

ACRIULUS ONCE MORE REDUCED (CYPERACEAE)

J. H. KERN
Rijksherbarium, Leyden

Ridley (1883) based the genus *Acriulus* (Cyperaceae) on two species, *A. madagascariensis* Ridl. from Madagascar, and *A. griegifolius* Ridl. from Angola, the former of which must be considered the nomenclatural type, as the generic characters were chiefly taken from it, and the latter species was but inadequately known at the time. The author originally admitted a close affinity of *Acriulus* to *Scleria*, but "the different habit, the solitary spikelets, and the deeply cleft style not continuous with the ovary" he regarded as sufficient to base a new genus upon, and, later on even as so important that he placed *Acriulus* in a different tribe, viz in *Cryptangieae*, not in *Sclerieae* (Ridley, 1884).

Having had the opportunity to study a fairly great number of *Acriulus* specimens, I am now convinced that neither the so-called generic characters mentioned by Ridley nor any other feature justify their exclusion from *Scleria*. The distinct articulation between style and ovary occurring in several cyperaceous genera, such as *Fimbristylis*, *Bulbostylis*, *Eleocharis*, and *Rhynchospora*, undoubtedly furnishes a first-class character for generic delimitation. However, in *Acriulus* there is no question of the style being articulated with the ovary in this way, nor could I find any structural difference with the gynoeceium in *Scleria* (fig. c and d). Deeply cleft styles are common in *Scleria*. There can hardly if at all be question of a habit peculiar to *Scleria*, a very large genus comprising annuals as well as perennials, both groups with numerous species of very diversified stature ranging from dwarfy to very stout. Therefore the alleged peculiar habit of *Acriulus* cannot be taken into account at the generic level. Besides, in *Scleria poaeformis* Retz., which may be the nearest ally of *Acriulus*, the numerous male spikelets are solitary, about evenly distributed along the branches of the panicle, and the few nut-bearing spikelets mostly restricted to the base of those branches, just like in *Acriulus*.

Ridley was apparently also struck by the presence of a scabrid appendage of the connective in his *Acriulus* species, but this is so common a phenomenon in *Scleria* and even throughout *Cyperaceae* that it need not be discussed here.

C. B. Clarke (1902) reduced *Acriulus* to *Scleria*, although keeping it as an infrageneric taxon, the systematic rank of which was not definitely indicated. All the characters brought to the fore by Ridley were omitted, and replaced by the following: "Female spikelets with no male rudiments, so that the female flower appears terminal. Hypogynous disc merely the stalk of the nut. Rather stout plants, with copious panicles."

If the female flower in the nut-bearing spikelets of *Scleria* were actually inserted laterally and always accompanied by some male flowers or at least by a vestigial male one, this in contradistinction to the single terminal female flower in *Acriulus*, there would certainly be sufficient reason for generic discrimination. As a matter of fact, however, spikelets without a trace of a male flower are found in several species of *Scleria*, and within this genus all kinds of intermediates occur between the bisexual spikelet with some male flowers and the strictly female one (Kern, 1961, p. 148). The latter type is not only to be found in Asian species, but also in African ones, for instance in the members

of sect. *Ophryoscleria* (Nees) C. B. Clarke; by its peculiar disk and persistent style this section is indeed far more divergent from the common *Scleria* type than *Acriulus*.

In my opinion the female *Scleria* flower is also terminal (Kern, 1961, p. 142), but at any rate the disappearance of the last trace of a male flower does not change the position of the female flower from lateral to terminal, neither in *Scleria* nor in *Acriulus*.

