

No. X.—THE MARINE POLYZOA OF THE INDIAN OCEAN,  
FROM H.M.S. *SEALARK*.

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Plate 8.

Read 2nd March, 1911.

THERE are 106 species and 12 varieties in this collection, of which nine species and five varieties are new to science, namely:—

<i>Bugula neritina</i> var. <i>rubra</i> .	<i>Lepralia crassa</i> .
"    "    " <i>tenuata</i> .	" <i>marginata</i> .
"    "    " <i>ramosa</i> .	" <i>bicornis</i> .
<i>Membraniporella magnifica</i> .	<i>Smittia glomerata</i>
<i>Cribrilina reticulata</i> .	" <i>ornata</i>
<i>Bifaxaria vagans</i> .	<i>Phylatella galeata</i>
<i>Retepora monilifera</i> var.	<i>Mucronella ellerii</i> var. <i>multi-aviculariata</i> .

Forty of these species have been reported by myself from Ceylon\*, and some of the same with three besides from the Bay of Bengal†. Mr Waters has reported 25 species and one variety from the Red Sea‡, which are in the *Sealark* collection, 20 of these being also in the Ceylon and Indian collections. This leaves 58 species and 11 varieties in the present list that are new records for these Eastern seas, namely:—

<i>Etea recta</i> Hincks.	<i>Bugula dentata</i> Lamx.
<i>Synnotum aviculare</i> (Pieper).	" <i>gracilis</i> Busk.
<i>Catenaria lafontii</i> (Aud.).	" <i>neritina</i> (Linn.).
" <i>otophora</i> Kirk.	"    "    "    var. <i>minima</i> Waters.
<i>Vitaticella crystallina</i> (Wyv. Th.).	"    "    "    " <i>rubra</i> nov.
" <i>buskii</i> (Wyv. Th.).	"    "    "    " <i>tenuata</i> nov.
<i>Scrupocellaria scrupea</i> Busk var. <i>dongolensis</i> Waters.	"    "    "    " <i>ramosa</i> nov.
" <i>pilosa</i> Busk.	<i>Beania intermedia</i> (Hincks).
" <i>obtecta</i> Haswell.	<i>Membranipora normaniana</i> (D'Orb.).
" <i>frondis</i> Kirk.	" <i>radicifera</i> Hincks, var. <i>intermedia</i> Kirkp.
" <i>macandrei</i> Busk.	" <i>pedunculata</i> Manzoni.
<i>Caberea boryi</i> (Aud.).	" <i>variegata</i> Hincks.
<i>Canda retiformis</i> Pourtalés.	" <i>savartii</i> (Aud.).
<i>Pollaplacium gilbertensis</i> Maplestone.	" <i>granulifera</i> Hincks.

\* Herdman's Ceylon Pearl Fisheries Report—Supplementary Rep. xxvi, 1905.

† Report on the Marine Polyzoa in the Collection of the Indian Museum, Records of the Indian Museum, vol. i, pt. 3, No. 13, 1907.

‡ Journ. Linnean Society, London, Zool., vol. xxx, Oct. 1907; vol. xxxi, March 1909.

- Onychocella velata* (Hincks).  
*Micropora coriacea* (Esper.).  
 „ *brevissima* Waters.  
 „ *bouchardii* (Aud.).  
*Membraniporella magnifica*, n. sp.  
*Cribrilina radiata* (Moll.).  
 „ „ var. *flabellifera* Kirk.  
 „ *figularis* (Johnston).  
 „ *reticulata*, n. sp.  
*Steganoporella magnilabris* (Busk).  
*Thalamoporella rozieri* Aud.  
*Bifaxaria vagans*, n. sp.  
*Salicornaria tenuirostris* Busk.  
*Tubucellaria cereoides* (Ellis and Sol.).  
 „ „ var. *chuakensis* Waters.  
 „ *zanzibarensis* Waters.  
*Microporella ciliata* (Pallas)  
 „ *hyadesi* (Jullien).  
 „ *diadema* MacG.  
 „ *renipuncta* MacG.  
 „ *malusii* (Aud.).  
 „ *magnirostris* (MacG.).  
*Lagenipora tuberculata* MacG.  
 „ *spinulosa* Hincks.  
*Retepora monilifera* MacG.  
 „ *porcellana* MacG.  
 „ *denticulata* Busk.  
*Schizoporella cecilii* (Aud.).  
 „ *triangula* Hincks.  
 „ *spongites* (Smitt).  
 „ *viridis* Thornely.  
 „ *nivea* Busk.  
 „ *biaperta* Michelin.  
 „ *circinnata* (MacG.).  
 „ *armata* Hincks.  
 „ *lata* MacG.  
 „ *subsINUATA* Hincks.  
 „ *dutertrei* (Aud.) var. *pes-anseris* (Smitt).  
 „ *hyndmani* (Johnston).  
*Gemellipora glabra*, form *striatula* Smitt.  
 „ *lata* Smitt.  
*Rhyncozoon bispinosa* (Johnston).  
 „ *incisor* Thornely.  
*Lepralia turrita* Smitt.  
 „ *poissonii* Aud.
- Lepralia cleidostoma* Smitt.  
 „ *feegeensis* Busk.  
 „ *crassa*, n. sp.  
 „ *marginata*, n. sp.  
 „ *depressa* Busk.  
 „ *bicornis*, n. sp.  
*Porella concinna* var. *gracilis* Hincks.  
 „ *nitidissima* Hincks.  
*Smittia signata* Waters.  
 „ *landsborovii* Johnston.  
 „ *marmorea* Hincks.  
 „ *tubula* Kirk.  
 „ *affinis* Hincks.  
 „ *glomerata*, n. sp.  
 „ *trispinosa* Johnston.  
 „ *nitida* Verrill.  
 „ *ornata*, n. sp.  
 „ *murarmata* Kirk.  
*Phylactella columnaris* Kirk.  
 „ *galeata*, n. sp.  
*Mucronella coccinea*, Abild.  
 „ *porelliformis* Kirk.  
 „ *delicatula* Busk.  
 „ *ellerii* MacG. var. *multi-aviculariata* nov.  
*Adeonella subsulcata* (Smitt).  
*Cellepora megasoma* MacG.  
 „ *longirostris* MacG.  
 „ *costata* MacG.  
 „ *vagans* Busk.  
*Holoporella tridenticulata* (Busk).  
 „ *albirostris* (Smitt).  
 „ *mamillata* (Busk).  
 „ *foliata* MacG.  
 „ *simplex* (MacG.).  
 „ *discoidea* (Busk).  
*Crisia conferta* Busk.  
*Idmonea atlantica* Forbes.  
 „ *milneana* D'Orb.  
 „ *serpens* (Linn.).  
 „ *radians* (Lamk.).  
*Hornera robusta* MacG.  
*Entalophora proboscidea* (M. Edwards).  
*Lichenopora holdsworthii* (Busk).  
*Cylindrocium giganteum* (Busk).  
*Farella atlantica* Busk.

