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NOVELTIES IN PANICUM (POACEAE) FROM INDIA

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ABSTRACT

Four novelties in the genus *Panicum* L. namely *P. phoiniados*, *P. deccanense* and *P. paianum* together with its variety *minor* have been described from materials collected from the Marathwada region of the Deccan plateau.

ABSTRAK

Empat takson baru dipertelakan dalam marga *Panicum* L., yaitu *P. phoiniados*, *P. deccanense* dan *P. paianum* serta varietasnya *P. paianum* var. *minor*. Keempatnya didasarkan pada bahan yang dikumpulkan di daerah Marathwada, dataran tinggi Deccan.

The large genus *Panicum* L. is represented in India by about 22 species (Bor, *Gr. Burma, Ceyl. Ind. & Pak.*: 319-332. 1960). Out of these Fischer (*in* Gamble, *Fl. Pres. Madras*: 1232-1235. 1934) reported 14 from the southern parts of the country while only 8 species have been recorded from the northern parts by Raizada & Jain (*in* Ind. For. Rec. n.s. Bot. 5(3): 153-161. 1964) and 11 species from the eastern parts by Haines (*Bot. Bihar & Orissa*: 1037-1043. 1924). These reports, however, do not cover the vast, more or less unexplored areas of the Deccan plateau. An intensive exploration of the Marathwada region of this area has now been undertaken and this has yielded quite a few novelties in grasses together with a large number of new records. The following novelties in the genus *Panicum* were recently collected by the junior author and are being described here.

***Panicum phoiniados* Naik & Patunkar, sp. nov. — Fig. 1.**

Panico repenti L. simile, differt rhizomate brevissimo, basi fibroso, foliis non-distichis v. sub-distichis et gluma inferior ovato-acuminata, 1-nervia.

Gramen perenne; rhizomate brevissimo, horizontali; basi fibroso. Culmi erecti, 80—120 cm alti, simplices v. basi ramosi; ad nodos infe-

