XII. *Description of a new Genus belonging to the Natural Family of Plants called Scrophularinæ. By Mr. David Don, Libr. L.S.*

Read March 21, 1826.

THE discovery of new generic forms is always a subject of great importance in a natural system, as they tend to throw light on the affinities of those groups already known to us, and consequently to give us more enlarged views of the beauty and advantages of the natural classification. What renders the present genus still more interesting is its partaking of the characters of two very distinct natural orders. Possessing all the essential marks of the *Scrophularinæ*, it agrees also with *Jacaranda*, a genus belonging to the *Bignoniaceæ*, in the form and covering of its seeds. This new genus I propose to denominate *Lophospermum*, a name compounded of λοφος *a crest*, and σπερμα *seed*, in allusion to the form of its seeds. It consists at present of only two species, both natives of Mexico, where they were discovered by the Spanish botanists Sessé and Mocinno, in whose herbarium the one is marked *Besleria scandens*, and the other *Scrophularia physalodes*,—names, no doubt, vaguely given them at the time of collecting by the discoverers, of whose zeal and knowledge ample testimony is afforded by the extensive collections which they made in that interesting country. In a natural series our genus must be placed near to *Maurandia* and *Antirrhinum*. Its affinity to the former is shown by its calyx and capsules; but its compressed, tuberculated, winged seeds, and the

the form of its corolla, essentially distinguish it from both these genera. Both *Maurandia* and *Antirrhinum* have their seeds covered by a thick spongy testa, which is very much wrinkled, and resembles in a remarkable degree the testa of the curious cruciferous genus *Parrya* of Mr. Brown. This character is also met with in all those genera which are intimately allied to *Antirrhinum;* and it appears to me to be of sufficient importance to warrant their being regarded as a separate section, which may be denominated *Antirrhineæ*. *Chelone*, on account of its flat seeds and foliaceous cotyledons, will constitute another section of the order, forming the link of affinity between it and *Bignoniaceæ*, from which it principally differs in the direction of its seeds, and in the presence of albumen. *Sesamum* corresponds with the latter family in the absence of albumen; but in the form and direction of its seeds it is closely allied to *Chelone*, from which it is however essentially distinguished in the structure of its capsule, the absence of albumen, and by having the cells of its anthers parallel. It may therefore be considered as forming, together with *Martynia* and *Craniolaria*, a distinct natural group, as has already been suggested by Mr. Brown.

In *Scrophularia* the upper lip of the corolla is so much more developed than the lower one as to give the flower the appearance of being resupinate. The anthers of this genus differ very materially in structure from those of every other genus of the order; they are unilocular, and open by means of a transverse fissure, and the cell is attached along its whole length to the summit of the filament, in which particular it recedes from the usual form of the one-lobed anther.

A number of other sections equally distinct might be indicated, the adoption of which would greatly facilitate a knowledge of the genera of this extensive order. In a practical point of view, the advantages arising from the division of extensive

extensive orders and genera into sections cannot, I think, be doubted.

In concluding this part of my subject, I beg leave to offer a few remarks on the use of the terms *contrary* and *parallel* as applied to the position of the dissepiment of bilocular fruits; as without such explanation, that part of the following description which relates to the position of the dissepiment would be liable to be misunderstood. I use the term *dissepimentum contrarium* to express such dissepiments as have their flat side facing the stem, or, more properly speaking, contrary to the axis of the flower, without regard to the compression of the valves; and *dissepimentum parallelum*, to denote such as are perpendicular to the axis of the flower, having their edge opposed to the stem. The distinction between the parallel and contrary dissepiment having been hitherto so vague and uncertain, the adoption of the preceding mode of applying the terms will be found very advantageous. In order to point out more clearly the inconvenience, if not absurdity, of the manner in which these terms have been hitherto applied, I need only mention, that in the greater part of *Scrophularinæ* the dissepiment is said to be parallel, and contrary in *Pedicularis* and some other genera, merely because the valves happen to be more compressed: for the fact is, its position is precisely similar. In all bilocular fruits having really a parallel septum, the dehiscence takes place at the margin of the valves.

LOPHOSPERMUM.

Syst. Linn. Didynamia Angiospermia. Prope Maurandiam.

Ord. Nat. Scrophularinæ. *Brown.* Sect. 2. *Antheris bilobis muticis, seminibus testâ coriaceo-spongiosâ corrugatâ v. reticulatìm scrobiculatâ præditis.* Antirrhineæ. *Nob.**

* I have found it necessary to modify in some degree the character of the section, from observing the differences assumed by the seeds of certain species of *Linaria*.

Char. Essent. *Calyx* 5-partitus. *Corolla* campanulata: *limbo* 5-lobo, subæquali. *Capsula* bilocularis, irregularitèr dehiscens. *Semina* imbricata, membranaceo-alata.

