

## *Morella cerifera*

**Family:** *Myricaceae*

Wax myrtle; southern bayberry; southern wax myrtle; candleberry



Waxy, bluish green berries were used for candle making in colonial times.

### **Wax Myrtle**

**Synonyms (Discarded Names):** *Myrica cerifera*; *M. cerifera*  
Var. *pumila*; *M. pumila*

**Origin:** Southeastern U.S. from New Jersey to Florida; Gulf states; Bahamas; Caribbean; Central America

**U.S.D.A. Zone:** 6a-11 (-15°F leaf damage)

**Growth Rate:** Fast

**Flowering Months:** February-June

**Leaf Persistence:** Evergreen

**Salt Tolerance:** High

**Drought Tolerance:** Moderate

**Soil:** Prefers rich, acid soils but adapts to most soil types.

**Nutritional Requirements:** Low

**Potential Pests:** Lobate lac scales; mites; caterpillars; wood rot

**Typical Dimensions:** Multi stem shrub or small tree to 40 feet

**Propagation:** Seeds; root suckers; cuttings

**Human hazards:** Airborne pollen may contribute to respiratory problems; some people are allergic to the wax. Plant is highly flammable.

**Uses:** Excellent food and cover for birds and other wildlife.



Wax myrtle as a small tree.

### **Natural Geographic Distribution**

Wax myrtle ranges widely from Florida Keys, north to southern New Jersey, west to eastern Texas, and southeast Oklahoma. It is also native to Bermuda, the Bahamas, the eastern Caribbean and Central America. In Florida wax myrtle is found in pinelands, swampy areas and other moist sites, often growing behind dunes in the Everglades, where it is a pioneer plant. At lakesides and stream beds it can withstand occasional standing water. It is often used to screen drainage areas, retention ponds and swales.



Wax myrtle growing in pine flatland



Wax myrtle by the edge of a lake

### **Ecological and Ethnobotanical Functions**

The waxy drupes of the wax myrtle are an important part of the winter diet of birds, such as wild turkey, bob-white quail, waterfowl, catbirds, thrashers, bluebirds, vireos, and warblers. In Florida, these drupes are the main food source of the wintering tree swallows. The plant also serves as shelter for wildlife and is a larval food source of the red-banded hairstreak butterfly. Wax myrtle is a prolific suckering plant. It can form thickets in pastures and areas that have been farmed and are undergoing ecological succession. It will also grow densely in transition wetland that do not have regular fires. It has become a weed in certain locations including along fencerows, in ponds and marsh edges, and on rangeland and pastures.

The plant was once thought to repel fleas and was used as a foundation planting for that purpose. The notched leaves are fragrant when crushed and may be used as bay leaves in cooking. Wax myrtle was once used as a source of wax for soap and candles. However, the oil in the plant's leaves causes it to ignite quickly in a fire. Though a highly flammable plant, the root crown will regenerate after a fire. Due to its dense foliage, wax myrtle provides a good habitat for nesting birds and perching for migrants.

### **Growth Habit**

In South Florida wax myrtle forms a large shrub and commonly a small much-branched tree with a well-developed trunk. Wax myrtle size is highly variable from 3 to 40 feet, depending on genetic and growing conditions. New growth and flowering occur together in spring. Growth increments are distinct and separated by bud-scale scars. Vegetative growth is from terminal or lateral buds, and form at the end of the previous season's growth. Frequently, the terminal bud aborts and is replaced by one or more laterals, so that shoots tend to be either forked or tufted. Flower clusters (catkins) are from the old wood and not the new vegetative shoots. Plants are normally evergreen because leaves on one year's growth persist until a new flush of growth is well advanced, whereupon older leaves fall rapidly. Irregular summer growth may produce a second generation of leaves and of twigs on which catkins develop.

Lenticels are produced on new stems and on young branches. Plants growing in inundated areas often have expanded lenticels and adventitious roots. The bark of the oldest wood is usually mottled gray with hardly a trace of lenticels.



Frequently the terminal bud aborts and is replaced by one or more laterals.



