

New and Interesting Records of African Flowering Plants.

By

Various Authors.

ASCLEPIADACEAE.

Ceropegia occulta R. A. Dyer sp. nov., affinis *C. caffrorum* Schl. habitu crassiore, alabastro obtusiore, corollae lobis latioribus coronae lobis interioribus oblongo-ellipticis obtusis differt.

Herba perennis simplex vel sparse ramosa. *Tuber* 1.5–4 cm diam. *Rami* ad 20 cm longi, procumbentes vel suberecti nonnunquam volubiles, 2 mm crassi. *Folia* sessilia vel brevissime petiolata, carnosa, late ovata-vel lineari-lanceolata, 1–2 cm longa, 3–10 mm lata, acuta. *Flores* 1–2 extra folii axillam exorti, erecti, pedicillis 1 cm longis. *Sepala* lineari-lanceolata, 3–3.5 mm longa. *Corolla* 2–2.8 cm longa, apice obtusa; tubus 1.5–2 cm longus, basi ovoideo-inflatus, plus minusve 5 mm diam., in media parte 2.5–3 mm diam. in faucibus 5.6 mm extra et intus glaber; lobi 6–7 mm longi, apice per 2 mm connati, basi et apice 3.5 mm lati, medio 2.5 mm lati, intus breviter pubescentes, carinati. *Coronae exterioris lobi* poculiformes; 0.5 mm lati cum lobis interioribus connati; coronae interioris lobi incumbenti-erecti, 2.5 mm longi, oblongo-elliptici, obtusi, subcarnosi.

PLATE I.

CAPE PROVINCE.—Worcester Division; near Tweefontein, foothills under bushes, *Van Breda* 85 (PRE, type); *Erens and van Breda* 2264 (photograph).

Plants forming one to several subglobes tubers 1.5–4 cm in diam. with a few fibrous roots. *Stems* 1–4 from each main tuber, up to about 20 cm long, rarely showing signs of twining, 2 mm thick; lower internodes 2–6 cm long, towards apex of branches reduced to about 1 cm long or less. *Leaves* sessile or subsessile very variable in shape, the broadest towards the base ranging from nearly circular to ovate to linear-lanceolate, 1–2 cm long, 3–10 cm broad, fleshy, grooved down face, convex on lower surface, acute. *Cymes* laterally produced at nodes, subsessile, 1–2-flowered; flowers produced successively, sometimes the second aborted; pedicels up to about 1 cm long, glabrous. *Sepals* linear-lanceolate, 3–3.5 mm long. *Corolla* 2–2.8 cm long, very slightly curved or straight with tube 1.5–2 cm long, inflated at base to about 5 mm diam. 2.5–3 mm diam. above and spreading at the mouth to 5–6 mm; glabrous inside and outside, finely longitudinally ribbed within the inflation; lobed portion in bud 5–8 mm long with a slight constriction about the middle and a flattened united apical portion, apiculate; lobes about 3.5 mm broad at base and the same towards apex, 2.5 mm at middle, united for 2 mm at apex forming cap about 4 mm wide, apiculate in middle, each lobe shortly hairy within the margin and keeled down the inner face with the keel broadened to 1.5 mm at the base; margins only slightly replicate leaving comparatively small apertures between the lobes. *Corona* appearing as one series; outer corona of small spreading pockets about 0.5 mm wide, confluent with the base of inner lobes; inner lobes incumbent-erect, narrowly oblong-elliptic, 2.5 mm long, obtuse, somewhat fleshy. *Pollinia* subglobose, about 0.25 mm diam. with narrow amber-coloured inner margin which extends into a minute apical point (a feature not observed previously).

It is remarkable that this species of *Ceropegia*, which grows closest to the first port of entrance to the Union at Cape Town, should be among the last to be named specifically. No earlier record of the species seems to exist than a collection by P. A. B. van Breda shortly before 1950. He found it well hidden—hence the name—under the protection of karoo shrublets near Tweefontein in the Worcester district. In 1950 he and Mr. J. Erens, then head gardener of the Division of Botany, gathered more material at the same site for cultivation in Pretoria. This material flowered in September of the same year and although it was photographed, no herbarium specimen appears to have been preserved at the time.

In June, 1956, Mr. van Breda made further collections on request. A few flowers were present at the time and the holotype consists of this material, and duplicates were made when the plants continued to bloom at the Division of Botany, Pretoria, during February, March and April of 1957. Although the species appears to have a fairly long flowering period, it grows slowly and is not very floriferous. Under natural conditions the stems are relatively short and rarely show signs of twining, whereas under cultivation the stems are more robust and twine when placed on a support.

It seems that *C. occulta* is nearest in affinity to *C. caffrorum* Schl. and its allies in the eastern Cape Province near Uitenhage. It differs from these in the shape of the corolla lobes and the obtuse cage-like structure they form, and also in the more fleshy obtuse inner corona lobes. The pollinia are specially interesting. It is readily distinguished from *C. africana* R. Br., figured in the Botanical Register 626 (1822), and since recorded from near Oudtshoorn, by the falcate inner corona lobes of the latter.

R. A. DYER.

CALLITRICHACEAE.

Callitriche bolusii Schonl. et Pax ex Marl., Flora S. Afr. II, ii: 141 (1925).

The valid publication of this name seems so far to have been overlooked. It was first rendered as *Callitriche bolusiana* Schonl. et Pax in a note in Engl. Pflanzenw. Afr. III, ii: 169 (1921), but in Marloth's Flora under *C. bolusii* there is a series of line drawings which make it possible to identify the plant without doubt. Contrary to Marloth's observations the plant is restricted to the eastern Cape Province and has not been found in the Transvaal.

MAYDA HENDERSON.

COMPOSITAE.

Helichrysum albirosulatum Killick, sp. nov., affine *H. flanaganii* Bolus, sed habitu robustiore, foliis argenteo-albis, floribus majoribus paucioribus differt.

Fruticulus prostratus, ad 6 cm altus, omnino indumento argenteo-albo vestitus. *Folia* rosulata, plerumque spathulata interdum obovata, 1.4–2.2 cm longa, 5–6 mm lata, apice acuta vel obtusa plus minusve uncinata, basi attenuata. *Pedunculi* suberecti, 8 cm longi, foliati. *Corymbi* polycephali, semi-globosi, 1.3–1.5 cm diam. *Capitula* 5 mm longa, 2.5–3 mm lata. *Involucri bracteae* 3-seriatae, erectae, aureo-flavae, ab exteriore gradatim majores. *Flores* hermaphroditi, 10–12, aureo-flavi; corolla tubulosa, supra ampliata. *Achaenia* papillosa, breviter pubescentia.

NATAL.—Underberg District: rocky slopes of Bamboo Mountain, McLean 697. Estcourt District: top of Little Berg, 6,000 feet, Cathkin Park, Galpin 11838. Bergville District: Cave Sandstone outcrops, 5,500 feet, Cathedral Peak Forest Influences Research Station, Killick 1919 (PRE, type).

A prostrate, much-branched shrublet, up to 6 cm high, covered all over with a silvery-white, somewhat glossy, very closely felted indumentum. *Leaves* rosulate, spatulate or sometimes obovate, 1.2–2.2 cm long, 4–6 mm wide, apex acute or rounded, somewhat hooked, base attenuate. *Peduncles* suberect, 6–12 cm long, leafy. *Corymbs* many-headed, semi-globose, 1.3–2 cm diam., densely araneous underneath. *Capitula* 5 mm long, 2.5–3 mm wide. *Involucral* bracts in 3 rows, erect, golden-yellow at the tips; outer broadly elliptic, 4.5 mm long, 2 mm wide, subtended by a single large obovate bract 5 mm long, 2.5 mm wide; median ovate, 4 mm long, 2 mm wide; inner linear-lanceolate, 3.5 mm long, 1 mm wide, apex reflexed. *Florets* hermaphrodite, 10–12, golden-yellow; corolla tubular, widening above; pappus of numerous bristles successively shorter towards base; anthers with an acute appendage at apex, acuminate tails at base; style branches truncate. *Achenes* papillose and shortly pubescent.

Helichrysum albirosulatum seems to be restricted to Cave Sandstone outcrops in the Drakensberg area. Usually it is found on the “pavements” situated along the edge of the “Little Berg,” the terrace immediately below the main escarpment. This species with its numerous silvery-white rosettes forms extensive mats, which are a conspicuous feature of Cave Sandstone Macchia with *Passerina montana*, *Protea roupelliae* and *Erica* spp. as dominants. The known distribution of *Helichrysum albirosulatum* is between Bamboo Mountain, Underberg, in the south, and Cathedral Peak in the north. It was first collected by E. E. Galpin in March, 1932.

