

Four new species and one new subspecies of *Lachenalia* (Hyacinthaceae) from arid areas of South Africa

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Keywords: Hyacinthaceae, *Lachenalia*, new species, new subspecies, South Africa

ABSTRACT

Four new species of *Lachenalia* are described: *L. karooica* W.F.Barker ex G.D.Duncan from the Great Karoo and southwestern Free State, *L. perryae* G.D.Duncan from the Little Karoo and southern Cape, as well as *L. neilli* W.F.Barker ex G.D.Duncan and *L. alba* W.F.Barker ex G.D.Duncan, both from the Nieuwoudtville-Calvinia District of the Northern Cape. In addition, a new subspecies, *L. marginata* W.F.Barker subsp. *neglecta* Schltr. ex G.D.Duncan is described from the Western Cape.

INTRODUCTION

Lachenalia Jacq. f. ex Murray is the largest genus within the southern African Hyacinthaceae and comprises more than 100 species (Duncan 1988, 1992). The genus is endemic to this region where it has a very wide distribution extending from the southwestern parts of Namibia, southwards throughout Namaqualand, the Western Cape and Great Karoo to as far inland as the southwestern Free State, from where its probable boundary makes an arc to the southeast down to Transkei on the east coast of the Eastern Cape (Barker 1987). Most of the taxonomic work on *Lachenalia* carried out this century has been undertaken by the late Miss W.F. Barker, formerly curator of the Compton Herbarium at Kirstenbosch Botanical Garden. Her studies, both during her term as curator and subsequent to her retirement, have resulted in the publication of more than forty new species for the genus. A number of new *Lachenalia* species have still to be formally described and published, and this paper serves as the first in a series to be published as a continuation of the recent work of W.F. Barker (Barker 1978, 1979, 1983a & b, 1984, 1987, 1989) and the current author (Duncan 1993) towards a revision of the genus.

NEW SPECIES IN LACHENALIA

***Lachenalia karooica* W.F.Barker ex G.D.Duncan**, sp. nov. distinguitur inflorescentia spicata vel subspicata floribus patentibus, oblongo-campanulatis virellis cum vel sine basibus excaeruleis, segmentibus interioribus perianthii recurvatis, staminibus bene exsertis patentibus, plerumque folio singulari lanceolato conduplicato venis longitudinalibus depressis, supra maculis brunneis, viridibus vel marronis irregulariter dispersis.

TYPE.—Free State, 2925 (Jagersfontein): Fauresmith veld, 0.5 km on road from Fauresmith to Koffiefontein, (–CB), 6-8-1976, Chaplin s.n., (NBG, holo!).

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MS. received: 1995-10-09.

Deciduous, winter-growing geophyte 45–220 mm high. *Bulb* globose, 10–20 mm in diam., white with thin brown outer scales, usually produced into a neck terminating just below ground level. *Leaf* usually solitary, occasionally 2, lanceolate, conduplicate, 40–200 × 5–20 mm, glaucous with depressed longitudinal veins on upper surface and a coriaceous margin, and irregularly scattered brown, green or maroon blotches mainly on upper surface; clasping leaf base 5–30 mm long with magenta bands or blotches just below ground level, shading to purplish maroon above ground level. *Inflorescence* spicate or subspicate, few to many-flowered, 20–150 mm long with a short sterile tip; peduncle erect to suberect, 20–80 mm long, slender or sturdy, shorter than length of leaf, mottled with very pale maroon and green; rachis mottled with very pale maroon and green; pedicels absent or up to 2 mm long; bracts ovate, greenish white, 1–2 mm long. *Flowers* patent, oblong-campanulate, dull white to greenish white, often discolouring to a dull purple on herbarium sheets; outer perianth segments oblong, 5–7 × 2–3 mm, with or without bluish bases, with purplish maroon or greenish brown gibbositities; inner perianth segments obovate, recurved, 7–10 × 3 mm, with brownish green keels. *Stamens* well exerted beyond tip of perianth, spreading; filaments white, 10 mm long; anthers pale to dark maroon prior to anthesis, yellow at anthesis. *Ovary* ovoid, pale green, 2–3 mm long; style white, 10 mm long, protruding well beyond stamens as ovary enlarges. *Capsule* ovoid, membranous, 5–7 mm long. *Seed* globose with an arillode with a terminal ridge of medium height. *Chromosome number*: 2n = 16. Figures 1A; 2 & 3.

Etymology: named after the Great Karoo where the first specimens were collected, and from where the largest number of collections are known.

Diagnostic characters

L. karooica is characterised by a spicate or subspicate inflorescence of patent, oblong-campanulate flowers, with the inner perianth segments distinctly recurved and considerably longer than the outer ones. The spreading stamens are well exerted beyond the tip of the perianth, and the anthers are conspicuously pale to dark maroon prior



FIGURE 1.—Inflorescences of four new species and one new subspecies of *Lachenalia*. A, *L. karooica*, Chaplin s.n.; B, *L. perryae*, Perry s.n.; C, *L. neilii*, Duncan 196; D, *L. alba*, Steiner 1366; E, *L. marginata* subsp. *marginata*, Duncan 197; F, *L. marginata* subsp. *neglecta*, Duncan 238. Scale bars: 10 mm.

to anthesis. The plant usually has a single lanceolate leaf which is glaucous and distinctly conduplicate, with depressed longitudinal veins on the upper surface, and irregularly scattered brown, green or maroon blotches, mainly on the upper surface.

