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NOTES ON SOME PLANTS OF SOUTHERN AFRICA CHIEFLY FROM NATAL: XV

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ABSTRACT. Twenty-eight new items are annotated, 10 being new species: *Aspidoglossum* (2), *Schizoglossum* (2), *Berkheya* (1), *Cineraria* (2), *Hypoxis* (1), *Ornithogalum* (1) and *Gnidia* (1). New specific combinations are proposed in *Centella* (1), *Glia* (1) and *Peucedanum* (1), and new infraspecific names in *Hypoxis* (1) and *Juncus* (1). Other annotations refer to *Fuirena*, *Clutia*, *Hypoxis*, *Eriospermum* and *Ornithogalum*. The Addenda to the series comprise updatings on 68 items published previously. The part ends with a complete index to the series, which is now closed.

This series of papers, which started in 1970, has dealt with nearly 600 items, and many more plant names: an index is clearly needed and is now supplied, together with a number of Addenda that bring earlier items up to date. It has seemed to us useful to broaden the index so that it covers, at the generic level, our relevant publications that have appeared separately, outside this series, and a list of these is given under References. Our future work on the flora of southern Africa is likely to be less miscellaneous in nature and will be published under individual titles. The part presented now is the final one of the present series.

The Rev. F. A. Rogers collected extensively in southern Africa (see Gunn & Codd, *Bot. Expl. S. Africa* 298. 1981). Many of his specimens from Natal are labelled 'Culvers, Weenen County'. It may be useful to put on record that Culvers is at 29°18′30″S, 29°42′12″E (i.e. in 2929 BC); it lies at the E end of the ridge running on the N side of the upper valley of the Little Mooi River and ending in Mt Lebanon. The houses at Culvers are at 5200ft, the point above the ridge-end is at 6300ft and Mt Lebanon itself has peaks at 6970 and 7097ft.

ASCLEPIADACEAE

(O. M. Hilliard)

566. Aspidoglossum difficile Hilliard, **species nova** prope *A. delagoense* (Schltr.) Kupicha dubitanter posita et corollae lobis 9mm longis facie ventrali villosis (nec 4–5mm longis facie ventrali glabris vel puberulenti-

bus), coronae lobis lanceolatis 3·5mm longis (nec rotundato-triangularibus a dorso visis, 1·5–2mm longis) tantum carinis duabus angustis intus praeditus (nec appendice cucullata) statim distinguenda.

Stem c.450mm tall, 1mm diam., either simple or forking once, glabrous except for a narrow band of small curved hairs, sparsely leafy. *Leaves* opposite and decussate, lamina 30–40 × 1mm, but appearing to be only half the width because of the sharply revolute margins, apex acute, callous-tipped, base sessile, both surfaces glabrous except for a few marginal hairs on young leaves. *Flowers* 4–5 at each node, pendent. *Pedicels* 5–7mm long, pubescent on one side. *Calyx* segments 2 × 1mm, lanceolate, sparsely pubescent outside, glabrous inside. *Corolla* lobed nearly to the base, lobes 9 × 2mm, oblong, flat, apex obtuse, dorsal surface very sparsely hairy, ventral surface villous, the hairs up to 1mm long. *Corona* composed of 5 main lobes alternating with 5 minute ones; main lobes 3·5 × 1·25mm, much overtopping the gynostegium, lanceolate, thin-textured, almost papery when dry and then red-brown, without an appendage but with 2 narrow fleshy keels running up the inner face; subsidiary lobes c.0·3mm long, suborbicular. *Anther* appendage c.0·4mm long, erect, just reaching the rim of the gynostegium; corpusculum c.0·3mm long, pollinium attachment subterminal; pollinium c.0·6mm long, narrowly pear-shaped, much flattened. *Gynostegium* 1·5mm tall, the head c.0·8mm in diam., 5-lobed, truncate. *Fruit* unknown.
Type: Natal, Hlabisa distr., St Lucia Estuary Game Park, 9 xi 1977, *Pooley* 1921 (E holo.).

Mrs Pooley described her plant as having flowers hanging like bells, with brown sepals and the 'petals deep purple inside'. The combination of pendent flowers, narrowly oblong corolla lobes that are villous on the inner face, and thin, lanceolate corona lobes having only two narrow keels on the inner face, render this an altogether distinctive plant.

Dr Kupicha, during the course of her revision of *Schizoglossum sensu lato* (in *Kew Bull.* 38: 599–672, 1984), examined the specimen and annotated it as being neither *Schizoglossum* nor *Aspidoglossum*. But in the keys to the African genera of Asclepiadaceae that are currently available (e.g. N. E. Brown in *Flora Capensis* 4(1), 1907; F. Thonner, *The flowering plants of Africa*, 1915; R. A. Dyer, *The genera of southern African flowering plants* 1, 1975) the plant runs straight down to *Schizoglossum* (including *Aspidoglossum*) and as that is where it will be sought, it is considered expedient to describe it there.

It has the sessile, fasciculate inflorescences and sausage-shaped, subapically attached pollinia that distinguish *Aspidoglossum* from *Schizoglossum*, and we have diagnosed it against *A. delagoense*; the pollinia of the two species are similar (see *Kew Bull.* 38(4), plate 27F). Dr Kupicha remarked (*loc. cit.*, p. 663) of *A. delagoense* 'it is clearly related to *A. rhodesicum*, these two species uniquely sharing a corona, with alternating large and small lobes'. *Aspidoglossum difficile* too has alternating large and small lobes, but in *A. difficile*, the small lobes are exterior to the large ones, while in *A. delagoense* and *A. rhodesicum* they are interior to them. Although the main corona lobes of *A. difficile* differ markedly from those of both *A. delagoense* and *A. rhodesicum*, they are not unlike those of *Schizoglossum flavum* Schltr.; several other species of *Schizoglossum* also have thin, unappendaged corona lobes, so the

thin unappendaged corona lobes of *Aspidoglossum difficile* are possibly not so odd as they might at first seem.

567. Aspidoglossum xanthosphaerum Hilliard, **species nova** *A. lamellato* (Schltr.) Kupicha affinis sed coronae lobis facie interiore appendicem linear-lanceolatam (nec duas lamellas longitudinales) gerentibus, et corolla et corona vivide canarinis (nec corolla pallide brunnea viridi purpurea, corona alba) distinguenda.

Tuber pyriform, c.20×10mm. *Stem* 55–125mm tall, simple, erect, pilose with coarse white somewhat curled hairs. *Leaves* in 4 or 5 pairs, sharply ascending, lowermost up to 25×6mm, lanceolate, longer than the internodes, becoming linear upwards and diminishing slightly in length, apex acute, base more or less truncate and subhastate, almost sessile, upper surface sparsely pilose, lower surface glabrous except on the midrib and principal veins, margins somewhat revolute. *Flowers* crowded in a terminal capitate umbel. *Pedicels* 2–4mm long, pilose. *Calyx* segments c.2·5×1·5mm, lanceolate, glabrous inside, pilose outside. *Corolla* tube c.0·5mm long, lobes c.2·75×1·75mm, ovate, erect, glabrous inside, pilose on the upper half outside, canary-yellow. *Corona* lobes c.2×1·5mm, about equalling the gynostegium, roughly rhomboid-triangular in outline, apex obtuse or somewhat emarginate, with a linear-lanceolate appendage on the inner face, tip of appendage entire or emarginate, slightly overtopping the corona lobe, but inflexed towards the gynostegium then sharply reflexed at the level of the gynostegial head and almost touching the tip of the corona lobe, both canary-yellow. *Anther* appendage c.0·5×0·75mm, suborbicular, inflexed over the rim of the gynostegial head; corpusculum c.0·2mm long; pollinia 0·5mm long, bean-shaped, attachment subterminal. *Gynostegium* 1·5mm tall, the head depressed-truncate, c.1mm in diam. *Fruit* unknown.
Type: Natal, Utrecht distr., 2730 AC, Groenvlei, 2 xi 1985, *Hilliard & Burtt* 18528 (E holo., NU iso.).

We know *A. xanthosphaerum* only from the type collection made in northernmost Natal, not far from the Transvaal border. Many plants were dotted about in somewhat marshy grassland, the bright yellow capitate inflorescences making them conspicuous despite their short stature. The species is allied to *A. lamellatum* and their pollinia are similar (see *Kew Bull.* 38, plate 27E). *Aspidoglossum lamellatum* usually has the flowers in fascicles at the nodes, but they may also be borne in a terminal, many-flowered head as in *A. xanthosphaerum*. Dr Kupicha (in *Kew Bull.* 38: 664, 1984), in discussing variation within *A. lamellatum*, noted that plants with capitate inflorescences occur only at the eastern margin of the range of the species, and that four of the six collections she saw had an appendage on the inner face of the corona lobes, in contrast to the two longitudinal flaps of tissue characteristic of the species. From the distribution map provided (*Kew Bull.* 38: 665, fig. 12) it is clear that *A. xanthosphaerum* grows in the same area as these atypical plants. We have not seen the specimens examined by Dr Kupicha, but the corona lobes (*Kew Bull.* 38: 665, fig. 12) are elliptic-lanceolate (not rhomboid-triangular as in *A. xanthosphaerum*), the appendage is shorter than the lobe (not longer) and the tips are not reflexed. Dr Kupicha makes no mention of the flowers of these specimens differing in colour from those of typical *A. lamellatum*; only field work in northern Natal

and south-eastern Transvaal can confirm whether or not these plants are conspecific with *A. xanthosphaerum* and so justify Dr Kupicha's caveat that two entitites might be included within her concept of *A. lamellatum*.

568. Schizoglossum amatolicum Hilliard, **species nova** *S. hamato* E. Mey. affinis sed corollae lobis replicatis (nec paulo cucullatis) et coronae lobis appendice ventrali minuta (nec appendice 2·5–3mm longa) statim distinguenda.

Stem 250mm tall, 2mm diam., simple, erect, pubescent in two broad bands alternating at the nodes. *Leaves* opposite and decussate, lamina 18–34 × 8–14mm, oblong-deltoid, base more or less truncate, apex subacute, margins repand-revolute, hispidulous near margins and on midrib below, petiole 2mm long. *Inflorescences* in the upper leaf axils, c.6-flowered, lowermost peduncle 36mm long, puberulous. *Pedicels* c.10mm long, puberulous. *Calyx*: sepals 4 × 1·5mm lanceolate, glabrous inside, pubescent outside. *Corolla* lobed almost to the base, lobes 9 × 5mm, replicate, glabrous except for a few small hairs on the margins and at the base inside, blackish-green. *Corona* lobes 2 × 1·5mm, much shorter than the gynostegium, green, very fleshy, subquadrate in outline, truncate, margin somewhat crenate, appendage a minute vertical tooth about 0·5mm from the outer margin. *Anthers* with appendages c.1 × 1mm, ovate, white, inflexed over the rim of the gynostegial head; corpusculum c.0·3mm long, very conspicuously flanged; pollinium attachment subterminal; pollinium c.0·8mm long, compressed obtriangular. *Gynostegium* 4mm high, the head 2mm diam. excavated under the anther appendages, green. *Fruit* not known.

Type: E Cape, 3226 DB, Amatole Mts, Elandsberg, above farm Coolin, c.5500ft, 15 xii 1985, *Hilliard & Burtt* 18876 (E holo.).

S. amatolicum is clearly allied to *S. hamatum*, which it resembles in foliage and in the size and disposition of the flowers; also, the pollinia are similar (see the illustration of the pollinium of *S. hamatum* in *Kew Bull.* 38, plate 20A) and are made distinctive by the broad flanges on the corpusculum. But the two species differ markedly in the form and colouring of the corolla lobes (lobes replicate, blackish-green in *S. amatolicum*, slightly cucullate, greenish striped reddish-brown in *S. hamatum*), and in their corona lobes, only minutely appendaged in *S. amatolicum*, in contrast to the 2–3mm long teeth in *S. hamatum*.

Schizoglossum hamatum is widely distributed from south central Natal to the eastern Cape; *S. amatolicum* is known only from the Elandsberg near Hogsback in the Amatole Mountains, where we found it growing in grass on a rough scrubby slope.

569. Schizoglossum rubiginosum Hilliard, **species nova** *S. hamato* E. Mey. affinis sed foliis c.2mm latis in petiolo 1–2mm longo attenuatis (nec 8–25mm latis basi truncatis vel hastatis, petiolo 2–10mm longo); corolla omnino brunneo-rubra (nec striata), coronae lobis gynostegio multo brevioribus, appendicibus minus quam 1mm longis (nec lobis gynostegio paulo longioribus, appendicibus 2·5–3mm longis) differt.

