STUDIES IN THE GESNERIACEAE OF THE OLD WORLD XXXVII: SCHIZOBOEA, THE ERSTWHILE AFRICAN DIDYMOCARPUS

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ABSTRACT. The genus *Schizoboea* (K. Fritsch) B. L. Burtt is segregated from *Didymocarpus* on account of its terminal inflorescence and fruit splitting into 4 valves. All the African mainland material recently referred to *Didymocarpus* belongs here, but is regarded as forming a single variable species, *S. kamerunensis* (Engl.) B. L. Burtt.

Didymocarpus Wall. is currently one of the largest genera of the Old World Gesneriaceae and covers a number of sections whose interrelationships are by no means clear. These are nearly all Indo-Malesian, and the taxonomic problem is aggravated by the large number of species concerned. From this complexity, however, the African species (three names can be reduced to one variable species) stands apart.

K. Fritsch (1894, p. 146) used the illegitimate name *Roettlera* Vahl (*Rottlera*) to cover a very broad concept of *Didymocarpus*, but even so he made (1897, p. 300) a distinct section for the African species and suggested that generic rank was a possibility. The prefix of his sectional name, *Schizoboea*, refers to the splitting of the fruit into 4 valves; these, together with the placentae, which become free from the valves, make the old fruit look like a collection of loose strands. Such dehiscence is not found elsewhere in *Didymocarpus*: in sect. *Didymocarpus* the fruit is compressed and dehisces, loculicidally, along both edges; in other sections it usually opens, in a follicle-like manner, along one side only. Fritsch, however, missed another very distinctive feature of *Schizoboea*: that is the terminal inflorescence. This may not immediately be apparent as the fruiting clusters on the lower part of the stem are often laterally displaced. When a careful examination is made, however, it is found that the inflorescence is always terminal. Vegetative growth of the shoot is continued by buds in the axils of the uppermost leaves, one of these buds usually becoming a new 'leader' while the other remains relatively undeveloped. It is this pattern of growth that gives the old inflorescence a lateral appearance. *Didymocarpus* always has either solitary axillary flowers or axillary inflorescences; there is always a terminal vegetative growing point.

Additional characters distinguishing *Schizoboea* are its creeping habit, subglabrous entire leaves and short broadly tubular pale cream unmarked corolla. In total there are ample reasons for according *Schizoboea* generic rank.

It is by no means certain that the true affinity of *Schizoboea* is with *Didymocarpus* at all; it may rather lie with the well-known African genus *Saintpaulia* H. Wendl., not through the commonly cultivated African Violet (*S. ionantha* H. Wendl.), but through a little known and anomalous species, *S. inconspicua* B. L. Burtt. This has similar subglabrous leaves and a weak straggly habit; the corolla is more campanulate than is usual in *Saintpaulia* but not tubular

as in *Schizoboea*; the unripe fruit of *S. inconspicua* looks rather like that of *Schizoboea*, but it has no defined dehiscence; in this feature and in the axillary inflorescences *Saintpaulia inconspicua* is characteristic of its genus and differs from *Schizoboea*.

It has been suggested elsewhere (Hilliard & Burtt, 1971, p. 116) that the African Gesneriaceae form a group more closely interrelated amongst themselves than to any of the Asiatic genera. This view would be strengthened if the affinity of *Schizoboea* and *Saintpaulia* is confirmed. The position of the species of *Didymocarpus* on Madagascar is still somewhat uncertain, but it is clear that they are closer to the Asiatic *Didymocarpus* than to *Schizoboea*.

