

Cinclidium stygium. It appears to be the same Moss as n. 253 of Drummond's *Musci Americani*, which Bruch and Schimper propose to call *Mnium pseudo-punctatum* (See Lond. Journ. of Bot. Dec. 1843); but our Moss is essentially a *Bryum* in its mode of producing innovations immediately below the perichæcium. It is easily known from *Mnium punctatum* by its celluloso-margined leaves, and small roundish capsule; it differs also in its inflorescence. Specimens have been sent to Mr. Sowerby for figuring in Engl. Botany Suppl.—*W. Wilson*.

New British Phænogamous Plant.

It gives us pleasure to be able to announce, that a small party of Botanists, consisting of Mr. Jas. Backhouse and Son, Mr. John Tatham, Jun., Mr. George Gibson, and Mr. Sylvanus Thompson, have detected in Teesdale the *Spergula stricta*, Sw. (*Arenaria uliginosa*, *Schleich. and DeCand.*; *Alsinantha stricta*, *Fenzl. and Reichenbach*). We shall notice this more particularly in a future number.

ALGÆ of TASMANIA, by W. H. HARVEY, M.D. M.R.I.A.
&c.

It is my intention to publish in the Journal of Botany, under the above title, descriptions of all Marine Plants which may be communicated from Tasmania, either to Sir W. J. Hooker or to myself. At present, besides the parcel about to be noticed, I have under examination another package communicated by Mr. Gunn to Sir W. J. Hooker in 1840, the description of which, long since commenced, has been unavoidably delayed, but which will shortly appear; and one from Dr. Jennirett, which will form the subject of a succeeding paper. These several parcels are so interesting, and contain so great a number of new species, as to hold out the promise that when the shores of Van Diemen's Land are more fully explored, they will yield a Marine Flora richer in

species, and more luxuriant and delicate in form than those of any other country in the world. The FLORIDEÆ (or red-coloured sea-weeds) of these shores are particularly beautiful and curious, especially those of the tribe *Rhodomeleæ*, which there, seems to put on its highest development. We are less acquainted with the FUCOIDEÆ (olive-coloured sea-weeds); and I would beg especially to request the attention of our colonial friends to these; and in doing so, would pray them to gather specimens of the *whole frond*, including the main stem from its base upwards. In general, the specimens of Fucoideæ sent to Europe are so broken, that it is difficult to describe them, if new; or, to refer them to the several described species. This is especially the case with *Sargassa* and *Cystoseiræ*. The species of these genera are known to be very variable in their characters, often producing leaves of different form on different parts of the same frond, a circumstance that renders it particularly difficult, and often mischievous, to make descriptions from any but the most perfect specimens, or a series of such.

Should I be so fortunate as to awaken an interest in this neglected department of Botany among Van Diemen's Land Botanists, and should they place in my hands sufficient materials for an "ALGOLOGIA TASMANICA," it is my wish to undertake such a work in a separate form. It would be written in the English language, with detailed descriptions, and figures to illustrate the genera; and I should especially bear it in mind to make descriptions intelligible to the amateur botanist, whose knowledge of Botany is picked up on a visit to the sea-shore in the summer time.

W. H. H.

Trinity College, Dublin, June 24, 1844.

No. 1.—*Description of ALGÆ gathered at George Town, Van Diemen's Land, and communicated to SIR W. J. HOOKER, by RONALD GUNN, Esq.*

SERIES I.—RHODOSPERMEÆ, OR FLORIDEÆ.

TRIBE 1. RHODOMELEÆ, *J. Ag.*

1. *Claudea elegans*, Lam.—George Town, *R. Gunn, Esq.*, n. 1261.—The three specimens of this plant, which the parcel contains, have already been noticed in this Journal, p. 408, Tab. xx.

2. *Dictyomenia tridens*, Grev. ; fronde lineari, membranacea, reticulata, bi-tripinnata, costata, costa ante apicem evanescente, pinnis pinnulisque crebris, apicem versus sensim minoribus, erecto-patentibus, margine dentibus tri-multifidis ornatis ; axillis dentorum rotundatis ; keramidiis globosis, sessilibus ; stichidiis ? — *Fucus tridens*, *Turn. t.* 255.

George Town, V. D. L., *R. Gunn Esq.*, n. 1280.—*Fronde* 6-8 inches long or more, from a line to nearly a quarter of an inch in breadth, flat and membranaceous, linear, tapering to the base and apex, furnished in the lower part with a strong midrib, which gradually becomes thinner and fainter as it approaches the upper part, and nearly or quite disappears below the apex, simple or divided into 3-4 principal stems ; stems or main branches bi-tripinnate, with an ovate circumscription ; pinnæ closely set, erecto-patent, with rounded axils ; pinnules similar ; and the margin in every part of the frond save the denuded bases of old stems, furnished with minute, tooth-like, forked, trifid, or 4-6-fid ramuli, about a line in length, occasionally elongating into pinnules. *Colour* dark reddish brown or chesnut. *Capsules* or *Keramidia* nearly globose, wide-mouthed, sessile on the tooth-like, marginal processes.

3. *Pollexfenia pedicellata*, Harv.

POLLEXFENIA, *Nov. Gen.*

Frons plana, membranacea, purpureo-rosea, expansa, enervia, lacero-fissa, reticulata, e cellulis polygonis formata. *Keramidia* ovata, apiculata, poro pertusa, pericarpio crasso carnososo, e frondis paginâ orientia, sessilia v. pedicellata, *granulis* pyriformibus basifixis foeta. *Stichidia*?—
Algæ Capenses et Australasice, habitu Nitophylli, structurâ Dictyomeniæ affines.

This genus, founded on a plant from the Cape of Good Hope, is inscribed to the *Rev. John H. Pollexfen* of Bradford an accomplished British Botanist and Algologist, who has explored the marine flora of the Orkneys with much success.

Pollexfenia pedicellata, Harv.; fronde latissima dichotome laciniata; segmentis divaricatis, longitudinaliter pellucidostriatis; sinubus rotundatis; apicibus obtusis; keramiidiis ovatis, pedicellatis.

George Town, V. D. L., *R. Gunn, Esq.*. 1272 and 1274.—
Fronde 4-5 inches long, and about equally broad, delicately membranaceous, with an orbicular outline, more or less deeply divided in a dichotomous manner; the segments spreading and the spaces between them remarkably wide and rounded; the apices obtuse and broad, and the margin flat and without teeth. The substance is very thin, highly reticulated as in *Nitophyllum*, and destitute of rib or veins, but the frond is traversed through its entire extent with a wide band of pellucid longitudinal filaments, which run through its centre, and give the appearance, under a pocket lens, of pellucid striæ. These filaments originate at the base of the frond, and radiate towards all the segments, passing through the middle portion of each, and evidently supply the place of midrib, though they do not assume its appearance. They are most obvious towards the apices, which is not generally the case with ribs or veins. *Colour* probably a purplish rose red, rather inclining to brownish red in drying. *Keramidia* abundantly scattered over both surfaces of the frond, ovate, acuminate, borne on stalks as long as themselves. *Stichidia* unknown. It adheres to paper.

