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NOTES ON SOME PLANTS OF SOUTHERN AFRICA CHIEFLY FROM NATAL: X*

O. M. HILLIARD** & B. L. BURTT

ABSTRACT. Thirty-three items are annotated. There is one new section (in *Pachycarpus*), and 20 new species in the genera *Hypoxis* (1), *Pachycarpus* (1), *Chironia* (1), *Sebaea* (2), *Argyrolobium* (1), *Ornithogalum* (1), *Thesium* (3), *Diascia* (7), and *Selago* (3). Some names in current use are clarified: *Gladiolus cruentus* is a lowland species quite distinct from the high montane *G. flanaganii*; *Thesium crassifolium* stands against *T. sedifolium*; in *Selago*, *S. lithospermoides* is reduced to *S. flanaganii*, *S. cooperi* and *S. sandersonii* to *S. galpinii*, *S. racemosa* and *S. tysonii* to *S. trinervia*; *S. lepidioides* is lectotypified. *Chenopodium mucronatum*, *Baccharis pingraea* (an alien from S America), and *Euclea coriacea* are recorded from Natal for the first time; these and new species add a further 18 species to the Natal flora.

AMARYLLIDACEAE (incl. HYPOXIDACEAE)

368. Hypoxis filiformis Baker in Journ. Linn. Soc. Bot. 17:109 (1878), forma floribus saepe tetrameris.
NATAL. Underberg distr., 2929 CB, 5–7 miles NNW of Castle View Farm, headwaters of Mlahlangubo river, c.7000ft., in wet ground around edge of tarn, flowers yellow mostly with 4 segments but some with 6, 22 i 1982, *Hilliard & Burtt* 15305 (E, NU).

See discussion under *H. tetramera,* below.

369. Hypoxis sagittata Nel in Bot. Jahrb. 51:323 (1914).
Type: [E Cape] Berg zwischen Kat und Klipplaatrivier, xi 1832, *Ecklon* 3515 (n.v.).
E CAPE. Stockenstrom distr., 3226 BC, top of Katberg Pass, damp bare ground above cliff; flowers yellow within, greenish outside, 4–5–6-partite mostly 4-partite, 28 x 1980, *Hilliard & Burtt* 13264 (E, NU).

This species was based by Nel on a single collection, and we have not traced later uses of the name. Nel noted that some flowers on the type sheet were tetramerous.

See further discussion under *H. tetramera,* below.

370. Hypoxis tetramera Hilliard & Burtt, **species nova** *H. filiformi* Bak. et *H. sagittatae* Nel affinis, ab ambabus pedunculo et ovario subglabro (nec dense villoso), pedunculo fructifero decumbente (nec erecto) distincta; ab *H. filiformi* antheris apice haud fissis etiam recedit.

Tuber ovoideum c.10×7.5mm. *Folia* 3–5, filiformia, ad 10cm longa, basi in vaginam membranaceam dilatata, glabra vel pilis longis albis basin versus praedita. *Pedunculus* foliis multo brevior, ad 2–3.5cm longus, basin versus albo-pilosus vel glaber, primum erectus, sub fructu decumbens.

* Continued from *Notes RBG Edinb.* 40: 298 (1982).

** Dept of Botany, University of Natal, Pietermaritzburg, S Africa. Financial assistance from CSIR, Pretoria is acknowledged.

Bractea filiformis glabra vel parcissime pilosa, 4–10mm longa. *Pedicellus* c. 4mm longus. *Ovarium* glabrum, vel lineis pilorum paucorum notatum, 4mm longum. *Perianthium* 4–6-partitum; segmenta exteriora 6 × 1.5mm, interiora eis subaequalia, omnia subglabra. *Filamenta* longiora 2mm, breviora 1.25mm; antherae 2mm longae, apice minute apiculatae nec fissae. *Stylus* 0.8mm longus, stigmate 1.2mm longo.
Type: Natal, Underberg distr., 2929 CB, 5–7 miles NNW of Castle View Farm, headwaters of Mlahlangubo river, c. 7200ft, in dried-up pool on grass plateau, tiny yellow 4–6-partite flowers, decumbent peduncles, 23 xi 1980, *Hilliard & Burtt* 13524 (E holo., NU iso.).
LESOTHO. Sehlabathebe, c. 29°52′S 29°08′E, 2300–2500m, in moist grassland depressions, 4 tepals consistently, 4–14 i 1973, *Guillarmod, Getliffe & Mzamane* 274 (K).
NATAL. Giants Castle Game Reserve, 6800ft, common at edge of pan, perianth segments 4–6, 23 i 1969, *Killick & Vahrmeijer* 4048 (K).

We record here montane collections of three small species of *Hypoxis* that have certain features in common, notably the frequent occurrence of flowers with only four perianth segments and four stamens. It is also interesting that these collections were made from more or less bare ground. Typical *H. filiformis* is usually found on grassy slopes or in marshy grassland, but *Hilliard & Burtt* 15305 was on the almost bare 'shore' of a partially dried-up pond; *H. sagittata* was on more or less bare soil, and *H. tetramera,* where we found it, was in a small dried-up pond with a few grasses and sedges.

When describing *H. sagittata,* Nel reported that it was very close to *H. filiformis.* However, that species is distantly placed in Nel's classification because the tip of the anther is split, whereas in *H. sagittata* it is not. Weak as this character sounds, it does hold in these three collections, for only that of *H. filiformis* has the anther-tip split. Thus *H. tetramera* will be placed in Nel's classification alongside *H. sagittata,* the re-discovery of which is most opportune.

The noteworthy feature of *H. tetramera,* apart from the frequently 4-merous flowers that justify the specific epithet, is the decumbent fruiting peduncle, reminiscent of the American *H. decumbens* L., which has been recorded as an alien in Natal (see *Notes RBG Edinb.* 37:250, 1979). That is a species with soft broad leaves, but it may be significant that decumbent fruiting peduncles are found in species of damp places; dehiscence of the capsule at ground level must ensure that the seeds remain in a suitable habitat, unless they are picked up in mud on the feet of water-fowl, which is presumably the means by which they are dispersed. The erect censer-dispersal mechanism characteristic of most species of *Hypoxis* might only result in the seeds being shot into neighbouring unsuitable grass.

ASCLEPIADACEAE

We are grateful to Mrs D Smith for contributing the following two items from her M.Sc. thesis (University of Natal).

371. Pachycarpus E. Mey. sect. **Trichocodon** D. M. N. Smith, **sect. nov.**

Herbae erectae, caulibus gracilibus. *Folia* anguste linearia vel lanceolata, marginibus revolutis. *Inflorescentia* plerumque solitaria, vel raro duae (inflorescentia secunda nodo supremo laterali), semper pedunculata, floribus nutantibus. *Corolla* campanulata, straminea vel virescens, extra pubescens. *Carpella* plerumque brunneo-pilosa.

Typus sectionis: *Pachycarpus campanulatus* (Harv.) N. E. Br.

The genus *Pachycarpus* divides naturally into two sections. The larger consists of 20 species and bears the name *Pachycarpus* as it includes the lectotype of the genus, *P. grandiflorus* (Linn. fil.) E. Mey. The smaller section consists of four species and for it the name *Trichocodon* (= hairy bell) is proposed in allusion to the hairy pendulous campanulate corolla that is shown by all species and is their most obvious distinctive feature.

In addition to *P. campanulatus* the other species of sect. *Trichocodon* are *P. linearis* (E. Mey.) N. E. Br., *P. stelliceps* N. E. Br. and *P. rostratus* N. E. Br.

372. Pachycarpus lebomboensis D. M. N. Smith, **species nova** *P. dealbato* E. Mey. affinis sed floribus minoribus sepalis 4.5–8mm longis (nec 7–20mm), corolla 6.8–9mm (nec 10–23mm), corona dentibus duobus basalibus in pagina superiore praedita (nec corona appendicibus destituta) distinguitur.

