

## Cold-water Corals Online Appendix

### Phylogenetic list of the 735 valid Recent azooxanthellate scleractinian species, with their Junior synonyms and depth ranges

#### Notes

Type species of the genus indicated with an asterisk, valid species names in **bold-type**

Eleven facultatively zooxanthellate species are indicated

Taxa prefaced with a single square bracket are not valid species and thus are not counted

Last revised: June 2017 (by Stephen D. Cairns)

#### Suborder ASTROCOENIINA

##### FAMILY POCILLOPORIDAE Gray, 1842

##### *Madracis* Milne Edwards & Haime, 1849

\**asperula* Milne Edwards & Haime, 1849 (facultative, H. Zibrowius, pers. comm.; 0-311 m)

***pharensis*** form ***pharensis*** (Heller, 1868) (facultative; 6-333 m)

=? *M. cf. pharensis* sensu Cairns, 1991: 6 (Galápagos, 30-343 m)

=? *M. cf. pharensis* sensu Cairns & Zibrowius, 1997: 67 (Banda Sea, 85-421 m)

***asanoi*** Yabe & Sugiyama, 1936 (110-183 m)

= *M. palaoensis* Yabe & Sugiyama, 1936

***kauaiensis*** Vaughan, 1907 (44-541 m)

?= *singularis* Rehberg, 1892

?= *interjecta* Marenzeller, 1907

**var. *macrocalyx*** Vaughan, 1907 (160-260 m)

***hellana*** Milne Edwards & Haime, 1850 (46 m)

***myriaster*** (Milne Edwards & Haime, 1849) (37-1220 m)

= *Stylophora mirabilis* Duchassaing & Michelotti, 1860

= *Axohelia schrammii* Pourtalès, 1874

***brueggemanni*** (Ridley, 1881) (51-130 m)

= *M. scotiae* Gardiner, 1913

***profunda*** Zibrowius, 1980 (112-327 m)

***fragilis*** Neves and Johnsson, 2009 (Brazil, 73 m)

[sp. A

=sensu Wells, 1954: 414 (Marshall I.)

=cf. *asperula*, sensu Cairns, 1991: 5 (Galápagos, 46-64 m)

=sensu Cairns & Keller, 1993:228 (SWIO, 62-160 m)

=sensu Cairns, 1994: 36 (Japan, 46-110 m)

=sensu Cairns & Zibrowius, 1997: 67 (Philippines, 124-208 m)

#### Suborder FUNGIINA

##### Superfamily AGARICIICAE Gray, 1847

##### FAMILY AGARICIIDAE Gray, 1847

##### *Dactylotrachus* Wells, 1954

\****cervicornis*** (Moseley, 1881) (73-400 m)

= *Tridacophyllia primordialis* Gardiner, 1899

##### *Leptoseris* Milne Edwards and Haime, 1849

***trogodyta*** Hoeksema, 2012

##### Superfamily FUNGIOIDEA Dana, 1846

FAMILY FUNGIACYATHIDAE Chevalier, 1987

**Fungiacyathus (F.) Sars, 1872**

\***fragilis** Sars, 1872 (200-2200 m) (not *F. fragilis* Keller, 1976 (junior homonym))  
= *Bathyactis hawaiiensis* Vaughan, 1907

**paliferus** (Alcock, 1902) (69-823 m)  
= *Bathyactis kikaiensis* Yabe & Eguchi, 1942 (fossil)  
= *F. sp. sensu* Zibrowius & Grygier, 1985

**stephanus** (Alcock, 1893) (245-2000 m)

**pusillus pusillus** (Pourtalès, 1868) (285-685 m)  
**pusillus pacificus** Cairns, 1995 (350-1050 m)

**multicarinatus** Cairns, 1998 (348-350 m)

**sandoi** Cairns, 1999 (77-600 m)  
[sp. A sensu Cairns 1994: 38 (Kurile I., 3175-4110 m)  
= *F. paliferus sensu* Keller, 1976

**Fungiacyathus (Bathyactis) Moseley, 1881**

\***symmetricus** (Pourtalès, 1871) (183-1664 m)

**sibogae** (Alcock, 1902) (463-1914 m)  
= *Bathyactis stabilis* Gardiner & Waugh, 1939

**marenzelleri** (Vaughan, 1906) (1820-6328 m)  
= *Bathytrochus hexagonus* Gravier, 1915  
= *F. symmetricus aleuticus* Keller, 1976  
= *F. symmetricus fragilis* Keller, 1976  
= *F. symmetricus durus* Keller, 1976  
= *F. sp a sensu* Zibrowius & Grygier, 1985

**pseudostephanus** Keller, 1976 (3840-5120 m)

**variegatus** Cairns, 1989 (84-715 m)

**granulosus** Cairns, 1989 (287-1050 m)

**turbinolioides** Cairns, 1989 (600-930 m)

**hydra** Zibrowius & Gili, 1990 (882-886 m)

**margaretae** Cairns, 1995 (440-1175 m)

**pliciseptus** Keller, 1981 (480 m)

**crispus** (Pourtalès, 1871) (fragmenting species; 183-1115 m)

**dennanti** Cairns & Parker, 1992 (fragmenting species; 190-770 m)

**fissilis** Cairns, 1984 (fragmenting species; 212-503 m)

**fissidiscus** Cairns & Zibrowius, 1997 (fragmenting species; 282-287 m)

FAMILY MICRABACIIDAE Vaughan, 1905

**Leptopenus** Moseley, 1881

\***discus** Moseley, 1881 (2842-5000 m)  
= *L. irinae* Keller, 1977

**hypocoelus** Moseley, 1881 (3949 m)

**antarcticus** Cairns, 1989 (2005-2897 m)

**solidus** Keller, 1977 (2000-3250 m)

[sp. A  
= sensu Cairns, 1989: 14 (Celebes, 871 m)  
= sensu Cairns & Zibrowius, 1997: 73 (Banda Sea, 221-871 m)

**Letepsammia** Yabe & Eguchi, 1932

\***formosissima** (Moseley, 1876) (97-500 m)

**superstes** (Ortmann, 1888) (77-710 m)  
= *Stephanophyllia japonica* Yabe & Eguchi, 1934

**franki** Owens, 1994 (50-650 m)

- fissilis* Cairns, 1995 (106-458 m)  
 =*Letepsammia* sp. sensu Squires, 1964
- Stephanophyllia*** Michelin, 1841  
*complicata* Moseley, 1876 (73-700 m)  
*fungulus* Alcock, 1902 (15-653 m)  
*neglecta* Boschma, 1923 (49-555 m)
- Rhombopsammia*** Owens, 1986  
 \**squiresi* Owens, 1986 (622-1401 m)  
*niphada* Owens, 1986 (390-804 m)

Suborder FAVIINA

Superfamily Favioidea

FAMILY RHIZANGIIDAE d'Orbigny, 1851

***Culicia*** Dana, 1846

- \**stellata* Dana, 1846 (0-100 m)  
 =*C. truncata* Dana, 1846  
 =*C. japonica* Yabe & Eguchi, 1936
- rubeola* (Quoy & Gaimard, 1833) (0-82 m)  
 =*Cylicia huttoni* Tenison-Woods, 1878
- tenella tenella* Dana, 1846 (30 m)  
*tenella natalensis* (Duncan, 1876)
- hoffmeisteri* Squires, 1966 (0-51 m)  
*australiensis* Hoffmeister, 1933 (3-378 m)  
 =*C. sp.* sensu Veron, 1986
- quinaria* (Tenison-Woods, 1878) (0.5-30 m)  
*smithii* (Milne Edwards & Haime, 1849) (shallow)  
*fragilis* Chevalier, 1971 (14-20 m)  
*excavata* (Milne Edwards & Haime, 1849) (shallow)  
*cuticulata* (Klunzinger, 1879) (unknown, but shallow)  
*tenuisepes* Ogawa, Takahashi & Sakai, 1997 (0.5-1.5 m)  
*subaustraliensis* Ogawa, Takahashi & Sakai, 1997 (shallow)  
*rachelfitzhardingeae* Cairns, 2006 (2 m)  
 [*verreauxii* (ME & H, 1849) sp. dub. (see Cairns, 2004: 319, New Zealand; unknown depth)]
- Astrangia*** Milne Edwards & Haime, 1848  
*poculata* (Ellis & Solander, 1786) (facultative, 0-263 m)  
 =\**A. michelinii* Milne Edwards & Haime, 1848  
 =*A. danae* Milne Edwards & Haime, 1849  
 =*A. astreiformis* Milne Edwards & Haime, 1849  
 =*A. danae* Agassiz, 1850  
 =*A. edwardsii* Verrill, 1866
- browni* Palmer, 1928 (0-5 m)  
*conferta* Verrill, 1870 (9-33 m)  
*equatorialis* Durham & Barnard, 1952 (0-15 m)  
 =*A. gardinerensis* Durham & Barnard, 1952
- haime* Verrill, 1866 (1-53 m)  
 =?*A. concinna* Verrill, 1866  
 =*A. pulchella* Verrill, 1866  
 =*A. pedersenii* Verrill, 1870  
 =?*A. oaxacensis* Palmer, 1928  
 =*A. lajollaensis* Durham, 1947  
 =*A. caboensis* Durham, 1947

