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Studies of the Homalomeneae (Araceae) of Peninsular Malaysia VII: *Homalomena puncticulosa* [Chamaecladon Clade], a new species from recreational forest

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Abstract. *Homalomena puncticulosa* is described and illustrated as a new species of the Chamaecladon Clade known from a single population in Selangor, and compared with the superficially similar *H. kiahii* Furtado, and other similar Sumateran species.

Keywords: *Homalomena* Chamaecladon Clade, taxonomy, Selangor, Triassic granite.

INTRODUCTION

During fieldwork in recreational forest, which is to say forest that has continual public access for recreational activities such as mountain biking, swimming, etc., on the fringe of the protected Taman Negeri Selangor, a population of a facultatively rheophytic Chamaecladon clade *Homalomena* was encountered that aroused interest by having the petioles and the spathe exterior longitudinally ribbed, a characteristic previously unrecorded for the genus in the Malay Peninsula. At the time of collecting, all blooms were post-anthesis and, although the spathes were highly characteristic, the critical spadix characteristics were unobservable. Plants brought into cultivation subsequently flowered and, as discussed below, confirmed that the plants indeed did not match any of the species described for Peninsular Malaysia.

As noted in previous papers (Baharuddin and Boyce 2005, 2010, 2011, Boyce and Wong 2017; Wong and Boyce 2021; Zulhazman et al. 2011, 2012) *Homalomena* remains least well-studied large genus of Asian Araceae, within which species of the Chamaecladon clade (Wong et al. 2013) are perhaps the most poorly understood.

Geological occurrences in this paper are verified with Tate et al. (2008).

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

Type: Cultivated Buso, Bau, Kuching [original collection: Malaysia, Selangor, Batu Caves, Jalan Sungai Tua, Kampung Pasir Ulu Yam, Taman Negeri Selangor, Sungai Tua, 3°18'44.28"N 101°41'57.46"E, 160 m asl., 6 Jun 2011, P.C.Boyce, Wong Sin Yeng & April Ting Pei Jen AR-3590 (holotype KEP!; isotype KEP – spirit). (Figure 1).

Diagnosis

Homalomena puncticulosa differs from all other described species occurring in Peninsular Malaysia by the pistils with conspicuous red punctations, and by the longitudinally ribbed petioles and spathe limb exterior. Sterile plants are similar in overall appearance to *H. kihii*, notably by the proportionately (to the blade length) short petioles, but immediately distinguished by the ribbed petiole. From species in Sumatra in which the spathe exterior and/or petioles are longitudinally ribbed (*H. mobula* and *H. plicata*) *H. puncticulosa* is distinguished by the leaf blades smooth, not adaxially ornamented, and by pistils with red punctations.

Description

Small slightly aromatic (terpenoids) facultatively rheophytic herbs to c. 20 cm tall. Stem epigeal, erect or rooting-ascending, rooting from the nodes and through the petiole bases, new shoots flushed reddish-brown, later becoming green, older portions of stems medium brown; roots c. 1–2 mm diameter, tough, flexuous, pale brown, younger portions velvety. Leaves numerous, petioles erect, older ones slightly spreading with the blades held more or less flat; petiole 4–11 cm long, c. 2 mm diameter midway, dorsally narrowly channelled, pale green suffused with reddish brown, notably in the lower half, conspicuously longitudinally acute-ribbed; petiolar sheath 1.5–4 cm long, extending c. one-half length of the longest petiole, clasping at the base, width between both margins c. 2 mm, wings persistent, tips truncate; leaf blade narrowly elliptic, 6–15 cm long, 3–4 cm wide, thinly coriaceous, dark matte medium green adaxially, noticeably paler matte green abaxially, base cuneate, apex acuminate with a short (c. 2 mm long) tubule, margins smooth; midrib adaxially almost flush with the blade, abaxially prominent with the basal half reddish brown; primary lateral veins c. 8 on each side of midrib, adaxially impressed, abaxially slightly prominent, diverging at c. 35–60° from the midrib, alternating with much fainter regularly interspersed interprimaries; secondary venation faint, striate; tertiary venation almost invisible; all veins running

into a slightly thickened intramarginal vein. Blooms up to seven produced sequentially in a simple synflorescence; peduncle terete, slender, 2–3 cm long, c. 2 mm diameter, reddish brown to reddish maroon, microscopically glandular-pubescent; spathe oblong ellipsoid, not constricted, c. 2 cm long, 8 mm wide at base, with a terminal short stout mucro to c. 2 mm long, exterior longitudinally ribbed, with the dorsal median rib forming a sharp keel that extends from the spathe down the peduncle, spathe inflating at anthesis with the margins spreading slightly, then closing post staminate anthesis and persisting until basal dehiscence at fruit dispersal, exterior matte reddish brown, visible exterior microscopically glandular-pubescent, with the portion of the exterior formerly hidden by the overlapping margin on opening exposed and glossy, interior similarly coloured to exterior but wholly glossy, margins hyaline. Spadix sub-equalling spathe limb at opening, c. 2 cm long, c. 3.5 mm diameter at mid-point, very briefly stipitate, stipe c. 0.5 mm long, smooth, very pale pink with a few minute red speckles; pistillate floret zone c. 5 mm long; pistils congested, stoutly bottle-shaped, c. 2 mm tall × 1 mm diameter, olive green with numerous scarlet speckles, style about 1 mm long, stout, stigma capitate, slightly wider than the style, c. 0.4 mm diameter, olive green; each pistil with a single staminode situated on proximal side of the floret relative to the base of the spadix; interpistillar staminodes oblong fusiform, c. 0.5 mm long, waxy white; staminate flower zone c. 1.5 cm long, stoutly oblong-conical, apex blunt; staminate florets well-defined, each consisting of two, occasionally three stamens, stamens rounded, c. 0.5 mm tall, 1–1.5 mm long × 0.5–0.9 mm wide, creamy white with the thecae tips slightly transparent. Infructescence, fruit and seed not observed.

