

ART. II.—*Further Descriptions of the Tertiary Polyzoa
of Victoria.—Part VIII.*

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(With Plates I. and II.).

[Read 3rd April, 1902.]

Catenariopsis morningtoniensis, Map. (Pl. I., Fig. 1).

This species I described in Part II. of these papers (P.R.S.V., vol. xii., pt. 1, p. 11), from a specimen of a single free zooecium from Mornington, and I stated there was nothing to show the character of the zoarial growth but that it was probable it might originate from a creeping stolon like *Ætea*. I have found a fragment of a univalve shell from the Gellibrand River deposit with several groups of zooecia upon it, they are adherent like those of *Hippochoa*; the zooecia are in single series; they do not grow from the median line, but from one side, near the distal end. In only one of the zooecia is the thyrostome perfectly preserved; it shows, as I supposed, a structure of a similar character to that of *Steganoporella*; the "descending plate" mentioned in the description divides the zooecial cavity into two chambers in a somewhat similar manner to the "cryptocyst" of that genus, leaving an "opesiule" on each side. A figure is given showing the zooecium with the perfectly preserved thyrostome and the proximal part of one growing out from it. The zooecium is misshapen and unsymmetrical, owing to the presence of some cells of an encrusting zoarium of an indefinable species interfering with it.

Smittia macgillivrayi, nov. nom. *S. transversa*, McG.

Dr. MacGillivray, in his Monograph of the Tertiary Polyzoa of Victoria (T.R.S.V., vol. iv., p. 92) describes a species of *Smittia* as *S. transversa*, having apparently overlooked the fact that

Busk described a species under the same name in the report of the "Challenger" Polyzoa (p. 152, pl. xviii., fig. 7), which is quite different; consequently a new name is required for *S. transversa*, McG., and I have much pleasure in giving it the name of *S. macgillivrayi*, in honor of Dr. MacGillivray and in recognition of his excellent work in both recent and fossil Polyzoa.

***Microporella marginata*, n. sp. (Pl. I., Fig. 2).**

Zoarium cylindrical. Zoecia oblong, with raised margins, perforated with a marginal row of small pores and also scattered pores on the surface. Thyrostome arched above, nearly straight proximally, with a crescentic pore below it.

Locality.—Spring Creek (T. S. Hall).

A single specimen. The raised margins are uncommon in this genus.

***Smittia centralis*, var. *laevigata*, Waters. (Pl. I., Fig. 3).**

Mr. Waters, in Q.J.G.S., vol. xxxvii., p. 337, describes *S. centralis*, and on the same page describes a variety, "*laevigata*," which differs from the type species in having only a few elongated pores near the edge instead of a double row, and he gives a figure of it (pl. xiv., figs. 7 and 8) but none of the type species.

I have found specimens of var. *laevigata* in the Mitchell River deposits (I have not seen the type species) which bear oecia and which have the peristomes perfect. The peristome in the type is said to be "very much raised and projecting with a large pore (probably avicularian) immediately below the orifice; peristome transversely oval;" that of var. *laevigata* is said to be "less well preserved." The specimens found by me are undoubtedly those of var. *laevigata*; the peristome is perfect, it is much raised and projecting, but the lower lip is nearly straight, with a very narrow spout or sinus, and there is no pore immediately below the orifice. In some cases the spout or sinus is closed at the top, and this would lead to the supposition that the "pore" spoken of by Mr. Waters was really a closed sinus. The oecia

are rounded, but nearly flat in front, partially immersed and adherent upon the zoecium above. Owing to the primary orifice or thyrostome being hidden by the peristome no internal denticles can be seen, and there are no avicularia upon the zoecia, so I consider it somewhat doubtful if this species should be placed in *Smittia*.

I would here wish to observe that owing to the very unsatisfactory state of the classification of the Lepralioid or Escharine group of the Cheilostomata it is impossible, until a thorough revision be made, to correctly and definitely place some of the species described in this paper, but I have tentatively placed them in the genera to which I consider they should be assigned.

Porella rhomboidalis, n. sp. (Pl. I., Fig. 4).

Zoarium encrusting. Zoecia rhomboidal, with very highly raised margins; nearly flat, with scattered pores over the surface except on a smooth area below the thyrostome. Thyrostome orbicular, with a very wide sinus proximally.

Locality.—Morningson (T. S. Hall).

