

A new species of *Monoon* (Annonaceae) from Brunei

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ABSTRACT. *Monoon bathrantherum* I.M.Turner is newly described. It is only known from Brunei on the island of Borneo and is notable for bearing reproductive structures on branched inflorescences confined to the base of the trunk.

Keywords. Annonaceae, Borneo, *Enicosanthum*, Malesia, *Monoon bathrantherum*, *Polyalthia*

Introduction

The genus *Monoon* was originally described by Miquel (1865). He included a rather disparate selection of species but the majority were considered allied to *Polyalthia*. Bentham and Hooker (1867) reduced *Monoon* to a section of *Polyalthia* which is where it has stayed, and been rather neglected, until being resurrected recently (Xue et al. 2012) as part of the shake-up of *Polyalthia* based on molecular and morphological analyses. The remodelled *Monoon* includes *Enicosanthum* Becc., *Woodiellantha* Rauschert and *Cleistopetalum* H.Okada and their synonyms as well as *Polyalthia* section *Monoon*. The genus thus consists of some 60 species ranging from India to Australia.

The new species here described would certainly have been placed in *Enicosanthum* until recently as it has the imbricate perianth aestivation that distinguished the genus before molecular evidence indicated that this character was not sufficient to maintain a distinction from the rest of *Monoon*. The most remarkable feature of the new species is the presence of basal twiggy inflorescences.

Monoon bathrantherum I.M.Turner, **sp. nov.**

The new species bears reproductive structures on branched inflorescences confined to the base of the trunk similar to *Monoon congregatum* (King) B.Xue & R.M.K.Saunders of the Malay Peninsula but differs in having longer inflorescence axes (to 20 cm versus 6 cm in *M. congregatum*) and less thick and fleshy petals.

TYPE: *Sands 5749*, Brunei, Belait, Labi, Rampayoh, Rampayoh river valley c. 2.5 km from the Labi Road, 8 July 1993 (holo K[×2] (barcode nos. K000582145 and K000582146); iso BRUN [×2] (sheet nos. B 004 226, B 004 227). Fig. 1.

Tree to 20 m or more tall, 20 cm dbh or more. Twigs drying brown, latticed or longitudinally wrinkled, youngest parts covered with a short dense brown tomentum giving a soft feel to the touch. **Leaves** subcoriaceous, drying brown above, grey-green

