

## SHORT COMMUNICATION

***Psychotria hebecarpa* Merr. & L.M.Perry (Rubiaceae),  
a new record for Queensland and Australia**

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The genus *Psychotria* L. is predominantly pantropical with estimates of species diversity around 2000 (Sohmer 1998; Davis *et al.* 2001; Sohmer & Davis 2007). In Australia where it extends to the subtropics, the genus is in need of revision with the last overall account being Bailey (1900) who enumerated eight species, one of which is now classified in *Amaracarpus* Blume (Forster 2010). More recent listings of taxa enumerate 16 species, with the majority of these endemic to Queensland (Forster & Halford 2007, 2010, 2017). The non-climbing species in adjacent New Guinea and the Bismarck Archipelago were revised by Sohmer (1988) with a handful of more recent additions (Takeuchi 2001, 2009, 2013); however, there is little overlap with the Australian taxa.

In this short communication, the presence in Queensland and Australia of *Psychotria hebecarpa* Merr. & L.M.Perry is documented and a phrase name applied at the Queensland Herbarium and in census accounts (Forster & Halford 2007, 2010, 2017) placed into synonymy. Collection of this species from Australia was first made by the entomologist and natural history collector Eduard F. Dämel (Daemel) (*c.* 1821–1900) prior to 1868 and probably in 1867 (ANBG 2018; Beiler & Petit 2012; JSTOR 2018), with an intervening period of 120 years before further collections were made.

**Taxonomy**

***Psychotria hebecarpa*** Merr. & L.M.Perry, *J. Arnold Arbor.* 27: 212–213 (1946). **Type:** Papua New Guinea. CENTRAL PROVINCE: Aisa River, 13 May 1926, *L.J. Brass 1419* (holo: A *n.v.*; iso: BRI).

*Psychotria* sp. Pajinka, **syn. nov.**; Cooper & Cooper (2004: 450).

*Psychotria* sp. (Pajinka W.Cooper+WWC1435), **syn. nov.**; Forster & Halford (2007, 2010, 2017).

**Illustration:** Sohmer (1988: 121, holotype).

Shrub or subshrub with erect to prostrate stems up to 1.5 m tall; foliage densely ferruginous-tan pubescent throughout. Stipules valvate, ovate, 11–18 mm long, deeply bilobed with the lobes aristate and 5–7 mm long. Leaves petiolate; petiole 8–40 mm long, *c.* 2 mm diameter, deeply channelled adaxially; laminae weakly coriaceous to somewhat chartaceous, lanceolate-oblong, 115–200 × 48–80 mm; secondary lateral veins 10–19 per side of primary vein, heavily pubescent below; apex acute, base obtuse to round. Inflorescence shortly pedunculate to 37 mm long, with 3 or 5 flower clusters, each subtended by foliose linear-lanceolate bracts up to 20 × 5 mm. Flowers sessile, subtended by linear bracts 10–15 mm long, 1–3 mm wide; calyx tube short and < 1.5 mm long, lobes lanceolate-subulate, 7–15 mm long, 1.8–2 mm wide, apices sharply acute; corolla tube *c.* 4.5 mm long. Fruit fleshy, *c.* 12 mm long and 10 mm wide, white. Pyrenes 4–4.5 mm long, *c.* 2 mm wide, strongly ridged; endosperm not ruminant. **Fig. 1.**



Fig. 1. *Psychotria hebecarpa* (Cooper WWC1435 & Jensen, BRI).

**Additional specimens examined:** **Papua New Guinea.** WESTERN PROVINCE: Wuroi, Oriomo River, Jan 1934, *Brass* 5720 (BRI); c. 2 miles [c. 3.3 km] SE of Morehead Patrol Post, Aug 1967, *Pullen* 7192 (BRI). **Australia.** **Queensland.** COOK DISTRICT: Cape York, *s.dat.*, *Daemel s.n.* (BM [purchased 1868], MEL 1583718); Near Bamaga, New Mapoon, Sep 1987, *Gitay s.n.* (BRI [AQ437548]); Pajinka Water intake, Cape York, *s.dat.*, *Cooper WWC1435 & Jensen* (BRI, DNA).

**Distribution and habitat:** *Psychotria hebecarpa* is known from Papua New Guinea (Central and Western provinces) and the tip of Cape York, Queensland in Australia where it is restricted to the Lockerbie Scrub. It occurs in lowland rainforest, with the Australian population in semi-deciduous complex notophyll vineforest on volcanic substrate.

**Notes:** This is a highly distinctive species in the Australian context due to the heavily pubescent foliage, the very large and characteristic bilobed stipules and the large bracts on the inflorescence. Sohmer (1988: 122) was of the opinion that the pubescence was an adaptation to drier habitats (no doubt from the perspective of other taxa in New Guinea); however, other Australian species from seasonal communities are not noticeably pubescent (e.g. some of the varieties of *P. daphnoides* A.Cunn.).

**Conservation status:** In Australia and Queensland, *Psychotria hebecarpa* is known from a single population (with probably a number of subpopulations) in the greater Lockerbie Scrub at the tip of Cape York. There are at least six recorded populations in Papua New Guinea (Sohmer 1988); although it is not possible to ascertain if these are extant, nor what their extent of occupancy or population numbers might be. Once again, this species in its Australian occurrence is a good example of a peripheral population at the outer edge of the distribution envelope (Forster 2016) with the majority of the populations elsewhere. It is not common and widespread in the Lockerbie Scrub indicating that only certain environmental conditions are suitable for its persistence. Peripheral populations are important in terms of enabling species to expand their range or to respond

to environmental conditions that select for evolutionary diversification through disjunct speciation (cf. Levin 2000).

It is not known if any of the populations in Papua New Guinea are conserved. The population at Cape York is not in a formal conservation reserve; however, the Lockerbie Scrub is effectively managed for conservation by the locally based The Apudthama Lands Trust rangers.

Within the Australian jurisdiction, an appropriate conservation status for *Psychotria hebecarpa* is **Vulnerable** based on the criterion **D2** (IUCN 2012).

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