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NOTE

On the Identity and Typification of *Phrynium nicobaricum* (Marantaceae) from Andaman & Nicobar Islands, India

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ABSTRACT: *Phrynium nicobaricum* Didr., an endemic species from Andaman and Nicobar Islands is lectotypified here. After detailed studies of the type images, protologues of *P. paniculatum* N.P. Balakr. along with the live collections, it is concluded that both are conspecific. Detailed description, illustrations and photographs are provided for the easy identification.

KEY WORDS: Andaman & Nicobar Islands, conspecific, lectotypification, *Phrynium nicobaricum*, *P. paniculatum*.

INTRODUCTION

The first accepted account of the genus *Phrynium* Willd. was given by Roxburgh (1820) in Flora Indica. The genus *Phrynium* includes *c.* 20 species distributed from India and Sri Lanka to New Guinea (Suksathan and Borchsenius, 2005); out of which only four are reported from India, two from main land and others from Andaman and Nicobar Islands.

As part of the revision of the family Marantaceae in India, 7 genera and 12 species were collected from all over India, which includes *Phrynium repens* (Körn.) Suksathan & Borchs. a new record for India from Andaman and Nicobar Islands (Rajesh Kumar *et al*., 2011) and were studied along with their protologues and types and compared with all available herbarium specimens deposited in main herbaria (CAL, K, PBL, MH, ASSAM, etc). The *Phrynium* specimen collected from the Nicobar Island was identified as *P. nicobaricum* Didr. and a detailed description was made based on live material. The species was first described by F. Didrichsen in 1854 from Nicobar Island. Though the description of the *P. nicobaricum* was based on a single specimen collected from Sambelong, Nicobar Islands by Didrichsen, he had not mentioned any details such as collection number, in which herbarium it was deposited, etc. Hence, it is lectotypified here for the first time. Subsequently Schumann (1902), treated this species under his new genus *Phacelophrynium* K. Schum. Recently Suksathan *et al.* (2009) merged *Phacelophrynium* with *Phrynium* based on the phylogenetic analyses.

This species was compared with an endemic species *P. paniculatum,* described by Balakrishnan in 1978. It was found that *P. nicobaricum* completely matches with *P. paniculatum.* Sinha (1999) recorded this species in his flora and is also mentioned in the Integrated check-list Flora of Andaman and Nicobar Islands (Pandey and Diwakar, 2008).

A detailed study of the protologues and herbarium images of both the species along with the live specimens from type locality revealed that *P. paniculatum* cannot be maintained as a distinct species. Moreover, the data shows that both the species were found endemic to the same geographical location. Therefore it is concluded that both these names are conspecific and *P. paniculatum* is reduced here as a synonym of *P. nicobaricum.* The nomenclature is changed accordingly and a detailed description is provided.

TAXONOMIC TREATMENT

Phrynium nicobaricum Didr. In Vidensk. Meddel. Naturhist. Foren. Kjobenhavn: 183. 1854.

Type: INDIA, Nicobar Island, Sambelong, Nancowry & Milu, *F. Didrichsen* 2937 (C, *Lectotypus,* designated here) Figs. 1A, 2, 3

Phacelophrynium nicobaricum (Didr.) K. Schum., In A. Engler (Ed.). Pflanzenr. IV, 48: 121. 1902.

Phrynium paniculatum Balakr., Blumea 24: 185–187. 1978; B. K. Sinha in P. K. Hajra & P. S. N. Rao (Eds.), Fl. Great Nicobar Isl., 1999; R. P. Pandey & P. G. Diwakar, J. Econ. Tax. Botany, 32(2): 403-500. 2008. ***syn. nov.***

Type: INDIA, Great Nicobar Island, 8 km on East-West Road, 19 Aug. 1975 *Balakrishnan* 2979 A (Holo., CAL) Fig. 1B

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Fig. 1. A: *Phrynium nicobaricum* Didr. From C (Lectotype designated here). B: Holotype of *P. paniculatum* N.P. Balakr. From CAL.