It differs from its nearest ally, *H. flanaganii* Bolus, in that the plant is more robust, the indumentum silvery-white and somewhat glossy instead of dull grey and in having florets which are larger and fewer per head (10–12 instead of 30 or more).

Helichrysum drakensbergense Killick, sp. nova, distinctissima, nullis e specibus notibus propinqua.

Herba decumbens, ad 35 cm alta, omnino cano lanata. *Folia* spatulata, 3.5–4 cm longa, 1.2–1.8 cm lata, apice subacuta vel rotundata, basi multo attenuata. *Pedunculi* ascendentes, 15–18 cm longi. *Corymbi* plani, 2–2.4 cm diam., infra dense araneosi. *Capitula* congesta, subcampanulata, 6 mm longa, 3.5–4 mm lata. *Receptaculum* conicum, nudum. *Flores* hermaphroditi, circiter 27. *Involucri bracteae* plerumque 3-seriatae, flavae, nitidae. *Corolla* pallide lutea. *Pappi setae* numerosae, plumosae. *Achaenia* breviter pubescentia.

NATAL.—Bergville District: frequent in alpine grassveld below Organ Pipes Pass, 9,200 feet, Cathedral Peak Forest Influences Research Station, Killick 1879 (PRE, type).

A decumbent to suberect herb up to 35 cm high, grey-lanate all over. *Leaves* spatulate, 3–5 cm long, 1.2–2.2 cm wide; apex subacute or round; base much attenuate appearing almost petiolate, somewhat stem-clasping. *Peduncles* ascending, up to 22 cm long, with single clasping lanceolate bract 2.2 cm long. *Corymbs* flat-topped, many-headed, 2–3 cm diam., densely araneous underneath. *Capitula* congested, subcampanulate, 6 mm long, 3.5–4 mm wide at summit. *Receptacle* conical, nude. *Florets* hermaphrodite, about 27. *Involucral* bracts usually 3-seriate, imbricate, not radiating, straw-coloured, glossy; outer linear or lanceolate, 4–5 mm long, embedded in wool; median lanceolate to spatulate, 5 mm long, 1.2–1.5 mm wide; inner similar to median. *Corolla* pale yellow; tube narrowly cylindrical, 4 mm long, widening slightly in upper third then abruptly at summit; lobes deltoid, 0.5 mm long, 0.3 mm wide at base; anthers with appendage at apex and acuminate tails at base; style branches truncate. *Pappus* of numerous plumose bristles with the trichomes progressively shorter towards the base. *Achenes* 5-ribbed, minutely pubescent.

H. drakensbergense is a very distinct species without any obviously close ally, consequently its position in the genus is difficult to establish. When one uses Harvey's key in *Flora Capensis* it runs to the section *Stoechadina*, but its relationship to the constituent species of that section is obscure.

It is surprising that this quite conspicuous plant has not been recorded before. It grows in alpine grassveld below the Organ Pipes Pass next to a footpath which is frequently used by climbers making for Cleft Peak or Basutoland and is a socially growing species forming fairly large communities.

Senecio cryptolanatus Killick, sp. nov., affinis *S. tugelensi* Wood et Evans, sed plantis acaulescentibus differt.

Herba acaulescens, ad 8 cm alta, rhizomate lanato robusto. *Folia* rosulata, spathulata, 5–7 cm longa, 1–1.4 cm lata, apice subacuta vel obtusa, plus minusve carnosae, glabra, nervis immersis, marginibus integris rubris, in axillis lanata. *Pedunculi* simplices, 17 cm longi, bracteis 8. *Capitula* solitaria, subcampanulata, 1 cm longa, 1.3–1.5 cm lata, calyculata. *Involucrum bracteae* circiter 20, lineari-lanceolatae, 7–8 mm longae, 1.5 mm latae. *Receptaculum* alveolatum. *Flores radii* circiter 17, lutei. *Flores disci* numerosi. *Pappi setae* numerosae, barbellatae. *Achenia* glabra.

CAPE.—Barkly East District: Doodman's Krans Mountain, Drakensberg, 8,900 feet, Galpin 6723 (in part).

NATAL.—Bergville District: top of Mont aux Sources, 11,000 feet, Evans 743 (in part); mountain top, 11,000 feet, Mont aux Sources, Allsopp 24; very rare on streambank on summit of Drakensberg between Indumeni Dome and Cleft Peak, 9,700 feet, Killick 1941 (PRE, type).

NOTE.—Evans 743 and Galpin 6723 in the National Herbarium are mixtures consisting of *Senecio cryptolanatus* and *S. tugelensis*. Mr. W. Marais, our liaison officer at Kew, reports that Evans 743 in Herb. Kew. has the same mixture, but that Galpin 6723 is *S. tugelensis* only. He also reports that Milford 636 and Galpin 6722 are *S. cryptolanatus*.

An acaulescent herb up to 8 cm high with a thick and woolly rootstock. *Leaves* rosulate, spathulate, occasionally oblanceolate, 3–8 cm long, 0.5–1.7 cm wide, apex subacute to obtuse, somewhat fleshy, glabrous, veins immersed, margins red, usually entire but sometimes distantly serrate, axils with long tufts of white wool. *Peduncles* simple, rarely divided into two; bracts 5–10, lanceolate with a subrotund base, white wool in axils. *Heads* solitary, subcampanulate, 1 cm long, 1.3–1.5 cm wide, calyced. *Involucral bracts* about 20, linear-lanceolate, 7–8 mm long, 1.5 mm wide, with acuminate apices. *Receptacle* honeycombed. *Ray florets* about 17, yellow. *Disc florets* numerous. *Pappus* of numerous barbellate bristles. *Achenes* glabrous.

Senecio cryptolanatus is a distinct species with yellowish green, somewhat fleshy, rosulate leaves. The plants seen by the author had red-margined leaves, a character which is not always evident in the dried material. All the collectors describe the flowers as yellow, but in the dried state the rays are almost white on the inner face and yellow on the outer. The plant flowers during March and April. The epithet *cryptolanatus* refers to the "hidden" tufts of wool in the axils of the leaves, bracts and involucral bracts.

This species grows on the summit of the Drakensberg Mountains between 8,900 and 11,000 feet usually at the edge of small streams or pools. Its known distribution is from Doodman's Krans Mountain in the Barkly East District of the Eastern Cape to Mont aux Sources in Natal—a range of some 200 miles. *S. cryptolanatus* was first collected in March, 1898, by Maurice Evans, one of the earliest collectors in the Drakensberg area.

S. cryptolanatus has no very close ally, but is probably nearest *S. tugelensis* Wood and Evans, which differs in being caulescent. It is rather surprising that *S. cryptolanatus* has been collected in mixed gatherings with *S. tugelensis*; morphologically the two species are easily distinguishable and in addition they have a different ecology. *S. cryptolanatus*, as already pointed out, is a streambank or pool-edge plant, whereas *S. tugelensis* grows in alpine grassveld.

***Senecio praeteritus* Killick, sp. nov.**, affinis *S. brevidentato* M. D. Henderson, sed foliis radicalibus cordato ovatis non oblanceolatis differt.

Herba erecta, ad 40 cm alta, simplex, basi fibrosa. *Caules* glabri vel breviter pubescentes. *Folia* glabra; radicalia cordato ovata, laminis 1.2–2 cm diam. petiolis 2.5–3 cm longis, apice subacutis vel rotundatis, marginibus repando dentatis sub-reflexis; folia caulina inferiora oblanceolata vel spatulata, 2.5–5.5 cm longa, 0.8–1.8 cm lata, marginibus ut in foliis radicalibus; superiora lanceolata, 1.3–2.7 cm longa, 1–4 mm lata, basi auriculata amplexicaulia, obscure et sparse dentata. *Pedunculi* laxe corymbosi, raro simplices. *Capitula* radiata, calyculata, lutea. *Receptaculum* alveolatum. *Involucri bracteae* circiter 20, lineares. *Flores radii* circiter 10. *Flores disci* numerosi. *Achaenia* juvenia glabra, tereta. *Pappi setae* numerosae, breviter barbellatae.

NATAL.—Bergville District: locally abundant, mountain side, Old Basuto Pass, National Park, 6,000 feet, Galpin 9739; locally frequent on streambank, Cathedral Peak Forest Influences Research Station, 6,800 feet, Killick 1796 (PRE, type).

