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POACEAE

A NEW SUBSPECIES OF *TRICHONEURA ELEUSINOIDES* AND TWO NEW SPECIES OF *PANICUM* FROM SOUTH AFRICA

ERAGROSTIDEAE

The first record in PRE (*Obermeyer, Schweickerdt & Verdoorn 309*) of the new taxon, *Trichoneura eleusinoides* (Rendle) Ekman subsp. *limpopoensis*, was collected in November 1932 on the Farm Zoutpan in Limpopo Province. Subsequently, mainly during the months of January to April, more specimens of this taxon were gathered by various collectors from the Farm Breslau in the west to Punda Maria in the east, and from areas north of the Soutpansberg, i.e. from the northern slopes of the mountain range, to the Limpopo River. The taxon was first identified as *T. schlechteri* Ekman, but this is a coastal grassland plant known only from Mozambique and differs in having a glabrous palea (Cope 1999). Chippindall (1956) already indicated that this was a misidentification, and in Gibbs Russell *et al.* (1990) this species was referred to as *Trichoneura* sp. = *Codd 5325*.

Apart from its distribution and the longer spikelet, lemma, caryopsis and anthers, the misidentified species closely resembles *Trichoneura eleusinoides* which occurs in the western, central and northwestern regions of Namibia and into Angola. The height of *T. eleusinoides* ranges from 100–300 mm in the south and gradually increases to ± 700 mm in Angola, but the spikelet characters remain the same throughout the distribution area. As the only difference between the two taxa is their distribution area and the size of the spikelets (5–11 mm compared to 3–4 mm) and their components, the new taxon is best regarded as a subspecies of *T. eleusinoides* until more in-depth studies are done.

Trichoneura eleusinoides *(Rendle) Ekman* subsp. **limpopoensis** *L.Fish*, subsp. nov., subspeciei typicae valde similis sed spicula, lemmate, antheris, caryopsideque longioribus et in provincia Limpopo disposita.

Trichoneura sp. (= *Codd 5325*) in Gibbs Russell *et al.*: 344 (1990).

TYPE.—Limpopo, 2229 (Waterpoort): Masekwa Poort, (–DD), *Ellis 1945* (PRE, holo.).

Tufted annual, possibly biennial, 300–700 mm high; lower sheaths light brown, occasionally flushed purple; leaves mostly cauline. *Culms* slender, erect, sometimes geniculate; nodes dark. *Leaf blades* up to 150 × 2.0–6.5 mm, lanceolate, acute, flat, glabrous or with sparsely scattered, long, thin, bulbous-based hairs; margin scabrid. *Leaf sheaths* with long, slender, bulbous-based hairs, bases often red. *Inflorescence* 60–200 mm long; racemes 10–20, up to 60 mm long, becoming shorter towards apex, ascending, not spreading more than 45° from central axis; spikelets crowded, less than own length apart. *Spikelet* 5.5–7.5(–8.0) mm long (including awn), disarticulating above glumes and between florets. *Glumes* 5–8 mm long (including awn), tapering to an awn, unequal, slightly shorter to as long as to sometimes longer than spikelet, awn up to 1 mm long. *Florets* many, decreasing in size upwards. *Lemma* 2.8–3.0 × 0.8–1.0 mm, apex membranous; lateral nerves densely long-hairy, middle of back hairy from base to ¾ up; awn 0.8–1.2 mm long, shorter than body of lemma. *Palea* as long as lemma, apex emarginate, capitate, pilose, upper margins and apex minutely ciliate. *Anthers* 0.6–1.0 mm long. *Caryopsis* 2.0–2.5 × 0.5 mm, oblong. *Flowering time*: January to May (occasionally November). Figure 15.

Distribution and habitat: recorded in the far west on the Limpopo on the farms Breslau and Greefswald, then on the northern slopes of the Soutpansberg, in the west from Zoutpan eastwards to around Wylliespoort and then again in the extreme east in the Kruger National Park around Punda Maria and the Dzundwenia Hills on sandy to sandy loam soils often derived from quartzite, on rock slabs, in rocky depression or ledges and crevices on rocky or stony slopes or moist soils on banks of rivers or streams. Figure 16.