Rootstock carrot-shaped, c.20 × 8mm. *Stem* 60cm tall, 2·5mm diam., pubescent in two broad bands, nude below, closely leafy in upper part. *Leaves* opposite and decussate, lamina c.25–48 × 2(–3)mm, linear, apex

subacute, base narrowing to the 1–2mm long petiole, margins revolute, upper surface hispidulous, the hairs eventually confined to the marginal area, on the lower surface hairs confined to the prominent midrib. *Inflorescences* in the upper leaf axils, c.6-flowered, peduncles 10–12mm long, pubescent. *Pedicels* c.7–10mm long, pubescent. *Calyx*: sepals 4–5 × 1·5–2mm, lanceolate, glabrous inside, pubescent outside. *Corolla* lobed nearly to the base, lobes 10 × 6mm, broadly elliptic, very obtuse, slightly cucullate, glabrous, maroon-red. *Corona* lobes 1 × 1mm, much shorter than the gynostegium, transversely oblong when viewed from the back, with 2 marginal lobes, the whole forming a hollow box lacking a wall on the inner face; appendage composed of 2 subulate points arising directly from the dorsal face of the corona lobe, slightly less than 1mm long, erect and reaching just to the base of the anther appendage, both lobe and appendage cream-coloured. *Anther* appendages 0·6 × 1mm, transversely elliptic, scarcely inflexed over the rim of the gynostegium head; corpusculum c.0·4mm long, conspicuously flanged, pollinium attachment subterminal; pollinium c.0·8mm long, compressed obtriangular. *Gynostegium* 3mm high, the head 2mm diam., excavated under the anther appendages, cream-coloured. *Fruit* not known.
Type: Natal. Alfred distr., 3029 DB, Harding, farm Rooivaal, 2500–3000ft, 1 iii 1983, *Hilliard & Burtt* 16723 (E holo.).

Initially we mistook this plant for *S. hamatum*, which it resembles in the size and shape of the flowers, in the general form of the coronal appendages and in the pollinia. But it differs markedly from that species in its narrow, tapering leaves and its wholly maroon-red corolla. The similarity of the corona lobes is superficial and lies in the pair of subulate appendages; in *S. rubiginosum* these are less than 1mm long, (2·5–3mm in *S. hamatum*). The lobe itself in *S. rubiginosum* resembles an open rectangular box, lacking a wall on the inner face while that of *S. hamatum* is suborbicular in outline when viewed from the back, fleshy and solid though dorsoventrally compressed.

Schizoglossum rubiginosum is known only from the type collection and was found in tall coarse grass.

COMPOSITAE

(O. M. Hilliard)

570. Berkheya leucaugeta Hilliard, **species nova** a *B. purpurea* (DC.) Masters lobis foliorum rotundatis minime profundis spinulos ad 5mm longos gerentibus (nec deltoideis nec duplo deltoideis spinulis plerumque 7–10mm longis), capitulis paniculatis (nec racemosis), bracteis involucri latioribus (plerumque 6–8mm latis, nec ad 5mm tantum), ligulis 5-nervosis (nec 9–10-nervosis), floribus radii albis disci luteis (nec omnibus roseo-lilacinis vel raro lusu albis) distinguenda. Cum *B. cirsiifolia* (DC.) Roessler ligulis albis congruit sed foliis multo minus profunde incisis (minus quam ad quartam partem ad costam lobatis, nec ad dimidium vel ultra), lobis rotundatis (nec oblongis iterum in dentes magnos deltoideos incisis), spinulis bractearum apicalibus 3–4mm longis (nec 5–10mm) differt.

Herba perennis, robusta, c.1–1·5mm alta; caulis inferne simplex, superne in paniculam magnam patentem corymbosam ramosus, molliter pilosus pilis glandulosis ad 2mm longis. *Folia* tempore florendi omnia caulina; infima usque ad 400 × 135mm, sursum decrescentia, elliptica, apice obtusa vel subacuta, ad basin angustata et in caulem decurrentia, alas ad c.15mm latas spinulis inclusis formantia, marginibus leviter et regulariter lobata, lobis rotundatis, spinulis terminalibus 2·5–4(–5)mm longis, pagina superiore tenuiter pilis glandulosis longis et brevibus induta, inferiore glanduloso-pubescente pilis tomento albo arachnoideo occultis. *Capitula* c.80mm trans ligulas expansas diametro, numerosa in panicula corymbosa patente. *Bracteae* involucri oblongo-lanceolatae, ad 25 × 8mm spinulis exclusis, spinula terminali 3–4mm longa, marginalibus principalibus similibus sed saepe binatis cum altera minore, utrinque glanduloso-puberulae. *Flores* radii ligula c.25 × 7mm alba, nervis primariis 5; flores disci c.8·5mm longi, lutei. *Pappi* squamae c.0·5–0·75mm longae, oblongae vel oblongo-ellipticae, obtusae, apice dentato.
Type: Natal, Bergville distr., 2828 DB, Royal Natal National Park, near Basuto Gate, c.7100ft, 19 ii 1984, *Hilliard & Burtt* 17696 (E holo.; NU, PRE iso.).
NATAL. Bergville distr., 2828 DB, Royal Natal National Park, Tugela Gorge above chain ladder, c.6100ft, 6 ii 1982, *Hilliard & Burtt* 15443 (E).

The specific epithet of *Berkheya leucaugeta* means white-rayed, calling attention to a feature that, though not restricted to this species, is uncommon in *Berkheya*, where yellow rays are more usual.

Initially, when we saw a single specimen of this plant just coming into flower in February 1982, we mistook it for a white form of *Berkheya purpurea*, but two years later, seeing it in full flower with the panicle expanded, we realized our mistake. The most striking difference between the two species lies in the inflorescence, a wide-spreading corymbose-panicle in *B. leucaugeta*, a raceme in *B. purpurea*. Also, the leaves are differently cut: shallowly rounded lobes in *B. leucaugeta*, the principal spines 2·5–4(–5)mm long, sharply pointed triangular lobes in *B. purpurea* with spines (5–)7–10mm long. The heads of *B. leucaugeta* have white rays and yellow disc flowers, whereas the heads of *B. purpurea* are concolorous, usually mauve, occasionally white, and there are only five main veins in the rays of *B. leucaugeta* whereas there are 9–10 in *B. purpurea* (counted at the base of the limb; the veins may branch in the upper part).

Berkheya leucaugeta most resembles *B. cirsiifolia* and *B. onopordifolia* (DC.) Burtt Davy in habit and in its broad involucral bracts; both these species may have white rays and yellow disc. But their deeply and sharply cut leaves will at once distinguish them, as well as other morphological detail in both leaves and involucral bracts.

A plant collected by us in the southern Natal Drakensberg should be mentioned here (*Hilliard & Burtt* 7818 (E) from the valley of the Umlambonja river above Drakensberg Garden Hotel, growing in the boulder bed of the river and in coarse vegetation on its banks, in flower on 29 i 1975). At the time, we determined it as *B. purpurea*, but it is closer to *B. leucaugeta* than to *B. purpurea*, sharing with *B. leucaugeta* a corymbose-paniculate inflorescence and rays with 5 main veins; the rays were pale dirty mauve, the disc yellow. It differs slightly from *B.*

leucaugeta in the lobing of the leaves (often triple-deltoid) with slightly longer terminal spines (5–6·5mm). This plant should be sought again to determine its status.

Where we saw *B. leucaugeta* growing near Basuto Gate, it was plentiful in a large marshy depression on the hillslope above the path leading down through Royal Natal National Park (*Berkheya cirsiifolia* was growing at the pathside close to Basuto Gate). In Tugela Gorge, we saw a solitary plant in scrub above the chain ladder near Tunnel Cave.

571. Cineraria albomontana Hilliard, **species nova** *C. molli* DC. affinis sed foliis maturis glabris (nec subtus albo-tomentosis) lobo apicali ad basin cuneato (nec cordato), radiis 5–6-nervosis (nec 4-nervosis) statim distinguenda.

Herba perennis, radice verticali lignoso usque ad c.40 × 5mm; caulis brevissimus, rosulas foliorum 1 vel plures apice emittens. *Folia* ad 80mm longa, petiolo basi lata semiamplexicauli; lamina simplex vel obscure lyrato-pinnatisecta, primum lanato-arachnoidea mox glabrescens, lobo terminali elliptico vel ovato, usque ad c.25 × 15mm, apice rotundato, basi cuneata, marginibus crenatis, coriacea, venis lateralibus 3 vel 4 ascendentibus, lobis lateralibus si adsentibus plerumque unijugis raro solitariis vel bijugis oblongis dentatis parvis. *Pedunculi* c.120–300mm, simplices, bracteati, laxe albo-lanato-arachnoidei, plus minusve apice excepto glabrescentes. *Capitula* solitaria. *Bracteae* involucri c.13 (calyculo absente), 6–7mm longae, floribus disci plus minusve aequales, nervis pluribus pilis albis lanato-arachnoideis partim occultis. *Flores* radii 8, limbo c.6 × 2mm 5(–6)-nervato, vivide lutei; flores disci c.4mm longi, cylindrici, ad basin angustati, vivide lutei. *Achenia* dimorphica; ea radii c.3–4 × 1mm, dorsoventraliter paulo compressa, facie exteriore paulo convexa, 3-costata, pilis albis duplicibus myxogenis dense induta, facie interiore costa mediana prominente excepta plana pilis duplicibus in costa interdum praesentibus exceptis glabra, testa nigra; achenia disci subcylindrica, 4-costata, omnino pilosa.

Type: E Cape, 3027 CB, Lady Grey distr., Witteberg, Joubert's Pass, c.7500–7700ft, 18 i 1979, *Hilliard & Burtt* 12177 (E holo., NU iso.).

LESOTHO. Thaba Ntlenyana, 11000ft, 18 i 1955, scree, *Guillarmod* 2325 (PRE).

The type collection was made above the highest point on the pass across the Witteberg between Lady Grey and New England. The plants were plentiful, growing on gritty bare ground between grass tussocks on a steep slope below basalt cliffs. *Cineraria albomontana* is clearly allied to *C. mollis* and that species was growing on the cliffs and on the damp stony ground immediately below them (*Hilliard & Burtt* 12186, E, NU). *C. mollis* forms extensive mats, whereas *C. albomontana* grows in single or multiple tufts: the two species thus differ in habit as well as in the shape of the apical leaf lobe, in indumentum and in the number of nerves in the limb of the ray flowers (see diagnosis). Also, the inner face of the ray achenes of *C. mollis* lacks the strong median rib that is so noticeable a feature in *C. albomontana*, and the achene is hairy all over.

Dr Jacot Guillarmod's collection came from scree on the slopes of

Thaba Ntlenyana, north of Sani Pass, and roughly 250km north-east of Joubert's Pass, the type locality. The species is probably widespread on suitable basalt sites throughout the Witteberg-Drakensberg massif.

572. Cineraria geraniifolia DC., Prodr. 6: 308 (1838); Harv. in Fl. Cap. 3: 312 (1865); Hilliard, Compositae in Natal 384 (1977). Lectotype: Cape, Albany, *Drège* 5902 (G-DC).

Drège 5902 was chosen (1977) as lectotype although it belongs to De Candolle's var. β because the specimen (*Burchell* 5063, G-DC, K) quoted by De Candolle under var. α has achenes hispid on both faces and margins and thus flatly contradicts his specific description, which says the achenes are glabrous and eciliate. *Drège* 5902 on the other hand meets this important criterion.

573. Cineraria vagans Hilliard, **species nova** *C. geraniifoliae* DC. affinis sed habitu diffuso, caulibus saepe nodis subtuberosis radicantibus (nec caulibus erectis vel decumbentibus nodis haud radicantibus), et floribus disci linea media inconspicua in quoque lobo notatis (nec linea conspicua rubro-brunnea) differt.

Herba perennis, fere glabra. *Caules* effusi, nodis saepe subtuberosis radicantibus saepe ramosi, per longitudinem remote foliati. *Folia* plerumque 30–65mm longa, petiolis basi vix expansis; lamina reniformis, plerumque 15–20 × 17–27mm, margine leviter lobata et dentata. *Pedunculi* 50–180mm longi, filiformes, remote et minute bracteati, solitarii vel ad apcies ramorum bini. *Capitula* solitaria. *Bracteae* involucri c.13 (bracteis calyculi paucis minimis), 5–6mm longae, floribus disci plus minusve aequales, nervis pluribus pallidis resinosis praeditae. *Flores* radii plerumque 8, limbo c.7–8 × 2mm 4-nervio vivide luteo; flores disci 4–5mm longi, cylindrici, ad basin gradatim angustati, vivide lutei, linea media inconspicua in quoque lobo praediti. *Achenia* omnia isomorpha, 2·5–3 × 1mm, paulo compresso, nigra, margine flavo-brunnea, glabra.

Type. E Cape, Stockenstrom div., 3226 BC, Katberg Pass, c.5500ft, 24 i 1979, *Hilliard & Burtt* 12536 (E holo., NU iso.).

E CAPE. Stockenstrom div., 3226 BC, summit of Katberg Pass, 10 xii 1977, *Hilliard & Burtt* 10961 (E, NU); 3226 DB, Amatole Mts, Elandsberg, above farm Coolin, 5300–5700ft, 15 xii 1985, *Hilliard & Burtt* 18873 (E, K, NU).

