

A new species of *Euphorbia* (Euphorbiaceae) from the Mossel Bay area

L.C. Leach

Karoo National Botanic Garden, Worcester, 6850 Republic of South Africa

Accepted 8 August 1988

Euphorbia bayeri Leach, a new dioecious, dwarf, creeping species from near Mossel Bay, related to *E. lumbricalis* Leach, is described. It is distinguished by its rhizomatose and profusely branched habit with branches obscurely angled, its broadly ovate, acutely dentate leaves and bracts, spreading involucre glands and smaller, narrower lobes, a glabrous capsule, styles free to the base with widely divergent, sulcate, red stigmas, finally its hairy perianth is probably unique, at least among the South African succulent, terete stemmed shrubs belonging in this ubiquitous genus. A line drawing showing inflorescence details as well as those of the seeds, leaves and bracts is provided, together with habit photographs.

Euphorbia bayeri Leach, 'n nuwe spesie wat naby Mosselbaai gevind is en aan *E. lumbricalis* Leach verwant is, word beskryf. Die plante is tweehuisig, verdwerg en kruipend. Dit word gekenmerk deur 'n goed-ontwikkelde wortelstok en sterk vertakte groeivorm met stingels wat effens hoekig is, breë eiervormige, skerpgetande blare en skutblare, spreidende omwindseklere en kleiner, smaller lobbe, 'n gladde kapsuul, style wat vanaf die basis vry is met sterk uiteenwykende, gegroefde, rooi stempels, en ten slotte is die harige periant waarskynlik uniek, onder Suid-Afrikaanse sukkulente-struik met silindriese, gepunte stingels wat tot hierdie alomteenwoordige genus behoort. 'n Lyntekening waarin die besonderhede van die bloeiwyse sowel as die sade, blare en skutblare aangedui word, word tesame met foto's van die groeivorm voorsien.

Keywords: *Euphorbia*, Euphorbiaceae, taxonomy

Euphorbia bayeri Leach, sp. nov.

Ad *E. lumbricalis* Leach affinis sed planta rhizomatosa vix tuberculifera, ramosissima; ramis obscure obtuse angularibus; foliis bracteisque late ovatis sparse acute dentatis; cyathiorum glandulis patulis, lobis minoribus forma angustiore; capsula glabra; stylis ad basim libris late patulis, stigmatibus late divergentibus sulcatis rubris differt; ab illo necnon omnibus affinis perianthio dense piloso divergentissima.

TYPUS. — Cape Province: Mossel Bay, cult. Karoo Bot. Garden, Bayer 4875 ♀ (NBG, holotypus; K, MO, PRE).

Plant: a dioecious, densely branched and rebranched, semi-procumbent, rhizomatose, succulent, dwarf shrublet

up to c. 120 mm high. Branches decumbent ascending, terete, obscurely obtuse-angled, sometimes (in female plants) minutely scabridulous, c. 4 mm diam.; branchlets opposite or random (due to abortion), decussately arranged, c. 2-3 mm diam. Leaves and bracts glabrous, broadly ovate, initially red, soon becoming dark brown, marcescent, strongly recurved; variably, very acutely few-toothed, teeth often almost thorn-like. Inflorescence a single terminal cyathium or dichasium. Male cyathium sessile, c. 2 mm long, 2.5 mm diam., initially reddish with ruby-red glands, becoming yellowish with brown glands; involucre with a dense tuft of hairs inside at the base of and

