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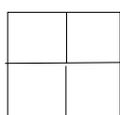
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Cover images: *Canthiumera robusta* K.M.Wong & X.Y.Ng, *spec. nov.* Top left: leafy branch with inflorescences; note also keeled stipules. Top right: flower with tufts of pale moniliform hairs visible opposite corolla lobes. Below left: fruits. Below right: pyrenes. Photos: Ang Wee Foong (top left) and X.Y. Ng (remaining images).

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## RHODODENDRON MEAGAI, A NEW SPECIES OF RHODODENDRON SUBGENUS *VIREYA* (ERICACEAE) FROM PAPUA, INDONESIA

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### ABSTRACT

MAMBRASAR, Y. M. & HUTABARAT, P. W. K. 2018. *Rhododendron meagai*, a new species of *Rhododendron* subgenus *Vireya* (Ericaceae) from Papua, Indonesia. *Reinwardtia* 17(2): 97–100. — *Rhododendron meagai*, is described and illustrated as a new species in subgenus *Vireya* (Ericaceae) from Mount Salju, District of Abenaho, Yalimo Regency, Papua Province, Indonesia. Characters distinguishing this new species from related species are discussed.

**Key words:** District of Abenaho, New Guinea, new species, Papua Province, *Rhododendron meagai*.

### ABSTRAK

MAMBRASAR, Y. M. & HUTABARAT, P. W. K. 2018. *Rhododendron meagai*, jenis baru *Rhododendron* submarga *Vireya* (Ericaceae) dari Papua, Indonesia. *Reinwardtia* 17(2): 97–100. — *Rhododendron meagai*, dipertelakan dan digambar sebagai jenis baru pada submarga *Vireya* (Ericaceae) dari Gunung Salju, Distrik Abenaho, Kabupaten Yalimo, Provinsi Papua, Indonesia. Didiskusikan pula karakter yang membedakan jenis baru ini dengan jenis yang terdekat.

**Kata kunci:** Distrik Abenaho, jenis baru, Provinsi Papua, Pulau New Guinea, *Rhododendron meagai*.

### INTRODUCTION

New Guinea is a major center diversity of *Rhododendron* subgenus *Vireya* in the Malesia region with more than three times the number recorded compared with the next richest island: Borneo (Argent, 2015). The number of species in western New Guinea is greater than in the Eastern part (Papua New Guinea). Argent (2015) recorded 121 species in western New Guinea compared with only 85 species in the eastern part. *Rhododendron* is well recorded in New Guinea because of its impressive flowers (Kartikasari *et al.*, 2013).

In 2016, during fieldwork in Yalimo regency, Papua Province, the team from LIPI discovered a *Rhododendron* that appeared to be new. This species is quite distinct from any other *Rhododendron* species known from western New Guinea. However, there were strong superficial similarities to *Rhododendron diesianum* Schltr. from eastern New Guinea. On close examination the scale structure and disposition appeared to be sufficiently distinct to consider this new collection as belonging to a different, undescribed species.

***Rhododendron meagai*** Mambrasar & Hutabarat *spec. nov.* — Type: Indonesia, Papua Province, Yalimo Regency, Abenaho District, Mount Salju, 23 May 2016, Michael Mambrasar 239 (Holotype: BO! iso: E! K!). Figs. 1 & 2.

**Diagnosis.** Distinct in section *Hadranthe* Schltr. in having the combination of characters: elliptic leaves, long stalked dendroid scales, a glabrous corolla and stamens of irregular lengths.

*Shrub* or small tree to ca. 2 m, twigs densely scaly, ca. 2–3 mm in diameter, internodes 2–6 cm. *Leaves* in tight pseudowhorls, 3–5 together, spreading. Blade 27–55 × 7–19 mm, elliptic to narrowly elliptic; base cuneate; apex obtuse to acute occasionally apiculate; margin entire, revolute; when young: densely covered with reddish-brown scales, quickly becoming glabrescent adaxially more slowly abaxially. Scales dendroid, with highly divided arms and long slender stalks, from low persistent epidermal tubercles. Mid-vein impressed above and strongly prominent beneath; lateral veins obscure. Petiole

