

FSA contributions 19: Asteraceae: Anthemideae: *Eumorphia*

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INTRODUCTION

The genus *Eumorphia* DC. belongs to the tribe Anthemideae in the subfamily Asteroideae of the family Asteraceae. It consists of six species and two subspecies (Hilliard & Burt 1982), which are endemic to southern Africa. It occurs widely in southern Africa in Limpopo, Mpumalanga, Swaziland, Free State, KwaZulu-Natal, Lesotho, Western and Eastern Cape (Herman *et al.* 2003).

MATERIAL AND METHODS

A total of seven *Eumorphia* taxa were studied from herbarium specimens housed in PRE. In each species, morphological characters were investigated. The length of the corolla, length and width of the involucre, length of the style and ovary, number of ray florets, where possible, and length of cypselae were measured with the aid of a Bausch & Lomb StereoZoom® Series microscope. Two cypselae in each taxon, except in the case of *E. swaziensis* and *E. corymbosa*, were examined by means of a scanning electron microscope (JSM-840, JEOL, Tokyo, Japan). Anthers were studied under a dissecting and light microscope and photographs were taken with a digital camera (Canon Powershot S80 Digital Camera) mounted on the light microscope (Olympus Vanox-S). Type specimens seen on the website are distinguished by the code e! in citations below. Acronyms for herbaria are listed in Holmgren *et al.* (1990) and in Smith & Willis (1999).

Eumorphia DC., Prodrum 6: 2 (1838); Harvey: 153 (1865); Källersjö: 538 (1985); Bremer & Humphries: 94 (1993); Bremer: 448 (1994); Herman *et al.*: 137 (2000); Oberprieler *et al.*: 355 (2007); Oberprieler *et al.*: 643 (2009). Type species: *E. dregeana* DC.

Shrubs or shrublets, glabrous or pubescent. *Leaves* opposite, alternate in *E. davyi* and *E. swaziensis*, ericoid, sometimes clustered, entire or lobed. *Capitula* heterogamous, radiate, terminal, solitary or corymbose in *E. corymbosa* and *E. swaziensis*, shortly pedunculate or subsessile. *Involucre* campanulate to subglobose or cylindrical in *E. corymbosa*. *Involucral bracts* in 3–5 rows, outer sometimes with 2–5 glands on back near apex, inner ciliate near apex, sometimes all with broad, membranous apices. *Receptacle* flat or convex, rarely conical, paleate or sometimes epaleate in *E. davyi*; paleae longer than disc florets, linear, sometimes with bent, apical appendage. *Ray florets* female, fertile; corolla white sometimes flushed rose-pink, lamina

oblong to linear, 3-toothed, 2–4 times as long as tube, glandular. *Style* slightly branched to branched with stigmatic areas along edges. *Disc florets* bisexual, fertile, yellow; corolla tube sometimes campanulate above, with 5 ovate lobes. *Anthers* minutely caudate with linear, apical appendages; endothelial tissue polarized. *Style* linear, branched, truncate, branches with stigmatic areas along edges. *Cypselae* ribbed, non-myxogenic, cylindrical, minutely papillose especially on ribs, with dentate or entire apical rim. *Pappus* absent. Figure 1A–C.

Etymology: the generic name *Eumorphia* is derived from the Greek words, *eu-* meaning well and *morphe* meaning form; referring to the neatness of the foliage (Jackson 1990: 91).

Conservation status: according to the latest Red List of South African plants (Raimondo *et al.* 2009), all species are listed as LC (Least Concern).

Key to species

- 1a Capitula corymbosely arranged, ≤ 5 mm diam.:
 - 2a Leaves opposite, narrowly linear, entire 1. *E. corymbosa*
 - 2b Leaves alternate, mostly trifid just above middle of stem 2. *E. swaziensis*
- 1b Capitula solitary, > 5 mm diam.:
 - 3a Leaves alternate 3. *E. davyi*
 - 3b Leaves opposite:
 - 4a Subshrub up to 0.6 m tall, receptacle epaleate or with few marginal paleae 4. *E. prostrata*
 - 4b Erect shrubs to 1 m tall, receptacle paleate:
 - 5a Leaves linear-terete, closely imbricate, up to 3.5 mm long 5. *E. dregeana*
 - 5b Leaves entire or 3-lobed, up to 8 mm long 6. *E. sericea*

1. *Eumorphia corymbosa* E. Phillips in Journal of South African Botany 16: 20 (1950). Type: Western Cape, 3222 (Beaufort West): on top of Molteno Pass, 5500' [1804 m], (–BA), May, J.P.H. Acocks 14340, (PRE, holo.).