We know this plant from two different localities in the Amatole mountains (3226 BC/DA) while *Ecklon* 438 from Graaff Reinet (3224 BC), cited by De Candolle as a syntype of *C. geraniifolia* var. *oligocephala*, proves to be the same thing. It is therefore highly probable that the species ranges over the intervening mountains.

It is a diffuse straggling plant (which suggested the specific epithet), with the stems rooting at the nodes and these somewhat tuberous. Habit will distinguish it from *C. geraniifolia*, to which it is allied, but there is another interesting difference: the median line in the lobes of the disc flowers is inconspicuous, being much the same colour as the corolla, while in *C. geraniifolia* this line is bright reddish-brown. Dr Dittrich of the Conservatoire et Jardin botaniques de la Ville de Genève very kindly

checked these and other details on the relevant Ecklon and Drège specimens in De Candolle's herbarium, and this character, as well as the number of veins in the rays, should prove helpful in the taxonomy of this difficult genus.

CYPERACEAE

574. Fuirena tenuis P. L. Forbes in S. Afr. J. Bot. 3: 359 (1984).
Type: Cape, SW outskirts of Barkly East, *Acocks* 20146 (K iso.).
LESOTHO. Maseru distr., Rapa-la-Boea, 25 ii 1987, *Backéus* 2169 (E, UPS); *ibidem*, 27 ii 1987, *Backéus* 2178 (E, UPS).

When published this species was known only from the type and a single record (*Schmitz* 4059) from the Roma Valley, Maseru dist., Lesotho. We are indebted to Dr P. L. Forbes (University of Witwatersrand) for this determination.

EUPHORBIACEAE

575. Clutia alpina Prain in Kew Bull. 1913: 403 & in Thiselton-Dyer, Fl. Cap. 5(2): 443 (1920).
Type. Cape, Barkly East div., Witteberg, Ben McDhui, 9300ft, *Galpin* 6827 (K holo.).
EASTERN CAPE. Barkly East dist., 3027 DB, Witteberg, Ben McDhui, c.8400ft, damp ground around edges of rocks, 3 xii 1981, *Hilliard & Burtt* 14698 (E); *ibidem*, c.8900ft, against rocks on hill slope, also on rocky ground in valley, 5 ii 1983, *Hilliard & Burtt* 16459 (E, K, NU).

The type specimen of *Clutia alpina* was a male plant; our own collections are female and permit a re-assessment of the affinity of the species. Prain described the rudimentary ovary in the male flower as glabrous, and keyed the species in a group 'Leaves distinctly petioled, ovary glabrous'. However the new material shows that the capsule is densely hairy. This pattern, rudimentary ovary glabrous, functional one hairy, is also found in *C. katharinae* Pax, and it is clearly here, both in floral and in vegetative characters, that the true affinity of *C. alpina* lies. The two species may be distinguished as follows:

Hairs on stem short, c.0·5mm long, curled or bent; leaves hairy only on the midrib and towards the base on the underside; petal of female flower c.1·5 × 1mm *alpina*

Hairs on stem c.1·25–2·5mm long, straight; leaves with hairs scattered all over both surfaces; petal of female flower 2–3·5 × 0·75–1mm *katharinae*

In addition to the above characters the leaves of *C. katharinae* are larger, usually much larger, than in *C. alpina*: (1·5–)2·5–5 × (0·5–) 1cm, against 1–1·5 × 0·3–0·5cm. *C. alpina* is a rather dwarf plant, c.15cm high with spreading branches, and is found in open situations around rocks on hill-slopes or in stream-valley bottoms. *C. katharinae* on the other hand has erect branches up to 1m or more and is usually found on forest margins or in *Leucosidea* scrub.

HYPOXIDACEAE

(B. L. Burtt)

576. Hypoxis dregei (Baker) Nel in Bot. Jahrb. 51: 306 (1914).
Lectotype: Kaffraria, *Cooper* 1811 (K—effectively chosen by Nel through exclusion of the other syntype, *Drège* 8525).
Syn.: *Hypoxis sericea* Baker var. *dregei* Baker in J. Linn. Soc. Bot. 17: 112 (1878).

The purpose of this and the following item is to correct some of the muddle created by Nel in his treatment of *Hypoxis sericea* var. *dregei*. Nel raised this variety to a full species, but his attribution of it to Baker in that rank was wrong: it must be cited as shown above and dates, as a specific name, only from 1914. Because of this, Nel's use of the name was incorrect (ICBN Art 63·3), for he included in his citations a specimen, *Junod* 157, which is the type of *H. junodii* Baker (1901); it was evidently an oversight that this species was not cited in synonymy, for it appears in the index with a reference to this page. Through the kindness of Prof. C. Cook we have been able to borrow the type of *H. junodii* from Zürich. It is not the same as *H. dregei* and we judge it to be synonymous with *H. gerrardii* Baker.

Nel also included under *Hypoxis dregei* a 'var. *biflora* (De Wild.) Nel'. This is based on *H. biflora* De Wild. (1913), which is a later homonym of *H. biflora* Baker (1876). The varietal name will stand as *H. dregei* Nel var. *biflora* Nel (1914), but neither *H. biflora* De Wild. nor *H. junodii* Baker should replace *H. dregei* (Baker) Nel, which becomes the correct name for the plant typified by *Cooper* 1811. We have accepted Nel's exclusion of the other syntype, *Drège* 8525, as effective lectotypification, but examination of both specimens at Kew showed no significant difference and we judge them to be conspecific. Nel referred *Drège* 8525 to *H. argentea*, to a variety of which Baker had later (in *Fl. Cap.* 6: 182. 1896) reduced *H. sericea* and its var. *dregei*.

The taxonomy of this group containing, at least, *Hypoxis sericea* Baker, *H. argentea* Baker and *H. dregei* (Baker) Nel needs thorough revision, but we are only concerned here with clarifying the use of the name *H. dregei*.

577. Hypoxis gerrardii Baker in J. Linn. Soc. Bot. 17: 110 (1878).
Syntypes. Natal, banks of Tugela River, *Gerrard & M'Ken* 1827 (K); sine loc. *Buchanan* (K).
Syn.: *Hypoxis junodii* Baker in Bull. Herb. Boiss. sér. 2, 1: 859 (1901). Type: Natal, Pinetown, *Junod* 157 (Z).

See discussion under *H. dregei* above.

578. Hypoxis limicola B. L. Burtt, **species nova** *H. parvulae* Baker proxime affinis sed foliis tenuioribus, pedunculis saepissime bracteatis, floribus minoribus, tepalis 4–6mm longis (nec (7–)8–10mm), antheris minusquam 1mm longis (nec 1·25–1·5mm) distinguenda.
Syn.: [*Hypoxis membranacea* auct. non Baker; R. H. Compton, Fl. Swazi. 130 (1976)]

Herba parva. *Folia* pauca, 6–8, saepe prostrata, anguste oblonga,

majora 6–7 × 1–1·2cm, tenuia, utrinque pilis longis simplicibus vel biramosis (ramo altero brevissimo) parce induta vel (praecipue superne) subglabra, apice acuto, nervis inconspicuis. *Pedunculi* 1–2-flori, 2–4cm longi, subappresse pilosi. *Bracteae* subulatae, 5–7mm longae, pilosae, raro absentes. *Pedicelli* 2–4cm longi, pilosi. *Tepala* intense lutea, oblonga, 4–6 × 1·5–2mm, extra parce pilosa. *Filamenta* exteriora 2·5–3mm, interiora 2mm, subulata. *Antherae* 0·5–0·75mm longae. *Stylus* 3·5–3·75mm longus, glaber, stigmate globoso 0·25–0·5mm coronatus. *Ovarium* 1·5mm longum, pilosum, mox post anthesin 3·5 × 3mm, fere sphaericum. Fructus seminaque non visa.

Type. Transvaal, 2530 BB, Mac Mac pools, 23 x 1985, *Hilliard & Burtt*, 18455 (E holo., NU iso.).

TRANSVAAL. Pietersburg distr., 2330 CC, Woodbush mountains, ix 1927, *Moss* 15429 (J, K). [Blydepoort Nature Reserve], Belvedere, 10 ix 1970, *Kerfoot* 6459 (J). Pilgrims Rest distr., 2430 DD, near God's Window, 6 ix 1966, *Davidson* 792 (J); 2430 DC, Mt Sheba Nature Reserve, c.1950m, x 1975, *Getliffe, Hearne & Kerfoot* 30 (J); ibidem, c.1980m, xi 1978, *Kerfoot* s.n. (J).

SWAZILAND. Mbabane distr., Dalriach, c.4500ft, 18 xi 1957, *Compton* 27243 (NBG); Forbes Reef, c.5000ft, 5 xi 1959, *Compton* 29335 (NGB); Havelock concession, 4000ft, ix 1890, *Saltmarshe* in Galpin 1049 (K).

Miss S. Wood first called attention to this plant (unpublished M.Sc. thesis, Natal University, 1976) and suggested that it might be a distinct variety of *Hypoxis parvula* Baker. We have decided to give it full specific rank because differences in habit and habitat reinforce the morphological distinctions. *H. limicola* is a plant of marshy places where it occupies wet ground that is otherwise more or less bare and forms small patches. This is attested by collectors' notes, our own observations and information from Mrs L. E. Davidson, who writes 'I know the plant well and have come across it frequently in patches in the Blyde reserve. It always grows in very damp situations and is usually locally abundant, almost carpeting an area'. The leaves are thinner and weaker than those of *H. parvula*, and the outer ones are usually flat on the ground. *H. parvula* is found on damp grassy slopes; it forms large colonies but the individual plants are spaced in the grassland and the leaves are not prostrate. *H. parvula*, small as it is, is a stronger plant: its peduncles are more robust and, even when forked to bear two flowers, there are no bracts. The delicate peduncles of *H. limicola* normally bear a subulate bract even when 1-flowered; bracts are always present when the peduncle is 2-flowered. *H. parvula* not only has larger flowers as measured by the length of the tepals, it is slightly larger in all parts (short filaments (2·5–)3·5mm, long filaments (3·5–)5mm, anthers 1·25–1·5mm, style 4·5–5mm, stigma 0·5–0·75mm).

Hypoxis limicola is known only from the eastern Transvaal; *H. parvula* has its main centre of distribution in the Natal Drakensberg but there are one or two records from the eastern Transvaal. One of these in particular (2430 DC, Mt Sheba Nature Reserve, c.1980m, xi 1978, *Kerfoot* s.n., J) has floral measurements at the bottom of the range for *H. parvula*. As *H. limicola* also occurs in the Mt Sheba Reserve a critical field comparison of the two species ought to be undertaken. Only the yellow-flowered *H.*

parvula var. *parvula* is known from the Transvaal, the white-flowered var. *albiflora* (see next entry) is restricted to Natal.

579. Hypoxis parvula Baker in J. Linn. Soc. Bot. 17: 113 (1878)
Type: Natal, sine loc., *Sanderson* s.n. anno 1854 (K).
Syn.: *Hypoxis brevifolia* Baker in Thiselton-Dyer, Fl. Cap. 6: 183 (1896). Type: Natal, Liddesdale [now Gowan Brae on Merrivale Heights,] *Medley Wood* 3940 (K).

In *Hypoxis parvula* there is a sharp association of flower colour with altitude and exposure. The plant at lower altitudes is white-flowered, that at higher levels has the bright yellow flowers usually associated with *Hypoxis* as a whole. We have now decided to give these colour forms varietal rank: var. *parvula* (yellow) and var. *albiflora* (white).

Hypoxis parvula was described by Baker as having the flowers yellow inside, the outer tepals green on the outside; despite this he later reduced it to the white-flowered *H. membranacea*. At the same time he described *H. brevifolia*, again noting the yellow flowers. *H. parvula* and *H. brevifola* are synonyms, and both refer to the yellow-flowered variety.

On a slope with uniform exposure the change from white-flowered *Hypoxis parvula* to the yellow-flowered form can take place within a few feet: one passes the last plant with white flowers and a few steps later (perhaps 20ft higher) one meets the first yellow ones. Mr F. B. Wright showed us this very striking changeover on the south-facing slope of Kamberg mountain where it takes place at about 6300ft. Some mountains, for instance Nhluzane (in Lions River distr. of Natal), are just not high enough to carry the yellow form and var. *albiflora* goes up to the summit.

Occasionally they do overlap in altitude, but then the exposure may be different. Both varieties occur in the Gxalingenwa valley, between Sani Pass and the Polela river; at c.7100ft they may both be found only about 10ft above the level of the stream, but the yellow var. *parvula* was in the damp grass of the cooler SE facing slope, while var. *albiflora* was in the thinner drier grassland of the opposite NW facing side.