- =*A. conceptionensis* Durham, 1947
- =*A. coronadoensis* Durham, 1947 (Pleistocene and Recent)
- =*A. santelmoensis* Durham, 1947 (Pleistocene)
- =*A. cortezi* Durham & Barnard, 1952
- =*A. hancocki* Durham & Barnard, 1952
- =*A. sanfilipensis* Durham & Barnard, 1952
- rathbuni*** Vaughan, 1906 (5-90 m)
- solitaria*** (Leseuer, 1817) (0-51 m)
  - =*A. neglecta* Duchassaing & Michelotti, 1860
  - =*A. granulata* Duchassaing & Michelotti, 1860
  - =?*A. minuta* Duncan, 1876
  - =?*A. epithecata* Duncan, 1876
  - =*A. solitaria portoricensis* Vaughan, 1901
  - =*A. brasiliensis* Vaughan, 1906
- woodsii*** Wells, 1955 (18 m)
- atrata*** (Dennant, 1906) (3-51 m)
- californica*** Durham & Barnard, 1952 (29 m)
  - =?*A. tangolaensis* Durham, 1949
- costata*** Verrill, 1866 (11-31 m)
- howardi*** Durham & Barnard, 1952 (54-91 m)
- dentata*** Verrill, 1866 (0-15 m)
- macrodentata*** Thiel, 1940 (shallow)
- mercatoris*** Thiel, 1941 (3-6 m)
- Oulangia*** Milne Edwards & Haime, 1848
  - \****stokesiana*** Milne Edwards & Haime, 1848 (1-22 m)
    - var. *miltoni*** Yabe & Eguchi, 1932 (0-135 m)
  - bradleyi*** (Verrill, 1866) (0-64 m)
  - cyathiformis*** Chevalier, 1971 (10-20 m)
- Cladangia*** Milne Edwards & Haime, 1851
  - exusta*** Lütken, 1873 (20 m)

FAMILY OCULINIDAE Gray, 1847

OCULININAE Gray, 1847

***Oculina*** Lamarck, 1816

- profunda*** Cairns, 1991 (119-742 m)
  - =*Oculinidarium* sp. sensu Marenzeller, 1904
- tenella*** Pourtalès, 1871 (possibly facultative; 25-159 m)
- varicosa*** Leseuer, 1821 (facultative; 5-128 m)
- diffusa*** Lamarck, 1816 (facultative, re: Humann, 1993; 0-25 m)
- virgosa*** Squires, 1958 (29-1050 m)
- Petrophyllia*** (= *Archohelia*) Conrad, 1855
  - rediviva*** (Wells & Alderslade, 1979) (0-7 m)
- Sclerhelia*** Milne Edwards & Haime, 1850
  - \****hirtella*** (Pallas, 1766) (18-165 m)
    - =?*S. dubia* Nemenzo, 1980
- Bathelia*** Moseley, 1881
  - \****candida*** Moseley, 1881 (500-1250 m)
- Cyathelia*** Milne Edwards & Haime, 1849
  - \****axillaris*** (Ellis & Solander, 1786) (12-366 m)
- Madrepora*** Linnaeus, 1758 (= *Neohelia* Moseley, 1881)
  - \****oculata*** Linnaeus, 1758 (55-1950 m)

=*Amphelia venusta* Milne Edwards & Haime, 1850: 86  
 =*Lophohelia tenuis* Moseley, 1881  
 =*Lophohelia candida* Moseley, 1881  
 =*Cyathohelia formosa* Alcock, 1898  
 =*Lophohelia investigatoris* Alcock, 1898  
 =*Amphihelia moresbyi* Alcock, 1898 (see Zibrowius, 1974)  
 =*M. kauaiensis* Vaughan, 1907  
 =*M. alcocki* Faustino, 1927: 106 (unnecessary replacement name)  
 =*M. vitiae* Squires & Keyes, 1967  
 --**oculata** forma *galapagensis* Vaughan, 1906  
 --**oculata** forma *alpha* Cairns, 1991  
 --**oculata** forma *beta* Cairns, 1991  
 --**oculata** forma *gamma* Cairns, 1991  
*carolina* (Pourtalès, 1871) (53-801 m)  
     =*Lophohelia exigua* Pourtalès, 1871  
*arbuscula* (Moseley, 1881) (212-658 m)  
*minutiseptum* Cairns & Zibrowius, 1997 (150-302 m)  
*porcellana* (Moseley, 1881) (pentamer; 55-516 m)  
 [cf. *porcellana* Cairns & Zibrowius, 1997: 84 (hexamer; Indonesia, 55-238 m)

FAMILY ANTHEMIPHYLLIIDAE Vaughan, 1907

*Anthemiphyllia* Pourtalès, 1878

\**patera patera* Pourtalès, 1878 (500-700 m)  
     *patera costata* Cairns, 1999 (320-700 m)  
*spinifera* Cairns, 1999 (282-650 m)  
*multidentata* Cairns, 1999 (128-270 m)  
*macrolobata* Cairns, 1999 (369-650 m)  
*dentata* (Alcock, 1902) (50-1050 m)  
     =?*Discotrochus investigatoris* Alcock, 1893 (has priority if synonymous)  
*pacifica* Vaughan, 1907 (205-342 m)  
*frustum* Cairns, 1994 (209-340 m)

Suborder CARYOPHYLLIINA

Superfamily CARYOPHYLLIOIDEA Dana, 1846

FAMILY CARYOPHYLLIIDAE Dana, 1846

*Caryophyllia* (C.) Lamarck, 1801 [key to species Kitahara, Cairns, Miller, 2010]

Attached *Caryophyllia*:

\**cyathus* (Ellis & Solander, 1786) (70-300 m)  
     =*Madrepora calendula* Hermann, 1782  
     =*Madrepora anthophyllum* Esper, 1791  
*berteriana* Duchassaing, 1850 (91-1033 m)  
     =*C. formosa* Pourtalès, 1867  
*crypta* Cairns, 2000 (12-183 m)  
*polygona* Pourtalès, 1878 (700-1817 m)  
*horologium* Cairns, 1977 (55-175 m)  
*corrugata* Cairns, 1979 (183-380 m)  
*calveri* Duncan, 1873 (91-340 m)  
     =*Cyathina pezita* Ehrenberg, 1834  
     =?*C. electrica* Milne Edwards, 1881  
 [cf. *calveri* Duncan, 1873, sensu Cairns, 1999: 73 (Vanuatu, 558-602 m)  
*diomedae* Marenzeller, 1904 (225-2200 m)

