



## *Limonium dagmarae* (Plumbaginaceae), a new species from Namaqualand coast, South Africa

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### Abstract

A new species of *Limonium* from Namaqualand coast, South Africa is here described and named *L. dagmarae*. Shared morphological characters with related South African species place the new species within *L.* sect. *Circinaria*. Evidence is presented to segregate the new species from relatives based on discrete morphological and environmental characters. The holotype of the *L. dagmarae* is preserved at NBG.

**Key words:** *Afrolimon*, *Limonium* sect. *Circinaria*, species nova, strandveld, Succulent Karoo

### Introduction

Plumbaginaceae Juss. is a moderately-sized family in the Caryophyllales Bercht. & J.Presl and comprises 25–30 genera and 650–1000 species (Hernández-Ledesma *et al.* 2015, Christenhusz & Byng 2016). *Limonium* Miller (1754: n.p.) is the largest genus in the family with c. 350 species, which are mainly coastal and Mediterranean (Hernández-Ledesma *et al.* 2015: 353). A previously recognised genus within the subfamily Limonioideae Reveal. is *Afrolimon* Linczevski (1979: 167), which included several African species. The species within *Afrolimon* have a history of taxonomic uncertainty, being previously included within *Statice* Linnaeus (1753: 174) by Boissier (1848) and Wright (1909) or *Limonium* by Bolus (1934), then all later grouped into *Afrolimon* by Linczevski (1979), and finally being included again as species of *Limonium* by Goldblatt & Manning (2000). *Afrolimon* has been considered morphologically distinct from *Limonium*, with the synapomorphies of a capitate stigma and expanded corolla limb. However, the independent status of *Afrolimon* was, for the first time, challenged by Lledó *et al.* (2005) who found that their sequences of *A. peregrinum* (Bergius 1767: 80) Linczevski (1979: 168) and *A. purpuratum* (Linnaeus 1767: 59) Linczevski (1979: 168) were embedded within a clade containing the European species. Malekmohammadi *et al.* (2017) later found that the position of *Afrolimon* was incongruently resolved as the sister to the sect. *Limonium* subclade in the plastid versus the sister to a lineage constituted by the sections *Nephrophyllum*, *Platyhymenium* and *Siphonocalyx* in the nrITS trees. In order to ensure the monophyly of section concepts, Malekmohammadi *et al.* (2017) placed ‘*Afrolimon*’ in its own section *Limonium* sect. *Circinaria* (Boiss.) Malekmohammadi. The latter section, typified *L. peregrinum* (P.J.Bergius) Dyer (1961: 490), also suggested that the isolated position of this clade points to a reticulation event that gave rise to this lineage prior to the diversification of the different sub-lineages. This is an interesting point that might have a support in the fact that (at least some) *Afrolimon* taxa readily hybridize, which has been used by horticulture (see below). There are currently about 20 *Limonium* species native to South Africa (Dyer 1963, Goldblatt & Manning 2000, Manning & Goldblatt 2012, Mucina & Snijman 2013), yet with many more taxa recognised and awaiting formal description (Mucina, pers. obs.).

This paper describes a new, so far overlooked *Limonium* species from the Namaqualand coast of South Africa and provides comparison with morphologically similar species occurring in the Cape region.

## Material and methods

This study was based on the examination of freshly collected material, observations made in the field and herbarium specimens deposited at NBG (incl. NBG-SAM and NBG-STE), BOL, GRA, PRE and PRU (herbaria acronyms according to Thiers 2019+). The morphologically similar South African species *L. peregrinum*, *L. purpuratum* (L.) Bailey (1916: 158), and *L. longifolium* (Thunberg 1794: 54) Dyer (1961: 490) were also examined to compare with the new species (see Appendix 1 for a full list of specimens examined). A distribution map of all examined species was produced using georeferenced herbarium collections, and when necessary *a posteriori*, georeferenced approximations were obtained based on specimen label data and personal field observation occurrence notes.

## Results and discussion

The examination of specimens has led to the recognition of *Limonium dagmarae* Mucina *sp. nov.* (Figs. 1 & 2; see Taxonomy below), which has been earlier collected and commonly identified as *L. peregrinum*, as well as *L. longifolium* on few occasions (see Specimens Examined). Although *L. dagmarae* has not been mistaken for *L. purpuratum* in the past, we include the latter species in the comparison to clarify their relationship. Comparisons between these species and *L. dagmarae* are available in Tables 1 and 2. These four taxa are closely related, as shown unequivocally by molecular-phylogenetic analyses including *L. peregrinum* and *L. purpuratum* (Lledó *et al.* 2005). Beside striking difference in ecology (see Table 2 and the Habitat section below for more detail) and non-overlapping (at fine scale) distribution areas (Fig. 3), the main differences between the compared species are in habit and leaf characters such as length, number, indumentum (Fig. 4; Table 1). *Limonium dagmarae* shares the closest affinity to *L. peregrinum*, but they can be easily distinguished by the latter species having distinctly different leaves, which are shiny, significantly broader and grouped at the base of untidy spreading branches (Fig. 4C). *L. dagmarae* has very rough, narrower leaves with abaxial lamina densely covered with salt glands (Fig. 2). *Limonium longifolium* has a very different growth form, forming erect, bloomy-like lax shrubs and often very long leaves (when fresh) are invariably glaucous. Included also in the comparisons are specimens of *L. longifolium* that have been putatively classified *L. fergusoniae* L. Bolus (1934: 124). These are very low shrubs (below 20 cm) and have no direct resemblance with *L. dagmarae*. In growth-form, *L. dagmarae* is similar with *L. purpuratum*, though the latter species has smooth leaves and lacks the rough laminal surface of *L. dagmarae*. The strong affinity with *L. peregrinum*, *L. purpuratum* and *L. longifolium*, suggest that *L. dagmarae* belongs to the taxon initially described as *Statice* sect. *Circinaria* Boiss. (Boissier 1848) that served later (Linczevski 1979) as basis of description of the genus *Afrolimon*.

Our observations do not concur with the statement by Malekmohammadi *et al.* (2017) that these plants are subshrubs. This category is reserved for plants having (at maturity) young herbaceous (hence short-lived) branches while the base of the stem and the branches is woody. At maturity all species formerly classified as *Afrolimon* are shrubs; albeit the young branches are always herbaceous when they are formed, they are not shed in herbaceous stage, but become woody as they would mature (L. Mucina, pers. obs.). Neither do we concur with the latter authors' statement that the *Afrolimon* species are 'restricted to littoral and non-littoral salt-marshes'. None of the described and undescribed species of *Limonium* sect. *Circinaria* are obligate halophytes.

In southern Africa (defined here as the African subcontinent south of the rivers Cunene and Zambezi), the native *Limonium* comprise, besides those formerly classified as *Afrolimon*, a large number of herbaceous taxa (Dyer 1963; L. Mucina, unpublished data), morphologically reminiscent of species commonly occurring around the Mediterranean, and indeed two of those (*Limonium scabrum* Kuntze (1891: 396) and *Limonium kraussianum* Kuntze (1891: 396)) fall within a 'Mediterranean clade B3', corresponding to *Limonium* sect. *Limonium* subsect. *Steirocladae* (Koutroumpa *et al.* 2018, Fig. 3). Another South African herbaceous species, *L. anthericoides*, (Schlechter 1897: 450) Dyer (1932: 155) was shown (Koutroumpa *et al.* 2018) to be sister to the Macaronesian *L.* sect. *Pteroclados* (Boiss.) Bokhari (= *L.* subg. *Pteroclados* sensu Lledó *et al.* 2005). *Limonium dagmarae* is distinctly different from all southern African herbaceous *Limonium* representatives.





