these mountains and to their limited area, but more perhaps to recent volcanic disturbances. Mr. Mann observed that some parts of the Cameroons presented evidence of subterranean heat—since which time the Cameroons have been in eruption on the grandest scale; and there can be no doubt that the scene of Mr. Mann's most interesting discoveries is now, in part at any rate, a mass of scorix, and that some of the endemic species he obtained may exist only in our herbaria, being burnt up in their native locality.

I will conclude with the hope that these fragmentary observations may prove of some use in calling attention to the great interest of the questions raised by even so small a collection as Mr. New's. They will at any rate afford some indication of the debt that science will owe to Mr. New when he again visits the scene of his labours, should he succeed in securing a more complete flora of the upper alpine regions of Kilima Njaro.

On the Marine Algæ of Barbadoes. By G. DICKIE,
M.D., F.L.S., &c.

[Read June 19, 1873.]

(PLATE XI.)

THE following notes of the Algæ of Barbadoes are founded on a collection sent to me by Governor Rawson, a good many of the species having been collected by Miss Watts; I have also seen a series from the same quarter belonging to Dr. J. E. Gray of the British Museum.

Lists of species from Barbadoes are worth recording, from the fact that irruptions of fresh water have been observed at the Island of Tobago, in the same line as Barbadoes and about 150 miles more to the south-west. The island alluded to is specially liable to such excessive flows of fresh water in the months of August, September, and October; the effects on marine life are shown by great numbers of *Echinida* &c. being cast on shore dead.

Governor Rawson has communicated remarks on this which are worthy of notice*. He states, "the outflows of the Orinoco and Amazons sweep round and form a swift current impinging on and passing by Tobago, carrying drift-wood, seeds, &c." It

* See 'Nature,' Dec. 19, 1872, and January 2, 1873.

is conjectured also that the rivers Essequibo and Demerara may assist in producing dilution of the sea in those quarters.

The distance between Barbadoes and Tobago being inconsiderable, and both being in a line from S.W. to N.E., it would be interesting to know whether the shores of the former are also affected by such flows of fresh water. The accompanying list of Marine Algæ seems to indicate the negative.

FUCACEÆ.

SARGASSUM VULGARE, Ag.

Geographical distribution. Tropical and subtropical coast of Atlantic; North America to shores of Long-Island Sound; Spain and Portugal; South Pacific.

S. FOLIOSISSIMUM, Lamx.

This is considered by some a variety of the former species.

S. CYMOSUM, Ag.

Geog. dist. Brazil.

S. BACCIFERUM, Turner.

Geog. dist. Tropical and subtropical ocean in both hemispheres.

DICTYOTACEÆ.

HALISERIS DELICATULA, Lamx.

Geog. dist. Brazil; Mexico; Ceylon.

H. PLAGIOGRAMMA, Mont.

Geog. dist. Brazil; W. Indies; Sandwich Islands.

H. JUSTII, Lamx.

Geog. dist. W. Indies.

PADINA PAVONIA, L.

Geog. dist. England; France; Spain; Mediterranean; Florida; Tropical Atlantic and Indian Oceans; South Pacific.

ZONARIA LOBATA, Ag.

Geog. dist. Canaries; Brazil; Florida; Cape of Good Hope.

DICTYOTA INDICA, Sonder.

Geog. dist. Havanna; Siam.

D. BARTYRESIANA, Lamx.

Geog. dist. Vera Cruz; Antigua; Florida; Indian Ocean.

D. CILIATA, J. Ag.

Geog. dist. Vera Cruz; Florida; Indian Ocean.

D. ANTIGUÆ, Sonder.

Geog. dist. Antigua.

D. PARDALIS, *Ktz.*

Geog. dist. W. Indies.

D. DENTATA, *Lamx.*

Geog. dist. Brazil; Antigua.

ASPEROCOCCUS SINUOSUS, *Roth.*

Geog. dist. Florida; Japan; Indian Ocean; Polynesia.

ECTOCARPACEÆ.

ECTOCARPUS PUSILLUS, *Griff.*

Geog. dist. South Britain.

RHODOMELACEÆ.

DICTYURUS OCCIDENTALIS, *J. Ag.*

Geog. dist. Mexico.

ACANTHOPHORA THIERII, *Lamx.*

Geog. dist. Spain? Florida; Mexico; Brazil; Indian Ocean; South Pacific.

