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STUDIES IN THE GESNERIACEAE OF THE OLD WORLD: XLIX*

Additions and amendments to Streptocarpus

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ABSTRACT. A species of *Streptocarpus* from Malawi previously designated '*S.* sp. aff. *S. wittei* De Wild.' is now given a specific name, *S. arcuatus*. *S. dolichanthus* is a new species recently discovered on Mt Mulanje, Malawi, and remarkable for its long corolla and tube. A white-flowered form of *S. eylesii*, also from Malawi and hitherto placed as a variant of subsp. *brevistylus*, is now ranked as an independent subspecies, subsp. *silvicola*. The East African *S. caulescens* var. *pallescens* is reinstated as the independent species *S. pallidiflorus*.

Streptocarpus arcuatus Hilliard & Burtt, **species nova** ex *S.* agg. *monophyllo*, affinis *S. wittei* De Wild. et *S. eylesii* S. Moore, sed corollae tubo longo arcuato basi superne inflato distinguenda.
Type: Malawi, Blantyre distr., Mpingwe hill near Limbe, *Hilliard & Burtt* 4137 (E holo., NU iso.).
MALAWI. Blantyre distr., Mpingwe hill, near Limbe, 31 i 1983, *I. la Croix* (E); Ndirande, near Limbe, *I. Cram*, cult. in RBG Edinb. C5398 (E).

S. arcuatus is a monocarpic unifoliate and the leaf of a flowering plant is always withered at the top, where the terminal part has abscinded during the unfavourable season. It can be 20cm broad, and at flowering the persistent part may be somewhat longer than that. Floral measurements are: calyx 5·5mm; corolla (to tip of extended lower lobe) 7–8cm, maximum diameter of tube (as pressed) 1·3cm; stamens arising 4cm above the base of the tube; filaments 1·5cm long; pistil c.6cm long (growth of the pistil is probably continuous and further elongation takes place as the flower goes over).

The group of *Streptocarpus* that we designated *S.* agg. *monophyllus* (Hilliard & Burtt, 1971, p.191) remains one of the most intractable. Within it we recognized (*op. cit.*, p.197) an entity that we referred to as *S.* aff. *wittei*, indicating thereby that it was a distinctive plant and we did not know how to place it. Now in preparing the account for *Flora Zambesiaca*, there is need to reconsider this treatment, for it is clearly unsatisfactory. The plant has been collected again by Mrs I. la Croix, who has remarked on the distinctive shape of the corolla, with its arcuate tube swollen in the lower part. It is this that marks the Mpingwe plant off from all the other components of *S.* agg. *monophyllus*; these are themselves poorly defined, which is why they were grouped into an aggregate. This plant cannot be satisfactorily attached to any of the other components as a subspecies or variety, it therefore seems to us now that the most satisfactory course is to designate it by another binomial. At the

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same time it must be emphasized that a species name within an aggregate must be accepted as ranking less highly than a fully independent species.

Streptocarpus dolichanthus Hilliard & Burtt, **species nova** distinctissima, indumento, ambitu, venatione foliorum, forma antherarum *S. milanjiano* Hilliard & Burtt insigniter approximat sed corolla tubo longissimo angusto toto caelo differt et *S. rexii* (Hook.) Lindley potius revocat.

