

In Quest of the Big Seed (With Observations Along The Way)

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The more Phyllis Sneed and I learn about the palms the more we love them. Our appetite for additional species seems almost insatiable. But there comes a time when one sits back in contemplation about some of the really "hard to get ones."

Thanks to the Seed Bank, all members of The Palm Society have the privilege of acquiring not only readily available species but many rare ones, too. More recently, thanks especially to Lucita Wait and DeArmand Hull and to others who have made contributions and expeditions, a number of exotic species have been acquired from far places and distributed. But, as a practical matter, the Seed Bank can't be expected to furnish some species, especially those having fruits too large for collection on a scale for distribution.

Having said that, we get to the point of going after the largest seed in the

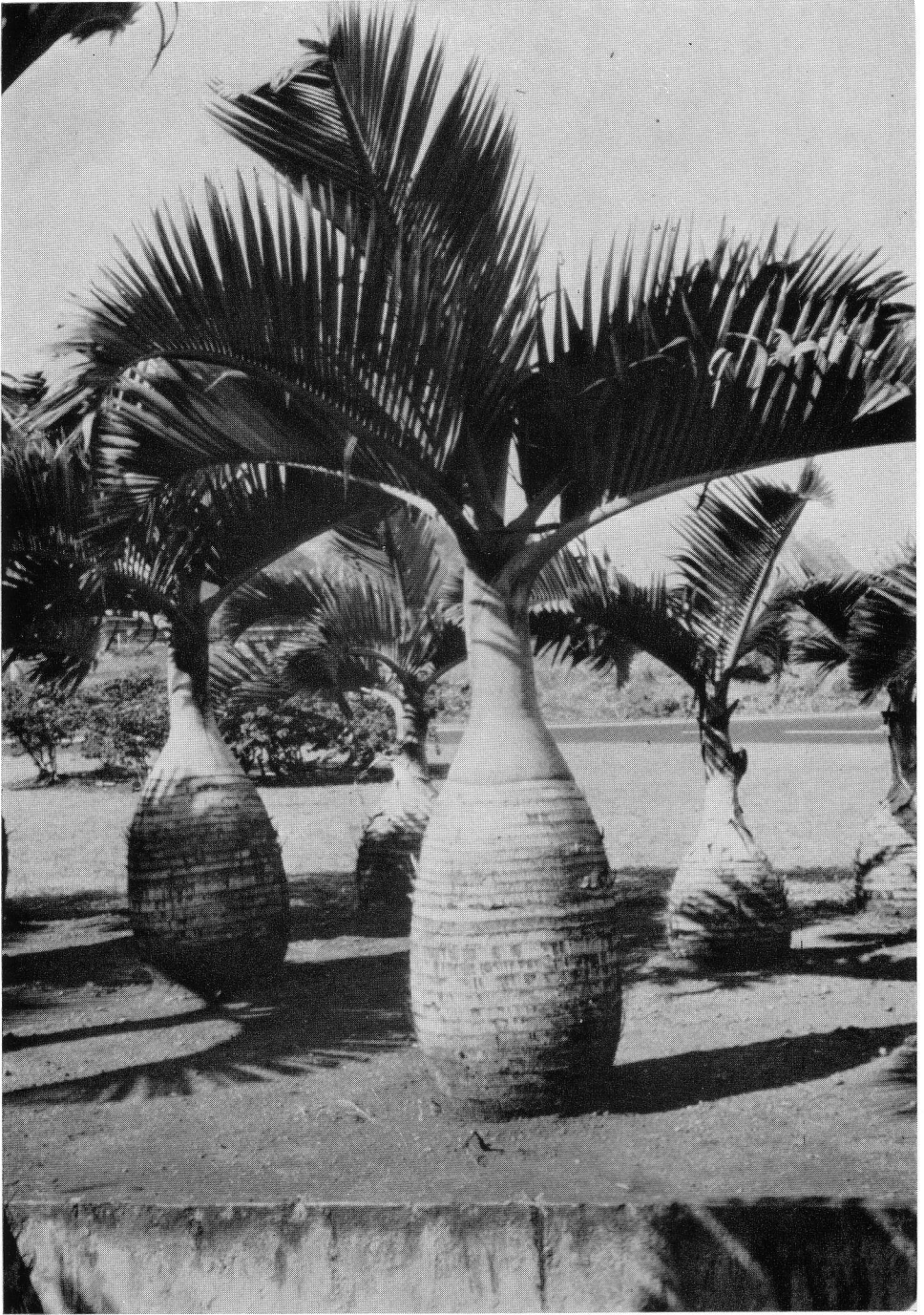
plant kingdom, that of *Lodoicea maldivica* (coco-de-mer). On our way we will interlace the account with some up-to-date and, we hope, informative observations.

