

BRYOZOA

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Abstract

The survey collections contained 114 species which are discussed; 95 of these are determined to species level, and the remaining 19 have been placed in their appropriate genera. Appended is a list of the 300 species with their localities recorded by MacGillivray in his monograph; 153 of these are recorded from Port Phillip Heads, and 78 of them were taken on the present Survey.

Introduction

The Bryozoa of the original Port Phillip Survey set up by the Royal Society of Victoria in July 1888 were included in P. H. MacGillivray's monograph of the Victoria Bryozoa published in McCoy's *Prodromus of Zoology* 1879-89. Port Phillip Heads is a locality listed for 153 of the 300 species discussed, and is the only one for 125 of these species; 81 species are listed for Queenscliff, 42 for Portland and 22 for Warrnambool, W. Victoria.

The present Survey Bryozoan collections have been worked in detail, and it has been possible to identify 95 species, while a further 19 have been identified to genus level only. These are discussed in the present paper. A table of the species discussed by MacGillivray in McCoy's *Prodromus of Zoology* is included together with their authors, dates, currently accepted nomenclature, and localities as listed in the *Prodromus*. The 78 species collected in this survey are marked with an asterisk.

Last century Bryozoologists proposed several new families, genera and species. However, Professor Raymond C. Osburn 1952: 284) frankly admitted that where to place several species still puzzled him greatly. He quoted Shakespeare, 'They fool me to the top of my bent', and continued '*The Lichenopores* have always been "a thorn in the flesh" to those who have attempted to work with them.' Likewise several times in this study the question arose as to whether one genus is congeneric with another. In several species a great deal of varia-

tion in most of the characters has been recorded. One species may resemble another species from the coast of Europe, so transfer by ship cannot be excluded.

It is necessary that the Bryozoan collections in the National Museum of Victoria be revised. They have been put in order recently both systematically and alphabetically, but not revised.

Subphylum ECTOPROCTA Nitsche, 1869

Class GYMNOLEAEMATA Allman, 1856

Order CTENOSTOMATA Busk, 1852

Suborder CARNOSA Gray, 1841

Family FLUSTRELLIDRIDAE Bassler, 1953

Elzerina Lamouroux, 1816

Elzerina blainvillii Lamouroux, 1816

Elzerina blainvillii Lamouroux, 1816: 123, Pl. 2, figs. 3a-b.

Farciminaria dichotoma Busk, 1861: 155, Pl. 35, figs. 1-1b.

Flustrella dichotoma Hincks, 1884: 366, Pl. 14, figs. 2-2b.

Verrucularia dichotoma Busk, 1884: 48.

Verrucularia dichotoma, MacGillivray, 1890: 348-349, figs. 6-7a.

Survey area 58 (88), 59 (36), MacGill.
Coll. area 58 Port Phillip Heads

Suborder VESICULARINA Johnston, 1847

Family VESICULARIIDAE Hincks, 1880

Bowerbankia Farre, 1837

Bowerbankia sp.

Survey area 10 (103-5).

Growing on *Mytilus planulatus* in association with *Membranipora papulifera*, *Bugula neritina* and *Celleporella hyalina*.

Amathia Lamouroux, 1812

This genus is well represented on the Australian coast.

Amathia australis (Tenison-Woods, 1878)

Serialaria australis Tenison-Woods, 1878: 83, plate.
Amathia australis, MacGill., 1889A: 310, Pl. 185, figs. 5-5a.

Survey area 59 (225), MacGill. Coll. area 58 Port Phillip Heads.

? Amathia biseriata Krauss, 1837

Amathia biseriata Krauss, 1837: 23.

Survey area 59 (36).

Amathia inarmata MacGill., 1887

Amathia inarmata MacGill. 1887A: 184, 1889A: 309, Pl. 185, figs. 4-4a.

Survey Area 60 (215), 61 (242), MacGill. Coll. area 58 Port Phillip Heads.

Amathia tortuosa Tenison-Woods, 1880

Amathia tortuosa MacGill., 1889A: 308, Pl. 185, figs. 3-3a.

Survey area 10 (193), 11 (212), 12 (196), 13 (210), 25 (299), 37 (297-8), MacGill. Coll. area 58 Port Phillip Heads.

Amathia sp.

Survey areas 59 (87), 61 (241).

Order CYCLOSTOMATA Busk, 1852

Suborder ARTICULATA Busk, 1859

Family CRISIIDAE Johnston, 1847

Crisia Lamouroux, 1812**Crisia acropora** Busk, 1852

Crisia acropora Busk, 1852: 351; 1875: 6, Pl. 5, figs. 3-4, MacGillivray, 1879A: 38-39, Pl. 39, figs. 3-3c.

Survey areas 58 (150-4), (290), 59 (36), 66 (291-2), MacGill. Coll. areas 6 Williamstown, 58 Queenscliff,

Crisia edwardsiana (d'Orbigny, 1839)

Crisia edwardsiana, d'Orbigny, 1839: 7, Pl. 1, figs. 4-8.
Crisia edwardsiana, Busk, 1875: 5, Pl. 2, figs. 5-8; MacGillivray, 1879A: 37, Pl. 39, figs. 2-2c.

Survey area 58 (290), 66 (291-2), MacGill. Coll. area 6 Williamstown.

Crisia tenuis MacGill., 1879

Crisia tenuis MacGill., 1879A: 39-40, Pl. 39, figs. 5-5d.

Survey area 59 (24), MacGill. Coll. area 59 Queenscliff, growing on roots of algae. Growing on *Celleporaria prolifera* in association with *Conopeum reticulum*, *Bugula dentata* and *Scrupocellaria diadema*.

Crisia geniculata (Milne-Edwards, 1838)

Crisia geniculata Milne-Edwards, 1838: 197, Pl. 6, figs. 1-1c.

Crisida cornuta var. *geniculata* Busk, 1875: 3, Pl. 1, figs. 1-4.

Survey area 59 (36).

Crisia sp.

Survey area 58 (88) (150-4), 59 (36) (79).

Suborder TUBULIPORINA Milne-Edwards, 1838

Family DIASTOPORIDAE Gregory, 1899

Berenicea Lamouroux, 1821**? Berenicea sarniensis** (Norman, 1864)

Diastopora sarniensis Norman, 1864: 89, Pl. 11, figs. 4-6; MacGillivray, 1887: 181, Pl. 147, figs. 4-4b.

Plagioecia sarniensis: Osburn, 1953: 632, Pl. 73, fig. 3.

Survey area 57 (294), MacGill. Coll. area 58 Port Phillip Heads.

'There is much resemblance to *P. patina* in the zoarial form . . . *P. sarniensis* has now been found in so many parts of the world that its distribution must be considered cosmopolitan' (Osburn 1953: 623-633). MacGillivray (1887C) lists both *Diastopora sarniensis* (Norman) and *Diastopora patina* (Lamarck) from Port Phillip Heads.

Family ONCOUSOECHIDAE Canu, 1918

Stomatopora Bronn, 1825**? Stomatopora geminata**, MacGill., 1886

Stomatopora geminata MacGill., 1886: 2, Pl. 2, fig. 3; 1889: 279, Pl. 176, fig. 1.

Survey areas 58 (150-4), 59 (36), MacGill. Coll. area 59 Port Phillip Heads.

Family TUBULIPORIDAE Johnston, 1838

Idmidronea Canu and Bassler, 1920**? Idmidronea australis** (MacGill., 1884)

Idmonea australis MacGill., 1884: 30, Pl. 68, figs. 2-2b.

Survey area 58 (150-4), MacGill. Coll. area 58 Port Phillip Heads.

'This species may prove to be a form of *I. atlantica*, but at present I think it better to describe it as a distinct species' (MacGillivray 1884: 30). 'It appears to me quite distinct' (Harmer 1915: 125).

Suborder CANCELLATA Gregory, 1896

Family HORNERIDAE Smitt, 1867

Hornera Lamouroux, 1821**Hornera foliacea** MacGill., 1869

Hornera foliacea MacGill., 1869: 143; 1886: 71-72, Pl. 118, figs. 1-5.

Survey area 59 (36), MacGill. Coll. area 58 Port Phillip Heads.

Hornera sp.

Survey areas 59 (36), 60 (268).

Suborder RECTANGULATA Waters, 1887

Family LICHENOPORIDAE Smitt, 1887

Lichenopora Defrance, 1823

Lichenopora sp.

Survey area 66 (292).

MacGillivray (1889: 280-281) lists two species for Victoria, both of which were taken in the vicinity of Port Phillip Heads (Area 58).

Order CHEILOSTOMATA Busk, 1852

Suborder ANASCA Levinsen, 1909

Division INOVICELLATA Jullien, 1888

Family AETIDAE Smitt, 1867

Aetea Lamouroux, 1812

Aetea anguina (Linnaeus, 1758)

Sertularia anguina Linnaeus, 1758: 816.

