Notes RBG Edinb. 42(2): 227–260 (1985)

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

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ABSTRACT. Thirty-two items are annotated, 20 of them being new: *Aster* (1), *Berkheya* (1), *Macowania* (1), *Osteospermum* (1), *Senecio* (6), *Erica* (5), *Albuca* (3), *Urginea* (1), *Alepidea* (1). *Vernonia hirsuta* var. *flanaganii* is raised to specific rank, as is *Senecio prionites* var. *laxus* (as *S. macowanii*). The generic limits of *Macowania* are discussed and the recent inclusion of *Athrixia pinifolia* and *Arrowsmithia* is rejected. *Stellaria sennii* and *Diplolophium swynnertonii* are new records for southern Africa, as is *Salvia tiliifolia,* an alien from Mexico. *Albuca crinifolia,* based on a mixed gathering, is lectotypified. *Aloe boylei* is discussed and a new subspecies is described; a new combination is made in *Urginea* for *Ornithogalum calcaratum,* it replaces *U. modesta. Rumex cordatus* and *R. woodii* are re-examined and specimens previously regarded as intermediate between them are identified as *R. dregeanus,* of which a new subspecies is described. The nomenclature of *Australina* is brought up to date. These notes result in the addition of 19 native species and two subspecies to the Natal flora.

Many of the specimens collected by Rev. J. Buchanan during his stay in Natal between 1861 and 1874 were unlocalized (see Gunn, M. & Codd, L. E., *Botanical Exploration of Southern Africa,* 107, 1981). Buchanan is known to have collected at Mapumulo, and there is one letter from him at Kew that says he is living about 75 miles from Durban at 2000ft between the Umvoti and Tugela rivers. That could well be at Mapumulo. While we cannot provide any precise localities for the specimens associated with Buchanan, it is worth recording that in the last few years we have done a little collecting on the Table Mountain Sandstone in the Little Noodsberg, which lies on the north flank of the Valley of a Thousand Hills. Here we have found in fairly close proximity several species for which Buchanan's specimens are the types or are at least quoted. These included *Costularia natalensis* C. B. Cl., *Kniphofia buchananii* Baker, *Dierama pumilum* N. E. Br., *Aristea torulosa* var. *monostachya* Baker, *Carex spicato-paniculata* C. B. Cl. This is enough to suggest that the Noodsberg would be a good place to start a hunt for some of Buchanan's unlocalized plants.

Another collector whose localities are not always clear was Maurice S. Evans (1854–1920). He was one of the earliest to work in the Drakensberg and some of the new species he discovered were described by the botanists at Kew. The type locality of both *Diascia cordata* N. E. Br. and *D. purpurea* N. E. Br. is 'Tiger Cave Valley', and it is obviously important to pin-point this place. Mr & Mrs J. R. Sealy kindly examined the Evans correspondence at Kew, but there is no mention of precise localities. However, it was found that these specimens were collected with others in January 1895 and amongst them were plants of *Albuca, Eucomis* and *Ornithogalum* from the top of Tabamhlope Mt, which stands just

*Continued from *Notes RBG Edinb.* 41: 299–319 (1983).

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away from the face of the Drakensberg in the Estcourt district. We then approached Mr W. Barnes of Giants Castle Game Reserve. He has had a long connexion with this area and was able to tell us at once that Evans' Tiger Cave Valley is near the headwaters of the Hlatikulu river, on or near the farm which is now called 'Tigershoek'. This is marked on the 1:50,000 map, 2929 BC, almost due north of Highmoor.

Evans also collected at Ulundi. This is not the well-known Ulundi in Zululand, but another place of the same name near Tabamhlope. It is important as the type locality for *Ursinia alpina* N. E. Br. and *Philippia evansii* N. E. Br.

CARYOPHYLLACEAE

401. Stellaria sennii Chiov. in Atti Reale Accad. Ital. Mem. 11(2): 20 (1940); Turrill in Fl. Trop. E. Afr. Caryoph. 26, t. 11 (1956); Wild in Fl. Zamb. 1(2): 350, tab. 64 (1961).
Type: Ethiopia, M. Mannagascia prope Addis Ababa, *Senni* 2165 (n.v.).
NATAL. Impendhle distr., 2929 BC, Loteni Nature Reserve, c.6000ft., forming mats at forest edge, 31 iii 1984, *Hilliard* 8220 (E, NU).

This is an addition not only to the Flora of Natal but to that of South Africa as a whole. In fact *Stellaria sennii* only crept into *Flora Zambesiaca* on the strength of a specimen collected by Rev. W. P. Johnson in the 'Mts. E. of Lake Nyasa', which might be in N Moçambique or S Tanzania. The southward extension of the known range is therefore considerable, some 1100 miles (1800km) at least. It would, however, be foolish to regard this automatically as a distributional gap. *Stellaria sennii* is an insignificant little plant, easily overlooked, or ignored.

The Natal plant is typical of the species, as illustrated in *Flora Zambesiaca,* except for one detail: there are only two (not four) fertile stamens. However, stamen number is not invariable in the species of *Stellaria,* or *Cerastium,* with reduced, apetalous flowers.

COMPOSITAE

402. Aster confertifolius Hilliard & Burtt, **species nova** *A. bakeriano* C. A. Smith affinis sed ramulis axillaribus brevibus foliatis sterilibus et tuberibus radicalibus minoribus (c.10–20 × 2mm, nec 20–50 × 4–6mm) facile distinguenda.

Herba perennis, rhizomatosa; rhizomata tenuia (c.1–1·5mm diam.), horizontalia, fasciculos tuberium fusiformium radicalium (plerumque 10–20 × 2mm) emittentia. *Caules* simplices, ramulis axillaribus foliatis nanis praediti, c.15–25cm alti, inferne foliati, superne in pedunculo longo nudo vel unibracteato transeuntes, pilis longis patentibus et aliis glanduliferis induti. *Folia* linearia, plerumque 25–75 × 1·5–4mm, apice subacuto calloso, basi angustata, semiamplexicaulia, marginibus integris vel interdum dente calloso ornatis, utrinque pilis glandulosis et eglandulosis induta. *Capitula* c.5–10mm trans discum diametro, solitaria. *Involucri* bracteae triseriatae, 7–9mm longae, lineari-lanceolatae, virides purpureo-marginatae, pilosae et

glandulosae. *Flores radii* c.12–18, c.15 × 2mm, laete violaceo-caerulei. *Flores disci* corolla c.4·5mm longa, lutei. *Achenia* 2·5mm longa, pilosa et glandulosa. *Pappus* biseriatus, externe squamis angustis c.0·75mm longis, interne setis scabridis c.5mm longis.
Type: Natal, Underberg distr., 2929 CB, Gxalingenwa valley, between Sani Pass and the upper Polela, c.2100m, 11 xii 1983, *Hilliard & Burtt* 17193 (NU holo.; E, K, M, PRE, PRF, S iso.).

Aster confertifolius is very common on moist S-facing grass slopes above the Gxalingenwa valley, in stream gullies through the Cave Sandstone; we found it first at c.2100m and it becomes progressively less common as one climbs towards the foot of the basalt cliffs at c.2250m. Plants that have yet to flower have a conspicuous tuft of leaves surmounting a simple almost leafless stem up to c.8cm tall; these stems may be solitary or several together, tufted from a common rhizome. As the stem elongates prior to flowering, a dwarf shoot similar in aspect to the initial shoot develops in the upper two or three leaf axils. These leaf tufts suggested the specific epithet *confertifolius* and they at once distinguish the species from its ally, *A. bakerianus* C. A. Smith, which is also common in the Gxalingenwa valley, but in the grass near the river and on the North facing slopes. The root tubers of *A. confertifolius* are smaller than those of *A. bakerianus* and the heads are always solitary, never corymbosely arranged as they often are in *A. bakerianus*.

403. Berkheya griquana Hilliard & Burtt, **species nova** *B. bergianae* Söderb. affinis sed foliis subtus glandulosis (nec tomentosis) et pappi squamis 0·75mm longis (nec 0·2–0·5mm tantum) distinguitur.

Herba perennis, stolonibus longis lignosis subterraneis praedita; caules e caudice plures, ad 1m alti, inferne simplices, superne in paniculam magnam corymbosam ramosi, late alati. *Folia* omnia caulina, usque ad 180 × 30mm, oblanceolata vel oblonga, apice subacuto, basi foliorum inferiorum in partem petiolarem attenuata, folia superiora basi lata amplexicauli; folia omnia in alas longas latas spinosas decurrentia, marginibus leviter vel alte in lobos remotos late triangulares incisa, sinubus grosse et irregulariter dentatis, lobis dentibusque aculeis ad 7mm longis apiculatis et marginibus loborum et sinuum spinulis brevibus tenuibus obsitis, supra glanuloso-puberula pilis aliis longis grossis dispersis etiam induta, pagina inferiore simili pilis longis ad venas restrictis. *Capitula* c.40mm trans radios expansos metientia. *Involucri* bracteae c.10–13 × 1·5–2mm, lineari-lanceolatae, spinoso-apiculatae, marginibus omnino spinosis, spinis plerumque ternatis maximis c.2·5–4mm longis, dorso glanduloso-puberulae. *Flores* radii limbo c.12mm longo, omnes vivide lutei. *Achenia* c.2·5mm longa, turbinata, glabra. *Pappi* squamae c.10, discretae, 0·75mm longae, apice truncato vel plus minusve rotundato laciniato.
Type: Natal, Mount Currie distr., 3029 CB, near Mt Currie motel and by road up Brook's Nek, 21 xii 1981, *Hilliard & Burtt* 14867 (NU holo., E iso.).
NATAL. Mount Currie distr., Kokstad, along roadside and in adjacent fields, 4 i 1964, *Hilliard* 2499 (NU); near turnoff to Kokstad from

Umzimkulu–Umtata road, 7 i 1966, *Hilliard & Burtt* 3516 (E, NU); farm Thornham, 5000ft, 30 iv 1973, *Coleman* 677 (NU).

Berkheya griquana is a plant of grassy places, but it rapidly invades old fields and roadsides, spreading by means of its stout woody underground runners. In Roessler's revision of *Berkheya* (*Mitt. Bot. Staatssamml. München* 3:104, 1959), the plant runs down to *B. caffra* MacOwan because the leaves are glandular below, not tomentose. *Berkheya caffra* is known only from the type collection made at Clydesdale (in Umzimkulu district, Transkei) not far from Kokstad, type locality of *B. griquana*; but *B. caffra* has narrowly obovate leaves cut into broad rounded lobes margined with short (up to 2mm) spines, very different from the triangular lobes of *B. griquana* armed with spines up to 7mm long. The relationship of *B. griquana* seems to lie more with *B. bergiana,* which is not dissimilar in leaf cutting and spines, but the leaves are white tomentose below, a not altogether reliable character in *Berkheya.* However, the pappus scales of *B. bergiana* are shorter than those of *B. griquana,* and we suspect that *B. bergiana* lacks underground runners.

404. Macowania Oliver; Hilliard & Burtt in Notes RBG Edinb. 34: 260–276 (1976).

Since our revision of *Macowania,* the limits of the genus have been considered by G. Kroner as part of his revisionary work on *Athrixia* (*Mitt. Bot. Staatssamml. München* 16: 1–268, 1980). Kroner came to two surprising decisions (pp. 29–31). First, to transfer *Athrixia pinifolia* N. E. Br. to *Macowania*; secondly, to unite *Arrowsmithia* DC., which is an eastern Cape genus with one species *A. styphelioides* DC., with *Macowania.* Even more surprisingly he achieved this by reducing *Arrowsmithia* DC. (1838) to synonymy, although the generic name is much older than *Macowania* Oliver (1870). Both these decisions would affect the nomenclature of plants we are studying in the southern Natal Drakensberg and we have therefore been forced to consider them carefully.

Athrixia pinifolia is a common dwarf streamside shrub at altitudes above 1300m. There is nothing about it at first sight to remind one of *Macowania,* for it has rays that are white above, pink below, whereas all the southern species of *Macowania* have bright yellow rays, only in Ethiopia and Yemen are they pale yellow or whitish. Kroner gives a table of differences between *Athrixia* and *Macowania* and an important one lies in the achenes. Those of *Athrixia* are 3-ribbed or 3–6-angled, those of *Macowania* have about 10 equal ribs. Re-examination of *Athrixia pinifolia* confirms notes and sketches made some years ago: the achene has three slender ribs. It is therefore typical of *Athrixia* on this definition.

There are other characters to be considered. Kroner dismisses ray-colour as unimportant; it may not be a crucial criterion, but it can be a useful warning sign. Leaf-structure cannot be so easily dismissed. The leaf of *Macowania* is always at least slightly grooved below (see *Notes RBG Edinb.* 34:265, fig. 2). In *Athrixia pinifolia,* not only is the margin not revolute, the lower surface is smoothly curved, there is no sign of a groove; this condition is not found in *Macowania.* Kroner realized that

the pappus of *A. pinifolia* consists of delicate bristles with intervening shorter ones or scales: this is the condition in all species of *Athrixia*. He was able to show, however, that similar short intervening bristles or scales also occur in *Macowania*. This observation decreases the distance between the two genera, but it does not, of itself, provide any reason for transferring *A. pinifolia* to *Macowania*.

Athrixia pinifolia is not a species of *Macowania*. In *Athrixia* it certainly seems a little out of place at first sight, but floral details tend to refute this judgment. Certainly it is closer to *Athrixia* than to any other genus, and we have no hesitation in leaving it there at present.

Arrowsmithia is a dwarf shrub with yellow radiate capitula and certainly has a considerable resemblance to *Macowania*, differing at first touch in its short highly pungent leaves. It has hitherto been distinguished on two characters: it was said to have bristles on the receptacle and to lack any pappus. Kroner was perfectly correct in refuting both statements. There certainly is a pappus of distinct bristles. The error has arisen because the pappus is very soon caducous and seems to slip down between the flowers; thus, unless the capitulum dissected is very young, the bristles may seem to have become detached from the receptacle, not from the top of the ovary. But it is necessary to see if there are other differences between *Arrowsmithia* and *Macowania*. We find that there are several:

i. Leaves: ovate in *Arrowsmithia* with five prominent raised veins on the upper surface: linear in *Macowania* with only the midrib visible above, and this depressed.

ii. Involucral bracts with the main veins fading well below the tip in *Arrowsmithia*: midrib persisting to the tip in *Macowania*.

iii. Corolla tube of both ray and disc flowers with long woolly hairs in the upper half in *Arrowsmithia*: corolla tube glabrous or with short glandular hairs in *Macowania*.

iv. Anther-appendage acute in *Arrowsmithia*, blunt in *Macowania*.

v. Achene of female ray flowers with 20 ribs in *Arrowsmithia*: in *Macowania revoluta* (with comparable female rays) 15 ribs; 10 ribs in all other species of *Macowania*.

vi. Ovaries of female-sterile disc flowers of *Arrowsmithia* with 12 ribs: all species of *Macowania* have 10 ribs.

