

**Studies on Homalomeneae (Araceae) of Peninsular
Malaysia IV:
Homalomena stongensis, a remarkable new species
endemic to Gunung Stong, Kelantan**

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ABSTRACT. *Homalomena stongensis* is described from Gunung Stong, Kelantan, where it is very locally endemic to steep forested slopes. An updated key to Peninsular Malaysian species of Homalomena Supergroup *Homalomena* is provided, and the new species is illustrated.

Keywords. Araceae, *Homalomena*, Homalomena Supergroup, Peninsular Malaysia, Kelantan, limestone

Introduction

Fieldwork focussing on Araceae in Peninsular Malaysia continues to reveal novel species, many seemingly very locally endemic, maybe explaining why they have been overlooked to date. In particular, *Homalomena* appears to be represented by a great many novel taxa in the Peninsula (Ng et al. 2011a; Zulhazman et al. 2011). Frustratingly, most are encountered sterile during fieldwork, necessitating samples being bought into cultivation to flower and enable assessment of their novelty. Recently, one such taxon gathered during an initial survey at Gunung Stong, Kelantan, has flowered in the research collection of the first author, and has proved to be both novel and rather remarkable in its morphology. It is here described.

***Homalomena stongensis* H.Zulhazman, P.C.Boyce & M.Mashhor, sp. nov.**

Species statim distinctissima pedunculo patente declinato spatha ascendenti florens. Praeterea spatha concolor ad anthesin externe medie virida interne clare luteole alba, staminodia interpistillaria filamentose clavata, spadix longe stipitatus, longitudo zonarum pistillatarum cum stipite circa dimidium spadicis longitudinem distinguenda.
TYPE: Malaysia, Kelantan, Jeli, Gunung Stong State Forest Park, forested flanks of

Jelawang Falls, 18 April 2010, 5°20'29.0"N; 101°58'10.1"E, *Zulhazman* UMK7, (holo, Herbarium Universiti Malaysia Kelantan, Faculty of Earth Science, UMK). (Fig. 1)

Medium, solitary, evergreen, glabrous, bruised tissue strongly aromatic (reminiscent of young mango), herbs to 52 cm tall, shoots pleionanthic. **Stem** up to 26.5 cm tall, c. 4 cm diam., erect, rooting from nodes and at length declinate, older parts clothed with brownish-black papery to fibrous petiole base remains, with the roots penetrating this fibrous layer, active tip erect with oldest leaves spreading. **Leaves** 6–7 together, spirally arranged, and clustered towards shoot tips, older leaves by bending of the petiole with the leaf blade tip touching the ground; **petioles** exceeding the blade, 34–42 cm long, non-sheathing portion D-shaped in cross section, 0.9–1.1 cm diam., above petiolar sheath, base clasping the stem and expanding into an open persistent petiolar sheath, medium green, **petiolar sheath** 11–18 cm, $\frac{1}{3}$ – $\frac{1}{4}$ petiole length, persistent, deep spreading and open, margins hyaline, petiolar sheath for the older leaves, externally shallowly grooved, the groove extending to the insertion of the blade; **leaf blade** ovate-cordate to ovate-lanceolate, 25–30 cm \times 18–22 cm, base sagittate to cordate, apex acute with an apiculate tip 6–7 mm long, semi-glossy, older leaves irregularly quilted between the primary lateral veins and these leaves, through recurving of the petioles often with the leaf blade tip touching soil, margins entire and minutely hyaline, adaxially semi-glossy dark green, adaxially paler green; mid-rib less conspicuous adaxially, prominent abaxially, wedged shape at mid-vein cross section and primary lateral veins conspicuously raised abaxially, deeply impressed adaxially; primary lateral veins 11–15 per side, interprimary veins alternating, much less prominent; secondary and tertiary venation invisible. **Inflorescences** 3–5 together, maturing sequentially in a simple synflorescence, initially upright, at anthesis with peduncle spreading-declinate and spathe ascending, fully all declinate after anthesis; peduncle 9–12 cm long, 8.3–9.5 mm diam., at spathe insertion 9–10 mm, dark, somewhat glossy green. **Spathe** unconstricted, ellipsoid-cylindrical, 10.4–10.7 cm long, 0.83–0.95 cm diam. (before anthesis), gaping c. 1.4 cm at anthesis to c. 1.8 cm wide with the rostrum remaining furled and retaining the tip of spadix, with a conspicuous terminal curved rostrum to c. 1.5 cm. **Spadix** c. 7 \times 1 cm, obliquely stipitate; stipe 0.9 cm, greenish white. **Pistillate flower zone** cylindrical, c. 3 \times 1 cm, pistils somewhat laxly arranged, 2.5 \times 1.5–2 mm; **ovary** globose-cylindric, the lowermost ones somewhat obliquely gibbose, ascending, glossy medium green; **stigma** sessile, discoid, flat, translucent white, c. 2 mm diam.; **interpistillar staminodes** c. 2.8 mm long, exceeding pistils, stipe very slender, flexuous, tip tear-drop shaped, white, staminodes associated with distal-most pistils weakly trapezoidal in plan view. **Staminate flower zone** c. 3.9 \times 1.1 cm, cylindrical, the tip bluntly weakly tapering, very pale whitish yellow, almost contiguous with the pistillate zone, the interface marked by a few somewhat laxly arranged trapezoidal staminodes; **staminate flowers** weakly and irregularly rhombo-hexagonal, each with 3–5 stamens, 1.8 \times 1 \times 1.5–2 mm, anthers with 4 distinct thecae, each with a terminal crenate lobe, and overtopped by a large synconnective. **Fruiting spathe** declinate. **Fruits & seeds** not observed.

