

ON A NEW SPECIES OF AXONOPUS FROM SOUTH AMERICA,  
WITH CRITICAL OBSERVATIONS

by

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Some years ago I treated a number of species of the genus *Axonopus* in Blumea IV, p. 510. Among them was *Axonopus Fockei* Henr., based upon Mez's *Paspalum Fockei*, which was published in Fedde's Repertorium XV, 1917, p. 62.

I mentioned Ule's number 8022 as identified by Mez himself being his *Paspalum Fockei*.

When I was preparing work on the grasses of Suriname, many years ago, I asked Prof. Mez to give me information about this *Paspalum Fockei*. The plants collected by Focke were under the charge of the director of the herbarium at Utrecht, Prof. A. A. Pulle, but, although I had at my disposal all the grasses of that collection, no *Paspalum* was found among them which could be the type of duplicate type of Mez's species. Mez's answer to my letter said nothing about the actual type or its whereabouts, but simply stated that Ule's number 8022 (which was in my hands) was his *Paspalum Fockei*, an opinion, accepted by me for the moment.

When I studied the genus *Axonopus* more in detail with the valuable help of Miss Amshoff, many doubts arised as to Mez's species, because Ule's plant no. 8022 did not agree with the description, given by Mez. So we were not satisfied with the data hitherto known and asked for the material at Berlin. After Mez's death his own material was deposited in the Berlin Herbarium and there were indeed two sheets bearing the name *Paspalum Fockei* in Mez's own handwriting. Both sheets were inspected by us. One plant was the number 8022 by Ule; a plant well-known to us, being represented by a very fine specimen in the herbarium at Leiden. On the second sheet in the Berlin Herbarium there was, however, a quite different plant from Suriname and collected by Wulschlägel no. 581. In our treatment of the grasses in Pulle's Flora, we gave our opinion on p. 346 of Vol. I, part 1, saying that the plant of Wulschlägel was not the actual type (being not mentioned with the description) but answered to the description of Mez with exception of the length of the spikelets, which were scarcely  $2\frac{1}{2}$  mm long, whereas Mez mentioned them as being  $3\frac{1}{2}$  mm long. It may be, however, that in the description this is a misprint. We gave in Pulle's Flora a description in the English language.

To compare the various specimens I give here at first Mez's original description of *Paspalum Fockei*:

"Perennis, ad 0.6 m alta, habitu iridaceo. Folia equitantia infima squamiformi-ovata rotundata glabra, superiora e vagina valde carinato-compressa, late lineari, profunde aperta, margine ciliata cet. glabra in laminam optime linearem, apice rotundatam, basi haud contractam, optime carinatum, siccam tota longitudine complicatam, chartaceam, medio non nisi obscure nervosam, glabram, ad 0.15 m longam et 10 mm latam producta; ligulis brevissime truncatis calliformibus, margine dense breviterque pilosis. Culmi erecti, validi, compresso-angulati, praeter nodos barbatos glabri, internodiis quam vaginae brevioribus. Inflorescentia in culmi apice singula, breviter stipitata, folia bene superans, subpauciflora, e spicis ad 4 subaequalibus, subdigitatis, suberectis, haud curvatis, sessilibus, ad insertionis nodulos brevissime pilosis, spiculas laxe distichas nullo modo unilaterales gerentibus, gracillimis, ad 80 mm longis composita; rhachibus valde angulatis nec complanatis, fere omnino rectis, marginibus non nisi minutissime et perobscure serrulatis, in spiculam vigentem desinentibus; spiculis stricte erectis, rhachi appressis, seriei eiusdem sequentibus sese haud attingentibus, plane sessilibus, parce pilosis, sublanceolatis, apice sensim acutis, ad 3.5 mm longis et 1 mm latis; glumis aequilongis, apice acutis vel acutiusculis et hic minutissime ciliolatis, bene 5-nerviis; palea inferore quam glumae sat brevior acutiuscula, straminea, pergamacea, laevi, vix nitidula, apice ciliolata, paleam superiorem rotundatam, apice minute ciliolatam cet. glabram bene superante.

