, has scentless flowers. The Carolina jasmine is a native plant gaining wide acceptance in horticulture. It is an excellent plant to hide a chain-link fence or to grow on an arbor or pergola.



Fig. 10: *Gelsemium sempervirens*. Photography credit: Michael Drummond, Atlas of Florida Vascular Plants

MURRAYA (Rutaceae, the citrus family). Many species in this family have fragrant flowers, but this is the only one referred to as a jasmine.

***Murraya paniculata* (L.) Jack (including *M. exotica* L.)**, the orange jasmine, is native from China and India south to Australia. It forms a finely-textured shrub or small tree to 15 feet tall, but with regular shearing it can be kept much shorter. It is extremely common as a hedge plant in South Florida and is often grown in containers as a conservatory plant further north. The alternate, glossy, dark green, evergreen leaves are pinnately compound, with five to nine small, alternate leaflets. White flowers with a scent reminiscent of orange blossoms are borne in terminal cymes almost continuously throughout the year. The flowers are followed by red berries which are attractive to birds that eat the berries then disperse the seeds widely. 'Lakeview' is a



Fig. 11: *Murraya paniculata*. Photography credit: Joel Timyan, Atlas of Florida Vascular Plants

popular cultivar. The orange jasmine has become naturalized in parts of South Florida and is considered an invasive (FLEPPC Category II). In addition, it is a host for citrus greening disease, and propagation and movement of the plant has been regulated since January 1, 2008.

TABERNAEMONTANA (Apocynaceae, the dogbane family). This genus has nearly 100 species of trees and shrubs with opposite leaves and copious, milky sap, native to the warmer parts of both hemispheres (Mabberley 2008). Only the following is commonly cultivated in the United States.

***Tabernaemontana divaricata* (L.) Roem. & Schult.**, the crepe jasmine, is native from northern India to western China and northern Thailand. It forms a symmetrical shrub to 6 feet tall. The leaves are evergreen, in subtropical climates, glossy dark green and about 6 inches long. They closely resemble those of gardenias and coffee, but interpetiolar stipules are absent. The inch-wide, white flowers are powerfully fragrant after dusk. Those of the wild-type plant have five corolla lobes arranged like a pinwheel, but those of the commonly grown cultivar 'Flore Pleno' are fully double and resemble small gardenias. This is a good plant for a partially shaded situation. This tropical plant freezes to the ground during cold winters in northern Florida, but it recovers sufficiently to bloom reliably.



Fig. 12: *Tabernaemontana divaricata*.
Photography credit: Dennis Girard, Atlas of Florida Vascular Plants

TRACHELOSPERMUM (Apocynaceae, the dogbane family). This is a genus of 10 species of evergreen vines with milky sap and opposite leaves, native to Asia from Japan to India (Mabberley 2008). A single species was thought to be native to the southeastern United States, but that species has been moved to a different genus and is now known as *Thyrasanthella difformis* (Wunderlin and Hansen 2011). The fragrant flowers are five-parted, with the lobes arranged in a pinwheel pattern. Only the following two species are common in cultivation.

***Trachelospermum asiaticum* (Sieb. & Zucc.) Nakai** is known by a number of common names including Asiatic jasmine, yellow star jasmine and dwarf jasmine. It is a fast-growing plant with slender stems that climb weakly but usually hug the ground. The glossy, inch-long leaves are dark green with paler markings along the main veins. The flowers are pale yellow, but are seldom produced in Florida. This plant is an excellent groundcover for shady places, and it forms a dense, weed-choking mat. It is also a good subject for hanging baskets. Several cultivars with variegated leaves are in commerce.



Fig. 13: *Trachelospermum asiaticum*.
Photography credit: Top Tropicals

***Trachelospermum jasminoides* (Lindl.) Lem.**, the Confederate jasmine, is native to China and has been a popular ornamental in this country for more than a century. It is a vigorous, high climbing vine with glossy, two-inch long, solid green leaves. The extremely fragrant white flowers are borne profusely in terminal cymes in May and June in northern Florida. This is more of a climber than the preceding and is a particularly good plant to mask a chain-link fence or to grow on an arbor or pergola. It will also cling to solid surfaces such as walls or tree trunks by means of aerial roots.



Fig. 14: *Trachelospermum jasminoides*.
Photography credit: Asit K. Ghosh, Atlas of Florida Vascular Plants

Following is a list of plants, arranged by family, that are commonly known as “jasmnes.” Only the most familiar of the *Jasminum* species are included.