The Cape of Good Hope species which I have sent to several of my friends either as "*Rytiphlœa* ? n. sp.," or "*Nov. Gen.*" may be thus characterised:—

Pollexfenia laciniata, Harv.; fronde flabelliformi basi cuneatâ, in segmentis lineari-cuneatis, laciniatis, palmato-multifidis, vel subdichotomis, erecto-patentibus, profunde fissa; margine lacero-dentato; sinubus obtusis; apicibus laceratis; keramidiis sessilibus.

At Muysenberg, False Bay, C. B. S., growing with *Tham-nophora corallorhiza* near low water mark, *W. H. Harvey*. *Fronde* tufted, 6-7 inches high, narrow at the base, becoming gradually wider till they are half an inch broad; then spreading with a fanshaped or broadly ovate outline, and divided in a partly dichotomous, partly pinnate manner, the segments generally half an inch wide, nearly linear, erecto-patent, and again dividing in the same irregular manner. The axils every where rounded, but not very broad. The apices generally jagged; and the margin either toothed, lacero-dentate or almost ciliate at times. *Keramidia* sessile, generally near the margin, few on each frond, depresso-ovate or mamillæform, thick and fleshy. *Stichidia* unknown. *Colour* fine purple-red, with iridescent tints when fresh, becoming darker and duller on drying. It adheres to paper.

4. *Dasya naccarioides*, Harv.; caule crasso, longissimo, indiviso, ramisque nudo, cartilagineo; ramis alternis, pinnatis vel sub-bipinnatis; pinnis clavæformibus, filis verticillatis, dichotomis, articulatis, minimis, densissime vestitis; florum axillis patentibus, articulis inferioribus subduplo, superioribus quadruplo diametro longioribus; stichidiis oblongis, obtusis, sphærosporas biseriales includentibus.

George Town, V. D. L., *R. Gunn, Esq.*, n. 1287.—*Stem* 12 inches long or more, 1-2 lines thick, cartilaginous, shrinking in drying, quite naked, undivided, but furnished from base to apex at distances varying from $\frac{1}{4}$ inch to an inch, with spreading, alternate, undivided branches similar to the stem, but only one fourth of its diameter. These produce a third series of undivided branchlets or pinnæ, which are also about $\frac{1}{4}$ the diameter of the branches; and in luxuriant specimens

another series is probably borne. All the divisions are alternate, and generally a considerable space intervenes between both branches and branchlets. The branches like the stem are naked; the branchlets alone, which diminish in size from the base to the apex of the branches, are furnished with the filamentous articulate *ramelli* characteristic of the genus. These *ramelli* are very minute, scarcely $\frac{1}{4}$ of a line long, horizontally patent, whorled, rising from broad bases or slightly foliaceous expansions, many times dichotomous, with patent axils; their lower part thick, with short joints, the upper gradually attenuated, with long joints. *Stichidia* borne on the *ramelli*, sessile, oblong, subobtuse or slightly mucronate, containing a double row of 3-parted tetraspores. Colour of the frond pale red, of the ramuli rosy.—The habit of this plant is something like that of *Naccaria Wigghii*, especially in the clubshaped branchlets; but it is a true species of *Dasya*.

5. *Dasya villosa*, Harv.; caule crasso, longissimo, pinnatim decomposito-ramosissimo, vestito, cartilagineo; ramis ramulisque alternis, crebis, erecto-patentibus, totis filis quadrifariis, articulatis, elongatis, floccosis, tenuissimis vestitis; filis dichotomis, axillis acutis, articulis diametro quadruplo longioribus; stichidiis pedicellatis oblongis, acutis v. mucronatis; keramidiis ovatis, acuminatis, pedicellatis, e ramis enatis.

George Town, V. D. L., *R. Gunn, Esq.*, n. 1262 and 1263.

—*Stem* 12-14 inches long, excessively branched and bushy, the lower branches often as long as the stem, many times divided in an alternate, but not distichous manner. Branches crowded; they, and all parts of the frond except the older portions of the stem densely clothed with exceedingly slender quadrifariously inserted, *scattered*, articulated filaments or *ramelli*. These are neither whorled nor pencilled at their insertion, but, though crowded, are scattered irregularly over the surface, erecto-patent, 2-3 lines long, repeatedly, but rather distantly dichotomous, with joints about 4 times as long as broad. *Colour* a dark vinous red, becoming brown-

ish, and staining the paper in drying. *Keramidia* springing directly from the stem, on thickish inarticulate stalks, ovate-acuminate, large. *Stichidia* borne on the ramelli, pedicellate, oblong, acute or lanceolate, but not remarkably attenuate.—This species has greatly the habit of *D. elegans*, Ag., but is a much coarser growing plant, and wants the beautiful rosy colour of that species.

6. *Dasya bolbochæte*, Harv. ; caule crassiusculo, ramosissimo ; ramis alternis, patentibus, simplicibus, ramulisque filis articulatis elongatis floccosis tenuissimis vestitis ; filis e bulbo lanceolato basi attenuato penicillatis, simplicibus, setiformibus, fragilibus, articulis diametro 5-6-plo longioribus.....?

George Town, V. D. L., *R. Gunn, Esq.*, n. 1264.—*Stem* 6-8 inches long, thicker than hog's bristle, much branched from the base ; branches alternate or irregular, spreading, once or twice divided ; the penultimate branches long and simple, clothed, but not very densely, with articulated ramelli. Ramelli 2-3 lines long, simple, setaceous, and very fragile if moistened after having been dried, springing from bulbous bodies borne quadrifariously on the stem, of a lanceolate figure and not unlike in form to the stichidia of the genus.—The ramelli spring from all parts of these bulbs, from top to bottom, and thus form little pencils. The stem, though externally striate, as in *Dasya* proper, is internally many tubed as in *Polysiphonia*, and divided into joints about equal in length and breadth. Colour full red. Fruit unknown.

7. *Dasya verticillata*, Harv. ; caule crasso longissimo ; ramis alternis, pinnatis, gracilibus, basi attenuatis ; pinnis ramellis articulatis elongatis simplicibus striatis verticillatis ; verticillis approximatis ; articulis diametro 5-8-plo longioribus ; stichidiis.....?

