

NOTES ON NEW GUINEA RUBIACEAE.
RHADINOPUS

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SUMMARY

A second species of *Rhadinopus*, *R. kurivana*, is described. The genus is placed in the tribe *Coffeoidae*.

Rhadinopus, until now, was a monotypic genus only represented by the type collection from the Owen Stanley Mountains. In the collections of the Rijksherbarium there are several sheets, all of rather poor material, pre-identified as *aff. Cowiea*. Recently limited flowering material and rather more abundant fruiting material have been collected and it has been possible to identify the material as a new species of *Rhadinopus*. Moreover, further collections of *R. papuana*, including fruits, have been made.

RHADINOPUS S. MOORE

Rhadinopus S. Moore, J. Arn. Arb. 11 (1930) 129. — Type species: *R. papuana* S. Moore.

Small treelets with slender horizontal branches. *Tissues* without raphides. *Stipules* obvolute, slightly ciliate, sub-persistent. *Leaves* opposite. *Inflorescence* supra-axillary, few flowered. *Flowers* 4- or 5-merous. *Calyx* somewhat cupular, lobes denticulate. *Corolla* broadly infundibular to somewhat campanulate, lobes contorted. *Stamens* inserted at the basal $\frac{1}{3}$ of the tube; anthers subsessile, dorsifixed, introrse, more or less equal in length to the corolla tube and included, apex acuminate. *Style* bifid, included. *Ovary* bilocular, placenta attached to the septum, ovules numerous. *Seeds* flattened, horizontal, vertically arranged in two slightly overlapping rows in each locule.

KEY TO THE SPECIES

- 1a. Flowers 5-merous. Stipules 3–8 mm long. Leaves membranous; base acute to obtuse or rounded; lateral nerves departing from the midrib at an angle of 30–40(–45)^c **1. *R. papuana***
- b. Flowers 4-merous. Stipules 10–22 mm long. Leaves coriaceous; base usually truncate to emarginate; lateral nerves departing at an angle of 45–60°. **2. *R. kurivana***