Caulis 22–45cm altus, tenuis, simplex vel ramosus, pubescens, ad basin versus saepe nudus vel foliis redactis, supra crebre foliatus. *Folia* ascendento-patentes; petiolus 2–6mm longus; lamina 35–58 × 20–38mm, ovata vel oblonga, apice vel subacuto vel obtuso mucronato, basi plus minusve truncata, marginibus et paginis utrisque pilis asperis pubescentibus. *Inflorescentiae* umbellatae, terminales et ad nodos laterales, sessiles, 4–6-florae; pedicelli 4–8mm longi, pubescentes; bracteae 4.2–4.6mm longae, lineares, acutae vel acuminatae, subtus pubescentes, caducae. *Flores* ochroleuci vel luteo-virides, purpureo-maculati. *Sepala* lanceolata vel anguste ovata, 4.5–7.9 × 1.8–3mm, acuta vel acute-acuminata, extra pubescentia, intus glabra. *Corolla* cupularis, 6.8–9.1mm longa, fere ad basin lobata; lobi vel ovati vel late ovati vel elliptici, 5.8–8 × 3.2–4.5mm, obtusi apice plus minusve emarginato, marginibus infra imbricatis, extra puberuli vel pubescentes, intra glabri vel raro ad apicem puberuli. *Coronae* lobi 3.4–8.7mm longi, lineares, obtusi vel raro bifidi, basi horizontales, ad apices sursum curvati et supra styli apicem incurvi, inferne 1.1–1.7mm lati basi pare carinarum vel dentium vestigialium praediti, superne 0.6–1.5mm lati. *Antherae* alae 0.9–1.1mm longae, verticales; appendices 0.7–1mm longae, late ovatae, obtusae; columna staminalis 2–2.3mm longa; pollinia 0.7–0.8mm longa, oblonga; translatoris rami 0.4–0.5mm longi; corpusculum 0.4mm longum. *Stylus* apice truncato plano vel crateriformi. *Carpella* 1.9–2mm longa.

Type: Natal, Ubombo distr., near Mkuze Game Reserve, Mhlekazi trading store, 1 xii 1977, *D. Harriss* 96 (NU holo.).

NATAL Ingwavuma distr., nr Gwalaweni Forest, c. 1800ft, 14 xii 1965, *Hilliard & Burtt* 3259 (E, NU). Ubombo distr., Mkuze Game Reserve,

304m, 13 xii 1976, *Goodman* 825 (NU); Lebombo Mountains,± 20km from Jozini, 19 i 1978, *Harriss* 123 (NU); Ubombo to Mkuze road, 3km outside Ubombo, 1 xii 1978, *Harriss* 95 (NU); roadside from Mkuze to Mhlekazi store, 1 xii 1977, *Harriss* 97 (NU).

In *P. lebomboensis* the coronal lobes are very similar to those of *P. dealbatus*; they are flat, horizontally spreading from the base and then curved upwards. In *P. dealbatus* there are no coronal keels or appendages, whereas in *P. lebomboensis* there is a pair of vestigial teeth or humps on the upper surface at the base of the corona lobe. There are other small differences between the coronas of these two species: the lobes in *P. lebomboensis* are strap-shaped, whereas in *P. dealbatus* they are more spathulate and fleshy; in *P. lebomboensis* the lobes are curved upwards and inwards beyond and over the style apex, whereas in *P. dealbatus* the curvature is such that the apex of the lobe rests against the upper part of the staminal column.

Pachycarpus lebomboensis is as yet known only from NE Zululand (in the one-degree square 2732), where it has been found in the Lebombo mountains, the hills around Mkuze and Ubombo, and in the Mkuze Game Reserve. *P. dealbatus* has been found once in this area, but has a much wider distribution, ranging right through Natal, the Transkei and Eastern Cape to Plettenberg Bay in Knysna Division.

CHENOPODIACEAE

373. Chenopodium mucronatum Thunb., Prodr. Pl. Cap. 48 (1794) & Fl. Cap. (ed. Schultes) 246 (1823); Moquin in DC., Prodr. 13(2): 64 (1849); Wright in Thiselton-Dyer 5(1): 440 (1910); Aellen in Merxmüller, Prodr. Fl. SW Afr. 32: 10 (1967).

Type: S Africa, without locality, *Thunberg* (UPS, n.v.; IDC microfiche sheet 6403).

NATAL. Underberg distr., 2929 CA, Garden Castle Forest Reserve, Mlambonja valley, c. 6500ft, bare gritty ground at edge of Cave Sandstone overhang, prostrate, smelling of rotten fish, 6 i 1982, *Hilliard & Burtt* 14976 (E, NU).

The occurrence of *Chenopodium mucronatum* in the Drakensberg is the first record for Natal and is decidedly unexpected, as it has previously been found only in more arid areas to the south and west; however, it is really a species about which very little is known. Perhaps, phytogeographically, this record has something in common with that of *Euclea coriacea* which grew in a similar habitat (see no. 375 below).

Our specimen is a good match of the microfiche of Thunberg's type, and we are grateful to Professor Brenan (Kew) for confirming our determination. He points out that although the species seems to deserve recognition, its relationship to *C. opulifolium* Schrad., which ranges from Europe and western Asia into tropical Africa, remains to be clarified.

COMPOSITAE

374. Baccharis pingraea DC, Prod. 5:420 (1836); Cabrera, Fl. Prov. Buenos Aires 4 (6A):132 fig. 31B (1963) & Fl. Patag. 7:91 fig. 81 (1971) & Fl. Il. Entre Rios (Argent.) 6 (6): 281 fig. 157 (1974) & Fl. Prov. Jujuy 10: 233 fig. 96 (1978).
Syntypes: from Chile, Brazil, Argentine, various collectors (G- DC, n.v.).
NATAL. Pietermaritzburg distr., 2430 CB, 6.3km south of Pietermaritzburg, Ashburton turnoff, 50–100m along road to Ashburton, 2200ft, 12 ii 1982, *Manning* 184/A (NU, PRE, US)♂; *Manning* 184 (NU, PRE, US)♀; ibidem, 21 v 1982, *Manning* 245/A (E, NU)♂; *Manning* 245 (E, NU)♀.

A native of South America (S Brazil, Paraguay, Uruguay, Argentine and Chile), now recorded for the first time in South Africa. The plants are dioecious, about 1m tall, with lanceolate toothed leaves and nondescript white heads in corymbose panicles. John Manning, an undergraduate student at the University of Natal, tells us that there is an extensive colony in marshy grassland beside the road to Ashburton, near Pietermaritzburg.

We are grateful to Dr Robert M. King (Smithsonian Institution, Washington) for his identification of this plant.

EBENACEAE

375. Euclea coriacea A.DC., Prodr. 8: 216 (1844); Hiern in Trans. Cambr. Phil. Soc. 12: 94, 289 (1873) & in Thiselton-Dyer, Fl. Cap. 4(1): 463 (1906).
Type: [E Cape, Queenstown div.] Los Tafelberg, 6000–7000ft, *Drège* (G-DC, n.v.).
NATAL. Underberg distr., 2929 CB, 5–7 miles NNW of Castle View Farm, headwaters of Mlahlangubo river, 6700ft, shrub to 7ft under Cave Sandstone cliffs, 19 i 1982, *Hilliard & Burtt* 15191 (E, NU).

Euclea coriacea is easily distinguished from the only other species found in the southern Drakensberg, *E. crispa* (Thunb.) Guerke, by its elliptic, strongly undulate and densely hairy leaves. This is the first record from Natal, the species being otherwise known from the Eastern Cape, Orange Free State and western Lesotho. Its occurrence in otherwise bare ground at the foot of Cave Sandstone cliffs may be compared with that of *Chenopodium mucronatum* reported above (no. 373). We are indebted to Dr F. White (Oxford) for confirming this determination.

GENTIANACEAE

376. Chironia albiflora Hilliard, **species nova** *C. laxae* Gilg affinis sed foliis caulinis multo majoribus 10–17mm latis (nec tantum ad 6mm) in partem petiolarem angustatis (nec sessilibus), floribus minoribus corolla 16–18mm longa (nec 20–30mm) alba (nec rosea) distinguitur.

Herba perennis (?), c. 45cm alta, radicibus lignosis; caulis basi c. 4mm diam. et ibidem simplex superne bene ramosus, subteres, e basibus foliorum

decurrentibus anguste alatus, glaber, foliatus. *Folia* patentia, plerumque 50–80 × 10–17mm, in ramulis inflorescentiae multo minora, elliptica, acuminata, in basin petiolarem angustata, glabra, marginibus integris. *Flores* in cymas laxas ramulos terminantes dispositi; pedicelli c. 8–15mm longi, filiformes. *Calyx* c. 9mm longus, fere ad basin divisus; segmenta lanceolata, longe acuminata, medio carinata. *Corolla* c. 16–18mm longa, alba, tubo 7–9mm cylindrico in fauce leviter ampliato, lobis 9 × 3.25mm lanceolatis acutis. *Stamina* c. 1.5mm infra corollae sinus orientia; filamenta c. 2.5mm longa; antherae 4mm, rectae. *Ovarium* 5–6mm longum; stylus 8–9mm longus; stigma c. 1.5mm longum, apice per 0.5mm fissum. *Capsula* c. 10 × 4mm, basi styli persistente coronata; semina c. 0.5mm longa, testa profunde reticulata.

Type: Natal, Port Shepstone distr., c. 5 miles from Port Edward on the Izingolweni road, 2 i 1965, *Hilliard* 3030 (NU holo., E iso.).

