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Letter from Chuck Hubbuch of Fairchild Describing the Aftermath of Hurricane Andrew

The following is also reprinted from the January issue of *Principes Minor*, the magazine of the Sydney [Australia] Chapter of the International Palm Society. This is a letter from Chuck Hubbuch to Peter and Lynn Kristensen, which I think we should all take a moment and read.

November 15, 1992

Dear Peter and Lynn,

As I write this, I know you are still on the International Palm Society's Costa Rica tour and I must admit that I envy you. I would love to be there now. It was great to see you both at the IPS Biennial meeting last week. The lectures were informative. But, as you know, the most valuable part of events like this is always meeting new people and seeing old friends.

You asked for more information about the damage to Fairchild Tropical Garden by Hurricane Andrew. As you saw, the Garden is battered and scarred, but recovering nicely. The trees have leaves once again, Birds, raccoons, and staff are starting to go about their normal lives.

Of course, it all began about two and a half months before your visit with Hurricane Andrew's rapid development in the Caribbean. There is so much to tell about the storm itself. It devastated the northern part of the Bahama Islands, although we saw on the tour that the capital city of Nassau was virtually undamaged. The storm hit the southern tip of the Florida peninsula early in the morning on Monday, August 24. The eye passed several miles south of the city of Miami and Fairchild Tropical Garden (FTG). Days later, newspaper writers wrote to say how fortunate

we were that the hurricane struck the area of the Florida coast with the lowest population. I can assure you that the thousands of us who once lived there did not feel so lucky. Officially, the hurricane produced winds of approximately 165 miles per hour. If so, there must have been a lot of tornadoes with much higher winds adding to the destruction produced by the hurricane. On the other hand, we were fortunate that there was very little tidal surge and the storm moved past us quickly. It could have been much worse.

I am glad that FTG did not bear the brunt of the storm. The damage was bad enough as it was. We had to replant or right and brace over 300 palms, including several old *Copernicia baileyana*. So far, only eight of the braced palms have died. To date, we have lost about twenty percent of the palm collection, nearly one thousand palms. Our inventory indicates that only forty-one palm species are completely lost. This still leaves a substantial palm collection of about four thousand palms of over six hundred species.

Over four hundred volunteers poured through our gates to assist in our cleanup and rescue operations. Palm Society volunteers from much of Florida came to help especially from the new chapters in Broward and Palm Beach counties. With their assistance, the Garden was able to re-open to the public on October 3, less than six weeks after the hurricane. We had a very busy weekend as our members and neighbors came to see how we fared. Donations and offers of assistance have come in from around the world.

Scientists and students from over forty institutions in the United States and Europe

came to study the effects and collect research materials from the dead and dying plants. Some of the information, knowledge, and materials they gathered will be used in anatomical studies, taxonomy, and medical research. Undoubtedly, some of it will add to our knowledge of palms.

For example, how many ways can a palm die? I think I saw most of them as we cleared away debris. Small understory plants were crushed under massive trunks and branches. Dwarf coconuts and *Zombia antillarum* clumps are among those that simply broke free from their roots and blew around the ground like large umbrellas. The trunks of many *Livistona* species and *Wodyetia bifurcata* broke off as high as three meters above the ground. The terminal buds of several *Neodypsis decaryi* and some *Phoenix canariensis* simply blew out of the crown, leaving a ring of green lower leaves but no growing point. Crowns were broken from the trunks of palms which were thrown to the ground. Do you remember the *Dictyosperma album*, the "hurricane palm" plants? In the garden, all of the tall plants developed permanent ninety degree curves or they broke. They obviously weren't named for resistance to wind.

Since the hurricane, insect pests and fungal problems have appeared. I expect to see more in these stressed plants. The bitterest losses came after the hurricane, when trucks or heavy equipment drove over surviving plants or when workers' chain saws moved faster than their brains. Admittedly, there have been few of these accidents. They just seemed so senseless. So, I have been busy applying insecticides and fungicides and trying to resist employeeeicide.

Not too surprisingly, palms came through the storm better than most other trees. I am sure you remember the healthy *Veitchia*, *Hyophorbe* and *Roystonea*

plants. They survived and are recovering very quickly, along with low growing species like *Chamaedorea cataractarum* and *Phoenix roebelenii*. Tall, old specimens of *Latania*, *Coccothrinax*, *Copernicia*, and *Thrinax* often blew over. But younger palms survived with little damage.

The rains we had after the hurricane, and during the Biennial, were helpful for the palms. One of the surprises for me was that our underground irrigation system was nearly destroyed. Many of the large trees that fell over carried a length of irrigation pipe into the air with their root systems. We are still working to get it into operation again. The best news was the survival of our plant records. Without them, this would no longer be a scientific institution.

As you saw, the nursery still has a large collection of healthy young plants, including many species new to the Garden. Next spring, we will begin replanting. Some of our older palms have already replaced their battered crowns with new leaves. I think Fairchild Tropical Garden will be a place of beauty again within the next year.

Although the storm's efforts were tragic, the recovery effort was an education to us all. While I do not wish to do this again, it has opened wonderful new planting spaces, pruned overgrown trees, and, maybe most importantly, shook most of the complacency from the staff. I think we all look at the Garden from a new perspective, certainly with a greater appreciation for the forces of nature.

I look forward to seeing you both again in Venezuela at the 1994 IPS Biennial. Send me a photo of your home landscape when you have a chance. Your hillside planting project sounds very interesting.

All the best,

Chuck