

CATALOGUE
OF
MARINE POLYZOÄ
IN THE
COLLECTION
OF THE
BRITISH MUSEUM.

PART III.
CYCLOSTOMATA.

LONDON:
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1875.

Prof. Smitt's experience, however, would appear to lead to the belief that it sometimes does so; and that able observer has thence been induced to place *Idmonea* in the same family, in fact as a sub-genus of *Tubulipora*. At present, from my own observation, I am unable to agree with him on this point.

3. *Idmonea milneana*, D'Orb. (Plate XI.)

Zoarium spreading, ramose, dichotomous, each longer branch usually terminating in a pair of short forks; tubes very slightly exserted, flattened, and even; aperture wide, margin thick; four cells in each series. Surface finely dotted, slightly sulcate behind; dorsal surface convex, usually marked with concentric lines of growth.

Idmonea milneana, *D'Orbigny, Voy. Amér. Mérid., Polypiers*, p. 20, pl. ix. figs. 17-21; *Pal. Franç.* p. 732; *Smitt, Floridan Bryozoa*, pl. iii. figs. 14, 19.

? *Idmonea transversa*, *M.-Edw. l. c.* p. 26, pl. ix. fig. 3.

Hab. Îles Malouines (*D'Orb.*); coast of Tierra del Fuego and Patagonia, 30 fathoms; Chonos archipelago (*Darwin*).

M. M.-Edwards's figure of *I. transversa* appears to represent *I. milneana*.

4. *Idmonea contorta*, n. sp. (Plate VIII.)

Zoarium irregularly branched or lobate; branches, or lobes, nearly uniform in size, variously contorted, sometimes inosculating; cells usually connate and immersed throughout, sometimes much produced and projecting, 5-7 in each series. Surface finely punctured; dorsal surface convex, marked with concentric lines of growth.

Hab. Algoa Bay, South Africa.

5. *Idmonea notomala*, n. sp. (Plate XII. A.)

Zoarium dichotomously branched; branches flattened or concave behind, rounded in front; cells deeply immersed, 3-5 in each series (usually 4); the series on either side are separated by a wide interspace, in which there are no openings of cells.

Hab. Rasel Amoush, Mediterranean (*H.M.S. 'Porcupine'*).

As the specimens upon which I have ventured to found this species, brought home by the 'Porcupine' Expedition, consist of only four or five small worn fragments of evidently an old dead growth, the above characters will apply only to the advanced stage of development. They are, however, sufficient to distinguish the form to which they belong from any other with which I am acquainted. That it has no relation with *I. atlantica* is at once obvious; nor does it agree with any of the forms described by Heller or Meneghini under the names of *I. frondosa*, *gracilis*, *serpula*, *meneghinii*, *triforis*, *tubulipora*, and *irregularis*. There only remains, therefore, *I.*

transversa of Milne-Edwards; but as there is every reason to believe that what M. Milne-Edwards has described and figured under that name is really *I. milneana*, D'Orb., and as his figure, at any rate, will in no way suit the present form, it is impossible to place them together, even were it right in any case to adopt Lamarck's specific appellation, which was clearly applied by him, not to any form of *Idmonea*, but to a parasitic *Tubulipora*, probably *T. serpens*.

6. *Idmonea marionensis*, n. sp. (Plate XIII. figs. 3-5,
Plate VII. figs. 7, 8, young state.)

Zoarium slender, elongated, very sparingly branched; stem and branches cylindrical; cells 2-3 in a series (more usually 2), series wide apart. Surface very finely and sparsely punctured; dorsal surface convex, with a fine longitudinal striation.

? *Crisina hochstetteriana*, *Stoliczka, Novara Exp. Geol. Th. Bd. i. p. 113, tab. xviii. fig. 3*; *Smitt, Floridan Bryozoa*, p. 6, pl. ii. figs. 11-13.

Hab. Marion Island, 80 fathoms (*Voy. Erebus & Terror*,); ? Gulf of Florida, Bahia (*Smitt*, fossil); Orakei Bay, Auckland, New Zealand (*Stoliczka*).

This species marks a transition between *Pustulopora* and *Idmonea*. The cells, however, are always placed in rows or series on each side of the anterior aspect of the branch and deeply immersed. It may possibly be identical with M. d'Orbigny's *I. canariensis* (Pal. Franç. p. 732); but as no figure or description of that species is given, and it is merely stated to be "slender as a thread and almost round, with very few cells," it is impossible to be certain.

7. *Idmonea irregularis*, Meneghini. (Plate XII.)