L. karooica is related to *L. bowkeri* Baker, an as yet poorly known species from the southern part of the Eastern Cape, in that both have a usually single conduplicate, lanceolate leaf and oblong-campanulate, dull white to greenish white, patent flowers which are sessile or have very short pedicels. The anthers of both species are distinctly pale to dark maroon prior to anthesis. *L. bowkeri* differs in having included, declinate stamens, the tips of the outer perianth segments not re-

curved, and the leaf pale green and unblotched without coriaceous margin.

Flowering time: June to September.

Distribution and habitat

Material of this very distinctive species was first collected by Douglas F. Gilfillan in August 1899 in the Middelburg District of the Eastern Cape. It has since been recorded from several widely separated localities in the Great Karoo and Northern Cape, and from one locality at Karooport. It is distinguished from all other lachenalias in having a single glaucous, conduplicate, lanceolate leaf with a coriaceous margin, and oblong-campanulate flow-

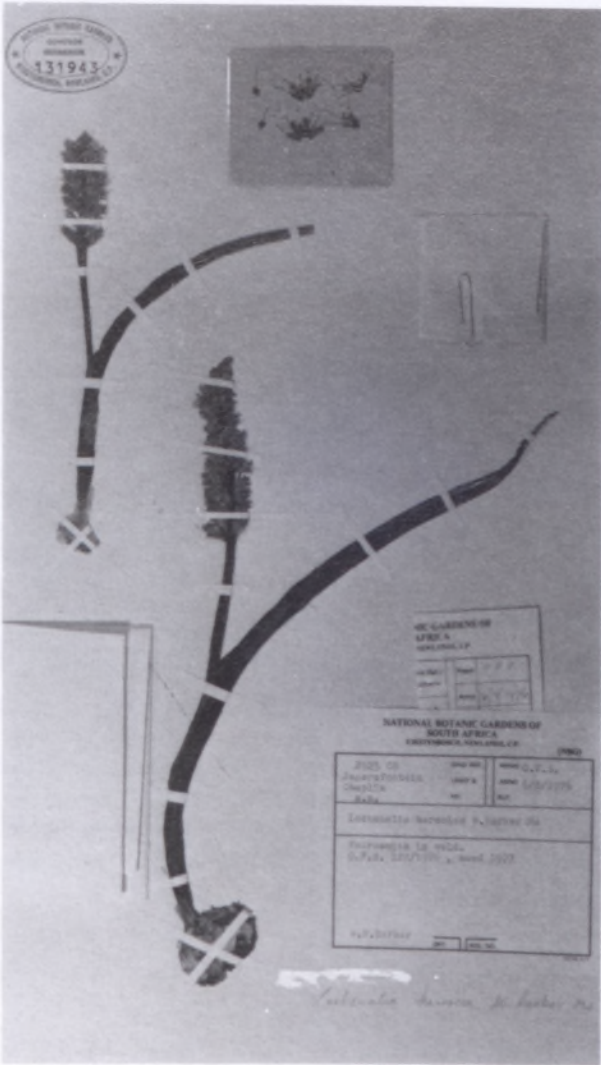


FIGURE 2.—Holotype of *Lachenalia karoovica*, Chaplin s.n.

ers with spreading, exerted stamens, of which the anthers are distinctly pale to dark maroon prior to anthesis. The largest number of specimens is recorded from the Fauresmith District in the southwestern part of Free State, and it is very likely that the plant occurs throughout the Great Karoo and much of the Northern Cape; it is no doubt due to the remote nature of this area and the inconspicuousness of the flowers that only a small number of scattered specimens has been recorded. *L. karoovica*, although growing in areas with predominantly summer rainfall, follows the typical pattern of winter rainfall growth and summer dormancy characteristic of the vast majority of species belonging to this genus.

At the Fauresmith site, plants occur singly or in small groups on south-facing aspects on dolomite outcrops, often growing in the shade of *Rhus burchellii* Sond. ex Engl. Two other geophytes encountered at this site are the white-flowered *Freesia andersoniae* L.Bolus and the yellow-flowered *Homeria pallida* Baker, both widespread, spring-flowering geophytes which follow the winter growth cycle.

Material examined

NORTHERN CAPE.—2824 (Kimberley): between Campbell and Schmidtsdrif, (–CA), Aug. 1963, *Stayner s.n.* (NBG); Farm Wolwefontein, Barkly West, (–DA), July 1936, *Acoks 540* (PRE). 2922 (Prieska):

near Prieska, (–DA), Aug. 1935, *Bryant 592* (PRE); Prieska, (–DA), June 1969, *Hardy & Rauh 1591* (PRE). 3025 (Colesberg): Colesberg commonage, (–CA), Aug. 1925, *Botha s.n.* (PRE). 3124 (Hanover): 12.6 km from T-junction on Nieuw Bethesda road to Middelburg, (–DC), Sept. 1990, *Van Jaarsveld 11160* (NBG).

FREE STATE.—2925 (Jagersfontein): Fauresmith Botanical Reserve, (–CB), Aug. 1938, *Henrici 3158* (PRE); Sept. 1925, *Pole Evans 1825* (PRE); Sept. 1925, *Smith 404* (PRE); 0.5 km on road from Fauresmith to Koffiefontein, (–CB), Aug. 1976, *Chaplin s.n.* (NBG); Aug. 1993, *Duncan 367* (NBG); Aug. 1976, *Lumley s.n.* (NBG).

