NOTES RELATING TO THE FLORA OF BHUTAN: XL. *GRAMINEAE* III, THE GENUS *POA*

H. J. NOLTIE*

The following new species are described from the E Himalaya: *Poa pseudotibetica* Noltie (Tibet, Sikkim); *P. rohmooiana* Noltie (Sikkim); *P. chumbiensis* Noltie (Tibet); *P. dzongicola* Noltie (Bhutan, Sikkim); *P. cooperi* Noltie (Sikkim); *P. longii* Noltie (Sikkim); *P. lachenensis* Noltie (Sikkim); *P. rajbhandarii* Noltie (India, Nepal, Bhutan). *Poa himalayana* Nees ex Steud. has been misunderstood and a new lectotype is chosen, replacing that of Bor; *P. stewartii* Bor is reduced to its synonymy.

Keywords. E Himalaya, lectotypification, new taxa, *Poa*.

INTRODUCTION

With 29 species, *Poa* is the largest grass genus in the *Flora of Bhutan* area. Despite a recent revision of the Himalayan species (Rajbhandari, 1991) and Bor's authoritative treatment of the genus for the Indian region (Bor, 1951a, 1952) it has been found necessary to describe several new species and to disentangle a muddle arising from an erroneous typification of one of the commonest species of the area, until now known as *P. himalayana*.

It should be noted that the genus is very poorly collected in Bhutan, compared with Sikkim, and that given the number of new taxa from Sikkim more species can be expected when northern Bhutan is more fully explored.

NEW TAXA

Poa pseudotibetica Noltie, **sp. nov. Fig. 1A–D.**
Syn.: *P. tibetica* Stapf var. *aristulata* Stapf, in Hook.f., Fl. Brit. India 7: 339 (1897).
A *P. tibetica* Stapf ramis inflorescentiae longioribus rigide erectis, spiculis majoribus (plus quam 6.5mm longis, haud usque ad 5.5mm), lemmatibus longioribus (infimo plus quam 5mm, non usque ad 4.5mm) crassioribus et tenuiter acuminatis (haud subacutis) differt.

Differs from *P. tibetica* Stapf in having longer, stiffly erect inflorescence branches; spikelets larger (over 6.5mm, not up to 5.5mm), lemmas longer (the lowest over 5mm, not to 4.5mm), thicker textured and finely acuminate (not subacute).

Type: India, Sikkim, Chholhamoo, 17,820ft, 16 viii 1972, *Pradhan, Norbu & Naku* 206 (holo. E).

