

A new spectacular species of *Homalomena* (Araceae) from Indonesian New Guinea

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ABSTRACT. A new ornamental species of *Homalomena* Schott, *H. polyneura* A.S.D.Irsyam & M.R.Hariri, is formally described from Central Papua, Indonesia.

Keywords. Aroid, Malesia, Philodendreae, rheophytic

Introduction

The genus *Homalomena* Schott exhibits a broad distribution spanning tropical and subtropical Asia and extending into the Southwest Pacific (POWO, 2025). Centres of species richness are concentrated in western Malesia, particularly in Peninsular Malaysia (26 spp.), Sumatra (41 spp.), and Borneo (73 spp.) (Hariri & Irsyam, 2025a; Irsyam et al., 2025a, 2025b, 2025c, 2025d; POWO, 2025). Eastwards from this core region, taxonomic diversity markedly decreases, with the genus as currently understood represented by only eight species in Java, two in the Lesser Sunda Islands, three in the Philippines, three in Sulawesi, and two in the Maluku islands (Hay, 1999; Kurniawan et al., 2011; Irsyam et al., 2023; POWO, 2025). Conversely, a secondary centre of diversity is apparent east of Lydekker's Line, where 24 taxa are documented from New Guinea, the Bismarck Archipelago, and the Solomon Islands. This assemblage includes *H. adei* M.R.Hariri & A.S.D.Irsyam, a recently described species endemic to Arsopura District, Indonesian New Guinea (Hay, 1999; Herscovitch & Hay, 2003; Hariri & Irsyam, 2025b).

Through extensive investigations of ornamental aroids, we identified and formally described herein a novel species of *Homalomena* from Indonesian New Guinea. The species is considered new to science on the basis of a distinct suite of morphological characters that unambiguously separate it from all congeners previously recorded in the region. In this contribution, we provide detailed species

descriptions, diagnostic characters, and taxonomic notes for this newly recognised and morphologically distinct taxon.

Materials and methods

Observations were undertaken in June 2024 at a private nursery in Bogor, West Java, Indonesia. Living specimens originating from New Guinea were cultivated *ex situ* and observed under controlled conditions. Morphological features were recorded directly from fresh material, with particular attention given to the reproductive structures. Inflorescences were photographed and measured using a Dino-Lite digital microscope at the National Research and Innovation Agency (BRIN), Cibinong. Descriptive data presented here are derived solely from cultivated plants, as no wild populations were available for examination at the time of study. The preliminary conservation assessments are based on the guidelines of the IUCN Standards and Petitions Committee (2024).

The new species

Homalomena polyneura* A.S.D.Irsyam & M.R.Hariri, *sp. nov.

Homalomena polyneura exhibits morphological affinities with *H. steenisiana* A.Hay, yet it can be readily distinguished by 5–6 primary lateral veins (vs 2–3), inflorescences solitary or 2 together (vs few to c. 16 together), spathe reddish to dark brown (vs green), female zone shorter than male zone (vs female and male zones approximately equal in length), and pistillate flowers lacking staminodes (vs staminodes present). – TYPE: Indonesia, West Java, cult. Bogor, from material collected in the wild in Central Papua Province, Nabire Regency (orig. coll. 2021, *AA Setiawan s.n.*), voucher 8 June 2024, *M.R. Hariri & A.S.D. Irsyam s.n.* (holotype FIPIA [dried specimen and inflorescences in alcohol]; isotype BO). (Fig. 1)

Rheophytic herb, 10–17 cm in height. **Stem** 1.5–4 cm long, 0.6–2.9 cm diam.; internodes obscured by overlapping leaf bases. **Leaves** 3–14 together; petiole slender, spreading, canaliculate, terete, shorter or longer than blade, 5–16 cm long, 2–3 mm diam., strongly aromatic, green, glabrous; petiolar sheath adnate to petiole, spreading, persistent, 2.3–6.5 cm long, incurved, margin green or reddish, apex truncate, glabrous; blade lanceolate-linear or oblong to lanceolate-oblong, 4.8–21.6 × 0.9–6 cm, base cuneate to attenuate or subcordate to truncate, margin undulate, apex acute to acuminate, apiculate for 1.5–2 mm long, adaxial surface green to dark green, abaxial surface pale green; midrib adaxially impressed, raised abaxially, yellowish white to green or reddish above, reddish to green beneath; primary lateral veins 5–9 on each side; secondary veins numerous, raised abaxially. **Inflorescences** solitary or 2 together; peduncle 1.2–5.5 cm long, greenish white to reddish, glabrous. **Spathe** unconstricted, 17–25 mm long, exterior green to dark red, verrucate, interior green with red dots to reddish brown, with a terminal short mucro 1–2 mm long, tip of spathe reflexed after

