



Palmetto



Across the Florida Straits: Observations on Plants in Cuba

Article and photos
by Chuck McCartney



1. A white peacock butterfly (*Anartia jatrophae guantanamo*) nectars on Spanish needles (*Bidens alba*) at Cuba's Cienfuegos Botanical Garden. This is the same race that occurs in South Florida, according to butterfly expert Marc Minno.

2. The palm-dotted Viñales Valley of Cuba's westernmost Pinar Del Rio Province is justifiably famous for its distinctive steep limestone mountains called *mogotes*.

Having grown up in subtropical Florida south of Miami, I have been fascinated by our distinctive flora ever since I became aware of what a native plant is. And as I learned more after joining the original Native Plant Workshop (a Dade-based precursor group to the Florida Native Plant Society) in the 1970s, it became clear that Cuba was most probably the source of many of our subtropical plants and I longed to visit there. However, that seemed impossible, considering the vast political differences between the United States and the regime of Cuba's Fidel Castro. So, when I learned that the Florida Native Plant Society was co-sponsoring a trip to the island, I leapt at the chance to go. Finally, I could see firsthand the source of so many of South Florida's native plants among the approximately 6,500 species of vascular plants found in Cuba.

Although it was promoted as a botanical tour, the mid-November 2015 trip to Cuba arranged by the Florida Keys-based TREE Institute and co-sponsored by the FNPS didn't quite live up to that billing. Nevertheless, those of us who consider ourselves amateur botanists still managed to get a glimpse of the natural tropical allures of this fabled island that had been off-limits to the average American for so many years.

We were lucky to have a very capable Cuban botanist, the knowledgeable Raul Verdecia, along on the tour as our plant expert, although access to him was limited because of the overly large size of the group (34 people – far too many for this kind of tour).

Still, the central and western parts of the country that we saw were beautiful, with medium-size wooded mountain ranges (3,000-4,000 feet) and broad valleys filled with fields and pastures and gallery forests along streams, plus rocky coastlines, many of which reminded me of the Florida Keys. These coastal areas included many familiar species, such as sea grape (*Coccoloba uvifera*), bay cedar (*Suriana maritima*), and railroad vine (*Ipomoea pes-caprae* subsp. *brasiliensis*).

My overriding memory of this largest island of the Greater Antilles, though, is palms. So many palms. Of so many kinds, some known to me, most of them not. Approximately 90





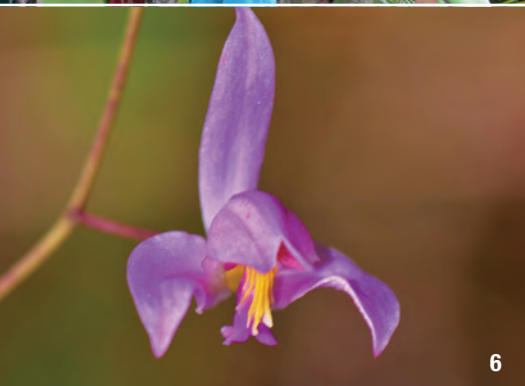
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palm species and subspecies in 14 or 15 genera (depending on the taxonomist you consult) are listed for Cuba. It's estimated that more than 80 percent of those palms are endemic to the island, as is nearly half of the rest of the country's flora. As in Florida, non-native palms are grown there, too.

We saw species of genera familiar to South Floridians, such as *Roystonea* (the royal palms), *Sabal* (related to our state tree, the cabbage palm), and *Thrinax* (the thatch palms). And we saw paurotis palms (*Acoelorrhapha wrightii*), the same species found in the southern end of the Sunshine State.

There were also rare and unusual palms, such as the Cuban endemic *Copernicia brittonorum*, which we saw up close when we visited the countryside home of farmer Luis Vera Colina, who cleared a patch of forest next to his modest house but thoughtfully left these rare specimens standing. The species epithet honors Nathaniel Lord Britton, co-founder and first director of the New York Botanical Garden from 1895 to 1929, and his wife, Gertrude. The pair did a lot of botanical exploration in Cuba as well as the Bahamas in the early 20th Century, and several plant species of the region bear their name.

Then there was the slightly comical belly palm (*Colpothrinax wrightii*), with a prominent swelling in the middle of its trunk, making it look like a potbellied man, a pregnant woman or – to my way of thinking – a snake that had swallowed a rat and was digesting it. The species epithet *wrightii* shows up on a number of Cuban plants. It honors Charles Wright, 1811-1885, who was a famous botanical collector in Cuba and elsewhere.