In only one place has a puzzling colony been found: this was on Mulangane, where, on a south-facing slope at 7000–7300ft in a good population of yellow-flowered plants, we suddenly came upon a patch where there were a few white-flowered plants scattered among the yellow. These, however, had yellow in the throat of the perianth; this is not normal for var. *albiflora*, which is as yet unrecorded from Mulangane. We strongly suspect, therefore, that these plants were a mutant of var. *parvula* and not true var. *albiflora*.

var. **parvula**

Widespread on the slopes of the Drakensberg in western Natal and on the nearby mountains, usually above 6000ft and reaching at least 8200ft.

var. **albiflora** B. L. Burtt, **var. nov.** a var. *parvula* floribus albis (nec vivide luteis) et plantis altitudine humiliore crescentibus differt.
Type. Natal: Richmond distr., escarpment above Byrne valley, c.5000ft, myriads in short grass among rock sheets, flowers white, 13 xi 1975, *Hilliard* 5589 (E holo, NU iso.).

Hypoxis parvula var. *albiflora* is widespread in southern and western Natal, at least from Kokstad through to the Karkloof range and along the foothills of the Drakensberg.

JUNCACEAE

580. Juncus exsertus Buchenau subsp. **lesuticus** B. L. Burtt **subspecies nova** a subspecie *exserto* habitu humiliore, culmis c.5cm. altis, inflorescentiis foliis brevioribus distinguenda.
Type. Cape, Barkly East distr., 3027 DB, Witteberg, Ben McDhui, 8600ft, 4 ii 1983, *Hilliard & Burtt* 16435 (E holo., NU iso.).
LESOTHO. Indumeni Dome–Cleft Peak, 9800ft, 12 ii 1958, *Killick* 2336 (K); Sehlabathebe, 2300–2500m, 4–14 i 1973, *Guillarmod, Getliffe & Mzamane* 56p.p. (E, mixed with *J. dregeanus* and *J. mollifolius*); Maseru distr., Semongkong road, Thaba Putsoa range, N of Phatla-Khono, 18 ii 1987, *Backéus* 2145 (E, UPS).

This very dwarf rush is evidently well distributed on the summit plateau in Lesotho and on the E Cape Witteberg. Backéus records it from an 'overgrown sedimentation fan in a mire, growing in seepage water with *Haplocarpha nervosa*'; we collected it in mud, half-submerged in water at the side of a runnel, and in adjacent marshy sward, where it was associated with a taller globose-headed rush, *Juncus subglobosus* Adamson (reduced to *J. dregeanus* Kunth by Obermeyer in *Fl. Southern Afr.* 4(2): 84, 1985). The high altitude rushes of the Eastern Mountain Region certainly require intensive study. This dwarf plant is sufficiently distinct from typical *Juncus exsertus*, which is a tufted rush 30–40cm high with the inflorescences overtopping the leaves, to warrant at least subspecific recognition. The seeds of our plant are yellow, whereas those of typical *J. exsertus* are brown, but unfortunately ours had to be extracted from the capsule and one cannot be certain that they are fully ripe; the character is therefore not given in the diagnosis. It needs further investigation.

Juncus exsertus is itself a variable species. A specimen we collected in Lesotho on the Blue Mountain Pass (*Hilliard & Burtt* 17706) has decidedly more compact inflorescences than those from the Natal slopes of the Drakensberg (e.g. *Hilliard & Burtt* 17549 from Mulangane, *Hilliard & Burtt* 18122 from Upper Loteni).

LILIACEAE

(Eriospermum by O. M. Hilliard)

581. Eriospermum cooperi Bak. in J. Linn. Soc. Bot. 15: 265 (1876) & in Fl. Cap. 6: 475 (1896); Trauseld, Wild Fl. Natal Drakensberg, 9, cum ic. (1969).
Lectotype: Basutoland [Lesotho], *Cooper* 3307 (K).
NATAL. Dundee distr., Mpati Mt, 27 xii 1964, *Shirley* s.n. (NU); Hatting Spruit, 4 xi 1949, *Johnstone* 249 (NU). Klip River distr., NE of Van Reenen, farm Boschfontein, c.4700ft, 11 xii 1976 (fruiting only), *Hilliard & Burtt* 9472 (E, NU). Bergville distr., Cathedral Park Forest Research Station, 6000ft, 10 xi 1951, *Killick* 1568 (K, NU). Estcourt distr., Giant's

Castle Game Reserve, 5300ft, 9 xii 1967, *Trauseld* 882 (NU); Highmoor, 2012m, 1 xi 1977, *Ruddock* 77 (NU); Kamberg Mountain, c.6200ft, 28 xi 1974, *Wright* 1977 (NU). Underberg distr., 2929 CB, foot of Bamboo Mountain, N side, near Umzimkulwana river, c.5300ft, 22 xi 1982, *Hilliard & Burtt* 15662 (E, NU); ibidem, ix 1973, *Grice* s.n. (NU); Sani Pass, 6800ft, 13 xii 1984, *Hilliard & Burtt* 17931 (E, K, NU, PRE); upper tributaries S of Mkhomazi (feeders of Ka-Ntubu), 7300ft, 1 xii 1982, *Hilliard & Burtt* 15741/A (E).

Eriospermum cooperi and *E. sprengerianum* (=*E. natalense*) (below) are much alike in general facies, both having the flowering stem up to c.1m tall including the long raceme of white or creamy-white flowers in which the backs of the three outer perianth segments are dark red or brown. At its base this stem is embraced by a bract or cataphyll consisting of a long sheathing portion and a small blade: this may look as though it will develop into a mature leaf but does not do so. The foliage leaves are borne singly at each growing point on the tuber, and usually appear at the end of the flowering season. Occasionally they are produced at the same time as the flowering stems.

Baker (in *Fl. Cap.* 6: 369) in his key to the species of *Eriospermum*, described the leaf of *E. cooperi* as glabrous, that of *E. natalense* (that is, *E. sprengerianum*) as hairy. In both species, however, the leaf may be either hairy, with varying degrees of development of hairs, or glabrous. The type sheet of *E. cooperi* comprises two specimens; one has a bract with blade glabrous, the sheath sparsely hairy, while in the other specimen the bract is densely hairy on the back. It is relatively easy to distinguish the two species on the length of the pedicels: up to 8mm long in *E. cooperi*, at least the lowermost c.20–30mm long in *E. sprengerianum*.

582. Eriospermum haygarthii Bak. in Fl. Cap. 6: 371 (1896).
Type: Natal, E Griqualand, Vaalbank, *Haygarth* in herb. *Wood* 4221 (K).

This species is an addition to Ross, *Flora of Natal* (1973). It has white flowers, similar to those of *E. hygrophilum* (below) but it is a much more delicate plant with only 5 or 6 flowers in the inflorescence (not many). It is known to us only from the type collection.

583. Eriospermum hygrophilum Bak. in Bull. Herb. Boiss. sér. 2, 4: 998 (1904).
Type: Transvaal, Modderfontein, *Conrath* 657 (K).
NATAL. Utrecht distr., 2730 AC, farm Retirement, c.5800ft, 3 xi 1985, *Hilliard & Burtt* 18560 (E, NU); farm Rustfontein, c.1600m, 24 xi 1985, *Devenish* 1990 (E, NU). Ngotshe distr., Itala Nature Reserve, Craigadam Farm, 5 i 1978, *McDonald* 401 (E, NU). Vryheid distr., Hlobane, 5 xi 1950, *Johnstone* 533 (E, NU). Bergville distr., Cathedral Peak area, contour path, 7000ft, *Schelpe* 1049 (E, NU).

This species is an addition to Ross, *Flora of Natal* (1973). It is not unlike *E. cooperi* Bak. in general aspect, but the perianth is white with green median stripes, not with the 3 outer tepals wholly brown outside as in *E. cooperi*.

Eriospermum hygrophilum seems to be widely distributed on the Transvaal Highveld and in the eastern highlands, entering only the northern districts of Natal. It favours damp or marshy sites, flowering mainly in October and November.

584. Eriospermum mackenii (Hook. f.) Bak. in Journ. Linn. Soc. 15: 266 (1876) & in Fl. Cap. 6: 378 (1896).
Type: A plant transmitted from Natal by M'Ken and flowered at Kew (K).
Syn.: *Bulbine mackenii* Hook. f. in Bot. Mag. t. 5955 (1872).
Eriospermum junodii Bak. in Bull. Herb. Boiss. sér. 2, 1: 783 (1901). Type: Pinetown, *Junod* 149 (Z).
NATAL. Pinetown distr., near Pinetown, 1–2000ft, 5 xi 1895 [fruiting], *Wood* 5819 (E); Gillitts, 2000ft, 15 x 1900, *Wood* 7993 (E); Everton, Eskotene, 2000ft, 3 v 1970, *Hilliard* 5025 (E, NU); ibidem, 16 i 1977 [fruiting], *Hilliard & Burtt* 9689 (E, NU). Alexandra County, Dumisa, Umgaye, 600m, 18 x 1908, *Rudatis* 448 (E).

585. Eriospermum platyphyllum Bak. in Bull. Herb. Boiss. sér. 2, 4: 998 (1904).
Type: Natal, [Durban] Claremont (sphalm. Clairmont), viii 1893, *Schlechter* 3162 (Z holo.(n.v.); GRA, K iso.).
NATAL. Durban, 20ft, 3 x 1898, *Wood* 7300 (E); ibidem, 100ft, x, *Wood* s.n. (E); ibidem, viii 1891, *Wood* in Herb. Austr. Afr. 1559 (K); ibidem, ix 1883, *Wood* 107 (K); ibidem, Umgeni, *Rehmann* 8562 (K). Inanda, *Wood* 256 (K). Isipingo Beach, 5ft, x 1949, *Ward* 973 (E, NU). Mtunzini, farm Twin Streams, 14 x 1973, *Hilliard & Burtt* 6855 (E, NU). Alexandra distr., Umtwalumi, 400ft, 9 x 1910, *Rudatis* 1183 (E).

When Baker described *E. platyphyllum* in 1904, he made the observation 'Ad *E. latifolium* Jacq. accedit'. *Eriospermum capense* (L.) Salter (=*E. latifolium* Jacq.) is a plant of the SW cape; Baker did not mention *E. natalense*, which he had described eight years earlier, quoting specimens from Durban and its environs as well as plants from much higher altitudes (see under *E. sprengerianum* below). The name *E. natalense* has been used ever since for specimens from both coastal and montane Natal and the name *E. platyphyllum* has never been taken into use, although it appears in Ross, *Flora of Natal* (1973). It now seems clear that two separate species are involved, similar in facies, but differing in the colour of the flowers, in flowering time, in habitat, and possibly in the time at which they produce leaves. They also appear to be allopatric, one occurring at higher altitudes than the other.

Baker described the perianth segments of *E. platyphyllum* as '*sursum albis, densum [sphalm. demum] viridibus*'. Subsequent collectors have recorded the flowers as white or yellow (the latter possibly meaning creamy-coloured) in contrast to the brown or red-brown and white flowers of *E. natalense*, that is, *E. sprengerianum*. *Eriospermum platyphyllum* grows in open woodland near streams and in damp sandy grassy places, up to c.400m above sea level, flowering between August and October; most herbarium specimens consist of a flowering stem and a separate foliage leaf. *Eriospermum sprengerianum* favours rocky grass-

land above c.1000m, and flowers mainly between November and January; few herbarium specimens include a foliage leaf.

586. Eriospermum sprengerianum Schinz in Bull. Herb. Boiss. 4: 416 (June 1896); Baker in Fl. Cap. 6: 535 (Sept. 1896).
Type: Natal, cult. Damman & Co. ex Herr Sprenger (Z).
Syn.: *E. natalense* Bak. in Fl. Cap. 6: 373 (Sept. 1896). Lectotype (chosen here): Transkei, near Clydesdale, Mt Malowe, 3000ft, Nov. 1885, *Tyson* in MacOwan & Bolus, Herb. Austr. Afr. 1205 (K).
NATAL. Klip River distr., Drakensberg Mts, valley near Van Reenen, 5–6000ft, 4 xii 1895, *Wood* 5861 (E). Lion's River distr., 2930 AD, Mt Gilboa, c.5800ft, 29 xii 1978, *Hilliard & Burtt* 11860 (E). Pietermaritzburg distr., 13 miles from Pietermaritzburg on Richmond road, c.3000ft, 22 x 1962, *Strey* 4361 (K). Underberg distr., 2929 CC, Garden Castle Forest Reserve, jeep track to Crystal Waters, 6000–6200ft, 5 xii 1980, *Hilliard & Burtt* 13823 (E, NU); near Underberg, Mr Gold's farm, 5 xii 1935, *Dyer* 3274 (K, NU, PRE). Polela distr., Mawahqua Mt, Sunset Farm, 6000ft, 1 i 1982, *Rennie* 1289 (NU).

