

***RHODODENDRON LORANTHIFLORUM*
(*ERICACEAE*) FROM MAINLAND NEW GUINEA. A
DISTRIBUTIONAL RECORD AND NEW SUBSPECIES**

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Rhododendron loranthiflorum was previously regarded as an archipelagic endemic, with known stations in the Solomon Islands and New Britain. An exploratory survey of the Lakekamu Basin has now established the plant's presence on the southern side of the New Guinea mainland. The Lakekamu provenance represents a geographical disjunction distinguishable as a separate subspecies, and is formally described as subsp. *lakekamuensis*.

Keywords. Botanical survey, Papuaasia, *Vireya*.

INTRODUCTION

The Lakekamu basin ranks among Papua New Guinea's (PNG) largest and most unspoiled wilderness areas. It is regarded by multiagency assessment as one of the 16 terrestrial unknowns within PNG and is also included on site portfolios of the highest-value biodiversity localities (Sekhran & Miller, 1995). In 1996, an expeditionary survey established biological baselines for future initiatives within the Lakekamu drainage. Although the botanical findings were disseminated in earlier publications (Takeuchi & Kulang, 1998; Takeuchi, 1999), new taxa continue to be identified from the survey's collections. The present article reports on the most recent novelty to be separated from the botanical vouchers.

***Rhododendron loranthiflorum* Sleumer subsp. *lakekamuensis* W.N. Takeuchi, subsp. nov. Fig. 1.**

A *Rhododendron loranthiflorum* subsp. *loranthiflorum* corolla tubo usque 37mm longo et stylo fere usque ad apicem lepidoto differt.

Type: Papua New Guinea, Gulf Province, Lakekamu, east branch of the Avi Avi River, 31 x 1996 (fl., fr.), *W. Takeuchi & J. Kulang* 11503 (holo. LAE; iso. A, BRIT, E, K, L, NY).

Perched epiphytic shrub. *Branchlets* numerous, subapical diam. 2–3mm, obliquely ascending, gnarled, nodose, distally compressed and glaucous, pulverulent to the naked eye, older intervals terete and pale brown, periderm brittle, cracking and exfoliating in flakes; indument orange-brown or pale reddish-brown squamulate, ±lax, eventually falling, peltately fixed, the marginal zone hyaline, irregular, not or hardly stelliform. *Leaves* usually 3–5-pseudowhorled, infrequently opposite,

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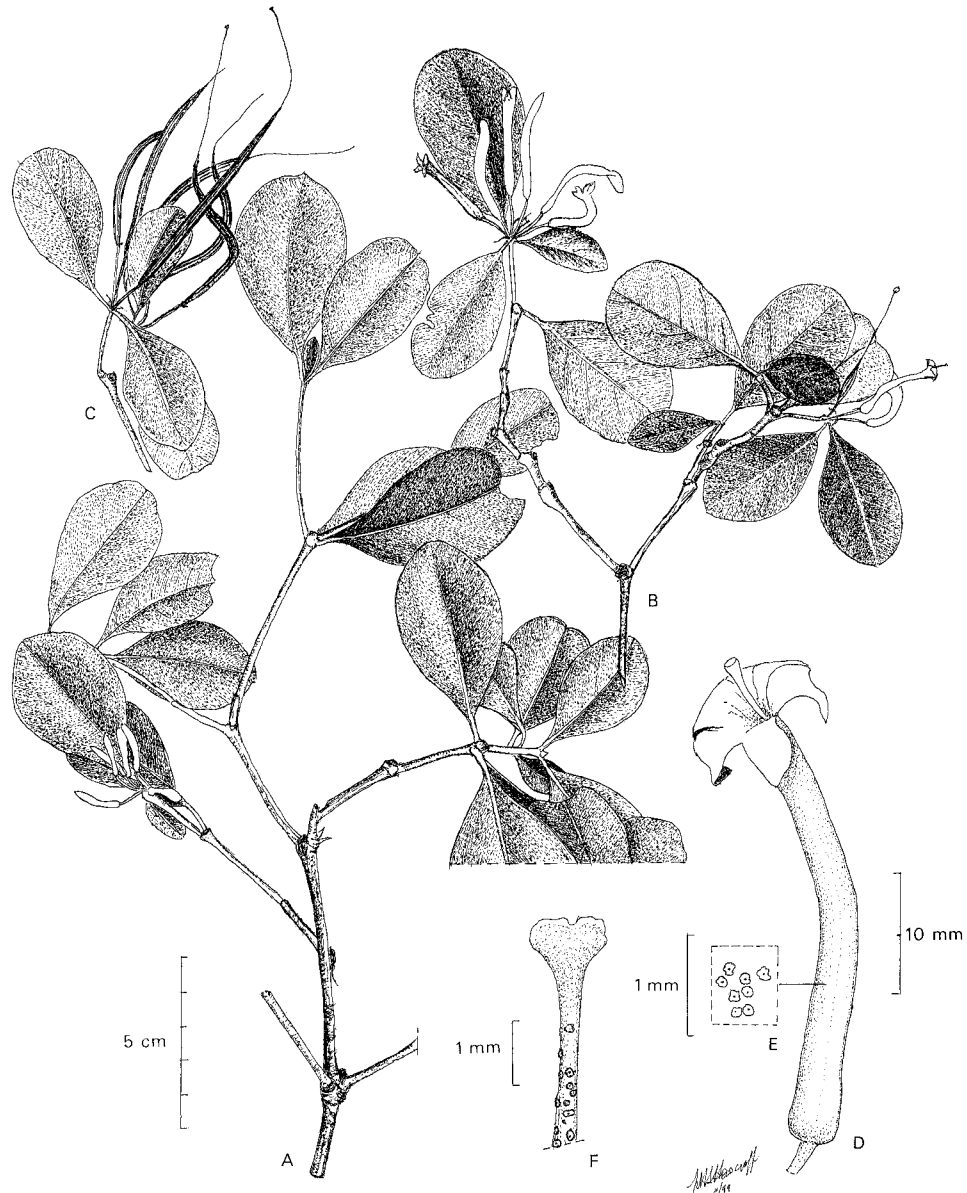