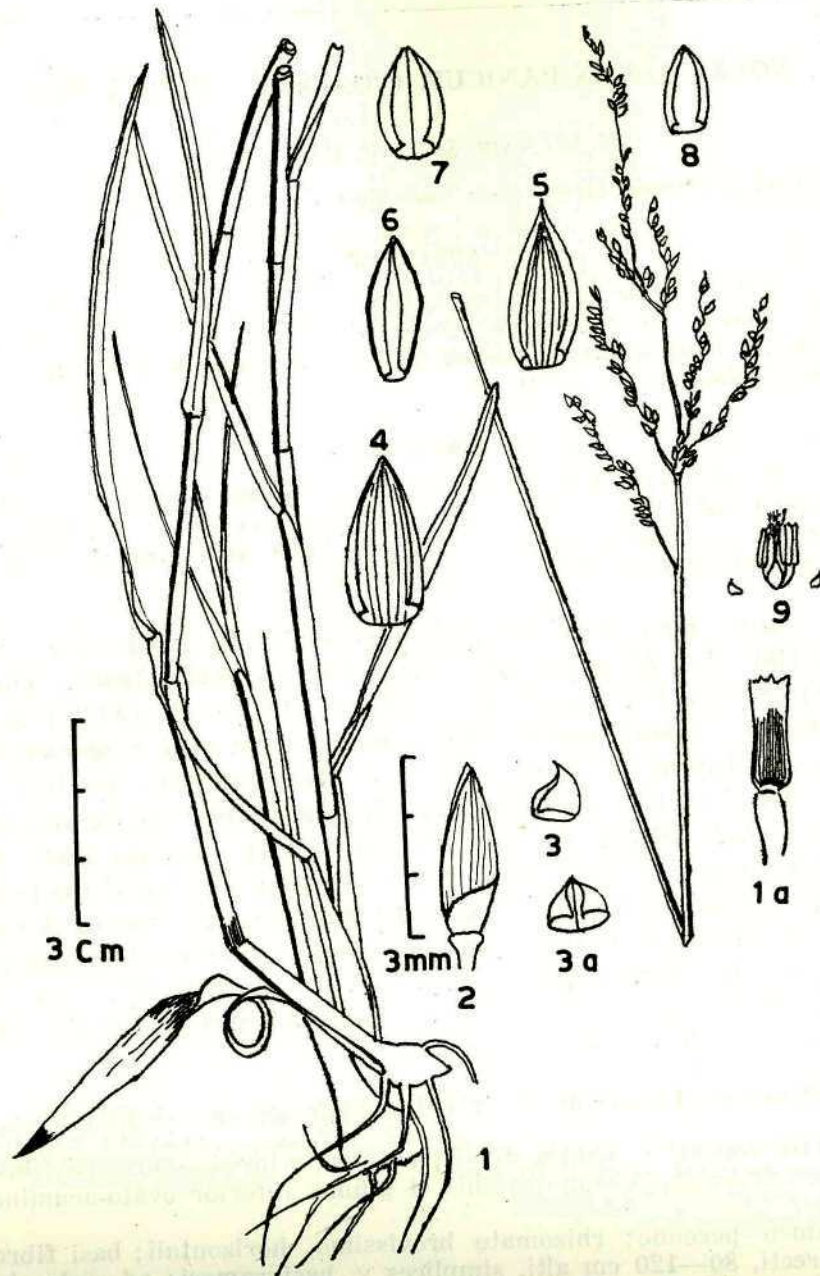


FIG. 1. *Panicum phoiniclados* Naik & Patunkar. 1. Habit, 1a. Ligule, 2. Spikelet, 3 & 3a. Lower glume, 4. Upper glume, 5. Lower lemma, 6. Palea, 7 & 8. Upper lemma and its palea and 9. Floret.

riores radicanes. Vaginae glabrae, striatae; ligula in annula in ciliarem redacta; lamina plana v. convoluta, lineari-lanceolata, 10—25 x 0.3—0.5 cm, rigida, pseudo-disticha, glabra; apice angustata. Paniculae pyramidales, ca. 8—15 cm longae, effusae; ramis erectis v. petentibus, angulatis, scabris instructae. Pedicelli solitarii v. fasciculares, 1—2.5 mm longi; apice cupuliformes. Spiculae ovato-lanceolatae, 2.5—3 mm longae. Gluma inferior ovato-acuminata, 1—1.2 mm longa, 1-nervia; gluma superior lineari-lanceolata, 2.5 mm longa, acuta, 7—9-nervia; lemma inferius eidem simile paullo latis; palea longitudine $\frac{2}{3}$ lemmatis inferioris, hyalina, 2-nervia; marginibus imbricatis. Lemma superius ca. 2 mm longum, fulgens, 7-nervium.

HOLOTYPE: *Patunkar 2A68 a* in herb. MU Aurangabad.

Tufted perennial grass with very short creeping rhizome; base fibrous. Culms erect, 90—120 cm tall, simple or branched below, rooting at lower nodes. Sheaths glabrous, striated; ligule a narrow coriaceous hairy ring, ca. 1 mm long; blades flat or convolute, linear-lanceolate, 10—25 x 0.3—0.5 cm, rigid, not or sub-distichous, glabrous, tapering to a fine point. Panicles pyramidal, 8—15 cm long, sparingly branched; branches erect or spreading, angular, scabrous. Pedicels solitary or paired, 1—2.5 mm long; tips cupular. Spikelets ovate-lanceolate, 2.5—3 mm long. Lower glume ovate-lanceolate, 1—1.2 mm long, 1-nerved. Upper glume linear-lanceolate, 2.5 mm long, acute, 7—9-nerved. Lower lemma similar, slightly broader. Palea $\frac{2}{3}$ its length, hyaline, closely 2-nerved; the margins overlapping. Upper lemma 2 mm long, glistening, 7-nerved.

ECOLOGY: Locally abundant in stagnant water pools, forming pure stand.

A very distinct species with purplish culms and sheaths and very short rhizome. It differs from *P. repens* L., which it closely resembles, in having fibrous basal sheaths, longer culms, narrower leaf-blades, longer ovate-acuminate lower glume which is 1-nerved, and sterile lower lemma (rarely male).

NANDED. Ganjgaon, 17 November 1974, *Patunkar 24-68 a* (holotype is deposited in the MU herbarium and isotype in Kew).

Panicum deccanense Naik & Patunkar, *sp. nov.* Fig. 2.

Panicum trypheron Schult. simile, differt glumis inferioribus brevioribus et acutis, glumis superioribus 9—13- v. multi-nerviis.