*sarsiae* Zibrowius, 1974 (520-2200 m)  
 =*C. sp. sensu* Zibrowius, 1974  
*alberti* Zibrowius, 1980 (76-506 m)  
*secta* Cairns & Zibrowius, 1997 (transverse division; 220-366 m)  
*abrupta* Cairns, 1999 (transverse division; 300-650 m)  
*stellula* Cairns, 1998 (166-420 m)  
 =*C. epithecata* of Gardiner, 1904  
*balaenacea* Zibrowius & Gili, 1990 (882-1112 m)  
*atlantica* (Duncan, 1873) 298-2165 m)  
 =*C. laevicostata* Moseley, 1881  
 =?*C. panda* Alcock, 1902  
 =*C. alcocki* Vaughan, 1907  
 =?*C. pacifica* Keller, 1981  
*antarctica* Marenzeller, 1904 (87-1435 m)  
*kellerae* Cairns & Polonio, 2013 (310 m)  
*coronula* Cairns & Polonio, 2013 (797-1553)  
*arnoldi* Vaughan, 1900 (40-656 m)  
*alaskensis* Vaughan, 1941 (102-399 m)  
 =*C. sp. A sensu* Cairns, 1994: 21  
*lamellifera* Moseley, 1881 (89-1152 m)  
*japonica* Marenzeller, 1888 (77-1680 m)  
*ephyala* Alcock, 1891 (420 m)  
*crosnieri* Cairns & Zibrowius, 1997 (nom. nov.; 133-1050 m)  
 =*C. elongata* Cairns, in Cairns & Keller, 1993, not *C. clavus* var. *elongata* Duncan, 1873  
*cinticulatus* (Alcock, 1898) (384 m)  
*inornata* (Duncan, 1878) (0-100 m)  
 =*Coenocyathus giesbrechti* Doderlein, 1913  
 =*Coenocyathus dohrni* Doderlein, 1913  
*ralphae* Cairns, 1995 (315-360 m)  
*eltaninae* Cairns, 1982 (101-814 m)  
*profunda* Moseley, 1881 (35-1116 m)  
*paucipalata* Moseley, 1881 (714-843 m)  
*barbadensis* Cairns, 1979 (129-249 m)  
*rugosa* Moseley, 1881 (71-581 m)  
 =*C. paraoctopali* Yabe & Eguchi, 1942  
*octopali* Vaughan, 1907 (457-627 m)  
 =*C. octopali* var. *incerta* Vaughan, 1907  
*marmorea* Cairns, 1984 (331-500 m)  
*oetonaria* Cairns & Zibrowius, 1997 (182-622 m)  
*antillarum* Pourtalès, 1874 (150-730 m)  
*zopyros* Cairns, 1979 (73-618 m)  
*abyssorum* Duncan, 1873 (732-2000 m)  
 =*Caryophyllia inskipi* Duncan, 1873  
 =*Caryophyllia vermiformis* Duncan, 1873  
*perculata* Cairns, 1991 (54-316 m)  
*hawaiiensis* Vaughan, 1907 (85-650 m)  
*quadragenaria* Alcock, 1902 (54-440 m)  
 =*C. scobinosa decapali* Yabe & Eguchi, 1942  
*solida* Cairns, 1991 (373-488 m)  
*smithii* Stokes & Broderip, 1828 (40-400 m)  
 =*Turbinolia borealis* Fleming, 1828

=*Caryophyllia clavus* Scacchi, 1835  
 =*Cyathina turbinata* Philippi, 1836  
 =*Caryophyllia pseudoturbinolia* Michelin, 1841  
 =*Paracyathus taxilianus* Gosse, 1860  
 =*Paracyathus thulensis* Gosse, 1860  
 =*Paracyathus pteropus* Gosse, 1860  
 =*C. smithii* var. *castanea* Gosse, 1860  
 =*C. smithii* var. *esmeralda* Gosse, 1860  
 =*C. smithii* var. *clara* Gosse, 1860  
 =*C. clavus* var. *elongata* Duncan, 1873  
 =*C. clavus* var. *exserta* Duncan, 1873  
 =*C. clavus* var. *epithecata* Duncan, 1873  
 =*Paracyathus monilis* Duncan, 1878  
 =*Paracyathus humilis* Duncan, 1878 (junior homonym of *P. humilis* Verrill, 1870)

***foresti*** Zibrowius, 1980 (155-950 m)

***paradoxus*** Alcock, 1898 (786 m)

***jogashimaensis*** Eguchi, 1968 (52-98 m)

***transversalis*** Moseley, 1881 (210-397 m)

***corona*** Duchassaing, 1870 (Antilles, 60 m)

***protei*** Duchassaing 1870 (Antilles, 100 m)

[sp. A sensu Seig & Zibrowius, 1989: 190 (New Caledonia, 570-610 m)

[sp. B sensu Seig & Zibrowius, 1989: 190 (New Caledonia, 825-860 m)

Unattached *Caryophyllia*:

***scobinosa*** Alcock, 1902 (302-2450 m)

=*C. cultrifera* Alcock, 1902

=?*C. sp. B* sensu Seig & Zibrowius, 1989 (New Caledonia)

***cornulum*** Cairns & Zibrowius, 1997 (1525-2603 m)

***squiresi*** Cairns, 1982 (406-659 m)

=*C. sp. A* sensu Squires, 1969

***grandis*** Gardiner & Waugh, 1938 (183-596 m)

***mabahithi*** Gardiner & Waugh, 1938 (278-1022 m)

***sewelli*** Gardiner & Waugh, 1938 (366 m)

***valdiviae*** Zibrowius & Gili, 1990 (882-2670 m)

***ambrosia ambrosia*** Alcock, 1898 (311-1230 m)

=?*C. scillaemorpha* Alcock, 1894

***ambrosia caribbeana*** Cairns, 1979 (183-1646 m)

***seguenzae*** Duncan, 1873 (1000-1400 m)

***planilamellata*** Dennant, 1906 (128-1220 m)

***huinayensis*** Cairns, Haussermann & Försterra, 2005 (16-256 m)

***aspera*** Kitahara, Cairns, & Miller, 2010 (400 m)

***concreta*** Kitahara, Cairns, & Miller, 2010 (215-570 m)

***laevigata*** Kitahara, Cairns, & Miller, 2010 (410-1032 m)

***oblonga*** Kitahara, Cairns, & Miller, 2010 (670-1005 m)

***tangaroae*** Kitahara, Cairns, & Miller, 2010 (505-900 m)

***versicolorata*** Kitahara, Cairns, & Miller, 2010 (215-708 m)

[*paucipaliata* Yabe & Eguchi, 1942 (fossil)

=*paucipaliata* Yabe & Eguchi, 1932: 443 (nom. nud., not *C. paucipalata* Moseley, 1881)

***Caryophyllia (Acanthocyathus)*** Milne Edwards & Haime, 1848

\****grayi*** (Milne Edwards & Haime, 1848) (spined; 37-360 m)