Etymology: the subspecific epithet *limpopoensis* refers to the geographical region where the taxon grows.

Other specimens examined (all housed in PRE)

LIMPOPO.—2229 (Waterpoort): Farm Greefswald 615, (–AB), *Codd 4123, Theron 2954, Mothogoane 316*; Farm Breslau, (–AC) *Straub 937*; Zoutpan, (–CD), *Schweickerdt & Verdoorn 609*; Waterpoort, Van Colliers Pass, (–DC), *Smook 5399*; Wylliespoort, (–DD), *De Winter & Codd 334*; Masekwa Poort, *Ellis 1946*. 2231 (Pafuri): Punda Maria, (–CA), *Van Oudtshoorn PRE62830*; Dzundwenia Hills, (–CC), *Codd 5325*; *Ellis 3237*.

FIGURE 15.—*T. eleusinoides* subsp. *limpopoensis*, *Schweickerdt & Verdoorn 609*. A, habit, × 0.8; B, dorsal view of lemma, × 7.8; C, lateral view of spikelet, × 7.8. Artist: Gillian Condy.

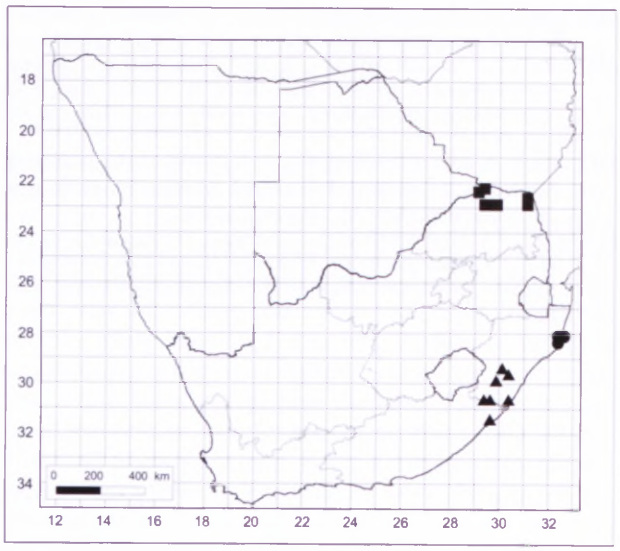

FIGURE 16.—Distribution of *T. eleusinoides* subsp. *limpopoensis*, ■; *Panicum sancta-luciense*, ●; and *P. silvestre*, ▲.

PANICOIDEAE–PANICEAE

Panicum sancta-luciense *L.Fish*, sp. nov., *P. hymeniochilo* Nees similis sed robustior, flosculo inferno masculo paleaque inferna bene evoluta.

TYPE.—KwaZulu-Natal, 2832 (Mtubatuba): St Lucia Game Park, (–BA), *Smook 1908* (PRE, holo.).

Trailing perennial; rooting at nodes. *Leaves* cauline, lanceolate, 30–60 × 5–12 mm, apex acute, base cordate, amplexicaul, glabrous or hairy; margin thickened, often crinkled, usually scaberulous, bulbous-based hairs present at base. *Leaf sheaths* densely hairy with bulbous-based hairs; convolute with outer margins densely long-hairy; inner margins membranous, glabrous to hairy. *Inflorescence* an open, obovate panicle 30–110 mm long, sparsely branching; primary branches solitary or in clusters of 2 or 3 on same side of central axis, clusters alternate on central axis; nodes with thin, usually purple, hairy pulvini. *Spikelets* 1.8–2.5 mm long, apices of glumes and lemmas usually purple. *Glumes* unequal; lower glume ovate, up to $^{1}/_{2}$ as long as spikelet, 3-nerved (at least near base) rarely 1-nerved on same inflorescence; upper glume slightly shorter than lower lemma and as long as upper lemma, 9-nerved. *Florets* 2; lower floret male, lemma longer than upper floret, 9–11-nerved, at least at base; palea well developed, as long as lemma; anthers 1.3 mm long, dark yellow, flushed purple; upper floret bisexual, crustaceous, shiny, pallid to straw-coloured, apex with scattered stiff hairs. *Flowering time*: January to April. Figure 17.

