

NOTES ON *AESCHYNANTHUS* (*GESNERIACEAE*) FROM SERAM

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Two new species of *Aeschynanthus* from Seram, *A. intraflavus* Mendum and *A. roseoflorus* Mendum, are described and illustrated. An expanded description and illustration is provided for *A. amboinensis* (Merr.) Mendum, comb. nov.

Keywords. *Aeschynanthus*, Seram, new species, new combination.

INTRODUCTION

The island of Seram, lying east of Sulawesi and west of New Guinea, is little known botanically. During an Operation Raleigh expedition to Seram in 1987, Dr George Argent collected herbarium and living material of three species of *Aeschynanthus*, all of which subsequently flowered in cultivation. The genus is at present split into sections on seed-hair characters, and seeds of *A. intraflavus* and *A. roseoflorus* were obtained; *A. amboinensis* died before it set seed. The two new species show strong affinities with New Guinea members of the genus, while *A. amboinensis* surprisingly has strong links with species to the west.

***Aeschynanthus intraflavus* Mendum, sp. nov. Fig. 1, A–E.**

Species ab omnibus aliis sectionis *Polytrichium* absentia ullorum pilorum vel ullarum papillarum intus partem inferiorem tubi corollae distincta; ab *A. arfakensis* C.B. Clarke colore floris extus rubro-aurantiaco, intus pallide luteo (non sordide aurantiaco apicem versus purpureo-tincto) et coma seminum e pilis 8–10 tantum (haud c.40) insuper distinguenda.

Type: Seram, Manusela National Park, N side of Gunong Binaia above Kanikeh village, on fallen tree in lower montane forest on limestone, 'climbing herb to 3m long, throwing off branches at nodes up to 80cm long. Flowers reddish orange outside, pale yellow inside. Stigma purple, style and stamens yellowish white', alt. 800m, 13 ix 1987, *G.C.G. Argent* C87192 (holo. E!, iso. BO.).

Subshrubby epiphyte. *Stems* scrambling and trailing to 3m, rooting from nodes, branches to 80cm, glabrous, light green when young and becoming brown with age; internodes to 5 × 0.3cm. *Leaves* opposite, thick and leathery, glossy mid-green above and paler below, glabrous; blade 4–7.5 × 1.1–3.2cm, narrowly to broadly elliptic, margins entire, apex acuminate, base acute, midvein impressed above and prominent below, other veins indistinct; petioles 6–10mm, glabrous. *Inflorescences* 1- or 2-flowered, in leaf axils near tips of branches or pseudoterminal. *Peduncles* minute.

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Bracts 0.5–1mm, triangular, with an occasional minute glandular hair. *Pedicel* light green flushed orange, 5–6mm, glabrous, slightly ribbed towards apex. *Calyx* divided to base, lobes pale green flushed orange towards apex, 5–6mm and slightly uneven in length, narrowly linear with acute tip and with scattered minute sessile glands. *Corolla* externally reddish orange, internally pale yellow with a faint orange midline on lateral and lower lobes, tubular, arcuate, 2.2–2.6cm long, 1.5mm wide at base then flaring gradually to 4mm at throat, lobes not widely spreading; upper lobes 2.5 × 2.5mm, rounded, lateral lobes 4 × 4mm, rounded oblong, lower lobe 5 × 3mm, rounded oblong, all fringed with glandular hairs; corolla externally with very sparse 0.05–0.1mm glandular hairs, internally with a few papillae near bases of lateral and lower lobes. *Stamens* 4, inserted about 1.4cm from base of corolla, exerted; filaments yellowish shading to greenish towards apex, posticous pair c.1.4cm with scattered papillae towards base, anticous pair c.1.8cm with quite dense 0.3mm glandular hairs in upper half and papillae towards base; anthers yellowish white, oblong, posticous pair 1.5 × 1mm, anticous pair 2 × 1mm; staminode 1mm. *Disc* 1.2mm, slightly lobed. *Ovary* and *stipe* with occasional minute sessile glands; stipe 4.5mm. *Style* yellowish white to greenish, 17mm when mature, densely hairy in upper half, hairs 0.1–0.2mm. *Stigma* pink to purple, 1mm diam., discoid. *Capsule* linear cylindrical, to 20.2 × 0.3cm. *Seeds* numerous, 1.5mm, papillose, with a coma of 9 or 10 hairs 1.2–1.4cm at the hilar end and a single 2–2.3cm hair at the other end.