Erect herb up to 40 cm high with a fibrous base. *Stems* simple, usually glabrous but sometimes minutely pubescent. *Leaves* glabrous, distinctly paler on the lower surface; radical cordate-ovate with the blade 1–2 cm diam. and petiole 1.5–3 cm long, apex subacute to round, margins repand dentate occasionally appearing crenate, sub-reflexed, teeth thickened; lower cauline oblanceolate to spatulate, 2.5–5.5 cm long, 0.4–1.8 cm wide, margins as in the radical leaves; upper cauline lanceolate, 1.3–2.7 cm long, 1–4 mm wide, auriculate and somewhat amplexicaul at the base, obscurely and distantly toothed. *Peduncles* laxly corymbose, rarely simple, with 1 or 2 linear bracts 2–6 mm long. *Heads* radiate, subcampanulate, 6–9 mm long, 6–8 mm wide at the summit, yellow, calyced. *Receptacle* honeycombed, angles of pits produced into subulate processes. *Involucral bracts* about 20, linear, 5–6 mm long, margins membranous, apex black-tipped, glabrous. *Ray florets* usually 10; tube 4–5 mm long, limb twice as long. *Disc florets* numerous, 7 mm long, widening above middle; lobes narrowly triangular, 1 mm long, 0.75 mm wide at base; style branches truncate, conspicuously hispid at tips; filaments thickened below anthers; anthers with incurved apical appendage. *Achenes* terete, glabrous. *Pappus* of numerous barbellate bristles.

This new species of *Senecio* was first collected in November, 1928, by E. E. Galpin. He found it growing at the side of the Old Basuto Pass in the Mont aux Sources area of the Drakensberg. Galpin describes the plant as “locally abundant”. Twenty-four years elapsed before it was collected again, hence the epithet *praeteritus* meaning “passed-over”. The author found the plant growing on a streambank in the upper reaches of the Indumeni Valley on the Little Berg in the Cathedral Peak area. There it is locally frequent.

The affinity of *S. praeteritus* seems to be with *S. brevidentatus* M. D. Henderson, which differs in having oblanceolate instead of cordate-ovate radical leaves.

A note by Dr. E. P. Phillips on the Galpin specimen states that the plant is “near *Senecio cordifolius* Linn. f.” At first sight this seems possible; *S. cordifolius*, a S. W. Cape species, has the same three leaf shapes. However, this is another example of homoplastic similarity between unrelated species—in this case between two species of different genera for, as pointed out by Spencer Moore in Journ. Bot. 41, 406 (1903), L’Heritier in Sert. Angl. 25 transferred *S. cordifolius* to *Cineraria* renaming it *C. mitellae-folia*. In *C. mitellae-folia* the achenes are compressed as is characteristic of *Cineraria*, whereas in *Senecio praeteritus* the achenes are clearly terete.

D. J. B. KILLICK.

CONVOLVULACEAE.

Ipomoea bisavium A. Meeuse sp. nov., *I. heterosepalae* Baker affinis sed pedunculis longioribus praecipue differt.

Perennis, alte scandens. *Caules* lignosi teretes, ad ca 1 cm diam. cortice atro-brunneo vel nigricanti rugoso obtecti, juveniles graciles adpresse puberuli. *Folia* firmiter herbacea in siccitate chartacea, ovato-cordata vel elongato-cordata, integra vel subcrenata, acuminata vel attenuata, mucronata basi late cordata vel subcordata, 3–7 cm longa 1.5–5 cm lata lobis basalibus rotundatis; lamina utrinque praecipue subtus minute adpresse pubescenti, glabrescenti costa et nervis secundariis gracilibus subtus paucis prominentibus petiolis gracilibus subteretibus dense adpresse puberulis 1–3 cm longis. *Inflorescentiae* axillares, pauciflorae, monochasiales vel interdum flores solitarii; pedunculus communis satis gracilis, teres, dense adpresse puberulus, ad 7 cm longus pedunculis secundariis ad 3 cm longis pedicellis gracilibus minute pubescentibus substriatis 0.5–2.5 cm longis; bracteolae submembranaceae ovato-lanceolatae vel oblongae, acutae, sparse puberulae, subciliatae, ca 6 mm longae 2–3 mm latae, deciduae. *Sepala* erecta, in vivo dilute virides in siccitate olivacea, extus pubescentia demum glabrescentia, inaequalia; 2 extiora cordato-triangularia lobis basalibus biauriculatis, subacuminata, subobtusata, margine plus minusve undulata, ca. 14 mm longa 8–9 mm lata; sepalum tertium semicordatum-subfalcatum, 10–11 mm longum 4–5 mm latum, 2 interiora minora, vix auriculata, oblonga-lanceolata, subacuta, 9–10 mm longa 2–3.5 mm lata. *Corolla* infundibularis, alba tubo ad basin intus violaceo; tubus ca 2 cm longus, limbus 4–6 cm diam., vix lobatus, 5-angulatus, patens cum 5 fasciis mesopetalis extus pilis albidis strigoso-pilosis. *Stamina* inaequalia, ad basin breve glanduloso-pilosa granulis pollinis spinulosis. *Pistillum* glabrum. *Capsula* ovoideo-conoidea, glabra, fusca, 10–12 mm longa, ca 8 mm diam. *Semina* plerumque 4, ca 4.5 mm longa, velutina et ad angulos cum linea pilorum longissimorum fulvidorum ca 7 mm longorum.

TRANSVAAL.—Zoutpansberg district: about 2 m. S. of Wyllie's Poort, *Meeuse* 10181 (flow. 2/4/1957, PRE, type); *Meeuse* 10237 (fruit 11/5/1957), isotypes in BM, BR, EA, K, L, SRGH.

A tall perennial climber, reaching the tops of the supporting trees. *Stems* woody, terete, attaining a thickness of about 1 cm near the base, in the older parts covered with a dark brown to blackish rough bark, the youngest twigs firmly herbaceous to wiry, green, adpressed-puberulous. *Leaves* firmly herbaceous drying chartaceous, ovate-cordate to elongate-cordate, entire or faintly crenate, acuminate to attenuate and mucronate at the apex, broadly and shallowly cordate to subtruncate at the base, with rounded basal lobes, on both surfaces, especially on the lower one, minutely adpressed-puberulous mainly on the nerves, more or less glabrescent; the midrib and the sub-palmately arranged main nerves slender, slightly prominent beneath; the blade 3–7 cm long and 1.5–5 cm wide, the petiole slender, subterete, densely adpressed-puberulous, 1–3 cm long. *Inflorescence* axillary, cymosely few-flowered or occasionally reduced to a single flower; common peduncle rather slender, terete, densely adpressed-puberulous, up to 7 cm long; secondary peduncles of the monochasia resembling the common peduncles but slightly thinner, up to 3 cm long; pedicels slender, minutely pubescent, somewhat striate, 0.5–2.5 cm long; bracteoles submembranous, ovate-lanceolate or oblong, acute, sparsely puberulous and subciliate, about 6 mm long and 2–3 mm wide, early deciduous. *Sepals* erect, unequal, light green drying olive-green, finely pubescent outside, glabrescent, not or hardly accrescent in fruit; two outer sepals cordate-triangular, biauriculate by the basal lobes of the cordate base, subacuminate, subobtusate at the very apex, more or less undulate along the margin, about 14 mm long and 8–9 mm wide near the base; third sepal somewhat asymmetrical, semi-cordate-subfalcate, 10–11 mm long and 4–5 mm wide; the innermost two distinctly smaller, not or hardly auriculate at the base, oblong-lanceolate, subacute, 9–10 mm long and 2–4.5 mm wide. *Corolla*

funnel-shaped, white with the lower portion of the tube purple-mauve inside; the tube glabrous, about 2 cm long, the limb spreading; hardly lobed, 5-angled, 4-6 cm in diam; the midpetaline areas strigose-pilose with white hairs on the outside. *Stamens* unequal, white, at the base shortly glandular-pilose; pollen grains spinulose. *Pistil* glabrous. *Capsule* ovoid-conical, glabrous, brown when ripe, 10-12 mm long and about 8 mm in diam. *Seeds* normally 4, about 4.5 mm long, shortly velutinous with greyish or drab hairs and in addition bearing fulvous hairs 7 mm long on the angles.