Woody subshrub, 0.1–1.0 m high, single-stemmed at base becoming branched, glabrous; stem very rough. *Leaves* opposite, narrowly linear, entire, upper 4–5 × 1.2 mm, lower 10–18 × 1.2 mm, some clustered at nodes, acuminate. *Capitula* heterogamous, radiate, small, 5 × 2.5 mm when pressed, corymbose at ends of branches, shortly pedunculate. *Involucre* cylindrical; involucral bracts in 5 rows, imbricate, glabrous; outer ovate, 1 × 0.5 mm, membranous along edges; middle ovate-lanceolate, 1.1 × 1 mm, membranous along edges; inner 5 × 1 mm, lacerate, tips membranous. *Receptacle* flat, paleate; paleae linear-lanceolate, 2 mm long, almost as long as disc florets. *Ray florets* female, white; corolla limb glandular, 3 mm long, 3-toothed; corolla tube shorter than limb, sparsely glandular. *Style* terete, 1.5 mm long, branches linear, obtuse, 0.4 mm long. *Ovary* ellipsoid, ribbed, glabrous. *Disc florets* bisexual, fertile, yellow; corolla tube 1.2 mm long, glandular; corolla limb 1 mm long, glandular, 5-lobed; lobes ovate, 0.2 mm long.

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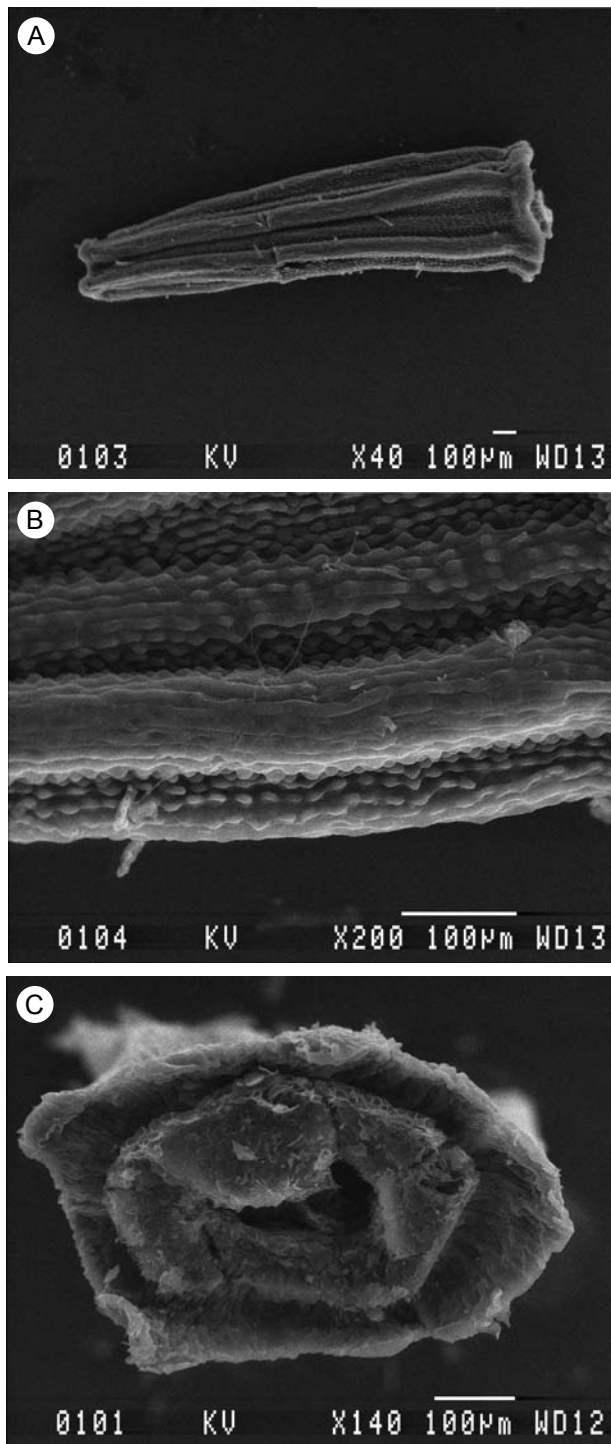


FIGURE 1.—A–C, scanning electron micrographs of cypselas of *E. davyi*, *Brusse 5010*: A, surface with papillae especially on ribs; B, surface at higher magnification; C, showing apical rim.