We left Montego Bay 28 September, 1974, nonstop to London, arriving early the 29th. We had ample time in London to visit the magnificent Palm House and other attractions at Kew Gardens before leaving, late evening, nonstop to Nairobi, then on to Mauritius.

The "big seed," of course, is indigenous to those delightful little wisps of granite islands, the Seychelles, situated in the Indian Ocean midway between Africa and India. Going that far, we couldn't pass up a chance to visit Mauritius, although it was perhaps some 3,000 miles out of our most direct way to the Seychelles. Mauritius is about 1,900 air miles southeast of Nairobi and some 500 miles east of Madagascar in the Indian Ocean.



1. *Mascarena lagenicaulis* planting on highway near University of Mauritius.



2. Near-perfect bottle specimen of *Mascarena lagenicaulis* in the planting shown in Fig. 1.



3. Avenue of relatively young *Verschaffeltia splendida* in the Royal Botanic Gardens at Pamplemousses, Mauritius.

We flew over Madagascar with something like a heavy heart. One doesn't enjoy being that close to a huge tropical island, the indigenous source of so much of the world's finest tropical flora, without stopping. But Madagascar has had, and still has, apparently, a reputation for being somewhat inhospitable to "foreigners." We found Mauritius most friendly and enjoyed meeting the people there.

Thanks to our Editor, Dr. Moore, and Stanley Kiem of the Fairchild Tropical Garden in Miami, we had corresponded with several persons in Mauritius. Dr. H. R. Julien, Curator of the Herbarium, Sugar Industry Research Institute at Reduit, busy as he is, was extremely helpful, as was his father, Mr. H. Julien, M.B.E., in acquiring seeds for the Seed Bank. Without their help we couldn't have assembled a sufficient quantity for

Seed Bank purposes. It should be noted that Dr. Julien's father, for many years the Director of the Royal Botanic Gardens at Pamplemousses, went out of his way to introduce us to the Gardens. Not only that, but he has created much beauty in Mauritius with his landscaping for the government and others. This seemed important to us in an island where the indigenous vegetation to a very large extent has given way to the production of sugar cane. A new superhighway between Port Louis (the capital) and Curepipe (largest city) has been landscaped beautifully by Mr. Julien. Palms are not the only motif, but see the group of *Mascarena lagenicaulis*, the bottle palm, in Fig. 1. Phyllis and I were thrilled with this sight, which is located in a "round-about" on the new highway, only a short distance from Reduit and the University of Mauritius. Figure 2



4. Dr. R. E. Vaughan and Phyllis Sneed in the garden at his home in Phoenix, Mauritius.

shows a closer view of this magnificent small palm which is indigenous to the Mascarene Islands.

We liked the garden at Pamplemousses, which has a large collection of palms including those indigenous to the Mascarenes. As we look back, I think we were most fascinated with an avenue of relatively young *Verschaffeltia splendida* (Fig. 3), which is indigenous to the Seychelles, not Mauritius. Later in the Seychelles we saw many mature

specimens of *Verschaffeltia splendida*, but never out in the sun, lined up in a row for a picture.

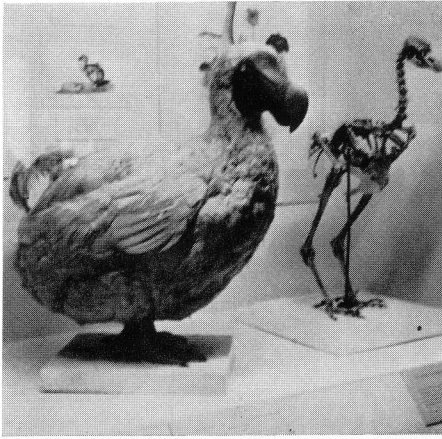
Pamplemousses has *Mascarena lageni-caulis*, too, but in our judgment the stands there were not as attractive as the more recent plantings down south on the superhighway. This garden deserves much more attention than we can give it here, except to say that, unfortunately, no catalog of the garden's plants is available to the visitor, although the garden itself certainly is diverse enough to justify one.