NATAL. Port Shepstone distr., 3130 AA, Beacon Hill East, 8 ii 1972, *Strey* 10625 (NU).

TRANSKEI. Lusikisiki distr., Magwa Falls, 29 xii 1952, *Leighton* 2984 (BOL).

The type collection of *C. albiflora* was growing among bushes on the big weathered outcrops of Table Mountain Sandstone that are a feature of the slopes above the Umtamvuna river and its tributaries on Natal's southern border; Strey, however, recorded 'river bank'. Both collectors noted that the flowers were white, which is unusual in *Chironia,* where the flowers are generally a rich pink, with an occasional white sport.

The specimen collected by Leighton at Magwa Falls is mentioned under *C. laxa* in the account of *Chironia* in the *Flora of southern Africa* (26:236, 1963), with the prophetic statement 'When further material comes to light its status may be reviewed'. Both southern Natal and neighbouring Transkei are ill-explored botanically, and *C. albiflora* will undoubtedly be found elsewhere over the Table Mountain Sandstone formations in Natal and Transkei, to which it is probably endemic.

377. Sebaea pleurostigmatosa Hilliard & Burtt, **species nova** *S. repenti* Schinz affinis sed characteribus sequentibus distinguitur. Filamenta valde sub sinubus corollae (nec in sinubus) orientia; glandula antherae apicalis parva, pallida, stipitata (nec majuscula, sessilis, flava vel aurantiaca); stylus brevissimus, 1mm longus, apice non receptivo (nec c. 5–7mm longus, stigmate prominente praeditus).

Herba perennis, tegetem formans; caules repentes, radicantes, ramosi, tenuissimi, foliati. *Folia* plerumque 4–8 × 4–7mm, suborbicularia vel late ovato-elliptica, apice subacuta vel rotundata, basi in foliis majoribus in partem petiolarem angustata, in foliis superioribus minoribus gradatim angustata. *Flores* aut solitarii aut 2–5 in cymas congestas terminales dispositi; bracteae oblongo-ellipticae, c. 4 × 1.25mm. *Calycis* segmenta 6 × 1.25–2mm, lanceolata, acuta, basi per 1mm coalita, hyalina, carinata, anguste alata ala minus quam 0.5mm lata. *Corolla* tubo 6mm longo; lobi 8 × 3–3.5mm spatulati, apicibus rotundatis, vivide lutei. *Filamenta* minus quam 0.25mm longa, 1mm infra corollae sinus orientia; antherae 1.5mm longae, glandula apicali parva pallida stipitata. *Stylus* c. 1mm longus,

tumore stigmatoso prominente per fere totam longitudinem praeditus, stigmate terminali carente. *Ovarium* 3.75×2mm. *Capsula* c. 3×2.5mm.
Type: Natal, Underberg distr., 2929 CB, 5–7 miles NNW of Castle View Farm, headwaters of Mlahlangubo river, c. 7600ft, 23 xi 1980, *Hilliard & Burtt* 13574/A (E holo., NU iso.).
NATAL. Underberg distr., 2929 CB, 5–7 miles NNW of Castle View Farm, headwaters of Mlahlangubo river, c. 8000ft, 20 i 1982, *Hilliard & Burtt* 15235 (E, NU).
NATAL-LESOTHO border. Summit of Drakensberg, source of Tlanyaku river, 9000ft, 24 x 1973, *Hilliard & Burtt* 6904 (E, NU).

Sebaea pleurostigmatosa bears a striking superficial resemblance to *S. repens,* with which it is sympatric, and they occupy similar habitats, namely damp partly shaded earth banks along incised streamlets, marshy turf, and cliffs damp from the spray of waterfalls. But *S. pleurostigmatosa* differs from *S. repens* not only in details of filaments and anthers, but also in its most remarkable style and stigma: there is no terminal stigma, the style is exceedingly short, and the prominent stigmatic swelling is almost confluent with the ovary. The specific epithet draws attention to this character (Greek 'pleuron'—side).

378. Sebaea radiata Hilliard & Burtt, **species nova** *S. procumbenti* A. W. Hill affinis, sed antheris basi glandulis stipitatis destitutis recedit; in vivo lineis aurantiacis duabus basi loborum corollae etiam distinguenda.

Herba perennis tegetes parvas formans; caules plures ad 20cm longi, simplices vel inferne parce ramosi, erecti vel decumbentes, foliati praecipue in parte inferiore. *Folia* ad basin caulium congesta, sursum abrupte redacta et remota; inferiora plerumque 15–28×7–12mm, spatulata, apice rotundato, basi angustata petiolari; superiora multo minora late elliptica. *Flores* pauci vel plures in cymas terminales congestas dispositi; bracteae infimae foliis supremis similes, sursum decrescentes. *Calycis* segmenta c. 5–6×2mm, basi per 2mm coalita, lanceolata, acutissima, hyalina, carina crassa viridi c. 0.75mm lata. *Corollae* tubus c. 7.5mm longus; lobi c. 7×4.5mm, elliptici, obtusi, vivide lutei basi lineis duabus brevibus aurantiacis notati. *Filamenta* 0.25mm longa, in corollae sinubus orientia; antherae 1.5mm longae, glandula apicali lutea conica 1mm longa praeditae, glandulis basalibus absentibus. *Stylus* 5mm longus, tumore stigmatoso prope basin praeditus; stigma capitatum. *Capsula* 6×3mm.
Type: Natal, Underberg distr., 2929 CB, 5–7 miles NNW of Castle View Farm, headwaters of Mlahlangubo river, c. 7600ft, 24 xi 1980, *Hilliard & Burtt* 13603 (E holo.; K, NU, PRE, S, iso.).
NATAL. Underberg distr., 2929 CA, Garden Castle Forest Reserve, Pillar Cave Valley, c. 6700ft, 5 xi 1977, *Hilliard & Burtt* 10419 (E, K, NU, PRE); ibidem, Mlambonja Valley, 7100ft, 5 i 1982, *Hilliard & Burtt* 14897 (E, NU). Cobham Forest Reserve, Upper Polela Cave, c. 7000ft, 20 xi 1976, *Hilliard & Burtt* 9258 (E, K, NU); ibidem, 7500ft, 22 xi 1976, *Hilliard & Burtt* 9325 (E, K, MO, NU, PRE); ibidem, c. 6800ft, 14 ii 1979, *Hilliard & Burtt* 12561 (E, NU); lower Bamboo Mountain, 2 i 1975, *Grice* s.n. (NU). Mpendhle distr., Kamberg area, Storm Heights, c. 7000ft, 14 xii 1978, *Hilliard & Burtt* 11710 (E, NU, PRE).

Sebaea radiata closely resembles *S. procumbens* and dried specimens are most easily distinguished by the lack of glands on the base of the anther lobes in *S. radiata*. But in the field, *S. radiata* is easily recognized by the orange lines in the throat, which suggested the specific epithet; these lines disappear in dried material. The two species are at least partially sympatric, but they occupy different habitats: *S. radiata* favours clefts and ledges on wet partially shaded cliffs, while *S. procumbens* may be found on damp grassy slopes or in the shelter of low bushes and grass tufts around the edges of damp rock sheets. We have seen the two species growing in close proximity, and the differences are then striking: the bushier plants of *S. radiata* on the cliff faces, with *S. procumbens* on the grassy slopes below the cliffs, its paler yellow flowers without contrasting darker lines in the throat.

IRIDACEAE

379. Gladiolus cruentus T. Moore in Gard. Chron. 1868: 1138 (31 Oct. 1868) & in Florist 1869: 121 cum ic. (June 1869); Hook. fil. in Bot. Mag. t. 5810 (Dec. 1869); Baker in Thiselton-Dyer, Fl. Cap. 6: 157 (1896); Killick in Bot. Surv. Mem. 32: 97 (1958); Lewis & Obermeyer, Gladiolus (Journ. S. Afr. Bot. Suppl. 10) 20 (1972) quoad typus tantum.

Type: No specimen known: Bot. Mag. t. 5810, which is the same plate as that published earlier in the Florist, is cited by Lewis & Obermeyer as iconotype.

Syn.: [*Gladiolus saundersii* auct., non Hook. fil.; Medley Wood, Natal Plants, 4(2): t. 342 (1904); J. M. Gibson, Wild Fl. Natal (Coastal Region) 19, t. 19 f. 1 (1975).]

NATAL. Inanda, *Wood* 1216 (K, SAM). Kranskop, *McKen* 17 (K). Pinetown distr., Everton, 2000ft, 5 ii 1966, *Hilliard & Burtt* 3806 (NU); ibidem, Molweni gorge, 610m, *J. St. C. Gibson* s.n. (NU). Pietermaritzburg distr., Table Mt, iii 1947, *Killick* 47 (NU); ibidem, *Killick* 515 (E, NU). New Hanover distr., Little Noodsberg, Laager Farm, 24 iv 1981, *Hilliard & Burtt* 14515 (corms only, flowered RBG Edinburgh, ix 1982).

