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Studies on *Homalomeneae* (*Araceae*) of Borneo XIX: Three new species of geologically obligated *Homalomena* from Sabah, Malaysian Borneo

Abstract

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Three new geologically obligated species of *Homalomena* Schott are described from Sabah, Malaysian Borneo. Rheophytic *H. gempal* Kartini, P. C. Boyce & S. Y. Wong, sp. nov., restricted to rhyolite, belongs to the Chamaecladon clade and is compared to *H. atrox* P. C. Boyce & al. and *H. paucinervia* Ridl. *Homalomena marasmiella* Kartini, P. C. Boyce & S. Y. Wong, sp. nov., restricted to ultramafic substrates, forms an apparently natural grouping with *H. stella* P. C. Boyce & S. Y. Wong and *H. vagans* P. C. Boyce, and together these are termed the Vagans Complex. *Homalomena simunii* Kartini, P. C. Boyce & S. Y. Wong, sp. nov. is the third species of the Insignis clade to be described from Sabah and is restricted to basalt. All three species are illustrated from living plants.

Additional key words: aroids, *Homalomena gempal*, *Homalomena marasmiella*, *Homalomena simunii*, basalt, ultramafic, rhyolite, rheophyte

Introduction

Araceae-focused fieldwork on Borneo continues to bring to light undescribed locally endemic species correlated with geological obligation (see Boyce & Wong 2015 for a bibliography to date). Here we describe three taxonomic novelties belonging to *Homalomena* Schott, each restricted to a specific geology: *H. marasmiella* associated with ultramafic rocks at Telupid, C Sabah, *H. gempal* occurring on rhyolite waterfalls and *H. simunii* from forested basalts, the latter two at Tawau Hills N.P. (National Park), SE Sabah.

Homalomena is by far the most speciose and most poorly understood genus of aroids in tropical Asia. No modern monograph exists, the last being Engler (1912).

Geological interpretation of Tawau Hills N.P. was much assisted by reference to Sanudin & al. (2010). Interpretation of the geology of Borneo in general relies on Tate (2001).

Results and Discussion

Homalomena gempal Kartini, P. C. Boyce & S. Y. Wong, **sp. nov.** – Fig. 1.

Holotype: from plant cultivated at Institute for Tropical Biology and Conservation, Kota Kinabalu, 4 Jan 2015, *Kartini BORH 2702* (BORH!) [original living collection: Malaysian Borneo, Sabah, Tawau, Tawau Hills N.P., Bukit Galas, Dec 2014, *Kartini*].

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