Zoarium branched dichotomously; branches slender, rounded; cells 4-6 in each series, the outermost of which are the longest. On the front of the branch, between the lateral series, the surface presents the openings of scattered cells.

Idmonea irregularis, *Meneghini, Mem. sui Polypi della Famiglia dei Tubuliporiani*, p. 12 (teste *Heller*); *Heller, l. c. p. 121*.

Hab. Adriatic, on the Dalmatian coast (*Menegh.*, *Heller*); Mediterranean (*H.M.S. 'Porcupine'*).

Like *I. marionensis*, which has some of the characters of a *Pustulopora*, the present form may be regarded as passing into *Hornera*.

8. *Idmonea parasitica*, n. sp. (Plate X. figs. 2, 3.)

Zoarium irregularly branched; branches slender, straggling, often anastomosing; cells slender, in great part free, and curved in various directions, 2-5 in each series; surface smooth, dotted.

Hab. South Australia, parasitic upon *Pustulopora intricaria* (*Gould*).

19. *Idmonea tuberosa*, D'Orb.

"Slender, everywhere wrinkled transversely, branched, slightly compressed; rows indistinct, each consisting of two separate cells."

Idmonea tuberosa, *D'Orb. l. c.* p. 731.

? *Idmonea marionensis*, *Bk.*

Hab. Ile de Basilan.

20. *Idmonea canariensis*, D'Orb.

"Slender as a thread, almost round, with very few cells."

Idmonea canariensis, *D'Orb. l. c.* p. 731.

? *Idmonea gracillima*, *Bk.*

Hab. Teneriffe (*D'Orb.*).

21. *Idmonea californica*, D'Orb.

"Wide, much depressed, marked as if by steps of growth beneath, presenting above simple transverse lines of cells not interrupted in the middle."

Idmonea californica, *D'Orb. l. c.* p. 731.

Hab. Ile de Venado, Mer Vermeille, California (*D'Orb.*).

22. *Idmonea fenestrata*, Busk.

Zoarium irregularly reticulate; branches anastomosing, subtriangular, often angular behind; mouths of cells projecting, quadrangular, 5-6 in each series; cells flattened in front. Surface finely punctate; dorsal surface very finely reticulate, sulcate, with elongated pores in the sulci.

Idmonea fenestrata, *Bk. Mon. Crag Polyzoa*, p. 105, pl. xv. fig. 6?;
Smitt, Skandin. Hafs-Bryozoen, 1896, p. 399.

Hab. Spitzbergen, 50 fathoms (*Malmgren*). Fossil in the Coral-line Crag.

The identification of this species with the Crag form has been made by Prof. Smitt with some doubt.

2. HORNERA, Lamx.

Zoarium ramose, ramification irregularly dichotomous. Branches cylindrical or subcompressed. Zoocœcia opening only on one side of the branch. Oocœcia dorsal or anterior.

Hornera, *Lamx. Exposit.* p. 41 (1821); *Milne-Edwards* (pars); *Reuss* (pars); *Blainville* (pars); *DeFrance*, *Michelin*, *Hagenow*, *D'Orbigny*, *Smitt*, *Busk*, *Sars*, *Alder*, *Norman*, &c.
Millepora (pars), *Linn.*, *Pallas*, *Esper*, *Solander*.
Retepora (pars), *Lamk.*, *Goldfuss*.
Siphodictyum, *Lonsdale*.

a. *Species with dorsal ooecia: anterior surface longitudinally fibrillated or sulcate.*

1. *Hornera frondiculata*, Lamx. (Plate XX. figs. 1, 2, 3, 6.)

Branches tapering, more or less in one plane, cylindrical or sub-compressed; anterior surface strongly fibro-reticulate, presenting rhomboidal spaces in which are situated the openings of the zooecia surrounded by numerous pores; mouth of tubes exerted, usually bifid; dorsal surface coarsely reticulate, granular or nearly smooth, with small elongated pores in the sulci; ooecium oblong, carinate, ribbed; aperture tubular, superior.

Hornera frondiculata, Lamx. *Exposit.* p. 41, pl. 74. figs. 7-9; *M.-Edw.* l. c. p. 17, pl. 9. figs. 1-1 c; *Blainv. Man. d'Actinol.* p. 419; *Heller*, l. c. p. 124.

Retepora frondiculata, Lamk.

? *Millepora tubipora*, Ell. & Sol. p. 139, pl. xxxi. fig. 1.

Millepora lichenoides, Linn., Pallas, *Esper.*

? *Hornera affinis*, *M.-Edw.* l. c. p. 9, pl. x. fig. 1.

? *Hornera andegavensis*, *Michelin*, *Icon. Zoophyt.* p. 318, pl. 76. fig. 8.

