

# Key to Common Bay Trees of Florida<sup>1</sup>

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## Introduction

Bay trees in Florida can be difficult to distinguish because their leaves all look alike at first glance. The leaves of bays are all simple, large, elliptical, and evergreen. In addition, several bay species grow in overlapping ranges and habitats. Many times two or more different species of bay will be found growing right next to one other.

One simple way to distinguish these woody plants is by focusing on their distinctive flowers and fruits. However, these features are not present throughout the year, so it is helpful to learn about other bay characteristics in order to help you decide which species you are looking at in every season of the year. Fortunately, each bay species has at least one characteristic that makes it distinguishable from similar trees of other species. In some cases, site, or where the plant is found on the landscape, can be helpful. For instance, *Magnolia grandiflora* (southern magnolia, bull bay) and *Persea borbonia* (red bay) are more commonly found in uplands, whereas *Gordonia lasianthus* (loblolly bay), *Magnolia virginiana* (sweetbay), and *Persea palustris* (swamp bay) are typically wetland dwellers. Morphological features can also be of use. For example, *M. virginiana* and *P. borbonia* have glaucous (bluish-gray) lower leaf surfaces, but the others do not. The difference between these two species is the stipule scars that completely surround the twig in *M. virginiana*. Once you learn the key features or group of features that are characteristic to a species, identification is relatively easy.

Florida contains many different plant communities (habitats) in which bay species occur. Descriptions of these natural plant communities are found in the [Guide to the Natural Communities of Florida, 2010 edition](#), created by the Florida Natural Areas Inventory (FNAI).

This fact sheet was produced to help in the identification of common bay trees found in Florida by using the dichotomous key below. This key focuses on those features that are present year round. Following the key, a basic description, along with photographs, of each species is given to help with the identification process.

The species included in this fact sheet are:

- *Gordonia lasianthus*; loblolly bay
- *Magnolia grandiflora*; southern magnolia, bull bay
- *Magnolia virginiana*; sweetbay
- *Persea borbonia*; red bay
- *Persea palustris*; swamp bay

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## Key

- |   |                                |
|---|--------------------------------|
| 1a Stipular scars encircle the twig   |                                |
| 2a Leaves large, thick, leathery; underside of leaves sometimes with rusty pubescence especially on younger growth; not fragrant when crushed | 2. <i>Magnolia grandiflora</i> |
| 2b Leaves thin; underside of leaves glaucous; fragrant when crushed   | 3. <i>Magnolia virginiana</i>  |
| 1b Stipular scars, if any, do not encircle the twig   |                                |
| 3a Leaf margins serrated from apex to base. Leaves not aromatic when crushed  | 1. <i>Gordonia lasianthus</i>  |
| 3b Leaf margins entire; leaves aromatic when crushed; often covered with insect galls   |                                |
| 4a Lower leaf surfaces with shaggy brown pubescence, especially along principle veins   | 5. <i>Persea palustris</i>     |
| 4b Lower leaf surfaces glaucous with gold pubescence (magnification required)   | 4. <i>Persea borbonia</i>      |



Figure 2. The leaf margins of *Gordonia lasianthus* are serrated.  
Credits: Lynn Proenza

## Plant Descriptions

### 1. *Gordonia lasianthus*; Loblolly Bay

Habitat type: Wetlands, bay swamps, bogs.

Form: Evergreen, although shedding of some leaves during fall and winter is common. Small to medium tree up to 20 m tall.

Bark and twigs: Bark narrowly furrowed, ridges flat, thick, gray to dark gray.



Figure 1. The bark of *Gordonia lasianthus* is a distinct characteristic.  
Credits: Lynn Proenza

Leaves: Alternate. Up to 16 cm long, 5 cm wide. Glabrous upper surface, dull green lower surface. Margins serrated. Some leaves turn red in fall and winter before dropping off.



