

Studies on Homalomeneae (Araceae) of Borneo XVI: three new shale-obligated *Homalomena* species

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Homalomena cowleyae P.C. Boyce & S.Y. Wong, *Homalomena imitator* P.C. Boyce & S.Y. Wong, and *Homalomena mutans* P.C. Boyce & S.Y. Wong are described and illustrated as new species obligated to tropical forested shales.

Keywords: Araceae; Homalomeneae; *Homalomena*; Malaysian Borneo; Brunei; shales

Introduction

The influence of geology in the occurrence of localized species diversity and species richness of aroids on Borneo has previously been highlighted by Boyce and Wong (2013a, b, c), Ni Putu Sri Asih et al. (2012), Wong and Boyce (2011, 2012, 2013), and Wong et al. (2012). Here we describe three novel species of *Homalomena* each restricted to one of the richest ecological habitats on the island, lowland forest over shales. Geological confirmation for this and all of our fieldwork is much assisted by Hutchison (1989, 2005) and Tate (2001).

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

Diagnosis

Homalomena cowleyae is most similar to *Homalomena imitator* (this paper) although simple to differentiate by the lower spathe rich pink (versus spathe entirely white), by the much shorter spadix stipe, the smaller and more numerous pistils, and the tapering, not fusiform, spadix. *Homalomena cowleyae* approaches *Homalomena insignis* N.E. Br., by lacking interpistillar staminodes, a rare occurrence among larger-growing *Homalomena* species, but is distinguished by the overall larger and more robust habit, the proportionately much longer petioles, and by the stiffer, glossy (versus somewhat softly leathery and minutely velvety) leaf blades, the pink lower spathe, and by the much shorter spadix stipe.

Typus: Brunei, Temburong, Amo, Apan Sungai Baki, downstream from camp, 4°31' N, 115°11' E, 45 m, 16 July 1993, J.Cowley JC78 (holo K!; iso BRUN B008067 [+spirit]). Figures 1, 2.

Description

Medium, evergreen, glabrous, strongly aromatic mesophytic herbs to c.60 cm tall. Stem pleionanthic, congested, erect, ca 2.5 cm thick, green, internodes to ca 1.5 cm long, green, later becoming pale brown, adventitious roots few, penetrating the leaf bases. Leaves c.10 together; petiole 30–40 cm long × 9–12 mm wide, adaxially very shallow wide-grooved, weakly D-shaped in cross-section, sub-erect to spreading, medium glossy green, the lowermost part sometimes suffused reddish; a weak pulvinus always present, about one-fifth of the petiole length from blade base; petiole bases clasping; petiolar sheath to c.10 cm long, one-quarter to one-fifth of petiole length, width between both margins c.1 cm at the base, narrowing towards the apex, sheath margins 0.5–1 cm, equal, involute, clasping, weakly truncate, green, persistent; blade broadly oblong-ovate, 20–35 cm long × 12–18 cm wide, somewhat stiffly coriaceous, semi-glossy medium green adaxially (fresh), drying pale brown, abaxially sub-glaucous green (fresh), drying pale brown, base shallowly cordate, posterior lobes straight, rounded, c.2 long, blade tip acute, short-acuminate for c.2.5 cm, apiculate for c.3 mm; midrib raised abaxially (fresh and dry), c.6 mm wide at the base and 4 mm wide at the centre, adaxially impressed (fresh and dry), c.8 mm at the base and 3 mm at the centre; 10–13 primary lateral veins on each side, diverging at 60°–80° from the midrib, adaxially impressed (fresh and dry), abaxially raised (fresh and dry), curved towards the apex when near the margin; interprimary veins impressed, alternating irregularly with primaries, posterior lobes each with one or two primary lateral veins; secondary venation visible abaxially as conspicuous pellucid-striate vein-like glands running parallel to the primary lateral veins; tertiary venation not visible, all veins running into a slightly thickened intramarginal vein. Inflorescences up

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