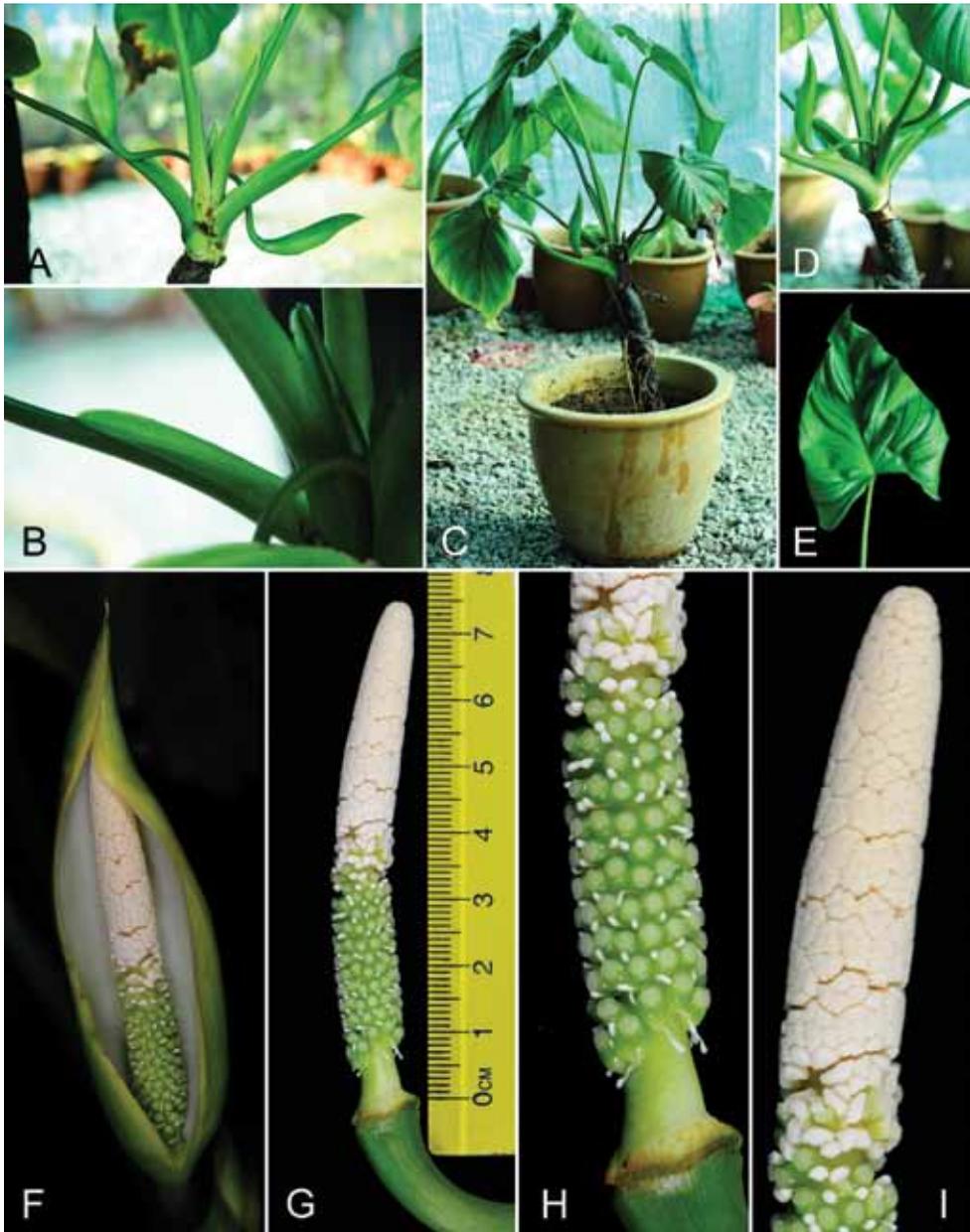


Fig. 1. *Homalomena stongensis* H.Zulhazman, P.C.Boyce & M.Mashhor. **A. & D.** Flowering plant. Left hand inflorescence at female anthesis; note the spreading-declinate peduncle and erect spathe; right hand inflorescences at early stages of fruiting, note the declinate peduncle and spathe beginning to decline. **B.** Detail of the open petiolar sheath. **C.** Whole plant. **E.** Leaf blade, adaxial view. Note the quilted nature of the blade. **F.** Inflorescence at pistillate anthesis. Note the yellowish tinge to the spathe interior, and the manner in which the rostrum remains closed and retains the tip of the spadix. **G.** Spadix, with spathe removed. **H.** Pistillate flower zone. Note the flexuous interstaminal staminodes. **I.** Staminate flower zone. (Photos: Zulhazman H.)

Distribution. Peninsular Malaysia, Kelantan, Gunung Stong State Forest Park. Locally endemic.

Ecology. Perhumid hill dipterocarp forest along flanks of waterfalls on steep (c. 30°) granite slopes, at 300 m asl.

Notes. *Homalomena stongensis* belongs to the Homalomena Supergroup *sensu* Wong & Boyce (2008) & Ng et al. (2011b). *Homalomena stongensis* is immediately distinctive from all other *Homalomena* so far described from Peninsular Malaysia by flowering