While in Mauritius we were delighted with the opportunity to meet Dr. R. E. Vaughan, botanist. At one time he helped Stanley Kiem in the collection of seeds for Fairchild Tropical Garden, and through Stanley's introduction we met Dr. Vaughan. We certainly appreciated his attention to us in Mauritius and his courtesy in showing us around the delightful garden at his home in Phoenix, a suburb of Curepipe. The picture in Fig. 4 does not do Dr. Vaughan justice but it was taken because he and Phyllis were "caught" in front of a palm that has borne his name.

While in Curepipe we visited the interesting botanic garden there. It's small, compared with Pamplemousses, but has some fine species of palms including one that exists nowhere else! Helping us at the garden in Curepipe was Mr. T. A. M. Gardner, M. A., of the Forestry Service, shown here with *Acanthophoenix crinita* (Fig. 5). Not only did he take time to help us around the Garden and in acquiring seeds, but he cares about palms and is a current member of The Palm Society. Later when we went to work packaging seeds to mail back to the Seed Bank we were extremely grateful to Mr. Joseph Gueho of the S.I.R.I., who also has accompanied Dr. Moore on expeditions in the Mascarenes.



5. *Acanthophoenix crinita* and Mr. T. A. M. Gardner of the Forestry, Service, Curepipe,



6. Restoration of the dodo in museum, Port Louis, Mauritius.

In the few days we were there we explored much of Mauritius in a rented car which took a few wrong turns, but the roads are excellent and the people most helpful all over the island. English is generally understood and we had no serious communication problems. There are several good, modern hotels. We enjoyed downtown Port Louis with its avenue of royal palms and the interesting museum where one can see a restoration of that famed, albeit extinct, indigene of Mauritius, the dodo bird. Frankly, our preference for indigenous things there is *Mascarena lagenicaulis*, with *Hyophorbe verschaffeltii*, *Acanthophoenix crinita*, and the species of *Lantania* in close competition. Nevertheless, as one contemplates the bird (see Fig. 6), imagination takes over and one can wonder about a number of things, such as a fantasy of the flora that might have surrounded the living bird.

Leaving Mauritius on October 5, we arrived at the new airport on Mahe, Seychelles after a three-hour flight. The next day we called Mr. Guy Lionnet, with whom we had corresponded at Dr. Moore's suggestion. He had come to the Seychelles from Mauritius some 30 years

ago and was the Director of the Seychelles Department of Agriculture for 10 years. It is not possible to thank Guy Lionnet enough for the splendid things he did to make our visit to the Seychelles so pleasant and so productive in the way of seed collection. Before we left the islands we not only had the "big seed" in the mail but also a great many fresh seeds of the other Seychelles palms—*Deckenia nobilis*, *Nephrosperma vanhoutteanum*, *Phoenixophorium borsigianum*, and *Verschaffeltia splendida*—on their way to the Seed Bank. Only *Roscheria melanochaetes* had eluded us. More about that later. First, a few notes.

Until completion of the Seychelles International Airport in 1971, it wasn't a quick and easy trip to these islands. Over the years, the literature is laced with travelers' stories about the fabulous coco-de-mer nut (e.g., see the notes on "Traveling Members" in *Principes* 15: 141, 1971). The Seychelles remain remote but they can be reached by air comfortably within relatively few hours from any international airport in the world. Moreover, hotel accommodations, particularly in Mahe and now, Praslin, are quite modern.

The islands have been covered in the literature (see especially the delightful book by Guy Lionnet, *The Seychelles*, 1972, published in the United States by Stackpole Books, Harrisburg, Pa., and in Great Britain by David Charles Publishers Ltd.) as has the Vallée de Mai on Praslin Island and the coco-de-mer (see *Principes* 7: 44–54, 1963 and *Principes* 9: 134–138, 1965; also Guy Lionnet's *Coco-de-Mer, the Romance of a Palm*, 1973 ed. Imprimerie Saint Fidèle, Seychelles). Accordingly, the observations here are intended to supplement and update rather than duplicate.