Gramen perenne; culmi erecti v. decumbentes, 25—50 cm longi; abquando ad nodos inferiores radicanes. Vaginae glabrae v. pubescentes; pili basi bulbosi; ligulae hyalinae, apice laceratae; lamina plana, 3—15 x 0.6—0.8 cm, acuta v. acuminata, glabra v. pubescentia. Paniculae ca. 7—25 cm longae, mox effusae; ramulis pedicellisque saepe capillaribus, scabulis. Pedicelli solitarii v. fasciculares, 1—3 mm longi. Spiculae

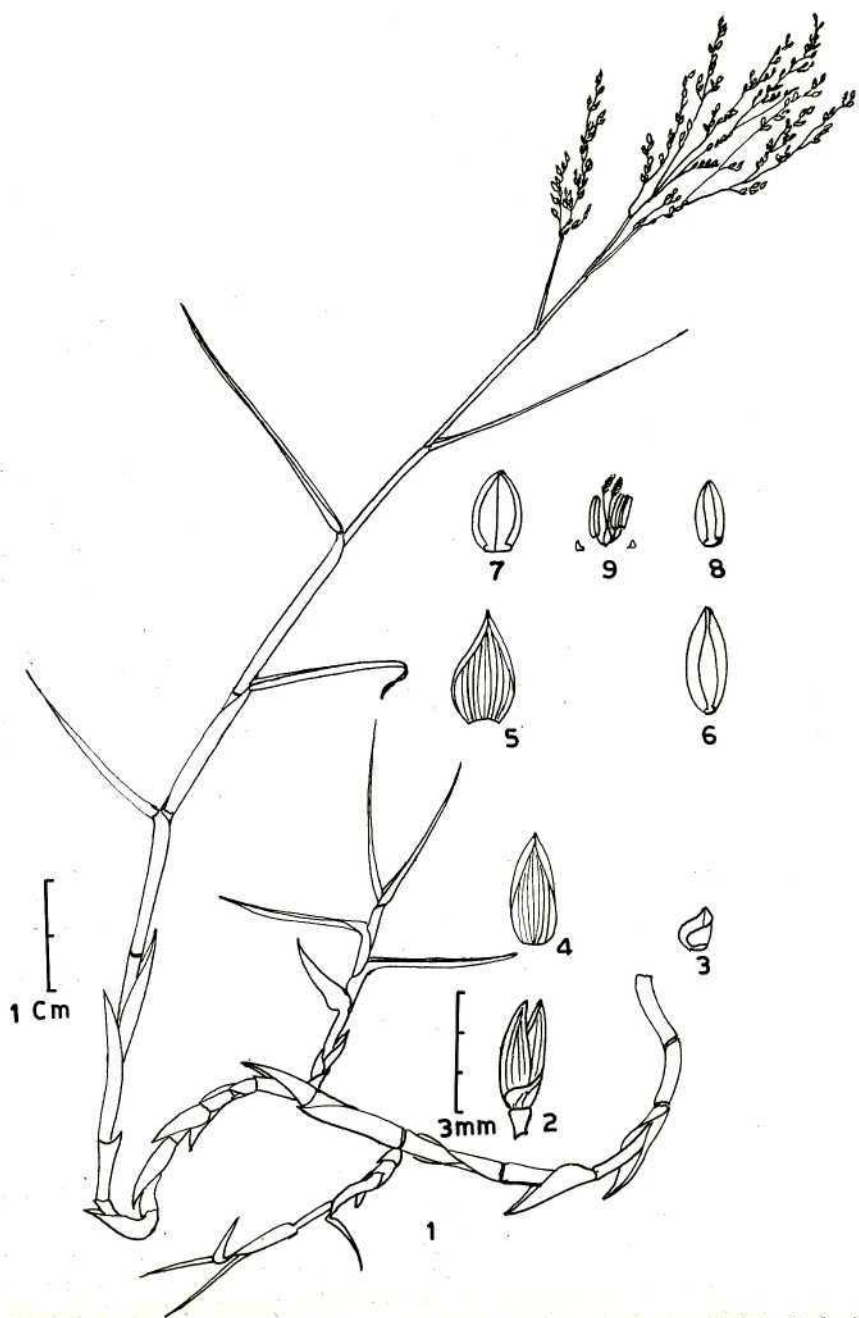


FIG. 2. *Panicum deccanense* Naik & Patunkar. 1. Habit, 2. Spikelet, 3 & 4. Lower and upper glume, 5 & 6. Lower lemma and its palea, 7 & 8. Upper lemma and its palea and 9. Floret.