Figure 3. Although evergreen, some of the leaves on *Gordonia lasianthus* will turn red in the fall and winter before dropping off.  
Credits: Lynn Proenza

Flowers: Late spring to summer. White, cup-shaped, 5-petaled to 8 cm in diameter, stalks to 8 cm long. Many yellow stamens.



Figure 4. The flower of *Gordonia lasianthus* is cup-shaped and 5-petaled.  
Credits: Lynn Proenza

Fruit: Woody capsule to 1.5 cm long with 4–8 winged seeds up to 1 cm long, matures in early fall.



Distinguishing characteristics: The bark has narrow, furrowed ridges that are flat. The margins are serrated, whereas the margins on other bay trees are entire.

## 2. *Magnolia grandiflora*; Southern Magnolia, Bull Bay

Habitat type: Well-drained upland woodlands, bluffs, coastal hammocks, mesic woodlands, ravines.

Form: Evergreen. Medium to large tree that typically grows 25 to 30 m tall but occasionally can reach up to 40 m tall.

Bark and twigs: Bark smooth when young; mature trees have large, scaly gray plates. Twigs with rusty pubescence on newer growth that turns darker brown and sloughs with age. Stipular scars evident and encircle the twig.

Leaves: Alternate. Leathery and thick up to 30 cm long, 10 cm wide. Upper surface waxy, glabrous, shiny, and dark green. Lower surface sometimes with dense rusty pubescence, sloughing with age, otherwise paler green and glabrous. Horticultural varieties are bred to have a darker green upper leaf surface and more pronounced rusty pubescent lower leaf surface than you will see in naturally occurring trees (Figure 9).



Figure 5. The leaves of *Magnolia grandiflora* are shiny and glabrous on the upper surface, and have varying amounts of rusty pubescence on the lower surface.

Credits: Lynn Proenza

Flowers: Spring to summer. White, fragrant, saucer-shaped, large, to 20 cm in diameter.

Fruit: An aggregate of follicles that together appear cone-like. To 10 cm long, turning reddish brown with age. Pubescent, with shiny red seeds attached by a thin, hair-like fiber. Appearing in late summer.

Distinguishing characteristics: Stipule scars completely encircle the twig, a characteristic for all species in the Magnoliaceae family. The leaves of *Magnolia grandiflora* are thick and leathery, whereas *Magnolia virginiana* leaves are thin, papery, and fragrant. The lower leaf surface of *Magnolia grandiflora* is sometimes rusty pubescent or green and glabrous, whereas the lower leaf surface of *Magnolia virginiana* is glaucous.



Figure 6. Stipule scars (appearing as white lines on this twig) surround the twigs of both *Magnolia* species covered in this fact sheet

Credits: Lynn Proenza

## 3. *Magnolia virgin*; Sweetbay

Habitat type: Wetlands, bay swamps, creek bottoms, bogs, wet flatwoods.

Form: Evergreen. Medium to large tree to about 30 m tall.

Bark and twigs: Smooth, dark gray bark. Twigs with silvery pubescence on newer growth, sloughing with age. Stipular scars evident and encircle the twig.

Leaves: Alternate. Up to 15 cm long, 6 cm wide. Aromatic when crushed. Upper surface dull green and glabrous. Lower surface glaucous with silky pubescence.

Flowers: Summer to fall. White, to 7 cm in diameter, showy, fragrant. Similar to *Magnolia grandiflora* (see Figure 7).

Fruit: An aggregate of follicles that together appear cone-like. To 5 cm long. Glabrous, turning reddish brown with age. Matures in late summer. Shiny red seeds attached by a thin, hair-like fiber. Similar to *Magnolia grandiflora* (see Figure 8).

Distinguishing characteristics: Stipule scars completely encircle the twig, a characteristic for all species in the Magnoliaceae family. The leaves of *Magnolia virginiana* are aromatic when crushed and are thin and papery, whereas *Magnolia grandiflora* are thick and leathery. The lower leaf



surface of *Magnolia virginiana* is glaucous, whereas the lower leaf surface of *Magnolia grandiflora* is sometimes rusty pubescent or paler green and glabrous.



