to become slightly prominent, and finally by a strain upon the vessels of that particular part to fall off in the shape of a lid. In *Couroupita* the pressure is sufficient to mark the surface of the fruit with a prominence, but from the partitions giving way early, and from the abundant juices produced in the interior, there has not been, he conceives, sufficient pressure to occasion disruption. In all the species of *Lecythis*, he observes, the extent of the loose cover corresponds with the extent of the axis, and what remains of the latter continues attached to it.

As regards lomentaceous fruits in general, the author believes that the intervals between the seeds being sufficient to admit of the sides of the fruit cohering (which is promoted in particular instances by special causes), the swelling of the seeds afterwards stretches the parts over them in a degree which this coherence prevents from being equally distributed, drags the tissue forcibly from the junctures which are fixed points, and thus there being a strain in each direction from the middle line of the juncture, the contraction of drying during the ripening of the fruit effects the separation.

Finally the author refers to the horizontal separations in the capsules of *Mosses*, and observes that the separation of the calyptra affords a plain example of the operation of his third principle; but with regard to the nature of the operculum, although he has an hypothesis under consideration, his mind is not yet satisfied. He states his object in the present paper to have been the investigation of the immediate physical causes of certain known effects, but he has not thought this the place even to touch upon their ultimate causes or the ends to accomplish which they are apparently designed, and which adapt them to the position and general structure of the particular plant.

Read also the conclusion of Dr. J. D. Hooker's "Enumeration of the Plants of the Galapagos Islands, with descriptions of the new species."

In a brief introduction Dr. Hooker offers his acknowledgements to Mr. Darwin, by whom the collection on which this enumeration is chiefly founded was made, and to Prof. Henslow, in whose charge the collection had been placed, and who kindly relinquished his intention of publishing the novelties contained in it in favour of the author. He also notices the striking peculiarities which mark the flora of the Galapagos group, the plants composing which not only differ in a great degree from those of any other country, but are in many

cases peculiar to the separate islands, although in those instances frequently representatives of others which are found on different islands.

The number of species enumerated is two hundred and twenty-eight. Of these upwards of a hundred are described as new, and six new genera are established, the characters of which are given as follows:—

Ord. BORAGINEÆ.

Gen. Galapagoa, *Hook. fil.*

*Calyx* 4–5-partitus; laciniis linearibus. *Corolla* infundibuliformis; tubo lato; limbo 5-fido patente; fauce nudâ. *Stamina* 5, inclusa, imo corollæ tubo inserta. *Ovarium* 4-loculare. *Stylus* terminalis, ad basin usque bipartitus; stigmata 2, obtusa. *Semina* pendula; albumine parco, carnoso; cotyledonibus planis; radiculâ majusculâ, superâ.—Herbæ *Insularum Galapagos, hispido-pilosæ.* Caules *prostrati, ramosissimi.* Folia *alterna, coriacea, versus apices ramulorum densissimè conferta.* Flores *parvi, in axillis foliorum omninò sessiles, valdè inconspicui.*

*Obs.* Genus *Ehretiearum* inter *Coldeniam* et *Rhabdiam* (secund. clariss. Bentham) medium, ob stylum bipartitum staminaque fundo corollæ inserta singulare.

Ord. SOLANEÆ.

Gen. Dictyocalyx, *Hook. fil.*

*Calyx* cylindraceus, 5-fidus; lobis acutis; tubo post anthesin subinflato, membranaceo, reticulatim venoso. *Corolla* membranacea, subinfundibuliformis; tubo gracili gradatim supernè ampliato; limbo plicato, brevi, vix explanato. *Staminum filamenta* elongata; antheræ inclusæ. *Ovarium* disco carnoso insertum; stigmate capitato. *Capsula* evalvis, indehiscens, bisulcata, incompletè 4-locularis, calyce ventricoso inclusa. *Semina* plurima, majuscula, tuberculata, dissepimenti medio prope angulum parietalem affixa; testâ nitidâ, obscurè granulatâ. *Embryo* arcuatus.—Herbæ Americanæ, *repentes, glanduloso ?-pubescentes, cum tribu* Daturearum, *suadente Clariss. Miers, conferendæ.* Folia *membranacea, angulata v. sinuata, subopposita v. bina.* Flores *axillares.*

Ord. COMPOSITÆ.

Gen. Desmocephalum, *Hook. fil.*

*Capitula* in axillis foliorum densissimè congesta, monoica, 6-flora; floribus 3 fœmineis ligulatis, cæteris masculis tubulosis. *Involucrum* compressum; foliolis 3–5 inæqualibus. *Receptaculum* minimum, epaleaceum. *Corolla fœminea* tubo brevi, lato, piloso; ligulâ latâ, involutâ, bifidâ: *mascula* 4-fida, dentibus extùs hispido-barbatis. *Antheræ* ecaudatæ. *Stylus* floris masculi indivisus, acutus; floris fœminei in ramos 2 elongatos desinens. *Achenium* latè obcuneatum, compressum, subtrigonum, supernè pilosum, foliis involucralibus immutatis tectum.—*Genus* Elviræ *affine.* Radix *annua.* Caulis *pedalis, herbaceus, teres, erectus, a basi*

*trichotomè divisus*; ramis *ascendentibus pubescentibus*. Folia *opposita, petiolata, ovata, obtusa, duplicato-serrata, coriacea, suprà scabriuscula, nitida, subtùs pubescentia, nigricantia*. Capitula *axillaria, densissimè congesta, massam depresso-sphæricam semunciam latam efformantia*. Involucri foliola *latè ovata, acuminata, hispida*. Corolla *valdè inconspicua*.

