

(n. 224.)—This differs from *Ditassa* chiefly in the bifid outer coronal laciniae of the flowers.

729 (1) *Sarcostemma Bonariense* (Hook. & Arn.); ramis inarticulatis pedunculoque glabris, foliis lineari-oblongis basi obtusis apice in cuspidem subiter attenuatis subtus ad costam præcipue puberulis pedicellis calyce corollaque sericeo-pubescentibus.—Buenos Ayres. *Tweedie*.—Peduncles equal in length with the leaf. Stigma apiculate, apiculus emarginate. Outer corona small, annuliform and entire. Nearly allied to *S. pubescens* and *S. Cumanense*, H. B. K.—“This with the other S. American species scarcely agree with the true *Sarcostemma* in the form and origin of the exterior corona, which in this is only an elevated margin to the tube of the corolla, while in the true *Sarcostemma* it is distinct from the corolla. In other respects, save in the emarginate stigma of our plant, they all accord in generic structure.” *Wight, MSS.*

(*To be continued.*)

(TAB. CXXXVIII.—CXXXIX.)

ALGOLOGICAL ILLUSTRATIONS,

BY WILLIAM H. HARVEY, ESQ.

NO. I.—REMARKS ON SOME BRITISH ALGÆ, AND DESCRIPTIONS OF NEW SPECIES RECENTLY ADDED TO OUR FLORA.

LAMINARIÆ. *Grev.*

1. *Laminaria debilis*. *Ag. Syst. v. i. p. 120. Grev. Scot. Crypt. Fl. t. 277. Grev. Alg. Brit. p. 35. t. 5. Hook. Brit. Fl. v. ii. p. 272. Chalmers, Alg. Scot. N. 39.*

This supposed species of *Laminaria* was introduced to the British Flora by Mr. James Chalmers, who published specimens gathered in the Island of Islay in his "Algæ Scoticæ;" and it has since been admirably figured in Dr. Greville's "Scottish Cryptogamic Flora." No one appears to have detected it in any other locality: although a plant agreeing in shape, size and colour, but hitherto supposed to have a different structure, occurs on many of our shores, being found in Devonshire by Mrs. Griffiths, near Belfast by Dr. Drummond, and in the West of Ireland by myself. This is the *Punctaria latifolia* of the "Algæ Britannicæ:" and Dr. Greville admits, that, "in its outline and general appearance, it resembles *Laminaria debilis*, which as well as the two following species of *Punctaria*, Sprengel has referred to his *Zonaria plantaginea*, an association which proves him to have generalized without much examination."

Under *Laminaria debilis*, he further observes:—"Sprengel has not admitted this plant as a species into his Species Plantarum, but refers it as a synonym to *Zonaria plantaginea* of Agardh, the *Punctaria Plantaginea* of this work. It is nevertheless not only perfectly distinct, but has no affinity whatever with the genus *Punctaria*."

With opinions against me thus strongly expressed by so high an authority as my friend Dr. Greville, I fear I shall be thought presumptuous in stating my conviction that however distinct the three reputed species of *Punctaria* may be among themselves, (a point I leave for future observation) the *Laminaria debilis* is completely identical with *Punctaria latifolia*.

I trust I have not come to this conclusion hastily or without a minute examination and comparison of authentic specimens of both species—those of *L. debilis* gathered at Islay by Mr. Chalmers and given to me by Mr. Arnott, and those of *P. latifolia*, by Mrs. Griffiths from Devonshire. It was Mrs. Griffiths indeed who first called my attention to the subject, by remarking that specimens from Chalmers which I had sent her, were the same as her *P. latifolia*: and I find that

Chalmers himself expresses a doubt of his *L. debilis* proving any thing else than a more advanced state of *P. plantaginea*.

In form, size, substance and colour, it is allowed that the Islay and Devonshire plants perfectly agree; but it is asserted that the former have the closely cellular structure of *Laminaria*, the latter the reticulated or *dictyoteous* structure of *Punctaria*. This dissimilarity I have not been able to discover, for though I have subjected both to a rigid microscopic examination and dissection, I cannot perceive the most trivial structural character to distinguish them. Both are truly *dictyoteous* and entirely the same in genus and species: I cannot even detect sufficient differences to establish a variety.

