

The Coconut Industry Board of Jamaica has been shipping pollen from distant places for their work on the hybridization of coconut varieties (Whitehead, 1962). They report that they are using a freeze-drying technique which permits long-term storage of the viable pollen in quantity. However, for the purpose outlined in the present paper, the equipment and skill needed seem unnecessary in collecting pollen from palms while in the jungle many miles from civilization. The technique described herein requires only a few small

air-tight "pill" vials containing pre-dried silica gel and gelatin capsules. The results obtained from pollen sent in by Dr. Moore are tabulated in Table I and documented in figures 1-4.

Literature Cited

- Read, R. W. 1964. Palm chromosome studies facilitated by pollen culture on a colchicine-lactose medium. *Stain Technology* 39: 99-106.
- Whitehead, R. A. 1962. Room-temperature storage of coconut pollen. *Nature* 196: 190.

	Haploid number	place of origin	Moore voucher
Arecoideae			
a. <i>Rhopaloblaste ceramica</i>	n = 16	Cultivated at Singapore	9077
b. <i>Carpentaria acuminata</i>	n = 16	Australia	9228
c. <i>Laccospadix australasica</i>	n = 16	Australia	9240
d. <i>Ptychococcus lepidotus</i>	n = 16	New Guinea	9259
e. <i>Archontophoenix Alexandrae</i>	n = 16	Australia	9249
f. <i>Ptychosperma elegans</i>	n = 16	Australia	9245
g. <i>Veitchia sessilifolia</i>	n = 16	Fiji Islands	9348
h. <i>Veitchia vitiensis</i> var. <i>Parhamiorum</i>	n = 16	Fiji Islands	9358
i. <i>Gulubia Hombronii</i>	n = 16	Solomon Islands	9296
j. <i>Gulubia costata</i>	n = 16	New Guinea	9273
k. <i>Taveunia trichospadix</i>	n = 16	Fiji Islands	9345
l. <i>Heterospathe humilis</i> ?	n = 16	New Guinea	9289
Caryotoideae			
m. <i>Wallichia densiflora</i>	n = 16	Cultivated in Australia	9256
Lepidocaryoideae			
n. <i>Calamus caryotoides</i>	n = 13	Australia	9241
o. <i>Calamus Muellieri</i>	n = 13	Australia	9230

Table I. Chromosome counts of palms obtained from pollen-tube mitotic studies of air-mailed pollen. Voucher specimens are on deposit at the L. H. Bailey Hortorium, Cornell University, Ithaca, New York.

Ptychococcus lepidotus — A New Species from New Guinea

HAROLD E. MOORE, JR.

The genus *Ptychococcus* is related to *Ptychosperma* in the tribe Ptychospermeae of the subfamily Arecoideae. Few of the species have been adequately described. The original species, *P. para-*

doxus, has been grown in botanic gardens for many years but most of the others are known only from incomplete specimens in herbaria. Two of the seven validly described species — *P. Guppy-*

anus and *P. Kraemerianus* — are known with certainty only from fruits, and another — *P. Schumannii* — appears to have been described from mixed specimens representing more than one species. Nonetheless, comparison of specimens collected in New Guinea during 1964 with descriptions and specimens of known species leaves little doubt but that they represent still another species. Seeds and seedlings have been introduced into cultivation and the chromosome number is reported elsewhere in this issue by Mr. Read (p. 10). It is advisable, therefore, to provide a name. The epithet *lepidotus* has been chosen because of the tiny scales on the petals of flowers of both sexes.*

PTYCHOCOCCUS LEPIDOTUS H. E. Moore, sp. nov. (Fig. 5)

Caulis ca. 5 m altus. Folia breviter petiolata pinnis utrinque 41-47. Inflorescentiae fusco-tomentosae, ad maturitatem glabratae, petalis florum masculinorum et foemineorum dense lepidotis, staminibus 85-110, fructo rubro 4.1-5 cm. longo, 3.4-4 cm. diam., endocarpio et semine 5-lobatis, carina curvata prominente.

Trunk solitary, slender, gray, ca. 5 m. high or perhaps more, ca. 10 cm. in diameter. Leaves ca. 12, spreading or ascending; sheath ca. 6 dm. long, green with indument of dark brown membranous scales margined with appressed soft interlocking hairs forming a dense tomentum at first but the hairs deciduous in part leaving only the membranous center or the base of the scale at length, especially on marginal or unprotected areas, the margins oblique without ligules; petiole short, 5-20 cm. long.

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rounded and densely pale lepidote-tomentose below, more or less densely covered above with pale membranous laceraately interlocking scales when young or their darker bases when old; rachis 2.5-3 m. long, rounded centrally and channelled toward the margin below, scaly like the petiole above and below when young, the margins flattish toward the base and the upper surface channelled on each side of a median rounded ridge, becoming nearly deltoid in section at mid-leaf and to the apex where scales are often deciduous and the surface only dark punctate; pinnae 41-47 on each side of the rachis in regular, mostly alternate arrangement at intervals of 5-6 cm. near the middle, the blade nearly horizontal basally but twisting upward at about a 90° angle with the apex arcuately curved, the lower pinnae 50-65 cm. long, 2.1-4.3 cm. wide, median pinnae 68-78 cm. long, 6-9 cm. wide, apical pinnae 37-42 cm. long, 3.5-6 cm. wide, all with very oblique (basal) to nearly truncate (apical) sharply divided and toothed apex, very narrowly reduplicate at the base where densely and minutely red-brown lepidote above and paler lepidote on the prominent midnerve above, the lower surface densely and minutely red-brown or pale lepidote with a line of twisted basifixed red-brown membranous scales to ca. 13 mm. long on the midnerve, these sparser toward the apex. Inflorescences 9 (on type tree), stiff, densely clustered below the crownshaft, those in flower horizontal, those in fruit drooping; lower bract ca. 42 cm. long, 7 cm. wide in bud, densely pale lepidote-tomentose, ancipitous-margined and acute, enclosing the upper bract, the entire inflorescence red-brown tomentose in bud but the axes becoming sparsely hairy to nearly glabrate at maturity; peduncle dorso-ventrally compressed, 9.5-15 cm.