Schinz published only a short description of *E. sprengerianum* and made no mention of its affinity. However, the type sheet in Zürich, which was kindly sent on loan to Edinburgh, carries a page of detailed description and notes, concluding with the following sentence: 'Diese Art steht in der Nähe der bis jetzt noch unbeschrieben gebliebenen *E. natalense* Baker, das dessen aüssere Perigonzipfel (im trockenen Zustande) tiefdunkelrot gefärbt sind und dessen Staubfäden etwas schmäler sind'.

One deduces that Schinz saw one of Baker's syntypes that bore the manuscript name *E. natalense*, and sought to distinguish from it the living plant he had from Damman's nursery, on the basis of the colour of the flowers and the size of the filaments. Schinz's published description describes the perianth segments as '*exterioribus rubro-maculatis . . . interioribus immaculatis*'. These red-brown flecks are commonplace in many species of *Eriospermum*; Schinz failed to describe the actual *colour* of the perianth segments, but, even in the dry specimen, a purple-red flush is visible at the tips of the outer segments in the young flowers, and the colour extends throughout the segments in the older ones. This flush is characteristic of the outer segments in *E. natalense* (the colour varies from greenish-brown to chocolate-brown to red-purple), and Baker himself described them as 'outer all brown, inner white with a brown keel'.

So clearly there is no real difference in flower colour between *E. sprengerianum* and *E. natalense*. There is no difference either in the size of the filaments. The outer filaments of seven specimens measured (1·5–)2–2·25 × 1–1·2mm (Schinz gave 2 × 1mm, but in the flower we examined the outer filaments measured 2·25 × 1·5mm, the inner 2 × 1·25mm).

Schinz's name antedates that of Baker by three months. Baker saw no specimen of *E. sprengerianum* and lists it in the Addenda.

We have chosen the specimen collected by Tyson on Mt Malowe as lectotype of the name *E. natalense* because it clearly fits Baker's descrip-

tion of the flowers. Of the other specimens cited by Baker, *Tyson* 1667 (Fort Donald, 3500ft, Dec. 1885) is also *E. natalense*; *Wood* 107, *Wood* 256, *Wood* in Herb. Austro-Afric. 1559 and *Rehmann* 8562 all came from the environs of Durban and are *E. platyphyllum* (above).

587. Ornithogalum capillare Wood & Evans in J. of Bot. 35: 490 (1897); Leighton in J. S. Afr. Bot. 11: 160 (1945); Obermeyer in Bothalia 12: 355 (1978).
Type: Natal, near Newcastle, *Wood* 6511 (PRE iso.).
E CAPE. Graaff Reinet div., 3224 AB, hill above St Olives, NW of town, c.5500ft, in shallow soil on and around rock sheets, 29 xi 1977, *Hilliard & Burtt* 10774 (E, NU).
NATAL. Mooi River, valley SE of No. 4 General Hospital, 26 xi 1901, *Johnston* 717 (E); ibidem, 16 xii 1901, *Johnston* 736 (E).

Ornithogalum capillare has previously only been recorded from Ermelo in the SE Transvaal and near Newcastle in northern Natal. The additional record from Natal is not particularly noteworthy, but that from near Graaff Reinet provides a very marked extension of range. *O. capillare* is certainly very closely allied to *O. juncifolium* Baker. The small size of the plants could have ecological causes, but there is no obvious reason why this should bring about the more spreading inflorescence and much longer pedicels. The relationship needs to be more thoroughly studied.

588. Ornithogalum hygrophilum Hilliard & Burtt, **species nova** *O. diphyllo* Baker affinis sed habitu robustiore, bulbis 8–20mm diam. (nec c.3–10mm), foliis planis oblongo-lanceolatis 8–18mm lata (nec linearibus, ad 3mm latis, marginibus plerumque involutis), marginibus ciliatis (nec glabris), pedunculis usque ad 150mm altis (nec c.18–30mm), pedicellis infimis 15–30mm longis plerumque bracteas subtendentes duplo superantibus (nec ad 10mm longis bracteis brevioribus) distinguenda.

Bulbi 8–20mm diam., tunicis papyraceis extimis griseis induti. *Folia* 2–3, synanthia, plerumque 60–150 × 8–18mm, textura crassiuscula, oblongo-lanceolata, apice acuto, marginibus ciliatis. *Pedunculi* 50–150mm alti, foliis breviores, ad 3mm diam., 1 vel 2 ex quoque bulbo, foliis laterales. *Inflorescentia* 3–13-flora, racemosa, compacta. *Bracteae* lanceolatae, attenuatae, infimae 11–22 × 4–8mm, sursum decrescentes. *Pedicelli* ad 15–30mm longi, plerumque bractea subtendente minime duplo longiores, erecti. *Perianthium* campanulatum, niveum; tepala 7–10 × 3–4·5mm, interiora quam exteriora paulo minora, elliptica, obtusa. *Filamenta* 3·75–4·5mm longa, 0·5–1mm diam., ad apicem gradatim attenuata. *Antherae* 2mm longae. *Ovarium* 2·5–3 × 1·25–1·75mm; stylus stigmate incluso 2mm longus. *Capsula* c.8 × 7·5mm, ambitu turbinata, distincte triangularis, apice truncato. *Semina* c.2·25 × 1·25mm, pyriformia, nigra, pilis mollibus tenuibus echinulatis.
Type: South Africa, Transkei, 3128 BC, NW of Umtata, hill above Mhlahlane Forest Station, 10 xii 1985, *Hilliard & Burtt* 18768 (E holo.; K, KEI, NU, PRE iso.).

Ornithogalum hygrophilum is closely allied to *O. diphyllum* Baker with which it shares the characters of firm boat-shaped bracts, snow-white

campanulate flowers (the tepals lacking a green or coloured median band), turbinate capsules and black echinulate seeds. Obermeyer, in her revision of the S African species of *Ornithogalum* (in Bothalia 12: 323–376, 1978) described *O. diphyllum*, which is restricted to a small area of the Natal Drakensberg as 'an isolated montane relic of the Cape *Ornithogalum* Group, the chinkerichees'. The new species came from the mountain range NW of Umtata, Transkei, and about 250km SSW of the Giant's Castle area where *O. diphyllum* grows, and so provides a geographical link towards the Cape species. *O. sephtonii* Hilliard & Burtt (in *Notes RBG Edinb.* 41: 308, 1983) from Ben McDhui in the Cape Drakensberg about 110km NNW of Umtata is in the same affinity as *O. diphyllum* and *O. hygrophilum*. There are thus three northern outliers of the Cape 'chinkerichees' (subgen. *Aspasia*, group Aspasiae in Obermeyer's classification) in the Eastern Mountain Region.

O. hygrophilum is a much stouter plant than *O. diphyllum* (see diagnosis), with broad leaves ciliate on the margins and flowers on long pedicels much exceeding the bracts (leaves linear, glabrous and pedicels shorter than the bracts in *O. diphyllum*). We saw thousands of plants growing in marshy ground among flat rocks; they were in full flower, but also with ripe capsules, in early December. The plants varied greatly in stature and in the number of flowers in an inflorescence; it seems that young plants flower readily.

THYMELAEACEAE

589. Gnidia singularis Hilliard, **species nova** fortasse *G. aberranti* C. H. Wright affinis, sed inter alia staminibus exsertis filamentis 1mm longis (nec inclusis antheris subsessilibus) statim distinguenda.

Suffrutex nana ad 10cm alta caudice lignoso c.5mm diam. *Caules* e basi ramosi, ramulis ultimis minus quam 1mm diam., parce pilosi, partibus senioribus basibus foliorum delapsorum asperis. *Folia* opposita et decussata, usque ad 7×3·5mm, auguste obovata, sessilia, ad pulvinum prominentem articulata, crassa, venis immersis, utrinque glabra. *Flores* ut videtur 2–4 in axillis foliorum superiorum (speciminibus pro maxima parte fructiferis), subsessiles. *Calyx* 4-lobus, glaber, luteo-viridis, tubo 3·5mm longo parte basali persistente 2×1mm, parte superiore infundibuliformi 1·5mm longa fauce 1mm diam.; lobi 1·5×1mm, oblongi, apice rotundati. *Petala* 4, in ore tubi inserta, carnosa, plus minusve teretia, ambitu transverse oblonga, 0·3mm alta, 0·5mm lata. *Stamina* 4, in ore tubi inserta lobis opposita; filamenta 1mm longa, filiformia; antherae 0·4mm longae. *Ovarium* 1·3mm longum; stylus 3mm longus, filiformis; stigma capitatum, glandulosum. *Fructus* 3×1·5mm, auguste obovatus.
Type: Lesotho. Sani Top, ii 1985, *Manning* 554 (E holo., NU iso.).

This is a most remarkable plant. Superficially, it bears a strong resemblance to *Gnidia compacta* (C. H. Wr.) J. H. Ross, but it can at once be distinguished by its yellowish-green flowers; those of *G. compacta* are bright canary yellow. In floral detail they are quite different: calyx tube and lobes glabrous in *G. singularis* (versus hirsute outside with a tuft of hairs at the back of the tip of each lobe in *G. compacta*); calyx lobes oblong, 1·5×1mm (versus 1·25×1·25mm, suborbicular); petals 4 (versus

petals wanting); stamens 4 (versus 8) exserted on 1mm long filaments (versus included, sessile).

In its 4 petals and 4 stamens, *G. singularis* resembles *G. aberrans* and *G. propinqua* (Hilliard) Peterson (with both of which, and *G. compacta,* it is sympatric), but it differs from both these species in having the anthers exserted on relatively long filaments; all other species of *Gnidia* known to us also have sessile or nearly sessile anthers. When Wright first described *G. aberrans* (in *Fl. Cap.* 5(2):584, 1925) he remarked on its anomalous possession of only 4 perfect stamens and went on to say 'while the allied genus *Drapetes*, which does not occur in South Africa, differs in having the upper whorl of stamens perfect with the anthers exserted on long filaments.' We examined *Drapetes dieffenbachii* Hook. (=*Kelleria dieffenbachii* (Hook.) Endl.) from New Zealand. There, the 4 fertile stamens alternate with the calyx lobes; in our plant they are opposite the lobes.

Gnidia singularis is known only from the type collection. It was found growing among rocks on a dry slope and was bearing ripe fruits in mid-February.

UMBELLIFERAE

(B. L. Burtt)

590. Centella macrodus (Spreng.) B. L. Burtt, **comb. nov.**

Type: ? (see note below).

Syn.: [*Hydrocotyle moschata* auct. non Forst.; Sprengel in Roemer & Schultes, Syst. Veg. 6:351 (1820)]

Hydrocotyle macrodus Sprengel, Neue Entdeck. 2:292 (1821) et Syst. Veg. 1:877 (1825); Cham. & Schlechtd. in Linnaea 1:372 (1826).

Hydrocotyle hederifolia Burch., Trav. S. Afr. 1:46 (1822), reimp. Batchworth Press 1:37 (1953); Sonder in Harvey & Sonder, Fl. Cap. 2:529 (1862).

Centella hederifolia (Burch.) Drude in Engler & Prantl, Nat. Pflanzenfam. 3(8):119 (1898); Adamson in Adamson & Salter, Fl. Cape Penins. 613 (1950) & in J. S. Afr. Bot. 17:11 (1951); Eichler in Feddes Repert. 98:159 (1987).

Adamson (in *J. S. Afr. Bot.* 17:11.1951) dismissed *Hydrocotyle macrodus* Sprengel as having been a *nomen nudum* when published in 1820, but this was not so. Sprengel, in a review of A. Richard's monograph of *Hydrocotyle* (*Neue Entdeck.* 2:292, 1821) wrote 'In diesen Abtheilung fehlt ein merkwurdige kapsche Art: *H. moschata* Thunb. Schult. Syst. 6:351 welches aber nicht die Thunbergische Art ist, und kunstig *H. macrodus* heissen mag'. Sprengel himself contributed the account of Umbelliferae to Roemer & Schultes, *Systema Vegetabilium* and gave a description under *H. moschata* Thunberg which owes nothing to Thunberg's own description (which was of *H. moschata* Forst.). The name *H. macrodus* is therefore validated by this description. The specimen is not cited, but a few years later Chamisso & Schlechtendal recorded their own collection of the plant on Table Mountain and said

that it has previously been collected there by Bergius. Writing in 1820 it is very probable that Sprengel was describing one of Bergius's collections.

Centella macrodus must now replace *C. hederifolia* (Burchell) Drude for this species, which is restricted to the Cape Peninsula.

591. Glia Sonder in Harv. & Sond., Fl. Cap. 2: 547 (1862); Adamson & Salter, Fl. Cape Penins. 618 (1950); Dyer, Gen. S. Afr. Fl. Pl. 1: 426 (1975).

Syn.: *[Ruthea* Bolle sec. Drude in Engler & Prantl, Nat. Pflanzenfam. 3(8): 179 (1898) p.p.; Phillips, Gen. S. Afr. Fl. Pl. 450 (1926), ed. 2,551 (1951), dubie Bolle (=*Rutheopsis* A. Hansen & Kunkel)]

Lectotype (chosen here): *Oenanthe inebrians* Thunb., Prodr. Pl. Cap. 49 (1794).