## SYSTEMATIC LIST.

## CHEILOSTOMATA.

1. *Aetea recta*, Hincks, Ann. Mag. Nat. Hist., ser. 3, ix, 1862, p. 25.  
Cargados, 28 fath.; Amirante, 35 fath.
2. *Synnotum aviculare* (Pieper).  
*Gemellaria avicularis* Pieper, Jahresbericht Westfalischen Provincialvereins, ix; Hincks, Ann. Mag. Nat. Hist., ser. 5, xvii, p. 257.  
Amirante, 29 fath.
3. *Catenaria lafontii* (Aud. and Sav.), Descrip. de l'Égypte, Hist. Nat., i, p. 242.  
Cargados.
4. *Catenaria otophora*, Kirkpatrick, Ann. Mag. Nat. Hist., ser. 6, v, 1890, p. 17.  
Salomon.
5. *Vitaticella crystallina* (Wyville Thomson).  
*Catenicella crystallina*, Wyv. Th., Dub. Nat. Hist. Rev., April 1858, p. 7; MacG., Prod. Zool. Vict. Dec. iii, p. 25.  
One small broken piece only.  
Amirante, 23 fath.
6. *Vitaticella buskii* (Wyville Thomson).  
*Catenicella buskii*, Wyv. Th., Dub. Nat. Hist. Rev., p. 140, April 1858; MacG., Prod. Zool. Vict. Dec. iii, p. 24.  
There is only one fragment of this delicate species. The vittæ reach the full length of the zœcium, the two lateral processes, bearing avicularia, are small and of even height, the surface is finely punctured in front and the orifice has a slightly projecting rounded lower lip. Oœcia are absent.  
Amirante, 23 fath.
7. *Scrupocellaria scrupea*, Busk, var. *dongolensis*, Waters, Journ. Linn. Soc. London, Zool., xxxi, 1909, p. 134.  
Amirante, 34 fath.
8. *Scrupocellaria pilosa*, Busk, Report Challenger Exp., x, pt. xxx, p. 24.  
The scutum of these specimens is not so fully developed as in Busk's figure, Pl. XI, fig. 7, but is of the same form with the lamina more developed above than below the peduncle. One of the five or six spines, usually the outermost, is thicker than the rest, the flagellum of the vibraculum is of considerable length, the lateral avicularia are small, radical fibres are toothed and spring from the side of the vibraculum.  
Cargados, 28 fath.; Saya de Malha, 125 fath.; fragmentary pieces only.
9. *Scrupocellaria obtecta*, Haswell, Proc. Linn. Soc. New South Wales, v, pt. i, p. 37.

There are some colonies of a *Scrupocellaria*, having the large figured scutum, the small lateral and anterior avicularia and the perforated oecia of Hincks'\* and MacGillivray's† specimens of *S. obtecta*. They have here, sometimes four, but usually two spines, the lower pair usually stout and forked. Hincks speaks of two, simple spines, and MacGillivray of only one. There are none of the occasional large, lateral avicularia of Hincks' specimens, the median avicularium varies a little in size and has often a serrated beak, the vibraculum is like Hincks' and is longer than in MacGillivray's specimens. The forked spines, figured scutum and perforated oecium the present specimens have in common with *S. cervicornis*, but they are larger, more robust and less glassy than that species.

Amirante, 29 fath.; Cargados, 30 fath.; Providence, 50—78 fath.

10. *Scrupocellaria frondis*, Kirkpatrick, Journ. Linn. Soc. Zool., xx, 1890, p. 504.

The spines, median avicularia and oecia correspond with those of this species, the characteristic antler-like spine being a marked feature. There are, however, lateral avicularia present here and the scutum is different, being spade-shaped, sometimes much elongated, so as to make a curved band right over the front of the aperture, extending even beyond it, and covered by a tree-like tracery. Median avicularia are small and have pointed mandibles directed downwards and outwards. There is a toothed radical fibre. The one small specimen is of a delicate vitreous nature, with some resemblance to *S. cervicornis*.

Amirante, 29 fath.

11. *Scrupocellaria macandrei*, Busk, Brit. Mus. Cat., i, p. 24.

These specimens have the broad granular margin to the aperture, the large lateral avicularia and the raised median avicularia and the 4—5 spines of Busk's‡ species. The eminence carrying the median avicularium is tall and leans from the base of one zoecium to about the base of the peduncle of the scutum of the opposite zoecium. The oecium is smooth, with an oval, flattened area on the front wall in some cases. The vibracular cell is wedge-shaped, reaching right across the back of the zoecium, the vibraculum is smooth, about twice the length of the groove it rests in; there are two vibracula in each fork of a branch. Colonies are slender, of a yellowish colour.

Providence, 50—78 fath.; Amirante, 29 fath.; Farquhar, reef; Cargados, 30 fath.; Seychelles, 34 fath.

12. *Caberea boryi* (Aud.).

*Crisia boryi*, Aud., Descrip. de l'Égypte, Nat. Hist., i, p. 72; Busk, Brit. Mus. Cat., i, p. 38.

The one small colony of this form has the scutum more developed below its peduncle than above, the upper portion often extending across and uniting with the side of the zoecium as in Busk's variety *zelanica*, pl. 16, figs. 4—5. There is not the stout spine near the peduncle of the scutum, as is usual in this variety, the lower zoecia on a branch having none and the upper four slender spines only, if any. Avicularia as in *C. rostrata*,

\* Ann. Mag. Nat. Hist., ser. 5, xi, p. 193.

† MacG., Prod. Zool. Vict. Dec. xiii, p. 102.

‡ Rep. Challenger Exp., x, pt. xxx, p. 23.

Busk\*, are small usually, but replaced here and there by a large one, raised on a prominent rostrum and having a triangular mandible, the largest of these being situated below the fork of a branch. Besides these there are large spatulate avicularia on the sides of the branches near a fork, seen best from behind. Setæ are long and serrated. Oœcia have an arched ridge across the front and are so numerous that the zoœcia are partly concealed.

Cargados, 30 fath.

13. *Canda retiformis*, Pourtalés, Bull. Mus. Comp. Zool., Camb. Mass., p. 110.

These specimens have the peculiarly long, pointed upper half to the fornix described by Miss Phillips†. There are sometimes two spines instead of one on the inner margin of the zoœcium. Where avicularia are present they are situated above the oœcia. Vibracula are not so long as figured by Smitt‡. Oœcia have a semicircular area in front. There is abundant material of this species.

Amirante, 23—29 fath.; Saya de Malha, 55 fath.; Seychelles, 39 fath.; Cargados, 30 fath.

14. *Pollaplœcium gilbertensis*, Maplestone, Proc. Roy. Soc. Vict. n.s. p. 417, 1909.

Cargados, 30 fath.; Providence, 50—78 fath.; Saya de Malha, 150 fath.; Amirante, 23 fath.

15. *Bugula dentata*, Lamx.

*Acamarchis dentata*, Lamx, Exp. Méth. p. 6; Busk, Brit. Mus. Cat., i, p. 46.

This species answers to Busk's description of *B. dentata* in all respects but that the oœcia are not blue. They are set a little to one side, owing, apparently, to the three spines occupying so much space on the outer margin of the zoœcium. The spines are jointed and are often broken off at the joints.

Amirante, 29—34 fath.

16. *Bugula gracilis*, Busk, Quart. Journ. Micro. Sci., vi, p. 125.

Amirante, 29 fath.

17. *Bugula neritina* (Linn.). Waters, Journ. Linn. Soc. London, Zool., xxxi, 1909, p. 135.

There are several broken pieces of this species with avicularia present.

Providence, 50—78 fath.; Amirante, 34 fath.; Cargados.

18. *Bugula neritina*, var. *minima*, Waters, Journ. Linn. Soc. London, Zool., xxxi, 1909, p. 136.

There are colonies  $\frac{1}{2}$  in. in height growing on seaweed.

Cargados, reef; Providence, 50—78 fath.