Hornera serrata et tubulosa?, *Meneghini*, l. c. p. 10.

Hab. Mediterranean, Adriatic (very abundant). Fossil in the Crag and Upper Tertiaries of Sicily &c.

2. *Hornera lichenoides*, Linn. (sp.). (Plate XVIII. figs. 5, 6.)

Zoarium irregularly dichotomous; branches crowded; anterior surface faintly fibro-reticulate, sparsely punctate; opening of zooecia in front of branches circular, and either wholly immersed or slightly prominent, those on the sides of the branches tubular; orifice elliptical, entire, the border being produced on one side; dorsal surface finely sulcate, with minute pores in the sulci; ooecia dorsal, subglobular; surface reticulate or coarsely punctured; aperture tubular, lateral. (*Alder.*)

"Corallium," *Pontoppidan*, *Norges Natuurl. Hist.* i. p. 258, pl. 14. figs. D, E.

Millepora lichenoides, Linn.; *Müller*, *Prodrom.* p. 252. no. 3046; *Ström*, *Act. Hafn.* xii. p. 309, pl. iii. fig. 12; *Fabricius*, *Zool. Samml.* (*M.S. Smitt*), et *Faun. Grænl.* p. 432 (non Pallas).

Hornera frondiculata, *Sars*, *Reise Loff. Finn.*, *Nyt Magazin f. Nat. Vid.* t. vi. p. 146; *Busk*, *Ann. N. H.* 2 ser. xviii. p. 34, pl. i. fig. 7.

Hornera borealis, *Busk*, *Crag Polyzoa*, pp. 95 & 103; *Alder*, *New Brit. Polyzoa*, *Mic. Journ.* new ser. vol. iv. p. 108, pl. v. figs. 1, 6.

Hornera lichenoides, *Smitt*, l. c. p. 404, pl. vi. fig. 10, pl. vii. figs. 1-14.

Hab. Arctic Seas (*Lovén*); coast of Norway (*Pontopp.*, *Sars*, *M^cAndrew*); Shetland (*Barlee*).

3. *Hornera cæspitosa*, n. sp. (Plate XV.)

Zoarium densely and irregularly branched in all directions; secondary branches short and truncate; anterior surface obscurely

fibrillated, granular, punctured; mouths of zoecia circular, level with the surface, arranged in irregular quincunx; peristome entire, slightly thickened; dorsal surface granular, irregularly sulcate, densely punctured with unequal round pores; ooecium unknown.

Hab. Cape Capricorn, 15 fathoms (*Voy. Rattlesnake*); Tierra del Fuego, 53° S., 30 fathoms (*C. Darwin*).

The Australian form is rather more robust than the Fuegian; but in essential characters the two appear to coincide.

4. *Hornera pectinata*, Busk.

Zoarium irregularly branched; branches terete; anterior surface sparsely punctured and obscurely ridged, porcellaneous, dorsal sparsely punctured; mouths of zoecia exerted; peristome pectinate; ooecia unknown.

Hornera pectinata, *Bk. Quart. Journ. Mic. Sci. new ser. vol. i. p. 79, pl. xxxiii. figs. 4-6.*

Hab. Madeira (*J. Y. Johnson*).

- b. *Species with the ooecia anterior, either wholly or in part; surface in front not fibrillated or sulcate.*

5. *Hornera violacea*, Sars. (Plate XVIII. figs. 1-4.)

Zoarium irregularly branched; branches short, truncate; zoecia distinct, immersed or in part free; dorsal surface granular or very finely striated with minute pores; ovicells elongated, situated in the axils of the branches, partly in front and partly behind, smooth and finely punctate, with a thin median costa.

Hornera violacea (forma violacea), *Smitt, l. c. p. 404, tab. vi. figs. 6-9; Sars, Geol. og Zool. Jagtt. Reise Trondj. 1862, Nyt Mag. Nat. Vid. xii. p. 282.*

Pustulopora orcadensis, *Bk. Q. J. Mic. Sc. (1860), viii. p. 214, pl. 39. figs. 1, 2.*

Hab. Arctic Seas; coast of Norway, Hammerfest (*Sars*).

- Var. *α. PROBOSCINA*. (Plate XVIII. figs. 1, 3.) Ooecia in front, suborbicular, umbilicate, finely punctate.

Hornera violacea (forma proboscina), *Smitt, l. c. p. 404, pl. vi. figs. 2 & 5.*

Zoarium irregularly branched; branches lax and straggling; zoecia tubular, distinct, elongated, in great part free; anterior surface without sulci, ridges, or punctures; dorsal surface granular, finely punctate; ooecia anterior, suborbicular or elongate, situated in the axils of the branches, partly in front and partly behind (*Norman*); smooth, finely punctate, with a thin median costa.

