

friend reaches the axial canal; but some of them terminate in globular excavations.

It is evident that the assimilation of the organic substance in the sponge-spicule by the vegetable organism produces the destruction of the siliceous structure; and probably the colloidal silica unites with the protoplasm of the destroyer and forms an organic compound with it.

Large cells and small nucleus-like cells operate, producing penetrations of corresponding diameters through the spicula down to the axial canal. The vegetable growth occurs there; and the amount of erosion does not appear to be in relation with the size of the primary penetration.

The organism is not an *Achlya*; and all that can be said is that it consists of cell-like bodies without very definite cell-walls, but evidently with a very delicately limiting texture surrounding a granular greenish plasma, and that there is much free and non-cellular plasma with bodies like small nuclei, the whole having a faint green tint. I have named this very lowly organic substance (which is probably a plant) *Spongiophagus Carteri*.

XV.—*Contributions towards a General History of the Marine Polyzoa.* By the Rev. THOMAS HINCKS, B.A., F.R.S.

[Plates I.-V.]

[Continued from p. 14.]

Family *Escharidæ* (part.), Smitt.

LEPRALIA, Johnston (part.).

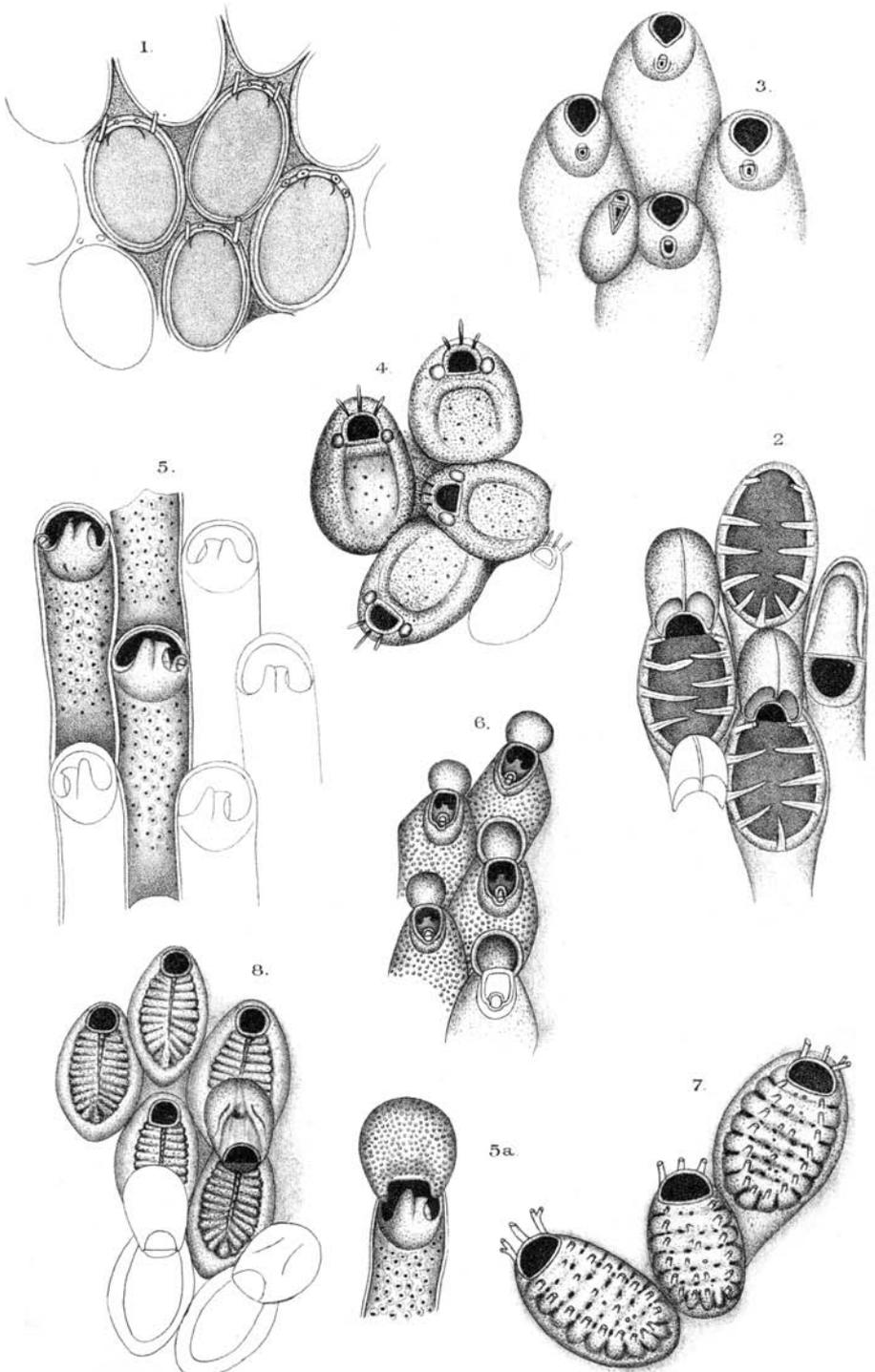
Lepralia cleidostoma, Smitt, var. *orbicularis*.