I trust Dr. Greville's specific name "*latifolia*" will be retained for the united species; for though "*debilis*" has undoubtedly the claim of priority, and was quite applicable to the plant whilst considered a *Laminaria*, it would be rather too absurd, for the mere sake of preserving an older name, to attach such an epithet to the largest and finest species of *Punctaria*.

DICTYOTEÆ.

2. *Striaria attenuata*. Grev.—*Hook. Br. Fl. v. ii. p. 279*. &c.—To the habitats already given in British Flora, add Torbay, *Mrs. Griffiths*—and Sidmouth, *Miss Cutler*. 1833.

3. *Asperococcus castaneus*, Carm.—*Hook. Br. Fl. v. ii. p. 277*. Mrs. Griffiths has sent me a series of specimens which prove that this supposed species is only the young state of *Chorda lomentaria*.

ECTO CARPEÆ.

4. *Sphacelaria disticha*.—*Harv. in Hook. Br. Fl. v. ii. p. 323*. Since the publication of the British Flora, my friends Mrs. Griffiths and Miss Cutler have convinced me that the plant I formerly described under this name is merely a form of *S. scoparia*. The latter lady, who finds both states commonly at Sidmouth, has kindly communicated an extensive

series gathered at different seasons, by which it appears that the form called "*disticha*," is most abundant during the autumnal and winter months, though it is occasionally found in summer.

Whether the *S. disticha* of Lyngbye and Agardh be really distinct, I have no means of ascertaining, never having seen an authentic specimen.

5. *Ectocarpus Mertensii*. Ag.—*Harv. in Hook. Br. Fl. v. ii. p. 327.*

This most beautiful as well as very rare and little known plant has recently been added to the Devonshire Flora by *Mrs. Griffiths*, and *Mrs. Wyatt*, who gathered it at Tor Abbey and Harbrich in April of the present year (1834,) and *Miss Cutler* has since detected it at Sidmouth. Thus within a few weeks three new stations have been ascertained for this most interesting species,—a species indeed long known to botanists by the figure in "English Botany" (t. 999), but, until now, existing in very few herbaria. It may confidently be expected to occur in many other places on the Southern shores of England: and as good specimens will I hope be published in the 3d vol. of the "Algæ Danmonienses," it will soon cease to be a little known plant. I regret that I cannot yet claim *E. Mertensii* as a native of Ireland. Bantry Bay is indeed given as a station on the authority of the late Miss Hutchins, but her specimens which, through the kindness of Mr. Mackay, I have lately had access to, belong to *E. granulosus* and *E. spermophorus*.

MYRIOTRICHIA. *Nov. Gen.*

(*Alga minuta, parasitica. Frons diorgana, ex filis articulatis, quorum alia olivacea opaca, alia hyalina crinoidea constans.*)

Gen. Char.—*Filum primum* olivaceum flaccidum (simplex), ramulis setiformibus quadrifariis obtusis obsessum, quorum apicibus filamenta crinoidea hyalina dichotoma

longè articulata enascuntur. *Fructus* capsulæ ovatæ glomerulum olivaceum includentes.

