Comments on the treatment of the Poaceae in the Prodrömus einer Flora von Södweslafrika (1970)

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INTRODUCTION

The latest available revision of the Poaceae (Gramineae) of South West Africa appeared in Merxmüller's "Prodrömus" (1970) under the authorship of E. Launert. During the compilation of the Master Index of South African Grasses, being undertaken by the National Herbarium, Pretoria, a number of species not recorded in the Prodrömus came to light. Some of these have, so far, been found only in the Caprivi Strip, an area specifically excluded from the Prodrömus since it is covered by the Flora Zambesiaca. For the purposes of the preparation of the Flora of Southern Africa it is useful, however, to bring the record up to date.

In a number of instances the species delimitation adopted in the Prodrömus is at variance with our views. Since some of these concern species with a mainly South African distribution, it was regarded as necessary to elaborate on these differences even though complete revisions of the groups concerned could at present not be undertaken. Unnecessary name changing and confusion will thus be avoided.

COMMENTS ON SPECIES DELIMITATION, NOMENCLATURE AND IDENTIFICATIONS

Chloris radiata (L.) Swartz. S.W.A.—2117 (Waterberg): Waterberg (–?), Giess, Volk & Bleissner 6615. Launert (p. 48) cites this number as *C. virgata* Swartz.

Echinochloa frumentacea (Roxb.) Link. S.W.A.—1821 (Andara): Kaké Camp between Andara and Bagani (–BA), De Winter & Wiss 4373. (Cited by Launert p. 71 as *E. crusgalli* (L.) Beauv. This material matches the type of *E. frumentacea* which we regard as a distinct species.

Eragrostis trichophora Coss. & Dur. De Winter 2378 is *E. trichophora*, not *E. lehmanniana* Nees as quoted by Launert (p. 108). Note the whorled lower branches of the inflorescence and the grey membranous glumes. S.W.A.—2217 (Windhoek): Neudamm Experimental Farm (–AD), De Winter 2378.

Paspalum paspalodes (Michx.) Scribn. Launert (p. 146) sinks *P. vaginatum* Swartz as a synonym under *P. distichum* L. Clayton in Fl. W. Trop. Afr. ed 2, 3: 446 (1972) proposes to reject *P. distichum* as a *nomen confusum*, as the name has constantly been misapplied. We concur with his proposal, and if accepted, this means that the species erroneously regarded as *P. distichum* by most authors, needs a new name. According to Clayton (personal communication) the earliest name available is *P. paspalodes* (Michx.) Scribn. S.W.A.—2417 (Mariental): Hardapdamm, GIB 110 (–DB), Giess, Volk & Bleissner 5598.

Paspalum vaginatum Swartz. This species is synonymous with *P. distichum* L. as was recognised by Launert (p. 146). We regard *P. distichum* as a *nomen confusum* (see above). The earliest alternative name available for this entity is *P. vaginatum* Swartz. S.W.A.—2214 (Swakopmund): Swakopmund (–DA), Research Station Gobabeb 00102; Van Vuuren 987.

Setaria tenuiseta De Wit. S.W.A.—1718 (Kuringkuru): Makambu Camp 32,8 km west of Kuringkuru on the way to Katwitwi (–BC), De Winter & Marais 5023. This specimen is cited, incorrectly in our opinion, as *Setaria finita* Launert (Launert, l.c. p. 173).

Setaria ustilata De Wit. S.W.A.—1821 (Andara): between Bagani Camp and Mahango (–BA), De Winter & Wiss 4403. 1917 (Tsumeb): ca. 16 km southeast of Tsumeb (–BD), Basson 42. 2115 (Karibib): Ohere-Ost (–BA), Merxmüller & Giess 1594. Merxmüller & Giess 1594 is cited by Launert (l.c. p. 173) as *S. pallide-fusca* (Schumacher) Stapf & C. E. Hubb. We consider *S. ustilata* to be distinct from *S. pallide-fusca*. The specimens cited above match the type of *S. ustilata* in PRE. Ecologically they occupy a habitat distinct from that of *S. pallide-fusca*. *S. pallide-fusca* is a weed of agriculture and, where the rainfall is low, prefers moist habitats. In areas of higher rainfall it is common in disturbed areas as a ruderal weed. *S. ustilata*, on the other hand, is confined to semi-disturbed areas which are more arid, where it usually grows in shady places, particularly in the humus-rich soil under trees. Whereas it seems to grade into *S. pallide-fusca* in the tropics, and is apparently included in the latter in the Flora of Tropical Africa, it is sufficiently distinct in our area to be separated as a species. See Stapf in Fl. Trop. Afr. 9: 819 (1930). There may be an older name for this taxon, but, until this is established, there seems to be no alternative to using De Wit's name.

