

Mitt. Bot. München	Band VIII	p. 147 - 163	20.3.1970
--------------------	-----------	--------------	-----------

**MISCELLANEOUS TAXA OF GRAMINEAE
FROM SOUTH WEST AFRICA AND ADJACENT AREAS**

by

E. LAUNERT (London)

Chloris flabellata (Hackel) Launert, comb. nov.

Tetrapogon flabellatus Hackel in Bull. Herb. Boiss. 4:
810 (1896). - Type as below.

Chloris pubescens Wawr. & Peyr. in Sitzungsber. Akad.
Wiss. Wien 38: 585 (1860), non Lagasca (1805);
Typus: Angola, near Benguela, WAWRA 243 (W).

Type: Angola; Mossamedes in maritimis inter Mossamedes et
Rio Bero, 20.IV.1882, HÖPFNER 78 (W).

The characters of this plant clearly indicate its belonging to *Chloris*. Since the taxon has never been properly defined a description based on the material so far available is given below.

A dense perennial, with stout compressed woody stolons up to 100 cm long, with the internodes glabrous. Culms usually ascending from a prostrate base and rooting at the lower nodes, rarely erect, growing in dense tufts, simple or branched, often bulbous at the base, terete, up to 50 cm long, 2-many-noded, pubescent to glabrous (especially when old), smooth, finely striate with the uppermost internode very slender and long exerted. Leaves densely crowded at the base; sheaths tight when young, later somewhat loose and sometimes slipping off the culm, finely striate, dorsally rounded or inconspicuously keeled towards the collar, softly pilose to densely pubescent; the lowermost reduced to bladeless cataphylls. Leaf-laminas linear or very narrowly

linear-lanceolate (usually ensiform), gradually tapering to a soft point, obliquely ascending to almost erect, flaccid, softly pilose to velvety pubescent, canescent. Ligule a membranous rim, about 0,4 mm long. Spikes 8 - 20, densely crowded at the apex of the culm, 1 - 2,75 (- 3) cm long, inwardly curved to a varying degree thus forming a rather compact terminal subspherical head-like flat-topped inflorescence, yellowish green to brownish; rhachis slender, triangular, with rows of short spiny hairs along the edges. Spikelets subsessile, 3-flowered; the lowest floret hermaphrodite, the following two male or sterile, the uppermost much reduced, 2,5 - 3,25 mm long, laterally compressed, broadly elliptic in outline. Glumes membranous, 1-nerved, dissimilar in shape and size; the inferior lanceolate, about 1,5 mm long, acute, keeled, scaberulous along the keel, glabrous; the superior ovate-elliptic, about 2,5 mm long, with the apex acute or sometimes somewhat truncate, with the nerve extending into a short scabrid point, keeled, scabrous or with a row of short stiff hairs along the keel. Lemmas broadly elliptic, the lowest about 2,5 mm long (excluding the awn!), obtuse, often somewhat retuse, membranous, 3-nerved, awned from just below the apex, dorsally with three rows of whitish silky hairs along the nerves but usually glabrous towards the apex; awn shorter, as long as or only slightly longer than the body of the lemma (usually much shorter), protrorsely scabrous, usually slightly reclined. Palea 2-keeled, narrowly elliptic, slightly shorter than the corresponding lemma, hyalin, with the apex obtuse to retuse, shortly ciliate along the keels, with narrow non overlapping flaps. Lodicules very inconspicuous, obcuneate-truncate. Stamens 3, with the anthers linear-oblong, about 1,5 mm long. Caryopsis not known.

Distribution: The area of the species is confined to the coastal regions of southern Angola extending to the Namib region of the Kaokoveld and the Outjo district in South West Africa. It grows usually in sand, and usually forms dense masses like a carpet in saline marshes or flats.

Material examined:

Angola: Luanda, 14.4.1958, TEIXEIRA 3215 (BM). - Luanda, Istolhosa nos marros maritimos de Luanda, 6.1904, GOSSWEILER 1551 (COI). - Luanda, near Cacuaco and Barra do Bengo, 6.1858, WELWITSCH 7304 (BM). - Luanda, Boa vista - Conceicao, 10.8.1854, WELWITSCH 7455 (BM). - Luanda, 1853/54, WELWITSCH

7376 (BM). - Luanda, between Cacucaco and Morro das Lagostas, 12.1853, WELWITSCH 7454 (BM; COI; K). - Benguela, Lobito Bay, 6.3.1927, LYNES s.n. (BM). - Mossamedes, Plateau do Buraco (entre Mossamedes e P. Alexandre, a 45 km de P. A.) ca. 30 m, 6.4.1956, TEIXEIRA 806 (BM). - Mossamedes, ca. 20 m, 23.3.1956, TEIXEIRA 774 (BM). - Mossamedes, Litorideserta, 50 m, 26.5.1938, GOSSWEILER 11080 (COI). - Mossamedes, Carvalhão, Coroca R., 3.6.1937, CARRISSO & SOUSA 239 (COI). - Mossamedes, between Boa vista and Giraúl, 7.1859, WELWITSCH 2602 (BM). - Mossamedes, between Mossamedes and R. Cowca, 23.4.1909, PEARSON 2197 (K). - Mossamedes, sandy plain behind the town, 22.4.1909, PEARSON 2288 (K). - Mossamedes, Boa vista, fazenda Boa vista, 11.1900, GOSSWEILER 86 (K). - Mossamedes, Carvalhão, R. Coroca, 3.6.1937, CARRISSO & SOUSA 239 (BM).