**FIGURE 1.** Drawing (original) of *Limonium dagmarae* (voucher *L. Mucina* 250901/25M2, Doringbaai): 1. Stem with flowering branches and leaves (leaf scars are visible in the lower part of the stem), 2. side branch showing post-anthesis calyces, 3. outer supportive bract (supporting the flower), 4. dorsal view of the middle supportive bract, 5. side view of the middle supportive bract, 6. inner (most conspicuous) supportive bract, 7. side view of the calyx tube, 8. shape of the top calyx lobes (calyx rim), 9. top-down view of the calyx, 10. corolla with anthers, 11. corolla petal with anther basally attached, 12. anther, 13. stigma, 14. detail of the stigma. The size of the branch (picture 1. serves as the scale; the branch is c. 30 cm long). Artist: Angela Beaumont.





**FIGURE 2.** *Limonium dagmarae* in situ (the southernmost population of the species, origin of the voucher *L. Mucina* 250901/25M2). A: overall habit (semiglobose-shaped low shrub); B: view of a branch that finished flowering not long ago (the papery calyces are still light pink and brownish ribs prominent; also showing the sparse leafing of the branch); C: fully developed flower, flanked by several calyces which perigone already withered and several buds prepared to flower. D: habitat of *L. dagmarae* – loamy-sandy strandveld scrub, with associated succulent shrubs (*Aizoaceae* and *Euphorbia decussata* E.Mey. and *E. mauritanica* L.). All photos L. Mucina.



**TABLE 1.** Comparison of some basic morphological traits able to assist field identification of four putatively related *Limonium* species of the sect. *Circinaria*.

	<i>L. dagmarae</i>	<i>L. peregrinum</i>	<i>L. purpuratum</i>	<i>L. longifolium</i>
Life-form	low to mid-tall shrub	low shrub	low to mid-tall shrub	low to mid-tall shrub
Overall appearance	rounded semiglobose	broadly lax	broadly semiglobose	broomy lax
Shape of the terminal flowering branches	arching	arching	erect or slightly arching	erect
Leaf shape	narrowly cuneate with lamina tapering into petiole-like base; when dry, lamina folded and with the leaf tip flexed backwards	broadly cuneate or obovate with lamina tapering into petiole-like base; when dry, lamina remains flat	obovate-cuneate, oblanceolate to oblinear-lanceolate with lamina smoothly grading into broad petiole; when dry, lamina folded and slightly flexed backwards	linear-oblanceolate and sometimes narrowly spatulate, with lamina inconspicuously grading into broad petiole
Leaf lamina length <sup>1</sup>	3–5 cm	3–8 cm	8–18 cm	up to 30 cm
Leaf surface	both surfaces rough; especially the abaxial side of lamina densely covered with salt glands; reddish-brown when both fresh and dry	adaxial surface often shiny (in situ); abaxial surface rough and pitted; shiny green when fresh and dark green when dry	both surfaces smooth with only faint pitting; dark green when fresh and dark grey when dry	both surfaces smooth or very minutely scabrid; glaucous when fresh and dark grey when dry
No of leaves per leaf tuft <sup>1</sup>	5–15	8–20 <sup>3</sup>	5–7	6–9
Dry calyx colour <sup>2</sup>	light pink to white	deep to light pink	light pink	light brown
Flower colour	light pink	deep pink	light pink	white

<sup>1</sup>counted on 10 randomly chosen voucher specimens

<sup>2</sup>the dry calyx colour is dominated by the colour of the calyx veins

<sup>3</sup>the low number of leaves refers to young yet fertile specimens

**TABLE 2.** Summary of ecology of four putatively related species of *Limonium* sect. *Circinaria*. The biome and vegetation-typological terminology follows Mucina & Rutherford (2006) and Mucina (2019). The nutrient status of soils as well as texture and colour source data from field observations (L. Mucina, unpubl. data).

	<i>L. dagmarae</i>	<i>L. peregrinum</i>	<i>L. purpuratum</i>	<i>L. longifolium</i>
Soil texture; colour	Ca- and P-rich; loamy-sandy; red	Ca- and P-rich; sandy; yellow	nutrient-poor; sandy; white	nutrient-poor; sandy; white
Soil nutrient-status	high	high	low	low
Salt-spray influence	rare (impacting only few coastal cliff populations)	strong and regular	none	none
Vegetation type	tall dry strandveld	low strandveld scrub	restio-dominated fynbos	restio-dominated fynbos
Biome	Succulent Karro, partly Fynbos (dry dune fynbos scrub) and coastal azonal vegetation	Fynbos (Strandveld)	Fynbos (Sand Fynbos)	Fynbos (Sand Fynbos)

## Taxonomy

### *Limonium dagmarae* Mucina *sp. nov.* (Figs. 1 and 2)

**Type:**—SOUTH AFRICA. **Western Cape:** Bitterfontein District, Farm Katdoringvlei, Ruitersvlei, approx. 2 km WSW of farmhouse, elev. 180 m, 25 October 1988, L.W. Powrie 742 (NBG-STE!, sub *L. 'peregrinum', recte: L. peregrinum*).

**Synonym:**—‘*Limonium sp. A* (= *Limonium dagmarae* Mucina ms)’ in Mucina & Snijman, Plants of the Greater Cape Floristic Region. 2: The Extra Cape Flora, p. 439; 2013. (nomen nudum, Art. 38 in ICN, Turland *et al.* 2018).



**Description:**—*Shrub* up to 60 cm tall when mature, ramificated, with woody tap-root. *Stems* 5–30 cm long, multiple, originating from root head, ascending and becoming broadly arched; colour green-copper when young, older mainly copper-coloured; glabrous and smooth; petioles of senesced leaves persistent; densely branched in the upper half or third. *Branches* 5–15 cm long, curved, dense, mostly unilaterally ramified; copper-coloured; glabrous and wrinkled. *Leaves* 10–40 mm long (including the petiole) and 5–10 mm wide, obovate or oblanceolate and typically channeled, finely scabrous, alternate, occurring solitary along the stem and branches, located mainly in the lower half or lowest third of the stems/branches; colour coppery and green-coppery; apex rounded to broad acute; petiole c. 5 mm long, partly channeled. *Spikes* 10–30 mm long, straight or slightly curved, terminating at same level. *Spikelets* 12–15 mm long, single-flowered, loosely arranged on spike. *Outer bract* 2.6–2.8 mm long and 2.0–2.5 mm wide, broadly triangulate-ovate; central part of bract fleshy, triangular, with tip reaching as far as the margin; bract margin narrowly white-membranous, serrate; apex acute. *Middle bract* 2.9–3.1 mm long and 1.8–2.0 mm wide, broadly-elliptic to obovate; central part of bract fleshy, bifurcated, with two unequally long tips, 2.5–2.8 mm long; bract margin narrowly white-membranous, 0.2–0.5 mm long at apices, serrate; apices rounded. *Inner bract* 8.5–9.0 mm long and 6.3–7.0 mm wide, broadly-elliptic to broadly obovate, encircling calyx tube; central part fleshy, 8.3–8.6 mm long and 4.9–5.3 mm wide, oblong-elliptic, apex with one triangular tip, 0.1–0.2 mm long reaching more or less to the margin; margin white-membranous, 1.2–2.2 mm wide; apex finely serrate, membranous to 0.5–1.0 mm long. *Calyx* broadly funnelform (infundiform), 5.0–5.5 mm long and exerted beyond the inner bract by 2.0–3.0 mm; calyx tube 6.8–7.0 mm long with five fleshy ribs terminating c. 1 mm below the margin, lower half covered by short, bristly hairs. *Corolla* light pink. *Petals* approx. 3–5 mm long and c. 2–3 mm broad, fused at the base and forming short corolla funnel, wedge-shaped, rounded on the upper end. *Stamens* with versatile anthers divided halfway. *Ovary* 5-winged; styles 5, free. *Stigma* capitate.

**Phenology:**—Flowering has been observed and recorded from August to November, which is typical of the warm-temperate, mediterranean-type climate of the Cape, characterised by wet and cool winter and spring. Interestingly, most of the *Limonium* species so far described from South Africa (and not belonging to the *Limonium* sect. *Circinaria*) are summer-flowering. The flower corollas are short-lasting (only few days) and appear in successive cohorts during the flowering time.