ovato-acuminatae, 2.5—3 mm longae, virides v. purpurascentes, glabrae. Glumae ad anthesin divaricatae; gluma inferior ovato-acuta, 1/3 v. spiculis paullo brevior, hyalina, 1-nervia; gluma superior ovato-lanceolata, 2.5 mm longa, acuminata, 9—13- (v. magis)-nervia; lemma inferius simile, 5—7-nerviium; palea eidem 2/3 longitudine, hyalina; lemma superius ellipticum, acutum, hyalinum.

HOLOTYPUS: *Patunkar 2350 a* in Herb. MU Aurangabad.

Perennial grass; culms 25—50 cm long, erect or decumbent, sometimes rooting at lower nodes, glabrous. Sheaths glabrous or hairy; hairs with bulbous bases; ligule lacerate, ca. 1 mm long; blades flat, 3—15 x 0.6—0.8 cm, acute or acuminate, glabrous or hairy on both surfaces. Panicles 7—25 cm long, very effuse; branches capillary, scaberulous. Pedicels solitary or paired, 1—3 mm long. Spikelets ovate-acuminate, 2.5—3 mm long, green or purplish, glabrous. Glumes (upper glume and lower lemma) widely gaping at anthesis; lower glume ovate, 1/3 times as long as the spikelet or a little less, acute, hyaline, 1-nerved; upper glume ovate-lanceolate, ca. 2.5 mm long, acuminate, 9—13- or more-nerved. Lower lemma similar, 5—7-nerved; palea 2/3 its length, hyaline. Upper lemma elliptic, acute, hyaline.

ECOLOGY: In open grassland, less common than *P. trypheron* Schult.

Although a distinct species with shorter spikelets, short acute lower glume and 9—13- or more-nerved upper glume, it is very difficult to distinguish in the field from *P. trypheron* Schult.

NANDED. Degloor, 24 September 1974, *Patunkar 2350 a* (holotype is deposited in the MU herbarium and isotype in Kew).

Panicum paianum Naik & Patunkar, *sp. nov.* — Fig. 3.

Panico trypheron Schult. simile, differt culmi pubescentes, pili basi bulbosi, paniculae pyramidatae, spiculae deciduae et gluma inferior acuta.

Gramen annuum; culmi 15—50 cm longi, erecti v. procumbentes, pubescentes; pili basi bulbosi. Vaginae glabrae v. pubescentes; pili basi bulbosi; lamina lineari-lanceolata, 30—100 x 5—9 mm, acuta, glabra v. pubescentia; ligulae in annula in ciliarem. Paniculae ca. 6—15 x 6—10 cm, effusae; samulis pedicellisque saepe capillaribus, scabrulis, glabrescentes. Spiculae lanceolatae, 2.7—3.2 x 1—1.2 mm, acutae, divaricatae; pedicelli ad apice dilatatae. Gluma inferior 1 mm longa, acuta, basi imbricatis; gluma superior ovato-lanceolata, 2.5—3 mm longa, acuta, 9—11-nervia. Lemma inferius eidem simile, 7-nerviium; palea lanceolata, 2-nervia; lemma superius 1.8—2 mm longum, coriaceum, obtusum, 3—5-nerviium; palea simile.

HOLOTYPUS: *Patunkar 24-30 a* in Herb. MU Aurangabad.