This plant was discovered after the manuscript of a revision of the South African Convolvulaceae had gone to press. Specimens were sent to the herbaria in Brussels, Kew, Nairobi and Salisbury, where Professor W. Robyns, Mr. W. Marais, Dr. B. Verdcourt and Dr. H. Wild all failed to match it. Mr. Marais, who also tried to match it in the British Museum (Nat. Hist.) herbarium, and Dr. Verdcourt reported that its nearest relationship is obviously with *Impomoea heterosepala*, a Somaliland species. Thanks are offered to all the botanists who so promptly answered my queries.

As the plant under discussion was collected in a place which was rather inaccessible until the opening of the new road to Wyllie's Poort, it is unlikely to be an introduction or a garden escape. The locality is on a dry rocky hillside northwest of the new road between the Punch Bowl and Wyllie's Poort, about two miles from the Poort. This locality was visited twice, in April, 1957, for flowering material, and again in May of the same year to collect the fruits. Only a single plant was seen, and the flowering and fruiting specimens are from the same individual. This species is named in honour of Dr. Allan V. Bird, M.D. of Johannesburg and his son Peter for their active assistance in the gathering of the specimens, which, in the dense thorn scrub of the type locality, was by no means a sinecure.

I. bisavium is closely related to *I. heterosepala* Baker, but according to the report received from Mr. Marais, differs in the following characters:—

	<i>I. heterosepala</i> .	<i>I. bisavium</i> .
Flowers.....	Almost invariably solitary	Inflorescence usually several-flowered.
Peduncles.....	1.1-5 cm long up to bracts and articulation.	Common peduncle 3-7 cm long.
Pedicels.....	1.5-2.5 cm long.	Up to 3 cm long.
Bracts.....	Small and narrow.	Elliptic, foliaceous.
Sepals.....	Ovate-cordate, acute.	Cordate, acute.

The seeds and apparently the colour of the corolla of *I. heterosepala* are unknown, but the differences indicated above, apart from the complete geographical separation, appear to be sufficient to warrant specific distinction.

Viable seeds were obtained which have germinated quite well and it is hoped that plants can be raised, so that this species can be figured for "Flowering Plants of Africa" in the near future.

A. D. J. MEEUSE.

CORRECTION.

"I wish to correct an erroneous statement which appeared in Dr. Meeuse's recent excellent account of the South African Convolvulaceae (Bothalia 6, 4: 1958). On reading through I noticed on page 753 the statement that the type of *Impomoea aquatica* Forsk. at Copenhagen is not in accordance with the usual conception of that species. This statement should have applied to *Ipomoea biloba* Forsk. and a note concerning this is to be published in the Kew Bulletin. This error is entirely due to a misleading statement in the postscript of a letter I sent to Dr. Meeuse and I must apologise to him and to his readers."

B. VERDCOURT.

EUPHORBIACEAE.

Euphorbia rowlandii R. A. Dyer, sp. nov., habitu acaule ramis 5-7-angulatis podariis corneis confluentibus cyma solitaria capsula plus minusve acute triangulata distinguitur.

Planta succulenta acaulis perennis armata, basi profunde ramosa ad 1.5 m alta. *Rami* suberecti simplices vel raro ramulosi, 5-7-angulati in segmentis 7-15 cm longis basin versus 3-5 cm latis superne angustioribus constricti, podariis corneis 2-aculeatis confluentibus, aculeis ad 1 cm longis. *Cyma* solitaria plus minusve 2-4 mm supra aculeos emittentia, breviter pedunculata, 3-cyatheis. *Cyathium* primum masculinum, cyathea lateralia 2, bisexualia; involucrum 4.5-5 mm diametro, glabrum, lobis parvis subquadratis fimbriatis et glandulis 5 transverse oblongis 2.5-3 mm latis contiguis integris flavis munitum. *Ovarium* breviter stipitatum; styli circiter 1.5 mm longi infra medium connati. *Capsula* circiter 9 mm lata plus minusve acute triangulata pedicello circiter 5 mm longo exserta.

PLATE II.

TRANSVAAL.—Soutpansberg District; on rocky outcrop eight miles north of Punda Maria in Kruger National Park, *Rowland Jones* 48 in National Herbarium, Pretoria, No. 28636 (PRE, type); 48A in PRE No. 28637; *Codd* 5370.

A succulent shrub 1-2 m tall and about the same width, with a suppressed main trunk rising only very shortly above ground and producing many spreading-erect branches. *Branches* 5-7-angled, very rarely rebranched, constricted into segments 7-15 cm long; segments 3-5 cm broad near their base and narrowed gradually upwards to the base of the segment above, with the constriction about 2 cm broad; angles acute, winglike, with a narrow continuous horny margin, paired spines and rudimentary leaves. *Spines* in pairs about 1 cm apart, 5-10 cm long without prickles or with only rudimentary ones on either side of the leaf-base or scar. *Cymes* solitary, 2-4 mm above the spines, shortly pedunculate, consisting of 1 central male cyathium and 2 lateral bisexual cyathia arranged in a plane parallel to the main axis; peduncle about 2 mm long and about as thick, bibracteate; involucre cup-shaped, glabrous, about 4.5-5 mm diam. with 5 glands and 5 small subquadrate, fimbriate lobes; glands contiguous, transversely oblong, 2.5-3 mm in their greater width, nearly flat on upper surface, yellow. *Ovary* on a short gynophore about 1 mm long with a small rim-like calyx; styles about 1.5 mm long, united below the middle, with free portions about 1 mm long, spreading, bifid at tips; ovule attached within a hood, filling the cell; capsule purple, more or less acutely 3-lobed, about 9 mm broad, seed globose, about 2.5 mm diam.

The first recorded specimen of the species was collected by Dr. L. E. Codd in 1949 when he visited Lt. Col. Rowland Jones, then in charge of the northern sector of the Kruger National Park with headquarters at Punda Maria. Lt. Col. Rowland Jones subsequently forwarded both flowering and fruiting material. It is now nearly 10 years since the plants were recorded by the two collectors as rare on the sand stone ridges 8-9½ miles north-west of Punda Maria and although a constant search has been maintained no further records have been made.

Several miles distant from the site of *E. rowlandii* occurs *E. confinalis* R. A. Dyer which undoubtedly is a fairly near relative in spite of the fact that it grows into a tree of about 25 ft. tall, generally has fewer angles to the branches and shows significant differences in the inflorescence. There is a close superficial resemblance to *E. waterbergensis* R. A. Dyer, which however, has more slender, parallel-angled branches and differs in details of the inflorescence.

The combination of characters to be given taxonomic importance are the trunkless habit, the segmented branches with 5–7 angles, the continuous horny margin to the angles, the shortly pedunculate solitary cymes with 3 cyathia developed in a plane parallel to the main axis and the relatively deeply 3-lobed capsule.

R. A. DYER.

Euphorbia cussonioides Bally, sp. nov., affinis *E. obovalifoliae* A. Rich., sed foliis rotundioribus, ramulis brevioribus, angustioribus, ad ramorum cacumina congestis, ovarii denique calyci sine processis distinguenda.

Arbor 20–25 m alta, succulenta, spinosa, trunco erecto, cylindrico, ad 12 m alto, 80 cm diametro, ramis primariis paucis, spiraliter dispositis, ascendentibus, teretibus, rare ramificis, ramulis numerosis ad cacumina coronatis. *Ramuli* usque 75 cm longi, segmentati, inter segmenta constricti, ramifici, 3- raro 4-angulati, angulis valde compressis, 2–3·5 cm latis, margine undulato vel obtuse dentato. *Podarii* in apicibus dentium dispositi, cornei, brunneogrisei, breviter triangulati, 5 mm longi, aculeis binis ad 1·5 mm longis, saepe obsoletis instructi. *Folia* sessilia, in transversum subrotunda, ad 9·5 mm longa, ad 10 mm lata, succulenta, mox decidua. *Cymae* 1–4, ex podario uno, 1–2 mm supra aculeos productae, perbreviter pedunculatae, 3 cythia gereantes. *Pedunculum* bibracteatum. *Bracteeae* late deltoideae vel late oblongo-ovatae, membranaceae, margine denticulato, 3 mm latae, 2·3 mm longae. *Cyathium* primum masculinum, deciduum. *Cyathium* bisexuale 6·5 mm diametro, in forma poculi, 5 glandulis flavoviridibus, in transversum reniformibus, 3·4 mm latis, 1·3 mm longis, margine integro, leviter incrassato, 5 lobis subquadratis, fimbriatis munitum. *Capsula* breviter exserta, erecta, glabra, profunde trilobata, 10–12 m longa, 14–15 mm diametro. *Calyx* obtuse trilobatus, lobis breviter dentatis munitus. *Styli* usque basim divisi, erecti, ad 1·2 mm longi, apice bifidi. *Semen* subglobosum, 4 mm longum, 3·5 mm diametro, griseomaculatum.