**Distribution:**—Endemic to the Namaqualand coast, between Doringbaai, Western Cape and Kleinsee, Northern Cape Province (Fig. 3).

**Habitat:**—*Limonium dagmarae* is typically found in open arid strandveld scrub, dominated by succulent subshrubs of the genera *Ruschia* Schwantes (1926: 234), *Drosanthemum* Swantes (1927: 14, 29), *Vanzyllia* L.Bolus (1927: 262) (all Aizoaceae Martinov), *Euphorbia* L. (Euphorbiaceae Juss.) and *Caroxylon* Thunb. (1782: 240–241) (Chenopodiaceae Vent.). In the southern section of its distribution area (Brandsebaai near Vredendal and southwards) it is confined to SKs 7 Namaqualand Strandveld (terminology follows Mucina & Rutherford 2006), while further north it is also found in SKs 8 Namaqualand Coastal Duneveld. Both SKs 7 and 8 are part of the Succulent Karoo Biome. Coastal populations characterised by dwarfed habitus are found in AZd 2 Namaqualand Seashore Vegetation (near Hondeklipbaai) and AZd 3 Cape Seashore Vegetation (near Doringbaai). Few populations found east of Hondeklipbaai occur in arid FFd 1 Namaqualand Sand Fynbos (part of the Fynbos Biome).

Ecologically, *L. dagmarae* is one of the most arid (semi-desert) elements within *Limonium* sect. *Circinaria*. Of three other species of this section morphologically somewhat similar with *L. dagmarae*, ecologically most similar is *L. peregrinum* which occurs within Fynbos Biome realm while *L. dagmarae* is linked mainly to Succulent Karoo Biome (Table 2). When comparing the latter two taxa, *L. dagmarae* occurs only rarely under direct salt-spray influence (on coastal cliffs or shell beds) – here in a creeping, poorly developed form, while *L. peregrinum* is typical of stabilised coastal dunes and calcareous outcrops associated with the coastal dune systems.

Unlike *L. peregrinum*, *L. purpuratum* and *L. longifolium* (all occurring on sandy soils), *L. dagmarae* prefers stabilised red sandy-loamy soils.

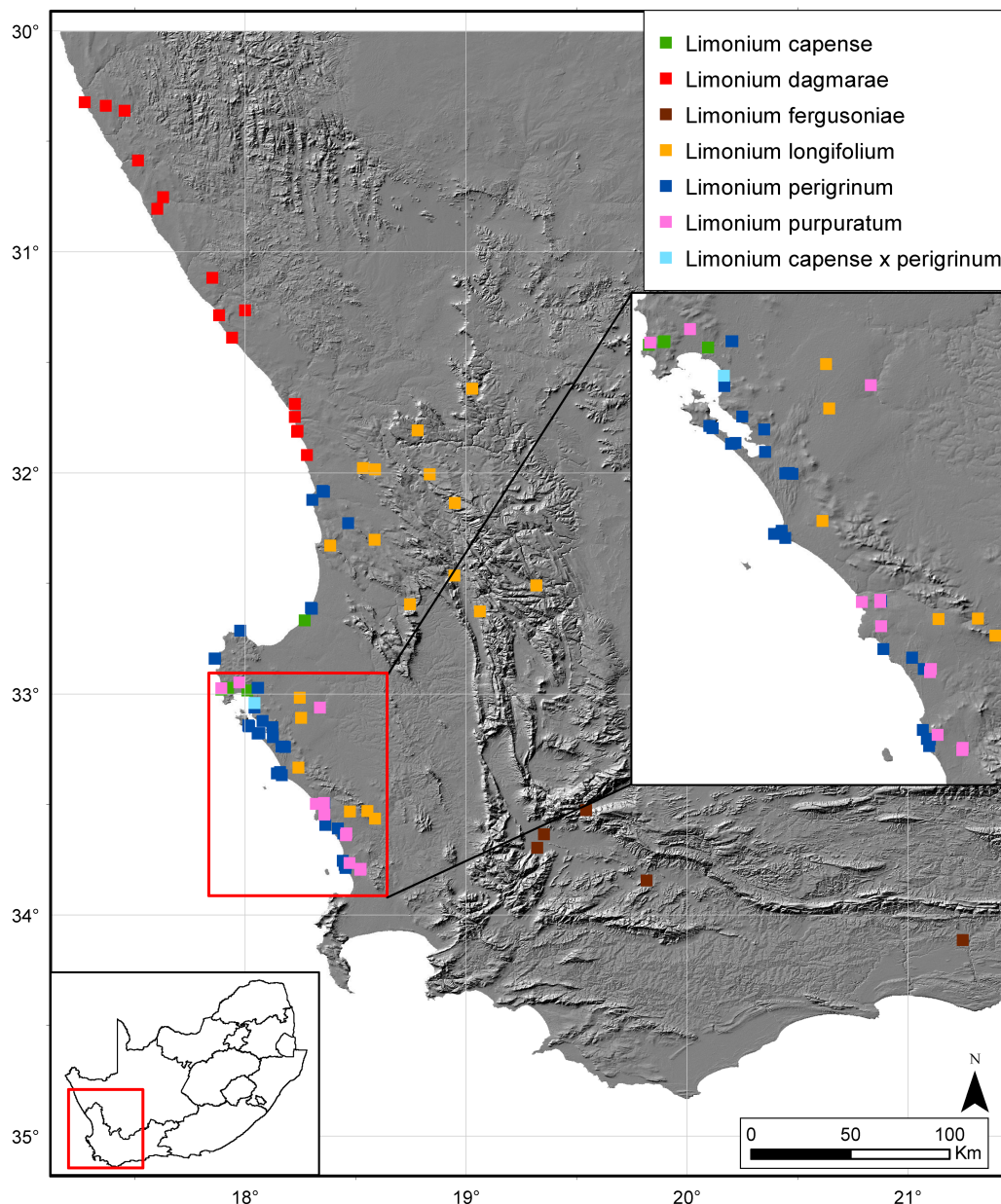
**Horticultural significance:**—Many *Limonium* species have been taken subject of horticultural research (e.g. European Union 2002, Antonetti 2012) into cultivation and have proven to be popular garden ornamentals, mainly because of persistent conspicuous colourful calyces (Mediterranean *L. sinuatum* (L.) Mill., making it a wide spread popular ‘paper-flower plant, colour combinations involving flowers and calyces as well as showy leaves (Canarian *L. perezii* (Stapf) F.T.Hubb.), and even showy leaf rosettes (Sicilian *L. hyblaenum* Brullo). As an unwanted side effect of the popularity of those taxa, one has to acknowledge that some became invasive (*L. sinuatum* in South Africa, *L. hyblaenum* in Western Australia) and some might possess invasive potential (*L. perezii*). Of taxa similar with *L. dagmarae*, *L. peregrinum* became popular as cut plant (Reynten *et al.* 2011), or garden ornamental (*L. Mucina*, pers. obs., Chile, Zapallar).



*Limonium peregrinum* and *L. purpuratum* became a subject of breeding (Morgan *et al.* 1995, 1998, 2001, Burge *et al.* 1998, Seelye *et al.* 2000) in New Zealand. *Limonium dagmarae* is similarly showy both in anthesis (pink splashes of flowers and bright-coloured calyces) and in post-anthesis when temporary pink calyces persist for a while just to be replaced gradually by dense patches of dry white ones (Fig. 2) extending the visual delight further. Since the close relative *L. peregrinum* apparently is easy to cultivate, one can assume that the water-wise *L. dagmarae* might eventually find a way to cultivation (see also Reinten *et al.* 2011).