Aetea anguina, MacGillivray, 1887B: 143, Pl. 137, figs. 7-7a.

Survey area 58 (88), 59 (36), MacGill. Coll. area 58 Port Phillip Heads.

'This little creeping species is practically cosmopolitan and has been listed in nearly every paper dealing with shorewise Bryozoa in the temperate and tropical regions' (Osburn 1953: 11).

Aetea sica (Couch, 1844)

Aetea sica Couch, 1844: 102.

Aetea recta Hincks, 1880: 6, Pl. 1, figs. 6-7; MacGillivray 1889: 287, Pl. 178, fig. 1.

Survey area 58 (150-4), MacGill. Coll. area 58 Port Phillip Heads.

A widely distributed species, recorded from Europe and America.

Aetea sp.

Survey area 59 (36).

Division MALACOSTEGA Levinsen, 1909

Family SCRUPARIIDAE (Busk, 1852), Harmer, 1926

Scruparia Oken, 1815

Scruparia ambigua (d'Orbigny, 1841)

Eucrates ambigua d'Orbigny, 1841, Pl. 3, figs. 13-17; 1847: 11.

? *Scruparia chelata* McGill., 1889 (non Linnaeus 1758): 287-288, Pl. 178, figs. 2-2a, 3.

Survey area 53 (253), 58 (150-4) (290), 59 (36), MacGill. Coll. area 58 Port Phillip

Heads on algae and zoophytes. This species has been much confused with *S. chelata* (Linnaeus) and Dr Anna B. Hastings has pointed out the differences (1941), she shows that it has a very wide distribution around the world (Osburn 1953: 16).

Family MEMBRANIPORIDAE Busk, 1854

Membranipora de Blainville, 1830

Membranipora membranacea (Linnaeus, 1767)

Flustra membranacea Linnaeus, 1767: 1301.

Membranipora membranacea, MacGill., 1879: 29, Pl. 25, figs. 1-1b.

Survey areas 6 (137), 58 (80), 59 (36).

On *Macrocystis* at station 36. 'Of frequent occurrence everywhere on our shores, creeping over broad seaweeds' (MacGillivray 1879, Pl. 29). It has been reported from various regions around the world.

Membranipora perfragilis (MacGill., 1881)

Biflustra fragilis MacGill., 1869: 138.

Biflustra perfragilis MacGill., 1881A: 27, Pl. 57, figs. 1-1e.

Membranipora crassimarginata var. *erecta* Busk, 1884: 63, Pl. 14, figs. 3-3a.

Acanthodesia perfragilis, Hastings, 1945: 98.

Survey 59 (Portsea Pier intertidal coll. 27 Mar. 1960), MacGill. Coll. area 58 Port Phillip Heads.

The figured specimen of *Membranipora crassimarginata* var. *erecta* of the Challenger Report is from Bass Strait, and Waters (1898: 658) identifies it with *Biflustra perfragilis* MacGillivray, which was described from the same locality.

(?) **Membranipora papulifera** (MacGill., 1882)

Membranipora papulifera MacGill., 1882: 116, fig. 9.

Survey area 10 (103-5), McGill. Coll. area 58 Port Phillip Heads.

Growing on *Mytilus planulatus* in association with *Bugula neritina*, *Celleporella hyalina* and *Bowerbankia* sp.

Conopeum Gray, 1848

Conopeum reticulum (Linnaeus, 1767)

Millepora reticulum Linnaeus, 1767: 1284.

Membranipora lacroixii MacGillivray (non Savigny), 1879: 35, Pl. 26, figs. 5-5a, 6-6a.

Survey area 17 (172), 29 (174), 30 (130), 59 (24) (36), MacGill. Coll. area 10 Point Cook, area 7 Brighton, area 58 Queenscliff.

At (24) growing on *Celleporaria prolifera* in association with *Crisia tenuis*, *Bugula dentata*

and *Scrupocellaria diadema* and at (130) growing on *Mytilus planulatus* in association with *Rhynchozoon tubulosum* and at (174) again on *Mytilus* in association with *Celleporaria verrucosa*.

A cosmopolitan species generally confused with *lacroixii* Audouin.

Family FLUSTRIDAE Smitt, 1867

Spiralaria Busk, 1861

Spiralaria denticulata (Busk, 1852)

Flustra denticulata Busk, 1852: 380; MacGillivray, 1880: 27, Pl. 45, figs. 1-1g.

Flustra denticulata var. *inermis*, Busk, 1852A, Pl. 49, figs. 3-4.

Survey area 57 (294), 58 (88), (291-2, 59 (36), 66 (291-2), MacGill. Coll. area 58 Queenscliff.

'A very variable species, the only constant character being the minute denticles within the inner edge of the margin of the cells' (MacGillivray 1880: 27).

Bugularia Levinsen, 1909

Bugularia dissimilis (Busk, 1852)

Carbasea dissimilis, Busk, 1852A: 51, Pl. 50, figs. 4-7; MacGillivray, 1880: 28-29, Pl. 45, figs. 3-3d.

Bugularia dissimilis, Levinsen, 1909: 109, Pl. 5, figs. 2a-2d.

Survey area 59 (36), MacGill. Coll. area 58 Queenscliff.

Family ALDERINIDAE Canu and Bassler, 1927

Amphiblestrum Gray, 1848

Amphiblestrum sp.

Pyrulella Harmer, 1926

Pyrulella pyrula (Hincks, 1881)

Membranipora lineata (MacGill., 1879 (non Linnaeus): 34, Pl. 26, figs. 3-3a.

Membranipora pyrula Hincks, 1881: 3; MacGillivray, 1886A, Pl. 126, figs. 1-1b, 2.

Survey area 59 (36), MacGill. Coll. area 58 Port Phillip Heads.

Family HIASTOPORIDAE MacGill., 1895

Hiantopora McGill., 1887

Hiantopora ferox (MacGill., 1869)

Lepralia ferox MacGill., 1869: 132; 1879: 34, Pl. 38, figs. 8-8c.

Survey areas 59 (36), MacGill. Coll. areas 6 Williamstown, 59 Queenscliff.

On algae.

Family ARACHNOPODIIDAE Harmer, 1957

Arachnopusia Jullien, 1888

Arachnopusia monoceros (Busk, 1854)

Lepralia monoceros Busk, 1854: 72, Pl. 93, figs. 5-6.
Cribrilina monoceros Busk, 1884: 133-134, Pl. 19, figs. 8-8c.

Lepralia monoceros MacGill., 1879: 32, Pl. 38, figs. 1-2.

Survey areas 66 (291-2), MacGill. Coll. area 58 Port Phillip Heads.

Division COELOSTEGA Levinsen, 1909

Family MICROPORIDAE Hincks, 1880

Caleschara MacGill., 1880

Caleschara denticulata (MacGill., 1869)

Eschara denticulata MacGill., 1869: 138.

Survey area 58 (88), MacGill. Coll. area 55 Schnapper Point.

Family STEGANOPORELLIDAE Hincks, 1884

Steganoporella Smitt, 1873

Steganoporella magnilabris Busk, 1854

Membranipora magnilabris Busk, 1854: 62, Pl. 65, fig. 4.

Steganoporella magnilabris, MacGill., 1885: 43-44, Pl. 60, fig. 1-1c.

Survey areas 55 (149), 59 (23) (36).

Type species, *Steganoporella* (*Steginoporella*) *elegans* Smitt (= *Membranipora magnilabris* Busk) according to Osburn 1950: 107.

Family THALAMOPORELLIDAE Levinsen, 1902

Thairopora MacGill., 1882

Thairopora cincta (Hutton, 1878)

Membranipora cincta Hutton, 1878: 23.

Diploporella cincta, MacGill., 1881: 15, figs. 1-1c.

Diploporella cincta, MacGill., 1885: 98.

Thalamoporella cincta, Levinsen, 1909: 179, 192-193, Pl. 22, figs. 7a-7d.

Survey areas 50 (229), 58 (150-4).

'Of this species I have examined two dry colonies from Port Phillip found in the collections of Algae at the Botanical Museum' (Levinsen 1909: 193).

Thairopora mamillaris (MacGill., 1860)

(?Lamoureux, 1816)

(?) *Flustra mamillaris* Lamoureux 1816: 110, Pl. 1, figs. 6a-b.

Membranipora mamillaris MacGill., 1860A: 165, Pl. 2, fig. 3, Queenscliff (Vict.); 1879: 30, Pl. 25, figs. 4-4a.

Thairopora mamillaris MacGill., 1882A: 118, figs. 7-7a; 1890A: 351, Pl. 196, fig. 2.

Thalamoporella mamillaris Levinsen, 1909: 178-179, 194-195, Pl. 6a, figs. 5-5e.