Additional specimen examined. Specimen cult. RBGE, accession no. 19880250, originating from Seram, Manusela National Park, N side of Gunong Binaia, *Argent* 87/1 (E!).

This species appears to be close to the New Guinea *A. arfakensis* (syn. *A. hartleyi* P. Woods) from which it differs principally in the flower colour, in the absence of hairs inside the lower part of the corolla tube, and in the number of hairs in the seed coma. *A. arfakensis* (Clarke 1883: 36) has dirty orange-yellow flowers purplish towards the apex, 5 tufts of multicellular hairs in the lower part of the corolla tube and usually in excess of 40 hairs in the seed coma. Flower colour within species of *Aeschynanthus* is in most cases constant, and in addition the pale internal colour extending over the whole lobes in *A. intraflavus* is distinctive. The presence and arrangement of internal hairs, or their absence, seems also to be a reliable taxonomic character. Coma hair numbers in members of sect. *Polytrichium* require further study but would appear to have significance (Burt & Woods, 1975: 478).

***Aeschynanthus roseoflorus* Mendum, sp. nov. Fig. 1, F–J.**

Species nova aliquot speciebus novoguineensibus, praecipue *A. leptoclado* C.B. Clarke et *A. pullei* Schltr., valde similis, sed ab omnibus lobis calycis anguste ovatis patentibus et corollis colore vivide roseo dignoscitur.

FIG. 1. *Aeschynanthus intraflavus* Mendum. A, habit (× 1); B, calyx; C, corolla; D, gynoecium (all × 2); E, seed (×3); drawn from *Argent* 87/1, cult. RBGE 19880250. *A. roseoflorus* Mendum. F, habit (×1); G, calyx; H, corolla; I, gynoecium (all × 1.5); J, seed (×8); drawn from *Argent* 87/14, cult. RBGE 19880263.

Type: Seram, Manusela National Park, camp 3, north side of Gunong Binaia, 'Epiphyte in mossy submontane forest. Flowers pink, slightly creamy in throat', alt. 2000m, 1 ix 1987, *G.C.G. Argent* C8790 (holo. E!, iso. BO).

Subshrubby epiphyte. *Stems* spreading and decumbent to 60cm, branching from near base, purplish when young and becoming brown with age, hairy; hairs ± 0.2 mm, patent, white, tipped with golden brown glands; internodes 0.8–3cm. *Leaves* opposite or on occasional branches in threes, leathery, mid-green above and much paler below, when young often flushed purplish, with scattered glandular hairs at tip above, on margins and on midvein below; blade 3–4 \times 1.7–2.5cm, ovate, apex acute with rounded tip, base acute, margins entire or subentire, midvein impressed above and prominent below, other veins indistinct; petioles 4–7mm, sparsely glandular hairy.

Inflorescences single-flowered in leaf axils near tips of branches or occasionally pseudoterminal. *Peduncles* minute. *Bracts* 1–1.5mm, linear or slightly spatulate, glandular hairy. *Pedicel* pale green, 9–13mm, slightly ribbed towards apex, glandular hairy. *Calyx* divided to base, lobes pale green flushed purplish towards apex, 6.5–8.5 \times 1.5–2.5mm, spreading and slightly unequal in length with the two lower lobes the longest, narrowly ovate with rounded tip, margins sparsely fringed with glandular hairs and with sessile glands or sparse hairs and glands on both surfaces. *Corolla* rather fleshy, bright rose pink, internally paler in throat and with paler marks on 3 lower lobes, tubular, arcuate, 3.7–3.9cm long, ± 5 mm and slightly gibbous at base then gradually flaring to 9mm at throat, lobes widely spreading; upper lobes 9 \times 11mm, rounded, lateral lobes 10 \times 13mm, bluntly triangular, lower lobe 11 \times 13mm, rounded, all fringed with 0.1mm glandular hairs; corolla externally glabrous or with occasional sessile glands, internally with patches of papillae at bases of 3 lower lobes (corresponding with paler areas), and on floor of throat. *Stamens* 4, inserted about 1.4 and 1.7cm from base of corolla, not exerted; filaments white to cream, posticous pair c.1.4cm, glabrous, anticus pair c.2cm, with occasional glandular hairs; anthers grey, 1.5 \times 1mm, rounded oblong, pollen greenish yellow; staminode 1mm. *Disc* 1 \times 2.5mm, slightly lobed, pinkish. *Ovary* and *stipe* very pale green, with sessile glands and scattered 0.1–0.2mm hairs becoming denser towards apex of ovary; *stipe* ± 7 mm. *Style* cream to pale green, 8mm, densely glandular hairy. *Stigma* dark pink to purple, 2 \times 1.5mm, oval. *Capsule* linear cylindrical to 8cm. *Seeds* numerous, 1mm, hair at each end 1mm.