APOCYNACEAE (including ASCLEPIACEAE)

Akokanthera venenata – poison jasmine
Catharanthus roseus – Cayenne jasmine
Marsdenia (Stephanotis) floribunda – Madagascar jasmine
Plumeria rubra – West Indian jasmine
Tabernaemontana divaricata – crepe jasmine
Trachelospermum asiaticum – Asiatic jasmine, yellow star jasmine
Trachelospermum jasminoides – confederate jasmine
Wrightia religiosa – water jasmine

BIGNONIACEAE

Mandevilla laxa (suaveolens) – Chilean jasmine
Mandevilla splendens – Brazilian jasmine
Millingtonia hortensis – tree jasmine
Pandorea jasminoides – false jasmine
Radermachera ‘Kunming’ – dwarf tree jasmine

CAPRIFOLIACEAE

Lonicera fragrantissima – January jasmine

CONVOLVULACEAE

Ipomoea hederifolia – American jasmine

LOGANIACEAE

Gelsemium sempervirens – Carolina jasmine
Gelsemium rankinii – Rankin’s jasmine, swamp jasmine

OLEACEAE

Jasminum adenophyllum – bluegrape jasmine, princess jasmine
Jasminum angulare – East London jasmine
Jasminum angustifolium – narrow-leaved jasmine
Jasminum beesianum – rose jasmine
Jasminum dichotomum – Gold Coast jasmine
Jasminum floridum – showy jasmine
Jasminum fluminense – Brazilian jasmine
Jasminum fruticans – shrubby jasmine
Jasminum gracillimum – pinwheel jasmine, star jasmine
Jasminum humile – Italian jasmine
Jasminum leratii – New Caledonia jasmine
Jasminum mesneyi – primrose jasmine, yellow jasmine
Jasminum molle – Indian jui jasmine
Jasminum multiflorum – downy jasmine
Jasminum nitidum – shining jasmine, pinwheel jasmine
Jasminum nudiflorum – winter jasmine
Jasminum odoratissimum – true yellow jasmine
Jasminum officinale – poet’s jasmine
Jasminum officinale f. *grandiflorum* – Spanish jasmine, royal jasmine
Jasminum polyanthum – winter jasmine
Jasminum robustum – robust jasmine

Jasminum sambac – Arabian jasmine
Jasminum tortuosum – African jasmine
Jasminum volubile – wax jasmine
Nyctanthes arbor-tristis – Indian night jasmine
Schrebera alata – tree jasmine

PRIMULACEAE

Androsace spp. – rock jasmine

RANUNCULACEAE

Clematis crispa – blue jasmine

RUBIACEAE

Gardenia jasminoides – cape jasmine
Posoqueria latifolia – tree jasmine

RUTACEAE

Murraya paniculata – orange jasmine

SOLANACEAE

Cestrum aurantiacum – orange jasmine
Cestrum diurnum – dayblooming jasmine
Cestrum nocturnum – nightblooming jasmine
Cestrum parqui – willow-leaved jasmine

THYMELAEACEAE

Passerina stelleri – ground jasmine

LITERATURE CITED

Green, P.S. 1967. The name jasmine. *Arnoldia* 25: 71-74.

Hammer, R.L. 1996. *Jasminum dichotomum*, *Jasminum fluminense*. Pages 94-95 In J. M. Randall and J. Marinelli, (eds.). *Invasive plants, weeds of the global garden*. Brooklyn Botanic Garden Handbook #149. Brooklyn Botanic Garden Press, Brooklyn, New York. 111 p.

Huxley, A.J. (ed.). 1992. *The new Royal Horticultural Society dictionary of gardening*. 4 volumes. Macmillan Press, London, England. 3,240 p.

Mabberley, D.J. 2008. *Mabberley's plant-book: a portable dictionary of plants, their classification and uses*, 3rd edition. Cambridge University Press, New York, New York. 1,021 p.

Wunderlin, R.P. and B.F. Hansen. 2011. *Guide to the vascular plants of Florida*, 3rd edition. University Press of Florida, Gainesville, Florida. 783 pp.

ACKNOWLEDGEMENTS: We thank Dr. Greg Hodges (DPI) and Dr. Wayne Dixon (DPI), who graciously reviewed the manuscript.