

TRIPOGON ANANTASWAMIANUS SREEKUMAR, V. J. NAIR ET N. C. NAIR
— A NEW GRASS FROM KERALA, INDIA

P. V. SREEKUMAR, V. J. NAIR AND N. C. NAIR

Botanical Survey of India, Coimbatore

Tripogon anantaswamianus Sreekumar, V. J.
Nair et N. C. Nair, *sp. nov.*

Tripogon bromoides Roem. & Schult. affinis, sed foliis longissimis angustioribus glaucis, costa prominenti, ligulis membranaceis, spiculis magnioribus, lobis medianis lemmatum longis acuminatis, aristis lemmatum subaequalibus et antheris longioribus, differt.

Holotypus, P. V. Sreekumar 69432 et isotypi P. V. Sreekumar 69432 lecti ad Eravikulam Sanctuary, in dist. Idukki, in ditone Kerala die 15 Novemberis anni 1980; holotypus positus in CAL, isotypi in K et MH.

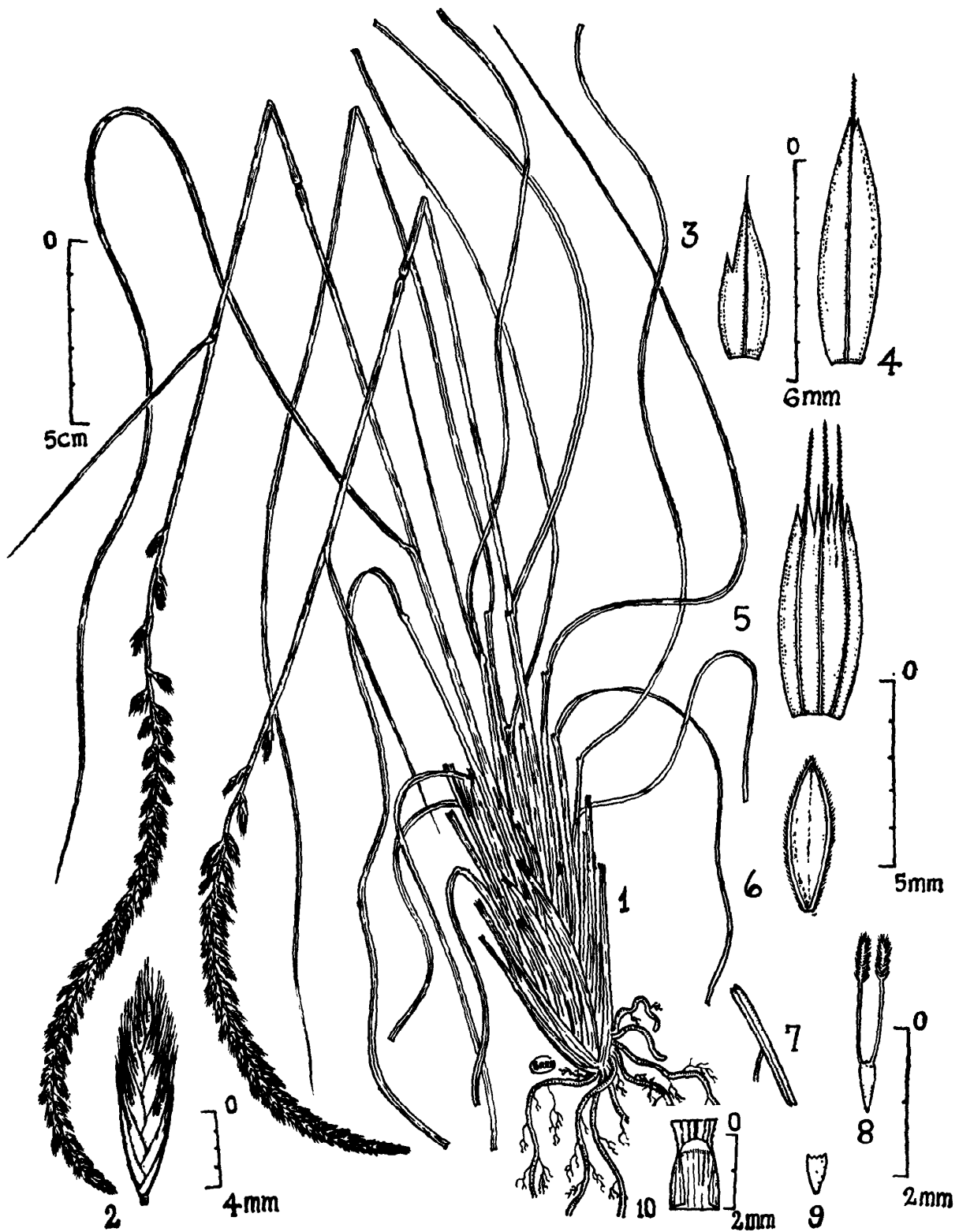
Tripogon anantaswamianus Sreekumar, V. J.
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Densely tufted perennial herb. Culms 30-50 cm long, nodes glabrous. Leaves 25-40 cm long and 1-2 mm broad, linear, convolute, glabrous or very sparsely villous; upper surface glaucous; midrib conspicuous. Ligule a fine membrane. Sheaths smooth, glabrous. Racemes 15-20 cm long, contracted.