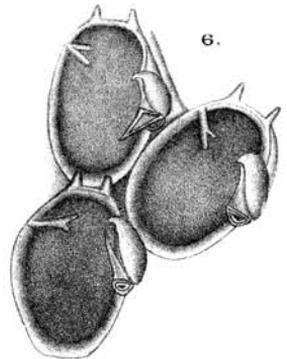
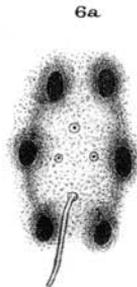
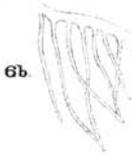
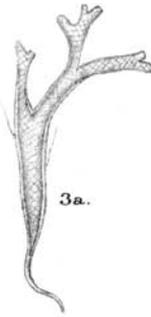
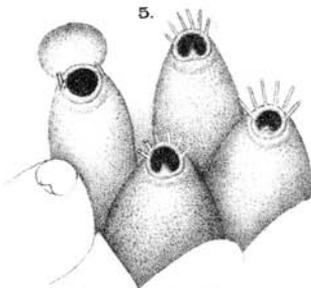
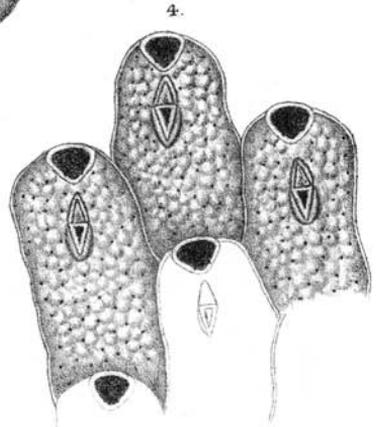
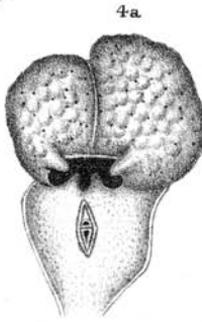
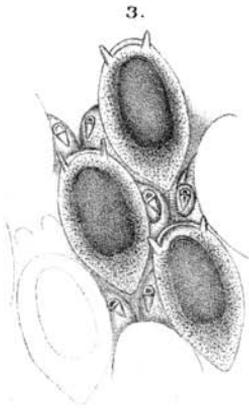
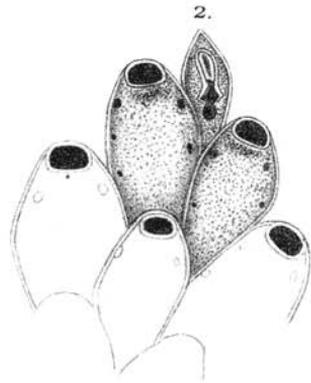
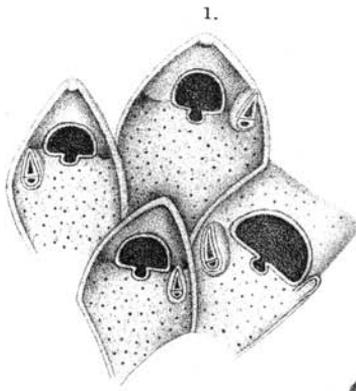
This form differs from Smitt's species in having a rather large circular avicularium, placed on an elevation at one side of the orifice and looking towards it, instead of a pointed avicularium. The oecium of *L. cleidostoma* is described as striated; that of the present variety is usually smooth and silvery; but I have met with one which was distinctly marked by radiating lines or slight ribs. On the whole I can see no sufficient reason for separating the two forms.

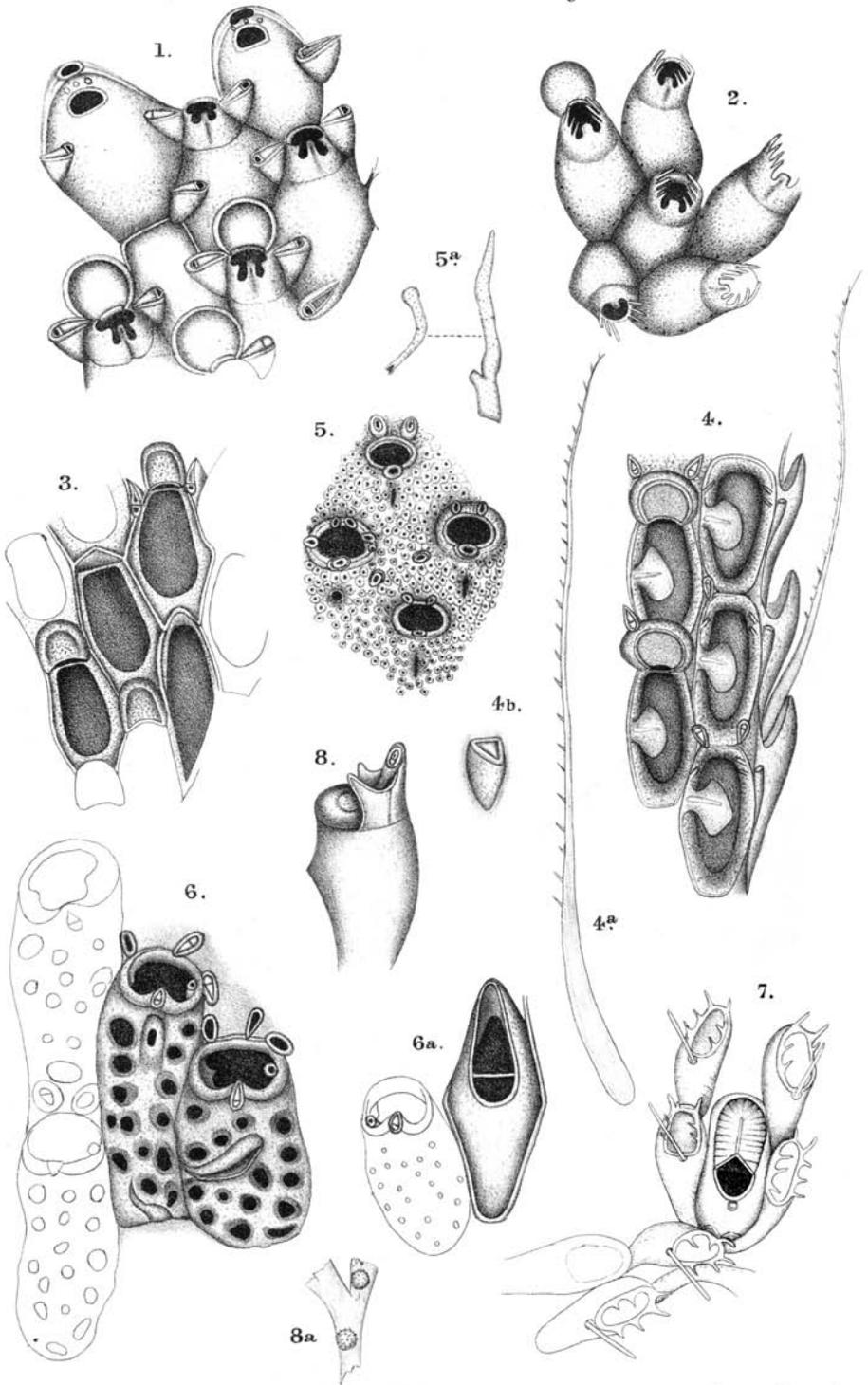
Loc. Bass's Straits, abundant in the dredgings. [Florida (*Pourtales*).]