Sonder described the genus *Glia* for a single species, to which he gave the name *G. gummifera* (L.) Sond., based on *Bubon gummiferum* L. and including in synonymy *Oenanthe inebrians* Thunb. Wijnands (*Bot. Commelins* 199, 1983) has shown that the type of *Bubon gummiferum* is a plate published by Commelin (*Hort. Amst.* 2: 115, t. 58, 1701) and that the plant depicted there is not that described by Sonder as *Glia*, but *Peucedanum tenuifolium* Thunb., now to be called *Peucedanum gummiferum* (L.) Wijnands.

At the same time Wijnands accepted Hiroe's reduction of *Glia* to *Annesorhiza* Cham. & Schlechtd. (Hiroe, *Umbell. World* 674, 1979) and made the new combination *Annesorhiza inebrians* (Thunb.) Wijnands, pointing out that the earlier epithet *capensis*, from another synonym *Oenanthe capensis* Houtt., was preoccupied in *Annesorhiza.* Wijnands then added 'If *A. inebrians* is considered to differ from *Annesorhiza* at the generic level, the name *Glia* is not available as it is a synonym of *Seseli* L. [this is clearly a slip for *Peucedanaum* L.] according to the Rules as given by the International Botanic Congress in Sydney'. This remark stems from the decision taken at Sydney that a genus shall be deemed to be typified by the species cited (even if a clear misidentification, as here) rather than the plant described (except by conservation).

However if we look at Art. 10 of the Code carefully we find at Art. 10.2 'If in the protologue reference to one or more species names is definitely included, the type must be chosen from among the types of those names'. Nothing is said to exclude species that are placed in synonymy.

Wijnands did not precisely lectotypify *Glia* by *Bubon gummiferum* L.; he simply assumed that it was the type as it provided the basionym of the name Sonder used, *Glia gummifera.* Examination of the whole protologue shows that, in the light of Wijnands' re-determination, *Bubon gummiferum* L. must not be taken as the lectotype: it does not agree with the description. On the other hand *Oenanthe inebrians* Thunb., cited in synonymy, is the plant described.

Accordingly I propose that the name *Glia* Sond. be lectotypified by the type of the name *Oenanthe inebrians* Thunb.

Glia, in my view, should not be included in *Annesorhiza.* Hiroe made

an incredibly wide genus of *Annesorhiza*, including not only *Glia* but *Polemannia* Eckl. & Zeyh. and *Stenosemis* Sond. (see Hilliard & Burtt in *Notes RBG Edinb.* 37: 324, 1979): such an agglomeration is quite undefinable. It is true that at present the limits of *Annesorhiza sensu stricto* cannot easily be set down, but at least it seems certain that all its species are herbs with radical leaves, not always present at flowering time, and with the leaves on the flowering stems reduced to sheaths with or without a rudimentary lamina. *Glia* is a subshrub with several pairs of foliage leaves on the stem: the lower leaves differ somewhat in shape, but they are not strictly radical. The mericarps of the type species of *Annesorhiza*, *A. capensis* Cham. & Schlechtd., are unequal, though other species (e.g. *A. wilmsii* H. Wolff, *A. schlechteri* H. Wolff) have equal mericarps: but where fruit structure is known the endosperm is more or less semicircular in outline, whereas in *Glia* there is a distinct peak under each rib. Until a much more critical study has been made of *Annesorhiza*, the genus *Glia* should be kept distinct.

A word needs to be added about the genus *Ruthea* Bolle to which *Glia* was reduced by Drude (in Engler & Prantl, *Nat. Pflanzenfam.* 3(8): 179, 1898). Both *Ruthea* and *Glia* were published in 1862 and Drude evidently thought that *Ruthea* had priority. This, however, is not so: it seems that *Ruthea* dates from 20 December, *Glia* from 15–31 October. However, this is now of no practical importance, because *Ruthea* Bolle has been found to be a later homonym of a fungal genus *Ruthea* Opatowski (1836), and was replaced by *Rutheopsis* A. Hansen & Kunkel in 1976, (and superfluously by *Gliopsis* Rauschert in 1982); therefore *Glia* has clear priority if it should again be judged congeneric.

As pointed out by Wijnands, the earliest epithet for the one species of *Glia* comes from *Oenanthe capensis* Houtt.; a new combination is required and forms the next item.

592. Glia capensis (Houtt.) B. L. Burtt, **comb. nov.**

Type: Cape, no collector given (n.v.)

Syn.: *Oenanthe capensis* Houtt., Nat. Hist. 2(8): 140, t. 45, f.2 (1777); Christm., Pflanzensyst. 2(8): 140, t. 45, f.2 (1780); Merrill in J. Arn. Arb. 19: 357 (1938) sub *Ruthea gummifera* (L.) Drude.

Oenanthe inebrians Thunb., Prodr. Pl. Cap. 49 (1794). Type: S. Africa, sine loc., *Thunberg* (UPS, sheet 7095).

Oenanthe tenuifolium Thunb., Prodr. Pl. Cap. 49 (1794). Type: S. Africa, sine loc., *Thunberg* (UPS, sheets 7103, 7104).

Peucedanum caledonicum Eckl. & Zeyh., Enum. Pl. Afr. Austr. Extratrop. 349 (1837). Type: Zwarteberg, Caledon, *Ecklon & Zeyher* 2233 (n.v.).

Lichtensteinia inebrians (Thunb.) Eckl. & Zeyh., Enum. Pl. Afr. Austr. Extratrop. 343 (1837).

Peucedanum abbreviatum Meisn. in Hook. Lond. J. Bot. 2: 535 (1843)—non Sond. (1862). Type: Cape, Table Mt., *Krauss* 1179 (NY, n.v.; photo K).

[*Glia gummifera* auct., non (L.) Sond.; Sond. in Fl. Cap. 2: 548 (1862) excl. basionym].

[*Ruthea gummifera* auct., non (L.) Drude; Drude in Engl. & Prantl, Nat. Pflanzenfam. 3(8): 179 (1898), excl. basionym].

[*Annesorhiza gummifera* auct., non (L.) Hiroe; Hiroe, Umbell. World 675 (1979), excl. basionym].

Annesorhiza inebrians (Thunb.) Wijnands, Bot. Commelins 199 (1983).

See discussion above. No specimen of *Oenanthe capensis* has been found amongst Houttuyn's specimens at Geneva, where some of his types are preserved. I have not attempted to cite all the misuses of the epithet *gummifera*.

593. Peucedanum sonderi (Hiroe) B. L. Burtt, **comb. nov.**

Lectotype: Cape, Dutoitskloof, *Drège* (S, n.v.; E, K iso).

Syn.: [*Bubon tenuifolium* E. Mey in Drège, Zwei Pflanzengeog. Doc. 79 (1843) nomen nudum—non *B. tenuifolium* (Thunb.) Sond.]

Bubon montanum Sond. in Harv. & Sond., Fl. Cap. 2: 560 (1862). Type as above.

Peucedanum montanum (Sond.) Drude in Engler & Prantl, Nat. Pflanzenfam. 3(8): 237 (1898)—non *P. montanum* Koch.

Seseli sonderi (sphalm. *sondorii* in textu, *sonderii* in indice) Hiroe, Umbell. World 1128 (1979).

Hiroe also included under *Seseli sonderi* the following:

Oreoselinum uliginosum Eckl. & Zeyh. var. *glaucum* Eckl. & Zeyh., Enum. Pl. Afr. Austr. Extratrop. 350 (1837). Type: Cape, Duyvels and Voormannsbosch near Swellendam, *Ecklon & Zeyher*.

Oreoselinum glaucum (Eckl. & Zeyh.) C. Presl, Bot. Bemerk. 75 (1845)—non *Peucedanum glaucum* Link.

Neither the epithet *montanum* nor *glaucum* was available in *Seseli* and Hiroe's new name was therefore nomenclaturally correct. As both epithets are also pre-occupied under *Peucedanum*, Hiroe's epithet *sonderi* has to be transferred. The Drège specimen cited above as lectotype is the holotype of *Bubon montanum* Sonder. Technically the type of *P. sonderi* could have been the type of *Oreoselinum glaucum*: this however was quoted by Sonder (*Flora Capensis* 2: 56 1862) under *B. hypoleucum* Meisn., not under *B. montanum*. Consequently I take the type of *B. montanum* as the lectotype of *P. sonderi*. It is certainly close to *P. hypoleucum* (Meisn.) Drude; of this Sonder himself was very well aware. In view of the much finer cutting of the leaves and the alleged differences in fruit structure (vittae present below the ribs in *P. hypoleucum* absent in *P. sonderi*), I deem it best to clarify the nomenclature without change of rank.

ADDENDA

Previously published entries are brought up to date nomenclaturally. The records cited here are additional to those already published; in general we have given only those records that add appreciably to knowledge of the species. Place of publication of previous entries can be found from the list of papers preceding the Index (p. 211).

14. *Aster quinquenervius* Klatt = **Felicia quinquenervia** (Klatt) Grau in Mitt. Bot. München 9: 473 (1973); Hilliard, Compositae in Natal 71 (1977).

15 & 82. *Athanasia acerosa* (DC.) Harv. = **Phymaspermum acerosum** (DC.) Kallersjö in Nordic J. Bot. 5: 538 (1985).

Sub 16. The species referred to in the discussion as *Cotula sericea* Thunb. is now **C. lineariloba** (DC.) Hilliard (No. 87).

24. *Senecio basutensis* Thell. = **S. subcoriaceus** Schlechter; Hilliard, Compositae in Natal 428 (1977).

26. Senecio ulopterus Thell.
NATAL. Mpendhle distr., 2929BC, Highmoor Forest Reserve, 7800ft, 6 i 1983, *Hilliard & Burtt* 16260 (E, NU); Mulangane ridge above Carter's Nek, 7000–7300ft, 2 xii 1983, *Hilliard & Burtt* 17024 (E, NU). Underberg distr., 2929CB, Sani Pass, 6700ft, 13 xii 1984, *Hilliard & Burtt* 17905 (E, NU); Gxalingenwa valley, c.7200ft, 9 xii 1983, *Hilliard & Burtt* 17085 (E, NU); Chameleon Cave area, 6600ft, 2 xii 1984, *Hilliard & Burtt* 17810 (E, NU); Lakes Cave area, c.6800ft, 11 xii 1982, *Manning, Hilliard & Burtt* 15890 (E, NU); 2929CC, vicinity of Tarn Cave, c.7800ft, 21 i 1984, *Hilliard & Burtt* 17433 (E, NU).

29. *Romulea longituba* L. Bolus var. *alticola* B. L. Burtt = **R. macowanii** Baker var. **alticola** (B. L. Burtt) M. de Vos, The genus Romulea in S. Afr. (J.S. Afr. Bot. Suppl. 9): 168 (1972), & in O. A. Leistner (ed.), Fl. Southern Afr. 7, pt. 2(2): 48 (1983).

33. Wahlenbergia pulvillus-gigantis Hilliard & Burtt
NATAL. Mpendhle distr., 2929BC Mulangane ridge above Carter's Nek, 7000–7300ft, 5 ii 1984, *Hilliard & Burtt* 17604 (E, NU). Underberg distr., 2929CB, Chameleon Cave area, c.5 miles WNW of Castle View Farm, 7700ft, 4 xii 1984, *Hilliard & Burtt* 17861 (E, NU); ibidem, headwaters Mlahlangubo river, 7500–8500ft, 23 i 1982, *Hilliard & Burtt* 15347 (E, NU); upper tributaries S of Mkhomazi (feeders of Ka-Ntubu), 8800ft, 30 xi 1982, *Hilliard & Burtt* 15723 (E, NU); Cobham Forest Reserve, Lakes Caves area, c.7800ft, 12 ii 1982, *Manning, Hilliard & Burtt* 15930 (E, NU); Sani Pass, c.9000ft, 19 i 1976, *Hilliard & Burtt* 8883 (E, NU); 2929CA, Garden Castle Forest Reserve, Pillar Cave Valley, c.7000ft, 5 xi 1977, *Hilliard & Burtt* 10435 (E, NU); 2929CB, Bushman's Nek, Thamathu Pass, 8100ft, 23 xi 1973, *Hilliard & Burtt* 7463 (E, NU).

34. Brachylaena discolor DC. & **35. B. uniflora** Harv.
This group has also been studied by Paiva (in *Bol. Soc. Brot.* 46: 375–381, 1972). He examined some of the material that we list and allocates it as follows:

B. discolor var. *discolor*: *Strey* 8753, 8789, 8754, 8822.
B. discolor var. *mossambicensis* Paiva: *Strey* 8804, 8751, 8823, *Schweickerdt* 1368.

39. *Gnaphalium septentrionale* (Vatke) Hilliard = **Helichrysopsis septentrionalis** (Vatke) Hilliard in Bot. J. Linn. Soc. 82: 207 (1981) & Fl. S. Afr. 33 (7,2): 47 (1983).