19. *Bugula neritina*, var. *rubra*, nov. (Pl. 8, fig. 1). This variety has the shape of zoœcium, with pointed outer angle and the sideways position of the oœcium of *B. neritina*. The colonies are reddish brown in colour, robust and about  $1\frac{1}{2}$  in. in height. The whole

\* Rep. Challenger Exp., x, pt. xxx, p. 28.

† Willey's Zool. Results, p. 439, 1900.

‡ Flor. Bry., p. 16, 1873.

front wall of the zoecium is occupied by the aperture, which is wide and open. Avicularia are situated a little way up the margin of the aperture on long, stout peduncles, they have a powerful long, curved beak with a sharp tooth midway on the lower edge. This and the position of the oecium make a marked difference in this species from *B. robusta*, MacGillivray\*, which it somewhat resembles.

Amirante, 34 fath. ; Providence, 50 fath.

20. *Bugula neritina*, var. *tenuata*, nov. (Plate 8, fig. 2).

This variety has the same shape of zoecium as the last, with pointed outer angle, no spines, and has the oecium turned sideways. The colonies are about 2 inches in height where they are broken off, they are thin and straggling, of a yellowish grey colour. Zoecia are almost uniserial in their arrangement, the aperture occupies about  $\frac{2}{3}$  of the front wall, the sides of the zoecium are curved inwards, narrowing the aperture. Avicularia are borne on long, slender peduncles and are situated below the aperture; they are globular with short parrot-like beaks.

Cargados, 28 fath.

21. *Bugula neritina*, var. *ramosa*, nov. (Pl. 8, fig. 3).

This variety is of a red colour. Branches are given off at right angles from the sides of zoecia, rounded and narrowed towards their bases and with a joint near there. Zoecia are uniserial on the upper portion of the colony, turning alternately to either side, the lower portion attached and lying against the back of the zoecium below, the upper portion free, its front wall entirely occupied by the aperture, which is covered by a reddish membrane. The sides of the zoecium curve inwards considerably, and a few perforations are to be seen along their margins. Avicularia are rarely to be seen, they are small, on fairly long peduncles, and situated below the aperture as in the last species. The oecium has a pitted surface.

There are merely fragments of this species growing among *Canda retiformis*. It resembles *B. uniserialis*, Hincks†, but is much larger, red, and branches differently.

Amirante, 23 fath.

22. *Beania intermedia* (Hincks).

*Diachoris intermedia*, Busk, Ann. Mag. Nat. Hist., ser. 5, viii, 1881, p. 133.

Indian Ocean.

23. *Membranipora normaniana* (d'Orb.). Waters, Journ. Linn. Soc. London, Zool., xxvi, p. 670.

There are numerous representatives of this species encasing stems of Hydroids and other objects.

Providence, 50—78 fath. ; Amirante, 32 fath.

24. *Membranipora radificera*, Hincks, var. *intermedia*, Kirkpatrick, Proc. Roy. Dub. Soc., vi, p. 615.

Salomon, 75 fath.

\* MacG., Prod. Zool. Vict. Dec. viii, p. 29.

† Ann. Mag. Nat. Hist., ser. 5, xiii, 1884, p. 367.

25. *Membranipora pedunculata*, Manzoni, Bry. fr. Ital. 4<sup>a</sup> cont. sitzb. d. k. akad. d. Wissensch., lxi, p. 7; Hincks, Ann. Mag. Nat. Hist., ser. 5, vi, 1880, p. 377.

There are a few zoecia with oecia attached growing on a small bit of shell and corresponding with Hincks' description of this species. There are mixed up with this colony some zoecia with two spines at the top and two avicularia pointing upwards on either side, below the spines. These zoecia, which differ entirely from those I have referred to *M. pedunculata*, must belong to another colony, but are growing as one with *M. pedunculata* on the shell.

Saya de Malha, 125 fath.

26. *Membranipora variegata*, Hincks, Ann. Mag. Nat. Hist., ser. 5, viii, 1881, p. 131.

The spines are, as Hincks describes, dark at their bases, the upper four standing upright and thicker, while the six or seven lower ones lie across the zoecium and are more slender. None have the tendency to become clavate. Oecia, not seen by Hincks, are smooth with an arch across the centre as in *M. lineata*, Linn., which is either pointed or square, with sometimes a very small avicularium directed upwards in the centre above it.

Providence, 50—78 fath.

27. *Membranipora savartii* (Aud.). Waters, Ann. Mag. Nat. Hist., ser. 5, xx, 1887, p. 181.

There is a small but good colony of this form, brownish in colour owing to the membranous covering, which is well preserved. There are calcareous nodules at the bases of the zoecia, one or two, according to the width of the zoecium, and there are denticles on the upper margin of the calcareous portion which incline backwards into the orifice and are jagged at their edges.

Providence, 50—78 fath.

28. *Membranipora granulifera*, Hincks, Ann. Mag. Nat. Hist., ser. 5, vi, 1880, p. 72.  
Providence, 50—78 fath.; Amirante, 25—80 fath.

29. *Onychocella velata* (Hincks), Ann. Mag. Nat. Hist., ser. 5, viii, 1881, p. 130.

The one specimen of this form in the collection is old and the colour faded to a very pale brown. The crenulated margin of the zoecium is broad. There is only one broken avicularium present, but enough to show the right position and shape. There are several oecia.

Saya de Malha, 29 fath., growing on a piece of old shell.

30. *Micropora coriacea* (Esper.). Hincks, Brit. Mar. Pol., 1880, p. 174.

This is Hincks' variety which has no nodular enlargements of the margin below the orifice but unlike Hincks' variety they have avicularia as on his ordinary species. No oecia are present.

Providence, 50—78 fath.; Saya de Malha, 125 fath.

31. *Micropora brevissima*, Waters, Expéd. Antarct. Belge, 1904, Bryozoa, p. 40.  
Providence, 50—78 fath.; Saya de Malha, 125 fath.; Salomon, 75 fath.

32. *Micropora bouchardii* (Aud.) (Pl. 8, fig. 4).

*Flustra bouchardii*, Aud., Descrip. de l'Égypte, Hist. Nat. i, Pl. 9, fig. 11.

This striking species, of which there is only one very small colony, growing on a coral, resembles Savigny's figure, Pl. 9, fig. 11, described by Audouin as *Flustra bouchardii*. The zoarium is incrusting, covered by a thin yellowish membrane. Zoecia large, prominent, perforated over the entire front wall. Orifice arched above, the lower margin slightly convex, surrounded by six thick spines, black at their bases. A pore on either side of a central keel below the orifice. No oecia.

Providence, 50—78 fath.

33. *Membraniporella magnifica*, n. sp. (Pl. 8, fig. 5).

Zoarium incrusting in large, yellow patches. Zoecia fairly close together, large, with from five to six prominent ribs on either side, which fork before uniting in the centre, forming a double irregular row of holes there, an erect spine-like process on each rib near its outer edge. Orifice large, spreading towards the base, a spine on either side and several flat, forked spines above. Oecia flat, peaked above, or sometimes with three peaks, the middle one the highest, they appear to be membranous; the flattened spines lying behind, and showing above them.

Cargados, 30 fath.

There is a large dried colony of this beautiful species, measuring about two inches across, unfortunately much broken. It has some resemblance to (?) *Membraniporella aragoi* (Aud.).

34. *Cribrilina radiata* (Moll). Busk, Report Challenger Exp., pt. xxx, p. 131.

Providence, 125 fath.; Saya de Malha, 29 fath.; Salomon, 75 fath.

35. *Cribrilina radiata*, var. *flabellifera*, Kirkpatrick, Ann. Mag. Nat. Hist., ser. 6, i, 1888, p. 75.