EASTERN CAPE.—3125 (Steynsburg): Farm Conway, Middelburg Dist., (–CB), Aug. 1899, *Gilfillan s.n. in Herb. Galpin 5578* (PRE). 3225 (Somerset East): Mountain Zebra National Park, top of Babylon's Tower, (–AB), Aug. 1963, *Liebenberg 7248* (PRE).

WESTERN CAPE.—3319 (Worcester): Karooport, (–BC), Aug. 1980, *Karoo National Botanic Gardens expedition s.n.* (NBG).

***Lachenalia perryae* G.D. Duncan, sp. nov.** distinguatur inflorescentia racemosa floribus oblongo-campanulatis segmentibus exterioribus perianthii pallide azureis declinatis, staminibus inclusis, folio singulari arcuato conduplicato anguste lanceolato infra fasciis perspicuis viridibus vel magenteis.

TYPE.—Western Cape, 3319 (Worcester): Karoo National Botanic Garden veld reserve, Worcester, (–CB), Aug. 1985, *P.L. Perry s.n.* (NBG, holo.!; PRE).

Deciduous, winter-growing geophyte 120–320 mm high. *Bulb* globose, 10–20 mm in diam., covered with dark brown spongy tunics produced into a short neck terminating just below ground level. *Leaf* usually solitary, occasionally 2, 240–300 × 10–23 mm, arcuate, conduplicate, narrowly lanceolate, yellowish green, banded below with dark green shading to maroon or magenta on the pale white clasping leaf base. *Inflorescence* subspicate or racemose, lax, few to many-flowered, up to 130 mm long with a very short sterile tip; peduncle slender, suberect, up to 260 mm long, pale green; pedicels 2–3 mm long; bracts ovate to lanceolate, greenish white, 1–2 mm long. *Flowers* patent or slightly cernuous, oblong-campanulate; outer perianth segments oblong, very pale blue, 5–6 × 3 mm, with pale green or brown gibbositities; inner perianth segments obovate, obtuse, 7–9 × 4–5 mm, protruding well beyond outer perianth segments, pale white to whitish yellow with green keels and recurved tips. *Stamens* declinate;

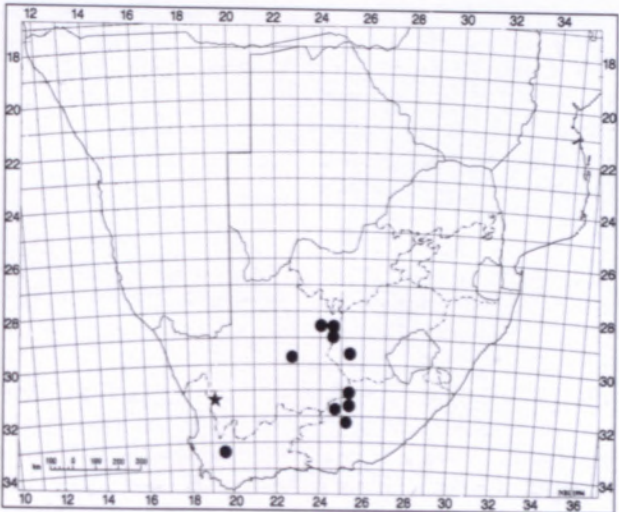


FIGURE 3.—Distribution of *Lachenalia karoovica*, ●; and *L. neilii*, ★.

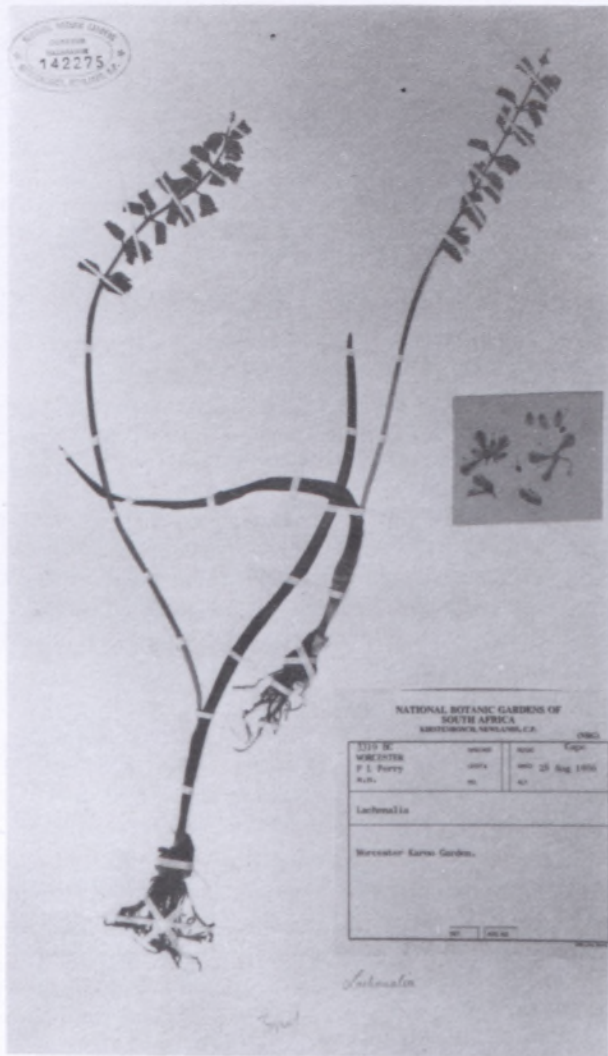


FIGURE 4.—Holotype of *Lachenalia perryae*, Perry s.n.

filaments white, as long as or very slightly longer than inner perianth segments. *Ovary* globose, pale green, 2 mm long; style white, 8–10 mm long, protruding well beyond stamens as ovary ripens. *Capsule* globose, 5–7 mm long. *Seed* globose with an arillode with a terminal ridge of medium height. Figures 1B; 4 & 5.