George Town, V. D. L., *R. Gunn, Esq.*, n. 1306.—A single imperfect specimen of this very distinct species has only been sent by Mr. Gunn. This is a fragment of an undivided stem 5 inches long, cylindrical, and about $\frac{1}{2}$ a line in diame-

ter, bearing seven more or less perfect, alternate patent branches, each about 4 inches long. These branches are much more slender than the main stem, and taper remarkably at their insertion; they are naked in their lower part, but above are distantly pinnate; the pinnæ are alternate, either simple or pinnulated, and regularly and closely whorled with very slender straight simple jointed ramuli, 8-10 times longer than the distances between the whorls, and having cylindrical joints 5-8 times longer than their diameter. Colour rosy red. Substance not very tender, the stem only imperfectly adhering to paper. Externally the stem and branches appear inarticulate, but internally they are many tubed.

8. *Dasya ceramioides*, Harv.; caule crasso, inarticulato, glaberrimo, vagè decomposito-ramoso; ramis pseudo-articulatis, ad articulos sursum incrassatos diametro 4-5-plo longiores pinnatis bipinnatisve; pinnulis ultimis (v. *ramellis*) articulatis, alternis, crassis, simplicibus furcatis v. alterne multifidis, acutis, basi constrictis: articulis diametro 2-3-plo longioribus; stichidiis minimis, lanceolatis, ad apices ramellorum insidentibus.

George Town, V. D. L., *R. Gunn, Esq.*, n. 1303 *in part.*—*Fronde* 4 inches, or probably much more in length, $\frac{1}{3}$ of a line in diameter at the base, gradually smaller upwards, irregularly divided many times in a pinnate manner, the divisions patent with rounded axils. Branches rather flexuous, opaque, and not distinctly jointed, but divided at intervals of 4-5 diameters into portions resembling joints narrowed at their base and swelling upwards, almost pyriform; from the swollen part of which spring lesser branches or pinnules, also inarticulate, but furnished with jointed single tubed ramuli, which are not of much less diameter than the pinnules. These ultimate ramuli are contracted at the basal joint, and gradually taper to an acute apex; they are simple at the lower part of the pinnule, erecto-patent and rather distant; those in the upper part of the pinnule are alternately divided or pinnulated:—the joints in all about 2-3

times longer than broad. The *Stichidia* are exceedingly minute, especially so in reference to the large size of the plant, and are borne on long pedicels or accessory ramuli which spring from the more divided of the jointed ramuli. Each stichidium is of less diameter than the ramulus from which its pedicel springs, and might easily fit into one of its joints.—Of this plant I have seen but a single imperfect specimen, but its characters are so distinct that there can be no doubt of its claim to specific distinction. It is not closely related to any Australian species yet noticed, but is allied in many characters to the European *D. coccinea*, from which the smooth stem, the long joints, and the fruit will readily distinguish it. The colour is a pinky red, given out in fresh water.

9. *Polysiphonia byssoclados*, Harv.; caule ultra-setaceo, elongato sub-dichotomo, articulato, basi nudo; ramis decomposito-ramosissimis, sensim attenuatis; ultimis elongatis, simplicibus; totis ramellis monosiphoniis dichotomis articulatis roseis densissime vestitis; articulis caulinis diametro triplo longioribus, rameis diametro equalibus v. brevioribus; keramidiis ovatis, sessilibus. *Cladostephus australis*, Ag! Syst. p. 169.—*Griffithsia australis*, Ag! spec. 2. p. 135.—*Bindera cladostephus*, Dne! (fide spec. e Cl. Decaisne.)

George Town, V. D. L., *R. Gunn, Esq.*, n. 1267.—Stem 6-10 inches long, thicker than hog's bristle in the lower part, and about setaceous in the principal divisions, distinctly articulated in every part, seven tubed; the main branches naked at base, somewhat dichotomous or irregularly multifid, with a fan-shaped outline, their upper part and all the lesser divisions densely clothed with quadri-farious, horizontally patent, single tubed, dichotomous ramelli or filaments, which are about a line in length, and are especially crowded at the tips of the branches, and there form a dark spot or tuft. *Keramidia* ovate, sessile on the branches at the base of the multifid ramelli. Colour red, drying to brown.—This species has to the naked eye so much the

character of a *Dasya*, that at first sight, I had referred it to that genus. A closer inspection, however, showed that it could not be generically separated from *Polysiphonia byssoides*, with which species the structure of its stem and of its ramelli precisely agrees. Both species, indeed, form a close link with *Dasya*.

10. *Polysiphonia Gunniana*, Harv.; caule longissimo, crasso, sub-inarticulato, striato, alternè ramosissimo; ramis primariis elongatis, distantibus, cauli similibus, articulatis; secundariis ramulis dichotomè multifidis roseis pinnatis; ramulis flabellatis, multoties dichotomis, sensim attenuatis, et in filis monosiphoniis byssoideis, roseis desinentibus; articulis omnibus diametro sesqui-vel duplo longioribus; keramidiis (magnis) globosis, sessilibus; stichidiis lanceolatis, acuminatis, ad apices ramulorum.

George Town, V. D. L., *Ronald Gunn, Esq.*, n. 1265, 1266.

—Stem 8-10 inches long or more, more than half a line in diameter at base, gradually attenuated upwards, repeatedly and at length excessively branched, inarticulate below, more or less evidently so above. Branches resembling the stem, long, as thick as or thicker than hog's bristle, somewhat flexuous, twice or thrice alternately divided; the penultimate branches flabellate (the fans half an inch or more in breadth) regularly circumscribed, many times dichotomous, gradually attenuated; many-tubed below, but less and less compound upwards, and ending in *single-tubed*, coloured, dichotomous filaments, which are exactly similar to those of *Dasya*. Colour a brilliant rosy red or crimson, as in *P. elongata rosea*. Substance tender, but not very gelatinous, adhering to paper. Capsules very large, seated on the dichotomous ramuli, sessile or nearly so, at first ovate, afterwards globose or nearly spherical; the pericarp thin and membranous. *Stichidia* resembling closely those of *Dasya*, but, in the specimen examined, without spores, situated at the apex of the polysiphonious portion of the ramulus, and terminating it;—they seem therefore as if nestling among the pencilled one tubed filaments which are produced far beyond

these true apices.—This is a very noble and most distinctly characterised species, which probably will mark an Australian section of the genus, distinguished by having dichotomous ultimate ramuli terminating in single-tubed filaments. I have great pleasure in inscribing it to its discoverer, Mr. Gunn, to whom the botany of V. D. Land stands so largely indebted.

11. *Polysiphonia Lawrenciana*, Harv. ; caule longissimo ; crasso, inarticulato, striato, alternè ramosissimo ; ramis primariis, secundariis, tertiariisque inarticulatis ; tertiariis ramulis dichotome multifidis roseis pinnatis ; ramulis congestis, globoso-penicillatis, parum attenuatis multifidis, in filis monosiphoniis dichotomis roseis desinentibus ; articulis ramulorum diametro equalibus, filarum sesquilongioribus ; stichidiis lanceolatis mucronatis, ad apices ramulorum.