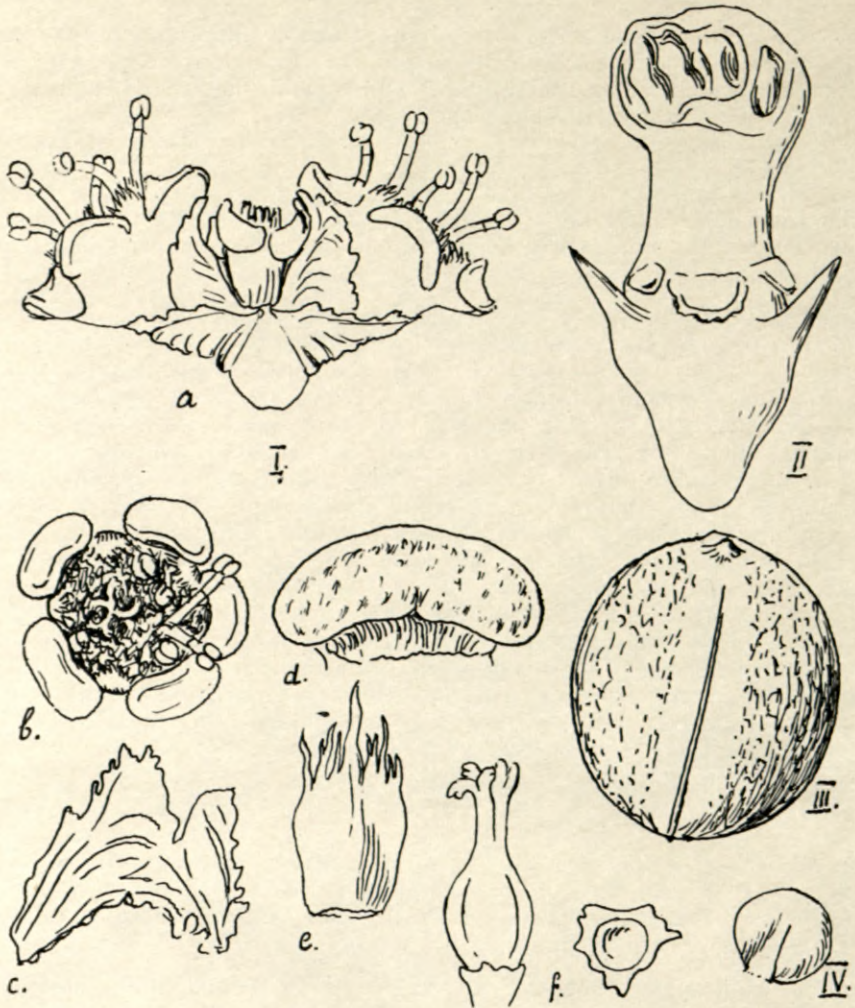
PLATE III.

KENYA COLONY.—Southern Prov.; Ngong Dist., at Ngong, *McDonald* (Bally E 42) 8/1/39 (EA, type) (EA, type; Central Prov.: Fort Hall Distr., Meru-Sagana, *Jackon* (Bally E 171); Ndarugu, *Bally*; Thika, *Bally*; Gorge of Chania River, *Piers*. Embu Distr., *Bally*, (Phot. CVI, 36).

With a height up to 25 metres this species is one of the tallest and most imposing of the tree *Euphorbias*. Its comparatively late discovery in 1939, hardly twelve miles from Nairobi, is partly due to its habitat, tall mixed Highland Forest in which its lofty crown merges with the closed canopy, and partly to its general appearance. The crown of *E. cussonioides* consists of comparatively few ascending branches, crowned by clusters of short, thinly winged branchlets which, at a distance, resemble foliage; its general appearance is not unlike that of *Cussonia holstii*, which is expressed in the name of the new species. The type of forest in which *E. cussonioides* occurs comes under the category of "Mixed Highland Forest" which, in the neighbourhood of Nairobi, consists mainly of *Brachylaena hutchinsii*, *Croton macrostachys*, *C. megalocarpus*, *Calodendrum capense*, *Cussonia holstii*, *Olea chrysophylla*, *Strychnos* spp. *Teclea* spp., *Warburgia ugandensis*.

The range of distribution of *Euphorbia cussonioides*, as it is known at present, is restricted to the Kenya Highlands at altitudes between 4,500 ft. and 6,000 ft., where it occurs in a belt extending from the foot of the Ngong Hills just South of Nairobi north-east wards for about 90 miles as far as Embu, on the southern slopes of Mt. Kenya where the annual rainfall is between 34 and 60 inches. In spite of its fleshy branches and its small deciduous leaves this species is not a xerophyte.

The Kikuyu-name is "kithuri"; in Embu the tree is known as "mramba".

FIG. 1.—*Euphorbia cussonioides* Bally.

I.	a: cyme.....	1 × 4
	b: bisexual involucre.....	1 × 4
	c: bract.....	1 × 4
	d: gland.....	1 × 10
	e: lobe.....	1 × 10
II.	spine-shield.....	1 × 10
III.	seed.....	1 × 10
IV.	leaf.....	1 × 1

The timber is very soft, white and even-grained and should be well suited for the manufacture of matches. The copious latex is white. It hardens when drying to a guttapercha-like consistency.

A tree, 20–25 m high, fleshy, spiny, with an erect, cylindrical bole to 12 m high and to 80 cm diam. Branches few, spirally disposed, ascending, terete, sparsely branched, bearing at their tips numerous 3–4-angled, fleshy, green branchlets, branchlets up to

75 cm long, segmented, with constrictions between the segments; the segments up to 20 cm long, branching from the constrictions, 3- or rarely 4-angled, with angles much compressed, 2-3.5 cm wide, their margins undulate or obtusely dentate. *Spine-shields* disposed at the apex of the teeth, grey-brown, shortly triangular, 5 mm long, with a pair of thin spines up to 1.5 mm long, sometimes obsolete. *Leaves* sessile, transversely subrotund up to 9.5 mm long, 10 mm wide but mostly smaller, fleshy, soon deciduous. *Cymes* produced from the spine-shield, 1.2 mm above the spine-pair, one to four, very shortly pedunculate, bearing one central and two lateral cyathia each. *Peduncle* fleshy, with two lateral bracts. *Bracts* broadly deltoid, or obovate-oblong, membranous, 2.3 mm long, 3 mm wide, with a denticulate margin; central cyathium male, soon deciduous, lateral cyathia bisexual, 6.5 mm diam., cupshaped, bearing 5 not contiguous, reniform, greenish-yellow glands with entire, slightly thickened, raised margin, and with 5 subquadrate, fimbriate lobes. *Capsule* shortly exserted, erect, glabrous, deeply 3-lobed, 10-12 mm long, 14-15 mm diam. *Calyx* obtusely 3-lobed; its lobes shortly and irregularly dentate. *Styles* divided to the base, fleshy, erect, 1.2 mm long, with bifid apex. *Seeds* subglobose 4 mm long, 3.5 mm diam., grey with darker brown-grey spots.

P. R. O. BALLY.

RHAMNACEAE.

Ziziphus rivularis L. E. Codd, sp. nov., *Z. pubescenti* Oliv. affinis, sed cymis sessilibus ovariis trilocularibus stylis 3 foliis glabrescentibus differt.

Frutex vel arbuscula ad 7 m altus inermis; ramuli cano-tomentosi. *Folia* petiolata lanceolata vel ovato-lanceolata serrulata glabrescentia, basi rotundata obliqua, apice acuta; petiolus 4-10 mm longus; lamina 3.5-6.5 cm longa, 1.2-3.4 cm lata. *Stipulae* minutae. *Cymae* axillares sessiles, floribus 1-5; pedicelli 1-1.5 mm, deinde frugibus maturatis 2.5-3 mm longi. *Calyx* 5-lobatus coriaceus, externe pubescens; lobi trianguli, 1.5 mm longi, apicem versus crassiores. *Corolla* minuta; petala 5, obovata unguiculata. *Stamina* 5, petalis opposita. *Orbis* carnosus, obscure 5-lobatus. *Ovarium* in orbe depressum, cellulis 3; ovula solitaria; styli 3, subulati. *Fructus* drupa globosus indehiscens, diametro 6-7 mm.

