

## ZOOPHYTOLOGY.

Class. POLYZOA.

Order I. P. INFUNDIBULATA.

Sub-order 1. CHEILOSTOMATA.

§ 1. Articulata.

§§ 2. Bi-multiserialaria.

Fam. SALICORNARIADÆ, Busk.

Gen. *Onchopora*, n. sp., Busk (*ὄγκος*).

Cells ventricose, coalescent; not bordered by a raised margin. Ovicells inconspicuous.

1. *O. hirsuta*, n. sp. ? Busk. Pl. III.

A long jointed corneous tube arising on each side on the front and upper part of the cell; a raised median pore, below the mouth, which is produced and subtubular.

? *Cellaria hirsuta*, Lamx. Hist. des Polyp. cor., p. 126. Pl. II., fig. 4, α, B.

Hab. New Zealand. Dr. Lyall.

The outward aspect of this species so closely resembles that of *C. hirsuta*, Lamx., that, notwithstanding the apparent differences in the minutest details, so far as they can be ascertained from the imperfect figure above cited, I am strongly inclined to regard them as most probably identical. The polyzoary forms small tufts, constituted of short truncated internodes, united by a single large corneous tube, and having a hairy aspect from the curious, jointed corneous tubes springing from each side of the cell. The little median pore sometimes appears like a very minute avicularium, but it is by no means clear that it is an organ of that kind. The corneous tubes are clearly not vibracula; and as the perfect ones are closed at the end, and free, they do not seem to be of the nature of radical tubes, such as exist, for instance, in *Cauda arachnoidea*.

2. *O. tubulosa*, n. s., Busk. Pl. IV., fig. 1.

Mouth of cell—very much produced, tubular; a median pore in front of the cell.

Hab. Ægean Sea. E. Forbes.

The much-produced tubular prolongation of the mouth in this species, at the end of which there is no indication of a moveable lip, might at first sight lead to the supposition that this form belongs to the second sub-order of the Polyzoa; but further examination, and especially where the tubular portion may be partially broken off, will detect the lip, at the bottom of the tube, in the usual situation. The absence of the corneous tubes at once suffices to distinguish this from the preceding species, from which it also differs very widely in external aspect. The polyzoary is not constituted, as in that case, of short internodes, arising from each other in a dichotomous arrangement, but is formed of cylindrical branches sometimes an inch or more in length, from which others arise at irregular distances, and nearly at right angles, to that from which they spring, and to which they are articulated, not by a single, wide corneous tube, but by a bundle of smaller tubes, in number corresponding to the initial cells of the new branch. It may be supposed to bear some resemblance to the *Cellaria cereoides* of Ellis and Solander (Pl. V., fig. b, A, B, C, D, E);

and perhaps may represent a variety of the same species, which is also stated to come from the Mediterranean.

3. *O. nutica*, n. sp., Busk. Pl. IV., figs. 2, 3.

Mouth plain; crescentic above, with a straight inferior margin.

Hab. Philippine Islands? or Australia?

A minute form, sufficiently distinguished from its congeners by the above character. The polyzoary is constituted of short internodes, connected by a flexible horny tube. The only specimen I have is very small, and it is constituted of short internodes, composed of 8 or 10 cells. Its habitat is doubtful, but I believe it to be one or other of those above assigned. It is growing on a fragment of coral.

Some apology is requisite for the proposal of a new generic term, to a form which has probably been long known under another name; but in the present case it appeared justifiable, from the consideration that the term *Cellaria*, which is the only one that could have been taken, has been understood in so many senses; and that the species at different times included under it have been so frequently subdivided into other groups, as to render its continued use likely to produce much confusion.

The species having articulated polyzoaries composed of cylindrical internodes, in which the cells are disposed around an imaginary axis, were originally confounded by Pallas under his genus *Cellularia*, and by Solander under that of *Cellaria*, with many others, not possessing that peculiar characteristic. The term *Cellaria*, however, was subsequently restricted by Lamouroux to those polyzoaries, which had cylindrical branches, or rather in which the cells were disposed around a central axis; but as this restricted sense of the term has not been adopted by many subsequent writers, nor especially by Lamarck, and as it has long since ceased to be applied to the genus *Salicornaria*, it seems as well perhaps to dispense with it altogether.

Other forms again have been confounded under the same term *Cellaria* by several writers, among whom may be noticed Reuss, in his account of the fossil polyzoa of the Vienna tertiary, who includes under it *Vincularia*, Defrance (*Glaucanoma*, Goldfuss). Whilst Hagenow, on the other hand (Die Bryoz d. Maastrich, Kneidebildung), adopts *Vincularia* and ignores *Cellaria*. In *Vincularia*, proper, however, the polyzoary is continuous throughout, and not subdivided into internodes by flexible joints; so that there appears to be no reason whatever for associating the two.

The following fossil forms might be referred to the genus *Onchopora*; and it would appear that no species belonging to it occur in formations anterior to the tertiary, unless the

*Cerriopora oculata*, Goldf. (Petref. Germ., Pl. LXIV., fig. 14, p. 217), from the transition limestone, may be included in it.

- Cellaria duplicata*, Reuss, l. c., p. 62, T. vii., fig. 34.  
 „ *labrosa*, Reuss, l. c., p. 63, T. vii., fig. 35.  
 „ *Michelini*, Reuss, l. c., p. 61, T. viii., figs. 1 and 2.  
     (*Vincularia fragilis*? DeFrance), also in the Paris basin  
     (Michelin, p. 46).  
 „ *coronata*, Reuss, l. c., p. 62, T. viii., fig. 3.  
 „ *scrobiculata*, Reuss, l. c., p. 63, T. viii., fig. 4.  
 „ *Schreibersi*, Reuss, l. c., p. 63, T. viii., fig. 8.  
 „ *Haueri*, Reuss, l. c., p. 63, T. viii., fig. 9.  
 „ *stenosticha*, Reuss, l. c., p. 64, T. viii., fig. 10.

We have here also given the figures of a species of *Eschara*, which would seem to correspond very closely with the *Millepora cervicornis* of Ellis and Solander, or with the *Eschara cervicornis* of Lamarck (An. s. Vert., 2nd ed., t. ii., p. 267), though not to that described by M. Edwards (*Sur les Eschares*, p. 15, Pl. I. and Pl. II., fig. 1), under the same name, from which it is undoubtedly different, as it is also from the *E. cervicornis* in the British Museum Catalogue. Neither does it correspond with the *E. gracilis* of Milne-Edwards. From the former it differs widely in the shape of the mouth, and in its tubular projection, and from the latter in the absence of the median pore, and of punctuation of the surface of the cells.

But as I have not been able to refer to Marsigli's figure (Hist. de la Mer., tab. xxxii., fig. 152), with which Ellis and Solander's *Millepora cervicornis* is said exactly to agree, I find it impossible at present to come to a definite conclusion in the matter.

Provisionally, it would seem right to regard the present form as the true *Millepora (Eschara) cervicornis* of Ellis and Solander, and it might be thus characterized:—

*E. cervicornis*, Solander. Pl. IV., figs. 4, 5, 6.

*E. ramosa*, ramis subcylindraceis per angustis; osculis proximalis tubulosis; labio inferiori, medio denticulato.

Hab. Ægean Sea. E. Forbes.

The polyzoary is composed of slender, cylindrical branches, in the older and thicker parts of which the cells become deeply immersed, and the mouth appears like a raised nipple, but within it may always be perceived the median denticle on the lower lip.