In the revision of South African Gladiolus (Lewis & Obermeyer, *Journ. S. Afr. Bot. Suppl.* 10: 20–23, 1972) there is confusion betweeen *G. cruentus* (there including *G. flanaganii* Baker) and *G. saundersii* Hook. fil. This stems from the attempt to squeeze three species into two. The authors state (p. 23) that the account given by Medley Wood under the name *G. saundersii* was based on a mixture of that species and the Drakensberg plant they call *G. cruentus*. This was not so. Wood was describing (admittedly under the wrong name) a well-marked species that is found on the cliffs of Table Mountain Sandstone around The Valley of a Thousand Hills inland from Durban. It grows at altitudes of 2–3000ft.

Now *G. cruentus* was described from a specimen grown at Bull's nursery in Chelsea in 1868. In equating *G. cruentus* with *G. flanaganii* Baker, Lewis & Obermeyer give the species a restricted distribution around Mont aux Sources in the high Drakensberg: that is at about 9000ft. It is highly improbable, to say the least, that a corm of a rare gladiolus was collected in this area as early as 1868: it was nearly 30 years later that Justus Thode and

after him H. G. Flanagan, H. Bolus and others collected on Mont aux Sources. Furthermore the original illustration of *G. cruentus* does not accord well, as to petal markings for instance, with the photograph of the high Drakensberg plant given by Trauseld (*Wild Fl. Drakensberg* 44, 45, 1969). However *G. cruentus* does agree perfectly with the plant described by Medley Wood from the Table Mountain Sandstone cliffs at much lower altitudes. Corms of this could easily have been collected about 1868. There is no doubt that the name *G. cruentus* must be restricted to this plant.

The original introduction of *G. cruentus* is said to have been used for hybridisation. Quite by chance we came upon the photograph of a plant called *Gladiolus hybridus princeps* (*J. Roy. Hort. Soc.* 26: clxxxii, 1901), described as having 'large scarlet flowers blotched and feathered with white'. This plant looks remarkably like wild *G. cruentus*! Newly introduced corms (*Hilliard & Burtt* 14515) flowered at Edinburgh in September 1982. The white markings are somewhat paler than those observed in the wild and their distribution is somewhat variable. Sometimes all three lower tepals are marked, sometimes only the two lower laterals, while in one case the lower laterals and the upper median tepal were all marked. Although the distribution of the markings varied, the general pattern was always the same and was as shown in the original coloured illustration.

The high Drakensberg plant, which, like *G. cruentus,* is a cliff-dweller, is *G. flanaganii* Baker (see below). *G. saundersii* is terrestrial, and is fairly widespread from the Witteberg above Lady Grey to Lesotho and along the Drakensberg, as indicated in the *Revision.* But the specimens cited there from Inanda (*Wood* 1216) and Kranskop (*McKen* 17) are not *G. saundersii*: they are the true *G. cruentus.* On the other hand, the Barber specimen at Kew, a cultivated one, cited under *G. cruentus* is *G. saundersii.*

G. cruentus, G. flanaganii and the Cape *G. cardinalis* Curtis and *G. sempervirens* Lewis are closely related cliff-dwelling plants; understandably, material of them is rare in herbaria, and indeed the species themselves are not common. *G. saundersii* is terrestrial and, within its montane area, is not infrequent: indeed, it has been reported as a weed in high level cultivation: it differs from the other four in its strongly hooded, down-facing flower.

380. Gladiolus flanaganii Baker in Thiselton-Dyer, Fl. Cap. 6: 530 (1897).
Syn.: [*G. cruentus* auct.; Trauseld, Wild Fl. Natal Drakensberg 44, 45 (1969); Lewis & Obermeyer, Gladiolus 20 (1972) quoad syn. et spec.—non T. Moore.]
Type: [Lesotho] Mont aux Sources, near summit, *Flanagan* 1832 (BOL n.v.).

This species must be reinstated—see the discussion under *G. cruentus* above.

LEGUMINOSAE

381. Argyrolobium summomontanum Hilliard & Burtt, **species nova** nulli arcte affinis; fortasse prope *A. candicans* Eckl. & Zeyh. ponenda, a qua habitu diffuso (nec erecto), foliolis ellipticis supra glabris (nec obovato-ellipticis utrinque sericeo-villosis) facile distinguitur.

Herba perennis; caules multi e summo caudice, usque ad 15cm longi, multi-ramosi, patentes vel decumbentes, crebre foliati, partibus juvenilibus appresse villosi. *Stipulae* foliolis similes, 4–6 × 1.5–3mm, ovato-lanceolatae, paulo obliquae, supra glabrae, subtus sericeo-villosae. *Petioli* 2–3mm longi, supra canaliculati et glabri, subtus appresse sericeo-villosi. *Foliola* 4–8 × 2.75–3.5mm, late elliptica, subacuta, supra glabra venis invisibilibus, subtus appresse sericeo-villosa pilis apice folioli apiculo parvo formantibus. *Flores* solitarii, ad apices ramulorum foliis oppositi, bractea parva et bracteolis duabus suffulti. *Calyx* extra sericeo-villosus pilis plus minusve appressis; tubus 2mm longus; lobi duo postici 5.5 × 2.5mm, lanceolati, acutissimi, tres antici 6.5mm longi, per 3.5mm conjuncti, apicibus liberis lanceolato-acuminatis. *Corolla* vexillo 11.5 × 11mm, ungue 1.5mm longo incluso, suborbiculari extra appresse sericeo-villoso; alae 10 × 4.75mm longae, oblongae, apicibus rotundatis, basi auriculata, longitudinaliter sacculatae seriebus pluribus plicarum brevium crescenticarum transversalium inter venas praeditae, ungue 2mm longo; carina 9 × 4.5mm, ungue 2mm longo incluso, fere recta, oblique ovata, saccula parva oblonga prope basin praedita. *Stamina* 10, in tubo clauso 4mm longo coalita; filamenta libera c. 4.5mm; antherae dimorphicae, sex 0.75mm longae, quatuor 1.5mm. *Ovarium* 5mm longum, appresse sericeo-villosum; stylus 4.5mm, paulo curvatus, stigmate capitato; ovula 6–7, funiculo brevissimo mediano. *Legumen* c. 13 × 5mm, oblongum, sessile, sericeo-villosum; semina 2.5 × 2.5mm, ovata, hilo paulo impresso, fusco-maculata. Type: Lesotho-Natal border, hill slopes behind escarpment south of Sani Pass, c. 2900m, 18 i 1976, *Hilliard & Burtt* 8871 (E holo., NU iso.).

LESOTHO. Butha Buthe distr., Oxbow, 8500ft, 18 xii 1969, *Williamson* 434 (K).

NATAL. Escourt distr., Giant's Castle Game Reserve, Upper Injasuti area, 11000ft, 20 xii 1967, *Trauseld* 895 (NU).

Argyrolobium summomontanum has been recorded from three widely separated localities on the high Lesotho plateau, where it grows in short montane turf. It was locally common in the area where we found it, the small silvery tufts of stems and yellow flowers conspicuous in the green grass. The new species is to be placed in sect. *Chasmone* § *Brevipedes* and its general affinity seems to be with *A. candicans* Eckl. & Zeyh., but we have not seen material of that species.

LILIACEAE

382. Ornithogalum sephtonii Hilliard & Burtt, **species nova** ex affinitate *O. diphylli* Bak. sed bulbo collo conspicuo praedito, foliis plerumque 4 (nec 2–3 tantum), racemis 1–2-floris (nec 2–10-floris), tepalis 9–11mm longi (nec 7mm), et seminibus laevibus (nec echinulatis) facile distinguitur.

Bulbus subglobosus, 8–10mm diam., tunicis fuscis, apice in collum subterraneum 15–25mm longum extensus. *Folia* 3–4, synanthia, rosulata, usque ad c. 100 × 1.5–2mm, partim subterranea, linearia, subacuta, plana, glabra. *Inflorescentia* 1–3-flora, racemosa. *Pedunculi* 15–40mm longi, pro parte maxima subterranei, 1–2 e quoque bulbo. *Bracteae* usque ad 18 × 8mm, lanceolato-acuminatae, membranaceae, glabrae. *Pedicelli* plerumque 5–25mm longi. *Perianthium* campanulatum; tepala 9– 11 × 2.75–4mm, tria interiora exterioribus minime minora, elliptica, obtusa, tria exteriora paulo cucullata, omnia candida. *Filamenta* 3–4.5 × 1mm, ambitu oblonga, membranacea; antherae 2–3mm longae, luteae. *Ovarium* 4 × 3mm, triloculare, ovulis numerosis biseriatis, stylo 1.5–1.75mm; stigma 0.75mm, trilobum, lobis deltoideis erectis papillis minutis fimbriatis. *Capsula* tepalis persistentibus occulta, 8 × 8mm, pericarpio pallido translucente. *Semina* 3 × 2mm, ambitu deltoidea, tetragona, testa nigra leviter elevato-reticulata.

