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Notes on *Phyllanthera* (Apocynaceae) from the upper Sepik of Papua New Guinea: *P. lancifolia* and *P. piforsteriana* sp. nov.

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Abstract

Phyllanthera piforsteriana (Apocynaceae) is described from the Sepik River basin in Papua New Guinea. Distributional notes are also provided for *P. lancifolia*, a frequent associate of the new species but otherwise rarely represented in herbarium collections.

Key words: *Cryptolepis*, new species, Periplocoideae

Introduction

Phyllanthera Blume (1826: 1048) is a genus of 9 vining species collectively ranging from Southeast Asia to Australia (Ionta 2009). With a conspectus of 7 species, New Guinea is the generic center of diversity.

A colorful species of *Phyllanthera* was recently discovered during a multi-year schedule of expeditions to the upper Sepik. In the following discussion, *Phyllanthera piforsteriana* is formally described from these exploratory surveys. Distributional and taxonomic notes are also briefly presented for *P. lancifolia* (Forster 1991: 381) Venter (2001: 566), a rarely seen congener despite being a common and characteristic vine in Sepik habitats where it occurs.

Methods

Taxonomic descriptions are based on the measurements and qualitative attributes from dried specimens (excepting flower measurements from bottled collections). Characters determined in situ from living plants are reported separately as 'field characters'.

The corolla tube measurements are expressed as: length × basal width × distal width (at the sinus). The similar protocol for the filaments is: length × basal width × distal width (at the anthers).

Silica-dried leaf samples have been inserted with the M duplicate for *Takeuchi et al. 25595*; the A and L duplicates for *Takeuchi et al. 25729*; and the K duplicate for *Takeuchi et al. 25732*. Ethanol-preserved flowers in leakproof vials are attached to the A duplicates for *Takeuchi et al. 25595* and *25732.*

Phyllanthera lancifolia (P.I.Forst.) Venter (2001: 566). Fig. 1.

Cryptolepis lancifolia Forster (1991: 381). Type:—INDONESIA. Papua Province: Okwalimkan River headwaters, lower montane forest, on moss covered branches of low trees, 5°02'S, 140°55'E, 4000 ft (1220 m), 17 June 1967, *Ridsdale et al. 31999* (holotype L; isotype LAE! [2 sheets]).

Additional specimens examined: PAPUA NEW GUINEA. Southern Highlands Province: South Karius, montane alluvial forest, 5°59.324'S, 142°40.287'E, 1365 m, 6 February 2008, *Takeuchi et al. 22487* (A!, LAE!); 7 February

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TABLE 1. Summary of the principal distinctions between *Phyllanthera piforsteriana* and the species closest to it (*P. takeuchiana*).

Phyllanthera piforsteriana W.N.Takeuchi	*Phyllanthera takeuchiana* P.I.Forst.[1]
known only from the upper Sepik (northern PNG) at 625–1100 m	known only from the Lakekamu River (southern PNG) at 350 ft (105 m)
leaf surfaces (in vivo) adaxially dark dull green, abaxially purple or purple red	leaf surfaces (in vivo) adaxially dark dull green, abaxially pale green to glaucescent
leaves with 10–22(–27) secondary veins per side, diverging (50–)65–85° from midribs	leaves with 32–39 secondary veins per side, diverging 75–90° from midribs
corolla united in the lower 3.5–5 mm; lobes obliquely elliptic, 5.2–7.2 × 3.2–3.9 mm, not papillate	corolla united in the lower 1–2.5 mm; lobes elliptic-ovate, 9–11 × 5–6 mm, adaxially densely papillate
gynostegium 2–2.2 × 2.2–2.5 mm, sessile	gynostegium ca. 3 × 4 mm, inserted on a 2 mm long stipe
filaments 0.4–0.7 mm long; anthers 0.4–0.6 × (0.5–)0.7–0.9 mm; apical appendages acute, elliptic-ovate (distinctly more long than wide), 0.6–0.8 × 0.3–0.6 mm	filaments ca. 1.5 mm long; anthers ca. 1.5 × 1.5 mm; apical appendages obtuse, broadly flabellate (distinctly more wide than long), ca. 1.2 × 1.8 mm

[1]extracted from Forster (2002), and refined by examination of the LAE isotype.

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