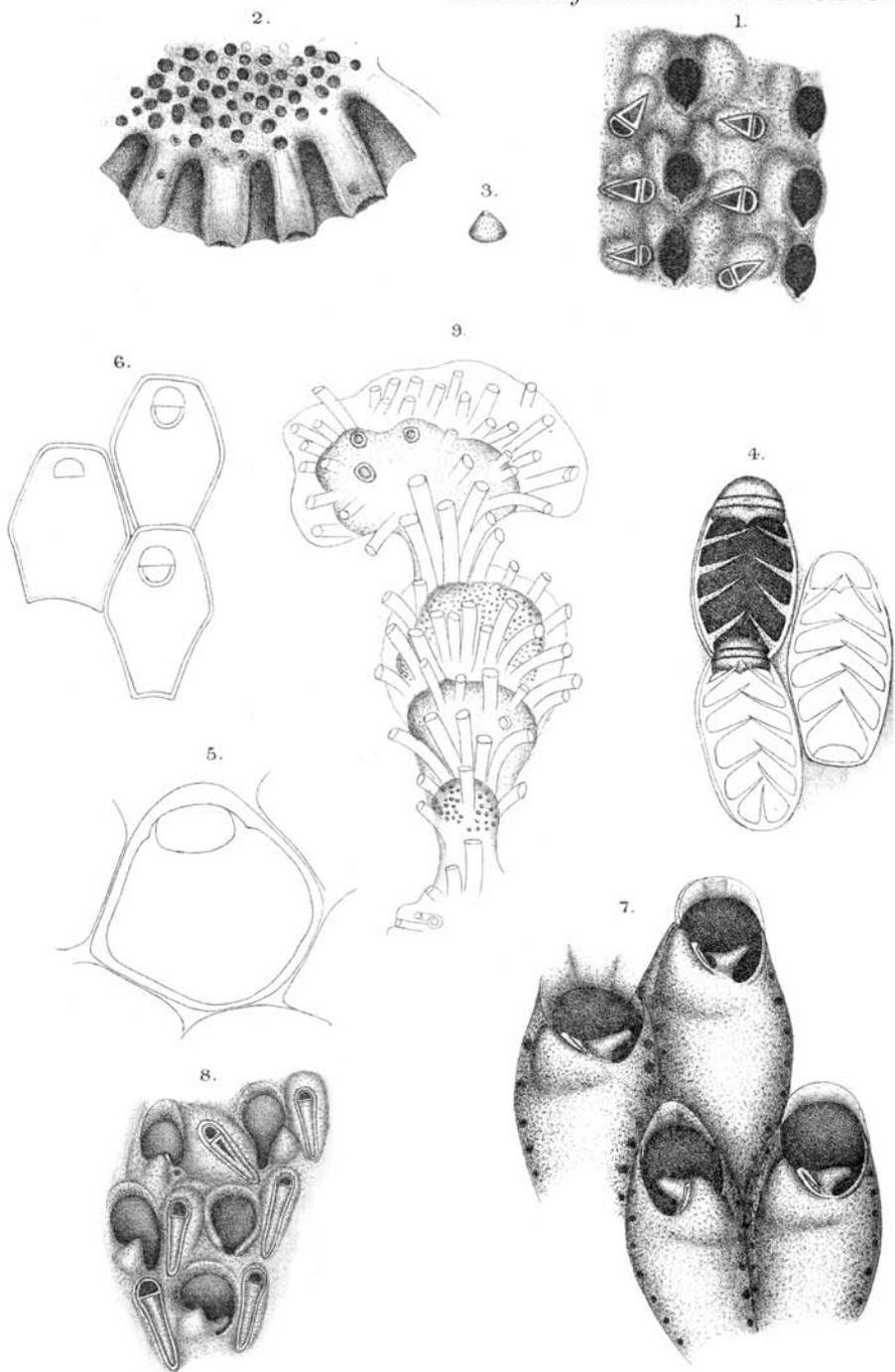
Lepralia Poissonii, Audouin. (? = *Escharella setigera*, Smitt.)