Var. β . TUBULOSA. (Plate XVIII. figs. 2, 4.) Oocœcia represented by an elongated dilatation in front of a branch; surface smooth.

With respect to the last-mentioned form, I have considerable doubt as to the propriety of associating it with *H. violacea* at all. It forms, in fact, so marked a transitional form between *Pustulopora* and *Hornera* that it might as reasonably be given to one as to the other. The specimen from which I have made the figures and taken the description was given to me many years since by my friend Mr. Bowerbank, who informed me that it was procured by Captain Beaufort in the North Atlantic in lat. $21^{\circ} 35' N.$ and $90^{\circ} 42' W.$, at a depth of 20 fathoms.

It differs from *H. violacea* not only in its colour, which is brown, but more importantly in the constitution of the oocœcium, which in no respect resembles that of the other species of *Hornera* with which we are acquainted, but is exactly like that of *Pustulopora*, *Idmonea*, &c.; i. e. it is formed by a simple expansion of variable size in front of a portion of a branch (Plate XVIII. fig. 2). Should it be regarded as a species distinct from *H. violacea* (var. *proboscina*), it might be thus diagnosed:—

Hornera tubulosa.

Zoarium brown, irregularly dichotomous; branches occasionally inosculating; zooœcia tubular, free for about half their length, curved forwards and very long; mouth orbicular, border even, somewhat expanded; surface finely dotted, smooth, dorsal surface very finely punctate; oocœcia formed by an elongated enlargement on the front of a branch.

3. RETIHORNERA, Kirchenpaur.

Zoarium foliaceous, composed of subparallel branches connected by transverse tubules, so as to form an expanded frond with quadrangular fenestræ.

Retihornera (pars), *Kirchenpaur, Catalogue iv. of the Museum Godeffroy, Hamburg, May 1869.*

Hornera —, *M^r Gillivray, Austr. Polyzoa.*

1. *Retihornera foliacea*, M^r Gillivray. (Plate XIII. figs. 1, 2; Plate XIX.)

Zoarium irregularly plicate or convoluted, rising from a short central stem with a discoid base; branches very closely approximate; the oblong fenestræ consequently are usually narrower than the branches; mouths of zooœcia exerted, margin toothed; anterior surface granular, numerous delicate spines projecting into the fenestræ; dorsal surface granular, irregularly sulcate, or sometimes nearly smooth; oocœcia unknown.

Discocavea aculeata, D'Orb. Pal. Franç. p. 958, pl. 776. figs. 5-8 strongly resembles this species.

5. *Discoporella novæ-zelandiæ*, n. sp. (Plate XXX. fig. 2.)

Discoid, cupped; cells tubular, projecting, connate in uniserial radii; peristome bifid; central area (unoccupied by cells) depressed; cancelli large, becoming smaller towards the periphery.

Hab. New Zealand, (? always) on a *Catenicella* (*Dr. Lyall*).

A small species, rarely exceeding $\frac{1}{8}$ inch in diameter. The much-raised slender series of upright connate tubes with a bifid mouth, and the comparatively very large central cancelli, are the main characteristics of this abundant species.

6. *Discoporella fimbriata*, n. sp. (Plate XXVII.)

Zoarium almost conical; cells very indistinctly serial, distant; interstitial pores almost obsolete; mouth expanded; peristome fimbriated.

Hab. Chonos archipelago, 13 fathoms; Tierra del Fuego; Cape Horn, 40 fathoms; Chiloe, 96 fathoms (*Darwin*); Tasmania (*Mrs. Smith*) (fig. 1).

7. *Discoporella californica*, D'Orb. (Plate XXX. fig. 5.)

Zoarium orbicular, thick, depressed in the centre; cells disposed in bi- to triserial radii, alternately longer and shorter, and much raised; cells connate throughout, thence hexagonal; central area and interstitial spaces widely reticulate; mouths of cells less than the cancelli.

Unicavea californica, *D'Orb. Pal. Franç. p. 972.*

Hab. San Diego, California (*Dr. P. Carpenter*); off Milva Maura, San Pedro, California (*Dr. Palmer*).

8. *Discoporella radiata*, Audouin (*sp.*). (Plate XXXIV. fig. 3.)

Zoarium orbicular, convex, with the centre flat or depressed; cancelli small and sparse, not stellate. Cells connate, disposed in much-raised uniserial rays alternately long and short; mouths obscurely mucronate. A single row of circular pores between the rows of cells.