Etymology

The specific epithet *puncticulosa* is from the Latin meaning, minutely dotted, referring to the scarlet speckles on the pistils.

Distribution and ecology

So far known only from recreational forest abutting the Taman Negeri Selangor where it occurs as a facultative rheophyte on heavily shaded forested stream-edge Triassic granite rocks at low altitudes.

Notes

In Peninsular Malaysia *Homalomena puncticulosa* is most similar in overall appearance to Johore *H. kihii* Furtado (1937: 207), although readily differentiated by the ribbed petioles. Although there are species of

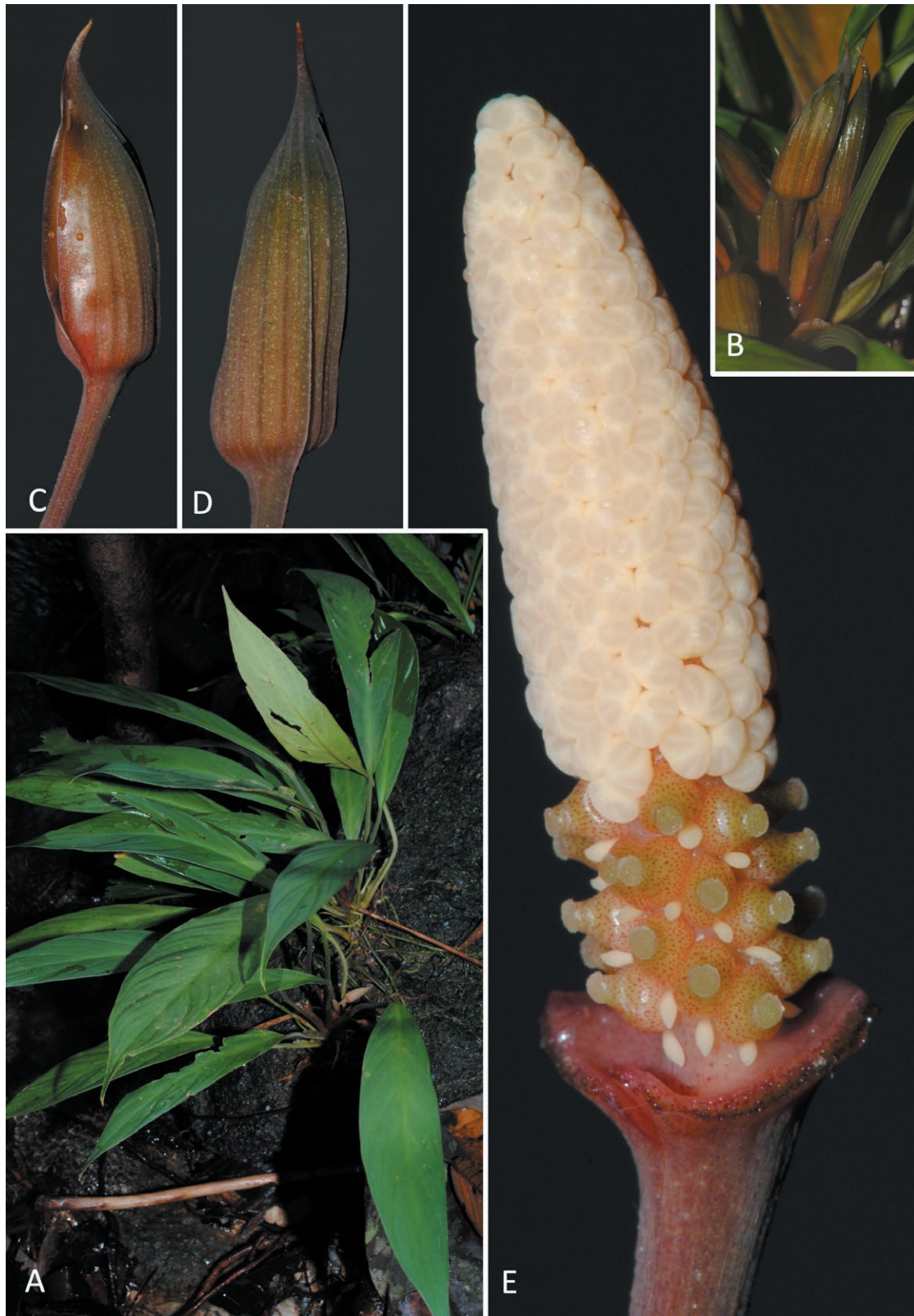


Figure 1. *Homalomena puncticulosa* (A) Plant in habitat. (B) Flowering shoot showing externally ribbed spathes and petioles. (C) and (D) Bloom at pistillate anthesis. (E) Spadix at pistillate anthesis, spathe artificially removed. All from AR-3590.

Homalomena Chamaecladon clade with spathes externally ribbed occurring on Sumatera (among them *H. mobula* P.C.Boyce & S.Y.Wong and *H. plicata* P.C.Boyce & S.Y.Wong (Boyce & Wong 2016: 254, 257) these have distinctly elaborated leaf blades or leaf epidermis quite different to these Selangor plants. Elsewhere in Sumatera *Homalomena puncticulosa* resembles *H. batoeensis* Engl. (Engler 1912: 47) and *H. multivenosa* Ridl. (Ridley 1926: 92) from the islands to the west of Sumatera, both of which have the spathe conventionally smooth on the outside, and unribbed petioles, differing further from the latter by leaf blades with far fewer primary lateral veins.

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