

## ERICACEAE

### A NEW SPECIES OF *ERICA* FROM THE WESTERN CAPE

***Erica karooica*** *E.G.H. Oliv.*, sp. nov.

*Rami* puberuli. *Folia* 3-nata, erecta, 2–3 mm longa, lineari-oblonga, glabra, ciliolata; petiolo  $\pm$  0.5 mm longo, appresso. *Flores* 3–6-nati terminales; pedicello  $\pm$  1 mm longo, dense puberulo; bractea mediana, bracteolis subapproximatis. *Calyx* 4-lobatus, base puberula, breviter ciliatus et glandibus sessilibus rubris, viridis. *Corolla* 4-lobata, 1.3  $\times$  1.0 mm, glabra, straminea, brunnescens, obconica. *Stamina* 8, libera, subexserta; antheris ovatis muticis; polline in tetradis. *Ovarium* 4-loculare, 0.5  $\times$  0.5 mm, obovoideum, glabrum, emarginatum; nectariis absentibus; placenta in dimidio superiore; ovulis 8 in quoque loculo pendentibus; stylo exserto; stigmatate latissime cyathiformi. Figura 7.

TYPE.—Western Cape 3321 (Ladismith): Ladismith Dist., southern foothills of Great Swartberg on Vaartwel/Bergplaas farms, waboomveld on steep, dry, stony, south slopes northeast of lower Bergplaas, 808 m, (–BC),

6-04-1994, *Oliver 10447* (STE, holo.: BM, BOL, E, K, MEL, MO, P, PRE, S, W, iso.).

Erect dense shrub to 1.25 m tall, single-stemmed. *Branches* wiry flexuose, very shortly puberulous with occasional glands intermixed, no infrafoliar ridges, bark grey flaking irregularly when old. *Leaves* 3-nate, erect, imbricate, 2–3 mm long, linear-oblong, subacute to obtuse, rounded in transverse section, sulcate, very shortly ciliate and with a few sessile glands when young, otherwise glabrous; petiole  $\pm$  0.5 mm long, appressed, shortly ciliate. *Flowers* 3–6 at ends of main branches and short lateral branchlets, erect; pedicel  $\pm$  1 mm long, densely puberulous, reddish; bract median, appressed,  $\pm$  0.7 mm long, oblong, terminally sulcate, glabrous, minutely ciliate, pale green; bracteoles subapproximate, like the bract but slightly smaller. *Calyx* 4-lobed,  $\pm$  0.8 mm long, green, lobes erect,  $1/3$ – $2/3$  length of calyx, ovate to deltoid, subacute to obtuse, apically sulcate, puberulous at base,

