

## NEW SPECIES IN THE GRAMINEAE

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*Royal Botanic Gardens, Kew, U.K.****Poa hylobates* Bor, sp. nov.**

Gramen annuum, caespitosum. Culmi graciles, usque 75 cm alti, teretes, leves glabrique. Foliorum laminae lineares, in apicem acutum productae, usque 6 cm longae, 1-2 mm latae, planae vel complicatae, utrinque scaberrimae; vaginae inferiores laxae, a culmis solutae, superiores culmos amplexantes, striatae, leves glabraeque; ligulae 3-4.5 mm longae, membranaceae, acutae, extus scabrae.

Panicula laxa, usque 9 cm longa, 3-4 cm lata, ramis pedicellisque scabris patentibus. Spiculae usque 4 mm longae, 2-3-florae. Gluma inferior 4 mm longa, a latere visa subulata, subaristata, 3-nervia, carinata, carina scabra; gluma superior elliptico-acuminata, 5-nervia (laterales breves), carinata, carina scabra. Lemma 3.5 mm longum, oblongo-obtusum, 5-nervium, apicem versus carinatum, dorso rotundatum, intra nervos glabrum, nervis lateralibus et nervo mediano inferne ciliatum, carina scabrum; palea bicarinata, carinis denticulatis; stamina 3; antherae 2 mm longae; styli 2; stigmata plumosa; lana nulla; rhachilla verrucosa, anthoecio vestigiale coronata.

An annual caespitose grass. Culms slender, up to 75 cm tall, terete, smooth and glabrous. Leaf-blades linear, flat or folded, up to 6 cm long, 1-2 mm broad, produced into an acute tip, scabrid on both surfaces; lower sheaths loose, slipping from the culms, the upper clasping the culms, striate, smooth and glabrous; ligules 3-4.5 mm long, membranous, acute, scabrid on the outer surface.

Panicle loose, up to 9 cm long, 3-4 cm broad, with spreading scabrid branches and pedicels. Spikelets up to 4 mm long, 2-3-flowered. Lower glume 4 mm long, subulate when seen from the side, subaristate, 3-nerved, keeled, scabrid on the keel, otherwise glabrous; upper glume elliptic-acuminate, 5-nerved (the two lateral short), keeled, scabrid on the keel. Lemma 3.5 mm long, oblong-obtuse, 5-nerved, keeled towards the tip, rounded on the back, glabrous between the nerves but ciliate on lateral and median nerves in the lower half, scabrid on the keel; palea 2-keeled, toothed on the keels; stamens 3; anthers 2 mm long;

styles 2; stigmas plumose; wool absent; rhachilla warty, crowned with a vestigial floret.

India Orientalis: Nepal, near Tarakoti, Bheri River, 13.7.1952, c. 10,500 ft, *Polunin, Sykes & Williams* 2445—grassy clearings in mixed forest. Typus in Herb. Kew. Ibidem, below Mugu, Mugu Khola, 18.8.1952, 10,000 ft, *idem* 5305—growing among boulders.

***Poa lhasaensis* Bor, sp. nov.**

Gramen perenne, rhizomatosum. Culmi graciles, leves glabrique, teretes, usque 40 cm alti. Foliorum laminae lineares, basi rotundatae in apicem acutum productae, usque 18 cm longae, 4 mm latae, glaucae, utrinque leves glabraeque, marginibus leves, planae; vaginae inferiores laxae, eae culmorum culmos amplexantes, leves glabraeque, striatae; ligulae membranaceae, 2 mm longae, truncatae.

Panicula 15-18 cm longa, nutans, a vagina summa suffulta, multispiculata, ramosa ramulosaque; rami inferiores 5-nati; rami, ramuli pedicellisque scaberrimi. Spiculae pallidae, c. 5 mm longae, 3-4-florae. Gluma inferior 2.5 mm longa, explanata 1.5 mm lata, linearis-acuta, 1-nervia, carinata, carina scabra, ceterum levis glabra; gluma superior 3.25-3.75 mm longa, explanata 1.5 mm lata, 3-nervia, carinata, carina scabra. Lemma 4 mm longum, explanatum 2 mm latum, 5-nervium, apici et marginibus hyalinum, carinatum, nervis marginalibus carinae inferne ciliatum, carina scabrum; palea bicarinata; carinae denticulatae; lana copiosa; stamina 3; antherae 1.5-1.75 mm longae; styli duo; stigmata plumosa; caryopsis ignota.

A rhizomatous perennial grass. Culms slender, terete, smooth and glabrous, up to 40 cm tall. Leaf-blades linear, rounded at the base, produced into an acute tip, up to 18 cm long, 4 mm wide, glaucous, smooth and glabrous on both surfaces, smooth on the margins, flat; lower sheaths loose, the upper clasping the culms, smooth and glabrous, striate; ligules 2 mm long, membranous, truncate.