45. *Ifloga ambigua* Thell. = **I. thellungiana** Hilliard & Burtt in Bot. J. Linn. Soc. 82: 224 (1981); Hilliard in Bot. J. Linn. Soc. 82: 302 (1981).

46. *Ifloga aristulata* Thell = **I. glomerata** (Harv.) Schltr.; Hilliard in Bot. J. Linn. Soc. 82: 300 (1981).

50. Ifloga polycnemoides Fenzl: not a synonym of *I. verticillata*; see Hilliard in Bot. J. Linn. Soc. 82: 304 (1981).

53. *Ifloga disticha* (Linn. f.) Druce = **I. ambigua** (L.) Druce; Hilliard in Bot. J. Linn. Soc. 82: 307 (1981).

55. *Ifloga reflexa* (Linn f.) Schlechter = **I. repens** (L.) Hilliard & Burtt in Bot. J. Linn. Soc. 82: 264 (1981); Hilliard in Bot. J. Linn. Soc. 82: 309 (1981).

56. *Ifloga woodii* (N.E. Br.) B. L. Burtt = **I. decumbens** (Thunb.) Schlechter; Hilliard in Bot. J. Linn Soc. 82: 311 (1981).

59. Kalanchoë elizae Berger

The affinity of this Malawian species, which is so different from other species of the genus on the African mainland, is clearly with the Socotran *Kalanchoe robusta* Balf. fil., illustrated in Bot. Mag. N.S. tab. 657 (1973).

61. *Basutica propinqua* Hilliard = **Gnidia propinqua** (Hilliard) Peterson in Bothalia 14: 82 (1982).

62. *Vellozia elegans* (Balf.) Hook. f. = **Talbotia elegans** Balf.; Smith & Ayensu in Kew Bull. 29: 181 (1974).

68. Empodium elongatum (Nel) B. L. Burtt

S E TRANSVAAL. Wakkerstroom distr., 2730AC, farm Oshoek, 2000m, 17 x 1976, *Devenish* 1656 (E); ibidem, 6400ft, 7 xi 1976, *Hilliard & Burtt* 9177 (E).

ORANGE FREE STATE. Harrismith distr., 2829AC, Platberg, escarpment near One Man Pass, 7200ft, 13 xii 1976, *Hilliard & Burtt* 9511 (E).

E CAPE. Barkly East distr., 3027DA, Three Drifts stream below farm Pitlochrie, c.5800ft, 4 xii 1981, *Hilliard & Burtt* 14710 (E).

The notes on *Empodium* were written in 1973, with very little material available for study. At that time it was thought that *E. monophyllum* (see below) could be distinguished from *E. elongatum* by having only one or two leaves to each corm, and by the leaves being shorter. Consequently a number of specimens were mentioned under *E. elongatum* which seemed to differ from it only in having terminal appendages on the anthers; these are absent in true *elongatum*, but are present in *E. monophyllum*.

However, we have now seen much more ample material of *E. monophyllum* (see below), in particular specimens collected for us on Kamberg Mt by Mr F. B. Wright. He made several collections between 4 October, first flowers, and 31 December, in fruit. At first flowering only a single leaf is visible (justifying Nel's choice of epithet), but by the end of December there may be 6 on a good-sized corm. Thus it seems clear that the presence of anther appendages in *E. monophyllum*, their absence in *E. elongatum*, must be relied upon for the discrimination of these two species.

The collection of *E. elongatum* from the Barkly East district represents a surprising extension of range, but the specimen definitely has the style (4·5mm) shorter than the stigma (6·5mm) and is therefore not *E. gloriosum* (Nel) B. L. Burtt which, uniquely in the genus, has style longer than stigma and reaches north as far as the Stockenstrom division.

71. Empodium monophyllum (Nel) B. L. Burtt
NATAL. Utrecht distr., 2730AC, farm 'Retirement', c.5900ft, 7 xi 1976, *Hilliard & Burtt* 9194 (E); ibidem, 3 xi 1985, *Hilliard & Burtt* 18564 (E); farm 'Naauwhoek' c.7000ft, 6 xi 1976, *Hilliard & Burtt* 9163 (E). Ngotshe distr., 2731CB, Louwsburg, Itala Nature Reserve, E of Potwe house, 11 xii 1975, *Hilliard & Burtt* 8563 (E). Estcourt distr., 2929BC, Kamberg Mt, N facing slope, c.6300ft, 4 x 1973, *Wright* 1550 (E); ibidem, 17 xi 1974, *Wright* 1871 (E); ibidem, 6600–6750ft, 14 xii 1974, *Wright* 2000 (E); ibidem, near summit beacon, 6873ft, 14 xii 1974, *Wright* 2072 (E); ibidem, 31 xii 1974, *Wright* 2047 (E). Polela distr., 2929DD, Bulwer, Mawahqua Mt, Sunset farm, 10 xi 1973, *Hilliard & Burtt* 7174 (E).

For discussion see under 68. *E. elongatum* (above).

72. *Empodium* = **E. namaquense** (Baker) M. F. Thompson in Fl. Pl. Afr. 44, t. 1727 (1977).

82–85. See Kallersjö in Nordic J. Bot. 5: 527 (1985) for genera segregated from *Athanasia*.

82. *Athanasia acerosa* (DC.) Harv. = **Phymaspermum acerosum** (DC.) Kallersjö in Nordic J. Bot. 5: 538 (1985).

83. *Athanasia pinnatifida* (Oliv.) Hilliard = **Phymaspermum pinnatifidum** (Oliv.) Kallersjö in Nordic J. Bot. 5: 538 (1985).

84. *Athanasia villosa* Hilliard = **Phymaspermum villosum** (Hilliard) Kallersjö in Nordic J. Bot. 5: 538 (1985).

85. *Athanasia woodii* (Thell.) Hilliard = **Phymaspermum woodii** (Thell.) Kallersjö in Nordic J. Bot. 5: 538 (1985).

91. Gnaphalium declinatum Linn. f. This entry replaced by Hilliard & Burtt in Bot. J. Linn. Soc. 82: 181–193 (1981); Hilliard in Bot. J. Linn. Soc. 82: 283 (1981) & Fl. S. Afr. 33 (7,2): 23 (1983).

Amphidoxa gnaphalodes DC.: not a synonym of *Gnaphalium declinatum*; = **G. gnaphalodes** (DC.) Hilliard & Burtt, loc. cit. 193; Hilliard, loc. cit. 280 (1981) & 21 (1983).

Gnaphalium unionis [Sch. Bip. ex] Oliv. & Hiern: not a synonym of *G. declinatum*; Hilliard, loc. cit. 286 (1981).

93. *Gnaphalium polifolium* Thunb. = **Plecostachys polifolia** (Thunb.) Hilliard & Burtt in Bot. J. Linn. Soc. 82: 207 (1981); Hilliard, Fl. S. Afr. 33 (7, 2): 49 (1983).

94–124. See Hilliard & Burtt. Some generic concepts in Compositae—Gnaphaliinae in Bot. J. Linn. Soc. 181–232 (1981).
(p.342) *Cassinia alba* O. Hoffm. = **Helichrysum platypterum** DC.

97. Helichrysum cephaloideum DC.
The synonym *H. araneosum* Klatt (non Baker) is to be excluded. It is a distinct species, **H. auriceps** Hilliard (No. 196).

108. Helichrysum hyphocephalum Hilliard
Not known to range throughout the southern Natal Drakensberg; see Hilliard, Compositae in Natal 226 (1977) & Fl. S. Afr. 33 (7,2): 266 (1983).

120. *Helichrysum serpyllifolium* (Berg.) Pers. = **Plecostachys serpyllifolia** (Berg.) Hilliard & Burtt in Bot. J. Linn. Soc. 82: 207 (1981); Hilliard in Fl. S. Afr. 33 7(2): 49 (1983).

124. *Helichrysum subglomeratum* var. *imbricatum* DC. = **H. albanense** Hilliard (No. 306).

135. *Rhynea phylicifolia* DC. = **Tenrhynea phylicifolia** (DC.) Hilliard & Burtt in Bot. J. Linn. Soc. 82: 232 (1981).

138. *Senecio cissampelinus* (DC.) Sch. Bip. = **Mikaniopsis cissampelina** (DC.) C. Jeffrey in Kew Bull. 41: 879 (1986).
CAPE. Amatole Mts, 3226 DB, Hogsback Forest Reserve, 11 xii 1977, *Hilliard & Burtt* 10990 (E, NU).
TRANSKEI. Baziya Mt, 3128 BC, 10 ii 1981, *Hilliard & Burtt* 13871 (NU); 3128 DA, Nqadu, N of Umtata, 30 i 1983, *Hilliard & Burtt* 16317 (NU).
NATAL. Ngotshe distr., 2731 CB, Ngome, 8 xii 1975, *Hilliard & Burtt* 8455 (NU).
All the above specimens are sterile.

151. *Vernonia stipulacea* Klatt = **V. subuligera** O. Hoffm. in Engler, Pflanzenw. Ost-Afr. C, 403 (1895).

152. *Kalanchoë figuereidoi* Croizat = **K. humilis** Britten, fide R. Fernandes in E. Launert (ed.), Fl. Zambesiaca 7(1): 56 (1983).

188. Senecio saniensis Hilliard
NATAL. Mpendhle distr., 2929 BC, Highmoor Forest Reserve, headwaters of Elandshoek river south of Giant's Castle, 8300ft, 5 i 1983, *Hilliard & Burtt* 16247 (E). Underberg distr., 2929 CB, Cobham Forest Reserve, Lakes Cave area, c.7800ft, 12 xii 1982 (heads spent), *Hilliard & Burtt* 15919 (E).

Like the type, these specimens were found at the foot of basalt cliffs. These areas are often rather inaccessible and the species may be more widespread than the records suggest.

193. Aster ananthocladus Hilliard & Burtt
NATAL. Mpendhle distr., 2929 BC, Mulangane ridge above Carter's Nek, 7000–7300ft, 2 xii 1983, *Hilliard & Burtt* 17021 (E, NU). Underberg distr., 2929 CB, Sani Pass, 6800ft, 13 xii 1984, *Hilliard & Burtt* 17925 (E, NU); Gxalingenwa valley between Sani Pass and Polela valley, c.7000ft, 9 xii 1983, *Hilliard & Burtt* 17102 (E, NU); Upper Polela Cave area, c.6800ft, 14 ii 1979 [sterile] *Hilliard & Burtt* 12558 (E, NU); Lakes Cave area, c.7200ft, 11 xii 1982, *Hilliard & Burtt* 15893 (E, NU); Chameleon Cave area, 6500ft, 2 xii 1984, *Hilliard & Burtt* 17804 (E, NU); 5–7 miles NNW Castle View Farm, headwaters of Mlahlangubo river, c.7200ft, 24 xi 1980, *Hilliard & Burtt* 13587 (E, NU); 2929 CC, vicinity of Tarn Cave above Bushman's Nek, c.8100ft, 23 xi 1983, *Hilliard & Burtt* 16914 (E, NU).

195. *Gnaphalium oligandrum* (DC.) Hilliard & Burtt = **Pseudognaphalium oligandrum** (DC.) Hilliard & Burtt in Bot. J. Linn. Soc. 82: 204 (1981); Hilliard, Fl. S. Afr. 33 (7,2): 54 (1983).

204. Macowania sp. = **Macowania deflexa** Hilliard & Burtt (No. 405).

215. Tetraria macowaniana B. L. Burtt
NATAL. Mpendhle distr., 2929 BC, Mulangane ridge above Carter's Nek, 7000–7300ft, 12 iii 1985, *Hilliard & Burtt* 18350 (E, NU). Underberg distr., 2929 CB, Cobham Forest Reserve, Lakes Cave area, c.7100ft, 13 xii 1982, *Hilliard & Burtt* 16006 (E, NU); Bamboo Mt, summit, c.7200ft, 21 xi 1982, *Hilliard & Burtt* 15589 (E, NU).

The above records confirm that the habitat of this species, a tough harsh plant, is rather bare stony areas.

216. Dioscorea brownii Schinz
This species, which is remarkable for its erect habit when mature, was fully described. It has now been grown from seed at RBG Edinburgh. The seedlings have twining stems and cordate suborbicular leaves, which are rather similar to the adult leaves of *D. sylvatica* Eckl. & Zeyh.

217. Chironia peglerae Prain
NATAL. Mpendhle distr., 2929 AD, upper Loteni valley, vicinity of Ash Cave, 6400–6500ft, 5 ii 1985, *Hilliard & Burtt* 18124 (E, NU). Underberg distr., 2928 CB, Cobham Forest Reserve, Sipongweni, 6500–6800ft, 20 ii

1981, *Hilliard & Burtt* 14044 (E, NU); Upper Polela cave area, c.7000ft, 13 ii 1979, *Hilliard & Burtt* 12467 (E, NU); Lakes Cave area, c.7400ft, 13 xii 1982, *Hilliard & Burtt* 16038 (E); 5–7 miles NNW Castle View Farm, headwaters Mlahlangubo river, 6400–7400ft, 19 i 1982, *Hilliard & Burtt* 15179 (E, NU); 2929 CC, Bushman's Nek, Thamathu Cave, 7500ft, 6 ii 1976, *Hilliard & Burtt* 9005 (E, NU).

