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## Studies on Homalomenaeae (Araceae) of Borneo XXIX — *Homalomena latisinus*, a new species for the Borneensis Complex from Brunei

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**Abstract.** *Homalomena latisinus* is described and illustrated as a new Bruneian species of the *Homalomena* Borneensis Complex from shaded damp kerangas. It is compared with the five species previously described for the complex.

**Keywords:** Borneo, Brunei, *Homalomena*, kerangas, Palaeogene sandstones.

### INTRODUCTION

The *Homalomena* Borneensis Complex of the *Homalomena* Cyrtocladon Clade (Ng et al. 2011: 26; Wong et al. 2013a; Wong et al. 2013b: 10) currently comprises five described species, all restricted to Borneo: *Homalomena borneensis* Ridl. (Ridley 1905: 173), *H. clandestina* P.C.Boyce, S.Y.Wong & Fasih. (Boyce et al. 2010: 277), *H. ibanorum* S.Y.Wong & P.C.Boyce (Wong et al. 2013: 18), *H. ovata* Engl. (Engler 1879: 296), and *H. tirtae* Asih, Kurniawan & P.C.Boyce, (Asih et al. 2012: 241). Here we describe a sixth species from damp kerangas in Brunei which is highly distinctive in the complex by the glossy deep green leaf blades with well-developed posterior lobes separated by a wide parabolic sinus. Hitherto only *H. ibanorum* has glossy leaf blades, but differs from the species described here by, among other characteristic, a weakly cordate to almost truncate base to the leaf blades.

Geology in this paper is specified based on Hutchinson (1989, 2005) and Tate (2001).

### Key to species of the *Homalomena* Borneensis Complex

1. Pistillate floret zone accounting for nearly 1/2 of the spadix; staminate and pistillate floret zones contiguous, not separated by a naked interstice.....2

- Pistillate floret zone accounting for 1/3 or less of the spadix; staminate and pistillate floret zones separated by a naked interstice ..... 3
- 2. Spathe green at anthesis; pistils somewhat lax, stigma clearly 3-lobed, wider than pistil; interpistillar staminodes shorter than pistils. Kalimantan Timur; volcanic-derived clays.....  
..... *H. tirtae*
- Spathe white at anthesis; pistils very dense with stigma not 3-lobed, narrower than pistil; interpistillar staminodes equalling or slightly longer than pistils. Matang Massif, Kuching; Palaeogene sandstone-derived soils ..... *H. ovata*
- 4. Leaf blades adaxially glossy ..... 5
- Leaf blades adaxially matte ..... 6
- 5. Leaf blades adaxially medium green with red margins; blade base weakly cordate to almost truncate; spathe limb internally white with a red margin, exterior glossy pale green with margins and the distal part of the spathe limb stained red; C-NE Sarawak, SW Brunei; lowland mixed dipterocarp forest on alluvial soils..... *H. ibanorum*
- Leaf blades adaxially deep green without red margins; blade base with well-developed posterior lobes separated by a wide parabolic sinus; spathe without any red colouration. Brunei; damp kerangas..... *H. latisinus*
- 6. Pistils yellowish, directed outwards; interpistillar staminodes with the clavate portion papillate; pistillate floret zone weakly fusiform; spadix somewhat sinuous; leaf blade abaxially glaucous. NW Borneo; Karst limestone.....  
..... *H. borneensis*
- Pistils white with grey stigmas, directed upwards; interpistillar staminodes with the clavate portion smooth; pistillate flower zone markedly fusiform; spadix straight; leaf blade not abaxially glaucous; Ai drainages; shales.....  
..... *H. clandestina*

***Homalomena latisinus* S.Y.Wong & P.C.Boyce, sp. nov.**

Type: Brunei. Belait, Ulu Ingei, Bukit Batu Patam, 4°05'N 114°42'E, 180 m asl., 8 June 1989, P.C. Boyce 276 (holotype BRUN!; isotypes K!, L!). (Figures 1–3).

*Diagnosis*

*Homalomena latisinus* differs from all described species of the Borneensis Complex by the glossy deep green leaf blades with well-developed posterior lobes separated by a wide parabolic sinus. In the glossy leaf blades *H. latisinus* most resembles *H. ibanorum*, from which it differs by the leaf blades with well-developed posterior lobes (vs blade base weakly cordate to almost truncate), the blades, prophylls and cataphylls lacking a red margin, and spathes without any red staining. *Hom-*