Sporobolus acinifolius Stapf, *S. glaucus* Mez, *S. salsus* Mez and *S. tenellus* (Spreng.) Kunth

No material which we would refer to *S. tenellus sensu stricto* was seen from South West Africa or Botswana, nor do we regard *S. acinifolius* as being synonymous with *S. tenellus*. *S. acinifolius* is, however, fairly widely distributed in all these territories. Although occasionally difficult to distinguish, these two species are in our opinion justifiably retained as distinct species by Chippindall in Grasses and Pastures of South Africa (1955).

The sinking of *S. salsus* and *S. glaucus* into synonymy under *S. tenellus* can also not be supported. However, *S. salsus* and *S. glaucus*, in our opinion, represent one species in spite of the difference in size of the spikelets. In habit the latter two agree closely, being distinctly tufted with fairly long leaves. By contrast, *S. acinifolius* has a branched rhizome producing short leaves, the basal parts being mat-forming. The spikelets are 1,4–1,6 mm long in *S. acinifolius* and 2,0–2,9 mm in *S. salsus* (syn. *S. glaucus*). The Southern African specimens were identified by us as shown below.

S. acinifolius Stapf. S.W.A.—1815 (Okahakana): Gemsbocklaagte, Etoshapfanne, Giess 2213. 1816 (Namutoni): Namutoni (–DD), Volk 2612; east of Namutoni (–DD), De Winter 2969. 2015 (Otjihorongo): district Otjojo, Wittklipp (–AC) Volk 2873. 2115 (Karibib): Okaukuejo, bei Okandeka (–DA),

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Giess, Volk & Bleissner 6108. 2217 (Windhoek): Neudamm Experimental Farm (-AD), *De Winter* 2375. 2517 (Gibeon): 2,2 km north of Asab (-BD), *De Winter* 3478. 2519 (Koës): near Koës (-CC), *Acocks* 15599. CAPE.—2624 (Vryburg): Vryburg (-DC), *Rodger sub PRE* 32349; *Henrici* 174. 2723 (Kuruman): Kuruman (-AD), *Mogg* 7635; Cardington (-BA), *Esterhuysen* 2215; 38 km east of Kuruman on the road to Vryburg (-BD), *Codd* 1294. 2822 (Glen Lyon): Lucas Dam (-BB), *Wilman sub PRE* 32350. 2824 (Kimberley): Koopmansfontein (-AA), *Brueckner* 187; Barkly West (-DA), *Acocks* 155.

S. salsus Mez (Syn.: *S. glaucus* Mez). S.W.A.—1815 (Okahakana): E.N.P. Ondongab (-?), *Du Toit & Le Roux* 456; 457; between Namutoni and Okakwea (-DC), *Volk* 2413. 2416 (Maltahöhe): 48 km north of Mariental (-BA), *Basson* 268. 2417 (Mariental): Farm Narib GIB 106 (-BA), *Giess, Volk & Bleissner* 5624.

The specimens *De Winter & Marais* 4666 from 13 km east of Tamso Camp in Omuramba Khaudum and *Le Roux* 278 from Fischers Pan, Etosha National Park, are best placed under *S. salsus* for the present. More material is needed to determine whether they form a part of the variation of this species.