Guy Lionnet oriented us in Victoria, the colorful capital of the islands, then

took us through its small (15-acre) but very attractive botanical garden situated on a hillside, to which we returned before leaving the islands. Though not much above sea level, the garden has all six endemic palms of the Seychelles and a collection of others, most notably *Cyrtostachys renda*, *Corypha umbraculifera*, *Dictyosperma*, and *Mascarena lagenicaulis*. There is also a good collection of flowering ornamentals, together with *Araucaria heterophylla* and the magnificent *Pandanus hornei* (Vacoa parasol) which flourishes in the Vallée de Mai along with the coco-de-mer. Several clusters of *Cyrtostachys renda* were most impressive, and we were intrigued by a young cultivated coco-de-mer in a cage. But we had seen these palms and it was the garden's lone specimen of *Roscheria melanochaetes* that excited us the most. Although this delightfully attractive small palm prefers a higher elevation than the Victoria garden affords, it was accessible to admire and photograph there (Fig. 7). Unfortunately it wasn't in fruit and, as we soon were to learn, viable seeds of *Roscheria* are elusive and difficult to obtain.

After a meeting with the Seychelles' most cordial and able Director of Agriculture, Mr. S. M. Savy, arranged for us by Guy Lionnet, we were not only permitted to collect seeds for the Seed Bank but given every encouragement to do so. Armed with this, our enthusiasm grew, and we drove the few miles up into the central highlands of Mahe to meet Willy André, Forest Officer in the Morne Preserve area. This is beautiful country and the region where *Roscheria* occurs on Mahe. We went through the bush in two sections of the mountain slopes and saw stands of *Roscheria* (see Fig. 8) but no seeds! Willy André certainly did his best to help us find them but it wasn't the right time. *Roscheria* seeds



7. *Roscheria melanochaetes*, Botanical Garden at Victoria, Mahe, Seychelles.

are extremely small, easily blown away by wind, and readily lost if they fall in undergrowth on the ground. Not only that but the viability of fresh seeds apparently is short, so it seems likely that this palm will remain rare in cultivation.

After three most enjoyable days on Mahe we were ready to go on to the source of the big seeds. Praslin Island lies 24 miles northeast of Mahe. Though small, about 14 square miles, what it lacks in size is far more than compensated for by its beauty and the presence of the incredible Vallée de Mai, itself an area of only 46 acres. To get there from Mahe one can go daily by ferry, a three hour trip, or by regularly scheduled flight in small aircraft in 15 minutes. We flew.

From the Praslin air strip we were bused to our lodging in the newly



8. Willy André and Phyllis search for seeds of *Roscheria* in an indigenous area on Mahe, Seychelles.

opened Paradise Hotel, a very pleasant cottage-type facility on a good white sand beach at Cote d'Or. There we were able to rent a Mini Moke and set out immediately to locate Mr. Philippe de Lafontaine, Senior Forest Ranger on Praslin. One really can't get too lost on Praslin but we managed to drive past the station and had to backtrack to find Philippe. He was most cordial, and after discussing and lining up our seed-collecting mission we drove the short distance to the Vallée de Mai entrance and proceeded on an orientation walk through the Vallée. Philippe has a

mastery of the flora there and the introduction he gave us was exceedingly helpful as a prelude to several return excursions we made later. Not only that but he has mastered the call of the rare Praslin black parrot which inhabits the Vallée. Although we didn't decoy them close enough to photograph, we did see two on the wing in the distance and heard them frequently.

It would be inappropriately presumptuous of us to pretend that we can describe the Vallée de Mai. Words are inadequate, and we have yet to see pictures that capture what it is really like.



9. Young coco-de-mer, Philippe de Lafontaine, and Phyllis on pathway in Vallée de Mai, Praslin, Seychelles.



10. *Verschaffeltia* vies with *Lodoicea* in the Vallée de Mai.

The best we can do is to say that, to us, it was awesome and primeval. It has to be a botanical wonder of the world. Certainly nothing else like it exists on earth, and it should be a "must" for traveling palm enthusiasts.

One can walk the main circular path in the Vallée in perhaps an hour, which is what many of the Seychelles tourists do, going to Praslin from Mahe and returning the same day. The palm devotee can spend many hours in the Vallée marveling at its grandeur and antiquity. The dirt paths are only three to four feet wide following the contours (see Fig. 9) with the slope on the descending side plunging steeply to a stream at the bottom of the Vallée. The path itself descends to the bottom and across the small stream to continue up on the other side. The paths are kept swept clean but very little else is disturbed. Every effort is made to keep the Vallée natural, so palm and other debris accumulates on the ground throughout the area. This poses a fire hazard so smoking is discouraged and fire breaks have been constructed.

