

XVI.—<sup>v</sup>*On the Genus Eremophila*, by FERDINAND MUELLER, M.D. PH.D., *Government Botanist of Victoria, and Director of the Botanic Gardens of Melbourne, Member of the Imperial Charl. Leop. Academy, &c. &c.*

A TRAVELLER in the extensive desert-tracts of Australia is often well rewarded for his toils and privations by the enjoyment which the sight of the varied works of the Creator must ever cause to contemplative minds; more especially when it is observed that, with the increase of the country's barrenness, variety and beauty in the vegetation increase in proportion.

Prominent amongst the attractive plants to be met with in the solitudes of the interior are those of the Myoporinous order, and amongst these again are the genera *Stenochilus*, *Eremophila* and *Pholidia*, comprising forms exquisitely ornamental.

Having enjoyed many opportunities of scrutinizing a considerable number of the species which constitute the above genera, I have become convinced that the limits within which the latter are narrowed are extremely uncertain, and that it would be preferable to unite the whole network of species into a single and seemingly very natural genus.

This, my opinion, formed many years ago, has received additional strength from the recent discovery of several interesting species of these genera; and I believe, that if the great author of the *Prodromus Floræ Novæ Hollandiæ* had been enabled to observe even those plants which were considered by him as typical of the above genera in full development of flowers, no lines of demarcation or different ones would have been drawn between them.

More desirous, however, to avail myself of this opportunity of bringing some of the rarest and most elegant desert plants of Australia under notice, than to enter into an elaborate essay on the species, for which, moreover, the Western Australian forms are but partially at my command, I beg to limit these notes to a diagnostic definition of *Eremophila Freelingii*, discovered by Mr. Hawker in Capt. Freeling's Journey to Lake Torrens, and to *Eremophila Behrii*, a plant of the South Australian desert, on which more than nine years ago I bestowed the name of its discoverer, Dr. Hermann Behr, a physician and naturalist of great learning and acute observation, now carrying on his researches in California.

To the definition of these a simple enumeration is added of all the species hitherto described, merely to serve as a temporary systematical disposition, until all the connecting forms, which probably will be found to predominate in Central Australia, and which the new expeditions into the interior are likely to reveal, shall be discovered.

In collecting all the species of *Eremophila*, *Pholidia*, and *Stenochilus* under one universal generic appellation, preference has been given to the expressive name *Eremophila*; not only because it is so well adapted for all these plants, (all without exception being restricted to the desert tracts of Australia), but also as it claims equal right with those of *Stenochilus* and *Pholidia* in regard to priority, whilst neither of the latter names applies to the generality of the species.

If in these plants the principal form which the corolla assumes is to be regarded as a distinct mark of the genera, then the former arrangement of the species has to undergo a considerable change, according to the combinations of a scarious enlarged calyx of *Eremophila*, or an almost unaltered calyx of *Stenochilus* or *Pholidia*, with the

legitimate form of the corolla of *Stenochilus* and *Eremophila*, or with that of *Pholidia*. The flowers of *Stenochilus glaber*, *S. maculatus*, and many others, are, in general structure, identical with those of *Eremophila alternifolia*, and *E. latifolia*, whilst those of *Stenochilus longifolius*, *S. Bigononiflorus*, *Eremophila oppositifolia*, and several others, are much more in accordance with those of *Pholidia*. Indeed, the gradations between the typical forms of the flowers, as originally described by R. Brown in *Pholidia* and *Stenochilus*, are so complete, that I have deemed it scarcely advisable to employ these differences for the sectional character of the species.

### E R E M O P H I L A.

*Stenochilus*, *Pholidia*, and *Eremophila*, R. Br. Pr. 517–518.

*Eremodendron*, De Cand. in Meisn. Gen., p. 292.

*Pholidiopsis*, Ferd. Mueller in Linnæa, xxv., p. 429.

SECT. I.—SENTIS. Ferd. Mueller, Transact. Phil. Soc. Victor., i., 47. — Calyx quadripartitus. Drupa rostrata imperfecte quadriloculata.