Pinar del Rio, the beautiful westernmost province of Cuba, with its distinctive *mogotes*, those karst limestone mountains with precipitous cliff sides, is often pictured in tourist photographs of the island, and justifiably so. Clinging to the steep sides of the *mogotes*, we saw *Thrinax radiata* (known to us as the Florida thatch palm) and the endemic

3. Members of the FNPS tour group inspect a specimen of the Cuban endemic palm *Copernicia brittonorum* at the home of farmer Luis Vera Colina, who cleared a patch of forest next to his house – but left this rare specimen.

4. The unique mid-trunk swelling accounts for the common name of the Cuban belly palm (*Colpothrinax wrightii*). This specimen is planted in front of the Hotel Pinar Del Rio.

5. In Florida, bitterbush (*Picramnia pentandra*) is found only in a small area of Miami-Dade County. In the second-growth forest of Cuba's Zapata Swamp in Matanzas province, it is frequently encountered as an understory shrub/tree.

6. The only orchid seen in flower in the wild during the trip was the terrestrial *Bletia purpurea*, a species also widespread in southern Florida. This specimen grew along La Serfina Trail above Rancho Curujey.

7. Gumbo limbo (*Bursera simaruba*), with its flaky copper-colored bark, is familiar to South Floridians. This specimen grew in a second-growth forest in the Zapata Swamp of Cuba's Matanzas province.

8. A *Stigmaphyllon* species in the family Malpighiaceae shows flowers pollinated by oil-collecting bees. Orchids in the genus *Tolumnia* mimic these flowers to lure pollinators, and several species of this Antillean orchid group occur in Cuba.

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Gaussia princeps (locally called *Palma de Sierra*). The only drawback to appreciating them is that we could only observe them from an irritatingly distant vantage.

The National Botanic Garden of Cuba outside Havana, begun in 1968 and opened to the public in 1984, is famous for its palm collection, but we got to enjoy very little of it due to time constraints. We were allowed only an hour or so at the 1,483-acre (600-hectare) garden on our way to the airport for our return flight to Miami, when we easily could have spent a half a day or more there.

This was a consistent drawback of the trip. The tour organizers tried to cram so many points of interest into the limited time available that we often didn't get to savor the really interesting botanical sites we visited. The National Botanic Garden experience was especially frustrating for plant lovers. We saw most of the palms and other plantings only from the windows of our large, Chinese-made tour bus as we drove rather quickly through the garden. This was like going to Fairchild Tropical Botanic Garden and not being allowed to walk among the plantings.

Although the National Botanic Garden was given short shrift, we got to spend a little more time at the 232-acre (94-hectare) Cienfuegos Botanical Garden on the afternoon of our arrival in Cuba, including a hike through the plantings at this former Harvard University tropical research station.

Two other smaller botanical gardens also offered a chance to see many tropical plants, some native, some exotic. One was the small family-maintained site in the Pinar del Rio town of Viñales that was started by a pair of sisters named Carmen and Caridad. The other was adjacent to the elegant restaurant Divino in the Havana suburb of San Francisco de Paula. The latter garden and nursery included a shade house and plantings of interesting botanical specimens and plants that provided some of the food served at the restaurant.

One place where we did get to spend time observing plants more closely was the Zapata Swamp in the province of Matanzas near the infamous Bay of Pigs. We spent parts of two days (one for plants, one for

birds) in this area, which had a rocky limestone substrate covered with second-growth forest – but practically no swamp in the area we visited. This spot reminded me of the hammocks in the northern Florida Keys. Dominant canopy trees included species familiar to us in subtropical South Florida, such as wild tamarind (*Lysiloma latisiliquum*) and gumbo limbo (*Bursera simaruba*). Understory shrubs included shiny-leaf wild coffee (*Psychotria nervosa*) and bitterbush (*Picramnia pentandra*). The latter species is rare in Miami-Dade County, found almost exclusively in remnants of the old Brickell Hammock that once covered vast areas south of the Miami River along Biscayne Bay and now is reduced to a few postage-stamp-sized parcels.

A smaller shrub at that site that is familiar to many South Floridians is *Turnera ulmifolia*. This tropical American species has succeeded in naturalizing as a “benign exotic” in our area. Its large, bright yellow flowers resemble big versions of our pretty native herb *Piriqueta cistoides* subsp. *caroliniana*, to which it is related. Common names for the *Turnera* include yellow alder and tropical buttercup (although it's not related to true buttercups in the Ranunculaceae). More intriguing is another common name for this species, ramgoat dashalong. While I was photographing a flower of this species, Horace Thompson, a member of our tour group who is originally from Jamaica and now lives in Florida, walked up and I called the plant by that name. His eyes lit up in recognition of a plant name from his home island. Supposedly, the name comes from the fact that male goats are said to get “frisky” when they have fed on the leaves of this species.