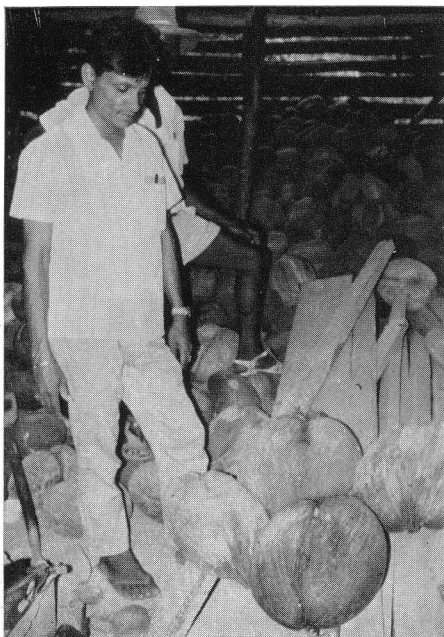
The Vallée has all the palms endemic to the Seychelles and some that were introduced, including *Cyrtostachys renda*. But *Lodoicea maldivica* completely overwhelms everything else. There are at least 4,000 of them in the Vallée—from seedlings on up to the 800-year-old giants that tower above the others at more than 100 feet. Although difficult to photograph because of the density of other growth, magnificent old specimens of *Deckenia nobilis* and *Verschaffeltia splendida* assert themselves through the maze of *Lodoicea* (Figs. 10, 11). *Phoenicophorium* also is much in evidence, with many young trees noticeable along the upper slopes from the pathways. At one juncture, a side path diverges from the main trail down to the floor of the Vallée. This leads past a stand of very old *Verschaffeltia splendida*, rising up out of the natural debris. The stilt roots of these trees seemed almost as tall as the entire height of the row of much younger *Verschaffeltia* we had photographed earlier in Mauritius.

Sandwiched in with our dallying along the paths through the Vallée we enjoyed the beach at Cote d'Or, explored Praslin in the Mini Moke and of necessity discovered the one petrol source with its quaint glass-bottle-pump dispenser. Meanwhile, seeds of *Nephrosperma*, *Deckenia*, *Phoenicophorium*, and *Verschaffeltia* had been collected and readied for packaging. Again, *Roscheria* was elusive. It remained to get the "big seed."

Fortunately, to get *Lodoicea maldivica* one does not probe the bush, shake any trees hoping seeds will fall, or shinny up them to hack off an inflorescence. How could you handle seeds each weighing 20 to 40 pounds, or more, which have taken up to seven years on the tree to mature, and some



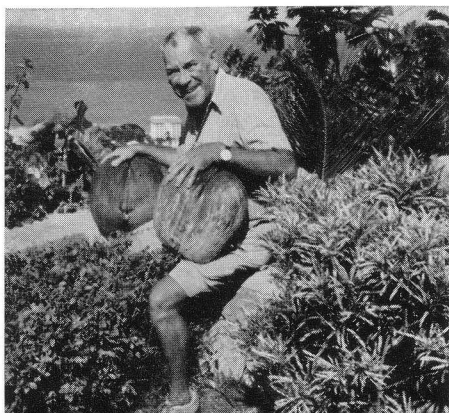
11. *Deckenia* emerges above younger *Lodoicea* in the Vallée de Mai.



12. *Lodoicea* seeds assembled after collection in the Vallée de Mai. Philippe de Lafontaine and assistant view the four seeds selected for mailing to Jamaica and Florida.

that are contained in two- or three-seeded fruits weighing much more?

Through its Forestry Department under the Director of Agriculture, the Seychelles government collects the available seeds in the Vallée de Mai and assembles them centrally. Some 2,000 or more mature nuts are brought in annually. They are sold, as a source of revenue, to souvenir and seed collectors as well as furnished to local craft industries for manufacture of curios. In addition, up to perhaps 1,000 nuts each year are consumed green by visitors to the islands and others who wish to taste the "forbidden fruit," which in the immature nut is a jellylike substance. No loss to the Vallée de Mai accrues as a result of this deflection of seeds. Indeed it is difficult to see how the Vallée could support much further proliferation of



13. *Lodoicea* seeds (average weight 33 lbs.) and the author back in Jamaica.