South West Africa: Kaokoveld; track Orupembe-Sarusas, on the Namib flat near the river Khumib, ca. 400 m, 9.6.1963, L.E. KERS 1470 (BM; M; S). - Kaokoveld; Namib-Kiesfläche 14 Meilen nördlich Sarusas, 9.6.1963, W. GIESS & H. LEIPPERT 7451 (M). - Outjo distr.: 10 Meilen nördlich Torrabai, Unjab Rivierlauf, 3.4.1963, W. GIESS, O.H. VOLK & B. BLEISSNER 6296 (M). - Outjo distr.: Unjabmund, sandy-muddy patches, 16.4.1964, B. NORDENSTAM 3763 (M). - Outjo distr.: Unjab River Mouth 12.9, N. of Torra Bay on coast road, 2.4.1963, DE WINTER & HARDY 8198 (M).

Brachiaria psammophila (Welw. ex Rendle) Launert, comb. nov.

Panicum psammophilum Welw. ex Rendle, Cat. Afr. Pl.
Welw. 2: 171 (1899).

Leucophrys psammophila (Welw. ex Rendle) Dandy in Journ.
Bot. (Lond.) 69: 54 (1931).

Type: Angola, Mossamedes, 8.1859, WELWITSCH 2626 (BM).

Distribution: Southern Angola extending into the Kaokoveld district of South West Africa.

In agreement with DANDY (loc. cit.) I find that this species "is a close ally of *Leucophrys glomerata* (Hackel) Stapf" but after detailed examination I cannot agree with its inclusion in *Leucophrys*. This genus, as originally defined by

RENDLE, exhibits some outstanding features the most conspicuous of which are the slender stalklike callus at the base of the spikelet and the two tufts of transversely arranged rows of hairs which appear in the upper half of the dorsal surface of both the superior glume and the lemma of the inferior (σ^7) floret (see pl. 1, fig. 1). One might argue that these characters can be observed, although not simultaneously, in some species of *Brachiaria* e.g. *B. nigropedata* (the callus) and *B. serrata* (the serial arrangement of hairs) and that *Leucophrys* could therefore be submerged into this genus. There are, however, other features which would introduce alien characters to *Brachiaria*. The most notable of these is the inferior glumes which is narrowly lanceolate and as long as the entire spikelet; it also differs conspicuously from the rest of the spikelet in being glabrous. Moreover the inflorescence of *Leucophrys* differs remarkably from that of *Brachiaria*; the spikelets are not arranged in regular pairs and their inferior glume is not in a fixed position in relation to the rhachis. Thus taking into consideration all characters *Leucophrys* is a well defined and clearly delimited genus.

Now the question remains of how to house the two species which were attributed to *Leucophrys* by STAPF and DANDY respectively. The tabular representation on p. 151 shows clearly that both species are very closely related to each other. Generically they possess most of the features which characterize the genus *Brachiaria* except for the changing position of the inferior glume in relation to the rhachis. But this may be explained by the condensed condition of the inflorescence, which is certainly the response of these two species to an extremely arid environment. I should therefore think it unwise to base a new genus on these two species and prefer to transfer them rather to *Brachiaria*. The continuation of the rhachilla beyond the superior floret, marked in *B. glomerata* and rudimentary (vestigial?) in *B. psammophila* (see pl. 1, fig. 4 & 2) is the most remarkable feature in this complex of species.

Panicum impeditum Launert, spec. nov.

Gramen annuum, caespitosum. Culmi numerosi, plerumque prostrati vel decumbentes, 10 - 35 cm longi, 2 - 3-nodes, striati, glabri laevesve, teretes, viriduli; internodia vaginis foliorum paulo longiora. Foliorum vaginae conspicue striatae, glabrae laeves-