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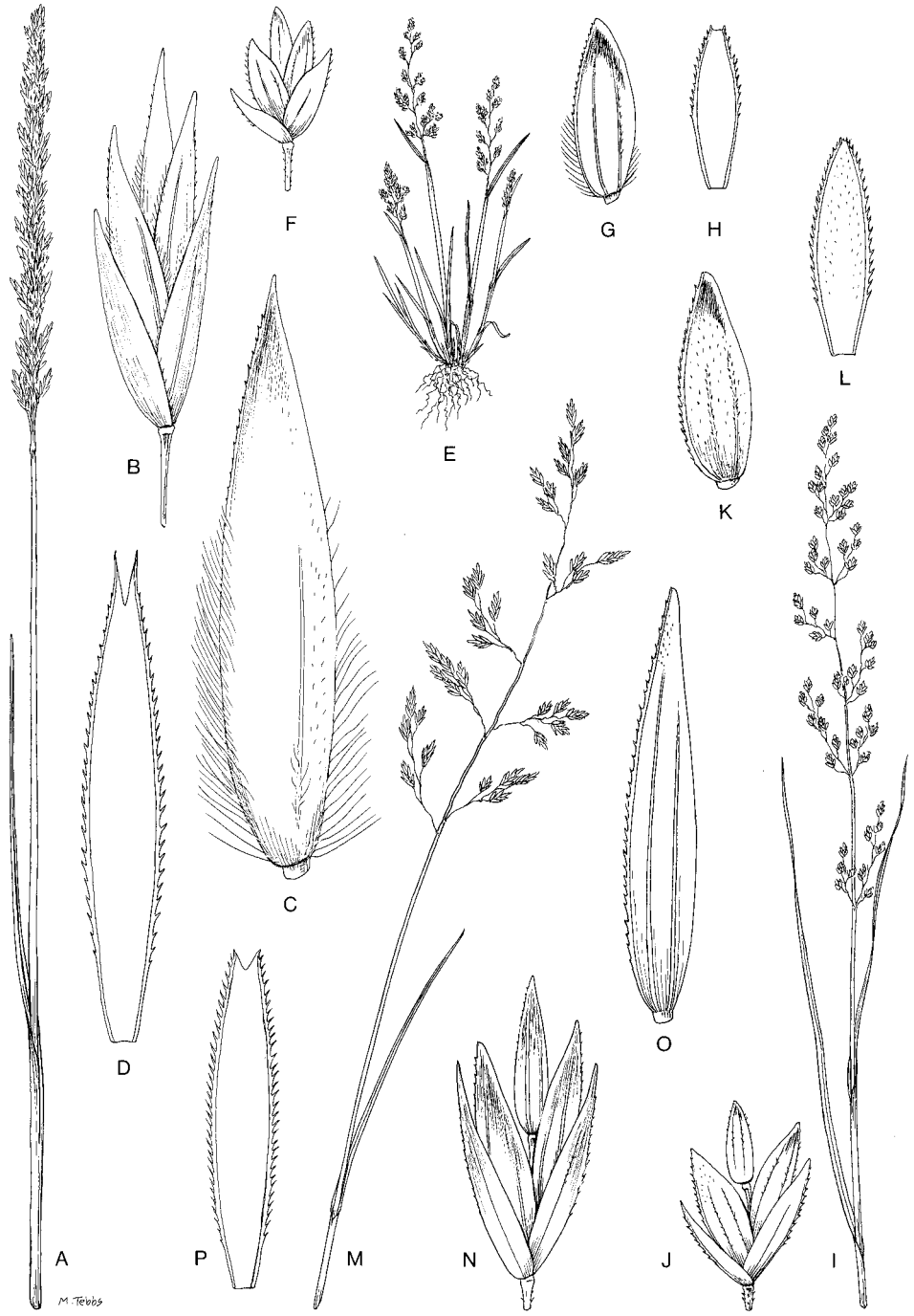

FIG. 1. A–D, *Poa pseudotibetica* Noltie (*Pradhan, Norbu & Naku* 206): A, inflorescence; B, spikelet; C, lowest lemma; D, lowest palea. E–H, *P. rohmooiana* Noltie (*Rohmoo* 284): E, habit; F, spikelet; G, lowest lemma; H, lowest palea. I–L, *P. chumbiensis* Noltie (*Bor & Kirat Ram* 20148): I, inflorescence; J, spikelet; K, lowest lemma; L, lowest palea. M–P, *P. dzongicola* Noltie (*Sinclair & Long* 5396): M, inflorescence; N, spikelet; O, lowest lemma; P, lowest palea. Infls. × ⅔; spikelets × 8; lemmas & paleas × 16.

Perennial, with slender, creeping rhizomes. *Culms* to 45cm, smooth, leafy for lower ½ to ⅔. *Culm leaf blades* 4–16cm, coriaceous, strongly ribbed above and beneath, scabrid on ribs above, pungent; sheaths smooth; ligule of uppermost leaf 1.5–5.5mm, subacute, irregularly dentate. *Inflorescence* to 9cm, dense, narrowly cylindric, branches smooth, naked only at base, stiffly appressed, the lowest in whorl of c.4, the longest to 4cm. *Spikelets* pale brownish purple, 6.6–8.2mm, narrowly elliptic, florets 3–4, callus wool absent. *Glumes* papery, acuminate, margins minutely ciliate below: the lower 4–4.6 × 1.5–1.7mm, 1- or 3-veined; the upper 4.8–6 × 2–2.4mm, 3-veined, surface minutely hairy at base. *Lemmas* oblong-lanceolate in profile, finely acuminate, chartaceous, lateral veins obscure, the lowest 5.3–5.7mm, half-width 1–1.2mm, keel and outer lateral veins with long (1–2mm), woolly hairs in lower half, apex narrowly hyaline, flushed purple subapically. *Palea* of lowest floret 4.1–4.9mm, keels scabrid, apex deeply bidentate. *Anthers* 2.2–3.1mm.