Herba acaulis, rhizomatosa. *Folia* (phyllomorpha) c.5 ad apicem rhizomatis biseriata; petiolodium (petiolus infra inflorescentia) tempore florendi 4cm longum; petiolus (supra inflorescentia) c.5cm; ambo pubescentia; lamina elongato-oblonga vel anguste elliptica, 22–27 × 4–6cm supra et infra in venis breviter et appresse sericeo-pubescens, infra inter venas subglabra, venis lateralibus numerosis inter se 5–10mm distantibus, marginibus irregulariter et crebre denticulatis. *Inflorescentia* 2–14-flora; pedunculus ad 11cm longus, appresse pubescens; pedicelli (primarii) 1·5–2cm, binati. *Bracteae* (primariae) lineares, c.5mm longae. *Calyx* fere ad basin in segmenta 5 linearia 7mm longa divisus. *Corollae* tubus inferne per 5cm anguste cylindricus, superne per 2·5cm infundibuliformis, extra parce patenter pubescens; lobi superiores 7 × 7mm, laterales 10 × 7mm, medianus 12 × 8mm, omnes obtusi. *Stamina* filamentis 8mm longis glabris, 5cm supra corollae basin orientibus; antherae 3cm longae, basi trans thecas divergentes 3mm latae, connectivo dorso incrassato. *Ovarium* c.2·5cm longum, dense et appresse pubescens, in stylum 4·5cm longum gradatim attenuatum; stigma horizontaliter bilobum, lobo inferiore majore. *Capsula* 8cm longa spiraliter torta, styli parte persistente c.2–3cm longa terminata.

Type: Malawi, Mulanje Mt, Ruo Gorge, 1700m, 17 v 1983, *Johnston-Stewart* in La Croix 486 (holo. E).

MALAWI. Mulanje Mt, Ruo Gorge, c.1200m, in deep shade on rock, 10 iv 1983, *P. Jenkins* s.n. (E); ibidem, 1700m, in rock by stream, 10 iv 1983, *Johnston-Stewart* s.n. (E).

Mr Johnston Stewart recorded that this plant was growing on vertical rock faces in moss, at the edges of and in the middle of a perennial stream in the deep shade of Montane Evergreen Forest. Even a small flood, he noted, would cause the plants to be temporarily covered by water. The species is late-flowering compared with other *Streptocarpus* on Mt Mulanje and blooms from April into June.

In a revision of this genus (Hilliard & Burtt, 1971, pp.41–42, 65–68), we noted that there are pairs of species which are similar in habit and foliage, but remarkably dissimilar in the form of the flower. Two such pairs are *S. dunnii* Masters and *S. pole-evansii* Verdoorn in the southern Transvaal, and *S. hirtinervis* C. B. Cl. and *S. nimbicola* Hilliard & Burtt on Mt Mulanje. We argued that such pairs of species suggest that the corolla-form has changed more rapidly in evolution than have the characters of the foliage. *S. dolichanthus* forms another such pair with *S. milanjianus* Hilliard & Burtt, lending strength to this argument. The difference in corolla form is here quite remarkable: *S. milanjianus* has a short broad tube and the whole corolla is no more than 1·5cm long: *S. dolichanthus* has a long narrow tube and the whole corolla is some 8cm. But within

these very different corollas both species have more or less triangular anthers with the thecae only slightly divergent towards the base. In *S. rexii* (Hook.) Lindley and its allies, which *S. dolichanthus* resembles in form of corolla, the anther thecae are widely divergent, the longitudinal slits forming an almost straight line. Thus anther-form may be ranged with leaf and habit in supporting a fairly close affinity between *S. dolichanthus* and *S. milanjianus*.

We are greatly indebted to Mrs I. la Croix for channelling to us specimens of this new species found by herself and her friends, and particularly to Mr N. Johnston-Stewart for making a return visit to collect material adequate for a full description. The latest news is that the species has been found by Mr & Mrs M. Spurrier at a new site on the edge of the Luchenya plateau.

Streptocarpus eylesii S. Moore subsp. **silvicola** Hilliard & Burtt, **subsp. nova** a subsp. *brevistylo* Hilliard & Burtt corollis albis in palato luteo-notatis distinguenda.

Type: Malawi, Lilongwe distr., c.35 miles SW of Lilongwe, Dzalanyama F.R., Chaulongwe Falls, 14 i 1967, *Hilliard & Burtt* 4486 (E holo., NU iso.).

MALAWI. Mangochi distr., Namwera hills, Mt Uzuzu, c.4000ft, 21 i 1971, *Hilliard & Burtt* 6301 (E, NU); ibidem, c.1075m, 21 ii 1982, *Brummitt, Polhill & Patel* 16022 (K); Phirilongwe, 1350m, 17 iii 1985 *Johnston-Stewart* 410 (E).