Clearly *Arrowsmithia* is much closer to *Macowania* than was previously thought: but there are significant and workable differences. It is not surprising, therefore, that we reject Kroner's view that they are congeneric, and consider that the transfer of all the species of *Macowania* to *Arrowsmithia*, which this view necessitates, would be wholly unjustified.

405. Macowania deflexa Hilliard & Burtt, **species nova** *M. glandulosae* N. E. Br. affinis sed foliis deflexis haud punctatis, capitulis ramulis foliatis novis mox superatis, pappi setis numerosioribus c.20–25 (nec c.10–12) facile distinguitur.

Frutex ad 75cm alta, 1·5m diam., caulibus veteribus nudis cicatricibus foliorum asperis, junioribus in partibus inferioribus foliis deflexis

emortuis, superne foliis virentibus etiam deflexis, summo foliis novis patentibus albo-tomentosis. *Folia* c.10–15 × 1mm linearia, utrinque primum albo-tomentosa, supra lana mox caduca nitentia papillis minutis praecipue ad margines et apicem ornâta, subtus in sulco persistenter albo-tomentosa, apice acuto mucronato, marginibus revolutis. *Capitula* sessilia, apicibus ramulorum solitaria, mox innovationibus superata. *Involucrum* 11mm longum, bracteis pallide brunneis breviter scabro-pubescentibus, marginibus ad apices paulo laceratis. *Flores* omnes lutei; ei radii feminei, limbo c.7 × 2·5mm; ei disci hermaphroditi corolla 6mm longa. *Achenia* 2·5 × 1mm, cylindrica, 10-costata, villosa. *Pappus* e setis 20–25 scabridis floribus disci aequilongis persistentibus compositus.

Type: Natal, Estcourt distr., Monk's Cowl Forest Station, valley below Ship's Prow Pass, 2100m, 7 xii 1983, *Balkwill, Manning & Meyer* 1038 (NU holo.; E, K, PRE, PRF iso.).

NATAL. Bergville distr., Tugela Gorge, 7000ft, among boulders, ix 1915, *Bews* 327 (E, NU). Estcourt district, Ship's Prow Pass, 7000ft, i 1981 [sterile], *Granger* s.n. (NU); spur SE of Champagne Castle, 2200m, 8 xii 1983, *Balkwill, Manning & Meyer* 1037 (E, NU, PRE).

Seventy years have elapsed since Bews first collected this *Macowania* in what is now Royal Natal National Park (see Hilliard & Burtt in *Notes RBG Edinb.* 34: 272, 1976); when he found it in September it was in young bud. The plant was not seen again until January 1981 when Dr J. E. Granger brought in a sterile specimen from Ship's Prow Pass in Monk's Cowl Forest Reserve. At our instigation, Messrs Balkwill and Manning together with Miss S. Meyer, all of the Department of Botany, University of Natal, camped near Ship's Prow Pass, with the kind co-operation of the Forestry Department, and found the plant for us. They report that it is locally common in the valley below Ship's Prow Pass, on southfacing slopes among *Protea*. In the first week in December, it had nearly finished flowering.

406. Osteospermum attenuatum Hilliard & Burtt, **species nova** *O. grandidentato* DC. affinis sed habitu caespitoso et caulibus ascendentibus (nec subscandentibus nec effusis), et foliis ad basin attenuatis (nec auriculatis nec cordato-amplexicaulibus) differt.

Herba perennis rhizomatosa; caules numerosi, caespites laxos formantes, 15–40 cm longi, subsimplices vel valde ramosi, pilis grossis patentibus saepe glanduliferis parce induti, foliati. *Folia* alterna, usque ad 55 × 10mm, oblanceolata vel anguste elliptica, apice subacuto vel obtuso, basi attenuata, marginibus subintegris vel remote calloso-denticulatis, uti caules parce pilosa. *Pedunculi* terminales et foliis superioribus oppositi, capitulo singulo, c.30–40mm longi, pilis grossis patentibus saepe glanduliferis induti. *Involucri* bracteae 8–12, plus minusve biseriatae, leviter imbricatae, 11 × 2mm, lanceolato-acuminatae, marginibus membranaceis, dorso glanduloso-puberulae insuper pilis aliis grossis patentibus praeditae. *Flores* radii 8, involucrum superantes, tubo c.1mm longo piloso, limbo c.12 × 3–4mm glabro supra luteo subtus brunneo-purpureo vel rubro; flores disci involucro breviores, lutei. *Achenia* c.9·5 × 4mm, cylindrica vel ad basin leviter attenuata, glabra.

Type: Natal, Underberg distr., 2929 CB, upper tributaries S of Mkomazi river (feeders of Ka-Ntuba), 2285m, 1 xii 1982, *Hilliard & Burtt* 15726 (NU holo., E iso).
NATAL. Underberg distr., hill above Endawana river on Coleford road, 21 xi 1973, *Hilliard & Burtt* 7393 (E, K, NU, S). Polela distr., Mawahqua Mountain, farm Glengariff, 1675m, 21 xii 1975, *Rennie* 671 (NU); ibidem, 4 xi 1972, *Rennie* 307 (NU).

Osteospermum attenuatum is a plant of moist grassy places, between c.1675 and 2300m above sea level. In Natal, it is found at higher altitudes than its close ally, *O. grandidentatum,* which ranges from sea level to c.1500m. *O. grandidentatum* is a plant of coarse grassland often mixed with scrub, at the margins of forest patches and amongst rocks. It has a woody caudex (unlike the thin creeping rhizomes of *O. attenuatum*), from which arise long sprawling or subscandent branches in contrast to the tufted, mat-forming shoots of *O. attenuatum.* The specific epithet *attenuatum* draws attention to another significant character, the tapering leaf bases, in contrast to the auriculate or subcordate clasping leaves of *O. grandidentatum.*

The spatial separation of two closely allied species in *Osteospermum* is paralleled in *O. fruticosum* (L.) T. Norl. and *O. caulescens* Harvey; the first found on coastal sand dunes or sandy grassland near the sea, the second in rocky grassland above c.1650m. Like *O. attenuatum* and *O. grandidentatum, O. fruticosum* and *O. caulescens* differ in habit (sprawling versus tufted) and in leaf shape.

407. Senecio dissimulans Hilliard, **species nova** *S. hastato* L. affinis sed foliis crassioribus marginibus subintegris vel serratis (nec herbaceis pinnatifidis vel lobulatis, lobis oblongis vel rotundatis, sinubus rotundatis) distinguitur.

Herba perennis, viscosa, rhizomate usque ad 10mm diam. lignoso; caules floriferi ad c.40cm alti, plures e caudice, decumbentes vel suberecti, inferne simplices, furcati (saepe inferne) in paniculam apertam corymbosam capitulis paucis vel multis, glanduloso-pubescentes, remote foliati. *Folia* radicalia rosulata, saepe rosulis pluribus e caudice, plerumque 70–150 × 3–15mm, oblonga vel oblanceolata, apice subobtuso, basi in partem petiolarem angustata inferne expansa et amplexicauli, marginibus subintegris serrulatis vel serratis, crassa, utrinque glanduloso-pubescentia; folia caulina similia sed basi lata amplexicauli, sursum decrescentia et in bracteas ramos inflorescentiae subtendentes transeuntia. *Capitula* radiata. *Involucrum* campanulatum; bracteae 12–20, 9–13mm longae, pappo aequales, lanceolato-acuminatae, glanduloso-pubescentes; bracteae calyculi paucissimae, minimae. *Flores* radii 8–13, limbo c.12–15 × 2–4mm, lutei, interdum subtus erubescentes; flores disci lutei. *Achenia* c.4·5mm longa, cylindrica, inter costas hispida, pilis valde myxogenis.
Type: Natal–Lesotho border, hill slopes behind escarpment south of Sani Pass, c.3000m, 18 i 1976, *Hilliard & Burtt* 8874 (NU holo.; E, K, MO, S iso.).
ORANGE FREE STATE. Harrismith distr., Qwa-Qwa Mt, above farm Bluegumbosch, c.2000m, 8 i 1979, *Hilliard & Burtt* 11989 (E, NU);

Platberg, Zig-Zag path, 1800–1980m, 14 xii 1976, *Hilliard & Burtt* 9525 (E, K, NU, PRE, S); ibidem, Gibson Dam, c.2225m, 16 i 1972, *Hilliard* 5257 (E, K, NU, S).

NATAL. Without precise locality, Drakensberg, 9500ft, 21 iv 1899, collector unknown (probably Maurice Evans) (NU). Underberg distr., Bushman's Nek, Thamathu Pass, c.2440m, *Hilliard & Burtt* 8920 (E, NU, S).

LESOTHO. Sehlabathebe National Park, c.2425m, 17 ii 1978, *Hoener* 2025 (E, NU). Mokhotlong distr., Sani Top, 2895m, 18 ii 1973, *Hilliard* 5348 (NU); ridge north of mountaineer's chalet, across Sani River, 2895m, 2 i 1974, *Hilliard* 5446 (E, K, NU, PRE); valley west of border post, c.2865m, 16 i 1976, *Hilliard & Burtt* 8809 (E, K, NU); Sani Top, c. 2895m, 7 i 1977, *Hilliard & Burtt* 9640 (E, NU, S).

CAPE. Barkly East distr., Naude's Nek, c.2590m, 28 xi 1971, *Hilliard* 5214 (E, K, NU).

Senecio dissimulans is common on moist grassy mountain slopes on the Drakensberg from Platberg at Harrismith in the north-eastern Orange Free State through Lesotho and Natal to Naude's Nek across the Cape Drakensberg between Maclear and Rhodes. It bears a striking resemblance to the radiate form of *S. hypochoerideus,* which is also common at high altitudes in Natal, Lesotho and the north-eastern Cape, and this resemblance suggested the specific epithet. The leaves of *S. hypochoerideus* are mostly 15–30mm broad, broader than those of *S. dissimulans*; but they are not viscid. A dissecting microscope shows that the hairs in *S. dissimulans* have a relatively large turbinate tip composed of 4 secretory cells, but the tips of the hairs in *S. hypochoerideus* are ellipsoid and are composed of 4 cells that presumably do not secrete viscous matter.

The relationship of *S. dissimulans* probably lies, not with *S. hypochoerideus,* but with *S. hastatus. Senecio hastatus* was described by Linnaeus from a specimen collected at the Cape of Good Hope, and the species ranges north and east across the mountains to Lesotho, the Natal Drakensberg and the north-eastern Orange Free State. The hairs on *S. hastatus* are similar to those of *S. dissimulans,* but the leaves are thinner and at least the radical ones are pinnatifid or lobulate, with rounded sinuses and lobes oblong or rounded in outline, further lobed and toothed. In the Cape, the heads of *S. hastatus* have 8 rays, and about 12 involucral bracts 9–10mm long; in Natal there are 12–13 rays and 14–20 involucral bracts 10–13mm long. Thus, in Natal, the heads of *S. hastatus* are much the same size as those of *S. dissimulans.*

408. Senecio kalingenwae Hilliard & Burtt, **species nova** *S. tugelensi* Wood & Evans affinis sed statim foliis linearibus (nec ellipticis) usque ad 2·25mm (nec 15mm) latis marginibus integris revolutis (nec planis crenulatis serrulatisve) distinguitur.

Herba perennis rhizomatibus tenuibus subterraneis ramosis tubera moniliformia ad 10mm diam. praeditis. *Caules* simplices, solitarii, debiles, 10–250mm longi, lana in axillis foliorum excepta glabri, inferne remote foliati, superne bracteati. *Folia* plerumque 4, interdum 3, glabra, 30–

70 × 1·5–2·5mm, linearia vel anguste lineari-lanceolata, apice acuto, basi angustata amplexicauli, marginibus revolutis compressis costae aequilatis, costa supra immersa subtus elevata, venis lateralibus infra tantum indistincte visis. *Capitula* radiata, plerumque solitaria interdum bina. *Involucrum* turbinatum; bracteae 8–12, 4·5–5·5mm longae ciliis apicalibus paucis exceptis glabrae; bracteae calyculi paucae, parvae, glabrae. *Flores* radii 8–13, c.12 × 1·5mm; flores disci c.4·5–5mm longi; omnes vivide lutei. *Ovaria* 2·5mm longa, glabra; achenia non visa. *Pappus* corollae aequilongus, copiosus, scabridus, albus.
Type: Natal, Underberg distr., 2929 CB, Gxalingenwa valley, between Sani Pass and the upper Polela, c.2000m, 12 xii 1983, *Hilliard & Burtt* 17212 (NU holo.; E, K, PRE, PRF, S iso.).

Senecio kalingenwae is a small herb with weak stems held erect by the grass tufts in which the slender rhizomes are deeply buried, with small tubers at the very base of each tuft. We know the plant from only this one site on the north side of the Gxalingenwa valley, in a steep grassy drainage gully between Cave Sandstone blocks. Here, it was common.

We have rendered the 'Gx' (a palatal click) of the Zulu word Gxalingenwa as a 'k', and the specific epithet should be pronounced with five syllables, thus: ka-li-n-gen-wae.

The discovery of *S. kalingenwae* is of particular interest in providing an ally for *S. tugelensis* Wood & Evans which has till now been rather isolated amongst the Natal species of *Senecio*.

409. Senecio macowanii Hilliard, **nom. et stat. nov.**
Type: Cape, Somerset East div., Boschberg, 4800ft, xii, 1871, *MacOwan* (SAM).
Syn.: *S. prionites* MacOwan var. *laxus* MacOwan in J. Linn. Soc. Bot. 25:389 (1890). Type as above.