1. *Rhadinopus papuana* S. Moore—Fig. 1A

R. papuana S. Moore, J. Arn. Arb. 11 (1930) 129, fig. p. 130. — Type: *Brass 1495* (BM).

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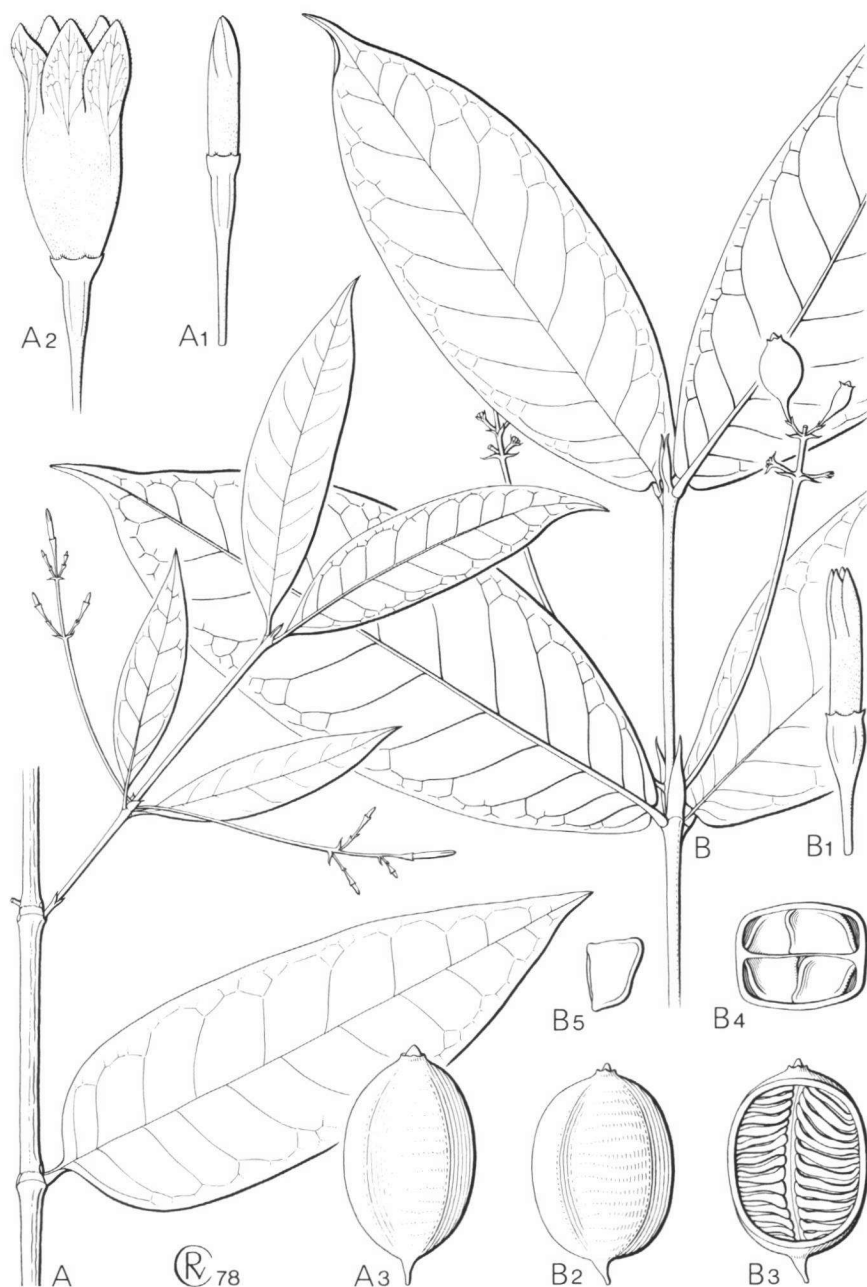


Fig. 1. *Rhadinopus papuana* and *R. kurivana*. — *R. papuana*: A. habit (Pullen 8109), $\times \frac{1}{2}$; A1. bud, $\times 2$; A2. flower, $\times 2$, (both Pullen 7631); A3. fruit, partly reconstructed (NGF 38543), $\times 1$. — *R. kurivana*: B. habit (Schodde 2511), $\times \frac{1}{2}$; B1. bud (NGF 8264), $\times 2$; B2. fruit, $\times 1$; B3. fruit, wall partly removed, $\times 1$, (both NGF 30746); B4. fruit t.s., $\times 1$; B5. seed, $\times 1$, (both Schodde 2511).

Treelet up to 5 m high. *Bark* (grey-) brown, vertically fissured. *Wood* yellowish. *Terminal vegetative bud* acute, volute. *Stipules* triangular, (3-)5-8 × (2-)3-4 mm, sometimes feintly keeled, margins minutely ciliate. *Leaves*, when young oblong to (ovate-)lanceolate, when mature (ovate-)oblong to (ovate-)lanceolate, rarely lanceolate, membranous, glabrous; apex acuminate; base acute becoming obtuse to rounded; lateral nerves 6-10 pairs, departing from the midrib at an angle of 30-40(-45)°. *Petiole* 4-10 mm long, glabrous. *Inflorescence* up to 10 cm long. *Flowers* 5-merous, white. *Hypanthium* 3-4 mm long, narrowly elongate. *Calyx* cupuliform, 1 mm long; lobes denticulate. *Corolla* broadly infundibular to campanulate, c. 13-15 × 6 mm; tube 10 mm, outside glabrous, inside sparsely hairy; lobes triangular to ovate, 5 × 3 mm, with prominent reticulate nerves. *Stamens* 8-9 mm long. *Style* 10-14 mm long, stigma 2 mm. *Disc* prominent. *Fruit* ovoidal c. 3 × 2.5 cm, leathery when dry.

D i s t r i b u t i o n. New Guinea; Central Dist. (all in the vicinity of Mori River near Cape Rodney), *Brass* 1495 (BM, holotype); *NGF* 38543; *Pullen* 7721, 8109.