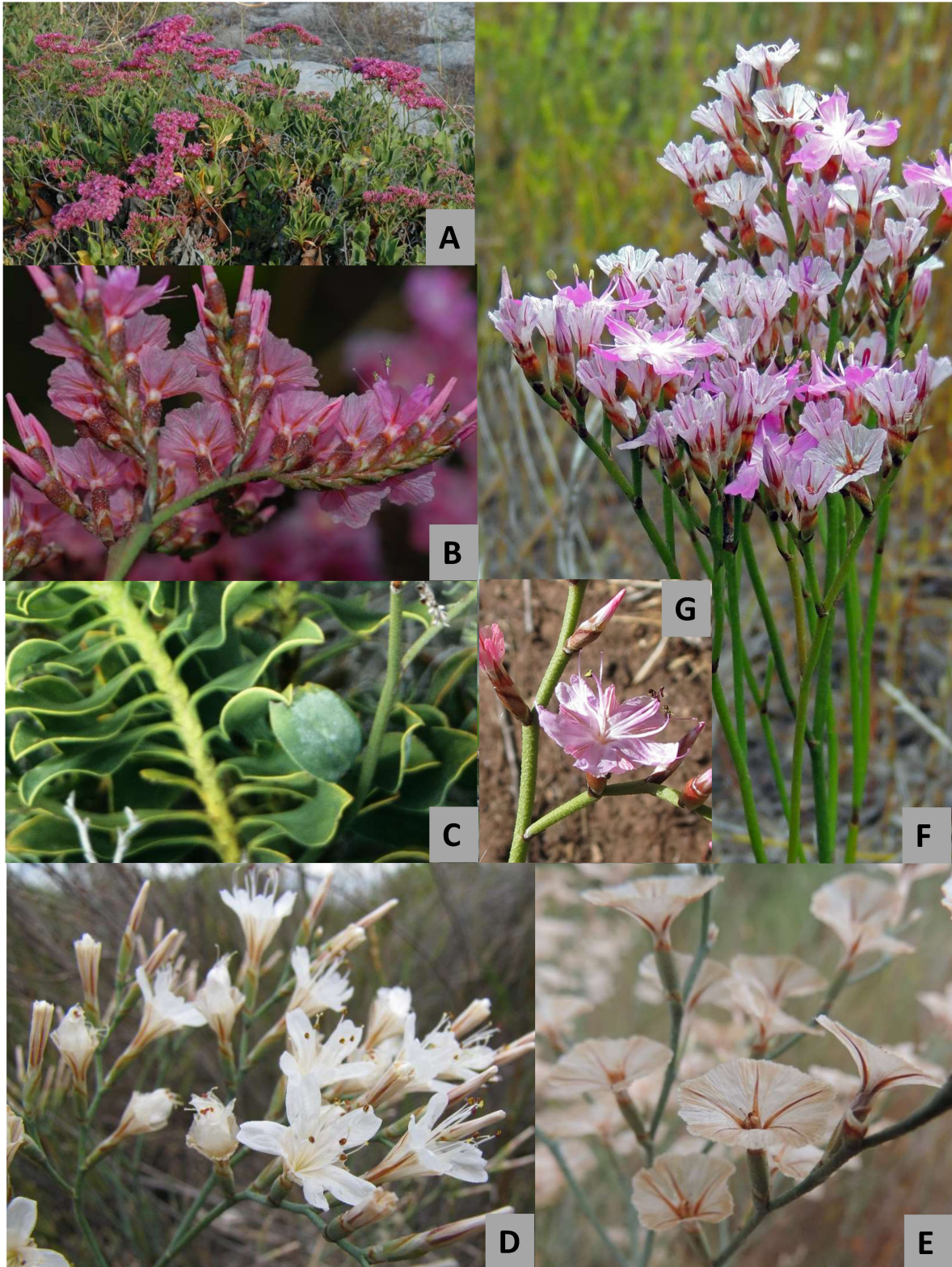
**Conservation assessment:**—Following the criteria of the IUCN Standards and Petitions Subcommittee (2017), *Limonium dagmarae* is Endangered: B1a,b(I,ii,iii,iv); C2a(ii). *L. dagmarae* occurs in region spanning 96 latitudinal minutes (c. 205 km of aerial distance between the northernmost and southernmost locality) and within this span it occurs in a 5–10 km broad belt. They local populations of the species count several tens of individuals. So far, the extensive population occurs on private land (lightly grazed) north of settlement (Doringbaai near Vredendal, Western Cape Province). It is potentially endangered by further settlement development.

Ex situ conservation using tissue cultures, as applied in the case of *L. sinensis* (Dam *et al.* 2010) or being developed in Bulgaria (Kaninski *et al.* 2012), seems like a feasible option to enhance survival of the species.



**FIGURE 3.** Distribution of putatively related species (and one hybrid) of *Limonium* sect. *Circinaria* in the SW Western Cape and Namaqualand (South Africa).





**FIGURE 4.** Three most similar (with *Limonium dagmarae*) *Limonium* species (all photographed on the West Coast, Western Cape Province of South Africa). A: *L. peregrinum*, overall habitus, coastal dunes, Langebaan; B: *L. peregrinum*, arrangement of the terminal flowering branches, view from the abaxial side, Paternoster; C: *L. peregrinum*, typical dense leafing on a branch, Langebaan; D: *L. longifolium*, terminal inflorescence with typically white flowers, Elandsfontein; E: *L. longifolium*: post-flowering terminal branch with broadly opened papery calyces, note also the grey-coloured surface of the branches, Atlantis; F: *L. purpuratum*: typical tall broomy habitus in young specimens; G: *L. purpuratum*, detail of a fully developed flower and bud (above the flower), Jacobsbaai. Photos: A, B: G. López; C: L. Mucina; D: N. Helme (iSpot); E (iSpot), F: J. van der Merwe; G: K. Claassens (iSpot).



**Etymology:**—Named in honour of Dagmar Mucina, the life partner and wife of the first author, in recognition of her indispensable support and her shared passion for the flora of Namaqualand.