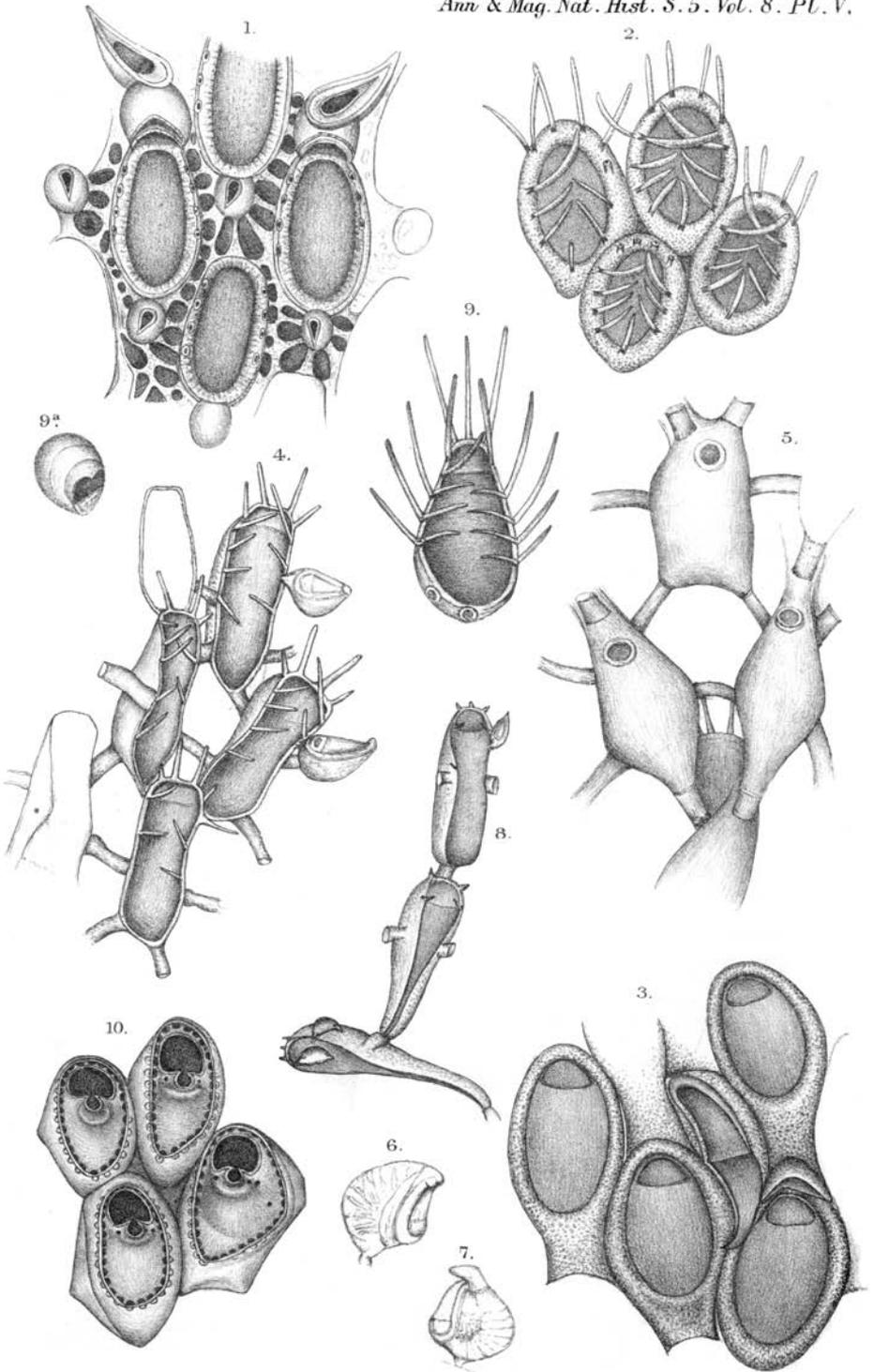
This species was figured by Savigny in his work on Egypt,











and seems to have been little noticed since his time. Its remarkable peculiarity is the line of spines fringing the base of the cell for about half its length. It is not uncommon in Capt. Warren's dredgings, on shells, Retepores, &c.

PORELLA, Gray.

Porella marsupium, MacGillivray.
(Pl. I. fig. 6.)

This species is nearly related to the British *P. minuta*, Norman. MacGillivray does not notice the tooth on the lower margin, which is sufficiently conspicuous; nor does he describe the shape of the orifice; but, on the whole, there is ground, I think, for identifying the form which I have figured with his species. The whole surface is sometimes punctured; in other cases there is only a row of perforations round the edge.

Loc. Bass's Straits, on shells &c., extremely common in the dredgings.

SMITTIA, Hincks.

Smittia Landsborovi, Johnston, var. *purpurea*.

This differs from the English form in colour, being commonly of a rich purple. It exhibits another peculiarity which I have not met with before in this species: the œcium is "hooded;" and in the fertile cell the peristome gives off two processes in front, which meet across the orifice, leaving a circular opening, through which the avicularium is visible*. These, however, are merely varietal differences.

Smittia reticulata, J. MacGillivray, var.

The *avicularium* always placed on one side of the sinus, close to the peristome, directed downwards, elongate (sometimes of great length); the mandible of much the same width throughout, rounded at the extremity.

In all essential characters this form agrees with the normal *S. reticulata*; but the avicularium is modified in shape, and is constantly placed in a different position. In the usual form it is situated centrally immediately below the sinus, and is furnished with an acute mandible. Though the variation is comparatively trifling, it affects very materially the appearance of the species.

The normal form also occurs.

* As in *Microporella ciliata*, var. *personata*.

MUCRONELLA, Hincks.

Mucronella porosa, n. sp.
(Pl. I. fig. 5.)

Zoæcia elongate and rather narrow, or of a shorter and more ovate form, moderately convex, rising towards the orifice, depressed towards the base; orifice ample, suborbicular, somewhat flattened below, with a broad tooth inside the inferior margin, and a sharp denticle on each side; immediately below the tooth a large massive mucro, swollen at the base, bearing on one side an *avicularium* with rounded mandible directed upwards; a small *avicularium* (also rounded) on the margin at one side of the mucro; walls of cell strongly calcified; surface thickly covered with rather large deep pores, in older states reticulate. *Oæcium* large, rounded, of considerable width, thickly and minutely granulated or reticulate, slightly flattened in front, white and silvery.

Loc. Off Curtis Island. [Singapore or the Philippines, on coral (*Miss Jelly*).]

Mucronella teres, n. sp.
(Pl. II. fig. 5.)

Zoæcia ovate, quincuncially arranged, convex, divided by deep sutures, in which an inconspicuous line is traceable, punctured round the edge, the cell-wall rising towards the orifice, which is borne on a short neck; surface perfectly smooth, whitish; orifice suborbicular, a tooth inside the lower margin; the peristome carried up into a small central mucro in front, on the inner side of which is a slight nodular projection; six spines round the upper margin. *Oæcium* globose, smooth, somewhat recumbent, two spines showing on each side in front of it.

Loc. Off Curtis Island, on shells.

Allied to the British *M. ventricosa* and a characteristic example of the simpler type of structure for which this genus was originally founded. It is a question whether the *Mucronella* group might not properly be divided; but any revision should be based on a more extended study of foreign species than has yet been made.

Mucronella spinosissima, n. sp.
(Pl. III. fig. 2.)

Zoæcia small, lageniform, the peristome elevated, suberect, forming a neck; surface perfectly smooth, subhyaline, a row of punctures round the edge; orifice suborbicular, a broad

tooth on the lower margin; the rim of the elevated peristome set round with about eight spines; the front margin carried up into a tooth-like mucro. *Oæcium* globose, smooth, recumbent. *Avicularia* none.

Loc. Off Curtis Island, on *Retepora* and *Flustra dissimilis*.