George Town, V. D. L., *R. Gunn, Esq.*, n. 1268.—Stem 8-10 inches long or more, thicker than bristle below, about as thick above, excessively branched in an alternate manner, in all parts opaque, veiny, and therefore seemingly striated, without any external indications of joints. Branches of the first, second, and third orders alternate, erecto-patent, rather distant, *all inarticulate* ; those of the third order pinnated with dichotomously multifid glomerate or pencilled ramuli, each pencil 1-2 lines in breadth, closely circumscribed and somewhat globular, consisting of a robust main trunk set with four or five distichous once-forked many-tubed ramuli which terminate in a pencil of dichotomously multifid one-tubed attenuated coloured filaments. *Substance* seemingly rigid, and only imperfectly adhering to paper. *Colour* a fine crimson. *Stichidia* lanceolate, terminating the forked ramuli, containing tetraspores.—The strong affinity which exists between this plant and *P. Gunniana* induces me to dedicate it to the memory of the late *R. W. Lawrence, Esq.*, the intimate friend and accomplished fellow-labourer in botany of Mr. Gunn. It differs from *P. Gunniana* in the more rigid substance, inarticulate lesser branches, and small and very dense

fascicles of ramuli. To the naked eye it is not very unlike some states of *Ceramium obsoletum*.—A transverse section of the stem shows a large central tube, surrounded by eight or nine others of moderate size, and these externally defended by a wide periphery composed of slender broken cellules containing endochrome, which cause the opaque appearance of the stem. In *P. Gunniana* the structure is very similar, except that the periphery is very much narrower, and the tubes proportionally larger.

12. *Polysiphonia frutex*, Harv.; frondibus aggregatis, fruticosis, ramosissimis, articulatis, sulcatis; caulibus basi ultrasetaceis, sensim attenuatis, et in ramis divaricatis patentibus, decompositis, alternis solutis; ramis secundariis bipinnatis, pinnis distantibus, patentibus; pinnulis brevibus, simplicibus v. ramulosis, apice fibris hyalinis, byssoideis ornatis; articulis omnibus brevissimis, diametro equalibus v. brevioribus, 4 striatis, keramidiis ?

George Town, V. D. L., *R. Gunn, Esq.*, n. 1317, and one of the specimens marked 1316.—*Fronde* 2-4 inches high, forming globose bushy tufts, branching in every direction from the immediate base, the branches equalling the stem in length, or no distinct stem visible;—all excessively branched, the lesser branches alternate, very patent or divaricate, setaceous below, attenuated upwards, straight, bi-tripinnate, with distant alternate pinnæ; these in their turn having distant, short, spinelike pinnulæ, which are sometimes again pinnellate;—all the apices terminating in colourless byssoid fibres. Colour dull grey or brownish, staining the paper reddish. Articulations visible from the base to the apex, very short. A transverse section of the stem shows a small central siphon surrounded by seven large tubes, without any external cellular periphery; the stem is consequently furrowed.—This has a good deal the habit of the European *P. fruticulosa* (whence the specific name), and several of the characters of *P. subulifera*;—but it is distinct from both.

13. *Polysiphonia fuscescens*, Harv.; frondibus aggregatis, fruticosis, ramosissimis, articulatis, sulcatis, setaceis; e basi

in ramis elongatis erectis divisis; ramis attenuatis bi-tripinnatis; pinnis pinnulisque erecto-patentibus, brevibus, simplicibus v. ramulosis, apice fibris hyalinis byssoideis ornatis; articulis ramorum diametro 2-4-plo longioribus, ramulorum brevissimis, 4 striatis; keramidiis....?

George Town, V. D. L., *R. Gunn, Esq.*, n. 1316 in part.—*Fronde* 6-8 inches high, excessively branched and bushy, but not of so shrub-like a character as *P. frutex*, much divided from near the base into long erect branches or stems, which are generally simple, or merely throw out from their lower part long branches similar to themselves. These branches are in circumscription linear or narrow lanceolate, fasciculato-bipinnate throughout their length, the pinnæ very short, in proportion to the length of the branch, or $\frac{1}{4}$ to $\frac{1}{2}$ inch long on branches that are 4-5 inches long, erect or erecto-patent, pinnulated with short simple spinelike ramuli, the apices beset with byssoid fibres. Articulations of the stem and branches 4 striate, from 2 to 4 times longer than broad. Colour a dull brownish or grey.—This species, which may be looked on as the V. D. Land representative of *P. nigrescens*, is nearly allied to *P. frutex*, but differs something in habit, and clearly in the length of the joints. The structure of the stem is similar in both.

14. *Polysiphonia cancellata*, Harv.; frondibus ultrasetaceis, fruticulosus, spinoso-ramosissimis, articulatis, sulcatis; ramis e basi emissis, longissimis, flexuosis, divaricatis v. horizontalibus, ramulis alternis, distantibus, patentissimis vix pinnulatis v. margine subuliferis; articulis diametro duplo brevioribus, reticulatis, 4 striatis; keramidiis minutis, ovatis, sessilibus.

George Town, V. D. L., *R. Gunn, Esq.*, n. 1318 and 1320.—*Fronde* 4-5 inches high, thicker than bristle at the base, forming a thorny bush, the outline of which is broadly ovate or globose; branches as long as the principal stem, and issuing at right angles with it, flexuous, from a quarter to half an inch asunder, furnished with a second series of horizontally patent ramuli each about an inch long. These

ramuli are either furnished with a series of distant, short, spinelike pinnules, or they are more or less *bipinnate*, the pinnæ in this latter case resembling the main ramuli in the former; the ultimate pinnules always patent and spinelike. Articulations deeply furrowed, much shorter than broad, 4 striate; the striæ which mark the tubes as evident as those which divide the branch into joints, and thus the frond has a netted appearance.—*Keramidia* very small, sessile on the ramuli, ovate. The stem is seven-tubed as in the last two species.

15. *Polysiphonia acanthophora*, Harv.; caule longissimo, crasso, indiviso, inarticulato, bi-tripinnato; pinnulis elongatis, tenuibus, alternis, distantibus, ramulis minutis spinulosis bi-tri-multifidis apice fibrilliferis distiche obsessis; ramulis solum articulatis, articulis sesquolongioribus, bi-striatis.