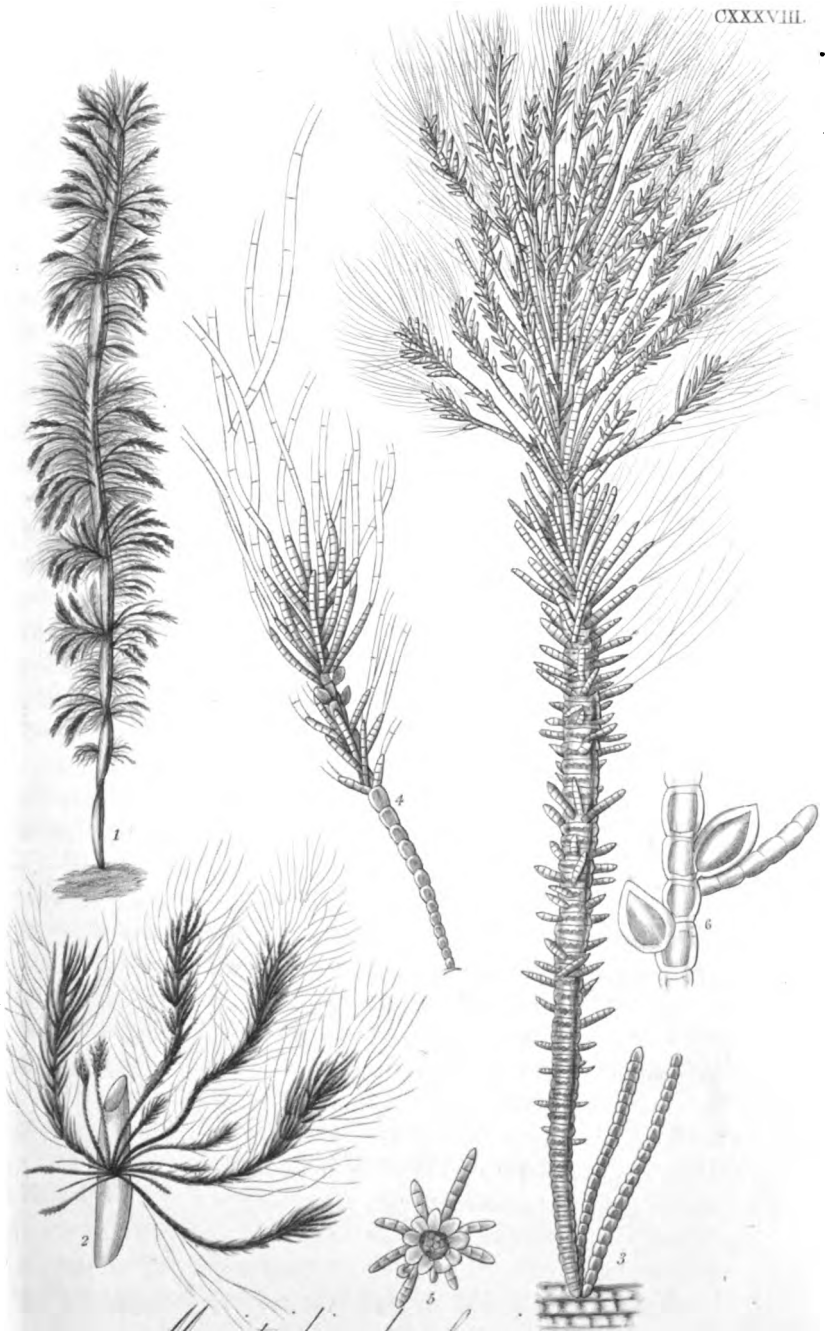
6. *Myriotrichia clavæformis*. *Harv. MSS.*—(TAB. CXX XVIII.)

Radix callus exiguus, parasiticus. *Frondes* ex una basi plurimæ, fasciculatæ, semi-unciales, tenuæ, flaccidæ, subgelatinosæ, simplices, lineari-clavatæ, olivacæ, filis hyalinis tenuissimis circumdatæ. *Filum primum* totam frondem percurrens, simplex, basi attenuatum, articulatum, infra nudum, apicem versus ramulis vestitum. *Ramuli* sparsi quadrifarii vel verticillati, obtusi, *inferiores* breves nudî, *superiores* (sicut *filum primum*) ramusculis ornati, apice *filamenta* tenuissima hyalina dichotoma longè articulata ferentes, quæ sæpe in frondibus provectoribus maxime implexa sunt. *Articuli: fili primarii* brevissimi, geniculis contractis, transversim punctato-fasciati, punctis proliferis, quæ demum in ramulos producuntur; *ramulorum* oblongiusculi, geniculis hyalinis. *Capsulæ* sessiles, ellipticæ vel ovatæ, limbo pellucido cinctæ, glomerulum *seminum* olivacearum includentes. Chartæ arcuè adhæret.

Discovered by *Mrs. Griffiths* in August 1833, at the "Bathing Cove, Torquay," growing parasitically on *Chorda lomentaria*.

