

Lemon bacopa: *Bacopa caroliniana*¹

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Introduction

Lemon bacopa is an herbaceous aquatic perennial native plant that commonly grows along shorelines, in “wet feet” areas, and in water that is less than 3’ deep. The leaves of lemon bacopa are small (less than 3/4” in length), nearly round, thick, fleshy, and succulent. When the species grows as an emergent plant (with most or all of the plant out of the water), the stems are often covered with fine hairs and may appear velvety. In contrast, the stems of submersed plants (with most or all of the plant under water) are hairless or nearly hairless. Crush the leaves of this delightful plant to release a fragrance reminiscent of lemon, lime, anise, or licorice. The species produces lovely, bright-blue flowers, which make it an attractive native addition to water gardens, aquascapes, and restoration and mitigation projects. Lemon bacopa is a host for larvae of the white peacock butterfly (*Anartia jatrophae*) (Florida Native Plant Society 2015). Lemon bacopa is widely available from a variety of sources, including stores that carry aquarium plants, water garden supply shops, and nurseries that sell aquatic or native plants.

Classification

Common Name: Lemon bacopa, blue waterhyssop

Scientific Name: *Bacopa caroliniana* (Walter) B. L. Robins

Family: Scrophulariaceae (figwort family) (USDA NRCS 2015) or Plantaginaceae (plantain family) (Wunderlin and Hansen 2008)



Figure 1. Lemon bacopa flower
Credits: Lyn Gettys, UF/IFAS

Description and Habitat

Lemon bacopa is very common in Florida and occurs in 56 of 67 counties, but the species is also widely distributed throughout the southeastern United States. Populations of lemon bacopa have been reported in eastern Texas, South Carolina, southern Louisiana, Mississippi, Alabama, and in a handful of counties in Georgia and North Carolina (USDA NRCS 2015). The species is categorized as a hydrophyte or obligate wetland plant, meaning it almost always occurs in wetlands as opposed to more terrestrial areas (USDA NRCS 2015). Lemon bacopa plants are hardy in USDA Zones 6 through 9; freezing temperatures in temperate regions will cause emergent growth to die back to the

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ground or water line, but lemon bacopa stays green all year in tropical areas such as south Florida. Submersed plants produce underwater stems that are usually up to 3' long, although stems as long as 12' have been reported in deep, clear water. The emergent growth on these stems is typically only a few inches above the water line. Plants growing in the wet soil along the margins of ponds and lakes can be up to 6" tall when held erect by the thick, stocky stems or can be several feet in length if the stems trail along the ground.



Figure 2. Population of lemon bacopa
Credits: Lyn Gettys, UF/IFAS

Lemon bacopa is a native plant and is used to add beauty to water gardens and to provide habitat in wetland enhancement and restoration projects, but the species can be “weedy” under some circumstances, particularly when growing under submersed conditions. Lemon bacopa can be challenging to control and options are limited. No bio-control agents are known to cause damage to lemon bacopa. For example, triploid grass carp (*Ctenopharyngodon idella* Val.), which are generalist plant-eating fish used for control of a number of submersed weeds, do not eat significant amounts of lemon bacopa. Mechanical harvesting can be effective but is labor-intensive and can be costly, since plant material must be hauled off-site to prevent re-establishment of lemon bacopa along the shoreline. Herbicide choices are limited as well; products with the active ingredient imazapyr are effective (but only on emergent plants), and herbicides with penoxsulam may provide partial control of submersed growth. Other active ingredients are not known to cause significant damage to lemon bacopa.

Propagation

Lemon bacopa roots easily from cuttings without the need for rooting hormones. Cuttings should be taken from the stem tips and should be 3" to 5" long. Strip the leaves from the lower 2" of the stem, then stick the prepared cuttings into containers filled with a good-quality, all-purpose potting soil. It is important to thoroughly saturate the soil in the container before inserting the cuttings; inserting the cuttings can be made easier by using a pencil or other small cylindrical object as a “dibble” to make planting holes in the saturated soil. The number of cuttings per container is a matter of choice; in general, 3 to 5 cuttings can be grown in a standard 4" nursery pot, and 10 cuttings fit nicely in a 1-gallon pot. Because lemon bacopa is a wetland plant, do not let the soil dry out or the cuttings will die. If you use a standard nursery pot with drainage holes, place the planted pot in a tray that holds several inches of water—the water will wick up through the soil and keep conditions nice and moist for your lemon bacopa cuttings. Cuttings are typically well-rooted within a month; they can be grown out in the container they were started in, transplanted to a larger pot, or planted around your water garden.



Figure 3. Ideal cutting of lemon bacopa
Credits: Lyn Gettys, UF/IFAS

Other Uses

In addition to lemon bacopa, there are other species of *Bacopa* in Florida. The most broadly distributed of these is *Bacopa monnieri*, commonly called waterhyssop. Recall that lemon bacopa has blue flowers and round, aromatic leaves. In contrast, flowers of waterhyssop are white; leaves are unscented and broader at the tip than at the base.

Both species have a long history of ethnobotanical use and have been employed as purgatives, cathartics, diuretics, and nerve tonics throughout the world. The waterhyssops

have also been used to treat rheumatism, oral infections, vitamin C deficiency, lung congestion, psychosis, epilepsy, and threadworms. Florida's Native Americans have historically used species of *Bacopa* for medicinal purposes too. The Seminoles call waterhyssops *wi:katcahiliswa* and the Miccosukee refer to the plants as *okikó:wayikcí*; both are translated as “water puma medicine” (Austin 2004). Today, extracts of waterhyssop are widely available as herbal supplements and are marketed for mental alertness, along with memory and learning enhancement aids. Both species of *Bacopa* are considered edible and are used in salads and as a seasoning by those with adventurous palates. However, you should NEVER eat field-collected plants, because many species have very similar appearances and you could accidentally consume something toxic.



Figure 4. Waterhyssop (*Bacopa monnieri*)
Credits: Lyn Gettys, UF/IFAS

Summary

Lemon bacopa is a native aquatic and wetland plant that is a welcome inclusion in a variety of settings, including water gardens, aquatic ponds, and wetland restoration and mitigation sites. The species is broadly adapted and extremely common throughout Florida, and its perennial nature assures a stellar performance year after year. Although lemon bacopa can be weedy in some situations, it is most often considered a beneficial native plant that brings a number of desirable characteristics to almost any aquatic setting.

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