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The Quest for Jubaeopsis caffra, the Pondoland Palm

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In all respects, Africa does not have a diversity of palms in contrast to cycads. Only five species of palms are found in South Africa; these are *Phoenix reclinata*, *Rhapia australis*, *Hyphaene coriacea* (syn. *H. natalensis*), *Borassus aethiopum*, and *Jubaeopsis caffra*.

Of these, I have long been interested in *Jubaeopsis caffra*, the Pondoland palm, mostly because of its rarity and purported cold-hardiness. *Jubaeopsis caffra* is singular for its rarity as it is found in a very restricted area and nowhere else in the entire world. My interest is romantic (i.e., the quest for the unobtainable) as this palm is very rare in collections. Two groves exist in the wild, a handful occur in South Africa collections, two or three in U.S. collections, and a single specimen tree is cultivated at Port Elizabeth, R.S.A.

As a reaction to this interest, I sought to visit South Africa to photograph this tree, collect seeds, and eventually propagate the plant in the U.S. as a hedge against extinction in the wild. I had been in active correspondence with Philippe Cremer of the S.A. Palm Society learning as much as I could before embarking on the trip. He had explained that it would be quite a trip to get to the localities involving two days in the Transkei, camping, fording rivers, and climbing a cliff to get to the locality.

The palm is found in the Mkambati Reserve which is located deep within the Transkei, one of the tribal homelands, and the palm is concentrated on the north banks of two rivers (the Msikaba and the Mtentu) emptying into the Indian Ocean. I landed in Durban on August 21 and there waiting was Philippe Cremer. Within five minutes, I had collected my luggage and was on the road heading south to the reserve. The trip south was quite impressive as we drove through mile after mile of luxuriant stands of 40 foot *Strelitzia nicolai* and *Phoenix reclinata* periodically punctuated by the heavily fruit laden *Hyphaene natalensis* and the occasional *Raphia* palm.

Once in the Transkei, we drove six hours of the worst roads that I had ever experienced. As it was the dry season, huge clouds of dust billowed up as we proceeded on through the back roads lined with rondavels and littered with abandoned stolen cars and the ubiquitous donkey carts.

We arrived right at dusk and were warmly greeted by Neville Elaff, the Ranger of the reserve. That evening we enjoyed a "bride" or South African barbeque that consisted of bloodeborst (a local sausage), steak, and cheese and talked of the numerous theories concerning *Jubaeopsis caffra*, its phylogeny, and why it is confined to the north banks of these rivers. Philippe Cremer is a veritable encyclopedia of knowledge on this palm and other species. In listening to him one feels his convictions and appreciates the passionate interest that he shares in these magnificent plants.

The next day saw us up and out early. A fisherman had kindly offered us a ride across the river. This we gladly accepted as I was very reluctant to swim across the swiftly flowing river with full camera gear. However, half way across things were not

1. Close-up of a *Jubaeopsis* crown. Note infructescence with fruit in center above.

so well as the boat's engine quit, the boat listed sharply and lost its passengers. Fortunately, all were survivors as the water turned out to be only waist deep. I looked up and there a mile away on the cliffs, I took my first view of *Jubaeopsis caffra*. We walked up the beach to cliffs and on to the grove.

The Pondoland palm grows in a luxuriant forest amidst *Strelitzia nicolai*, *Phoenix reclinata*, *Asplenium* ferns and an occasional *Stangeria eriopus*. To get to the trees, one however must do some rock climbing. Once over the cliffs and into the grove, I feasted my senses on the profusion of these palms. *J. caffra* (Fig. 1) superficially resembles a hybrid between a coconut and pindo palm. It is tall and graceful as a coconut and the fronds are a lovely iridescent green, yet the trunk is knobbed like a pindo palm. The palms within the grove showed frequent double and triple forking which is rare elsewhere in the palms. The grove is very dry and one could see evidence of frequent brush fires.

We covered the grove in anticipation of locating seeds; however none were to be found. The seeds resemble miniature coconuts and the Transkei herder boys will collect them and break them open for the sweet juice and meat. As I walked through the trails, I saw untold generations of this palm dashed upon the rocks. Tragically, one of the world's rarest palms is being destroyed for a handful of sweets. After an intense search for the rest of the morning we were only able to locate a paltry 10 ripe seeds.

During the afternoon, we visited the second locality and scoured the grove for any seeds or ripe fruit. Our success was similar and about all I could locate was the odd seed that had rolled from the grasps of the hungry herder boys into the thatch. As the sun was quickly waning, we concluded the search as it would be next to impossible to find our way out of the very

dense forest in darkness. In climbing up the cliff, I noticed one lone seedling that had been spared the ravages of human predation and stood as the sole progenitor for the next generation.

The next morning after breakfast, we visited the lone *Jubaeopsis* tree behind the reserves' offices and to our excitement, it was replete with ripe fruit. At last success! We proceeded to reap the harvest of this very rare palm and within 10 minutes had collected 180 seeds. With that rare booty, we broke camp and started on the long trip through the Transkei and back to Durban.

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PALM LITERATURE

BALICK, MICHAEL J. AND COLLABORATORS. *Jessenia* and *Oenocarpus*: Neotropical Oil Palms Worthy of Domestication. 191 pp. Plant Production and Protection Paper 88, Food and Agriculture Organization of the United Nations, Rome. 1988.

The author of this study has been engaged for a decade in field and laboratory research on the closely related genera and species in the *Oenocarpus–Jessenia* complex. This book is a synthesis of his and other earlier published work on the subject, along with new findings.

Chapters 1 and 2 deal with subsistence and economic utilization. A case study, by G. Blaak, of small-scale oil extraction in Colombia makes up chapter 3. These initial chapters are the longest and together provide a fine state-of-the-art assessment of the 9 species within the complex. The following 7 chapters are shorter and address particular aspects of the palms, with a focus on providing essential background information on the subjects of botanical classification, distribution and ecology, germination and growth, natural hybridization (a key research question), reproductive biology, mycorrhizal enhancement (by T.V. St. John) and agroforestry. Breeding prospects for domestication are discussed in chapter 11 and are judged to be promising because of the considerable species diversity present in the complex and their ability to cross and produce hybrids. Chapter 12 suggests lines of research to expand utilization and promote actual domestication of a new oil palm species. A bibliography of uses, and a set of guidelines for the proper collection of palms for systematic study, are provided as appendixes. High quality illustrations are found throughout the book.

A vital part of realizing the palm family's full economic potential rests in comprehensive studies such as Balick has given us. It is hoped that this book will be emulated by other palm specialists.

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