Mucronella tricuspis, n. sp.
(Pl. III. fig. 1.)

Zoæcia ovate, moderately convex, separated by shallow sutures, hyaline, smooth or slightly roughened; orifice transversely elliptical, three tall spines on the upper margin, in front closed in by a screen-like elevation, which in the centre rises into a dentate process rounded at the top, and on each side of it into a projecting lobe, a furrow down the middle of it; on each side of the cell, about halfway down it, a raised *avicularium*, with a slender pointed mandible directed outwards. *Oæcium* globose, smooth, silvery, with a projecting rim round the opening, the avicularia of the neighbouring cells flanking it on each side.

Loc. Off Curtis Island, on shells &c., very common.

A very marked and abundant form. I cannot find any description of it in the works of Australian writers, though it is difficult to believe that it has escaped observation. It is not amongst the forms figured by MacGillivray in his work on the Victorian Polyzoa.

RHYNCHOPORA, Hincks.

Under this name I have constituted a genus* for the reception of the remarkable form *Lepralia bispinosa* of Johnston. Amongst Capt. Warren's dredgings a species occurs which has many features in common with the last named, but which seems to be distinct. Reserving for the present all questions respecting the genus, I shall describe it provisionally as

Rhynchopora longirostris, n. sp.

Zoæcia pyriform, ventricose above, narrowing off and depressed towards the base, quincuncially disposed, rather coarsely granulated, with a line of perforations round the edge; orifice (primary) transversely elliptical, perfectly simple; secondary orifice, formed by the elevation of the peristome, subelliptical or irregular in shape and of large

* Hist. Brit. Mar. Poly. vol. i. p. 385. I am indebted to Miss Agnes Crane for pointing out to me that the name *Rhynchopora* had already been appropriated to a genus of Brachiopods; so that a substitute must be found for it.

size, the margin frequently bearing a number of short spinous processes, which give it a jagged outline; within the lower lip a large bluntly pointed process which stretches across on one side almost to the margin, and forms with it a kind of loop; immediately behind this process a massive mucro, which bears on its inner aspect an *avicularium*, with a short triangular mandible directed upwards; commonly on the front of the cell a raised avicularium, with a very long mandible, rounded at the apex and usually pointing downwards. *Ooecium* rounded, shallow, smooth, often subimmersed, the opening closed in by a calcareous operculum.

Loc. Off Curtis Island, on *Retepora*.

This form has many points of resemblance to *R. bispinosa*, a species which is very liable to variation; but the differences are striking and somewhat significant, and it seems right that it should have a separate name. The shape of the cell can be observed best on the growing edge, before calcification has proceeded far. In an early stage it is distinctly pyriform, very ventricose at the upper part and depressed below; the surface is smooth. In later stages the surface is covered with a granular crust, the cells lose their distinctness, the original orifice is concealed by the elevation of the peristome, and a large opening is developed above it of somewhat irregular shape. The oral avicularium differs materially from that of *R. bispinosa*: in the latter it is placed transversely immediately below the orifice, and is borne on a mound-like swelling, below which the mucro is situated; in the present case it occupies the inner aspect of the mucro itself, which rises immediately behind the spur-like process on the inferior margin. The latter appendage is larger and more prominent than that of *R. bispinosa*, and of a different shape. Another distinctive feature of this species is the presence, usually in great numbers, of the elongate avicularia, which are somewhat elevated and placed on the front of the zoecium. The mandible is slightly expanded at the base, but throughout the greater portion of its length is narrow and of uniform width, terminating in a blunt extremity. These appendages are very conspicuous, and are so numerous as to give a peculiar character to the zoarium (Pl. IV. fig. 8). The primary orifice seems to want the slightly sinuated lower margin which has been noticed in *R. bispinosa*. The latter species also occurs in Bass's Straits.

Family Celleporidæ.

CELLEPORA (part.), Fabricius.

Cellepora granum, n. sp. (Pl. III. fig. 8.)

Zoæcia erect, ovoid, smooth, distant, those of the uppermost stratum more or less separated by the cells of the one below it; orifice quite terminal, suborbicular, with a very marked pointed sinus; peristome elevated around it and carried up in front into a tall central rostrum, which bears at the top on its inner aspect a small oval *avicularium*; peristome on each side of the rostrum rising into a point. *Oæcium* rounded, smooth, a flattish semicircular space on the front bounded by a raised edging and traversed by radiating lines. *Zoarium* forming small subglobose patches.

Loc. Off Curtis Island, common.

Family Selenariidæ, Busk.

LUNULITES, Busk.

Lunulites incisa, n. sp. (Pl. IV. figs.1-3.)

Zoarium conical, well raised; beneath flat, divided into lobes round the edge, porous. *Zoæcial orifices* occupying a kind of furrow between the lines of *avicularia*, separated by short spaces, depressed, the cell-wall rising around them, elliptical, with a narrow well-marked sinus on the lower margin. *Avicularia* short, suberect, pointed; mandible probably triangular, turned in different directions.

Loc. Bass's Straits.

This fine species probably belongs to the same group as the *L. cancellata* and *philippensis* of Busk, which agree with it in the cancellated structure of the zoarium, and should no doubt be dissociated, as suggested by Busk, from the other members of the genus. The diagnosis in the British-Museum Catalogue of the two species just named, however, does not give any detailed account of the structure of the orifice; and it is therefore impossible to determine their exact relation to the present form.

In the specimens of *L. incisa* which I have examined the mandibular portion of the appendages is wanting; but, from the form of the fixed base (beak), there can be no doubt that they are *avicularia*; and if so, in this respect the species differs from the other recent forms, and agrees (so far) with *Conescharellina* of D'Orbigny.

The present form is ranked under the genus *Lunulites* provisionally. We are not yet in a position to discuss the affinities and systematic place of the various members of the Selenarian group.

Suborder CYCLOSTOMATA.

Family Tubuliporidæ.

TUBULIPORA, Lamarck.

Tubulipora capitata, n. sp.
(Pl. IV. fig. 9.)