***spinigera*** Saville Kent, 1871 (spined; 127-347 m)

***dentata*** (Moseley, 1881) (spined; 90-263 m)

- quangdongensis* Zou, 1984 (spined; 167-179 m)  
*spinicarens* (Moseley, 1881) (222-750 m)  
*zanzibarensis* Zou, 1984 (nom. nov.) (238-302 m)  
 =*C. compressus* of Gardiner & Waugh, 1938, not =*C. compressa* Yabe & Eguchi, 1932  
*decamera* Cairns, 1998 (spined; 124-263 m)  
*karubarica* Cairns & Zibrowius, 1997 (389-477 m)  
*unicristata* Cairns & Zibrowius, 1997 (251-477 m)  
***Premocyathus*** Yabe & Eguchi, 1942  
 \**dentiformis* (Alcock, 1902) (22-960 m) x10  
 =*Caryophyllia compressa* Yabe & Eguchi, 1932 (nom. nud.)  
 =*Premocyathus compressus* Yabe & Eguchi, 1942, not *C. compressa* Gardiner & Waugh, 1938 =*C. (A.) zanzibarensis* Zou, 1984, nom. nov.  
 ?=*Caryophyllia ceratoconus* Hu, 1987  
*cornuformis* (Pourtalès, 1868) (137-2360 m)  
 =*Caryophyllia pourtalesi* Duncan, 1873  
***Coenocyathus*** Milne Edwards & Haime, 1848  
 \**cylindricus* Milne Edwards & Haime, 1848 (65-500 m)  
 =*Coenocyathus lobatus* Chevalier, 1966  
*anthophyllites* Milne Edwards & Haime, 1848 (65-250 m)  
*bowersi* Vaughan, 1906 (9-302 m)  
*brooki* Cairns, 1995 (7-95 m)  
*caribbeana* Cairns, 2000 (5-100 m)  
*goreaui* Wells, 1972 (octamerall; 2-6 m)  
*humanni* Cairns, 2000 (21 m)  
*parvulus* (Cairns, 1979) (97-399 m)[Not *Caryophyllia parvula* Montanaro, 1929]  
***Africana*** Ocaña & Brito, 2015  
*wirtzi* Ocaña & Brito, 2015 (depth not reported)  
***Bathycyathus*** Milne Edwards & Haime, 1848  
 \**chilensis* Milne Edwards & Haime, 1848 (26-420 m)  
 =*B. indicus* Milne Edwards & Haime, 1848  
***Crispatotrochus*** Tenison-Woods, 1878  
 \**cornu* (Moseley, 1881) (220-1097 m)  
*rubescens* (Moseley, 1881) (110-634 m)  
 =*Cyathoceras tydemani* Alcock, 1902  
 =*Cyathoceras diomedae* Vaughan, 1907  
*niinoi* (Yabe & Eguchi, 1942) (104 m)  
*foxi* (Durham & Barnard, 1952) (82-272 m)  
*irregularis* (Cairns, 1982) (549 m)  
*inornatus* Tenison-Woods, 1878 (120-400 m)  
*woodsii* (Wells, 1964) (77-87 m)  
*squiresi* (Cairns, 1979) (686-822 m)  
 =*Aulocyathus* sp. sensu Squires, 1959  
*galapagensis* Cairns, 1991 (84-806 m)  
*curvatus* Cairns, 1995 (1373-2505 m)  
 =*Gardineria* sp. sensu Gardiner, 1929  
*rugosus* Cairns, 1995 (142-1050 m)  
*gregarius* Cairns, 2004 (460 m)  
*septumdentatus* Kitahara & Cairns, 2008 (187-400 m)  
 [as *Cyathoceras* sp. A sensu Cairns, 1982: 22 (Eltanin Fracture Zone, 2305-2329 m)  
 [cf. *cornu* sensu Cairns 1979: 67 (western Atlantic, 220-241 m)  
***Labyrinthocyathus*** Cairns, 1979

- \**langae* Cairns, 1979: 341 (695-810 m)  
 =*L. langi* (sic) Cairns, 1979
- limatulus* (Squires, 1964) (20-508 m)  
 =*Ceratotrochus japonicus* Eguchi, 1968
- delicatus* (Marenzeller, 1904) (155-1000 m)  
 =*L. sp.* sensu Cairns, 1979: pl. 11, fig. 10-11
- quaylei* (Durham, 1947) (37-293 m)
- facetus* Cairns, 1979 (385-402 m)
- japonicus* (Eguchi, 1968) (150-250 m)
- [sp. A  
 =sensu Cairns, 1995: 58 (New Zealand, 665-1000 m)  
 =sensu Cairns & Zibrowius, 1997: 104 (Indonesia, 210-268 m)
- Concentrotheca** Cairns, 1979
- \**laevigata* (Pourtalès, 1871) (183-772 m)  
*vaughani* Cairns, 1991 (313-316 m)
- Ceratotrochus** Milne Edwards & Haime, 1848
- magnaghii* Cecchini, 1914 (7-400 m)  
*franciscana* Durham & Barnard, 1952 (79-80 m)  
 “*Ceratotrochus*” *laxus* Vaughan, 1907 (583-678 m)
- Nomlandia** Durham & Barnard, 1952
- \**californica* Durham & Barnard, 1952 (82 m)
- Trochocyathus** (*T.*) Milne Edwards & Haime, 1848
- rawsonii* Pourtalès, 1874 (55-700 m)  
 =*Montlivaultia poculum* Pourtalès, 1878  
 =*Paracyathus laxus* Pourtalès, 1880
- [*rawsonii* Pourtalès, 1874, sensu Gardiner 1904 (S. Africa, unknown depth)  
 =cf. *rawsonii* Pourtalès, 1874, sensu Cairns & Keller, 1993: 241 (SWIO, 560-620 m)
- fossulus* Cairns, 1979 (205-775 m)  
*fasciatus* Cairns, 1979 (238 m)  
*laboreli* Cairns, 2000 (130-240 m)  
*caryophylloides* Alcock, 1902 (115-344 m)  
*japonicus* Eguchi, 1968 (150-450 m)  
 =*Ceratotrochus jogashimaensis* Eguchi, 1968
- decamera* Cairns, 1994 (70-88 m)  
*rhombocolumna* Alcock, 1902 (110-530 m)  
 =*Paracyathus tenuicalyx* Vaughan, 1907
- oahensis* Vaughan, 1907 (75-571 m)  
*aithoseptatus* Cairns, 1984 (371-454 m)  
*mauiensis* (Vaughan, 1907) (174-278 m)  
*vasiformis* Bourne, 1903 (323-650 m)  
*philippinensis* Semper, 1872 (54-330 m)  
*semperi* Cairns & Zibrowius, 1997 (38-245 m)  
*gordoni* Cairns, 1995 (398-710 m)  
*maculatus* Cairns, 1995 (77-550 m)  
 =?*T. cavatus* Alcock, 1902
- spinosocostatus* Zibrowius, 1980 (1575-1650 m)  
*burchae* (Cairns, 1984) (35-144 m)  
*apertus* Cairns & Zibrowius, 1997 (20-230 m)  
*porphyreus* (Alcock, 1893) (shallow)  
*cooperi* (Gardiner, 1905) (25-100 m)

=? *T. weberi* Alcock, 1902  
*gardineri* (Vaughan, 1907) (274-470 m)  
*cepulla* Cairns, 1995 (398-610 m)  
 = *Trochocyathus* sp. sensu Seig & Zibrowius, 1989  
*discus* Cairns & Zibrowius, 1997 (240-700 m)  
*efateensis* Cairns, 1999 (391-437 m)  
*patelliformis* Cairns, 1999 (1010-1250 m)  
*wellsi* Cairns, 2004 (75-86 m)  
 [sp. A sensu Cairns & Keller, 1993: 240 (SWIO, 74-315 m)]  
*Trochocyathus (Aplocyathus)* Orbigny, 1849  
*hastatus* Bourne, 1903 (366-710 m)  
*brevispina* Cairns & Zibrowius, 1997 (240-560 m)  
*longispina* Cairns & Zibrowius, 1997 (326-760 m)  
*Tethocyathus* Kühn, 1933  
*cylindraceus* (Pourtalès, 1868) (183-649 m)  
 = *Trochocyathus* sp. sensu Gardiner, 1929  
*prahli* Lattig & Cairns, 2000 (303-333 m)  
*recurvatus* (Pourtalès, 1878) (320-569 m)  
*variabilis* Cairns, 1979 (250-860 m)  
*virgatus* (Alcock, 1902) (137-1200 m)  
*minor* (Gardiner, 1899) (73 m)  
*endesa* Cairns, Haussermann & Försterra, 2005 (15-240 m)  
*patagoniensis* Haussermann & Försterra, 2009:956 (nom. nud.)  
*Paracyathus* Milne Edwards & Haime, 1848 [Rhizangiidae sensu Best (1987)]  
*pulchellus* (Philippi, 1842) (17-1260 m)  
 = *Cyathina striata* Philippi, 1842  
 = *P. defilippi* Duchassaing & Michelotti, 1860  
 = *P. confertus* Pourtalès, 1868  
 = *Caryophyllia sinuosa* Duchassaing, 1870  
 = *P. agassizii* Duncan, 1873  
 = *P. insignis* Duncan, 1878  
 = *P. africanus* Duncan, 1878  
 = *P. costatus* Duncan, 1878  
*arcuatus* Lindström, 1877 (201-343 m)  
*stearnsii* Verrill, 1869 (20-134 m)  
 = *P. caltha* Verrill, 1869 (sic)  
 = *P. tiburonensis* Durham, 1947  
*montereyensis* Durham, 1947 (75-146 m)  
*humilis* Verrill, 1870 (23-104 m)  
*coronatus* Duncan, 1876 (unknown depth)  
*pruinus* Alcock, 1902 (150 m)  
*molokensis* Vaughan, 1907 (161-260 m)  
*conceptus* Gardiner & Waugh, 1938 (229-805 m)  
*stokesii* Milne Edwards & Haime, 1848 (unknown depth)  
*parvulus* Gardiner, 1899 (73 m)  
*lifuensis* Gardiner, 1899 (73 m)  
*rotundatus* Semper, 1872 (18-66 m)  
 =? *P. caeruleus* Duncan, 1889  
 =? *P. merguensis* Duncan 1889  
*indicus* *indicus* Duncan, 1889 (unknown depth)  
*indicus gracilis* Alcock, 1893 (unknown depth)