Other specimens seen. TIBET. Sandy dunes, Thibet, N of Sikkim, [1849], *J.D. Hooker s.n.* (K; type of var. *aristulata*). C. Tibet, vii 1929, *Prof. Kashyap s.n.* (K). Kala, Gyantse, 14,500ft, 1935, *Ludlow* 139 (BM).

Poa tibetica var. *aristulata* was described by Stapf based on a specimen consisting of the upper part of a culm with a single leaf and inflorescence. Bor (1952) wrote 'the impression one gets is that the inflorescence is not quite normal', but later (Bor, 1960) this had become 'possibly a diseased form'. Now, with more material available one can see that we are dealing with a distinct species. The varietal epithet has not been used for the species as there is already a *Poa aristata*, which would be confusingly similar, and the type of the variety is not complete enough for a proper description. The plant is an extreme alpine from southern central Tibet and northern Sikkim; the only habitat note is on the Ludlow specimen which reads 'boggy ground'.

Poa rohmooiana Noltie, **sp. nov. Fig. 1E–H.**

Poa tibeticola Bor habitu annuo et spiculis glabriusculis similis sed a qua multo humiliore (culmis usque ad 3cm altis, non plus quam 10cm), spiculis in omnibus partibus minoribus minus compressis et lemmatibus latioribus carinis inferne ciliatis (haud glaberrimis) differt.

Resembles *P. tibeticola* Bor in its annual habit and almost glabrous spikelets, but differs in being much smaller (culms to 3cm, not over 10cm), spikelets smaller in all parts, less compressed, and lemmas wider, the keels ciliate below (not glabrous).

Type: India, Sikkim, Chugya, 15,000ft, 12 ix 1912, *Rohmoo* 284 (holo. E).

Diminutive, tufted annual. *Culms* to 3cm, scabrid beneath inflorescence, leafy for lower ⅔ or to base of inflorescence. *Culm leaf blades* to 1.7cm, flat, linear, to 1.4mm wide; sheaths scabrid; ligule of uppermost leaf c.0.5mm, rounded. *Inflorescence* to 3cm, narrowly triangular in outline, branches scabrid, deflexed, the lowest paired, the longer 0.9–1.3cm. *Spikelets* greenish, to 2.3mm, widely elliptic, florets 3, callus wool absent. *Glumes* herbaceous, margins narrowly hyaline: the lower 1.6 × 0.7mm,

lanceolate, acuminate, 1-veined; the upper 1.6 × 0.9mm, oblong-ovate, acuminate, 3-veined. *Lemmas* narrowly elliptic in profile, blunt, the lowest c.1.5mm, half-width c.0.5mm, keel ciliate below, scabrid above, lateral veins minutely scabrid above, glabrous or minutely hairy near base, surface smooth between veins, apex narrowly hyaline, sometimes flushed purple subapically. *Palea* of lowest floret c.1.4mm, keels scabrid above. *Anthers* c.0.5mm.

Bor (1951a) identified this specimen as his *P. tibeticola*, but commented on its small size. Closer examination shows it to be a distinct species. *Poa tibeticola* is a species from southern Tibet (Khambajong and Lhasa), of which there appear to be no recent collections. The new species, known only from the type gathering, is from a much higher elevation in Sikkim. Its name commemorates its discoverer – Rohmoo, a Lepcha (native Sikkimese) collector, who collected many interesting plants in Sikkim and Chumbi for the Calcutta Botanic Garden.

Poa chumbiensis Noltie, **sp. nov. Fig. 1I–L.**
Poa triviali L. ligulis longis et vaginis foliorum scabridis similis sed a qua lana calli carenti, pilis secus carinam et venas laterales lemmatum nullis, antheris minoribus (c.0.5mm longis, non plus quam 1mm) differt.

Similar to *P. trivialis* L. in its long ligules and scabrid leaf sheaths, but differs in lacking callus wool, lacking hairs on the keel and lateral veins of the lemmas, and in its smaller anthers (c.0.5mm, not over 1mm).