Perennial or biennial herb up to c.1m tall, roots cylindric, pilose, stems, leaves and involucral bracts all glandular-pilose, very viscid, flowering stems one or several from the crown, lateral to the radical rosette, simple below the inflorescence branches, densely leafy in lower part, distantly so above. *Radical leaves* erect, rosetted, up to 15 × 4cm, elliptic-lanceolate or oblanceolate, apex obtuse, tapering into a broad, flat, petiole-like base, membranous, margins sometimes shallowly lobed, always callose dentate or serrate, the sinuses sometimes denticulate; cauline leaves similar but soon sessile, becoming smaller, oblong-lanceolate and acute to acuminate upwards, base half-clasping, sometimes auricled. *Heads* discoid, c.4–15 corymbose-paniculately arranged on long sparsely bracteate peduncles, sometimes further compounded. *Involucre* campanulate, bracts c.14, 10–15mm long, about equalling the disc, calyculus bracts few, small. *Flowers* c.45, corolla 8–10mm long, cylindric below, abruptly campanulate above, yellow. *Achenes* 4·5mm long, narrowly cylindric, closely ribbed, white hispid between the ribs. *Pappus* copious, of fine white scabrid hairs.
CAPE. Stockenstrom div., 3226 DA, Katberg Pass, c.5800ft, 26 i 1979, *Hilliard & Burtt* 12392 (E, NU). Maclear distr., 3028 CA, ascent to Naude's Nek, c.8000ft, rocky slopes, very viscid, flower heads yellow, discoid, 19 ii 1971, *Hilliard & Burtt* 6592 (E, NU).

NATAL. Underberg distr., 2929 CC, above Bushman's Nek, vicinity of Tarn Cave, c.8000ft, 21 i 1984, *Hilliard & Burtt* 17469 (E, NU).

MacOwan's species *S. prionites* is conspecific with *S. hypochoerideus* DC. (see Hilliard, *Compositae in Natal* 448, 1977), which has thick-textured, oblong-lanceolate radical leaves that are not clammy to the touch. In contrast the radical leaves of *S. macowanii* are relatively thin, elliptic-oblanceolate in outline, and very viscid. MacOwan himself noted that in his variety of *S. prionites* 'the leaves are almost as glandular as in *S. concolor* DC' [i.e. *S. speciosus* Willd.].

Senecio macowanii has been recorded from a few mountains in the eastern Cape and we have recently found it above Bushman's Nek in Natal, near the Lesotho border at Sehlabathebe. Its ally *S. hypochoerideus* has a much wider range and is relatively common in the mountains from Bruintjeshoogte, near Somerset East, to Lesotho and Natal.

410. Senecio marginalis Hilliard, **species nova** *S. poseideonis* Hilliard & Burtt affinis sed habitu, foliis radicalibus et caulibus pluribus in inflorescentiam compositam tantum ramosis (nec foliis radicalibus absentibus nec caulibus a basi ramosis) et capitulis discoideis (nec plerumque radiatis raro discoideis) distinguitur.

Herba perennis caudice robusto lignoso ad 10mm diam.; caules floriferi ad 1m alti, tenues, debiles, foliati, simplices, superne in inflorescentiam compositam tantum ramosi. *Folia* radicalia rosulata, usque ad 270 × 70mm, ambitu spatulata in partem basalem petiolarem attenuata, lyrato-pinnatifida, lobo apicali rotundato, lobis lateralibus oblongis deorsum decrescentibus, sinubus rotundatis, marginibus leviter lobulatis et dentatis, utrinque parce et subscabride glanduloso-pilosa; folia caulina similia, sed sessilia, auriculato-amplexicaulia, lobis magnis rotundatis, sursum decrescentia ad oblongo-lanceolata et late cordato-amplexicaulia. *Capitula* discoidea, pauca vel multa in paniculam magnam apertam corymbosam ramis plus minusve divaricatis disposita. *Involucrum* turbinato-campanulatum; bracteae c.8–12, 6–7mm longae, glanduloso-pilosae; bracteae calyculi 2 vel 3, minimae. *Flores* purpurei. *Achenia* 3mm longa, inter costas albo-pilosa.

Type: Natal, Bergville distr., Royal Natal National Park, Tugela gorge, c.1800m, 23 iii 1981, *Hilliard & Burtt* 14447 (NU holo.; E, K, M, PRE, S iso.).

NATAL. Polela distr., Mawahqua Mountain, 5 ix 1892, *Wood* 4625 (K, NH); ibidem, farm Sunset, 5200ft, 5 i 1974, *Rennie* 472 (E, NU); ibidem, radical leaves only, 3 i 1975, *Hilliard & Burtt* 7586 (E, NU); farm Glengariff, 6000ft, 18 i 1974, *Rennie* 529 (E, NU). Mpendhle distr., 2929 BC, Mulangane ridge, above Carter's Nek, 7000–7300ft, in old Leucosidea wood, 1 xii 1983, *Hilliard & Burtt* 16955 (E, NU); ibidem, 4 ii 1984, *Hilliard & Burtt* 17575 (E, NU).

Medley Wood first collected this species on Mawahqua Mountain nearly one hundred years ago, and Mrs Rennie kindly sought it there for us in 1974. It is enumerated as *Senecio* sp. 39 in Hilliard, *Compositae in Natal* 436, 1977, but we hesitated to name it until more was known of its

distribution. We have now found it on Mulangane ridge, which lies above Carter's Nek between the Nzinga and Loteni rivers, and in the gorge of the Tugela river, about 145km to the north west of Mawahqua. *Senecio marginalis* is found in scrubby growth on the margins of forest patches (which suggested the trivial name). It may be biennial; initially there is a tuft of radical leaves and presumably only in the second season of growth are the flowering stems produced. These are subsimple, thin and weak, and may be supported by other vegetation. In contrast, its ally, *S. poseideonis* is erect, well-branched from the base, and without radical leaves.

411. Senecio parascitus Hilliard, **species nova** *S. scito* Hutch. & Burtt Davy affinis sed bracteis involucralibus 6·5–9mm longis differt.

Herba perennis, summo caudice lanato et lana in axillis foliorum occulta (lana raro absente) excepta glabra; caules floriferi e caudice 1 vel plures, ad 60cm alti, infra inflorescentiam compositam simplices, in dimidio inferiore foliati, superne bracteati. *Folia* 3–8, in parte caulis inferiore conferta, coriacea, abrupte in bracteas distantes transeuntia, plerumque 80–170 × 15–35mm, summa et infima paulo minora, 4–8-plo latitudine longiora, lanceolata vel elliptica, apice subacuto vel breviter acuminato, basi cordato-amplexicauli breviter decurrente, marginibus paulo incrassatis integris vel minute et distanter calloso-denticulatis, nervis lateralibus paucis indistinctis. *Capitula* radiata, 3–15 in pedunculis longis paniculam corymbosam formantia. *Involucrum* turbinato-campanulatum, bracteae 8–13, 6·5–9mm longae, floribus disci breviores; bracteae calyculi 1 vel 2, minimae. *Flores* radii plerumque 8, limbo c.9–11mm longo, ut ei disci vivide lutei. *Achenia* 3·5–5mm glabra.

Type: Natal, Mpendhle distr., 2929 BC, Highmoor Forest Reserve, ridge SE of Giant's Castle, headwaters of Elandshoek river, 2400–2470m, 5 i 1983, *Hilliard & Burtt* 16201 (NU holo.; E, K, PRE, PRF, S iso.).

NATAL. Bergville distr., Castle Buttress area, 2925m, *Killick* 1878 (PRE). 2929 BC, Mpendhle distr., Highmoor Forest Reserve, spur running E from Giant's Castle, c.2440m, 26 xii 1968, *Hilliard & Burtt* 5684 (E, NU). Underberg distr., 2929 CB, Gxalingenwa valley, 2250m, 11 xii 1983, *Hilliard & Burtt* 17192 (E, NU); 5–7 miles NNW of Castle View Farm, headwaters of Mlahlangubo river, 2440–2590m, 23 i 1982, *Hilliard & Burtt* 15322 (E, K, M, NU, PRE, S); Cobham Forest Reserve, Lakes Cave area, c.2380m, 12 xii 1982, *Manning, Hilliard & Burtt* 15933 (E, NU, PRE, PRF); 2929 CC, vicinity of Tarn Cave above Bushman's Nek, below The Devil's Knuckles, S side, c.2440m, 23 xi 1983, *Hilliard & Burtt* 16890 (E, NU).

LESOTHO. Summit plateau of the Drakensberg, vicinity of Giant's Castle Pass, c.3000m, 17 i 1971, *Wright* 1153 (E, K, NH, NU, PRE); Sani Top, ridge north of mountaineer's chalet, 2900m, 2 i 1974, *Hilliard* 5445 (E, NU); Sehlabathebe National Park, c.2425m, 28 xi 1977, *Hoener* 1874 (NU).

Senecio parascitus is part of a taxonomically difficult group of species that includes *S. bupleuroides* DC. and *S. glaberrimus* DC. *Senecio glaberrimus* is relatively easily distinguished by its leaves being 2·5–4 times as long as

broad, not mostly at least 4 times. The name *S. scitus* was given to a plant differing from *S. bupleuroides* (and *S. glaberrimus*) in its larger heads, reflected in more involucral bracts and more rays. The type of the name came from Lydenburg in the mountains of the eastern Transvaal, and similar plants are relatively widely distributed from the Transvaal to Transkei between c.1300 and 2200m above sea level. *Senecio bupleuroides* has a similar geographical range, but at lower altitudes, and reaches the eastern Cape. The plant here described as *S. parascitus* was enumerated as *Senecio* sp. 100 in Hilliard, *Compositae in Natal* 483, 1977. It grows at even higher altitudes than *S. scitus,* but they overlap in distribution at about 2000m in the Natal Drakensberg. The epithet indicates their close relationship. *Senecio parascitus* is easily distinguished from *S. scitus,* not only by its longer involucral bracts but also by its often more tufted habit and more leathery leaves with indistinct venation.

412. Senecio villifructus Hilliard, **species nova** *S. glaberrimo* DC. affinis, sed lamina foliorum in partem petiolarem attenuata (nec cordato-amplexicauli) et ovariis acheniisque villosis (nec glabris) facile distinguitur.

Herba perennis, caudice lignoso vertice lanato; caules floriferi plerumque solitarii, c.30–40mm alti, infra ramos inflorescentiae simplices, lana in axillis foliorum occulta excepta glabri. *Folia* c.3–6 basi caulis conferta, coriacea, in siccitate dura et rigida, plerumque 80–112 × 30–50mm, obovata, apice abrupte contracto acutissimo mucronato, basi petiolari semi-amplexicauli angustata, marginibus incrassatis obscure et distanter calloso-denticulatis, venatione grosse reticulata utrinque prominente. *Capitula* radiata 2–20, corymboso-paniculata, pedunculis longis parce et minute bracteatis. *Involucrum* turbinatum; bracteae c.12, c.6mm longae, floribus disci multo breviores, latae, coriaceae, nervis resinosis; bracteae calyculi vel absentes vel 1–2 minimae. *Flores* radii 8–10, limbo c.8 × 3mm ut ei disci vivide lutei. *Achenia* 4mm longa, cupiformia, costata, villosa.

Type: Natal, Ngotshe distr., Louwsburg, Itala Nature Reserve, c.1370m, 10 xii 1975, *Hilliard & Burtt* 8530 (NU holo.; E, K, M, PRE, S iso.).

Senecio villifructus is known only from Itala Nature Reserve near Louwsburg in northern Natal. It was plentiful in stony grassland sloping down to the sandstone cliffs near the western border of the reserve. It is clearly allied to *S. glaberrimus* (represented by two forms at Itala) as well as *S. scitus* Hutch. & Burtt Davy and *S. venosus* Harvey, all of which are locally common in the reserve. All these species have glabrous ovaries and fruits; *S. villifructus* is strikingly different in its villous ovaries and fruits, which prompted the specific epithet. It also differs from all three species in that its leaves taper to a distinct petiolar part. (See Hilliard, *Compositae in Natal* 639, 1977).

413. Vernonia flanaganii (E. P. Phillips) Hilliard **comb. et stat. nov.**

Lectotype (chosen here): O.F.S.–Natal Border, Elands River valley near Mont aux Sources, 1890m, *Flanagan* 1947 (SAM).

Syn.: *V. hirsuta* (DC.) Sch. Bip. var. *flanaganii* E. P. Phill. in Ann. S. Afr. Mus. 16:116 (1917).

NATAL. Bergville distr., Bezuidenhout Pass, c.1735m, 10 xii 1975, *Hilliard & Burtt* 9458 (E, K, MO, NU, S); Royal Natal National Park, path to Witzieshoek Gate, c.2100m, 28 xii 1975, *Hilliard & Burtt* 8673 (E, K, NU). Mpendhle distr., Loteni Nature Reserve, c.1800m, 24 xii 1978, *Hilliard & Burtt* 11826 (E, NU). Polela distr., Mawahqua Mt, Sunset Farm, 10 xi 1973, *Hilliard & Burtt* 7160 (E, K, NU, PRE, S). Underberg distr., Sani Pass foothills, 1675m, 24 xi 1973, *Hilliard & Burtt* 7474 (E, K, NU).

Vernonia flanaganii is amply distinct from *V. hirsuta* by its leaves, tapered below into a short petiole (not ±cordate-clasping), by its larger heads c.10mm in diam. (not c.5–8mm), and lanceolate involucral bracts gradually narrowed to the apex and equalling the pappus (not oblong-elliptic, abruptly contracted to the mucronate tip, about half as long as or nearly equalling the pappus).

Vernonia flanaganii has been recorded along the Drakensberg from Van Reenen in Klip River district to Mawahqua Mountain, which lies in Polela district, southern Natal. It grows in moist places, particularly bushy drainage lines, between c.1525 and 2000m. In the Drakensberg, it is often sympatric with *V. hirsuta,* which is always on drier sites than *V. flanaganii*; *V. hirsuta* is widely distributed, from Angola and the eastern highlands of Zimbabwe to the eastern Cape, from sea level to about 1980m.

414–418. Erica L.; Guthrie & Bolus in Thiselton-Dyer, Fl. Cap. 4(1):4–315 (1905).

Erica in the Natal Drakensberg has suffered from taxonomic neglect and we have for long been collecting material for which we have been unable to find names. Four new species from the Drakensberg are now described, together with a fifth from northern Natal.