*cavatus* Alcock, 1893 (unknown depth)  
*fulvus* Alcock, 1893 (350-433 m)  
*andersoni* Duncan, 1889 (unknown depth)  
*profundus* Duncan, 1889 (unknown depth)  
*persicus* Duncan, 1876: 431 (less than 50 m)  
*ebonensis* Verrill, 1866: 40 (unknown depth)  
*porcellanus* Verrill, 1866: 40 (unknown depth)  
*darwinensis* Cairns, 2004 (0-26 m)  
“*Paracyathus*” *vittatus* Dennant, 1906 (31 m)  
[sp. Cairns & Zibrowius, 1997: 116 (Banda Sea, 90-397 m)  
= *P. defilippi* sensu Moseley, 1881  
[sp. sensu Zibrowius, 1974: 766 (Amsterdam I., 80-100 m)  
***Polycyathus*** Duncan, 1876 [=Rhizangiidae sensu Best (1987)]  
\**atlanticus* Duncan, 1876 (unknown depth)  
= *Agelecyathus helenae* Duncan, 1876  
= *A. helenae* var. *minor* Duncan, 1876  
*mayae* Cairns, 2000 (137-309 m)  
*fuscomarginatus* (Klunzinger, 1879) (unknown depth)  
*pallida* (Klunzinger, 1879) (depth unknown)  
*fulvus* Wijsman-Best, 1970 (30-50 m)  
*hodgsoni* Verheij & Best, 1987 (0-35 m)  
*marigondoni* Verheij & Best, 1987 (35 m)  
*furanaensis* Verheij & Best, 1987 (6-52 m)  
*hondaensis* (Durham & Barnard, 1952) (55-64 m)  
*isabela* Wells, 1982 (14-23 m)  
*muelleriae* (Abel, 1959) (0-30 m)  
= *Polycyathus banyulensis* Best, 1968  
= *Polycyathus mediterraneus* Best, 1968  
*palifera* (Verrill, 1869) (“reef” depth)  
*senegalensis* Chevalier, 1966 (12-143 m)  
*verrilli* Duncan, 1889 (unknown depth)  
*andamanensis* Alcock, 1893 (unknown depth)  
*difficilis* Duncan, 1889 (unknown depth)  
*persicus* (Duncan, 1876: 434) (shallow)  
*norfolkensis* Cairns, 1995 (10-20 m)  
*octuplus* Cairns, 1999 (90-441 m)  
***Cladocora*** Ehrenberg, 1834  
*debilis* Milne Edwards & Haime, 1849 (28-480 m)  
= *C. patriarca* Pourtalès, 1874  
= *C. paulmayeri* Doderlein, 1913  
*pacifica* Cairns, 1991 (45-274 m)  
***Bourneotrochus*** Wells, 1984  
*stellulatus* (Cairns, 1984) (210-566 m)  
= \**B. veroni* Wells, 1984  
***Stephanocyathus*** (*S.*) Seguenza, 1864  
*diadema* (Moseley, 1876) (795-2553 m)  
= *Ceratotrochus discoides* Moseley, 1876  
*paliferus* Cairns, 1977 (220-715 m)  
*laevifundus* Cairns, 1977 (300-1158 m)  
*moseleyanus* (Sclater, 1886) (1000-2000 m)  
= ?*Sabinotrochus apertus* Gravier, 1920

- crassus* (Jourdan, 1895) (400-1557 m)  
*platypus* (Moseley, 1876) (439-1219 m)  
 =*S. sp. sensu* Squires & Ralph, 1965 and Squires & Keyes, 1967  
*regius* Cairns & Zibrowius, 1997 (563-2160 m)  
*imperialis* Cairns, 2004 (2436-2474 m)  
*isabellae* Reyes, Santodomingo & Cairns, 2009 (408-732 m)  
 [*bipatella* (Alcock, 1902) (a juvenile specimen of an unknown species);  
 [sp. sensu Cairns & Parker, 1992: 26 (Tasmania, 520 m)]
- Stephanocyathus (Odontocyathus)*** Moseley, 1881  
 \**coronatus* (Pourtalès, 1867) (543-1989 m)  
 =*Sabinotrochus flatiliseptis* Alcock, 1902  
 =*S. (O.) sp. sensu* Keller, 1975  
*weberianus* (Alcock, 1902) (700-1500 m)  
 =*Stephanotrochus sibogae* Alcock, 1902  
 =*Stephanocyathus ixine* Squires, 1958 (in part)  
*nobilis* (Moseley in Thompson, 1873) (609-2200 m)  
 =*Stephanotrochus nitens* Alcock, in Wood Mason & Alcock, 1891  
 =*Stephanotrochus oldhami* Alcock, 1894  
 =*Sabinotrochus opulens* Gravier, 1915  
*campaniformis* (Marenzeller, 1904) (882-1610 m)
- Stephanocyathus (Acinocyathus)*** Wells, 1984  
 \**spiniger* (Marenzeller, 1888) (120-1188 m)  
 =*Stephanotrochus tatei* Dennant, 1899 (fossil)  
 =*Odontocyathus sexradii* Alcock, 1902  
 =*Odontocyathus stella* Alcock, 1902  
 =? *Odontocyathus coloradus* Smith, 1913 (fossil)  
 =*Odontocyathus japonicus* Yabe & Eguchi, 1932 (fossil)  
*explanans* (Marenzeller, 1904) (180-1016 m)
- Vaughanella*** Gravier, 1915  
 \**margaritata* (Jourdan, 1895) (1267 m)  
*concinna* Gravier, 1915 (500-3018 m)  
*oreophila* Keller, 1981 (646-1050 m)  
*multipalifera* Cairns, 1995 (920-3500 m)
- Eriocyathus*** Cairns & Zibrowius, 1997  
 \**echinatus* Cairns & Zibrowius, 1997 (814-1401 m)
- Heterocyathus*** Milne Edwards & Haime, 1848  
 \**aequicostatus* Milne Edwards & Haime, 1848 (facultative; 0-20 m)  
 =*H. roussaeanus* Milne Edwards & Haime, 1848  
 =*Stephanoseris lamellosa* Verrill, 1865: 149 (1865 is correct)  
 =*H. philippinensis* Semper, 1872  
 =*H. oblongatus* Rehberg, 1892  
 =*H. wood-masoni* Alcock, 1893  
 =*Stephanoseris carthausi* Felix, 1913  
 =*H. a. delicatus* Sakakura, 1935  
 =*H. elongatus* Hu, 1987 (Pleistocene)  
*japonicus* (Verrill, 1866: 47) (see Zibrowius, 1998: 321; 0-20 m)  
 =*H. mai* Cheng, 1971  
*alternatus* Verrill, 1865: 149 (facultative; 0-319 m)  
 =*H. parasiticus* Semper, 1872  
 =*H. heterocostatus* Harrison, 1911  
*sulcatus* (Verrill, 1866: 48) (facultative; 11-312 m)