Type: Tibet, Chumbi Valley, Yatung, 10,000ft, 18 vi 1945, *Bor & Kirat Ram* 20148 (holo. K).

Tufted perennial. *Culms* to 30(+?)cm, scabrid beneath inflorescence, probably finally leafy for most of length. *Culm leaf blades* to 13cm, flat, to 4mm wide, scabrid on veins, especially above; sheaths keeled, very scabrid; ligule of uppermost leaf to 4.3mm, those of lower leaves to 6mm, acute. *Inflorescence* (not fully expanded) to 14cm, probably finally narrowly triangular in outine, lax, branches very scabrid, probably finally spreading, the lowest in whorls of 3, the longest to 5.7cm. *Spikelets* greenish, c.2.7mm, widely ovate, florets 3, callus wool absent. *Glumes* lanceolate, acuminate, herbaceous, margins hyaline, keels very scabrid: the lower 1.5 × 0.6mm, 1-veined; the upper 2.1 × 0.9mm, 3-veined. *Lemmas* oblong-elliptic in profile, blunt, the lowest 1.9mm, half-width 0.6mm, keel scabrid above, lateral veins raised, minutely scabrid, surface minutely scabrid between veins, apex narrowly hyaline, flushed purple subapically. *Palea* of lowest floret 1.8mm, keels hispid, back scabrid between keels. *Anthers* c.0.5mm.

Known only from the type collection, which grew on 'wet sand'. This specimen was identified as *P. trivialis* by Bor (1952); however, he annotated the sheet as 'cf. trivialis? var. nov.?', indicating his uncertainty. It is quite different from *P. trivialis* and worth describing, despite the fact that the specimen is not fully mature.

Poa dzongicola Noltie, **sp. nov. Fig. 1M–P.**
A *P. royleana* Nees ex Steud. ligulis longioribus, spiculis majoribus et habitu humiliore differt. A *P. pagophila* Bor carinis lemmatis sine ciliis basalibus antheris minoribusque recedit.

Differs from *P. royleana* Nees ex Steud. in its longer ligules, larger spikelets and smaller habit. From *P. pagophila* Bor it differs in its glabrous lemma keels and smaller anthers.

Type: Bhutan, Upper Mo Chu district, Lingshi Dzong, 4100m, 28 ix 1984, *Sinclair & Long* 5396 (holo. E, iso. K).

Tufted perennial. *Culms* 13–22cm, smooth, or occasionally scabrid beneath inflorescence, leafy for just above half its length. *Culm leaf blades* 4.7–22cm, flat, 2–3mm wide, scabrid only on margins; sheaths smooth or occasionally scabrid; ligule of uppermost leaf 4–6mm, acute. *Inflorescence* 6.5–16cm, triangular in outline, lax, branches minutely scabrid above, spreading, the lowest single or paired, the longer 3–8cm. *Spikelets* flushed purple, 4–7.4mm, narrowly oblong, florets (2–)3–6, callus wool absent. *Glumes* lanceolate, acuminate, thickly herbaceous, margins hyaline, surface sometimes punctate: the lower almost reaching tip of lowest lemma, 2.9–3.8 × 1.3mm, 1- or 3-veined; the upper 3.3–4.3 × 1.5mm, 3-veined. *Lemmas* thickly herbaceous, narrowly lanceolate in profile, subacute, the lowest 3.1–4.1mm, half-width 0.6–0.9mm, keel scabrid throughout, lateral veins glabrous or minutely scabrid, surface smooth or minutely scabrid between the veins, apex widely hyaline, often flushed purple subapically. *Palea* of lowest floret 2.6–3.4mm, keels scabrid, the back sometimes scabrid near base. *Anthers* 0.9–1.5mm.

Other specimens seen. BHUTAN. Upper Mo Chu district, Jambethang, Lingshi Hill, *Dunbar* 43 (K); Soi Yaksa, *D.J. Miller* 291 (K); above Laya, *Sinclair & Long* 5131 (E, K); Zambuthang, *Sinclair & Long* 5455A (E, K).

INDIA. Sikkim, unlocalized, [1892], *Gammie s.n.* (K); Patang La, *King's Collector s.n.* (K); S of Thanggu, *Edinburgh Expedition to Northern Sikkim (EENS)* 280 (E).