spikelet	Leucophrys mesocoma	Brachiararia psammophila	Brachiararia glomerata
	with basal stalk	not stalked	not stalked or with very short stalk
inferior glume	1/1 length of spikelet 1 (- 3)-nerved glabrous	1/2 - 2/3 length of spikelet 3 (- 5)-nerved hairy	1/2 - 2/3 the length of sp. 1 (2)-nerved hairy
superior glume	longer than spikelet, 5-7-nerved with transverse veinlets; with transverse row of hairs above the middle; lanceolate-acute and often with an awn-point	as long as spikelet, usually 5 (rarely -9)-nerved without transverse veinlets; without transverse row of hairs; ovate, subacute to acute	as long as spikelet, 5-nerved without transverse veinlets; ovate-acute
lemma of inferior (♂) floret	dorsally with a dense transverse row of white hairs on either side above the middle. Ovate-oblong below then abruptly contracted and tapering to a fine point	dorsally evenly hairy. Broadly ovate, obtuse subacute, rarely apiculate	dorsally evenly hairy. Broadly ovate, obtuse or subacute
superior (♀) floret	glabrous without extension of rhachilla	margins of lemma long pilose without extension of rhachilla but sometimes with a minute basal scar	glabrous with rhachilla extension
ligule	short rim of hairs	not clearly developed	not clearly developed

ve, inferiores adplicitae, superiores laxae. Foliorum laminae 2 - 8 (- 11) cm longae et 3 - 6 mm latae, lineares vel anguste lanceolati-lineares, acutae, laete virides, laeves. Panicula 5 - 8 x 1,5 - 5 cm, erecta, ambitu elliptica vel ovati-elliptica; rhachis obtuse angulata, glabra, laevis; ramuli oblique adscendentes ad suberecti vel raro patentes, parce divisi, triangulati, laeves. Pedicelli 1 - 5 mm longi, rigidiusculi, apice patellati. Spiculae 2,7 - 3,3 mm longae, dorso modice compressae, ambitu anguste ellipticae vel ovati-oblongae, apice acutae ad cuspidatae, glabrae, tarde deciduae, laete virides. Gluma inferior perbrevis, membranacea, 1,1 - 1,4 mm longa, indistincte 3 - 5-nervis, explanata latissime ovata, apice acuta. Gluma superior membranacea, spicula subaequilonga, 7 - 9-nervis, elliptica vel ovati-elliptica, apice acutiuscula. Flosculus inferior sterilis (semper?): lemma membranaceum, 2,5 - 3,1 mm longum, (7) 9-nerve, late ellipticum vel ovati-ellipticum, apice acutiuscula; palea lemmati multo brevior vel ad squamam reducta, hyalina, anguste elliptica, 2-nervis, marginibus inflexis, apice plerumque retusa, carinis angustissime alatis haud ciliatis. Flosculus superior hermaphroditus: lemma ei flosculi inferioris brevius, 7-nerve, chartaceum vel coriaceum, ellipticum, apice subobtusum, pallide viride haud pullum, nitidum; palea lemmati paulo brevior, chartacea, apice subacuta. Caryopsis ignota. Antherae oblongae, plusminusve 1,25 mm longae.

Distribution: South West Africa, Gordonia District of the Cape Province.

Material examined:

South West Africa: Gibeon District: Mariental, 10.5.1955, DE WINTER 3483 (K, holotypus; M; PRE).

Cape Province: Gordonia District: Kalahari, Gemsbok National Park, 20,8 km N. of Twee Rivier, 880 m, 7.4.1961, LEISTNER 2229 (K). - Obobogorap, ca. 192 km NW. of Upington, ca. 850 m, 8.4.1960, LEISTNER 3152 (K; PRE). - Mata-Mata, in bed of Auob R., 24.4.1960, LEISTNER 1877 (K; PRE).

Habitat: Moist sandy clay, around water holes, vleis or pans or in river beds.

As Miss CHIPPINDALL (Grasses & Pastures of S. Africa p. 334, 1955) has quite rightly suggested more than one species may be represented under the taxon called *P. laevifolium*.

On the other hand this species could be rather polymorphic, thus forming several strains which are linked up by intermediates to a degree that would make any classification impossible. Within the framework of my studies for the projected "Prodromus einer Flora von Südwestafrika" which I undertook several years ago I could not clear up this complex as a whole, but this may be done in connection with the preparation of this genus for "Flora Zambesiaca" in the near future. Even a superficial look at material from southern tropical Africa as well as from South Africa reveals that many plants have been referred to *P. laevifolium* which certainly do not agree with its original concept. At this point attention should be drawn to the fact that *P. laevifolium* shows a close resemblance to the Indian species *P. psilopodium* Trin. The two species may even be synonymous. Both *P. gilvum* and *P. impeditum* were referred to *P. laevifolium* in the past. Even in habit they differ so much from this species that one could hardly classify them as varieties or subspecies of it. The main differences between these two species and *P. laevifolium* as well as the distinguishing characters among themselves are laid down in the following table. On the base of these characters the three species can be clearly identified; no intermediates have been found so far.

Panicum gilvum Launert, spec. nov.