Another interesting shrub in this area was the *Jacquinia aculeata*. With its narrow, sharp-pointed leaves and bright orange fruits, it doesn't look much like our joewood (*Jacquinia keyensis*) of the Florida Keys. The species epithet of this Cuban endemic, *aculeata*, refers to those sharp-pointed leaves, as does one of the local common names of this plant, *Espuela de Caballero*, which loosely translates as “cowboy's spurs,”

This area also produced a sighting of a small calabash tree (*Crescentia cujete*), with its fist-sized fruit hanging directly off the trunk. When dried, these gourd-like fruits are used to make the maracas so often heard as a rhythm instrument in Latin American music.

The previously mentioned Pinar del Rio was a real botanical treasure trove. It was there that we saw distinctive pine-oak forests made up of Caribbean pine (*Pinus caribaea*) and a silvery-leaved oak related to our southern U.S. live oak group and variously called *Quercus cubana* or *Q. oleoides* var. *sagrana*. In these hills, we also saw roads lined with our familiar cocoplum (*Chrysobalanus icaco*) that Raul Verdecia said were used as firebreaks to protect the pine plantations. Our informative lead guide for the trip, Renier Rodriguez, told us that the very name of the province translated as “the pine plantation by the river.”

The province is also known for the fine tobacco grown for Cuba's world-famous cigars. Near Viñales, we hiked through fields of that crop, plus staple food crops of malanga and cassava, to visit a farmer who demonstrated the art of hand-rolling cigars. On this hike, we also got a close-up look at one of the distinctive tobacco-drying barns of the region, with their steeply pointed palm-thatched roofs.

The farmer's little country home sat near the base of a *mogote*, where we got our closest look at some of the plants that hold on for dear life on that steep terrain, including the tall endemic *Bombacopsis cubensis* with its characteristic swollen trunk. Locally called *Ceibón*, it formerly was placed in the silk-cotton family Bombacaceae, which has now, somewhat inexplicably, been lumped into the Malvaceae, the family of hibiscuses.

Other plants on the *mogotes* include cycads and bromeliads. We saw many bromeliad species at numerous places on the tour. Many of these were in the genus *Tillandsia* similar to the ones we know in much of the Florida peninsula.

In Viñales, growing in a resident's yard, Raul Verdecia pointed out a tall, spindly tree with its few long, pinnate leaves all clustered at the top, making it look from a



distance like a palm or a tree fern. He said it was a plant of the *mogotes*, a rare Cuban endemic called *Spathelia brittonii* in the family Rutaceae (the citrus family).

During our trip, the Morning Glory family (Convolvulaceae) was well-represented. In the Zapata region of Matanzas province, we got a good look at pretty white-flowered *Turbina corymbosa* (sometimes called Christmas vine in English), a species also found sparingly in southern Florida. Raul, our botanical guide, says honey made by bees visiting the flowers of this species is highly prized in some of the more eastern provinces of Cuba. In Viñales, we got an up-close look at a smaller pink-flowered morning glory, *Ipomoea tiliacea*, that somewhat resembles our *I. cordatotriloba* in Florida. Like the *Turbina*, it was often viewed along roadsides from the windows of our bus as we sped by.

For me as an orchid lover, this trip was a disappointment. Florida shares 63 of Cuba's more than 300 orchid species, and the island may well have been the seed source of all but one of those. (Only *Calopogon tuberosus*, the grass pink orchid, came the other direction, from North America south across the Florida Straits to Cuba.) However, on this trip, there were very few orchids in evidence, especially in the few wild places we visited.

The first orchid we saw in the wild was in Parque Natural El Cubano outside the city of Cienfuegos in south-central Cuba, which was our port of entry for the tour. It was the ground-growing African-centered *Oeceoclades maculata*, which also has now naturalized thoroughly in the southern half of the Florida peninsula. This orchid has long, mottled green leaves that resemble some species of *Sansevieria*. As in Florida, the old bloom stems were filled with ripening seed capsules, so I'm sure the Cuban plants

are also self-pollinating.

During our hike in the second-growth Zapata forest of Matanzas, we came across a few vine-like plants of a leafy *Vanilla* species, including one with a short inflorescence filled with succulent seed capsules. It resembled *Vanilla phaeantha* of the Fakahatchee Strand in Southwest Florida, but without flowers, it was impossible to assign the plants to a species, although this orchid also is known to occur in Cuba.

The first – and only – blooming native Cuban orchid we finally saw in the wild was the pretty pink-flowered *Bletia purpurea*. This terrestrial species is also native to the Everglades and Big Cypress.

In gardens and at various tourist attractions, we saw flowering plants of *Prosthechea cochleata* (clamshell orchid) and a few plants of little green-flowered *Epidendrum rigidum* in bloom. These are also native to southern Florida. At a few sites, we saw cultivated plants of the shared species *Prosthechea boothiana* (dollar orchid) and *Epidendrum nocturnum* (night-fragrant Epidendrum) and what appeared to be *Cyrtopodium punctatum* (cowhorn orchid) and *Trichocentrum undulatum* (mule's ear orchid). There were no flowers, though, to verify identification.