Additional specimens examined. Seram, Manusela National Park, N side Gunong Binaia in mossy montane forest above camp 3, 'A climber on small forest tree; corolla deep pink', alt. 2100m, 12 viii 1987, *Edwards* 223 (E!, BO). Specimen cult. RBGE, accession no. 19880263, originating from Seram, Manusela National Park, N side of Gunong Binaia, 2000m, mossy forest, *Argent* 87/14 (E!).

Aeschynanthus roseoflorus is superficially similar to several New Guinea members of sect. *Microtrichium*, particularly *A. leptocladus* and *A. pullei* from Irian Jaya (West New Guinea); unlike *A. roseoflorus* both have red flowers with hairs on the inside of the lobes. *A. leptocladus* (Clarke 1883: 39) has a 2.5cm externally hairy corolla, 3mm linear calyx lobes, and, at least in dried material, very characteristic prominent veining on the underside of the leaves. *A. pullei*

(Schlechter 1923: 270; 1926: 308) has a corolla to 2.7cm and linear calyx lobes to 1.5cm. *A. roseoflorus* has a corolla to 3.9cm and narrowly ovate calyx lobes to 8.5mm.

***Aeschynanthus amboinensis* (Merr.) Mendum, comb. nov. Fig. 2.**

Syn. *Trichosporum amboinense* Merr. in Phil. J. Sci., Bot. 11: 313 (1916)

Type: Amboina, Mahiya, 12 viii 1913, 'hanging over rocks at an altitude of about 333m; locally known as *manumpang*', B. Robinson 1728, Reliquiae Robinsonianae (iso. K!).

Subshrubby epiphyte. *Stems* hanging or trailing, sometimes rooting from nodes, branches purple-flushed and eglandular hairy when young, becoming brown and glabrous with age; internodes to 4.5cm. *Leaves* opposite, very hard and thick, glossy mid-green above and paler below; when young with scattered 0.1mm eglandular hairs on both surfaces and margins, becoming glabrous with age; blade 2.2–4.2 × 1.3–2.9cm, narrowly to broadly ovate, margins entire, apex acute, tip rounded, base rounded to cordate, midvein impressed above and prominent below, other veins indistinct; petioles 2–5mm, sparsely hairy to glabrous. *Inflorescences* several-flowered in leaf axils. *Peduncles* 3–6mm, eglandular hairy, single or briefly joined by a common

