

**A NEW PHRYNIUM (MARANTACEAE)
FROM GREAT NICOBAR ISLAND, INDIA**

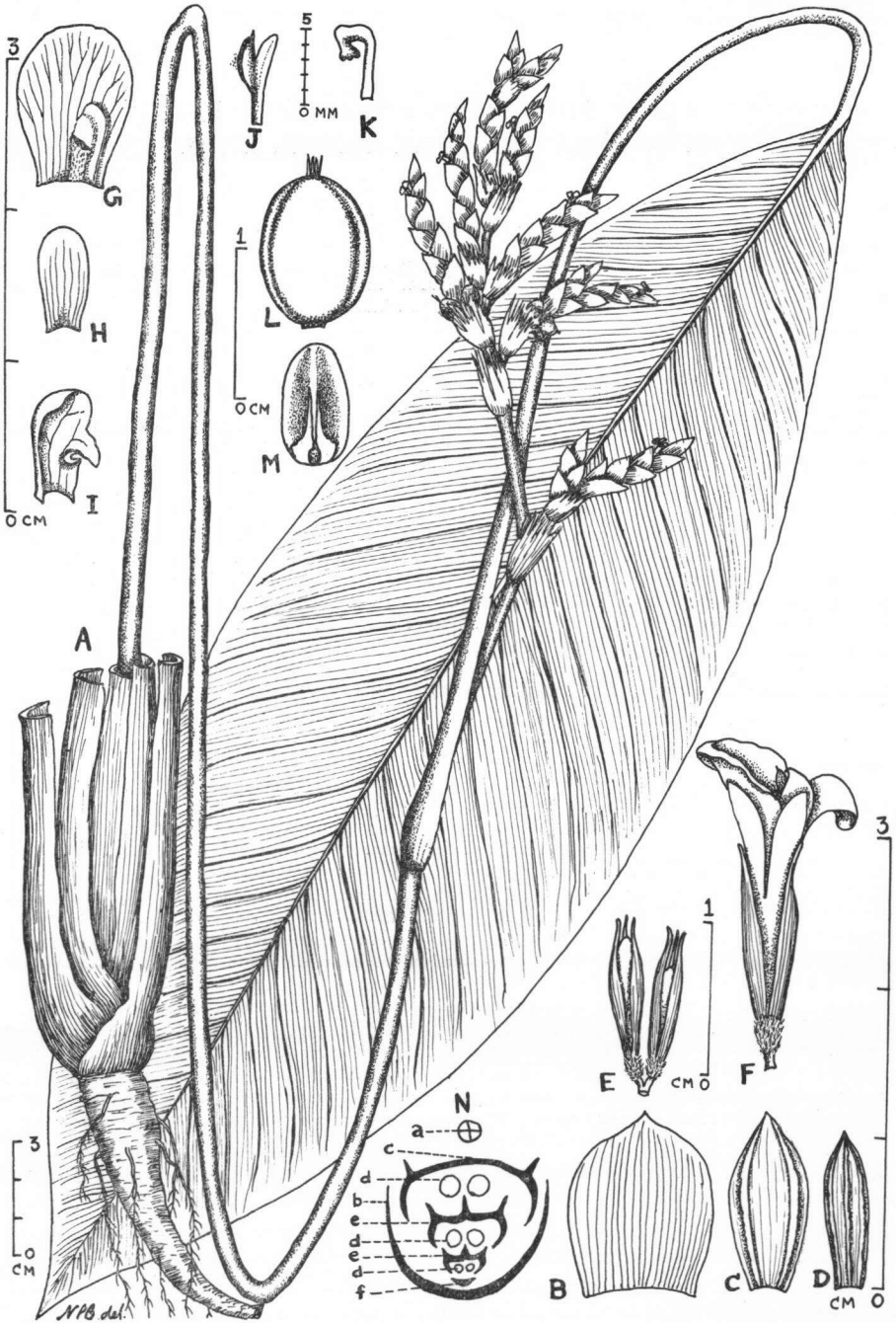
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Phrynium paniculatum Balakr., *sp. nov.* — Fig. 1.