**Specimens examined:**—SOUTH AFRICA. Western Cape Province: West Coast, Vredendal, Doringbaai, N of town on road to Strandfontein, 31°48'42.8" S 18°14'06.5" E, 25 September 2001, *L. Mucina* 250901/25M2 (NBG!); West Coast, West Coast, Doringbaai, at northern entrance to settlement, 31°48'24.9" S 18°14'10.104" E, 14 February 2016, *L. Mucina* 140216/22 (NBG!); West Coast, Doringbaai S of Olifants River mouth, 31°48'42.8" S 18°14'06.5" E, 25 September 2001, *L. Mucina* & *A. Santos Guerra* 250901/40 (NBG!); West Coast, Doringbaai, 0.5 km N of town at R362, 31°48'28.0" S 18°14'10.6" E, 21 January 2003, *L. Mucina* 2101003/02 (NBG!); [West Coast], near Doringbay [Doringbaai], 31°55'6.996" S 18°16'42.6" E, 22 December 2013, filed by Francois Kriel on iSpot SA (photo!); Namaqualand, Clanwilliam Dist., Strandfontein, Karelshoek, coast, elev. 10 m, 7 November 1978, *C. Boucher* 4044 (NBG-STE!, sub *L. 'perigrinum'*); West Coast, Vredendal, Papendorp, at R362 N of turnoff to Papendorp, 31°41'14.1" S 18°13'29.4" E, 21 January 2003, *L. Mucina* 2101003/01 (NBG!); Namaqualand, Vredendal District, Baie Vleie E of Waterbakke, elev. c. 80 m, 6 November 1989, *C. Boucher* 5641 (NBG-STE!, sub *L. 'perigrinum'*); Van Rhynsdorp/Vredendal, Brandsebaai, proposed mining area of Anglo-American Corp., beach dune, 1 October 1992, *M.W. van Rooyen* 2230 (PRU!, sub *Limonium* sp.); Van Rhynsdorp/Vredendal, Brandsebaai, proposed mining area of Anglo-American Corp., beach dune, 16 January 1993, *A.J. de Villiers* 13 (PRU!, sub *L. 'perigrinum'*); Van Rhynsdorp/Vredendal, Brandsebaai, proposed mining area of Anglo-American Corp., on the coast, March 1993, *A.J. de Villiers* 28 (PRU!, sub *L. 'perigrinum'*); Van Rhynsdorp/Vredendal, Brandsebaai, Namakwa Sands, 23 August 1993, *A.J. de Villiers* 78 (PRU!, sub *L. purpuratum*); Namaqualand, [Brandsebaai], Plaas Geelwal, Karoo 262, 18 August 1978, *A. Le Roux & Ramsay* 98 (CPA/KPA Nature Conservation Herbarium!, sub *L. sp. cf. namaquanum*); Namaqualand, Vredendal District, Sandkop Farm E of Brand se Baai [Brandsebaai], elev. ca. 120 m, 6 November 1989, *C. Boucher* 5650 (NBG-STE!, sub *L. 'perigrinum'*); Bitterfontein District, Farm Katdoringvlei, Ruitersvlei, approx. 2 km WSW of farmhouse, elev. 180 m, 25 October 1988, *L.W. Powrie* 742 (NBG-STE!, sub *L. 'perigrinum'*), 31°7'0.0" S 17°51'0.0" E, wrongly filed in JSTOR Global Plants as holotype of '*Afrolimon peregrinum*', <http://plants.jstor.org/stable/10.5555/al.ap.specimen.nbg0173594-0>. Northern Cape Province. Namaqualand, 11 km NE of Groen River mouth, Roode Heuwel, elev. ca. 90 m, 30°45'05.2" S 17°37'41.8" E, 2 July 2013, *N.A. Helme* 7959 (NBG, photo!); Namaqualand, about 15 km NE of Groen River mouth, Farm Roode Heuwel 502, 30°45'04.8" S 17°37'42.0" E, fairly common in undisturbed Namaqualand Strandveld, elev. 120 m, *N.A. Helme* 7959 (NBG!); Namaqualand, Groen River mouth, near Klipkraal [Klipkuil] NE of the mouth, February 1981, *A. Le Roux* 2848 (NBG-STE!, sub *L. 'perigrinum'*); CPA/KPA Nature Conservation Herbarium!, sub *L. 'perigrinum'*); Namaqualand, Hondeklipbaai, near coast near police station, *L. Mucina* LM6600/9-Ex2 (NBG!), creeping form; Namaqualand, Hondeklipbaai, SW of police station, 18 October 2005, *D. Gwynne-Evans* 181005/21 (private herbarium D. Gwynne-Evans!); Namaqualand, 18 km E of Hondeklip Bay [Hondeklipbaai] on road to Baksteenhoek, 11 September 1989, *A. Le Roux* 4062 (CPA/KPA Nature Conservation Herbarium!, sub *Limonium* sp.); Namaqualand, Hondeklipbaai, 10 km oos van [east of] Hondeklipbaai, 5 December 1977, *G. Rösch* 2123 (PRU-37587!, sub *L. longifolium*); Namaqualand, 10 km SSE of Hondeklipbaai, Farm Avonura 487, near road-fork Baksteen/Gheams, 30°21'24.0" S 17°25'56.1" E, 15 August 1998, *L. Mucina* LM6594/9 (NBG!); Namaqualand, Hondeklipbaai, 10 km east of Hondeklipbaai, 5 December 1977, *A.H. Wooley-Dod* 2123 (PRE!, sub *L. longifolium*); [Namaqualand], Northwestern Cape, Groenbosvlei, elev. 400 ft, 8 December 1980, *P.M. van der Westhuisen* 206/80 (NBG-STE!, sub *L. 'perigrinum'*); CPA/KPA Nature Conservation Herbarium!, sub *L. 'perigrinum'*); Namaqualand, Sandveld, [Koingnaas], Zoutpan 471, on road from De Riet to Heidens [Haidons], 17 August 1993, *A. Le Roux* 4503 (CPA/KPA Nature Conservation Herbarium!, sub *L. longifolium*); Namaqualand, Bitterrivier, Langberg, on gravelly foothills, 2 November 1963, *H.C. Taylor* 5516 (NBG-STE!, sub *L. longifolium*). Imprecise locality: [Cape], *Ecklon & Zeyher* 70.10 (NBG-SAM 41399!, sub *S. tetragona*, *S. rosea*, *L. peregrinum*).

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## Appendix 1. Additional specimens examined for this study.

**Specimens of *L. peregrinum* examined** (ordered from the South to the North; often misspelled as '*perigrinum*'):—SOUTH AFRICA. Western Cape Province: [Cape Town], S of Melbosstrand, M14, Cape Farms, lat. 33.7725° S, long. 18.4497° E, 13 December 2012, filed by Geertoni Spot SA (photo!); [Cape Town], Belville Dist., Melkbosstrand, 29 November 1954, P.G. Jordaan 28081 (NBG-STE!, sub *L. roseum*); Cape Town, Melbosstrand, lat. 33°45'15.6" S, long. 18°26'31.4" E, *L. Mucina* 06022000/5 (NBG!); [Cape Town], Duynfontein (Koeberg), 6 December 1988, Besenberg & Rutherford 480 (NBG-STE!, sub *L. "perigrinum"*); [Cape Town], Melkbosch Strand, 20 December 1940, R.H. Compton 9857 (NBG-42737!, sub *L. roseum*); [Cape Town], Cape Peninsula Dist., Blaauwberg Strand, 2 August 1943, R.H. Compton 14630 (NBG-42738!, sub *L. roseum*); [Cape Town], Bloubergstrand, Melkbosstrand area, lat. 33.78692° S, long. 18.45423° E, 4 July 2016, filed by Richard Adcock on iSpot SA (photo!); [Cape Town], Blaauwberg Nature Reserve, BBNR Coastal Hiking Trail, lat. 33.7734° S, long. 18.456° E, 30 May 2014, filed by Vuyo on iSpot SA (photo!); [Cape Town], prope Blaauwberg ad sinum Tafelbaai marit., sine dato, Pappé 25652 (NBG-STE!, sub *Statice rosea*); [Cape Town], Ganzekraal East, lat. 33.4952° S, long. 018.358° E, 2 December 2016, filed by Richard Adcock on iSpot SA (photo!); [West Coast], R27 near Atlantis, lat. 33.60957° S, long. 18.41971° E, 20 January 2017, filed by 'PetraBroddle' on iSpot SA (photo!); [Atlantis], R27, Cape Farms, Witzands Aquifer Nature Reserve, lat. 33.63212° S, long. 18.44369° E, 3 September 2014, filed by Simonne on iSpot SA (photo!); Atlantis, Silvestroom Strand, lat. 33°35'31" S, long. 18°21'43" E, 21 August 1998, *L. Mucina* 97-08-21/A1 (NBG-STE!, sub *A. 'perigrinum'*); [Yzerfontein], op strand by [on the beach near] Ysterfontein, 27 December 1967, W.F. Reyneke 30 (PRU!); Yzerfontein, Smutskraal, near the sea, 8 December 1983, A. de Kock 57 (NBG-STE!, sub *L. 'perigrinum'*); Malmesbury Dist., Yzerfontein, sand dunes, 12 August 1951, S.M. Johnson 154 (NBG-5737!, sub *L. roseum*); Ysterfontein [Yzerfontein], Klein Suurfontein, elev. 50 ft, 13 June 1982, M. Viviers 438 (NBG-STE!, sub '*L. 'perigrinum'*'); Ysterfontein [Yzerfontein], 1 September 1969, H. Barry s.n. (NBG-STE!, sub *L. 'perigrinum'*); Malmesbury Dist., Yzerfontein, 7 June 1938, E. Cohen s.n. (NBG-42742!, sub *L. roseum*); Ysterfontein [Yzerfontein], Sandveld State Forest, 17 January 1979, R.A. Haynes 1521 (NBG-STE!, sub *L. 'perigrinum'*); Yzerfontein, S edge of town, lat. 33°21'12.3" S, long. 18°09'27.1" E, 08 December 2000, *L. Mucina* s.n. (observation); [Langebaan], West Coast National Park, lat. 33.23683° S, long. 18.17062° E, 5 August 2014, filed by \_sian on iSpot SA (photo!); Langebaan, April 1929, unknown student Univ. Stellenbosch s.n. (NBG-STE!, sub *Statice rosea*); Langebaan, West Coast NP, lat. 33°10'42.7" S, long. 18°03'20.3" E, *L. Mucina* 06022000/4 (NBG!); [Langebaan], West Coast NP, lat. 33.2389° S, long. 18.1786° E, 28 November 2015, filed by Rolf T. Borlinghaus on iSpot SA (photo!); [Langebaan], West Coast National Park, near N entrance, lat. 33.12289° S, long. 18.07786° E, 4 October 2011, filed by Nicky vB on iSpot SA (photo!); [Langebaan], West Coast National Park, lat. 33.14947° S, long. 18.12172° E, 3 October 2011, filed by Nicky vB on iSpot SA (photo!); Langebaan, lat. 33.238° S, long. 18.164° E, 15 July 2012, filed by Andrewm on iSpot SA (photo!); Langebaan Lagoon, road to Kraalbay, West Coast National Park, lat. 33.17825° S, long. 18.05551° E, 21 March 2014, filed by Tony Rebelo on iSpot SA (photo!); Langebaan Peninsula, 232B Harpuisbos St, lat. 33.147° S, long. 18.018° E, 10 November 2012, filed by \_Celia on iSpot SA (photo!); Langebaan Peninsula, Schrywershoek, sand dune, 13 August 1975, C. Boucher 2768 (NBG-STE!, sub *L. 'perigrinum'*); Langebaan lagoon, eastern side, elev. 50 ft, 22 February 1970, C. Boucher 1148 (NBG-STE!, sub *L. 'perigrinum'*); [Langebaan], Church Haven, coastal dune, elev. 100 ft, 28 December 1976, R.D.A. Bayliss 7977 (GRA! sub *L. purpureum*); [Langebaan], West Coast National Park, Postberg Peninsula, coastal dune, 11 August 1992, P. van Wyk BSA 147 (PRU! sub *L. 'perigrinum'*); Hopefield Dist., Langebaan, sand dunes, 23 May 1963, N. Horrocks 72 (NBG-68588!, sub *L. roseum*); Malmesbury Dist., [Langebaan], Geelbek, 23 August 1947, W.F. Barker 4615 (NBG-42745!, sub *L. roseum*); Langebaan, 3 km S of Geelbek, dunes, 28 September 1987, M. O'Callaghan & Steensma 1606 (NBG-STE!, sub *L. 'perigrinum'*); Langebaan, Geelbek Farm, 15 September 1986, Besenberg & Rutherford 126 (NBG-STE!, sub *L. 'perigrinum'*); Langebaan Peninsula, above Preekstoel, dunes, 29 September 1987, M. O'Callaghan & Steensma 1649 (NBG-STE!, sub *L. 'perigrinum'*); Hopefield Dist., [Langebaan], south of Geelbek, 15 August 1966, J. Pamphlett 79 (NBG-85007!, sub *L. 'perigrinum'*); Langebaan, Saldanha Bay, 18 December 1951, L.E. Taylor 3754B (NBG-42741!, sub *L. roseum*); Langebaan, Kalkklipfontein, elev. 350 ft, 06 February 1978, L. Hugo 988 (NBG-STE!, sub *L. 'perigrinum'*); Langebaan Dist., Postberg reservaat, SW van Postberg ingang, 26 January 1991, A. Craven 146 (NBG-STE!, sub *L. 'perigrinum'*); Saldanha Bay, 15 September 1961, unknown 694 (NBG-STE!, sub '*Limoneum*' roseum); Saldanha, Namaqua Sands factory, lat. 32°58'18 S, long. 018°03'27.0 E, 21 August 1997, *L. Mucina* 97-08-21D (NBG!, sub *A. 'perigrinum'*); Saldanha, road near Saldanha Steel, opposite to Namaqua Sands entrance, lat. 32°58'17.47" S, long. 18°03'20.48" E, 05 February 2000, *L.*