Gramen annuum, caespitosum. Culmi numerosi, usque ad 65 cm alti, 2 - 4-nodes, prostrati vel leviter geniculati-adscendentes et e nodis inferioribus radicanter vel raro erecti, teretes, plerumque ramosi vel raro simplices, saepe spongiosi, laeves, glabri, straminei vel pallide viriduli, internodiis 3 - 10 cm longis vaginis paulo longioribus. Foliorum vaginae striatae, tenuiter membranaceae, saepe leviter inflatae, inferiores adplicatae, superiores laxae, laeves glabraeque. Ligulae circiter 1,5 mm longae, ciliatae. Foliorum laminae 3 - 15 (- 20) cm longae et 3 - 7,5 mm latae, lineares ad anguste lanceolati-lineares, tarde in exilitatem fastigiantur, flaccidae, erectae vel erecto-adscendentes vel rarissime subpatentes, explanatae vel plicatae, pallide viridulae vel stramineae, glabrae vel basin versus dissite pilosae. Panicula erecta, si non omnino tamen aliqua ex parte vaginis superioribus foliorum inclusa, 2,5 - 7,5 (- 10) cm longa et 0,75 - 3 (- 5) cm lata, contracta, ambitu anguste ovati-elliptica vel anguste elliptica, gilva vel straminea vel pallide viridula; rhachis rigida obtuse angu-

	<u>P. gilvum</u>	<u>P. impeditum</u>	<u>P. laevifolium</u>
	acute	acute to acuminate	obtuse to subacute
<u>Spikelet:</u> apex			
length	2,8 - 3,4 mm	2,7 - 3,3 mm	2,3 - 2,6 mm
colour	pale greyish green to yellowish	vivid green	green, often tinged with purple
<u>Inferior glume:</u>	0,8 - 0,9 mm	(1) 1,1 - 1,4 mm	0,7 - 1,1 mm
<u>Superior glume:</u>	11 - 14-nerved	7 - 9-nerved	10 (- 12)-nerved
<u>Lemna of inferior floret:</u>	(9) 10 - 11-nerved	7 (- 9)-nerved	9-nerved
<u>Panicle:</u>	2,5 - 7,5 (- 10) x 0,75 - 3 (- 5) cm	5 - 8 x 1,5 - 5 cm	(8) 15 - 40 x 5 - 15 cm
	totally or partly enclosed by upper leaf-sheath	free	free
	contracted (branches erect or ascending)	somewhat contracted (branches ascending)	usually open (branches spreading)
<u>Culms:</u>	geniculately ascending	ascending from a prostrate base	erect or geniculate at the base
	up to 65 cm tall	up to 35 cm tall	up to 100 cm tall
<u>Leaf laminae:</u>	3 - 7,5 mm wide	3 - 6 mm wide	up to 20 mm wide

lata, sulcata, glabra, laevis; rami plerumque solitarii, erecti vel oblique adscendentes haud patentes, parce divisi, triangulati, rigidiusculi. Pedicelli 1 - 6 mm longi, triangulati, rigidiusculi, apice patellati, plerumque laeves. Spiculae 2,8 - 3,4 mm longae, dorso modice compressae, ambitu oblongae vel oblongi-ellipticae vel ellipticae, apice acutae pallide viridulae vel stramineae, glabrae, deciduae. Gluma inferior perbrevis, membranacea, 0,8 - 0,9 mm longa, indistincte (3) 5 - 7-nervis, apice rotundata vel obtusa. Gluma superior membranacea, spicula subaequilonga, 11 - 14-nervis, elliptica vel ovati-elliptica, apice obtusa ad acutiuscula. Flosculus inferior masculus (semper?): lemma membranaceum, 2,2 - 2,75 mm longum, (9) 10 - 11-nerve, ellipticum ad ovati-ellipticum, apice obtusiusculum vel raro acutum; palea lemmati paulo brevior, tenuiter membranacea anguste elliptica, 2-nervis, apice acuta, marginibus inflexis, carinis angustissime alatis haud ciliatis. Flosculus superior hermaphroditus: lemma ei flosculi inferioris brevius, 7-nerve, coreaceum, ovatum vel ovati-ellipticum, apice obtusum ad acutiusculum, griseo-viridulum vel stramineum haud pullum (!), nitidum; palea lemmati paulo brevior, coriacea, apice acutiuscula. Caryopsis plusminusve 1,75 mm longa, dorso leviter complanata, ambitus elliptica, hilo basali subcircularis.

Distribution: South West Africa, not known from elsewhere so far.

Material examined:

South West Africa: Okahandja District: Pad Okahandja-Otjisazu, 12 km, 20.3.1912, DINTER 2544 (Z, holotype; M, isotype). - Onkongo, without date, DINTER 2/1914 (K!). - Grootfontein District: Farm Keibeb, 19.4.1950, SCHWEICKERDT 2186 (K; PRE) - Ovamboland Native Reserve: Small protected waterhole at Onjonjo near Ondangua, 9.2.1959, DE WINTER & GIESS 6911 (M).

Habitat: On sandy soil, margins of vleis.