Guyana, Surinam bei Paramaribo (Focke)."

In this description we find some general characters applying to various species of *Axonopus*, but there are a great many data which do not agree with Ule's specimen no. 8022, especially the short inflorescence, consisting of only 4 racemes, is quite distinct from the large panicle with numerous racemes in Ule's plant. Many other characters in the description do not agree with Ule's number as is evident if we compare Mez's description with the plate of Ule's plant given here by me and with my own description of Ule no. 8022.

Wulschlägel's number agrees much better with Mez's description and because a description prevails and Mez's localities are sometimes erroneous, I accepted *Axonopus Fockei* as a valid species in Pulle's Flora, but at the same time I was convinced that Ule's plant from Brazil belonged to a very distinct and easily recognizable new species.

A recapitulation of the various data is given here.

1. The authentic description was published in the year 1917 with Focke's plant as type specimen from Paramaribo. No such specimen could be located.

2. A sheet from Mez's own herbarium, afterwards in the Berlin Herbarium bears a label in Mez's own handwriting: "Wulschlägel 581 Pasp. Fockei n. sp." Another typewritten label bears the data: "Carl Mez Herbarium nr. 1.1630. Paspalum Fockei Mez! Wulschlägel nr. 581".

This specimen has 4 racemes and answers to the description with exception of the length of the spikelets.

3. A sheet of Ule no. 8022 in the Berlin Herbarium is labeled by Mez: "Pasp. Fockei Mez. Carl Mez VI 19." Quite the same plant with

Ule's number 8022 is in the herbarium at Leiden. This number does not agree at all with the description and the Berlin plant was identified by Mez in the year 1919, two years after the publication of his species *Paspalum Fockei* (identification probably by memory).

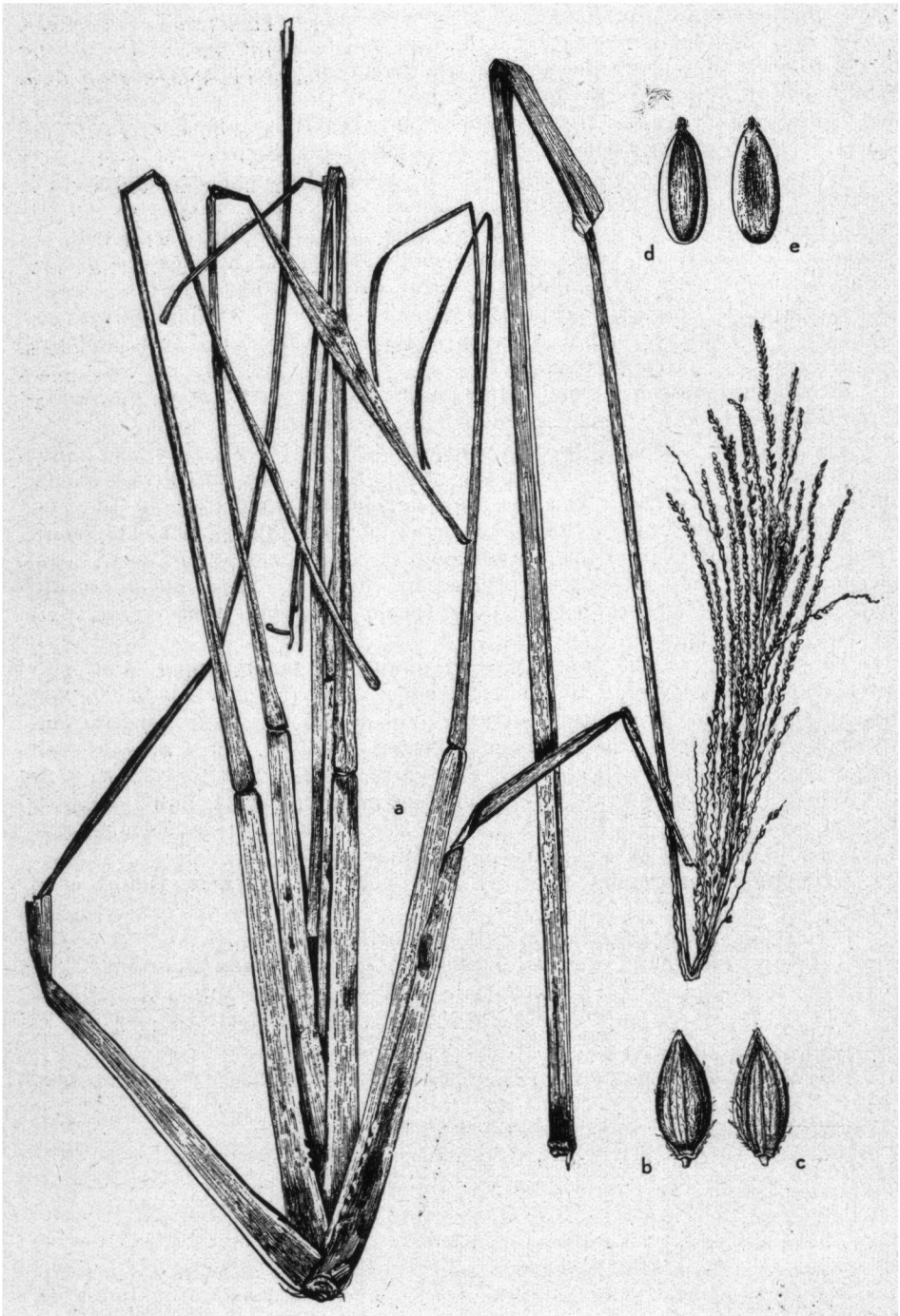
Hence our conclusion is, that the most authentic specimen of *Paspalum Fockei* Mez, answering best to the original description is Wullschlägel's number 581 from Suriname, further that the specimens collected by Ule and named in the year 1919 *Paspalum Fockei* by Mez, belong to a quite different species, which on account of the very characteristic whitish indumentum of all the vegetative parts of the plants, received the name of *pruinosis*. I give here the following description:

***Axonopus pruinosis* Henr. nov. spec.**

Perennis, probabiliter caespitosus, cum panicula circa 70 cm altus, stricte erectus; tota planta pallida, albido-cinereascens vel inferne ferrugineo-suffusa; vaginae basales valde flabellatae, equitantes, a culmo solutae, ad 20 cm longae, valde compressae, circa 1 cm latae, late carinatae, carina circa 2—3 mm lata; margines vaginarum laxae, leviter apertae, haud involutae, non vel vix hyalinae, glaberrimae, longitudinaliter leviter, ad carinas manifeste striatae, vaginae ad apicem dorso-ventraliter constrictae, quasi sed non vero subarticulatae; folia rigida, laminae e basi subrotundata circa 6 mm latae, sensim angustatae, 30—40 cm vel interdum plus longae, interdum superne ad circa 1 cm latae, inferne canaliculato-complicatae et tunc circa 5—6 mm latae, haud acuminatae sed apex valde obtusatus, arcuato-scariosus, quasi appendiculatus, fusco-coloratus; laminae marginibus glaberrimis, vel ad basin puberulis, haud membranaceis, longitudinaliter striatae; ligula brevissima, dense sed breviter ciliata, pallide fusca; culmus validus, subarundinaceus, sine panicula ad 50 cm altus, compresso-carinatus, 4—8 mm latus, stramineus, glaberrimus, vaginis laxissime circumdatus, nodo unico paullo infra  $\frac{1}{2}$  culmi sito, breviter adpresse sericeo; panicula ad 25 cm longa, contracta, rhachi ramisque angulosis, racemi numerosissimi, secus axin communem glaberrimum alterni, stricte erecti; rhachi depresso-trigona, basi in axillis breviter vel minute puberula, ceterum glabra, pedicelli spicularum ad rhacheos nodulos singuli, brevissimi, glabri; spiculae ovato-lanceolatae, acutae, ad  $2\frac{1}{4}$  mm circa longae, 1 mm latae, leviter sparse pilosae, gluma prima deest, glumae II et III subaequilongae, tenuiter membranaceae, 5- et 7-nerves, nervi alternatim crassi et tenues, crassioribus ad apicem anastomosantibus; lemma fertilis (IV) spiculam subaequans, lineari-lanceolata, leviter acuminata, pallida, marginibus inflexis, ceterum vix vel minutissime puncticulata, apice distincte setuloso-ciliata.