Panicle 15-18 cm long, nodding, supported by the uppermost sheath, many-spiculate, branching and

rebranching ; lower branches 5-nate ; branches, branchlets and pedicels scabrid. Spikelets pale, about 5 mm long, 3-4-flowered. Lower glume 2.5 mm long, 1.5 mm wide when flattened, linear-acute, 1-nerved, keeled, scabrid on the keel, otherwise smooth and glabrous ; upper glume 3.25-3.75 mm long, 1.5 mm broad when flattened, 3-nerved, keeled, scabrid on the keel. Lemma 4 mm long, 2 mm broad when flattened, 5-nerved, hyaline at the tip and along the margins, keeled, ciliate on the keel and lateral nerves in the lower half, scabrid on the keel ; palea 2-keeled, toothed on the keels ; wool copious ; stamens 3 ; anthers 1.5-1.75 mm long ; styli 2 ; stigmas plumose ; caryopsis unknown.

Tibet : Lhasa, Sept. 1904, 10,000 ft, *Walton*, s.n. Typus in Herb. Kew.

This species is closely allied to both *P. pratensis* L. and *P. jaunsarensis* Bor but differs markedly from both by its very pale spikelets and glaucous foliage. The lemmas, too, are much less firm and the intermediate nerves very faint.

***Stipa* (§ *Lasiagrostis*) *staintonii* Bor, sp. nov.**

Gramen perenne. Culmi erecti, caespitosi, teretes, graciles, leves, glabrique, usque 60 cm alti. Foliorum laminae 2.5 mm latae, usque 35 cm longae, involutae, rare planae, supra basin versus pilis albis pilosae, infra glabrae, marginibus scaberrimae ; vaginae culmos arcte amplexantes, glabrae, minute retrorseque scaberulae, margine singulo sparse ciliatae, faucibus dense pilosae ; ligula membranacea, fimbriata, 0.75 mm longa.

Panicula laxa, nutans, ramis longis. Spiculae 11-13 mm longae, longe-aristata. Gluma inferior 11-13 mm longa, lanceolato-acuminata, 3-nervia (nervi laterales cum mediano anastomosantes) levis glabraque, purpurascens ; gluma superior 8-11 mm longa, elliptico-acuminata, 3-nervia (nervi laterales cum nervo mediano haud anastomosantes), purpurascens. Lemma teres, 5.5 mm longum, apice bilobatum, dorso pilis longis

albis usque 3 mm longis instructum ; callus acutus, curvatus, retrorse barbatus ; palea hyalina, 2-nervia, inter nervos pilosa ; stamina 3 ; antherae 2.5 mm longae ; loculi sparse barbati ; lodiculae 2 ; arista usque 4 cm longa, omnino glabra, inferne torta, bis-geniculata.

A perennial grass. Culms erect, caespitose, terete, slender, glabrous, smooth, up to 60 cm tall. Leaf-blades up to 35 cm long, 2.5 mm broad, involute, rarely flat, white-hairy on the upper surface towards the base, glabrous below, scabrid on the margins ; sheaths firmly clasping the culms, glabrous, minutely retrorsely-scaberulous, ciliate on one margin and very hairy in the throat ; ligule membranous, fimbriate, 0.75 mm long.

Panicle loose, nodding, many-spiculate ; branches long. Spikelets 11-13 mm long, long-awned. Lower glume 11-13 mm long, lanceolate-acuminate, 3-nerved (lateral nerves anastomosing with the median), smooth and glabrous, purplish ; upper glume 8-11 mm long, elliptic-acuminate, 3-nerved (lateral nerves not anastomosing) purplish. Lemma terete, 5.5 mm long, 2-lobed at the apex, covered on the dorsal surface with hairs up to 3 mm long ; callus acute, curved, retrorsely bearded ; palea hyaline, 2-keeled, hairy between the nerves ; stamens 3 ; antherae 2.5 mm long, sparsely bearded at the tips of the loculi ; lodicules 2 ; awn up to 4 cm long, twice kned, completely glabrous.

India Orientalis : Nepal, between Pudamigaon and Ringmigaon, 22.9.1952, 13,000 ft, growing on dry stony slopes, glumes reddish, *Polunin, Sykes & Williams* 3553. Near Seng Khola, 4.10.1954, 12,500 ft, exposed cliffs. Inflorescence purplish, *Stainton, Sykes & Williams* 4677 (Typus K. isotypus B.M.) Tukucha (Kali Gandaki), 21.8.1954, 10,500 ft, *Stainton, Sykes & Williams* 7352 ; open rocky slope. Inflorescence silvery mauve. Barsung Khola, 18.7.1963, 10,000 ft, *J. D. A. Stainton* 4417.