ART. XX.—*Descriptions of New, or Little Known, Polyzoa.*

PART I.

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(WITH PLATE.)

[Read 9th December, 1881.]

Beania decumbens, n. sp. Fig. 1.

CELLS much elongated; two or three short spines at the top; spines 14—16, on each side, arching over the cell, and those of opposite sides interdigitating; at each upper angle a small capitate avicularium; connecting tubes springing from the extremities, so that the cells are entirely decumbent.

Port Phillip Heads, Mr. J. Bracebridge Wilson.

Spreads in long, irregular lines over calcareous nodules. The connecting tubes are very short, and the cells are almost always arranged end to end, but occasionally one springs from the side of another. In many cells there are one or two tubes from the sides, fixing them to the body on which they grow, or occasionally extending to the sides of a cell of a crossing series. These tubes are in the situation of the lateral tubes of *Diachoris*. From the other species of *Beania* this differs, especially in the cells, in consequence of the connecting tubes springing from their extremities, being entirely decumbent instead of semi-erect.

Mr. Wilson considers that it ought to be referred to *Diachoris*, in consequence of the presence of avicularia and the mode of connection of the cells. It agrees with *Diachoris* in the avicularia, which, however, in the other *Beaniæ* are evidently represented by the ear-like processes; while it agrees with *Beania* in the connecting tubes being only attached to the ends, or occasionally to the side of a cell. The semi-erect position in the other species is a character of no value, as the same occurs in *Diachoris crotali*, where also the avicularia are imperfectly developed. Hincks has recently described a very interesting form, *D. intermedia*, from Tasmania, in which the connecting tubes are four, and the avicularia very small. The two genera are

so closely connected by the present form and *D. intermedia* that, in my opinion, the species with the (abortive or perfect) avicularia at the summit of the cell ought to be referred to the older genus *Beania,* while the others might find a place elsewhere.

Membranipora acifera, n. sp. Fig. 2.

Cells elongate-quadrate, wider in the middle; aperture occupying the whole front, except a minute corner on each side inferiorly; margin much raised; one or two sharp incurved spines on each side, and usually a small round spine at each upper angle; avicularium in a separate area at the base of a cell, mandible very long and narrow; ovicell small, immersed in the base of the cell above.

Queenscliff, a single specimen.

Membranipora flagellum, n. sp. Fig. 3.

Cells arranged in regular transverse series, elongate-quadrate, separated by much-raised margins, the lower fourth filled in by a perforated plate, a little more extensive on one side; upper margin deeply arched; two conical stout spines superiorly on each margin common to two adjacent cells; an enormous whip-like vibracular spine below the aperture on one side, and one or, occasionally, two small spines on the margin of the aperture on the other side.

Port Phillip Heads, Mr. J. B. Wilson.

Membranipora papulifera, n. sp. Fig. 9.

Cells arranged in more or less regular, contiguous lines, narrowed below, oval, very slightly filled in below; margin thickened, strongly crenulated, the lower part raised into an elevated prominence.

Port Phillip Heads, Mr. J. B. Wilson.

Membranipora albispina, n. sp. Fig. 10.

Cells elongated, narrowed downwards; aperture occupying upwards of two-thirds of the front, rounded below; mouth very large; on each side a series of 3—5 enormous, pod-like, white, articulated spines, and generally two or three smaller ones from the upper margin.

Queenscliff.

The only species with which this can be confounded is *M. ciliata,* the spines of which are sometimes of great size,

and arranged and articulated in the same manner. The figure of *M. ciliata* in *The Decades* is badly drawn, the artist having represented the spines as too small and rigid, in this respect resembling *M. spinosa*. The illustrations which are now given of the three species will, I hope, render their recognition easy.

Membranipora serrata, M'G. Fig. 5.

(*Trans. Royal Soc., Victoria*, 1869.)

Cells quadrate, very much elongated, truncate above and below; from each side of the margin projecting inwards is a series of short processes, expanding and dividing at the ends; avicularium on a separate area at the base of a cell, mandible very long; ovicell small, projecting into the base of the cell above.