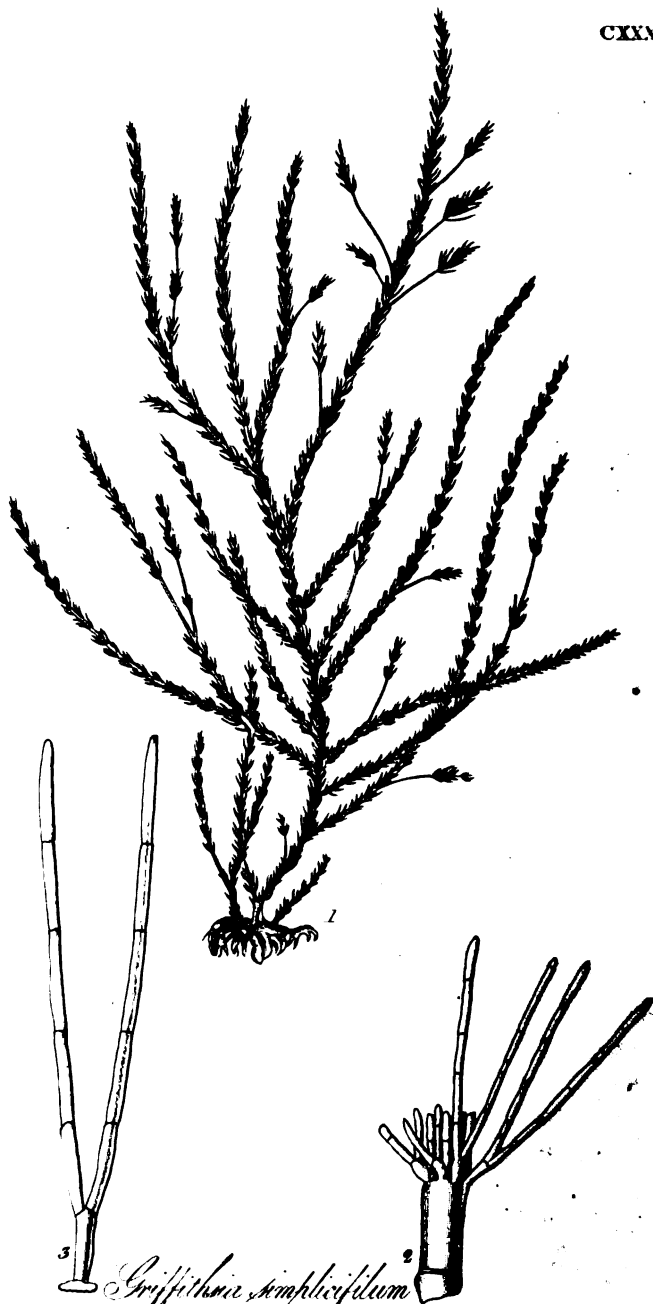
This is a very curious little plant, in habit a good deal resembling *Dasycladus clavæformis*, but of a totally different structure, if that plant be, (as Agardh assures us it is,) nearly allied to the *Characæ* (especially to *Nitella*),—a tribe to which our parasite is not in the least related. *Myriotrichia* will stand next to *Ectocarpus*, from which it differs far more in habit than in structure. The long *hyaline fibres* which I have admitted into the generic character appear to be in every respects similar to those found in *Trichocladia*, *Chordaria* and many other Algæ of totally different families. These *fibres*, however, do not occur in any other genus of *Ectocarpeæ*.

TAB. CXXXVIII. Fig. 1, Plants: *nat. size*, parasitical



W. H. Harvey, Esc. Del. *Myricetachia clausiformis.*

Scal. Sillb.



W.H. Harvey del.

Griffithsia simplicifilum

Swain 56

on *Chorda lomentaria*. *f.* 2, tuft of Plants. *f.* 3, a single frond. *f.* 4, a ramulus. *f.* 5, Section of a frond. *f.* 6, Capsules : more or less magnified.

CERAMIEÆ.

7. *Polysiphonia Subulifera*: filis flexuosis flaccidis vagè ramosis, ramulis sparsis subulatis simplicibus patentibus, articulis diametro æqualibus, multistriatis. *Hutchinsia subulifera*, *Ag. Sp. Alg. v. ii. p. 97.*

Ad "Torquay"—*Dna. Griffiths et D. Borrer. Aug. 1833.*

Fila 4—5 uncias longa, crassiuscula, sensim attenuata, apicibus acutis, subdichotoma vel vagè ramosa; *rami* divaricati flexuosi elongati subdivisi, obsessi *ramulis* sparsis (intervallo 1—2 linearum) brevissimis spinæformibus, patentibus acutis simplicibus, rarè subpinnulatis, pinnulis perbrevibus. *Articuli*; *ramorum* diametro æquales 4—6 venosi, venis rectis tenuibus, geniculis opacis; *ramulorum* diametro brevioribus. *Substantia* tenera flaccida. *Color* purpurascens.