George Town, V. D. L., *R. Gunn, Esq.*, n. 1291, 1297, 1321.—Stem 8-10 inches long or probably more, cartilaginous, from $\frac{1}{4}$ to $\frac{1}{2}$ a line or even more in diameter at base, gradually attenuated to the thickness of bristle above; pinnated with patent branches much more slender than itself, which gradually diminish in length from the lower part to the top, so that the general outline of the frond is ovate-lanceolate. These branches are usually again once-pinnated, but in large specimens twice-pinnated, with slender patent pinnæ of from $\frac{1}{2}$ an inch to $1\frac{1}{2}$ inches in length:—both stem, branches, pinnæ and pinnulæ perfectly opaque and inarticulate. The pinnæ and pinnulæ are distichously set with minute, jointed, spinelike ramuli, which are about $\frac{1}{2}$ a line in length or less, and either simple, bifid, trifid or multifid with alternate divisions, their apices producing colourless byssoid fibres. Fruit unknown. Stem internally with four principal tubes round a minute central one, and a wide cellular fleshy periphery. Colour in the dry state greyish brown, with a stain of red.—This is one of those inarticulate species which will probably be separated from *Polysiphonia*, and perhaps placed in *Alsidium* as at present defined. It bears an out-

ward resemblance to *P. byssoides*, but is of a totally different structure: and it also something resembles *Acanthophora Delilii*, whence the specific name.

Tribe 2. CHONDRIÆ, *J. Ag.*

16. *Bonnemaisonia elegans*, *Ag.*; fronde compressâ, membranaceâ, anguste lineari, decomposito-ramosissima; ramis alternis, flabellatis, ramulis setaceo-subulatis distichis alternis utrinque pectinatis; keramidiis solitariis ovatis in jugamento immersis, poro ad axillam directo. *Ag. Sp. Alg. vol. i. p. 198.*

George Town, V. D. Land, *R. Gunn, Esq.*, n. 1299, 1300.—*Fronde* 6-12 inches long, excessively and finely branched; the stem and branches compressed, the ultimate divisions perfectly flat and membranaceous. All the branches, through their whole length, and through all the divisions, are bordered with distichous very slender setaceo-subulate ramuli about a line in length, and tapering to an acute point. Frond internally composed, as in *B. asparagoides* of large polygonal cellules which are visible through the smaller ones which form its surface. No trace of midrib or central opacity. Keramidia ovate, immersed in the sinus of the marginal ciliæ, equally convex on either surface of the frond, opening by a pore directed to the axil of the ramulus, and containing a tuft of pearshaped seeds. These keramidia or capsules are usually solitary on each branchlet, and generally but shortly removed from the apex; but occasionally a branch is found with two, one above the other.—This beautiful plant which, as Agardh well remarks, bears so striking a resemblance to the European *B. asparagoides*, that, except by the fruit, it might be difficult to distinguish them, has also many points in common with *Calocladia pulchra*, *Grev.*, and I am disposed to concur with Mr. J. Agardh in uniting *Calocladia* to *Bonnemaisonia*. So great is the resemblance between *Cal. pulchra* and *B. elegans*, that had I not before me an authentic specimen of *Cal. pulchra* communicated by Dr. Greville, and numerous other specimens of that plant found by Dr.

Joseph Hooker at Kerguelen's Land, I should perhaps have fallen into the error of considering these two species identical. *B. elegans* is, however, a much more delicately and finely branched plant; its substance is far more tender, the ciliæ that border its branches are slenderer, and its capsules are removed from the apex of the ramuli. M. Montagne informs me that Greville's *Calocladia pulchra* belongs to the Lamourouxian genus *Delisia*, and he considers it distinct from *D. fimbriata*, Lam.

17. *Laurencia? membranacea*, Harv.; fronde plana, tenui-membranacea (!), lato-lineari, profunde bipinnatifida; pinnis pinnulisque alternis patentibus, inferioribus brevibus dentiformibus, superioribus linearibus elongatis; axillis rotundatis; pinnulis obtusè dentatis; apicibus obtusis.

George Town, V. D. L., *R. Gunn, Esq.*, n. 1277.—Having seen but a solitary barren specimen of this remarkable plant, I am unable to give more than a very imperfect description of it, and cannot altogether satisfy myself of the proper genus to which it should be referred. It has so much the colour and outline of very luxuriant specimens of *Laurencia pinnatifida*, that I venture to place it in the same genus, although its substance is as thin and membranous as the frond of *Rhodomenia bifida*, or of *Thamnophora Mertensii*. Had the apices been *acute*, and the colour less purple, I should probably have placed it in *Thamnophora*. The fruit, when discovered, will decide the question. Mr. Gunn's specimen, which is broken at base, and may be only a branch, measures 8 inches in length, and, taking the expansion of its branches, 7 inches across; the breadth of the frond being half an inch in the widest, and more than a quarter in the narrowest place. There is neither midrib nor thickening in the middle, the whole is a thin membrane. The stem is undivided; its lower half furnished with short, closely set, alternate, bluntly toothed pinnæ about half an inch long; its upper half bears long pinnæ 3 inches long, which are again pinnatifid, the pinnules bluntly toothed, and the teeth themselves bluntly cleft at the apex. All the apices

and axils are blunt. Colour a pale purplish red, greenish in the lower part, exactly resembling that of *L. pinnatifida*.

18. *Laurencia tenuissima*, Grev. (*Fucus tenuissimus*, *Turn. t.* 100.)

George Town, V. D. L., *R. Gunn, Esq.*, n. 1296, 1319— and part of 1288 (specimens in decay).

19. *Laurencia dasyphylla*, Grev. (*Fucus dasyphyllus*, *Turn. t.* 22.)

George Town, V. D. L., *R. Gunn, Esq.*, n. 1281.—Colour much darker than usual, deep purple.

20. *Laurencia obtusa*, Lamour. (*Fucus obtusus*, *Turn. t.* 21.)

George Town, V. D. L., *R. Gunn, Esq.*, n. 1288, in part.

21. *Laurencia botryoides*, Gaill. (*Fucus botryoides*, *Turn. t.* 178.)

George Town, V. D. L., *R. Gunn, Esq.*, n. 1286.

22. *Chylocladia kaliformis*, Grev. (*Fucus kaliformis*, *Turn. t.* 29.)

George Town, V. D. L., *R. Gunn, Esq.*, n. 1323.

23. *Chylocladia Tasmanica*, Harv., M.S.S.

George Town, V. D. L., *R. Gunn, Esq.*, n. 1295.—Two imperfect and half decomposed specimens of a fine *Chylocladia*, probably new, but too closely allied to *C. articulata* for me to venture to describe it without more perfect specimens. The substance is far more gelatinous than in *C. articulata*, and the size, unless we compare it with the gigantic state figured by Turner, is much greater. The length of the lowermost constrictions is, in one specimen, an inch and in the other 1½ inches. It appears to decompose rapidly in fresh water, throwing off its ultimate ramuli as a Starfish does its rays. The frond is irregularly dichotomous, with very patent axils, constricted at the branching; the upper divisions umbellate, 4-5 new branches springing from the top of an old one, and these from their apices giving birth to saccate clavate ramuli.