Erect caespitose herbs, 90–150 cm tall; rhizome sub-erect, 0.5–2 cm thick. Leaves 2–3 per shoot, spirally crowded at apex of rhizome; sheath 9–10 cm long, light green, slightly puberulent. Petiole *c.* 90 cm long, sparsely pubescent, light to yellow green; pulvinus *c.* 5 cm long, sparsely hairy; leaf blade elliptic to oblong-lanceolate, 16–34 × 6–14 cm in size, glabrous, abaxially whitish green, adaxially dark green, acute at tip, cuneate at base; lateral nerves many, parallel, with many fine scalariform transversely reticulate nervules in between; midrib thickened towards base, gradually narrowed towards apex. Peduncular leaf similar to primary leaves, petiole 13–25 cm long, sheathing at basal half, scattered hairy, sparesely pubescent at apex. Inflorescence a lax panicle of spikes and spikelets, arising from axel of peduncular leaf; panicle 12–15 × *c.* 6 cm, 2–10 branched, puberulous; spikes 3–7 cm long, arranged at distances of up to 3 cm apart in axils of spirally arranged bracts on main rachis; bracts ovate - lanceolate, *c.* 2 × 1 cm, puberulous outside, hairy at margins, soon splitting up in upper half into many fibres, later upto base; spickelets many, subspirally arranged on spikes in axils of primary bracts; primary bracts ovate, obtuse, mucronate, *c.* 1.5 × 1 cm, puberulous outside and along margins, similar to main bracts. Flowers white, 1.8–1.9 cm long, in cymes of 1–3 or more pairs; prophyll large, 2-keeled, ovate to lanceolate, 1.2–1.3 × *c.* 0.3 cm wide, incurved at margins; interphylls 3-keeled at back, smaller, 0.8–1 cm long. Pedicels of each pair of flowers united at base. Calyx lobes 3, free upto base, linear-lanceolate, *c.* 1.1 × 0.2 cm, white, tip hairy. Corolla tube *c.* 0.8 cm long; lobes 3, oblong, ovate, obtuse, equal, *c.* 0.6 × 0.2 cm, white translucent, deflexed and curled. Staminodes 4, united to a tube and adnate to the corolla tube; outer staminodes 2, subequal; larger lobes obovate, obtuse with recurved margins, *c.* 1 × 0.6 cm, tip yellowish; smaller lobe sub-spathulate, recurved, *c.* 0.6 × 0.2 cm. Callose staminode with a free part *c.* 0.5 × 0.2 cm, entirely adnate to outer large staminode, with a fleshy puberulous callus and an auricular lobe at side of stigma. Cucullate staminode hooded, *c.* 0.4 × 0.2 cm. enclosing style apex. Fertile stamen one, with a thin, subulate, *c.* 0.1 cm long appendage on one side; free portion of filament *c.* 0.2 cm long; anther monothecic, oblong, apiculate, *c.* 0.2 cm long, yellow. Style adnate to staminodial tube with a free part of *c.* 1 cm long, curved and hooded; ovary *c.* 3 mm long, densely golden