Two of the new species, *E. anomala* and *E. caespitosa,* are on the borderline between *Erica* and *Philippia.* The problem of how this boundary (if it exists) may be defined is being studied by Mr E. G. H. Oliver and we wish to express our gratitude to him for his comments on our specimens and on the generic position as it stands at present; but we say this without in any way committing him to approval of what we have done.

In the great majority of the species of *Erica* there are three structures on the pedicel; the lowest one, which is placed abaxially, is best referred to as the bract and the two placed above it and at a right-angle on either side are bracteoles. All these are referred to as bracts in the account by Bolus & Guthrie in *Flora Capensis.* The flower has four equal calyx segments. Occasionally bracteoles and, rarely, the bract as well are missing. In *Philippia* there is normally a calyx of three equal segments and a larger member distinctly, but very closely, below it; this is apparently the bract, which has moved very close to the calyx and replaces the fourth segment. There are no bracteoles.

When Klotzsch first proposed the genus *Philippia* (in *Linnaea* 9:354, 1835) he appreciated that the fourth 'calyx segment' was inserted below the others; the position was clearly explained by Alm & T. C. E. Fries in

their revision of *Philippia* (in *Kungl. Svensk Vetenskap. Handl.* ser. 3, 4(4):6–9, 1927), although these authors regarded the bract as fusing with the fourth calyx segment, rather than replacing it. Alm & Fries also recorded the occasional occurrence of ericoid flowers in *P. jaegeri* Engl. (loc. cit. p. 36).

The material here described as *Erica caespitosa* raises the problem in an acute form. Mr Oliver has pointed out to us that *E. caespitosa* is very probably the same as *Philippia tristis* Bolus, a species represented only by the type from the Koudeveldberg, Graaff Reinet div., where Mr Oliver himself has sought it in vain. The difference is that in Bolus's material most of the flowers are philippioid: in the Drakensberg specimens most of the flowers are ericoid, the four sepals are more or less equal in size and a bract is often, but not always, present on the pedicel. However in *Philippia tristis* ericoid flowers can be found, as indeed they can in the common Drakensberg *Philippia, P. evansii* N.E.Br. Equally, *E. caespitosa* bears some philippioid flowers; that is to say there are only three sepals and the fourth is replaced by the bract which is placed very close to, but just outside, the calyx. The lateral coherence of the anthers found in *Erica caespitosa* is a character that is common in *Philippia,* rare in *Erica.* The close relationship of *E. caespitosa* to *Philippia* is not in doubt.

Neverthless, since the Drakensberg plant shows a preponderance of ericoid flowers, it will be sought in *Erica,* and it would not be satisfactory simply to call it *Philippia tristis.* On the other hand, the epithet *tristis* cannot be transferred to *Erica,* as there is already *Erica tristis* Bartl. Therefore we have decided to describe the Drakensberg plant as *E. caespitosa.*

In the case of *Erica anomala* there is no equivalent name in *Philippia* to complicate the issue, but the irregular bract and bracteole arrangements, and the laterally coherent anthers, are features that point towards *Philippia.* In *Erica dissimulans* there is usually only a single bract on the pedicel, so this too deviates from the typical *Erica* pattern in the direction of *Philippia.* Other species in this borderline zone have been in the literature for many years and include *E. ebracteata* Bolus and *E. alticola* Bolus.

It is clear that there is a group of species in *Erica* sect. *Arsace* that interlock very closely with the South African species of *Philippia.* Were only these few species involved, the reduction of *Philippia* to *Erica* would clearly be the best course. But *Philippia* is a large genus in tropical Africa, Madagascar and the Mascarene islands and its disappearance would give rise to a major nomenclatural upset. The union of these two genera, though it seems to us inevitable, is not a step to be taken without a wide-ranging study, which we are happy to leave in Mr Oliver's hands.

414. Erica (sect. *Apoecus*) **albospicata** Hilliard & Burtt, **species nova** *E. caffrorum* Bolus affinis sed marginibus et foliorum et bractearum et calycis loborum glandulis caducis praeditis (nec ciliatis, ciliis foliorum exceptis persistentibus) differt.

Suffrutex caespitosus, caudice robusto lignoso; caules usque ad 15–25cm erecti, simplices vel parce ramosi, puberuli. *Folia* 3- vel 4-nata,

erecta vel patentia, congesta, plerumque 4–9 × 0·75(–1)mm, linearia, obtusa, supra plus minusve plana, subtus convexa sulcata, marginibus glandulis parvis caducis praeditis; petiolus c.1mm longus. *Flores* plerumque 3, raro plures, ramulos breves laterales terminantes, ramulis pseudoracemum densum foliatum formantibus; pedicelli c.1–1·5mm, puberuli; bractea et bracteolae duae plerumque adsentes, c.2 × 0·5mm, lineari-lanceolatae, in dimidio superiore abaxiali carinatae, glabrae, marginibus glandulosis. *Calyx* fere ad basin divisus; lobi 4, c.3·5–4·5 × 1·25–1·75mm, lanceolati, in dimidio superiore abaxiali carinati, glabri, albi, marginibus glandulosis. *Corolla* 4–4·5mm longa; lobi c.3 × 1·25–1·5mm, oblongo-lanceolati, obtusi, erecti, apicibus demum leviter recurvati, albi, glabri. *Stamina* 8; filamenta c.2mm longa, filiformia, sub antheris abrupte curvata; antherae inclusae, thecis c.0·75mm longis, basi rotundatis, poro dimidium thecae aequante, calcaribus trientem thecae aequantibus scabridulis. *Ovarium* c.1mm longum, glabrum; stylus c.1·5mm longus; stigma stylo vix latius.

Type: Natal, Underberg distr., 2929 CB, Cobham Forest Reserve, Upper Polela Cave, c.7000ft, 30 xi 1976, *Hilliard & Burtt* 9260 (NU holo.; E, K, PRE iso.).

NATAL. Bergville distr., Cathedral Peak, 7000ft, July 1954 [spent], *Esterhuysen* 23010 (BOL, K). Estcourt distr., Cathkin, Injasuti area, *Esterhuysen* 29088 (BOL); Giant's Castle Game Reserve, Bannerman area, 8000ft, 28 xi 1965, *Trauseld* 479 (NU). Mpendhle distr., foot of Hlatimba Pass, c.7500ft, 2 xii 1972, *Wright* 1322 (NU). Underberg distr., Sani Pass, 7000ft, 26 i 1966 [spent], *Killick & Vahrmeijer* 3818 (K); Garden Castle Forest Reserve, Pillar Cave Valley, c.6500ft, 4 xi 1977, *Hilliard & Burtt* 10396 (E, K, NU, PRE); ibidem, upper waters of Umzimkulu river, 3 xi 1973, *Hilliard & Burtt* 7034 (E, NU); 5–7 miles NNW of Castle View farm, headwaters of Mlahlangubo river, c.7800ft, 27 xi 1980, *Hilliard & Burtt* 13728 (E, NU, PRE); Bamboo Mountain, c.6000ft, 19 vi 1971, *Hilliard* 5108 (E, NU); Bushman's Nek, Thamathu Pass, 7500–8100ft, 23 xi 1973, *Hilliard & Burtt* 7457 (E, NU, STE); Bushman's Nek, 6850ft, 2 xi 1962, *Hilliard* 907 (NU); vicinity of Tarn Cave above Bushman's Nek, c.7600ft, 22 xi 1983, *Hilliard & Burtt* 16873 (E, NU).

LESOTHO. Sehlabathebe, *Hoener* 1890 (BOL).

Erica albospicata has been recorded only along the face of the Drakensberg from Cathedral Peak Forest Reserve to Bushman's Nek Forest Reserve in southernmost Natal and nearby Sehlabathebe in Lesotho, between 1800 and 2700m above sea level. It flowers mainly in November and December. The plants grow scattered on steep rocky grass slopes, but are often locally common. Usually, tufts of simple or subsimple stems are produced from a stout caudex, but near the top of Mashai Pass, in Garden Castle Forest Reserve, we found a small well-branched shrub hanging from turf above outcropping rocks. Apart from its habit, it is distinguished from the grassland plant by its shorter leaves (mostly c.3mm long) and flowers not arranged in dense pseudoracemes, but terminating short lateral branchlets. We conclude that it is no more than a plant of *E. albospicata* that has been protected from fire (Underberg distr., 2929 CA, near top of Mashai Pass, c.9000ft, 7 xi 1977,

Hilliard & Burtt 10477, E, K, NU, PRE, S). Its ally, *E. caffrorum* Bolus, usually forms a well branched shrub, either free-standing or pressed against rocks, but occasionally it will produce simple or subsimple stems from a caudex when growing among rocks.

415. Erica (sect. *Arsace*) **anomala** Hilliard & Burtt, **species nova** *E. caespitosae* Hilliard & Burtt (vide infra) affinis, sed foliis late patentibus (nec pro maxima parte erectis) plerumque 2·5–5mm longis (nec 1·5–3mm), marginibus glandulosis (nec ciliatis) et glomerulis florum in pseudospicas oblongas aggregatis differt.

Frutex ad 1·5m alta, ramulis pubescentibus. *Folia* plerumque 3-nata interdum 4-nata, patentia, aggregata, plerumque 2·5–5 × 0·5–0·75mm, linearia, obtusa, supra plana, subtus convexa sulcata, marginibus glandulis parvis caducis praedita; petiolus c.0·75–1mm longus. *Flores* in glomerulos parvos plerumque trifloros in ramulis terminales dispositi, ramulis in pseudospicas oblongas aggregatis; pedicelli usque ad 1·5mm longi, puberuli, bractea varie (interdum proxime sub calyce) posita, bracteolis absentibus. *Calyx* fere ad basin divisus, lobis plerumque 4 interdum uno redacto vel raro 3 tantum quarto ut videtur bractea valde approximata sepalina substituto, c.1 × 1mm rhomboideis, marginibus glandulosis. *Corolla* c.1·5 × 1·25mm, cyathiformis, alba mox brunnescens, glabra, lobis 0·75 × 1mm deltoideis erectis vel apicibus paulo recurvatis. *Stamina* 8, filamentis c.0·5mm longis filiformibus fere rectis; antherae inter se lateraliter cohaerentes, inclusae sed demum capsula maturescente extrusae, thecis 0·5mm longis, poro dimidio thecae aequali, basi rotundata mutica. *Ovarium* c.0·75mm longum, glabrum. *Stylus* c.0·5mm longus; stigma maximum c.0·75–1mm diam., peltatum vel cyathiforme, intense roseum, capsula maturescente demum valde exsertum.

Type: Natal, Underberg distr., 2929 CB, Garden Castle Forest Reserve, stream valley beyond Forester's house, c.6400ft, 11 xi 1980, *Hilliard & Burtt* 13433 (NU holo.; E, PRE iso.).

NATAL. Mpendhle distr., 2929 BC, Ntabanyama, 'Storm Heights', c.7000ft, 15 xii 1978, *Hilliard & Burtt* 11754 (E, NU); Mulangane ridge, above Carter's Nek, 7000–7300ft, 5 ii 1984, *Hilliard & Burtt* 17599 (E, NU). Underberg distr., 2929 CB, Cobham Forest Reserve, Upper Polela Cave area, c.7000ft, 23 xi 1976, *Hilliard & Burtt* 9340 (E, K, MO, NU, PRE); 2929 CA, Garden Castle Forest Reserve, ridge above Pillar Cave, 6700ft, 8 xi 1977, *Hilliard & Burtt* 10513 (E, NU); ibidem, Sleeping Beauty cave valley, c.6200ft, 3 xi 1981, *Hilliard* 8166 (E, NU).

Erica anomala has been recorded only from the southern part of the Natal Drakensberg, from the big spur running south east from Giant's Castle to Ntabanyama, just north of the upper reaches of the Inzinga river, south to Garden Castle Forest Reserve on the upper waters of the Umzimkulu river, between c.1900 and 2150m above sea level, on the Cave Sandstone. It grows among rocks in stream gullies, on damp cliffs and rubble banks above streams, and sometimes in rock crevices near damp overhangs, either erect or pendulous. The flowers, which appear in October and November, have white corollas, which soon fade to brown,

and large dark red stigmas that protrude from the persistent corollas as the capsules enlarge.

Erica anomala is clearly allied to *E. caespitosa,* which may be found growing in the same area, but its spreading leaves and the aggregation of the glomerules of flowers into a pseudospike give it a different facies. The leaves are also larger and have marginal glands, not cilia. Florally the most striking difference in older specimens is the way the anthers are held together and are pushed up by the developing capsule so that they might seem to be exserted, but by the time this position is reached the filaments have been ruptured.

The irregularities in the pattern of bract and calyx, compared with the usual condition in *Erica,* suggested the specific epithet. It is, however, distinctive of the group tending towards *Philippia,* including *E. caespitosa* and *E. ebracteata,* rather than of the one species now described. The general position has been discussed under the generic heading above.

416. Erica (sect. *Pyronium*) **austroverna** Hilliard, **species nova** *E. drakensbergensi* Guthrie & Bolus affinis sed pilis grossis dendroideis in caulibus foliisque (nec pilis tenuibus simplicibus cum perpaucis dendroideis in caulibus intermixtis), calycis lobis deltoideis longitudine aequilatis (nec lineari-lanceolatis duplo longioribus quam latis), antherae thecis breviter mucronatis (nec mucrone thecam aequante), ovario superne ciliato (nec glabro) differt.

Frutex ad 1m alta, ramulis puberulis et insuper pilis grossis dendroideis praeditis. *Folia* 3–4-nata, erecta vel patentia, congesta, plerumque 2·5–6 × 0·5–1mm, lineari-lanceolata, subacuta, marginibus valde revolutis pilis dendroideis (saepe supra basin robustam effractis) parce induta; petiolus usque 1mm longus. *Flores* in axillis foliorum superiorum solitarii, ramulis itaque ad apices magnopere floriferis; pedicelli 4–5mm longi, puberuli et saepe pilis grossis dendroideis adjectis; bracteae plerumque 2, interdum 3, in parte pedicelli superiore subapproximatae, 0·75mm longae, filiformes. *Calyx* fere ad basin divisus; lobi c.0·75 × 0·75mm, deltoidei, marginibus fimbriatis. *Corolla* c.2·75 × 2·5mm, cyathiformis, 'roseo-rubra' (Johnstone) vel 'pallide lilacina' (Devenish), glabra; lobi c.0·75 × 1·5mm, rotundati, erecti. *Stamina* 8; filamenta c.2mm longa, filiformia, sub antheris abrupte curvatis; antherae inclusae, c.0·75mm longae, poro dimidium thecae aequante, basi rotundatae, mucronatae. *Ovarium* c.1·5mm longum, intra discum stipitatum, superne puberulum; stylus c.2mm longus; stigma parvum, capitatum, bene exsertum.