225. *Glumicalyx alpestris* (Diels) Hilliard & Burtt = **G. nutans** (Rolfe) Hilliard & Burtt (No. 289).

228. Strobilopsis wrightii Hilliard & Burtt

NATAL. Mpendhle distr., 2929 BC, farm 'Storm Heights', c.7200ft, 28 i 1978, *Hilliard & Burtt* 11260 (E); ibidem, c.7000ft, 16 xii 1978, *Hilliard & Burtt* 11776 (E); Mulangane ridge above Carter's Nek, 7000–7300ft, 2 xii 1983, *Hilliard & Burtt* 17031 (E, NU), 17540 (E, NU). Underberg distr., 2929 CB, Cobham Forest Reserve, Upper Polela cave area, c.6800ft, 14 ii 1979, *Hilliard & Burtt* 12553 (E, NU); 2929 CA, Garden Castle Nature Reserve, end of ridge above Pillar Cave, c.6700ft, 8 xi 1977, *Hilliard & Burtt* 10510 (E, NU).

LESOTHO. 2929 CC, Sehlabathebe National Park, Matšu a Mafikeng, c.2450m, 2 xi 1976, *Hoener* 1688 (E); ibidem, xii 1976, *Schmitz* 6987 (Roma).

When *Strobilopsis wrightii* was first described it was known from only two specimens: *Wright* 388 (the type) from the farm 'Whiterocks', Mpendhle distr. (this is at the end of the ridge Ntabanyama, which runs SE from Giant's Castle), and *Guillarmod et al.* 31 from Sehlabathebe National Park in Lesotho. The type had two fertile stamens, the other specimen had four. It is therefore interesting to see whether the additional material shows a geographical pattern for this character. *H&B* 11260 (i 1978) is from the exact type locality (which we have relocalized as Storm Heights as it lies slightly to that side of the farm boundary): only two plants were found in a small patch of grass etc on an exposed rock sheet: both plants had two stamens. However when revisiting the area in December 1978 we found the plant again by a stream in a shady gulley about half-a-mile away and this one had four stamens. A population subsequently discovered on the neighbouring ridge of Mulangane had all plants examined with two stamens. All the other additional records cited above are from further south along the Drakensberg and all have four stamens. It seems therefore that in the north of its range, on Ntabanyama and Mulangane, the diandrous form is usual, but tetrandrous plants also occur; in the south of its range all plants found so far have been tetrandrous. The plant is still something of a rarity and, unfortunately, attempts to raise it from seed have so far failed.

sub 249. Genera of Hypoxideae

The species from Seychelles mentioned (p.75, top) as *Molineria rhizophylla* (Baker) Baker has now been placed, together with an allied new species, in a separate genus *Hypoxidea* F. Friedmann (in *Bull. Mus. Nat. Hist. Nat. Paris*, 4 sér. 6 sect. B, *Adansonia*, 4: 453–460, 1984). The

position of *Curculigo seychellensis* Baker, which is very anomalous in *Curculigo*, remains uncertain.

254. *Tysonia africana* H. Bolus = **Afrotysonia africana** (H. Bolus) Rauschert in Taxon 31: 558 (1982); R. Mill in Notes RBG Edinb. 43: 469 (1986).

255. *Tysonia glochidiata* R. Mill = **Afrotysonia glochidiata** (R. Mill) R. Mill in Notes RBG Edinb. 43: 470 (1986).

292. *Zaluzianskya lychnidea* (D. Don) Walp. = **Z. maritima** (Linn. f.) Walp., fide Hilliard & Burtt (1983).

301. Stenosemis angustifolia Sond.
NATAL. Umzinto distr., 3030 BC, Vernon Crookes N.R., 420m, 10 ii 1984, *Balkwill & Cadman* 1246 (E, NU). Port Shepstone distr., Umtamvuna N.R., 700ft, 26 ii 1983, *Manning & Balkwill* 399 (E, NU).
TRANSKEI. 3128 CB, Baziya Mt, Mpolompo valley, c.4500ft, 11 ii 1981, *Hilliard & Burtt* 13927 (E, NU). 3128 BC, above Mhlahlane Forest Station, 6 iii 1985, *Hutchings* 1600 (E, KEI); ibidem, c.5000ft, 31 i 1983, *Hilliard & Burtt* 16324 (E, NU).
CAPE. Stockenstrom div., Katberg Pass, c.5800ft, 26 i 1979, *Hilliard & Burtt* 12399 (E, NU).

313. Helichrysum ephelos Hilliard
NATAL. Mpendhle distr., 2929 BC, Mulangane ridge above Carter's Nek, 7000–7300ft, 4 ii 1984, *Hilliard & Burtt* 17571 (E, NU); ibidem, 13 iii 1985, *Hilliard & Burtt* 18366 (E, NU).

332. Petalacte epaleata Hilliard & Burtt
CAPE. 3321 DA, Rooiberg, just east of main peak, 4600ft, 11 xi 1974, *Oliver* 5396 (E, NU, STE); Montagu–Swellendam, Goedgeloof Peak, Langeberg near Swellendam, S slopes, 3500ft, 3 ix 1955, *Esterhuysen* 24503 (BOL, NU).

333. Senecio austromontanus Hilliard
NATAL. Underberg distr., 2929 CC, Thamathuwe Pass, 8000ft, 17 i 1969, *Killick & Vahrmeijer* 4004 (PRE).

334. Senecio basalticus Hilliard
NATAL. Mpendhle distr., 2929 BC, Highmoor Forest Reserve, 8100ft, 5 i 1983, *Hilliard & Burtt* 16191 (NU). Underberg distr., 2929 CB, Cobham Forest Reserve, Lakes Cave area, 7800ft, 12 xii 1982, *Hilliard & Burtt* 15921 (NU); near Wilson's Cave, 7400ft, 20 i 1982, *Hilliard & Burtt* 15250 (NU); 2929 CC, above Bushman's Nek, below The Devil's Knuckles, c.8000ft, 23 xi 1983, *Hilliard & Burtt* 16892 (NU).

All the above specimens consist of sterile rosettes only. The species is a very late flowering one.

336. Senecio polelensis Hilliard
NATAL. Underberg distr., 2929 CB, Chameleon Cave area, 6700ft, 1 xii 1984, *Hilliard & Burtt* 17780 (E, NU); near Wilson's Cave, 7100ft, 18 i 1982, *Hilliard & Burtt* 15145 (E, NU).

342. Heliophila formosa Hilliard & Burtt
NATAL. Underberg distr., 2929 CA, Garden Castle F.R., Mlambonja valley, c.6100ft, 6 i 1982, *Hilliard & Burtt* 14943 (E, NU); 2929 CB, upper tributaries S of Mkhomazi river (feeders of Ka-Ntubu), c.8000ft, 2 xii 1982, *Hilliard & Burtt* 15774 (E, NU); Chameleon Cave area, 7000–7250ft, 1 xii 1984, *Hilliard & Burtt* 17771 (E, NU); Lakes Cave area, c.7800ft, 12 xii 1982, *Hilliard & Burtt* 15931 (E, NU); Gxalingenwa valley, 7400ft, 11 xii 1983, *Hilliard & Burtt* 17198 (E, NU); 2929 CC, vicinity of Tarn Cave above Bushman's Nek, c.8000ft, 20 xi 1983, *Hilliard & Burtt* 16823 (E, NU).

344. Hesperantha huttonii (Baker) Hilliard & Burtt
For a full account of this species and others that occur in Natal and nearby, see Hilliard & Burtt (1986).

353. Trachyandra smalliana Hilliard & Burtt
NATAL. Underberg distr., 2929 CB, Bamboo Mt, N side, c.6700ft, 21 xi 1982, *Hilliard & Burtt* 15609 (E, NU).
CAPE. 3028 CA–3028 CC, Rhodes to Naude's Nek, 13 ii 1983, sterile, *Hilliard & Burtt* 16614 (E).

367. Peucedanum upingtoniae (Schinz) Drude
Correction: Type: N.E. Namibia, Grootfontein distr., farm Upingtonia, *Schinz* 1033 (Z).

373. Chenopodium mucronatum Thunb.
NATAL. Underberg distr., 2929 CC, vicinity of Tarn Cave above Bushman's Nek, 7800–8000ft, under dripline of sandstone overhangs, smelling of rotten fish, 19 i 1984, *Hilliard & Burtt* 17387 (E, NU).
LESOTHO. Masevi distr., Mantsonyane road, beyond the pass between Likalangeng and Marakabei, 2560m, in stand of *Kniphofia caulescens* on moist soil, 13 ii 1987, *Backéus* 2128 (UPS).

375. Euclea coriacea A. DC.
NATAL. Mpendhle distr., 2929 AD, upper Loteni valley, Ash Cave, 6500ft, 4 ii 1985, *Hilliard & Burtt* 18095 (E, NU). Underberg distr., 2929 CB, Upper Mkhomazi area, Nhlangeni valley, Bird's Nest Cave, 6000ft, 19 ii 1985, *Hilliard & Burtt* 18201 (E, NU); Bamboo Mt, N side, c.6700ft, 21 xi 1982, *Hilliard & Burtt* 15652 (E, NU). Matatiele distr., 2929 CC, farm Glen Almond, 6200ft, 9 i 1986, *Hilliard & Burtt* 19002/A (E, NU).

386. Thesium durum Hilliard & Burtt
NATAL. Mpendhle distr., 2929 AD, path from Loteni Nature Reserve to Redi, c.7500ft, 26 xii 1982, *Hilliard & Burtt* 16104 (E, NU); 2929 BC, Mulangane ridge above Carter's Nek, 7300ft, 13 iii 1983, *Hilliard & Burtt*

18372 (E, NU). Underberg distr., 2929 CB, upper tributaries S of Mkhomazi river, 8600ft, 30 xi 1982, *Hilliard & Burtt* 15715 (E, NU): 2929 CC, vicinity of Tarn Cave above Bushman's Nek, c.8000ft, 20 xi 1983, *Hilliard & Burtt* 16817 (E, NU).
CAPE. Barkly East distr., 3028 CC, Rhodes to Naude's Nek, farm Dunley, c.7500ft, 13 ii 1983, *Hilliard & Burtt* 16621 (E, NU); 3027 DC, Three Drifts Stream below 'Pitlochrie', c.5800ft, 2 ii 1983, *Hilliard & Burtt* 16360 (E, NU).

387–393. See Hilliard & Burtt, A revision of Diascia section Racemosae in J. S. Afr. Bot. 50: 269–340 (1984). *Diascia* sp. (No.9) in this revision = **D. transkeiana** Hilliard & Burtt (No.553).

403. Berkheya griquana Hilliard & Burtt
NATAL. E. Griqualand, 3029 AC, Swartberg to Matatiele road, turn off D492 just past Umzimvubu R., 8 i 1986, *Hilliard & Burtt* 18913 (E, NU).

This specimen adds to the known variability of the species as the leaves are white-cobwebby on the lower surface. Similar variation is known in other species of *Berkheya*.

432. *Australina caffra* (Thunb.) N.E. Br. = **Didymodoxa caffra** (Thunb.) Friis & Wilmot-Dear in Bol. Soc. Brot. 58: 210 (1985).

471a. (renumbered from repeated 471). *Cynoglossum alpinum* (Brand) B. L. Burtt (1986) = **C. alpinum** Riedl in Linzer Biol. Beitr. 17(2): 317 (Nov. 1985). Holotype: Ethiopia, *Schimper* 49 (W—n.v.).

Both authors recognize *Cynoglossum montanum* var. *alpinum* Brand as an independent species; Dr Riedl's name, however, was published as a new species and was fully described.

496. Juncus mollifolius Hilliard & Burtt
LESOTHO: Maseru distr., Matsonyane road, Blue Mt pass, 2550m, 9 ii 1987, *Backéus* 2106 (E, UPS); Semongkong road, N. of Phatla-Khono, 17 ii 1987, *Backéus* 2142 (E, UPS). Butha-Buthe distr., Khalong-la-Lithunya, first valley W. of pass, c.3100m, 18 iii 1987, *Backéus* 2207 (UPS).

In these localities *Juncus mollifolius* was growing in mire. It is likely that this is the main habitat of the species and that its occurrence in a muddy overhang on Mulangane is exceptional. Dr Backéus' specimens were small and heavily grazed.

504. Alectra thyrsoidea Melchior
TRANSKEI. Ongeluks Nek, 3028 AD, c.7000ft, 7 xii 1985, *Hilliard & Burtt* 18720 (E).

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