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# Palmetto



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# The Milkvines of Florida

Article and photos by Roger L. Hammer

**There are six native Florida wildflowers** commonly called milkvines (for their milky sap and vining growth habit), with three species restricted to the northern counties and three others that range into Central Florida as far south as Lake Okeechobee. These are members of the Apocynaceae, or dogbane family, and are related to the well-known milkweeds in the genus *Asclepias* that are so beloved by gardeners as larval host plants for monarch and queen butterflies. The genera of milkvines in Florida include *Chthamalia*, *Gonolobus*, and *Matelea*.



**Facing page:** Sandhill spiny pod (*Chthamalia pubiflora*). **Above, clockwise from upper left:** Angle pod milkvine (*Gonolobus suberosus*), yellow Carolina milkvine (*Matelea flavidula*), Alabama milkvine (*Matelea alabamensis*), Baldwin's milkvine (*Matelea baldwyniana*).



**Above:** Florida milkvine (*Matelea floridana*).

There is also a closely related, non-native vine called latexplant (*Morrenia [Araujia] odorata*) that is naturalized from South America and first recorded in Florida in the early 1970s. It has fragrant, star-shaped flowers with 5 pale-green lobes and a white central column.

Sandhill spiny pod or trailing milkvine (*Chthamalia pubiflora*) occurs in sandhill habitat from Madison, Suwannee, Columbia, and Clay Counties south to Hillsborough, Polk, and Highlands Counties, where it flowers from April into June. *Chthamalia* means “spreading on the ground,” and relates to its typical growth habit. The name *pubiflora* translates to “hairy flowers.” This state-listed endangered species was described in 1844 by botanist Joseph Decaisne (1807–1882) and later moved to the genus *Matelea* in 1941 by botanist Robert Everard Woodson (1904–1963). It has also been placed in *Gonolobus* (1877), *Vincetoxicum* (1900), and *Edisonia* (1933). Following a study of the evolution and systematics of American milkvines, Oklahoma State University Ph.D. candidate Angela McDonnell relegated it back to the genus *Chthamalia* in 2017. Its stems average 20”–28” long, with hairy, heart-shaped, opposite leaves that range up to 2” long

and nearly equally as wide. The greenish brown, 3/8” flowers are densely covered with coarse hairs internally. Cucumber-like pods bear short, soft spines. The “ch” at the beginning of *Chthamalia* is silent, in case you were wondering how to pronounce such a cumbersome-looking name. It was photographed at the Carter Creek Preserve in Highlands County.

Angle pod milkvine (*Gonolobus suberosus*) occurs in woodlands across the Florida Panhandle south through the peninsula to Charlotte, Lee, Glades, and Brevard Counties, flowering from April to October. The name *Gonolobus* refers to the angled pods and *suberosus* alludes to the corky bark on mature stems. Botanist Robert Brown (1773–1858) moved this species to the genus *Gonolobus* from *Cynanchum* in 1810, and there is still much nomenclatural disagreement regarding this state-listed threatened species. The flowers are self-incompatible and require cross-pollination by insects carrying pollinia from the flowers on one plant to another, so there is generally low fruit-set. The opposite leaves of this twining vine are somewhat heart-shaped and measure 4”–6” wide. Axillary, star-shaped, 1/2”–5/8” flowers are usually maroon to brownish at the base and green or yellowish toward the tips. It was photographed at Florida Caverns State Park in Jackson County.

*Matelea* is closely allied to the genus *Gonolobus* and was named by French botanist Jean Baptiste Christophore Fusée Aublet (1720–1778). It is believed to be a French Guiana aboriginal name for the species Aublet described (*Matelea palustris* is the type species). In 1762, Aublet was sent to Cayenne, French Guiana for the purpose of preparing an herbarium of about 400 tropical plants in preparation of writing his 1775 publication, *Histoire des plantes de la Guiane Française (History of the Plants of French Guiana)*.

Alabama milkvine (*Matelea alabamensis*) is a state-listed endangered species found in deciduous woods and along ravine slopes of Georgia and Alabama south into Walton, Liberty, and Gadsden Counties in the Florida Panhandle. It flowers from April into June. Stems of this species reach 6’ in length with cordate (heart-shaped) leaves to 6” long and 4” wide. The fly-pollinated, green, 1” flowers have intricate venation and a white central column surrounded by a dark yellow ring. A distinguishing characteristic is the yellow star formed in the center of the column. It was photographed in a privately-owned deciduous hardwood forest in Gadsden County.

Baldwin’s milkvine (*Matelea baldwyniana*) can be found in bluff forests of Jackson and Gadsden Counties in the upper central panhandle, where it flowers from April to August. Despite the spelling of the name, *baldwyniana* honors American physician and botanist William Baldwin (1779–1819). It is a state-listed endangered species due to its limited natural range in Florida. The broadly ovate (egg-shaped) leaf blades of this species reach about 5” long and are deeply cordate at the base. The branched, axillary, flowering stems are topped with clusters of 5-lobed, white, 1/2” flowers. It was photographed at the

Angus Gholson Nature Park in Gadsden County.