This species is distinctive in the combination of lack of callus wool, lemmas lacking cilia on the keels or veins, and length of glumes relative to lemmas. It is known from several collections from N Bhutan and Sikkim where it grows in disturbed places (waste places near houses; banks among cultivation; on walls; among rocks in scrub), 3760–4100m. The epithet is taken from the habitat of the type specimen, the walls of Lingshi Dzong. The Dzongs are one of the most spectacular forms of architecture in Bhutan, being combined monastic and district administrative centres.

Poa cooperi Noltie, **sp. nov. Fig. 2A–D.**
A *P. pagophila* Bor antheris minoribus (longitudine minus quam 1mm, non plus quam 1.7mm), ligulis brevioribus, lemmatibus brevioribus magis acutis, et spiculis florum magis numerosorum compositis differt.

FIG. 2. A–D, *Poa cooperi* Noltie (*Cooper* 118): A, inflorescence; B, spikelet; C, lowest lemma; D, lowest palea. E–H, *P. longii* Noltie (*ESIK* 286): E, inflorescence; F, spikelet; G, lowest lemma; H, lowest palea. I–L, *P. lachenensis* Noltie (*J.D. Hooker*, *Poa* 17, p.p.): I, inflorescence; J, spikelet; K, lowest lemma; L, lowest palea. M–P, *P. rajbhandarii* Noltie (*ESIK* 748): M, inflorescence; N, spikelet; O, lowest lemma; P, lowest palea. Infls. × ⅔; spikelets × 8; lemmas & paleas × 16.

Differs from *P. pagophila* Bor in having shorter anthers (under 1mm, not over 1.7mm); ligules shorter; lemmas shorter, more acute; and the spikelets with more numerous florets.

Type: India, Sikkim, Laghep, 10,000ft, 1 vii 1913, *Cooper* 118 (holo. E).

Tufted perennial. *Culms* to 13(+?)cm, smooth, leafy to inflorescence. *Culm leaf blades* 4.5–6.9cm, flat, becoming inrolled, c.2.2mm wide, glabrous; sheaths purple, smooth; ligule of uppermost leaf 1.5–2.2mm, truncate-dentate. *Inflorescence* (not fully expanded) to 16cm, lax, branches minutely scabrid, probably spreading at maturity, the lowest borne singly, to 7.7cm. *Spikelets* flushed purple, 4.5–5.5mm, narrowly wedge-shaped, florets (3–)4, callus wool absent. *Glumes* lanceolate, subacte, herbaceous, margins hyaline, surface scabrid, tinged purple: the lower c.2.5 × 0.8mm, 1-veined; the upper 3.1–3.4 × 1.3mm, 3-veined. *Lemmas* thickly herbaceous, oblong-lanceolate in profile, acute, the lowest 3.6–3.8mm, half-width 0.9mm, keel ciliate in lower half, outer lateral veins shortly hairy at base, surface scabrid above and shortly hairy near base between the veins, apex very narrowly hyaline, flushed purple subapically. *Palea* of lowest floret c.3.5mm, keels scabrid, the back shortly hairy. *Anthers* c.0.9mm.

Known only from the type gathering. The epithet commemorates R. Edgar Cooper (1890–1962), who collected for the nursery firm of Bees in Sikkim in 1913 and who made a fundamentally important contribution to our knowledge of the flora of Bhutan in the years 1914 and 1915.

Poa longii Noltie, **sp. nov. Fig. 2E–H.**
A *P. polycolea* Stapf rhizomata tenuia carenti, antheris glumisque minoribus, lana calli praesenti et lemmatibus ad apicem anguste tantum hyalinis differt. A *P. pagophila* Bor antheris minoribus, ligulis brevioribus, lemmatibus magis acutis cum apice magis anguste hyalina et venis lateralibus ad bases hirsutis recedit.

Differs from *P. polycolea* Stapf in lacking slender rhizomes, anthers and glumes smaller, callus wool present and lemmas only narrowly hyaline at the apex.

Differs from *P. pagophila* Bor in its smaller anthers, shorter ligules, and the lemmas more acute, with a more narrowly hyaline apex and the lateral veins hairy at base.