Encrusting sponge, Schnapper Point and Queenscliff.

At once distinguished from all other species by the curious marginal processes which bear some resemblance to those found in certain forms of *Flustia denticulata*, from which, however, it differs in the absence of the characteristic minute denticles and in the much longer and narrower mandible of the avicularium.

Membranipora armata, M'G. Fig. 6.

(*Trans. Royal Soc., Victoria*, 1869.)

Cells quadrate, elongated, separated by narrow raised margins; surface finely granular; mouth lofty, arched above, straight or slightly hollowed below, with a large blunt process on each side; operculum hinged; avicularium situated at the base of a cell, mandible broadly lanceolate, with a membranous margin and directed vertically upwards.

Queenscliff, on algæ.

This species is closely allied to *M. mamillaris*, from which it differs in the form of the avicularium. In *M. mamillaris* the stirrup-shaped support of the mandible is situated close to the edge and prolonged into a narrow point upwards, while in *M. armata* it is broader, shorter, and situated at some distance from the margin. *M. armata*, moreover, is white, while *M. mamillaris* is brown or purple.*

* In my original description of *M. mamillaris*, the avicularium is described as oblique, from an abnormal specimen, instead of erect. Lamouroux's description of the same species as *Flustra mamillaris* was overlooked; a matter, however, of little consequence, as the prominent mamillary processes suggested the same specific name.

M. mamillaris, armata, dispar, and *Woodsii* differ from the other species in having the operculum distinctly hinged, and form a well defined subgeneric or, rather, generic group, for which I would propose the name *Thairopora,* the definition being—Cells separated by raised margins; front entirely membranous or membrano-calcareous; operculum articulated by a distinct hinge.

Membranipora permunita, Hincks.

This species is the same as I described in 1869 as *M. falcata;* but as my description was taken from a bad specimen, in which the peculiar marking of the ovicell was obliterated by calcareous overgrowth, and was accompanied by no figure, I think it preferable to adopt Mr. Hincks' name. Sometimes the rim on the ovicell is scarcely, or not at all, perceptible, and the ovicell projects much more than usual. It may always be distinguished by the peculiar structure of the falciform avicularium, one side of the mandible of which is thickened and the other expanded into a thin, membranous wing. In some specimens there are one or two blunt, rounded elevations at the base of the cells.

Membranipora polita, Hincks, Fig. 8.

Mr. Hincks has recently described the present species from specimens obtained at Glenelg. I have little doubt that it is identical with Lamouroux's *Cellepora alata.* The cells are very porcellanous, close together, distinct, narrowed downwards. The aperture occupies about one-third or more of the cell. Below, the cell is elevated into a rounded or oval protuberance, and on each side of the aperture is thickened into an oval or elliptical mass. These convexities are not always distinctly marked; occasionally there is a thick collar all round the aperture, and sometimes there are several transverse marks across the front of the cell. At the growing extremity of one specimen the cells spread irregularly, in the manner of *Membranipora catenularia,* to which it is nearly related. The latter species is usually described as an *Hippothoa,* from the true species of which it differs entirely in the structure of the cell; and I quite agree with Hincks in referring it to the Membraniporidæ, of which it ought probably to form the type of another genus, including the present species and *Hippothoa crassa.*

I have found it at Queenscliff, encircling the stems of *Cymodocea antarctica.*

Membranipora Rosselii, Fig. 4.

I am not quite satisfied that the *M. Rosselii* of *The Decades* is identical with the European form. The cells are arranged much more regularly than in the only English specimen I have seen, and they are more rhomboidal in shape, although agreeing so far with Hincks' figure. In many cases the upper margin of the aperture is not straight, but is extended slightly forwards in the middle or towards one side, to form a broad sinuous projection, occupying about two-thirds of the width. The avicularium is very large, replacing a cell, with a long rounded mandible, directed upwards and forwards, and occupying the whole width of the cell; the upper edge of the avicularium is calcareous and projects considerably forwards. In some cells there is a little additional thickening, filling in the lower angles of the area, and there is occasionally here a small rounded process, on one or both sides, close to the margin of the cell below.