America meridionalis: Brasilia, Rio Branco, Surumu, in montibus prope Quarai, Muïam superior, Febr. 1910. E. Ule, Herbarium Brasiliense, no. 8022. Typus speciei in Herb. Lugd. Bat. sub no. 915. 106—372.

Important differences with the true *Axonopus Fockei* (taken from Mez's own description) are that in Mez's species the blades are not contracted at the base, the ciliate sheath-margins and the few-flowered inflorescence, consisting of only 4 subdigitate racemes. Probably constant differences of *Axonopus Fockei* with the new species are also the sericeous collar at the junction of the blade and the sheath and the summit of the leaves, which is acutish, puberulous and not provided with the scarious appendages.



These characters are found in both specimens, Wullschlängel 581 and Splitgerber no. 724 together with the other specimens mentioned in the Flora of Suriname. Moreover, the whitish indumentum of Ule's species is not mentioned by Mez and the specimens accepted in the Flora of Suriname have dark-green foliage. Mez's species was described from Paramaribo, a coastal region, whereas Ule's plant is a mountain-species.

When I treated some species of the genus *Axonopus* in Blumea IV (1941), I mentioned the beautiful species with white hairs instead of golden ones in the panicle, from Guiana and described by Doell as *Paspalum senescens*. I made a new combination for this species in the genus *Axonopus*, but unfortunately I wrote *canescens* instead of *senescens*. The combination *Axonopus canescens* (Doell) Henr. is wrong, there is no *canescens* by Doell, although there is a *canescens* by Nees. I accept the opportunity to rectify this error.

*Axonopus senescens* (Doell) Henr. is the correct name, based on Doell's *Paspalum senescens*; a name to change in the index on p. 536.

The common carpet grass *Axonopus compressus* (Sw.) P. B. is found throughout tropical America, in the West Indies and in the southern parts of North America. This species is evidently introduced in the Old World but is according to Stapf a member of the tropical African Flora, where it is found in Upper and Lower Guinea. Having seen some specimens from both regions, mentioned by Stapf, I found that there are some striking differences between the specimens from West Africa and the New World ones.

The spikelets of the West African plants are much longer, and both outer scales much overtop the fertile lemma, they are only up to 2.8 mm long in the typical *Axonopus compressus* but are in the West African ones up to 3½ mm long in the specimen collected by Hens and 4 mm or even longer in a specimen collected by Pobéguin.

When I saw the latter in the herbarium at Paris I noted it as a distinct species but I prefer to accept the West African members of *Axonopus compressus* as a subspecies as follows:

*Axonopus compressus* (Sw.) P. B., subsp. *congoensis* Henr., nov. subsp.

Differt a typo praesertim spiculis longioribus, ad 3.5—4 mm vel paullo plus longis, glumis haud raro ad 7-nervis, foliis vulgo angustioribus.

*Africa occidentalis*, Guinea inferior, Congo Belgica, M'Sonata, 1000 ped. loco sabuloso, leg. Fr. Hens anno 1888. Série C. no. 162. *Typus* in Herb. Lugd. Bat. sub no. 908. 146—1416.

Hue pertinet etiam:

Guinea superior, Congo Gallica, prope Timbo, leg. Pobéguin no. 1703 vid. in Herb. Paris.

Explanation of the plate. a. Whole plant  $\frac{2}{3}$  natural size; b. and c. two spikelets back and front side, magnified 8 times; d. and e. fertile lemmata from both sides, magnified 8 times.