

## No. 47. Two new Grasses from Paraguay

BY

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*Paspalum plumosum*, HENR. nov. spec., — Perenne, dense caespitosum. *Culmi* stricte erecti, 6–9 dm alti, graciles, simplices, teretes, laeves pauci-nodes, nodis paullulo pilosis. *Foliorum vaginae* subarctae, apice hiantes, leviter compressae, laeves, glabrae, nitentes, striatae, sordide stramineo-fuscae, prope collum longe denseque villosae, marginibus glabris; auriculae longe barbatae. *Ligula* valde abbreviata, subindurata, subscariosa, glabra. *Laminae* teretes, junci-formes, pungentes, diametro  $\frac{1}{2}$ –1 mm, plus quam 25 cm longae, pagina superiore ad sulcum levem reducta, intus medullosae, erectae, rigidiusculae, virides, extus glaberrimae, scaberrimae, superne ad margines sulci scaberulae, inferne longe denseque villosae, pilis e tuberculis fuscis enatis, summae valde abbreviatae 1–2 cm longae. *Racemi* 3 vel 4 singuli, duo superiores conjugati,  $3\frac{1}{2}$ –6 cm longi, erecti, internodiis 1–2 cm sejuncti, laxiusculi, graciles, recti, paniculam lineari-lanceolatam formantes, *rhachi* communi subtereti, glaberrima, filiformi, axillis ebarbatis, rhachi racemi rectiuscula, subtriquetra, applanata, margine glabro, spiculis multo angustiore.

*Spiculae* singulae inordinate biseriales, breviter pedicellatae, fere sessiles, pedicellis cupuliformibus, glabris, ovato-lanceolatae, 4 mm longae, 1 mm latae, laxe dispositae. Spiculae reversae (i. e. gluma fertilis ab axi aversa), ad basin longe barbatae, quasi annulo piloso cincto. *Glumae* steriles subaequilongae, gluma I 5-nervis, nervo medio rariter duplicato, ergo 6-nervis, margine inferne pilis vestita, gluma II primam subaequans, modo gluma I pilis vestita, 3-nervis, vel nervis duobus lateralibus approximatis indistinctis, tum sub-5-nervis, ceteris ut in prima sed margine tota pilis vestita; gluma III fertilis sterilibus brevior, 3,2 mm longa lineari-lanceolata, acutiuscula, flavida, leviter longitudinaliter striolata, glabra sed apice pulchre barbata, quasi plumosula (unde nomen speciei), leviter 5-ner-

vis, marginibus inflexis; *palea* binervis, nervo medio suppressa, apice breviter barbulata, marginibus inflexis, infra non auriculata.

Hab. Paraguay, Pastoreo-mi, á l'Est de la Cordillère de Villarrica, 24 septemb. 1874 leg. B. BALANSA no. 105, in Herb. Lugd. Batav. sub no. 908, 93—857.

The reversed position of the solitary spikelets (in which the first glume is wanting) and the racemes aggregated at the summit of the culms place our plant in the section *Axonopus* of *Paspalum* and because this section being accepted by American authors as a valid genus our species must be named *Axonopus plumosus*, related to the Brazilian *Paspalum comans*, TRIN., also a member of the *Axonopus* group and therefore named by me *Axonopus comans*. The latter is distinguished from *Axonopus plumosus* as follows:

Spikelets 5 mm long, glabrous, towards the top somewhat hairy, without long hairs at the base; lemma 4 mm long, at the top barbate, pedicels of the spikelets strongly compressed, at both sides with a small prolongation; there is no distinct callus. — *Axonopus comans*, (TRIN.) HENR..

Spikelets 4 mm long, along the margins strongly hairy with long soft hairs, at the base with a circle of long hairs, lemma 3 mm long or slightly longer, at the top with a tuft of long hairs, pedicels not so strongly compressed, slightly enlarged, cupuliform, without prolongation; the callus is more or less distinct. *Axonopus plumosus*, HENR..

The only specimen of *Paspalum comans* I saw, is a plant from the same locality, collected by BALANSA (no. 104) thus determined by myself. This number is also named *Paspalum comans* by Prof. MEZ, but he gave the same name to the Balansa plant numbered no. 105, („communication by letter”).

