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Homalomena pistioides: a new small-sized lithophytic species of Sumatran Aroid

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Abstract. *Homalomena pistioides* A.S.D.Irsyam, M.R.Hariri & Raynalta represents a recently identified species within the Aroid family, hailing from the region of Sumatra, Indonesia. The newly identified species is a lithophytic plant distinguished by its rosette leaf arrangement, short petiole, obovate leaf blade, spongy leaf texture, erect-spreading inflorescence, and slender peduncle. The species is promoted by Sumatran horticulturists and enthusiasts as *Homalomena* “Dolphin” on social media.

Keywords: Araceae, Homalomeneae, ornamental, Sumatra.

INTRODUCTION

Homalomena of Sumatra presents a compelling area for further investigation and classification. A total of 33 distinct species have been documented from the region of Sumatra (POWO 2024). Recent investigations have focused on the Sumatran *Homalomena*, specifically within the ‘Chamaecladon group’. In the past 12 years, numerous novel species within the clade have been identified from the island (Boyce and Wong 2012; 2013; 2016a; 2016b; Wong et al. 2020b).

In July 2024, our fieldwork led to the discovery of a new lithophytic species of *Homalomena* in North Sumatra. By October 2024, the authors realized that the species had been available for quite some time as an ornamental plant on social media, referred to as *Homalomena* “Dolphin”. The plant exhibits distinctive characteristics when compared to other Sumatran *Homalomena* species. This manuscript provides a comprehensive formal description of the newly identified species.

MATERIALS & METHODS

The field study took place in Bohorok Subdistrict, Langkat, North Sumatra, in July 2024. Additionally, we examined the herbarium specimens at Herbarium Bogoriense (BO) for additional specimens that corresponded to the new species. The morphological traits of the plant material were analysed, and inflorescences were documented using the Dinolite digital microscope at the Bogor Botanic Gardens.

TAXONOMIC TREATMENT

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

Type: North Sumatra Province, Langkat Regency, Bohorok, 27 July 2024, *D Karo Karo s.n.* (holotype FIP-IA; isotype BO).

Diagnosis

Homalomena pistioides is similar to *H. mobula* P.C. Boyce & S. Y. Wong by having highly condensed stem and rosette leaves, but it differentiated by its smaller stem, to 3–4 mm height (vs 10 cm height), very short petiole, 1–2 mm long (vs 4–6 cm long), reddish brown coloured petiole (vs dark green with flushed reddish), leaf blade with shorter length, to 3.5–6.2 cm long (vs 13–23 cm long), obovate shape (vs oblanceolate), obtuse to cuneate leaf base (vs cordate), spathe with shorter length to 8.8 mm long (vs 2 cm long), smooth surface (vs longitudinally ribbed), and reddish yellow colour (vs deep red), globose pistils (vs globose-lageniform), ovoid staminode (vs spherical), and staminate flower zone with stout-conic shape (vs slender-conic) and blunt apex (vs acute).

Description

Herbs lithophytic, small, 8–12 mm height, forming leaf rosettes. Stem highly condensed, 3–4 mm long; internodes obscured by overlapping leaf bases. *Leaves* 6–8 per crown; sheath fully adnate to petiole, 3–4 mm long, reddish brown; petiole short, 1–2 mm long, canaliculate, reddish brown; leaf blade obovate, 3.5–6.2 × 2.2–3.4 cm, base obtuse to cuneate, margin entire, apex truncate, rounded or mucronate, flat, adaxial leaf surface blueish green, brownish green to green, colliculate, abaxial leaf surface pale green, with thin hyaline layer; midrib green or reddish adaxially, raised abaxially; primary lateral veins 2–3 on each side. Inflorescences erect-spreading; peduncle slender, 14–29 mm long, red. Spathe oblong with asymmetric apex, without constriction, 6–8.8 × 3–3.2 mm, yellowish, reddish at base, apex blunt with a terminal mucro to 0.45 mm long. Spadix sessile, ca. 6.9 mm long, 2.4 mm diam., fertile to tip; pistillate flower zone ca. 1.5 mm long, shorter than the male zone; pistils few, in two whorls, globose, 0.6–0.8 mm height, 0.7–0.8 mm diam., white, stilar region white; stigma sessile, 0.2–0.4 mm diam.; staminode 1 each pistillate flower, ovoid, sessile, 0.2–0.4 mm height, ca. 0.2 mm diam., white; staminate flower zone ca. 5.5 mm long, stout-conic, apex blunt; staminate florets densely arranged, 0.7–1.1 mm long, consisting of two stamens, trapezoid to hexagonal in plan view, yellowish. Fruits and seeds not observed.

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Etymology

The nomenclature originates from *Pistia*, which is a genus within the family of aquatic aroids, combined with the suffix *-oides*, signifying a likeness or resemblance. The observation pertains to the similarity in the leaf morphology of the newly identified species to that of *P. stratiotes* L.

