



***Pilea victoriae* V. Suresh & Sojan (Urticaceae)- A new addition to the angiospermic flora of Bangladesh**

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**Abstract**

In this article, *Pilea victoriae* V. Suresh & Sojan belonging to Urticaceae is described as a new species from Bangladesh. The new species is morphologically most similar to *Pilea microphylla* (L.) Liebm. from which it differs by having orbicular leaf blades, a great number of flowers per pistillate inflorescence and absence or rare internodal branching. Taxonomic description, phenology, distribution and photograph have been provided along with key to facilitate its identification.

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## Introduction

In the family Urticaceae, *Pilea* Lindl. is the largest genus and comprises ca 715 species worldwide (Monro, 2004; Fu *et al.*, 2022). Absence of stinging hairs and opposite leaves with a single ligulate stipule (the latter rarely much reduced or even absent) is distinguished it from other genera of Urticaceae (Fu *et al.*, 2022). The genus *Pilea* frequently occurs naturally thought in tropical and sub-tropical world except Australia and New Zealand (Deshmukh *et al.*, 2018). Bangladesh is the harbor of 5 species of *Pilea* genus such as *Pilea anisophylla* Wedd., *Pilea cadierei* Gagnep. & Guillaumin, *Pilea glaberrima* (Blume) Blume, *Pilea melestomoides* (Poir.) Wedd. and *Pilea microphylla* (L.) Liebm (Ahmed *et al.*, 2009; Mahmudah *et al.*, 2017; Rahman and Uddin, 2018; Uddin and Hassan, 2018; Khanam *et al.*, 2020; Khan *et al.*, 2021; Rahman, 2021; Hossain *et al.*, 2022; Khatun *et al.*, 2022; Hasan and Samad, 2023; Uddin *et al.*, 2023). While conducting field investigations into the flora of Rajshahi city, Bangladesh, 1<sup>st</sup> author encountered an unknown species of *Pilea* with orbicular leaf blade, less internodal branching and a greater number of pistillate flowers in an inflorescence. The collected specimen was found as a weed on shady and moist places and damp wall. After perusing thorough survey of literature, critical examination this specimen was determined as *Pilea victoriae* V. Suresh & Sojan. which was first described from Western Ghats of Kerala (Jose *et al.*, 2017).

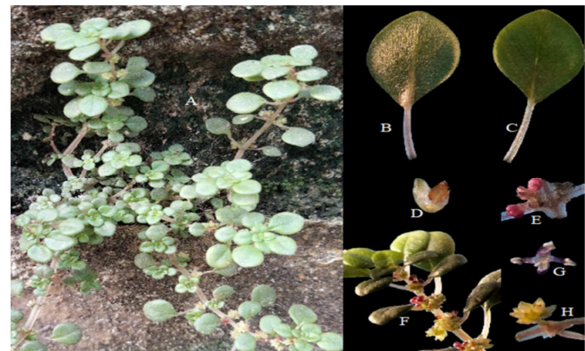
*Pilea victoriae* was first discovered by a team of botanist from the Government Victoria College, Palakkad, Kerala, India. Later the same species was collected by them from Kollengode and Malappuzha regions of Palakkad district and Perinthalmanna region of Malappuram district of Kerala, India (Jose *et al.*, 2017). Soon after that Deshmukh *et al.*, in 2018 reported this specimen from Chandrapur city of Maharashtra State, India. In Bangladesh, no report on this species has been published yet, so it was first time record from Bangladesh. Therefore, investigation should be needed to found more distributional record of this species in Bangladesh.

## Materials and methods

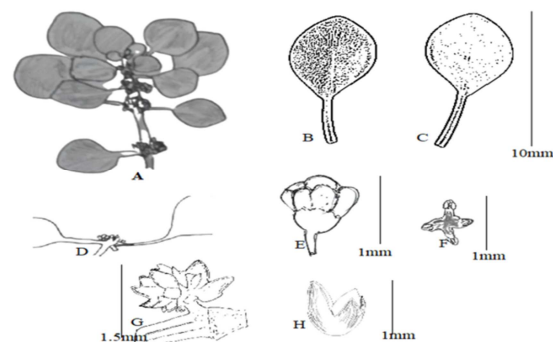
Collected specimen checked with the related literature (online flora; Flora of China). The specimens of were housed at department of Botany, Rajshahi Govt. City College, Rajshahi. The up-to-date nomenclature has been cited based on “Plants of the world online” (POWO, 2019). Data about the habitat and the occurrence of both are based on personal observations in the field.

