

An Introduction to the Palms of Cuba

by Paul Craft

Cuba is so close and yet so far away for us here in Florida as well as the rest of the USA. It maintains a mystique that extends to its flora, including its palms. Few of the palms have ever been cultivated here or anywhere else in the world. The few that have been cultivated have appeared to do well and are some of the most beautiful palms in the world.

To understand the palms of Cuba, one must understand the land itself. Cuba is an island that is 720 miles long and averages 50 miles across. It is made up of chunks of land that broke off the top of South America and drifted north to its present location. Over the eons, a land bridge formed for a time with the Yucatan that along with migratory birds and winds have resulted in the migration of various plant life between Cuba, Florida, Central America, South America and the Greater Antilles to create the diversity that exists today.



The mogotes of Western Cuba

Mountain ranges extend through different parts of the country. There are lowland savannas, coastal swamps, and smaller hilly areas. The highest mountain is over 6000 feet in a range that features a montane habitat similar to what you would find in South or Central America. The coastal cayes along the north coast are identical to what Florida was like before man built all those condos along the coast. In the western end of Cuba species grow that also grow in the Yucatan.



Copernicia baileyana in habitat

The mountains are high enough in the east end of the island to interfere with clouds that bring the rain, so rainfall amounts vary depending on the area. There are dry desert-like areas such as Guantanamo Bay, montane cloud forest areas in the Sierra Maestra Mountains and everything in-between.

Soils can vary throughout Cuba as well. Mogotes (solid limestone hills) rise up from fertile red clay soils. Sandy areas, very poor in nutrients, are scattered generally close to the coasts. Black, heavily organic soils can also be found. The most interesting land feature is the serpentine areas found scattered through the length of Cuba, which give rise to the most unusual and diverse plant species. Serpentine soils contain toxic levels of the elements Magnesium, Nickel, and Iron. Plants should have no business growing in such soil, but certain plants,

including palms, have evolved and adapted to these soils making them the most interesting areas to study for their diversity. These serpentine areas vary in their size and age meaning that all areas contain a few of the same species, but each area contains unique species that grow only in that locale.

Temperatures stay fairly consistent throughout Cuba, but because of the elevation of some of the mountain ranges, temperatures can drop to as low as the mid to high 30's some nights in the winter. Near the tops of these ranges, temperatures remain consistently lower year round, which means the plants that grow there may not do well in hotter lowland areas.

From all of this discussion, it is easy to understand why there is such diversity in the plant life in Cuba. It is a fascinating place to study plants with a great deal of study yet to be done.

A list of Cuban palms was compiled in the late 1990s by the two top palm researchers in Cuba, Celio Moya Lopez and Angela Leiva Sanchez, which has been modified after more taxonomic studies. Currently, the genera *Coccothrinax* and *Copernicia* are in the greatest need of taxonomic work. Following is the current list of Cuban palms as of this writing. It should be understood, as more taxonomic work is undertaken, this list will change.

Here is the list consisting of 98 taxa under 16 genera:

<i>Acoelorrhaphe wrightii</i>	<i>Coccothrinax litoralis</i>
<i>Acrocomia aculeata</i>	<i>Coccothrinax macroglossa</i>
<i>Acrocomia crispa</i>	<i>Coccothrinax microphylla</i>
<i>Bactris cubensis</i>	<i>Coccothrinax miraguama</i>
<i>Calyptronoma plumeriana</i>	<i>Coccothrinax miraguama subsp. arenicola</i>
<i>Coccothrinax acunana</i>	<i>Coccothrinax miraguama subsp. havanensis</i>
<i>Coccothrinax alexandri</i>	<i>Coccothrinax miraguama subsp. roseocarpa</i>
<i>Coccothrinax alexandri subsp. nitida</i>	<i>Coccothrinax moaensis</i>
<i>Coccothrinax baracoensis</i>	<i>Coccothrinax munizii</i>
<i>Coccothrinax bermudezii</i>	<i>Coccothrinax muricata</i>
<i>Coccothrinax borhidiana</i>	<i>Coccothrinax nipensis</i>
<i>Coccothrinax camagueyana</i>	<i>Coccothrinax orientalis</i>
<i>Coccothrinax clarensis</i>	<i>Coccothrinax pauciramosa</i>
<i>Coccothrinax clarensis subsp. brevivolvia</i>	<i>Coccothrinax pseudorigida</i>
<i>Coccothrinax crinita</i>	<i>Coccothrinax pumila</i>
<i>Coccothrinax crinita subsp. brevicrinus</i>	<i>Coccothrinax pseudorigida</i>
<i>Coccothrinax cupularis</i>	<i>Coccothrinax rigida</i>
<i>Coccothrinax elegans</i>	<i>Coccothrinax salvatoris</i>
<i>Coccothrinax fagildei</i>	<i>Coccothrinax salvatoris subsp. loricata</i>
<i>Coccothrinax fragrans</i>	<i>Coccothrinax savannarum</i>
<i>Coccothrinax garciana</i>	<i>Coccothrinax saxicola</i>
<i>Coccothrinax Guantanamoensis</i>	<i>Coccothrinax torrida</i>
<i>Coccothrinax gundlachii</i>	<i>Coccothrinax trinitensis</i>
<i>Coccothrinax hiorami</i>	<i>Coccothrinax victorini</i>
<i>Coccothrinax leonis</i>	<i>Coccothrinax yunquensis</i>

<i>Coccothrinax yuraguana</i>	<i>C. brittonorum</i> x <i>C. hospita</i>
<i>Coccothrinax</i> x <i>angelae</i>	<i>Copernicia</i> x <i>shaferi</i>
<i>C. crinita</i> subsp. <i>brevicrinus</i> x <i>C.</i>	<i>C. cowellii</i> x <i>C. hospita</i>
<i>miraguama</i>	<i>Copernicia</i> x <i>sueroana</i>
<i>Cocos nucifera</i>	<i>C. hospita</i> x <i>C. rigida</i>
<i>Colpothrinax wrightii</i>	<i>Copernicia</i> x <i>textilis</i>
<i>Copernicia baileyana</i>	<i>C. baileyana</i> x <i>C. hospita</i>
<i>Copernicia brittonorum</i>	<i>Copernicia</i> x <i>vespertillonum</i>
<i>Copernicia cowellii</i>	<i>C. gigas</i> x <i>C. rigida</i>
<i>Copernicia curbeloi</i>	<i>Gaussia princeps</i>
<i>Copernicia curtissii</i>	<i>Gaussia spirituana</i>
<i>Copernicia fallaensis</i>	<i>Hemithrinax compacta</i>
<i>Copernicia gigas</i>	<i>Hemithrinax ekmaniana</i>
<i>Copernicia glabrescens</i>	<i>Hemithrinax rivularis</i>
<i>Copernicia glabrescens</i> var. <i>ramosissima</i>	<i>Hemithrinax rivularis</i> var. <i>savannarum</i>
<i>Copernicia hospita</i>	<i>Leucothrinax morrisii</i>
<i>Copernicia humicola</i>	<i>Prestoea acuminata</i> var. <i>montana</i>
<i>Copernicia longiglossa</i>	<i>Pseudophoenix sargentii</i>
<i>Copernicia macroglossa</i>	<i>Roystonea lenis</i>
<i>Copernicia molineti</i>	<i>Roystonea maisiana</i>
<i>Copernicia oxycalyx</i>	<i>Roystonea regia</i>
<i>Copernicia rigida</i>	<i>Roystonea stellata</i>
<i>Copernicia roigii</i>	<i>Roystonea violacea</i>
<i>Copernicia yarey</i>	<i>Sabal domingensis</i>
<i>Copernicia yarey</i> var. <i>robusta</i>	<i>Sabal maritima</i>
<i>Copernicia</i> x <i>burretiana</i>	<i>Sabal palmetto</i>
<i>C. hospita</i> x <i>C. macroglossa</i>	<i>Sabal yapa</i>
<i>Copernicia</i> x <i>occidentalis</i>	<i>Thrinax radiata</i>

