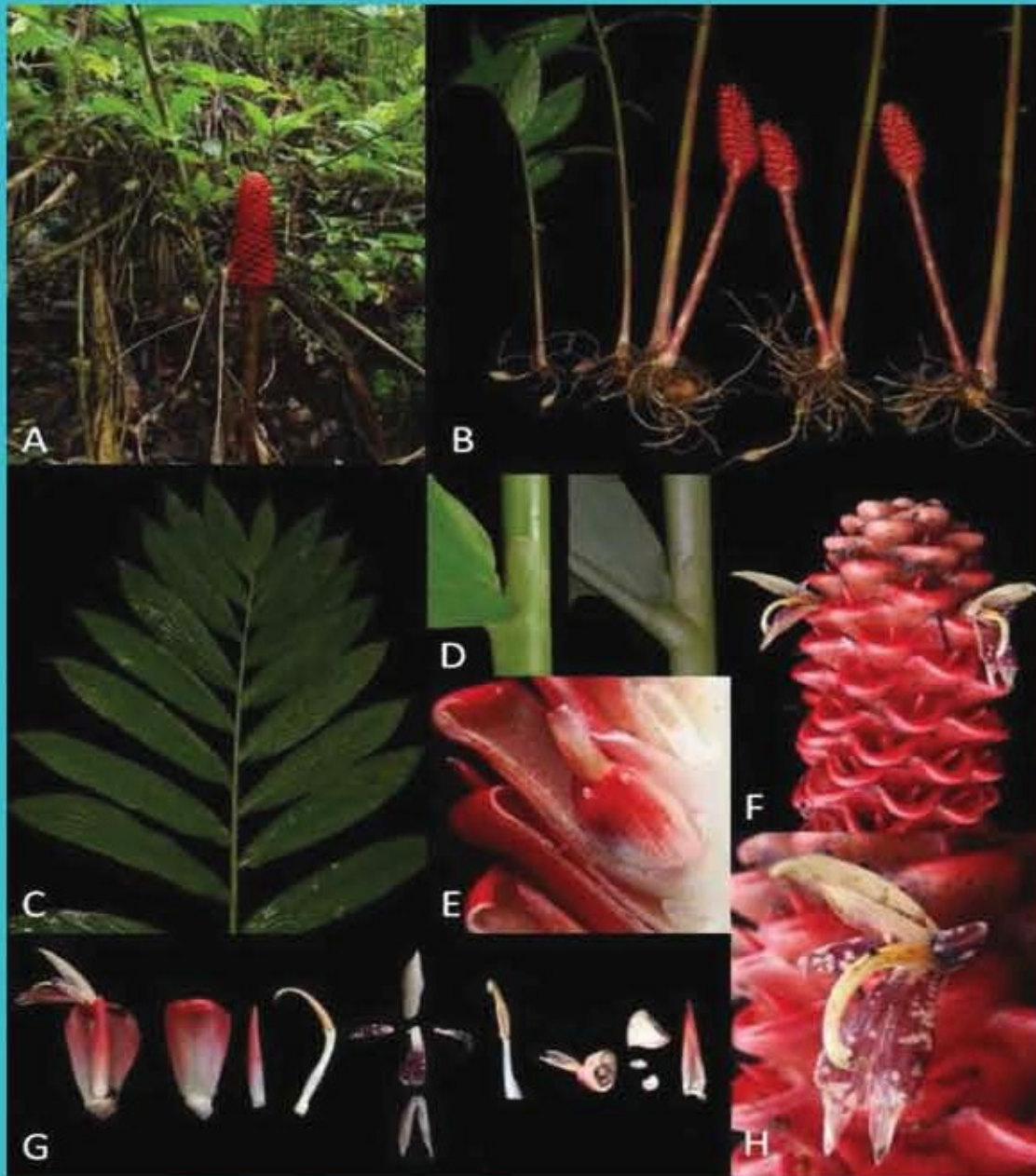




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Correspondence on editorial matters and subscriptions for Reinwardtia should be addressed to:

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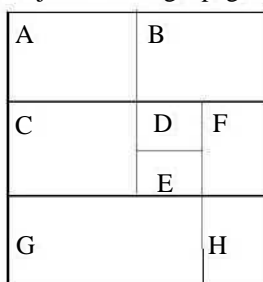
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PHONE (+62) 21 8765066; Fax (+62) 21 8765062

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Cover images: *Zingiber engganoensis* Ardiyani. A. Habit B. Leafy shoot and the inflorescence showing rhizomes, roots and root-tuber C. Leaves D. Ligule and swollen petiole E. Dissection of inflorescence showing fruit F. Spike and flowers G. Dissection of flowers and fruits showing bract, bracteole, two lateral staminodes, two petal lobes, labellum, and the four appendages of the anther H. Flower. Source of materials: E190 (BO). Photo credits: B, C, D by Arief Supriatna. A, E, F, G, H by Marlina Ardiyani.