Figure 7. The flowers on *Magnolia grandiflora* are large, white, fragrant, and very showy.  
Credits: Lynn Proenza



Figure 8. *Magnolia grandiflora* fruit is large, pubescent, and cone-like with shiny red seeds.  
Credits: Lynn Proenza



Figure 9. The leaf characteristics for the horticultural varieties of *Magnolia grandiflora* are more pronounced than leaf characteristics for naturally occurring trees.  
Credits: Lynn Proenza



Figure 10. The lower surface of the leaf of *Magnolia virginiana* is glaucous.  
Credits: Lynn Proenza

#### 4. *Persea borbonia*; Red Bay

Habitat type: Xeric to mesic woodlands, scrub.

Form: Evergreen. Small to medium tree to 20 m tall.

Bark and twigs: Bark fissured, dark reddish-brown. Twigs with gold pubescence.

Leaves: Alternate. Up to 15 cm long, 6 cm wide. Upper surface glabrous, lower surface glaucous, gold pubescence is appressed (the tiny hairs grow very close to the surface of the leaf). Magnification is required to see pubescence. Aromatic when crushed. Often deformed by leaf gall insects.



Figure 11. The lower surface of the leaf on *Persea borbonia* is glaucous with some gold pubescence, and the upper surface is glossy.  
Credits: Lynn Proenza





Figure 12. This photo shows both older (left) and younger (right) bark of *Persea borbonia*.

Credits: Lynn Proenza

Flowers: Spring to summer. Greenish, small clusters on long stalk, borne in axils of leaves.

Fruit: Drupe. Round, dark blue to black when mature in fall.

Distinguishing characteristics: The leaves of this species are aromatic when they are crushed, which is characteristic of the Lauraceae family. *Persea palustris* is also aromatic but has shaggy brown pubescence on the lower surface of the leaves and twigs, whereas *Persea borbonia* has a glaucous lower surface.

**Note:** *Persea borbonia* is currently experiencing a decrease in abundance due to a non-native Asian ambrosia beetle which causes laurel wilt disease; in sites where laurel wilt disease infestation is severe, you will likely see only dead trees. The wilted leaves of *Persea borbonia* usually persist on the tree after it dies (Figure 13).



Figure 13. *Persea borbonia* is now typically found dead due to the non-native Asian ambrosia beetle.

Credits: Lynn Proenza

## 5. *Persea palustris*; Swamp Bay

Habitat type: Wetlands, swamps, wet pinewoods, maritime forests, savannas, marshes.

Form: Evergreen. Small tree to 12 m tall.

Bark and twigs: Bark fissured, brown. Twigs with dense pubescence sloughing with age, then turning dark brown.

Leaves: Alternate. Up to 20 cm long, 5 cm wide. Upper surface with some pubescence when young, sloughing with age. Lower surface with shaggy brown pubescence, especially along principle veins, which can feel fuzzy to the touch. Petioles are also pubescent. Aromatic when crushed. Often deformed by leaf gall insects.



Figure 14. The lower surface of the leaf on the *Persea palustris* has shaggy brown hairs that feel fuzzy to the touch.

Credits: Paul Proctor



Figure 15. Younger twigs of *Persea palustris* are covered in brown, dense hairs.

Credits: Lynn Proenza

Flowers: Spring to summer. Greenish-white, small clusters on long stalks, borne in leaf axils.

Fruit: Drupe. Oblong to 1 cm long. Dark-blue to black when mature in fall.

Distinguishing characteristics: The leaves of this species are aromatic when they are crushed, which is characteristic of the Lauraceae family. *Persea borbonia* is also aromatic, but it has a glaucous coating on the lower surface of the leaves, whereas *Persea palustris* has shaggy brown pubescence on the lower surface of the leaves and twigs.

## References and Additional Resources

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