Etymology: *L. perryae* is named after Miss Pauline Perry, formerly horticulturist at the Karoo National Bo-

tanical Gardens at Worcester, in recognition of her valuable work in collecting and recording the bulbous flora of the Little Karoo.

Diagnostic characters

Superficially, *L. perryae* is reminiscent of the very variable and widespread *L. unifolia* Jacq., to which it is related due to the combination of features of a single narrow, banded leaf, patent or slightly cernuous, oblong-campanulate flowers with pale blue outer perianth segments and whitish inner segments, and included stamens. It differs mainly in leaf morphology, and to a lesser extent, in pedicel length, flower shape and seed morphology. In *L. unifolia*, which never has more than one leaf, the leaf blade is linear, widening abruptly into a loosely clasping base. *L. perryae*, on the other hand, usually has a single leaf, or occasionally two, with a narrowly lanceolate blade which does not widen abruptly. Furthermore, the flowers of *L. perryae* have short pedicels no longer than 3 mm, whereas *L. unifolia* usually has very long pedicels up to 12 mm long. Although both these species have oblong-campanulate flowers, the perianth segments of *L. unifolia* are usually appreciably longer and the tips of the inner perianth segments of *L. perryae* considerably more flared than in *L. unifolia*. In addition, the seed of *L. perryae* has an arillode with a terminal ridge of medium height, whereas in *L. unifolia* the arillode is almost obsolete.

Flowering time: July to September.

Distribution and habitat

The first specimens of *L. perryae* were collected by Miss W.F. Barker in August 1949 near Robertson in the Little Karoo, and it is from this region that most records of the species are known; the largest number of collections have been made in the veld reserve of the Karoo National Botanical Garden at Worcester. The species is currently known from the Worcester District in the north to Port Beaufort in the south and eastwards to Albertinia, all in the Western Cape, with one isolated record much further east near Kommadagga in the Eastern Cape. It occurs in arid areas in clay or sandy soil amongst succulents, usually on south-facing aspects. Plants occur singly or in small groups, and are locally common in some areas. It is quite a variable species as

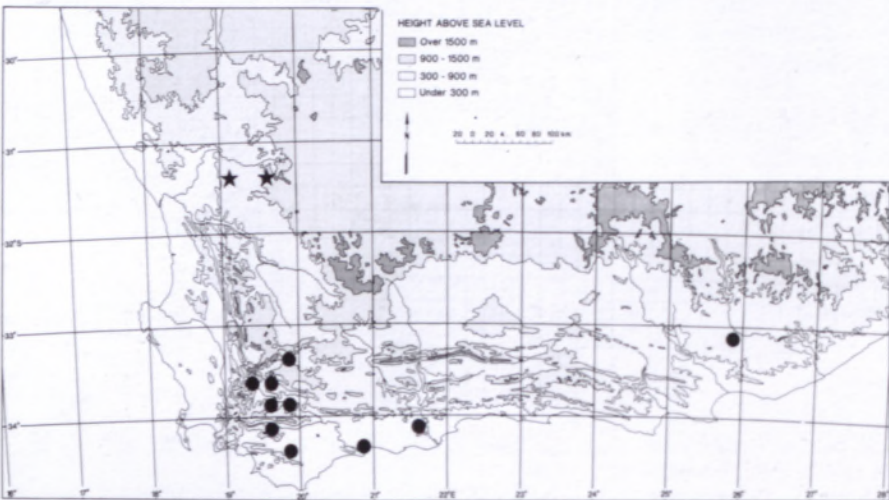


FIGURE 5.—Distribution of *Lachenalia perryae*, ●, and *L. alba*, ★

regards plant size, ranging from depauperate specimens 120 mm high to much taller individuals, up to 320 mm in height.

Material examined

WESTERN CAPE.—3319 (Worcester): top of Hex River Pass, (–BD), Sept. 1974, *Mauve 221* (NBG); Karoo National Botanical Garden veld reserve, (–CB), Sept. 1949, *Barker 5941* (NBG); Aug. 1970, *Bayer 17* (NBG); Aug. 1953, *Compton 24118* (NBG); Aug. 1962, *Olivier 59* (NBG); Aug. 1986, *Perry s.n.* (NBG); De Doorns Mountains on way to Touws River, (–CB), Aug. 1984, *Van Zijl 235* (NBG); near Nuy cement factory, (–DA), Aug. 1970, *Barker 10706* (NBG); 9 km beyond Nuy Village, (–DA), Sept. 1975, *Thomas s.n.* (NBG); 0.3 km from Breede River Bridge on road to Le Chasseur, (–DC), Aug. 1974, *Van Reenen s.n.* (NBG); near Robertson, (–DD), Aug. 1949, *Barker 5393* (NBG). 3419 (Caledon): 17 km E of Caledon, (–BA), Aug. 1969, *Barker 10616* (NBG). 3420 (Bredasdorp): 20 km NW of Port Beaufort on Malagas road, (–BD), Aug. 1962, *Thomas s.n.* (NBG). 3421 (Riversdale): 1.6 km along Stilbaai road from Albertinia, (–BA), Aug. 1971, *Thomas s.n.* (NBG).

EASTERN CAPE.—3325 (Port Elizabeth): road to Jansenville from Kommadagga, (–BB), Sept. 1973, *Bayliss 5919* (NBG, PRE).