The greater portion of the only specimen found is figured. It is a very distinct form, the very highly raised margins being very characteristic. The thyrostome is of a very similar form to *Porella dennanti* described below, therefore I place it in *Porella* although there is no avicularium within the sinus. Some of the "pores" do not pass through the cell wall, and show as slight cavities only.

Porella areolata, n. sp. (Pl. I., Fig. 5).

Zoarium encrusting. Zoecia irregularly hexagonal; margins narrow; surface somewhat depressed, with large irregularly shaped areolae round the margin which extend sometimes to the centre. Thyrostome orbicular, with a large rounded sinus, within which is a small avicularium.

Locality.—Spring Creek (T. S. Hall).

The very large and irregular areolae are peculiar to this species.

***Porella otwayensis*, n. sp.** (Pl. I., Fig. 6).

Zooecia small, elongated; surface covered with pores. Thyrostome orbicular, with a small sinus below, in which is a small avicularium; margin thickened and raised. Ooecia globular, subimmersed, with a small circular depressed area in front minutely punctured.

Locality.—Cape Otway (J. Dennant).

This is a curious little species. The surface is covered with large pores, the dividing line between the zooecia is scarcely discernible, the thyrostome is thickened and raised, more especially in the fertile zooecia and in them with the ooecia form a pyriform elevation. The ooecia have a round perforated area and are curiously like those of *Shizoporella ambita* Waters.

***Porella dennanti*, n. sp.** (Pl. I., Fig. 7).

Zoarium encrusting. Zooecia obscurely hexagonal, flat, with a more or less regular row of large pores round the margin; margins slightly raised. Thyrostome orbicular, with a wide sinus in the lower part, within which is a small avicularium. Ooecia large, globular and partly immersed.

Locality.—Mitchell River (J. Dennant).

A single specimen, but clearly distinct from any described species; the nearest to it is *Porella ordinata* (Smittia *ordinata*, McG.).

***Mucronella proboscoides*, n. sp.** (Pl. I., Fig. 8).

Zooecia very large, elongated, quadrate; surface nearly flat, covered with small pores. Thyrostome orbicular, with a broad square denticle (lyrula) in the middle of proximal margin and a small pointed one (cardella) on each side. An enormous elongated mucro or rostrum immediately below the thyrostome, projecting at nearly a right angle to the surface.

Locality.—Griffins, Moorabool (T. S. Hall).

A single specimen consisting of one zooecium only. In the front view the enormous rostrum, or mucro, hides the proximal

part of the thyrostome, but by tilting it longitudinally at an angle of 45° it is seen as shown at Fig. 8a. The true character of the rostrum can only be seen when viewing it from the side. and Fig. 8b shows its appearance in this position; it is only magnified about half as much as the other figures. There are traces of a few spines on the distal margin of the thyrostome.

Mucronella conica, n. sp. (Pl. I., Fig. 9).

Zooecia elongated; surface convex, covered with rather large pores. Thyrostome orbicular, with a pointed median denticle and two lateral ones. Peristome thickened and developed proximally into a large thick, obtuse, conical mucro.

Locality.—Filter Quarries (T. S. Hall).

This is allied to *M. proboscoides*, but the zooecia are smaller, convex and perforated with large pores; the peristome is thickened, the conical mucro is much broader in proportion to its length, the median denticle in the thyrostome is small and acute (Fig. 9a), and there are no traces of spines.

Porella angustata, n. sp. (Pl. I., Fig. 10).

Zoarium encrusting. Zooecia very small and narrow, smooth, with raised margins, two pores near the base of the cell. Thyrostome orbicular, with a small acute mucro on the proximal margin, and a small avicularium below it on or within the peristome, which is raised in that part.

Locality.—Mitchell River (J. Dennant).

A single specimen. This is one of those species which are difficult to place generically; the mucro would place it in *Mucronella*, but the small avicularium being within the external margin of the peristome, I place it in *Porella*.

Mucronella irregularis, n. sp. (Pl. II., Fig. 11).

Zoarium encrusting. Zooecia irregular in shape; surface rugose, with raised ridges in places. Thyrostome transversely elliptical, with a small pointed mucro in the proximal margin, with a small

pore below it. One or two small elliptical avicularia on the surface, with a denticle on each side.

Locality.—Mitchell River (J. Dennant).