Zoarium white, wholly adnate, composed of a number of capitate or clavate portions, which originate one from the other by means of a slender, stem-like base, and form a linear series, slightly branched. *Zoecia* slender, minutely speckled, with a circular orifice, disposed radiately on the expansions, the anterior half erect. *Gonocysts* consisting of an irregularly shaped inflation of the surface, thickly covered with minute puncta, freely produced, sometimes as many as three on an expansion.

Loc. Bass's Straits, on shell.

This seems to be a distinct species; several specimens have been examined, which all exhibit the same remarkable habit of growth. The free production of gonocysts appears to be a distinguishing character; they form a succession of transverse swellings on the surface of the zoecial expansions.

ADDITIONAL.

Family Membraniporidæ.

[The remarkable form which is described below has the true Membraniporidan cell, the characteristic Flustrine habit (though without the flexible membrano-calcareous zoarium), and the marginal rib, which is the distinguishing feature of the *Flustramorpha* of Gray. It seems to occupy a somewhat intermediate place between *Flustra* and *Membranipora*. I shall hope to discuss its systematic place hereafter, and leave it provisionally amongst the *Membraniporæ*.]

Membranipora roborata, n. sp.
(Pl. II. fig. 3.)

Zoarium erect, calcareous, bilaminate, compressed, the stem expanding slightly upwards, divided and subdivided dichotomously into narrow segments, a thickened rib along

the margin, composed of tubular fibres laid closely together, which at the base form a considerable tuft of rootlets. *Zoæcia* quincuncially arranged, ovate, often running out to a point below; margin thin, smooth, two short and rather stout spines above; aperture ovate, occupying the whole front, with a membranous covering, depressed, the cell-wall surrounding it minutely granular, expanded below; above each cell two raised and pointed *avicularia* placed side by side, the mandible directed downwards. *Oœcium* mitriform, flattened and smooth in front, surrounded by a thickened border, which rises into a blunt point in the centre.

Loc. Off Curtis Island, abundant in the dredgings.

The tubules which constitute the rib along the edge of the zoarium (as in *Eschara flabellaris*, Busk) are given off from the side of the marginal zoæcia; they strengthen, and support, and hold together the rigid but slender stem and branches, and secure a certain amount of flexibility to the whole structure; at the base they run out into a multitude of (*quasi*) root-fibres.

Note on Catenicella.

In Capt. Warren's collection there is a fair representation of the characteristic Australian group of the Catenicellidæ; and amongst the forms occurring there are two or three which I cannot identify with any described species; but as I have not been able as yet to obtain all the papers dealing with this tribe they must be reserved for future examination.

VII FOREIGN MEMBRANIPORINA (third series).

MEMBRANIPORA, De Blainville.

Membranipora amplectens, n. sp. (Pl. III. fig. 7.)

Zoæcia pyriform, disposed in single series, which bifurcate at intervals; surface smooth, frequently a line of minute pores on each side, extending from the aperture to the bottom of the cell; aperture oval, occupying more than half the front, with a membranous covering; margin smooth, slightly thickened, two spines at the top, two on each side, and a tall vibraculoid spine, calcareous, with a corneous joint at the base, immediately below the aperture. No *avicularia*. *Oœcium* borne on a special cell, which is always situated in the fork between two branches, elongate, rounded at the top, composed of a number of flattened pieces or ribs placed close together, which spring from the opposite sides and unite in the centre, a line (mark-

ing the junction of the ribs) passing from the top of the ovicell to the opening.

Loc. Australia, creeping over an alga (*Miss Jelly*).

This species is allied to *M. pilosa*, but differs from it in many points. Its most marked characteristic is the very curious ribbed ovicell, which occupies a fixed place in the colony and is borne on a cell embraced by the branches which are given off at intervals from the extremity of the single lines. The oecium is formed by an extension of the aperture upwards, giving rise to an elongate-oval area bounded by a slightly raised margin. On the latter are developed seriatim the rib-like processes, which ultimately unite along a central line, and constitute the marsupial chamber. These must be regarded as a modification of the spines of the zoœcial aperture. When closely examined the wall of the oecium is seen to be composed of *spine-like ribs, united laterally by a calcareous expansion*, but often slightly disjunct at the base. In this species, therefore, the marsupium is formed of the upper portion of the zoœcial aperture (which is much extended in the ovicelligerous cell), roofed in by a number of marginal spines, which meet and are soldered together at the extremities, and are united along the sides by a calcareous lamina. It is a very simple modification of certain elements of the zoœcium, by which the latter is divided into two chambers—one for the polypide, the other for the embryo.

Membranipora velata, n. sp.

(Pl. V. fig. 3.)

Zoœcia ovate, pyriform, or hexagonal (somewhat irregular in shape), distinctly quincuncial, placed close together; aperture occupying the whole front (except in the pyriform cells), ovate, the cell-wall around it slightly roughened or crenate, with a membranous roofing stretching across it on a level with the margin, which it overspreads. *Avicularia* sessile, on a distinct area, scattered amongst the zoœcia, always wedged in between two cells at their upper extremity; beak not prominent; mandible pointed, flattened, directed obliquely upwards. *Oœcium* very shallow and inconspicuous, just covering the extremity of the cell. *Zoarium* presenting a flat uniform surface of a dark brownish colour, caused by the overlying membrane.

Loc. Santa Cruz, California, on shell (*Miss Jelly*).

The brownish appearance of the zoarium, which is due to the extension of the membranous front wall over the margin of the cells, is a distinguishing character. There is much irregularity in the shape of the cells; in many cases they are

prolonged below, and become distinctly pyriform. Their arrangement is very regularly quincuncial.

The avicularia are remarkably depressed and scarcely rise above the surface.

Membranipora circumclathrata, n. sp.
(Pl. V. fig. 1.)

Zoecia ovate, running to a point below, quincuncially arranged, distant, the interspaces areolated; aperture slender-oval, occupying about three fourths of the front, and closed in entirely by a membranous wall; margin slightly thickened, crenate, bearing a line of small holes; immediately below the aperture a pointed *avicularium*, elevated on a very prominent rising or boss, sloping upwards, the mandible directed straight outwards or turned obliquely. *Oecium* founded, smooth, a raised rib across the front a little above the opening; surmounted by an *avicularium*, which is sometimes of very large size, with an elongate acute mandible pointing obliquely upwards, sometimes of the usual form.