***Lachenalia neilii* W.F. Barker ex G.D. Duncan**, sp. nov. distinguitur inflorescentia multiflora racemosa floribus parvis oblongo-campanulatis pallide viridibus basibus perspicuis obscure caeruleis, tumoribusque clare viridibus vel brunneis, staminibus declinatis, foliis duobus lanceolatis glaucis suberectis innotatis supra venis longitudinalibus depressis annuloque bulbillorum basi bulbi.

TYPE.—Northern Cape, 3119 (Calvinia): Nieuwoudtville-Calvinia road (R27), at turnoff to Rondekop, in ditches on both sides of road, (–AC), 12-9-1985, *G.D. Duncan 196* (NBG, holo.).

Deciduous, winter-growing geophyte 120–320 mm high. *Bulb* globose, 12–25 mm in diam., surrounded by strong, dark brown outer tunics, usually with a ring of bulbils produced at the base. *Leaves* 2, lanceolate, glaucous, unmarked, suberect, with depressed longitudinal veins on upper surface, 55–145 × 7–22 mm, clasping leaf base pale yellowish green, with or without tiny maroon speckles, 40–70 mm long. *Inflorescence* racemose, many-flowered, 50–150 mm long with few sterile flowers at tip; peduncle erect, sturdy, pale green, with or without pale brown or maroon speckles, 40–110 mm long; pedicels suberect, white, 2–5 mm long; bracts ovate to lanceolate, white, 2–3 mm long. *Flowers* oblong-campanulate, greenish white fading to dull red, with distinct dull blue bases; outer perianth segments oblong, 7–8 × 4 mm, greenish white with distinct dull blue bases and bright green or brown gibbosities; inner perianth segments obovate, tips slightly recurved, protruding beyond outer perianth segments, white with green keels, 9–10 × 4–5 mm. *Stamens* declinate; filaments white, exerted up to 2 mm beyond perianth, 9–11 mm long. *Ovary* ovoid, bright green, 3 mm long; style white, 8–11 mm long. *Capsule* ovoid, 7–8 × 5–6 mm. *Seed* globose, with an arillode with a terminal ridge of short to medium height. Figures 1C; 3 & 6.

Flowering time: August to October.

Etymology: *L. neilii* is named after Mr Neil Macgregor of Glen Lyon Farm, Nieuwoudtville, in recognition of the sterling nature conservation work he has done in this area

of the Northern Cape. This is the second *Lachenalia* species commemorating Mr Macgregor and his family; in 1979, the very rare *L. macgregorium* W.F.Barker was described from the Charles Hoek area of Nieuwoudtville.

Diagnostic characters

L. neilii is characterised by a many-flowered raceme of greenish white oblong-campanulate flowers with distinct dull blue bases and bright green or brown gibbosities, shortly exerted stamens, two glaucous, lanceolate leaves and usually a ring of bulbils produced at the base of the bulb. It is related to *L. alba* W.F.Barker ex G.D.Duncan due to the shared features of two lanceolate, unmarked leaves, the oblong-campanulate flowers with protruding white inner perianth segments and the slightly exerted stamens. *L. alba* differs in having bigger, more campanulate flowers which are pure white, without distinct dull blue bases, and which are usually attached to the rachis by very short pedicels. Furthermore, the bulb of *L. alba* does not develop a ring of bulbils at its base as *L. neilii* does.

Distribution and habitat

L. neilii has a restricted distribution in the Nieuwoudtville and Calvinia Districts of the Northern Cape

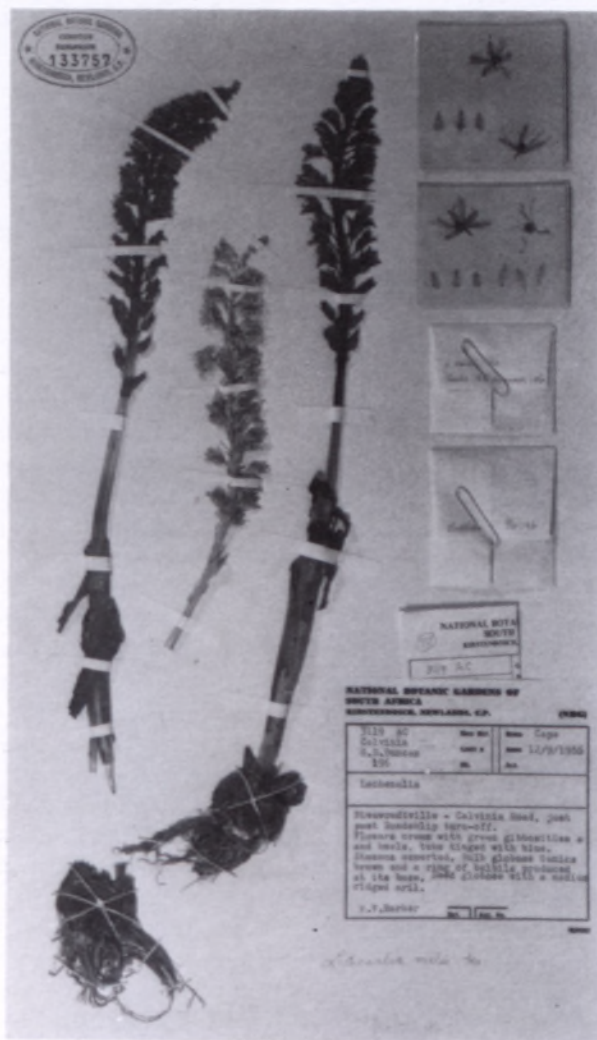


FIGURE 6.—Holotype of *Lachenalia neilii*, Duncan 196.

where it grows in heavy red clayey soil on open flats. The first specimens were collected as far back as September 1930 by a National Botanic Gardens expedition in the area known as Klipkoppies in the Nieuwoudtville area. The plant is locally plentiful and has been recorded as growing in association with another new species, *L. alba*, which is also published for the first time in this paper, and which is also restricted to the Nieuwoudtville area in the Calvinia District.

