



Additional notes on *Psychotria* (Rubiaceae) from the southern karst of Papua New Guinea: *P. defretesiana* comb. et stat. nov., *P. dieniensis* var. *banakii* var. nov., and *P. stevedarwiniana* sp. nov.

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Abstract

Psychotria dieniensis var. *banakii* and *P. stevedarwiniana* are described from limestone environments in the Muller Range of Papua New Guinea. *Psychotria defretesiana* (formerly a variety of *P. leptothyrsa*) is reinterpreted as a distinct species.

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

Introduction

With an estimated 120 species, *Psychotria* is one of the ten largest tracheophytic genera in New Guinea (Takeuchi 2007a). Geographic endemism is unusually high among its East Malesian representatives—only two species are known to range outside the Papuan region (Sohmer 1988). All mainland *Psychotria* found predominantly in montane habitats (elevations above 1,000 m) are unique to New Guinea and its satellite islands.

Psychotria diversity arguably decreases from east to west across New Guinea. Range-limited endemics (e.g., with occurrences restricted to only one side of the island) are more prevalent in the eastern forests of the mainland as opposed to the west (48 spp. vs. 11 spp.; in Sohmer 1988). The numerical contrast is not necessarily attributable to the disparity in collection densities (CD) between the geographic halves (CD at least 3x higher for the eastern side) but may be related to obvious differences in the number of terranes comprising the mountainous interior (cf. Pigram & Davies 1987, Davies et al. 1997).

Modern exploration has consistently produced meager *Psychotria* inventories for Indonesian Papua (Richards in prep.). The genus is surprisingly depauperate in the Bomberai Peninsula, Foja Mountains, Mamberamo basin, and the Raja Ampat Archipelago, despite high expectations for taxonomic discovery from such districts (e.g., Takeuchi 2003, Takeuchi et al. 2003). Extensive fieldwork has yielded no new records (for *Psychotria*) from those areas. In contrast, a three-week reconnaissance of Papua New Guinea's (PNG) Muller Range has uncovered five previously unknown *Psychotria*, four of which were entirely new to science (i.e., with no prior collection or other documentation). In an earlier publication, *Psychotria stolonifera* (Takeuchi 2010) and *P. ternatifolia* (ibid.) were formally presented from the 2009 Muller Range RAP Expedition. The expeditionary coverage of this genus is now brought to conclusion with descriptions for *P. defretesiana*, *P. dieniensis* var. *banakii*, and *P. stevedarwiniana*.