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HOMALOMENA MAMASAENSIS (ARACEAE), A NEW SPECIES FROM SULAWESI, INDONESIA

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Homalomena mamasaensis sp. nov., under Chamaecladon Super Group (Araceae) is newly described and illustrated from Sulawesi in Indonesia. *Homalomena mamasaensis* is morphologically similar to *H. vittifolia* but differs in having entire sheath margin, cuneate sheath apex, smooth petiole, entire to subundulate leaf margin, 4–5 primary lateral veins, peduncle shorter than spathe, spathe up to 29 mm long, spadix up to 28 mm long, pistillate zone ca ⅕ of total spadix length, pistils arranged in 4 whorls, creamy staminodes, staminate zone 21 mm long, and creamy thecae. A description and photographic data, along with the comparative characteristics of the closely allied species, are provided.

Homalomena Schott is a genus distributed throughout tropical and subtropical Asia, extending eastwards into the Southwest Pacific (POWO, 2025). The genus currently comprises 174 species, of which nine represent newly described species and two are newly proposed combinations published in our previous studies (Hariri and Irsyam, 2025a, 2025b; Irsyam *et al*., 2025a,b,c,d,e,f). Species diversity is highest in western Malesia, particularly in Peninsular Malaysia, Sumatra, and Borneo, which collectively harbour the majority of known taxa, with 27, 41, and 74 species recorded, respectively (Hariri and Irsyam, 2025a,b; Irsyam *et al*., 2025a,b,c,d,e; POWO, 2025). Outside this core region, species richness declines markedly, with only eight species recognised from Java, two from the Lesser Sunda Islands, three from the Philippines, three from Sulawesi, two from the Maluku Islands, and 25 from New Guinea to Solomon Islands (Hay, 1999; Kurniawan *et al*., 2011; Irsyam *et al*., 2023; Irsyam *et al*., 2025b; POWO, 2025).

In Sulawesi, the genus is currently represented by three recognized taxa: *H. aeneifolia* Alderw., *H. pusilla* Alderw., and *H. vittifolia* Kurniawan & P.C. Boyce. Both *H. aeneifolia* and *H. pusilla* have occasionally been treated as conspecific with, or closely allied to *H. humilis* (Jack) Hook. f. species complex (Kurniawan *et al*., 2011). Since the work of Kurniawan *et al.* (2011), no additional species of *Homalomena* have been described from Sulawesi. A botanical survey carried out in Bogor, West Java, yielded a morphologically distinctive *Homalomena* specimen originating from Mamasa Regency, West Sulawesi, Indonesia. Detailed examination of its diagnostic characters demonstrates that this taxon represents a previously undescribed member of the Wallacean *Homalomena*. Here, we describe *Homalomena mamasaensis* A.S.D.Irsyam, M.R.Hariri & Rosleine as a species new to science, representing the first addition to the Sulawesi *Homalomena* flora.

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Morphological investigations of the newly recognized species were carried out in December 2024 using a combination of living material and preserved specimens. Fresh specimens were obtained from privately collected nursery material, allowing direct observation of characters that are often difficult to assess in dried collections, such as color, texture, and three-dimensional structure. These primary observations were conducted at a private nursery in Bogor. To ensure accurate taxonomic comparison and to evaluate character variation within related taxa, additional reference material was examined from the Herbarium Bogoriense (BO).

The morphological study focused on a comprehensive assessment of vegetative and reproductive characters, with particular emphasis on reproductive structures due to their high diagnostic value in species delimitation. Special attention was given to the inflorescence architecture, floral arrangement, and associated structural details. Detailed examination and documentation of these features were conducted using a Dino-Lite digital microscope at the National Research and Innovation Agency (BRIN) in Cibinong. High resolution magnification facilitated precise observation of minute morphological traits, supporting a robust and well documented species characterization.

Homalomena mamasaensis A.S.D.Irsyam, M.R.Hariri & Rosleine **sp. nov**. (**Fig. 1**).

Type: Indonesia, West Java, Bogor, cultivated in a private nursery from material collected in the wild ex Indonesia: Sulawesi, West Sulawesi, Mamasa, Sumarorong village [*orig. coll.* 17 July 2024, *David s.n.*], voucher 14 Dec 2024, *MR Hariri 845* (FIPIA!).

Diagnosis: *Homalomena mamasaensis* bears a close resemblance to *H. vittifolia* Kurniawan & P.C. Boyce in its general vegetative morphology, particularly the linear-elliptic to subfalcate leaf blades. However, it can be distinguished from the latter by the following combination of characters: sheath margin entire (vs erose); sheath apex cuneate (vs truncate); petiole smooth (vs ribbed); leaf margin entire to subundulate (vs crispulate); 4–5 primary lateral veins (vs 3); peduncle shorter than spathe (vs longer than spathe); spathe up to 29 mm long (vs 20 mm); spadix up to 28 mm long (vs 15 mm); pistillate zone ca ⅕ of total spadix length (vs ca ⅙); pistils arranged in 4 whorls (vs 3); staminodes creamy (vs yellow); staminate zone 21 mm long (vs 10 mm); and thecae creamy (vs yellowish-green).