*Mucina 05022000/A* (NBG!; sub *A. 'perigrinum'*); Malmesbury Dist., Saldanha Bay, near sea, 23 December 1945, R.H. Compton 17893 (NBG-42743!, sub *L. roseum*); Malmesbury, Saldanha Bay, Betis, sine dato, *J.C. Nel 8700* (NBG-STE!, sub *Statice rosea*); Vredenburg Dist., Saldanha, Hoedjes Point, langs kus op duine [along the coast on dunes], 14 October 1959, *W.L.J. van Rensburg 127* (NBG-STE!, sub *L. 'perigrinum'*); Malmesbury Dist., Vredenburg, Stompneus Point, 04 September 1955, *H.C. Taylor 1529* (NBG-42740!, sub *L. roseum*); [Vredenburg], Titiesbaai, Cape Columbine Nature Reserve, lat. 32°50'20.3" S, long. 17°51'44.9" E, 5 February 2000, *L. Mucina 05022000/2 = LM6802/4* (NBG!); [Vredenburg], Titiesbaai, Cape Columbine Nature Reserve, lat. 33°10'53.7" S, long. 17°51'44.9" E, 5. February 2000, *L. Mucina 05022000/3* (observation); [Vredenburg], Titiesbaai, Cape Columbine Nature Reserve, lat. 32.84088° S, long. 17.86173° E, 11 January 2016, *filed by 'peter slingsby' on iSpot SA* (photo!); [Veldrif], Rocher Pan N.R., between pan and west track near south gate, 21 January 1981, *L. van Rooyen & M. Ramsey 65* (NBG-STE!, sub *L. 'perigrinum'*); Veldrif, Rocher Pan Nature Reserve, near inspection quarters, 18 January 1978, *A. le Roux 2408* (NBG-STE!, sub *L. 'perigrinum'*); [Veldrif], Clanwilliam Dist., Rocher Pan Nature Reserve, edge of pan, 20 March 1978, *C. Heyl 4* (NBG-STE!, sub *L. 'perigrinum'*); [Veldrif], Rocher Pan N.R., between Pan and E base of coastal dunes, 22 February 1982, *D.F. Laidler 6* (NBG-STE!, sub *L. 'perigrinum'*); Veldrif, Shell Bay, coastal dunes, 14 August 1969, *M.F. Thompson 812* (NBG-STE!, sub *L. 'perigrinum'*); Veldrif, Rocher Pan N.R., near 1<sup>st</sup> hide, lat. 32°36'39.7" S, long. 18°17'49.6" E, 09 December 2000, *L. Mucina s.n.* (observation); Clanwilliam, Grouduine, N of Elandsbaai coastal dune, elev. 50 ft, 08 February 1978, *C. Boucher 3613* (NBG-STE! sub *L. 'perigrinum'*); [West Coast], south of Elandsbaai, coastal sand dunes, elev. ca. 50–100 ft, March 1973, *P. Britton 21* (NBG-STE!, sub *L. 'perigrinum'*); Clanwilliam Dist., off Elandsbaai road, elev. 50 ft, 25 June 1968, *C. Boucher 91* (NBG-STE!, sub *L. 'perigrinum'*); Clanwilliam Dist., Leipoldstville, langs pad [along the road], elev. 300 ft, 11 December 1962, *P.J. Grobler 42* (NBG-STE!, sub *L. 'perigrinum'*); Clanwilliam Dist., [Lambert's Bay], Van Putten vlei [Van Puttensvlei] flats, 7 January 1950, *R.H. Compton 21876* (NBG-42744!, sub *L. roseum*); Lambert's Bay, 2 km S of town (1 km S of camping site), along R365, 30 August 1998, *L. Mucina 6613/8* (observation).