This is the plant described by PILGER (Notizbl. Bot. Gart. Berlin 15: 448, 1940) as var. *contractum* of *Panicum laevifolium* Hackel. PILGER based his taxon on the specimen DINTER 2544a in the Berlin Herbarium. This specimen was destroyed by war action. A duplicate of DINTER's gathering, however, is preserved at Zürich, and there is hardly any possibility that it represents a plant different from the one seen by PILGER. This point is of great importance since PILGER's variety has been misinterpreted in the past: the name was wrongly attributed to a plant which is described as *P. impeditum* above. For the re-

lationship of *P. gilvum* see the discussion in connection with this species on p. 153.

Psilochloa Launert, genus novum

Spiculae similes, biflorae, dorso compressae, apicem versus leviter lateraliter compressae, lanceolatae vel anguste ovatae, apice acuminatae, exaristatae, a pedicellis persistentibus disarticulantes; flore inferiore ♂ superiore ♀. Glumae valde dissimiles; gluma inferior tenuissime membranacea, subhyalina, $1/5 - 1/4$ partem spiculae aequans, basin spiculae semiamplectens, inconspicue 5-nervis, apice truncata vel rotundato-truncata, gluma superior spiculam aequans, tenuissime herbacea, ovato-lanceolata vel late lanceolata, distincte 9-nervis, ecarinata, apice hyalina. Flosculus inferior: lemma glumam superiorem simulans, tenuiter membranaceum, 7-nervium, apice acutum et lateraliter modice compressum. Palea hyalina, 2-nervia, raro enervis, bicarinata. Lodiculæ duae, minutae, crassiusculae. Stamina tria; antherae oblongae. Flosculus superior: lemma coriaceum, glabrum, nitidum, minute punctatum, anguste ovato-lanceolatum vel lanceolatum, apice acutum, obscure 7-nervatum, dorso convexum, marginibus firmis involutis. Palea lemmati subaequilonga, glabra, coriacea, lanceolata, minute punctata, obtuse bicarinata. Lodiculæ duae, cuneiformes, minutae. Stamina tria; antherae oblongae. Ovarium glabrum, ovato-lanceolatum; styli liberi, terminales; stigmata plumosa ex apice exserta. Caryopsis ambitu oblonga, compressa, subacuta, longitudinaliter leviter sulcata, breviter stipitata; hilum inconspicuum, leviter immersum, lineare. - Gramen annuum aquaticum. Ligulae membranaceae, breves, irregulariter laceratae. Panicula erecta, densa; rhachis obtuse angularis, sulcata, glabra laevisque; rami erecti vel oblique ascendentes, leviter arcuati vel recti.

Species unica, Africam tropicam austro-occidentalem inhabitans.

Typus generis: *P. pilgerana*.

Psilochloa pilgerana (H. G. Schweickerd) Launert, comb. nov.

Acroceras pilgeranum H. G. Schweickerd in Notizbl. Bot. Gart. Berlin 14: 199 (1938), "pilgerianum".

Type: South West Africa, Ovikokoreo, 25.2.1914, DINTER 3395 (B).

The position of this species has remained doubtful since its inception. SCHWEICKERDT (loc.cit.) quite rightly states that because of the elongate hilum of its caryopsis it cannot be attributed to *Panicum* (see pl.1, fig.9 and pl. 2, fig.18). By putting it into *Acroceras*, most probably reluctantly, he introduced the "odd-man out" element into this so far nicely circumscribed genus. Although having much more material available than SCHWEICKERDT had more than thirty years ago, I am still faced with the same dilemma: "die taxonomische Stellung dieser Art ist mir nicht ganz klar". Only two things are clear to me: it spoils the concept of *Acroceras* and it would be out of place in *Panicum*. Thus there is only one possible decision to take, namely to express the taxonomic isolation of this taxon by raising it to generic status. Whether or not it represents a link between *Panicum* and *Acroceras* is open to speculation. There is certainly a field here to be investigated by the cytologist. The essential differences between *Acroceras* and *Psilochloa* are as follows:

	<u>Acroceras</u>	<u>Psilochloa</u>
ligule	a very short rim of hairs	membranous, up to 2,75 mm long, entire or irregularly split
inflorescence	composed of one-sided spike- or raceme-like branches which are widely spaced along a common axis	a panicle with usually ascending branches
inferior glume	3-nerved, about 2/3 the length of the spikelet	5-nerved, 1/5 - 1/4 the length of the spikelet
superior glume	5-nerved, with a thickened appendage at the apex	9-nerved, apex without any appendage
lemma of inferior (♂) floret	as superior glume	7-nerved, apex without appendage
lemma of superior floret	with small indurated apical appendages	without apical appendages

- continued next page -

	<u>Acroceras</u>	<u>Psilochloa</u>
caryopsis	hilum linear, stretching 1/2 - 2/3 the length of the caryopsis, not immersed	hilum linear, almost as long as the entire caryopsis, immersed.