In habit this species strongly resembles a young specimen of *P. fruticulosa*, but it is nevertheless perfectly distinct. The substance is tender and flaccid, the ramuli are never nearly so much divided, and above all the filaments are distinctly articulated to the very base, the veins being straight and parallel—not reticulated and anastomosing as in *P. fruticulosa*. Agardh's description of *Hutchinsia fruticulosa* agrees admirably with the Devonshire specimens, and leaves no room to doubt the correctness of my reference. His specimens were gathered at Venice.

8. *Griffithsia simplicifila*; ramulis verticillatis imbricatis furcatis rectis filum primum totum tegentibus.—(TAB. CXXXIX.) *Ag. Spec. Alg. v. ii. p. 134.*

Ad promontorium "Arday Point" dictum, et ad "Black-Castle," in Comitatu "Wicklow."

Frons 2—8 uncias longa, crassa irregulariter ramosa; *ramis* subalternis elongatis simplicibus vel subdivisis. *Filum primum* articulatam, articulis diametro sub-duplo longioribus,

ad genicula emittens ramellos strictos erectos tenues breves, semel furcatos obtusos, articulatos, articulis diametro quadruplo longioribus, cylindricis. In exemplis nonnullis rami majores *ramis-secundariis* brevioribus papillois; aliis ramulis elongatis tenuibus inferne nudis, superne ramelliferis obsessi; aliisque rami minores sæpè interruptè verticillati (vel nunc nudi, nunc ramellis vestiti) sunt. *Color* purpureo-roseus. *Substantia* ramorum cartilaginea, ramulorum tenera. *Fructus* mihi ignotus.

The slender branches, bright colour and straight once forked ramuli distinguish this species from *G. equisetifolia* which it resembles in general habit and with which it has frequently been confounded by authors. I was so fortunate as to add it to the British Flora last autumn during a short excursion to the coast of the County of Wicklow. My first specimens were gathered on rocks below "Black Castle" near the town of Wicklow, where it grows very sparingly indeed; and I afterwards procured a tolerable supply among rejectamenta at Ardinary Point about seven miles to the southward. On the continent it is a native of the coasts of France where it does not appear to be uncommon.

TAB. CXXXIX. Fig. 1, Plant, *nat. size.* f. 2, portion of do. f. 3, ramuli:—*magnified.*

9. *Calithamnion byssoides.* Arn. in Hook. *Br. Fl.* v. ii. p. 342. This proves to be a variety or the young state of *C. corymbosum.*

10. *Calithamnion versicolor.*— β . *seirospermum*; ramellis ultimis fasciculatis moniliformibus articulis demum in pseudo-capsulos mutatis. Harv. in Wyatt, *Alg. Danm.* N. 91.

This remarkable variety was discovered by Mrs. Griffiths last autumn on the Coast of Devonshire, and beautiful specimens are published in the 2d vol. of the "Algæ Danmoniensis." In ramification and general appearance it perfectly agrees with the true *C. versicolor*, but in the fructification there is a striking difference. The capsules, instead of being, as in the typical form, borne solitary in the axilla, are ranged consecutively in a moniliform manner and a number of these

strings of capsules, collected at the apices of the branches into little fascicles. In young specimens the change of an articulation from its usual form and structure into a perfect capsule may be most distinctly seen, examples occurring in every state of transition from the slightly swollen pale-coloured joint to the ripe tri-sporous capsule. Here then we have a beautiful illustration of the origin of the capsule in this genus, for real capsules are formed in precisely the same manner, though from different parts of the frond.

11. *Ceramium fastigiatum* (Harv. MS.); filis capillaribus tenuissimis æqualibus dichotomis fastigiatis, geniculis opacis, articulis inferioribus hyalinis longis, ultimis roseis brevissimis. — *Conf. fastigiata*. Roth, *Cat.* ii. p. 224.?—*Cer. diaphanum*. *β. arachnoides*. Ag. *Sp. Alg.* v. ii. p. 152.—*Cer. daiphanum*. Wyatt, *Alg. Danm.* N. 86.