Type: India, Sikkim, Bikbari, Choktsering Chu Valley, 27°30′53″N, 88°08′28″E, 4000m, 12 vii 1992, *Edinburgh Expedition to Sikkim and Darjeeling (ESIK)* 286 (holo. E).

Densely tufted perennial. *Culms* to 31cm, smooth, leafy for ⅔ length. *Culm leaf blades* 3–6.5cm, flat, 1–2mm wide, glabrous; sheaths sometimes flushed purple, smooth or very minutely scabrid; ligule of uppermost leaf 1–1.8mm, blunt. *Leaves* of vegetative shoots short, to 8cm. *Inflorescence* 6.5–13cm, very lax, triangular in outline, branches filiform, scabrid, deflexed, naked for more than half-length, the lowest borne in pairs, 3s or 4s, the longest to 7.5cm. *Spikelets* flushed purple,

3.6–5.6mm, narrowly wedge-shaped, florets 2–4, callus wool present, scanty or copious. *Glumes* flushed purple, lanceolate, subacute, surface scabrid: the lower 1.1–2.2 × 0.6–0.9mm, 1-veined; the upper 2.5–3.2 × c.1.2mm, 3-veined. *Lemmas* narrowly lanceolate in profile, subacute, the lowest 2.9–3.8mm, half-width c.0.7mm, keel ciliate below, outer and sometimes intermediate lateral veins shortly hairy near base, apex narrowly hyaline, flushed purple subapically. *Palea* of lowest floret 2.3–2.4mm, keels scabrid. *Anthers* 0.7mm.

Ecology. An alpine species of open habitats (edge of yak pasture by river bank; base of cliff on acidic soil), 3430–4000m.

Other specimen seen. INDIA, Sikkim, Phune, 3430m, 13 vii 1996, *Edinburgh Expedition to Northern Sikkim (EENS)* 147 (E).

It gives me great pleasure to name this graceful species after David G. Long, who took part in the two expeditions on which it was found.

Poa lachenensis Noltie, **sp. nov. Fig. 2I–L.**
In superficie *P. rajbhandarii* Noltie (*P. himalayana* sensu Bor) similis et *P. khasianae* Stapf similis ab ambabus lana calli carenti, carinis paleae pilos breves crispatos ferentibus et carina venis lateralibus lemmatum glabris differt. A *P. khasiana* recedit etiam gluma inferiore in proportione lemmate infero breviore.

Similar in overall appearance to *P. rajbhandarii* Noltie (*P. himalayana* sensu Bor) and *P. khasiana* Stapf. From both of these it differs in lacking callus wool, the palea keels bearing short, crisped hairs, and the keel and lateral veins of the lemmas glabrous. From *P. khasiana* it also differs in having the lower glume shorter relative to the lowest lemma.

Type: India, Sikkim, Lachen, 11,000ft, 11 vi 1849, *J.D. Hooker Poa* 17 (p.p.) (holo. K).

Tufted perennial. *Culms* 20–40cm, smooth, leafy to inflorescence, leaves rather widely spaced. *Culm leaf blades* 3.7–11cm, flat, 1.9–3.2mm wide, glabrous; sheaths smooth; ligule of uppermost leaf to 0.6–0.9mm, truncate. *Inflorescence* 6–13.5cm, narrow, lax, branches scabrid, ascending, the lowest paired or in 3s, the longest 3–7cm. *Spikelets* greenish, 4.1–6.2mm, wedge-shaped, florets 3–4, rachilla internodes slender, exposed, callus wool absent. *Glumes* lanceolate, acuminate, subacute, herbaceous, margins hyaline: the lower 1.8–2.7 × 0.8mm, 1-veined; the upper 2.5–3.6 × 1.2mm, 3-veined. *Lemmas* linear-lanceolate in profile, acute, the lowest 3.1–4.2mm, half-width c.0.6mm, keel minutely scabrid above, lateral veins glabrous, surface punctate, apex narrowly hyaline, sometimes flushed purple subapically. *Palea* of lowest floret 2.3–2.9mm, keels with crisped hairs on upper parts. *Anthers* 0.7–1.1mm.