Pseudobrachiaria Launert, genus novum

Spiculae similes biflorae, exaristatae, vel solitariae, haud contiguae, binatae altera subsessilis altera longe pedicellata, vel racemi apicem versus solitariae, in racemis strictis paucifloribus dispositae, a pedicellis persistentibus disarticulatae, dorso leviter compressae, a latere visa anguste oblongae, a dorso visa late ellipticae, apice acutae vel subobtusae. Glumae dissimiles; gluma inferior brevis, latissima, membranacea, basin spiculae amplectens, 5 - 7-nervis, apice haud divisa, ecarinata; gluma superior spiculae aequilonga, late ovata vel elliptica, herbacea, obtusa vel subobtusa, 7-nervis, apice haud divisa. Flosculus inferior plerumque sterilis: lemma spiculae aequilongum, glumae superiori simile sed 5-nerve. Flosculus superiore ♂ : lemma coreaceum, dorso visum ovatum vel late ellipticum, apice subacutum, transverse rugosum. Palea lemmati subaequilonga, coriacea, transverse rugosa. Lodiculæ duae, late cuneiformes, crassiusculæ, minutæ. Ovarium glabrum, ovatum vel ovati-ellipticum; styli liberi, terminales, stigmata plumosa, ex apice exserta. Caryopsis late elliptica, compressa, obtusa; scutellum ovato-oblongum; hilum basale, subrotundum. - Gramen annuum. Ligulae truncatae, ad seriem ciliolum brevissimorum redactae. Inflorescentia laxè composita; racemis distantibus, pauca spiculatis, subrigidis, patentibus vel oblique adscendentibus. Species unica (?), Africam tropicam et australem inhabitans.

Typus generis: *P. deflexa*.

Pseudobrachiaria deflexa (Schumach.) Launert, comb. nov.

Panicum deflexum Schumach., Beskr. Guin. Pl. : 63 (1827).

Panicum regulare Nees, Agrost. Cap. : 41 (1843) in obs.

Panicum nudiglume Hochst. in Flora, 27: 253 (1844).

Brachiaria deflexa (Schumach.) C. E. Hubb. ex Robyns in
Bull. Jard. Bot. Brux. 9: 181 (1932).

Brachiaria regularis (Nees) Stapf in Fl. Trop. Afr. 9:
544 (1919).

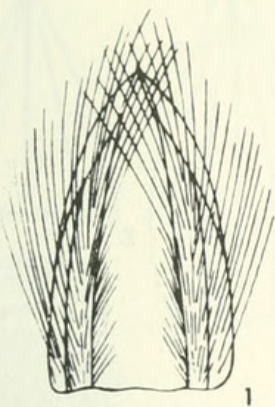
Type: from Guinea (C).

Since about the turn of the century there has been a tendency amongst taxonomists to break up large genera into smaller recognizable units. Although this is, of course, not the place to speak out in favour of or even perhaps against the merits of this trend, which has affected all sections of the plant kingdom, it should be noted that there is certainly no other family in which such a proliferation of genera has occurred than the Gramineae. A case in point is the once universal genus *Panicum*. It is the merit of A. S. HITCHCOCK and A. CHASE to have recognized that this genus was nothing but an unwieldy agglomeration of various heterogeneous groups. In short, the consequences of their joint effort were both a re-evaluation of previously described genera sunk into *Panicum* and the creation of a number of new ones. Most of these genera are clearly defined; they represent units of common species produced by evolutionary divergence. But besides these groups there are quite a number of taxa which cannot easily be fitted into any of them. Their origins can be manifold; some may be not yet extinct intermediates, others may be the end-product of complicated genetic permutations. It is this kind of species that causes headaches for taxonomists. One easy solution to the problem is to put them into the genus to which they show the greatest possible overall similarity. Unfortunately this procedure in most cases obscures the original delimitation of an otherwise well defined genus. In order to avoid this, one simply has to raise these species to generic rank, a process which not only leads to a refinement of genetical boundaries but also indicates the taxonomic significance of these taxa more effectively. *Brachiaria deflexa* is a typical example. As Miss CHIPPINDALL (Grasses & Pastures of S. Africa: 378, 1955) has already pointed out, it is indeed almost impossible to key out, unambiguously, the genus *Brachiaria* within the *Panicoideae* as long as this species remains in it: *B. deflexa* differs from the typical *Brachiaria* in two essential characters: firstly the variable position of the inferior glume in relation to the rachis and, secondly, the inflorescence. In *Brachiaria* all the spikelets are arranged usually in pairs - in dense racemes or spike-like branches along

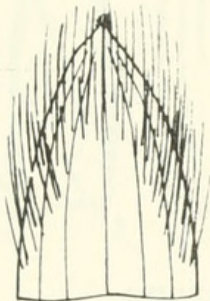
a common axis; the inferior glume of each spikelet faces the rhachis. The position of the inferior glume in *B. deflexa* is virtually indefinable; the spikelets terminate pedicels of unequal lengths (see pl. 2, fig. 19) thus rendering the entire inflorescence quite different from that of *Brachiaria*. On the other hand the species under consideration cannot be transferred to *Panicum* because of the different structure of its caryopsis (see pl. 1, fig. 8, 9 and 10). Moreover the inflorescence of *Panicum* is a loose true panicle. Without doubt *Pseudobrachiaria* is an intermediate between *Brachiaria* and *Panicum*. Further studies may prove that it may comprise two or three species.