Rachis smooth, glabrous. Spikelets 8-15 mm long, leaden grey coloured, with 7-10 florets. Callus hairy. Lower glumes 4-5 mm long, ovate-lanceolate, acuminate, shortly awned, 1-nerved, lobed on one side. Upper glumes 7-8 mm long, lanceolate, notched at apex with a small awn in between. Lemma 7-8 mm long (including awns), ca 2.5 mm broad, coriaceous, 6-lobed at apex, three awned. Lobes on either side of median awn long acuminate, lateral lobes conspicuous. Awns subequal, 3-4 mm long, scabrid. Palea 3-4 × 1.0-1.4 mm, elliptic, 2-nerved, 2-keeled; keels ciliate. Lodicules 2, ca 0.5 mm long. Stamens 3, 1.5-2.0 mm long, narrow, yellow, filaments short. Ovary ca 0.6 mm long, obovate, cuneate at base. Styles 2, each 1.2 mm long, slender. Stigma ca 0.7 mm long, feathery, white. Grains not seen.

Allied to *Tripogon bromoides* Roem. & Schult. and is often growing along with it in the type locality. The two species, however appear quite distinct in the field itself. The distinguishing features are given below :

	<i>Tripogon bromoides</i> Roem. & Schult.	<i>Tripogon anantaswamianus</i> <i>sp. nov.</i>
1. Height of flowering stem	ca 20 cm	up to 50 cm
2. Blade length range	10-20 cm	25-40 cm
3. Blade width range	± 3 mm	Less than 2 mm
4. Blade margins	Hairy	Entire, smooth
5. Upper surface of the blade	Densely hairy, green	Glabrous to very sparsely hairy, glaucous
6. Lower surface of the blade	Few fine hairs	Glabrous



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Figs. 1-10 : 1. Habit. 2. Spikelet. 3. Lower glume. 4. Upper glume. 5. Lemma. 6. Palea. 7. Stamen. 8. Pistil. 9. Lodicule. 10. Ligule.

7. Midrib	Inconspicuous	Conspicuous
8. Cross section of blade at 1 cm from collar	Flat	"V" shaped
9. Blade exit angle	ca 60°	40° or less
10. Nature of sheath	Hairy, old ones breaking up into fibres	Glabrous, not forming fibres
11. Ligule	Absent	Small, fine membrane
12. Nature of awns in the lemmas	Lateral awns less than half the length of the median; glabrous	Awns almost equal in length, scabrid
13. Lateral lobes of the lemmas	Inconspicuous, which continue into arista	Conspicuous
14. Median lobes	Short, acute	Long, acuminate
15. Keels of the palca	Glabrous to scabrid	Ciliate
16. Size of anthers	1-1.25 mm	1.5-2 mm
17. Nature of gynoecium	ca 1.5 mm	ca 2.5 mm, style longer

The holotype *P. V. Sreekumar* 69432 and isotypes *P. V. Sreekumar* 69432 were collected from Eravikulam Sanctuary in Idukki District, Kerala State, at an altitude of 2000 m, on 15-11-1980. Holotype is deposited in CAL. The isotypes are deposited in K and MH.