The avicularia here have much wider wings than are figured by Kirkpatrick.

Providence, 50—78 fath.

36. *Cribrilina figularis* (Johnston). Hincks, Brit. Mar. Pol., p. 196.

There is one colony of this species without avicularia, growing on a piece of coral.

Salomon, 60—120 fath.

37. *Cribrilina reticulata*, n. sp. (Pl. 8, fig. 6).

Zoarium composed of zoecia widely separated by a reticulate, calcareous expansion, giving off erect processes here and there, which bear avicularia on their summits. Zoecia small and neat with from 9—11 finely perforated furrows on either side of a central line,



the ridge below the uppermost furrow rather more raised than the rest, forming a screen below the orifice. Orifice with two spines near together, above, which bend forward, and two lateral broader spines which unite in the centre, making an arch over the orifice. Oœcia small, rounded and smooth.

Providence, 50—78 fath.

There is only one small colony of this species, growing with many other species on a small bit of coral. It is smaller and more delicate than *C. annulata*.

38. *Steganoporella magnilabris* (Busk).

*Membranipora magnilabris* Busk, Brit. Mus. Cat., ii., p. 62.

Amirante, 20—25 fath.

39. *Thalamoporella rozieri*, Aud.

*Steganoporella rozieri*, Hincks, Ann. Mag. Nat. Hist., ser. 5, vi, 1880, p. 379.

Some colonies are growing in the form of hollow tubes, one is incrusting a stick and one a coral. They have the oœcia of Hincks' form *indica* and the avicularia both of that form and of form *falcifera*.

Amirante, 20—35 fath.; Farquhar atoll; Cargados, 30 fath.; Coin, Peros.

40. *Bifaxaria vagans*, n. sp. (Pl. 8, fig. 7).

Zoarium erect, calcareous, of a dull brown colour, with lighter coloured tips, forking at irregular intervals; branches not all in one plane, with corneous joints near their bases. Zoœcia elongate, perforated, distinctly divided from each other. Orifice with raised peristome enclosing a small pointed avicularium, which is directed upwards from a central position and leaves a sinus in the margin when absent. There are no oœcia.

Seychelles, 34—39 fath.; Amirante, 34 fath.

There is a good quantity of this species, which has the appearance of a sertularian hydroid to the naked eye. It is placed provisionally under the genus *Bifaxaria*, being closely allied to *B. reticulata*.

41. *Salicornaria tenuirostris*, Busk, Brit. Mus. Cat., i, p. 17.

These specimens are about 2 inches in height, their avicularia are not so attenuated as in Smitt's\* figure and in some colonies are very much shorter than in others, where the mandible is almost triangular, leaning forward. There are several colonies in the collection.

Seychelles, 39 fath.; Amirante, 32 fath.; Cargados, 28—30 fath.; Providence, 50 fath.

42. *Tubucellaria cereoides* (Ellis and Solander). MacGillivray, Prod. Zool. Viet. Dec. ii, p. 18.

Cargados, 28 fath.; Saya de Malha, 29—145 fath.

\* Floridan Bryozoa, p. 4, Pl. I, fig. 57.

43. *Tubucellaria cereoides*, var. *chuakensis*, Waters, Journ. Linn. Soc. London, Zool., xxx, 1909, p. 130.

Providence, 50—78 fath.

44. *Tubucellaria zanzibarensis*, Waters, Journ. Linn. Soc. London, Zool., xxx, p. 131.

Saya de Malha, 145—150 fath. ; Farquhar, reef ; Cargados, 28 fath.

45. *Microporella ciliata* (Pallas).

*Eschara ciliata*, Pallas. Hincks, Brit. Mar. Pol., p. 206.

Providence, 50—78 fath. ; Cargados ; Saya de Malha, 125 fath.

46. *Microporella hyadesi* (Jullien).

*Fenestrula hyadesi*, Jullien, Mission Scientific du Cap Horn, p. 44 ; Waters, Journ. Linn. Soc. London, Zool., xxix, 1909, p. 237.

There are no foliaceous expansions of the zoarium among the specimens in this collection which are all incrusting ; the zoecia are perforated throughout, the margins of the orifices are smooth below, with three spines above, usually ; the avicularian mandible has large wings.

Providence, 50—78 fath. ; Saya de Malha, 47 fath.

47. *Microporella diadema*, MacGillivray.

*Lepralia diadema*, MacGillivray, Trans. Roy. Soc. Vict., ix, p. 8, 1868.

There are, unfortunately, none of the peculiarly marked oecia present in this colony.

Providence, 50—78 fath.

48. *Microporella renipuncta*, MacGillivray, Trans. Roy. Soc. Vict., xix, p. 130, 1882.

There is a very small colony of this form without avicularia or oecia, but recognisable from its distinctive pore.

Providence, 50—78 fath.

49. *Microporella malusii* (Aud.) (Pl. 8, fig. 8). Hincks, Brit. Mar. Pol., p. 211.

Zoecia very large, about twice the size of the usual British species, regularly marked all over by opaque, white spots, an oval or kidney-shaped pore not far below the orifice. No avicularia. Oecia smooth, resting on a broad ridge at the back.

Saya de Malha, 125 fath. The only colony of this kind is old and worn in parts and is adhering to a piece of old shell.

50. *Microporella magnirostris* (MacGillivray), Trans. Roy. Soc. Vict., xix, p. 134, 1882.

Amirante, 35 fath.

51. *Lagenipora tuberculata*, MacGillivray, Trans. Roy. Soc. Vict., xix, p. 132, 1882.

Providence, 50—78 fath.

52. *Lagenipora spinulosa*, Hincks, Ann. Mag. Nat. Hist., ser. 5, xiii, 1884, p. 210.  
Amirante, 38 fath. Small, erect colonies, growing on *Nellia oculata*.

53. *Retepora monilifera*, MacGillivray, var. nov., Trans. Phil. Inst. Vict., iv, pt. 2, p. 168; MacG., Prod. Zool. Vict. Dec. x, p. 19.

The representatives of this species in the present collection do not correspond exactly with any of MacGillivray's various forms, but have usually the following characters: a central pore, more or less complete; the edge of the lower margin of the orifice sometimes crenulated; an avicularium to one side of the pore and close up to the margin, not always present, sometimes another below this one, and there are long pointed avicularia situated at the bases of some of the fenestræ, the mandible when at rest lying between the two points of the beak. There are no avicularia on the dorsal surface. Oœcia have a long vertical band and a shorter horizontal one, an avicularium on one or both sides of the vertical band. These characters are more or less constant on the many colonies and fragments of colonies in the collection.

Seychelles, 39 fath.; Amirante, 29—30 fath.; Cargados, 28 fath.; Providence, 50 fath.; Saya de Malha, 47 fath.; Diego Garcia, 12 fath.

54. *Retepora porcellana*, MacGillivray, Trans. Roy. Soc. Vict., ix, p. 140, 1868; MacG., Prod. Zool. Vict. Dec. x, p. 15.

Seychelles, 39 fath.; Amirante, 25—30 fath.; Saya de Malha, 150 fath.; Cargados, 28 fath.

55. *Retepora denticulata*, Busk, Report Challenger Exp., x, pt. xxx, p. 109.