A single specimen not very well preserved (the front wall is apparently broken away in places) but easily distinguished by the shape of the thyrostome and avicularia. The ridges on the surface are very irregular, and do not appear to indicate the margins of the zoecia. The small pore below the proximal margin of the thyrostome would seem to place this in *Porina*, but I do not think it extends through the cell-wall.

***Mucronella airensis*, n. sp.** (Pl. II., Fig. 12).

Zoaria ligulate, with zoecia on both sides. Zoecia irregular in shape, raised towards the distal end; surface finely granulated. Thyrostome orbicular, with a raised peristome; a very small mucro in the proximal part of the margin. A small, elongated, avicularium on the side of the raised peristome; also several small broadly-oval ones scattered over the surface.

Locality.—Aire Coastal Beds (T. S. Hall).

The elevation of the peristome, and the surrounding portion of the surface is very marked; the small, oval avicularia have half the area covered.

***Mucronella personata*, n. sp.** (Pl. II., Fig. 13).

Zoarium encrusting. Zoecia elongate, quadrate, with a single or double row of pores round the margin; margin slightly raised. Thyrostome suborbicular or unguiform, with a curved flat mucro in the proximal margin; peristome narrow, raised; a small, oval avicularium on each side of the thyrostome. Zoecia orbicular, immersed, smooth, with a rounded, shallow pit in front of each side of a slightly-raised carina.

Locality.—Aire River (A. E. Kitson).

This is a very well-marked species; the mucro is a simple curved extension of the wall of the zoecium, and were it not so prominent it would probably be considered to be a *Lepralia*. The dorsal surface has a round perforation near the distal end, which is visible through the opening of the thyrostome.

Trigonopora, nov. gen.

Zooecia elongated, quadrate. Thyrostome inversely subtriangular, curved distally, with a mucro in the proximal angle. Sides with a mucro at the distal ends, forming a small, circular channel or opening on each side.

The leading characteristic of this genus is the form of the thyrostome.

Trigonopora vermicularis, n. sp. (Pl. II., Fig. 14).

Zoarium encrusting. Zooecia quincuncial, elongated, quadrate, but broader distally. Thyrostome inversely subtriangular, curved distally, with a small mucro in the proximal angle; sides with a mucro on the distal ends, forming a small circular channel or opening on each side. Surface with vermiform markings, at the end of some of which are pores.

Locality.—Cape Otway (J. Dennant).

I at first assigned this species to *Mucronella* on account of the mucro in the proximal part of the thyrostome, but the character of the whole thyrostome is so peculiar that I have formed a new genus for its reception, as it cannot be included in any existing genus; the distal part is a simple curve in the median portion, but at each end the margin goes round in a small circular, almost closed, curve, and then turns sharply proximally forming a mucro on each side in so doing, and in the rounded proximal angle there is a small mucro.

Porina tuberculosa, n. sp. (Pl. II., Fig. 15).

Zoaria cylindrical. Zooecia in longitudinal series, large, elongated, quadrate, separated laterally by distinct, raised margins. Surface covered with scattered tubercles. Thyrostome transversely elliptical; peristome elevated, thin, with a very large elliptical opening below it, the upper margin of which is curved and overlaps the opening. A sessile avicularium on each side of the thyrostome, and equally elevated with it.

Locality.—Gellibrand River (A. E. Kitson).

This is somewhat similar to *Porina cribraria*, McG. It differs,

however, from that species in the zooecia being much longer, and in having the surface covered with tubercles instead of "rounded deep pits," and the large peristomial pore is not simply "rounded," but is transversely elliptical, with a curved over-arching upper margin or lip; a side view of it is shown on the left side of the figure near the bottom of the upper left-hand zooecium, and it is clearly quite different from that of *P. cribraria*.

***Lagenipora morningtoniensis*, n. sp.** (Pl. II., Fig. 16).

Zooecia ventricose, surface granulated, with median or lateral ribs. Thyrostome suborbicular; peristome elevated distally, and laterally forming an irregularly trilabiate orifice; a round avicularium at the end of a subtubular process, adherent to the wall of the zooecium.

Locality.—Mornington (T. S. Hall).

The shape of the zooecium and the irregularly elevated peristome are very similar to *L. simplex*, McG.

