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

HERBARIUM BOGORIENSE, BOTANY DIVISION,

RESEARCH CENTER FOR BIOLOGY– INDONESIAN INSTITUTE OF SCIENCES

CIBINONG SCIENCE CENTER, JLN. RAYA JAKARTA – BOGOR KM 46,

CIBINONG 16911, P.O. Box 25 CIBINONG

INDONESIA

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

E-MAIL: reinwardtia@mail.lipi.go.id

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Yee Wen Low - Herbarium Singapore, Singapore Botanic Gardens, 1 Cluny Road, Singapore

***DENDROBIUM TINUKARIENSIS*, A NEW SPECIES OF SECTION *CALYPTROCHILUS* FROM THE MEKONGGA MOUNTAINS, SOUTHEAST SULAWESI, INDONESIA**

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DIAH SULISTIARINI

Herbarium Bogoriense, Botany Division, Research Center for Biology – LIPI, Cibinong Science Center, Jln. Raya Jakarta–Bogor Km. 46, Cibinong, 16911, Bogor, Indonesia. Email: dsulistiarini@yahoo.com

DANIEL POTTER

Department of Plant Sciences, University of California, Davis, United States of America, Email: dpotter@ucdavis.edu

PETER O'BYRNE

Research Fellow at Forest Research Institute Malaysia (FRIM). Waikiki Condominium H10-11, Tanjung Aru, 88100 Kota Kinabalu, Sabah, Malaysia. Email: oberonia@gmail.com

ABSTRACT

SULISTIARINI, D., POTTER, D. & O'BYRNE, P. 2017. *Dendrobium tinukariensis*, a new species of section *Calyptrochilus* from Mekongga Mountains, South East Sulawesi, Indonesia. *Reinwardtia* 16 (2): 103–106. — A new species of *Dendrobium* (Orchidaceae), *D. tinukariensis* is described and illustrated from Mekongga, Southeast Sulawesi, Indonesia. It belongs in *Dendrobium* sect. *Calyptrochilus*.

Key words: *Calyptrochilus*, Orchid, Southeast Sulawesi.

ABSTRAK

SULISTIARINI, D., POTTER, D. & O'BYRNE, P. 2017. *Dendrobium tinukariensis*, satu jenis baru seksi *Calyptrochilus* dari Pegunungan Mekongga, Sulawesi Tenggara, Indonesia. *Reinwardtia* 16 (2):103–106. — Satu jenis baru *Dendrobium* (Orchidaceae), *D. tinukariensis* dari Pegunungan Mekongga, Sulawesi Tenggara, Indonesia, dipertelakan dan digambar. Jenis ini termasuk dalam kelompok *Dendrobium* seksi *Calyptrochilus*.

Kata kunci: Anggrek, *Calyptrochilus*, Sulawesi Tenggara.

INTRODUCTION

The genus *Dendrobium* is restricted to the subtropics and the tropics of the Old World and comprises about *ca.* 1700 (Ormerod, 2017). This after the inclusion of *Cadetia*, *Diplocaulobium* and *Flickingeria* as section in *Dendrobium*. Thomas & Schuiteman (2002) list 72 species. Add to this number also the species of above section for the real number of *Dendrobium* species.

Mekongga is the highest mountain in Southeast Sulawesi Province, which was formed from an atoll raised several hundred million years ago, creating the possibility for specific and perhaps endemic flora and fauna to occur in this area (Anonymous, 2017). Until now, accounts of the flora of Sulawesi, especially orchid species, have been very limited. Thomas & Schuiteman (2002) recorded 548 orchid species from Sulawesi. The Southeast Sulawesi region has been under-researched; Sulistiarini (2008) reported 91 orchid species from Wawonii Island, Southeast Sulawesi, of which 36 species were new records and four were endemic species to Sulawesi. The biodiversity of orchids in Mekongga was presented in Flora Malesiana Symposium IX by Sulistiarini & Potter (2013), who reported 37 species, including

four endemic to Sulawesi, some new records, and some new species. One of the new species, belongs to *Dendrobium* section *Calyptrochilus*. The section have roots smooth and thick, stems erect and slim, long, in some species branched, in many species pendulous, leaves slender, semi-deciduous, the flowers are single, axillary on older stem or on leafless stems, white, red, yellow, purple or pink. The lip is not lobe, with blade expanded, the lip and lateral sepal fused into a spur. The characteristic of the section has a long spur, the column has a peculiar very elongated foot and the stelia overtop the anther (Wood, 2006).

