



Additions to the rubiaceous flora of Papua New Guinea: *Psychotria stolonifera* and *P. ternatifolia*, two remarkable species from the Muller limestone

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Abstract

Psychotria stolonifera and *P. ternatifolia* are newly described from limestone environments in the Muller Range of Papua New Guinea. Both species have unique vegetative characteristics allowing for instant separation from their closest allies. *Psychotria stolonifera* has an astonishing stoloniferous habit and diminutive stems; *P. ternatifolia* is the only Papuan *Psychotria* with whorled leaves.

Key words: doline karst, limestone, new species, Papua New Guinea, *Psychotria*, Rubiaceae

Introduction

Since April 2005, four scientific expeditions to the southern limestone area of Papua New Guinea (PNG) have been concluded with institutional and corporate funding. Ten bivouacs were collectively established in support of these operations, at elevations ranging from 210 to 2860 m. The most recent undertaking (September 4–24, 2009, to the Muller Range) represents the furthest penetration of the limestone biome by any of the combined schedules. Numerous biological discoveries, including more than 10 plant species of exceptional character, have been obtained during the latest assessment. A multidisciplinary synthesis of that survey is currently in preparation (Richards in prep.). As with previous expeditionary itineraries, the taxonomic findings will be formally presented as a series of papers focused on specific plant groups. The Muller botanical reporting was recently initiated with the description of *Barringtonia jebbiana* (Takeuchi 2010 in press) and continues here with descriptions for *Psychotria stolonifera* and *P. ternatifolia*.

Unless otherwise noted, the following diagnoses refer only to the features observed on dried specimens. Characters determined in situ from living plants are reported separately as "field characters."

Description

Psychotria stolonifera Takeuchi, *sp. nov.* (Figs. 1–4)

Inter species congeneris Papuasiae caulibus partim basalibus stoloniformis partim erectis vel ascendentibus 0.1–0.4(–1.0) m altis statim distinguitur.

Type:—PAPUA NEW GUINEA. Western Province: Muller Range, Expedition Camp 2, *Nothofagus*-emergent montane forest on doline karst, 5°39.652'S, 142°17.962'E, 1425 m, 16 September 2009, *Takeuchi, Ama & Gamui 24691* (holotype LAE; isotypes A, BO, K, L).