2. *Rhadinopus kurivana* Ridsd., *sp. nov.* — Fig. 1B

Arbuscula ad 2-5 m alta. *Gemmae vegetativae terminales* acuminatae, volutae. *Stipulae* anguste triangulares, carinatae, 10-22 mm longae, 3-8 mm latae. *Folia* elliptico-oblonga vel lanceolata, raro ovato-lanceolata, 12-16(-22) cm longa, 4-7(-9) cm lata, coriacea, apice acuminata, basi emarginata, nervis lateralibus 8-14-paribus sub angulo 45-65° prodeuntibus; petioli glabri, usque ad 4 mm longi. *Inflorescentia* usque ad 12 cm longa. *Flores* alabastris tantum cogniti, 5-meri, albi. *Hypanthia* 2-3 mm longa, latuscula. *Calyx* cupuliformis, 1 mm longus, lobis breviter denticulatis. *Corollae tubus* 7 mm longus, extus glaber, ore sparse pubescens, lobi ovati c. 4 mm longi, 3 mm lati. *Antherae* 8 mm longae. *Stylus* bifidus. *Fructus* ruber, ovoideus, 25-30 mm longus, 20 mm latus.

T y p u s: *Schodde* 2511 (L, holo).

Treelet 2-5 m high. *Bark* greyish brown, vertically fissured, somewhat papery; under- and inner-bark red brown. *Wood* reddish-brown, hard. *Terminal vegetative bud* acute, volute. *Stipules* narrowly triangular, 10-22 × 3-8 mm, strongly keeled, margins faintly minutely ciliate. *Leaves* elliptic-oblong to lanceolate, rarely ovate-lanceolate, 12-16(-22) × 4-7(-9) cm, coriaceous, glabrous; apex acuminate; base rounded and emarginate or acute and abruptly emarginate; lateral nerves 8-14 pairs, departing from the midrib at an angle of 45-60°. *Petiole* up to 4 mm long, glabrous. *Inflorescence* up to 12 cm long. *Flowers* only known in the bud, 4-merous, white. *Hypanthium* 2-3 mm long, somewhat broad. *Calyx* cupuliform, 1 mm long; lobes denticulate. *Corolla* tube 7 mm long, outside glabrous, inside sparsely hairy in the throat; lobes ovate c. 4 × 3 mm, nerves not conspicuous. *Stamens* 8 mm long. *Style* immature. *Fruit* ovoidal, 25-30 × 20 mm, green ripening red, leathery when dry.

D i s t r i b u t i o n. New Guinea; Central Dist. (all in the vicinity of Brown River), *NGF* 5865, 8264, 30746; *LAE* 51557, 51583, 62113; *Schodde* 2511.

SYSTEMATIC RELATIONSHIPS

Leathery to somewhat fleshy fruits with 2 vertical rows of overlapping flattened seeds per locule is characteristic of a group of genera (*Cowiea*, *Diplospora*, *Hypobathrum*, *Maschalodesme*, *Petunga*, *Zuccarina*, and perhaps a few others) which

have often been placed in the *Gardenieae*. *Rhadinopus* was associated with *Gardenia* and *Hypobathrum* by S. Moore. Bremekamp (Fedde Repert. 37: 1934, 6–11; Acta Bot. Neerl. 15: 1966, 25, 26, and pers. comm.) transferred this group to the *Coffeoidae*, the *Gardenieae* being limited to genera in which the seeds are embedded in a gelatinous mass. Such a delimitation of the *Gardenieae* seems to be the more generally accepted by modern workers.

Within the group of genera mentioned *Rhadinopus* superficially resembles some species of *Hypobathrum*, particularly *H. purpurescens* (Elm.) Merr., and also *Cowiea philippinensis* Merr., but in the latter there is a long, distinct corolla tube. The greatest resemblance is with *Zuccarinia*, particularly in the form of the corolla, the sessile anthers, and the form of the fruit and arrangement of the seeds. However, *Rhadinopus* has a much less protracted inflorescence.

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