Distribution and ecology

The species is recognised exclusively from the type locality. In its original locality, *H. pistioides* exhibits lithophytic growth on moss-laden cliffs at elevations not exceeding 500 meters above sea level.

Proposed conservation assessment

The status of the species is currently classified as undetermined according to the criteria set forth by the IUCN Red List. In light of the limited information available, it is prudent to categorise it as Data Deficient (DD). Nevertheless, within its type locality, *H. pistioides* demonstrates a vulnerability to overexploitation, thereby warranting a thorough evaluation of its conservation status.

Notes

In terms of its morphological characteristics, *H. pistioides* is classified within the 'Chamaecladon group' owing to several distinctive features: a non-constricted spathe, exhibits two stamens in each staminate flower, staminodes in the pistillate zone. The newly identified species possesses an oblong spathe measuring 8.8 mm in length (max).

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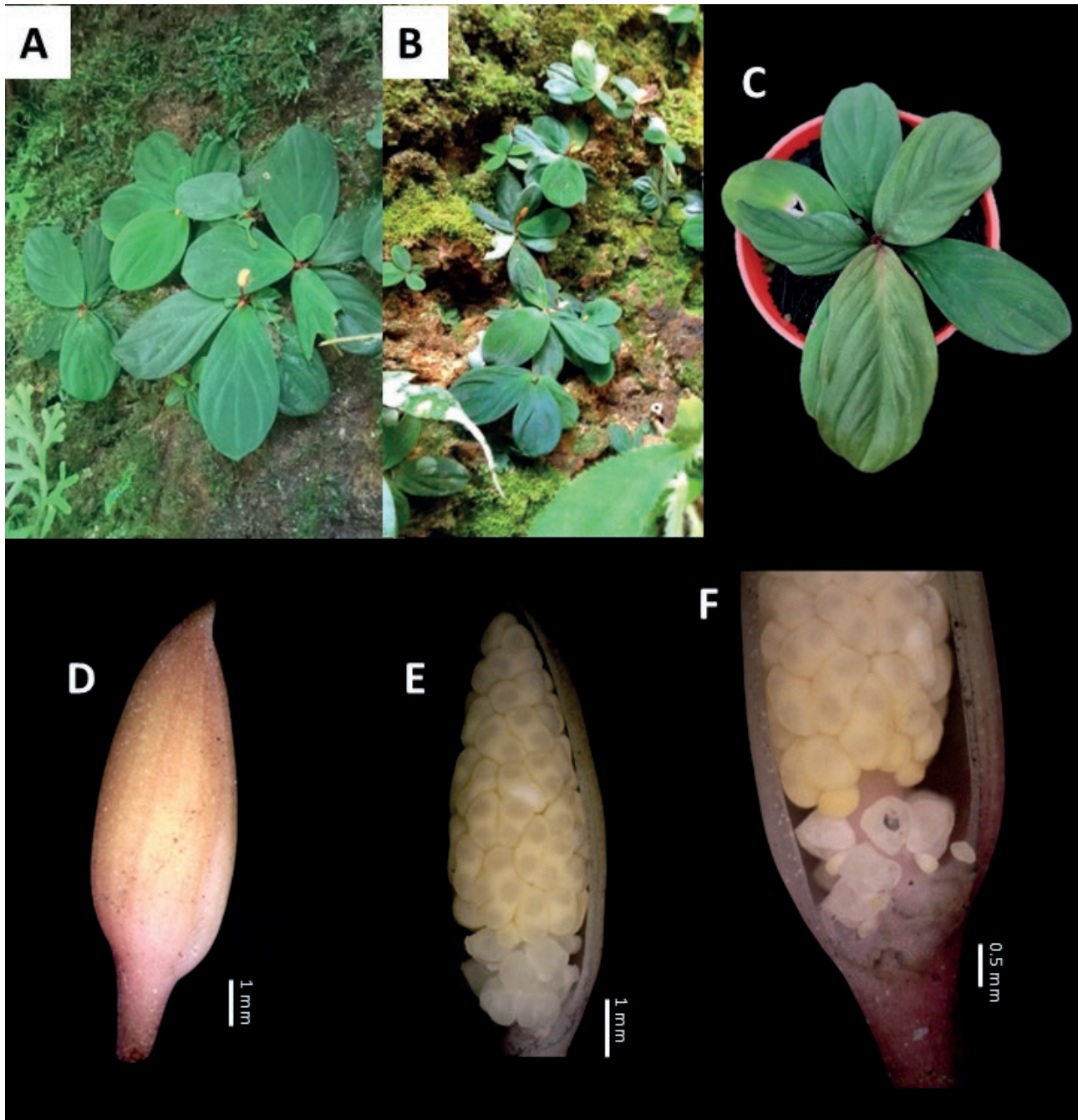


Figure 1. *Homalomena pistioides*. A-B. Habitat; C. Habit; D. Spathe (31.6×); E. Spadix with half of spathe removed artificially (51.3×); F. Part of lower-half spadix showing pistillate flower zone (67.9×).

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