TRANSVAAL.—Soutpansberg: south end of Wyllie's Poort, *Gerstner* 6011; 6037; *Codd* 3009; 4823; 8348; Kruger National Park, Baiandbai, *Lang* in TM 32131; Shingwedzi River, *Lamont* 26; Pongola River, *van der Schijff* 3819. Nelspruit: Kruger National Park, beside stream in Lebombo Mountains, Crocodile Bridge Division, *van der Schijff* 3974 (PRE, type). Barberton: 6 miles south of Komatipoort, on banks of Komati River, *Codd* 7777.

MOCAMBIQUE.—Goba, *Hornby* 712; Umbeluzi, *Torre* 6503.

Shrub or small tree up to 7 m high, unarmed; bark grey, smooth; branchlets and innovations covered with a short, greyish tomentum. *Leaves* alternate, petiolate, lanceolate to ovate-lanceolate, serrulate, apex acute, base rounded, often oblique, from which three main nerves arise, sparingly pubescent on the nerves below and along the margin, becoming glabrous with age; petiole 4-10 mm long; blade 3.5-6.5 cm long and 1.2-3.4 cm broad. *Stipules* minute. *Inflorescence* an axillary, sessile cyme, consisting of 3-5 (rarely 1 or 2) shortly pedicellate flowers; pedicels 1-1.5 mm, elongating to 2.5-3 mm in the fruiting stage. *Calyx* 5-lobed, coriaceous, pubescent without; lobes triangular, 1.5 mm long with a thickened keel towards the apex within. *Corolla* minute; petals 5, obovate, clawed, truncate at the apex, attached between the calyx lobes. *Stamens* 5, opposite the petals; filaments 1 mm long; anthers 2-celled, medifixed. *Disc* fleshy, obscurely 5-lobed. *Ovary* superior, embedded in the disc, 3-celled; ovules solitary, erect; styles 3, free above the disc, subulate; stigma scarcely differentiated. *Fruit* globose, drupaceous, indehiscent, usually solitary in the leaf axil, 6-7 mm in diameter, dark brown when ripe, shortly pedicellate; endocarp and septa relatively thin, semi-woody; seeds usually 3 (rarely 1 or 2), compressed.

Material of this species has been accumulating at the National Herbarium for some years. Specimens were sent to Kew Herbarium and were reported to be unmatched in any species represented there. An attempt to name it in Suessenguth's treatment of the Rhamnaceae, Pflanzenfam. 20d (1953), was unsuccessful. It is unique among South African members of the genus in being unarmed and in having a 3-celled ovary with 3 styles, and a fruit in which the endocarp and septa between the cells do not develop into a hard, stony centre. Nevertheless, these are not characters which would exclude it from the genus *Ziziphus*.

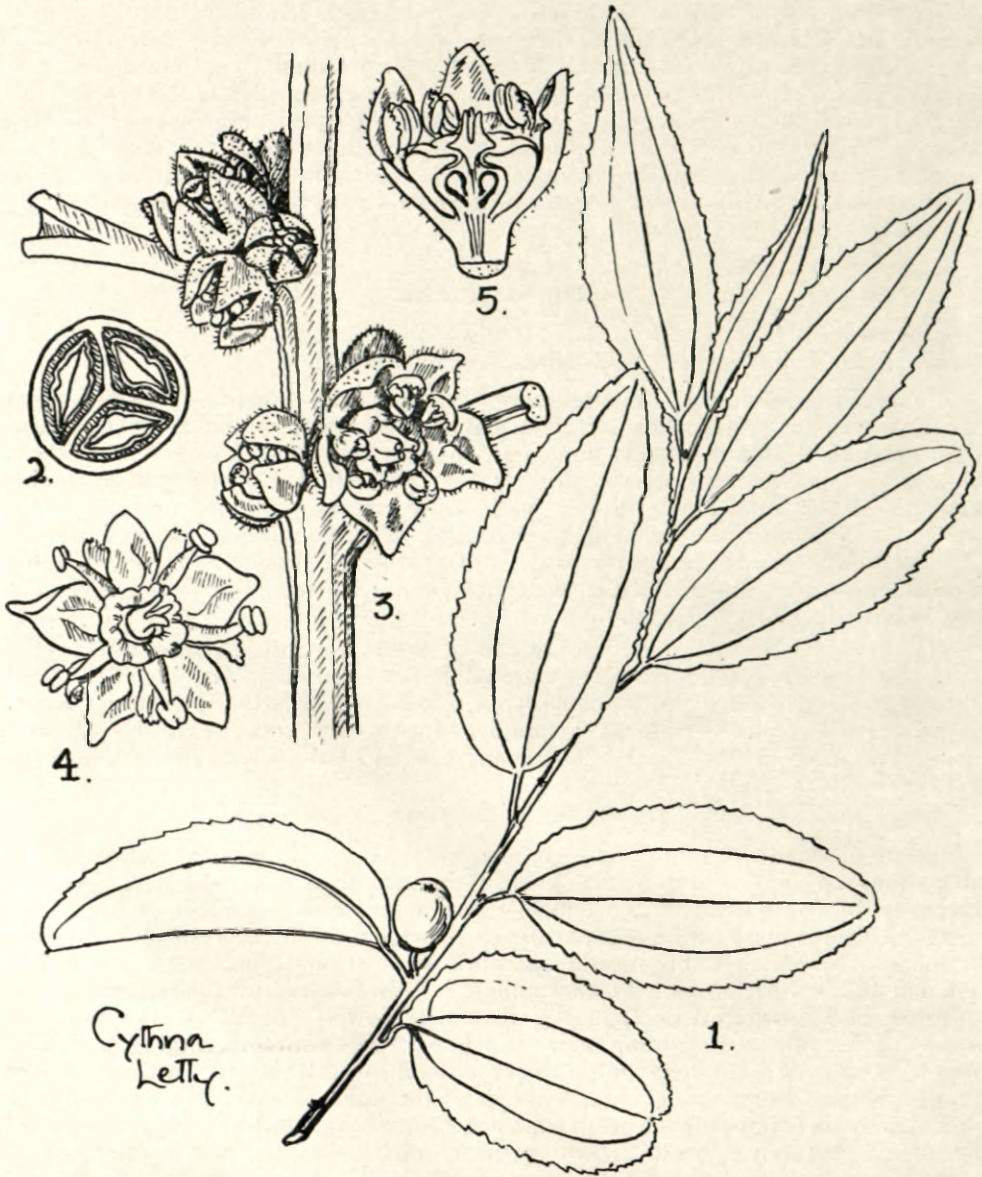


FIG. 2.—*Ziziphus rivularis* L. E. Codd (van der Schijff 3974). 1, fruiting twig, natural size; 2, transverse section through fruit, $\times 3$; 3, flowering twig, $\times 10$; 4, flower, $\times 10$; 5, section through flower, $\times 10$.

In vegetative characters it shows a close resemblance to *Z. pubescens* Oliv., but there are important floral differences. The main distinguishing features are summarised below:—

	<i>Z. pubescens.</i>	<i>Z. rivularis.</i>
Leaves.....	Persistently tomentose.	Glabrescent.
Cymes.....	Shortly pedunculate, several-flowered.	Sessile, 1- to 5-flowered.
Ovary.....	2-celled.	3-celled.
Styles.....	2.	3.
Fruit.....	Ovoid, apiculate.	Globose.
Endocarp and septa.....	Thick and woody.	Relatively thin, semi-woody.

Z. rivularis has so far been recorded only from the northern and eastern Transvaal and from the neighbouring region of Mocambique. Most collectors record that it is found on stream banks or in water courses, often among rocks, and this ecological character has suggested the specific name.

It may be noted that Suessenguth, l.c. (1953) cites the genus as *Zizyphus* Mill., Gard. Dict. Abridg. Ed. 4 (1754) and refers to a discussion on the spelling of the generic name by Loew in Flora der Juden, 3: 139 (1924). This work has not been consulted, but the main facts appear to be as follows: The species *Z. jujuba* Mill. was known in ancient times as "zizyphon" (Greek), "zizyphus" (Latin) and "Zizuf" (Arabic). It was listed by Dodonaeus (1616) as *Zizyphus* and by Linnaeus, Sp. Pl. Ed. 1: (1753), as *Rhamnus zizyphus*. However, Tournefort, Inst. Rei Herb. Ed. 3: 627, t. 403 (1719), although he cites Dodonaeus, spells the generic name as *Ziziphus* and Miller, basing his genus on Tournefort's reference, adopted this spelling consistently in his fourth and subsequent editions. Even if it is argued that this is a philological error, it was deliberately used by Miller and would appear to be the spelling that must be taken up according to the rules.