After having compared the two plants with the original description of *Paspalum comans*, TRIN. in DOELL, *Flora Brasiliensis* p. 109, I concluded, that only the number 104 is identical with this species, the number 105, the basis of my new species differing from this one as noted above.

*Panicum caaguazuense*, HENR. nov. spec. — Perenne; rhizoma reptans, horizontale; innovationes extravaginales, stolones suprateraneos elongatos haud radicanes formantes, glabrae ut tota planta. *Culmi* procumbenti-adscendentes, plurinodes, teretes, glaberrimi, ad apicem usque foliati. *Vaginae* arctae, internodiis breviores, teretiusculae, striatae, laeves; *ligulae* brevissimae, fere subnullae; *laminae* circa 8—9 cm longae, sensim acuminatae, rigidae, multistriatae,

nervo medio parum prominulo, ad 8 mm latae, e basi rotundato-truncata lineari-lanceolatae, marginibus cartilagineis glabris laevibus. *Panicula* terminalis, ampla, laxissima, patula, ambitu fere orbicularis, ad 30 cm longa, rhachi ramisque glaberrimis, his solitariis, mox supra basin divisus, dein ramulos secundarios decrescentes edentibus, spiculis solitariis vel binis, longe pedicellatis, pedicellis circa 2—4 cm longis laevibus, patentibus. *Spiculae* ovato-lanceolatae, 2,2 mm longae, 1 mm latae; *gluma* I. spiculae  $\frac{2}{3}$  aequans, late ovato-lanceolata, acuta, 5-nervis, II. spiculam aequans, late lanceolata, acutiuscula, 5-sub-7-nervis, nervis prominentibus, III. II aequans, apice a latere subcucullato-compressa, leviter carinata, vacua (in axilla sine palea), IV. (fertilis) quam II. et III. paullo brevior, oblonga, leviter stipitata, supra basin subimpressa, obtuse acuminata, convexa, pallida, nitens, pilis pellucidis perbrevis sparsim obtecta. *Palea* pallida, nitens, glabra.

Hab. Paraguay, Caaguazu, in paludosis, 6 mart. 1876, leg. B. BALANSA no. 22, in Herb. Lugd. Batav. sub no. 908. 93—504.

A very elegant species, belonging to the section *Eupanicum* and placed by me in the group „*Parvifolia*”. The species of this group are perennial with more or less decumbent culms, diffuse panicles and small glabrous spikelets, the first glume more than half the length of the spikelet. Wellknown species of this group are *Panicum cyanescens*, NEES and *Panicum parvifolium*, LAM.. Our plant has a very striking character, the lemma being papillose hairy, under a strong lense sparsely obtected with very short blunt hyaline hairs. This character is present in *Panicum helobium*, MEZ (ap HENR. in Meded. Rijks Herbarium no. 40 (1921) p. 52), *Panicum cyanescens*, NEES and *Panicum parvifolium*, LAM., but also in a recently described species: *Panicum errabundum*, HITCHC..

*Panicum* species with hairy lemmas occur in other groups, such as „*Urvilleana*” and „*Parviglumia*” but the hairs are scattered, appressed and silky. They differ totally from the curious very short hyaline ones mentioned above.

*Panicum polycladum*, EKM. supposed by EKMAN to belong to our group, is a plant not growing in swamps, with pubescent or hirtellous axis and branchlets of the panicle and small spikelets, 1,5 mm long. This species belongs to the group „*Cordovensia*”.