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GYMNOPETALUM PECTINATUM (W. J. DE WILDE & DUYFJES) RUGAYAH: RANK OF SPECIES FOR *GYMNOPETALUM SCABRUM* VAR. *PECTINATUM* (CUCURBITACEAE)

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W. J. J. O. DE WILDE & B. E. E. DUYFJES

Naturalis Biodiversity Center, section Botany, P.O. Box 9517, 2300 RA Leiden, The Netherlands. E-mail: b.wilde-duyfjes@naturalis.nl

RUGAYAH

Herbarium Bogoriense, Botany Division, Research Center for Biology-LIPI, Cibinong Science Center, Jln. Raya Jakarta-Bogor Km. 46, Cibinong 16911, Bogor, Indonesia. E-mail: titikrugayah@yahoo.com

ABSTRACT

DE WILDE, W. J. J. O., DUYFJES, B. E. E. & RUGAYAH. 2015. *Gymnopetalum pectinatum* (W. J. De Wilde & Duyfjes) Rugayah: rank of species for *Gymnopetalum scabrum* var. *pectinatum* (Cucurbitaceae). Reinwardtia 14(2): 323 – 324. — With *Gymnopetalum pectinatum* (W. J. de Wilde & Duyfjes) Rugayah, *stat. nov. & comb. nov.*, a coastal species, four species in *Gymnopetalum* are now recognized in Malesia.

Key words: *Cucurbitaceae*, *Gymnopetalum*, new species, SE Asia.

ABSTRAK

DE WILDE, W. J. J. O., DUYFJES, B. E. E. & RUGAYAH. 2015. *Gymnopetalum pectinatum* (W. J. De Wilde & Duyfjes) Rugayah: tingkat jenis *Gymnopetalum scabrum* var. *pectinatum* (Cucurbitaceae). Reinwardtia 14(2): 323 – 324. — Adanya perubahan status *Gymnopetalum scabrum* var. *pectinatum* sebagai varietas *Gymnopetalum* menjadi jenis tersendiri *Gymnopetalum pectinatum* (W. J. de Wilde & Duyfjes) Rugayah, menambah jumlah jenis *Gymnopetalum* yang ada di Malesia menjadi empat jenis.

Kata kunci: Asia Tenggara, *Cucurbitaceae*, *Gymnopetalum*, jenis baru.

INTRODUCTION

Gymnopetalum Arn. in Malesia and Thailand has recently received much attention in connection with the flora treatments of the *Cucurbitaceae* for both areas (de Wilde & Duyfjes, 2006; 2008a; 2008b; 2010). With the description of *Gymnopetalum integrifolium* var. *pectinatum* (2006) only two collections were known, from a locality in E Java, near Pasuruan, at sea level, *viz. de Wilde & Duyfjes 21692* (flowers), *21693* (fruits), both in L.

Recently a third collection in BO became known, from distant Sumbawa, *Nakano & Kahono 99111*, containing male flowers and fruit, collected at Alas, 5–10 m alt., beside the road near the sea, dated June 26, 1999.

This latter specimen, matching the E Java collections in the male bract and fruit and seed details, indicated that a good species rather than a variety is concerned. This raises the number of Malesian *Gymnopetalum* species from 3 to 4, and with the Sri Lanka species *G. tubiflorum* to 5 for the genus as a whole. For clarity a key to the species, alternative to that presented in *Flora Malesiana* and a species description compatible to those in *Flora Malesiana* (de Wilde & Duyfjes, 2010) is presented.

DESCRIPTION

Gymnopetalum pectinatum (W. J. de Wilde & Duyfjes) Rugayah, *stat. & comb. nov.*

Gymnopetalum integrifolium (Roxb.) Kurz var. *pectinatum* W. J. de Wilde & Duyfjes, *Blumea* 51, 2 (2006) 287, fig. 4. — *Gymnopetalum scabrum* (Lour.) W. J. de Wilde & Duyfjes var. *pectinatum* (W. J. de Wilde & Duyfjes) W. J. de Wilde & Duyfjes, *Reinwardtia* 12 (2008a) 268; *Fl. Males.*, Ser. 1, 19 (2010) 78, f. 24: a, b.; 26: b, b'; pl. 10: c. — Type: *de Wilde & Duyfjes 21692* (L), male fl., E Java.