Type: E Cape, 3027 DB, Barkly East Distr., Ben Mcdhui, c. 8100ft, 3 xii 1981, *Hilliard & Burtt* 14665 (E holo., NU iso.).

We take pleasure in naming this species after Paul Sephton, Esq., of Pitlochrie, Barkly East Distr., who is keenly interested in the native flora, and who first took us to Ben Mcdhui. We had the pleasure of finding together in December 1981 this beautiful little *Ornithogalum* in full flower.

Ornithogalum sephtonii grows in marshy sward with only the flowers and the tips of the leaves above the surface of the ground. Similar marshy swards are a feature of the high bleak parts of the Drakensberg and Lesotho mountains, and although we know *O. sephtonii* only from its type locality, it will undoubtedly be found elsewhere in these mountains.

In Obermeyer's key to the South African species of *Ornithogalum,* (in *Bothalia* 12(3):331, 1978) *O. sephtonii* runs down near *O. diphyllum,* which is also endemic to the Drakensberg Centre.

SANTALACEAE

383. Thesium (sect. Barbata) alatum Hilliard & Burtt, **species nova** *T. utili* A. W. Hill affinis sed habitu robustiore, caulibus distincte alatis (nec costatis tantum), lobis perianthii tubo duplo longioribus (nec plus minusve eo aequalibus), antheris ad trientem loborum attingentibus (nec fere ad apices), et stigmate fere sessili (nec stylo c. 1mm longo suffulto) differt.

Herba perennis robusta; caules ad 60cm alti, unus vel plures e caudice crasso lignoso, erecti, inferne simplices, superne ramis abrupte ascendentibus ramosi, e foliis decurrentibus distincte alati. *Folia* distantia, parva, linearia, usque ad 15 × 1mm, mox marcescentia et caduca. *Flores* solitarii vel pauci ad apices ramulorum racemosim dispositi. *Bracteae* floribus breviores, lineari-lanceolatae, integrae, glabrae; bracteolae similes sed minores. *Perianthium* 2–3mm longum; lobi tubo circa duplo longiores, lanceolati, subacuti, apicibus cucullatis dense barbatis. *Antherae* e tubo paulo exsertae, 0.75mm longae, apicibus pilis perianthii affixae. *Stigma* fere sessile. *Fructus* subglobosus, c. 4 × 3.5mm, costis 5 prominentibus 5 tenuioribus alternantibus, inter costas leviter reticulatus.

Type. Natal, Underberg distr., 2929 CA, Garden Castle Forest Reserve, Pillar Cave Valley, c. 6500ft, 4 xi 1977, *Hilliard & Burtt* 10400 (E holo., NU iso.).

Selected citations:

NATAL. Bergville distr., Royal Natal National Park, 1930, *Hutchinson* 4554 (K); ibidem, Cold Hill, 6750ft, 25 i 1955, *Edwards* 520 (NU); Cleft Peak area, 8–9000ft, vii 1944, *Esterhuysen* 10212 (K); Cathedral Peak Forest Reserve, 6800ft, 12 xii 1952, *Killick* 1864 (K, NU). Highmoor Forest Reserve, 6200ft, 17 i 1966, *Killick & Vahrmeijer* 3670 (K). Mpendhle distr., foot of Hlatimba Pass, c. 7500ft, 2 xii 1972, *Wright* 1319 (E, NU). Underberg distr., 2929 CB, 5–7 miles NNW Castle View Farm, headwaters of Mlahlangubo river, c. 7200ft, 22 xi 1980, *Hilliard & Burtt* 13519 (E, NU); 2929 CA, Upper Umzimouti valley, 6500–6700ft, 27 xi 1976, *Hilliard & Burtt* 9372 (E, NU); Bushman's Nek, path to Thamathu, 2 ii 1976, *Hilliard & Burtt* 8896 (E, NU).

Thesium alatum was first collected in 1930, but it has been persistently misidentified as *T. angulosum* A.DC. of section *Imberbia,* from which it is immediately distinguished by its bearded perianth segments and almost sessile stigma, as well as by its more robust habit and differently disposed flowers. In A. W. Hill's account of the genus (in *Flora Capensis* 5(2):136, 1915) it runs down to *T. cytisoides* A. W. Hill, which has been reduced to a synonym of *T. utile* A. W. Hill by N. E. Brown (in Burtt Davy, *Man. Fl. Pl. Ferns Transvaal* 2:459, 1932). This is where its affinity lies.

Thesium alatum is common on steep grass slopes along the face of the Drakensberg from Royal Natal National Park (Bergville district) in the north to Bushman's Nek (Underberg district) in the south. The plants are a dull yellowish green and often form conspicuous stands though individually well-spaced. The flowers, too, are dull yellowish green outside, but white inside with snowy white tufts of hairs at the tips of the perianth segments.

384. Thesium crassifolium Sonder in Flora 40:355 (1857); Hill in Thiselton-Dyer, Fl. Cap. 5(2):149 (1915).

Type: Stellenbosch & Caledon, *Ecklon & Zeyher* Santal. no 34.

Syn.: *T. sedifolium* Levyns in J. S. Afr. Bot. 6:78 (1940) and in Adamson & Salter, Fl. Cap. Penins. 334 (1950).

Dr Levyns proposed *T. sedifolium* (taking up a manuscript name of De Candolle) to replace *T. crassifolium* Sond., in the belief that this was invalidated by the earlier *T. crassifolium* R. Br. That name, however, appeared only as *nomen nudum* in a list of Cape species (R. Brown, *Prodr.* 353, 1810) and was never validly published with a description. To De Candolle (*Prodr.* 14:672, 1857) it was known by name only. A. W. Hill (see *Kew Bull.* 1915: 8 and *Fl. Cap.* 5(2): 149, 1915) did in fact find the relevant specimen in the British Museum herbarium and identified it as *T. frisea* var. *thunbergii* A.DC., but this gave no validity to the name. It is now necessary to revert to *T. crassifolium* Sond. for Sonder's plant.

385. Thesium (sect. Barbata) decipiens Hilliard & Burtt, **species nova** *T. resedoidei* A. W. Hill affinis, sed habitu minus ramoso, ramis abrupte ascendentibus (nec semi-patentibus), floribus majoribus perianthio c. 3mm (nec 2mm) longo.

Herba perennis, gracilis; caules unus vel plures e caudice crasso lignoso, erecti ad c. 40cm, inferne simplices, superne parce ramosi, ramis abrupte ascendentibus, anguste alati. *Folia* remota, ascendentia, usque ad 181mm, linearia, acuta. *Flores* aut solitarii aut in cymulis brevibus axillaribus trifloris, in racemos longos simplices dsipositi. *Bracteae* floribus longioribus brevioribusve, lanceolatae, acutae, glabrae; bracteolae similes sed minores. *Perianthium* 3mm longum; lobi tubo paulo longiores, oblongo-lanceolati, obtusi, apicibus cucullatis barba apicali tenui et pilis marginalibus deorsum decrescentibus instructis. *Stamina* basi loborum orientia; antherae c. 1mm longae, apicibus pilis perianthinis affixis. *Stylus* stigmate incluso c. 2mm longo ad apices anterarum attingens. *Ovarium* placenta contorta. *Fructus* globosus, c. 3×3mm, 10-costatus, inter costas leviter reticulatus.

Type: Natal, Underberg distr., 2929 CB, 5–7 miles NNW of Castle View Farm, Headwaters of Mlahlangubo river, 7000ft, 20 i 1982, *Hilliard & Burtt* 15252 (E holo., NU iso.).

NATAL. Lions River distr., Kamberg, south-facing slope, 19 xii 1975, *F. B. Wright* 2385 (E, NU). Underberg distr., Cobham Forest Reserve, Upper Polela Cave area, c. 7000ft, 23 xi 1976, *Hilliard & Burtt* 9342 (NU).

Although we have diagnosed *T. decipens* against *T. resedoides,* next to which it runs down in A. W. Hill's key (in Thieselton-Dyer, *Fl. Capensis* 5(2):142, 1915), it is more likely to be confused with *T. angulosum* A.DC. in sect. *Imberbia*. It resembles this species strongly and is chiefly distinguished by its bearded, nor merely papillose, perianth segments. The resemblance across the sectional boundaries suggested the epithet *decipiens* = deceiving. A critical study of the sectional characters is needed.