Three species of *Didymocarpus* have been described from the mainland of tropical Africa, one from the West (Cameroun and Fernando Po), one from the centre (Zaire and Burundi) and one from the East (S Tanzania, with a variety on the Uluguru Mts in C Tanzania). When material from these disjunct areas is assembled, however, it is seen that there is only one good species. The variation does not show geographical patterning, but rather suggests a species susceptible to the influence of the local environment. This is not surprising, for it is a weak rather succulent-stemmed decumbent herb growing in the forest, by waterfalls, streamsides, as an epiphyte, but occasionally in savanna. The variation is largely in size of the whole plant and leaf-blade, in length of petiole, hairiness and number of flowers: all features likely to be affected by external conditions. Certainly no satisfactory subdivision of the material can be made from herbarium studies alone. The species was in cultivation at Edinburgh for a time (from the Cameroons Mt) and formed a rather dense small-leaved mat, but it never flowered.

As this species is shortly to be dealt with in the appropriate regional Floras, there seems to be no need to give a full enumeration of material here.

Schizoboea (K. Fritsch) B. L. Burtt, **gen. nov.**

Syn.: *Roettlera* sect. *Schizoboea* K. Fritsch in Engler & Prantl, Nat. Pflanzenfam., Nachtr. 1 zum III-IV: 300 (1897).

Weak herbs, creeping and rooting at least at the lower nodes; young parts with an indumentum of uniseriate hairs, becoming glabrous. Leaves opposite, subequal, petiolate, entire. Inflorescences terminal shortly above uppermost leaves, eventually overtopped by axillary vegetative shoot and appearing pseudolateral. Calyx 5-partite, segments linear-oblong. Corolla held horizontally, barely 1 cm long, shortly and broadly tubular (about twice as long as broad), the 5 lobes subequal, less than half as long as the tube, white or cream, apparently unmarked. Fertile stamens 2, anterior, arising below middle of tube; filaments slender; anther-thecae only slightly divergent; (anthers free?); staminodes 2, very small. Disc small, annular. Ovary conical-cylindric tapering into the somewhat shorter style; stigma capitate. Fruit terete, tapering at the tip, sometimes slightly falcate, dehiscing into 4 valves and eventually, by freeing of midribs and placentae, forming a bundle of 8 "shreds", c. 3 cm long. Seeds ellipsoid, slightly pointed at each end.

Type species :—

Schizoboea kamerunensis (Engl.) B. L. Burtt, **comb. nov.**

Type: Cameroun, Barombi, *Preuss* 951.

Syn.: *Didymocarpus kamerunensis* Engl. in Bot. Jahrb. 18:79, tab. IV-V, F (1893); Baker & C. B. Cl. in Fl. Trop. Afr. 4, 2:503 (1906); Hutch. & Dalz., Fl. W Trop. Afr. 2:23 (1931), ed. 2, 2:382 (1963).

Roettlera kamerunensis (Engl.) Fritsch in Engler & Prantl, Nat. Pflanzenfam. Nachtr. 1 zum III-IV: 300 (1897).

Didymocarpus bequaertii De Wild. in Rev. Zool. Afr. 8, Suppl. Bot. 40 (1920), Pl. Bequaert, 1:285 (1922). Syntypes: Congo, Mokoto-Masisi, *Bequaert* 6556; Ruwenzori (Batagu), *Bequaert* 3812; Irumu, *Bequaert* 2956 (all BR).

D. stolzii Engl. in Bot. Jahrb. 57:203 (1921). Type: Tanganyika, Rungwe, *Stolz* s.n. (K, iso.).

D. stolzii var. *minor* Mansf. in Notizbl. Bot. Gart. Berlin 12:94 (1934). Type: Tanganyika, Uluguru Mts., *Schlieben* 3421 (BR, iso).

Distribution: Cameroun, Fernando Po, Burundi, Zaire, Tanzania.

References

FRITSCH, K. (1894). Gesneriaceae in Engler & Prantl, *Die natürlichen Pflanzenfamilien* IV (3b): [133–144, 1893] 145–183 (1894).

— (1897). Ibidem, *Nachträge* 1 zum III-IV: 299–300.

HILLIARD, O. M., & BURTT, B. L. (1971). *Streptocarpus: an African Plant Study*. Pietermaritzburg.