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

two species examined were *C. paludosa* and *C. pulicaris*; but in the present notes I shall confine my remarks to the latter. The study of the development of the perigynium in *C. pulicaris* shows conclusively that it is not developed in two pieces, but is a single structure. It is therefore impossible to regard it either as representing a perianth or stamens. In young spikes of *C. pulicaris* the regularly arranged bracts are very conspicuous. On removing one of the lower bracts, a single female flower is observed, situated apparently in the axil. If by careful dissection the anterior portion of the utriculus be opened by means of a fine needle, then the racheole will be brought into view, lying in front of the two styles. As the racheole is shorter than the utriculus, it is not visible until the latter is opened. A notch exists in the anterior margin of the utriculus. A careful examination shows that the racheole is a secondary axis produced in the axil of the bract. This secondary axis produces a bract (the utriculus) in the axil of which a very short tertiary axis develops, which is the female flower reduced to two carpels. On the prolonged secondary axis, or racheole, near the summit, two or three rudimentary flowers are observable, but apparently they very soon cease to develop. The perigynium seems to be equivalent to the sheath of the foliage-leaf, no lamina being formed, the notch on the anterior margin of the utriculus corresponding to the notch seen on the upper margin of the sheath of the foliage-leaf opposite the base of the lamina. This reduction of the leaf to the mere sheath depends on an arrest of development taking place before the lamina should appear.

The study of the development does not seem in any way to favour Mr. Bentham's view of the staminal nature of the perigynium; but my observations confirm those of Kunth, Gay, Röper, Schlechtendal, Wesmael, Caruel, and others, and are quite opposed to the views of Brown, Lindley, Schleiden, Payer, and their followers.

For an abundant supply of material for dissection, I am indebted to Dr. Moore, of Glasnevin.

April 2, 1873.