This is a rather large number of species for such a relatively small area the size of Pennsylvania. As stated previously, *Coccothrinax* and *Copernicia* are in need of a great amount of taxonomic work. The greatest problem in researching these genera is the hybridization and variability that can occur within some species. In *Copernicia*, many of the natural hybrids listed above were initially considered to be distinct species until further field work was done. As might be expected, seed from these hybrids will produce a wide range of offspring. For example, seed of *Copernicia* x *burretiana* will produce plants that look like *C. macroglossa*, *C. hospita*, and everything in-between. There are areas in Cuba where the hybrid populations are so diverse that it is difficult to understand what the original species were that produced these offspring. Some of the plants seen in these populations are truly extraordinary. It is exciting to see this evolution occurring as eventually a new species may be born from this melting pot of DNA. The same occurs in *Coccothrinax*, but not so graphically. It is perhaps more the case that a *Coccothrinax* species is quite variable and when looking at the two extremes, it appears that they are two different species. Hybrids do also occur quite frequently though and it will be a

difficult genus to do a study of and finally understand. No one seems very eager to attempt it just yet.

Many of the Cuban species of palms will grow well here in South Florida, as well as elsewhere in the world. Some species do require special cultural and/or horticultural conditions because of the habitats they grow in. Such species as *Bactris cubensis*, *Hemithrinax rivularis*, *Copernicia cowellii*, *Coccothrinax pseudorigida*, and others from serpentine soils may not do well here because of the habitat they grow in. It will take time to see if they can adapt to existing conditions in cultivation or if certain soil amendments that better mimic serpentine soil will be required. All are well worth trying though, if and when they ever become available for cultivation.

There is not enough room here to go into detail about each species of Cuban palms, but I would like to mention a few. So many of the species are outstanding in their beauty, it is hard to pick and choose so I will mention just a handful that are just entering into cultivation.



Roystonea violacea in Cuba.
Photo by Duanny Suárez.

There are two *Copernicias* that are the two extremes in size but very much equal in their beauty. *Copernicia fallaensis* is the largest and grandest of all *Copernicias*. It is similar in appearance to *Copernicia baileyana* but is even larger than that majestic palm. The smooth columnar trunks are whitish to light gray in color. The crown of slightly diamond shaped leaves is almost always silvery blue in color. Trunks can be up to 2.5 feet in diameter and leaves 6 feet or more across. Height can reach 65 feet. *Copernicia fallaensis* is now known to only one locale

and is considered heavily endangered because it is not in a protected area. There are a few in cultivation now reaching 20 feet or more and hopefully will begin seeding before long.



Copernicia fallaensis in habitat.

Copernicia cowellii is perhaps the most beautiful species in the genus. It grows in serpentine soils and that is perhaps the reason for its striking coloration. The tops of the leaves are a medium to dark green while their undersides are powdery blue. This is the only species of *Copernicia* that exhibits two colors as all other species

have the same coloration on both sides of the leaves. The leaves are held very stiffly in a tight cluster giving the crown a ball-like appearance. Younger specimens hold a petticoat of dead leaves down to the ground while taller palms show off a smooth trunk about 6.5 inches in diameter. These palms only grow to about 10 feet and begin flowering when less than 3 feet tall. The entire crown of leaves is perhaps only slightly larger than 5 feet. This is definitely a palm that once seen will never be forgotten. It is one of the gems of Cuba. Some seed came into cultivation in the mid to late 1990s and there are a few plants now growing that are all of perhaps 12 inches tall. It is an extremely slow grower considering *Copernicia fallaensis* that entered cultivation at the same time are over 20 feet tall with a few up to 30 feet.



Copernicia cowellii in serpentine habitat

It is difficult to pick just a couple of *Coccothrinax* to discuss, as there are many unique and beautiful ones. Perhaps one of the most beautiful is *Coccothrinax borhidiana*. It reminds one of a miniature *Copernicia macroglossa*. Overall height is only 8 - 10 feet, with a smooth stem that is 4 - 5 inches in diameter. Leaves are not deeply divided, and appear orbicular. The crown of leaves is held very closely and stiffly with old leaves hanging down, giving the appearance of a petticoat. *C. borhidiana* is also one of the most endangered Cuban palms occurring in a small coastal area on the north coast. There are a number in cultivation now that are setting seed. It seems to hybridize easily with other *Coccothrinax*, so care needs to be exercised to guarantee pure seed.



