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## Notes on the Palms of Mayotte, Comoro Islands, Indian Ocean

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In October 1998 when I left Reunion for a 10 day trip to Mayotte, I thought of listing the palms to be found on this island for my friends of Palmeraie-Union which is a rather newly established association of palm enthusiasts.

Therefore, I checked in Palms of Madagascar (Dransfield and Beentje 1995) the endemic species of north-west Madagascar and Grande Comore that might occur in Mayotte. Mayotte is a French overseas Communauté Territoriale, and

not part of the Republic of the Comores, even though geographically it is part of the Comoro Archipelago.

I recorded the following palms:

Areca catechu Bismarckia nobilis Borassus sambiranensis Caryota mitis Cocos nucifera

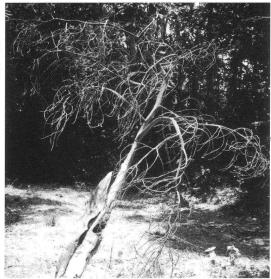




1. Borassus sambiranensis at Sazilé. 2. Dypsis humblotiana at Sohoa.



3. A close-up view of the stem of *Dypsis humblotiana*, Sohoa; stem diameter is about 18 cm.



4. Last year's dead inflorescence of *Dypsis humblotiana*, Sohoa.

Corypha utan
Dypsis humblotiana—the "Sohoa palm"
D. lanceolata
D. lutescens
D. madagascariensis
Hyophorbe lagenicaulis
Hyphaene coriacea
Livistona chinensis
Phoenix reclinata
Raphia farinifera
Roystonea oleracea

Among these species, Caryota mitis, Corypha utan, Dypsis lutescens, D. madagascariensis, Hyophorbe lagenicaulis, Livistona chinensis and Roystonea oleracea occur as ornamental palms in some private gardens, public parks and squares in Dzaoudzi and Mamoudzou.

Areca catechu seems to be naturalized on the west coast with a small population along the stream near Soulou Waterfall. Bismarckia nobilis is locally known as "palmier de Koungou" as it is quite abundant in the Koungou area in the north coast. However, I saw two other specimens at Ngouja in the gardens of the Jardin Mahorais hotel.

Concerning *Borassus sambiranensis*, there is a small population at Sazilé Pass (Fig. 1) between the villages of Moutsamoudou and Dapani. It consists of several old specimens, some young

ones and seedlings under the female trees. When falling, some fruits roll down embankments and germinate in gravel on the roadside. I have seen a few other old trees on the Sazilé Peninsula, including one with a trunk base damaged by fire. It is possible that *B. sambiranensis* was introduced by Sakalava settlers who migrated from north Madagascar to Mayotte a few centuries ago.

Cocos nucifera, the coconut, is very abundant in the lowlands and is widely used for food, woven fences, baskets and as building material. The second most abundant palm in Mayotte is *Phoenix reclinata*, that occurs in rather dry localities.

In the Majimbini rain forest reservation, I recorded *Dypsis lanceolata* above 500 m elevation. I did not see any inflorescences or infructescences, but found quite a large number of seedlings under the mature trees. This species could also occur in the forest at Mont Benara.

On one day I had an appointment with Alain Pibot from Service de l'Environnement et de la Forêt and we visited Sohoa Forest Reservation where we found a few specimens of a palm, scattered from 160–210 m elevation. This is a single-stemmed palm with trunks 8–10 m tall (Figs. 2, 3, 4), with keeled leaf rachises and leaflets with bifid tips, glossy green on the upper surface and dull green beneath, the leaflet margins thickened. We thought it could be the very poorly

known *Dypsis humblotiana*. I have sent a leaflet and photographs to John Dransfield and Henk Beentje at the Royal Botanic Gardens Kew, and they agree that this may well be the elusive species, known previously only from a single herbarium specimen.

Among other species, *Hyphaene coriacea* occurs in small populations near Chirongui pass, and, on Petite Terre, at Dziani Dzaha crater lake.

I did not stay long enough in Mayotte to visit Mont Benara forest and look for *Ravenea hilde-brandtii* which might occur in that area. This will have to wait for another visit

## LITERATURE CITED

Dransfield, J. and H. J. Beentje. 1995. The Palms of Madagascar. The Royal Botanic Gardens Kew and the International Palm Society.

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## **PALM LITERATURE**

Non-Timber Forest Products of East Kalimantan—Potentials for Sustainable Forest Use. By J. L. C. H. van Valkenburg. X + 202 pp, 6 appendices, 23 figures, 14 color illus. Tropenbos Series 16, ISSN 1383-6811. Backhuys Publishers, Leiden, The Netherlands. 1997. Paperbound, ISBN 90-5113-030-9. 76,00 NLG (approximately \$40).

Humankind is challenged to harmonize the needs and aspirations of a growing population with ecological imperatives. Nowhere is the challenge more daunting than in the world's tropical forests. One proposed alternative to forest degradation and loss is found in the sustainable extraction of non-timber forest products (NTFP), an approach that would leave basic forest structure intact, preserve indigenous cultures, and provide an ongoing livelihood to local and regional inhabitants. Since palms, in their variety of habits and ubiquitous distribution provide a rich store of NTFP, ranging from building and craft materials to fruits, starch, and sugar, it is not surprising that they are major components of many ongoing and proposed extractive programs. This volume, Non-Timber Forest Products of East Kalimantan, gives palms no less attention, for two of its seven principal chapters are devoted to rattans, and they otherwise enter the discussion as critical elements in assessing the potential of NTFP.

Despite its focus on East Kalimantan, this volume serves as a general primer to the underlying concepts and issues of forest utilization. It provides economic and ecological arguments for the sustained harvest of forest resources, rather than periodic timber cutting or the conversion of forests to plantation monocultures. Following a general introduction, Chapter 2 contrasts in detail systematic and ecological measures the three study sites reported on, each of which encompasses primary forest of a somewhat different character. One site also includes logged areas. Chapter 3 summarizes NTFP available in those sites. While comprehensive in its coverage of primary forest and logged portions of the study sites, the exclusions of secondary forest bamboos and medicinal plants does leave a gap in assessing the full forest management potential of the region. Chapter 4 deals with edible fruits and nuts with actual and potential use as forest and home garden products. Market determinants, including access, ethnic preference, and seasonality and periodicity of fruiting are considered. While no palms enter this discussion a number of familiar names appear, including the durians (Durio), the breadfruits and jackfruits (Artocarpus) and rambutans (Nephelium).

The rattans constitute Chapters 5 and 6. The former considers species richness and abundance of these remarkable lianas. Dominant genera, in species numbers, are Calamus, Daemonorops, and Korthalsia, but with Ceratolobus, Plectocomia, and Plectocomiopsis also represented. This inventory is not a mere taxonomic listing, but rather a richly detailed presentation of rattan dynamics in natural and human-influenced primary and logged forests. Chapter 6 considers rattan trade in a broad forum—attention being given to rattan quality, processing, economic value under different conditions, and role in contrasting social situations.

Using a number of different comparative measures, including those economic, the closing chapter is a reasoned discussion of the potential