Anthers linear, minutely caudate, with lanceolate apical appendage. *Style* terete, branches linear, truncate, 2 mm long. *Ovary* 1.2 mm long, \pm ellipsoid, slightly striate, glabrous. *Cypselas* 2 mm long, glabrous, cylindrical, minutely papillose especially on ribs, crowned with thickened apical rim. *Pappus* absent. *Flowering time*: Feb.–Mar.

Distribution and habitat: *Eumorphia corymbosa* is endemic to the Western Cape in the Beaufort West Division, from the National Park, Mountain View, down to

the foot of the Nuweveld Mtns as far as Molteno Pass (Figure 2), at 1 000–1 828 m. It grows in seasonal wet soils along rivers and in marshy habitats.

Notes: *Eumorphia corymbosa* can be distinguished from other species in the genus by the small corymbosely arranged capitula at the branch endings; cylindrical involucre and opposite leaves.

Other specimens examined

WESTERN CAPE.—3222 (Beaufort West): Karoo National Park, Mountain View, (–BA), 2 Jan. 1985, *Shearing 828* (PRE); near Abrahamspoor Farm, on top of Nuweveldsberg Plateau, (–BA), 9 Mar. 1990, *Vlok 2276* (PRE); foot of Nuweveld Mtns, on bank of small river flowing at foot of mountain, (–BA), 15 Feb. 1978, *Gibbs Russell, Robinson, Herman & Downing 235* (PRE); Mountain View Farm, among dolerite boulders at top of hill, (–BA), 14 Feb. 1978, *Gibbs Russell, Robinson, Herman & Downing 124* (PRE); Matjieskloof, 24 miles [38.4 km] north of Beaufort West, (–BA), 16 May 1950, *Acocks 15893* (PRE).

2. *Eumorphia swaziensis* *Compton* in *Journal of South African Botany* 33: 300 (1967). Type: Swaziland, 2631 (Mbabane): hill northeast of Mbabane, (–AC), 4000' [1 312 m], 15 Mar. 1960, *R.H. Compton 29963*, (SDNH, holo. e!; PRE, two sheets!, NBG e!, iso.).

Small, mainly glabrous shrub, 0.3–0.6 m high, with erect woody stems, densely branched in upper floriferous parts. *Leaves* alternate, very numerous, erectopatent, mostly trifid just above the middle; rachis and lobes filiform, flexuous, apiculate, lobes subopposite, up to 20 mm long; many leaves in upper parts of stems undivided, filiform. *Inflorescence* irregularly corymbose, capitula numerous, erect, each borne on short peduncle, subtended by short linear bract; peduncle and bract finely and sparsely hairy. *Involucre* $\pm 5 \times 2$ mm, compact, campanulate, glabrous. *Involucral bracts*: 3 rows, imbricate; outer ovate, 1.2×0.5 mm; middle 2.2×1 mm; inner 3.5×1.1 mm, with narrowly membranous-fimbriate margins. *Receptacle* paleate; paleae membranous, linear, slightly shorter than disc florets. *Ray florets* 5, female, white; corolla limb broadly oblong to ovate, $\pm 3 \times 2$ mm, shortly 3-lobed, glabrous; corolla tube sparsely glandular, 1 mm long. *Style* linear, slightly curved, 0.1 mm long with stigmatic areas along edges.

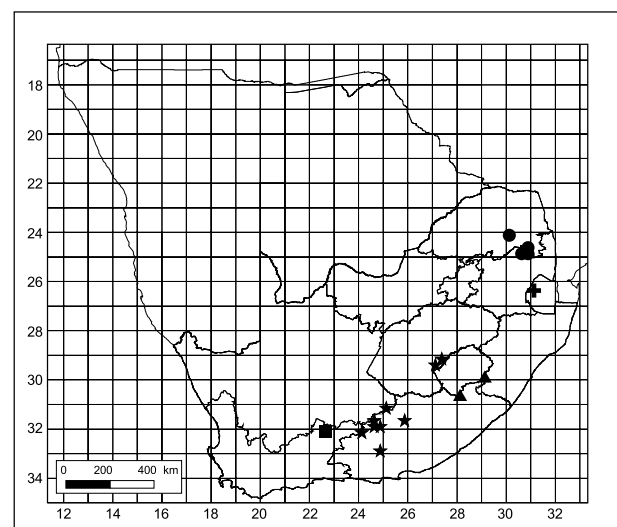


FIGURE 2.—Known distribution of *Eumorphia corymbosa*, ■; *E. davyi*, ●; *E. dregeana*, ★; *E. prostrata*, ▲; and *E. swaziensis*, +.