If I understand Clarke's somewhat peculiar wording correctly, he assumes the nut in *Acriulus* to be destitute of a disk. Now, ripe nuts have but seldom been collected. I have

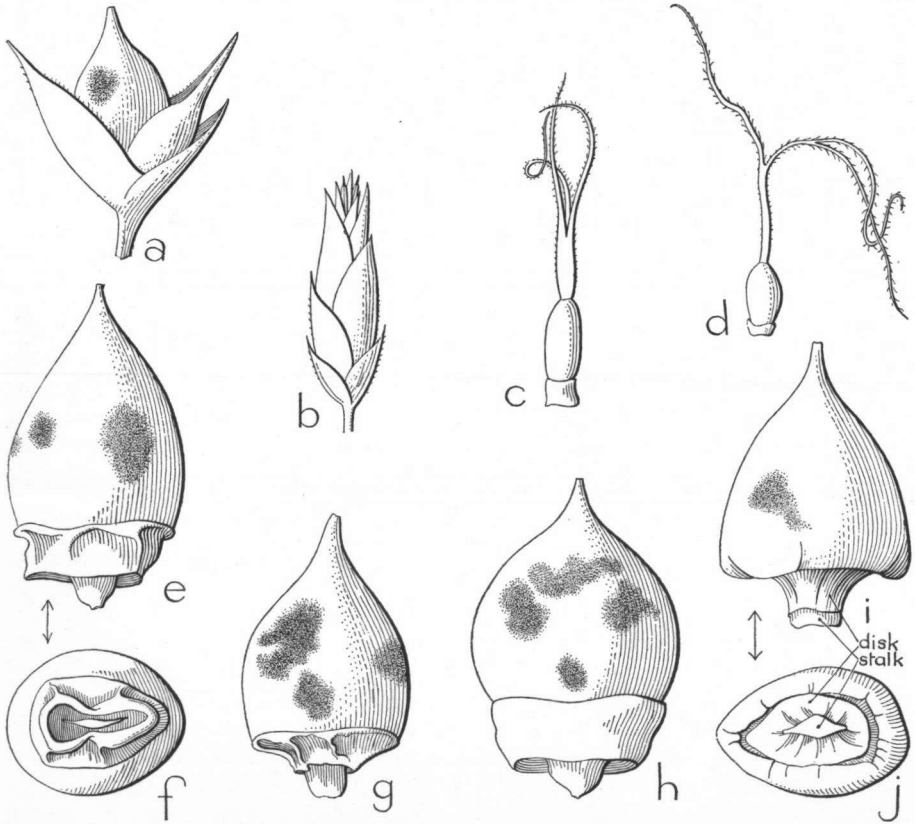


Fig. 1. *Scleria greigiifolia* (Ridl.) C. B. Clarke — a. Female spikelet; b. male spikelet; c. gynoeceum. — *Scleria poaeformis* Retz. — d. Gynoeceum. — *Scleria greigiifolia* (Ridl.) C. B. Clarke — e. Mature nut; f. id., underside; g. immature nut; h. mature nut; i. immature nut; j. id., underside. (a—b $\times 5$, c—j $\times 7\frac{1}{2}$; a—c and e—g from Chandler 1335, h—j from Richards 1786.)

seen them only in Chandler 1335, Milne-Redhead & Taylor 8468, and Richards 1786, where they show a very well developed, reflexed, collar-shaped disk (fig. e, f, h). In immature fruits of the same collections the disk has strongly shrivelled in drying, and is often so tightly appressed to the stalk of the nut as to seemingly form a whole with it (fig. g, i, j), and so is the disk in all other collections I examined, including those Clarke observed and described.

In Clarke's posthumously published system of *Cyperaceae* (Clarke, 1908), *Acriulus*

appears as a separate genus, which of course does not mean that between 1902 and 1906 the author changed his mind concerning its systematic position. Nevertheless it seems necessary to point out the untenability of Ridley's genus, because only De Wildeman (1906; 1916) followed Clarke. *Acriulus* is not incorporated in Nelmès's revision of the African species of *Scleria* (1955) nor in Piérart's study on those of Belgian Congo (1953), and to my surprise it is upheld in Chermezon's splendid elaboration of the Malagasian *Cyperaceae* (1931; 1937), again on account of the terminal position of the female flower and the absence of male flowers in the nut-bearing spikelet.

From the original descriptions it is impossible to infer on what grounds Ridley treated the Angola specimen as specifically distinct from the Madagascar plants, and Clarke could only give some trifling differences between them mainly concerning the measurements of stems and leaves.