1. *Eremophila divaricata*.—

*Pholidia divaricata*, Ferd. Muell., l. c. Murray,  
Darling, and Murrumbidgee.

SECT. II.—EREMODENDRON. D. C., l. c.—Calyx quinquepartitus demum auctus. Drupa imperfecte quadriloculata.

2. *Eremophila arborescens*.—All. Cunn. ex D. C., l. c.

*E. Cunninghamsi*, R. Br. in Sturt's Centr. Austr.  
ii., app. p. 84.

*Eremodendron Cunninghamsi*, D. C., l. c. Lachlan,  
Murray, Darling.

SECT. III.—XEROPHILA. Calyx quinquepartitus demum auctus. Drupa perfecte quadriloculata.

3. *Eremophila latifolia*.—Ferd. Muell. in Linnæa,  
xxv., p. 428.

*Stenochilus serrulatus*, All. Cunn. in D. C., pr. xi.,  
715, huc forsān pertinet. Flinders' Range.

4. *Eremophila viscida*.—Endl. Annal. Wien. Mus.,  
ii., 203. South Western Australia.

5. *Eremophila alternifolia*.—R. Br., Pr. p. 518.  
Murray, Darling, Spencer's Gulf, Flinders' Range,  
Lake Torrens.

6. *Eremophila Latrobei*.—Ferd. Mueller. Interior  
of Eastern, tropical, and sub-tropical Australia.

7. *Eremophila tuberculata*.—Ferd. Mueller. Hooker's  
Creek, interior of North Western Australia.

8. *Eremophila Mitchelli*.—Benth. in Mitch. Trop.  
Austr., p. 31. From the Gilbert River to the  
Burnett River, and on the tributaries of the  
Darling.

9. *Eremophila Sturtii*.—R. Br. in Sturt's Central  
Austral., app. p. 85. Barrier and Grey Range.  
Murray River, Darling River,—Mr. Dalachy and  
Rev. Thos. H. Goodwin.

10. *Eremophila oppositifolia*.—R. Br. Prodr. Fl. N.  
Holl, p. 518. Murray River, Lake Torrens,  
Spencer's Gulf.

SECT. IV.—PHOLIDIA. Calyx fructifer vix mutatus.  
Corollæ labium inferum latum divisum. Drupa perfecte  
quadriloculata.

11. *Eremophila polyclada*.—

Pholidia polyclada, Ferd. Mueller, in Transact.  
Phil., Soc. i. p. 47. From the Burdekin River  
to the Murray Desert.

12. *Eremophila bignoniiflora*.—Ferd. Mueller.

*Stenochilus bignoniiflorus*. Benth in Mitch. Trop.  
Austr., p. 386. Sturt's Creek, (towards Central

Australia), from the Gilbert River to the Dawson ; tributaries of the Darling.

13. *Eremophila longifolia*.—Ferd. Mueller.

*Stenochlus longifolius*, R. Br., Prod. p. 517.

*S. salicinus*, Benth, l. c.

*S. pubiflorus*, Benth. l. c. From Spencer's Gulf, Lake Torrens, and the Murray River, to the deserts of tropical Australia.

14. *Eremophila santalina*.—

*Pholidiopsis santalina*, Ferd. Mueller, in Linnæa, xxv. p. 429. Flinder's Range.

15. *Eremophila Freelingii*.—Ferd. Mueller.

*Viscidulo-pubescentis, ramulis parce tuberculatis exsulcis demum valde cicatricosis, foliis sparsis planis lineari-lanceolatis acuminatis integerrimis non tuberculatis pedicellis calyce longioribus. Sepalo supremo maximo ovato acuto lateralia angusto-lanceolata amplexante corollæ extus pubescentis labio supero bidentato, labii inferi tripartiti lacinia media ovata, lateralibus lanceolatis, omnibus acuminatis et subæquilongis ; fauce alba lanuginosa, antheris inclusis glabris, stylo pubescente, germine glanduloso.*

In deserto juxta rivum Blanche Waters prope lacum Torrens detexit cl. G. Hawker in expeditione Freelingii.