***Lagenipora airensis*, n. sp.** (Pl. II., Fig. 17.)

Zooecia ventricose; a slightly-raised scutiform area below the thyrostome, radially divided into subtriangular elevations, below which are sometimes one or two ribs enclosing a subtriangular area. Thyrostome orbicular or horseshoe shaped with a sinus at each proximal angle; peristome elevated distally, and laterally, forming a trilabiate orifice.

Localities.—Aire Coastal Beds (Hall and Pritchard); Mitchell River (J. Dennant).

This is a remarkable form, and in some respects resembles *L. morningtoniensis*, but it is much larger; the peristome rises round the thyrostome in collar-like elevations, distally and laterally; there are one or more ribs on the front of the cell. I have several specimens, and they show considerable variation owing, chiefly, to the difference in the zoarial growth. The specimens from which the figures are taken are from the Aire Coastal Beds, they are glomerate, and were chosen for illustration

because the form of the thyrostome and peristome are better preserved than in those which are encrusting; in the latter the zooecia are quite distinct from one another, and they have two ribs diverging from the bottom of the scutiform area to the base of the zooecia, and the triangular space enclosed by them is slightly concave. The structure of the scutiform area is very similar to that of the front wall of *Membraniporella* or of some *Catenicellidae*.

Lekythopora mooraboolensis, n. sp. (Pl. II., Fig. 18).

Zoarium glomerate. Zooecia orbicular or subconical; surface granulated. Thyrostome with a long tubular peristome, with a small tubular avicularian process adherent to it; aperture of peristome oval with a small mucro (?) projecting inwards. Primary orifice too far down the peristomial tube to be visible.

Locality.—Moorabool (T. S. Hall).

A single specimen of three or four zooecia. The granulated surface of the zooecia is yellowish, owing to iron stain, but the peristomial tube is white and semitranslucent. The mucro seen in the aperture of the peristome is probably the projecting side of the avicularian tube.

Lekythopora kitsoni, n. sp. (Pl. II., Fig. 19).

Zoarium ligulate, with zooecia on both faces. Zooecia flask-shaped, with a circular depressed area in front. Thyrostome small, orbicular, with a thickened rim or margin.

Localities.—Waurm Ponds (T. S. Hall); Darriman (A. E. Kitson).

This species is plentiful in the Waurm Ponds deposit, and I had assumed it was peculiar to it, but recently I found a few specimens in the Darriman deposit. All of them present a granular or subcrystalline appearance under the microscope, rendering it very difficult to be sure of their structure, but it is evidently a *Lekythopora*. Many of the specimens are somewhat worn, and look something like *Adeona clavata* in a bad state of preservation, and probably it has been taken for that species.

Notwithstanding that there may be some doubt as to the correctness of the diagnosis of this species, owing to its peculiar state of preservation, I have described it because its presence in the Waurn Ponds and Darriman deposits, and in no other, indicates that these deposits belong to the same horizon.

(P) *Porella minutissima*, n. sp. (Pl. II., Fig. 20).

Zoarium encrusting. Zoecia very small, undefined; surface covered with scattered mamillae. Thyrostome with a highly-raised subtubular peristome, on the proximal part of which and adherent to it is a tubular process, probably avicularian.