Dendrobium tinukariensis Sulistiarini & O'Byrne *spec. nov.* — Type: Indonesia, Southeast Sulawesi, North Kolaka District, Rante Angin Subdistrict, Tinukari Village Mekongga Mountain, on the way to camp G. Glondongan, 1,200 m., *Widjaja EAW 9795* (Holotype: BO!). Fig. 1 & 2.

Epiphytic herb. Rhizome not seen, stems growing in tufts. *Stems* erect, to about 50 cm long, highly branched in distal half, the branches having secondary and tertiary branches in their distal halves, 4-12 branches in total on the stem, leafy towards apex; 2-3 mm diam; internodes on

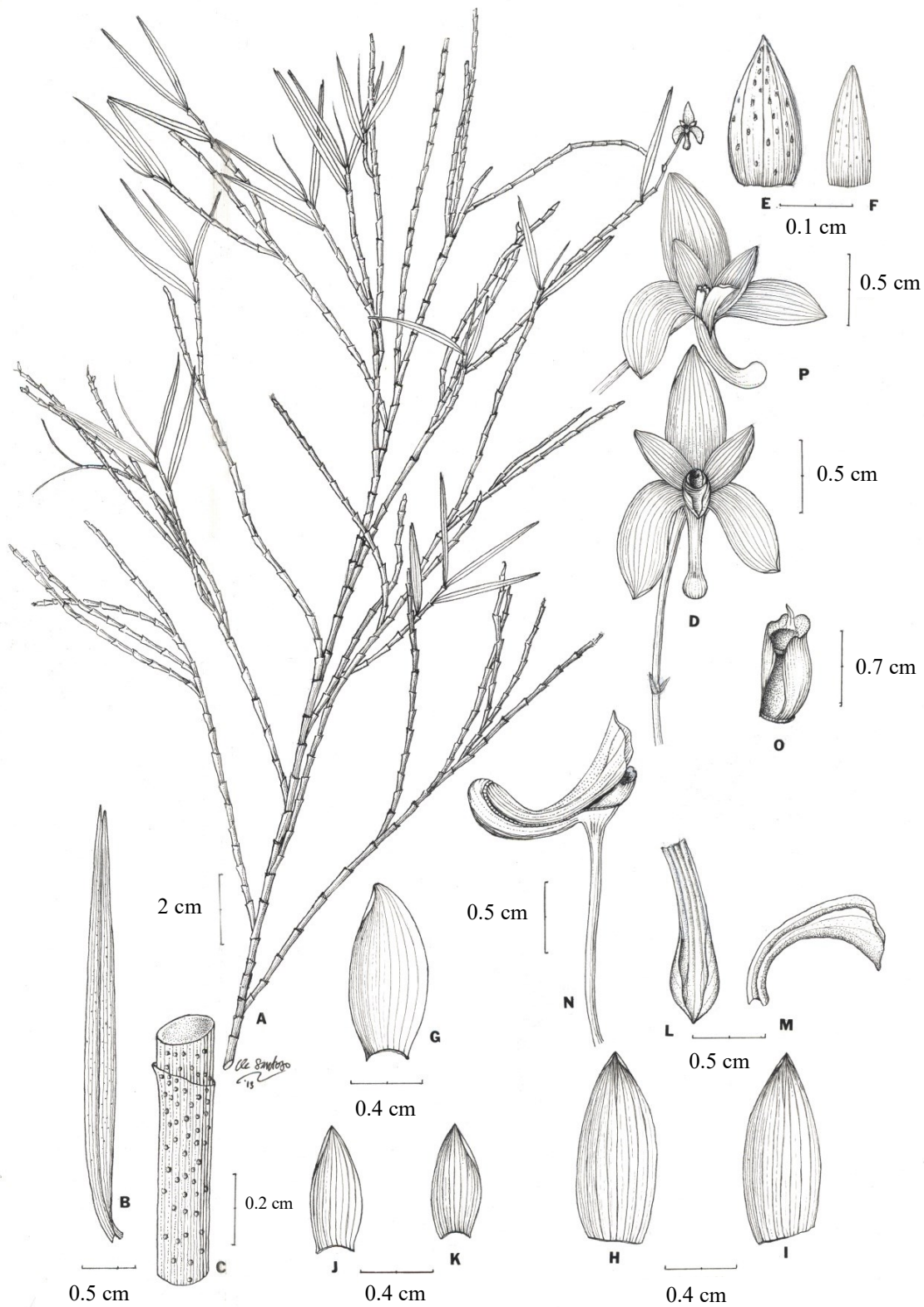


Fig.1. *Dendrobium tinukariensis* Sulistiarini & O'Byrne spec. nov. A. Habit; B. Leaf; C. Sheath; D. Flower from front; E & F. Bracts; G. Median sepal; H & I. Lateral sepals; J & K. Petals; L & M. Lip; N. Mentum, lip & column; P. Flower, oblique view; O. Column. From Widjaja EAW 9795 (BO), drawing by Wahyudi Santoso (BO).

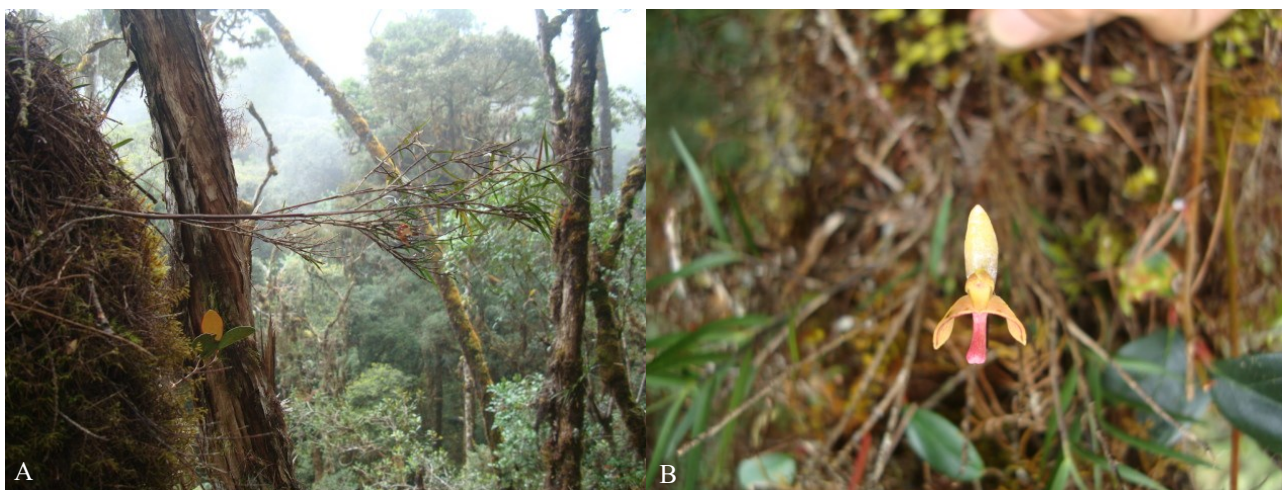


Fig. 2. *Dendrobium tinukariensis* Sulistiarini & O'Byrne *spec. nov.* A. Habit; B. Flower. Photos taken from type location at Mekongga Mountains by Wahyudi Santoso (BO).