Plate 1:

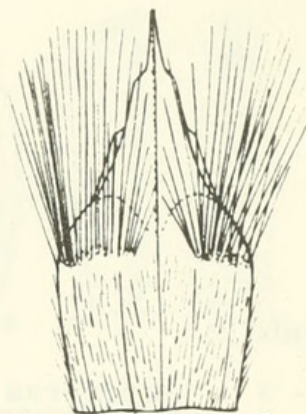
- 1 - 2 *Brachiaria psammophila*: 1) lemma of inferior floret (dorsal view) (x 6); 2) superior floret (ventral view) (x 6).
- 3 - 4 *Brachiaria glomerata*: 3) lemma of inferior floret (dorsal view) (x 6); 4) superior floret (ventral view) showing extension of rhachilla (x 6).
- 5 - 7 *Leucophrys mesocoma*: 5) lemma of inferior floret (dorsal view) (x 6); 6) superior floret (ventral view) (x 6); 7) lemma of inferior floret (lateral view) (x 6).
- 8 *Pseudobrachiaria deflexa*: 8) caryopsis showing a) scutellum, b) hilum (x 15).
- 9 *Panicum gilvum*: 9) caryopsis showing a) scutellum, b) hilum (x 15).
- 10 *Brachiaria marlothii*: 10) caryopsis showing a) scutellum, b) hilum (x 15).