Thesium angulosum may prove to differ further from *T. decipiens* by its stouter main stems, about 4mm in diameter (not less than 2mm as in *T. decipiens*) but we have not seen a range of material. As yet *T. angulosum* is only known in Natal from much lower altitudes than the new species, which has been found on moist grass slopes between 6250 and 7000ft.

386. Thesium (sect. Barbata) durum Hilliard & Burtt, **species nova** *T. flexuoso* A. DC. affinis sed habitu dense ramuloso, caulibus teretibus (nec sulcatis) et floribus terminalibus in ramunculis nanis lateralibus spicam densam brevem formantibus (nec solitariis in axillis bractearum spicae compactae) differt.

Frutex pumilus, densus, durus, ramis teretibus interdum fere prostratis. *Folia* usque ad 2.5×1mm, lanceolata, acuta vel acuminata, glabra, in ramulis juvenilibus imbricata apicibus plus minusve patentibus, in ramulis vetustis arte appressa dimidio superiore saepe sicco et brunneo. Flores aut solitarii terminales aut 2–4 terminales et axillares in ramulis nanis lateralibus c. 4mm longis spicas densas formantibus. *Bracteae* floribus breviores, late lanceolatae, acutissimae, marginibus angustis hyalinis; bracteolae similes sed minores. *Perianthium* c. 2mm longum; lobi tubo plus minusve

aequales, late lanceolati, acuti, apice cucullato dense barbato. *Antherae* e tubo semi-exsertae, c. 0.75mm longae, apicibus pilis perianthinis affixis. *Stylus* stigmate incluso 0.5–1mm longus. *Ovarium* placenta contorta. *Fructus* non visus.
Type: E Cape, Elliot distr., 3127 BB, Fetcani Pass, c. 7800ft, on basalt sheets, 15 x 1980, *Hilliard & Burtt* 13136 (E holo., NU iso.).
NATAL. Mpendhle distr., S end of eastern ridge from Giant's Castle, c. 8200ft, 1 x 1967, *F. B. Wright* 220 (E, NU).

Thesium durum is a distinctive plant forming dense hard cushions on basalt sheets or in hard stony ground. The older parts of the stems appear to be leafless, but this is not so: the leaves are scale-like, closely appressed and distant. On young twigs the leaves are imbricate and are easily seen because the upper parts are spreading, imparting a spiky look to the twigs. The flowers are borne on much abbreviated dwarf lateral shoots arranged in spikes; here the leaves, which resemble the bracts, are closely imbricate, so that the flowers appear to terminate short scaly peduncles.

SCROPHULARIACEAE–HEMIMERIDEAE

387–393. Diascia Link & Otto, Icon. Pl. Select. 7, t. 2 (1820).

The following seven diagnoses are being published now in order that the names may be validated for use without waiting for the full descriptions; these will be included in a revision of the perennial species of the genus that is being prepared. This course is particularly desirable as some of the plants are in cultivation, both in South Africa and in Britain, and promise to be of considerable horticultural value.

387. Diascia anastrepta Hilliard & Burtt, **species nova** *D. megathurae* Hilliard & Burtt (vide infra) affinis, in sicco pilis staminum inferiorum redactorum usque ad 0.5mm longis tantum (nec plerumque 1mm vel ultra) distinguenda; in vivo corolla tubo minus profunde invaginato, fenestra in labio superiore dorso convexa (nec plana), calcarum apicibus sursum curvatis (nec calcaribus rectis) facilius recognoscenda.
Type. Natal: Underberg distr., 2929 CB, Sani Pass, c. 8600ft, clumped at base of grass tussocks and rocks in stream line, 17 ii 1982, *Hilliard & Burtt* 15498 (E holo., NU iso.).

The epithet *anastrepta* (from the Greek, meaning turned up) refers to the upturned tips of the spurs.

388. Diascia lilacina Hilliard & Burtt, **species nova** nulli arcte affinis, sed prope *D. stachyoidem* Hiern ponenda, a qua floribus minoribus (c. 12mm longis, nec 18mm), lilacinis (nec roseis), saccis lateralibus obtusis praeditis (nec calcaratis) facile distinguenda.
Type. E Cape: Barkly East–Elliot distr. border, 3127 A–B border, Saalboom Nek south of Clifford, c. 6900ft, 21 i 1979, *Hilliard & Burtt* 12297 (E holo., NU iso.).

The species takes its name from the distinctive colour of the corolla, all the other species in this group having clear pink or red corollas.

389. Diascia megathura Hilliard & Burtt, **species nova** *D. purpureae* N. E. Br. affinis, sed calcaribus lateralibus 8mm longis recte patentibus (nec c. 4mm longis tantum et sub labio corollae inferiore prorsum curvatis) facile distinguenda.
Type. Natal: Underberg distr., 2929 CB, Cobham Forest Station, Upper Polela Cave area, 6800ft, open grass above stream, gritty soil, 12 ii 1979, *Hilliard & Burtt* 12465 (E holo., NU iso.).

The specific epithet refers to the large yellow 'window' at the base of the upper corolla lobe (Greek megas—large, thuros—window).

390. Diascia personata Hilliard & Burtt, **species nova** *D. rigescenti* Benth. affinis, sed palato personato glabro (nec carina media flava glandulifera praedito), calcaribus c. 1.5mm longis incurvis (nec 5mm longis primum deorsum dein prorsum curvatis) interne glandulis sessilibus atropurpureis destitutis facile distinguenda.
Type. E Cape: East London, Beacon Bay, 9 x 1979, *Batten* s.n. (E holo., NU iso.).

The mouth of the corolla of this species is almost closed by the bulge at the base of the palate, as in the common snapdragon (*Antirrhinum*). The condition is known botanically as personate and gives the species its name.

391. Diascia stricta Hilliard & Burtt, **species nova** *D. stachyoidei* Hiern affinis sed habitu rigidius erecto, foliis ovato-lanceolatis plerumque 4–8mm latis et duplo longioribus (nec ovatis vel subrotundatis plerumque 10–23mm latis et aequilongis) acute ascendentibus (nec patentibus), pedicellis inferioribus c. 10–12mm longis (nec 16–30mm), calcaribus lateralibus c. 4mm longis (nec 7mm) distinguitur.
Type. E Cape: Barkly East distr., 3027 DC, Witteberg, Three Drifts stream below Pitlochrie, c. 5800ft, 4 xii 1981, *Hilliard & Burtt* 14705 (E holo., NU iso.).

392. Diascia tugelensis Hilliard & Burtt, species nova *D. vigilis* Hilliard & Burtt affinis sed pedicellis c. 25–40mm longis (nec 14–24mm) patentibus (nec acute ascendentibus) inferioribus ut minimum 20mm inter se distantibus (nec minus quam 15mm), corollae tubo valde invaginato et calycis lobis itaque reflexis (nec vix invaginato et calycis lobis patentibus), corollae palato sulcato sine glandulis (nec palato elevato glandulis sessilibus atropurpureis praedito) distinguitur.
Type. Natal: Royal Natal National Park, 2828 DB, Tugela Gorge, Sentinel Gully, 6000ft, 6 ii 1982 [sterile; flowered in Hort. Reg. Bot. Ed. v 1982] *Hilliard & Burtt* 15455 (E holo., NU iso.).

393. Diascia vigilis Hilliard & Burtt, **species nova** *D. stachyoidei* Hiern affinis, sed corollae tubo vix invaginato et igitur calycis lobis patentibus (nec tubo profunde invaginato et igitur calycis lobis lateralibus abrupte reflexis), 'fenestra' fulva externe leviter convexa et siccitate fere plana (nec profunde convexa siccitate plica conica clare visibili) distinguitur.
Type. Orange Free State, Witzieshoek, road to Sentinel, c. 8000ft, 27 xii 1975, *Hilliard & Burtt* 8656 (E holo., NU iso.).

Diascia vigilis means the *Diascia* of The Sentinel (latin *vigil*, gen. *vigilis*). It is so named because most of the material that we have seen was collected within sight of the massive peak which stands at the boundary of the Royal Natal National Park and the Witzieshoek district of the Orange Free State.

SCROPHULARIACEAE–SELAGINEAE
(O. M. HILLIARD)

394. Selago elongata Hilliard, **species nova** *S. trinerviae* E. Mey. affinis sed inflorescentia ante anthesin jam elongata (nec congesta), floribus sessilibus (nec pedicellatis), brachyblastis axillaribus foliatis praesentibus (nec saepissime absentibus) differt.