Annual grass; culms 15—50 cm long, erect or procumbent, rooting at lower nodes, pubescent with bulbous based hairs. Sheaths glabrous or pubescent with bulbous based hairs; ligule a ciliate ring ca. 1 mm long; blades flat, linear-lanceolate, 3—10 x 0.5—0.9 cm, acute, glabrous

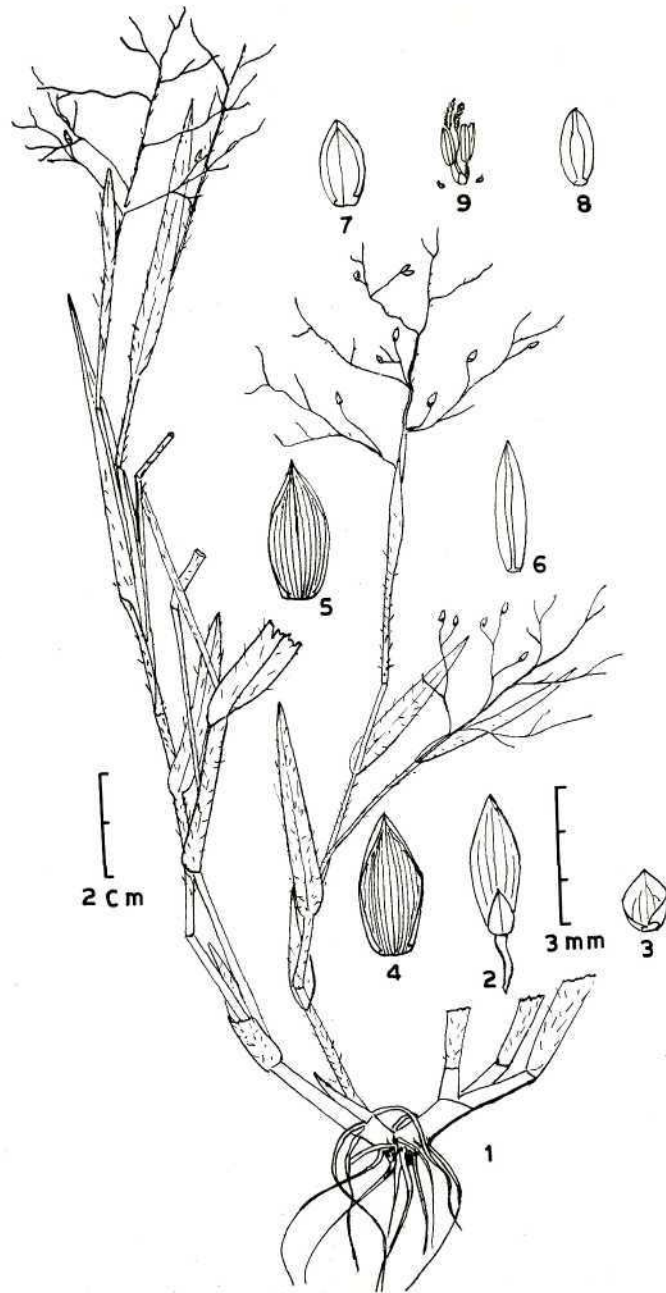


FIG. 3. *Panicum paianum* Naik & Fatunka var. *paiannvi*. 1. Habit, 2. Spikelet, 3 & 4. Lower and upper glume, 5 & 6. Lower lemma and its palea, 7 & 8. Upper lemma and its palea and 9. Floret.

or pubescent. Panicles ca. 6—15 x 6—10 cm, effuse; branches and pedicels capillary, scabrous, glabrescent; spikelets gaping at or even before anthesis, lanceolate, 2.7—3.2 x 1—1.2 mm, acute; pedicels dilated at apex. Lower glume 1 mm long, acute, 5-nerved, base overlapping; upper glume ovate-lanceolate, 2.5—3 mm long, acute, 9—11-nerved. Lower lemma similar to the upper glume, 7-nerved, often barren; palea lanceolate, 2-nerved; upper lemma 1.8—2 mm long, obtuse, coriaceous, 3—5-nerved; palea similar.

ECOLOGY: Ample along gullies in open grassland.

This species is very distinct because of the bulbous-based hairs covering the vegetative parts and desiduous spikelets. It has been named in honour of Dr. R. M. Pai.

NANDED, Rajgarh, 26 October 1974, *Patunkar 2430 a* (holotype is deposited in MU herbarium and isotype in Kew).

Panicum paianum Naik & Patunkar var. **minor** Naik & Patunkar, var. *nov.*

Culmi minores et glabri; spiculae minores.

HOLOTYPE: *Patunkar 2439 a* in Herb. MU Aurangabad; isotypus in K).

Easily distinguished from var. *paianum* by its low stature, smaller spikelets and absence of hairs. It is found in similar situations as var. *paianum*.

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