

Studies on Homalomeneae (Araceae) of Borneo X: Two new *Homalomena* species from Brunei, and a new Informal Species Complex for Supergroup Cyrtocladon

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Studi sulle Homalomeneae (Araceae) del Borneo X: due nuove specie di Homalomena del Brunei e un nuovo gruppo informale nell'ambito del supergruppo Cyrtocladon — È proposto un nuovo gruppo informale nell'ambito del Supergruppo Cyrtocladon relativamente alle entità di *Homalomena* (Araceae: Homalomeneae) dell'area sondaica e vengono descritte due nuove specie ***Homalomena wongii*** S.Y. Wong & P.C. Boyce e ***Homalomena terajaensis*** S.Y. Wong & P.C. Boyce. Vengono inoltre forniti sia i caratteri differenziali che una chiave identificativa relativamente al nuovo gruppo proposto e alle due nuove specie qui descritte.

Key words: Araceae, Borneo, Brunei, *Homalomena wongii*, *Homalomena terajaensis*, Wongii Complex.

Introduction

Homalomena Schott, with perhaps as many as 500 species, the majority yet to be formally described, is the largest and yet most understudied genus of mesophytic aroids in South East Asia. To date just 26 accepted names are available for Bornean *Homalomena* (Boyce et al., unpublished data), of which 14 are recently described (Baharuddin & Boyce, 2010; Boyce & Wong, 2008; Boyce et al., 2010; Tung et al., 2010; Hoe et al., 2011; Kurniawan et al., 2011).

No attempt has yet been made to tackle the internal phylogeny of *Homalomena*, in the main because the alpha taxonomy remains in such a preliminary state. However, Boyce & Wong (2008) and Ng et al. (2011) have delimited informal Supergroups and

Species Complexes in order to create manageable taxonomic units to aid identification, and from which to attempt phylogenetic analyses.

Homalomena specimens are abundant in Herbaria. However, the overwhelming majority of specimens are either undetermined, or bear incorrect determinations. Many herbarium specimens, while certainly representing undescribed species, are of insufficient quality to enable description. In part this is owing to much of the material, even when not subject to post-preservation depredations by beetles, having been collected too far into anthesis by which time critical floral morphologies, notably interpistillar staminodes, have been irreparably damaged during pollination. Additionally much of the herbarium material is prepared in a manner by which the spathe obscures

critical floral morphologies. Post-preservation removal of a long-dry spathe, without damaging the spadix, is almost impossible. Provided concise locality data are available attempts must be made to re-visit and prepare adequate samples (images, inflorescences in alcohol) for any suspected novelties.

Examination of the Araceae collections of the Herbarium, Brunei Forestry Department (BRUN), and subsequent fieldwork in Brunei late in 2010 confirmed two highly distinctive novel *Homalomena* restricted to forested vertical sandstone bluffs in the Teraja area. There are here described as *Homalomena wongii* S.Y. Wong & P.C. Boyce and *Homalomena terajaensis* S.Y. Wong & P.C. Boyce, belonging to the Cyrtocladon (sensu Boyce & Wong, 2008) and Chamaecladon supergroup (sensu Boyce & Wong, 2008) respectively.

While *H. terajaensis* fits incontrovertibly into the Humilis Complex (see Kurniawan et al., in press), *H. wongii* combines a suite of morphologies that do not permit it to be included into any of the five current defined complexes in the Cyrtocladon Supergroup (Ng

et al., 2011). Therefore, for this species we are proposing a new informal complex, the Wongii Complex.

Wongii Complex

Mesophytic solitary or slightly clumping lithophytic herbs. *Petiole sheath* with margins ultimately marcescent. *Leaf blade* cordiform, matte pale green adaxially with conspicuous pellucid striate vein-like glands running parallel to the primary lateral veins. *Spathe* with a constriction separating the limb from the lower part; lower spathe exceeding the spathe limb. *Pistillate flowers* each associated with a single staminode.

TYPICAL SPECIES: *Homalomena wongii* S.Y. Wong & P.C. Boyce

DISTRIBUTION: Currently one species, endemic to Brunei, Borneo.

Key to species complexes

The **Wongii Complex** can be accommodated in the key in Ng, et al. (2011) by the following modification to couplet 4:

- 4a. Leaf blade abaxially with conspicuous pellucid vein-like glands running parallel to the primary lateral veins 11
- 4b. Leaf blade without pellucid vein-like glands 5-10 as per original key.
- 11a. Pellucid vein-like glands comprised of lines of close-packed punctilliform spots. Lower spathe longer than spathe limb. Leaf blade with conspicuous posterior lobes; spathe limb separated from the lower spathe by a distinct constriction; each pistil associated with a staminode **Wongii Complex**
- 11b. Pellucid vein-like glands comprised of unbroken striae. Spathe limb longer than lower spathe. Leaf blade lacking posterior lobes, base obtuse to truncate, sometimes minutely peltate; spathe lacking a distinct constriction; pistils without staminodes **Havilandii Complex**

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

DIAGNOSIS - *Ab ominis ceteris speciebus foliis abaxialiter glandulis conspicuis pellucidis parallelis ad venas primarias laterales, spatha constrictione inter partem inferiorem et limbum, spathae parte inferiore limbo brevior, pistillis omnibus staminodio provisus differt.*

TYPUS: Brunei, Belait District, Labi, Hill dipterocarp forest, Bukit Teraja south of summit, 04° 20'; 114° 27', 20th March 1991, *R.J. Johns* 6875 (holotypus BRUN - barcode B 008 060; isotypus K). Figs. 1, 2.

DESCRIPTION - Medium, evergreen, glabrous, strongly aromatic lithophytic herbs, to ca 80 cm tall.