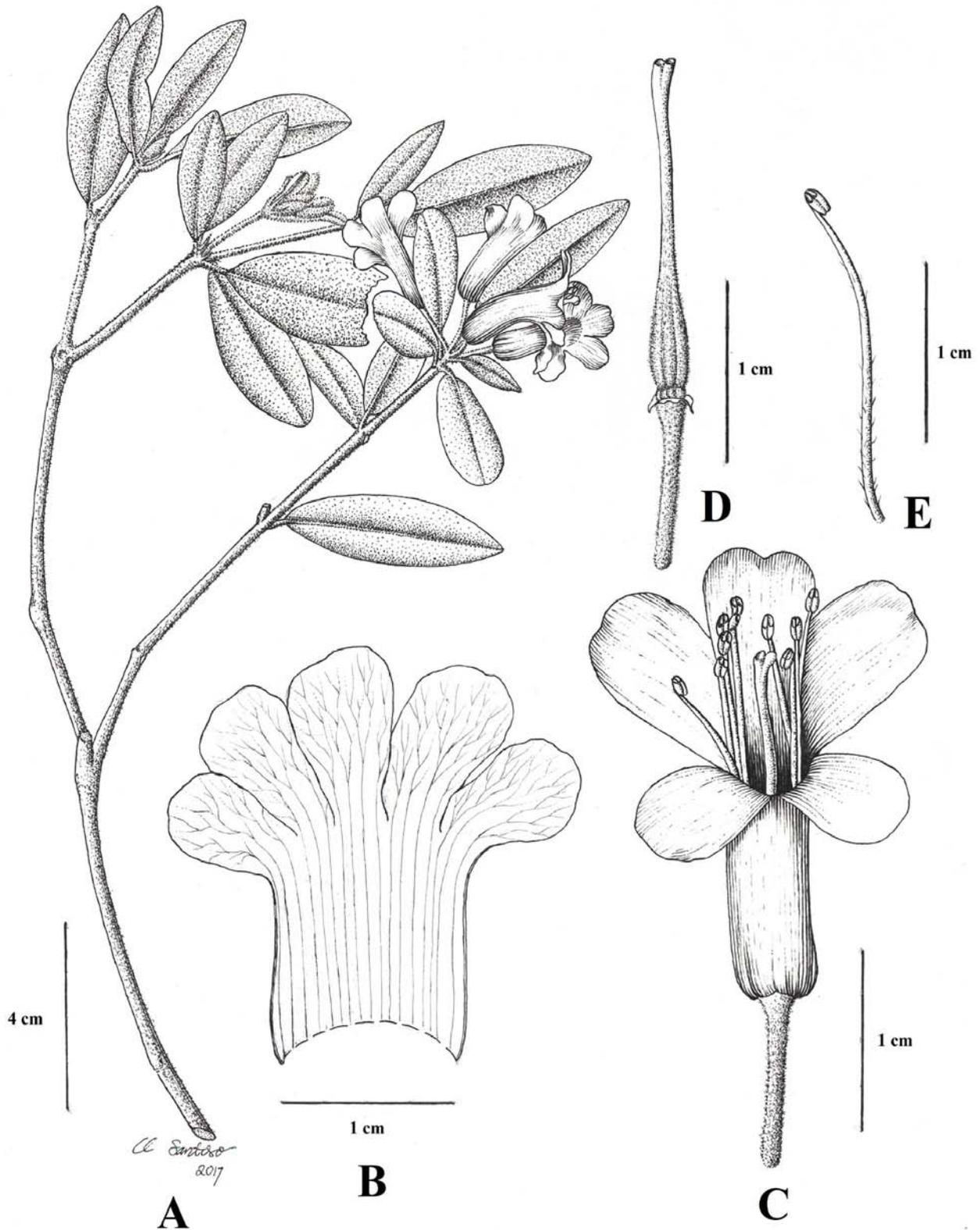


Fig. 1. *Rhododendron meagaili* Mambrasar & Hutabarat, *spec. nov.* A. Branch showing habit of flowers. B. Corolla opened out. C. Flower. D. Pistil. E. Stamen. From Michael Mambrasar 239 (BO), drawing by Wahyudi Santoso (BO).