S. tenellus (Spreng.) Kunth. No material of this species, *sensu stricto*, is known to us from South West Africa. The following South African specimens are referred to *S. tenellus* by us: O.F.S.—2728 (Frankfort): Naauwpoort (-BC), *Sim s.n.* 2825 (Boshof): Boshof (-CA), *Burt Davy* 12399; 21 km N.N.E. of Dealesville (-DB), *Acocks* 14012. 2924 (Hopetown): Luckhoff (-DB), *Henrici* 2156; Berggrivier, Fauresmith (-DD), *Smith* 5429. 2925 (Jagersfontein): Fauresmith (-CB), *Smith & Pole Evans sub PRE* 8831; *Verdoorn* 896; *Henrici* 3069. 2926 (Bloemfontein): Bloemfontein distr. (-AA), *Acocks* 12511. CAPE.—2824 (Kimberley): Rooipoort (-CA), *Leistner* 1229. 3023 (Britstown): Omdraaisvlei (-AA), *Bryant* 1190; Britstown (-DA), *Von Broemben* 81. 3025 (Colesberg): Knoffelfontein (-AA), *Smith* 5385; Vrede, Philippolis (-AD), *Smith* 4347A. 3026 (Aliwal North): Groenvlei (-AD), *Henrici* 3905; 3905A; 3905B; 3905C; *Smith* 3889. 3122 (Loxton): 61 km S.E. of Loxton (-DD), *Acocks* 14377. 3124 (Hanover): 24 km S.S.E. of Richmond (-AA), *Acocks* 15849; Hanover (-AB), *Acocks* 16350. 3322 (Beaufort West): Driefontein (-BC), *Van der Merwe* 2775. 3324 (Steytlerville): 34 km from Steytlerville on the road to Uitenhage (-DA), *Story* 2337.

Sporobolus natalensis (Steud.) Dur. & Schinz. Clayton in Fl. W. Trop. Afr. ed 2, 3: 410 (1972) points out that *S. natalensis* probably belongs in the synonymy of *S. africanus* (Poir.) Robyns & Tournay or may be of hybrid origin. *De Winter* 3980 cited by Launert (p. 184) under *S. natalensis* is a fairly typical specimen of *S. pyramidalis* Beauv. S.W.A.—1718 (Kuring-Kuru): junction of Mpungu Omuramba and Okavango River between Tondoro and Lupala (-DD), *De Winter* 3980.

Sporobolus subtilis Kunth, *S. conrathii* Chiov. and *S. welwitschii* Rendle

We regard the first two species as distinct, not only from one another, but also from *S. welwitschii* Rendle, for the following reasons: *S. subtilis* has the rhachilla produced and, like *S. welwitschii*, has slender, oblique rhizomes terminating the culms (or clusters of culms) at the base. It favours wet places such as vleis. *S. conrathii* has no produced rhachilla and the habit is caespitose with a dense covering of fibrous old sheaths at the base (unlike *S. welwitschii*). No rhizomes have been noted. It prefers open grassland but is occasionally found in wetter places.

S. subtilis Kunth. TRANSVAAL.—2528 (Pretoria): Rayton (-DA), *De Winter* 276; *Schweickerdt* 1756. 2630 (Carolina): Athole Pasture Research Station (-CA), *Norval* 69. NATAL.—2732 (Ubombo): Mpangazi Lake (-DA), *Strey & Huntley* 5013. Not recorded from S.W.A.

S. conrathii Chiov. S.W.A.—1724 (Katima Mulilo): 3 km southwest of Katima Mulilo (-CB), *De Winter* 9189. 1820 (Tarikora): 24,9 km. S. of Kapupahedi on the track to Tamso (-DC), *De Winter & Marais* 4639. TRANSVAAL.—2428 (Nylstroom): Sterkrivier Dam (-BC), *Jacobsen* 2614. 2528 (Pretoria): Premier Mine (-DA), *Menzies* 16; Rayton (-DA), *Schweickerdt* 1826. Grid reference unknown: Rustenburg distr., Crocodile River, *Schlechter* 3977; Frankenwald, *HBG* 25042. O.F.S.—Grid reference unknown: Maccau Vlei, *Brandmuller* 36.

S. welwitschii Rendle (syn.: *S. baumianus* Pilg., *S. macrothrix* Pilg.). These three species are indistinguishable morphologically except by the length of the spikelets which are 0,8–1,0 mm long in *S. baumianus*, 1,2–1,3 mm in *S. welwitschii* and 1,9–2,1 mm in *S. macrothrix*. The bases of the type specimens of these three species agree in that the new shoots are enveloped in cataphylls. Long, fibrous, basal sheaths, typical of *S. conrathii*, are always absent. In habit as well as in the characteristics of the bases, the specimens cited below resemble *S. subtilis* Kunth, but the rhachilla is never produced.