There were also numerous plants of some of the various *Encyclia* species (a few in fruit) for which Cuba is justifiably famous, but without flowers, it was impossible to determine the species. These are related to our native *Encyclia tampensis*, whose presence in Cuba has never been verified.

The famous Soroa Orchid Garden was a bit of a disappointment. The hilly setting is beautiful, but the facility seems to have fallen on hard times. Most of the orchids we saw in our rather quick tour of the place – especially the ones in flower – were Asian

9. *Ipomoea tiliacea* is a morning glory species frequently encountered in Cuba, like this specimen growing the Viñales Valley.

10. Unique palm-thatched tobacco drying barns sit amid fields of malanga, cassava, sugarcane and other crops in the Viñales Valley. Besides its attractive *mogotes*, the area is renowned for the quality of its tobacco, used to make Cuba's world-famous cigars.

11. The gourd-like trunk-borne fruits of the calabash (*Crescentia cujete*) like this one in the Zapata Swamp forest are used to make the maracas so familiar as rhythm instruments in much Latin American music.

12. A large cacao pod matures on the trunk of a *Theobroma cacao* tree in the Botanical Garden of Sisters Carmen & Caridad in Viñales. The seeds inside the pod are the source of our beloved chocolate.

13. The morning glory relative *Turbina corymbosa* (sometimes called Christmas Vine in English) is occasionally seen in southern Florida, but it was frequently encountered by the group in central and western Cuba.

14. *Morinda royoc*, shared by Florida and Cuba, is called mouse's pineapple or cheese plant because of its fruits, like this one seen in the Zapata Swamp forest.



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exotics, things like *Spathoglottis plicata* (which has naturalized in Cuba and is beginning to naturalize in Florida because of its use in landscape plantings) and *Arundina graminifolia* (the tall bamboo orchid, which has naturalized in Hawaii and may be doing so in Cuba). There were also vandaceous orchids such as *Acampe longifolia*, a *Renanthera* species, *Vanda* intergeneric hybrids, the terete-leaved hybrid *Papilionanthe* (formerly *Vanda*) Miss Joaquim, and *Phalaenopsis* hybrids.

Early in our tour, in Cienfuegos province when we stopped to look at the rare *Copernicia brittonorum* palms, we saw flowering plants of a vining subshrub that has a small association with a few of Cuba's orchids. This was a member of the genus *Stigmaphyllon* with bright yellow flowers. The plant is in the family Malpighiaceae, many members of which are pollinated by oil-collecting bees. A few miniature orchids of the Antilles in the genus *Tolumnia* (formerly called the "equitant oncidiums") produce flowers that mimic *Stigmaphyllon* flowers to lure pollinators to visit in the hope of gathering the needed oils. But the orchid offers no reward. Instead, if it's lucky, the orchid gets pollinated in the process. One such yellow-flowered *Tolumnia* in Cuba is *T. guibertiana* of central and western Cuba. The somewhat similar yellow-flowered *T. lemoniana* also is found throughout the country. Florida also has a native *Tolumnia*, the highly endangered *T. bahamensis*, but it has white flowers.

Cuba is not immune to the problem of invasive exotics that also plagues Florida. Of course, there are the usual suspects: *Melaleuca quinquefolia*, Australian pines (*Casuarina* species) and Brazilian pepper (*Schinus terebinthifolius*). But one of the biggest culprits is an *Acacia* relative named *Dichrostachys cinerea* and locally known as *Marabu*. It fills acres and acres of disturbed land such as pastures and fallow farm fields. Raul says it is very difficult – and very expensive – to bring under control. We should hope that this species does not become established in Florida, although it's already been vouchered for Polk and Lake counties in Central Florida and in South Florida in Palm Beach and Miami-Dade counties as well as the Florida Keys, according to the University of South Florida's online *Atlas of Florida Vascular Plants*.

Cuba also has some surprising invasive exotics, among them African tulip tree (*Spathodea campanulata*) and purple allamanda/Madagascar rubbervine (*Cryptostegia madagascariensis*).

Oddly, Cuba's national flower is also an exotic. *Hedychium coronarium* of the ginger family is native to tropical Asia. Cubans call it *Mariposa*, which means "butterfly," because the fragrant flowers resemble pure white butterflies. Florida has the same situation – our state flower, the orange blossom, is also non-native.

About the author

Chuck McCartney is a fourth-generation South Floridian and a longtime member of the Florida Native Plant Society. His special interest is the wild orchids of his native South Florida and the Southern Appalachians, and he often speaks on these subjects to orchid societies, native plant groups, garden clubs and natural history organizations.