Type: Natal, Vryheid distr., Hlobane, 10 ix 1950, *Johnstone* 433 (NU holo, E iso).

NATAL. Vryheid distr., Hlobane, 13 viii 1950, *Johnstone* 425 (E, NU). Utrecht distr., Kaffir Drift, 1922–1923, *Thode* A 237 (K); farm Naauwhoek, 6000ft, 14 xi 1962, *Devenish* 888 (K).

SWAZILAND. Mbabane distr., upper Mbabane river and Lake Adelaide, 4000ft, 15 ix 1960, *Dlamini* s.n. (K).

This pretty shrub grows along streambanks, and produces masses of pink or mauve flowers in spring, which in itself justifies the trivial name; but also the name Hlobane, the mountain whence came the type material,

derives from the Zulu for 'the mountain adorned with fineries', that is, the green grass of spring, the southern spring, September.

Erica austroverna is allied to *E. drakensbergensis,* and it is interesting to note that Mr Johnstone also collected this species at Hlobane, near the banks of the Mlangeni river, in January 1950 (*Johnstone* 302, NU).

417. Erica (sect. *Arsace*) **caespitosa** Hilliard & Burtt, **species nova** *E. leucopeltae* Tausch affinis sed foliis supra planis marginibus acute angulatis (nec supra paulo convexis marginibus obtusis), et corolla et calyce glabris (nec pubescentibus) differt.

Fruticulus; caules primarii saepe caespitosi, plerumque 15–45cm alti, bene ramosi, ramulis pubescentibus. *Folia* plerumque ternata, interdum plus minusve dispersa, congesta, erecta vel longiora paulo patentia, 1·5–3 × 0·5mm, linearia subacuta, supra plana, subtus convexa sulcata, marginibus acute angulatis ciliatis cetera glabra; petiolus usque ad 0·5mm longus. *Flores* in glomerulos parvos saepe trifloros terminales dispositi; pedicellus c.1–2mm longus, puberulus; bractea aut absens aut sepalis similis proxime sub calyce posita; bracteolae absentes. *Calyx* ultra medium divisus; lobi plerumque 4, interdum unus redactus vel absens, c.1 × 1mm, rhomboidei, marginibus plus minusve ciliatis. *Corolla* 1·5 × 1·5mm, cyathiformis, viridula vel albida mox brunnescens, glabra, lobis 0·75 × 1mm deltoideis paulo incurvis. *Stamina* 8; filamenta c.0·5mm longa, filiformia, fere recta; antherae inclusae, inter se leviter lateraliter cohaerentes, c. 0·75mm longae, basi rotundata mutica poro circiter dimidium thecae aequante. *Ovarium* c.0·75mm longum, glabrum; stylus 0·25–0·5mm longus, tantum post ovarium auctum exsertus; stigma maximum, c.0·75mm diam., peltatum vel cyathiforme.

Type: Natal, Underberg distr., 2929 CA, Garden Castle Forest Reserve, Pillar Cave valley, c.6500ft, 4 xi 1977, *Hilliard & Burtt* 10397 (NU holo; E, K, MO, PRE, S iso).

ORANGE FREE STATE. Harrismith distr., 2828 DB, Qwa Qwa Mountain, above 'Bluegumbosch', c.6300ft, 8 i 1979, *Hilliard & Burtt* 11973 (E, NU); 2829 AC, Manyanyeza Mountain, 5 i 1979, *Hilliard & Burtt* 11945 (E, NU); Platberg, SW face, 7 i 1979, *Hilliard & Burtt* 11968 (E, NU).

NATAL. Bergville distr., 2828 DB, Royal Natal National Park, Tugela gorge pathway, c.5500ft, 2 ii 1982, *Hilliard & Burtt* 15389 (E, NU). Estcourt distr., 2929 BC, Highmoor, 1905m, 15 x 1977, *Ruddock* 55 (NU). Underberg distr., 2929 CB, Cobham Forest Reserve, Gxalingenwa valley, between Sani Pass and Polela valley, c.1920m, 10 xii 1983, *Hilliard & Burtt* 17142 (E, NU); Upper Polela Cave, c.7200ft, 23 xi 1976, *Hilliard & Burtt* 9339 (E, K, NU, PRE); ibidem, Ndlovini, Troutbeck, c.6000ft, 9 xi 1980, *Hilliard & Burtt* 13378 (E, NU, PRE); 5–7 miles NNW Castle View Farm, headwaters of Mlahlangubo river, c.7200ft, 26 xi 1980, *Hilliard & Burtt* 13691 (E, NU); Garden Castle Forest Reserve, stream valley beyond Forester's house, c.6400ft, 11 xi 1980, *Hilliard & Burtt* 13440 (E, NU); ibidem, upper waters of Umzimkulu river, 4 xi 1973, *Hilliard & Burtt* 7064 (E, K, NU, PRE, STE); 2929 CC, Bushman's Nek, Ngwangwe valley, 5200 ft, 14 i 1969, *Killick & Vahrmeijer* 3939 (K).

TRANSKEI. Baziya Mt, 3128 CB, c.4700ft, 10 ii 1981, *Hilliard & Burtt*

13891 (E, K, NU, PRE); near Engcobo, Gulandoda, 5000ft, 10 x 1961, *Esterhuysen* 29215 (K).
E CAPE. Somerset East, 3225 DA, Boschberg, 24 x 1980, *Hilliard & Burtt* 13222 (E, NU, PRE); 3225 DB Kagaberg, 5000ft, *Weale* in herb. MacOwan 1344 (K).
LESOTHO. Mafeteng distr., Ribaning, 20 x 1946, *Esterhuysen* 13202 (K).

Erica caespitosa is common around Cave Sandstone rocks on grass slopes in the Natal Drakensberg, and ranges south as far as Boschberg at Somerset East, and north to the Cave Sandstone mountain blocks in the NE Orange Free State; it has also been recorded in Lesotho. It is a dwarf shrub that regenerates freely from a woody stock after fire, and the resultant tufted habit suggested the specific epithet.

The specimens collected by Miss Esterhuysen and by Killick & Vahrmeijer were misnamed *E. leucopelta,* which differs from *E. caespitosa* in leaf form and indumentum as well as in its hispid calyx and corolla (*Baur* 517, K, type of *E. leucopelta* var. *pubescens* Bolus, has some corollas glabrous, some hispid, but the material is old). The specimen at Kew collected by Weale on Kagaberg and cited by Bolus (in Thiselton-Dyer, *Fl. Cap.* 4(1):215, 1909) as *E. maesta* Bolus proves to be *E. caespitosa*; Mr Oliver informs us that the Weale specimen in the Bolus herbarium is true *E. maesta.* The relationship to *Philippia tristis* Bolus is discussed above under the generic heading.

418. Erica (sect. *Arsace*) **dissimulans** Hilliard & Burtt, **species nova** *E. dominanti* Killick affinis sed foliis plerumque 3–7 × 0·5–0·75mm (nec 1·5–3·5 × 0·75–1mm), marginibus glandulis caducis (nec pilis grossis saepe dendroideis), calyce 1mm vix longiore (nec plerumque 1·25–2·25mm), stylo 1mm vix longiore (nec plerumque 1·5–2·25mm) recedit.

Frutex usque ad 1·2m alta, ramulis pubescentibus. *Folia* ternata, demum patentia, aggregata, plerumque 3–7 × 0·5–0·75mm, interdum prope flores breviora, linearia, apice acuto, supra plana, subtus convexa et sulcata, marginibus glandulis globosis vel elongatis saepe caducis praeditis; petiolus 1–1·5mm longus. *Flores* in glomerulos parvos terminales dispositi; pedicelli c.1·5–2·5mm longi, pubescentes; bractea in medio pedicello vel supra, linearis, c.1·5mm longa, bracteolis plerumque absentibus. *Calyx* fere ad basin divisus; lobi c.1 × 0·75–1mm, rhomboidei, marginibus ciliatis. *Corolla* c.2 × 1·5mm, cyathiformis, obscure rubra, mox brunnescens, glabra; lobi c.0·75 × 1mm, deltoidei, erecti vel leviter recurvi. *Stamina* 8; filamenta c.0·5mm longa, filiformia, recta vel leviter flexa; antherae inclusae, c.1mm longae, basi rotundata mutica, poro dimidium thecae aequante. *Ovarium* c.0·5mm longum, glabrum; stylus 1mm vix excedens; stigma peltatum, c.0·75mm diam., capsula matura bene exsertum.
Type: Natal, Underberg distr., 2929 CB, 5–7 miles NNW of Castle View Farm, headwaters of Mlahlangubo river, 7600ft, 23 xi 1980, *Hilliard & Burtt* 13554 (NU holo, E iso).
NATAL. Bergville distr., Cleft Peak area, 8000ft, July 1944, *Esterhuysen* 10195 (E, K, NU). Mpendhle distr., 2929 BC, farm 'Redruth', source of Inzinga river, above waterfall, 7000ft, 15 viii 1977, *Wright* 2450 (E, NU).

Underberg distr., 2929 CB, Sani Pass, c.8000ft, 6 i 1977, *Hilliard & Burtt* 9624 (E, K, NU, PRE); ibidem, 21 iii 1977, *Hilliard & Burtt* 9737 (E, NU); 5–7 miles NNW of Castle View Farm, headwaters of Mlahlangubo river, 8000ft, 20 i 1982, *Hilliard & Burtt* 15240 (E, NU); ibidem, 6400ft, 19 i 1982, *Hilliard & Burtt* 15190 (E, NU); Cobham Forest Reserve, Upper Polela Cave area, c.8000ft, 21 xi 1976, *Hilliard & Burtt* 9305 (E, K, NU, PRE); Bamboo Mountain, Sept. 1973, *Grice* s.n. (NU); 2929 CC, vicinity of Tarn Cave, above Bushman's Nek, c.8100ft, 23 xi 1983, *Hilliard & Burtt* 16893 (E, NU), 16902 (E, NU).
E CAPE. Barkly East distr., 3027 DA, Witteberg, farm 'Beddgelert', c.7000ft, 16 x 1980, *Hilliard & Burtt* 13167 (E, NU, PRE); ibidem, c.6200ft, 2 xii 1981, *Hilliard & Burtt* 14645 (E, NU); Ben Mcdhui, Bell River gorge, c.8000ft, 7 iii 1983, *Hilliard & Burtt* 16532 (E, NU).
LESOTHO. Maseru distr., Blue Mountain Pass, 8600ft, 15 v 1973, *Phillips* s.n. (NU).

Erica dissimulans grows in rocky stream gullies, near the water, and on cliff faces wet from falling or trickling water, from about 1825–2440m in the Drakensberg, and a little higher in Lesotho. It begins flowering in winter and spring (July, August) but the corollas persist around the ripe capsules well into March. It is closely allied to *E. dominans*, with which it is at least partially sympatric, but, along the face of the Drakensberg, *E. dominans* may be found on Cave Sandstone platforms and rocky grass slopes, as well as in stream gullies, to which *E. dissimulans* is confined. Typical *E. dominans* from the summit plateau has leaves mostly 2–3mm long and between 0·75 and 1mm broad; these are erect and closely appressed; but along the face of the escarpment, not only do the plants grow taller, and bear slightly larger flowers, but also the leaves are often longer, and then they may be recurved, as in *E. dissimulans*. However, the leaves of *E. dissimulans* are proportionately narrower than those of *E. dominans*; for example, a leaf of *E. dissimulans* 3·5mm long will be 0·5mm broad, but a leaf of *E. dominans* of the same length will be 1mm broad. Furthermore, the leaf margins in *E. dissimulans* are clad in small glands, which may soon fall; the leaf margins of *E. dominans* are clad in coarse hairs that are often forked; these may fall to leave stubs, so it is best to examine young leaves, especially the margins in the lower half of the leaf. The styles in *E. dissimulans* scarcely exceed 1mm in length; those of *E. dominans* are usually 1·5–2·25mm long: plants with slightly shorter styles may occur on the summit plateau, but then the leaves are small and appressed, and no confusion can arise.

LABIATAE

419. Salvia tiliifolia Vahl, Symb. Bot. 3:7 (1794); Jacq., Pl. Hort. Schoenbr. 3:2, t. 254 (1798); Epling in Repert. Spec. Nov. Regni Veg., Beih. 110:241 (1939) & in Publ. Univ. Calif. Los Angeles, Biol. Sci. 2:241 (1940); Gibbs Russell et al. in Mem. Bot. Surv. S. Afr. 48:111 (1984).
NATAL. Underberg distr., 2929 CB, Sani Pass Police Post, c.6500ft, rocky waste ground near barrier, annual with small bright blue corollas, 4 i 1984, *Manning, Hilliard & Burtt* 17239 (E, NU, PRE).

FIG. 1. *Albuca batteniana* Hilliard & Burtt, in cultivation at the Royal Botanic Garden, Edinburgh, April 1984.

Vahl described this species from material sent to him by Bellardi, presumably from the Botanic Garden at Turin; a little later Jacquin was cultivating it in Vienna. Neither of these authors knew its native country. This has proved to be Mexico, where it is widely distributed. Epling also records it from Guatemala, Honduras, El Salvador, Costa Rica, Venezuela, Colombia and Ecuador.

Salvia tiliifolia appears as an alien in the computer print-out list of South African plants edited by G. E. Gibbs Russell (ref. above), and Dr L. E. Codd (Pretoria) has kindly sent us the information that the entry is based on three specimens from the Pretoria area, *Repton* 1429 collected in 1943, *Codd* 10737 in 1969 and *Liebenberg* 8855 in 1977 (all in PRE). The above record extends its known range in South Africa to Natal. It is also known to occur as an alien in Ceylon. We are indebted to Mr I. C. Hedge for the determination of our specimen.