L. E. CODD.

SELAGINACEAE.

Dischisma struthioloides Killick, sp. nov., affine *D. squarroso* Schlechter, sed foliis angustioribus acutioribus differt.

Fruticulus multo ramosus, erectus, 30–60 cm altus, ramis divaricatis, partim albolanatis, dense foliatis. *Folia* subreflexa, sessilia, anguste triangula, 3–5 mm longa, basi 1–1.5 mm lata, integra, utrinque glabra, plus minusve glauca. *Spicae* terminales, cylindratae, 1–3 cm longae; bractae foliis similes sed basi 2.5 mm latae et dimidio inferiore ciliatae. *Calycis segmenta* 2, libera, navicularia, 4 mm longa, 0.7 mm lata, ciliata. *Corolla* alba, tubo gracili, antice ad infra medium fissio, 1.1 cm longo, lobis 4, subaequalibus, oblongis, 2.5 mm longis, 1 mm latis, lobo quinto rudimentario, 0.8 mm longo, subulato. *Stamina* 4, superiora 1.5 mm longa, inferiora 0.5 mm longa, antheris 1.5 mm longis, medifixis. *Ovarium* 1 mm longum; stylus 3 mm longus, stigmatibus simplicibus, 2.5 mm longo.

CAPE PROVINCE.—Namaqualand: 11 miles east by south of Hondeklip Bay, Strandveld on dunes, c. 500 feet, *Acocks* 14941 (PRE, type); Hondeklip, *Pillans* 163.

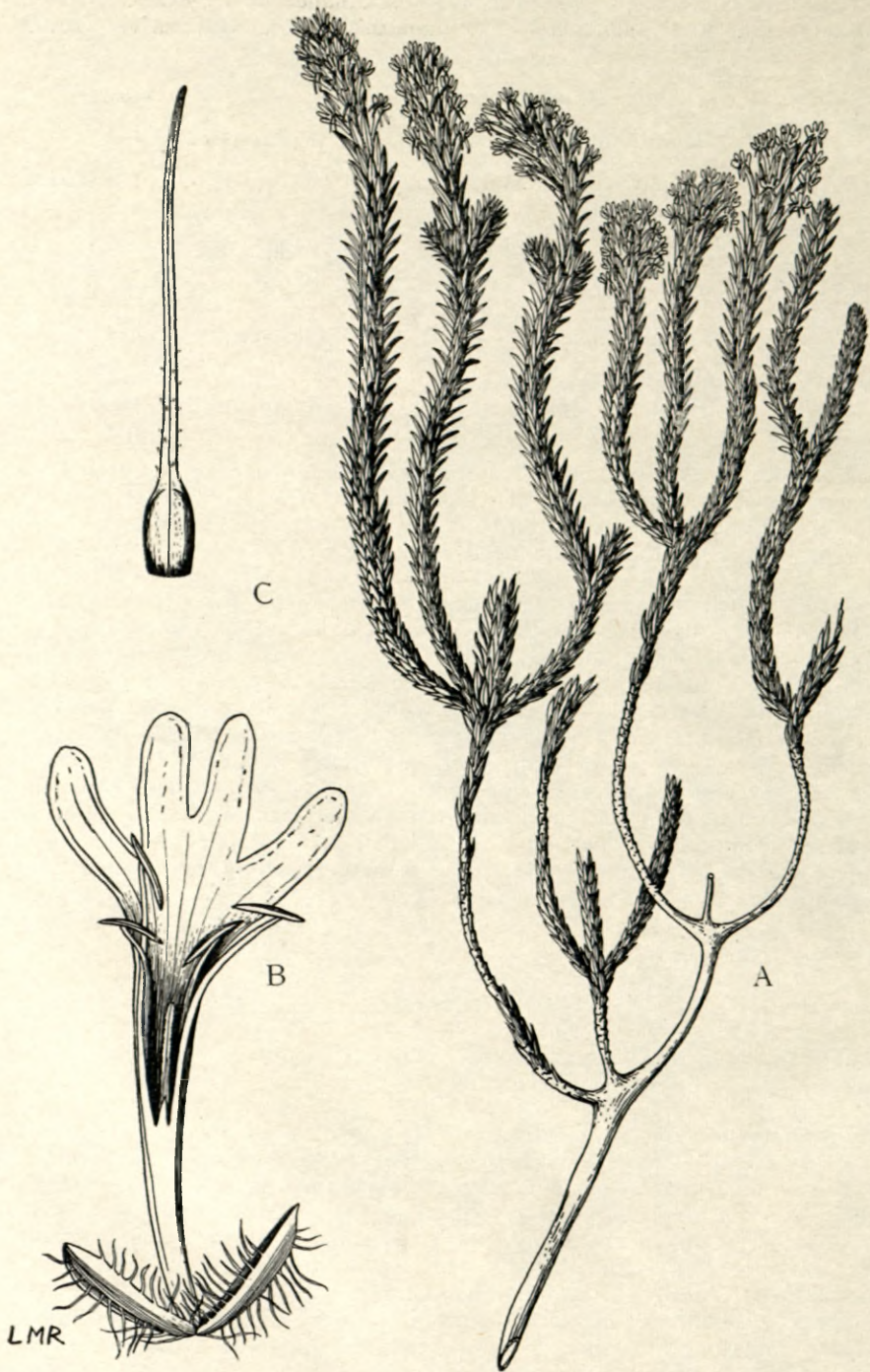


FIG. 3.—*Dischisma struthioloides* Killick : A, habit, $\times 1$; B, flower, $\times 10$; C, pistil, $\times 20$.

An erect, much-branched shrublet, 30–60 cm high. *Branches* divaricate, white-lanate in parts, densely foliate, older portions covered with persistent leaf-bases. *Leaves* slightly reflexed, sessile, narrowly triangular, 3–8 mm long, 1–2 mm wide at the base, glabrous, somewhat glaucous. *Spikes* terminal, cylindrical, 1–3.5 cm long; bracts similar to the leaves but 2.5 mm wide, almost ovate and ciliate in the lower half. *Calyx segments* 2, free, boat-shaped, acute, 4 mm long, 0.7 mm wide, ciliate. *Corolla* white; tube slender, 1.1 cm long, slit to just below half-way, lobes 4, subequal, oblong, 3 mm long, 1 mm wide, vestigial fifth lobe at base of slit, 1 mm long, subulate. *Stamens* 4, didynamous, upper 1.5 mm long, lower 0.5 mm long; anthers 1.5 mm long, medifixed. *Ovary* 0.5–1 mm long; style 3 mm long, with few scattered glands; stigma 2.5–3 mm long.

This new species of *Dischisma* from Namaqualand appears to have been collected only twice; first by Mr. N. S. Pillans in 1924 and then by Mr. J. P. H. Acocks in 1948. The specific epithet *struthioloides* points to the superficial similarity of this plant to species of *Struthiola* in Thymelaeaceae. So marked is this similarity that the Acocks specimen was originally misidentified as a *Struthiola*. The nearest ally of *D. struthioloides* is *D. squarrosus* Schlechter which, however, has broader and blunter leaves.