A third 'species' of *Acriulus* was published in a most unfortunate way. A specimen from Belgian Congo (vallée de la Djuma, leg. Gentil, s.n.) in the Brussels Herbarium was annotated: "*Scleria Acriulus* C. B. Clarke forma *Leopoldiana*? This is close to *Acriulus* (genus) Ridley, but is very much larger than any of our examples. It might be ventured as '*Acriulus Leopoldianus*' sp. nova? 26 Nov. 1902. C. B. Clarke." It is to be regretted that a short note on this plant in Clarke's unfinished manuscript was posthumously published, as if it were a well-considered description (Clarke, 1908): "*Acriulus Titan*, sp. n.; culmo 15 dm longo, crasso; nuce maturâ 2 mm longâ, ovoideâ, albâ, longitudinaliter obscure striatâ; inflorescentiâ *A. madagascariensis*. [Descr. amplior deest]." The obscure ribs Clarke mentioned may be caused by the shrinking of the quite undeveloped, still small nuts; I have found no mature nuts in the specimen.

In my opinion *Acriulus madagascariensis*, *A. griegifolius*, and *A. titan* represent but a single species, somewhat variable as to size and indumentum, and widely distributed from tropical and subtropical Africa to Madagascar.

The meaningless epithet *griegifolius* is an obvious orthographic (or typographic?) error for *greigiifolius*, the latter alluding to the resemblance of the leaves to those of the bromeliaceous genus *Greigia* Regel (see K. Schumann, 1895). In the synonymy below I have accepted the corrected spelling.

I wish to express my gratitude to the Directors of the Herbaria at Kew and Brussels for the loan of the materials cited below.

Scleria greigiifolia (Ridl.) C. B. Clarke in This.-Dyer, Fl. Trop. Afr. 8⁸ (1902) 509 ('*griegifolia*'). — *Acriulus madagascariensis* Ridl., Journ. Linn. Soc., Bot. 20 (1883) 336; Trans. Linn. Soc. II, 2 (1884) 166, t. 22, f. 6—7; C. B. Clarke in Durand & Schinz, Consp. Fl. Afr. 5 (1895) 676; K. Schum. in Engler, Pfl. Ost-Afr. C (1895) 128; Chermezon, Mém. Acad. Malgache 10 (1931) 11 & 43; in Humbert, Fl. Madag. 29^e fam. (1937) 266, f. 27, 1—2; non *Scleria madagascariensis* Boeck. 1884. — *Acriulus greigiifolius* Ridl., Journ. Linn. Soc., Bot. 20 (1883) 336; Trans. Linn. Soc. II, 2 (1884) 166, t. 22, f. 1—5 ('*griegifolius*'); C. B. Clarke in Durand & Schinz, Consp. Fl. Afr. 5 (1895) 675; Rendle, Cat. Afr. Pl. Welw. 2¹ (1899) 132. — *Scleria acriulus* C. B. Clarke in This.-Dyer, Fl. Trop. Afr. 8³ (1902) 509; De Wild., Bull. Jard. Bot. Brux. 5 (1916) 143; *ibid.* 7 (1920) 5. — *Scleria acriulus* C. B. Clarke f. *leopoldiana* C. B. Clarke ex De Wild., Etude Fl. Bas- et Moyen Congo 1 (1906) 221; Th. & Hél. Durand, Syll. Fl. Congo (1909) 594. — *Acriulus leopoldianus* C. B. Clarke in De Wild., Etude Fl. Bas- et Moyen Congo 1 (1906) 221, *nom. inval. in nota*. — *Acriulus titan* C. B. Clarke, Kew Bull., *add. ser.* 8 (1908) 62. — *Scleria friesii* Kük., Wiss. Ergebn. Schwed. Rhod.-Kongo Exped. 1911—12, 1 (1921) 9 (*vide* E. A. Robinson).

Typification:

Acriulus Ridl. — Type species: *A. madagascariensis* Ridl. (lectotype).

Acriulus greigiifolius Ridl. — Angola: Welwitsch 6959.

Acriulus madagascariensis Ridl. — Madagascar: Baron 1870 (fide Ridl.), Hildebrand 3751.