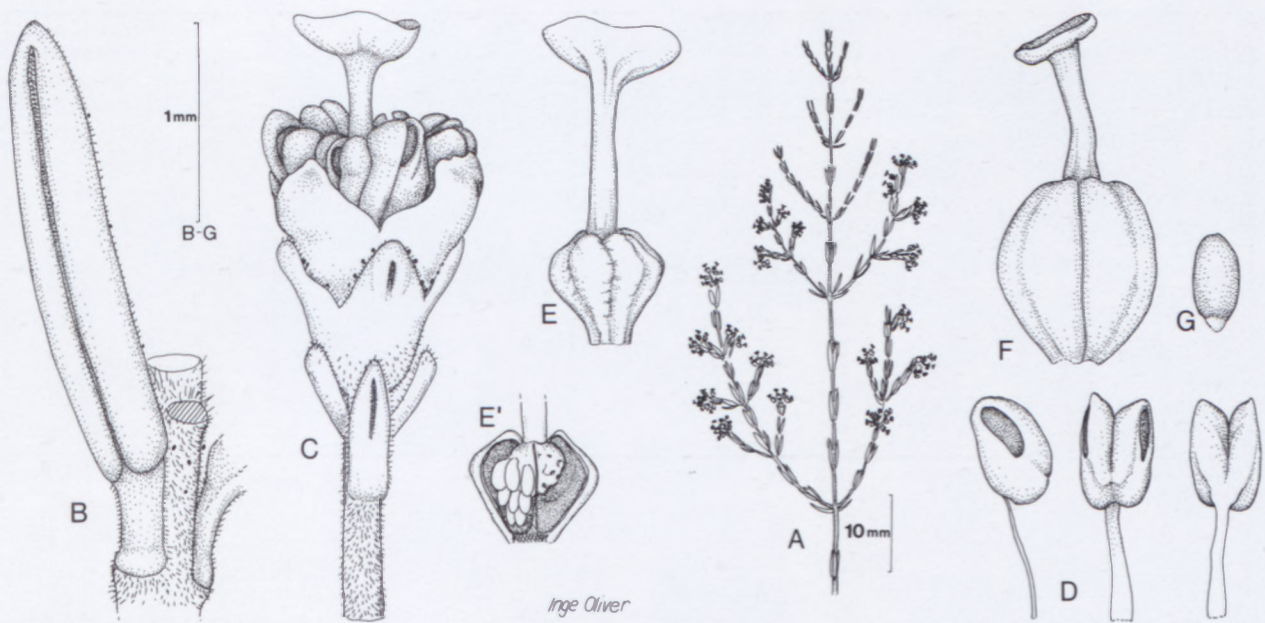


FIGURE 7.—*Erica karoovica* E.G.H. Oliv.: A, flowering branch; B, branchlet & leaf; C, flower; D, anther, side, front & back views; E, gynoecium; E', ovary, opened laterally; F, fruiting gynoecium; G, seed. Drawn from *Taylor 10362* (STE).

shortly ciliate with hairs and a few sessile red glands. *Corolla* 4-lobed,  $1.3 \times 1.0$  mm, obconical, glabrous, dull translucent cream soon turning brown, lobes erect to slightly incurved,  $\frac{1}{3}$  length of corolla, subacute, sometimes sparsely crenulate. *Stamens* 8, free, erect; filaments linear 0.7 mm long; anthers subexserted, mucous, thecae ovate in outline, glabrous, golden brown, pore  $\frac{1}{2}$  length of theca; pollen in tetrads. *Ovary* 4-locular,  $0.5 \times 0.5$  mm, obovoid, 8-lobed, glabrous, emarginate, with no nectary glands at base, ovules  $\pm 8$  per locule, pendent, placenta confined to upper half; style exserted,  $\pm 1.1$  mm long, red; stigma very broadly cyathiform, red. *Capsule*  $1.2 \times 1.0$  mm, narrowly cyathiform, septa split for  $\frac{3}{4}$  their length, upper part of septa 50% on axis and 50% on valve; seeds  $0.5 \times 0.2$  mm, slightly flattened ellipsoid, smooth and shiny, yellow to brown, with a distinct short paler elaiosome. Figure 7.

This new species is most closely related to the widespread eastern Cape species, *E. caespitosa* Hilliard [= *Philippia tristis* Bolus], but may be distinguished by its single-stemmed reseeding habit, densely hairy pedicel with a hairy base to the calyx, always two free bracteoles, open broadly obconic corolla with the anthers clearly visible being half exserted and a very broadly cyathiform stigma.

*E. caespitosa*, as its name suggests, is a low, multi-stemmed resprouter with a glabrous, or occasionally sparsely puberulous, pedicel and glabrous calyx, globose to broadly urceolate corolla with included anthers and obconic stigma. *E. caespitosa* occasionally possesses two bracteoles on the pedicel, but usually has none with the bract often fully recaulescent and forming part of the calyx in the philippioid condition (Oliver 1988).

*E. karoovica* has small insignificantly coloured flowers that are developed for wind pollination (Rebello *et al.* 1985). At the type locality plants gave off small puffs of pollen into

the wind when disturbed. The flowers are very similar at first glance to those in the minor genera of the Ericoideae like *Salaxis* Salisb. and *Coccosperma* Klotzsch, and therefore would probably not attract much attention among collectors. The flowers are unusual in that the corolla is a very translucent white with the red immature anthers clearly visible inside. Soon after the stigma appears beyond the corolla mouth, the corolla loses its colour, dries out and turns brown before the anthers have appeared and shed their pollen. I have not noticed this feature in any other species.

The possession of an elaiosome on the seeds is a character that has never before been recorded in the Ericoideae. This is, however, not the only species that I have recently found, in the closer examination of *Erica* spp., to possess such an appendage. The biological implications of this character need some detailed field investigations.

The species is fairly widespread in the southern region of South Africa (Figure 8) with most of the collections coming from the mountains in and around the Little Karoo, hence the name. Within this distribution range the species occurs in a wide variety of habitats from low to high altitude. Most, however, occur on southern slopes of mountains in mountain fynbos on quartzitic soils. In the far west it occurs at low altitude, 500 m, in dry fynbos on Malmesbury shales. On the eastern end of the Great Swartberg it occurs on the summit ridges at 1 500 m. Surprising localities are those on the coastal plain east of Riversdale and north of Bredasdorp.

The nearest localities of *E. caespitosa* are in the Sneeuwberg west of Graaff-Reinet 130 km to the north and the Boschberg above Somerset East 180 km to the northeast.

Flowering period is from March to May.

