

# A New Species in the Genus *Salacca*

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## ABSTRACT

A new species, *Salacca ramosiana* is described; it is the only species in the genus possessing lateral leaflets with lobed tips, and represents an addition to section *Leiosalacca*.

During study for a revision of the genus *Salacca*, remarkable specimens collected about 40 years ago in the Sulu Isl., Philippines and Sandakan in Sabah, were recognized as a distinct new species. A population of this species has also been recently recorded in the field by Dr. J. Dransfield, during his expedition to Palawan, in the Philippines in May 1984. It seems important to describe and name this distinctive new species of the genus before revision of the genus is completed, as this is expected to take some time yet.

***Salacca ramosiana* Mogeia**, sp. nov. ad sectionem *Leiosalaccam* pertinens; palma acaulescens foliis pinnatis, foliolis utriusque ca. 40, profunde lobatis, inflorescentiis erectis, floribus pistillatis solitariis, fructibus squamis adpressis tectis. Typus: Borneo: Sabah, Sandakan, *Elmer 20110* (holotypus BO).

Undergrowth pinnate leaved calamoid palm ca. 8 m tall; leaflets ca. 40 on either side of the rachis, all deeply lobed and fanned. Inflorescences erect, pistillate flowers always solitary, fruits covered with adpressed scales, without spiny tips. Type: Borneo: Sabah, Sandakan, *Elmer 20110* (holotype BO).

Plant ca. 8 m tall, girth to 60 cm, including the sheaths, erect, tufted  $\pm$  stemless. Leaves ca. 2.7-5.5 m long, leaf sheaths dull brown with abundant long brown spines and pale brown indumen-

tum; petiole about 1 m long, channeled near the base, circular in cross section distally, 2 cm in diam., surfaces wrinkled, abaxially spiny; rachis ca. 2.4-4.2 m long, at the base elliptic in cross section, 2.5 cm diam., gradually more angular towards the tip, spiny abaxially; leaflets ca. 40 on either side, irregularly arranged, tending to be held in an upright position especially near the base, at distances of (2.5-)4-8(-11) cm, obtriangular, broadly wedge-shaped with several lobes at the tip, at the base somewhat sigmoid, armed along the margins with small upcurved spines ca. 2 mm long and at distances of 3-10 mm, at the base of the rachis leaflets 11-15  $\times$  2.5-4 cm with ca. 3 lobes in the middle of the rachis; leaflets irregularly grouped, each group consisting of 3-4 leaflets, 35-46  $\times$  8-10 cm with 5-9 lobes, at the top of the rachis, leaflets 21-37  $\times$  (5-) 8-10 cm with 6-8 lobes, the apical leaflet pair  $\pm$  obtriangular, deeply bifid, at the base shortly attenuate, 19-34  $\times$  30-38 cm broad at the tips, 8-14 cm broad at the base, with 5-10 lobes, the lobes slightly sigmoid, 2.5-7  $\times$  0.07-2.5 cm, armed along the margins with very small spines, midleaf leaflets with 3 main longitudinal veins, at distances of 2-4.5 cm, with 4-7 more slender ones in between, leaflets of the apical part of the leaf with 3-5 main longitudinal veins, at distances of 2-5 cm, with 6-9 more slender ones in between; transverse veinlets conspicuous; spines triangular, pointing upwards or downwards, pale yellow, confined to abaxial surface, those on the petiole ca. 5-8  $\times$  0.6 cm, 1 mm thick, arranged in transverse or oblique combs, ca. 10 spines