1



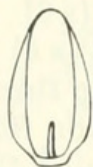
3



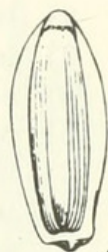
5



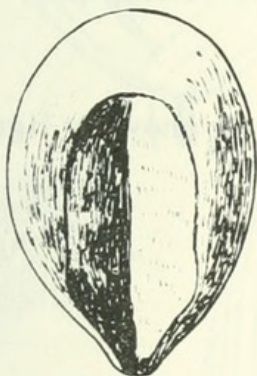
2



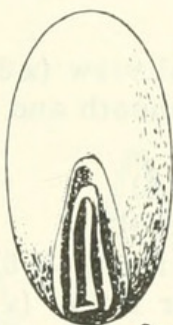
4



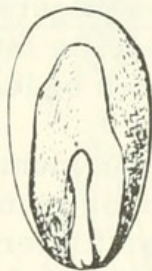
6



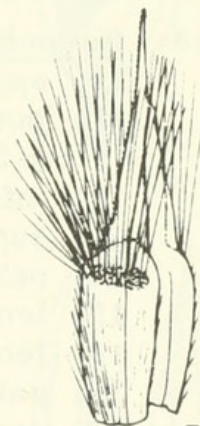
8a



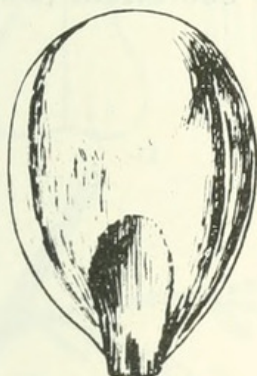
9a



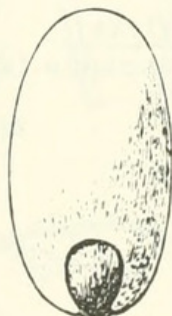
10a



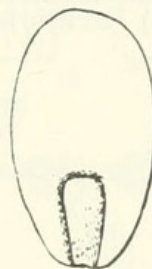
7



8b



9b

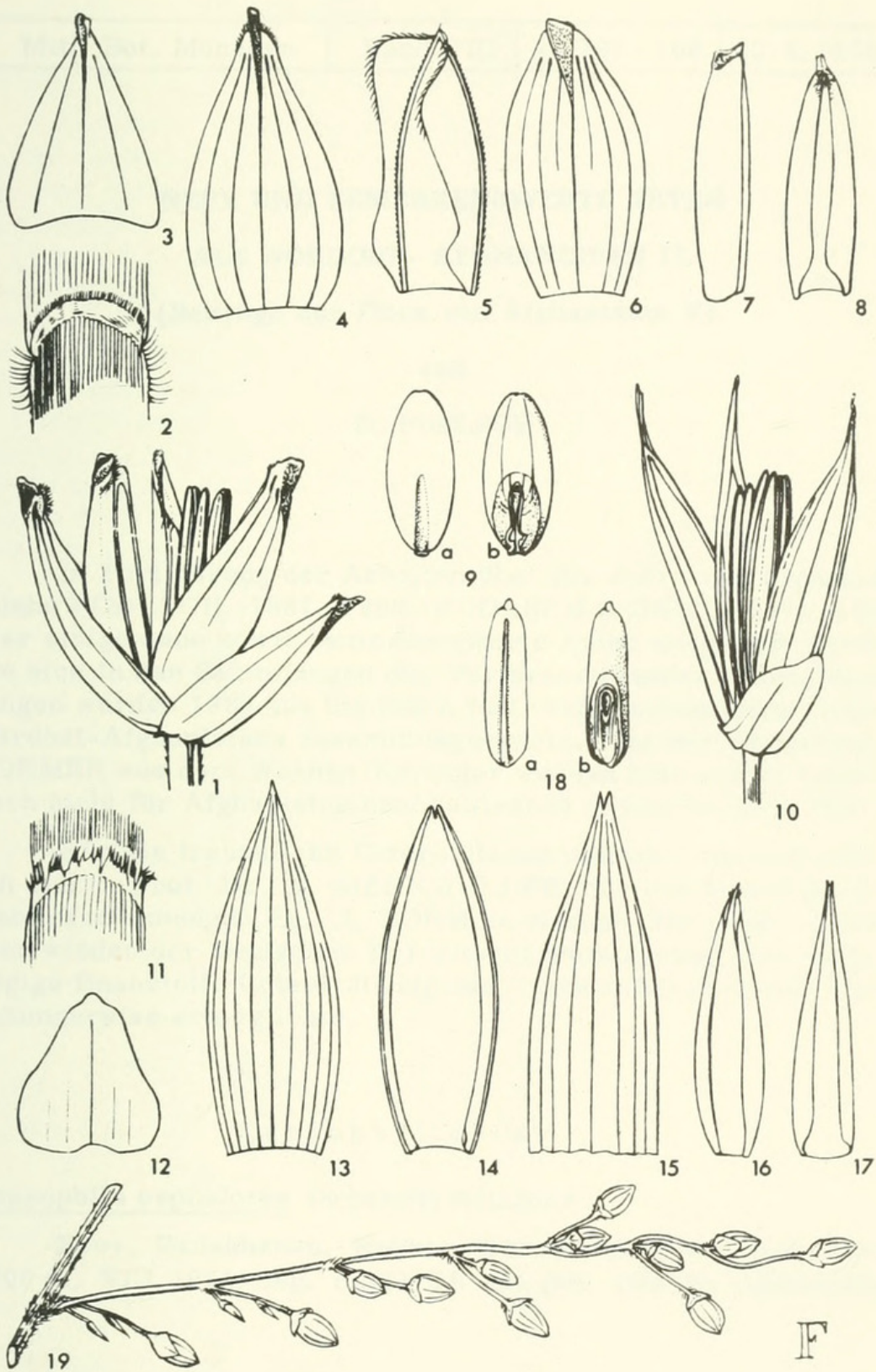


10b

F

Plate 2:

- 1 - 9 Acroceras macrum:
1) spikelet in lateral view (x 6)
2) junction of leaf-sheath and lamina showing ligule (x 3)
3) inferior glume (x 6)
4) superior glume (x 6)
5) palea of inferior floret (x 6)
6) lemma of inferior floret (x 6)
7) lemma of superior floret in lateral view (x 6)
8) same in ventral view (x 6)
9) caryopsis showing a) hilum, b) scutellum (x 6)
- 10 - 18 Psilochloa pilgerana:
10) spikelet in lateral view (x 6)
11) junction of leaf-sheath and lamina showing ligule (x 3)
12) inferior glume (x 6)
13) superior glume (x 6)
14) palea of inferior floret (x 6)
15) lemma of inferior floret (x 6)
16) lemma of superior floret (x 6)
17) palea of superior floret (x 6)
18) caryopsis showing a) hilum, b) scutellum (x 6)
- 19 Pseudobrachiaria deflexa:
19) branch of inflorescence (x 1,5).





Launert, Edmund. 1969. "MISCELLANEOUS TAXA OF GRAMINEAE FROM SOUTH WEST AFRICA AND ADJACENT AREAS." *Mitteilungen der Botanischen Staatssammlung München* 8, 147–163.

View This Item Online: <https://www.biodiversitylibrary.org/item/52263>

Permalink: <https://www.biodiversitylibrary.org/partpdf/194058>

Holding Institution

New York Botanical Garden, LuEsther T. Mertz Library

Sponsored by

The LuEsther T Mertz Library, the New York Botanical Garden

Copyright & Reuse

Copyright Status: In copyright. Digitized with the permission of the rights holder.

Rights Holder: Botanische Staatssammlung München

License: <http://creativecommons.org/licenses/by-nc-sa/3.0/>

Rights: <https://biodiversitylibrary.org/permissions>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.