Melobesia radiata, *Audouin, Egypte*, t. i. p. 235, pl. 6. fig. 3.

Unicavea radiata, *D'Orb. l. c. p. 971.*

Discocavea verrucaria, *id., ib. p. 958.*

Discoporella flosculus, *Hincks, Zooph. S. Devon, An. N. H. 3rd ser. vol. ix. p. 468, pl. xvi. fig. 3.*

Tubulipora patina, *M.-Edw. l. c. p. 9, pl. xiii. fig. 1.*

Discoparsa patina, *Heller, Bryoz. Adriat. p. 122.*

Hab. Mediterranean? (*Savigny, H.M.S. 'Porcupine'*); Adriatic, (*Heller*); South Devon (*Hincks*).

9. *Discoporella mediterranea*, Blainville. (Plate XXXIV. fig. 4.)

Zoarium orbicular, umbonate, but hollowed in the centre, around which the cells are arranged in short multiserial rays, most of which do not reach the border of the disk; entire surface reticulate. Mouths of cells and openings of cancelli of equal size and almost indistinguishable.

Lichenopora mediterranea, *Blainv. Man. d'Actinol.* p. 407 (no figure or description); *Michelin, Icon.* (1844), p. 68, pl. xiv. fig. 5.

Actinopora mediterranea, *D'Orb. Prodr.* iii. p. 188 (1847).

Unicavea mediterranea, *id. ib.* p. 971 (1852).

Hab. Mediterranean, on shell (*H.M.S. 'Porcupine,' Blainville, Michelin, D'Orbigny*). Fossil, Miocene: Astezan, Asti, Vaucluse.

10. *Discoporella holdsworthii*, n. sp. (Plate XXX. fig. 4.)

Discoid, convex, bordered; cells uniserial, two to six in each series; orifice elliptical, peristome pointed on the lower side. Central area wide, with numerous large circular stellate pores.

Hab. Ceylon, on dead shell (*Holdsworth*).

Other species noticed by Authors.

11. *Discoporella convexa*, D'Orb.

"Very convex above; cells in irregular lines, very slightly projecting; intermediate pores very distinct and numerous."

Unicavea convexa, *D'Orb. l. c.* p. 972.

Hab. Coast of Calvados.

12. *Discoporella novæ-hollandiæ*, D'Orb.

"Much depressed; rays wide apart, much raised and very wide, with two ranges of intermediate pores."

Unicavea novæ-hollandiæ, *D'Orb. l. c.* p. 971.

Hab. Bay of Chiens-Marins (? Seal Bay), New Holland.

13. *Discoporella complanata*, Meneghini.

"Discoid, flat, not hollowed in the centre; the whole surface furnished with rows of tubes radiating from the centre towards the periphery; tubes slightly curved, of almost equal length."

Tubulipora complanata, *Meneghini, Polipi dell. Famiglia dei Tubuliporani, finora osservati nell' Adriatico*, 1844, p. 5.

Discosparsa complanata, *Heller, l. c.* p. 122.

Hab. Adriatic.

Probably = *D. radiata*.

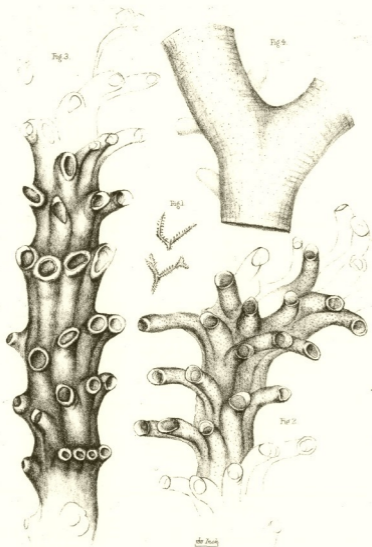


Fig 2.



Fig 3.

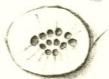
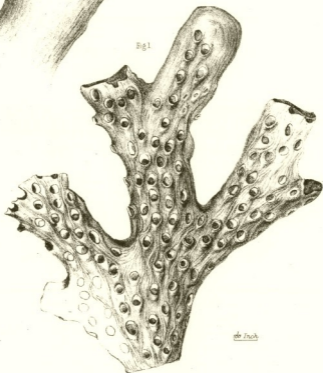


Fig 1.



de Trach.

Fig. 1.

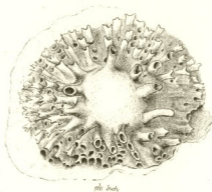


Fig. 4.



Fig. 3.



Fig. 2.