D. J. B. KILLICK.

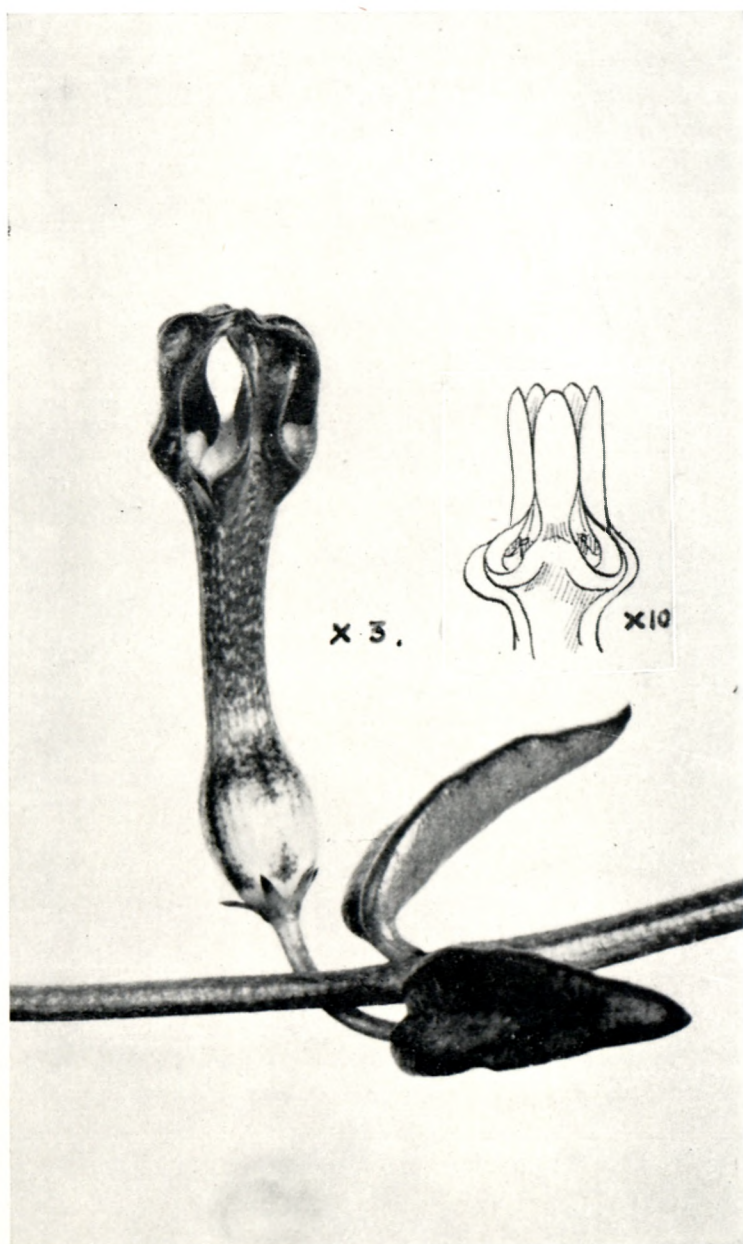


PLATE I.—*Ceropegia occulta* R. A. Dyer.

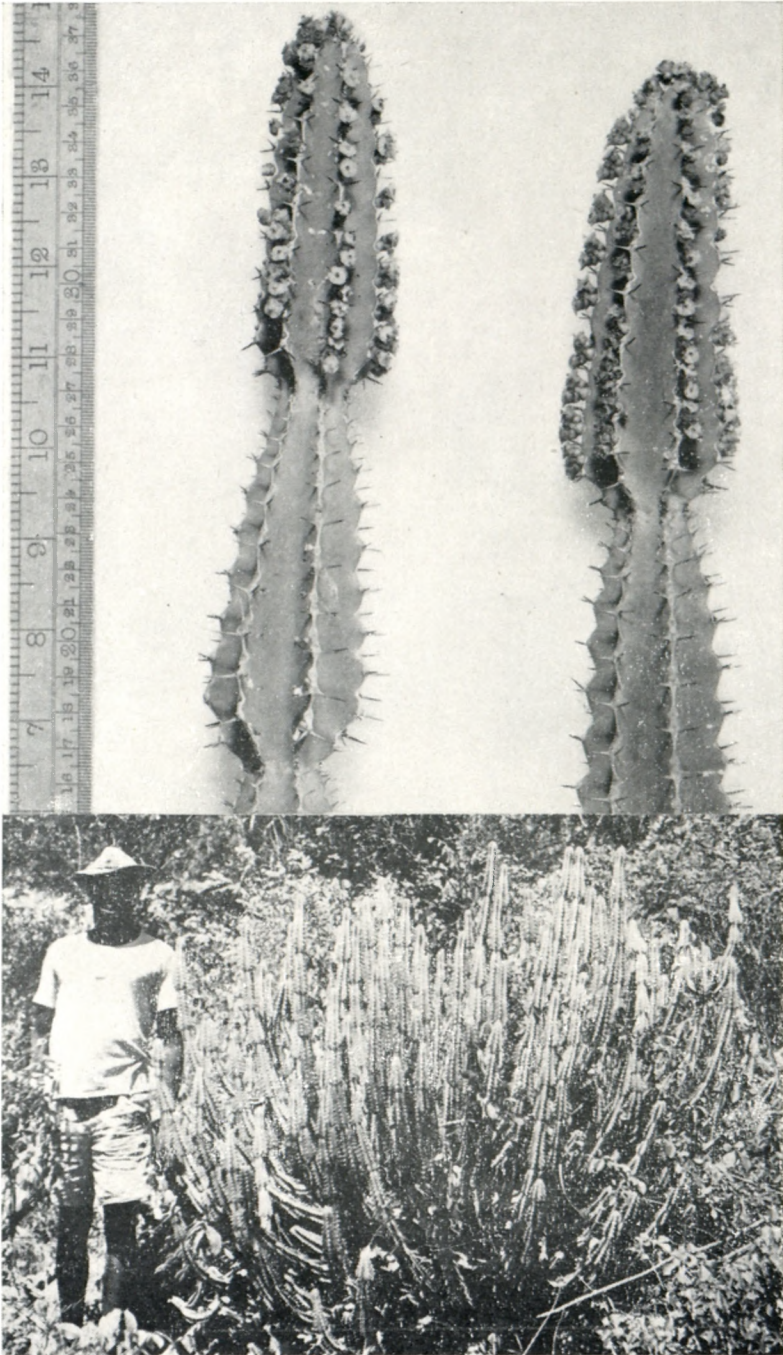


PLATE II.—*Euphorbia rowlandii* R. A. Dyer.

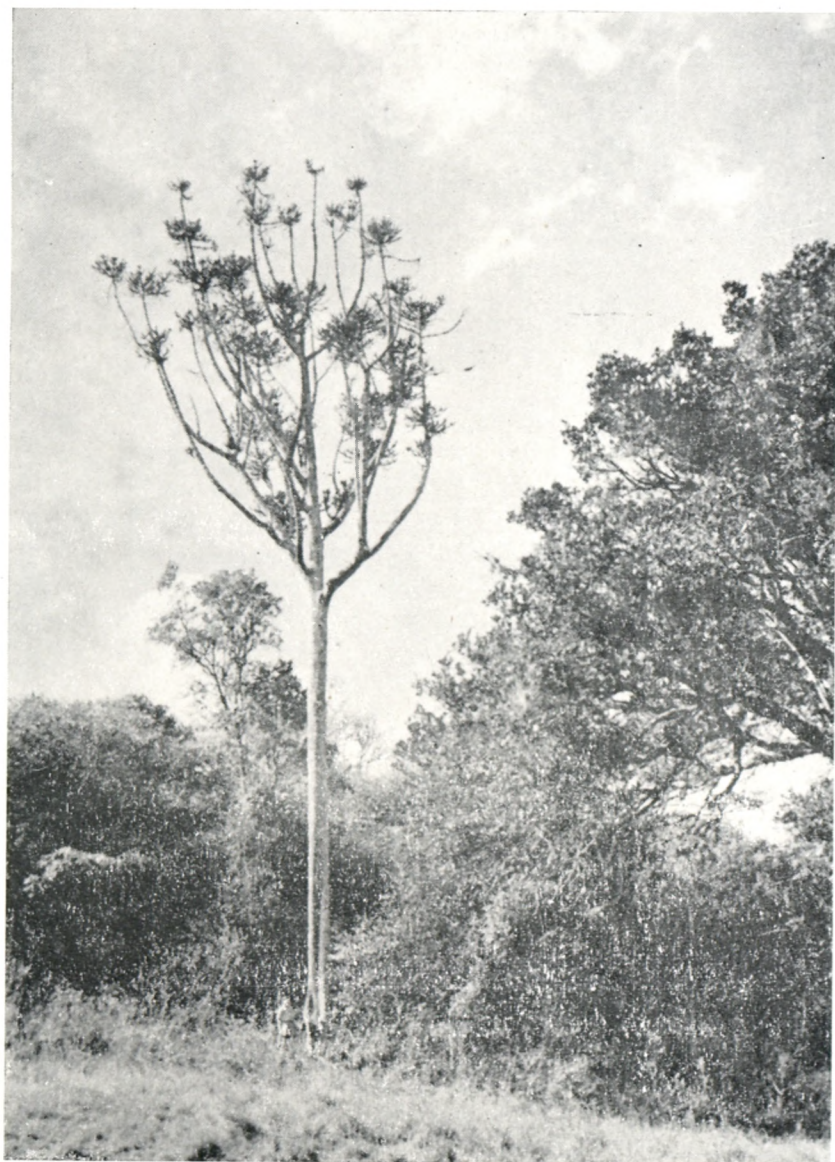


PLATE III.—*Euphorbia cussonioides* Bally.