- =*Psammoseris cycliodes* Tenison-Woods, 1879
- =*H. pulchellus* Rehberg, 1892
- =*Homophyllia incrustans* Dennant, 1906
- hemisphaericus** Gray, 1849 (2-140 m)
- =*Spongiocyathus typicus* Folkeson, 1919
- antoniae** Reyes, Santodomingo & Cairns, 2009 (20-70 m)
- Conotrochus** Seguenza, 1864
- brunneus** (Moseley, 1881) (97-1051 m)
- =*Phloeocyathus hospes* Alcock, 1902
- funicolumna** (Alcock, 1902) (80-1078 m)
- =*Ceratotrochus hiugaensis* Yabe & Eguchi, 1942
- =?*Ceratotrochus parahispidus* Yabe & Eguchi, 1942
- asymmetros** Cairns, 1999 (210-510 m)
- Lochmaeotrochus** Alcock, 1902
- \***oculeus** Alcock, 1902 (240-616 m)
- gardineri** Cairns, 1999 (608-1175 m)
- Paraconotrochus** Cairns & Parker, 1992
- \***zeidlereri** Cairns & Parker, 1992 (304-558 m)
- =*Cyathoceras* sp. sensu Veron, 1986
- ?**antarcticus** (Gardiner, 1929) (87-728 m)
- =*Flabellum* sp. sensu Pax, 1910
- =*Caryophyllia* sp. sensu Gravier, 1914
- =*Gardineria lilliei* Gardiner, 1929
- ?**capense** (Gardiner, 1904) (59 m)
- Aulocyathus** Marenzeller, 1904 (=??Conotrochus)
- \***juvenescens** Marenzeller, 1904 (182-463 m)
- recidivus** (Dennant, 1906) (128-1137 m)
- atlanticus** Zibrowius, 1980 (450-1716 m)
- matricidus** (S.-Kent, 1871) (84-207 m)
- =*Fragilocyathus controchoides* Yabe & Eguchi, 1932
- =*Ceratotrochus elongatus* Yabe & Eguchi, 1942 (fossil)
- Desmophyllum** Ehrenberg, 1834
- \***dianthus** (Esper, 1794) (8-2460 m)
- =*Desmophyllum cristagalli* Milne Edwards & Haime, 1848
- =*Desmophyllum costatum* Milne Edwards & Haime, 1848
- =*D. cumingii* Milne Edwards & Haime, 1848
- =*D. reflexum* Duch. & Mich., 1860
- =?*Thalassiotrochus telegraphicus* Milne Edwards, 1861 (see Zibrowius, 1980: 206)
- =*D. ingens* Moseley, 1881
- =*D. capense* Gardiner, 1904
- =*D. serpuliforme* Gravier, 1915
- quinarium** Tenison-Woods, 1879: 18 (37 m)
- striatum** Cairns, 1979 (277-823 m)
- Thalamophyllia** Duchassaing, 1870
- \***riisei** (Duchassaing & Michelotti, 1860) (nom. correct: from *rusei*; 4-914 m)
- =*Desmophyllum simplex* Verrill, 1870
- =*Desmophyllum solidum* Pourtalès, 1871
- tenuescens** (Gardiner, 1899) (8-360 m)
- gasti** (Doderlein, 1913) (13-200 m)
- gombergi** Cairns, 1979 (188-220 m)
- wirtzi** Ocaña & Brito, 2015 (20-40 m)

- Hoplangia** Gosse, 1860  
  \***durotrix** Gosse, 1860 (0-150 m)  
    =*Gemmulatrochus simplex* Duncan, 1878  
    =*Microcyathus neapolitanus* Doderlein, 1913
- Monohedotrochus** Kitahara & Cairns, 2005  
  \***capitolii** Kitahara & Cairns, 2005 (150-1200 m)  
  **circularis** (Cairns, 1998) (190-545 m)  
  **epithecatius** (Cairns, 1999) (240-455 m)
- Oxysmilia** Duchassaing, 1870  
  \***rotundifolia** (Milne Edwards & Haime, 1848) (46-640 m)  
    =*Desmophyllum incertum* Duchassaing & Michelotti, 1860  
    =*Lophosmilia urena* Duchassaing, 1870  
    =*Parasmilia punctata* Lindström, 1877  
    =*Cyathoceras portoricensis* Vaughan, 1901  
  **corrugata** Cairns, 1999 (180-190 m)
- Phyllangia** Milne Edwards & Haime, 1848  
  \***americana americana** Milne Edwards & Haime, 1849 (0-53 m)  
    =*Syndapas gouldii* Lyman, 1857  
    =*Stellangia reptans* Duchassaing & Michelotti, 1860  
    =*Astrangia phyllangioides* Duchassaing & Michelotti, 1864  
    =*Coenocyathus apertus* Doderlein, 1913  
    =?*P. fuegoensis* Squires, 1963  
    =*P. americana nazensis* Chevalier, 1966  
  **americana mouchezii** (Lacaze-Duthiers, 1897) (1-55 m)  
  **pequegnatae** Cairns, 2000 (48-112 m)  
  **consagensis** (Durham & Barnard, 1952) (0-82 m)  
    =*Lophosmilia wellsii* Durham & Barnard, 1952  
  **dispersa** Verrill, 1864: 47 (shallow, less than 50 m)  
  **papuensis** Studer, 1878 (88-100 m)  
    =*Blastomussa lawtoni* Nemenzo, 1988  
  **hayamaensis** (Eguchi, 1968) (5 m)  
  **granulata** Koch, 1886 (unknown depth)  
  **echinosepes** Ogawa, Takahashi & Sakai, 1997 (90 m)
- Colangia** Pourtalès, 1871  
  \***immersa** Pourtalès, 1871 (1-347 m)  
  **jamaicaensis** Cairns, 2000 (10-20 m)  
  **multipalifera** Cairns, 2000 (20 m)  
  **moseleyi** (Faustino, 1927) (nom. nov, see Cairns & Zibrowius, 1997: 137; 18-54 m)  
    =*Cladocora conferta* Moseley, 1881, not *Caryophyllia conferta* Dana, 1846 (junior secondary homonym)
- Rhizosmilia** Cairns, 1978  
  \***gerdae** Cairns, 1978 (123-549 m)  
  **maculata** (Portalès, 1874) (1-508 m)  
    =*Coenocyathus bartschi* Wells, 1947  
  **sagamiensis** (Eguchi, 1968) (60-98 m)  
  **elata** Cairns & Zibrowius, 1997 (70-380 m)  
  **multipaliferus** Cairns, 1998 (11-165 m)  
  **valida** (Marenzeller, 1907) (490 m)  
    =**robusta** Cairns, in Cairns & Keller, 1993 (66-360 m)
- Sympodangia** Cairns & Zibrowius, 1997  
  \***albatrossi** Cairns & Zibrowius, 1997 (212-616 m)

**Lophelia** Milne Edwards & Haime, 1849

- pertusa** (Linnaeus, 1758) (39-2775 to ?3383 m)
  - =\**Madrepora prolifera* Pallas, 1766
  - =*Lophohelia subcostata* Milne Edwards & Haime, 1850
  - =*Lophohelia affinis* Pourtalès, 1868
  - =*Lophohelia prolifera* forma *gracilis* Duncan, 1873:328
  - =*Lophohelia tubulosa* Studer, 1878
  - =*Lophohelia prolifera* forma *brachycephala* Moseley, 1881:178
  - =*Lophohelia oculifera* Whiteaves, 1901: 42 (nom. nud.)
  - =*Lophelia californica* Durham, 1947
  - =*Dendrosmilium nomlandi* Durham & Barnard, 1952

**Coenosmilium** Pourtalès, 1874

- \***arbuscula** Pourtalès, 1874 (74-622 m)
- inordinata** Cairns, 1984 (244-322 m)

**Anomocora** Studer, 1878

- \***fecunda** (Portalès, 1871) (37-640 m)
  - =A. sp. sensu Cairns, 1984 (Hawaii, 201-271 m)
- carinata** Cairns, 1991 (614-785 m)
- prolifera** (Portalès, 1871) (30-329 m)
  - =*Ceratotrochus johnsoni* Duncan, 1882
- marchadi** (Chevalier, 1966) (32-229 m)
  - =?*Trochosmilium elongata* Studer, 1878
- gigas** (van der Horst, 1931) (183-510 m)

**Pourtalesmilium** Duncan, 1884

- anthophyllites** (Ellis & Solander, 1786) (25-300 m)
  - =*Coenocyathus corsicus* Milne Edwards & Haime, 1848
  - =\**Blastosmilium pourtalesi* Duncan, 1878
  - =*Coenosmilium repens* Chevalier, 1966
- conferta** Cairns, 1978 (55-191 m)