Ovary 1.8 mm long, slightly striate. *Disc florets* bisexual, 5-lobed, yellow; lobes ovate, 0.1 mm long; corolla glandular; corolla limb 1 mm long; corolla tube 1 mm long. *Anthers* minutely caudate, with short apical appendages; filaments thickened. *Style* 2 mm long, branched, style branches linear, truncate, 0.15 mm long, with stigmatic areas along edges. *Ovary* linear, 1.1 mm long, slightly striate. *Cypselas*: mature ones not seen. *Pappus* absent. *Flowering time*: Mar.–Apr.

Distribution and habitat: *Eumorphia swaziensis*, as the name suggests, is endemic to Swaziland, where it occurs in grassland on the hilltops, at 1 219–1 372 m around Mbabane (Figure 2).

Notes: *Eumorphia swaziensis* can be distinguished from other species in the genus by having alternate leaves; irregularly corymbose inflorescences and campanulate involucre.

Specimen examined

SWAZILAND.—2631 (Mbabane): Black Umbuluzi Valley, (–AC), 24 Mar. 1978, *Kemp 1304* (PRE).

3. *Eumorphia davyi* Bolus in Transactions of the South African Philosophical Society 16: 387 (1906); Retief & Herman: 306 (1997). Type: Eastern Transvaal [Mpumalanga], 2430 (Pilgrim's Rest): Graskop, near Pilgrim's Rest, (–DD), 29 Jan. 1906, *J. Burt Davy 1474*, (BOL, holo. e!; PRE!, K e!, iso.).

Ericoid shrub, 0.18–2.0 m high, single-stemmed at base becoming branched only in upper third, forming a compact, rounded bush, glabrous. *Stem* very rough. *Leaves* alternate, imbricate, up to 11 × 0.5 mm, glabrous, acute, mucronulate. *Capitula* shortly pedunculate or sessile, radiate. *Involucre* campanulate, 5–6 × 6 mm, finely hairy. *Involucral bracts* in 3 rows, imbricate; outer narrow, 3–4 × 0.5 mm, slightly hairy; middle lanceolate, 4–6 × 1 mm, acuminate, lacerate membranous; inner with ovate apex, 6–7 × 1 mm, membranous, discoloured. *Receptacle* conical, epaleate. *Ray florets* female, fertile, white; corolla limb oblong, 3-toothed, 7 mm long; corolla tube 2 mm long. *Style* up to 1.8 mm long, linear, branched, style branches 0.2 mm long, round with stigmatic areas along edges. *Ovary* 3 mm long, slightly striate. *Disc florets* many, bisexual, fertile, yellow; corolla limb 1 mm long; corolla tube 0.8 mm long, 5-lobed; lobes ovate, 0.15 mm long. *Anthers* minutely caudate, apex round; filaments thickened. *Style* linear, 1.8 mm long, branched, style branches 0.2 mm long, truncate with stigmatic areas along edges. *Ovary* 1.8 mm long. *Cypselas* closely ribbed, slightly curved, 2.2 mm long, glabrous but minutely papillose especially on ribs, crowned with thickened apical rim. *Pappus* absent. *Flowering time*: Sept.–April.

Distribution and habitat: *Eumorphia davyi* is found in Mpumalanga at Graskop, Pilgrim's Rest and as far north as Mariepskop, and in Limpopo Province in Polokwane [Pietersburg] and The Downs (Figure 2) at 1 200–2 286 m. *E. davyi* grows in grassveld.

Notes: *Eumorphia davyi* is named in honour of Joseph Burt Davy (1870–1940), a British botanist, founder of the Pretoria National Herbarium, a student of the flora of California, agriculturist, silviculturist and

ecologist (Stafleu & Richard 1976). *E. davyi* can be distinguished from other species in the genus by alternate leaves and a conical, epaleate receptacle.

Other specimens examined

LIMPOPO.—2430 (Pilgrim's Rest): The Downs, (–AA), Nov. 1918, *Rogers 21557, 22003* (PRE).

MPUMALANGA.—2430 (Pilgrim's Rest): at top of Mariepskop, (–DB), 15 Jan. 1960, *Van der Schijff 4835* (PRE); Mount Sheba, road up mountain from Mount Sheba Hotel to main Lydenburg-Pilgrim's Rest tar road, (–DC), 17 Apr. 1987, *Brusse 5010* (PRE); Graskop, (–DD), 28 Mar. 1979, *Kluge 1845* (PRE).