Gen. Microcœcia, *Hook. fil.*

*Capitula* axillaria, pauca, valdè compressa, monoica, subtriflora; floribus fœmineis ligulatis, masculis tubulosis. *Involucrum* compressum, 3–4-foliolatum; foliolo unico latè obovato, unilaterali, cæteris parvis collateralibus. *Receptaculum* minimum, epaleaceum. *Corolla* floris fœminei tubo gracili; laminâ rotundatâ, obscurè crenatâ: floris masculi 4-fida; tubo supernè ampliato; segmentis extùs barbatis. *Antheræ* semi-exsertæ, ecaudatæ. *Stylus* floris fœminei in ramos 2 elongatos desinens; floris masculi indivisus. *Achenium* cuneatum, compressum, obscurè trigonum, parcè pilosum.—Herba *pusilla, repens, scaberula*; ramis *gracilibus, ascendentibus*. Folia *opposita, petioluta, rigidula, ovata, acuta, serrata, suprà hispidula, subtùs cana, venis prominulis*. Capitula *minima, breviter pedicellata*. Involucri *foliolum exterius planum, acuminatum, nervosum, marginibus basi involutis*. Flores *exserti, flavi*.

Gen. Macræa, *Hook. fil.*

*Capitulum* multiflorum, heterogamum, radiatum; floribus radii squamis involucri tectis, paucis, 1-seriatis, fœmineis; disci tubulosis. *Involucri* hemisphærici squamis sub-2-seriatis, disco brevioribus. *Receptaculum* convexum, paleaceum; paleis deciduis flores involucrantibus. *Corolla radii* tubo brevi gracili, ligulâ latâ bifidâ; *disci* tubo 4-fido, dentium marginibus incrassatis. *Antheræ* breviter appendiculatæ. *Stylus floris radii* in ramos duos obtusos desinens; *disci* ramis cono latiusculo terminatis. *Achænium* obovato-cuneatum, compressum, trigonum, hispidum, pappo brevi e squamis paucis ciliatis coronatum.—*Genus* Heliopsideis *relatum*. Frutex; *ramis erectis virgatis, nodosis*. Folia *in ramis abbreviatis fasciculata, rigida, linearia, integerrima, pilosu, suprà nitida, marginibus revolutis*. Pedunculi *folia superantes, graciles, sericei*. Capitula *sphærica*. Flores *flavi, radii pauci*. Receptaculi paleæ *lineares, apicibus incurvis acuminatis, dorso hispidis*.

*Ord. Incert.*

Gen. Pleuropetalum, *Hook. fil.*

*Calyx* persistens, bipartitus; sepalis latè ovatis. *Petala* 5, subæqualia, libera, concava, coriacea, siccitate multicostata. *Stamina* 8, toro inserta; filamentis in tubum membranaceum coalitis; antheris elongatis, ovarium vix superantibus. *Styli* 4, lineares. *Ovarium* 1-loculare, pluriovulatum; ovulis placentæ basilari funiculis elongatis adnexis.—Suffrutex? *perennis, glaberrima, siccitate nigricans*; ramis *teretibus, strictis, apicem versus foliosis*. Folia *petiolata, patentia, elliptica, utrinque attenuata, longè acuminata, integerrima*. Flores *in paniculas breves,*

*pauciflorus, terminales dispositi, breviter pedicellati, inconspicui.* Calyx *parvus, carnosus.* Petala *majuscula.*

*Obs.* Genus nulli ordini arctè affine, habitu *Phytolaccæ.*

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January 20, 1846.

R. Brown, Esq., V.P., in the Chair.

Robert James Nicholl Streeton, Esq., M.D., and Robert Marnock, Esq., were elected Fellows.

Read a memoir "On the Structure of the Ascidia and Stomata of *Dischidia Rafflesiana*, Wall." By the late William Griffith, Esq., F.L.S. &c. Communicated by R. H. Solly, Esq., F.R.S., F.L.S. &c.

This paper bears date at Mergui, November 7th, 1834. In it the author gives a detailed description of the arrangement, form and structure of the ascidia of the species of *Dischidia* above-named, and comes to the conclusion that they are modified *laminæ* of leaves, in proof of which he adduces: 1st, their similarity in texture, internal structure, and structure of stomata with the limbs of the ordinary leaves; 2ndly, the slight but constant tendency in the limb of the leaves to assume an involute form; 3rdly, the occurrence of an imperfectly transformed pitcher, in which the body of the pitcher is clearly referable to the limb of the leaf; and 4thly, the general construction of the petioles in *Asclepiadeæ*, which renders it more natural to refer the ascidia to the limb of the leaf in that family. He regards the inner surface of the pitcher as corresponding with the upper surface of the leaves; and is confirmed in this view by the greater abundance and development of the stomata on those surfaces. On the lower and outer surfaces the stomata are more or less imperfect; but on the upper and inner they show a considerable degree of complexity. They are particularly remarkable for the existence of an external cellular *bourrelet* or thickening, much elevated above the surface and of a whitish colour, giving rise to an appearance of minute white dots, which are especially conspicuous on the purple inner surface of the ascidia. They appear to have a very slight connexion with the cuticle, from which they are easily detached, and are not met with on old ascidia. Each *bourrelet* is composed of from