A. MUSCOIDES, *L.*

Geog. dist. Angola; Florida; Brazil; Ascension.

BRYOTHAMNION SEAFORTHII, *Turn.*

Geog. dist. Mexico; Brazil.

B. TRIANGULARE, *Gm.*

Geog. dist. Florida; Brazil.

DIGENEA SIMPLEX, *Wulf.*

Geog. dist. Mediterranean; Red Sea; Indian Ocean; Florida.

POLYSIPHONIA FERULACEA, *Suhr.*

Geog. dist. Florida; Mexico; Australia; Indian Ocean.

LAURENCIACEÆ.

LAURENCIA SCOPARIA, *J. Ag.*

Geog. dist. Brazil.

L. PAPILLOSA, *Forsk.*

Geog. dist. Mediterranean; Red Sea; Florida; Mexico; Indian Ocean; S. Pacific.

L. OBTUSA, *Huds.*

Geog. dist. Britain; Mediterranean; Indian Ocean; Atlantic and Pacific, temperate and subtropical.

ASPARAGOPSIS DELILEI, *Mont.*

Geog. dist. Mediterranean; Canaries; S. America; Indian Ocean.

CORALLINACEÆ.

CORALLINA SUBULATA, *Ellis & Soland.*

Geog. dist. Brazil; Indian Ocean.

MELOBESIA PUSTULATA, *Lamx.*

Geog. dist. Britain; Mediterranean; North and South Pacific; Indian Ocean.

M. VERRUCATA, *Lamx.*

Geog. dist. Britain; Mediterranean; Brazil.

SPHÆROCOCOIDEÆ.

SPHÆROCOCCLUS FILIFORMIS, *J. Ag.*

Geog. dist. Martinique.

GRACILARIA CONFEROIDES, *L.*

Geog. dist. Scandinavia to Africa: Florida; Indian Ocean; Japan.

G. MULTIPARTITA, *J. Ag.*

Geog. dist. England; Spain; Red Sea; New York to Florida; Brazil; California; Indian Ocean.

G. COMPRESSA, *Ag.*

Geog. dist. England; Mediterranean; Vera Cruz.

G. CORNEA, *J. Ag.*

Geog. dist. Pernambuco.

G. CERVICORNIS, *Turner.*

Geog. dist. Gulf of Mexico; Brazil.

G. DOMINGENSIS, *Sonder.*

Geog. dist. St. Domingo.

GELIDIACEÆ.

GELIDIUM RIGIDUM, *Vahl.*

Geog. dist. Indian Ocean; Pacific.

SOLIERIA CHORDALIS, *Ag.*

Geog. dist. France; Spain; New York to Florida.

HYPNEA MUSCIFORMIS, *Wulf.*

Geog. dist. Mediterranean; Canaries; United States; Indian Ocean; N. and S. Pacific.

H. RISSOANA, *J. Ag.*

Geog. dist. Mediterranean.

HELMINTHOCLADIÆ.

LIAGORA PULVERULENTA, *Ag.*

Geog. dist. E. Indies.

GALAXAURA OBTUSATA, Lamx.

Geog. dist. Indian and Pacific Oceans.

G. ANNULATA, Lamx.

Geog. dist. Indian and Pacific Oceans.

G. RUGOSA, Lamx.

Geog. dist. Indian and Pacific Oceans.

G. PLICATA, Kütz.

Geog. dist. Indian Ocean ; Santa Cruz.

G. MARGINATA, Lamx.

Geog. dist. Indian Ocean.

G. LAPIDESCENS, Sol.

Geog. dist. Mexico ; Indian Ocean ; Japan.

SPYRIDACEÆ.

SPYRIDIA FILAMENTOSA, Harv.

Geog. dist. Britain ; Spain ; Mediterranean ; New York ; Red Sea ; Indian Ocean ; Australia.

CRYPTONEMIACEÆ.

CRYPTONEMIA LUXURIANS, Mertens.

Geog. dist. Brazil ; Indian Ocean ; Magellan's Straits.

CHRYSYMENIA UVARIA, J. Ag.

Geog. dist. Mediterranean ; Brazil ; China ; Florida ; Australia.

HALYMENIA LIGULATA, Woodw.

Geog. dist. Scandinavia ; Britain ; Spain ; Florida ; Indian Ocean.

H. FLORESIA, Ag.

Geog. dist. Mediterranean ; Red Sea ; Florida ; Australia ; Natal.