LILIACEAE

420. Albuca batteniana Hilliard & Burtt, **species nova** ob antheras omnes fertiles in subgenere *Falconera* Baker ponenda; bulbo epigaeo et floribus magnis *A. nelsonii* N. E. Br. affinis sed foliis lanceolatis (nec late linearibus) coriaceis recurvis, pedunculo et inflorescentiae axi rigido minus succoso horizontaliter arcuato (nec erecto), tepalis exterioribus patento-recurvis longe distat. Fig. 1.

Bulbus epigaeus, 5–6cm diam., squamis viridibus arcte appressis. *Folia* c.6, c.40–60 × 3–4cm, basi imbricata et erecta tubum formantia, superne

patentia et demum recurva, e basi leniter attenuata apice primum solido tereti c.10mm longo demum marcescente. *Inflorescentia* ad 80cm longa, horizontaliter arcuata axi rigido, pedunculo nudo ad 25cm longo; pedicelli inferiores ad 12cm, superiores breviores; bractea infima c.4cm, superiores minores medio venis viridibus approximatis, albo-marginata. *Tepala* tria exteriora 30–42 × 7mm, dimidio inferiore alba superiore linea lata viridi notata, apice leviter cucullata, anthesi basi leviter patentia, a medio recurva; interiora 25–30 × 7mm exterioribus similia sed erecta et magis cucullata; in alabastro 3cm longo exteriora et interiora plus minusve aequilonga. *Stamina* omnia fertilia; filamenta 15–20mm longa, plus minusve aequalia, interiora basi expansa et supra basin breviter involuta; antherae versatiles, exteriores 2–4mm, interiores 3·5–5mm longae. *Ovarium* 8–12mm longum, obtuse trigonum; stylus triquetrus, sursum crassior, 10–13mm longus, costis viridibus; stigma flavo-papillosum, acute umbonatum.
Type: E Cape, E London div., 2828 CD, Morgan's Bay, cult. in Hort. Bot. Reg. Edin. No. 790689 from *Hilliard & Burtt* 12454 (E holo; NU, PRE iso.).

This most distinctive species of *Albuca* was found growing on sea-cliffs and in the cliff-rubble at their base at Morgan's Bay, just south of Kei Mouth in the eastern Cape. It gives us the greatest pleasure to name it after our friend Mrs Auriol Batten whose outstanding botanical paintings are well-known. Her enthusiasm for the flora of the eastern Cape has been of great benefit to us on many occasions and it was she who took us to Morgan's Bay on the day when we collected this plant. It was not then in flower, but a bulb was sent back to the Royal Botanic Garden, Edinburgh, where it has flourished in cultivation and now forms a clump of some 10 bulbs.

There has been a striking increase in the size of the flowers since the bulb, introduced in early 1979, first flowered in November of that year. Then the outer tepals were 30mm long; after that first November the plant has flowered in March to April; no records were made in 1980 and 1981, later measurements of the outer tepals were 33mm (1982), 37mm (1983) 42mm (1984). In the formal description given above the lower measurements refer to the 1979 observations, the higher to those of 1984: all are from living material.

When cut longitudinally the bulb is seen to have a large central domed axis, invested by the fleshy leaf-bases. The inflorescence arises terminally. It is interesting to note that when a leaf is cut off and put into the press to dry, the lower part (although cut where it is free from the investing leaf-base) behaves as though it were going to be a bulb scale. Sap from the upper part of the leaf drains back to the basal inch or so and above this an abscission line forms. When young, the leaf has a solid, more or less terete, green tip; but this soon beings to die back and the feature is only discernible in young leaves.

Albuca batteniana has been diagnosed above against *A. nelsonii* N. E. Br., but the similarity lies chiefly in the large flowers of both. *A. nelsonii* is also shown (*Bot. Mag.* tab. 6649, 1882) as having epigeal bulbs, but the plant has long been grown at Edinburgh with the bulbs largely

underground. In other respects, in its broadly linear leaves and erect inflorescence, both of them much more sappy than in *A. batteniana, A. nelsonii* is a typical *Albuca*. The opportunity is taken below to eliminate the name *A. crinifolia* Baker, which may cause confusion when the new species is compared with the account in *Flora Capensis*.

421. Albuca crinifolia Baker in Thiselton-Dyer, Fl. Cap. 6:457 (1897).
Type: Natal, Inanda, *Wood* 750 (K: lecto. leaves only).

Baker correctly recognized that the leaves of this specimen are very similar to those of a *Crinum*. No *Albuca* with similar leaves has been collected again and it is clear that Medley Wood sent a mixed specimen. Leaves and inflorescence are not attached to one another and the former belong to *Crinum,* while the inflorescence is that of *Albuca nelsonii*. In view of the specific epithet, the name should clearly be lectotypified by the leaves, and thus belongs in *Crinum,* not *Albuca*.

422. Albuca rupestris Hilliard & Burtt, **species nova** *A. corymbosae* Baker affinis sed tunicis bulbi apicibus non setosis, foliis basi angustioribus recedit; ab *A. xanthocodone* Hilliard & Burtt (vide infra) floribus erectis nec pendulis facile distinguitur; ab *A. tenuifolia* Baker staminibus exterioribus sterilibus et foliis ab initio glabris differt.

Bulbus ovoideus, c.10–15mm diam, tunicis exterioribus membranaceis. *Folia* 6–10, linearia, c.35 × 4mm ima basi ad 6mm lata, supra sulcata, subtus rotundata levissime costata, glabra. *Inflorescentia* c.15cm alta, floribus 4–10 erectis racemosis; pedicelli ad 70mm longi, superiores multo minores; bracteae virides mox brunnescentes, membranaceo-marginatae c.20mm longae sursum decrescentes. *Tepala* exteriora flava medio linea lata viridi notata, oblonga, c.24 × 8mm, apice intensius flavo leviter cucullato et paulo papilloso, anthesi semipatentia; interiora c.16 × 7mm, colore exterioribus similia, extra valde convexa, apice cucullato et inflexo valde papillosa. *Stamina* exteriora filamentis 1mm longis crassiusculis sulco medio praeditis, anthera sterili dorsifixo 1mm longo; interiorum filamenta 11mm longa, superne plana, parte basali expansa, anthera fertili 3mm longa. *Ovarium* 6mm altum, viride, trigonum. *Stylus* 8mm, flavo-viridis, triqueter, crassus, ad apicem leviter ampliatus, transverse rugosus, stigmati conico.

Type: Natal, Underberg distr., 2929 CB, upper tributaries S of Mkomazi river, (feeders of Ka-Ntuba), c.7500ft, 1 xii 1982, *Hilliard & Burtt* 15735 (E holo., NU iso.).

NATAL. Underberg distr., 2929 CB, Cobham Forest Reserve, Upper Polela cave area, 7200ft, 20 xi 1976, *Hilliard & Burtt* 9285 (E, NU); ibidem, Gxalingenwa valley, between Sani Pass and Polela valley, 7300ft, 9 xii 1983, *Hilliard & Burtt* 17121 (E, NU); ibidem, Lakes Cave area, c.7900ft, 15 xii 1982, *Hilliard & Burtt* 16077 (E, NU); Bamboo Mt, S side above Restmount, 6000ft, 20 xi 1982, *Hilliard & Burtt* 15584 (E, NU); 2929 CC, Garden Castle Forest Reserve, valley beyond Forester's house, c.7300ft, 9 xii 1983, *Hilliard & Burtt* 13459 (E, NU); upper Umzimouti valley, 6500–6700ft, 27 xi 1976, *Hilliard & Burtt* 9399 (E, NU); 2929 CD,

Coleford Nature Reserve, Sunnyside sector, 5000ft, 25 xii 1976, *Hilliard & Burtt* 9544 (E, NU); & cult. in Hort. Bot. Reg. Edin. No. 770634 (E).

Albuca rupestris is given this epithet because it is characteristically a plant of rocky places. We have recorded it from crevices of Cave Sandstone rocks and from the edge of sandstone rock sheets; it is also frequently found, as in the type locality, where there are outcrops of dolerite giving loose bouldery ground which is clearly drier than the grassy hillsides.

The core of the distributional range undoubtedly lies in the southern Natal Drakensberg between the Umkomaas and Ngwangwane rivers, at altitudes between 5000 and 8000ft. It will almost certainly be found in the unworked area of the Drakensberg foothills in East Griqualand. There is also an outlying specimen from much further north that differs from typical *A. rupestris* only in having somewhat shorter, less membranous bracts. This is: Newcastle distr., Normandien Pass, c.6800ft, 3 xii 1963, *Hilliard* 2373 (E, NU).

423. Albuca xanthocodon Hilliard & Burtt, **species nova** ab *A. shawii* Baker planta glandulis destituta (nec ubique stipitato-glandulosa), ab *A. rupestri* Hilliard & Burtt floribus pendulis distinguenda. Fig. 2.

Bulbus ovoideus, c.1·5–2·5 × 1–2·5cm, tunicis exterioribus membranaceis. *Folia* glabra, glauco-viridia, anthesi brevia tandem ad 35cm longa, basi (applanata) ad 5mm lata, longe attenuata, supra canaliculata, subtus rotundata. *Inflorescentia* in toto ad 40cm alta, sed plerumque 15–25cm, parte basali ad 30cm nuda, simpliciter racemosa. *Bracteae* inferiores ad 3cm longae, sursum decrescentes, lanceolato-acuminatae, basi membranaceo-auriculatae. *Pedicelli* anthesi 3–4cm longi, ascendentes, sub fructibus duplo elongati. *Flores* c.7, anthesi nutantes, post anthesin mox erecti. *Tepala* exteriora flava medio viridi-suffusa, oblonga, 20 × 8mm, apicibus incrassatis, anthesi patentia; interiora flava medio distincte viridi-zonata, cymbiformia, 15 × 6mm, apicibus rotundatis lobulo inflexo medio papillato; tepala emarcida marginibus ex luteo albescentibus, zona media brunnescente. *Stamina* fertilia 3, tepalis interioribus opposita; filamenta 11mm longa, basi 2mm lata, supra basin marginibus subito inflexis canaliculam formantibus sursum iterum planis, apicibus ad apiculum inflexum attenuatis; antherae 4mm longae, medio dorso affixae, versatiles; stamina sterilia 3, 12 × 2·5mm, fertilibus crassiora, externe sulcata. *Ovarium* viride, triangulare, 9mm longum, faciebus medio leviter sulcatis 3·5mm latis. *Stylus* prismaticus, 5mm longus, sursum ampliatus ad 3mm latus, stigmate centrali terminali conico. *Capsula* pedicello 4cm longo suffulta, 1·5cm longa et fere 1cm lata. *Semina* plana, discoidea, 5 × 4mm, nigra.

Type: Transkei, 3029 CD, Tabankulu Mt, c.5000ft, cult. in Hort. Bot. Reg. Edin. No. C. 11369 from *Hilliard & Burtt* 7339 (E holo., NU iso.).

TRANSKEI. Tabankulu distr., 3029 CD, Tabankulu Mt, cult. in Hort. Bot. Reg. Edinb. from *Hilliard & Burtt* 7356, No. C. 11368 (E, NU). Engcobo distr., 3127 DB, Satana's Nek, between Engcobo and Elliot, c.4500ft, 13 x 1980, *Hilliard & Burtt* 13113 (E, NU).

E CAPE. Barkly East distr., Witteberg, 3027 BC, Beddgelert, Mt Avoca,

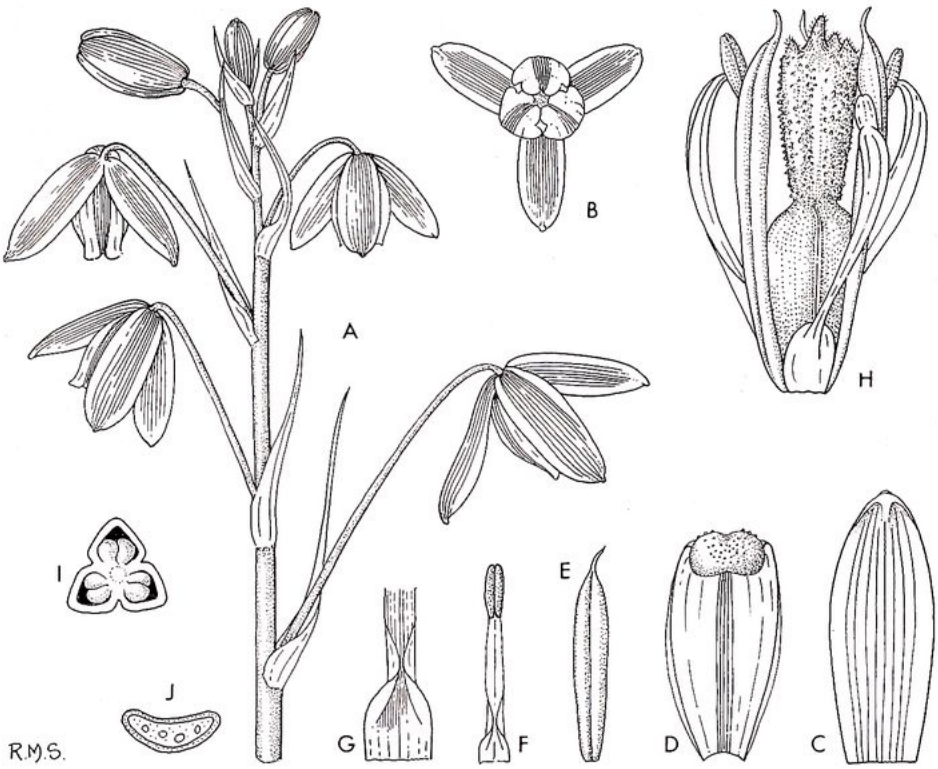

FIG. 2. *Albuca xanthocodon* Hilliard & Burtt. A, upper part of inflorescence, ×1; B, single flower, ×1; C, outer tepal, ×2; D, inner tepal, ×2; E, outer, sterile, stamen, ×2; F, inner, fertile, stamen, ×2; G, base of inner stamen, ×4; H, flower with tepals removed, ×4; I, ovary, in transverse section, ×4; J, leaf in transverse section, ×4. All from living material grown at RBG Edinburgh from *H & B* 7339.

7500ft, 5 xii 1981, *Hilliard & Burtt* 14721 (E, NU); ibidem, 3027 DA, Beddgelert, c.6200ft, 1 xii 1981, *Hilliard & Burtt* 14617 (E, NU).