Tribe 3. SPHÆROCOCOIDEÆ, *J. Ag.*

24. *Hypnea musciformis*, γ . *Valentiaë*, Harv. in *Hook. Journ. Bot.* 1, p. 153.—*Fucus Valentiaë*, *Turn. t.* 78.

George Town, V. D. L., *R. Gunn, Esq.*, n. 1314.—This specimen bears sphaerospores in the patent ramuli.

25. *Gracilaria lichenoides?* (*Fucus lichenoides, Turn. t. 118?*)

George Town, V. D. L., *R. Gunn, Esq.*, n. 1292.—Either *G. lichenoides* or a species very closely resembling it. The specimen produces irregular wartlike nemathecia.

26. *Sphaerococcus australis*, Harv.; caule brevi, carnosio, cylindrico, mox cuneato et in fronde lineari, compresso-planâ, membranaceâ, coccineâ, ecostatâ abeunte; fronde decomposito-dichotomâ; segmentis circumscriptione flabelliformibus, ramulis dichotomè multifidis sensim angustioribus distichis patentibus pinnatis; axillis rotundatis obtusissimis; apicibus acutis, laceratis; coccidiis acutis demum tuberculatis ad apices ramulorum sessilibus.

George Town, V. D. L., *R. Gunn, Esq.*, n. 1279:—also abundantly in the collection of 1840. Root scutate. Stem as thick as a sparrow's quill, cylindrical, cartilaginous, about a quarter of an inch in length, expanding thence, from a cuneate thickened apex, into a frond 4-12 inches long or probably more, which divides in an irregularly dichotomous manner into a few principal segments which preserve a nearly equal breadth of from 1-2 lines (in different specimens), and produce along their margins in a manner sometimes alternately pinnate, sometimes alternately geminate secund, or imperfectly dichotomous, *lesser* distichous *segments* half the breadth of those from which they spring, which either at once divide into dichotomously multifid ramuli gradually narrower, or are themselves pinnated with such multifid ramuli. These *multifid ramuli*, and even the major segments, preserve a tolerably defined flabellate outline.—Such is the common state of the more regular specimens, but others occur which are cleft in a manner so exceedingly irregular, between pinnate and dichotomous, that it is impossible to convey in words any idea of the branching. One character, however, runs through all the varieties, namely: every axil, from the greatest to the least, is remarkably rounded and large; and in the more finely divided or

upper part of the frond, the segments overlap each other above the axils, leaving wide circular spaces like holes in a net. The apices are all *acute*; the ultimate ramuli even *subulate*, from which circumstance, added to the colour, the position of the fruit, and the internal structure of the frond, I am induced to place this plant in the *restricted* genus *Sphærococcus* (Grev.) rather than in *Rhodomenia*, although there is no trace of midrib. The internal structure to which I allude consists in a number of large intercellular spaces of a roundish figure that exist throughout the substance of the frond, and give a transverse section of it a honey-combed appearance; while under a pocket lens they impart a netted character to the surface of the frond. These air-cells separate the two opposite surfaces so considerably, that we must call the frond rather very much *compressed*, than truly *flat*. The coccidia are borne only on the ultimate divisions, and generally at or near the apices; at first they are conical, they afterwards become more globose, and finally are tuberculated and very irregular in form. They are of a fleshy substance, and contain a *favella*, or mass of sporules divided into a great number of lesser clusters. The colour is exactly that of *S. coronopifolius*, and the habit is not dissimilar. The substance is thinner, yet it scarcely adheres to paper.— I had at first thought that this plant, which appears to be common in V. D. L., might be *Rhodomenia alcicornis*, J. Ag., but on reading over his description carefully, I cannot suppose them the same. The position of the fruit affords an obvious difference.

Tribe 4. DELESSERIEÆ, J. Ag.

27. *Nitophyllum punctatum*, Grev. (*Fucus punctatus*, *Turn.* t. 71.)

George Town, V. D. L., R. Gunn, Esq., n. 1270 (with capsules), and n. 1269, 1271 (with granular fruit).

28. *Nitophyllum*, *n. sp. ?*

George Town, V. D. L., R. Gunn, Esq., n. 1273 and 1276?
—The specimens are without fruit, and therefore I do not

venture to found a species upon them in a genus liable to such variations of form. It so closely resembles, in the dichotomous linear frond, bordered with ciliæ, some states of *Rhodomenia bifida*, that I at first regarded it as that species; but the reticulations of the frond are very much larger, and evidently point to a place in *Nitophyllum*.—Mr. Gunn's n. 1282, is also a *Nitophyllum* in a young state, and probably new.

29. *Nitophyllum affine*, Harv.; caule brevi, carnosò, mox in fronde latissimè flabelliformi, laceratâ, enervosâ, membranaceâ, basi subopacâ crassâ expanso; segmentis subpinnatifidis, sinubus rotundatis, soris granularum oblongis in segmentis ultimis longitudinaliter ordinatis.

George Town, V. D. L., *R. Gunn, Esq.*, n. 1272.—Nearly related to *N. Gmelini*, and strongly resembling the large Irish state of that plant, but differing in the position of the sori. It rises with an evident stem which soon expands into the cuneate dark-coloured base of a flabellate membranous frond, 5 inches long and 7 inches wide, veinless, except for the fused indication of the stem at the base, thin and delicate, but probably crisp in a recent state, and only imperfectly adhering to paper. It is deeply inciso-lacerate or many lobed, the segments coarsely sinuato-dentate or subpinnatifid; the marginal lobes blunt and shallow. Sori minute, oblong or linear, ranged in longitudinal rows across the tips of the segments, or scattered over them;—in our specimens past their prime.

30. *Thamnophora procera*, J. Ag. in *Linnæa XV. p. 10.*

George Town, V. D. L., *R. Gunn, Esq.*, 1278 in part.—In this species, and in *T. Mertensii*, Grev. I find an evident fine medial line running through the frond and branching off to each lacinia. The expression "fronde ecostata" is rather too strong.

31. *Thamnophora costata*, J. Ag. in *Linnæa XV. p. 10.*

George Town, V. D. L., *R. Gunn, Esq.*, 1278 in part. A fragment only.

32. *Thamnophora angusta*, J. Ag. in *Linnæa XV. p. 10.*

George Town, V. D. L., *R. Gunn, Esq.*, n. 1304.

Tribe 6. CRYPTONEMÆ, *J. Ag.*

33. *Chrysimenia coccinea*, Harv. ; fronde compressâ (?), tubulosâ, coccineâ, circumscriptione pyramidali; caule subdiviso vel furcato ; ramis alternis v. vagis, erecto-patentibus, dichotomè pinnatis, multifidis ; axillis subacutis ; ramulis ultimis erectis, basi vix constrictis, apice acutis ; coccidiis.....? granulis triangule divisis in ramulis ultimis nidulantibus.