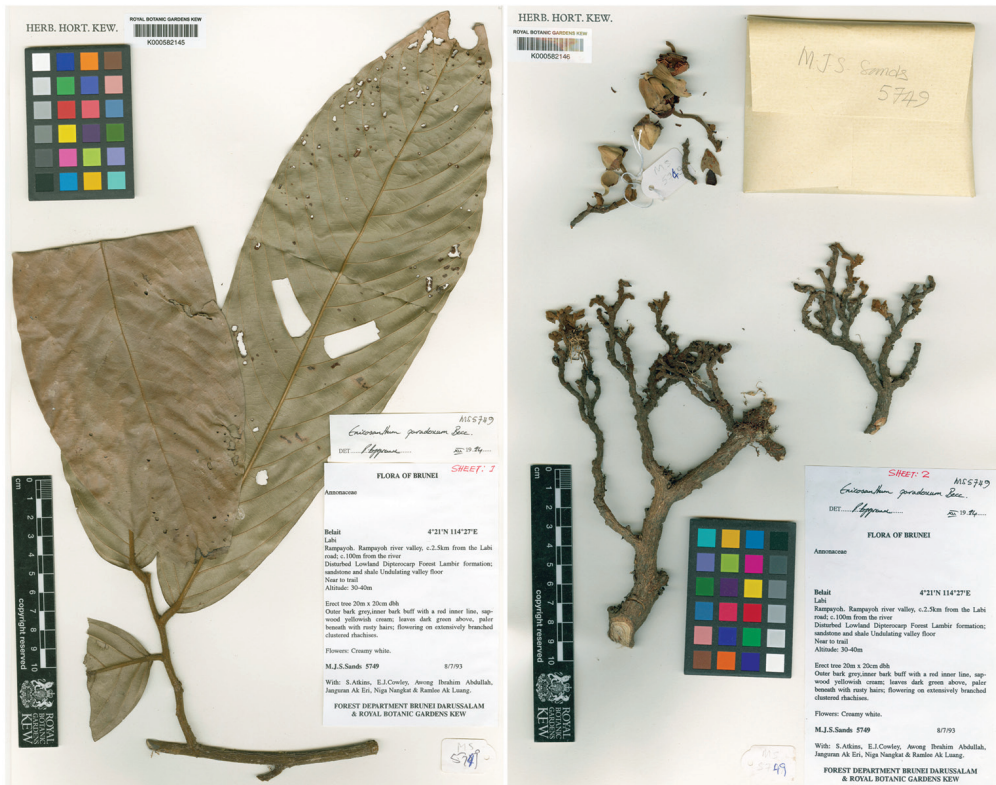


Fig. 1. Photograph of Sands 5749, the holotype (mounted on two sheets) of *Monoon bathrantherum* I.M. Turner. Reproduced with the kind permission of the Director and the Board of Trustees, Royal Botanic Gardens, Kew. © Royal Botanic Gardens, Kew.

below, some hairs along midrib, otherwise glabrous above, short hairs on midrib and major nerves below, lamina lanceolate to oblanceolate, 34–36 × 11–12 cm, lateral nerves, 21–24 pairs, arching forward and looping indistinctly near the margin, tertiary venation scalariform. Petiole c. 10 mm long, 4 mm in diameter, densely short brown hairy. **Inflorescences** of robust, much-branched leafless twigs, to at least 20 cm long, arising from the base of the main trunk. **Flower** pedicel to 6 cm long, 1.5 mm thick, drying brown, covered in a dense short brown tomentum, medial bract ovate, c. 7 × 3 mm, apex acute, covered in dense short brown tomentum abaxially, glabrous adaxially; flower in bud broadly conical with a flat base, sepals valvate, chartaceous, ovate, c. 14 × 11 mm, apex acute, densely covered in brown tomentum, outer petals imbricate in bud, ovate, c. 5–9 × 1.8–2 cm, dense, very short brown hairy outside with faint longitudinal lines, inside more sparsely hairy, inner petals slightly shorter and narrower than outer petals, centre of longitudinal edges folded inwards to middle and apex incurved giving a hooded appearance to the distal portion, torus more or less flat with erect brown hairs, stamens many, c. 4 mm long, connective apex with white hairs, carpels many c. 4 mm long, brown hairy. **Monocarps** stipitate, ellipsoidal, c. 5 × 2 cm, beaked, dark brown hairy.

Other specimens examined: BRUNEI DARUSSALAM. **Belait.** Labi, Mendaram, trail to Wasai Kadir, 4 Apr 1996, *Said BRUN 16181* (BRUN: sheet no. B 004 229; K), Wong Kadir, trail to Wasai Wong Kadir, 15 Dec 1997, *Ariffin & al. BRUN 18723* (BRUN: sheet no. B 004 230), Teraja, first waterfall, 28 Mar 2006, *Mohd. Ariffin & al. BRUN 21689* (BRUN: sheet no. B 004 228).

Etymology. The specific epithet is derived from Greek: *bathro-* = basal, *antheros* = flower and reflects the basiflory exhibited by the species.

Notes. Cauliflory is a relatively common feature in the Annonaceae, and occurs quite frequently in *Monoon*. The restriction of reproductive structures to the base of the trunk is a relatively rare phenomenon in trees but again it is found in the Annonaceae and is observed in *Monoon* in species such as *M. hypogaeum* (King) B.Xue & R.M.K.Saunders which also occurs in Borneo. *Monoon hypogaeum* is unlikely to be confused with *M. bathrantherum* as its inflorescences have long, slender, apparently flexible, axes compared to the relatively stout and stiff axes of the latter. The flowers of *M. hypogaeum* are smaller (petals to only 2 cm long) and the monocarps are distinctively fusiform.

Vegetatively *M. bathrantherum* is like the Bornean *M. erianthoides* (Airy Shaw) B.Xue & R.M.K.Saunders, but the branched inflorescences and the stipitate monocarps (subsessile in *M. erianthoides*) readily distinguish it.

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