An extreme example of the branching that occurs after the abortion of the terminal bud.



Lenticels populate young stems and branches.



This lichen mottled older trunk has no lenticels

### **Morphology and Reproduction**

Most wax myrtles are dioecious, meaning they have imperfect flowers with female (pistillate) flowers and male (staminate) flowers borne on different individual plants. Occasionally there are monoecious plants with imperfect male and female flowers on the same plant. The plants flower from February to June and are wind pollinated. Wax myrtle flowers are held together in clusters known as catkins. A catkin is an inflorescence consisting of a dense spike or raceme of unisexual flowers and lacking petals. The male plants produce yellow-green catkins that commonly grow to 0.5 inch. Male catkins are somewhat longer than female catkins. Catkins appear on young stems from the previous season's flush with their leaves still attached. They are held at the leaf axils of these stems and often on parts of the same

stem with no leaves. They are also present on older leafless wood. They do not appear on current season's growth or on the oldest wood. The pollinated flowers grow into one-seeded, globose, bluish drupes with a gray waxy coating. They are approximately 0.1 inch in diameter. Ripe drupes become evident from August into the fall.

Wax myrtle leaves are alternate, elliptic to oblanceolate, pubescent below, glandular and narrow at the base. They are 1 to 5 inches long and about 0.5 inch wide. The margins are entire or toothed above the middle. Some leaves are twisted in the upper portion. Leaves are aromatic when crushed.

Propagation is mainly by transplants. Semi hardwood stem tips can also be rooted. Chunks of root mass or suckers can be dug up and transplanted and new growth will quickly develop. By transplanting root mass or suckers from a plant of known gender, the gardener can presumably select plants that will or will not produce drupes as desired. Seeds can be collected in autumn, stratified at 40°F, held for 2 to 3 months and sown in the spring. The seed can also be sown in the fall and covered with 1/4 inch mulch for natural stratification. Seed moisture is essential. Germination takes from 3 to 6 weeks.



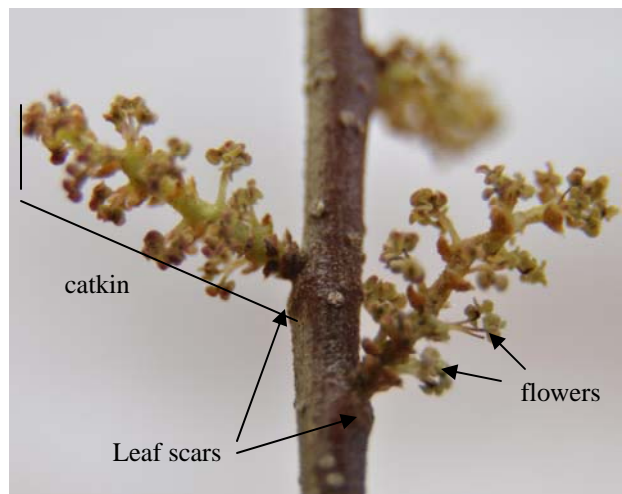
Elliptic to oblanceolate leaves are entire or toothed above the middle. Some are twisted in the upper half.



Male catkins, pictured in February, on the leaf axils of last season's stem



Conelike male catkins on leafless older stems in February



Close up of male catkins.



In February, wax myrtle flowers on previous season's growth and produces new vegetative growth on the terminal buds.



Mature drupes in early November

### **Planting and Maintenance Guidelines**

Wax myrtle is cold tolerant in all of Florida and can be planted anytime of year in south Florida. It can be used as a specimen shrub, small tree or as a formal or informal hedge. The plant prefers full sun but will grow in partial shade. It is a hardy plant and will adapt to both wet and dry conditions but will need supplemental watering during the dry season. When grown as a shrub or tree it can be trimmed to encourage a denser foliage. Remove unwanted suckers at the same time. Wax myrtle does not take well to frequent and excessive pruning when grown as a hedge. This often causes die out in certain portions of the hedge. To reduce dead areas, allow new leaves and stems to fully form. Consequently, prune in March or April and again in summer and fall, and more if needed. Do not remove more than 1/3 of the plant at any one time and avoid pruning back to leafless stems. The wood tends to be brittle and easily damaged in storms. The species is not particularly long-lived; probably not more than 50 years and much shorter when aggressively pruned.