There is a colony an inch in height. There are no barren trabeculæ, the zoarium is dichotomously branched, the tips of the branches bending over and uniting. The zoœcium has a flat, roughened surface, a tubular notched peristome, much indented round the margin, one side often higher than the other, an eminence on the front of the zoœcium bearing an avicularium with a two-pointed beak and a mandible ending squarely, the angles more or less pointed. There are larger avicularia at the forks of branches, having wide, three-pointed mandibles, and there is an occasional small elongated avicularium on the dorsal surface. Older colonies have the orifice much sunk, the rostrum, bearing an avicularium, being level with the surface of the zoœcium. There is a small broken piece of a colony from Seychelles, which may not be the same species. It has more slender branches, a small avicularium just below the lower margin of the orifice instead of the large frontal one, while the large avicularium at the fork of the branches is divided into four fingers. There are no oœcia on this species.

Amirante, 15—35 fath.; Seychelles, 34 fath.

56. *Schizoporella cecilii* (Aud.). Hincks, Brit. Mar. Pol., p. 269.

Providence, 50—78 fath.

57. *Schizoporella triangula*, Hincks, Ann. Mag. Nat. Hist., ser. 5, viii, 1881, p. 12.

Providence, 50—78 fath.

58. *Schizoporella spongites* (Smitt).

*Hippothoa spongitis*, Smitt, Floridan Bryozoa, 1872, p. 42.

Cargados, 30 fath.; Amirante, 30 fath. Large colonies.

59. *Schizoporella viridis*, Thornely, in Herdman's Report on Pearl Oyster Fisheries of the Gulf of Manaar, 1905, xxvi, p. 116; Waters, Journ. Linn. Soc. London, ser. 2, Zool., xxxi, p. 147, 1909.

There are large thick colonies of this species and also thin layers growing on a seaweed. Young zoecia always have one large avicularium, above the orifice, only.

Egmont, reef; Providence, 70 fath.; Coetivy.

60. *Schizoporella nivea*, Busk, Report Challenger Exp., x, pt. xxx, p. 163.

There are some small colonies corresponding to the description of this form, but that they are loosely adherent instead of entirely free growing, and the lateral processes are replaced by avicularia.

Amirante, 29 fath.; Seychelles, 39 fath.; Providence, 50—78 fath.

61. *Schizoporella biaperta*, Michelin. Hincks, Brit. Mar. Pol., 1880, p. 255.

There are none of the large avicularia borne on mamillæ as described by Hincks for his species. The margin of the orifice is thickened below, and a keel-like ridge runs downwards from it. The oecia have an arched ridge across the front of them. The colony is glistening white.

Providence, 50—78 fath.

62. *Schizoporella circinnata* (MacGillivray).

*Lepralia circinnata*, MacGillivray, Trans. Roy. Soc. Vict., xix, p. 134; Hincks, Ann. Mag. Nat. Hist., ser. 5, xv, 1885, p. 253.

The one good colony of this species has its younger zoecia smooth, with a single row of punctures round the margin and those that are older roughened and punctured all over the surface; oecia resemble the zoecia. The umbo on these colonies is usually central, below the orifice, but sometimes there are two, which have small rounded avicularia directed outwards.

Cargados, 30 fath.

63. *Schizoporella armata*, Hincks, Brit. Mar. Pol., p. 258.

There are from 6—8 spines on these specimens; they are much broken but appear to vary from being slender to thick. The species *S. scintillans*, Hincks\*, unless too small, seems to be identical with this species.

Saya de Malha, 47 fath.; Providence, 125 fath.

64. *Schizoporella lata*, MacGillivray, Trans. Roy. Soc. Vict., xix, p. 132; MacG., Prod. Zool. Vict. Dec. xiv, p. 145.

These specimens do not quite correspond with MacGillivray's description. The sinus

\* Ann. Mag. Nat. Hist., ser. 5, xv, 1885, p. 143.

appears to be narrower and more rounded below, the avicularium has a small, pointed mandible as in fig. 2, pl. 138, and above it there is a swollen semi-lunar area. The zoecia are about half the size of *S. triangula*.

Saya de Malha, 150 fath.

65. *Schizoporella subsinuata*, Hincks, Ann. Mag. Nat. Hist., ser. 5, xiv, 1884, p. 280.

There is a small, old colony adhering to a Cellepora, it resembles MacGillivray's\* species in having avicularia, but these are smaller than his and turn various ways, usually there is a pair, one on either side of the orifice high up, sometimes a double pair; all are raised on small bosses and slightly pointed.

Saya de Malha.

66. *Schizoporella dutertrei* (Aud.) var. *pes-anseris* (Smitt).

*Hippothoa pes-anseris*, Smitt, Floridan Bryozoa, 1872, p. 43.

Providence, 50—78 fath.

67. *Schizoporella hyndmani* (Johnston). Hincks, Brit. Mar. Pol., p. 281.

The peristome of this species is very much raised, concealing the primary orifice, it is elliptical, not tubular, and the upper and lower margins, being more developed than the lateral, gives a two-lipped appearance. The oecium is situated behind this and does not quite reach to the top. The mandibles of the avicularia are not very long. The surface of the zoecium is smooth, but there are faintly seen perforations on some. The front wall is raised at the sides and flattened centrally.

Providence, 50—78 fath.

68. *Gemellipora glabra*, form *striatula*, Smitt, Floridan Bryozoa, p. 37, 1872.

Amirante, 22—85 fath.; Saya de Malha, 29—125 fath.

69. *Gemellipora lata*, Smitt, Floridan Bryozoa, p. 36.

Saya de Malha, 29 fath.

70. *Rhyncozoon bispinosa* (Johnston).

*Rhynchopora bispinosa*, Hincks, Brit. Mar. Pol., p. 385.

There is a small, pinkish white colony of this species. The primary orifice is very slightly sinuated, the front wall covered by small, rounded avicularia, one of them larger and longer, having a blunt end and lying below the orifice, crosswise. There are several rounded spine-like processes round the margin, besides the umbo, which carries an avicularium on its side.

Saya de Malha, 29 fath.

71. *Rhyncozoon incisor*, Thornely, Herdman's Rep. on Pearl Oyster Fisheries, 1905, p. 118.

\* Prod. Zool. Vict. Dec. xiv, p. 147.

The uncinnate process is much less developed than in the Manaar specimens and the avicularium is higher up inside the tubular orifice. There is only one small colony.

Providence, 50—78 fath.

72. *Lepralia turrita*, Smitt, Floridan Bryozoa, p. 65.

Amirante, 29 fath.; Cargados, 30 fath.

73. *Lepralia poissonii*, Aud. Hincks, Ann. Mag. Nat. Hist., ser. 5, xv, 1885, p. 256.

Providence, 50—78 fath.

74. *Lepralia cleidostoma*, Smitt, Floridan Bryozoa, p. 62.

The species in this collection has zoecia with thickly calcareous front walls glistening and granular, having 2—3 spines on marginal cells and a sharp pointed avicularium, directed upwards, on either side of the orifice. Oecia have the same calcareous surface as the zoecia and are cucullate.

Amirante, 35 fath.

75. *Lepralia feegeensis*, Busk, Report Challenger Exp., x, pt. xxx, p. 144.

Cargados. A good colony growing on a Cellepora.

76. *Lepralia crassa*, n. sp. (Pl. 8, fig. 9).

Zoarium loosely attached, covered by a brown epitheca. Zoecia large, flat with raised margins, evenly punctured with large perforations, a raised calcareous reticulation of the front wall in later stages of growth. Orifice arched above, spreading near the base with a straight lower edge. Avicularia long and pointed, situated on one or both sides of the orifice about half-way up and directed upwards, nearly meeting above; frequently a third avicularium some way below the orifice, directed sometimes one way sometimes another, also long and pointed. Oecia large, more prominent than the zoecia and finely punctured throughout, resting on a ridge-like base. Dorsal surface of zoecia smooth, elongate with a small separate area at the top occupied by what is probably a perforated plate, but the membranous covering is absent. On some zoecia there are clusters of radical fibres.