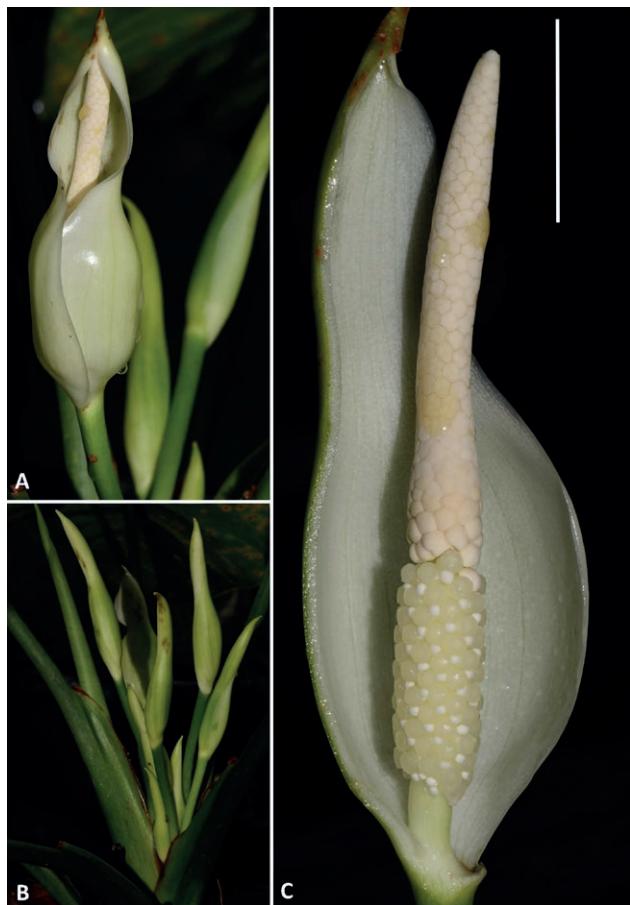


**Figure 1.** *Homalomena latisinus* S.Y.Wong & P.C.Boyce. A & B Plants in habitat. C. Leaf blade abaxial view. Photographed unvouchered. Refer to description for dimensions.

*Homalomena latisinus* is unique in the Borneensis Complex by occurring in damp kerangas.

*Description*

Mesophytic herb to c. 50 cm tall, vegetative tissues strongly aromatic (terpenoids). Stem erect to decumbent with the tip ascending, c. 2.5 cm thick, dark green; internodes to c. 2 cm long. Leaves up to 12 together, erect, the older ones spreading; each shoot module subtended by a single prophyll, c. 7 cm long, green, its margins membranous marcescent; petiole 28–35 cm long × c. 5 mm in diameter, terete, adaxially narrowly flattened, glossy medium green; petiolar sheath closed with one wing incurved upon the other, 7–8 cm long, c. 1/5 length of petiole, the wings long-persistent with the margins marcescent; leaf blade broadly cordate, 15–24 cm long × 12–14 cm wide, coriaceous, glossy dark green adaxially, semi-glossy medium green abaxially with very numerous minute darker punctations, apex acuminate and



**Figure 2.** *Homalomena latisinus* S.Y.Wong & P.C.Boyce. A. Bloom at late pistillate anthesis. Note the resin that has been secreted ahead of pollen release. B. Emerging blooms. C. Spadix at pistillate anthesis, spathe artificially removed. Scale bar = 2 cm.

then mucronate for c. 4 mm, base cordate, lobes rounded, c. 6 cm long, separated by a parabolic sinus; midrib rounded-raised abaxially, adaxially somewhat impressed, up to 4 mm wide; primary lateral veins about 8 on each side, diverging at 40° (distal one) to 60° (proximal ones) from the midrib, abaxially raised and somewhat darker than blade; interprimary veins c. 1/2 width of the primary lateral veins, irregularly interspersed, flush with the lamina adaxially, abaxially faintly darker and prominent; secondary venation somewhat conspicuous to weakly flush with the lamina on both sides; tertiary venation invisible; all veins running into a thickened intramarginal vein; intramarginal vein somewhat inconspicuous abaxially, adaxially almost invisible. Blooms up to 12 together in a simple synflorescence, each subtended by a small narrowly triangular prophyll and one or two cataphylls, suberect at anthesis, later declinate; peduncle to c. 9 cm long × c. 4 mm in diameter, medium green.



**Figure 3.** *Homalomena latisinus* – Holotype. P.C.Boyce 276. [BRUN B 008 035]. Image used with permission.

Spathe stiff, fleshy, tightly furled prior to anthesis, c. 8 cm long × c. 1.5 cm wide, glossy white at anthesis; lower spathe ovoid to broadly ovoid, c. 4.5 cm long, exceeding the limb in length; limb c. 3.5 cm long, narrowly ovoid with a terminal mucro 4–5 mm long; lower spathe inflating and spathe limb gaping at pistillate anthesis, spathe limb opening wide at staminate anthesis and spadix extending; spathe later closing around spadix. Spadix c. 8 cm long × c. 5 mm in diameter, stipitate, stipe c. 3 mm, creamy white to very pale green; pistillate floret zone cylindrical, about 1/3 the length of the spadix, c. 2 cm long; pistils densely arranged, globose, c. 1.5 mm tall × c. 1 mm in diameter, greenish white, stigma convex-topped, much wider than the pistil, c. 1 mm tall × 1.5 mm in diameter, mostly 3-lobed, semitranslucent, glossy grey; most florets associated to a single interpistillar staminode (rarely two staminodes in basal-most florets); interpistillar staminodes globose-headed, on a very slender stalk with an expanded top, c. 0.5 mm long, ivory; sterile interstice c. 1 cm long, densely packed with rhombohexagonal-round-topped white staminodes; staminate floret zone narrowly conic, c. 4 cm long, about half

the length of the spadix, 1/4 held within lower spathe chamber, apex acute, ivory; staminate florets densely arranged, mostly hexagonal in plan view, each floret consisting of 4 stamens, lowermost 1 – 2 rows of florets sterile, staminate florets zone producing abundant pale amber coloured resin just prior to pollen release. Fruiting spathe dull pinkish green; fruits not observed.

#### Etymology

From Latin *latus*, (Genitive *lati*) – broad, and *sinus*, a hollow or bay, referring to the space between the posterior lobes of the leaf blade.

#### Distribution

Brunei, known from two populations approximately 100 km distant. The type locality is almost on the border with Sarawak, such that *H. latisinus* is fully expected to occur in Malaysia. The second population occurs at Tasek Lama, on the trail to Bukit Sarang Helang, Brunei-Muara.

#### Ecology

Shady damp kerangas on steep banks overlying Belait (Miocene) series sandstones, 100–180 m asl.

#### Notes

The production of resin from the staminate florets zone in the Borneensis Complex (among others) was detailed by Hoe et al. (2016).

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