4. *Eumorphia prostrata* Bolus in Transactions of the South African Philosophical Society 16: 388 (1906); Hilliard: 332 (1977). Type: Eastern Cape, 3028 (Matatiele): Barkly East, summit Doodman's Krans Mtn, (–CA), 8 Mar. 1904, *E.E. Galpin, 6700*, (BOL, holo. e!; K e!, PRE, two sheets!, SAM e!, iso.).

Low, erect, spreading subshrub, up to 0.6 m high, often prostrate over rock sheets or hanging down cliff faces; branches sericeous, soon glabrous, old ones rough with leaf scars, often rooting, twigs closely leafy. *Leaves* opposite, sericeous, silvery, hairs appressed, primary leaves linear or 2- or 3-forked at tips, up to 10 × 1.5 mm, appearing fascicled from closely leafy axillary shoots. *Capitula* solitary, terminal, shortly pedunculate, radiate. *Involucre* campanulate, up to 7 × 9 mm when pressed, villous. *Involucral bracts* in 3 rows, imbricate; outer narrowly ovate, 2.5–5.5 × 0.5 mm; middle obtuse, 5.5–6.0 × 1.1 mm, tips membranous; inner oblong, 6.5–7.0 × 1.1 mm, discoloured, membranous. *Receptacle* epaleate or with a few marginal paleae. *Ray florets* female, 3-toothed, white tinged pink at base or sometimes at back; corolla limb 5–7 mm long; corolla tube 1.8 mm long. *Style* up to 2.2 mm long, branched, style branches 0.8 mm long, with stigmatic areas along edges. *Ovary* 1.2 mm long, slightly striate. *Disc florets* bisexual, 5-lobed, yellow; lobes ovate, 0.1 mm long; corolla limb 2 mm long; corolla tube 1 mm long. *Anthers* minutely caudate, apical appendage elongated, obtuse, filaments thickened. *Style* up to 2.8 mm long, slightly branched, style branches 0.2 mm long with stigmatic areas along edges and papillate appendages. *Ovary* 1.1 mm long. *Cypselas* narrowly cylindric, 2 mm long, closely ribbed, minutely papillose especially on ribs, crowned with thickened apical rim. *Pappus* absent. *Flowering time*: Dec.–Apr. Figure 3.

Distribution and habitat: *Eumorphia prostrata* is only known from a small area of the high Drakensberg, from Tina Head (Doodman's Krans and Naudesnek) where the boundaries of Lesotho, the Barkly East and Maclear Districts meet, to Thamathu Pass (Bushman's Nek area) and the Drakensberg Garden area in Underberg District, KwaZulu-Natal (Hilliard 1977), at 1 830–2 970 m (Figure 2). In its natural environment, it appears to tolerate extreme cold (–10°C) in winter, strong buffeting winds and fairly high daytime temperatures in summer (Oliver 1989). *E. prostrata* grows in mountain grassveld in seasonally wet areas.

Notes: although it seems close to *Eumorphia sericea*, this species has a prostrate habit and a receptacle epaleate or with a few marginal paleae.