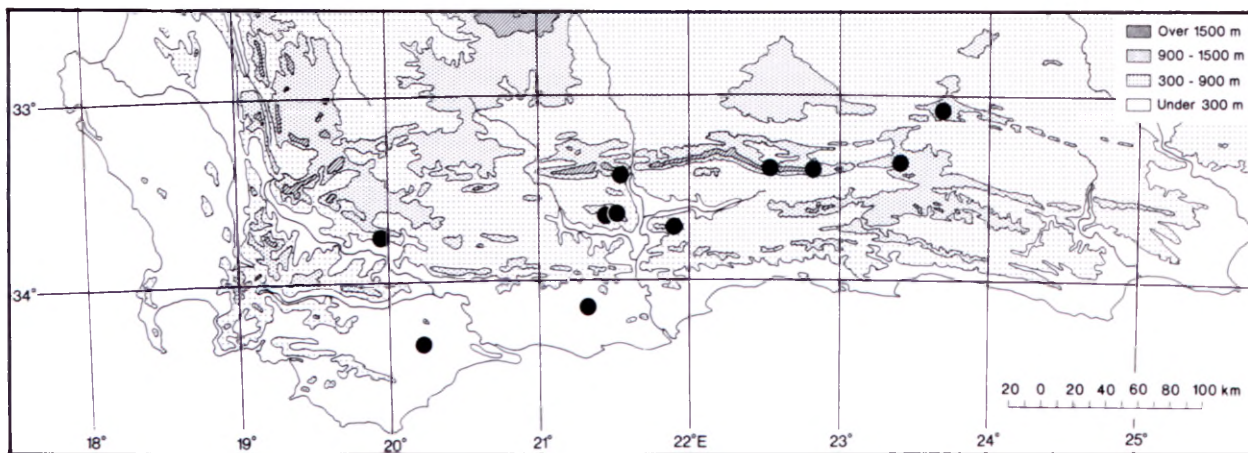


FIGURE 8.—Known distribution of *Erica karoovica* E.G.H. Oliv.

### Specimens examined

WESTERN & EASTERN CAPE.—3319 (Worcester): Robertson Dist., Klaasvoogds West, Korrug, on SW-facing slopes of Langeberg on Farm Bergendal, 500 m. (–DD), 20-10-1989 (fruiting), *McDonald 1824* (BOL, K, MO, PRE, STE). 3321 (Ladismith): Ladismith Dist., Calitzdorp area, S foothills of Great Swartberg on Vaartwel/Bergplaas farms, waboomveld on steep S slopes NE of the lower Bergplaas Farm, 808 m. (–BC), 6-04-1994, *E.G.H. & I.M. Oliver 10447* (BM, BOL, E, K, MEL, MO, P, PRE, S, STE, W); Ladismith Dist., Farm Bergplaas, waboomveld on steep S slopes, 790 m. (–BC), 9-04-1982, *Taylor 10362* (BM, K, MO, PRE, STE); Ladismith Dist., S slopes of Roodeberg, (–CB), 14-05-1950, *Esterhuysen 17140* (BOL, STE); Ladismith Dist., Rooiberg, above waterfall in Groenkloof below hut, 1 130 m. (–DA), 22-04-1977, *Taylor 9642* (K, PRE, STE); Ladismith Dist., Gamka Mtn, S slope SW of beacon, 1 000 m. (–DB), 23-05-1975, *Boshoff P139* (STE); Calitzdorp area, Gamka Reserve, Boskloof, on rugged sandstone slope, (–DB), 23-05-1975, *Esterhuysen 33843* (BOL, STE). 3322 (Oudtshoorn): Oudtshoorn Dist., Meiringspoort, (–BC), 25-08-1991, *Schumann 791* (PRE, STE); Willowmore Dist., eastern Swartberg on crest of Snyberg, 1 500 m. (–BD), 11-03-1991, *Vlok 2456* (STE). 3323 (Willowmore): Willowmore Dist., Zuurberg Poort, Farm Modderfontein, 824 m. (–AB), 22-09-1923, *Andreae 1040* (K, PRE, STE); Willowmore Dist., Witteberg [Witberg], peak N of World's View [Wildsvew], 1 540 m. (–BA),

26-07-1986, *Vlok 1542* (STE). 3420 (Bredasdorp): Bredasdorp Dist., hills E of Vrede on Swellendam/Bredasdorp main road, 950 m. (–AC), 2-09-1994 (fruiting), *Oliver 10548* (STE). 3421 (Riversdale): Platkop, SE of the town, (–AB), 20-10-1987 (fruiting), *Rebello et al. 58/1* (STE).

### REFERENCES

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- REBELLO, A.G., SIEGFRIED, W.R. & OLIVER, E.G.H. 1985. Pollination syndromes of *Erica* species in the southwestern Cape. *South African Journal of Botany* 51: 270–280.

E.G.H. OLIVER\*

\* Stellenbosch Herbarium, National Botanical Institute, P.O. Box 471, Stellenbosch 7599.

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