Herbae erectae caespitosae 1.5—2.0 m altae; rhizoma suberectum 1—2 cm diametro. *Folia* multa apice rhizomatis spiratim aggregata; petioli usque ad 1 m longi basi vaginantes, sparsim pubescentes; laminae ellipticae oblongo-lanceolatae glabrae 18—35 cm longae, 8—15 cm latae, basi acutae vel cuneatae, apice breviter acuminatae, infra subvirides, nervis lateralibus multis parallelis, nervulis multis scalariformibus inter nervos subtiliter transverse reticulatis; costa basi incrassata gradatim angustata et a nervis lateralibus haud distincta. *Pedunculus principalis* terminalis usque ad 1.5 m altus ad apicem folio uno inflorescentia unaque, raro folium deest; folium pedunculare foliis primariis simile petiolo ad medium usque vaginante parce piloso, apicem versus pubescente. *Inflorescentia* laxa paniculata e spicis spiculisque constans, in axillam vaginae folii pedunculati, pedunculo ad 15 cm longo, bractea basi vaginante lineari-lanceolata puberula ad 10 cm longa; panicula puberula, 2—10-ramosa usque ad 15 cm longa et 10 cm lata; spicae 2—10, longitudine variantes, 3—8 cm longae usque ad 4 cm distantes e axillis bractearum principalium spiratim dispositae in rachibus principalibus; bractee principaliae ovati-lanceolatae ± 2 cm longae, ± 1 cm latae, extus puberulae margine hirtae, cito ad medium usque, tandem basem versus in fibras multas secedentes; spiculae multae e axillis bractearum primariorum subspiraliter in spicis dispositae, usque ad 2 cm longae; bractee primariae ovatae obtusae mucronatae ± 1.5 cm longae, ± 1 cm latae, extus puberulae margine hirtae bracteis principalibus similes. *Flores* albi in cymis parorum 1—3 vel plurorum; omnis par e axilla prophylli, flos unus paris omnis primo aperiens, ceterus invicem; prophyllum externum magnum dorsaliter 2-carinatum ovato-lanceolatum margine incurvum ± 14 mm longum et ± 5 mm latum, alis carinarum fimbriatis; prophylla interiora dorsaliter 3-carinata parva; pedicelli omnis paris basi connati ± 1 mm longi. *Calycis lobi* usque ad basim discreti, lineari-lanceolati extra hirti, ± 1.2 cm longi, ± 2 mm lati. *Corolla* basi tubularis, tubo ± 7 mm longo lobis oblongis ovatis erectis obtusis ± 8 mm longis. *Staminodia* 4 in tubum connata tubum corollae adnata; lobi staminodiorum externorum subaequales; lobus magnus obovatus obtusus marginibus recurvatis, ± 1 cm longus, ± 8 mm latus; lobus parvus subspathulatus recurvatus, ± 7 mm longus, ± 3 mm latus; staminodium interioris carnosum cucullatum, lobo laterali apicem styli includenti, ± 6 mm longum et ± 3 mm latum; staminodium interiorissimum cucullatum, staminodium extimum magnum omnino adnatum apicem stigmati includens, infra stigma callo carnosio puberulo instructum, lobo ad laterem stigmati auriculato. *Stamen fertile* 1-cellulare appendice subulata ± 1 mm longa uno latere instructum; filamentum segmentum librum ± 3 mm longum; anthera oblonga apiculata lutea ± 2 mm longa. *Ovarium* ± 2 mm longum dense aureo villosum; stylus tubum staminalem adnatus ± 1 cm longus segmento libro cucullato ± 4 mm longo; stigma truncata irregulariter lobata. *Fructus* 3-lobatus sparsim breviter hirtus rubiginosus ± 9 mm longus, ± 7 mm latus; semina 3 oblonga subtrigona lurida ± 7 mm longa et ± 4 mm diametro arillis 2 lobatis albis lobis lineari-acuminatis ± 3 mm longis.

Erect caespitose herbs, 1.5—2.0 m tall; rhizomes suberect, 1—2 cm thick. *Leaves* many, spirally crowded at apex of rhizome; petiole sheathing at base, up to 1 m long, sparsely pubescent; leaf-blade elliptic to oblong-lanceolate, acute to cuneate at base, shortly acuminate at apex, 18—35 cm long, 8—15 cm wide, glabrous, whitish green beneath; lateral nerves many, parallel, with many fine scalariform transversely reticulate nervules in between; midrib thickened towards base, gradually narrowed and indistinct from