*RISSEOELLA DENTICULATA**, Mont.

Geog. dist. Peru near Payta.

CERAMIACEÆ.

CERAMIUM SUBTILE, J. Ag.

Geog. dist. Vera Cruz.

HALOPLEGMA DUPERREYI, Mont.

Geog. dist. Martinique ; S. Africa.

SIPHONACEÆ.

CAULERPA PLUMARIS, Ag.

Geog. dist. Florida ; Indian Ocean ; Pacific.

* One specimen only, but agreeing in structure of frond, and having zonate tetraspores, resembling also the figure given by Kützting.

C. FALCATA, Ktz.

Geog. dist. Gulf of Mexico.

C. CLAVIFERA, Ag.

Geog. dist. Florida; Indian and Pacific Oceans.

C. CYLINDRICA, Sonder?

A small species about an inch in height, the specimens badly prepared, and added to the list with some doubt; Sonder's plant was from Algoa Bay.

RHIPILIA RAWSONI, n. sp. Sessilis, irregulariter lobata, lobis obtusis; celomata dichotoma, torulosa, apicibus obtusis subclavatis; color sordide fuscus; substantia coriacea, subtomentosa.

Differs from *R. tomentosa*, K., in colour and consistence, but especially in ramification and form of the filaments; from *R. longicaulis* in being sessile, many-lobed, and in the absence of hair-like points to the filaments.

Plate XI. Fig. 1. Natural size.

Fig. 2. Filament, highly magnified.

CODIUM TOMENTOSUM, Stack.

Geog. dist. Very general in both hemispheres.

HALIMEDA TRIDENS, Lamx.

Geog. dist. Florida.

H. OPUNTIA, Lamx.

Geog. dist. Mediterranean; Red Sea; Indian Ocean.

H. TUNA, Lamx.

Geog. dist. Mediterranean; Florida.

BRYOPSIS RAMULOSA, Mont.

Geog. dist. Cuba.

B. PLUMOSA, Lamx.

Geog. dist. General in temperate and tropical zones of both hemispheres.

VALONIACEÆ.

VALONIA VERTICILLATA, Ktz.

Geog. dist. Santa Cruz.

CHAMÆDORIS ANNULATA, Mont.

Geog. dist. Florida.

DICTYOSPHERIA FAVULOSA, Dne.

Geog. dist. Florida; Indian Ocean.

ULVACEÆ.

ULVA FASCIATA, *Delile*.

Geog. dist. Indian Ocean ; California.

U. LATISSIMA, *L.*

Geog. dist. Widely diffused in both hemispheres.

ENTEROMORPHA COMPRESSA, *L.*

Geog. dist. Widely diffused in both hemispheres.

CŒNFERVACEÆ.

CLADOPHORA PROLIFERA, *Roth.*

Geog. dist. Azores ; Mediterranean.

C. FASCICULARIS, *Mertens.*

Geog. dist. E. Indies.

C. MEMBRANACEA, *Ag.*

Geog. dist. Florida ; St. Croix.

PHYLLODICTYON PULCHERRIMUM, *Gray?*

Very fragmentary and therefore recorded with doubt.

CHÆTOMORPHA AEREA, *Dillw.*

Geog. dist. Atlantic coasts of Europe ; Canaries ; United States ; Australia.

C. TORTUOSA, *Dillw.*

Geog. dist. Atlantic shores of Europe ; Mediterranean ; United States.

This list comprehends 17 olive, 40 red, and 23 green, in all 80 species ; of these 15 occur on the British coast, nearly one half on the shores of the United States, chiefly Florida, and more than 20 species have been found also in the southern hemisphere.

The following seem to be chiefly confined to the West Indies and Brazil :—*Haliseris Justii*, *Dictyota Antiquæ*, *D. pardalis*, *D. dentata*, *Dictyurus occidentalis*, *Bryothamnion Seaforthii*, *Laurencia scoparia*, *Sphærococcus filiformis*, *Gracilaria cornea*, *G. cervicornis*, *G. Domingensis*, *Caulerpa falcata*, *Cladophora membranacea*.

Notes on the Development of the Perigynium in *Carex pulicaris*.

By W. R. M'NAB, M.D.

[Read April 17, 1873.]

At the request of Mr. Bentham, I made a few observations on the development of the perigynium, or utriculus, of *Carex*. The

G.D. del.

G. Jarman sc.