Other specimens seen. There are three other sheets at Kew, one with a field label with the same data as the holotype, another collected at Lachen, but on a different date (20 vi 1849) and at a different altitude (13,000ft). The third bears only the distribution label '*Poa* 17'; there is a duplicate of this last in BM and no doubt also in other herbaria.

Known from several Hooker gatherings and not collected since 1849. These Sikkim specimens were part of Stapf's original circumscription of *P. khasiana*: Hooker's '*Poa* 17' is cited in the protologue and the characters of scanty wool and subglabrous outer lemma veins in the description refer to this element. However, from the epithet, the fact that Stapf's analytical drawing is attached to a Khasia specimen, and that Stapf did not annotate any of the Sikkim specimens with the name, Bor (1951a) was no doubt right to [lecto]typify *P. khasiana* on a specimen from Khasia (Cherrapunji, 2000m, *J.D. Hooker s.n.*, 18 vi 1850, K). Bor did not, however, deal with the excluded Sikkim element. Given the small differences between other taxa in the genus, and for the sake of consistency, there seems little choice but to describe this as a new species, though further work is required on this and the related taxa *P. himalayana*, *P. khasiana* and *P. rajbhandarii*.

POA HIMALAYANA

The name *Poa himalayana* has been misapplied to one of the commonest E Himalayan members of the genus. The name was first published by Steudel, based on a description and name by Nees von Esenbeck. In the original publication (Steudel, 1854–1855), the locality was given as Nepal, but no specimens were cited. Stapf (1897) took up the name in *Flora of British India*, and included specimens collected by Royle, Wallich, Griffith and Hooker. Bor (1951b) realised that among the specimens cited by Stapf were two taxa: one with ciliate, the other with scabrid, palea keels, though Stapf's description referred only to the former. Bor argued that the most likely Nepalese material available to Nees was Wallich's, and designated *Wallich* 8885 as the [lecto]type. This specimen belongs to the taxon with scabrid keels, and unfortunately Bor's choice turns out not to have been from the original material.

Steudel (1854–1855), in his Preface, stated that he had access to a Nees manuscript entitled 'Supplementa Graminearum'. By great good fortune a Nees manuscript has turned up at Glasgow which, if not the actual one used, is certainly a copy of the manuscript cited by Steudel (Noltie, 2000). In this, the description of *P. himalayana* consists of two paragraphs; only the first of these is quoted by Steudel, who gives it verbatim, though the two halves of the paragraph are reversed. The more detailed second paragraph is omitted as are the specimen numbers cited: *Royle* 104 and 163. In the manuscript the locality is given as 'Nepalia', and Nees appears to have been mistakenly informed that Royle's specimens were from Nepal. Fortunately the specimens are extant at LIV and the locality on the label is found to be 'Mussooree', i.e. in the Indian state of Uttar Pradesh.

Despite the fact that Steudel's description does not mention the character of the palea keels, Bor's lectotypification must be rejected as it was not based on specimens seen by the original author (Art. 9.13). In fact *P. himalayana* applies to the plant with the ciliate palea keels and I here designate *Royle* 163 as lectotype. Because Bor (1951b) typified on the other element, he had to re-describe this species, as *P. stewart-*

iana, which is therefore a superfluous synonym of *P. himalayana*. This means that the element with scabrid keels has yet to be described, and I do so below.

Poa rajbhandarii Noltie, **sp. nov. Fig. 2M–P.**
Syn.: *P. himalayana* sensu Bor, in Kew Bull. 6: 184 (1951), non Nees ex Steud.

A *P. himalayana* Nees ex Steud. et *P. khasiana* Stapf emend. Bor glumis in proportione lemmatibus brevioribus differt, a *P. himalayana* recedit etiam carinis palearum scabridis (haud ciliatis).

Differs from *P. himalayana* Nees ex Steud. and *P. khasiana* Stapf emend. Bor in having the glumes shorter relative to the lemmas and from the former in having the palea keels scabrid (not ciliate).

Type: India, Sikkim, Phedang to Tsoka, S of Dzongri, 27°26′N, 88°10′E, 3500m, 26 vii 1992, *Edinburgh Expedition to Sikkim and Darjeeling (ESIK)* 748 (holo. E).