Coccothrinax borhidiana in habitat

Coccothrinax pseudorigida is another absolute beauty. It is one of two clumping *Coccothrinax* species in Cuba. It grows in a dense clump 6 to 8 feet tall with very stiff, deeply divided orbicular leaves. It has a shrub-like appearance and grows next to *Copernicia cowellii* in serpentine soils.

Leaves are bright green on top and whitish silver underneath. Trunk fiber is very thick and spiny. Success in growing this species in cultivation has been very limited. Only a few have

survived after 20 years of growing and stand only about 6 inches tall. It may be one of those species that require soil amendments to better imitate the serpentine soil they grow in.

A recent introduction into cultivation that shows great promise is *Coccothrinax alexandri*. It grows on the north shore of Cuba in limestone rock and has been in limited cultivation since the late 1990s. Height can reach 90 feet with a stem diameter of only 4 inches. The orbicular leaves are deep green on top and silver beneath. Growing within 100 yards of the ocean indicates the palm to be very salt tolerant and thus far in cultivation it appears to be so. It has not been a fast grower albeit far faster than some other Cuban species and is most likely to do best in very well drained



Clustering *Coccothrinax pseudorigida* in its serpentine habitat



Coccothrinax alexandri growing on the north coast of Cuba in solid limestone rock

alkaline rock or sands. It is a highly ornamental palm that should prove quite popular once plants reach some size. Currently, cultivated specimens are no more than 3 or perhaps 4 feet tall.

Hemithrinax ekmaniana is another superb palm that is also unfortunately endangered because of its very limited habitat. It grows on 3 isolated limestone mogotes in an otherwise flat savanna region. The entire habitat is unique and several species of plants are found there and nowhere else. *Hemithrinax ekmaniana* is a small palm measuring no more than 8 feet tall and grows from cavities in solid limestone rock. Leaves are a medium green on top and silvery underneath. There is fiber attached to the leaf petioles that give it a bit of a hairy appearance amongst the leaves. Petioles are short and leaves are held stiffly. Old leaves hang in a petticoat giving the crown a ball-like appearance. From afar these palms look like lollipops

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Leaf-crown of *Coccothrinax alexandri*



Hemithrinax ekmaniana in habitat. Photo by Duanny Suárez.

sticking up from the mogotes. Seed that entered cultivation in the early 1990s has produced a few plants that are seeding, especially at Montgomery Botanical Center in Miami, Florida. These seed are being distributed and in turn are producing more and more plants. They are slow growers and need high alkaline, well drained soils to grow well.

Acrocomia crispa is the one Cuban belly palm that is known in South Florida. *Colpothrinax wrightii*, or commonly called barrigona palm (bottle palm), is the other Cuban belly palm. It is easy to see why this unusual and beautiful palm was at one time considered to be a *Pritchardia* as it shares a common ancestor. The belly is very pronounced and only occasionally does it produce a second belly. Trunks over time become very smooth and leaves are a dark green on top while light silver beneath. It is a very useful palm in Cuba with leaves used for roofing thatch and stems used as corner posts for buildings. Seed has entered cultivation

with the palm proving to be a difficult grow. It is very slow when young and it is not unusual to have just a very few survive the first 5 – 6 years of life. There does come a time though when this handful of survivors start to speed up and become robust growers. There are only a few in cultivation that have managed to get to this point. It is a palm well worth trying and perhaps someone will figure a way to get more to survive their first few years of life.

That is a small taste of the palms of Cuba and hopefully gives a little insight into a fascinating country and the palms that inhabit it. There will be additional information to come as more is learned and perhaps in the not too distant future more of the Cuban species will be available for cultivation.



Colpothrinax wrightii in habitat in Western Cuba



A mogote that *Hemithrinax ekmaniana* grows on.
Photo by Duanny Suárez.



Acrocomia crispa cultivated
in Cuba