Survey area 58 (293), MacGill. Coll. area 58 Queenscliff, on seaweed.
An Australian species.

Thaiopora sp.

Survey area 59 (36).

Division PSEUDOSTEGA Levinsen, 1909

Family CELLARIIDAE Hincks, 1880

Cellaria Ellis and Solander, 1786

Cellaria punctata (Busk, 1852)

Salicornaria punctata Busk, 1852: 366.

Salicornaria gracilis Busk, 1852A: 17, Pl. 63, fig. 3; Pl. 65 (bis), fig. 2.

Cellaria gracilis, MacGill., 1880: 50, Pl. 49, fig. 4-4c; 1885: 94, Pl. 1, fig. 8.

Survey area 59 (36), MacGill. Coll. area 58 Queenscliff.

Harmer (1926: 338) states that 'In his British Museum Catalogue Busk (1852A: 17) substituted *Salicornaria gracilis* for *S. punctata* of his earlier work (1852: 366) of the same year.'

Cellaria hirsuta (MacGill., 1869)

Salicornaria hirsuta MacGill., 1869: 129.

Cellaria hirsuta MacGill., 1880: 48-49, Pl. 49, figs. 2-2b.

Survey areas 58 (3) (290), 59 (36), MacGill. Coll. area 58 Queenscliff.

MacGillivray (1880: 49) simply states it is frequent.

Cellaria tenuirostris (Busk, 1852)

Salicornaria tenuirostris Busk, 1852A: 17-18, Pl. 63, fig. 4.

Cellaria tenuirostris, MacGill., 1880: 49-50, Pl. 49, figs. 3-3c.

Survey area 59 (36), MacGill. Coll. area 58 Queenscliff.

Division CELLULARINA Smitt, 1867

Family FARCIMINARIIDAE Busk, 1852

Didymozoum Harmer, 1923

Didymozoum simplex (Busk, 1852)

Didymia simplex Busk, 1852: 35, Pl. 39.

Didymia simplex MacGill., 1880: 34-35, Pl. 46, fig. 6.

Survey area 59 (36), MacGill. Coll. area 58 Port Phillip Heads.

Didymozoum was proposed by Harmer (1923: 306-307) to replace *Didymia* Busk (pre-occupied by *Didymia* Le Peletier and Ser-ville, 1828), and with the same type species *Didymia simplex* Busk, 1852 (p. 384).

Family BICELLARIELLIDAE Levinsen, 1909

Various authors have separated this family into three, viz. Bicellariellidae, Bugulidae and Beaniidae. Harmer (1926: 409-410) only accepts Bicellariellidae.

Beania Johnston, 1840

Beania crotali (Busk, 1852)

Diachoris crotali Busk, 1852: 54, Pl. 66, figs. 1-2.

Beania crotali, MacGill., 1886: 68-69, Pl. 117, figs. 4-5.

Survey area 55 (149), MacGill. Coll. area 58 Port Phillip Heads.

Beania magellanica (Busk, 1852)

Diachoris magellanica Busk, 1852: 382; 1852A: 54, Pl. 67, figs. 1-3; MacGillivray, 1880: 32, Pl. 46, fig. 2.

Survey area 59 (23), MacGill. Coll. Port-land.

'This species is distributed around the world in the southern hemisphere and as far north as the Mediterranean Sea and Japan. In American waters it has hitherto been noted only at the Straits of Magellan (Busk), and Terra del Fuego and the Falkland Islands (Calvet).' Osburn 1953: 172.

Beania spinigera (MacGill., 1860)

Diachoris spinigera MacGill., 1860A: 9, Pl. 2, figs. 1-2; MacGill., 1880: 32-33, Pl. 46, fig. 3.

Survey area 59 (23), MacGill. Coll. area 58 Queenscliff.

Dimetopia Busk, 1852

Dimetopia cornuta Busk, 1852

Dimetopia cornuta Busk, 1852: 384; 1852A: 35-36, Pl. 29, figs. 2-3.

Dimetopia cornuta MacGill., 1880: 34, Pl. 46, fig. 5. Survey area 59 (36), MacGill. Coll. area 58 Queenscliff.

Dimetopia spicata Busk, 1852

Dimetopia spicata Busk, 1852: 384; 1852A: 35, Pl. 29, fig. 1.

Dimetopia spicata, MacGill., 1880: 33, Pl. 46, fig. 4.

Survey area 59 (36), MacGill. Coll. area 58 Port Phillip Heads.

Cornucopina Levinsen, 1909

Cornucopina grandis (Busk, 1852)

Bicellaria grandis Busk, 1852: 374; 1852A: 42, Pl. 44, figs. 1-3.

Bicellaria grandis MacGill., 1881A: 38, Pl. 59, figs. 2-3.

Survey areas 57 (294), 58 (150-4) (290),

59 (36), 66 (291-2), MacGill. Coll. area 58 Queenscliff.

Cornucopina tuba (Busk, 1852)

Bicellaria tuba Busk, 1852: 373; 1852A: 42, Pl. 31, figs. 1-4.

Bicellaria tuba MacGillivray, 1880: 37, Pl. 59, fig. 1a-d.

Survey area 58 (290), MacGill. Coll. area 58 Queenscliff.

Harmer (1926: 422) stated that in addition to *Bicellaria grandis*, inter alia *Bicellaria tuba* may be referred to *Cornucopina*.

Bugula Oken, 1815

Bugula dentata (Lamouroux, 1816)

Acamarchis dentata Lamouroux, 1816: 135, Pl. 3, fig. 3.

Bugula dentata, Busk, 1852: 46, Pl. 35, figs. 1-5.

Bugula dentata, MacGill., 1885A: 31, fig. 3.

Survey areas 58 (89), 59 (24), 61 (239), MacGill. Coll. area 6 Hobson Bay, area 58 Queenscliff.

At Station 24 growing on *Cellepora prolifera* in association with *Crisia tenuis*, *Conopeum reticulum* and *Scrupocellaria diadema*. *Bugula dentata* appears to have a wide distribution, from S. Africa up the W. coast to the Cape Verde Is. and Madeira, as well as on the Australian and Japanese coasts (Harmer 1926: 441).

Bugula neritina (Linnaeus, 1758)

Sertularia neritina Linnaeus, 1758: 815.

Bugula neritina, MacGill., 1881A: 41, Pl. 59, fig. 7.

Survey areas 10 (103-5), 12 (196), MacGill. Coll. area 6 Hobson Bay, area 58 Queenscliff, Warrnambool.

At Station 103-5 growing on *Mytilus planulatus* in association with *Biflustra papillifera*, *Celleporella bougainvillei* and *Bowerbankia* sp. This, the type species of the genus, is also the best known. It appears to be distributed everywhere in warmer waters along the shores (Harmer 1953: 154). It might be introduced by ships.

Bugula sp.

Survey area 12 (196).

Family SCRUPOCELLARIIDAE Levinsen, 1909

Scrupocellaria van Beneden, 1845

Scrupocellaria cyclostoma Busk, 1852

Scrupocellaria cyclostoma Busk, 1852A: 24-25, Pl. 28, figs. 4-5.

Scrupocellaria cyclostoma MacGill., 1886: 99-100, Pl. 126, fig. 3-3b.

Survey area 58 (88), MacGill. Coll. area 58 Port Phillip Heads.

Harmer (1926: 369) indicated that he had no satisfactory evidence that an allied species, *Scrupocellaria ferox* Busk, 1825 (Busk 1852A: 25, Pl. 22, figs. 1-2, 5) occurred in S. Australia where it seemed to be replaced by *Scrupocellaria cyclostoma* Busk, 1852.

Scrupocellaria diadema Busk, 1852

Scrupocellaria diadema Busk, 1852: 370; 1852A: 24, Pl. 28, figs. 1-3.

Scrupocellaria cervicornis Busk, 1852: 370; 1852: 24, Pl. 62, figs. 1-4; MacGill., 1886: 101, Pl. 126, figs. 6-7.

Scrupocellaria diadema, Harmer, 1926: 375-378, Pl. 25, figs. 20-25.

Survey area 59 (24), MacGill. Coll. area 58 Port Phillip Heads.

On *Cellepora prolifera* in association with *Crisia tenuis*, *Conopeum reticulum* and *Bugula dentata*.

Scrupocellaria ornithorhynchus Wyville

Thomson, 1858

Scrupocellaria ornithorhynchus Wyville Thomson, 1858: 144, Pl. 12, fig. 2.

Survey area 59 (36), MacGill. Coll. area 58 Port Phillip Heads.

Scrupocellaria ornithorhynchus was described from Bass Strait by Wyville Thomson as having 4-5 long spines, a well-developed proximal cryptocyst, and a narrow, curved distal lobe in its scutum. The lobe appears to be variable in Victorian specimens (Harmer 1926: 373).

