

RHODODENDRON ALBORUGOSUM: A NEW SPECIES OF VIREYA RHODODENDRON FROM BORNEO

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ABSTRACT. *Rhododendron alborugosum* Argent & Dransfield (Ericaceae) is described from Borneo.

***Rhododendron alborugosum* Argent & Dransfield, sp. nov.** Figs 1-2. Plate 1.

R. rugosi Low ex Hooker f. foliis rugosis similis sed lepidibus non dendroideis, et colore, habitu indumentoque florum recedit. *R. suaveolenti* Sleumer fortasse magis arcte affinis sed foliis rugosis (non laevibus) multo minoribus, corolla extus lepidota (non glabra), umbella multo minore differt.

Frutex usque ad 3m altus. *Ramuli* laeves, in sicco leviter? longitudinaliterque striati, lepidibus atrofusci dispersis muniti. *Folia* in pseudoveriticillis distinctis 3-5 foliorum magnorum disposita, inter pseudoveriticillos cataphyllis squamiformibus parvis caducis. *Lamina* infra atroviridis erythrophlebia, plerumque elliptica, diquando obovata, 4-8 × 2.3-3.7cm, apice late acuto, obtuso vel rotundato, margine integra, paulo revoluta, base late cuneata usque rotundata; lepidides discoideae, patelliformes, magnitudine admodum variables, 1-5 diametris separatae, in faciei abaxiali laminae persistentes sed in adaxiali plerumque caducae; costa distincta, infra lata et per totam longitudinem valde elevata, supra ad basem lata longitudinaliter sulcataque sed ad canalem angustum simplicem impressum celeriter angustata; veni laterales 7-9-jugi, sub angulo - 45-90 abeuntes, supra paene ad marginem folii valde impressi faciem rugosam sic donati, et infra valde prominentes. *Petiolus* 8-12 × 3-4mm, ruber, superne sulcatus, lepidotus. *Umbella* c.10-flora, flores semi-erecti, albi, perfragrantes. *Pedicelli* rubri, c.12 × 1mm, minute scabridi lepidotis pilisque brevibus simplicibus. *Calyx* ex annulo humili lobato lepidoto 1-1.5mm alto constans. *Corolla* 36 × 13mm; tubus 24mm longus, ad basem 2.5mm, et distaliter 3mm latus, ± rectus, extus lepidibus tectus, intus glaber; lobi 12 × 9mm, dorsaliter exigue lepidoti. *Stamina* rubra 10; filamenta 16-20mm longa, ad basem 0.25mm lata, sursum leviter angustata, omnino pilosa; antherae 2.8 × 1.25mm, paginis subtiliter granulatis, poris obliquis. *Annulus* lobatus, pilis verticalibus brevibus. *Ovarium* 3.5 × 1.75mm, parum conicum, in 0.5mm basili leviter angustatum, dense lepidotum et pilis brevibus antrorsis tectum. *Stylus* 17 × 0.5mm, in triente inferiore sparse lepidotum, omnino parte apicali 3-4mm infra stigmate excepto pilis semi-patentibus antrorsis tectum. *Stigma* irregulariter lobatum, c.1mm diam. *Fructus* ignotus.

Shrub to 3m high. Twigs smooth, finely longitudinally striated when dry and with scattered dark-brown scales. Leaves arranged in well marked pseudowhorls of 3-5 large leaves with small caducous scale leaves between the pseudowhorls; leaf-blade dark-green with red veins below, leathery, mostly elliptic, occasionally obovate, 4-8 × 2.3-3.7cm, the apex broadly acute, obtuse or rounded; margin entire, slightly revolute; base broadly cuneate to rounded, scales rounded, plate-like, variable in size, spaced 1-5 diameters apart and persistent on abaxial face, adaxially mostly lost; midrib distinct, below broad and strongly raised throughout its length, above broad at the base and longitudinally grooved but quickly tapering to a narrow, simple, impressed channel; lateral veins 7-9 pairs, issuing at an angle of 45°-90°, strongly impressed above, almost to the leaf edge, giving a rugose surface and very prominent below. Petiole 8-12 × 3-4mm, red, grooved above, scaly. Umbels c.10-flowered, the flowers semi-erect, white, very fragrant. Pedicels red, c.12 × 1mm, minutely scabrid with scales and short simple hairs. Calyx a low lobed scaly ring, 1-1.5mm high. Corolla 36 × 13mm; tube 24 × 2.5mm (at base) and 3mm (distally), more or less straight, covered in scales outside, glabrous inside; lobes 12 × 9mm, slightly

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PLATE 1. *Rhododendron alborugosum* in the wild. Photo J. Dransfield.

scaly on the backs. Stamens red, 10; filaments 16–20mm \times 0.25mm (at the base) tapering slightly upwards, hairy throughout their length; anthers 2.8 \times 1.25mm with a finely granular surface and oblique pores; ring lobed with short vertical hairs. Ovary 3.5 \times 1.75mm, almost conical, tapering slightly in the basal 0.5mm, densely scaly and covered in short forwardly directed hairs; style 17 \times 0.5mm, sparsely scaly in the lower $\frac{1}{3}$ and with forwardly directed, semi-patent hairs to within 3–4mm of the stigma; stigma irregularly lobed, c. 1mm diam. Fruit not seen.