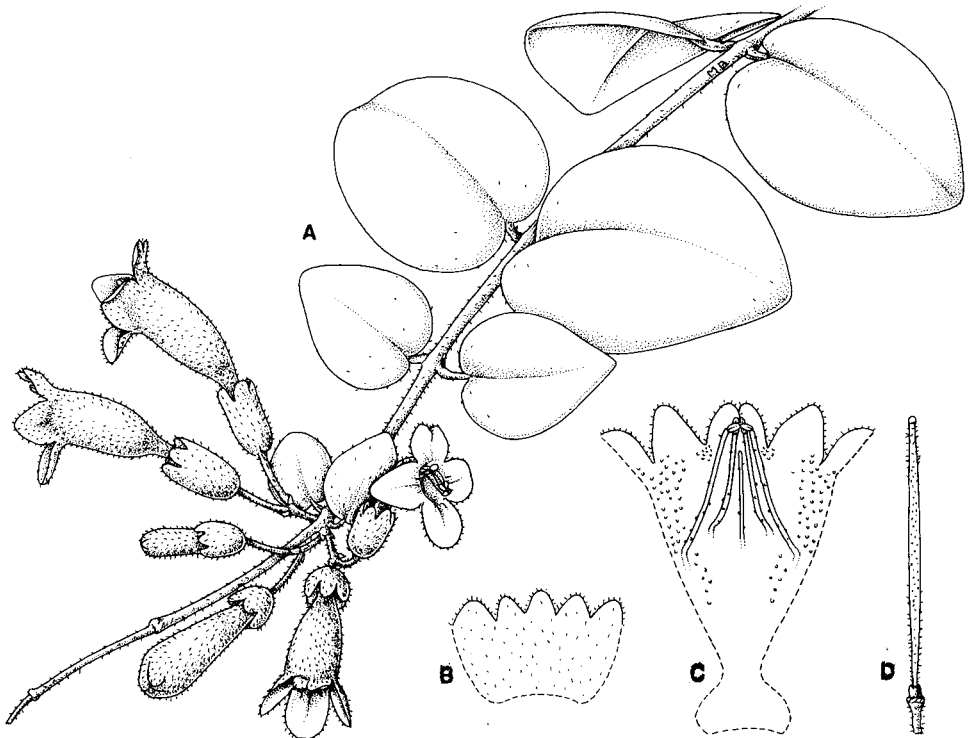


FIG. 2. *Aeschynanthus amboinensis* (Merr.) Mendum. A, habit ($\times 1$); B, calyx; C, corolla; D, gynoecium (all $\times 1.5$); drawn from *Argent* 87/5, cult. RBGE 19880254.

axis and each bearing usually 2 flowers. *Bracts* to 2×1.5 mm, ovate to rounded, eglandular hairy. *Pedice*l crimson, 6–15mm, sparsely to densely eglandular hairy. *Calyx* shining crimson, 8–12mm, tubular with broad rounded 5mm slightly uneven and inward-curving lobes, externally with sparse to dense 0.1–0.5mm white eglandular hairs and scattered sessile glands, internally with sparse to rare minute glandular hairs. *Corolla* externally bright crimson, internally with darker marks on lobes and a pale yellow throat, tubular, arcuate, 2.5–3.4cm, 4mm near base then narrowing to 2mm before flaring to 7–8mm at throat, lobes spreading; upper lobes 4×2.5 mm, rounded oblong, lateral lobes 5×5 mm, bluntly triangular, lower lobe 5.5×5 mm, rounded oblong, all fringed with glandular hairs; corolla externally with 0.2–0.5mm glandular hairs, internally with papillae at bases of lateral and lower lobes and extending onto floor of throat. *Stamens* 4, inserted about 1.7 and 2cm from base of corolla, not exerted; filaments pale yellow, posticous pair c.1cm, anticous pair c.1.3cm, all with scattered papillae and occasional hairs near apex; anthers grey, 1.5mm long, rounded oblong; staminode variable from 3–10mm. *Disc* 0.8mm, slightly lobed. *Stipe* c.11mm, with tiny glandular hairs; *ovary* with sessile glands; *style* with small glandular hairs; all pale yellow. *Stigma* 1mm, \pm circular. Mature *capsule* and *seeds* not seen (from the type description the capsule is stated to be 8–17cm long).

Additional specimens examined. W. Seram, Tuschen [between] Loemoli en Lohia Tala, $\pm 500-00$ m, 24 viii 1918, *Rutten* 1568 (U!). Specimen cult. RBGE, accession no. 19880254, epiphyte originating from Seram, Manusela National Park, N side of Gunong Binaia, 750m, *Argent* 87/5 (E!).

This is an extension of the range of the species. The combination of the shape and hairiness of the calyx, gibbous base of the corolla and arrangement of the internal papillae link *A. amboinensis* with species to the west; it has little in common with any of the known New Guinea species. It has many similarities with an as yet unnamed specimen from Sulawesi (*Alston* 15681, from Tomohon) but the flowers and leaves on the latter are smaller and the calyx is more campanulate with very shallow lobes. It also has some similarities with *A. dasycalyx* Hallier f. and *A. praelongus* Kraenzl., both from Borneo. Merrill (1916: 313) placed *A. amboinensis* in sect. *Holocalyx* (= sect. *Aeschynanthus*) on its affinities without seeing the seeds; this section is not known to occur in New Guinea.

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