Scrupocellaria scrupea Busk, 1852

Scrupocellaria scrupea Busk, 1852A: 24, Pl. 21, figs. 1-2.

Scrupocellaria scrupea MacGill., 1886A: 101, Pl. 126, fig. 8.

Survey areas 11 (212), 12 (196), 35 (71), 53 (253), 55 (149), 58 (290), 59 (36), 66 (291-2), MacGill. Coll. areas 58 Port Phillip Heads.

Scrupocellaria scruposa (Linnaeus, 1758)

Sertularia scruposa Linnaeus, 1758: 815.

Scrupocellaria scruposa Busk, 1852, Pl. 22, figs. 3-4.

Survey areas 7 (123), 11 (212), 12 (196), 21 (115), 35 (71), 55 (39), 57 (294), 58 (Ocean Beach, Point Nepean intertidal coll. 29 June 1963) 59.

A very widely distributed species.

Amastigia Busk, 1852

Amastigia rudis (Busk, 1852)

Cabera rudis Busk, 1852: 377; 1852A: 38, Pl. 46, figs. 1-3; MacGill., 1887B: 137, Pl. 136, fig. 1.

Amastigia rudis, Harmer, 1923: 332, Pl. 17, figs. 26-27; Pl. 19, figs. 49, 52; 1926: 349-351, Pl. 23, figs. 9-13.

Survey area 58 (150-4), MacGill. Coll. area 58 Port Phillip Heads.

This species is common and widely distributed in the W. Pacific from Japan to Australia, where it is known to extend from Victoria, through to Queensland. It has not been reported from the E. Pacific region (Harmer 1926: 350; Osburn 1953: 127).

Bugulopsis cuspidata (Busk, 1852)

Cellularia cuspidata Busk, 1852: 19.

Survey areas 58 (88) (290), 59 (36) (87), 66 (291-2).

Caberea Lamouroux 1816

Caberea darwinii Busk, 1852

Caberea darwinii, Busk 1884: 29, Pl. 32, fig. 6.

Survey area 59 (36), MacGill. Coll. area 58 Port Phillip Heads.

Caberea glabra MacGillivray, 1886

Caberea glabra MacGill., 1887: 142, Pl. 137, figs. 2-4.

Survey area 59 (36), MacGill. Coll. area 58 Port Phillip Heads.

Caberea transversa Harmer, 1926 resembles *Caberea grandis* Hincks, 1881 (see next species), which differs from it in being pluriserial and in having occasional gigantic frontal avicularia. It appears to be also related to *Caberea glabra* MacGillivray, 1886, which differs from it in its larger spines and in the larger size of the frontal avicularia.

Caberea grandis Hincks, 1881

Caberea grandis Hincks, 1881: 2.

Survey area 59 (36), MacGill. Coll. area 58 Port Phillip Heads.

There is only a slight serration in Victorian specimens.

Caberea sp.

Survey areas 56 (295), 59 (24).

Canda Lamouroux, 1816

Canda arachnoides, Lamouroux, 1816

Canda arachnoides, Lamouroux, 1816: 131.

Survey area 58 (88), MacGill. Coll. area 58 Port Phillip Heads.

Canda tenuis MacGillivray, 1885

Canda tenuis MacGill., 1885: 108, Pl. 4, fig. 1; MacGill., 1887: 139-140, Pl. 136, figs. 4-4b.

Survey area 58 (88), MacGill. Coll. area 58 Port Phillip Heads.

Readily distinguished from *C. arachnoides* by its much smaller size, more slender and straggling branches, which do not grow so much in one plane, narrower and more pointed avicularian mandible, and especially by the vibracular grooves for the lodgment of the setae extending across the median line on the surface of a cell of the other series (MacGillivray: 139-140).

Menipea Lamouroux, 1812

Menipea crystallina Gray, 1843

Menipea crystallina Gray, 1843, Dieffenbach, New Zealand, 2, p. 293; MacGillivray, 1881A: 31-32, Pl. 58, figs. 2-2b.

Survey areas 57 (295), 58 (88), 59 (36), MacGill. Coll. area 58 Queenscliff.

Menipea sp.

Survey area 59 (225).

Suborder ASCOPHORA Levinsen, 1909

Family HIPPOTHOIDEAE Levinsen, 1909

Celleporella Gray, 1848

Celleporella hyalina (Linnaeus, 1767)

Cellepora hyalina, Linnaeus, 1767: 1286.

Schizoporella hyalina MacGill., 1889A: 314-315, Pl. 186, figs. 7-9.

Survey areas 10 (103-5), 58 (88), 61 (239), 69 (221), MacGill. Coll. area 6 Williamstown, area 58 Queenscliff.

At (103-5) growing on *Mytilus planulatus* in association with *Biflustra papillifera*, *Bugula neritina* and *Bowerbankia* sp. It is a truly cosmopolitan species, occurring around the world and from the Arctic, where it is often excessively abundant, to the tropics (Osburn 1952: 277).

Family EUTHYROIDIDAE Levinsen, 1909

Euthyroides Harmer, 1903

Euthyroides episcopalis (Busk, 1852)

Carbasea episcopalis Busk, 1852: 379; 1852A: 52, Pl. 48, figs. 1-2; Pl. 55, fig. 3.

Carbasea episcopalis MacGill., 1880: 28, figs. 2-2c.

Survey area 58 (150-4), MacGill. Coll. area 58 Queenscliff.

The ovicells are very peculiar, presenting a

curious resemblance to a bishop's mitre (MacGillivray 1880:28).

Family SCHIZOPORELLIDAE Jullien, 1883

Schizoporella Hincks, 1877

Schizoporella biturrita Hincks, 1884

Schizoporella biturrita Hincks, 1884: 280; MacGill., 1889A: 313, Pl. 186, figs. 5-5b.

Survey areas 58 (88), 59 (36), MacGill. Coll. area 58 Port Phillip Heads.

MacGillivray (1889: 313) was prompted to state, 'This very peculiar and striking species is readily distinguished. It forms thick, calcareous layers, usually surrounding the stems of small dark algae'.

Schizoporella sp.

Survey areas 57 (294), 58 (150-4).

Family MICROPORELLIDAE Hincks, 1879

Microporella Hincks, 1877

Microporella ciliata (Pallas, 1766)

Eschara ciliata Pallas, 1766: 38.

Lepralia ciliata, Busk, 1854: 73, Pl. 74, figs. 1-2, Pl. 77, figs. 3-5.

Lepralia ciliata MacGill., 1879A: 28, Pl. 37, figs. 1-1b.

Survey areas 5 (57), 11 (190), 35 (71), MacGill. Coll. area 58 Queenscliff; Port Fairy, Warrnambool.

At station 57 growing on *Mytilus planulatus* in association with *Mucropetraliella watersi* and *Celleporaria foliata*. A cosmopolitan species in which Osburn (1952: 375) encountered such a remarkable degree of variation from the Pacific Coast of America that he was prompted to state, 'The question of what is a "good species" rises again and again in this genus, as most of the differential characters are subject to variation' (Powell 1967: 289 also has quoted this last sentence).

Fenestrulina Jullien, 1888

Fenestrulina malusii (Audouin, 1826)

Cellepora malusii Audouin, 1826: 239; 1828: 66; Savigny, De, Pl. 8, fig. 8.

Lepralia malusii, Busk, 1854: 83, Pl. 103, figs. 1-4; MacGillivray, 1879A: 27, figs. 8-8b.

Survey areas 6 (137), 58 (88), 66 (291-2), MacGill. Coll. area 58 Queenscliff on shell and algae. It apparently occurs around the world in tropical and temperate waters (Osburn 1952: 388).

Fenestrulina sp.

Survey area 66.

Family PETRALIELLIDAE Harmer, 1957

Mucropetraliella Stach, 1936

Mucropetraliella ellerii (MacGill., 1869)

Lepralia ellerii MacGillivray, 1869: 135; 1879A: 31, Pl. 37, figs. 8-8b.

Survey areas 5 (51-58), 42 (38), MacGill. Coll. area 6 Williamstown on algae and shells.

Stach (1936) has chosen *Mucropetraliella ellerii* as type species, and Harmer (1957) has described the species under two Sections (A, B) characterized respectively by the absence or presence of oral spines. Oral spines are wanting in *Mucropetraliella ellerii* (Section A).

Mucropetraliella serrata (Livingstone, 1926)

Petralia vultur var. *serrata* Livingstone, 1926: 95, Pl. 6, figs. 7-10.

Survey area 58 (293), MacGill. Coll. area 58 Port Phillip Heads.

Oral spines present (Section B).

Mucropetraliella watersi Harmer, 1957

Petralia vultur var. *armata* Waters, 1913: 518, Pl. 70, figs. 15-20.