Material examined

NORTHERN CAPE.—3119 (Calvinia): Klipkoppies, Nieuwoudtville, (–AC), Aug. 1961, *Barker 9535* (NBG); Sept. 1961, *Barker 9667* (NBG); Sept. 1986, *Brandham 3018* (NBG); Sept. 1930, *National Botanic Gardens expedition s.n.* (BOL); Glen Lyon Farm, Nieuwoudtville, (–AC), Oct. 1967, *Barker 10544* (NBG); Oct. 1973, *Barker 10892* (NBG); Glen Ridge Farm, Nieuwoudtville, (–AC), Aug. 1960, *Barker 9185* (NBG); Aug. 1961, *Barker 9435* (NBG); Aug. 1968, *Thomas s.n.* (NBG); 1.6 km E of Nieuwoudtville on road to Calvinia, (–AC), Nov. 1967, *Barker 9532* (NBG); Nieuwoudtville Reserve, (–AC), Oct. 1983, *Perry & Snijman 2420* (NBG); Nieuwoudtville-Calvinia road (R27), at Rondekop turnoff, (–AC), Sept. 1985, *Duncan 196* (NBG). Without precise locality: Klipbokberg, March 1931, *Herre s.n.* (BOL); Leliefontein, Sept. 1940, *Leipoldt 3386* (BOL).

***Lachenalia alba* W.F.Barker ex G.D.Duncan, sp. nov.** distinguatur inflorescentia subspicata vel racemosa floribus grandibus oblongo-campanulatis candidis cum vel sine basibus perpallide azureis cum vel sine carinis distinctis viridibus, rubris vel caeruleis segmentibus interioribus perianthii recurvatis declinatis, staminibusque breviter exsertis, foliis duobus lanceolatis suberectis ad erectis glaucis innotatis supra venis longitudinalibus depressis.

TYPE.—Northern Cape, 3119 (Calvinia); Charles Hoek, Nieuwoudtville, (–AC), 30-9-1973, *W.F. Barker 10888* (NBG, holo.!).

Deciduous, winter-growing geophyte 100–330 mm high. *Bulb* globose, 15–20 mm in diam., white with thick membranous dark brown outer tunics. *Leaves* 2, lanceolate, channelled above, suberect to erect, glaucous, unmarked, margin sometimes undulate, upper leaf surface with depressed longitudinal veins, 120–230 × 15–25 mm, clasping leaf base 20–80 mm long, sometimes suffused with dull maroonish brown zones. *Inflorescence* subspicate to racemose, usually many-flowered, 40–170 mm long with short sterile tip; peduncle suberect to erect, pale green, 50–150 long; rachis pale green shading to white in upper half, with very pale maroonish brown speckles; pedicels white, 1–3 mm long; bracts white, ovate to lanceolate, 2–3 mm long. *Flowers* pure white, oblong-campanulate; outer perianth segments oblong, 7–8 × 3–4 mm, with or without very pale greenish blue bases, gibbositities pale brownish green or dull red; inner perianth segments protruding well beyond outer perianth segments, recurved, obovate, 10–11 × 4–6 mm, with or without pale to distinct brownish green, red or blue keels. *Stamens* declinate; filaments white, 10 mm long, protruding up to 2 mm beyond tip of perianth. *Ovary* ovoid, pale green, 3–4 mm long; style white, 8 mm long, protruding well beyond perianth as ovary matures. *Capsule* ovoid, pale green, 7 mm long. *Seed* globose with an arillode with a terminal ridge of medium height. Figures 1D; 5 & 7.

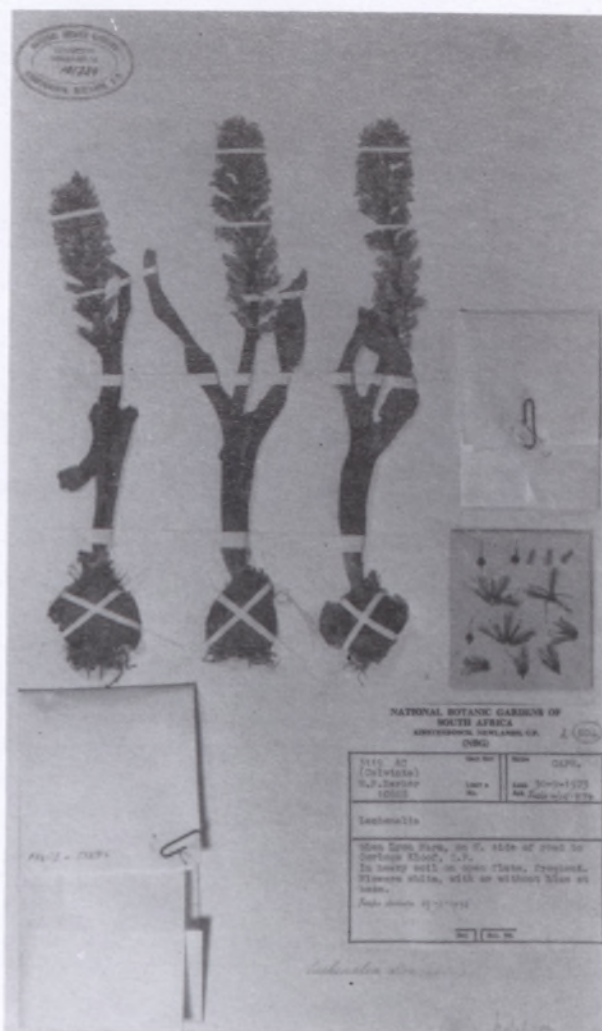


FIGURE 7.—Holotype of *Lachenalia alba*, Barker 10888.