Folia  $1\frac{1}{2}$ -2 inch longa,  $\frac{1}{8}$ - $\frac{1}{4}$  inch lata longe in basin angustata. Sepala glandulosa, puberula ciliate parce punctata, circiter semiuncialia. Corolla forsán albida et immaculata, unciam parum excedens, labio supero breviter et acute bidentato, infero eidem subæquilongo, lobis æstivatione

imbricatis; tubi basis glabra. Antheræ hippocrepicæ, loculis apice confluentibus, basi demum divergentibus. Stylus filiformis inclusus. Stigma minutum brevissime bilobum. Drupa ovato-globosa circiter  $\frac{1}{3}$  inch longa perfecte quadriocularis tetrasperma. Putamen lignosum. Semina cylindrica ex apice loculi pendentia scilicet albuminosa. Floret vere.

16. *Eremophila scoparia*.—Ferd. Mueller.

*Pholidia scoparia*, R. Br. Pr. p. 517. Rivers Murray and Darling, Lake Torrens and Spencer's Gulf.

17. *Eremophila resinosa*.—Ferd. Mueller.

*Pholidia resinosa*, Endl. Annal. Wien. Mus. ii., p. 203. South Western Australia.

18. *Eremophila Behriana*.—

*Pholidia Behriana*, Ferd. Mueller, in Linnæa xxv., p. 40, adnot. Ramis apice pubescentibus, foliis parvis alternis ovatis basi cuneatis supra medium dentatis margine ciliatis, calycis sessilis ciliati laciniis acutissimis angustis canaliculatis limbum corollæ attingentibus, corollæ parvæ violaceæ extus glabræ labio supero bidentato, labii inferi tripartiti laciniis acuminatis, fauce barbata, antheris glabris inclusis, stylo parce puberulo, germine glanduloso.

Tumbey Bay (Wilhelmi). Gawler River (Behr.)

Fruticulus 1-2 pedalis. Folia  $\frac{1}{4}$ - $5\frac{1}{2}$  in. longa plana venosa nitentia, antice plus minusve distincte dentata. Calyces  $\frac{1}{3}$  in. vix excedentes. Corolla circiter  $\frac{1}{3}$  in. longa.

Habitu Pseudopholidiam brevifoliam simulat, quod genus fructu ignoto dubium forsan ad *Pholidiam*

reducendum est *Duttonia* (Ferd. Mueller in Hook. Kew. Miscell., 1856) ad hasce *Eremophilæ* species approximat, quibuscum autem vix coadunari possit, nisi subgeneris ratione.

19. *Eremophila crassifolia*.—

*Pholidia crassifolia*, Ferd. Mueller, in Linnæa, xxv., p. 430. Spencer's Gulf (Wilhelmi).

SECT. V.—*STENOCHILUS*. Calyx fructifer vix mutatus. Corollæ labium superum quadridentatum, inferum angustum in divisum.

20. *Eremophila Brownii*.—Ferd. Mueller.

*Stenochilus glaber*, R. Br., Pr. p. 373. Deserts of Southern, Eastern, and Central Australia.

21. *Eremophila maculata*.—Ferd. Mueller.

*Stenochilus maculatus*, Ker. Bot. Reg., 647.

*S. curvipes*, Benth in Mitch. Trop. Austr., p. 221.

Gulf of Carpentaria, Eastern tropical and extra-tropical Australia, Australia Felix, Central and South Australia.

22. *Eremophila Grahamii*.—Ferd. Mueller.

*Stenochilus viscosus*, Grah. in Edinb. Phil. Journal, 1829, p. 385. Interior of South Australia.

23. *Eremophila racemosa*.—Ferd. Mueller.

*Stenochilus racemosus*, Endl. Annal. Wien. Mus. ii., 220. Interior of South Western Australia.

24. *Eremophila albicans*.—Ferd. Mueller.

*Stenochilus albicans*, Bartling in Lehm. pl. Preiss I., p. 351. et forsan—*S. subcanescens*, Bartl, l. c. South Western Australia.

25. *Eremophila incana*.—Ferd. Mueller.

*Stenochilus incanus*, Lindl. Bot. Reg. 1839, Miscel. n. 116. Murray Desert.