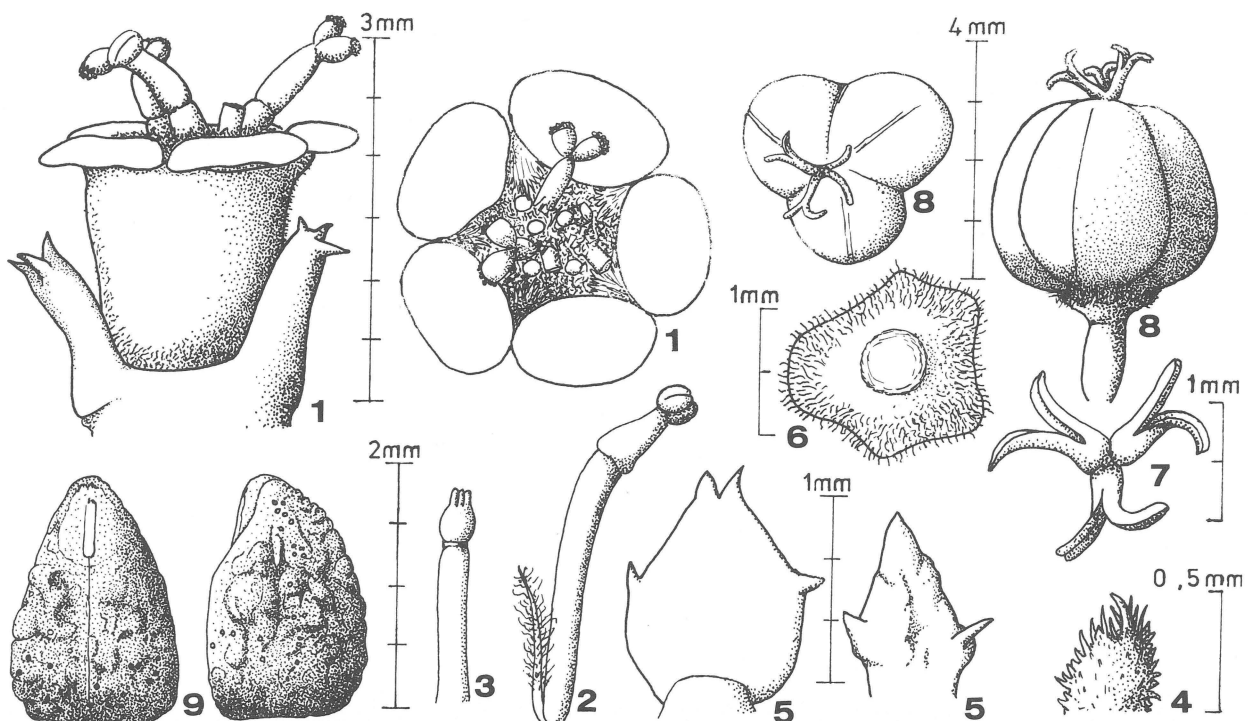


Figure 1 *E. bayeri*: 1. male cyathium; 2. male flower with bracteole; 3. abortive female flower; 4. involucre lobe; 5. leaves and bracts; 6. perianth; 7. styles; 8. capsule; 9. seed.

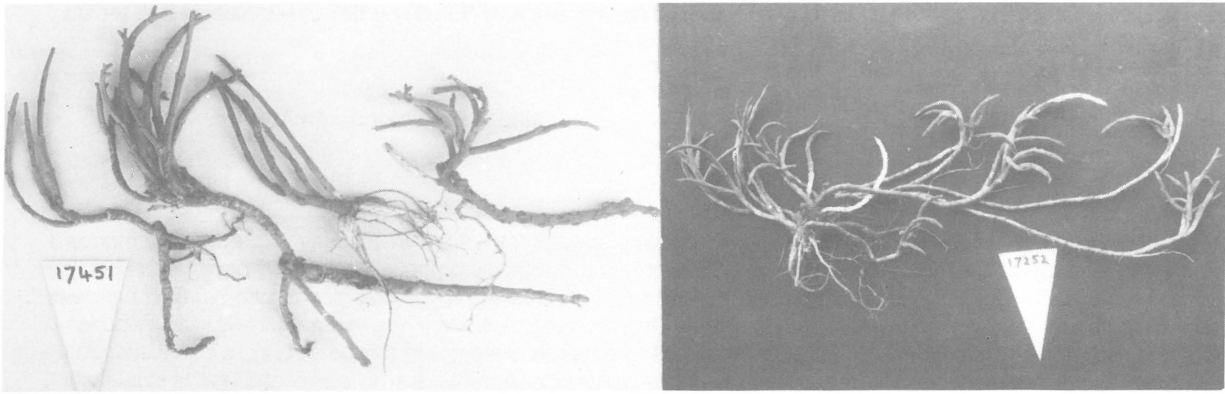


Figure 2 *E. bayeri*: left, 17451 (Bayer 4875) ♀; right, 17252 (Bayer 4565) ♂.

shortly below the glands, at the top of the rudimentary septum. *Lobes* finely fimbriate, ciliate, with the processes red splashed, especially the larger central one. *Glands* 5, spreading, transversely elliptic, c. $1,25 \times 0,75$ mm, more or less contiguous; *male flowers* 15, glabrous, pedicel translucent greenish-white, c. 2 mm long; filament pale green, c. 0,75 mm long; anther thecae pale green; bracteoles filiform plumose; pollen pale yellow; female flower abortive, glabrous, pedicel pale green; ovary and styles ruby-red. *Female cyathium* sessile, c. 1,5 mm long, 2,25 mm diam. *Capsule* glabrous, shortly exserted from the involucre, obtusely 3-lobed, 3,5–4,0 mm diam., 3 mm high, seated on an irregularly lobed, densely hairy perianth. *Styles* green, free to the base, widely spreading, deeply bifid with the stigmas widely divergent, dark red, longitudinally grooved, not at all enlarged, slightly recurved. *Seed* light brown, ovoid, subacute, truncate at the base, obscurely 4-angled, lightly irregularly lumpy and with scattered, small, concolorous, obtuse tubercles; the area around the hilum densely covered with minute reddish dots arranged in lines radiating from the hilum and imparting a brownish appearance to this area which is usually (in seeds of this pattern from other species) whitish and slightly rough. (Figures 1 & 2).

Known only from the type locality, *E. bayeri* is apparently most closely related to *E. lumbricalis* Leach, from very different terrain in the Knersvlakte. The new species is distinguished by numerous diagnostic characters, among which, the most unusual are its styles with dark red, grooved,

but not at all enlarged stigmas and the possibly unique hairy perianth, while its densely branched, creeping habit is otherwise unknown in the genus. The spreading glands, obscurely angled branches, differently shaped leaves and bracts, smaller narrower involucre lobes, and glabrous capsule all serve to separate the new species from the related *E. lumbricalis* from the western Knersvlakte.

This most unusual rhizomatose euphorbia was found about 2 km west of Mossel Bay, growing in shallow soil among grasses on Table Mountain Sandstone in a marginal fynbos area in association with *Orbea variegata* (L.) Haw. Not recognizing the species, Mr Bayer collected some live material for cultivation and eventual identification at the Karoo Botanic Garden, Worcester. When plants flowered they proved to represent an undescribed, unisexual species. Unfortunately only male cuttings were collected, necessitating a further visit to the type locality to obtain female material. Of the several cuttings and runners obtained, only one proved to be female. However, this provided sufficient flowering and fruiting material for the description to be completed, and it is a pleasure to name it for Bruce Bayer who has contributed much to our knowledge of the Cape Flora.

Specimens examined

— 3422 (Mossel Bay): T.M.S. platform, c. 2 km W. of Mossel Bay (–AA), cult. KGW, Bayer 4565 ♀ (B, BM, K, M, MO, NBG, PRE, ZSS), *ibid.*, Bayer 4875 (K, MO, NBG, PRE).