The species is named after Dr. M. Anantawami Rau, former Deputy Director, Botanical Survey of India and former Emeritus Scientist, University of Mysore who had always been a source of inspiration to us.

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A NEW SPECIES OF *HIBISCUS* LINN. (MALVACEAE) FROM PUNJAB, INDIA

T. K. PAUL AND M. P. NAYAR

*Botanical Survey of India, Howrah****Hibiscus hoshiarpurensis*** T. K. Paul et Nayar
sp. nov.

Affinis *H. beddomei* Rakshit et Kundu sed foliis lanceolates 5.5-10 cm longis, 1-4 cm latis, ad basin acutis vel cuneatis, petiolis brevioribus (0.5-2.5 cm), calycinis lobis capsulo longioribus.

Holotypus lectus ad Dholbah in Hoshiarpur dist., Punjab, die 22.9.1970 et positus in BSD subnumero O.P. Misra 41888 — A ; isotypus 41888 — B positus in CAL.

Hibiscus hoshiarpurensis T. K. Paul et Nayar
sp. nov.

Perennial herb upto ca. 1.5 m high. Stem erect, densely covered with both stiff and soft stellate and few simple hairs, nearly hirsute, without any prickles. Leaves 5.5-10 × 1-4 cm, lanceolate, apex acute, base cuneate to acute, margin irregularly serrate, with one prominent midvein, stellate pubescent on both surfaces ; petioles 0.5-2.5 cm long, densely stellate pubescent, nearly hirsute. Stipules ca. 5 mm long, linear, covered with simple and few stellate hairs. Flowers axillary, solitary ; pedicels 1-4 mm long, not jointed, hairy. Epicalyx segments 10, free to the base, 0.8-1.3 cm long, linear, apex oblanceolate with 3-5 mm long linear appendage arising from the base of the oblanceolate tip, stiff hairy throughout. Calyx 1.2-1.7 cm long, campanulate, divided upto the middle, lobes 1.2-1.7 × 0.3-0.5 cm, deltoid, acuminate, with 1 prominent nerve, outside with stiff simple and