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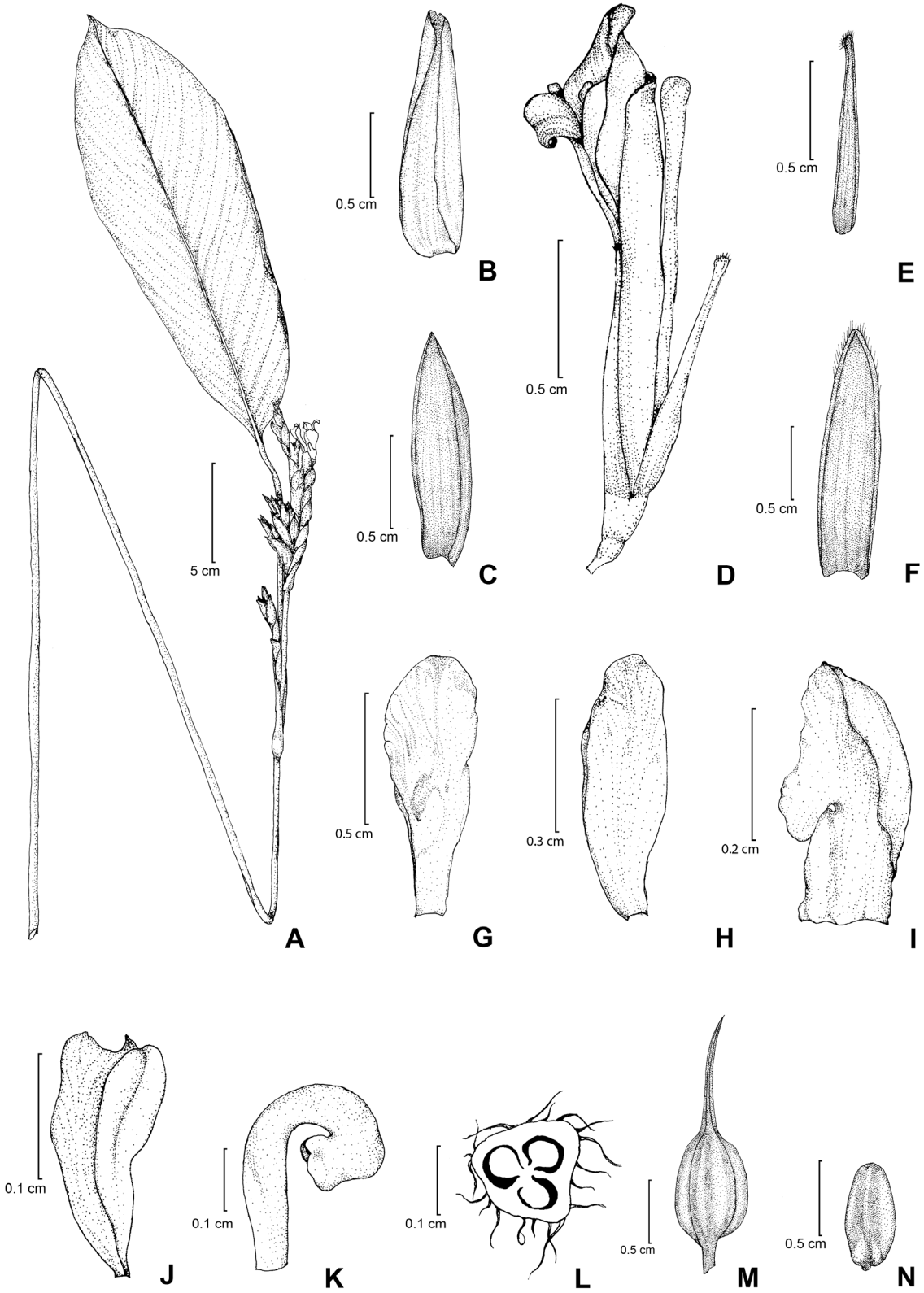


Fig. 2. *Phrynium nicobaricum* Didr. A: Cauline leaf with inflorescence. B: Bract. C: Prophyll. D: Single flower. E: Sepal. F: Corolla lobe. G & H: Outer sraminodes. I: Cucullate staminode. J: Fertile stamen with appendage. K: Style with stigma. L: C.S. of ovary. M: Fruit. N: Seed.