FIG. 1. *Rhododendron loranthiflorum* subsp. *lakekamuensis*. (A) vegetative habit, (B) flowering habit, (C) branchlet with fruit cluster, (D) corolla at anthesis (calyx not shown), (E) inset detail of exterior corolline indument, (F) stigma and the distal stylar indument. Scale bars: A-C, 5 cm; D, 10 mm; E-F, 1 mm. All drawn from the type by N. H. S. Howcroft.

spreading, firm or coriaceous, adaxially dark green, abaxially yellow-green, distinctly bichromatic with drying: turning gray-olivaceous above, brunneous beneath; blades always broadest above the middle, oblanceolate or more often obovate, 35–65 ×

19–44mm, rounded or retuse at the apex, margins reflexed, base cuneate; ventral surfaces at first lepidote, also with minute papillate-dendriform hairs in costal channels, the scales mostly caducous, hairs persisting or not, dorsal side shallowly foveolate, squamules rotund, seated within the depressions, orange-brown, subentire or lacerate, generally persistent; venation pinnatifid, laterals 3–6, obliquely diverging, hardly or not at all visible, reticulum obscure; petioles 3–11mm long, adaxially plane and narrowly canaliculate, convex beneath, indument like the branchlets. *Inflorescence* strictly terminal, fasciculate, umbelliform; perulae lanceolate-ovate, c.2–3mm long, densely lepidote, fugacious. *Flowers* 2–7 together; bracteoles linear, c.5–6mm long, marginate; pedicels 10–12mm at anthesis, red, very sparsely squamulate; calyx \pm densely lepidote, truncate, margin undulate and fimbriate; corolla white, tube isometrical, cylindrical, to 37×3 mm, exterior surfaces orbicular-lepidote, internally provided with papillate hairs on the lower part, limb glabrous, pentamerous, lobes acute or rounded, c.7mm long, reflexed at anthesis; stamens 10, filaments slender, indument like the inner corolla tube, the hairs sparse towards the throat, anthers oblong, c.2mm long, inappendiculate; disk hirtellous; gynoecium entirely yellow-green, ovary densely lepidote and also with coarse patent hairs; style in the lower half with indument like the ovary, exclusively squamate near the summit, exerted 4–5mm from the throat at anthesis, stigma capitate-turbinate, glabrous. *Fruits* linear-cylindric, to 60×3 mm, 5-sulcate, dark reddish-brown, sparsely provided with an indument of mixed scales and hairs; style persistent, to c.35mm long, stigma 5-lobulate; fruiting pedicel to 17mm long.