This attractive species recalls *A. shawii* Bak. in its yellow pendulous flowers, which, however, have a strong greenish tinge lacking in *A. shawii*. In addition, *A. xanthocodon* is a more robust, glabrous plant, entirely lacking the indumentum of stalked glands which is so characteristic of *A. shawii*. It has a more westerly distribution than *A. rupestris* and they are not, at present, known to overlap.

424. Aloe boylei Baker in Kew Bull. 1892:84 (1892), & in Thiselton-Dyer, Fl. Cap. 6:307 (1896); Berger, Pflanzenr. Liliac.-Aloineae, Heft 33:170 (1908); Reynolds, Aloes of South Africa 153 (1950).
Type: Natal, head of Tugela valley, *Allison*, comm. *Boyle* 1891 (K).

subsp. **boylei**
Syn: *A. agrophila* Reynolds in J. S. Afr. Bot. 2:68 (1936). Type: Transkei, 30 miles east of Umtata, 19 i 1936, *Reynolds* 1749 (PRE).
NATAL. Underberg distr., 2929 CB, 5–7 miles NNW of Castle View farm, headwaters of Mlahlangubo R., 7200ft, rocky hillside, 20 i 1982, *Hilliard*

& Burtt 15260 (E, NU).. Mpendhle distr., 2929 AD, Loteni R. valley, 6000ft, steep grass slope, 13 i 1982, *Hilliard & Burtt* 15128 (E, NU).

subsp. **major** Hilliard & Burtt, **subspecies nova** a typo habitu robustiore, foliis c.70mm (nec 15–30mm) latis, floribus c.40mm (nec 30–35mm) longis distinguenda.
Type: Natal, Ngotshe distr., Ngome, near sawmill, 7 xii 1975, *Hilliard & Burtt* 8438 (E holo., NU iso.).
Syn.: *A. boylei* Baker sensu Reynolds, The Aloes of South Africa 153 (1950) quoad descr. et figs 136, 137.
NATAL. Biggarsberg, *Reynolds* 1715 (K). Entumeni Nature Reserve, 24 iii 1977, *Bourquin* 961 (E, NU).

Baker's description of *Aloe boylei* is of a plant with coarsely serrate leaves 3cm wide near the base and a perianth 3·5cm long. In contrast Reynolds describes this species as having leaves 6–9cm broad, with soft marginal teeth 1–3mm long and 2–5mm distant near the base, more crowded and smaller upwards; the perianth, he says, is c.4cm long.

In 1936 Reynolds had collected an *Aloe* in Transkei, east of Umtata, and had described it as *A. agrophila*. In *The Aloes of South Africa* (1950) he reduced it to *A. boylei,* citing the type specimen as 'a weak form' and saying *'A. agrophila* proves to be only an outlying form of *A. boylei* not worth specific rank.' *A. agrophila* is, however, typical *A. boylei* and this form of the species is found in grasslands all along the slopes of the Natal Drakensberg.

The broad-leaved plant that Reynolds described as *A. boylei* is not typical. However, until it is better known it seems prudent to keep it within the species: it is described above as subsp. *major*. Reynolds published photographs of it from Lydenburg and Barberton. It is perhaps a plant of northern Natal and the Transvaal, whereas *A. boylei* subsp. *boylei* is found southwards from the headwaters of the Tugela R., in the Royal Natal National Park.

425. Urginea calcarata (Baker) Hilliard & Burtt, **comb. nov.**
Type: Illustration by W. H. Fitch, made from living plant sent from E Cape by MacOwan (K).
Syn.: *Ornithogalum calcaratum* Baker in Gard. Chron. 1874, 1:723 (1874).
Urginea modesta Baker in Bot. Jahrb. 15, Beibl. 35:6 (1892).
Type: Pondoland, *Backmann* 273 (K).
Drimia modesta (Baker) Jessop in J. S. Afr. Bot. 43:302 (1977).
Selected citations:
NATAL. Umzinto distr., Dumisa, near Ifafa R, 500m, 17 vii 1910, *Rudatis* 1067 (E); Ellesmere, 600m, 28 viii 1910, *Rudatis* 1126 (E); Friedenau, cult. in Hort. Bot. Reg. Edin. (66/97), fl. v 1967, from *Hilliard & Burtt* 3400/A (E); New Hanover distr., Little Noodsberg, Laager Farm, cult. in Hort. Bot. Reg. Edin. 811511, fl. v 1984, from *Hilliard & Burtt* 14507 (E, NU).

Both Miss Obermeyer (dealing with *Ornithogalum* in *Bothalia* 12(3): 372, 1978), and Jessop (dealing with *Drimia,* including *Urginea,* in *J. S. Afr. Bot.* 43:315, 1977) rejected *Ornithogalum calcaratum* Baker as an inadequately known plant, although its assignment to *Urginea* was reasonably certain from the description of the bracts. There is, it is true,

no type specimen for Baker's name, but when publishing it he mentioned an illustration made by W. H. Fitch at the same time. This is in the Kew collection of drawings, and, although it is an unfinished sketch, it is quite adequate for identification. The plant clearly falls within Jessop's concept of *Drimia modesta,* even when *Urginea tenella* Bak. has been excluded (see Hilliard & Burtt in *Notes RBG Edinb.* 40:286, 1982), and provides the earliest epithet in this group.

Unfortunately the precise origin of the plant that Baker described is unknown. The bulb had been sent by MacOwan from the eastern Cape. Fitch's illustration, and Baker's description, fit well with a plant collected in the Natal Midlands, cited above, and both this area and the eastern Cape are well within the range that Jessop ascribes to *Drimia modesta. Rudatis* 1067 was actually distributed as *Ornithogalum calcaratum* Baker. These specimens all have more numerous flowers than the cultivated plant described.

426. Urginea saniensis Hilliard & Burtt, **species nova** *U. capitatae* Baker affinis sed statura minore, foliis semiteretibus, floribus paucioribus 1–5 tantum (nec 10–20) differt.

Bulbus globosus, c.6–8mm diam., tunicis membranaceis pallidis. *Folia* hysterantha, vel anthesi paene visibilia, 1–4, semiteretia, supra canaliculata, 20–60 × 1–1·5mm, fusce viridia, glabra. *Inflorescentia* plerumque uniflora, vel floribus usque ad 4–7 subumbellatim dispositis. *Pedunculus* 10–25mm longus, 1–1·5mm diam. *Bracteae* ovatae, c.1 × 1·5mm, calcare brevi 0·75mm longo, membranaceae, purpureo-brunneae, glabrae. *Pedicelli* c.2–3mm longi. *Tepala* 3·5 × 2mm, elliptica, apicibus minute cucullatis, tria exteriora extra purpureo-brunnea intus alba, tria interiora alba linea media brunnea externe ornata. *Filamenta* c.2mm longa; antherae 1mm, luteae. *Ovarium* globosum, 1·5 × 1·5mm, ovula in quoque loculo c.3; stylus 1·25mm; stigma truncatum. *Capsula* c.3mm longa, pallida, apice loculicide dehiscens et in campanulam patens; semina 1·5mm longa, ellipsoidea, nigro-brunnea.

Type: Lesotho, top of Sani Pass, c.9500ft, in soil in cracks of rock, 6 xi 1973, *Hilliard & Burtt* 7102 (E holo., NU iso.).

The leaves, capsules and seeds were described from plants that flowered in the Royal Botanic Garden, Edinburgh.

In the key to *Drimia* (including *Urginea*) given by Jessop (in *J. S. Afr. Bot.* 43:297, 1977) this species runs down to *Drimia depressa* (Baker) Jessop (i.e. *Urginea capitata* Baker). Diminutive forms of this species are known, but they always have many flowers and the leaves are never subterete nor so narrow as in *U. saniensis.*

POLYGONACEAE

(B. L. Burtt)

427–429. Rumex L., subgen. **Acetosa** Campd., sect. **Afroacetosae** Rech. f., subsect. **Capenses** Rech. f. in Bot. Notiser, Suppl. 3(3):37 (1954).

Rechinger assigned three species to this subsection in his revision of the African species of *Rumex*: *R. cordatus* Poiret, *R. woodii* N. E. Br. and *R. lativalvis* Meisn. The last of these is a well-marked species from the SW Cape and does not concern us here. Under both *R. cordatus* and *R. woodii* Rechinger referred to a number of specimens which were not typical of the species. The accumulation of further material necessitates a re-examination of this problem and with it a re-consideration of *R. dregeanus* Meisn., treated by Rechinger as *species incomplete nota.* I am grateful to Professor Rechinger for giving time to discuss these southern African *Rumex* with me during a recent visit to Edinburgh.

The group is described as being monoecious or polygamo-dioecious. However, all the plants we have found have been fruit-bearing and all flowers examined have been hermaphrodite: that is to say all have well-developed anthers and an ovary with ovule and normal stigmas. There is nothing in floral structure to suggest that flowers failing to set fruit are inherently infertile.

The material that is referable to neither *R. cordatus* nor *R. woodii* can be sorted into two main groups on the size of the fruit valves: the length, following Rechinger's practice, is measured from the tip to the point of attachment (the base of the sinus) and excludes the cordate lobes. The first is an upland plant with fruit valves 5·5–7 × 5–7mm and a well marked retrorse callus in the basal sinus of each: it ranges from the northern Transvaal to the eastern Cape. The other is found nearer the coast in Natal, Transkei and eastern Cape and has larger fruit valves, 7–9 × 8–10mm, with the basal callus weakly developed. Between these two groups there are one or two intermediate specimens and they come from somewhat intermediate altitudes: such are E Cape, Somerset East, Boschberg, *MacOwan* 1857 (BM, SAM); Natal, Umzinto distr., Ellesmere, *Strey* 7049 (PRE); Alfred distr., Harding, Rooivaal, *Taylor* 5279 (NBG), which have fruit valves 7 × 7 or 7 × 8 or 8 × 8mm. In the present state of our knowledge, therefore, it would seem most appropriate to link these two groups as subspecies of one species.

In 1840 C. F. Meisner described *R. dregeanus* based on a specimen collected near Port Natal (Durban) by J. F. Drège. No additional material was quoted by C. H. Wright in *Flora Capensis* 5(1):478, 1912 and Rechinger, as already mentioned, left the species on one side as insufficiently known. The type specimen of *R. dregeanus,* from Meisner's own herbarium, has been kindly sent on loan to Edinburgh by the Chief Curator, New York Botanic Garden. It is well matched by the material found near the coast from Natal to the E Cape. This group must therefore bear the name *R. dregeanus*. The upland plant is described below as subsp. *montanus*.

The opportunity is taken to set out the correct citation for *R. cordatus,* usually attributed to Desfontaines, to choose a lectotype for *R. woodii* and give some details of its geographical range. A key to the South African species of *Rumex* subgen. *Acetosa* is provided. Of these species only *R. sagittatus* Thunb. extends northwards into the eastern highlands of Zimbabwe, the remainder are endemic south of the Limpopo river; there is a distinct group of tropical African species of subgen. *Acetosa* (*R. nervosus* Vahl, *R. ellenbeckii* Dammer, *R. trinervius* Rech. f. and *R.*

abyssinicus Jacq.) which do not reach South Africa. The sections and subsections of subgenus *Acetosa* seem, at least to one distrustful of sexual differences and inexpert in the genus as a whole, to be rather insecurely founded; they need not, however, concern us here.

KEY TO SOUTHERN AFRICAN SPECIES OF RUMEX SUBGEN. ACETOSA

1a. Plant scandent; fruit valves 4–7 × 6–9mm, without basal callus **R. sagittatus** Thunb.
1b. Plant erect, never scandent 2
2a. Leaf-blade narrowed to base, without lobes; fruit valves ovate, c.9–10 × 10–12mm ..... **R. woodii** N. E. Br.
2b. Leaf-blade more or less truncate, cordate or hastate; fruit-valves suborbicular, at most 9 × 10mm usually smaller 3
3a. Stem somewhat flexuous with spreading branches in lower part; leaves with long narrow hastate lobes ..... **R. lativalvis** Meisn.
3b. Stem stiff unbranched below inflorescence or branches ascending... 4
4a. Stem up to 30cm; leaf-blade ovate-cordate with blunt basal lobes; fruit-valves c.3–5 × 3–6mm; SW Cape ..... **R. cordatus** Poiret
4b. Stem c.1m; leaf-blade lanceolate-hastate or lanceolate-triangular from truncate base; mature fruit-valves 5–9 × 5–10mm; Transvaal southwards to eastern Cape..... **R. dregeanus** Meisn.

427. Rumex cordatus Poiret in Lam., Encycl. Méth. Suppl. 4:324 (June 1816).

Type: Cult. at Paris from the Cape of Good Hope (n.v.).

Syn.: *Rumex sarcorhizus* Link, Enum. Hort. Berol. 1:351 (1821); Meisner in Linnaea 14:501 (1840); Adamson in J. S. Afr. Bot. 5:54 (1939). Type: raised from seed sent by Bergius from the Cape of Good Hope (n.v.).

R. cordatus Desf., [Tabl. Ecole Bot. 40 (1804), ed. 2, 48 (1815) nom. nud.] Cat. Pl. Hort. Reg. Paris 70 (nomen) 389 (descr.) (1829); Wright in Dyer, Fl. Cap. 5(1):476 (1912), excl. *Pegler* 725; Rechinger in Bot. Notiser, Suppl. 3(3):38 (1954). Type: cult. at Paris (FI, photo E).

The name *R. cordatus* had obviously been in use at Paris for some years before it was validly published. There can be no doubt that Poiret and Desfontaines were describing the same plant, but there is nothing in print to link the two names and it is possible that independent type specimens may be found. They are therefore cited as nomenclaturally distinct.

R. cordatus is a southern species, ranging from the Cape Peninsula northwards to the Khamiesberg in the west and to the Port Elizabeth area in the east.

428. Rumex dregeanus Meisn. in Linnaea, 14(5):496 (probably late 1840); Wright in Thiselton-Dyer, Fl. Cap. 5, sect. 1:478 (1912).