Slender, tufted ?annual or short-lived perennial, sometimes producing short, filiform stolons. *Culms* 16–45cm, smooth, leafy almost to inflorescence. *Culm leaf blades* 4–12cm, flat, 0.9–2.5mm wide, glabrous or scabrid on upper surface; sheaths smooth; ligule of uppermost leaf 0.4–1.8(–2.3)mm, truncate, sometimes hispid on back. *Inflorescence* 8–18cm, triangular in outline at anthesis, lax, branches filiform, minutely scabrid, naked for c.⅔ length, nodes widely spaced, the lowest of 1–4 branches, the longest 3–7cm. *Spikelets* green, 3.7–5.2mm, narrowly wedge-shaped, florets 2–3(–4), callus wool sparse. *Glumes* very unequal, oblong-lanceolate, subacute, herbaceous, margins widely hyaline: the lower not reaching halfway along lowest lemma, 1.5–2.2 × c.0.6mm, 1-veined; the upper 2.2–3.3 × 0.9–1.5mm, 3-veined. *Lemmas* herbaceous, narrowly lanceolate in profile, subacute, the lowest (2.8–)3.3–3.8(–4.2)mm, half-width c.0.8mm, keel ciliate in lower half, outer lateral veins shortly hairy at base, surface smooth or sometimes minutely punctate between the veins, apex narrowly hyaline. *Palea* of lowest floret 2.1–2.8mm, keels scabrid. *Anthers* 0.6–0.9mm.

Distribution and ecology. Nepal, India (Sikkim, Darjeeling, Arunachal Pradesh), Tibet (Chumbi), Bhutan. Also recorded from Yunnan, but this requires confirmation. For further details see Rajbhandari (1991) under *P. himalayana*. Common especially in fir forest, 2700–3960(–4270)m.

It gives me great pleasure to name this plant after Dr Keshab R. Rajbhandari of the Department of Plant Resources, His Majesty's Government of Nepal, in recognition of the elegance of his study of Himalayan *Poa*.

It should be noted that work is still required on *P. rajbhandarii*, *P. himalayana* and the related *P. khasiana*. The stability of the palea keel indumentum character, in particular, needs to be assessed, as occasional individuals of *P. rajbhandarii* are found with ciliate keels and of *P. himalayana* with scabrid keels. Such work might

reduce them all to a single species, or recognise infraspecific taxa; until then, however, a conservative course has been followed.

The following lectotypification and synonymy must also be made:

P. himalayana Nees ex Steud., Syn. Pl. Glum. 256 (1854).
Type: India, Uttar Pradesh, Mussooree, Shalma, Royle 187/163 (lecto. selected here, LIV).
Syn.: *P. stewartiana* Bor, in Kew Bull. 6: 185 (1951). Type: India, Jaunsar, 2000m, 5v 1897, Duthie 19777 (holo. K).

Distribution. NW Himalaya; for further details see Rajbhandari (1991) under *P. stewartiana*.

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REFERENCES

BOR, N. L. (1951a). The genus *Poa* Linn. in India, part I. *J. Bombay Nat. Hist. Soc.* 50: 787–838.
BOR, N. L. (1951b). What is *Poa himalayana* Nees? *Kew Bull.* 6: 181–186.
BOR, N. L. (1952). The genus *Poa* Linn. in India, part II. *J. Bombay Nat. Hist. Soc.* 51: 61–103.
BOR, N. L. (1960). *The Grasses of Burma, Ceylon, India and Pakistan*. Oxford: Pergamon.
NOLTIE, H. J. (2000). Discovery of manuscripts on *Gramineae* and *Cyperaceae* by C. G. Nees von Esenbeck. *Edinb. J. Bot.* 57 (2): 309–310.
RAJBHANDARI, K. R. (1991). A revision of the genus *Poa* L. (Gramineae). In: OHBA, H. & MALLA, S. B. (eds) *The Himalayan Plants*, Vol. 2, pp. 169–269. Tokyo: University of Tokyo Press.
STAPF, O. (1897). *Poa* Linn. In: HOOKER, J. D. *Flora of British India*, Vol. 7, pp. 337–346. London: L. Reeve and Co.
STEUDEL, E. G. (1854–1855). *Synopsis Plantarum Glumacearum*. Stuttgart: J. B. Metzler.

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