Climbing or creeping herbs, rooting at the nodes, to 4 m long; stem sparsely and densely grey-brown hairy; monoecious. *Probract* absent or possibly inconspicuous and caducous. *Tendrils* sparsely hairy, simple or 2-branched near the base. *Leaves: petiole* 2–4 cm long; *lamina* subcoriaceous, slightly bullate, scabrous and sparsely hairy above, more densely hairy below, sparsely black-dotted, broadly ovate, circular or 3- or 5-angular, or reniform in outline, 2–7 cm long, base deeply cordate, margin subentire or dentate-mucronate, apex broadly rounded to acute, mucronate; *cystoliths* in older leaves present above. *Male flowers* solitary or in erect bracteate racemes 4–15 cm long; *bracts* hairy, minutely black-dotted, ± obtriangular, 15–20 mm long, sessile,

upper margin regularly, finely, densely laciniate, the lobes linear, 2–4 mm long; *flowers* sparsely or densely brown pubescent, hairs \pm curly, 2–3 mm long; *pedicel* 50–80 mm long in solitary flowers, 10 (–15) mm long in the racemes, persistent, at apex articulate; *receptacle tube* ca. 25 mm long, ca. 6 mm wide, narrowed below insertion of stamens about the middle; *sepals* narrowly triangular to linear, entire, acute, 3–4 mm long; petals at anthesis not seen; stamens, synandrium and disc-segments not investigated. *Female flowers* solitary on the node or solitary at base of the male raceme; *bracts* ca. 20 \times 25 mm, finely laciniate; *sepals* linear, ca. 8 \times 1 mm; *ovary* densely hairy, ca. 15 mm long. *Fruits* orange-red, sparsely hairy, rather juicy, ellipsoid, 4–4.5 \times ca. 2.8 cm, base and apex obtuse, not ribbed; *fruiting pedicel* hairy, 1–3 cm long. *Seeds* numerous, brown or blackish, in green pulp, ellipsoid-oblong, \pm compressed, 7–8 \times 3–3.5 mm, faces slightly raised, somewhat rugose, margin broad, rounded.

Distribution. E. Java, W. Sumbawa.

Ecology. Coastal flat-land on clayey soil; low altitudes.

Notes. Fully open male flowers are still unknown. As suggested with the original description of the variety the overall characters, *i.e.* in the general habit of the plant, this species seems intermediate between *Gymnopetalum scabrum* (with globose fruit, not ribbed) and *G. chinense* (with ellipsoid fruit, ribbed). Possibly the present *Gymnopetalum pectinatum* is a coastal species as all three collections are from near the sea. The probract is possibly absent in *Gymnopetalum pectinatum*. In *Gymnopetalum scabrum* it is 1–2.5 mm long or absent, in *G. chinense* minute, caducous, or absent. In Flora Malesiana (de Wilde & Duyfjes, 2010) the probract of *G. scabrum* (*G. integrifolia*) erroneously was indicated as to 2.5 cm long. In *Gymnopetalum orientale* W. J. de Wilde & Duyfjes the probract is absent or various in size, (ob)ovate, to 1 cm long.

Key to the Malesian species of *Gymnopetalum*

- 1 a. Leaves densely coarsely hairy below 2
- b. Leaves sparsely scabrous-pubescent below 3
- 2 a. Male bract in raceme irregularly few lobed or incised. Fruit globose, glabrescent *G. scabrum*
- b. Male bract in the raceme with apex \pm truncate, regularly finely laciniate. Fruit ellipsoid, sparsely hairy..... *G. pectinatum*
- 3 a. Flowers in the male raceme with distinct pedicel. Fruit 2.5–5 mm long, 10-ribbed *G. chinense*
- b. Flowers in the male raceme (sub)sessile. Fruit 5–6 cm long, unribbed *G. orientale*

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The help of the botanical garden at Purwodadi for facilitating a cucurbit-collecting fieldtrip to the area in E. Java where *Gymnopetalum pectinatum* was found is acknowledged. We would like to thank the curators of BO and L for allowing us to study their holdings.

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Scope. *Reinwardtia* is a scientific irregular journal on plant taxonomy, plant ecology and ethnobotany published in December. Manuscript intended for a publication should be written in English.

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Address: Jln. Raya Jakarta-Bogor Km. 46 Cibinong 16911, P.O. Box 25 Cibinong

Telp. (+ 62) 21 8765066; Fax (+62) 21 8765062

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