

# Studies on Schismatoglottideae (Araceae) of Borneo XVII: The *Schismatoglottis* Hottae Complex, a new informal taxon, and three new species from Sarawak, Malaysian Borneo

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**ABSTRACT.** On the basis of a suite of shared morphological characters, the *Schismatoglottis* Hottae Complex is defined as a Borneo-endemic informal taxon in the *Schismatoglottis* Asperata Group. Four species, three novel, are assigned to the Hottae Complex: *S. hottae* Bogner & Nicolson, *S. dilecta* S.Y.Wong, P.C.Boyce & S.L.Low, sp. nov., *S. mira* S.Y.Wong, P.C.Boyce & S.L.Low, sp. nov., and *S. thelephora* S.Y.Wong, P.C.Boyce & S.L.Low, sp. nov. A key to species of the Hottae Complex is proffered. *Schismatoglottis hottae* is illustrated from the Holotype herbarium material, the three novelties from living plants.

**Keywords.** Araceae, Borneo, Sarawak, *Schismatoglottis*, *Schismatoglottis* Hottae Complex

## Introduction

Earlier papers of this series (Boyce & Wong 2006; Wong 2010), and Hay & Yuzammi (2000), highlight that the Asperata Group (*sensu* Hay & Yuzammi 2000) is certainly heterogeneous. Notwithstanding the phylogenetic veracity or otherwise of the Asperata Group, during extensive fieldwork over the past 6 years in Sarawak we have come to recognise that within the Asperata Group there exists a number of ‘species complexes’—subsets of morphotaxa—the application of an informal nomenclature to which provides a convenient tool for discussing potential phylogenetically significant units (PSUs). One such is the Hottae Complex, defined here by long-persistent somewhat bicarinate ligular sheaths, petioles and sometimes leaf blades with deciduous indumentum, leaf blades abaxially with conspicuous pellucid secretory canals, solitary inflorescences with a very short peduncle completely concealed within the subtending cataphylls, staminate flowers with a blunt, narrowly pyramidal connective extended well beyond the thecae, and a spathe limb darkening rapidly after opening and thence deliquescing without crumbling. All species show an ecological preference for vertical or very steep slopes with surface running water in lowland moist or perhumid gallery forest, with one (*S. thelephora* sp. nov.) at least a facultative rheophyte.

So far four species are known that display the above set of morphological characters: *S. hottae* Bogner & Nicolson, and three novelties, here described.

#### Key to the *Schismatoglottis* Hottae Complex

- 1a. Leaf blade lanceolate, abaxially with conspicuous pellucid secretory canals. Staminate flower zone much narrower than the pistillate zone. Interstice staminodes nipple-like, greatly exceeding the pistils and staminate flowers, upper-most staminodes furnished with a terminal yellow-brown rostrum (vestigial anther?). Anthers deep red ..... 4. *S. thelephora*
- b. Leaf blade ovate to broadly ovate or ovato-cordate, abaxially with or without conspicuous pellucid secretory canals. Staminate flower zone width equalling or much exceeding the pistillate zone. Interstice staminodes not nipple-like, equalling pistils. Anthers pale salmon-orange, or bright pink ..... 2
- 2a. Leaf blade adaxially minutely and softly densely tuberculate, abaxially often with adventitious plantlets. Emerging leaves green. Pistillate zone much narrower than the staminate zone, pale green. Staminate flowers pale brownish pink. Spathe limb opening green. Sarawak (Bintulu, Bukit Satiam), shales ..... 3. *S. mira*
- b. Leaf blade adaxially minutely pubescent or smooth, abaxially without adventitious plantlets. Emerging leaves pink. Pistillate zone spadix sub-equalling or slightly exceeding the staminate zone. Spathe limb opening medium to bright pink. Sarawak and Brunei ..... 3
- 3a. Plant to 35 cm tall. Leaf blade up to 30 cm × 20 cm, adaxially smooth, semi-glossy when wet, abaxially pale green with conspicuous pellucid secretory canals. Petioles, and midrib and primary lateral veins of abaxial surface sub-microscopically pale greyish pubescent. Spadix c. 9 cm long. Sarawak (Mulu), shales ..... 2. *S. dilecta*
- b. Plant to 20 cm tall, often less. Leaf blade up to 12 cm × 9 cm, adaxially densely minutely hairy, matte even when wet, abaxially pale green without conspicuous pellucid secretory canals. Petioles, and mid-rib and primary lateral veins of abaxial surface densely pale brown pubescent. Spadix c. 2.5 cm long. Brunei (Teraja and Batu Patam), sandstones ..... 1. *S. hottae*

1. *Schismatoglottis hottae* Bogner & Nicolson, Aroideana 2: 120 (1979); Mayo, Bogner & Boyce, The Genera of Araceae, 184, pl. 49(ii), D (1997); Hay & Yuzammi, Telopea 9(1): 70–71 (2000) — *Schismatoglottis cordifolia* M. Hotta, Mem. Coll. Sci. Univ. Kyoto, ser. B, 32: 229 (1966) (*non S. cordifolia* Ridl. (1911)). TYPE: Brunei, ‘Seria Distr.’ [Belait], Bukit Teraja, Teraja Forest Reserve, 21 Dec 1963, *M. Hotta* 12886 (holo KYO, K! photo). (Fig. 1)