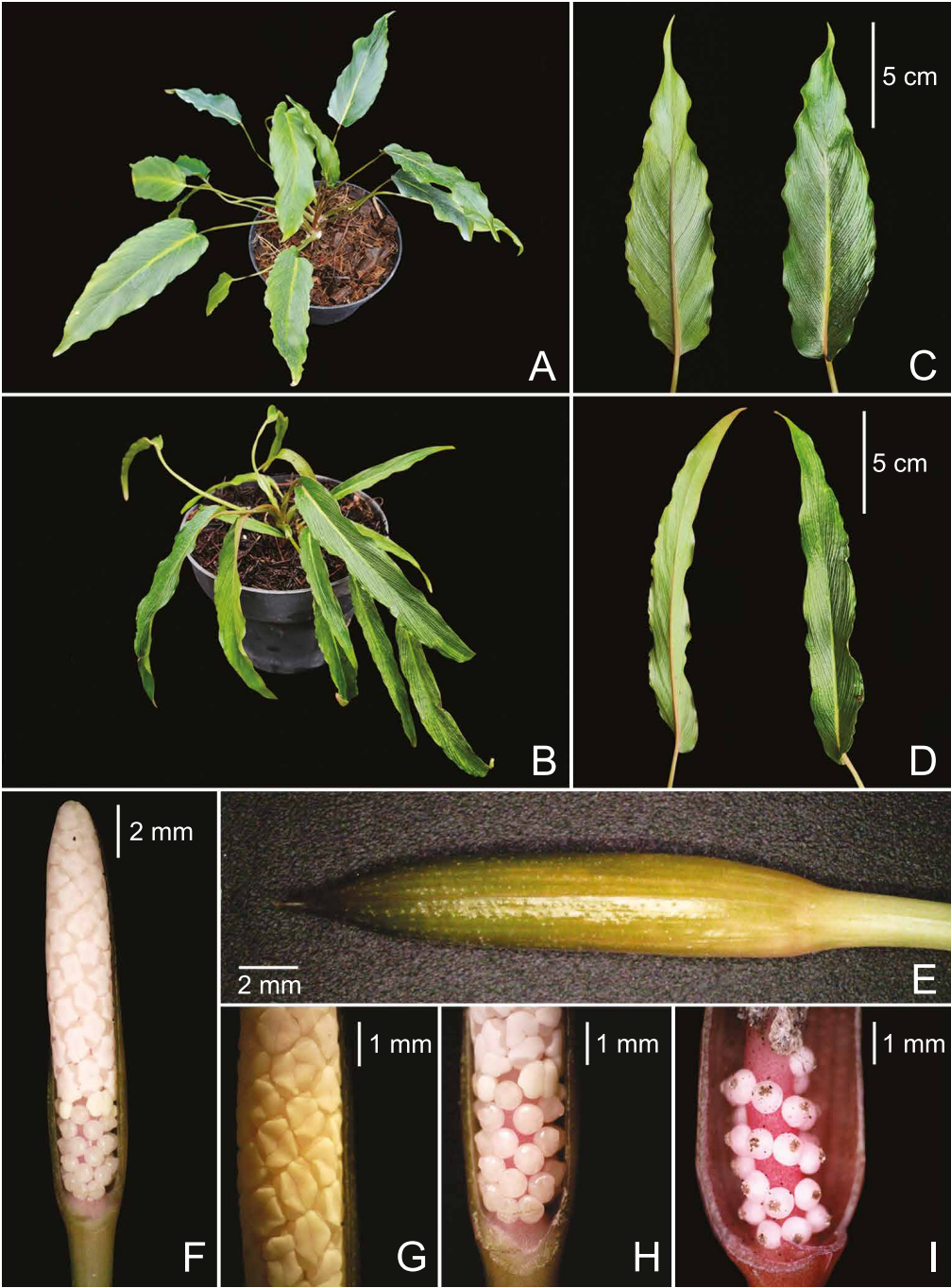


Fig. 1. *Homalomena polyneura* A.S.D.Irsyam & M.R.Hariri. **A, B.** Habit. **C, D.** Leaf showing both adaxial and abaxial surfaces. **E.** Spathe. **F.** Spadix. **G.** Close-up of staminate flowers. **H.** Close-up of pistillate flowers. **I.** Close-up of post-anthesis pistillate flowers. (Photos: A–D, E. Raynalta; E–I, M.R. Hariri)

anthesis. **Spadix** 12–25 mm long, with very short stipe, extended from spathe after anthesis; pistillate flower zone $\frac{1}{4}$ to $\frac{1}{2}$ the length of the spadix, 2.5–10 mm long; pistils in 3–5 whorls, oblate to globose, 0.5–1 mm in height, 0.7–0.9 mm diam., loosely arranged after anthesis, white to pinkish; stigma sessile, flat, button-like, 0.2–0.3 mm diam., white, blackish after anthesis; infrapistillar staminodes absent; staminate flower zone 7–18 mm long; staminate flowers tetragonal to hexagonal in plan view, 0.4–1.6 mm diam., consisting of 2–3 stamens; thecae up to 1.1 mm long, asymmetric, truncate at apex, yellow. **Fruiting spathe, fruits and seeds** not observed.

Etymology. The specific epithet *polyneura* is derived from the Greek *poly-* (many) and *neuron* (nerve, vein), in reference to the conspicuous abundance of raised lateral veins on the adaxial surface of the leaf lamina.

Provisional IUCN conservation assessment. *Homalomena polyneura* is currently known only from its type locality in Nabire, Papua Tengah, Indonesia, and from cultivated material in Bogor, West Java. To date, no wild populations beyond the type locality have been documented. Given the limited distributional data and the absence of comprehensive field surveys, the species' natural population size, habitat preferences, and potential threats remain unclear. We recommend that *Homalomena polyneura* be classified as Data Deficient (DD) until further field investigations can be conducted to better determine its conservation status.

Notes. Two leaf morphotypes are observed in *Homalomena polyneura*. One form possesses larger and broader blades (Fig. 1A, 1C), while the other develops smaller and more narrowly shaped blades (Fig. 1B, 1D).

This species has long been cultivated by local horticulturists for its distinctive and attractive foliage, and has gained popularity in the commercial trade under the horticultural name *Homalomena* “Samurai”.

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