Membranipora patellaria, Moll sp. Fig. 13.

Mollia patellaria, Smitt, *Floridan Byozoa*, Pt. II., p. 12. Fig. 72.

Diachoris patellaria, Waters' *Ann. and Mag. Nat. Hist.*, Feb., 1879.

Cells slightly separated and connected by short tubes, oval and lozenge-shaped; margins raised, crenulated; lower two-thirds filled in by a minutely granular calcareous membrane; aperture nearly semi-circular, occasionally somewhat trifoliate.

Port Phillip Heads.

Of this I have dredged a single specimen, growing on a small sandy and calcareous nodule. It agrees perfectly with the form described by Waters, from the Bay of Naples, as *Diachoris patellaria*, var. *multijuncta*. The cells are only slightly separated, and, in parts of the specimen, are so close together that the connecting tubes are scarcely distinguishable. Each cell is connected with the adjacent ones by usually about twelve tubes. In my specimen there are a few imperfectly developed ovicells on the summits of some of the cells at the growing margin; they are rounded, smooth, and closely adherent to the cells above. In the typical form, as figured by Smitt and Waters, the connecting tubes are much fewer. These naturalists consider Heller's *D. simplex* as the same species which they refer to Moll's

Eschara patellaria. I have not seen Moll's work; but Heller's figure certainly looks different, and he shows the cells all connected by six tubes. No avicularia have been seen.

It agrees with *Diachoris* in nothing but the disjunction of the cells, and seems to me certainly a true *Membranipora.*

I add a list of species of *Membranipora,* known to me to occur in Victoria:—

M. membranacea, L.
M. pilosa, L.
M. flagellum, M'G.
M. umbonata, Busk.
M. cervicornis, Busk.
M. Rosselii, Sav.
M. patellaria, Esper.
M. Lacroixii, Sav.
M. papulifera, M'G.
M. acifera, M'G.
M. serrata, M'G.
M. pyrula, Hincks (= *lineata,* M'G.).
M. corbula, Hincks.
M. flustroides, Hincks.

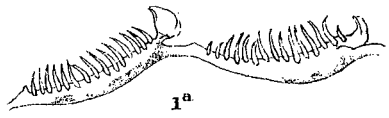
A form differing only from the English in having the spines longer and narrower, and the ovicell narrower and deeper, has been dredged by Mr. Wilson, and by myself at Port Phillip Heads. I have not seen the avicularia.

M. punctigera, Hincks.
M. Flemmingii, Busk.

I have examined two imperfect specimens, seemingly referable to this species, dredged at Port Phillip Heads by Mr. Wilson.

M. (Lepralia) trifolium, M'G.
M. spinosa, Q. and G.
M. ciliata, M'G.
M. albispina, M'G.
M. radicifera, Hincks.
M. permunita, Hincks.
M. catenularia, Hincks.
M. crassa, M'G.

1



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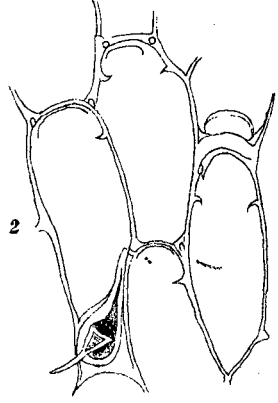

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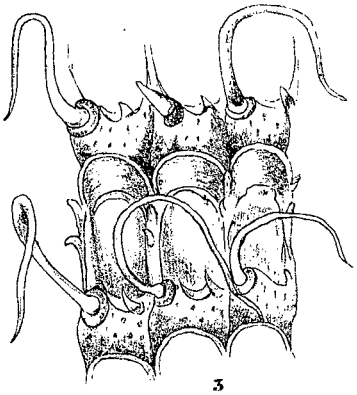

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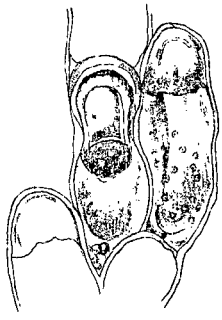