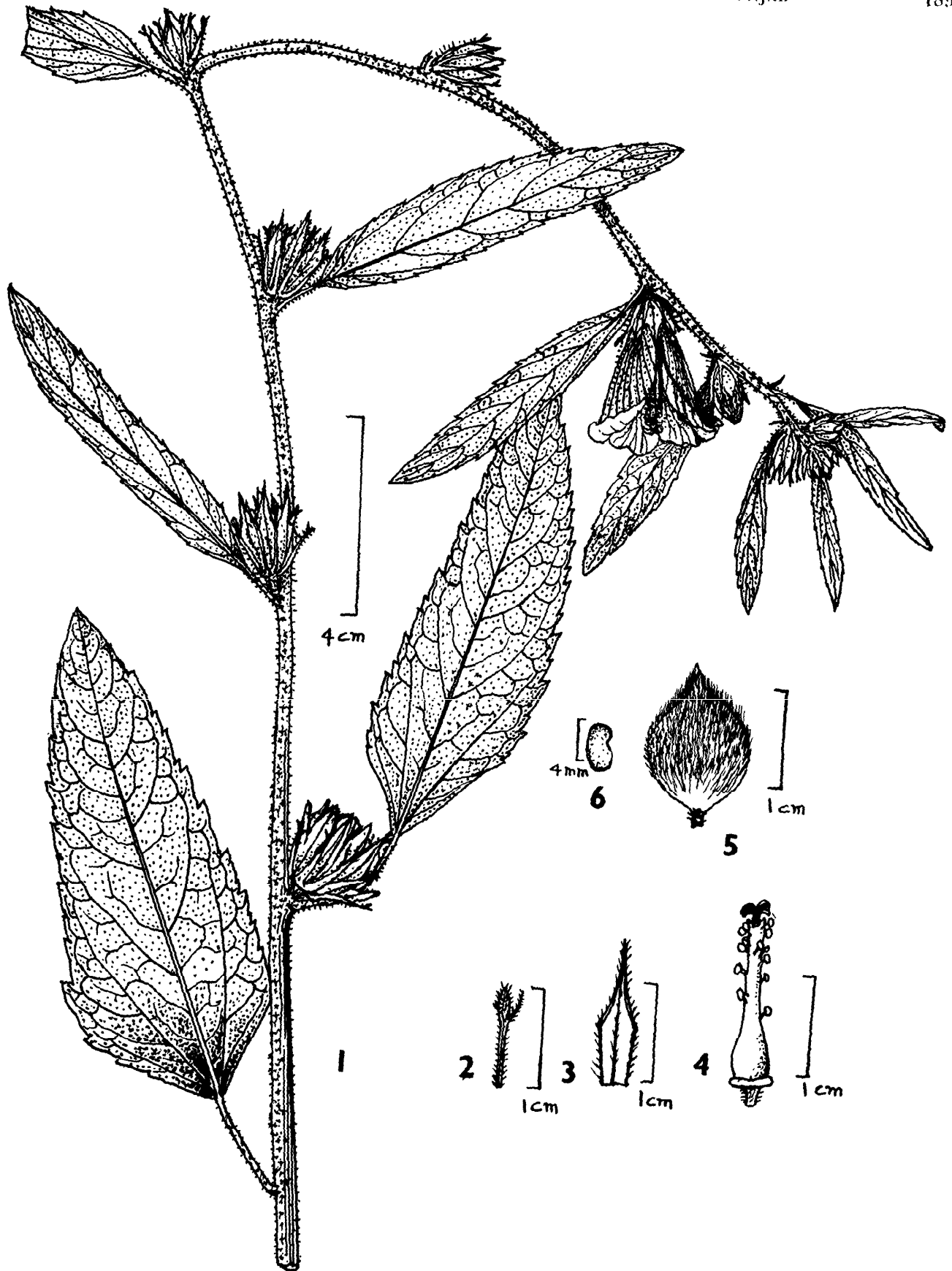
stellate hairs, inside glabrous. Corolla bright yellow ; petals 5, ca. 2.5 cm long, outside sparsely stellate hairy. Staminal column ca. 1.5 cm long, antheriferous throughout. Ovary ovoid-oblong, covered with white silky hairs, 5-loculed, many ovules in each locule ; style ca. 1.8 cm long ; stigmas 5. Capsule ca. 1.5 cm long and ca. 1 cm across, shorter than the calyx, ovoid, shortly beaked, densely hairy, dehiscing longitudinally into 5 valves. Seeds 3-4 × ca. 2 mm, ovoid — reniform, dotted with white scaly structures.

Holotype: Punjab: Dholbah (Hoshiarpur dist.), 22.9.1970, O. P. Misra 41888 — A is deposited in BSD ; Isotype O. P. Misra 41888 — B deposited in CAL.

This interesting species is allied to *H. beddomei* Rakshit et Kundu but differs in having: leaves lanceolate, unlobed, base cuneate to acute, 5.5-10 cm long, 1-4 cm across, petioles shorter (0.5-2.5 cm) and calyx longer than the capsule. While in *H. beddomei* Rakshit et Kundu leaves are ovate, slightly 3-lobed, base cordate, 5-9 cm long, 5-10 cm across, petiole longer (2.5-5.5 cm) and calyx equal to the capsule.

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Hibiscus hoshinpurensis Paul et Navar sp. nov.
 Figs. 1-6 1. Flowering twig, 2. Epicalyx segment, 3. Calyx lobe, 4. Gynoecium enclosed by staminal tube with stigmas at the top, 5. Capsule, 6. Seed.