### Diagnosis

*Pilea victoriae* V. Suresh & Sojan is most similar to *Pilea microphylla* (L.) Liebm. from which it can be distinguished by the erect stem, orbicular leaves, less internodal branching and a greater number of pistillate flowers in an inflorescence.



**Fig. 1A.** A- Natural habit; B- Abaxial leaf; C- Adaxial leaf; D- Fruit with persistent perianth; E- Male inflorescence; F- Twig with male and female inflorescence; G- Male flower with anther and H- Female inflorescence.



**Fig. 1B.** A-Flowering twig; B- Abaxial leaf; C- Adaxial leaf; D- Unequal leaf petiole; E- Male flower; F- Male flower with anther; G-Female inflorescence; H- Fruit with persistent perianth.

### Description of the specimen

Herb to 7-12 cm; glabrous; epipetric; monoecious. Stems erect, semitransparent, succulent, glabrous, internodes 2.5-7.5 mm long, angulate in cross-section.

Leaves petiolate, opposite, petioles at the same node sub-equal, 2.5-6.5 mm long, glabrous; lamina 2-5.5 × 2-3 mm, orbicular, apex minutely acute, base cuneate (often oblique), margin entire; adaxially green, glabrous, midrib depressed; abaxially pale grey-green, glabrous, midrib raised, papery when dry. Inflorescences 5-14 per stem, unisexual; bracted. Staminate inflorescences 1 per axil, 1 mm long, bearing 2-4 flowers in a compact head. Staminate flowers pinkish; perianth 4; glabrous; stamens 4; anthers ditheous. Pistillate inflorescences 1 or 2 per axil, 1.5-2 mm long, bearing 14-20 flowers in a compact head; peduncle 1-1.3 mm long, glabrous.

Pistillate flowers 0.75-1.0 mm long, adaxial perianth oblong, greenish; the lateral perianth shorter than adaxial perianth; membraneous. Achenes 0.4-0.5 × 0.15 mm, compressed, ellipsoid, enclosed by persistent perianth (Fig. 1A & 1B).

Flowering and fruiting: Throughout the year under favorable natural conditions.

Habitat: Damp wall, shady and moist places

Uses: Not known

Global distribution: India

State of occurrence: The species is very common and abundant in these collected localities.

**Table 1.** Diagnostic morphological characters of *Pilea victoriae* with *Pilea microphylla* (L.) Liebm.

Characters	<i>Pilea microphylla</i>	<i>Pilea victoriae</i>
Stem nature	Stems drooping or ascending when older	Stem prostrate then erect
Internodal branching	Present, very common	Absent or very rare
Petiole	Less than 1.5 mm	2-3.5 mm long
Leaf shape	Leaf blade elliptic-obovate or spatulate of unequal size at each node	Leaf blade orbicular of equal or subequal size at each node
Pistillate inflorescence	Bearing 5-10 flowers	Bearing 13-18 flowers

*Specimens examined*

Rajshahi: Rajshahi city, Rajarhata, 16 ix 2023, M Tarikul Hasan, TH 2709 (Dept. of Botany, Rajshahi Govt. City College, Rajshahi); Horogram Bazar, 05 x 2023, M Tarikul Hasan, TH 2715 (Dept. of Botany, Rajshahi Govt. City College, Rajshahi).

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**Discussion**

*Pilea victoriae* is almost similar to *Pilea microphylla* from which it can be distinguished based on leaf, internodal branching and number of flowers in a pistillate inflorescence as summarized in the Table 1. Based on the morphological data a key of identification is presented below:

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*Key to the species*

1. Leaf blade elliptic-obovate or spatulate of unequal size at each node. Internodal branching very common *Pilea microphylla*
- +. Leaf blade orbicular of equal or subequal size at each node. Internodal branching very rare *Pilea victoriae*

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