George Town, V. D. L., *R. Gunn, Esq.*, n. 1301.—*Fronde* (a single specimen only seen) 4 inches high, tubular, with a few lax threads running through the centre, apparently compressed. Stem as thick as bristle, undivided, or nearly so, beset from near the base to the apex with alternate or spiral multifid erecto-patent branches, the lowest longest, the rest gradually smaller upwards, all of them divided in a manner partly dichotomous, partly pinnate, the branches very erect, and the ultimate ramuli elongate and acute, slightly constricted at base. Colour a fine pinky red. Substance membranous and tender, but not very gelatinous. Granules imbedded in all the ramuli. This plant has much the habit of *Gracilaria*, but not the structure.

34. *Halymenia membranacea*, Harv. ; fronde planâ, membranaceâ, pallide rubrâ, lineari, basi cuneatâ, vagè subdichotomo-pinnatim v. palmatim-fissâ ; segmentis patentibus, e margine ramenta lanceolata v. furcato-cuneata emittentibus ; sphærosporibus (triangule divisis) per totam frondem sparsis.

George Town, V. D. L., *R. Gunn, Esq.*, n. 1276.—*Fronde* tufted, 3-4 inches high, quite flat and thin, membranaceous, cuneate at base, afterwards preserving nearly a uniform breadth of one to two lines, or in the largest specimen nearly $\frac{1}{4}$ of an inch, very irregularly divided, more pinnatifid than dichotomous, sometimes with several secund segments, sometimes palmate, or laciniate ; the axils rounded, and the segments widely spreading or divaricated. The margin in our specimens emits small ramenta, the youngest of which are linear, then lanceolate, and finally forked or palmatifid ; all attenuated at base. Colour a pale dull red. Substance

membranous, not in the least gelatinous, and not adhering to paper. *Fruit*: innumerable sphærospores, divided triangularly, scattered over the whole surface of the frond, dark-coloured, solitary, dot-like, immersed in the periphery. The structure of the frond internally exhibits very lax anastomosing central filaments ending outwardly in large cellules.—The aspect of this species is very much that of *Rhodomenia sobolifera*, but the structure is very different.

Tribe 7. CERAMIEÆ, J. Ag.

35. *Ceramium rubrum*, Ag. (*Conferva rubra*, *Eng. Bot. t.* 1166.)

George Town, V. D. L., *R. Gunn, Esq.*, n. 1292 and 1305 (in part).

36. *Ceramium diaphanum*, Roth. (*Conferva diaphana*, *Eng. Bot. t.* 1742).

George Town, V. D. L., *R. Gunn, Esq.*, n. 1309, 1310, 1311, and 1313.

37. *Spyridia filamentosa*, Harv. in *Br. Fl.* 2, p. 337.

George Town, V. D. L., *R. Gunn, Esq.*, n. 1283, 1312, 1305? (but not 1305).—There are two varieties, to the first of which, distinguished by scattered setæ or ramuli, the above numbers belong. This is identical with the Mediterranean and British Plant.—The second variety, or perhaps species, may be called— β . *verticillata*, n. 1298. It is remarkable for having the setæ regularly whorled round the branches, and much denser than in var. *a*.

38. *Spyridia? pellucida*, Harv.; frondibus e basi communi lata stuposa ortis, tenuibus, pellucidis, monosiphoniis, articulatis, roseis, vagè sub-dichotomè ramosissimis: ramis ad quodque geniculum ramulis brevissimis subulatis oppositis v. verticillatis ornatis; articulis diametro sesqui- v. subduplo longioribus.

George Town V. D. L., *R. Gunn, Esq.*, 1305: also in the collection of 1840.—*Fronde* 5-6 inches long, as thick as those of *Ceramium rubrum*, several growing from the same shaggy base, and often matted together below, much and irregularly

divided on a dichotomous type, the lesser branches generally alternate, straight; the apices not hooked in. Every part of the stem is clearly jointed, one-tubed and pellucid, but red-coloured, and all the larger and smaller branches, and the stems to their very base, are furnished at each joint with short, awl-shaped, opposite or cruciate ramuli, which are jointed like the stem, and more than half its diameter. These sufficiently mark the species from any variety of *C. rubrum*, and seem to indicate an affinity with *Spyridia*: but I am not sure that I am right in referring it to this genus, in preference to *Ceramium*, with which the structure of the frond more nearly agrees.

39. *Griffithsia setacea*? Ag.

George Town, V. D. L., *R. Gunn, Esq.*, n. 1290, 1302.—These specimens are not in fruit, and have not been sufficiently displayed to show the ramification; n. 1302, as well as it can be examined, seems identical with the European form; n. 1290 is smaller, more slender, and may be different.

40. *Griffithsia flabelliformis*, Harv.; fronde latissime flabellatâ, petiolatâ, multoties dichotomâ; axillis inferioribus patentissimis, superioribus acutis; articulis inferioribus cylindricis, diametro 4-5 plo longioribus: superioribus ellipticis geniculis maxime contractis; ultimis moniliformibus, attenuatis.

George Town, V. D. L., *R. Gunn, Esq.*, n. 1294.—A large species, 6 inches long, by 7 inches wide, twelve or fourteen times dichotomous. The lower axils very patent, the upper equally acute and close. Joints in the patent portion of the frond cylindrical, 4-5 times longer than broad; in the erect or upper portion strongly contracted at the genicula, swollen in their middle, and thrice as long as broad; those of the ultimate divisions, which taper to a very fine point, resolved into a string of elliptical beads. Colour a fine blood red. Substance lubricous, but less gelatinous than in *G. corallina*, to which this species is very closely allied.

41. *Wrangelia plumosa*, Harv.; caule nodoso, articulato, frondem percurrente, tripinnato; pinnis pinnulisque nodoso-articulatis; nodis omnibus ramulis verticillati

tenuissimis brevissimis dichotomis densè vestitis; favellis terminalibus, vix involucratis, densissime ramulis hirtiformibus velatis; articulis ramorum diametro 4-plo longioribus, striatis.

George Town, V. D. L., *R. Gunn, Esq.*, 1285, 1315.—*Fronde* 6 inches long or more; stems robust, nearly half a line in diameter at the base, gradually attenuated upwards, undivided, or breaking near the base into a few principal stems, erect, closely set with alternate branches, which are themselves twice pinnate: the whole frond is therefore thrice divided in a pinnate manner, and luxuriant specimens even still more decomposed. The main stem and branches are all evidently jointed, the joints 3-4 diameters asunder, swollen, or knobby, and each densely clothed with minute, almost fibrilliform, dichotomous and gelatinous ramuli, which in the old parts are sometimes worn down into hairyness. In the young parts, and especially in the pinnules, which they entirely invest, they are lengthened, though never exceeding half a line, and much divided dichotomously. The *sphæropores* (or *capsules*) are large, dark red, and abundantly scattered among these ramuli. The *favellæ* are borne on the tips of the branches; they are spheroidal and densely tomentose;—but the specimen which produces them is very much battered, which is perhaps the cause of the seeming absence of involucre. Colour dark grey, fading in fresh water, and slightly staining paper pink. Substance tender and gelatinous.

