

S. quinnia and *S. condensata*, a *Mesocarpus*, or, as the case might be, a *Staurospermum*, a long-celled *Zygnema*, three forms of *Ædognonium*, one very slender, another less so, and a thicker nearly square-celled species, I believe all quite distinct; but none (as mentioned) showed fruit. The contents in all cases were considerably altered and collapsed. *Zyggonium delicatulum* and *Conferva bombycina* made their appearance. A very slender *Vaucheria* also showed itself. *Microthamnion Kuetzingianum* was present (a very minute but, at home, common-enough little alga, of uncertain position). *Pediastrum Boryanum* and *P. ellipticum* showed themselves. Of Desmidiæ the representatives were very few and minute—a *Closterium* very like *C. parvulum*, Næg., but more slender, a minute *Cosmarium*, generally referred as a variety of *C. Meneghinii*, also *C. crenatum*, Næg. (?). Of Phycochromophyceæ, a macerated Nostoc (or Nostochaceous alga) also occurred, as well as a *Schizothrix* and *Tolypothrix distorta*.

There were a number of Diatoms already described by the Rev. E. O'Meara (Contrib. xxviii.). The empty carapace of a *Vaginicola* was here and there to be met with.

From this it may safely enough be assumed that the characteristic freshwater-algal flora of that remote region is very much the same as our own. Of course it is quite possible that a diligent search at different seasons might yield certain rarities or some novelties*.

XXXV. Notes on Algæ collected by H. N. MOSELEY, M.A., of H.M.S. 'Challenger,' chiefly obtained in Torres Straits, Coasts of Japan, and Juan Fernandez.

By Prof. DICKIE, M.D., F.L.S.

[Read June 15, 1876.]

(1) *Algæ from the Neighbourhood of Torres Straits.*

Mr. Moseley's note accompanying the specimens is here quoted:—

* [The above conclusions of Mr. Archer seem at variance with the researches of Mr. P. F. Reinsch, who describes as new to science three genera and some thirty species of freshwater Algæ from Kerguelen's Island (*vide* Journ. Linn. Soc. Bot. vol. xv. pp. 205-251). Doubtless the longer stay and hence greater opportunities afforded for collecting to the Rev. A. E. Eaton in the Transit-of-Venus Expedition, above referred to, may to some extent account for the paucity and non-rarity of the specimens obtained by the 'Challenger' Expedition.—Ed.]

"These Algæ were found at Somerset, at low-tide mark ; dredged at Cape York in 5-8 fathoms, and off Wednesday Island, Torres Straits. From these three localities the specimens were unfortunately mixed. The places, however, are close together ; and there seemed little difference in the flora."

FUCACEÆ.

SARGASSUM LANCEOLATUM, *J. Ag.*?

Two very indifferent specimens, having lanceolate leaves attenuate toward base and apex, one row of glands on each side of the midrib, which reaches the apex ; leaves slightly toothed ; vesicles spherical, not apiculate, and shorter than the supporting pedicels.

S. VULGARE, *Ag.*?

Probably a narrow-leaved variety of this species.

DICTYOTACEÆ.

PADINA PAVONIA, *L.*DICTYOTA LATA, *Lamx.*?

Very fragmentary, agreeing in the distribution of the fructification, "in lineas polymorphas per totam frondem sparsis" (*Lamouroux*).

RHODOMELACEÆ.

ACANTHOPHORA THIERII, *Lamx.*LEVEILLEA SCHIMPERI, *Dne.*NEURYMENIA FRAXINIFOLIA, *J. Ag.*DICTYMENIA TRIDENS, *Grev.*D. SONDERI, *Harv.*AMANSIA GLOMERATA, *Ag.*POLLEXPENIA PEDICELLATA, *Harv.*

A broad variety.

THURETIA TERES, *Harv.*

A dwarf variety.

POLYSIPHONIA HOOKERI, *Harv.*

LAURENCIACEÆ.

LAURENCIA FILIFORMIS, *Ag.*L. OBTUSA, *Huds.*

LAURENCIA GREVILLEANA, *Harv.*?

The specimens bleached and partly decomposed.

ASPARAGOPSIS SANDFORDIANA, *Harv.*

CORALLINACEÆ.

MASTOPHORA LAMOUROUXII, *Dne.*

CHEILOSPORUM SAGITTATUM, *Aresch.*

MELOBESIA VERRUCATA, *Lamx.*

On *Sargassum* and other Algæ.

SPHÆROCOCOIDEÆ.

CORALLOPSIS URVILLEI, *Mont.*

C. AUSTRALASICA, *Sonder.*

A few bad examples apparently of this species.

GRACILARIA RAMALINA, *Harv.*

G. FURCELLATA, *Mont.*?

The specimens in bad condition and therefore doubtful.

THYSANOCLADIA LAXA, *Sonder.*

CURDIEA OBTUSATA, *Harv.*?

Without fruit and rather imperfect.

