ontogeny or giving out some kind of stimuli for rapid growth by the plant might be responsible. In the present study fasciation seemed to be due to physiological disturbance to the growing points of the rachilla.

Acknowledgment

We are thankful to Dr. Natalie W. Uhl and Dr. K. Periasamy for going through this manuscript and offering valuable suggestions. One of us (S.V.) is grateful to the University of Mysore for the award of a fellowship during the tenure of which this work was carried out.

LITERATURE CITED

ANDY, S. P. 1869. On branched palms in southern India. Trans. Linn. Soc. 26: 661-662.

COSTERUS, J. C. AND J. J. SMITH. 1923. Studies in tropical teratology. Ann. Jardin. Bot. Buitenz. 33: 67-104.

— AND — . 1925. Studies in tropical teratology. Ann. Jardin. Bot. Buitenz. 34: 45–63.

*DAVIS, T. A. 1957. Twin and fasciated spikes. Bull. Indian Centr. Coconut Committee. 10: 231-233

KEMPANNA, C. 1969. A case of abnormal spike in coconut. Mysore Jour. Agri. Sciences. 3: 117– 119.

Principes, 37(3), 1993, pp. 168-171

PALM BRIEF

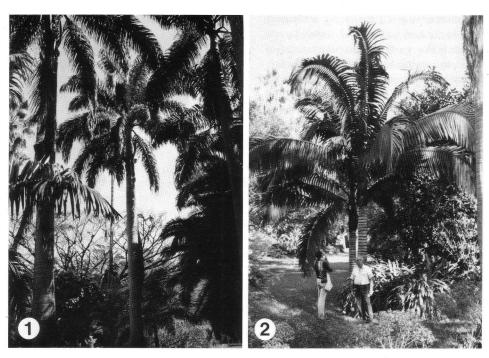
A Visit with August Braun at Jardin Botanico, Caracas

As guests of Dr. Rodolfo Belloso, in November, 1990, Crafton Clift and I had an opportunity to visit the Jardin Botanico in Caracas before proceeding to the Rio Tuy farm where Crafton was working in research and development of tropical fruits.

Shortly upon arriving at the garden, we made ourselves known to the former director, August Braun, who is known for his articles in Principes and as author of a number of books on palms indigenous to and growing in Venezuela. His recent publications, especially well-written, are Palmas Autoctonas de Venezuela y de los Paises Adyacentes (Native Palms of Venezuela and Adjacent Countries) and El Cultivo de las Palmas en el Tropico (The Cultivation of Palms in the Tropics). Both of these books in Spanish are quite useful and have information on species not normally found in some of the books written in the United States or Australia. Crafton and I were each presented with autographed copies for our own libraries.

Dr. Braun is a very gracious, friendly man whose main direction in life has been and is to study and grow palms. His vast experience over many years relate to both common and rare species. Since arriving at the garden in 1951 from his native Switzerland, he has almost singlehandedly planted the wide variety of species in the garden's collection, many of which grow to absolute perfection in Caracas' climate. The long avenue of Roystonea venezuelana (Fig. 1)—perhaps the longest planting of these grandest of all royals in the world-were planted just before his arrival but nurtured to perfection by his loving attention. In other parts of Caracas where a lowering of the water table has resulted in many R. venezuelana mortalities (such as the once-great boulevard in the Country Club of Caracas, since replaced with Washingtonia) his royals are now almost 40-50 m high and still healthy and still growing. One wonders at the maximum height these plants can achieve. Though some question exists as to the validity of this species—some classifying it as only a variety of B. oleracea—there is a dis-

^{*} Not read by the authors.



Roystonea venezuelana planted in 1950 in Jardin Botanico, Caracas.
Neoveitchia storckii, 15 year old plants in the Jardin Botanico, Caracas with C. Clift and August Braun.

tinctive appearance that singles out this royal. Wide short pinnae on stiffly erect petioles and in younger plants the maroon red petioles and crownshaft combine with a steadily-tapering massiveness with more prominent leaf scars to make this an outstanding palm. As an aside, I have been growing this royal in South Florida for some years. Its robustness and excellent resistance to cold spells make it perhaps more adaptable than most royals. I have observed it growing throughout Venezuela from steamy swamps to mountain sites, and it always looks good.