42. *Callithamnion? comosum*, Harv.; caule elongato, tenui, crinito, frondem percurrente, ramosissimo; ramis sensim attenuatis multoties pinnatis, oppositis vel sæpissime abortu alternis vel secundis (ramo abortivo ad ramulum minutum mutato), nodoso-articulatis, nodis filis minutis verticillatis hirtis; pinnulis penultimis cæteris similibus, ab quoque nodo duos ramulos oppositos emittentibus; ramulis byssoideis, tenuissimis, alterne v. secunde divisis, apicibus elongatis, erectis; sphærosporis pedicellatis, ovalibus.

George Town, V. D. L., *R. Gunn, Esq.*, n. 1307, and 1303

in part.—Fronde 6-8 inches high, setaceous below, excessively branched in a regularly pinnate manner, each successive pinnation being more slender than the last, till at the fifth or sixth the diameter is reduced to that byssoid fineness that requires a strong magnifying power to see it clearly. The *scheme* of branching is obviously by *opposite* patent branches or pinnæ, repeated over and over again; but from some cause it happens that in by far the greater number of cases in the earlier development of the frond, *one* of these branches is either very much shorter than the other, or is reduced to a mere rudiment, or even altogether wanting; though its place is usually found occupied by a small ramulus. The main branches, and their divisions therefore are frequently alternate. The structure of the stem is peculiar, and something at variance with the genus, while it shows a transition to *Crouania* or *Dudresnaia*. It is composed of a bundle of fine longitudinal threads, glued together, and as if knotted or more firmly combined together at each joint or node from which the branches issue. In old parts it is wholly covered with short hair-like ramelli, but in younger parts these are confined to the nodes, which are 2 or 3 diameters apart from each other. This nodose structure is found in all the divisions till we come to the last where the frond is reduced to a byssoid fineness and a single tube. The last or extreme nodose-pinnules, besides the hair-like ramelli that clothe the nodes, throw out at each node a pair of opposite slender byssoid pinnulated ramuli, whose pinnules are either alternate or secund, erecto-patent, and bear along their upper face, from joint to joint, a row of pedicels, each of which supports a sphærospore. Joints of the ramuli 4 times longer than broad. Colour a fine rosy red, not soon changing in fresh water, and well preserved in drying. Substance very tender and lubricous.—A noble species, and not likely to be confounded with any other.

43. *Callithamnion latissimum*, Harv.; caule elongato, frondem percurrente, tenui, basi opaco, subsetoso, e fibris constituto, in parte superiore articulato glabro; fronde latissimâ, pluries pinnatâ, divisionibus omnibus alternis; ramis pri-

mariis tripinnatis, articulatis, pellucidis, glabris; pinnis similibus sed tenuioribus; pinnulis penultimis (vel *plumulis*) patentibus, tenuibus, flexuosis, simpliciter pinnatis; articulis diametro 3-4-plo longioribus; sphærosporis minutissimis, sphæricis, brevè pedicellatis basin versus pinnellarum ultimarum secundis.

George Town, V. D. L., *R. Gunn, Esq.*, n. 1308.—Stem 5-6 inches long, or more, setaceous below, gradually attenuated upwards, continued throughout the broadly ovate, excessively pinnated frond, opaque and subsetose below, pellucid and naked above: all the divisions alternate. Main branches very patent or horizontal, 2-3 inches long, about half the diameter of the stem, pellucid and jointed; the joints 4-5 times longer than broad, triply pinnate, the pinnæ resembling the main rachis. Pinnules and their divisions very slender and patent, filiform, blunt. Colour a fine rose red, without any gloss when dry. Substance membranaceous, not very gelatinous. Sphærospores exceedingly minute, secund along the ultimate ramuli near their bases, 4-5 on each ramulus, sphærical, on short stalks.

44. *Callithamnion cruciatum*, Ag.

George Town, V. D. L., *R. Gunn, Esq.*—These specimens do not materially differ from the more slender British states of this variable, but easily recognised species, and are equally distinguished by the darkened tips of the branches, caused by the crowding of the ramuli about them.

SERIES II. MELANOSPERMÆ OR FUCOIDEÆ.

Tribe 8. SPOROCHNOIDEÆ, *Grev.*

45. *Sporochnus radiciformis*, Ag. (*Fucus radiciformis*, *Turn.* t. 189.)

George Town, V. D. L., *R. Gunn, Esq.*, 1284, 1293.

Tribe 9. DICTYOTEÆ, *Grev.*

46. *Stilophora australis*, Harv.; fronde cartilaginea, filiformi, alterne bi-tripinnatim ramosa; ramis primariis elongatis, indivisis; secundariis tertiariisque laxè insertis, simplicissimis, strictis, acutis, basi attenuatis; verrucis ellipticis, sparsis.

George Town, V. D. L., *R. Gunn, Esq.*, n. 1318?—A single imperfect specimen marked with a query is all that I have seen (n. 1318 is *Pol. cancellata*), but this is sufficient to establish a perfectly distinct new species. This specimen; which consists of the upper portion of a frond, is 6 inches long, and half a line in diameter, solid, cartilaginous, with a percurrent stem, much branched alternately; the branches and their divisions not strictly distichous, though nearly so. Branches long, simple, patent, alternate or secund, laxly set with alternate elongated simple ramuli, which bear a third and probably occasionally a fourth series similar to themselves. All the ramuli more or less tapering at base, and very acute, or acuminate at the apices. Warts of fructification rather laxly scattered over the branches and ramuli, depressed, exactly elliptical. Colour olive green.

SERIES III.—CHLOROSPERMÆ OR
ZOOSPERMÆ.

Tribe 10. ULVACEÆ, *Ag.*

47. *Ulva latissima*, L.

George Town, V. D. L., *R. Gunn, Esq.*, n. 1275.

48. *Enteromorpha compressa*, Grev.

George Town, V. D. L., *R. Gunn, Esq.*, n. 1289.

HEPATICÆ ANTARCTICÆ; *being characters and brief descriptions of the HEPATICÆ discovered in the southern circumpolar regions during the Voyage of H.M. Discovery Ships Erebus and Terror; by DR. J. D. HOOKER, and DR. THOMAS TAYLOR.*

(Continued from page 400.)

II.—SPECIES OF THE FALKLAND ISLANDS, CAPE HORN
AND OF KERGUELEN'S LAND.

(Where a species occurs, which has before been described among the plants of Campbell's Island and of Lord Auck-