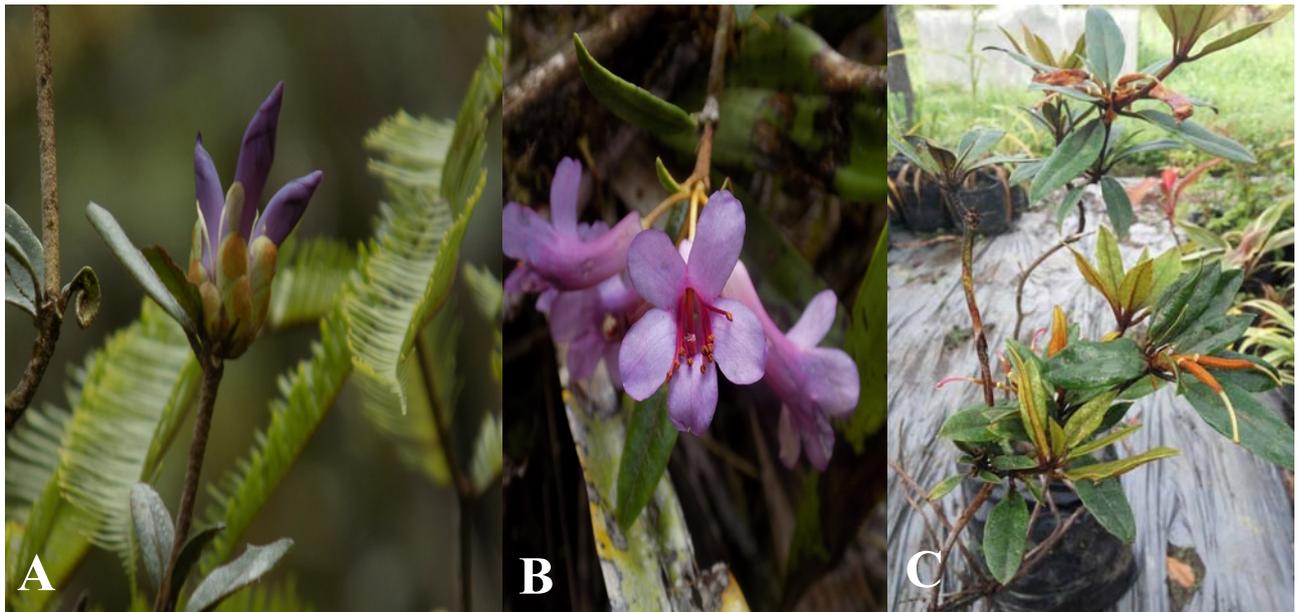


Fig. 2. *Rhododendron meagii* Mambrasar & Hutabarat, *spec. nov.* A & B Habit and Flower. Photo taken from type location by Y. Michael Mambrasar (BO). C. Cultivated at Biology Botanical Garden in Wamena (Kebun Raya Biologi Wamena). Photo by Dede Nurul Iman.

5–7 × 1 mm, densely stellate scaly, grooved. Flower bud *ca.* 10 × 4 mm, broadly ellipsoid, the basal bracts spreading, all other bracts appressed. Bracts: the outermost triangular, caudate, densely scaly outside and along the margins; inner bracts to *ca.* 7 × 8 mm, ovate to obovate, apiculate, membranous, scaly distally abaxially and along the margins. Bracteoles to *ca.* 18 × 1 mm, linear slightly broadened near the apex, with a few marginal scales. Flowers spreading 4–5 together in open umbels. Pedicels: 9–11 × 0.5 mm, densely brown stellate scaly without simple hairs. Calyx *ca.* 2 mm diameter, disk-shaped, the margin undulate, scaly outside, without simple hairs. Corolla zygomorphic, purple, without scent; tube *ca.* 20 × 4 mm, curved, glabrous both outside and inside; lobes *ca.* 8 × 6 mm, subcircular, glabrous. Stamens 10, unequal in length, slightly exserted, loosely clustered on the upper side of the mouth; filaments 20–22 mm long, sparsely short hairy in the proximal 2/3, glabrous distally. Anthers oblongoid, *ca.* 2 mm long. Disk densely short hairy on the upper side. Ovary narrowly fusiform, 6–7 mm long, densely scaly; style *ca.* 1–1.2 cm long, shortly patently hairy in the proximal 4 mm and glabrous distally. Stigma *ca.* 2 mm in diameter. Fruit cylindrical, densely scaly when young.

