

A New Species of *Kostermanthus* (Chrysobalanaceae) from Sarawak, Malaysia

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ABSTRACT. *Kostermanthus robustus* is described from the Malaysian state of Sarawak in Borneo. This is only the third species in this genus, which is distinguished from other Malesian genera of Chrysobalanaceae by the stamens, which are united into a ligule as in the Neotropical genus *Acioa* and the African genus *Dactyladenia*.

Key words: *Acioa*, Borneo, Chrysobalanaceae, *Kostermanthus*, Malaysia, Sarawak.

A review of material of Chrysobalanaceae for a monograph for *Species Plantarum* revealed a new species of *Kostermanthus* that had been previously overlooked. This adds a third species to this small genus, which is distinguished from other Malesian genera by the stamens, which are united into a ligule. The material described here had been identified previously as *Acioa percoriacea* of Kostermans (1965), which was described from a single sterile collection that does not match the new species described here. *Acioa percoriacea* has a pubescent leaf undersurface, more pronounced venation and two large, prominent glands at the intersection of the petiole and lamina, and is quite different from the material described here as *K. robustus*. Kostermans placed the other two species of *Kostermanthus* in *Acioa* because that Neotropical genus shares the staminal ligule. However, *Acioa* and *Kostermanthus* differ in many other characters of both the flowers and the fruit (see Prance & White, 1988). *Kostermanthus robustus* has a much more robust inflorescence and flowers with a solid campanulate receptacle 5–6 mm long as well as larger and thicker leaves than its two congeners.

Kostermanthus robustus Prance, sp. nov. TYPE: Malaysia. Sarawak: First Division, Sabal Sawmill Area, Sabal Forest Reserve, 70th Mile, Serian–Simanggang Road, Simunjan, 13 Oct. 1974 (fl), I. Paie & Azahari S35748 (holotype, K; isotypes, A, L, MO). Figure 1.

Species *K. heteropetalus* affinis sed ramulis, inflorescentiis robustioribus, foliis coriaceis majoribus, receptaculis 5–6 (haud 3–4) mm longis intus solidis differt.

Trees to 30 m tall, the young branches glabrous,

with long thin lenticels. Stipules early caducous (not seen); petioles 6–10 mm long, glabrous, usually eglandular or with 2 glands on lower surface near junction with lamina. Leaf lamina thickly coriaceous, oblong-elliptic, 9–22 × 4–7 cm, acute or bluntly acuminate at apex, cuneate or rounded at base, glabrous on both surfaces, minutely papillose on venation of both surfaces giving a bead-like appearance; primary veins 8–13 pairs, plane above, prominulous beneath; midrib slightly prominulous above toward base, plane near apex, prominent and glabrous beneath. Receptacle broadly campanulate and slightly gibbous, 5–6 mm long, solid within, sericeous-tomentose on exterior, tomentose within; calyx lobes unequal, 5–9 mm long, tomentose on exterior, tomentose within on upper portion. Petals dark red, unequal, with 2 large and slightly unguiculate, 9 × 7 mm, and 3 smaller ones not clawed, 7 × 3.5 mm, 2 of the smaller ones enveloping the staminal ligule. Stamens ca. 45, united into a unilateral ligule for 2/3 of length, 13–14 mm long, tomentellous on lower portion, glabrous above; anthers pubescent. Ovary densely pilose. Style densely pilose around base, glabrous on upper 2/3. Young fruit ovoid; exocarp glabrous, crustaceous; mesocarp thick and fibrous; endocarp thin and bony, sparsely arachnoid pubescent within.

Habitat. Hill slopes in mixed Dipterocarp forest to 200 m and in heath forest up to 700 m.

This species differs from *Kostermanthus heteropetalus* in the much more coriaceous and larger leaves, the more robust and thicker inflorescence with larger flowers, the solid center of the receptacle, and the less unguiculate petals that are colored deep red. In *K. heteropetalus* the petals are white tinged pink.

Paratypes. MALAYSIA. **Sarawak:** Semengoh Arboretum, Tree No. 1099, 21 Nov. 1978 (fl), I. Paie & Bernard S38000 (K, KEP, L, MO, SAN), 24 Nov. 1961 (young fr), Galau S15729 (B, K, L, S, M), 1961 (fl bud), Rosli S14959 (same tree as S15729) (A, B, K, L, NB, S); 4th Division, Bukit Mentagai, Bak-Tisam, Marudi, 11 May 1965 (fl), Sibat ak Luang S23295 (A, BO, K, L, SAN, SING).