Cargados, 30 fath.

This species appears to be most nearly allied to *Lepralia dorsiporosa*, Busk \*, but the epitheca is brown, the pore is smaller and there is no perforated membrane over it, also the avicularia are very different; oecia were not seen on *L. dorsiporosa*.

77. *Lepralia marginata*, n. sp. (Pl. 8, fig. 10).

Zoecia small and neat, square or elongate with a raised margin and finely punctured, the surface becoming roughened with age. Orifice almost round with two spines close together above on young zoecia and a tooth on either side, interiorly, more than half-way down. The roundness of the orifice is disguised by an inner lining which is arched above and ends abruptly a little above the lateral teeth, leaving a hollow or sinus

\* Report Challenger Exp., x, pt. xxx, p. 143.

between. There is no indication of this form in the operculum. Avicularia on lateral eminences about on a level with the lower margin of the orifice or below it, pointed and directed forwards and downwards. Oœcia fairly large, rounded and with the same surface as the zoœcia.

Amirante, 125 fath.

78. *Lepralia depressa*, Busk, Brit. Mus. Cat., ii, p. 75.

These specimens are roughly calcareous. There is no perceptible difference in the size of the orifice in fertile and non-fertile zoœcia. There are from 2—4 spines above the orifice on some zoœcia. Avicularia are short and pointed, directed upwards, usually, one on either side of the orifice as in Smitt's\* species *Escharella rostrigera*.

Salomon, 75 fath.

79. *Lepralia bicornis*, n. sp. (Pl. 8, fig. 11).

Zoarium yellowish grey, incrusting. Zoœcium with large orifice situated almost in the centre of its five-sided form, surface thick, opaque white, raised round the orifice, with faintly perceptible lines radiating towards the margin, where there are perforations. Orifice arched above widening downwards with an almost straight lower margin. A small, round avicularium to one side of the orifice or sometimes below it, large spatulate avicularia on separate areas scattered here and there over the zoarium. Oœcia of moderate size, rounded.

Cargados, 30 fath.; Salomon, 75 fath.

The orifice of this species is about the size of that of *L. pallasiana*, the zoœcium is shorter than that species and rounder and not punctured on the surface, and there are numerous avicularia.

80. *Porella concinna* var. *gracilis*, Hincks, Brit. Mar. Pol., p. 324.

Providence, 50—78 fath.

81. *Porella nitidissima*, Hincks, Ann. Mag. Nat. Hist., ser. 5, vi, 1880, p. 78.

Amirante, 29 fath.; Saya de Malha, 125 fath.

82. *Smittia signata*, Waters, Ann. Mag. Nat. Hist., ser. 6, iv, 1889, p. 17.

Saya de Malha, 125 fath.

83. *Smittia landsborovii*, Johnston. Hincks, Brit. Mar. Pol., p. 341.

Saya de Malha, 125 fath.

84. *Smittia marmorea*, Hincks, Brit. Mar. Pol., p. 350.

Amirante, 34 fath.

85. *Smittia tubula*, Kirkpatrick, Ann. Mag. Nat. Hist., ser. 6, i, 1888, p. 79.

Providence, 50 fath.

86. *Smittia affinis*, Hincks, Brit. Mar. Pol., p. 348.

There is a very little colony with small zoœcia, which are smooth with marginal

\* Floridan Bryozoa, p. 57.

perforations. There are four spines above the orifice, which is channeled below and has a wide central and two small, lateral denticles within its lower margin. There is an avicularium placed sideways, sloping across below and almost over the channel in the peristome. There are no oœcia.

Seychelles.

87. *Smittia glomerata*, n. sp. (Pl. 8, fig. 12).

Zoarium loosely incrusting, yellow, mamillate. Zoœcia small, rotate or elongate, more or less raised in front or only the margins raised, giving a honeycomb appearance, turning various ways and heaped upon each other often, the surface roughened, perforated at the margin and sometimes with lines radiating from the orifice outwards. Orifice round or slightly pointed below with a central and two lateral denticles within, the peristome raised sometimes all round, sometimes at the back and sides, sometimes at the front and sides, there are crenulations within, below the upper margin, and above this a mark as it were the base of a single spine or, more rarely, of two. Avicularia to one side of the orifice, small and spatulate or pointed and raised on an eminence, or large and the length of the zoœcium or sometimes pointed with a serrated beak. Oœcia with an arched perforated area and raised process above.

Cargados.

88. *Smittia trispinosa*, Johnston. Hincks, Brit. Mar. Pol., p. 353.

There are several thin, brown, incrusting colonies which have a good deal of variation to be noticed in the avicularia, spines and height of the peristome. They have all the usual three denticles below and crenulated inner edge to the peristome above, the front walls of the zoœcia roughened, with a perforated margin and oœcia with a perforated area in front, and sometimes raised processes above. Spines vary from 1—3.

Cargados, 20—30 fath.; Saya de Malha, 29 fath.

89. *Smittia nitida*, Verrill. Hincks, Ann. Mag. Nat. Hist., ser. 5, vii, p. 159.

The surface of the zoœcium is finely granular; there are four spines above the orifice; avicularia are directed outwards and downwards. This is a large species like *S. reticulata*.

Saya de Malha, 47—125 fath.; Salomon, 75 fath.

90. *Smittia ornata*, n. sp. (Pl. 8, fig. 13).

Zoarium forming thick layers of a pale brown colour covered by a transparent membrane, zoœcia large, broad, with slightly roughened surface, perforated round the margin. Orifice with the peristome much raised at the sides, often two spines above or a broad flat process in their place on the upper margin continuous with the raised sides of the peristome. Avicularia very varied in size, shape and position; usually a large pointed one on either side of the orifice, directed upwards and lying against the raised peristome, often a very large spatulate one, instead, lying across the zoœcium and almost covering it, or, there may be numerous, small, rounded and scattered



avicularia. There is a medium-sized central and two small lateral denticles within the orifice. Oœcia are smooth with a semicircle of curious raised, rounded bosses.

Saya de Malha, 150 fath.

91. *Smittia murarmata*, Kirkpatrick, Ann. Mag. Nat. Hist., ser. 6, i, 1888, p. 80, pl. 8, f. 5. (Pl. 8, fig. 14.)

The best colony in this collection is of a red colour and has often two instead of only one large avicularium. They are raised on the peristome on the sides of the orifice, reaching from rather below this and curving over the top. There are other colonies that have only one avicularium and shorter, looking more like Kirkpatrick's figure. Oœcia, not seen before, are rather flat and have an area of irregular shaped and sized perforations in front, being smooth above.

Cargados, 30 fath.

92. *Phylactella columnaris*, Kirkpatrick, Ann. Mag. Nat. Hist., ser. 6, i, 1888, p. 79. Providence, 29 fath.

93. *Phylactella galeata*, n. sp. (Pl. 8, fig. 15).

Zoarium incrusting, pale brown, each large zoœcium seen standing out separately by the naked eye. Zoœcia with thick walls perforated round the margin with two or three rows of large holes, rising to a long, tapering, tubular neck with a thick rim having a small, pointed mucro on the lower margin, usually, and 10—12 thick, oral spines above. The primary orifice has a central, broad and two lateral, small, pointed denticles. Oœcia are raised on the tubular peristome arching over the orifice like a helmet, all the spines showing in front of it.

Salomon, 75 fath.