Mucropetraliella watersi Harmer 1957: 721, Pl. 46, fig. 9, Fig. 67.

Survey area 5 (57).

Growing on *Mytilus planulatus* in association with *Microporella ciliata* and *Celleporaria foliata*.

Mucropetraliella sp.

Survey area 66 (294).

Family SMITTINIDAE Levinsen, 1909

Parasmittina Osburn, 1952

Parasmittina trispinosa (Johnston, 1838)

Discopora trispinosa Johnston, 1838: 222.

Survey area 59 (36).

Osburn (1952: 412) comments, 'If all the varieties which have been described under this species really belong here, it is probably the most variable species known. It has been given cosmopolitan distribution'.

Parasmittina macphersonae Powell, 1957

Smittia reticulata MacGillivray, var. *spathulata* MacGillivray, 1883: 135, Pl. 3, figs. 14-14a.

Survey area 11 (212).

From the description by Powell (1957: 381, Pl. 17, fig. c), it is quite clear that the species intended by him is identical with *Smittia reticulata spathulata*.

Smittina Norman, 1903

Smittina sp.

Survey area 10.

Family MARGARETTIDAE Harmer, 1957

Margaretta Gray, 1843

Margaretta hirsuta (Lamouroux, 1816)

Cellaria hirsuta Lamouroux, 1816: 126, Pl. 2, figs. 4a, B "Amérique".

Tubucellaria hirsuta MacGill., 1880: 52, Pl. 49, figs. 6-6a, Vict.

Survey area 58 (150-4), MacGill. Coll. area 58 Queenscliff.

Margaretta has been recognized as a valid generic name. 'On the assumption that *Tubucellaria* is a synonym of *Margaretta*, Tubucellariidae should be replaced by Margarettidae' (Harmer 1957: 824).

Family RETEPORIDAE Smitt, 1867

Retepora Lamarck, 1801

Retepora avicularis MacGill., 1884

Retepora avicularis, MacGill., 1884: 288, Pl. 2, fig. 6; 1885C: 16, Pl. 94, fig. 16; Pl. 95, figs. 7-11.

Retepora jacksoniensis, Busk, 1884: 125, Pl. 27, fig. 4.

Survey areas 58 (89) (150-4) (290), 59 (36), MacGill. Coll. area 58 off Port Phillip Heads.

At (89) on sponge.

Retepora sp.

Survey areas 57 (294), 59 (87).

Rhynchozoon Hincks, 1895

Rhynchozoon tubulosum (Hincks, 1880)

Mucronella (?) *tubulosa* Hincks, 1880: 383, Pl. 17, fig. 7.

Rhynchopora profunda, MacGill, 1883: 193, Pl. 2, figs. 8-8b.

Rhynchopora longirostris MacGill., 1890: 356, Pl. 196, figs. 13-13b.

Survey area 30 (13), MacGill. Coll. area 58 Port Phillip Heads.

Growing on *Mytilus planulatus* in association with *Conopeum reticulum* and *Celleporaria foliata*. Osburn (1952: 454) remarks that the species of the genus *Rhynchozoon* often are difficult to determine, as secondary calcification, which is very heavy, obscures the primary characters and these can be found only on the

young zooecia at the edge of the colony. It is one of the genera that 'try men's souls'.

Schizoretepora Gregory, 1893

Schizoretepora tessellata (Hincks, 1878)

Retepora tessellata Hincks, 1878: 358, Pl. 19, figs. 9-12; MacGillivray, 1885C: 29-30, Pl. 99, figs. 4-8.

Survey area 57 (294), 58 Point Nepean intertidal coll. (ocean beach) 29 June 1963, 59 (36), MacGill. Coll. area 58 Port Phillip Heads.

Triphyllozoon Canu and Bassler, 1917

Triphyllozoon monilifera (MacGillivray, 1860)

Retepora monilifera MacGillivray, 1860A: 168, Pl. 3, figs. 6-9.

Retepora monilifera form. *monilifera* MacGill., 1885, pp. 20-21; Pl. 96, figs. 1-3, Pl. 94, fig. 1

Survey areas 57 (294), 58 (80) (290) (intertidal collecting ocean beach Point Nepean, 29 June 1963), 59 (23) (24) (36), MacGill. Coll. area 59 Queenscliff.

Type species selected by Canu and Bassler (1917) *Retepora monilifera* MacGill., 1860: 168 = *Retepora monilifera* forma *moniliferae* MacGill., 1885: 20-21 (Harmer 1934: 590). 'This common form is confined to shallow water. On the framework of the wooden pier at Queenscliff it forms large masses, almost dry at low tide' (MacGillivray 1885: 20).

Family ADEONIDAE Jullien, 1903

Adeona Lamouroux, 1812

Adeona grisea Lamouroux, 1816

Adeona grisea, Lamouroux, 1816. Exposition Méthodique, p. 40, t.70, fig. 5.

Dictyopora grisea MacGill., 1882: 23-24, figs. 1-1e.

Survey areas 56 (295), 58 (290), 59 (36), MacGill. Coll. area 58 Port Phillip Heads.

Adeona sp.

Survey area 69 (24).

Adeonella Busk, 1884

Adeonella cellulosa (MacGill., 1869)

Dictyopora cellulosa, MacGill., 1869: 140; 1880: 37-38, Pl. 47, figs. 1-1d.

Survey areas 56 (295), 69 (221), MacGill. Coll. area 58 Queenscliff.

Adeonella gracilis (Lamouroux, 1824)

Eschara gracilis Lamouroux, 1824: 375; Busk, 1854: 91, Pl. 108, figs. 5-7; MacGill., 1880: 40-41, Pl. 48, figs. 3-3c.

Survey area 58 (290), MacGill. Coll. area 58 Queenscliff.

MacGillivray (1887: 190) may be considered to have accepted *Eschara gracilis* as the type species of *Porina* (Harmer 1957: 843).

Adeonellopsis MacGillivray, 1886

Adeonellopsis mucronata (MacGill., 1869)

Lepralia mucronata MacGill., 1869: 134.

Eschara mucronata, 1880: 43-44, Pl. 48, figs. 6-6c, 7-7d.

Survey area 58 (88), MacGill. Coll. area 58 Queenscliff on shell, area 55 Schnapper Point.

Adeonellopsis sp.

Survey area 56 (295), 58 (150-4).

Family CELLEPORARIIDAE Harmer, 1957

Celleporaria Lamouroux, 1821

'The species of *Celleporaria* are so difficult to distinguish that I think it necessary to subjoin notes on certain other species which appear to be allied to *C. fusca*' (Harmer 1957: 683).

Celleporaria foliata (MacGill., 1888)

Cellepora foliata (MacGill.), 1888A: 246, Pl. 166, figs. 2-2a; Pl. 168, fig. 10.

Survey areas 5 (57), 10 (103), 30 (130), 43 (303), 59 (24, 36).

At station 57 growing on *Mytilus planulatus* in association with *Microporella ciliata* and *Mucropetraliella watersi* and also at (130) in association with *Conopeum reticulum* and *Rhynchozoon tubulosum*. '*C. foliata* MacGill. seems to be a distinct species' (Harmer 1957: 684).

Celleporaria verrucosa MacGillivray, 1880

Cellepora verrucosa (MacGill.) 1882: 245-246, Pl. 166, 1-1f; P. 168, fig. 15.

Survey areas 6 (65), 29 (174), 57 (294), 59 (24).

At station 174 growing on *Mytilus planulatus* in association with *Canopeum reticulum*.

Celleporaria albirostris (Smitt, 1873)

Discopora albirostris Smitt, 1873: 70, Pl. 12, figs. 234-239.

Holoporella albirostris, Osburn, 1952: 497, Pl. 61, figs. 3-6 = *Celleporaria tridenticulata* (Powell 1967: 374).

Survey area 62 (96), MacGill. Coll. area 58 Port Phillip Heads.

'*C. albirostris* Smitt as *Discopora albirostris* forma *typica* should be placed in *Celleporaria*'

(Harmer 1957: 684). Smitt described the species from Florida, and it is a common species in the Gulf of Mexico and the Caribbean Sea. It has been recorded from the Indian Ocean and from Australia (Osburn 1952: 498).

Celleporaria mamillata (Busk, 1854)

Cellepora mamillata Busk, 1854: 87, Pl. 120, figs. 3-5.

Survey area 61 (239).

'The operculum differs so much from those of *C. fusca* that the two species may confidently be regarded as distinct' (Harmer 1957: 683).

Celleporaria prolifera (MacGill., 1888)

Cellepora prolifera (MacGill., 1888A: 247, Pl. 166, figs. 4-4b.

Survey areas 6 (65), 55 (39), 58 (290), 59 (24) (36), Maple. Coll. Portland.