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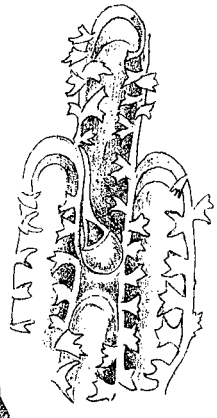

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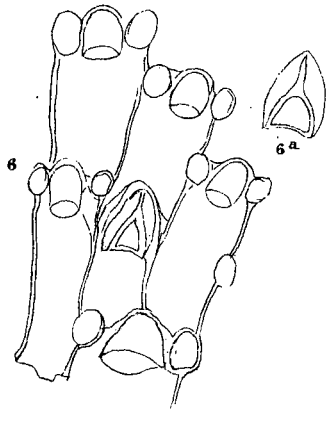

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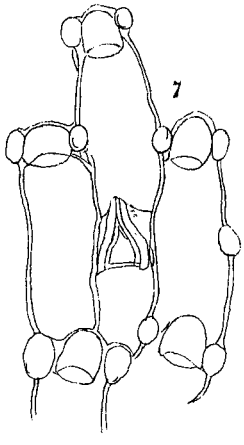

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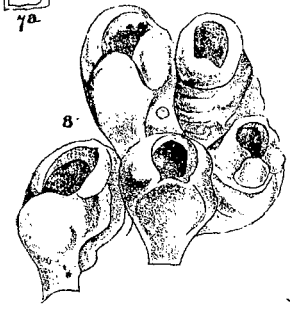

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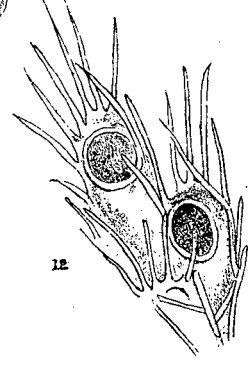

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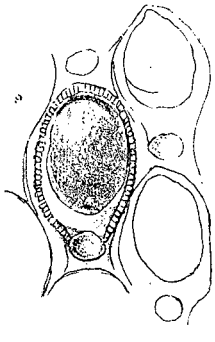

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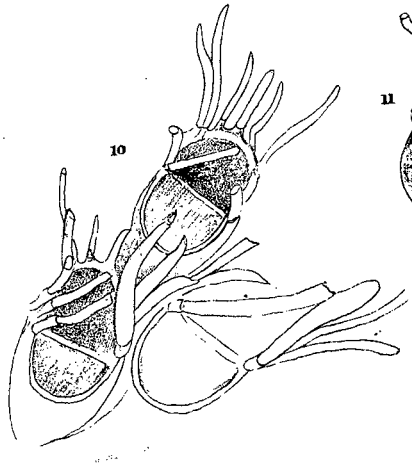

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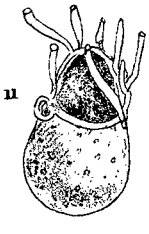

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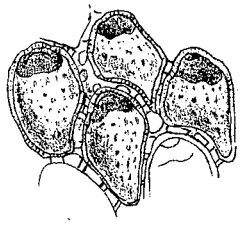

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P.H. MacGillivray.

M. polita, Hincks.
M. (Thairopora) Woodsii, M'G.
M. „ *dispar*, M'G.
M. „ *mamillaris*, Lamx.
M. „ *armata*, M'G.

Micropora coriacea Esper, var. wanting the nodular enlargement of the margin.
M. perforata, M'G.

EXPLANATION OF PLATE.

Fig. 1. and 1*a*. *Beania decumbens.*
Fig. 2. *Membranipora acifera.*
Fig. 3. *M. flagellum.*
Fig. 4. *M. Rosselii* var. showing an avicularium.
Fig. 5. *M. serrata.*
Fig. 6. *M. armata;* 6*a*, mandible of avicularium.
Fig. 7. *M. mamillaris;* 7*a*, mandible of avicularium.
Fig. 8. *M. polita*
Fig. 9. *M. papulifera.*
Fig. 10. *M. albispina.*
Fig. 11. *M. ciliata.*
Fig. 12. *M. spinosa.*
Fig. 13. *M. patellaria.*