

ART. XVI.—*Description of New or Little Known Polyzoa.*

PART XIII.

By P. H. MACGILLIVRAY, M.A., M.R.C.S., F.L.S.

(With Plates IV and V.)

[Read November 14, 1889.]

NOTAMIA GRACILIS, MCG.

Zoëcia very long and slender, aperture occupying almost the whole of the anterior surface, rounded or quadrate above, and with the superior margin projecting slightly forwards; a pedunculate, capitate avicularium on one or both sides, from the upper part of the posterior tube.

In a paper read before the Society in November 1885, I briefly described a species as *Calwellia gracilis*, from one or two very imperfect fragments, believing it to be a species indicated, but not described, by Mr. Maplestone. This identification is, however, somewhat doubtful, as I have on several occasions had specimens sent to me named *C. gracilis*, which proved to be merely rather slender forms of the well known *C. bicornis*. After my brief and necessarily imperfect description was published, I received from Mr. Whitelegge some fragments on an alga from Port Jackson, as well as specimens mounted in balsam. These have enabled me to make out its real structure, and to confirm Mr. Whitelegge's opinion, that it belongs to the genus *Notamia*.

Notamia gracilis is at once distinguished from the only other species, the European *N. bursaria*, by its much smaller size, the slenderness of the zoëcia, the rounded or somewhat quadrate form of the upper part of the aperture and its projection forwards, and the more slender attachment of the avicularia to the posterior tube, which also is not enlarged to the same extent above.

STIRPARIA EXILIS, n. sp., Pl. IV.

Zoarium very small, flabellate, branches dichotomously divided. Zoëcia alternate, elongated, upper edge straight,

with the outer angle turned forwards; aperture large; a single, long, hollow, articulated spine from the outer angle, and one or two from immediately behind the upper edge. The first cell of the zoarium with a large number (six or seven) of spines, and the succeeding two with three or four. No avicularia.

A very small species, about an eighth of an inch high, growing on sponge. The stem consists of a few lengthened internodes, with intervening round ball-like joints.

The appropriate name was suggested by Mr. Wilson.

Port Phillip Heads, Mr. J. Bracebridge Wilson; Port Jackson (a young specimen), Mr. Whitelegge.

BIFLUSTRA SERICEA, n. sp., Pl. V, Fig. 1.

Zoarium encrusting. Zoecia oval or elliptical, with raised finely crenulated borders, within which the aperture is entirely membranous. A single sessile avicularium, with a broad triangular mandible, situated on a space above each zoecium or oecium. Oecia rounded, with a small, inversely clavate ridge.

Allied to *B. Lacroixii* and *Membranipora cyclops*, Busk, but I believe distinct from both.

Port Phillip Heads, a single specimen.

BIFLUSTRA UNCINATA, n. sp., Pl. V, Fig. 2.

Zoarium adnate, hemescharine or bilaminate. Zoecia large, arranged alternately in linear series, separated by raised margins, aperture elliptical, partly filled in, especially below, by a narrow smooth extension of the raised margins, the edge being smooth or very faintly denticulate; on each side above is a short, stout, pointed, and somewhat uncinuate process, from the thickened margin.

Allied to *B. delicatula* and *perfragilis*, from which it is distinguished by the stout uncinuate processes.

Port Phillip Heads, Mr. J. Bracebridge Wilson.

SCHIZOPORELLA IMPAR, n. sp., Pl. V, Fig. 3.

Zoecia elongated, irregularly arranged, separated by distinct raised lines, surface covered with small hollow granulations; mouth semicircular, or slightly contracted below; lower lip straight, with a distinct, rather wide, sinus; peristome above becoming thickened, projecting, and

bevelled internally. A transverse avicularium, with large rounded mandible, usually on a considerable mound-like elevation, immediately below and to one side of the mouth.

Western Port, Rev. Mr. Porter.

SCHIZOPORELLA SPECIOSA, n. sp., Pl. V, Fig. 4.

Zoarium encrusting. Zoœcia very irregular in shape and arrangement, indistinctly separated by very narrow raised lines; surface rough, with hollow granulations; mouth arched above, higher than broad, a distinct, widely open, shallow sinus in the lower lip. A transverse elliptical avicularium to one side of the oral sinus. Scattered large vicarious avicularia, with very large thin mandibles. Oœcia reniform, with thickened rim, and several white-bordered pores, or granulations, on the convex surface.

With age, the zoœcia become highly calcified, the oral apertures, however, remaining on the surface; the peristome at the sides is much thickened and produced; the rim of the oœcia is thickened, and the pores very marked; the surface of the zoœcia, also, has numerous pores, or areolations. The edges of the vicarious avicularia are thickened and calcareous, the mandibles remaining thin and membranous.