Loc. Santa Cruz, California, on shell (*Miss Jelly*).

The striking characteristics of this attractive species are the areolated space which surrounds the cells* and the very prominent avicularia. Whether the marginal holes indicate the position of as many spines in the perfect state I am unable to say; there is no trace of these appendages in the specimen which I have examined.

Membranipora variegata, n. sp.
(Pl. V. fig. 2.)

Zoecia ovate, often running to a blunt point below, placed closely together, quincuncial, with a thick, rounded, and minutely granulated border; aperture occupying the whole of the front, slightly contracted above and expanded below, with a membranous covering; four tall spines at the top, a little below them a very stout subclavate spine on each side, and below these again about six very slender sharply-pointed spines, which bend inwards over the area and converge towards the centre; all these appendages with a dark-coloured base. *Avicularia* none. *Oecium* (?).

Loc. Santa Cruz, on shell (*Miss Jelly*).

An examination of the marginal *zoecia* in a colony shows that the cell-wall is pierced by a number of large oblong foramina, placed side by side and separated by a very narrow band

* In the *M. circumcineta* of Heller the *zoecia* are separated by a reticulate or areolated interspace.

of calcareous matter. There may be about fifteen or sixteen of these openings round the cell, each of them occupying a kind of recess in the wall. In some cases a slender acuminate spine originates near the base of one of the larger spines above, and projects outward instead of bending over the aperture.

VIII. FOREIGN CHEILOSTOMATA (Miscellaneous).

Family *Bicellariidæ*.

DIACHORIS, Busk.

Diachoris distans, n. sp.
(Pl. V. figs. 4-6.)

Zoecia elongate, slender, not expanded below, distant, sub-erect, entirely open in front; two long tapering spines at the top, and about four on each side, of which the uppermost pair is very small, and the pair below it usually larger than all the rest, the lower third of the margin destitute of spines; connecting tubes six in number, long; on one side of the cell a large *avicularium*, usually placed below the third spine, projecting considerably behind towards the base; a long straight back extending from the projection to the beak, which is slightly bent at the point; mandible triangular, surface smooth and shining. *Dorsal surface* smooth, destitute of spines, with a round tubular projection at the upper extremity of considerable size, from which the radical appendage originates. *Oecium* (?).

Loc. South Africa (*Miss Jelly*).

This form resembles in some respects the Australian *D. spinigera*, MacGillivray; but there are not unimportant points of difference, and on the whole I believe they are rightly accounted distinct.

The cells of *D. distans* are of an elongate type and considerably larger than those of *D. spinigera*; they lie wider apart, the connecting-tubes being of more than ordinary length, and are very decidedly suberect. The spines are not only fewer in number, but different in character from those of the kindred species. The small half-rudimentary pair just below the top of the cell is very constant, and contrasts strikingly with the tall stout pair immediately following. In *D. spinigera* the lateral spines, which generally extend to the bottom of the cell, are much more uniform in character.

But the most marked differences are found in the *avicularia*. There are normally two of these appendages in *D. spinigera*.

gera, which are placed nearer the top of the cell than that of *D. distans*; they also differ in form (Plate V. fig. 6 compared with fig. 7), and are especially remarkable for the length of the free portion of the beak. The mandible becomes much attenuated towards the apex.

Diachoris intermedia, n. sp.
(Pl. V. fig. 8.)

Zoæcia small, elongate, open in front, the aperture narrowing slightly downwards, decumbent, three (or two) denticles at the top of the cell, and a small spinous process at each side in a line with the lower margin of the oral valve; on each side a small *avicularium*, placed at a very short distance below the top; beak short and slightly bent. *Dorsal surface* perfectly smooth and destitute of spines; each cell connected by short tubular processes with four others, two terminal and two lateral, the latter originating at opposite points on the side-wall a little above the middle. *Oæcium* (?).

Loc. Tasmania, on an alga (*Miss Gatty*).

This is a minute species, and is interesting as in some measure a transition form between the genera *Diachoris* and *Beania*. The simple plan of the zoarium allies it to the latter genus, while in the decumbent cell armed with avicularia it resembles the former. The species described by Mr. Ridley from the Straits of Magellan as *Chaunosia fragilis** approaches still more nearly to *Beania*; its polypide, however, is said to be furnished with a gizzard, and it may possibly be entitled to generic rank. Its affinities are much more with *Beania* than *Diachoris*.

Diachoris hirtissima, Heller, form *robusta*.
(Pl. V. figs. 9, 9 a.)

Zoæcia large, suberect, boat-shaped, expanded below, and narrowing off rather abruptly towards the oral extremity into a kind of neck, entirely open in front; three very large acuminate spines at the top, and four tall stout ones immediately below them placed two at each side, flanking the oral valve; below these again four or five tall spines originating just outside the margin, from the base of which spring as many slender spinules, which bend over the aperture; at one side near the top an *avicularium*, subglobose, with a very small and slightly projecting beak and a broad mandible; connecting-tubes extremely short, six in number. *Dorsal surface* smooth,

* Proc. Zool. Soc. 1881, p. 45.

entirely destitute of spines, the radical appendage springing from about the centre. *Oœcium* (?).

Loc. Algiers, under stones (*J. Y. Johnson*).

It is with considerable doubt that I rank this fine *Diachoria* as a form of Heller's species. On comparing it with a specimen of the latter from the Cape-Verd Islands many differences between the two are apparent. The cells of the present form are fully a third larger than those of the normal *hirtissima*, and are more erect; the spines with which they are furnished are much less numerous. In *D. hirtissima* the dorsal surface bristles with these appendages; behind the triplet at the top of the cell are placed a number of tall slender spines, which extend for some distance down the back. Others are scattered over the dorsal surface, and are frequently forked. In the present variety the back of the cell is entirely destitute of spines. The spinules which bend over the aperture are usually more numerous in the normal form than in the variety; and the spines generally are more delicate, and the whole habit less robust. The terminal triplet, from its size, is a really striking feature in the Algerian specimens.