Perennial herb, up to 13 cm tall, rheophytic, forming subspreading rosette. Stem 3–4 mm long; internodes obscured by overlapping leaf bases. Leaves ca 9 per crown; sheath fully adnate to petiole, up to 5.7 cm long, margin entire, apex cuneate, red; petiole shorter than the blade, 2.7–10.3 cm long (incl. sheath), canaliculate, smooth, greenish-red to wine-red; leaf blade linear-elliptic to subfalcate, 3.5–6.2 × 2.2–3.4 cm, base cuneate, margin entire to subundulate, apex apiculate for ca 3 mm long, adaxial leaf surface dark green to reddish green, abaxial leaf surface reddish; midrib impressed adaxially, reddish and raised abaxially; primary lateral veins 4–5 on each side. Inflorescences erect-spreading, up to 4 together in a synflorescence; peduncle short, 9–29 mm long, red. Spathe without constriction, 18–29 × 4–7 mm, apex acute with a terminal mucro to 3 mm long, exterior wine-red to greenish-red, interior pale greenish-red. Spadix up to 28 mm long, fertile to tip; stipe very short, ca 1 mm long, reddish; pistillate flowers zone ca 5.4 mm long, ca ⅕ length of spadix; pistils in four whorls, subglobose to sublageniform, 0.71–1.14 mm in height, ca 1.4 mm in diam., green; stigma sessile, ca 0.36 mm in diam.; staminode 1 each pistillate flower, clavate, ca 0.36 mm in diam., creamy; suprapistillar interstice zone very short, less than 0.1 mm, naked, greenish-white; staminate flowers zone ca 21 mm long, stout-conic, apex blunt; staminate flowers densely arranged, ca 1.79 mm long, consisting of 2–3 stamens, thecae creamy with apex almost transparent, globose, ca 0.71 × 0.64 mm, each opening by a broad terminal pore. Fruiting spadix, fruits, and seeds not observed.

Habitat and ecology: The species is currently cultivated in Bogor and is only known from its type locality in Sumarorong village, Mamasa.

Etymology: The specific epithet *mamasaensis* is derived from Mamasa, the type locality of the species.

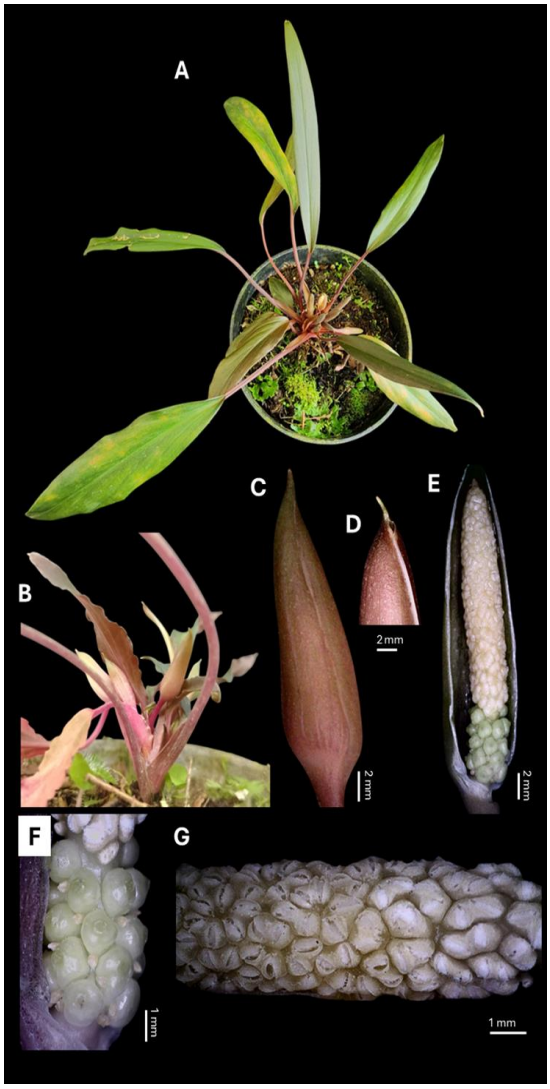

Fig. 1. *Homalomena mamasaensis* **sp. nov.** A. Habit (2×), B. Synflorescence (4×), C. Spathe (15.4×), D. Apex of spathe (23.3×), E. Spadix (14.7×), F. Closeup view of pistils and staminodes (56.6×), G. Close-up view of staminate flowers (38.9×).

Proposed conservation assessment: Homalomena mamasaensis is currently known only from a single locality, where the number of individuals remains unconfirmed. While it is possible that other populations exist, limited field exploration has hindered a comprehensive understanding of its distribution. Given the lack of data on its population size and range, we propose that this

species be categorized as 'Data Deficient' (DD) under current conservation assessment criteria (IUCN, 2025).

Note: The morphological features of *H. mamasaensis* support its placement within the *Chamaecladon* supergroup (SG). This informal assemblage, as circumscribed by Ng *et al.* (2011) and Wong *et al.* (2020), primarily comprises small-sized, frequently rheophytic taxa. *Homalomena mamasaensis* conforms to the key diagnostic features of the group, including a non-constricted spathe, staminate flowers bearing 2–3 stamens, and pistillate flowers furnished with interpistillar staminodes. Collectively, these characters provide strong evidence for its inclusion within the Chamaecladon SG.

The original material was collected by David on 17 July 2024 from Sumarorong Village, Mamasa Regency, West Sulawesi. Following collection, the material was transported to Bogor and maintained in cultivation as a living collection, which allowed continuous observation of its growth and reproductive development under controlled conditions. The type specimen was subsequently prepared from this cultivated material to ensure the availability of well preserved and fully developed diagnostic characters.

An additional occurrence of a morphologically similar specimen from Mamasa was independently reported by Andarias. This record supports the presence of the taxon in the same general geographic area and provides supplementary evidence for the consistency of its morphological features within the region.

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