S.W.A.—1724 (Katima Mulilo): Katima Mulilo area (-AD), *Killick & Leistner* 3110. 1820 (Tarikora): 13 km east of Tamso in Omuramba Khaudum (-DA), *De Winter & Marais* 4681. *De Winter & Marais* 4639 named *S. welwitschii* by Launert (p. 186) is *S. conrathii* Chiov.

NEW RECORDS FOR THE AREA COVERED BY THE PRODROMUS

Alloteropsis cimicina (L.) Stapf. S.W.A.—1720 (Sambio): 31,6 km west of Nyangana Mission on road to Rundu (-DC), *De Winter & Marais* 4582. 1724 (Katima Mulilo): 4,8 km east of Katima Mulilo (-AD), *De Winter* 9141; ca. 11,2 km south of Katima Mulilo on the road to Ngoma (-CB), *Killick & Leistner* 3027.

Bromus diandrus Roth. S.W.A.—2416 (Maltahöhe): Buellspoor (-AB), *Strey* 988. Introduced species, probably an escaped weed of cultivation.

Diplachne biflora Hack. ex Schinz. S.W.A.—1720 (Sambio): 3,8 km east of Masari Camp on road to Nyangana (-CC), *De Winter & Wiss* 4086.

Diplachne eleusine Nees. S.W.A.—1913 (Sesfontein): 4 km east of Sesfontein (-BA), *De Winter & Leistner* 5584.

Eragrostis habrantha Rendle. S.W.A.—1718 (Grootfontein): Grootfontein (-CA), *Engler* 6256. 2518 (Tses): Asis (-BC), *Volk A.* 39 in NH 30761.

Hyparrhenia dregeana (Nees) Stapf ex Stent. S.W.A.—1917 (Tsumeb): Auros, Hochtalboden (-DA), *Volk* 624.

Monocymbium ceresiiforme (Nees) Stapf. S.W.A.—1819 (Karakuwisa): Omuramba Omatako 66,9 km south of Rundu (-DA), *De Winter & Marais* 5048. 1920 (Tsumkwe): Gautscha Pan (-DC), *Watt S.W.A.* 2395.

Paspalidium cf. *P. platyrrhachis* C. E. Hubb. S.W.A.—1719 (Rundu): Rundu (-DD), *Volk* 1795. (This genus is in need of revision.)

Poa annua L. S.W.A.—2116 (Okahandja): Ondongani, 24 km east of Omaruru (-AC), *Maguire* 2051. (Common, weedy, introduced species).

Setaria cana De Wit. S.W.A.—2117 (Waterberg): Waterberg (–AC), *Boss sub TRV 36343*. This specimen is represented in PRE by the holotype only. It seems to be related to *S. phragmitoides* Stapf and may prove to be synonymous with this species.

NEW RECORDS FOR THE CAPRIVI STRIP

Dinebra retroflexa (Vahl) Panz. S.W.A.—1725 (Livingstone): Mpilila Island (–CC), *Killick & Leistner 3342*; Mpilila Island (–CC), *De Winter 9242*.

Echinochloa frumentacea (Roxb.) Link. S.W.A.—1724 (Katima Mulilo): 12,9 km west of Katima Mulilo (–DB), *De Winter 9132*.

Entolasia imbricata Stapf. S.W.A.—1723 (Singalamwe): Singalamwe (–CB), *Killick & Leistner 3240*.

Leptochloa uniflora Hochst. ex A. Rich. S.W.A.—1725 (Livingstone): Mpilila Island (–CC), *Killick & Leistner 3347*.

Loudetiopsis glabrata (K. Schum.) Conert. S.W.A.—1724 (Katima Mulilo): Katima Mulilo (–AD), *Ellis 344*; Kabe floodplains (–DA), *Brown s.n.*

Monocymbium cereziiforme (Nees) Stapf. S.W.A.—1724 (Katima Mulilo): ca. 80 km from Singalamwe on road to Katima Mulilo (–CA), *Killick & Leistner 3289*.

Sporobolus stapfianus Gand. S.W.A.—1724 (Katima Mulilo): Ngoma area (–DC), *Killick & Leistner 3003*.