At station 24 it has *Crisia tenuis*, *Conopeum reticulum*, *Bugula dentata* and *Scrupocellaria diadema* growing on it.

Celleporaria sp.

Survey areas 6 (137), 35 (71), 55 (39), 56 (295), 57 (294), 58 (88) (290), 59 (36), 61 (242), 66 (291-2).

At (39) growing on *Mytilus planulatus*.

Family CELLEPORIDINAE Harmer, 1957

Celleporina Gray, 1848

Celleporina costazii (Audouin, 1826)

Cellepora costazii Audouin, 1826: 237; 1828: 64; Savigny, Pl. 7, figs. 4¹-4⁶.

? *Cellepora costazii* MacGillivray, 1885: 116, figs. 3a-b.

Survey area 58 (290), MacGill. Coll. area 58 Port Phillip Heads.

Specimens determined as *Cellepora costazii* have been recorded from the tropical and temperate parts of all the oceans (Harmer 1957: 903).

Family VITTATICELLIDAE Harmer, 1957

'Since *Catenicella* cannot be accepted in the generally adopted sense, the Family name Catenicellidae is also invalid; and I accordingly suggest in its place the new name Vittaticellidae, *Vittaticella* being the genus which includes the largest number of species' (Harmer 1957: 765). 'The family, which is abundant in the Australian seas, is scarcely represented N. of the equator and hitherto no species has been

recorded from the W. coasts of the Americas' (Osburn 1952: 286).

Vittaticella Maplestone, 1901

Vittaticella elegans (Busk, 1852)

Catenicella elegans Busk, 1852: 361, Pl. 1, fig. 2; 1852A: 10, Pl. 9, figs. 3-4; MacGill., 1879: 23, Pl. 24, figs. 10-10b.

Survey areas 58 (150-4), 59 (36) (79).

MacGillivray (1879: 23) states, 'frequent', 'Occurs commonly on the S. coast of Australia and off New Zealand' (Harmer 1957: 770). 'Distributed around the world in warmer waters' (Osburn 1952: 287).

Vittaticella buskii (Wyville Thomson, 1858)

Catenicella buskii Wyville Thomson, 1859: 139, Pl. 11, fig. 2; MacGillivray, 1879: 24, figs. 13-13b.

Survey areas 58 (150-4), 59 (36) (225), MacGill. Coll.

Vittaticella perforata (Busk, 1852)

Catenicella perforata, Busk, 1852A: 10, Pl. 8, figs. 1-2; MacGillivray, 1879: 24, figs. 11-11e.

Survey area 59 (36).

Vittaticella sp.

Survey areas 58 (), 59 (87).

Costaticella Maplestone, 1899

Costaticella hastata (Busk, 1852)

Catenicella hastata Busk, 1852: 355; 1852A: 7, Pl. 2, figs. 3-4; MacGillivray, 1879: 19, figs. 4-4c.

Survey areas 58 (88) (290), 59 (36), MacGill. Coll. area 58 Queenscliff.

Distribution in Australia: Vict. N.S.W., Bass Strait, Tas. (Powell 1967: 243).

Scuticella Levinsen, 1909

Scuticella lorica Busk, 1852

Catenicella lorica Busk, 1852: 358; Busk, 1852A: 6, Pl. 1, figs. 1-3; MacGill., 1879: 24, figs. 8-8b.

Survey area 58 (150-4), MacGill. Coll. area 58 Queenscliff.

Scuticella margaritacea (Busk, 1852)

Catenicella margaritacea Busk, 1852: 356; 1852A: 9, Pl. 6, figs. 1-3; MacGill., 1879: 15-16, Pl. 24, figs. 1-1d.

Scuticella margaritacea Levinsen, 1909: 229-230, Pl. 20, fig. 3a, Pl. 11, figs. 5a-c.

Survey areas 58 (150-4), 59 (36).

MacGillivray (1879: 16) simply states, 'common on the Victorian coasts'.

Scuticella plagiostoma (Busk, 1852)

Catenicella plagiostoma Busk, 1852: 358; 1852A: 8-9, Pl. 5, figs. 1-2; MacGill., 1879: 17-18, Pl. 24, figs. 2-2c.

Survey area 59 (36).

'Very common' in Vict. (MacGillivray 1879: 17).

Scuticella ventricosa (Busk, 1852)

Catenicella ventricosa Busk, 1852: 357; 1852A: 7, Pl. 2, figs. 1-2; Pl. 3, figs. 1-5; MacGill., 1879: 18, Pl. 24, figs. 3-3b.

Survey area 59 (36).

S. Aust., Vict., N.S.W., Tasm. (Powell 1967: 240).

Cornuticella Canu and Bassler, 1927

Cornuticella cornuta (Busk, 1852)

Cornuticella cornuta Busk, 1852: 361; Busk, 1852A: 11, Pl. 10, figs. 1-3.

Cornuticella comuta MacGill., 1879: 27; 1885B: 34, Pl. 90, figs. 3-3c.

Catenaria cornuta Levinsen, 1909: 256-7, Pl. 13, figs. 5a-c; Pl. 21, fig. 1a.

Survey area 57 (294), MacGill. Coll. area 58 Queenscliff.

Victoria, Bass Strait (Powell 1967: 241).

Pterocella Levinsen, 1909

Pterocella alata (Wyville Thomson, 1858)

Catenicella alata Wyville Thomson, 1858: 137; Levinsen, 1909: 246-247; MacGill., 1879, Pl. 24, figs. 7-7b.

Survey areas 58 (293), 59 (87), MacGill. Coll. area 58 Queenscliff.

Australia: N.S.W., Vict., Tasm. (Powell 1967: 244).

Claviporella MacGill., 1895

Claviporella aurita (Busk, 1852)

Catenicella aurita Busk, 1852A: 8, Pl. 4, figs. 1-3; MacGill., 1879: 26, Pl. 24, figs. 16-16c.

Survey area 58 (150-4).

Claviporella pulchra (McGill.) and *Claviporella imperforata* (McGill.)—the last mentioned species closely allied to *C. aurita*—were both taken at Port Phillip Heads (MacGillivray, 1887C: 176-177) but do not occur in the Survey material.

Claviporella geminata (Wyville Thomson, 1858)

Catenicella geminata Wyville Thomson, 1858: 84, Pl. 7, figs. 3-4; MacGillivray, 1879: 26-27, Pl. 24, figs. 17-17b.

Claviporella geminata Levinsen, 1909: 242-243, Pl. 12, figs. 3a-b.

Survey area 58 (88), MacGill. Coll. area 58 Queenscliff.

'Of this species I have seen a few fragments from Port Phillip' (Levinsen 1909: 243).

Calpidium Busk, 1852

Calpidium ponderosum (Goldstein, 1880)

Catenicella ponderosa Goldstein, 1880: 63, Pl. 5, figs. 1-3.

Calpidium ponderosum MacGill., 1885D: 31-32, Pl. 107, figs. 3-3c; Levinsen, 1909: 249-251, Pl. 21, figs. 5a-c; Pl. 13, figs. 1a-d.

Survey area 59 (36), MacGill. Coll. area 58 Port Phillip Heads.

Calpidium ornatum (Busk) is taken at Port Phillip Heads, 'seemingly very rare' (MacGillivray 1885: 33-34, Pl. 108, figs. 1-1b).

Family CALWELLIIDAE MacGill., 1887

Calwellia Wyville Thomson, 1858

Calwellia bicornis Wyville Thomson, 1859

Calwellia bicornis Wyville Thomson, 1859: 92, Pl. 9, figs. 2-2a; MacGill., 1880: 35-36, Pl. 46, figs. 7-7b.

Survey areas 58 (88), 59 (36), MacGill. Coll. area 58 Queenscliff.

Calwellia gracilis Maplestone, 1882

Calwellia gracilis Maplestone, 1882: 48, Pl. 1, fig. 9.

Survey area 59 (36) MacGill. Coll. area 58 Queenscliff.

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TABLE 1

List of Species Discussed by MacGillivray in *Prodromus of Zoology* 1879-89

The species discussed by MacGillivray in McCoy's *Prodromus* are listed in alphabetical order with the author and date, followed by alterations from MacGillivray either due to generic change or change in synonymy.

Numbers 1-21 refer to the localities from which MacGillivray recorded the various species:

1. Port Phillip Heads
2. Queenscliff
3. Sorrento

4. Spring Creek near Geelong.
5. Schnapper Point, Mornington
6. Point Cook
7. Brighton
8. Williamstown
9. Hobsons Bay
10. Portland
11. Lady Bay, Portland
12. Port Fairy
13. Warrnambool
14. Cape Otway
15. Lorne
16. King Island
17. Cape Schank

18. Western Port
19. Wilsons Promontory
20. Sealers Cove
21. Widespread, usually common

Species collected on the 1957-63 Port Phillip Survey are preceded by an asterisk.