Lodoicea, notwithstanding the palm's slow growth.

We joined Philippe de Lafontaine and some of his assistants at what we dubbed the big-seed crib, which was reminiscent of an early Missouri corn crib. Though ignorant of the characteristics of a viable *Lodoicea* seed, we wanted two of them, a male and female, hopefully, if we are to propagate the species back in Jamaica. We had a request from Dr. U. A. Young, currently President of The Palm Society, to get one seed for him, and we wanted a fourth to send back to the Seed Bank for Lucita Wait to dispose of. We depended upon Philippe to select the seeds, all four of which are shown on the board in the crib in Fig. 12. He did his best to select viable seeds, and at the same time determine their sex. We will always be grateful for his decision, whatever the ultimate result may be.

Not content with merely acquiring the "big seed," we wanted to know how it tasted. Was it what the early potatoes thought it was? After considerable hacking and prying into a green nut the "jelly" was extracted. Satisfied with a liberal sampling, we returned to our hotel with a large plastic bag of this

unique and delicately textured jelly which we turned over to the chef with the suggestion that other guests might share it as a dessert.

In October, 1974, the government charge for *Lodoicea* nuts in Praslin was 30 Seychelles rupees (approximately U.S. \$6). Subsequently the rate has been increased to 100 rupees (about U.S. \$20). Then, of course, one has to get them back to Mahe for forwarding to whatever destination.

After three of the most enjoyable and seed-rewarding days in our short collecting experience, we almost overwhelmed the Mini Moke on the drive to the air strip with our luggage, the four coveted "big seeds," and miscellaneous and containers of seeds of the other Seychelles palms. Thanks to the consideration and understanding of Air Mahe

we were not charged overweight on the return trip from Praslin to Mahe. The four big seeds alone averaged over 33 pounds each.

Back on Mahe, Guy Lionnet put us in touch with a forwarding agent who arranged to package the "big seeds" for air freighting—two seeds to Jamaica, two to Florida. When we returned to Jamaica late in October, having gone on to Ceylon (Sri Lanka) from the Seychelles, the big seeds were waiting at the airport. After some delay because of missing clearance papers, we retrieved them from their airport captors and the author couldn't resist posing with them (Fig. 13).

The seeds have been half-buried and caged in our Gully (not Vallée!) and we shall be full of anticipation for some time to come.

(Continued from page 10)

which we hauled them through the surf into the boat. That was all that could be done here; and as I found no place so safe as the one we had left, to spend the night at, I returned to the cove, and having served a cocoa-nut to each person, we went to rest in the boat."

Friday, May 1, "At night, I served a quarter of a bread-fruit and a cocoa-nut to each person for supper." Saturday, May 2, "I served a cocoa-nut and a bread-fruit to each person for dinner."

They were later to obtain a few more coconuts from the natives of this island, but the natives became more unfriendly and attacked the boat and one of the men was killed. All the others who accompanied Bligh arrived at Timor after 44 days at sea and traveling 3600 miles in a small boat. It is irony of some sort that one of the things that set off the mutiny was due to Bligh accusing some of the crew of the Bounty of stealing his *cocoa-nuts*!

CLAIRE C. COONS

WHAT'S IN A NAME?

Attalea (at ta lée a) was taken from the name of Attalus III Philometor, King of Pergamum in Asia Minor from 138–133 B.C. In his later life, Attalus was interested in medicinal plants.

Cornera (cór ner a) honors Edred John Henry Corner (1906–), formerly professor of tropical botany at Cambridge University and author of *The Natural History of Palms* (1966).

Cuatrecasea (quat reh cáh see a) is based on the name of Dr. José Cuatrecasas (1903–) of the Smithsonian Institution, Washington, D.C., who has collected many palms in Colombia.

Jubaea (jew bée a) honors Juba II (about 50 B.C. to 24 A.D.), King of Numidia from 29 to 25 B.C. and subsequently King of Mauretania (both in North Africa). Juba married the daughter of Mark Antony and Cleopatra, was a Roman citizen, and wrote on many subjects, including plants and geography.