GELIDIACEÆ.

EUCHEUMA SPINOSUM, *L.*

A form with very acute spines and probably identical with *Gelidium aculeatum*, Hering (*Sphærococcus Heringii*, Ktz.).

ACROTYLUS PRISMATICUS, *J. Ag.*

The few specimens in Mr. Moseley's collection certainly belong to this species, first described by Prof. J. Agardh and found on the shores of Hindostan.

LIAGORA VISCIDA, *Ag.*

ERYTHROCLONIUM SONDERI, *Harv.*

RHODOPHYLLIS VOLANS, *Harv.*

CRYPTONEMIACEÆ.

CHRYSYMENIA UVARIA, *J. Ag.*

HALYMENIA FLORESIA, *Ag.*

By way of supplement to the Red Algæ, I record here an imperfect and partially decayed Alga with the general aspect and colour of *Codium damæorne*, Bory; the red colouring-matter having disappeared, the more permanent green chlorophyll remains. The

structure is that of *Hymenocladia*, the whole tissue infested with the mycelium of a mould, and the entire surface incrustated with a thin sponge which, Mr. Carter informs me, "belongs to the Holoraphidota, Family Suberitida, Group Cavernosa, and very much resembling *Cliona celata*."

The specimens were adherent to *Halimeda macroloba*.

SIPHONACEÆ.

CAULERPA CUPRESSOIDES, *Vahl*.

C. PLUMARIS, *Forsk.*

C. SIMPLIUSCULA, *Ag.*

C. VERTICILLATA, *J. Ag.*

C. CYLINDRACEA, *Sonder.*

HALIMEDA INCRASSATA, *Lamx.*

H. MACROLOBA, *Dne.*

H. CUNEATA, *Hering.*

UDOTEA FLABELLATA, *Lamx.*

A single specimen which I refer to this species.

CODIUM TOMENTOSUM, *Ag.*

VALONIACEÆ.

DITYOSPHERIA FAVULOSA, *Sonder.*

(2) *Algæ collected in Akashi Channel near Kobe (Hiogo) Nipon, Japan, in 4 to 6 fathoms, the bottom consisting of granite pebbles.*

FUCACEÆ.

SARGASSUM PINNATIFOLIUM, *Ag.*

S. OBTUSIFOLIUM, *Ag.?*

One imperfect specimen.

DICTYOTACEÆ.

PUNCTARIA LATIFOLIA, *Grev.?*

Several examples, much torn and without the point of attachment, may be referred with some doubt to this species. They have the same structure, but are more luxuriant than British specimens.

CHORDARIACEÆ.

CHORDA FILUM, *Lamx.*

Attached to small stones.

CHORDARIA FLAGELLIFORMIS, *Lightf.*

Smaller and paler than British examples.

ECTOCARPACEÆ.

ECTOCARPUS SILICULOSUS, *Lyngb.*

Mr. Moseley's are not well prepared; I think, however, they must belong to this species, and to the ordinary form with short pedicels to the sporangia, the latter being like those of the British plant.

CERAMIACEÆ.

CERAMIUM RUBRUM, *Huds.*

(3) *Algæ collected on the Shores of Osima Harbour, S. coast of Nipon, Japan.* The rocks composed of slate with dykes of porphyry.

FUCACEÆ.

SARGASSUM SCOPARIUM, *Turner.*S. PINNATIFOLIUM, *Ag.*S. HEMIPHYLLUM, *Turner.*S. MICROCERATIUM, *Mertens.*CYSTOPHYLLUM SWARTZII, *Ag.*CYSTOSEIRA SPICIGERA, *Mertens?*

A fragment only.

TREPTACANTHA SONDERI, *Ktz.*FUCUS LEPTOPHYLLUS, *Ktz.*

LAMINARIACEÆ.

LAMINARIA JAPONICA, *Aresch.*

DICTYOTACEÆ.

PADINA COMMERSONII, *Bory.*HYDROCLATHRUS CANCELLATUS, *Bory.*

CORALLINACEÆ.

LITHOTHAMNION POLYMORPHUM, *L.*

Found cast on shore near the village of Hasingui, in Osima Harbour.

AMPHIROA GAILLONII, *Lamx.?*

Very fragmentary specimens.

A. DILATATA, *Lamx.*

A dwarf form.

SPHÆROCOCCOIDEÆ.

GRACILARIA CONFEROIDES, *L.*G. CORONOPIFOLIA, *J. Ag.*

Specimens badly preserved and no fruit, but most probably this species.

SPHÆROCOCCUS TEXTORII, *Suringar.*

A single specimen, which agrees with Suringar's figure and description.

GELIDIACEÆ.

GELIDIUM AMANSII, *Lama.*

HELMINTHOCLADIÆ.

GINNANIA FURCELLATA, *Turner.*

CRYPTONEMIACEÆ.

