JOURNAL of the
ADELAIDE
BOTANIC GARDENS

AN OPEN ACCESS JOURNAL FOR AUSTRALIAN SYSTEMATIC BOTANY

flora.sa.gov.au/jabg

Published by the
STATE HERBARIUM OF SOUTH AUSTRALIA
on behalf of the
BOARD OF THE BOTANIC GARDENS AND STATE HERBARIUM

© Board of the Botanic Gardens and State Herbarium,
Adelaide, South Australia

© Department of Environment, Water and Natural Resources,
Government of South Australia

All rights reserved

State Herbarium of South Australia
PO Box 2732
Kent Town SA 5071
Australia
EREMOPHILA LINSMITHII,
A NEW SPECIES OF MYOPORACEAE FROM QUEENSLAND
R.J.F. Henderson
Queensland Herbarium, Meiers Road, Indooroopilly, Queensland 4068

Abstract
A new species of Eremophila is described from Queensland. E. linsmithii R.J. Henderson, sp. nov., belongs to section Amphichilus and is related to E. gibsonii and E. gilesii.

An account of the species of Eremophila R.Br. from Queensland by L.S. Smith has recently been published posthumously (Smith, 1975). At the time of his death (1970), Smith considered his treatment of the genus incomplete and not worthy of publication at that stage. He had not accounted for at least one undescribed species he recognized from herbarium material and plants in the field.

In editing his manuscript for publication, I refrained from inserting additional material such as the description of a new species, so that the treatment when published, would be solely his.

In his honour, I now formally describe the species, material of which was segregated by Smith in the Queensland Herbarium. The species is that referred to in my footnote on page 12 of the above account.


Frutex erectus ± turbinatus, c.0.5-1.75 m altus, ramosus prope basin; rami ascendentes vel patentes. Ramuli sub-glabri pilis minutis dispersis brevibus simplicibus curvis, conspicue visci. Folia alternata lineares plana, usque ad 6.5 cm longa et 1-3 mm lata, glabra ad sub-glabra pilis minutis dispersis brevissimis simplicibus curvis, viscida, ad apicem acuta vel obtusa sed extremum ± breviter apiculata, basin versus attenuata petiolis brevibus. Flores solitarii, axillares, visci. praecipue in alabastro; pedicellisigmoidei, recti vel ascendentes, visci. sub-glabri pilis brevissimis simplicibus curvis; pili infra dispersi sed densiores subter calycem. Calyx ad basim in 5 segmentia imbricata fere divisus; segmenta glabra praeter pilos aliquot breves simplices vel 1- furcatos in marginibus, papillis minutis densius utrinque obtecta, ovata ad anguste ovata vel obovata, acuta ad acuminata, 0.7-1.2 cm longa et 3-5.5 mm lata, crustacescentia et reticulatim nervatescentia, pallide-brunescentia etusque ad 1.5 cm longa et 8 mm lata subter fructus. Corolla lilacina pallida ad fere albida, extrinsecus maxime sparsim pubescens, intra in partibus mediis et infernibus loborum adaxialium et lobis abaxialibus medii et tubum floccosa: lobi 5, dispare; par adaxiale connotatum formas lobum singularem ± semicircularis reflexum apicem apiculato vel minute emarginato, 1-1.2 cm longum et 1.2-1.5 cm latum; lobi laterales oblique oblongi ad anguste ovati, acuti, 0.7-1.3 cm longi et 3.5-5.5 mm lati; lobi abaxialis semi-ellipticos obtusus apicem breviter apiculatum vel truncatum et minute emarginatum, longiorum semicircularis in sectione), 0.7-0.9 cm longum et 5-6.5 mm latus. Stamina inclusa; fila ± pubescentia, in paginis infernus infernus floccosa; par infernum c.7.5-10 mm longum, par superfurnum c.11-13 mm longum; antherae reniformes, c.2.75-3.5 mm latae; pollen ± globosum, 24-29 μm latum. Ovarium glabrum sed minute papillosum papilis densioribus in 2/3 supero, cylindricum breve, truncatum, 4-5 mm longum et 1.5 mm latum, 2-loculatum ovis 6-8 in quoque loculo; stylus filamentosus, 1-1.5 cm longus, sparsim pubescens. Drupa (exsiccata) ampulliformis, glabra sed papillis dispersis, viscida, c.7 mm longa et 5 mm lata.
longistrorsum nervosa, 4-loculata seminibus 2-3 in quoque loculo. Semina matura non vidi. Chromosomatum numerus 2n=36 (BRI 225898; BRI 225899).

*E. linsmithii* sect. *Amphichili* (DC.) L.S. Smith pertinet.