**Phacelocyathus** Cairns, 1979

- \***flos** (Portalès, 1878) (20-255 m)
  - [sp. sensu Zibrowius & Grygier, 1985: 121 (Indian Ocean, 55-131 m)]

**Solenosmilium** Duncan, 1873

- \***variabilis** Duncan, 1873 (220-2165 m)
  - =*Solenosmilium jeffreyi* Alcock, 1898
  - =*Solenosmilium* sp. sensu Keller, 1975
- australis** Cairns & Polonio, 2013 (650-1620 m)

**Dasmosmilium** Pourtalès, 1880

- \***lymani** (Portalès, 1871) (37-366 m)
  - =*Goniocyathus pacifica* Yabe & Eguchi, 1932
- variegata** (Portalès, 1871) (110-600 m)
  - =*Bathycyathus elegans* Studer, 1878

**Goniocorella** Yabe & Eguchi, 1932

- \***dumosa** (Alcock, 1902) (88-1488 m)
  - =*G. granulosa* Hu, 1987 (sic: granulosa; Pleistocene)

**Confluphyllia** Cairns & Zibrowius, 1997

- \***juncta** Cairns & Zibrowius, 1997 (135-385 m)

FAMILY DELTOCYATHIDAE Kitahara, Cairns, Stolarski and Miller, 2012

**Deltocyathus** Milne Edwards & Haime, 1848

- \***italicus** (Michelotti, 1838) (403-2634 m)

=*D. conicus* Zibrowius, 1980  
*agassizii* Pourtalès, 1867 (494-1115 m)  
*calcar* Pourtalès, 1874 (81-675 m)  
*eccentricus* Cairns, 1979 (183-1000 m)  
*moseleyi* Cairns, 1979 (200-1372 m)  
*pourtalesi* Cairns, 1979 (311-567 m)  
*magnificus* Moseley, 1876 (88-1500 m)  
 =*Fungiacyathus* sp. sensu Veron, 1986  
*andamanicus* Alcock, 1898 (187-397 m)  
*rotulus* (Alcock, 1898) (210-1300 m)  
 =*D. fragilis* Alcock, 1902  
*murrayi* Gardiner & Waugh, 1938 (1948-2312 m)  
*varians* Gardiner & Waugh, 1938 (655-732 m)  
*sarsi* (Gardiner & Waugh, 1938) (44-80 m)  
 ?*nascornatus* (Gardiner & Waugh, 1938) (73-2000 m)  
*suluensis* Alcock, 1902 (142-1050 m)  
 =*D. formosus* Cairns, 1995  
*vaughani* Yabe & Eguchi, 1932 (nom. nov.) (88-1097 m)  
 =*Levipalifer orientalis* Vaughan, 1900, not *D. orientalis* Duncan, 1876  
*parvulus* Keller, 1982 (1940-5080 m)  
*ornatus* Gardiner, 1899 (73-360 m)  
*heteroclitus* Wells, 1984 (208-335 m)  
*philippinensis* Cairns & Zibrowius, 1997 (342-522 m)  
*stella* Cairns & Zibrowius, 1997 (206-597 m)  
*halianthus* (Lindström, 1877) (46-130 m)  
*corrugatus* Cairns, 1999 (280-390 m)  
*crassiseptum* Cairns, 1999 (413-536 m)  
*cameratus* Cairns, 1999 (305-1175 m)  
*taiwanicus* Hu, 1987 (320-697 m)  
*inuitatus* Kitahara & Cairns, 2009 (580 m)  
*radiatus* Latypov, 2014 (depth unknown)  
 [sp. A sensu Cairns & Keller, 1993: 245 (SWIO, 207-315 m)  
 [sp. sensu Zibrowius, 1974: 756 (Amsterdam I., 496-2278 m)

FAMILY TURBINOLIIDAE Milne Edwards & Haime, 1848

*Alatotrochus* Cairns, 1994  
 \**rubescens* (Moseley, 1876) (180-751 m)  
*Pleotrochus* Cairns, 1997  
 \**venustus* (Alcock, 1902) (200-397 m)  
*zibrowii* Cairns, 1997 (1137 m)  
*Australocyathus* Cairns & Parker, 1992  
 \**vincentinus* (Dennant, 1904) (16-148 m)  
*Tropidocyathus* Milne Edwards & Haime, 1848  
 \**lessonii* (Michelin, 1842) (50-421 m)  
 =*Trochocyathus wellsi* Yabe & Eguchi, 1942  
*labidus* Cairns & Zibrowius, 1997 (206-536 m)  
*Cyathotrochus* Bourne, 1905  
*pileus* (Alcock, 1902) (123-522 m)  
 =?*Tropidocyathus bouganvillei* Milne Edwards & Haime, 1857 (nom. obl.)  
 =*Endopachys australiae* Tenison-Woods, 1878 (nom. obl.)  
 =?\**Cyathotrochus herdmani* Bourne, 1905

=*Tropidocyathus intermedius* Yabe & Eguchi, 1932 (nom. nud.)  
*nascornatus* (Gardiner & Waugh, 1938) (183-457 m)

***Deltocyathoides*** Yabe & Eguchi, 1932  
*orientalis* (Duncan, 1876) (44-635 m)  
 =*Deltocyathus lens* Alcock, 1902  
 =\**Deltocyathoides japonicus* Yabe & Eguchi, 1932, not *Peponocyathus orientalis* Yabe  
 & Eguchi, 1932  
 =*Deltocyathus minutus* Gardiner & Waugh, 1938  
*stimpsonii* (Pourtalès, 1871) (110-600 m)  
 =*Notocyathus* sp. sensu Lewis, 1965

***Notocyathus*** Tenison-Woods, 1880  
*conicus* (Alcock, 1902) (34-1110 m)  
*venustus* (Alcock, 1902) (70-555 m)

***Thrypticotrochus*** Cairns, 1989  
*petterdi* (Dennant, 1906) (95-925 m)  
 =\**T. multilobatus* Cairns, 1989

***Cryptotrochus*** Cairns, 1988  
 \**carolinensis* Cairns, 1988 (320-338 m)  
*javanus* Cairns, 1988 (585 m)  
*brevipalus* Cairns, 1999 (466-700 m)

***Pseudocyathoceras*** Cairns, 1991  
 \**avis* (Durham & Barnard, 1952) (91-183 m)  
 =*Kionotrochus hoodensis* Durham & Barnard, 1952

***Idiotrochus*** Wells, 1935  
 \**emarciatus* (Duncan, 1865) (82-238 m)  
 =*Sphenotrochus excisus* Duncan, 1865 (Miocene)  
 =*Sphenotrochus emarciatus* var. *perexiguus* Dennant, 1906  
*kikutii* (Yabe & Eguchi, 1941) (97-645 m)  
 =*Idiotrochus* n. sp. sensu Cairns & Parker, 1992: 41  
*alatus* Cairns, 2004 (315-450 m)

***Lissotrochus*** Cairns, 2004  
 \**curvatus* Cairns, 2004 (342-367 m)

***Dunocyathus*** Tenison-Woods, 1878  
 \**parasiticus* Tenison-Woods, 1878 (64-549 m)  
 =*Deltocyathus rotaeformis* Tenison-Woods, 1878  
 =*Dunocyathus* sp. sensu Wells, 1958: 263  
*wallaceae* Cairns, 2004 (320-414 m)

***Holcotrochus*** Dennant, 1902  
 \**scriptus* Dennant, 1902 (9-342 m)  
*crenulatus* Dennant, 1904 (40-414 m)

***Conocyathus*** d'Orbigny, 1849  
*zelandiae* Duncan, 1876 (4-137 m)  
 =*C. scrobiculatus* Dennant, 1902  
 =*Turbinolia australiensis* Gardiner, 1939  
*gracilis* Cairns, 1998 (22-291 m)  
*formosus* Cairns, 2004 (320-367 m)

***Turbinolia*** Lamarck, 1816  
*stephensoni* (Wells, 1959) (9-32 m)

***Sphenotrochus*** Milne Edwards & Haime, 1848 (type species is a fossil)  
 (*Eusthenotrochus*) *gilchristi* Gardiner, 1904 (\*type of subgenus; 24-165 m)  
 =*S. moseri* Wells, 1935