**Distribution.** Known only from the type locality.

**Ecology.** Mossy forest and open montane shrubbery. Growing with *Dicranopteris* sp.

altitude 1,100 m asl.

**Etymology.** Name in honour of Organes Meaga (†), Kebun Raya Biologi Wamena technician who helped in collecting this species.

**Phenology.** *Rhododendron meagii* was observed in flower when it was collected at the middle of May 2016. Later it was reported that the living specimen at the nursery of Kebun Biologi Wamena in Wamena was flowering and fruiting in early June 2017.

**Conservation status.** Not assessed.

**Note.** This species is clearly in section *Hadranthe* Schltr. displaying the characteristic dendroid scales on distinct epidermal tubercles of that section. It keys to *Rhododendron prainianum* in Argent (2015), but lacks the distinctive linear leaves of that species. It appears to be most similar to *R. diesianum* Schltr. which occurs much further to the east in New Guinea but that species has scales which are sessile or on much shorter stalks, and has a laxly scaly corolla tube outside.

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## REFERENCES

- ARGENT, G. 2015. *Rhododendrons of subgenus Vireya* 2<sup>nd</sup> ed. 1–454. Royal Botanic Garden, Edinburgh.
- KARTIKASARI, E. N., MARSHALL, A. J. & BEEHLER, B. M. 2013. *Ekologi Papua*. 2<sup>nd</sup> ed. Yayasan Obor Indonesia dan Conservation Indonesia, Jakarta.
- SLEUMER, H. 1966. *Rhododendron*. In: VAN STEENIS, C. G. G. J. (Ed.). *Flora Malesiana I* (6): 474–668. Wolters-Noordhoff, Groningen.

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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.

**Titles.** Titles should be brief, informative and followed by author's name and mailing address in one-paragraphed.

**Abstract.** English abstract followed by Indonesian abstract of not more than 250 words. Keywords should be given below each abstract.

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**Nomenclature.** Strict adherence to the International Code of Nomenclature is observed, so that taxonomic and nomenclatural novelties should be clearly shown. English description for new taxon proposed should be provided and the herbaria where the type specimens area deposited should be presented. Name of taxon in taxonomic treatment should be presented in the long form that is name of taxon, author's name, year of publication, abbreviated journal or book title, volume, number and page.

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**References.** Bibliography, list of literature cited or references follow the Harvard system as the following examples.

- Journal : KRAENZLIN, F. 1913. *Cyrtandraceae* novae Philippinenses I. *Philipp. J. Sci.* 8: 163–179.  
MAYER, V., MOLLER, M., PERRET, M. & WEBER, A. 2003. Phylogenetic position and generic differentiation of *Epithemateae* (Gesneriaceae) inferred from plastid DNA sequence data. *American J. Bot.* 90: 321–329.
- Proceedings : TEMU, S. T. 1995. Peranan tumbuhan dan ternak dalam upacara adat “Djoka Dju” pada suku Lio, Ende, Flores, Nusa Tenggara Timur. In: NASUTION, E. (Ed.). *Prosiding Seminar dan Lokakarya Nasional Etnobotani II*. LIPI & Perpustakaan Nasional: 263–268. (In Indonesian).  
SIMBOLON, H. & MIRMANTO, E. 2000. Checklist of plant species in the peat swamp forests of Central Kalimantan, Indonesia. In: IWAKUMA, T., INOUE, T., KOHYAMA, T., OSAKI, M., SIMBOLON, H., TACHIBANA, H., TAKAHASHI, H., TANAKA, N., YABE, K. (Eds.). *Proceedings of the International Symposium on: Tropical Peatlands*. Pp.179 – 190.
- Book : RIDLEY, H. N. 1923. *Flora of the Malay Peninsula* 2. L. Reeve & Co. Ltd, London.
- Part of Book : BENTHAM, G. 1876. *Gesneriaceae*. In: BENTHAM, G. & HOOKER, J. D. *Genera Plantarum* 2. Lovell Reeve & Co., London. Pp. 990–1025.
- Thesis : BAIRD, L. 2002. *A Grammar of Kéo: An Austronesian Language of East Nusantara*. Australian National University, Canberra. [PhD. Thesis].
- Website : <http://www.nationaalherbarium.nl/fmcollectors/k/KostermansAJGH.html>. (Accessed 15 February 2012).



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