

# The Palmetto

Discovering Florida's Ethnobotany: The People and Plant Interaction Series



Hoop vine (*Trichostigma octandrum*)  
A. Flowering branchlet. B. Flower, front-side view. C. Flower longitudinally dissected. D. Floral diagram. E. Fruit.  
Drawing from Correll, D. S. and H.B. Correll, 1982, *Flora of the Bahama Archipelago*.  
Vadu: J. Cramer. Reproduced with the permission of Gantner/Carmer Publishers and Fairchild Tropical Garden.

So far as Mike and I can learn, we are the only two resident Florida biologists to have seen the live plants. There has always been an unusual "hit-and-miss" story in the United States behind this relative of rougeberry and pokeweed (*Phytolacca americana*). Chapman's southeastern flora (1897) did not include the species. Later, when John K. Small wrote an updated southeastern flora (1933), the species was here. Hoop vine has only been collected two or three times since, and is now known from Collier, Monroe, and Broward Counties. Mike's discovery was a county record.

One cannot help wonder, "is this a rare native or an exotic species?" Indeed, the plants were so rampant when Mike found them, he was afraid he had discovered yet another alien species running amuck in the Everglades. After seeing the vigor with which hoop vine grows, I can even better understand his fear.

We were not the first to question this climber's nativity in this northern fringe of its range. Julia Morton (1981) wrote in her atlas on medicinal plants of the Americas that hoop vine was naturalized in the Bahamas. George Avery questioned whether or not people might have introduced *Trichostigma* onto Chokoloskee Island, as they had so many other plants.

## Hoop Vine: The Plant That Wasn't There

by Dan Austin

Back in the early 1970s the avid field-botanist George N. Avery, of Fairchild Tropical Garden, told me that he had found *Trichostigma octandrum* on Chokoloskee Island just south of Everglades City. At the time, David McJunkin and I were studying the "ethnoflora" of that island on the northern fringe of the 10,000 Islands. It should have been simple enough to find the plants.

Their stems grow to about 10 meters long, scrambling over other plants to form a blanket of greenery. The stems are woody and pliant and get bigger in diameter than a person's thumb. We scoured every inch of the island, and did not find this climber, now called "hoop vine" in Florida.

Later, in 1982, John Popenoe and Don Correll, also of Fairchild Garden, collected the vines on Chokoloskee. I went back, and still could not find it. In March 2000, Florida Atlantic University graduate student, Mike Anderson, brought in a sterile sample from Conservation Area 3 in Broward County. The sample looked to me like a woody rougeberry (*Rivina humilis*). Mike had found the elusive hoop vine.

It seems that Linnaeus thought the plant looked like rougeberry too back in 1756 when he named it *Rivina octandra* (*Rivina*, named for German botanist A. G. *Rivinus*, 1652-1723; *octandra*, with eight anthers). Subsequently, in 1909, another German biologist, Hans P. H. Walter, realized that the species belonged in a separate genus. Walter discovered that the Frenchman Achille Richard had created the proper home for the species in 1845, and so Walter moved Linnaeus' species name (*octandra*) to *Trichostigma* (Greek: having hair-like projections from the stigma).



An aggressive climber, hoop vine can cover other plants, casting suspicion on its origins (native or invasive exotic?). Thick woody stems reach over 30 feet in length. Hoop vines pictured occurred in Conservation Area 3, Broward County.

## Hoop Vine

*Trichostigma octandrum*

Shrubs with trailing, scrambling or twining stems and branches reaching to 10 m, without plant hairs. Leaves on long petioles, the blades entire, ovate to elliptic or oval, mostly 4-9 cm long, the apex short-acuminate, glabrous. Flowers in narrow clusters 5-7 cm long, a narrow raceme with flowers on stalks 4-6 mm long. Sepals oval or obcordate, 4-6 mm long, reflexed away from the fruit, glabrous. Fruits fleshy berries, red to red-purple, globose or oval, 4-5 mm long.

Growing in the edges or in breaks in hammocks, mostly found near the coast, but also inland on tree islands in the Everglades. Flowers and fruits resemble rougeberry (*Rivina humilis*) enough to aid identification with anyone familiar with that common herb. No one seems to know what pollinates the small flowers. However, judging from the number of mosquitos removing our blood when we photographed the plants, it might be them. Male mosquitos use only nectar from flowers as food; the females need the added boost of protein from blood to nurture their eggs

Why would someone introduce this plant? A quick search reveals that people have used the plant in several ways throughout its range from Cuba to Venezuela and Peru. The stems have been used to weave baskets, and to make barrel hoops. In Cuba it is bejuco canesta (basket vine) and guaniquí (unknown meaning, maybe an indigenous word). On French speaking islands it is liane panier (basket vine), liane a barriques (barrel or cask vine). On English speaking islands, reaching from Jamaica to Barbados, it is black basket wythe, cooper wythe, basket wiss, basket with, and hoop with. Some other names appear to allude to medicinal uses, like bonbon codine (codeine candy), bois à terre (wild bush), and liane à terre (wild vine). Just how the other names fit in is not clear, but the plant was important enough to be given names like sotacaballo (substitute horse, in Costa Rica), pabellón (pavilion) or pabellón del rey (king's pavilion, in the Dominican Republic), látigo (lariat for catching horses, in Guatemala), entii aaxux ts'aah (like garlic vine, in Mexico), and zamurito (little vulture).

Colombians use the leaves to help cure wounds. Hispañolans apply leaf decoctions to help someone overcome suffocation or choking, and against asthma. Fruits and stems have the same uses. It is medicinal also among the Mayan speakers of Mexico. Most surprisingly, people grow it. Perhaps they grow it for medicine or weaving, but some apparently find it ornamental. This species was being cultivated in the Bahamas a couple decades back, and the South American species *Trichostigma peruviana* is listed in Hortus Third.

Nothing seems to be known of the bioactive compounds in this species, but several of its relatives are notorious chemical factories. Two genera, *Petiveria* and *Phytolacca*, are best known. Among their active compounds are several saponins, or soap-like compounds. If hoop vines are anything like those two, there is no wonder they have been used in medicines. Extracts of *Petiveria* have shown promise in treatment of protozoal infections, particularly those caused by *Trypanosoma cruzi* which causes Chagas' disease in the tropics. That same plant may be useful in controlling tumors (mitogenic). Several species of *Phytolacca* have been studied and show promise against mitogenesis, in treating human immunodeficiency virus (HIV), in fighting vector borne diseases in animals, and in killing disease-carrying snails.

Still, the names bonbon coq d'Inde (Indian rooster candy), bejuco de paloma (dove vine), pira de guacharaca (chachalaca's nest; the chachalaca is a bird somewhat resembling a chicken), guacamaya (macaw), and murette (little mulberry) show that people from Colombia to Puerto Rico and Hispañola recognize that the fruits are spread by birds.

So, did the species come to Florida with people or in the stomachs of birds? Is it a rare and endangered native or an alien? We do not know. But, after a hiatus of 18 years, we know the species is still in Florida. It shows up about every couple decades. Maybe this is a plant that appears only periodically, like the legendary Scottish village, Brigadoon. Perhaps, like that village, the plants appear, thrive for a short time, then disappear back into the mists.



## References Cited

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## ABOUT THE AUTHOR

Dr. Daniel F. Austin is a departing botany professor at Florida Atlantic University, and a founding member of the FNPS who has contributed to *The Palmetto* regularly. Departing professor? Alas, he's moving to Arizona. FNPS will miss him greatly. Happily, Dan has agreed to continue contributing to *The Palmetto*.

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