Studies on the *Alocasia* Schott (Araceae-Colocasieae) of Borneo II: *Alocasia baginda*, a New Species from Eastern Kalimantan, Indonesian Borneo

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*Alocasia baginda* Kurniawan & P. C. Boyce is described and illustrated from an unspecified locality in eastern Kalimantan, Indonesian Borneo, and is inserted into a modified key to Bornean *Alocasia*. Recognition of *A. baginda* takes to 23 the *Alocasia* described from Borneo, of which 22 are endemic.

**Key words:** Araceae, *Alocasia*, Borneo, endemic, Kalimantan

Hay (1998) recognized 19 indigenous *Alocasia* species for Borneo, of which 18 are strictly Borneo endemic, many very locally so, with the other (*A. robusta* M. Hotta) extending as far as the Anambas Islands. Eight of Hay’s species were then novel. Subsequently, an additional three new species have been described for Borneo (Hay 2000, Boyce 2007), all endemic. Since 2002 fieldwork by the second author has revealed a 14 further undescribed (as yet not worked up) species in Sarawak, while a recent somewhat cursory examination of herbarium material from Sabah (KNP & SAN) indicated at least six additional novelties. This total of 42 taxa is overwhelmingly based on collections from Sarawak, Sabah, and Brunei (i.e., less than one third of the total landmass of Borneo). Kalimantan, comprising more than 70% of the land area of Borneo, remains very poorly known, and it is thus highly probable that Borneo harbors at least 50 *Alocasia* species, the overwhelming majority of which can be expected to be endemic.

**Alocasia baginda** A. Kurniawan & P. C. Boyce, sp. nov.—Fig. 1

*Alocasiae melo* proxima, insigniter foliis rigidissimis crasse coriaceis fere perfecte peltatis, sed prompte distinguenda foliis adaxialiter laevibus (non subtiliter et valde rugosis) atro-opace viridibus partibus disparibus palide griseis bullatis. Inflorescentiae specierum ambarum a prima visione leviter similissimae, sed in *A. baginda* spathae constrictio circa in parte media zonae staminatarum, dum in *A. melo* in parte apicali.

**Typus.** Indonesian Borneo, ex eastern Kalimantan, without exact locality, cultivated in Bali Botanic Garden, Indonesian Institute of Sciences-LIPI (Kebun Raya Eka Karya Bali), under Garden Accession E20081015 (holo-THBB [dried specimens and inflorescences in alcohol]; iso- BO!, K!, L!)

Small rather robust terrestrial herb 25–30 cm tall; stem shortly erect, developing in age into a short decumbent rhizome. Leaves up to 4 together, spreading; petioles 13–23 cm long, short sheathing in the lower 1/6–1/7, glabrous, pale green with scattered white speckles in the lower part; sheath persistent; leaf blade very broadly ovate to sub-orbicular, peltate, 10–18 cm long,
Fig. 1. *Alocasia baginda* Kurniawan & P. C. Boyce. A: Type plant in cultivation. B: Leaf blade, adaxial surface. Note the pale gray bullae. C: Leaf blade, abaxial surface showing the red venation. D: Freshly opened inflorescence. E: Inflorescence at late male anthesis, lower part of spathe partially removed. Note that the spathe limb is now semi-translucent. F: Detail of the pistillate and staminare flower zones. Note that the lowermost synandrodes are divided into staminodes. Note, too, the ascending pistils. Images by Dewi Lestari and Gede Wawan Setiadi.
7–12 cm wide, stiffly and thickly coriaceous, adaxially matte dark green, with contrasting pale grey bullate portions blade defined by the primary and marginal veins, pale green abaxially, with the distal part of the midrib, primary and marginal veins deep red, apex acuminate to apiculate for ca. 1 cm, thence mucronate for 4 mm; posterior lobes united for 75–90% of their length, 1/2–1/3 the length of the anterior, with the posterior costa diverging at 20°, anterior midrib with 3–4 primary lateral veins on each side, diverging at 35° (distal ones) to 80–85° (proximal ones); secondary venation impressed adaxially. Inflorescence pairs solitary, each subtended by narrowly membranous prophyll and surrounded by a single membranous cataphyll; peduncle 12–13 cm long, greenish white, exceeding cataphyll; spathe 5–6 cm long; lower spathe abruptly constricted 1.5–2 cm from the base, lower spathe ovoid; spathe limb erect even after anthesis, narrowly elliptic-triangular, 3–3.5 cm long, acuminate for ca. 5 mm, externally creamy white, interior glossy creamy white, deep red along the limb margin as far as constriction, limb late in anthesis becoming somewhat semi-translucent with the venation remaining opaque, thence semi-deliquescent; spadix distinctly shorter than to subequalling the spathe, 4–4.5 cm long, stipitate; stipe cylindrical, 2–3 mm long, creamy white; pistillate flower zone 6–7 mm long or about 1/5 the spadix length; pistils rather loosely arranged, ascending; ovaries ovoid, 1.5–2 mm long, ca. 1.5 mm diam., greenish to ivory; style short 0.5–1 mm, < 1 mm diam.; stigma 2–3-lobed, the variation in lobe number present in a single inflorescence, creamy ivory; sterile interstice slender, 2–3 mm long, partly naked below and with 6–7 synandria above; lowermost synandria deeply lobed into almost separate staminodes, the rest rhombohexagonal in plain view, 1–1.5 mm diam.; staminate flower zone cylindric to subcylindrid, 10–11 mm long, ca. 1/4 the length of the spadix, 1/3–1/2 held within the lower spathe chamber, ivory; synandria densely arranged, rhombohexagonal in plan view, convex-topped, 1–1.5 mm diam.; thecae slightly overtopped by the synconnective; appendix 1.75–2 cm long, ca. spadix length, narrowly conic, pale cream. Infructescence and fruits unknown.

**Distribution.** Eastern Kalimantan, without exact locality.

**Ecology.** Unknown. The species to which *A. baginda* shares closest morphological similarities are locally endemic and obligately associated with limestone (e.g., *A. regina* N. E. Br.—NE Sarawak: Mulu and *A. reginula* A. Hay—E Sabah: Bukit Tabin), or ultramafics (*A. melo* A. Hay, P. C. Boyce & K. M. Wong—E Sabah: Telupid). It is expected that *A. baginda* will reveal similar ecological preference once it is relocated in the wild. It is perhaps worth to note that *A. baginda* most closely resembles *A. melo* and *A. reginula* and that perhaps a search of ultramafic and limestone outcrops is in order.

**Etymology.** The trivial epithet is from the Bahasa Indonesia honorific title denoting ‘King’ or ‘Majesty’. The choice was influenced by the ‘tradition’ of applying regal epithets in the genus *Alocasia*, notably to species, such as this, with considerable horticultural merit.

**Notes.** *Alocasia baginda* most closely resembles *A. melo*, notably in the very stiffly thickly coriaceous almost completely peltate leaf blades and pale green glabrous petioles. Vegetatively it is readily distinguished from *A. melo* by the leaf blades adaxially smooth (not finely and strongly rugose), and dark matte green, with contrasting pale grey bullate portions of the blade. Inflorescences of both species are superficially very similar, although the spathe constriction in *A. baginda* is situated about mid-way up the staminate flower zone; whereas that of *A. melo* coincides with the top of the staminate zone, resulting in both the staminate and pistillate zones being enclosed in the lower spathe.

*Alocasia reginula* also closely approaches *A. baginda*, but is readily differentiated by leaf blades adaxially very dark black-green with white primary and secondary venation, and with wholly deep red abaxial surfaces.
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References