Herba perennis vel suffrutex, radice palari demum crassa et lignosa ad 10mm diam.; caules e summo caudice plures, erecti ad 30–100cm, subsimplices vel multiramosi, inferne nudi et lignosi, superne pubescentes et foliati. *Folia* plus minusve fasciculata, primaria plerumque 10–22 × 1–2mm, axillaria minora, linearia vel lineari-lanceolata, apice acuto, basi angustata, subsessilia, marginibus integris paulo revolutis, utrinque glanduloso-punctata, hispidula praesertim in pagina superiore ad margines, coriacea. *Spicae* simplices, terminales, elongatae, multiflorae, floribus plus minusve sessilibus. *Bracteae* 2.5–8mm longae, lanceolatae, acuminatae, dimidio inferiore conduplicatae, interdum ad calycem leviter adnatae, glabrae. *Calyx* c. 1.5–2.5mm longus, lobis duobus anticis tubum aequantibus lanceolatis acuminatis, lobis tribus posticis minoribus glabris. *Corolla* alba; tubus 4–5mm longus, inferne cylindricus, superne infundibularis; lobus anticus 2 × 1mm oblongus, 4 ceteri paulo minores. *Stamina* 4, 2 ad tubi orem attingentia, 2 valde exserta. *Fructus* ovoideus; cocci monospermi, 1.75–2mm longi.

Type: Natal, Port Shepstone distr., Umzimkulwana valley near old cement factory, c. 500ft, 22 ix 1963, *Ward* 4729 (NU holo, E iso.).

NATAL. Port Shepstone distr., Umzimkulu gorge, iv 1937, *McClean* 411 (K). Pinetown distr., Kloof, *Gibson* s.n. (NU). Mahlabathini distr., Ceza, 4 x 1969, *Strey* 9142 (K). Umfolozi distr., Umfolozi Game Reserve, 220ft, 8 xi 1953, *Ward* 1676 (NU). Babanango distr., farm Koningsdal, 18 xi 1966, *Venter* 2864 (K).

Both Ward and McClean recorded *Selago elongata* as growing in rough grass and scrub in the gorges of the Umzimkulu and its tributary, the Umzimkulwana; at Umfolozi, the plants were growing in sandy grassland on the banks of the White Umfolozi river. The species has been confused with *S. racemosa,* that is *S. trinervia* (see below), but is easily distinguished by its fascicled leaves, spikes that are elongated even in bud, and its sessile flowers.

395. Selago flanaganii Rolfe in Thiselton-Dyer, Fl. Cap. 5(1): 138 (1901).
Type: Orange River Colony, summit of Mont aux Sources at 9500ft, *Flanagan* 2108 (K).

Syn.: *S. lithospermoides* Rolfe in Thiselton-Dyer, Fl. Cap. 5(1):137 (1901).
Type: Natal, in the Rovelo Hills at 7000ft, *Sutherland* s.n. (K).

The type of *S. lithospermoides* consists of three twigs in young bud, but calyx, bracts and leaves all match those of *S. flanaganii* perfectly. Furthermore, there is no real difference in the shape of the individual heads as suggested by Rolfe in his key to the species of *Selago* in *Flora Capensis*: the heads in Sutherland's specimen are not yet fully developed.

We have not succeeded in tracing the exact location of Sutherland's 'Rovelo Hills', but both from the altitudinal range he gave and from the specimens he collected there we judge them to be the lower peaks adjoining the Amphitheatre (The Pudding, etc.) in present-day Royal Natal National Park, Bergville district, Natal.

Selago flanaganii is confined to the high Lesotho plateau and the highest parts of the Drakensberg in Natal and the Cape.

396. Selago galpinii Schltr. in J. Bot 1897:281 (1897); Rolfe in Thiselton-Dyer, Fl. Cap 5(1):137 (1901).

Type: Cape, Queenstown div., summit Hangklip Mountain, 6600ft, ii–iii 1893, *Galpin* 1508 (K).

Syn.: *S. cooperi* Rolfe in Thiselton-Dyer, Fl. Cap. 5(1):136 (1901). Lectotype: Cape, Albert distr., *Cooper* 602 (K, E isolecto.).

S. sandersonii Rolfe in Thiselton-Dyer, Fl. Cap. 5(1):136 (1901). Lectotype: Natal, below Mont aux Sources, 7–8000ft, iii 1898, *Evans* 755 (K).

In his key to *Selago* in *Flora Capensis,* Rolfe separated *S. galpinii* from *S. cooperi* and *S. sandersonii* on the height of the plants, but this is of no significance: differences in stem height are common in these grassland plants, which can be prostrate to erect. Furthermore, the supposed difference in the length of the calyx lobes in *S. cooperi* and *S. sandersonii* simply does not exist.

In describing both *S. cooperi* and *S. sandersonii* Rolfe cited a number of specimens, but did not indicate a type. We select *Cooper* 602 (K) as the lectotype of *S. cooperi,* partly because the specific epithet honours Cooper, partly because in the Sutherland specimens from Faku's Territory (i.e. Pondoland in modern Transkei) the inflorescence is not one-sided and they are better placed under *S. pachypoda* Rolfe. Nor is the inflorescence one-sided in the *Sanderson* specimen cited under *S. sandersonii* although it is so described in the key to species; furthermore there is doubt about the provenance of Sanderson's plant: the sheet in Kew herbarium is merely annotated 'Transvaal', but a further note states that the duplicate sheet in TCD bears a printed label 'Port Natal'. We therefore prefer to choose *Evans* 755 (K) as lectotype of *S. sandersonii.*

Selago galpinii is a montane plant ranging from Platberg and Witzieshoek in the NE Orange Free State through Lesotho and along the Natal Drakensberg to the Witteberg and Cape Drakensberg near Barkly East, and the mountains about Queenstown and Molteno.

397. Selago lepidioides Rolfe in Thiselton-Dyer, Fl. Cap. 5(1):157 (1901).

Lectotype: [Transkei], Pondoland, *Bachmann* 1217 (K).

NATAL. Port Shepstone distr., Umtamvuna Bridge, 26 xii 1966, *Strey* 7117 (K, NH, NU); Margate, ii 1931, *Rump* s.n. (NU); Oribi Gorge, 7 i 1971,

Glen 252 (NU); near entrance to Panorama farm 9km from Port Edward to Izingolweni, 16 xii 1981, *Schrire* 737 (NH).

Rolfe cited two specimens under his *Selago lepidioides,* namely *Bachmann* 1217 and *Bachmann* 1221, both from Pondoland, that part of Transkei marching with the southern border of Natal. *Bachmann* 1217 bears much elongated inflorescences, mostly in fruit, and their striking resemblance to a fruiting *Lepidium* clearly prompted Rolfe's choice of epithet; furthermore, the description fits the specimen reasonably well, though the leaves are glabrous, not hispidulous. We have chosen this specimen as lectotype.

Bachmann 1221 is only a fragment, with the flowers still in a tight head, but it is clearly *S. woodii* Rolfe.

Selago lepidioides is almost certainly conspecific with, and antedated by, *S. peduncularis* E. Mey., based on a Drège specimen collected in coastal Natal between the Umzimkulu and Umkomaas rivers, not far from Pondoland, but we have not been able to trace an isotype. Rolfe knew *S. peduncularis* only from Meyer's description; in his key to the species of *Selago* in *Flora Capensis,* he separated them on 'bracts suborbicular-ovate: *peduncularis*; bracts elliptic-oblong: *lepidioides'*, but the type of *S. lepidioides* has suborbicular-ovate bracts!

In his key to *Selago* in *Flora Capensis, S. woodii* appears in the group under the major lead 'Flower sessile or subsessile', while *S. peduncularis* and *S. lepidioides* fall into the group with 'Flowers distinctly (sometimes long) pedicelled.' However, in his description of *S. woodii* Rolfe gives a pedicel length of 1–1¼ lin., that is, 2–2.5mm; the isotype in NH has pedicels 2.5–3mm long (flowers measured at the base of the inflorescence; pedicel length decreases slightly upwards). We made 33 measurements over a range of 31 specimens (NH, NU), giving a pedicel length (lowest flowers only) of (1–) 1.5–3.5 (–4)mm. Ten measurements (six specimens) in *S. lepidioides* gave a pedicel length of (2.5–) 3–5mm.

Selago woodii is very closely allied to *S. lepidioides*: their flowers are precisely alike except for the mostly shorter pedicels of *S. woodii.* Nor do their leaves differ: although the type of *S. lepidioides* has glabrous leaves, that of *S. woodii* hispid ones, there is no absolute distinction, and upper leaves may be glabrous, lower hispid. However, the flowers of *S. woodii* are arranged in a corymbose panicle; the flowers of *S. lepidioides* are also panicled, but the primary inflorescence is soon overtopped by lateral branches. Field observations along the southern Natal coast, particularly in Port Shepstone district, and across the Umtamvuna in Transkei, as well as the collection of fruiting specimens, are needed to show if these apparent differences in habit really hold.

