Hapaline celatrix (Araceae: Caladieae)
– A New Record for Sarawak, Malaysian Borneo

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Abstract

Hapaline celatrix P.C.Boyce, a species known from only two collections and hitherto considered endemic to Brunei, has recently been collected in Gunung Mulu NP. An expanded description for the species, additional ecological notes and the first ever published field photographs are presented.

Introduction

Studies on the predominantly Indo-Chinese genus Hapaline Schott in recent years have resulted in a published generic revision (Boyce, 1996) including the description of a second Bornean endemic, Hapaline celatrix P.C.Boyce, based on two collections from the Setap Shales of eastern Brunei, and the rediscovery of Sarawak-endemic, H. appendiculata Ridl., after a period of nearly 30 years, and then only the fourth collection (Boyce et al., 2005).

Yet still more recent fieldwork by the authors in Gunung Mulu N.P. has located extensive populations of H. celatrix along the Sungai Licat, a stream draining into the Sungai Tutoh along the SW flank of the park. These collections represent the first ever record for Sarawak and are furthermore a new species record for Malaysia. Additionally the new discovery expands the information concerning species variability, not least variation in leaf shape and leaf markings.

Hapaline celatrix P.C.Boyce
Plate 1. *Hapaline celatrix* P.C. Boyce. A. Colony at Sg. Licat; B & C. Inflorescences at male anthesis. Note the short appendix in B & C compared with that of *H. appendiculata*; D. *Hapaline appendiculata*; E. Variation in leaf markings of *H. celatrix* at Sg. Licat.
Plate 2. Hapaline celatrix P.C.Boyce. A & B. Range of variation in leaf shape and markings present at Sg. Licat; C. Adaxial venation.
[Hapaline celator P.C. Boyce in Hay et al. in Blumea suppl. 8: 68 (1995), nom. nud.]

Diminutive, weakly tuberous or/or moderately rhizomatous evergreen perennial herb up to 15 cm tall. Stem with globose tuber, 7-20 x 7-13 mm; stolons terete, 1-16 cm x 2-4 mm, enclosed by several sub-fleshy, later papery, later still decomposing cataphylls. Roots rather few, ca 0.2 mm in diam. Prophyl of leaf linear-triangular, up to 10 cm x 5 mm, rather weakly 2-keeled, acute to briefly apiculate; cataphyll linear-triangular, up to 12 cm x 9 mm, attenuate to rather blunt; petiole 8-17 cm x 0.5-1.5 mm, longer petioles with up to half of the length buried; leaf blade hastato-sagittate to ovato-sagittate to cordiform, 5.5-16 x 2.7-10.5 cm, thinly to rather thickly coriaceous or sub-succulent, dark green to variously and variably spotted and blotched with pale green, yellow green or grey, margins smooth to minutely crispulate, apex acuminate, posterior lobes rounded, divergent to sub-parallel; mid-rib prominently raised abaxially, impressed adaxially; primary lateral venation arising at ca 75° to the mid rib, prominent abaxially, slightly impressed adaxially, running to a prominent (abaxially), impressed (adaxially), brochidodromous intramarginal collecting vein; interprimary veins much less prominent, running into intramarginal collecting vein; secondary venation reticulate, moderately raised abaxially, slightly impressed adaxially; tertiary venation reticulate, weakly visible abaxially, invisible adaxially in fresh material, barely visible in dried specimens, reticulate. Inflorescence solitary to several together; peduncle 3-9 cm x 0.5-2 mm, longest peduncles with much of the length buried; spathe 1.5-2 cm long; spathe limb elliptic, 1.5-2 cm x 6-10 mm, apex acute, base decurrent into lower spathe; lower spathe margins clasping, 1.5-3 cm x 2 mm; spadix 1 cm x 2.5-3 mm, free portion narrowly conic, ca 8 mm long, tapering apically in to a stout conical appendix composed of fused synandrodes. Flowers synandria, irregularly elongate in plane view, 2-7 x 0.75-1.5 mm; ovaries ellipsoid, 2-2.5 x 0.5-1 mm, 2-4 in a single row; stigma slightly prominent, ca 0.2 mm diam; style absent. Infructescence on declinate to reflexed peduncle, partially enclosed by the persistent lower spathe, 1 cm x 3.5 mm, 2-3-berried; berries more or less globular, ripening pale green, ca 2.4 mm in diam, stigmatic remains not prominent. Seed ellipsoid, ca 1.5 x 3 mm, glossy pale brown with a conspicuous white oily rhaphe.

Other specimens seen: SARAWAK: Miri Division, Mulu, Long Lama, Mulu N.P., Sg. Licat, trail to Long Lansat, 04° 00’ 03.5”; 114° 48’ 49.8”, 9 Aug 2007, P.C.Boyce, S.Y.Wong et al., AR-1972 (SAR, SING). BRUNEI. Temburong: Sg. Temburong at Kuala Belalong, 4°32’ N, 115°9’ E, 20 June
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Distribution: Sarwawak (Miri Division); Brunei (Temburong District).

Ecology: Disturbed lowland mixed dipterocarp forest on river banks in deep leaf litter overlying soils derived from Setap shales. 20-32 m asl.

Notes: Hapaline celatrix differs from all other species of Hapaline by the combination of evergreen habit, small inflorescences borne beneath the leaves and a short sterile spadix appendix. It is most similar to H. brownii Hook.f. in Peninsular Malaysia and S Thailand, and H. appendiculata. It may be distinguished from H. brownii by its evergreen habit and overall lesser stature and the smaller inflorescence carried beneath the leaves. Additionally, H. brownii is restricted to Karst limestone. Hapaline celatrix differs from Hapaline appendiculata by its evergreen habit, more coriaceous leaves and short sterile appendix.

The habitat of H. celatrix is briefly seasonally-dry riverine forest on shale. All known localities of H. celatrix are more exposed (higher light levels) and less humid for at least part of each day than the known habitats of H. appendiculata.

The specific epithet comes from the Latin celator, ‘the concealer’, in allusion to the manner in which the foliage obscures the inflorescences, a character otherwise unknown in the genus.

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