lateral nerves towards apex. *Main peduncle* terminal, up to 1.5 m tall, bearing one leaf and inflorescence at apex, rarely without leaf; peduncular leaf similar to primary leaves; petiole up to 15 cm long, sheathing at basal half, scattered hairy, pubescent towards apex. *Inflorescence* a lax panicle of spikes and spikelets, arising from axil of peduncular leaf-sheath with up to 15 cm long stalk, subtended by up to 10 cm long, linear-lanceolate, sheathing, puberulous bract at base; panicle up to 15 cm long, up to 10 cm wide, 2—10-branched, puberulous; spikes 2—10, of various length, 3—8 cm long, arranged at distances of up to 4 cm apart in axils of spirally arranged bracts on main rachis; bracts ovate-lanceolate, ± 2 cm long, ± 1 cm wide, puberulous outside, hairy at margins, soon splitting up in upper half into many fibres, later up to base; spikelets many, subspirally arranged on spikes in axils of primary bracts, up to 2 cm long; primary bracts ovate, obtuse, mucronate, ± 1.5 cm long, ± 1 cm wide, puberulous outside and along margins, similar to main bracts. *Flowers* white, in cymes of 1—3 or more pairs; each cymule (pair of flowers) in axil of a prophyll, one flower in each pair opening first, the other next; outer prophyll large, 2-keeled at back, ovate-lanceolate, ± 14 mm long, ± 5 mm wide, incurved at margins, minutely fringed on wings of keels; inner prophylls 3-keeled at back, smaller; pedicels of each pair of flowers united at base, ± 1 mm long. *Calyx-lobes* free up to base, linear-lanceolate, ± 1.2 cm long, ± 2 mm wide, hairy outside. *Corolla-tube* ± 7 mm long; lobes oblong, ovate, obtuse, ± 8 mm long, erect. *Staminodes* 4, united into a tube and adnate to the corolla-tube; lobes of outer staminodes subequal; larger lobe obovate, obtuse, with recurved margins, ± 1 cm long, ± 8 mm wide; smaller lobe subspathulate, recurved, ± 7 mm long, ± 3 mm wide; fleshy inner staminode hood-shaped with a lateral lobe enclosing style apex, ± 6 mm long, ± 3 mm wide; innermost staminode hooded, entirely adnate to outer large staminode, enclosing lip of stigma, with a fleshy puberulous callus below stigma and an auricular lobe at side of stigma. *Fertile stamen* 1-celled, with a thin, subulate, ± 1 mm long appendage on one side; free portion of filament ± 3 mm long; anther ± 2 mm long, oblong, apiculate, yellow. *Ovary* ± 2 mm long, densely golden hairy outside; style adnate to staminodial tube, ± 1 cm long; free portion curved, hooded, ± 4 mm long; stigma irregularly lobed, truncate. *Fruit* 3-lobed, ± 9 mm long, ± 7 mm wide, sparsely short hairy, reddish-brown; seeds 3, oblong, subtrigonal, ± 7 mm long, ± 4 mm thick, dull brown; arils 2, lobed, white; lobes linear-acuminate, ± 3 mm long.

GREAT NICOBAR ISLAND. 8 km on East-West Road, 19 Aug. 1975, *Balakrishnan 2979 A* (Holotype in CAL); *ibid.* 2979 B-C (Isotypes in PBL); 31—32 km on East-West Road, 14 June 1977, *Balakrishnan 5758* (Paratypes in CAL, L, PBL); on path to Shompen houses, ex 36.8 km on East-West Road, 17 June 1977, *Balakrishnan 5827* (Paratypes in CAL, E, PBL).

E c o l o g y: Shaded places, particularly near streams in dense evergreen rain forests, 50—100 m above m.s.l. Flowering & fruiting: May–September.

N o t e. Among the 12 species of *Phrynium* known from the Indo-Malesian region, this species comes near to *P. tristachyum* Ridley but differs in leaves being smaller, up to 35 cm long; leaf-sheaths sparsely pubescent; inflorescences laxly paniculate, up to 15 cm long, long-peduncled; lateral spikes up to 10, branching at a distance from the main rachis; mesophylls absent; pedicels ± 1 mm long; ovary ± 2 mm long.

Fig. 1. *Phrynium paniculatum* Balakr. — A. habit; B. bract of spikelet; C. outer prophyll; D. inner prophyll; E. pair of flowers (cymule); F. flower; G. larger outer staminode with adnate inner staminode; H. smaller outer staminode; I. hooded inner free staminode; J. fertile stamen; K. style; L. fruit; M. seed; N. scheme of spikelets (a. axis, b. bract, c. outer prophyll, d. flowers, e. inner prophylls, f. innermost sterile rudimentary cymule).