Descr. *Calyx* amplus, membranaceus, reticulato-venosus, 5-partitus: *segmentis* latis, ovatis. *Corolla* magna, campanulata, calyce duplò longior, basi tubulosa, fauce dilatata, limbo 5-loba, subæqualis: *lobis* latis, rotundatis, in æstivatione imbricatis. *Stamina* 4, didynama, fertilia, imæ parti tubi inserta, corollâ paulò breviora: *filamenta* angustè linearia, compressa, supernè glandulosa, basi angulo acuto arcuata, quasi stipite lævi compresso lateralitèr suffulta, ad flexuram glandulis capitatis munita, atque squamulis succulentis linearibus obtusis, exsiccatione ramentaceis, copiosè prædita: *antheræ* bilobæ, biloculares, muticæ, nudæ: *loculis* divaricatis, longitudinalitèr dehiscentibus, demùm explanatis. *Ovarium* globosum, biloculare. *Stylus* longissimus, filiformis, glaber, infernè crassior. *Stigma* simplex, emarginatum. *Capsula* sphærica, styli basi persistente coronata, bilocularis, subbivalvis, irregularitèr rumpens, polysperma. *Dissepimentum* transversum, latere (nec margine) ad caulem verso, completum, basi dilatatum. *Placentæ* 2, magnæ, oblongæ, scrobiculatæ, e septo ortum ducentes. *Semina* crebra, imbricata, adscendentia, compressa, membranâ scariosâ erosè crenulatâ cincta, apice truncata, basi hilo depresso instructa: *testa* crassa, coriacea, extùs corrugato-plicata et tuberculata. *Albumen* copiosum, ovoideum, cartilagineum, pallidè luteum. *Embryo* teres, erectus, ferè albuminis longitudine, lacteus: *cotyledones* brevissimæ, rotundatæ: *radicula* crassa, recta, obtusa, cotyledonibus duplò longior, centripeta.

Herbæ *v.* Frutices (Mexicani). Folia *alterna, serrata.* Flores *axillares, solitarii, pedunculati.*

1. *L. scan-*

1. *L. scandens*, foliis cordatis acuminatis inciso-serratis, pedunculis ebracteatis, caule herbaceo.
   Besleria scandens. *Sesse et Mocinno Mss.*
   Habitat in Mexico. *Sesse et Mocinno.* ♃. (v. s. in Herb. Lamb.)

Planta formosissima, scandens, herbacea. *Rami* cylindracei, pilis mollibus articulatis viscidis copiosè vestiti. *Folia* ferè *Campanulæ Trachelii* numerosa, alterna, petiolata, cordata, acuminata, inciso-serrata, hirsuta, 5-nervia, 3—4 uncias longa, 2 v. 3 lata. *Petioli* semiteretes, villosi, bipollicares. *Flores* penduli. *Pedunculi* axillares, solitarii, uniflori, teretes, villosi, ebracteati, petiolo ferè duplò longiores, cum foliis uno latere versi. *Calyx* hirsutus, profundè 5-partitus: *segmentis* ovatis, acuminatis, integris v. hinc indè dente parvo instructis; *duobus exterioribus* latioribus. *Corolla* magna, speciosa, purpureo-violacea?

This is truly a most magnificent plant. Its climbing stems, copiously adorned with leaves and large, campanulate blossoms, render it a very desirable object. It is necessary to observe, that the character and description of the genus are constructed principally from this species, because in the following there are some important points, particularly with respect to the ripe fruit and seeds, still remaining undetermined.

2. *L. physalodes*, foliis lanceolatis acutis denticulatis scabris, pedunculis bibracteatis, caule fruticoso.
   Scrophularia physalodes. *Sesse et Mocinno Mss.*
   Habitat in Mexico. *Sesse et Mocinno.* ♄. (v. s. in Herb. Lamb.)

Caulis erectus, fruticosus. *Rami* teretes, rigidi, papilloso-scabri. *Folia* alterna v. nunc (præsertim suprema) subopposita, subsessilia, lanceolata, acuta, denticulata, aculeis minutissimis callosis scabra, sesqui- v. bi-pollicaria. *Pedunculi* axillares,

solitarii, uniflori, teretes, scabri, foliis breviores, ultra medium bracteis 2 approximatis lanceolatis asperis muniti. *Calyx* asper, reticulatus, inflatus, 5-fidus: *lobis* semi-ovatis, acutis, integerrimis. *Corolla* ampla, sordidè violacea? præcedente multò brevior. *Filamenta* omninò glabra. *Antherarum lobis* longioribus, supernè confluentibus, basi tantùm divaricatis. *Stigma* simplex. *Ovarium* globosum, bilocurare. *Semina* nondùm vidi.

XIII. *On*