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THE IDENTITY OF TOXOCARPUS PAPUANUS VAN ROYEN (ASCLEPIADACEAE)

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SUMMARY

Toxocarpus papuanus van Royen is a species of *Marsdenia* and is renamed as *Marsdenia argentata* P. Forster. A detailed description and illustration is provided.

INTRODUCTION

A revision of the Asclepiadaceae in Australia and Papuasia is being presently undertaken by the author. Completion of revisions of some of the larger genera such as *Marsdenia* R. Br. and *Hoya* R. Br. will take some time; however, it is felt appropriate to provide taxonomic and nomenclatural notes on a number of taxa as the opportunity arises.

From van Royen's (1983) description and illustration of *Toxocarpus papuanus*, it is quite impossible to determine the correct generic placement of the type specimen, except to note that it is quite definitely not a species of *Toxocarpus* Wight & Arn. Examination of the type of this name revealed that only immature buds were present, and this may have contributed to the misinterpretation of its correct generic placement. This specimen is conspecific with a number of others, several of which bear fully developed flowers; all belong to a species of *Marsdenia*.

Comparison of this material with either the descriptions published by Schlechter (1905, 1913) or the few located types of some of his species show no previous names in Papuasian *Marsdenia* that are referable to it.

TAXONOMY

Marsdenia argentata P. Forster, *nom. nov.* – Figs. 1, 2.

Marsdenia argentata P. Forster — Basionym: *Toxocarpus papuana* van Royen, Alpine Fl. New Guinea 4 (1983) 2788, fig. 808 — Type: *L.J. Brass 30545* (L, holo; CANB, iso), 16 July 1959; Mt Wilhelm, Eastern Highlands, Papua New Guinea.

non *Marsdenia papuana* Schltr., Bot. Jahrb. Syst. 50 (1913) 144 [= *M. velutina* R. Br., fide Forster, Austrobaileya 3 (1990) 285].

Herbaceous vine with white latex. Stems cylindrical, with sparse yellow indumentum when young, forming lenticels when old; internodes up to 15 cm long and