Distribution and habitat. Thus far known only from the type locality, in the ecotone between lowland alluvial forest and the Lakekamu foothill zone. The plant occurs infrequently in the upper canopies of mature forest stands.

The type collection keys directly to *Rhododendron loranthiflorum*, a species previously regarded as endemic to New Britain and the Solomon Islands (Fig. 2; Sleumer, 1960, 1966, 1973). While otherwise comparable in aspect to the nominate taxon, the novelty is distinguishable by its geographic separation, the longer corolla tube to 37mm length, and the style exclusively lepidote in the upper intervals. The species was previously characterized as having corolla tubes 20–25mm long and styles exclusively hairy toward the stigma. Subspecies *lakekamuensis* also has petalline lobes which are mostly acute and closely reflexed at anthesis; the archipelagic provenances in the Bismarcks and Solomons have a salverform corolla with the segments ovate-oblong and spreading.

Rhododendron species are generally associated with montane environments, so in this sense the new subspecies is ecologically atypical. The type collection was obtained at 175m elevation in warm perhumid forest from the Papuan lowlands; a habitat not ordinarily regarded as ericaceous. Although *R. loranthiflorum* had been previously recorded from low elevations, the Lakekamu occurrence is notable for its apparent linkage to elevational anomalies in other taxa. During the 1996 survey, montane genera such as *Dimorphanthera*, *Levieria*, *Myrsine* (*Rapanea*), and

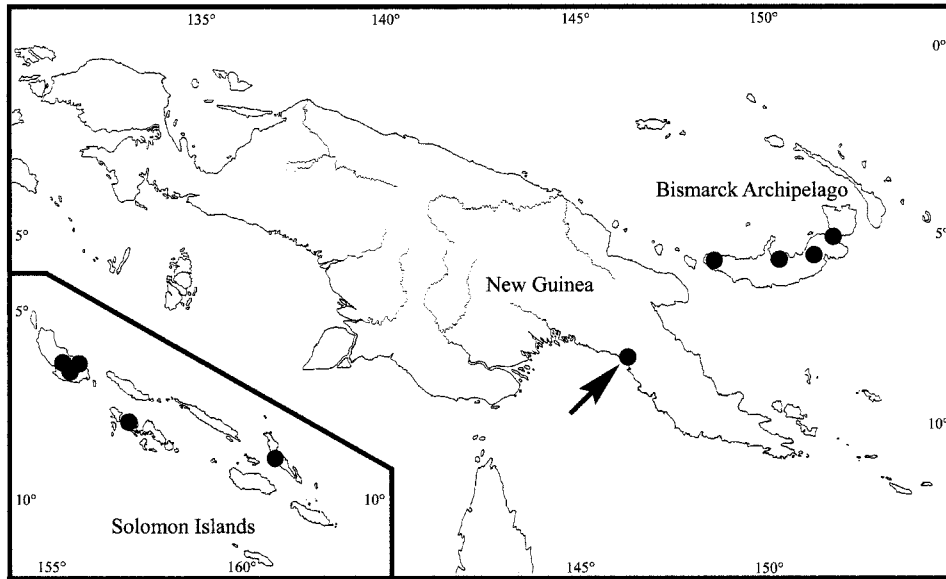


FIG. 2. Geographic distribution of *Rhododendron loranthiflorum*: solid circles, documented localities for the species; arrow, type locality for subspp. *lakekamuensis*; main diagram, New Guinea and nearby areas; dislocated inset at lower left, Solomon Islands.

Zygogynum were seen descending to the contact with the Lakekamu alluvial-coastal plain (Takeuchi & Kulang, 1998). Individual species such as *Elaeocarpus blepharoceras* Schltr. and *Ternstroemia britteniana* F.Muell., previously thought to be of strictly montane assignment, were also documented far below their previously known limits. The new distributional station for *Rhododendron loranthiflorum* is thus part of a wider permutation involving the apparent displacement of an entire montane assemblage to the Papuan lowland environment, where the nonconforming elements now coexist in disparate combination with the conventional lowland flora. This concatenation of normally allopatric species is arguably attributable to past Quaternary adjustments in vegetation zones managing to persist because of the exceptionally high rainfalls in the basin, which present measurement places at c.5000mm (Mack, 1998).

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