Type: Natal, near Port Natal [Durban], below 200ft, *Drège* 4694 (NY).
Syn.: *Rumex dregei* Meisn. in A. DC. Prodr. 14:168 (1856), nomen illegit. Type as above.

subsp. **dregeanus**

NATAL. Port Shepstone distr., 3030 CD, Uvongo, 'Skyline', 16 xi 1969, *Strey* 9271 (K, NH, NU, PRE); Umtamvuna N.R., Beacon Hill, 8 xii 1983, *Abbott* 1533 (NH, PRU); ibidem, 500m, 8 xii 1983, *Rycroft* 3457 (E, NU).
TRANSKEI. Kentani, near Columba mission, 1000ft, 30 xi 1906, *Pegler* 725 (BM, K, PRE). Tsolo, xi 1970, *Ndzamela* 1 (GRA).
E CAPE. Komgha, farm 'Prospect', xii 1889, *Flanagan* 341 (PRE, SAM). E London distr., Ncera R. bridge, E London to Chalumna, 21 v 1956, *Comins* 1544 (GRA, PRE); Selborne, site of new museum buildings, c.150ft, 14 xii 1926, *Smith* 3699 (PRE). Stutterheim distr., along the Bolo road between Dohne and Turpin Bridge, 2700–3000ft, 5 xii 1942, *Acocks* 9414 (K, PRE); Fort Cunynghame, 3000ft, i 1929, *Schonland* 123 (GRA). Albany distr., Trappe Valley, xii 1903, *Daly* 613 (GRA).

Rumex dregeanus has not been re-collected in the vicinity of Durban since Drège's visit in 1835, and may now have been exterminated there by urban spread. On the other hand South African *Rumex* has never been intensively collected and the rediscovery of this species around Durban would cause no surprise.

Meisner gave the measurements of the fruit valves as 3–4½ lines long, c.3 lines wide. I have taken the opportunity to check these measurements on the type specimen: they come out at 8–9 × 8–9mm, often a little broader than long, 8 × 8·5–9mm, occasionally the other way round, 9 × 8·5mm. The callus is very weakly developed, almost absent.

subsp. **montanus** B. L. Burtt, **subspecies nova** fructus valvis minoribus (4–7 × 4–7mm), callo basali retrorso bene evoluto a subsp. *dregeano* recedit.
Type: Natal, Underberg distr., 2929 CC, vicinity of Tarn Cave above Bushman's Nek, c.7800ft, very common in this area and down to 6500ft at least, 18 i 1984, *Hilliard & Burtt* 17332 (E holo., NU iso.).
Selected citations:
TRANSVAAL. 2329 DD, Haenertsburg, xi 1913, *Pott* 4599 (PRE). 2330 CC, Woodbush, i 1923, *Wager* TM 22992 (PRE). 2627 BB, Krugersdorp, Witpoortje, iii 1929, *Murray* 659 (PRE). 2628 AA, Johannesburg, Milner Park, 9 xi 1926, *Moss* 13759 (BM). 2630 CA, Ermelo, 4300ft, 29 xii 1933, *Walker* 143 (PRE). 2730 BB, Piet Retief, xii 1911, *Jenkins* TM 10959 (PRE).
SWAZILAND. Mbabane distr., 2631 AC, Poliniane R., 4000ft, 25 x 1957, *Compton* 27156 (NBG, PRE).
ORANGE FREE STATE. Harrismith distr., 2829 AC, Rensburgskop, 1700m, 8 ii 1978, *Jacobsz* 674 (PRE).
NATAL. Bergville distr., 2828 DB, Royal Natal National Park near Basuto Gate, 7200ft, 18 ii 1984, *Hilliard & Burtt* 17684 (E, NU); 2829 CC, Cathedral Peak, near hotel, 4900ft, i 1984, *Schelpe* 414 (NU); 2929 AB, Cathkin Park, 11 ii 1946, *Howlett* 95 (NH, PRE). Underberg distr., 2929 CB, Cobham Forest Reserve, Sipongweni, 6700ft, 20 ii 1981, *Hilliard*

& Burtt 14023 (E, NU); 2929 CD, Coleford N.R., Sunnyside, c.5500ft, 25 xii 1976, *Hilliard & Burtt* 9549 (E, NU). Pietermaritzburg distr., 2930 CB, Duncairn siding near Hilton, 18 xi 1942, *Smith* 8100 B (PRE). Umzinto distr., 3030 AD, Cambellton, Ifafa, 800m, 13 xii 1912, *Rudatis* 1799 (PRE).
LESOTHO. 2828 CC, Leribe, *Dieterlen* 466 (K, PRE, SAM). Phutha, 9500ft, 27 ii 1949, *Compton* 21620 (NBG). Molimo Nthuse–Blue Mt pass, c.2250m, 15 ii 1978, *Schmitz* 8032 (ROMA).
E CAPE. 3127 BB, Elliot–Maclear distr. boundary, Bastervoetpad, c.7200ft, 15 ii 1983, *Hilliard & Burtt* 16687 (E, NU).

The range of *R. dregeanus* subsp. *montanus* runs from the northern Transvaal (Haenertsburg and Woodbush) southwards down the eastern escarpment; only at about 26°S does it show a wide E–W spread, from the Mbabane district of Swaziland across to Krugersdorp, just W of Johannesburg. Further south it is known down to Piet Retief near the Natal border; then there is a partial break, with only one record in the low Drakensberg, until the high Berg is reached at the Royal Natal National Park. It occurs at Leribe and elsewhere in western Lesotho and probably in the nearby Orange Free State (but the material is too poor for certainty); eastwards it is found along the slopes of the Natal Drakensberg, and in scattered localities at lower altitudes, and follows the escarpment and its foothills to the E Cape. The situation there is not clear, because there is too little good material. As already mentioned *MacOwan* 1257 from Boschberg seems somewhat intermediate between subsp. *montanus* and subsp. *dregeanus*. Further work is needed in this area.

Through most of its range *R. dregeanus* subsp. *montanus* is sympatric with *R. woodii*. In the Natal Drakensberg, near Tarn Cave above Bushman's Nek and near Wilson's Cave between the Polela and Umzimkulu rivers, we have found them within a few feet of one another; they probably grow close together also in the Royal Natal National Park and near Ermelo in the south-east Transvaal. No plants have been seen that show any sign of hybridization. Further south, in the eastern Cape, *R. woodii* may be sympatric with *R. dregeanus* subsp. *dregeanus*.

Rumex dregeanus may always be distinguished from *R. woodii* by its more robust growth, as well as by its more or less hastate leaf-bases and shorter rounder fruit-valves.

429. Rumex woodii N. E. Brown in Kew Bull. 1909:187 (1909); C. H. Wright in Thiselton–Dyer, Fl. Cap. 5(1):478 (1912); Rech. f. in Bot. Notiser, Suppl. 3(3):40 (1954).
Lectotype (chosen here): Natal, [Bergville distr., probably 2829 CD] Lambonjwa river, 4000ft, *Medley Wood* 3583 (K).
Distribution: from the eastern Transvaal (Lydenburg distr.) southwards through south-eastern Transvaal and north-western Natal to the main Natal Drakensberg and its foothills; thence south through to the eastern Cape as far as Bathurst division.

N. E. Brown cited five syntypes when describing *R. woodii*: all represent the same species. Two were collected by Medley Wood in Natal, three by

Burtt Davy in the southern and eastern Transvaal. It seems desirable to take one of the Wood specimens as lectotype. *Wood* 644 is localized 'Itafamasi', on today's maps Tafamasi (29°32′S 30°52′E): that is to say slightly NW of Inanda where Medley Wood lived. There have been no other records of *R. woodii* from this area, and we know that Medley Wood's labels are not always reliable. It therefore seems better to turn to the other specimen for the lectotype. This is *Wood* 3583, localized Lambonjwa, 4000ft; this is the Mlambonje river that flows from the escarpment through the Cathedral Peak forest reserve and eventually joins the Tugela just above Bergville. This is in the foothills of the Drakensberg, country central to the range of *Rumex woodii*. This specimen is accordingly designated as lectotype.

UMBELLIFERAE

430. Alepidea insculpta Hilliard & Burtt, **species nova** *A. galpinii* Dümmer et *A. pusillae* Weimarck affinis, ab ambabus nervis foliorum pagina superiore insculptis facile distinguitur. Ab *A. galpinii* foliis crassioribus petiolis brevioribus, ab *A. pusilla* setis interdentalibus absentibus etiam recedit.

Herba rosulata, rhizomate c.20 × 7mm, caule florifero solitario ad 20cm alto. *Folia* radicalia c.6–10; lamina ovata vel elliptica, 17–20 × 12–13mm, marginibus foliorum exteriorum crenato-serratis interiorum acute serratis, dentibus setoso-apiculatis, setis exceptis glabra, nervis supra insculptis in pagina inferiore pallidiore fuscis conspicuis; folia caulina perpauca, oblonga, c.12 × 3mm, setifero-dentata et setifero-acuminata, basi auriculata setis longis brunneis dependentibus praedita. *Umbellae* c.3–6, terminalis 10mm diam., aliae minores. *Involucri* bracteae basi per 2mm coalitae; 5 majores parte libera 5 × 3mm, trinerviae; 5 minores parte libera 3 × 2mm, uninerviae. *Flores* umbellae terminalis c.14. *Sepala* triangularia 1mm longa. *Petala* 2·5mm, ovato-lanceolata, acuminata, a medio inflexa. *Stamina* filamentis albis 1·5mm longis, antheris pallide violaceis in alabastro inflexis 1mm longis. *Styli* (stylopodio incluso) conico-cylindrici, 2·5mm longi, ad basin verrucosi. *Ovarium* 1mm longum, verrucosum. *Fructus* (e capitulo vetusto) 1·5mm longus sepalis persistentibus exclusis, valde verrucosus.

Type: Natal, Mpendhle distr., 2929 AD, path from Loteni N.R. to Redi, c.7500ft, 26 xii 1982, *Hilliard & Burtt* 16116 (E holo., NU iso.).

NATAL. Underberg distr., 2929 CB, upper tributaries S of Mkomazi R. (feeders of Ka-Ntuba), 8200–8500ft, 30 xi 1982, *Hilliard & Burtt* 15692 (E, NU).

Alepidea insculpta was found in short grassland on high basalt ridges running out from the Drakensberg escarpment. At the end of November there were only the dead stems of last year's flowering and the new young leaves alongside; but we were lucky enough to find it again, a month later, with the first flowers just open.

In a previous comment on *Alepidea* (*Notes RBG Edinb.* 40:294, 1982) doubt was expressed about the validity of some of the sections proposed

by H. Weimarck (in *Bot. Notiser* 120:217–268, 1949). Further cause for this comes from a consideration of the affinities of *A. insculpta*. Because the leaf margins lack interdentine bristles, the species should be placed in sect. *Homotrichae* next to *A. galpinii* Dümmer; however, there seems to be an equally strong affinity to *A. pusilla* Weim. in sect. *Heterotrichae*. They share thickish leaves, and sparseness of marginal bristles and blunt crenations on the outer leaves. In these features *A. pusilla* differs from other species of *Heterotrichae* and *A. insculpta* differs from other species of *Homotrichae*. In *A. pusilla* the interdentine bristles are often better developed than those tipping the teeth, which may be reduced to a mere bristle-base.

431. Diplolophium swynnertonii (Baker f.) Norman in J. Bot. 61:57 (1923).
Type: Zimbabwe, Gazaland, Melsetter, c.6000ft, Sept., *Swynnerton* 649 (BM).
Syn.: *Physotrichia swynnertonii* Baker f. in J. Linn. Soc. Bot. 40:76 (1911).
Diplolophium buchananii (Oliver) Norman subsp. *swynnertonii* (Baker f.) Cannon in Notes RBG Edinb. 32:200 (1973) and in Fl. Zamb. 4:603 (1978).
TRANSVAAL. Venda, 2230DD, Tate Vondo, 1220m, grey sandy loam, 1·5m tall, creamy white-flowered herb in full sun in open woodland, 17 vii 1978, *Netshiungani* 652 (PRE).

The genus *Diplolophium* is an addition to the flora of southern Africa, and *D. swynnertonii* has hitherto only been known from the eastern highlands of Zimbabwe and nearby Moçambique. Cannon's action in reducing this to a subspecies of *D. buchananii*, which is found in Malawi and neighbouring Moçambique north of the Zambesi, may prove justified; but with perfectly clear differences in leaflet shape and a sharp disjunction in distribution it seems preferable to retain the simple binomial, at least until intermediates are found or interfertility investigated.

URTICACEAE

432. Australina caffra (Thunb.) Fourcade in Bot. Surv. S. Afr. Mem. 20:80 (1941).
Lectotype: S Africa, sine loc., *Thunberg* (UPS n.v.—sheet 22124 IDC).
Syn.: *Urtica caffra* Thunb., Prodr. Pl. Cap. 31 (1794), Fl. Cap. ed. Schultes 155 (1823); N.E. Br. in Kew Bull. 1913:80 (1913).
Australina acuminata Wedd. in Ann. Sci. Nat. Bot. sér. 4, 1:212 (1854); N.E. Br. in Thiselton-Dyer, Fl. Cap. 5(2):555 (1925); Ross, Fl. Natal 151 (1973).
Recent records from Natal and Transkei are:
NATAL. 2930AD, Lions River distr., Mt Gilboa, c.5000ft, damp Leucosidea wood, 29 xii 1978, *Hilliard & Burtt* 11887 (E, NU); Dargle, farm 'Kilgobbin', 31 iii 1975, *Hilliard* 5563 (E, NU).
TRANSKEI. 3128CB, Baziya Mt, Mpolompo valley, 4500ft, damp ground under sandstone overhang, 11 ii 1981, *Hilliard & Burtt* 13920 (E, NU).

The material of *Urtica caffra* in Thunberg's herbarium was examined by N. E. Brown and he decided that the sheet marked β must have been the one from which the description was drawn. The sheet marked α does not fit the description and is *Droguetia thunbergii* N.E. Br. It is therefore the β sheet that is cited above as lectotype.

Fourcade's combination was rather inadequately published, simply appearing as *Australina caffra* (Thunb.) with a footnote equating it to *A. acuminata* Wedd. The basionym was not mentioned: that has to be obtained from the entry under *A. acuminata* in *Flora Capensis*. However the combination (and one or two similar ones from the same paper) is entered in *Index Kewensis* and the basionym is given there; Fourcade's intention is perfectly clear, so the combination may be attributed to him.