**Imprecise localities:** Habitat ad Cap. b. Spei [Cape of Good Hope; not the Cape itself, but the broad region known that time under that name], *C.P. Thunberg s.n.* (LD-1749102!; <http://plants.jstor.org/stable/10.5555/al.ap.specimen.ld1749102>, sub *Statice purpurata*); Habitat ad Cap. b. Spei [Cape of Good Hope; not the Cape itself, but the broad region known that time under that name], *C.P. Thunberg s.n.* (LD-1743148!; <http://plants.jstor.org/stable/10.5555/al.ap.specimen.ld1731248>, sub *Statice purpurata*); Malmesbury Dist., near Bok Point, 15 September 1940, *W.F. Barker 856* (NBG-42739!, sub *L. roseum*); N of Modder River Mouth, hind dunes, 12 November 1986, M. O'Callaghan 1339 (NBG-STE!, sub *L. 'perigrinum'*); Zuurfontein, elev. 150 ft, 15 August 1896, *R. Schlechter 8528* (GRA!, sub *Statice rosea*); Sandveld Forestry Area, on dune blocks inland from sea, 17 January 1979, *A.B. Low 819* (NBG-STE!, sub *L. 'perigrinum'*).

**Cultivated specimens:** Cape [Town], Botanical gardens, sine dato, *Guthrie 2123* (NBG-42746!, sub *Statice rosea*); [Cape Town], Hort. Kirstenbosch, Field, 29 December 1944, *M.R. Henderson 2238* (NBG-42747!, sub *L. roseum*).

**Erroneously filed specimen:** Palmiet River, Elgin, [SANBI, Illustrations of Southern Africa flora], *E.G. Rice s.n.* (NBGART0002932!, sub *Limonium roseum*; painting based on collection of doubtful origin: 'Elgin' is highly improbable as natural locality; maybe in cultivation in Elgin?); filed as *Limonium roseum* in JSTOR Global Plants <http://www.aluka.org/action/showMetadata?doi=10.5555/AL.AP.VISUAL.NBGART0002932>.

**Specimens of *L. purpuratum* examined** (ordered from the South to the North):—SOUTH AFRICA. Western Cape Province: [Cape Town], Blaauwberg Nature Reserve, in the saddle between Grootberg and Kleinberg, transition area between Cape Flats Dune Strandveld and Cape Flats Sand Fynbos, lat. 33.7643° S, long. 018.4714° E, 7 June 2017, *filed by D.Slabbert on iSpot SA* (photo!); Cape [Town], Melbosch Road, 18 January 1950, *R.H. Compton 21889* (NBG- 42721!, sub *L. purpuratum*); Cape [Town], Milnerton, 13 March 1942, *R.H. Compton 13057* (NBG-42720! sub *L. purpuratum*); [Cape Town], Cape Peninsula Dist., Melkbosch Strand, 26 December 1956, *J.G. Cassidy 125* (NBG-10422!, sub *L. purpuratum*); [Cape Town], Cape Div., NE of Bellville, September 1932, *Arbuthnot s.n.* (NBG-42722!, sub *L. purpuratum*); Cape Town, roadside on R27 between Bokbaai turnoff and Rondeberg, 18 November 1995, *P. Goldblatt & J.C. Manning 10436* (NBG-757222!, sub *L. 'purpurascens'*); [West Coast], Bokbaai, 33.54580° S, 18.35762° E, 26 June 2013, *filed by jacquesvdmerwe on iSpot SA* (photo!); [Cape Town], Belville Div., Tygerberg, 1 November 1846, *R.C. Alexander-Prior s.n.* (PRE-51848 & PRE- 0354933-0!); [West Coast], Sandown East, 2, mixed Sand Fynbos – Strandveld, 33.79107° S, 18.52231° E, 3 February 2017, *filed by Nick Helme on iSpot SA* (photo!); [West Coast], Sandown East, 1, mixed Strandveld - Sand Fynbos,

lat. 33.79558° S, long. 18.52117° E, 3 February 2017, *filed by Nick Helme on iSpot SA* (photo!); [West Coast], Ganzekraal East, lat. 33.4975° S, long. 18.35545° E, 20 January 2017, *filed by Petra Broddle on iSpot SA* (photo!); [West Coast], Ganzekraal Reserve, lat. 33.4923° S, long. 18.3555° E, 19 August 2015, *filed by jacquesvdmerwe on iSpot SA* (photo!); [West Coast], Brakkefonteyn, SW of Atlantis, Eskom servitude, Atlantis Sand Fynbos, lat. 33.63165° S, long. 18.45773° E, 12 August 2015, *filed by Nick Helme on iSpot SA* (photo!); Western Cape, Atlantis, Brakkefontein, lat. 33.6385° S, long. 18.4557° E, 15 January 2015, *filed by jacquesvdmerwe on iSpot SA* (photo!); [West Coast], Atlantis, Grotto Bay Private N.R., lat. 33°29'50.4" S, long. 18°19'07.4" E, 09 March 2001, *J.C. Manning & L. Mucina 090301/1* (NBG!, sub *A. purpuratum*); Malmesbury Dist., Mamre Hills, 18 February 1947, *R.H. Compton 19361* (NBG-42719!, sub *L. purpuratum*); Malmesbury [District], Mamre Rocks, 01 February 1947, *F.M. Leighton 2840* (GRA!, sub *L. purpuratum*); Langebaan, 24 December 1971, *H. Axelson 559* (NBG-96088!, sub *L. purpuratum*); Malmesbury Dist., Saldanha Bay, inland sand, 23 December 1945, *R.H. Compton 17890* (NBG-43718!, sub '*Limonium ? purpurata*'); [West Coast], Jacobs Bay, Main Rd, lat. 32.9742° S, long. 17.8922° E, 5 January 2013, *filed by koosclaassens on iSpot SA* (photo!); Vredenburg, cemetery on road towards Saldanha, lat. 32°56'50.8" S, long. 17°58'24.1" E, 20 January 2003, *L. Mucina & D. Marais 200103/5* (NBG!, sub *A. purpuratum*); Vredenburg, cemetery on road towards Saldanha, lat. 32°56'50.53" S, long. 17°58'21.40" E, 15 February 2016, *L. Mucina 150216/01* (NBG!, sub *A. purpuratum*).

**Imprecise locality:** South Africa, sine dato, *unknown s.n.* (LINN-HL 395-15!, sub *Statice purpurata*; PRE, photo!, sub *Statice purpurata*; holotype).