in each comb, with the smaller spines between the combs, decreasing distally, those on the base of the rachis in small combs of 2–3 spines, in mid rachis borne singly; at the very tip, spines upcurved, sometimes with two small ones together in small combs, up to ca.  $1.5(-3.5) \times 0.2$  cm, 0.3 mm thick. Staminate inflorescences ca. 30–80 cm long, 4 cm wide, including the bracts, peduncle 1 cm in diam. at the base,  $\pm$  stout, erect or pendulous, branching to 3 orders, covered in bracts; bracts mostly boat-shaped, rather tattered, linear-lanceolate, acute,  $18-20 \times$  ca. 0.2–0.25 cm broad; rachillae ca. 25 in an inflorescence, each branch bearing ca. 3 rachillae, erect,  $\pm$  cylindrical,  $3-8 \times 0.6-1$  cm, rachilla bracts free, not ring-like, rhomboid, ca.  $2.5 \times 4$  mm, concave, the tips acute; floral bracteoles adnate to the dyad prophyll,  $\pm$  transverse elliptic, ca. 1.5 mm, very thin, persistent, hairy along the margins and abaxially. Staminate flowers, many in each rachilla; calyx bell-shaped, 1–3 mm long, split near the tip only, or to 1 mm deep, or almost completely, lobes obtuse; corolla  $\pm$  bell-shaped, petals linear-lanceolate, 5–6.5 mm  $\times$  ca. 1 mm, acute. Pistillate inflorescences  $45-70 \times 5.5$  cm including the bracts, erect; peduncle stout, 1.4 cm diam. at the base, covered by bracts, branching to three orders; branches 10–16 cm long, bracts rather tattered,  $\pm$  boat-shaped, linear-lanceolate  $10-20 \times 2-3$  cm, acute, rather thick, very rarely thin, stiff, very rarely flexible, dull brown; rachillae many in an inflorescence, erect,  $\pm$  conical, ca.  $2 \times 1.4$  cm, sessile; rachilla bract concave, elliptic ca.  $9 \times 6-7$  mm, free, not ring-like bracteoles  $\pm$  oblique,  $3 \times 3.5$  mm, concave, tips acute, hairy as in the staminate inflorescences. Flowers ca. 5–7 in each rachilla, solitary in each rachilla bract; calyx bell-shaped, ca. 5–8 mm long, split to about halfway or completely; corolla bell-shaped, lobes  $\pm$  lanceolate, ca.  $9 \times 3.5$  mm, somewhat concave; ovary ovoid ca.  $7 \times 3$  mm; scales adpressed,

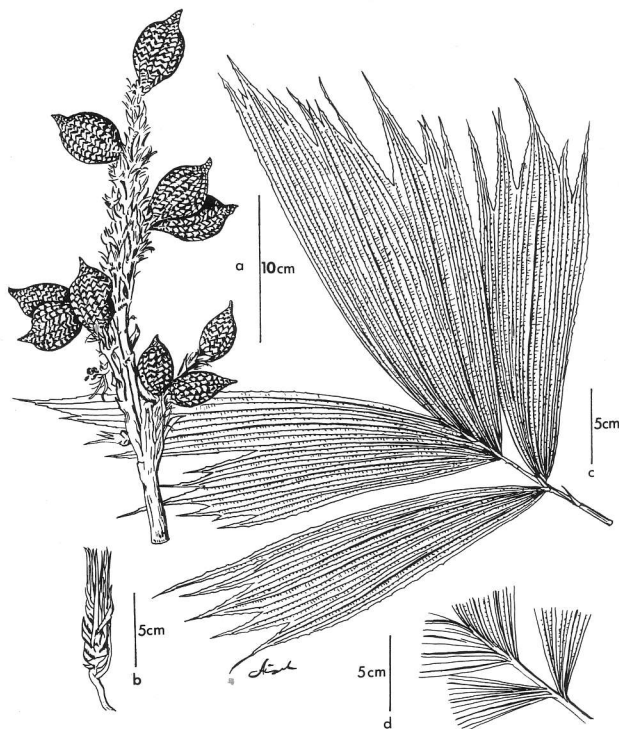
reflexed, ca. 0.3 mm long, serrulate. Fruits  $\pm$  ellipsoidal, beaked,  $6 \times 3$  cm. Scales borne in ca. 28 vertical rows, adpressed in the middle of the fruit,  $\pm$  rhomboid in shape, ca.  $5 \times 6$  mm, yellowish reddish brown when fresh (Fig. 1,2).

*Specimens Examined:* BORNEO: Sabah: Sandakan, Staminate and pistillate fl., fr. X–XI. 1921, *Elmer 20110* (holotype BO, isotypes A, BM, CAL, G, K, L, M, NY, SING, U, UC); Sepilok Laut, fr. 4.X.1976, *Ejan Gakial SAN 83453* (BO, SAN); Sepilok Forest Reserve, pistillate fl., fr. 15.I.1964, *H. E. Moore Jr. & W. Meijer 9166* (BH); Batu Lima, staminate fl. 18.XII.1920, *Ramos 1915* (A, BM, BO, K, L, PNH, US); Forest Reserve Sempurna, staminate and pistillate fl. 18. VIII, 1937, *Puasa 7691* (K, SING). PHILIPPINES: Sulu Isl., Tawi-tawi, staminate fl. VII–VIII.1924, *Ramos & Edano BS 44105* (BM, K, NY, UC, US).