Distribution and ecology: *Panicum sancta-luciense*, so far only recorded for the Greater St Lucia area, is a hygrophilous grass growing between other grasses and sedges in sandy soils in moist areas and swamps, also in water deeper than 1.5 m with culms and leaves forming floating mats. Figure 16.

Etymology: the specific epithet *sancta-luciense* refers to the geographical region in which the species grows.

FIGURE 17.—*Panicum sancta-luciense*, *Feely, Tinley & Ward 22*. A, habit, × 0.8; B, lateral view of spikelet, × 8. Artist: Gillian Condy.

FIGURE 18.—*Panicum silvestre*, *Moss 3812*. A, habit, × 0.8. B, C, spikelet: B, lower glume, ×7.8; C, upper glume, × 7.8. Artist: Gillian Condy.

Specimens examined (all housed in PRE)

KWAZULU-NATAL.—2832 (Mtubatuba): east of Fanie's Island, (–AB), *Feeley, Tinley & Ward 22*; Fanie's Island, *De Wet 1085*; between Cape Vidal and St Lucia, (–AD), *Du Toit 2719*; Lake Bangazi, (–BA), *Ellis 3403*; Lake St Lucia, eastern shores, Meersig Plantation, (–BA), *Ellis 4492*.

Panicum silvestre *L.Fish*, sp. nov., a *P. monticola* Hook.f. differt gluma inferiora 3-nervosa, et a *P. laticoma* Nees differt gluma inferiora spiculam paene aequanti usque ad hanc superanti foliisque pilis longis munitis.

TYPE.—KwaZulu-Natal, 3030—(Port Shepstone): near Mehlomnyana, (–CB), *Acocks 13315* (PRE, holo.).

Perennial?, scrambling; leaves cauline; culms up to 400 mm long, branched, rooting at the nodes; nodes yellow, glabrous. *Leaf sheaths* convolute, outer margins densely hairy. *Leaf blades* flat, lanceolate, 20–85 × 4–9 mm, acuminate, base cordate, then narrowing at junction with sheath; cross-venation present (obvious on abaxial surface); long, rigid hairs present or absent; margin pale, densely scaberulous, often crinkled, usually with dense long hairs at base. *Inflorescence* a delicate, open, sparsely branched panicle, 35–145 × 20–180 mm, closely associated with flag leaf or well exserted; branches long, fine; spikelets solitary, on long capillary pedicels up to 15 mm long and slightly thickened at apex. *Spikelets*

1.8–2.4 mm long. *Glumes* ± equal; lower glume as long as upper glume or lower lemma, narrower than upper glume, 3-nerved, long-acuminate; upper glume longer than spikelet, 7-nerved, hardly separated from lower glume. *Florets* 2; lower floret sterile, lemma 5–7-nerved, palea absent or reduced to a small scale; upper floret bisexual, shorter than glumes (at least upper) and lower lemma, pallid to light brown, crustaceous, shiny. *Flowering time*: December–July. Figure 18.

Similar to *Panicum laticomum* Nees which has leaves glabrous or hairy with short rigid hairs and with asymmetrical base; glumes distinctly separated and lower glume ½ as long as spikelet; and an inflorescence with many more spikelets.

Distribution and ecology: recorded from around Pietermaritzburg down to Kokstad and Port St Johns on forest floor between other herbs, along streams and roads in the forest; said to be common where growing. Figure 16.

Etymology: the specific epithet *silvestre* (from Latin: of the forest) refers to the habitat it grows in.

Specimens examined (all housed at PRE)

KWAZULU-NATAL.—2929 (Underberg): Lundie's Hill, Umkomaas Valley near Bulwer, (–DD), *Doidge PRE57884*. 2930 (Pietermaritzburg): Ehlatini, Karkloof, (–AC), *Moll 2872*; Swartzkop, near Pietermaritzburg, (–CB), *Moss 3812*; Pietermaritzburg, Chase Valley below Queen Elizabeth Park, (–CB), *Ellis 4415*. 3029 (Kokstad); Draal Kloof, Kokstad, (–CB), *Sidley 547*; Ingeli Forest, (–DA), *Smook 1759*.

EASTERN CAPE.—3129 (Port St Johns): Ntafufu, (–DA), *Strey 8520*.

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