398. Selago longicalyx Hilliard, **species nova** *S. junodii* Rolfe affinis sed capitulis in cymas compactas dispositis (nec solitariis), pedicellis 1.5–4mm longis (nec 0.75mm), bracteis acuminatis (nec acutis) facile distinguitur.

Herba perennis, caudice incrassato et lignoso; caules plures e summo caudice, ad c. 75cm erecti, simplices vel superne parce ramosi, ramis acute ascendentibus, puberuli. *Folia* in fasciculos aggregata, plerumque 8–18 × 1–1.75mm, linearia vel lineari-lanceolata, acuta, integra, glabra pilis

paucis parvis in marginibus et inferne ad costam exceptis. *Capitula* subglobosa ad apices ramulorum brevium aggregata in corymbos compactos disposita. *Bracteae* c. 3.75–5mm longae, parte ad pedicellum adnata exclusa, a calyce liberae, lanceolatae, acuminatae, in dimidio inferiore cucullatae, puberulae. *Pedicelli* 1.5–4mm longi, dorso-ventraliter compressi, puberuli. *Calyx* c. 4–5 × 1.5mm, tubularis, puberulus; lobi subaequales, c. 1.25mm longi, deltoidei acutissimi. *Corollae* tubus c. 5–6mm longus, anguste infundibuliformis; lobi subaequales, 2.5–3 × 1.5–1.75mm, oblongo-elliptici, obtusi, albi. *Stamina* 4, duo longe exserta, duo ad oram tubi paene attingentia. *Fructus* e coccis duobus monospermis, c. 3 × 0.75mm, ambitu oblongus.

Type: Natal, Ngotshe distr., Ngome, c. 4000ft, 31 iii 1977, *Hilliard & Burtt* 9841 (E holo.; K, NU iso.).

NATAL. Utrecht distr., 6400ft, 25 iii 1961, *Devenish* 637 (K); Altemooi, 6500ft, iv 1920, *Thode* NH 16483 (NH). Newcastle distr., Majuba, c. 7000ft, 13 iii 1905, *Rogers* 1034 (K). Vryheid distr., Nhlazatshe Mountain, 4600ft, 29 v 1960, *Ward* 3421 (K, NU).

TRANSVAAL. Wakkerstroom distr., summit Paardekop range, c. 7500ft, 2 ii 1930, *Galpin* 9770 (K); farm Oshoek, 6400ft, 9 ii 1961, *Devenish* 569 (K).

The specific epithet *longicalyx* draws attention to a characteristic feature of a small group of allied species, namely the almost tubular calyx with five subequal lobes much shorter than the tube. These species seem be be confined to northern Natal, western Swaziland and south eastern Transvaal.

Selago longicalyx has been recorded from northern Natal and the neighbouring Transvaal district of Wakkerstroom. Its closest ally is *S. junodii,* which is easily distinguished by its solitary rounded heads borne at the tips of scapose stems. *Selago junodii* is known only from eastern Transvaal and western Swaziland. Both species grow in rough grassland near forest margins, as does *S. elata* Rolfe, a much bushier plant with relatively broad leaves and tubular calyx split down the back. *Selago elata* and *S. junodii* appear to have a similar distribution.

399. Selago melliodora Hilliard, **species nova** *S. pachypodae* Rolfe affinis sed foliis brevioribus (plerumque 6–8mm longis) obtusis pubescentibus (nec 10–18mm longis subacutis glabris), bracteis obtusis (nec acutis), calyce minore (1.75–2mm longo, nec 2.5mm) corolla plerumque minore (4–5mm longa, nec 4.5–7mm) distinguenda.

Herba perennis, fruticosa, c. 45cm alta; caules primarii multiramosi, pubescentes pilis aliis patentibus albis acutis aliis minutis glanduliferis. *Folia* in fasciculos aggregata, plerumque 6–8 × 1–1.5mm, lineari-oblonga, obtusa, marginibus leviter revolutis, utrinque pilis acutis patentibus pubescentia pilis aliis parvis glanduliferis intermixtis. *Capitula* subglobosa, in ramulis brevibus et terminalia et lateralia in paniculas parvas densas terminales disposita. *Bracteae* 2.75–3mm longae, oblongae, obtusae, pilis patentibus et glandulosis et eglandulosis pubescentes. *Calyx* 1.75–2mm longus; lobi duo antici deltoidei, c. 0.5mm longi, duo laterales paulo minores, posticus oblongo-lanceolatus, c. 1mm longus, omnes pubescentes pilis aliis glanduliferis. *Corollae* tubus 3–3.5mm longus, anguste

infundibuliformis, lobo antico c. 1.75–2 × 1mm oblongo obtuso, 4 aliis lobis similibus sed minoribus albis vel pallidissime purpureo-tinctis. *Stamina* 4, exserta. *Fructus* non visus.
Type. Natal, Underberg distr., 2929 CB, Sani Pass, c. 8000ft, 17 ii 1982, *Hilliard & Burtt* 15539 (E holo., NU iso.).
NATAL. Underberg distr., Sani Pass, 8–8800ft., 23 iii 1977, *Hilliard & Burtt* 9804 (E, NU).
LESOTHO. Near Qacha's Nek, upper slopes Maquaba Peak, 13 iii 1936, *Galpin* 14056 (K). Mokhotlong, 28 ii 1949, *Guillarmod* 985 (K).

We have seen *Selago melliodora* forming big loose clumps on the scrub-covered slopes towards the top of Sani Pass; the sweet honey scent of the flowers suggested the specific epithet. The specimens collected by Dr Jacot Guillarmod at Mokhotlong had been determined as *S. schlechteri* Rolfe, but that species has glabrous leaves, and is very close to *S. pachypoda* Rolfe.

400. Selago trinervia E. Mey., Comm. 261 (1837); Rolfe in Thiselton-Dyer, Fl. Cap. 5(1): 158 (1901).
Type: Natal, between the Omsamculo [Umzimkulu] and Omcomas [Umkomaas] [rivers], below 200ft, *Drège* (E, K iso.).
Syn.: *S. racemosa* Bernh. in Flora 1845:69 (1845); Rolfe in Thiselton-Dyer, Fl. Cap. 5(1):159 (1901). Type: Port Natal, *Krauss* 225 (K iso.).
S. tysonii Rolfe in Thiselton-Dyer, Fl. Cap. 5(1):158 (1901). Type: Natal, summit Mount Currie, 7000ft, ii 1883, *Tyson* 1238 (K) (the second Tyson specimen cited by Rolfe is part of the same collection, but distributed under a different number by Herb. Norm. Austr. Afr.).

Bernhardi sought to distinguish his new species, *S. racemosa,* from *S. trinervia* by its racemose, not corymbose, inflorescence. However, the use of the term corymbose is rather misleading, because the inflorescence is really a simple raceme, which elongates as the flowers open; only in very young inflorescences do the flowers appear to be crowded in a corymb.

Rolfe, in his key to *Selago* in *Flora Capensis,* separated *S. racemosa* from *S. trinervia* on the shape of the calyx lobes and their length in relation to the bracts, but an examination of the isotypes at Kew dispels this supposed difference. Furthermore, it is impossible to distinguish Rolfe's species, *S. tysonii,* from *S. trinervia,* either on the key character he gave (bracts broad or subobtuse *versus* bracts narrow or subacute) or any other character. *Selago trinervia* should be accepted as a species displaying considerable variation in the length of the bracts, namely c. 2.5–5mm, and therefore exceeding the calyx by c. 0.5–2mm, the shorter bracts being slightly less acute than the longer ones. There are also considerable differences in the degree of pubescence: in coastal Natal, whence came the types of both *S. trinervia* and *S. racemosa*, there may be a few very small hairs over the main vein at the base of the bracts, but generally hairs are very nearly confined to the margins of both bracts and calyx lobes, and the corollas are glabrous. The type of *S. tysonii* came from an altitude of c. 2100m, and both bracts and calyx are puberulous all over, but the corollas are glabrous or very nearly so. Other specimens over the geographical range of the species may

have glabrous or pubescent corollas, and individual specimens may have either glabrous or sparsely hairy corollas in the same inflorescence.

Selago trinervia appears to be confined to Natal and nearby parts of Transkei, where it grows in grassland, often among rock outcrops, from near sea level to c. 2100m. It is a tufted herb, the branches often straggling, and it is easily recognized by its narrowly elliptic, rather leathery leaves, nearly always entire, rarely with one or two pairs of small teeth in the upper half, and pedicelled white flowers borne in simple racemes that elongate considerably (up to 10cm or more) as the flowers open.