primary stem 20–38 mm, much less on branches, hard and woody, glossy, yellow, bare or with a few sheath remnants persisting as long fibres. *Leaves* suberect, narrowly ovate, 25–47 × 2–3 mm, tapering to unequally bilobed, acute tip, green; sheaths cylindrical, tightly encircling stem, persistent on branches, not persistent on main stems, longer than internode, brownish-green to blackish-green, later turning white, sulcate with rows of nodules in the grooves, apex truncate with a small appendage opposite the leaf. *Inflorescences* lateral from nodes on the leafy part of stem, erect, *ca.* 15 mm long, 1-flowered; peduncle 2–4.5 mm long, with 2 tubular basal bracts, one continuing from the sheath; floral bracts 2, opposite, differently shaped, one erect or clasping the pedicel, *ca.* 2 mm long, obovate, the other spreading to recurved, linear, slightly shorter, *ca.* 1.5 mm. Flower resupinate, *ca.* 14 mm long (spur apex to dorsal sepal apex) × 10 mm wide, sepals wide-spreading, pale yellow to brownish-yellow, lateral sepals sometimes with red marks along the margin, lip apex pale green, mentum red. Pedicel with ovary 13–16 mm long, pedicel cylindrical, very slender, broadening slightly towards apex, ovary narrowly obconical, slightly broader. *Dorsal sepal* suberect to porrect, ovate, 9–12 × *ca.* 4 mm, subacute, 6 nerves. *Lateral sepals* free portion obliquely spreading and recurved from the middle, ovate to oblong, 7–13 × 3–5 mm, subacute, 6 nerves; basal portion 5.5–7.5 mm long, outer margin joined under lip, forming a mentum. *Petals* porrect and incurved around column apex, ovate-elliptic, 5–7 × 2.5–3 mm, acute. *Lip* porrect, margins raised to clasp the column, attached at the column foot, obovate, margin undulate, *ca.* 0.6 cm long, 0.4 cm wide, inner part has 5 keels. A mentum is always formed from the lateral sepals and column foot, base at *ca.* right-angle to lip, incurved at centre, 5.5–7.5 mm long, narrowly clavate, basal part cylindrical, distal part

swollen, broadening to *ca.* 2 mm wide at truncate and slightly retuse apex. Column porrect, 4 × 2 mm, cylindrical, at the top with a spine-like appendage, stelia porrect and recurved; anther-cap orbicular, 1 × 1 mm, the top margin irregular; pollinia 4 arranged in 2 pairs.

Habitat and ecology. Mossy forest, 1,880–2,600 m asl.

Distribution. Indonesia, Sulawesi, Southeast Sulawesi, Mekongga Mountains.

Etymology. The epithet name refers to location of the new species.

Note. *Dendrobium tinukariensis* differs from *D. furcatum* in having rather narrow ovate-elliptic petals and a mentum with a tip swollen into a blister versus *D. furcatum* has broad cuneate petals and while the mentum a sometimes slightly inflated mentum which in the distal half, the tip is never swollen into a blister. Also, the flower colour differs; the new species *D. tinukariensis* has cream-coloured to pale yellow flowers with a red mentum, while *D. furcatum* has white or purple flowers with a purple lip and white mentum.

Specimens examined. Indonesia, Southeast Sulawesi, North Kolaka District, Rante Angin Subdistrict, Tinukari Village Mekongga Mountain, on the way to camp G. Glondongan, 1,200 m., *Widjaja EAW 9795* (Holotype, BO). Sulawesi North Kolaka District, Rante Angin Subdistrict, Tinukari Village, Mekongga Mountains, to the top of the Mountains, 2576 m., *Widjaja EAW 9367* (BO).

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Scope. *Reinwardtia* is a scientific regular journal on plant taxonomy, plant ecology and ethnobotany published in June and 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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Herbarium Bogoriense
Botany Division
Research Center for Biology – Indonesian Institute of Sciences
Cibinong Science Center
Jln. Raya Jakarta – Bogor, Km 46
Cibinong 16911, P.O. Box 25 Cibinong
Indonesia