with the peduncle spreading-declinate and the spathe ascending. It is further distinguished by the strongly discolourous, spathe - is externally medium green, internally bright yellowish white at anthesis, the filamentous-clavate interpestillar staminodes, long-stipitate spadix, and the combined length of pistillate zone plus stipe accounting for almost half the spadix length.

Key to Peninsular Malaysian *Homalomena*
(Supergroup Homalomena)

- 1a. Peduncle at anthesis spreading-declinate with the spathe erect. Interpestillar staminodes with stipe very slender, filamentous, somewhat sinuous, the head teardrop-shape *H. stongensis*
- b. Peduncle at anthesis erect. Interpestillar staminodes stout, straight, the head ± globose 2
- 2a. Flowering plants large, often exceeding 1 m tall. Spathe 8–14 cm long; spadix 7–13 cm long *H. pontederiifolia*
- b. Flowering plants medium, seldom exceeding 40 cm tall. Spathe 4–6 cm long; spadix 5–6.5 cm long 3
- 3a. Leaf blade abaxially with conspicuous striate pellucid secretory canals running parallel to the primary lateral veins. (S Peninsular Malaysia as far north as S Pahang) *H. curvata*
- b. Leaf blade abaxially without striate pellucid secretory canals. (Kedah, Perlis)
..... *H. truncata*

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