In mari Brittanico, ad algas et corallinas, haud rarò.—*Fila* digitalia et ultra, æqualia vel parum attenuata, e basi regulariter dichotoma, axillis inferioribus distantibus, superioribus creberrimis, pluries furcata, fasciculata, apicibus fastigiatis, forcipatisque. *Articuli* inferiores plerumque diametro 3—4-plo longioribus hyalinis, superioribus brevissimis roseis; *genicula* opaca elevata purpurea. *Substantia* tenera flaccida. *Cæspitis color* atro-purpureus.

This species, which, I confess, I offer with some hesitation, has usually been considered a variety of *C. diaphanum*, from which, at the request of Mrs. Griffiths, I now separate it. That lady has long watched both species in their natural localities, and is convinced that they are perfectly distinct. If for the present I do not express myself so strongly, I may at least say that the characters which distinguish our *C. fastigiatum* appear to me quite as important as those which separate some other species of this genus. The filaments are not more than half the diameter of those of *C. diaphanum*, and are, moreover, regularly dichotomous from the base to the apex, and always level-topped; whilst in that species the filaments divide very irregularly, the main branches are of

various lengths, not dichotomous but pinnated with slender dichotomous branches in a distichous manner.

CONFERVEÆ.

12. *Conferva gracilis*; filis tenuibus flexuosis sericeis ramosissimis flavo-viridibus, ramis angulato-flexuosis parcè divisis, ramulis ultimis pectinato-secundis attenuatis longissimis, articulis diametro 3—5-plo longioribus. *Griff. in Wyatt, Alg. Danm. N. 97.*

Ad algas majores et Zosteram.—“Torbay.” *Dna. Griffiths & Dna. Wyatt.*—“Youghal,” *Dna. Ball.*—“Wicklow,” ubi ipse legi.—*Fila* 6—12 uncias longa, pulchrè cæspitosa, flavo-viridia siccitate nitentia; rami primarii maxime angulati vel geniculato-flexuosi.

A very beautiful species. It is nearly allied to *C. flexuosa* of *Dillwyn*, a native of salt marshes, and by *Agardh* made a variety of *C. fracta*. The appearance of *C. gracilis*, however, is very different, and it always grows in the open sea. Whether or not our plant differs from the *C. sericea* of continental authors I cannot determine; I have seen no authentic specimens, and in such a genus as this I prefer giving a new name to the British species, to deciding on uncertain grounds. The whole Genus wants revision; but, perhaps, no part of it more than the section to which *C. gracilis*, belongs.

13. *Conferva uncialis*; cæspite brevissimo spongioso basi simpliciusculo apice in ramos lanosos fastigiatos diviso, filis tenuissimis flexuosis parcè ramosis maximè intricatis, ramulis distantibus secundis subpectinatis longis patentibus incurvatis articulis diametro 2—4-plo longioribus. *Ag. Syst. Alg. p. 111. Fl. Dan. t. 771. f. 1.*

Ad rupes. “Torquay.” *Dna. Griffiths.*

Cæspes uncialis intense viridis spongiosus, habitu ferè *Ectocarpus tomentosus*, ex filis tenuissimis maxime intricatis flexuosis constans.

This pretty little species is well distinguished by its peculi-

arly matted, almost spongy habit, and slender flexuose slightly branched filaments, which it is no easy task to separate on the table of the microscope. I have seen no continental specimens, therefore the correctness of my reference may be doubted, but so far as descriptions may determine the question, Agardh's and our British Plant well agree.

C. uncialis is nearly allied to *C. centralis*, in company with which it is in England found growing: there are however, abundant characters to distinguish them, even to the naked eye.

SIPHONÆ.

14. *Codium adherens*; "fronde sessili crustacea irregulari." *Ag. Syst. p.* 178.

Ad rupes.—"Torquay." *Dna. Griffiths*, 1833.

This species requires more examination. It is almost impossible to judge accurately by dried specimens in this genus, I may say in this family, and I have not yet had an opportunity of watching it on its native rocks. Mrs. Griffiths who kindly sent me specimens last autumn, gathered it some months afterwards in the locality from which her first specimens were taken, when the plant had extended itself considerably without any disposition to throw up a frond like *C. tomentosum*. She is therefore of opinion that this is a true species and perfectly developed. However, when it is well known that *C. tomentosum* in its early stages is flat and expanded, it perhaps requires a longer trial before we can fully determine the matter. Agardh's specimens came from Cadiz, and I have received similar ones from the Mauritius.