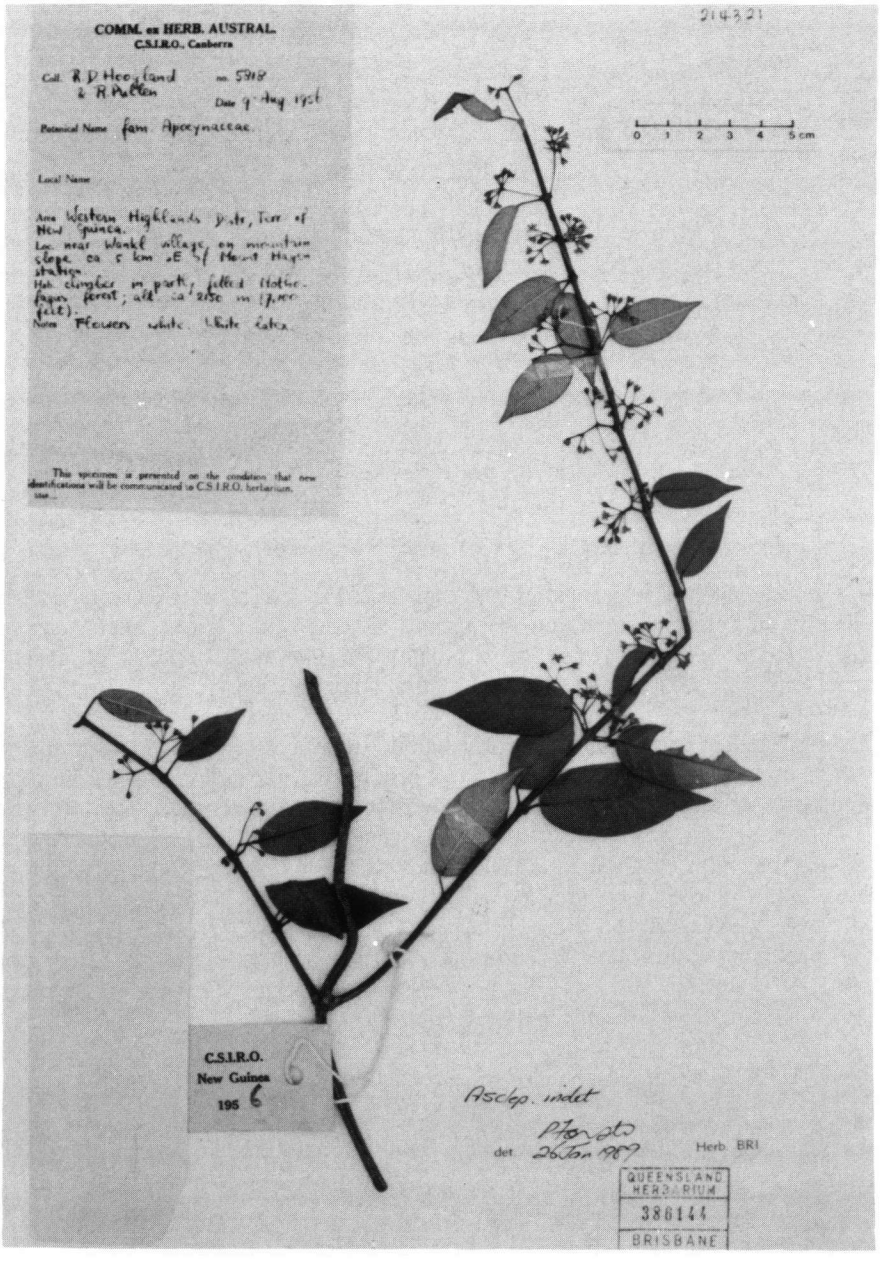

Fig. 1. Representative specimen of *Marsdenia argentata*. (*Hoogland & Pullen 5818*, BRI).

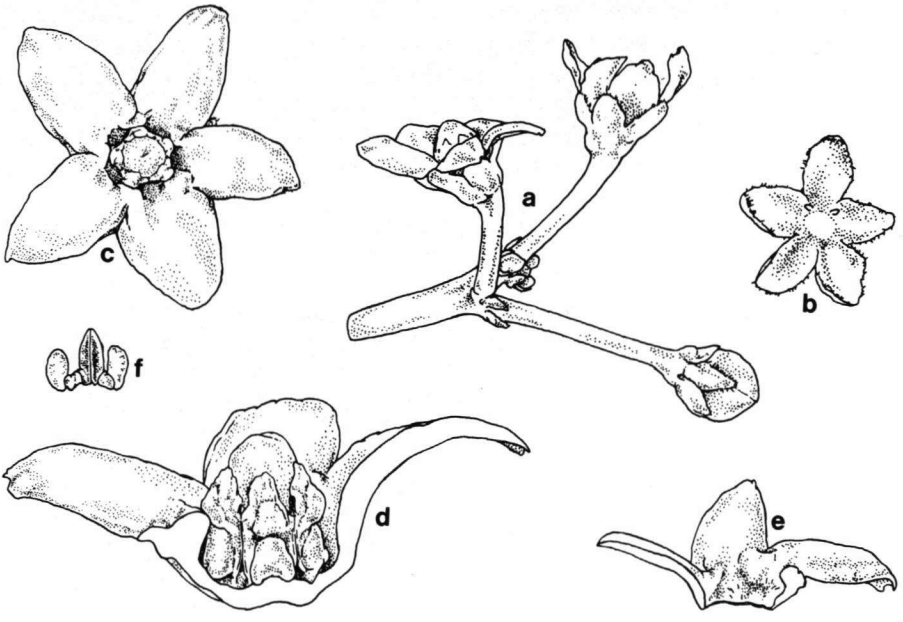

Fig. 2. *Marsdenia argentata* P. Forster. a. Cyme, × 5; b. face view of calyx with corolla, gynostegium and ovaries removed, × 6; c. face view of flower, × 10; d. side view of cut-away flower showing gynostegium, × 17.5; e. side view of upper corolla-tube and lobes; note sparse hairs in tube, × 10; f. pollinarium, × 40. All from *Hoogland & Pullen 5818*. Del. K. Harold.