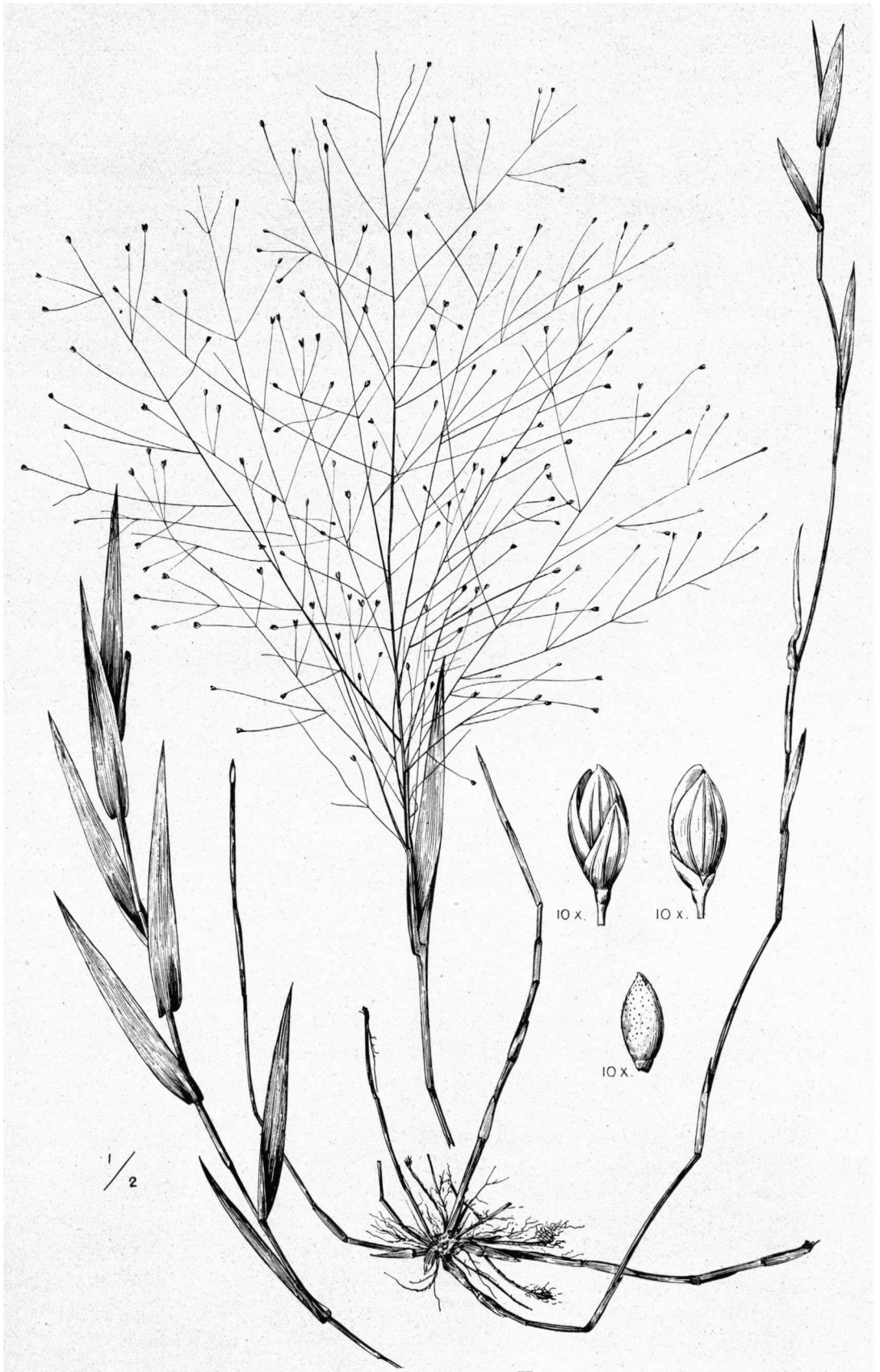
*Panicum Niederleinii*, MEZ given as a nomen nudum by EKMAN is probably described by MEZ under another name.

*Panicum Warmingii*, MEZ is not a valid species but only the cleistogamous form of *Panicum cordovense*, FOURN.. The

cotype I saw is BALANSA no. 6a. In the BALANSA Herbarium at Leiden is a fine specimen showing this clearly, this plant growing with *Panicum cordovense* on the same rootstock. Prof. MEZ has neglected the work of American agrostologists.

*Panicum Schwackeanum*, MEZ, probably belonging to the section „*Parvifolia*”, cannot be recognized from the very short and bad description given by MEZ.

*Panicum errabundum*, HITCHC. is allied to the *Panicum helobium*, MEZ. This species differs only by the firm hairy blades, but than this character is also given in the description of the *Panicum helobium* („*laminis utrinque pilosis vel glabris*”). *Panicum helobium* is according to the cotypes a variable species having glabrous or pubescent and thin or firm blades. It is interesting to remark that *Panicum parvifolium* presents the same phenomenon and it is very probable that extensive fieldstudy will prove that this species is also a mixtum.



***Panicum caaguazuense* Henr.**