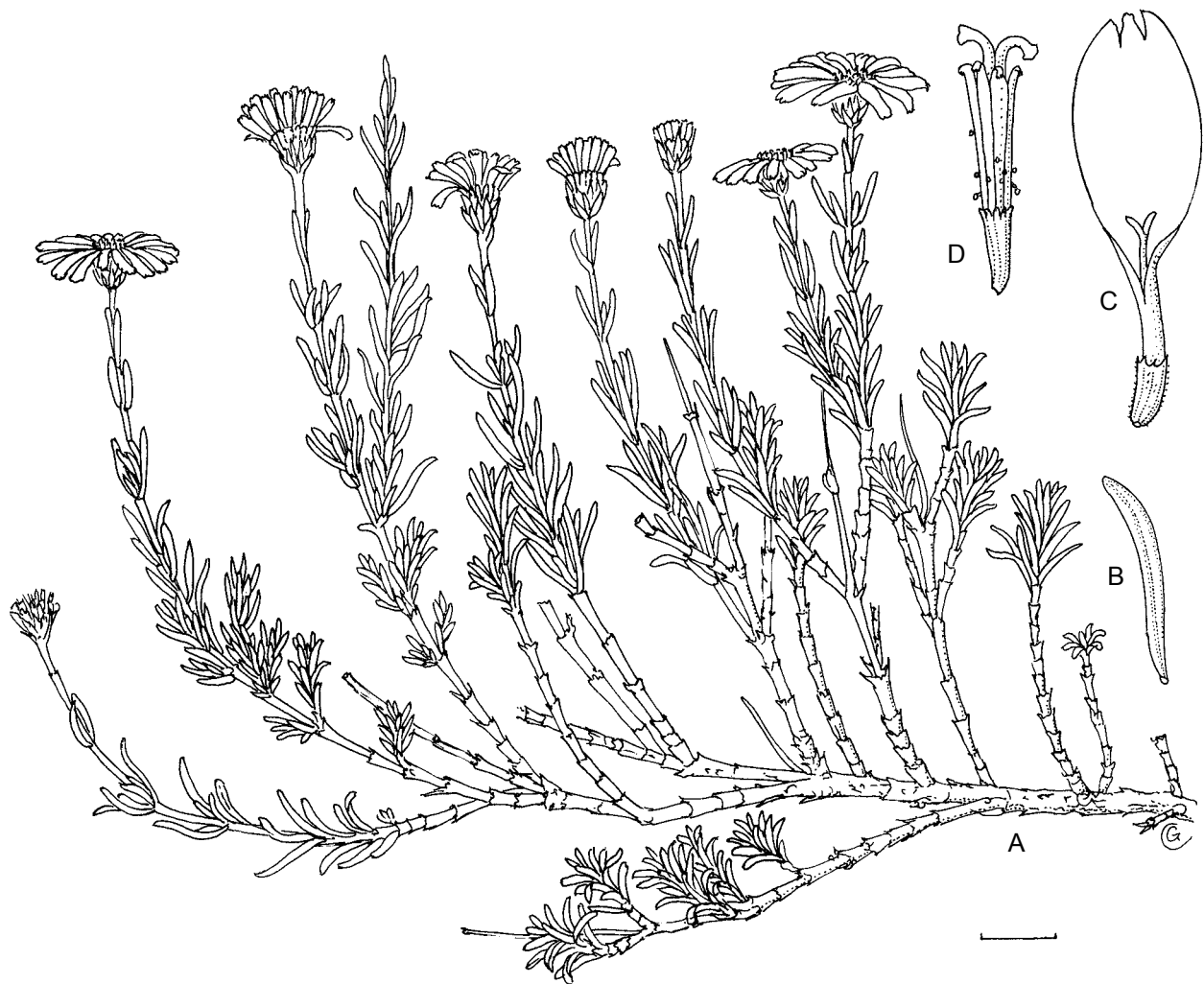


FIGURE 3.—*Eumorphia prostrata*. A, habit; B, leaf surface; C, ray floret; D, disc floret, Hoener 1722. Scale bar: A, 10 mm; B–D, 0.33 mm. Artist: Gillian Condy.

Specimens examined

KWAZULU-NATAL.—2929 (Underberg): Bushman's Nek, Thamathu Pass, (–CC), 4 Nov.1976, Hilliard & Burt 8930 (PRE); vicinity of Tarn Cave above Bushman's Nek, (–CC), 20 Jan. 1984, Hilliard & Burt 17400 (PRE); Thamatuwe (= Thamathu) Pass, (–CC), 17 Jan.1969, Killick & Vahrmeijer 3996 (PRE).

LESOTHO.—2929 (Underberg): Sehlabathebe National Park, Matsa a Mafikeng, (–CC), 16 Dec.1967, Hoener 1722 (PRE).

EASTERN CAPE.—3028 (Matatiele): Rhodes gravel road/jeep track between Naudesnek and Ben Macdhui, (–CA), 12 Dec. 1999, Koekemoer 1632 (PRE).

5. *Eumorphia dregeana* DC., Prodrum 6: 3 (1838); Harv.: 153 (1865). Type: Eastern Cape, 3124 (Hanover): Middelburg, Sneeuweberg between Kompasberg and Rhenosterberg, 5000–6000' [1 640–1 964 m], (–DC), Sept., Drège s.n., (G-DC, holo. e!; MO e!, M e!, PRE!, SAM e!, E e!, P e!, K e!, NBG e!, iso.).

Multi-stemmed, erect subshrub, 0.3–1.0 m high. Leaves linear-terete, closely imbricate, opposite, slightly pubescent, up to 3.5 mm long, \pm 1 mm broad, entire. Capitula shortly pedunculate, radiate, solitary. Involucre campanulate, 4–7 mm wide when pressed. Involucral bracts in 3 rows, imbricate; outer ovate, glabrous or slightly pubescent, 2×1 mm; middle 2.2×1.2 mm; inner 2.5×1.25 mm, obtuse with membranous tips.