An erect ± turbinate shrub about 0.5-1.75 m high, branched from near the base, the branches ascending or spreading. Branchlets sub-glabrous with scattered short simple curved hairs, conspicuously viscid. Leaves alternate, linear, flattened, up to 5 cm long and 1-3 mm wide, glabrous to sub-glabrous with scattered very short simple curved hairs, viscid, towards the tip acute or obtuse but ultimately ± shortly apiculate, towards the base tapered to the very short petiole. Flowers solitary, axillary, viscid particularly in bud; pedicels ± sigmoid, erect or ascending, viscid, sub-glabrous with very short curved simple hairs; hairs scattered below but somewhat denser beneath the calyx. Calyx divided almost to the base into 5 ± equal imbricate segments; segments glabrous except for a few short simple or once bifurcate hairs on the margins, covered on both surfaces with dense, minute papillae, ovate to narrowly ovate or obovate, acute to acuminate, 0.7-1.2 cm long and 3-5.5 mm broad, becoming ± crustaceous and reticulately veined, pale brown and up to 1.5 cm long and 8 mm wide under the fruit. Corolla pale lilac to almost white, very sparsely pubescent outside, inside floccose on the mid and lower portions of the adaxial lobes and the central abaxial lobe and in the tube: tube 1.2-1.4 cm long: lobes 5, unequal; adaxial pair fused to form a single ± semicircular reflexed lobe with an apiculate or minutely notched tip, 1-1.2 cm long and 1.2-1.5 cm across; lateral lobes obliquely oblong to narrowly-ovate, acute, 0.7-1.3 cm long and 3.5-5.5 mm wide; abaxial lobe semi-elliptic, obtuse with a short apiculate tip or truncate and minutely emarginate, longitudinally folded (± semi-circular in cross-section), 7-9 mm long and 5-6.5 mm across. Stamens included; filaments ± pubescent, floccose on the lower inner surfaces; lower pair c.7.5-10 mm long, upper pair c.11-13 mm long; anthers reniform, c.2.75 mm wide; pollen ± spherical, 24-29μm across. Ovary glabrous but minutely papillose with papillae more dense in the upper 2/3, shortly cylindrical, truncate, 4-5 mm long and 1.5 mm across, 2-celled with 6-8 ovules in each cell; style filamentous, 1-1.5 cm long, sparsely pubescent. Drupe (when dried) ampulliform, glabrous, with scattered papillae, viscid, c.7 mm long and 5 mm wide, longitudinally ribbed, 4-celled with 2-3 seeds in each cell. Mature seed not seen. Chromosome number 2n=36. (Fig. 1.)

*E. linsmithii* belongs to sect. *Amphichilus* (DC.) L.S. Smith.

**Specimens examined**


This species occurs over a wide area of south-west Queensland on remnants of dissected residuals locally known as “Jump-ups” or “Break-aways”. Plants are not widely distributed in any one locality, but may form dense narrow stands extending for some distance along drainage lines where there is a comparatively better class of soil and a higher supply of moisture than on adjacent flats and ridges. The species may extend into the north-western areas of New South Wales.

It has been in cultivation at “Myall Grove” Station in the western Darling Downs district and in Adelaide, South Australia according to R.J. Chinnock of the Adelaide Herbarium.
Fig. 1. *Eremophila linsmithii* R.J. Henderson. A. portion of a terminal flowering twig; B. flower looking into throat; C. corolla opened along the middle of the central abaxial lobe to show zones of floccose hairs and stamens; D. gynoecium with corolla and calyx segments removed; E and F. extremes in shape of calyx segments; E. an outer segment; F. an inner segment.

Though the species is most like *E. gilesii* F. Muell. in floral characteristics, it is clearly distinguished from it by the pale lilac to almost white flowers, the upper pair of corolla lobes fused almost completely, the glabrous but minutely papillose ovary and the fruit noticeably shorter than calyx lobes which are ovate rather than lanceolate or narrowly lanceolate. Because of their habit of growth plants may be mistaken for small plants of *E. mitchellii* Benth. in the absence of flowers.

*E. linsmithii* is closely related to *E. gibsonii* F. Muell., a species described from Central Australia but which also occurs in South Australia and Western Australia. From the little material available to me it apparently differs from *E. linsmithii* principally in the minutely serrulate (not entire) leaves, in the presence of sparse to moderately dense multicellular hairs and small stipitate glands on the calyces and outer surfaces of the corolla, and in the stiffly hairy and glandular (not minutely papillose) ovary.

Chromosome numbers were determined in two plants represented by *Henderson H2513* and *Henderson H2514*. The voucher sheets are BRI 225898 and BRI 225899 respectively.
Acknowledgements

I am grateful to Mr R. Chinnock, Adelaide Botanic Gardens, and Mr G. Needham for supply of fresh material for the illustrator and to Mrs Margaret Saul for preparing the illustration. Mr L. Pedley kindly checked by Latin description.

Reference