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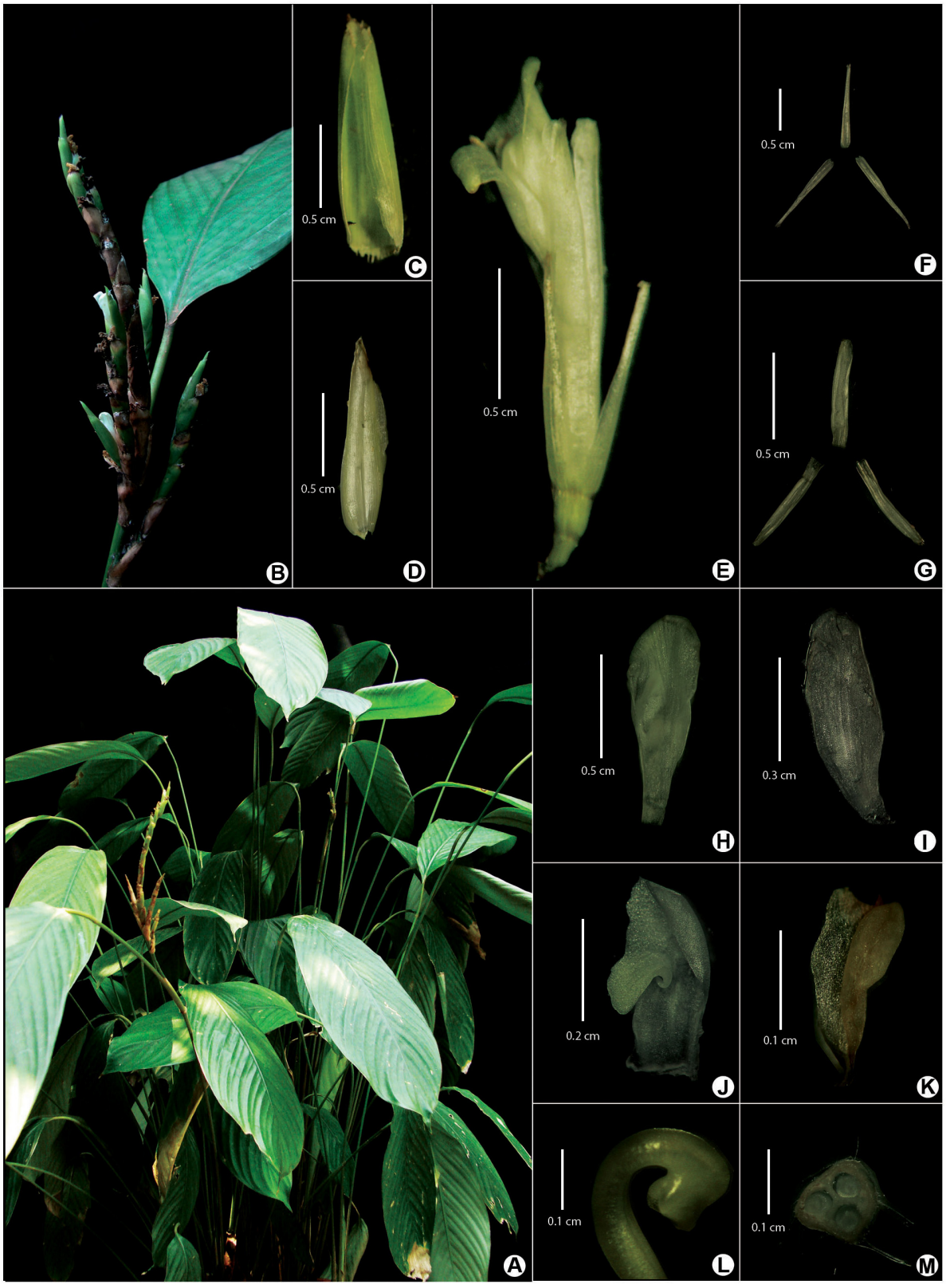


Fig. 3. ***Phrynium nicobaricum*** **Didr. A: Habit. B: Inflorescence. C: Bract. D: Prophyll. E: Single flower. F: Sepals. G: Corolla lobes. H & I: Outer staminodes. J: Cucullate staminode. K: Fertile stamen with appendage. L: Style with stigma. M: C.S. of Ovary.**

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hairy outside, trilocular with axile placentation; stigma irregularly lobed, truncate. Fruit 3-lobed, *c.* 0.8 × 0.6 cm, brown, sparsely hairy. Seeds 3, oblong, subtrigonous, *c.* 0.7 × 0.4 cm, dull brown; arils 2-lobed, white; lobes linear acuminate, *c*. 0.3 cm long.

Flowering & fruiting: May–September.

Distribution: India, Nicobar Islands.

Ecology: Shady places near streams, inland forests.

Notes: *Phrynim nicobaricum* is closely allied to *P. tristachyum*, but differs the later in having smaller leaves and smaller spikes with sub-spirally arranged spikelets.

IUCN Status: Endemic to Andaman and Nicobar Islands. L.C.

Specimens Examined: **INDIA**, Great Nicobar Island, 31-32 km on East-West Road, 14 June 1977 *Balakrishnan 5758* (CAL); on path to Shompen houses, ex 36.8 km on East-West Road, 17 June 1977, *Balakrishnan 5827* (CAL); East-West Road, 16 km from Campbell Bay, Great Nicobar, 116 m; N: 06º 58' 54.2"; E: 093º 51' 42.6" *V. P. Thomas & M. C. Shameer 113613* (CALI).

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Phrynium nicobaricum（竹芋科）之模式化與辨正

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摘要：本文指定了安達曼-尼科巴島特有種*Phrynium nicobaricum*的選模式。在仔細比對過*P. paniculatum*模式標本照片、原始描述與活植株後，本文認定兩者為同種，並提供詳細描述、描繪圖與彩色照片以供辨認。

關鍵詞：安達曼–尼科巴島、同種、選定模式、*Phrynium nicobaricum*、*P. paniculatum*。

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