Wild *Salacca* with about 18 known species—among them 7 species just recently described (Dransfield 1980, Mogeia 1980, Mogeia 1983) and one species transferred from *Lophospatha* (Dransfield & Mogeia 1981)—is distributed from Southern Yunnan, lower Burma, Thailand, the Malay Peninsula, Sumatra, western part of Java, Borneo and the southern part of the Philippines (Palawan, Mindanao, and Sulu Isl.). The largest number of species occurs in Borneo (about 10 species), followed by the Malay Peninsula and Sumatra (7 species each). *Salacca ramosiana* represents an additional species for Sabah, Borneo, and the Philippines. The habitat of the plant is on the landward fringe of mangrove forests and in small freshwater swamps in the lowlands. Local people in Sabah call the plant ‘sungsum’ in the Kedayan language.

Compilation of field notes suggests that the leaves are erect, leaf sheath including petiole ca. 3 m long, rachis 3 m long, flowers grey; fruit scales are bright red-brown in color.

Based on the solitary pistillate flower



1. *Salacca ramosiana*: a. inflorescence, b. pistillate rachilla, c. abaxial surface of the leaf-tip, d. adaxial surface to show leaflet insertion; after SAN 83454.

and the adpressed fruit scales, this species belongs to section *Leiosalacca* (Becc.) Furtado (Furtado 1949). Other recently described species mentioned above belong to the section *Salacca* (Becc.) Furtado. The new species is most closely related to *S. affinis* Griff., but has the lateral leaflets, obtriangular, deeply lobed leaflets, with (3–) 5–9 lobes; spines on the petiole are like those of *S. affinis* var. *borneensis* (Becc.) Furtado; the pistillate rachilla is smaller and each rachilla bears only very few flowers (Fig. 1). The fruit of *S. ramosiana* is similar to that of *S. dubia*. In *S. dubia*, the apex of the fruit is briefly beaked, in *S. ramosiana*, there is a long beak, while in the fruit of the other species of the section, *S. affinis*, the fruit is ovoid and scarcely beaked. The number of vertical rows of scales in *S. dubia* is 18–26, while in *S. ramosiana* it is about 28. The spe-

cific epithet of this new species honors the late Mr. M. Ramos, a leading plant collector of the Bureau of Science at Manila, who collected widely in the Philippines and Sabah (Steenis-Kruseman 1950).

### Acknowledgments

I wish to express my sincere thanks to Dr. J. Dransfield for the use of the photographs in Figure 2, preparation of the Latin diagnosis and valuable suggestions and corrections of the manuscript. Thanks are also due to Mr. M. Anwar, who prepared Figure 1.

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**THE INTERNATIONAL PALM SOCIETY, INC.**  
**STATEMENT OF CASH RECEIPTS**  
**AND DISBURSEMENTS**  
 December 31, 1985

Income			
Membership	\$	42,113	
Interest		2,826	
Subscribers		2,471	
Seed Bank		12,060	
Publications		8,999	
Postage		2,103	
Miscellaneous		<u>1,186</u>	
Total Income			\$ 71,758
Disbursements			
Printing of Catalog	\$	38,082	
Seed Bank		5,338	
Bookstore		5,202	
Accounting		905	
Travel		639	
Rent & Supplies		340	
Miscellaneous		<u>1,905</u>	
Total Expenses			\$ 52,411
Excess Receipts over Disbursements			<u>\$ 19,347</u>

**BALANCE SHEET**  
 December 31, 1985

Assets			
Petty Cash	\$	567	
Cash in Banks			
Imperial Savings		19,458	
American Commercial Bank		8,518	
Home Bank		5,861	
Douglas County Bank		31,119	
World Savings & Loan (Endowment Fund)		17,409	
Book Inventory		6,716	
Revolving Publications Fund		<u>47,289</u>	
Total Assets			<u>\$136,937</u>
Fund Balance			
Fund Balance—December 31, 1985	\$	117,590	
Net Receipts over Disbursements		<u>19,347</u>	
Balance			<u>\$136,937</u>