94. *Mucronella coccinea*, Abild. Hincks, Brit. Mar. Pol., p. 371. Providence, 50—78 fath.

95. *Mucronella porelliformis*, Kirkpatrick, Ann. Mag. Nat. Hist., ser. 6, i, 1888, p. 8.

There are eight spines round the orifice on this species instead of the usual six, and where the oœcia are present they all show in front of it. They are long and slender. The orifice has a tooth on either side but none in the centre, the crenulated mucro and long, pointed avicularia directed upwards on either side of the orifice and the small zoœcia with glistening verrucose surface are as described by Kirkpatrick. There are, sometimes, two additional, small, pointed avicularia also directed upwards. Oœcia are open in front.

Providence, 29—78 fath.

96. *Mucronella delicatula*, Busk, Report Challenger Exp., x, pt. xxx, p. 156. Amirante 25—80 fath.; Seychelles; Cargados, 28 fath.

This species closely resembles var. *a* of *Smittia trispinosa*, Johnston\*.

97. *Mucronella ellerii*, MacG. var. *multi-aviculariata*, nov. (Pl. 8, fig. 16.)

This variety has 20 marginal spines and has an enormous number of avicularia.

\* Hincks, Brit. Mar. Pol., p. 353.

There is the usual raised avicularium below the orifice and often a small rounded one on the other side of the rostrum; there are small, round raised avicularia scattered round the orifice and over the oecium and there are many, spatulate and very large, lying across the zoecia in various ways. The colonies are loosely attached, large, brown expansions. On the dorsal aspect there is, usually, a single pore on the upper margin of the zoecium, but sometimes there are two or three of these which are probably the bases of radicle fibres.

Cargados, 20—30 fath.; Amirante, 30 fath.

98. *Adeonella subsulcata* (Smitt).

*Porina subsulcata*, Smitt, Floridan Bryozoa, p. 28.

Cargados, 30 fath.; Seychelles, 39 fath.; Amirante, 20—80 fath.

99. *Cellepora megasoma*, MacGillivray, Prod. Zool. Vict. Dec. xv, p. 183.

This species is fairly abundant in incrusting and foliaceous forms. There is a good deal of variation in the development of the peristome but the main features of orifice, avicularia and oecia remain constant.

Amirante, 22—85 fath.; Saya de Malha.

100. *Cellepora longirostris*, MacGillivray. Phillips, Willey's Zoological Results, p. 448.

These specimens have avicularia not mentioned by Miss Phillips, there is usually one lying across the inner aspect of the rostrum with sharply curved beak, there are several raised and directed outwards, scattered over the front wall and sometimes others large and spatulate between the zoecia. Oecia have faintly radiating lines and an arched ridge above, as in Miss Phillips' species and the colonies are incrusting like hers, not erect like MacGillivray's\*. This species may be identical with *Mucronella tubulosa*, Hincks†.

Saya de Malha, 125 fath.; Cargados, 30 fath.

101. *Cellepora costata*, MacGillivray, Prod. Zool. Vict. Dec. xv, p. 183.

There are little ball-like colonies growing on Hydroids and also some small, freely branched colonies of this species. They have most of the features of *C. costata* as described by MacGillivray, but others that are more like *C. rota*. The surface is not fluted but smooth or pitted, the sculptured area on the oecia is sometimes nearly circular and the peristome has a thin rim, the avicularia making a ridge up either side of this almost like in *Lagenipora spinulosa*.

Saya de Malha, 125—145 fath.; Providence, 50 fath.; Amirante, 35 fath.; Seychelles, 34 fath.; Cargados, 29—30 fath.

102. *Cellepora vagans*, Busk, Report Challenger Exp., x, pt. xxx, p. 198. (Pl. 8, fig. 17.)

There are two colonies of what I believe to be this species although they have

\* Trans. Roy. Soc. Victoria, xxi, p. 113, Nov. 1884.

† Ann. Mag. Nat. Hist., ser. 5, vi, 1880, p. 383.

three denticles on the lower margin in place of the sinus. The dark membrane, covering all but the rostra, some branched mandibles to the avicularia and the absence of marginal spines all correspond with the description of this species rather than with that of *Holoporella tridenticulata* (Busk) which it resembles.

Cargados, 28—30 fath.

103. *Holoporella tridenticulata* (Busk), Report Challenger Exp., x, pt. xxx, p. 198.

There are the curious funnel-shaped processes distributed among the zoecia on these specimens. There are from 2—4 spines and the usual teeth on the lower margin of the orifice, but they are not constant in being three, as sometimes one lateral tooth unites with the central tooth making a sort of sinus to one side, sometimes the central tooth is missing leaving a large, central sinus, and sometimes the margin is merely serrated. Avicularia are of two sorts, small on raised, suboral rostra and large, raised on tall processes, or sunk between zoecia, and they may be long and dagger like or wide and fan like, the edge of the beak often serrated. The operculum is either dark, or horn colour. Zoecia are cucullate, having the granular surface of the zoecia.

Salomon, 75 fath.; Providence, 29—55 fath.

104. *Holoporella albirostris* (Smitt). (Busk), Report Challenger Exp., x, pt. xxx, p. 193.

Amirante, 12—18 fath.

105. *Holoporella mamillata* (Busk).

*Cellepora mamillata*, Busk, Brit. Mus. Cat., ii, p. 87.

Amirante, 12—85 fath.

There are large incrusting layers of this species.

106. *Holoporella foliata*, MacGillivray.

*Cellepora foliata*, MacGillivray, Prod. Zool. Vict. Dec. xvii, p. 246.

This species is well represented in this collection. There are colonies measuring 2 inches by 2½ inches of a yellowish grey colour, growing from thick bases into flattened hand-like branches which sometimes anastomose with other branches and are studded over with jagged finger-like processes.

Amirante, 29 fath.; Cargados, 30 fath.; Seychelles, 39 fath.

107. *Holoporella simplex* (MacGillivray).

*Cellepora simplex*, MacGillivray, Prod. Zool. Vict. Dec. xvii, p. 241.

This is a large, coarse, brown species with large erect zoecia, calcareous ridges running often from one to another. One incrusting colony is half an inch thick and measures five inches across, and has an irregularly mamillate surface, another from another locality is rather smaller in its parts and grows into tubular branches. The oral and only avicularium varies in size in the two colonies, a little, it is more raised and the rostrum more raised above it in the larger incrusting form.

Amirante, 29 fath.; Cargados, 30 fath.

108. *Holoporella discoidea* (Busk).

*Cellepora discoidea*, Busk, Report Challenger Exp., x, pt. xxx, p. 197.

This is a large species like the last but the orifice occupies a smaller portion of the zoecium. There is a colony incrusting in thick layers and one that from an incrusting base sends up some flattened branches. The oral rostrum is sometimes low with a small avicularium and sometimes tall and rounded with a large avicularium, in both cases the beak is serrated.

There are several avicularia lying flat on the front wall of the zoecium. The usual large vicarious avicularia are spatulate in shape, not lanceolate. The peristome is sometimes a good deal raised all round the orifice, the surface is roughened and the colour is light brown.

Saya de Malha, 150 fath.

### Cyclostomata.

109. *Crisia conferta*, Busk, Brit. Mus. Cat., iii, p. 7. (Pl. 8, Fig. 18.)

These colonies are an inch in height. In an internode there are never more than 19 zoecia or more than three branches. There is usually only one branch, but where an oecium is present there are usually three, rather near together on the internode, one below and two above the oecium. The joints between the series of zoecia vary in colour from black to pale horn colour. There is a good quantity of this *Crisia*.