Allied to *Schizoporella Maplestonei*, a variety of which has been described by Mr. Hincks from Western Australia as *S. lucida*, from which it differs in the suboral sinus being wide and open above, as well as in the peculiar vicarious avicularia.

Port Phillip Heads, Mr. J. Bracebridge Wilson; Western Port, Rev. Mr. Porter.

SCHIZOPORELLA NODULIFERA, n. sp., Pl. V, Fig. 5.

Zoœcia somewhat quadrate, separated by narrow raised lines; surface (young) granular and perforated, when more fully developed with large shining calcareous nodosities; oral aperture large, nearly quadrate above; lower lip straight, with a wide rather deep sinus. A broadly elliptical avicularium, with large mandible, usually situated transversely below the mouth, on one side. Oœcia subimmersed, with a thickened border, flattened in front, and usually with several large white-bordered pores.

In this very striking species, the young zoœcia have the surface granular and nodular, with perforations between the nodules; the oral aperture is very large, with a wide sinus

in the lower lip. In older zoœcia, the peristome becomes raised, and very large porcellanous nodules become developed. Between the zoœcial nodules are numerous large pores. The oœcia are immersed, flattened in front, with two or three large white-bordered pores; the border thickened, and with several large nodules. The suboral avicularium, which is present in the large majority of zoœcia, is also a marked feature. The space below the mouth, containing the avicularium, is usually destitute of nodules. The size and prominence of the nodules make the oval aperture seem very deep, and give the specimen a very peculiar appearance.

Western Port, Rev. Mr. Porter.

SCHIZOPORELLA PORTERI, n. sp., Pl. V, Fig. 6.

Zoœcia confused, indistinct; surface smooth and polished; oral aperture rounded above, with a well defined wide sinus in the straight lower lip. Below the sinus, a small avicularium with vertical rounded mandible, on the upper edge of an elevation of the cell. Numerous scattered avicularia between the zoœcia, with triangular mandibles, on mound-like elevations. Oœcia subimmersed, a nearly circular portion in front remaining membranous.

The scattered avicularia, and confused arrangement and size of the zoœcia, give a superficial resemblance to some specimens of *Rhynchopora bispinosa*, from which, however, the structure of the mouth is quite different. The incomplete calcification of the oœcia is very peculiar, and seems to be constant.

Western Port, Rev. Mr. Porter.

MUCRONELLA MENTALIS, n. sp., Pl. V, Fig. 7.

Zoœcia elongated, alternate, in regular lines, separated by deep grooves; a row of deep rounded areolations or pores along the margins; surface granular; mouth arched above, lower lip projecting as a rounded process, bulging below the mouth; six articulated spines on the upper margin. Oœcia rounded, granular, subimmersed in the cell above.

Port Phillip Heads.

LAGENIPORA SIMPLEX, n. sp., Pl. V, Fig. 8.

Zoœcia much enlarged below, contracted at the mouth, with the produced peristome either circular at the orifice

or bilabiate; surface smooth, glossy, with a few minute shining granulations.

Differs from *L. tuberculata* in the absence of pores or tubercles.

Western Port, a single specimen, Rev. Mr. Porter.

AMATHIA PLUMOSA, n. sp.

Zoarium large, tufted. Primary branches cylindrical, without zoecia. Secondary branches given off oppositely in pairs, each secondary branch bifurcating, the branch before bifurcation occupied, except at the basal portion, with a cluster of about six pairs of cylindrical zoecia, and each bifurcation having a similar or smaller group, each of these bifurcations terminating on a pair of confervoid filaments, which again divide at their extremities.

Port Phillip Heads, Mr. J. Bracebridge Wilson.

EXPLANATION OF FIGURES.

PLATE IV.

- Fig. 1.—*Stirparia exilis*, natural size.
 Fig. 1a.—Portion magnified.
 Fig. 1b.—Stem and lower zoecia of the same.

PLATE V.

- Fig. 1.—*Biflustra sericea*.
 Fig. 2.—*Biflustra uncinata*.
 Fig. 3.—*Schizoporella impar*.
 Fig. 4.—*Schizoporella speciosa*.
 Fig. 4a.—Young zoecium.
 Fig. 5.—*Schizoporella nodulifera*.
 Fig. 5a.—Mouth of zoecia.
 Fig. 6.—*Schizoporella porteri*.
 Fig. 6a.—Young zoecium.
 Fig. 7.—*Mucronella mentalis*.
 Fig. 8.—*Lagenipora simplex*.

ART. XVII.—*On the Illumination of Public Clocks.*

By SIDNEY W. GIBBONS, F.C.S.

[Read December 12, 1889.]