Flowering time: August to October.

Etymology: named *alba* due to the overall white colouring of the flowers.

Diagnostic characters

L. alba is characterised by its many-flowered inflorescence of pure white, oblong-campanulate flowers with recurved inner perianth segments which may or may not have distinct green, red or blue keels, and its two glaucous, lanceolate, suberect to erect unmarked leaves with distinct, depressed longitudinal veins on the upper surface. It is related to *L. neilii*, but the latter differs in having smaller, less campanulate greenish white flowers with distinct dull blue bases borne on long pedicels up to 5 mm long, whereas *L. alba* has short pedicels usually not longer than 2 mm. Furthermore, the bulb of *L. alba* does not develop the typical ring of bulbils at its base as *L. neilii* does.

Distribution and habitat

As with *L. neilii*, this species has a restricted distribution in the Nieuwoudtville and Calvinia areas of the Northern Cape, growing in colonies in heavy red clayey

soil on open flats. The earliest record of the plant is the collection made by W.F. Barker in September 1930 at Klipkoppies, Nieuwoudtville. *L. alba* is recorded as growing in association with *L. neilii* and *L. elegans* W.F. Barker, the latter being a very common, variable species in the Nieuwoudtville-Calvinia area, but to my knowledge there are no reports of interspecific natural hybrids between these species.

Material examined

NORTHERN CAPE.—3119 (Calvinia): Klipkoppies, Nieuwoudtville, (–AC), Sept. 1930, *Barker s.n.* (BOL); Sept. 1961, *Barker 9540* (NBG); Sept. 1973, *Barker 10889* (NBG); Sept. 1986, *Brandham 3027* (NBG); 2 km E of Nieuwoudtville, (–AC), Sept. 1957, *Acocks 19493* (NBG); Sept. 1961, *Barker 9532* (NBG); Nieuwoudtville, (–AC), Sept. 1938, *Buhr s.n.* (NBG); Grasberg, (–AC), Sept. 1943, *Buhr s.n.* (NBG); 1 km W of Nieuwoudtville, (–AC) Sept. 1986, *Brandham 3007* (NBG); Oorlogskloof, (–AC), Sept. 1939, *Leipoldt s.n.* (NBG); Oorlogskloof road, 10.6 km S of junction with R27 at Nieuwoudtville, (–AC), Sept. 1986, *Steiner 1366* (NBG); Nieuwoudtville Reserve, (–AC), Sept. 1983, *Perry & Snijman 2369* (NBG); Glen Lyon Farm, (–AC), Aug. 1972, *Barker 10544* (NBG); Sept. 1973, *Barker 10888* (NBG); Oct. 1974, *Barker 10921* (NBG); between Oorlogskloof and Papkuilsfontein, (–AC), Sept. 1939, *Leipoldt 4170* (BOL); near Toren Farm, (–BC), Oct. 1974, *Thomas s.n.* (NBG); 8.2 km along Toren road from Calvinia-Loeriesfontein road, (–BC), Sept. 1986, *Brandham 3030* (NBG). Without precise locality: between Vanrhynsdorp and Calvinia, Sept. 1934, *Bishop S. Lavis s.n.* (BOL).

***Lachenalia marginata* W.F.Barker** in *Journal of South African Botany* 45: 204–207 (1979).

TYPE.—Nieuwoudtville, *Barker 6463* (NBG, holo.).

L. marginata is a very distinctive species with a distribution range extending from the fynbos on the Nieuwoudtville escarpment to the Gifberg massif and the Nardouw-Pakhuis-Cederberg Mountains and the low-lying areas around Clanwilliam where it usually occurs in very sandy soil growing singly or in small groups. The subsp. *marginata*, which is the most widespread of the two subspecies, is recognised by its single ovate leaf with a distinctive thickened coriaceous margin which is undulate and crisped, its heavily banded clasping base and its long, sessile narrowly urceolate flowers with very conspicuous dark brown gibbosities on the outer perianth segments. The seed places the species into the group of species having a medium-sized terminal inflated arillode (Figures 1E; 8 & 9).

Material of subsp. *marginata* examined

NORTHERN CAPE.—3119 (Calvinia): Glenridge Farm, Nieuwoudtville, (–AC), Aug. 1961, *Barker 9433* (NBG); Aug. 1966, *Barker 10451* (NBG); Sept. 1985, *Duncan 197* (NBG); 4.8 km W of Nieuwoudtville, (–AC), Aug. 1950, *Barker 6465* (NBG); July 1948, *Lewis 2408* (SAM); Aug. 1950, *Lewis 3240* (SAM); 6.4 km W of Nieuwoudtville, (–AC), Aug. 1950, *Barker 6463* (NBG).