Newly planted hedge in mid-July



The same hedge in mid-September



Well tended hedge on Sanibel, FL

### Insects and Diseases

The lobate lac scale, *Paratachardina lobata lobata*, a scale insect native to India and Sri Lanka, was found for the first time in Florida in August 1999. It infests the woody portions of twigs and small branches. It has not been observed on foliage. In some areas, wax myrtle is especially prone to becoming heavily infested and dying from the effects of lobate lac scale. In Lee County, as of March 2011, infestations of lobate lac scale on wax myrtle has been relatively benign and rarely seen. Lobate lac scales are spread via wind, equipment and traffic. Cleaning tools and vehicle with soapy water or alcohol before moving between work areas will diminish the chance of spreading the scale.

*Pestalotia* leaf spot and tip blight were isolated on several plants in Lee County in 2010. The tips of stems and infected bark may be covered in fungal fruiting structures giving the tissue a black sooty appearance. Leaf spots are often the result of previous damage such as scorching or mechanical wounds. Prune and discard affected tissues as feasible when the plant is dry. Fungicide application is rarely recommended. *Diplodia corticola* is a fungus of wax myrtle and causes dieback of woody ornamentals. Symptoms are more pronounced during the summer. The damage caused by this disease is most severe on old or weakened plants. Old plants exposed to unsuitable growing conditions, mechanical injury, or damage by insects may eventually be killed. Pruning and sanitation should help minimize the disease. Prune off blighted twigs and destroy or discard them. Prune when the tree is dry to avoid transporting fungal spores to healthy twigs. Disinfect pruning tools before each cut. Rake up all blighted leaves, twigs and branches. Fungicides can minimize new infections.



Lobate lac scales on wax myrtle, Sanibel, FL



Close up of lobate lac scales on wax myrtle, Miami-Dade County, FL



*Pestalotia* leaf spot on wax myrtle.



Dead area in canopy caused by *Diplodia corticola*



Stem rot on trunk caused by *Diplodia corticola*

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## Glossary

**Adventitious:** structures or organs developing in an unusual position, as roots originating on the stem.

**Catkin:** an inflorescence consisting of a dense spike or raceme of mostly pendulous, stalkless flowers often without petals and usually of individual sexes.

**Dioecious:** having male and female flowers on separate plants.

**Drupes:** a fleshy, indehiscent fruit with a stony endocarp surrounding a usually single seed, as in a peach or cherry.

**Elliptic:** in the shape of an ellipse, or a narrow oval, egg-shaped; broadest at the middle and narrower at the two equal ends; mainly applied to leaves.

**Entire:** a complete; not broken, toothed, notched, or divided, as the continuous margins of some leaves.

**Glandular:** bearing glands (of hairs).

**Globose:** globe-shaped; spherical.

**Imperfect:** with either stamens (male parts) or pistils (female parts), but not both; unisexual.

**Inflorescence:** an arrangement of flowers on a stem or axis.

**Lenticel:** a somewhat raised, somewhat corky, often lens-shaped area on the surface of a young stem that serves as a path of gas exchange.

**Margin:** the edge, as in the edge of a leaf blade.

**Monoecious:** having separate male and female flowers on the same plant.

**Oblanceolate:** roughly lanceolate, but with the distal end broader than the basal portion.

**Sucker:** a shoot originating from below ground, near the base of the parent plant; often directly from the rootstock.

**Thicket:** a dense growth of a shrubbery or small trees.

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This fact sheet was reviewed by Peggy Cruz, Lee County Extension; Cathy Feser, Naples, FL; Jenny Evans, Sanibel-Captiva Conservation Foundation; Gayle Edwards, Master Gardener; John Sibley, Master Gardener and owner of All Native Garden Center, Nursery & Landscapes, Fort Myers.