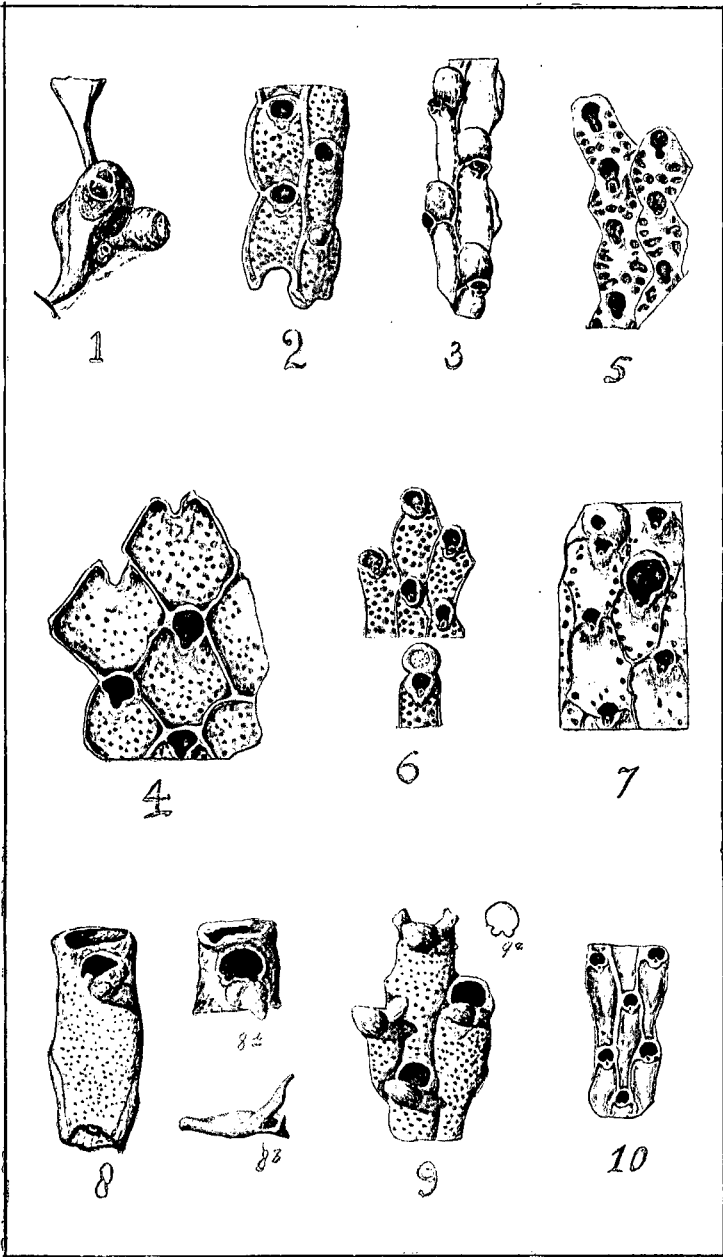
Locality.—Mitchell River (J. Dennant).

This is a single specimen and evidently grew round a small cylindrical alga. It is a very small celled species; the figure is magnified a little more than double the extent of the others. Just above the thyrostome on one side (shown in two of the zoecia figured) there is a small circular opening divided into sectors by radiating ribs, and most of the mamillae have a small perforation in the centre. It is a very puzzling species, and its position is very doubtful, as the primary aperture of the thyrostome cannot be seen; indeed, I had given up the idea of describing it, but I do so now to bring under notice the very peculiar circular opening near the thyrostome, the like of which I have never seen in a similar position in any species of polyzoa.

EXPLANATION OF FIGURES.

PLATE I.

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| Fig. | 1. | <i>Catenariopsis morningtoniensis</i> . |
| „ | 2. | <i>Microporella marginata</i> . |
| „ | 3. | <i>Smittia centralis</i> , var. <i>laevigata</i> . |
| „ | 4. | <i>Porella rhomboidalis</i> . |
| „ | 5. | <i>Porella areolata</i> . |
| „ | 6. | <i>Porella otwayensis</i> . |
| „ | 7. | <i>Porella dennanti</i> . |
| „ | 8. | <i>Mucronella proboscoides</i> . |





11



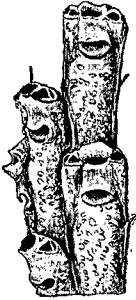
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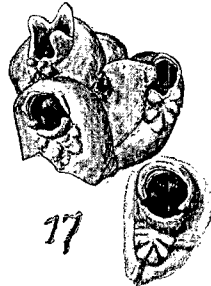
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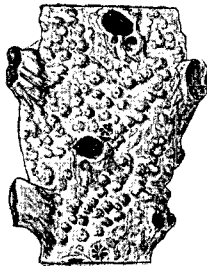
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19



20

- Fig. 8a. the same, thyrostome.
,, 8b. the same, side view of zooecium.
,, 9. *Mucronella conica*.
,, 9a. *Mucronella thyrostome*.

PLATE II.

- ,, 10. *Porella angustata*.
,, 11. *Mucronella irregularis*.
,, 12. *Mucronella airensis*.
,, 13. *Mucronella personata*.
,, 14. *Trigonopora vermicularis*.
,, 15. *Porina tuberculata*.
,, 16. *Lagenipora morningtoniensis*.
,, 17. *Lagenipora airensis*.
,, 18. *Lekythopora mooraboolensis*.
,, 19. *Lekythopora kitsoni*.
,, 20. (?) *Porella minutissima*.

Figs. 1 to 19 magnified about 12 diameters. Fig. 20 about 25.