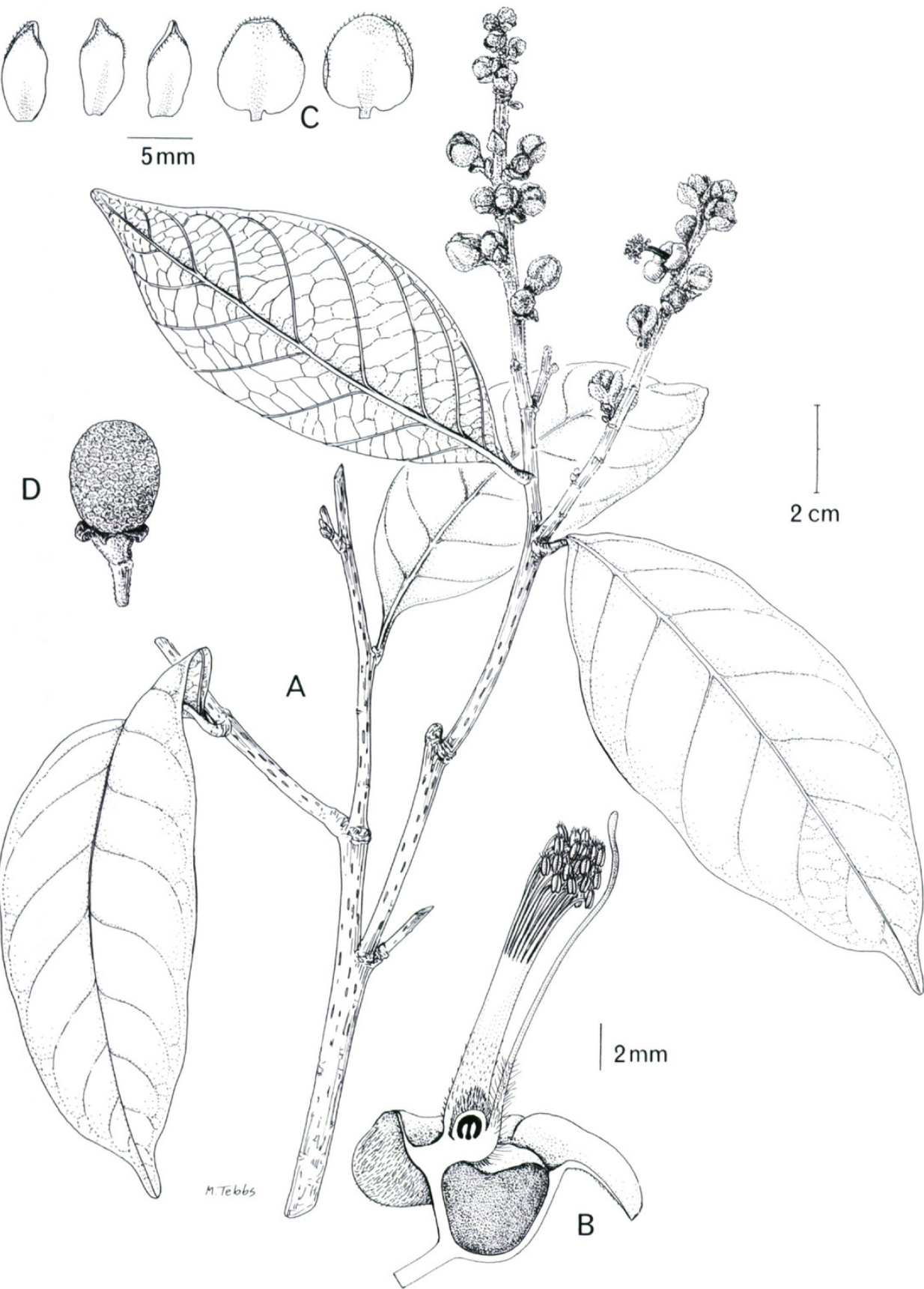


Figure 1. *Kostermanthus robustus* Prance. —A. Habit (Paie & Azahari S35748, from holotype). —B. Half flower (Paie & Azahari S35748). —C. Petals (Paie & Azahari S35748). —D. Young fruit (Galau S15729, same scale as A). Drawn by Margaret Tebbs.

KEY TO THE SPECIES OF *KOSTERMANTHUS*

- 1a. Leaves coriaceous; petioles 6–12 mm long; receptacle broadly campanulate.
 - 2a. Leaves thinly coriaceous; receptacle 2–3 mm long, hollow within
 . . . *K. heteropetalus* (Scortechini ex King) Prance
 - 2b. Leaves thickly coriaceous; receptacle 5–6 mm long, solid within *K. robustus* Prance
- 1b. Leaves chartaceous; petioles 2–3 mm long; receptacle slender cylindrical, 5 mm long
 *K. malayanus* (Kostermans) Prance

Acknowledgments. I thank Cynthia Sothers for assistance with work on Chrysobalanaceae and the Leverhulme Trust for an Emeritus Fellowship in support of this work. I also thank the Keeper of the

Herbarium of the Royal Botanic Gardens, Kew, where the material described was studied and the National Tropical Botanical Garden for the position as McBryde Professor to carry out my research work.

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Prance, Ghilleen T. 2001. "A new species of *Kostermanthus* (Chrysobalanaceae) from Sarawak, Malaysia." *Novon a journal of botanical nomenclature from the Missouri Botanical Garden* 11, 451–453.
<https://doi.org/10.2307/3393159>.

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