1–2 mm diameter. *Leaves* petiolate; lamina lanceolate to elliptic-ovate, up to 5.5 cm long and 3 cm wide, dark-green above and silver-gold to light-green below when fresh, drying yellowish, with 5–9 major secondary veins prominently raised below; tip acute to acuminate; base rounded; petiole grooved along top, 2–7 mm long, 0.5–1 mm diameter, with isolated to sparse indumentum; nectaries 2 at base of lamina. *Inflorescence* comprising umbelliform cymes which are usually paired at the nodes, each cyme with 1 or 2 fascicles with up to 15 flowers each; peduncle 2–8 mm long, 0.5–1 mm diameter, with sparse yellow indumentum; bracts lanceolate, 0.5–1 mm long, 0.25–0.4 mm wide, with sparse yellow indumentum. *Flower* campanulate, c. 2 mm long, 4–5 mm diameter, fragrant; pedicels 3–5 mm long, 0.25–0.5 mm diameter, with sparse yellow indumentum. *Sepals* lanceolate to ovate, 1–1.5 mm long, c. 1 mm wide, ciliate, with sparse indumentum externally and with 1 gland at each sinus. *Corolla* white; tube 1–1.5 mm long, 1.5–2 mm diameter, with a glabrous ridge at the join of each lobe sinus to the tube, glabrous or with isolated indumentum internally; lobes lanceolate-ovate, reflexed, c. 2 mm long, 1.4–1.5 mm wide, glabrous. Staminal corona consisting of 5 oblong lobes adnate to and not extending beyond the staminal column, each lobe c. 0.5 mm long, 0.5 mm wide. Staminal column 1–1.5 mm long, 1–1.5 mm diameter. Anther appendages truncate-ovate, 0.24–0.5 mm long, 0.25–

0.5 mm wide. Slit between anther wings 0.5–0.6 mm long. Style-head conical, extending beyond the anthers for 0.75–1 mm, c. 0.75 mm diameter. Ovaries glabrous, 0.75–1 mm long, c. 0.75 mm wide. Pollinarium 0.2–0.25 mm long, 0.24–0.3 mm wide; pollinia upright, 0.18–0.25 mm long, 0.07–0.09 mm wide; corpusculum oblong, 0.15–0.2 mm long, 0.06–0.07 mm wide; caudicles slightly jointed in middle, c. 0.07–0.1 mm long, 0.02 mm thick at corpusculum end, 0.05 mm thick at pollinium end.

Distribution – *Marsdenia argentata* has only been collected in a few montane localities in Papua New Guinea and as noted by Van Royen (1983) is the only alpine asclepiad in that nation.

Habitat – This species has been recorded from altitudes of 2500–3000 m where it was said to grow on the edges of *Equisetum–Carex* bogs or in secondary forest bordering *Alstonia–Elaeocarpus* forest.

Etymology – Renamed for the silver appearance of the foliage when fresh.

Collections other than type:

PAPUA NEW GUINEA. Western Highlands: near Wankl Village on mountain slope c. 5 km SE of Mt Hagen, 5° 47' S, 144° 04' E, *Hoogland & Pullen 5818* (BRI); c. 3 miles NE of Par, Ambun Valley near Wabag, 5° 28' S, 143° 46' E, *Flenley ANU 2696* (CANB). Morobe: Sarawaket, *Clemens 5673* (BRI). Central: W slope of Wharton Range, *van Royen NGF 30141* (BRI); high ridge due west of Kerau Mission, *Frodin 682* (L).

ACKNOWLEDGEMENTS

Figure 2 was prepared by K. Harold. The Directors/Curators of A, CANB and L allowed specimens to be examined either at their institutions or on loan. The author was supported by grants from the Australian Biological Resources Study during 1988–1990.

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