KALLYMENIA CRIBROSA, *Harv.?*

The only specimen, 3 inches in breadth, has the structure of the genus and the cribose character. The point of attachment is wanting. It may be a dwarf variety of the species, or new; it is therefore marked doubtful.

CONFERVACEÆ.

CHÆTOMORPHA CRASSA, *Ag.*CLADOPHORA WRIGHTIANA, *Harv.?*

Only a single specimen, which is probably this species.

C. COACTA, n. sp. Pusilla, coacta, cellulis primariis cylindricis diametro 8-10plo longioribus; ramulis ultimis urceolatis, hinc illinc anastomosantibus, articulis diametro 2-4plo longioribus.

Forming dense spongy masses, in which respect it seems to differ from *C. anastomosans*, Harv., to which it is allied.

(4) *Algæ from Yokosha, Japan.*

LAMINARIACEÆ.

CAPEA ELONGATA, *Mertens.*

SPHÆROCOCCOIDEÆ.

GRACILARIA CONFEROIDES, *L.*

A single specimen, not quite perfect, must, I think, be referred to this species. Both these were found by Professor Wyville Thomson.

From the sea-surface, lat. 34° 37' N., long. 140° 32' E., about 40 miles S.E. of Nosima, St.-Mela Head, Nipon, Japan, found by Mr. Moseley.

SARGASSUM MICROCRATIUM, *Mertens.*

(5) *Algæ collected at Juan-Fernandez Island.*

DICTYOTACEÆ.

ZONARIA VARIEGATA, Lamx.

The specimens very dwarf.

DICTYOTA KUNTHII, Ag.

D. NÆVOSA, Suhr.

The specimens seem quite identical with this species, which occurs on the coast of Tasmania and at the Cape of Good Hope.

ASPEROCOCCUS SINUOSUS, Roth.

A. ECHINATUS, Mert.

There are specimens in different stages, the larger nearly 2 feet long.

CHORDARIACEÆ.

CHORDARIA HIPPUROIDES, Bory.

RHODOMELACEÆ.

POLYSIPHONIA PARASITICA, Huds.—Var. γ . *reptans* (*P. dendritica*, Mont.)

P. VILLUM, Ag.

On *Codium tomentosum*.

CORALLINACEÆ.

CORALLINA SUBULATA, Ell. & Sol.

C. BERTERI, Mont.

MELOBESIA PUSTULATA, Lamx.

CRYPTONEMIACEÆ.

GIGARTINA CONTORTA, Bory.

Mr. Moseley's specimens are small, about an inch in height, and appear to belong to this species, respecting which Prof. Agardh says, "ad *G. Lessonii* forsân nimum accedit."

CERAMIACEÆ.

CERAMIUM RUBRUM, Hudson.

CENTRO CERAS MICRANTHUM, Ktz.

PTILOTA PARVA, n. sp. Pinnis oppositis difformibus, una minore simplici, subulata, altera majore, pinnulata, pinnulis subulatis obtusis, vel subconicis, omnibus cellulosis. Sphærosporibus—? Favellis—?

A few specimens were found mixed with *Centroceras*; they are about an inch in height; no fructification can be seen.

SIPHONACEÆ.

CODIUM TOMENTOSUM, *Stackh.*

A slightly branched variety 2 to 3 feet long.

ULVACEÆ.

ULVA LATISSIMA, *L.*

ENTEROMORPHIA INTESTINALIS, *Link.*

Both species are dwarf.

CONFERVACEÆ.

CHÆTOMORPHA ÆREA, *Dillw.*

C. TORTUOSA, *Dillw.*

DIATOMACEÆ.

COCCONEIS SC TELUM, *Ehr.*

Forming a white crust on *Gigartina*.

MELOSIRA NUMMULOIDES, *Ktz.*

GRAMMATOPHORA MARINA, *Ktz.*

BIDDULPHIA AURITA, *Bréb.*

B. PULCHELLA, *Gray.*

CLIMACOSPHERIA MONILIGEEA, *Ehr.*

(6) *Alge found at Honolulu Harbour.*

FUCACEÆ.

SARGASSUM OBTUSIFOLIUM, *J. Ag.*

S. DENSUM, n. sp. ?

Frondebns ex collo in caules plures divisus; ramis parce muriculatis, foliis linearibus obtusis, costatis, dense stipatis, hinc et hinc furcatis, multiplice glandulosis; receptaculis linearibus, terminalibus, furcato-ramosissimis; vesiculis —?

S. INCISUM, n. sp. ?

Foliis linearibus crispatis, inciso-dentatis, ad apicem costatis, duplici serie glandulosis; vesiculis terminalibus sphericis, nuticis, glandulosis, breviter pedicellatis. Receptaculis —?

TURBINARIA VULGARIS, *J. Ag.*

DICTYOTACEÆ.

DICTYOTA SPINULOSA, *Harv. ?*

A solitary specimen, not quite perfect, seems to belong to this species.

ASPEROCOCCUS BULLOSUS, *Lamx.*