- * *Aetea anguina* (Linnaeus, 1758) 1
* *Aetea dilatata* Busk, 1852 1
* *Aetea recta* Hincks, 1880 = *Aetea sica* (Couch, 1844) 1
* *Amathia australis* Tenison Woods, 1877 1
 A. bicornis Tenison Woods, 1878 1
* *A. inarmata* MacGill., 1887 1
 A. spiralis Lamouroux, 1816 1
* *A. tortuosa* Tenison Woods, 1880 1, 20
Amphiblestrum albispinum MacGill., 1881 2, 10
 A. flemingii Busk, 1854 1
 A. patellarium Waters, 1879 1
 A. permunitum Hincks, 1881 1, 10
 A. punctigerum Hincks, 1881 1
Bathypora porcellana MacGill., 1884 10
Beania conferta MacGill., 1890 1, 10
* *B. costata* (Busk, 1884) 1
 B. crotali (Busk, 1852) 1, 10
 B. decumbens MacGill., 1881 1
 B. intermedia Hincks, 1881 1
 B. mirabilis Johnston, 1840 1
 B. radicifera (Hincks, 1881) 1
 B. wilsoni MacGill., 1884 1
Bicellaria ciliata (Linnaeus, 1858) 2, 10
* *B. grandis* = *Corucopina grandis* (Busk, 1852) 2, 14
* *B. tuba* = *C. grandis tuba* (Busk, 1852) 2, 10, 18
 B. turbinata MacGill., 1869 2
Biflustra bimamillata (MacGill., 1885) 10
 B. delicatula Busk, 1859 2
* *B. papuifera* = *Membranipora papulifera* (MacGill., 1881) 1
* *B. perfragilis* = *M. perfragilis* (MacGill., 1881) 1, 16
Bracebridgia pyriformis (Busk, 1886) 21
Bugula avicularia Pallas, 1766 9
 B. cucullata Busk, 1867 2, 10
* *B. dentata* (Lamouroux, 1816) 2, 9.
* *B. neritina* (Linnaeus, 1758) 2, 9, 13
 B. robusta MacGill., 1869 18
* *Caberea darwinii* Busk, 1852 1, 10
* *C. glabra* MacGill., 1886 1
* *C. grandis* Hincks, 1881 1
* *C. rudis* = *Amastigia rudis* (Busk, 1852) 1, 10
* *Caleschara denticulata* (MacGill., 1869) 2, 5, 13
Calpidium ornatum Busk, 1852 1
* *C. ponderosum* (Goldstein, 1880) 1
* *Cawellia bicornis* Wyville Thomson, 1859 2
* *Canda arachnoides* Lamouroux, 1816 1, 10
 C. tenuis MacGillivray, 1885 1
* *Carbasea dissimilis* = *Bugula dissimilis* (Busk, 1852) 2, 16
 C. elegans Busk, 1852 2, 10
* *C. episcopalis* = *Euthyroides episcopalis* (Busk, 1852) 2, 16
 C. indivisa Busk, 1852 2, 10, 13-14
 C. pisciformis Busk, 1852 2, 10
* *Catenicella alata* = *Pterocella alata* (Wyville Thomson, 1858) 2
 C. amphora Busk, 1852 1
* *C. aurita* = *Claviporella aurita* (Busk, 1852) 21
* *C. buskii* = *Vittaticella buskii* (Wyville Thomson, 1858) 21, rare
 C. carinata Busk, 1852 21, rare
* *C. cornuta* = *Cornuticella cornuta* (Busk, 1852) 2
 C. cribraria Busk, 1852 2, 18, 20
 C. crystallina Wyville Thomson, 1858 21
 C. formosa Busk, 1852 2, 17
 C. fusca MacGill., 1885 2
 C. gemella MacGill., 1886 1
* *C. geminata* = *Claviporella geminata* (Wyville Thomson, 1858) 2
 C. gracilentia MacGill., 1884 1
* *C. hastata* = *Costaticella hastata* (Busk, 1852) 2, 14, 18
 C. hannafori MacGill., 1868 11
 C. intermedia MacGill., 1868 1, 2
* *C. lorica* = *Scuticella lorica* (Busk, 1852) 2
* *C. margaritacea* = *S. margaritacea* (Busk, 1852) 21
* *C. perforata* = *Vitaticella perforata* (Busk, 1853) 21, rare
* *C. plagiostoma* = *Scuticella plagiostoma* (Busk, 1852) 21
 C. pulchella Maplestone, 1880 1, 2
 C. ringens Busk, 1852 1
 C. rufa MacGill., 1868 21
 C. umbonata Busk, 1852 1
 C. urnula MacGill., 1886 1
 C. utriculus MacGill., 1885 13
* *C. ventricosa* = *Scuticella ventricosa* (Busk, 1852) 21
 C. venusta MacGill., 1886 1
 C. wilsoni MacGill., 1880 1
Catenicellopsis delicatula Wilson, 1880 14
 C. pusilla Wilson 1880 4
Cellaria fistulosa (Linnaeus, 1758) 2, 10
* *C. gracilis* (Busk, 1852) = *Cellaria punctata* (Busk, 1852) 2, 20
* *C. hirsuta* (MacGill., 1869) 2, 10
 C. rigida MacGill., 1884 1
* *C. tenuirostris* (Busk, 1852) 2, 20
* *Cellepora albirostris* = *Celleporaria albirostris* (Smitt, 1873) 1
 C. benemunita MacGill., 1887 1
 C. bispinata Busk, 1854 1, 10, 13
 C. cidaris MacGill., 1888 1
 C. costata MacGill., 1868 1, 10, 13, 19
* *C. costazei* = *Celleporina costazii* (Audouin, 1826) 1
 C. diadema MacGill., 1888 1
* *C. foliata* = *Celleporaria foliata* (MacGill., 1888) 10
 C. fusca Busk, 1854 10
 C. glomerata MacGill., 1887 1
 C. intermedia MacGill., 1868 2
 C. lirata MacGill., 1888 1
 C. magnirostris MacGill., 1888 1
 C. megasoma (MacGill., 1879) 1
 C. platylea MacGill., 1884 1
* *C. prolifera* = *Celleporaria prolifera* (MacGill., 1888) 10
 C. rota MacGill., 1884 1