Yellow Carolina milkvine (*Matelea flavidula*) is a state-listed endangered species found in deciduous bluff forests of Washington, Liberty, Gadsden, and Duval Counties where it flowers from April into June. It was first described in 1878 as *Gonolobus flavidulus* by botanist Alvan Wentworth Chapman (1809–1899) but was moved to the genus *Matelea* in 1941 by botanist Robert Everard Woodson (1904–1963). The name *flavidula* (or *flavidulus*) means “yellowish green” and alludes to the flower color. The heart-shaped, opposite leaves reach 1" long and 1/2" wide with yellowish green, 3/4" flowers clustered in the leaf axils. The flowers somewhat resemble *Matelea alabamensis* but lack the star on top of the column. It was photographed in a privately-owned deciduous hardwood forest in Gadsden County.

Florida milkvine (*Matelea floridana*) is a state-listed endangered species that occurs in hardwood forests scattered discontinuously from Jackson, Calhoun, and Liberty Counties east to Duval and Clay Counties, and south to Hillsborough and Polk Counties. There is, however, a single 1969 collection from Miami-Dade County made by botanist Robert W. Long (1927–1976) in Brickell Hammock at the corner of US1 and the Rickenbacker Causeway in Coconut Grove. Most of Brickell Hammock was razed during the land boom after railroad magnate Henry Morrison Flagler (1830–1913) brought his railroad south from Palm Beach County at the behest of American businesswoman Julia DeForest Tuttle (1849–1898), who envisioned the area around the Miami River and Biscayne Bay becoming a great city. One remnant parcel of old Brickell Hammock happens to be in Alice Wainwright Park, right where the specimen of *Matelea floridana* was collected in 1969, so it may be a worthwhile venture to see if there is a remote chance that it could still be present. The name *floridana* relates to Florida, where it was first collected and then described in 1899 as *Vincetoxicum floridanum* by botanist Anna Murray Vail (1863–1955). *Vincetoxicum* means “poison beater” and alludes to its perceived antidotal properties for venomous snake bites, with doubtful benefits. It blooms from April to August and the maroon flowers are about 5/8" wide, borne on a twining vine with heart-shaped leaves that reach up to 4" long. It was photographed at the Tiger Creek Preserve in Polk County.

In November 2017, Alan Franck of the University of Florida alerted me to the presence of an unknown species of *Gonolobus* growing on a fence north of Homestead in the Redland district, not far from my home. My wife, Michelle, and I visited this site on November 29 and found the plants clambering across a field fence along with *Jasminum fluminense*, *Ipomoea hederifolia*, *Momordica charantia*, and other weedy species. The identity of this species is still uncertain but Alan Franck suspects that it could be *Gonolobus taylorianus*, native to Central America, and perhaps introduced locally as a food item. Although all parts of *Matelea* species, especially the

seeds and latex, are poisonous, immature fruits of *Gonolobus taylorianus* are cut on each end to remove the latex, then the skin is scraped off. They are then salted to taste, but this sounds more like famine food than a gourmet snack. We hope to monitor the population during the spring and summer of 2018 to catch it in flower and get a positive identification.

Mark Fishbein, professor of botany at Oklahoma State University is currently working on the treatment of this group of plants for the Flora of North America project, so expect some new taxonomic revisions in the near future.

Our native milkvines are seldom seen in cultivation but are worthy garden subjects within their natural range in Florida. To photograph this interesting group of vines, I was a lucky, and grateful, recipient of the generosity of Kris DeLaney, Virginia Craig, Billy Bailey, Floyd Griffith, and Tom & Helen Roth, who helped locate plants in flower and kept me from having to wander aimlessly for weeks, or even months, looking for them. To quote The Beatles, “I get by with a little help from my friends.”

#### About the Author

Roger L. Hammer is an award-winning professional naturalist, author, botanist and photographer. His most recent book is *Complete Guide to Florida Wildflowers*. Find him online at [www.rogerlhammer.com](http://www.rogerlhammer.com)



## Call for Research Track Papers and Poster Presentations

### Florida Native Plant Society 2019 Conference

The Florida Native Plant Society Annual Conference will be held at the Plantation on Crystal River, Crystal River, Florida, May 16-19, 2019. The Research Track of the Conference will include presented papers and a poster session on Friday May 17 and Saturday May 18.

Researchers are invited to submit abstracts on research related to native plants and plant communities of Florida including preservation, conservation, and restoration. Presentations are planned to be 20 minutes in length. This includes 15 minutes for the presentation, and 5 minutes for questions.

Abstracts of not more than 200 words should be submitted as a MS Word file by email to Paul A. Schmalzer at [paul.a.schmalzer@nasa.gov](mailto:paul.a.schmalzer@nasa.gov) by February 1, 2019. Include title, affiliation, and address. Indicate whether you will be presenting a paper or poster.