**Specimens of *L. longifolium* examined** (ordered from the South to the North):—SOUTH AFRICA. Western Cape Province: Cape Town, Kuils Rivier, 25 November 1910, *unknown s.n.* (NBG-STE-14701!, sub *Statice purpurata*); Atlantis, Dassenberg Farm, lat. 33.53082° S, long. 18.55275° E, 26 November 2014, *filed by jacquesvdmerwe on iSpot SA* (photo!); [Atlantis], Greater Chatsworth, Rondeberg Rd, lat. 33.5649° S, long. 18.5877° E, 4 July 2014, *filed by jacquesvdmerwe on iSpot SA* (photo!); Malmesbury Dist., Mamre Hills, 22 September 1942, *R.H. Compton 13731* (NBG-42731!, sub *L. longifolium*); Malmesbury, flats near Yzerfontein, 09 November 1995, *P. Goldblatt & J.C. Manning 10380* (NBG!, MO-759901, sub *L. longifolium*); Malmesbury Dist., Saldanha Bay, 23 December 1945, *R.H. Compton 17889* (NBG-42732!, sub *L. longifolium*; inland sand); [Vredenburg], in maritimis ad oram Sinus St. Helena [at the coast of the St Helene Bay], sine dato, *P.A. Mader s.n.* (GRA-Gill College Herbarium!, sub *S. purpurata*); [West Coast], SW of Hopefield, Elandsfontein, Hopefield Sand Fynbos, lat. 33.1074° S, long. 18.2527° E, 13 November 2013, *filed by Nick Helme on iSpot SA* (photo!); [West Coast], Langenfontein 377, near old radiobase, 33°20'22.6" S, 18°13'24.2" E, *N. Helme 7388* (NBG!); Malmesbury Dist., near Hopefield, 10 December 1946, *R.H. Compton 18929* (NBG-42734!, sub *L. longifolium*; *n. sp.?*); Piquetberg Div., Het Kruis, October 1947, *H. Zinn 63600* (NBG-SAM!, sub *L. purpurata*); Piquetberg Dist., Redelinghuys, 29 September 1943, *R.H. Compton 15055* (NBG-42729!, sub *L. longifolium*); Clanwilliam Div., between Leipoldtville and Elands Bay, October 1947, *H. Zinn 63599* (NBG-SAM!, sub *L. purpuratum*); [Piquetberg], Zwischen Kromsriver (am Piquetberg) und Bergvalei oder Zwischen Pikenierskloof und Markuskraal, Sandhöhe, (locality code: III, E, a, 16, 19), 305 m or 305-457 m, *Drège, J.F., #a* (HBG-509681!, sub *Statice longifolia*; *filed by JSTOR Global Plants as http://plants.jstor.org/stable/10.5555/al.ap.specimen.hbg509681*); Graafwater, Heerenloggenmentsberg, lat. 31.98380° S, long. 18.58628° E, elev. 381 m, *D. Gwynne-Evans* (photo!); Graafwater, Heerenloggenmentsberg, lat. 31.97770° S, long. 18.53221° E, elev. 448 m, *D. Gwynne-Evans* (photo!); Graafwater, Near top of Heerenloggenmentsberg, *D. Gwynne-Evans* (photo 20141019\_083432!); Clanwilliam, Sandveld, between Sherp Pass and Graafwater, 14 September 1940, *C.L. Leipoldt 3308* (NBG!, BOL-42727!, sub *Limonium sp. nov.*); [Elandsbaai], Elands Bay, R366, Vleikraal Contract Nature Reserve, lat. 32.3284° S, long. 18.3836° E, 1 October 2011, *filed by Janeen Nichols on iSpot SA* (photo!); Clanwilliam, Veldrift, Heuwelfontein, 30 October 1982, *E.J. van Jaarsveld 7008* (NBG-123848!, sub *L. longifolium*); Clanwilliam, sine dato, *P.A. Mader s.n.* (GRA!, sub *Statice purpurata*); Clanwilliam, Olifants River, between Kridouw and Hex River, 30 September 1925, *R.S. Adamson s.n.* (NBG-98109!, sub *L. purpuratum*); Clanwilliam Div., Sandberg, sine dato, *unknown BOL-20810* (NBG-42735!, sub *Statice*; exhibited at the Wild Flower Show in London Oct. 1933); Malmesbury [District], Rondevlei, 21 March 1978, *E. Esterhuysen 34873* (NBG-120823!, sub *L. longifolium*); Clanwilliam Div., Vlakerug, about 1 mile east of Citrusdal, 06 November 1955, *H. Rabinowitz 68449* (NBG-SAM!, sub *L. purpuratum*); Cederberg, Pakhuis Pass, Kleinkliphuis short trail to NE, lat. 32.13670° S, long. 18.94880° E, 3 May 2015, *filed by Tony Rebelo on iSpot SA* (photo!); Clanwilliam, Pakhuis Pass, W side, 08 November 1961, *W.F. Barker 9629* (NBG-57161!, sub *L. longifolium*; 3 herbarium sheets); Clanwilliam, Pakhuis Pass, 02 December 1934, *R.H. Compton 4739* (NBG-42730!, sub *L. longifolium*); Clanwilliam, Pakhuis Pass, 07 January 1950, *R.H. Compton 21868* (NBG-42726!,



sub *L. longifolium*; 3 herbarium sheets); Clanwilliam Div., Pakhuis Pass, December 1946, *F.M. Leighton 2844* (GRA!, BOL!, sub *Limonium* sp. nov.); Clanwilliam Dist., Pakhuis Pass, 1 December 1934, *J.M. Salter 5017* (NBG-SAM!, sub (*Limonium*) *Stalice*; = *Compton 4739*); Clanwilliam, Nardouw, 14 September 1947, *R.H. Compton 20045* (NBG-42725!, sub *L. longifolium*; 2 herbarium sheets); Clanwilliam Div., Nardouw Kloof, September 1947, *T.P. Stokoe 63600* (NBG-STE!, sub *L. purpuratum*); Clanwilliam Div., Nardouw Kloof, September 1947, *T.P. Stokoe 63598* (NBG-SAM!, sub *L. purpuratum*; (NBG-90895!, sub *L. longifolium*; 3 herbarium sheets); [Clanwilliam] Cedarberg, Varkfontein, 12 November 1983, *H.C. Taylor 10792* (NBG-STE!, sub *L. longifolium*); Vanrhynsdorp, Gifberg, ± 1 km south of Colinshoek, 3 June 1982, *E.J. van Jaarsveld 6636* (NBG-123607!, sub *L. longifolium*); Vanrhynsdorp, Gifberg, lat. 31.807653° S, long. 18.780172° E, elev. 400 m, *D. Gwynne-Evans* (photo IMG\_2049!); Vanrhynsdorp, top of Kobee Pass, about 15 miles out of Vanrhynsdorp, 18 November 1970, *M.E. Strauss 59* (NBG-90895!, sub *L. longifolium*); Wupperthal, Vleikraal, E of Klawer, November 1979, *I.S. Walters 115* (NBG-STE!, sub *L. longifolium*); Wupperthal, November 1929, *J. Thode 2036* (NBG-STE-25393!, sub *L. purpuratum*; PRE-21853!, sub *Stalice purpurata*);

**Imprecise locality:** [Cape] Cap. B. Spei, Swartlandia [Swartland], September, since dato, *C.P. Thunberg s.n.* (PRE-48730 photo!, UPS-Thunberg sub *Stalice longifolia*; holotype).

**Specimens of (putative) *L. fergusoniae* examined** (ordered from the West to East):—SOUTH AFRICA. Western Cape Province. Worcester, near Worcester, 23 December 1939, *W.F. Barker 503* (NBG-42733!, sub *L. purpuratum*); Worcester, Municipal Farm Worcester, 20 November 1963, *I.B. Walters 1068* (NBG-131562!, sub *L. longifolium*); Worcester, Rainbow Chickens broiler area, Worcester B1-B5, 06 November 1976, *I.B. Walters 1544* (NBG-131470!, sub *L. amoenum*); Worcester, between Brandt Vlei and Rooihogte, November 1935, *A. Pockock 5163* (NBG-STE!, Natal Herbarium Durban-31184, sub *L. purpuratum*); Worcester, Brandvleikelder, 28 October 1960, *W.L.J. van Rensburg 409* (NBG-STE!, sub *L. longifolium*); Worcester, 1.5 km W of Wilgebome, 07 December 1984, *E. van Jaarsveld & T. Sardien 7706* (NBG-146816!, sub *L. longifolium*); [Worcester], Nuy, near culvert under N7 opposite entrance to Kanetvlei Farm, 05 December 1980, *I.B. Walters 2395* (NBG-131469!, sub *L. longifolium*); Worcester, lower N slope of Naudesberg, 13 November 1980, *E. van Jaarsveld & A. Bean 5831* (NBG-141191!, sub *L. amoenum*); Worcester, De Doorns, sine dato, *Gericke s.n.* / Marloth 9320 (NBG-STE-23426!, sub *Stalice purpurata*); Worcester, Aan de Doorns, 20 November 1963, *I.B. Walters 231* (NBG!, sub *L. longifolium*); Robertson Karoo, Robertson, 15 November 1949, *R.H. Compton 21739* (NBG!, sub *L. fergusoniae*); Riversdale Dist., Riversdale, sand dunes, 20 December 1930, *E. Ferguson 20081* (two sheets: BOL137802!, BOL137803!, sub *Stalice fergusoniae*; holotypus of *L. fergusoniae*; K000225743! ex BOL!, sub *Stalice fergusoniae*. The sheet carries 'holotypus' but it is obviously an isotypus since this specimens comes from Bolus Herbarium (BOL) and it is a duplicate of the holotypus lodged at BOL); Riversdale, in colle pr. [hills near] Riversdale, 19 November 1892, *R. Schlechter 1810* (NBG-42736 sub *Stalice longifolia*; GRA sub *Stalice purpurata*); Riversdale Dist., Riversdale Commonage, 02 November 1948, *J. Dekenah s.n.* (NBG-42734!, sub *L. fergusoniae*).