WESTERN CAPE.—3118 (Vanrhynsdorp): Matzikamma, (–AB), July 1940, *Martin s.n. sub NBG 72364* (NBG); Klawer, (–DC), June 1950, *Barker 7387* (NBG); 3218 (Clanwilliam): 10 km E of Clanwilliam on Pakhuis Pass, (–BB), Sept. 1985, *Duncan 194* (NBG); Aug. 1974, *Nordenstam & Lundgren 1327* (NBG); 3219 (Wuppertal): Lorraine Farm, N of Pakhuis Pass, (–AA), July 1965, *Siaens s.n. sub NBG 84814* (NBG); Matjiesrivier, Cederberg, (–AC), Sept. 1942, *Wagener 209* (NBG).

***Lachenalia marginata* W.F.Barker subsp. *neglecta* Schltr. ex G.D.Duncan**, subsp. nov. a subspecie typica inflo-

rescentia densiore elongata spicata floribus multo parvioribus anguste urceolatis, folioque erecto ad suberecto conduplicato lanceolato ad ovato-lanceolato differt.

TYPE.—Western Cape, 3218 (Clanwilliam): Die Berg Farm, SW of Clanwilliam, (–BB), 18-9-1966, *Barker 10428* (NBG, holo.).

Deciduous, winter-growing geophyte 110–280 mm high. *Bulb* globose, 11–25 mm in diam., white with thin membranous outer tunics. *Leaf* lanceolate to ovate-lanceolate, erect to suberect, almost always solitary (occasionally 2), glaucous, conduplicate, margin coriaceous, dark maroon, undulate and crisped, upper leaf surface with depressed longitudinal veins and irregularly scattered pale to dark green spots, 45–200 × 18–30 mm; tightly clasping leaf base distinctly banded or blotched with dark maroon. *Inflorescence* spicate, dense, many-flowered 45–185 mm long, with several sterile flowers at tip; peduncle 40–150 mm long, erect to suberect, pale green with maroon blotches, thickening towards base of inflorescence; bracts white, ovate to lanceolate, 3–5 mm long. *Flowers* sessile, narrowly urceolate, greenish yellow fading to dull red; outer perianth segments oblong, 6–8 × 3–4 mm, pale greenish yellow with minute blue speckles and conspicuous dark brown gibbosities; inner perianth segments protruding well beyond outer segments, obovate, 7–11 × 4–5 mm, dark greenish yellow, two upper lateral seg-

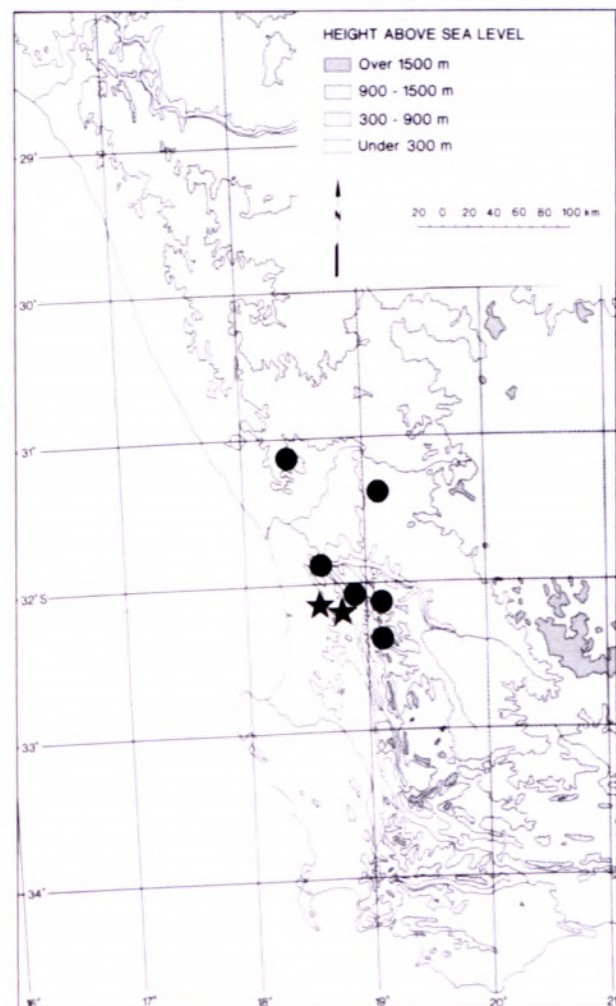


FIGURE 8.—Distribution of *L. marginata* subsp. *marginata*, ●; and *L. marginata* subsp. *neglecta*, ★.

variable and widespread species which is common in this area, but which flowers a few weeks later than *L. marginalis* subsp. *neglecta*.

Material examined

WESTERN CAPE.—3218 (Clanwilliam): Zeekoe Vlei Farm, 14 km W of Clanwilliam, (–BA), Aug. 1896, *Schlechter 8490* (B, BM, BOL, G, GRA, K, L, PRE, S, Z); Die Berg Farm, (–BB), Aug. 1966, *Barker 10428* (NBG); 41 km on N7 road Citrusdal-Clanwilliam, (–BB), July 1986, *Duncan 238* (NBG); July 1993, *Duncan 365* (NBG).

ACKNOWLEDGEMENTS

This paper is dedicated to Miss W.F. Barker who died on 27th December, 1994. I am very much indebted to the staff of the Compton Herbarium, especially Dr D.A. Paterson-Jones, Mr J.P. Roux and Mrs S.E. Foster for their assistance at various stages of this study. I also thank Dr O.A. Leistner for compiling the Latin translations of the diagnoses, Mrs J. Loedolff for taking the photographs of the herbarium sheets, Mrs A. Romanowski for producing the black and white photographs from colour slides and Mr M. Lumley for assistance in the field.

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