- C. serratirostris* MacGill., 1884 1
C. simplex MacGill., 1888 1
C. speciosa MacGill., 1886 1
C. spicata MacGill., 1888 1
C. tiara MacGill., 1887 1
C. tridenticulata Busk, 1884 1, 13
* *C. verrucosa* = *Celleporaria verrucosa* MacGill., 1888 10
C. vitrea MacGill., 1887 1
* *Cellularia cuspidata* = *Bugulopsis cuspidata* (Busk, 1852) 2
Childonia daedala Wyville Thomson, 1858 21
Claviporella imperforata MacGill., 1886 1
C. pulchra MacGill., 1886 1
Craspedozoum ligulatum MacGill., 1885 1
C. roboratum Hincks, 1881 1
C. spicatum MacGill., 1885 1
Cribrilina acanthoceros MacGill., 1886 1, 10
C. monoceros Busk, 1854 1, 10, 13
C. radiata (Moll, 1803) 1
C. setirostris MacGill., 1882 1
* *Crisia acropora* Busk, 1852 2, 8
C. biciliata MacGill., 1869 8, 13
* *C. edwardsiana* (d'Orbigny, 1839) 8
C. setosa MacGill., 1868 2, 8
* *C. tenuis* MacGillivray, 1879 2
Cyclicopora longipora (MacGill., 1882) 1
Diachoris magellanica = *Beania magellanica* (Busk, 1852) 10
D. spinigera = *B. spinigera* (MacGill., 1860) 2, 10, 19
Diastopora bicolor MacGill., 1889 1
D. capitata MacGill., 1886 1
D. patina Lamarck, 1816 1
D. cristata MacGill., 1886 1
* *D. sarniensis*, ? *Berenicea sarniensis* (Norman, 1864) 1
Dictyopora albida avicularis MacGill., 1881 1
* *D. cellulosa* = *Adeonella cellulosa* (MacGill., 1869) 2
* *D. grisea* = *Adeona grisea* Lamouroux, 1816 1
* *D. wilsoni* MacGill., 1881 1
* *Didymia simplex* = *Didymozoum simplex* (Busk, 1852) 2, 10
Dimetopia cornuta Busk, 1852 2, 10, 19
D. hirta MacGill., 1885 1
D. spicata Busk, 1852 2, 10, 14
Electra amplexans (Hincks, 1881) 1
E. flagellum (MacGill., 1881) 2
Eschara dispar MacGill., 1869 2
* *E. gracilis* = *Adeonella gracilis* (Lamouroux, 1824) 2
* *E. mucronata* = *Adeonellopsis mucronata* (MacGill., 1869) 2, 5
E. obliqua MacGill., 1869 5
E. platylea Busk, 1854 2
E. quadrata MacGill., 1879 2, 10
Escharipora stellata Smith, 1873 1
Farcimia appendiculata Hincks, 1883 1
Farciminaria aculeata Busk, 1852 1
F. simplex MacGill., 1885 1
F. uncinata Hincks, 1884 1
Fasciculipora bellis MacGill., 1883 1
F. fruticosa MacGill., 1883 1
F. gracilis MacGill., 1882 1
F. ramosa (d'Orbigny, 1850) 10
Flosculipora pygmaea MacGill., 1886 1
* *Flustra denticulata* = *Spiralaria denticulata* (Busk, 1852) 2
Gemellipora striatula Smitt, 1873 1
Hippothoa distans MacGill., 1869 1, 9
H. divaricata Busk, 1852 1, 9
* *Hornera foliacea* MacGill., 1869 1, 10, 18, 20
H. robusta MacGill., 1882 1
* *Idmonea australis*, ? *Idmidronea australis* (MacGill., 1884) 1
I. milneana d'Orbigny, 1847 1
I. radians Lamarck, 1816 2, 8, 10
Lagenipora nitens MacGill., 1886 1
L. tuberculata MacGill., 1882 1
Lekythopora hystrix MacGill., 1882 1
Lepralia anceps MacGill., 1879 13
L. botryoides MacGill., 1879 8
L. brogniartii Audouin, 1826 2
L. canaliculata MacGill., 1859 2
L. ceciliae Audouin, 1826 2, 13
L. cheilodon MacGill., 1869 8
* *L. ciliata* = *Microporella ciliata* (Pallas, 1766) 2, 12, 13
L. circinata MacGill., 1869 2
L. diadema MacGill., 1869 2, 8, 13
L. diaphana MacGill., 1879 2, 13
L. elegans MacGill., 1859 2, 8
* *L. ellerii* = *Mucropetraliella ellerii* (MacGill., 1869) 8, 13
L. excavata MacGill., 1860 2
* *L. ferox* = *Hiantopora ferox* (MacGill., 1869) 2, 8
L. larvalis MacGill., 1868 8
L. lunata MacGill., 1859 2
* *L. malusii* = *Fenestrulina malusii* (Audouin, 1826) 2
L. maplestonei MacGill., 1879 8
L. marsupium MacGill., 1868 21
L. megasoma MacGill., 1868 2
* *L. monoceros* = *Arachnopusia monoceros* (Busk, 1854) 2, 13
* *L. mucronata* MacGill., 1869 = *Adeonellopsis mucronata* (MacGill., 1869) 2, 5
L. papillifera MacGill., 1868 8
L. pellucida MacGill., 1879 2, 8
L. pertusa Esper., 1790 9
L. schizostoma MacGill., 1868 2, 8
L. subimmersa MacGill., 1879 13
L. trifolium MacGill., 1868 2, 8, 18
L. vitrea MacGill., 1879 8
L. vittata MacGill., 1868 18
Lichenopora bullata MacGill., 1886 1, 10, 13
L. magnifica MacGill., 1886 1
Maplestonia cirrata MacGill., 1884 1, 10, 13
Membranipora cervicornis Busk, 1854 8
M. ciliata MacGill., 1868 2, 8, 10
M. corbula Hincks, 1880 1, 10
M. dispar MacGill., 1868 10
M. inarmata Hincks, 1881 1
* *M. lacroixii* MacGill. (non Savigny) = *Conopeum reticulum* (Linnaeus, 1767) 2, 6, 7
* *M. lineata* MacGill., 1879 (non Linnaeus = *Pyrulella pyrula* (Hincks, 1881) 2, 12
M. mamillaris = *Thairopora mamillaris* (MacGill., 1860) 2
M. membranacea 1879 (Linnaeus, 1767) 21

- M. pectinata* MacGill., 1886 1
M. perforata MacGill., 1859 2
M. pilosa Linnaeus, 1867 21
M. pyrula = *Pyrulella pyrula* (Hincks, 1881) 1, 10
M. rosselii Audouin, 1826 21
M. serrata MacGill., 1881 1
M. spinosa d'Orbigny, 1847 21
M. umbonata Busk, 1854 2
M. woodsii MacGill., 1868 10
Membraniporella distans MacGill., 1882 1, 13
Menipea buskii Wyville Thomson, 1858 2
M. cervicornis MacGill., 1868 2
* *M. crystallina* Gray 1843 2
M. cyathus Wyville Thomson, 1858 2
M. funiculata MacGill., 1885 1
M. tricellata Busk, 1852 2
Micropora coriacea Esper., 1790 21
Microporella ciliata var. *spicata* MacGill., 1889 21
M. „ var. *personata* Busk, 1854 21
M. diadema MacGill., 1884 21
M. malusii var. *personata* MacGill., 1883
M. malusii var. *thyreophora* Busk, 1861 21
M. renipuncta MacGill., 1882 1
M. scandens MacGill., 1884 1
Mucronella laevis MacGill., 1882 1, 3
M. tricuspidis Hincks, 1881 1, 10
M. vultur Hincks, 1882 1, 10, 13
Nellia oculata Busk, 1852 2
Petralia undata MacGill., 1868 2, 10
Poecilopora anomala MacGill., 1886 1
Pyrupora catenularia (Jameson, 1828) 1, 7
P. crassa (MacGill., 1868) 2
P. polita (Hincks, 1880) 2
Retepora aurantiacea MacGill., 1882 1
* *R. avicularis* MacGill., 1882 1
R. carinata MacGill., 1883 1
R. fissa MacGill., 1869 21
R. formosa MacGill., 1883 1
R. granulata MacGill., 1869 1
* *R. monilifera* f. *monilifera* 1885, = *Triphyllozoon monilifera* (MacGill., 1860) 1, 10, 13
R. monilifera f. *munita* Hincks, 1878 21
R. monilifera f. *umbonata* MacGill., 1885 1
R. phaenicea Busk, 1854 1, 10, 16
R. porcellana MacGill., 1869 1
R. serrata MacGill., 1882 1
* *R. tessellata* = *Schizoretepora tessellata* (Hincks, 1878) 1
Rhabdozoum wilsoni Hincks, 1882 1
Rhynchopora bispinosa Johnston, 1881 1
* *R. longirostris* Hincks, 1881 = *Rhynchozoon tubulosum* (Hincks, 1880a) 1, 10, 13
Schizoporella arachnoides MacGill., 1882 1
S. biturrita Hincks, 1884 1
S. cryptostomata MacGill., 1884 1
S. daedala MacGill., 1882 21
S. hyalina = *Celleporella hyalina* (Linnaeus, 1767) 21
S. lata MacGill., 1882 1
S. latisinuata Hincks, 1882 1
S. pachnoides MacGill., 1886 1
S. pulcherrima MacGill., 1885 1
S. punctigera MacGill., 1883 1
S. ridleyi MacGill., 1882 1
S. rostrata MacGill., 1887 1
S. subsinuata Hincks, 1884 1
S. triangula Hincks, 1881 1
S. woosteri MacGill., 1886 2
* *Scruparia chelata* MacGill., 1889 (non Linnaeus) = *Scruparia ambigua* (d'Orbigny, 1841) 1
* *Scrupocellaria cervicornis* MacGill. = *Scrupocellaria diadema* Busk, 1852 21
* *S. cylostoma* Busk, 1852 1, 10
S. oblecta Haswell, 1883 1
S. ornithorhynchus Wyville Thomson, 1858 21
S. scrupaea Busk, 1852 1, 10
* *Smittia reticulata* Hincks, 1881 21
* *S. reticulata spathulata* MacGill., 1883 = *Parasmittina macphersonae* Powell, 1957 1
Spiralaria florea Busk, 1861 2
* *Steganoporella magnilabris* (Busk, 1854) 2, 10
Stirparia annulata Maplestone, 1879 10, 18
S. glabra Hincks, 1883 15
* *Stomatopora geminata* MacGill., 1886 21
Tessaradoma magnirostris MacGill., 1882 1
Thairopora armata MacGill., 1881 2
T. jervoisii (Hincks, 1880) 3
* *T. mamillaris* (MacGill., 1860) 2
Tubucellaria cereoides (Ellis and Solander, 1786) 1
* *T. hirsuta* = *Margaretta hirsuta* Lamouroux, 1816 2, 10, 14, 18
Urceolipora dentata MacGill., 1884 1
U. nana MacGill., 1885 1
* *Verrucularia dichotoma* (Busk, 1885) = *Elzerina blainvillii* Lamouroux, 1816 1



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