Acriulus titan C. B. Clarke — Congo: Gentil s.n.

Scleria acriulus C. B. Clarke — Based on *Acriulus madagascariensis* Ridl.

Scleria acriulus f. *leopoldiana* C. B. Clarke ex De Wild. — Congo: Gillet 2818.

Scleria friesii Kük. — N. Rhodesia: Fries 743 (seen by E. A. Robinson in UPS).

Scleria greigiifolia (Ridl.) C. B. Clarke — Based on *Acriulus greigiifolius* Ridl.

ANGOLA. Benguella, country of the Ganguellas and Ambuellas, Gosweiler 2793 (K); Dist. of Moxico: Dambo by R. Mumbala, in boggy grassland, Milne-Redhead 3996 (K).

CONGO. Territoire de Madimba: vallée de la Luvu, Kinkosi, prairie humide, Compère 1534 (BR); vallée de la Djuma, Gillet 2818 (BR); Gentil s.n. (BR); Kasai, Achten 654 (BR); région d'Idiofa, Atène, Vanderijst 3315 (BR), Sapin 17 (BR); moyen Kwilu, région de Kikurt, Mukulu, Vanderijst 3171 (BR); terr. Dimbelenge, Sankuru, Musangana, savane, marais, sable gris, 600 m, Collier 287 (BR); région Lualaba, Malonga, marais, 1200 m, nom indig. *mulengulula*, Vin 35 (BR); environs de Lualaba-Kraal, voisinage fleuve, Homblé 923 (BR); terr. Katoko Kombe, Katopa, prairie, tourbeux, Gillardin 397 (BR); Kwango, Mangombe, marécage, Callens 3298 (BR); région d'Elizabethville, Munama, ferme Martin, commune en bordure de la rivière Munama, Quarré 7880 (BR); Kundelungu, prairie naturelle humide, Schmitz 3129 (BR); Katanga, Kansenia, près de Bianco, bord galerie forestière, près de la gare, 1550—1600 m, Lukuesa 100 (K); Katanga, terr. Kambove, Nord Kingombe, savane steppique à *Loudetia* et *Xyris*, 1125 m, Steel 532 (BR); Katanga, Greles, plateau Bianco, vallées humides, 1600 m, Quarré 5909, 6123 (BR); Katanga, marais Kamwimo, Bredo 5405 (BR); Ngungu, Vanderijst 3332, 3333 (BR).

OUBANGUI. Haute-Kotto, de Mouka à Wadda, Le Testu 4088 (BR).

N. RHODESIA. Mwinilunga Dist., SW of Dobeka Bridge, in boggy grassland, Milne-Redhead 2696 (K); Abercorn, Bredo 5174 (BR); Abercorn Dist., Lake Chila, in wet peaty bog, 5000 ft, Richards 1786 (BR, K); Abercorn Dist., Kali Dambo, in very wet marsh, 5200 ft, Richards 565 (BR); Shiwa Ngandu, lakeside marsh, 5000 ft, Robinson 1621 (K).

S. RHODESIA. Makoni Dist., ad villam Maidstone, in solo humido ad rivulum, 1450 m, Nordlindh & Weimarck 4106 (BR); Makoni Dist., edge of dam, 5550 ft, Chase 6534 (BR).

UGANDA. Lake Nabugabo, alongside of boggy area, sometimes almost in water, 3750—3800 ft, Chandler 1335 (K).

TANGANYIKA TERR. Bukoba Dist., Bukoba, 3709 ft, Haarer 2025 (K); Songea Dist., 11 km W of Songea in Ulamboni valley, in flooded grassland on grey sand, 960 m, Milne-Redhead & Taylor 8468 (K); Songea Dist., Matengos, Miyao, Nyoni River, common in wet places near a stream, 1560 m, Semsei 2590 (BR, K).

NATAL. Port Edward, Izingolweni Rd., stream above gorge, abundant in vlei, in very damp soil, Hun'ley 781 (K).

MADAGASCAR. Ambohidratrimo, d'Alleizette 7982 (L).

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