long, 4 cm. wide; rachis 25-40 cm. long, angled as are the ca. 17 branches, the lower few again twice-branched with ultimate flowering axes 14-23 cm. long, those above once-branched to furcate or unbranched. Flowers in triads of a central pistillate and two lateral staminate nearly throughout the axes; staminate flowers green, drying brown, ca. 15 mm. long, 7 mm. in diam. or smaller when dry, the sepals 5-6 mm. high, 7 mm. across, keeled dorsally toward a gibbous base, ciliate marginally, petals ca. 15 mm. long, 7 mm. wide, very slightly asymmetric apically with a dense cover of minute brownish membranous scales, stamens 85-110, whitish at anthesis, the anthers emarginate to acute apically, deeply bifid basally, the lageniform pistillode as long as the stamens; pistillate buds ca. 10 mm. high, the sepals minutely brown hairy, the petals densely lepidote and pale brown when dry, the sepals in fruit ca. 7 mm. high, petals 11 mm. high, 2 cm. broad, forming a cupule ca. 2.5 cm. across, staminodes 3 and more or less united in a low semicircle in fruit. Fruit orange-red or crimson, 4.1-5 cm. long, 3.4-4 cm. in diam. when fresh, smooth and rounded, ovoid with slightly excentric apical stigmatic scar, drying 4-4.5 cm. long, 2.5-3 cm. wide without cupule, prominently angled and wrinkled, the endocarp ca. 4 cm. long, 2.6-3.2 cm. wide, with walls 2-3 mm. thick, prominently and narrowly keeled on the rapheal side with a hollow below the curved tip and the 3-ridged, 2-grooved ventral surface, laterally with a 2-ridged, 1-grooved flange on each side; seed 2-3 cm. long, 1.5-2 cm. wide, 5-lobed, shaped similarly to the endocarp; endosperm with shallow marginal rumination on the lobes and a deep intrusion in the rapheal lobes. Seedling leaf bifid. Chromosome number: $n=16$.

TERRITORY OF NEW GUINEA. Morobe District: ridge trail southwest of Bupu Village on track to Engebu above Wampit River, alt. 2500-2800 ft., 3 March 1964, *H. E. Moore, Jr.*, & *A. Millar* 9259 (BH, type; LAE, isotype); mixed forest at upper limit of *Araucaria* zone, Bulolo-Watut divide, alt. ca. 3600 ft., 11 March 1964, *H. E. Moore, Jr.* & *J. S. Womersley* 9281 (BH; LAE); disturbed forest near airstrip at Wagau, alt. 3400 ft., 14 March 1964, *H. E. Moore, Jr.* & *J. S. Womersley* 9293 (BH; LAE).

Vernacular names: *val* (Bupu); *wakal* (Wagau).

Trunk said to be used for spears and bows. Infrequent in the forests.

Fruits of this species vary when fresh and mature from 4.1 cm. long, 3.4 cm. in diameter. (*Moore & Womersley* 9393) to 5 cm. long, 4 cm. in diameter with corresponding differences in size of endocarp and seed. Only ripe fruit was collected at Wagau but a plant growing near the airstrip was clearly the same as that seen at Bupu and Bulolo and the associated palms — *Gronophyllum* sp., *Heterospatha humilis*?, *Calyptrocalyx* sp., *Areca* sp. — were the same as those at Bupu.

The densely scaly petals of male and female flowers readily distinguish *P. lepidotus* from *P. Archboldianus*, *P. arecinus*, *P. elatus* and *P. paradoxus*, all of which have glabrous petals. The much smaller fruit eliminates *P. Schumannii* as amended by Burret (*Reperitorium Specierum Novarum* 24: 262. 1928). Two remaining species — *P. Guppyanus* and *P. Kraemerianus* — have the seed prolonged in a very narrow sharp rapheal keel and the lateral and ventral lobes are narrow.

It is perhaps worthy of note here that *Index Kewensis* lists a further species of *Ptychococcus*, *P. Albertisianus* Beccari ex Martelli, *Nuov. Giorn. Bot. Ital.* ser.

2, 42: 74, 78. 1935. The name is a *nomen nudum* since it is neither accompanied by a description nor does it refer to a description, only to a possible misidentification in some of Beccari's ear-

lier writings of some fruits collected on the Fly River by d'Albertis. It is likely that these fruits are referable to *P. Archboldianus* Burret of the Fly River region in New Guinea.



5. The tree from which type specimens of *Ptychococcus lepidotus* were taken still may stand in the mountains of New Guinea (Moore & Millar 9259).

Palm Hunting Around the World

HAROLD E. MOORE, JR.

Introduction

If palms were as small as mosses and could be fitted in entirety on sheets of paper or in vials for study and preservation in museums and laboratories, there might be no need to write about hunting them through the tropics. Very many of them, however, are so large

and difficult to collect for study that botanists and explorers have tended to neglect them or to collect only fragments of leaf and inflorescence. Thus, though one may examine the whole of many plants from museum specimens, there are remarkably few palms for which this is true.