Type: Indonesia (Borneo) Kalimantan Selatan, Gunung Halauhalau (G. Besar) Pergunungan Meratus, Barabai, 1800m, (Upper montane forest ridgetop, mossy forest. Very beautiful shrub to 3m, leaves bullate, dark-green, with veins red below. Flowers on red pedicels, white with red stamens; very fragrant), 24 x 72, Dransfield JD 2910 (holo. BO, iso. L).

R. alborugosum is quite distinct from any other Bornean *Rhododendron*. It has been labelled *R. rugosum* Low ex Hooker f., no doubt because of a superficial resemblance in the rugose leaves, but that species has dendroid scales, and pendent, pink flowers. It has also been determined as *R. suaveolens* Sleumer, to which it is more closely related but that species has smooth, much larger leaves, a corolla which is glabrous outside, and a much larger truss of 14–20 flowers. It keys out in Sleumer (1966) amongst the New Guinea species of subsection *Solenovireya* but is unlikely to be any of these given the local distribution patterns of most species. In fact all the New Guinea species differ in characters of indumentum and the close resemblance to one another is no doubt due to parallel evolution.

Gunung Halauhalau (or Gunung Besar on some maps) is a sandstone cuesta, the edge of the cuesta varying from about 1,400–1,800m in elevation, with several summits. The ridge is covered with mossy upper montane forest

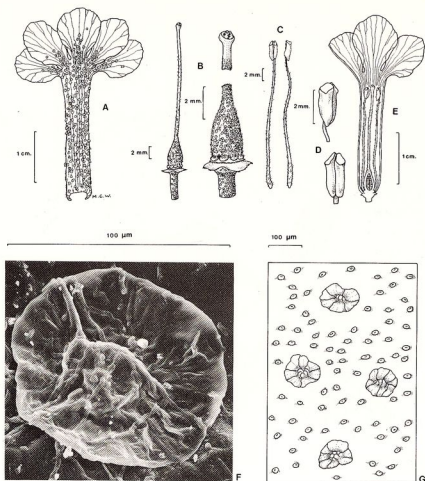
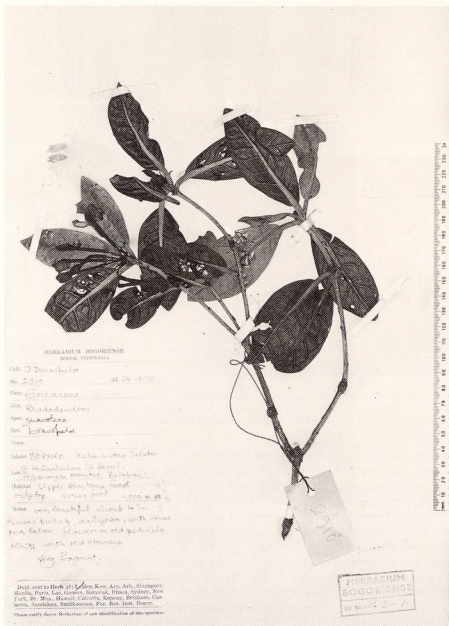


FIG. 1. *Rhododendron alborugosum* Argent & Dransfield. A, corolla, abaxial view; B, pistil; C, stamens; D, anthers; E, flower, L.S.; F, scanning electron microscope photo of a single leaf-scale; G, abaxial surface of leaf showing distribution of scales and stomata. All drawn or photographed from the type.

dominated by *Phyllocladus hypoleucus*, *Drimys piperita* and *Vaccinium* sp. On the exposed peaks there are small patches of open scrub with deep growth of sphagnum and other bryophytes, and it was in such an area on the saddle between the two highest peaks, Gunung Halau-halau Laki and Gunung Halauhalau Bini, that *Rhododendron alborugosum* was collected. Perhaps because of the very small area of the sharp ridge suitable for the development of upper montane forest, the forest gave the impression of being floristically poor and it seems probable that the population of the rhododendron is also very limited. The fragrance of the flowers of *Rhododendron alborugosum* is similar to that of *Rhododendron jasminiflorum*.

R. alborugosum has presumably also been collected by the Kyoto University Kalimantan expedition of 1978-79 as it is figured in their report (Iwatsuki et al., 1980: 19, fig. 11) as *Rhododendron* sp. from the same locality, but we have not seen any specimens.

FIG. 2. *Rhododendron alborugosum*. Holotype.

ACKNOWLEDGEMENTS

We would like to thank the curator of the Herbarium Bogoriense for the loan of the type specimen, Dr R. Mill for writing the Latin, Mrs M. Warwick for the scanning electron microscopy and art work and Mr K. Grant for photography. Field assistance from D. Darnaedi, Bogor, is gratefully acknowledged.

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