I have seen no avicularia on the normal *D. hirtissima*; in the variety *robusta* they are present, but not numerous. They are peculiar in shape, and unlike the usual capitate forms, being almost globose and having a very short rudimentary beak. In this species the connecting-tubes are extremely short, and the cells consequently lie very closely together; the dorsal surface presents an appearance very much resembling that which I have described in *Membranipora radicifera* ('Annals' for July 1881).

Family **Myrizoidæ**.

SCHIZOPORELLA, Hincks.

Schizoporella insignis, n. sp.
(Pl. V. fig. 10.)

Zoœcia ovate, distinct, quincuncially arranged; surface perfectly smooth, of a greyish colour; a raised line enclosing a large part of the front, and carried above the orifice; within it a row of perforations, and immediately outside of it a row of small disks surrounded by a white line; orifice large, peristome not raised, arched above, the lower margin slightly curved inward, with a central sinus, narrow at the opening and below subcircular, the cell-wall carried up immediately below the sinus into a prominent ridge-like umbo. *Oœcium* (?).

Loc. Africa (*Miss Jelly*).

In this beautiful species the oral sinus is almost circular and is connected by a narrow gap with the true orifice. It suggests very forcibly the special pore of the Microporellidæ. As bearing on the morphological relations of this portion of structure, an observation by Mr. Ridley is interesting. He has noticed a Myriozoidan stage in the development of a Porinidan cell, in which the pore had not yet become isolated, but was connected by a gap with the orifice*.

CORRIGENDUM.

Epicaulidium pulchrum, mihi.

I have to plead guilty to a strange oversight respecting this beautiful form. When I gave it the above name ('Annals' for Feb. 1881) it had quite escaped my recollection that it was long ago described and accurately figured in Ellis's posthumous work, edited by Solander, under the name of *Cellaria tulipifera*. A chance reference to the plates of this work (which I had not consulted for a long time) at once revealed to me my mistake, and has enabled me to make this early confession and correction of it.

Lamouroux reproduced in his 'Exposition' Ellis's figure; but he ranged the species amongst the Sertularians, and referred it to his genus *Pasythea*. Both De Blainville and Lamarck gave it generic rank, the one as *Tuliparia* ("*Tulipaire*"), the other as *Liriozoa*; but Lamarck has changed (without any sufficient warrant, as it seems) Solander's specific name.

EXPLANATION OF THE PLATES.

PLATE I.

- Fig. 1. *Membranipora vitrea*, n. sp.
 Fig. 2. *Membranipora pyrula*, n. sp.
 Fig. 3. *Schisoporella tumida*, n. sp.
 Fig. 4. *Monoporella* † *nodulifera*, n. sp.
 Fig. 5. *Mucronella porosa*, n. sp. 5 a. Oœcium.
 Fig. 6. *Porella marsupium*, MacGillivray.
 Fig. 7. *Cribrilina tubulifera*, n. sp.
 Fig. 8. *Cribrilina speciosa*, n. sp. (This figure and fig. 5 are drawn to the same scale, and are much less highly magnified than the rest.)

* "Polyzoa, Cœlenterata, and Sponges of Franz-Joseph Land," Ann. & Mag. Nat. Hist. for June 1881, p. 448.

† This genus stands as *Haploporella* in the text; but Mr. Waters tells me that this name has been applied to a genus of fossil Foraminifera.

PLATE II.

- Fig. 1. *Schizoporella acuminata*, n. sp.
 Fig. 2. *Monoporella lepida*, n. sp.
 Fig. 3. *Membranipora* (?) *roborata*, n. sp. (provisionally named).
 Fig. 4. *Schizoporella triangula*, n. sp. 4 a. The oecium.
 Fig. 5. *Mucronella teres*, n. sp.
 Fig. 6. *Membranipora radificera*, n. sp. 6 a. Dorsal surface of the zoecium. 6 b. Cluster of the radical tubes.

PLATE III.

- Fig. 1. *Mucronella tricuspis*, n. sp.
 Fig. 2. *Mucronella spinosissima*, n. sp.
 Fig. 3. *Membranipora punctigera*, n. sp.
 Fig. 4. *Caberea grandis*, n. sp. 4 a. Seta of the vibraculum, showing its remarkable length. 4 b. One of the large avicularia.
 Fig. 5. *Porina gracilis*, Lamx. 5 a. The same, natural size.
 Fig. 6. *Cribrilina monoceros* (?), MacGillivray. 6 a. One of the large marginal avicularia.
 Fig. 7. *Membranipora amplexens*, n. sp.
 Fig. 8. *Cellepora granum*, n. sp. 8 a. The same, natural size.

PLATE IV.

- Fig. 1. *Lunulites incisa*, n. sp. Zoecia, magnified.
 Fig. 2. *Lunulites incisa*, n. sp. Portion of the underside of the zoarium, showing the lobate margin and the cancellated structure of the centre.
 Fig. 3. *Lunulites incisa*, n. sp., nat. size.
 Fig. 4. *Membranipora inermata*, n. sp.
 Fig. 5. *Membranipora inornata*, n. sp.
 Fig. 6. *Membranipora hexagona*, Busk (for comparison with the preceding).
 Fig. 7. *Rhynchopora longirostris*, n. sp. A group of young zoecia.
 Fig. 8. *Rhynchopora longirostris*, n. sp. Zoecia and elongate avicularia from the centre of the colony, less highly magnified.
 Fig. 9. *Tubulipora capitata*, n. sp.

PLATE V.

- Fig. 1. *Membranipora circumclathrata*, n. sp.
 Fig. 2. *Membranipora variegata*, n. sp.
 Fig. 3. *Membranipora velata*, n. sp.
 Fig. 4. *Diachoris distans*, n. sp.
 Fig. 5. *Diachoris distans*, n. sp. Dorsal surface.
 Fig. 6. *Diachoris distans*, n. sp. Avicularium.
 Fig. 7. Avicularium of *Diachoris spinigera*, MacGillivray.
 Fig. 8. *Diachoris intermedia*, n. sp.
 Fig. 9. *Diachoris hirtissima*, Heller, form *robusta*. 9 a. Avicularium.
 Fig. 10. *Schizoporella insignis*, n. sp.