12. J. C. Gomes holding leaves of same *Syagrus comosa*.

proached a steep, sharp curve in the road and before we knew it the car went sailing over a 50-foot cliff. As the Jeep tumbled down the hillside, I was thrown out the side door before it finally struck a rock and came to a stop. Gomes got the full impact of the crash. He struck his head on the windshield and was killed instantly. It was tragic that the trip should end this way because we had been over roads far more dangerous for driving and still managed to survive. I was much more fortunate, escaping with an assortment of nasty cuts and bruises. After four days in a hospital at Iuna, I negotiated a ride to Vitoria where I made plane connections to Rio and then to the United States.

It is with deep sadness that I conclude this article. Mr. Gomes was a fine gentleman and field companion. His death puts an extremely high price on collecting palms.

# A Potting Mixture for Palms

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Research carried on at Cornell University in the Department of Floriculture and Ornamental Horiculture and Department of Vegetable Crops by James W. Boodley and Raymond Sheldrake, Jr. has been concerned with artificial soil mixtures for commercial plant growing. A modification of the so-called Peat-Lite mixes has been developed for general potting of aroids, begonias, ferns, gesneriads, and many other species of plants now growing in the tropical greenhouses at Cornell, as well as palms which are grown in clay pots and redwood tubs and are maintained under glass throughout the year at a night temperature of 65° F. The results of using this mixture for palms have been very encouraging and are thought worth reporting in PRINCIPES. This information is not based on data derived directly from experiments with palms but rather from observation and experience.

The components of the potting mixture were selected because they are readily available, are uniform in composition, and because they have certain physical and chemical characteristics that are important to the growth of plants. German or Canadian sphagnum peat moss is preferred to the domestic peat mosses which frequently contain large quantities of nutrients or other material in unknown amounts and are usually too decomposed to provide the

necessary structural and water-drainage properties. No substitution of different types of nutrients or other materials should be made.

Vermiculite is a micaceous material that has been heated to 1400° F. and the horticultural rather than the insulation grade of Vermiculite No. 2 should be used. It has a relatively high cation exchange which means it can hold nutrients in reserve and release them. The nutrients and water are held within the plate-like structure of the particles. Vermiculite also has good buffering characteristics that resist rapid change in pH. The material contains a certain amount of potassium and magnesium that is available for the growth of plants as well as a small amount of calcium.

Perlite is a form of volcanic rock that has been expanded by heating to 1800° F. It is sterile, has a pH of 7.0-7.5 and weighs six to nine pounds per cubic foot. This material contains no mineral nutrients and, unlike vermiculite, has neither cation exchange capacity nor buffering capacity. It does not decay or deteriorate but does hold water on its irregular surface areas.

The modified Peat-Lite Mix used as a medium for culture of palms contains the following:

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| Shredded German or Canadian Sphagnum peat moss (½ inch mesh screen) | 4 bu. |
| Vermiculite No. 2 | 2 bu. |
| Perlite | 2 bu. |
| 12-12-12 Fertilizer | 1 lb. |
| 20 per cent superphosphate (powdered) | ¾ lb. |
| Dolomitic limestone | 2 lb. |
| Iron sulphate | ¼ lb. |
| Fritted Trace Elements* | 5.6 gm. |

*Fritted Trace Elements contain the following: Manganese — 7.5 per cent as Mn; Iron — 18 per cent as Fe; Copper — 3 per cent as Cu; Zinc — 7 per cent as Zn; Boron — 3 per cent as B; Molybdenum — 0.2 per cent as Mo.

To prepare, first mix the peat moss, Vermiculite and Perlite thoroughly. Then weigh the quantities of fertilizer elements. The small quantity of trace elements, when weighed, may be mixed with the superphosphate. Finally, all ingredients are very thoroughly mixed and moistened with tap water. Enough water should be added to provide potting moisture consistency.

Since the components are considered sterile, it is expedient to store the mix in polyethelene bags or a closed container for future use. To further safeguard a clean mix, it is advisable to mix on a clean surface, preferably sterilized with a disinfectant such as LF-10 or chlorox solution.

Applications of fertilizer should commence about a month after repotting. Weekly applications of 20-20-20 fertilizer and potassium nitrate alternately are made throughout the year at one-half the normal dosage or four ounces in 25 gallons of water.

The following palms are growing in the modified mixture at the present time: *Areca* sp.; *Brahea* sp.; *Carpentaria acuminata; Caryota urens; Chamaedorea alternans, C. cataractarum, C. elegans, C. Ernesti-Augusti, C. erumpens, C. geonomaeformis, C. metallica, C. microspadix, C. oblongata, C. Seifrizii; Geonoma* sp; *Livistona chinensis, L. Mariae; Phoenix canariensis, P. pusilla; Phytelephas macrocarpa; Rhapidophyllum hystrix; Ravenea Hildebrandtii.*

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And though . . . a Contemplative Person . . . had onely the Palm or the Cocco, which furnishes a great part of the World with all that even a Voluptuous Man can need, or almost desire, it were sufficient to employ his Meditations and his Hands, as long as he had to live, though his years were as many as the most aged oak. John Evelyn's *Sylva.* 1664.