Receptacle paleate; palea membranous, linear, 4 mm long. Ray florets female, 3-toothed, white; corolla limb 5 mm long; corolla tube 1 mm long. Style up to 1.2 mm long, slightly branched, style branches 0.8 mm long, with stigmatic areas along edges. Ovary 2 mm long, slightly striate. Disc florets bisexual, fertile, 5-lobed, yellow; lobes ovate, 0.2 mm long; corolla limb glandular, 1.2 mm long; corolla tube glandular, 1 mm long. Anthers minutely caudate, apical appendage elongated, obtuse. Style up to 1.2 mm long, branched, style branches 0.25 mm long with stigmatic areas along edges and papillate appendages. Ovary 1.5 mm long, slightly striate. Cypsela closely ribbed, 1.5–1.8 mm long, slightly curved, glabrous but minutely papillose especially on ribs, crowned with thickened apical rim. Pappus absent. Flowering time: Feb.–Apr.

Distribution and habitat: *Eumorphia dregeana* occurs in the southeastern Free State and the northwestern Eastern Cape, at 1 311–1 980 m (Figure 2). According to specimens in the National Herbarium, *E. dregeana* grows in False Mountain Renosterveld (Karoo Escarpment Grassland), on sandy slopes and in vleis.

Notes: *Eumorphia dregeana* is named in honour of Jean François (Johann Franz) Drège (1794–1881), a Ger-

man plant collector in South Africa (1826–1834) (Stafleu & Richard 1976). *E. dregeana* can be distinguished from other species in the genus by having closely imbricate, opposite leaves and paleate receptacles.

Specimens examined

FREE STATE.—2927 (Maseru): Thaba Phatshwa Mtn, south of Tweespruit, high up on eastern slope of mountain, (–AC), 3 Apr. 1973, *Muller 1163* (PRE).

EASTERN CAPE.—3124 (Hanover): Cradock, Wapadsberg, plateau, (–DD), 28 Mar. 1947, *Acocks 13552* (PRE). 3125 (Steynsburg): Middelburg, Leeukop Farm, (–DB), 12 Mar. 1950, *Theron 746* (PRE). 3224 (Graaff-Reinet): Oudeberg, (–DD), Apr. 1890, *Bolus 1063* (PRE).

NORTHERN CAPE.—3124 (Hanover): Noupoot, 11 km from Noupoot on road to Colesberg via Oorlogspoort, (–BB), 3 Apr. 1981, *Herman 533* (PRE).

6. ***Eumorphia sericea*** J.M.Wood & M.S.Evans in *Journal of Botany* 35: 488 (1897); Grierson: t. 608 (1972); Hilliard: 332 (1977). Type: Natal, summit of Drakensberg, near Bushman's River Pass, 8000–10 000' [2 624–3 280], Apr. 1896, *M.S. Evans 751*, (NH, holo.; PRE!, K, iso.).

Key to subspecies of *Eumorphia sericea*

- 6a Plant with thick, silky, woolly indumentum, cypselas crowned by a thickened slightly lobulate rim 6a. *E. sericea* subsp. *sericea*
6b Plant more robust with thinner indumentum, pappus scales forming a corona on cypselas 6b. *E. sericea* subsp. *robustior*

6a. subsp. *sericea*

Much-branched, dwarf shrub, 0.2–1.3 m high; outer branches sometimes decumbent, nude below, rough with leaf scars, grey (because of its thick indumentum) silky-woolly, glabrescent, twigs closely leafy. *Leaves* opposite, grey silky-woolly, hairs fluffed up from leaf surface, primary leaves linear or digitately 3-lobed, $\pm 8 \times 1.5$ mm, appearing fascicled from closely leafy, dwarf axillary shoots. *Capitula* solitary, shortly pedunculate, radiate. *Involucre* campanulate, $\pm 7 \times 10$ mm when pressed, villous. *Involucral bracts*: 3 rows, imbricate; outer 3×1.5 mm, ovate; middle 4×1.5 mm; inner 6.5×1.5 mm, obtuse with scarious and lacerate tips. *Receptacle* paleate; paleae membranous, narrowly lanceolate, $\pm 5 \times 0.5$ mm. *Ray florets* female, 3-toothed usually white, but sometimes rose-pink, or white flushed with pink; corolla glandular; corolla limb 10.5 mm long; corolla tube up to 1.8 mm long. *Style* 3 mm long, branched, style branches 0.3 mm long with stigmatic areas along edges. *Ovary* 2.2 mm long, slightly striate. *Disc florets* bisexual, glandular, 5-lobed, yellow; lobes ovate, 0.1 mm long; corolla limb 2 mm long; corolla tube 1 mm long. *Antthers* minutely caudate, apical appendages elongated, obtuse; filaments thickened. *Style* up to 2.5 mm long, branched, style branches 0.18 mm long with stigmatic areas along edges. *Ovary* 2.2 mm long, slightly striate. *Cypselas* narrowly cylindric, ± 2.5 mm long, closely ribbed, glabrous but minutely papillose especially on ribs, crowned with thickened apical rim. *Pappus* absent. *Flowering time*: Nov.–Apr.