Farquhar atoll, 150 fath.

110. *Idmonea atlantica*, Forbes. Busk, Brit. Mus. Cat., pt. iii, p. 11.

Amirante, 15—80 fath.; Seychelles, 34 fath.; Cargados, 30 fath.

111. *Idmonea milneana*, D'Orb. Busk, Report Challenger Exp., xvii, pt. i, p. 13.

Providence, 55 fath.; Amirante, 25—80 fath.; Saya de Malha, 125 fath.

112. *Idmonea serpens* (Linn.). Hincks, Brit. Mar. Pol., p. 453.

Saya de Malha.

113. *Idmonea radians* (Lamk.). Busk, Brit. Mus. Cat., pt. iii, p. 11.

Seychelles, 39 fath.; Amirante, 29 fath.

114. *Hornera robusta*, MacGillivray, Prod. Zool. Vict. Dec. xii, p. 72.

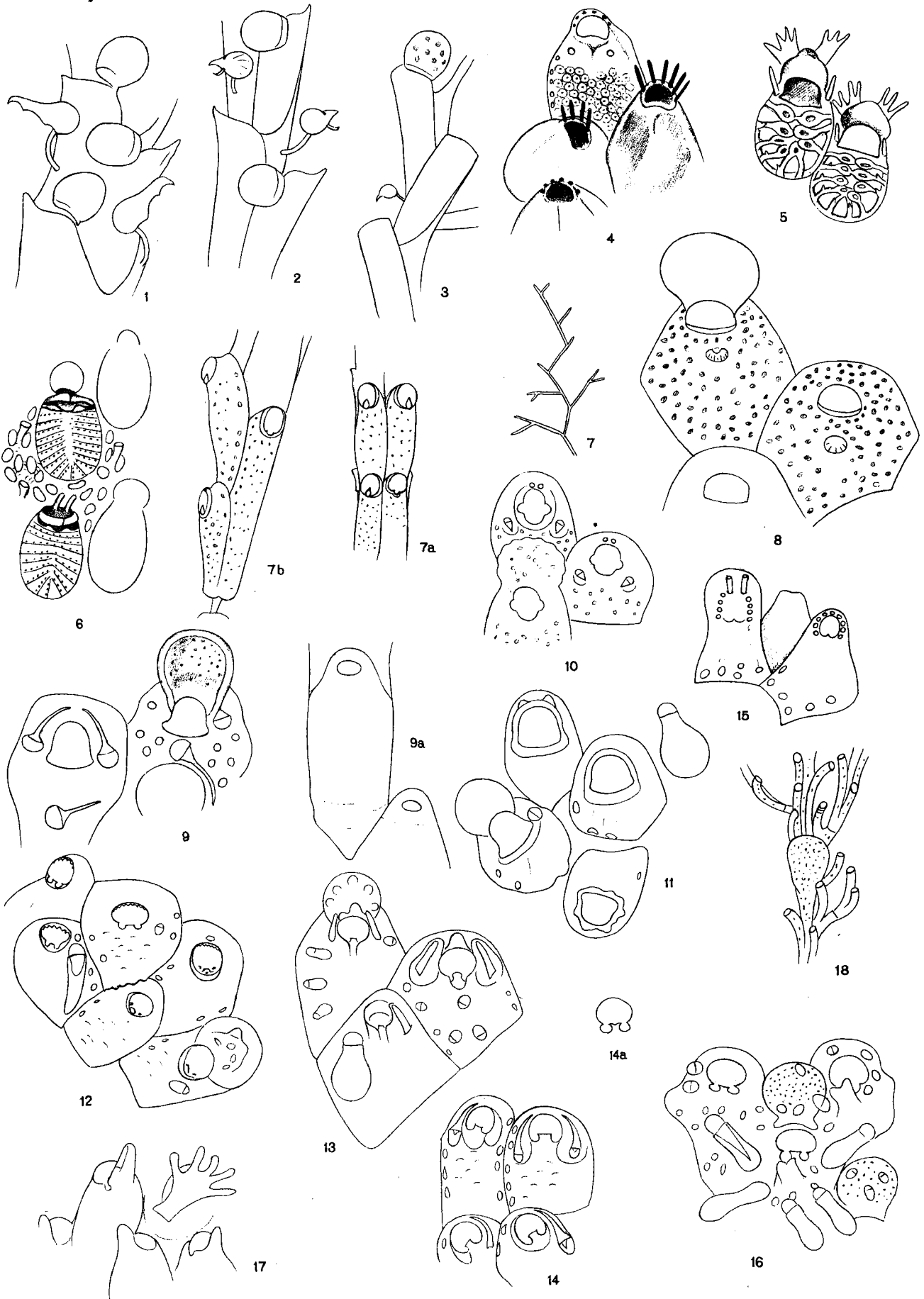
The largest specimen of this form is  $1\frac{1}{2}$  by 1 inch in size, it is beautifully branched, but the branches do not anastomose, the peristome is always toothed.

Amirante, 35 fath.

115. *Entalophora proboscidea* (M. Edwards). Waters, Expéd. Antarct. Belge, 1904, Bryozoa, p. 91.

Amirante, 29—35 fath.; Seychelles, 39 fath.

There are some bits of colonies that, I believe, belong to this species.



116. *Lichenopora holdsworthii* (Busk).

*Discoporella holdsworthii*, Busk, Brit. Mus. Cat., pt. iii, p. 33.

There are more zoecia in some of the series than Busk mentions, some of the series have as many as 12, but others are shorter, either curtailed at the outside or the inside of the series. Some colonies are much less regular than others. There are two rows of pores between the series, of the same size as those on the central area, which is about the size of the zoecial orifice. The margins of the zoecia are much broken, but appear to be elliptical, raised most at the back.

Cargados, 20—28 fath.; Saya de Malha.

117. *Cylindrocium giganteum* (Busk).

*Farella gigantea*, Busk, Quart. Journ. Micr. Sc., iv, 1856, p. 93; Hincks, Brit. Mar. Pol., p. 535.

Cargados; Farquhar, reef.

118. *Farella atlantica*, Busk, Report Challenger Exp., xvii, pt. i, p. 37.

Amirante, 35 fath.; Providence, 50—78 fath.; growing on hydroids.

## EXPLANATION OF PLATE 8.

- Fig. 1. *Bugula neritina*, var. *rubra*, n.  
 Fig. 2. *Bugula neritina*, var. *tenuata*, n.  
 Fig. 3. *Bugula neritina*, var. *ramosa*, n.  
 Fig. 4. *Micropora bouchardii* (Aud.).  
 Fig. 5. *Membraniporella magnifica*, n. sp.  
 Fig. 6. *Cribrilina reticulata*, n. sp.  
 Fig. 7. *Bifaxaria vagans*, n. sp.  
 Fig. 8. *Microporella malusii* (Aud.).  
 Fig. 9. *Lepralia crassa*, n. sp.  
 Fig. 9a. " " Dorsal view.  
 Fig. 10. *Lepralia marginata*, n. sp.  
 Fig. 11. *Lepralia bicornis*, n. sp.  
 Fig. 12. *Smittia glomerata*, n. sp.  
 Fig. 13. *Smittia ornata*, n. sp.  
 Fig. 14. *Smittia murarmata*, Kirkpatrick.  
 Fig. 15. *Phylactella galeata*, n. sp.  
 Fig. 16. *Mucronella ellerii*, var. *multi-aviculariata*, n.  
 Fig. 17. *Cellepora vagans*, Busk.  
 Fig. 18. *Crisia conferta*, Busk.