Impressive stands of Washingtonia are found in the garden, and this palm seems to grow taller and more vigorously than in California or Mexico. Dr. Braun thought his plants set out in the early fifties were probably hybrids. Even Brahea species do well in the garden, a situation quite dif-

ferent from Florida where they do not do well at all.

Probably the collection of *Licuala* species is one of the most impressive sights in the garden. While by no means a complete collection (readers might help here) the beauty of these plants in the tropical cool and misty climate of Caracas leaves nothing to be desired. Large specimens are so well-adapted that one is hard pressed to find damaged leaves even at the lowest part of the plants.

Growing equally well are Neoveitchia storckii (Fig. 2), Polyandrococos caudescens, and Pigafetta filaris. In some cases, unfortunately, the garden does not have enough plants to reproduce these palms. The Pigafetta, for example, seem to be only pistillate plants—so with a lack of pollen, the reproduction of this easy-to-grow palm becomes impossible. Since Dr.

Braun has been good at sharing seeds with palm enthusiasts and local nurserymen, providing the garden with the means of developing its palm collection will do service to the distribution of exotic palms both in Venezuela and abroad. Collectors and growers desiring to help may contact August Braun, Inparques, Jardin Botanico, Caracas, Venezuela.

Presently, August Braun is retired and living inside the garden. His loving interest in palms is not diminished, and living with them enables him to continue to carry out his life work. In a large shade house, divided by a center isle of bromeliads and ferns are long rows of magnificently grown palms-Reinhardtia simplex, Chamaedorea sp., an unnamed Prestoea species from the highland forests of Anzoategui state with unusually drab green-colored leaves of large size, orange-tinged trunk and petioles, and multiple trunks, and a delicate Geonoma species from Parque Nacional Guatopo. Above all was his pride and glory—a magnificent unnamed Chamaedorea with long pendulous infructescences adorned by large bright orange fruits. Unfortunately the male plant of this single-trunked species died shortly after producing its pollen. Unless found again in the high forests of Guatopo, the present seeds, hand-pollinated by Dr. Braun, may be the only survivors. These seeds were shared with us, and hopefully a reproducing colony of this beautiful Chamaedorea can be established in Florida. At this writing the seeds were germinating for several persons growing them. The plant was discovered by Dr. Steyermark of Missouri Botanical Garden fame and never found again. Dr. Steyermark, since deceased, worked incessantly and cooperated and travelled with Dr. Braun. His relentless search for new species in a lifetime of work in Venezuela gave him the distinction of having named more plants than any other person, perhaps even Linnaeus.

As in many gardens, the work in Caracas has been curtailed by insufficient funding and bureaucracy. Dr. Braun would be delighted to receive seeds of palms from members who would be interested in participating in his efforts to save many species from extinction. He is particularly interested in the genus *Chamaedorea* and other small-growing palms, but any palms—particularly those that can be grown well in Caracas' climate—would be gratefully received. Seeds not utilized by the garden would never be wasted, as he is very generous in helping others with an interest in palms.

The center of the garden is a hilly undeveloped rainforest region. It is perhaps the only surviving bit of natural habitat in the city of Caracas. There, over the years, Dr. Braun has planted many palms that have naturalized into the habitat, an area unlike the manicured design of the garden proper. As we walked the trails, the palms introduced everywhere overpowered the less resplendent growth, without any care or development. Lianas and vines rose and fell to add an other-worldly feel to this verdant paradise. The expressways, traffic, and urban noise of Caracas disappeared in this remnant forest attesting to the ability of plants to provide us with solace and peace even in a metropolis.

Members visiting the garden will enjoy a good collection of palms native to the American tropics as well as the exotics. They should also call on Dr. Braun who welcomes visits from Society members. He is a man with a big heart, kind personality, and a life devoted to his favorite plants—palms. He is deserving of recognition for his accomplishments, and I hope this article will help introduce him and his garden to our membership.

RICHARD A. VLASIC

See notice of 1994 BIENNIAL, p. 138.