Distribution and habitat: *Eumorphia sericea* subsp. *sericea* occurs in Free State, KwaZulu-Natal, Lesotho and Eastern Cape Province, at 2 296–3 414 m (Figure 4). *E. sericea* subsp. *sericea* grows in seasonally wet areas.

Note: although close to *E. prostrata*, it has paleate receptacles.

Specimens examined

FREE STATE.—2828 (Bethlehem): Mont-aux-Sources, summit above chain ladder, (–DB), 14 Jan. 1982, *Roux 1083* (PRE).

KWAZULU-NATAL.—2929 (Underberg): top of Sani Pass, (–CB), 23 Mar. 1962, *Acocks 22159* (PRE).

LESOTHO.—2928 (Marakabeis): Tsienyane Valley, over Meniameng Pass, (–AA), 8 Jan. 1955, *Coetzee 484* (PRE). 2929 (Underberg): Castle Butress, on summit of Drakensberg, (–AA), 18 Dec. 1952, *Killick 1873* (PRE).

EASTERN CAPE.—3028 (Matatiele): Barkly East, Drakensberg, Doodman's Krans Mtn, (–CA), 7 Mar. 1904, *Galpin 6699* (PRE).

6b. subsp. ***robustior*** Hilliard & B.L.Burt in *Notes from the Royal Botanic Garden Edinburgh* 40: 248 (1982). Type: Eastern Cape, 3127 (Lady Frere): Elliot, Fetcani Pass, common bush up to 5' [1.64 m], on slopes and especially in rock-fall scrub, (–BB), 7500' [2 460 m], 22 Jan. 1979, *O.M. Hilliard & B.L. Burt 12331* (NU, holo.; E, PRE!, K, M, S, NBG, iso.).

Green bush because of its thinner indumentum on leaves, more robust, hence its name, pappus scales forming a corona on cypselas. *Flowering time*: Dec.–May.

Distribution and habitat: *Eumorphia sericea* subsp. *robustior* is found in Naudesnek down to Spitskop Farm, at 2 073–2 755 m (Figure 4). This subspecies grows in damp areas.

Specimens examined

EASTERN CAPE.—3027 (Lady Grey): Barkly East, Rhodes to Naudesnek, at foot of cliff, (–DD), 22 Feb. 1971, *Hilliard & Burt 6732* (PRE); Rhodes, roadside between Ugie and Barkly East, (–DD), 10 May 1985, *Hutchings 1706* (PRE). 3028 (Matatiele): Barkly East, Naudesnek, (–CA), 28 Nov. 1971, *Hilliard 5213* (PRE); Naudesnek, between Maclear and Rhodes, (–CC), 7 Dec. 1983, *Van Wyk 6713* (PRE). 3127 (Lady Frere): Elliot, bastervoetpad, rocky ground on hillside and along stream, (–BB), 15 Feb. 1983, *Hilliard & Burt 16657* (PRE).

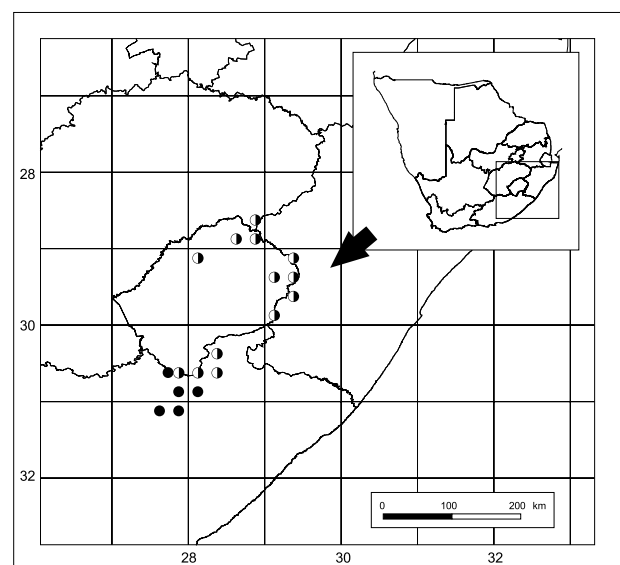


FIGURE 4.—Known distribution of *Eumorphia sericea* subsp. *sericea*, ○; and subsp. *robustior*, ●.

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