Streptocarpus eylesii subsp. *silvicola* was mentioned in the main text of our account of the genus (Hilliard & Burtt, 1971, p.196) as a white-flowered variant of *S. eylesii* subsp. *brevistylus* Hilliard & Burtt, found at Dzalanyama, E of Lilongwe. It was found again at a locality some 115 miles away to the south in the Namwera hills, and in the Addendum (op. cit. p.385) we reported this and suggested that it might eventually need to be given a name. It has now been found at a third locality, in the Phirilongwe Forest Reserve, by Mr N. Johnston-Stewart, and this establishes its claim to recognition beyond reasonable doubt. Furthermore, it would be unsatisfactory simply to name it as a white variety of subsp. *brevistylus*. Although the white flowers are its most conspicuous feature, it is also distinct ecologically. *S. eylesii* subsp. *silvicola* is a plant of *Brachystegia* woodland, where it is found on or among rocks (and occasionally on tree trunks): the epithet refers to its woodland habitat. *S. eylesii* itself and its subsp. *brevistylus* are found amongst rocks on hillsides and at the edge of evergreen forest. They have not been found associated with *Brachystegia* woodland.

Streptocarpus pallidiflorus C. B. Clarke in Fl. Trop. Afr. 4(2):508 (1906).

Lectotype (chosen here): Tanzania, Kilimanjaro, *Volkens* 1006 (K).

Syn.: [*S. caulescens* auct. non Vatke; Hook. f. in Bot. Mag. 91:t.6814, 1885.]

S. caulescens Vatke var. *pallescens* Engler in Bot. Jahrb. 19:154 (1984); Hilliard & Burtt, Streptocarpus, 333, plate 15c, d (1971). Type as above.

S. caulescens forma *pallescens* (Engler) Engler, Pflanzenw. O-Afrikas, C, 363 (1895).

Selected specimens:

TANZANIA. Arusha distr., Longido Mt, 5000ft, 10 vi 1969, *Carmichael* 1680 (E); Ngurdoto crater, 1500m, 5 v 1965, *Richards* 20347 (E, K), ibidem, 1524m, 22 i 1965, *Richards* 23792 (E, K); Marangu, Kilimanjaro, vi 1894, *Volkens* 2314 (E). Lushoto distr., Vugeri hill, 3200ft, 11 vii 1954, *Faulkner* 1449 (E, K); Lushoto–Mkusi road near Magamba fork, W Usambaras, 1650m, 18 iv 1953, *Drummond & Hemsley* 2131 (E, K); Bambali–Mazumbai road, W Usambaras, 1200m, 8 v 1953, *Drummond & Hemsley* 2434 (E, K); Shume, W Usambaras, fl'd in cult. Amani, x 1943, *Moreau* 901 (E). Morogoro distr., Uluguru Mts, Morningside, c.1200m, *Schlieben* 12156 (photos. E).

When writing up *Streptocarpus caulescens* for the account of the genus (Hilliard & Burtt, 1971, pp.332–334), we had known living plants of *S. caulescens* var. *pallescens* too briefly for a full appreciation of the characters marking it off from var. *caulescens*. It has been apparent for some time that var. *pallescens* deserved to be ranked as an independent species, and it now reverts to the name *S. pallidiflorus* bestowed on it by C. B. Clarke. Its smaller, paler corolla with dark veins has a characteristic swelling underneath that is not found in *S. caulescens*; further *S. pallidiflorus* has a distinctly dwarfer, less straggling, habit and the basal part of the stem is strongly swollen. It is now seen, too, that *S. pallidiflorus* is confined to Tanzania, whereas *S. caulescens* is endemic to Kenya (Teita hills, Chyulu hills, Mt Nzaui, and Thika).

REFERENCE

HILLIARD, O. M. & BURTT, B. L. (1971). *Streptocarpus: an African plant study*. Pietermaritzburg: University of Natal Press.