- =*S. dentosus* Boshoff, 1981 (nom. nud.)  
 =*S. sp.* sensu Boshoff, 1981  
*(E.) auritus* Pourtalès, 1874 (15-64 m)  
*lindstroemi* Cairns, 2000 (22-78 m)  
*hancocki* Durham & Barnard, 1952 (18-274 m)  
*excavatus* Tenison-Woods, 1878 (unknown depth)  
*ralphae* Squires, 1964 (7-104 m)  
 =*S. n. sp. B* sensu Ralph & Squires, 1962  
*squiresi* Cairns, 1995 (66-318 m)  
*aurantiacus* Marenzeller, 1904 (155-366 m)  
*evexicostatus* Cairns in Cairns & Keller, 1993 (12-73 m)  
 =*Sphenotrochus sp.* sensu Pichon, 1974: 176  
*imbricaticostatus* Cairns, in Cairns & Keller, 1993 (37-347 m)  
*cairnsi* Garberoglio, 2018 (n. nam. for *cuneolus* Cairns, 2004) (42-342 m)  
*gardineri* Squires, 1961 (9-403 m)  
*andrewianus andrewianus* Milne Edwards & Haime, 1848 (12-105 m)  
 =*Sphenotrochus wrightii* Gosse, 1860  
*andrewianus moorei* Cairns, 2000 (9-42 m)  
***Foveolocyathus*** Cairns, 1997  
 \**verconis* (Dennant, 1904) (27-238 m)  
 =*alternans* (Cairns & Parker, 1992)  
*kitsoni* (Dennant, 1901) (342-367 m)  
*parkeri* Cairns, 2004 (73-183 m)  
 =*verconis* sensu Cairns & Parker, 1992  
***Endocyathopora*** Cairns, 1989  
 \**laticostata* Cairns, 1989 (46-100 m)  
***Trematotrochus*** Tenison-Woods, 1879  
*hedleyi* Dennant, 1906 (150-457 m)  
*corbicula* (Portalès, 1878) (400-576 m)  
***Kionotrochus*** Dennant, 1906  
 \**suteri* Dennant, 1906 (44-622 m)  
***Platyrochus*** Milne Edwards & Haime, 1848  
*hastatus* Dennant, 1902 (27-148 m)  
*compressus* (Tenison-Woods, 1878) (64-130 m)  
*laevigatus* Cairns & Parker, 1992 (22-165 m)  
*parisepta* Cairns & Parker, 1992 (40-201 m)  
***Peponocyathus*** Gravier, 1915  
*folliculus* (Portalès, 1868) (30-582 m)  
 =\**Peponocyathus variabilis* Gravier, 1915  
 =*P. orientalis* Yabe & Eguchi, 1932  
*minimus* (Yabe & Eguchi, 1937) (30-903 m)  
*dawsoni* Cairns, 1995 (87-988 m)

Superfamily FLABELLOIDEA Bourne, 1905

FAMILY FLABELLIDAE Bourne, 1905

***Flabellum* (F.)** Lesson, 1831

- \**pavoninum* Lesson, 1831 (73-665 m)  
 =*F. distinctum* Milne Edwards & Haime, 1848  
 =*F. coalitum* Marenzeller, 1888  
 =*F. sp. 3, 6* sensu Cairns, 1989b: 63  
*thouarsii* Milne Edwards & Haime, 1848 (71-305 m)

*curvatum* Moseley, 1881 (115-1137 m)  
*campanulatum* Holdsworth, 1862 (unknown depth)  
*patens* Moseley, 1881 (204-439 m)  
*australe* Moseley, 1881 (36-1026 m)  
*transversale transversale* Moseley, 1881 (55-150 m)  
     *transversale conicum* Yabe & Eguchi, 1942  
     *transversale triangulare* Eguchi, 1965  
*lamellulosum* Alcock, 1902 (187-490 m)  
*folkesoni* Cairns, 1998 (124-430 m)  
*chunii* Marenzeller, 1904 (200-700 m)  
*magnificum* Marenzeller, 1904 (225-740 m)  
     =?*F. suluense* Alcock, 1902 (has priority if synonymous)  
*knoxi* Ralph & Squires, 1962 (201-1167 m)  
*impensum* Squires, 1962 (46-2260 m)  
     =?*F. sp. A* sensu Cairns, 1994: 28 (55-507 m, AK)  
*ongulense* Eguchi, 1965 (570 m)  
*floridanum* Cairns, 1991 (nom. nov.) (80-366 m)  
     =*F. fragile* Cairns, 1977 (junior homonym, not *F. cuneiforme* var. *fragile* Vaughan, 1900)  
*atlanticum* Cairns, 1979 (357-618 m)  
*areum* Cairns, 1982 (1647-2229 m)  
*gardineri* Cairns, 1982 (177 m)  
*flexuosum* Cairns, 1982 (101-659 m)  
     =*Desmophyllum* sp. sensu Marenzeller, 1903  
     =?*Flabellum ongulense* Eguchi, 1965 (has priority if synonymous; also listed as valid species)  
*vaughani* Cairns, 1984 (232-369 m)  
*politum* Cairns, 1989 (40-402 m)  
     =*Flabellum* sp. 1 sensu Cairns, 1989b: 63  
*arcuatile* Cairns, 1999 (300-640 m)  
*angustum* Yabe & Eguchi, 1942 (unknown depth)  
*septodentatus* Latypov, 2014 (depth unknown)  
*leptoconus* Cairns & Zibrowius, 2016 (80-567 m)  
     [*Flabellum* sp. A sensu Cairns, 1991: 20 (Galápagos, 441-717 m)]  
***Flabellum (Ulocyathus)*** Sars, 1851  
     *macandrewi* Gray, 1849 (128-1260 m)  
         =\**Ulocyathus arcticus* M. Sars, 1851  
     *japonicum japonicum* Moseley, 1881 (128-1141 m)  
         *japonicum bythios* Cairns, in Cairns & Keller, 1993 (1095-1720 m)  
     *deludens* Marenzeller, 1904 (106-1035 m)  
     *hoffmeisteri* Cairns & Parker, 1992 (110-842 m)  
     *daphnense* Durham & Barnard, 1952 (101 m)  
     *aotearoa* Squires, 1964 (130-1300 m)  
     *marenzelleri* Cairns, 1989 (179-390 m)  
     *angulare* Moseley, 1876 (2000-3186 m)  
     *conuis* Moseley, 1881 (1994-2603 m)  
     *apertum apertum* Moseley, 1876 (220-1575 m)  
         =*F. patagonichum* Moseley, 1881  
         =*F. raukawaensis* Squires & Keyes, 1967  
         *apertum borealis* Cairns, 1994 (307-1141 m)  
     *tuthilli* Hoffmeister, 1933 (347-824 m)

- alabastrum* Moseley, in Thompson, 1873 (357-2000 m)  
 =*F. goodei* Verrill, 1878  
 =*F. minus* Duncan, 1878
- messum* Alcock, 1902 (368-1035 m)
- lowekeyesi* Squires & Ralph, 1965 (278-1100 m)
- marcus* Keller, 1974 (1050-1602 m)
- moseleyi* Pourtalès, 1880 (216-1097 m)
- sexcostatum* Cairns, 1989 (685-1121 m)
- cinctutum* Cairns & Polonio, 2013 (500-1626 m)
- keruelensis* Cairns & Zibrowius, 2016 (195-1218 m)  
 [*Flabellum* sp. cf. *moseleyi* sensu Cairns & Zibrowius, 1997: 158 (W. Pacific, 441-1058 m)]
- Truncatoflabellum*** Cairns, 1989
- \**spheniscus* (Dana, 1846) (2-174 m)  
 =*Flabellum debile* Milne Edwards & Haime, 1848  
 =*Flabellum affine* Milne Edwards & Haime, 1848  
 =*Flabellum bairdi* Milne Edwards & Haime, 1848  
 =*Flabellum profundum* Milne Edwards & Haime, 1848  
 =*Flabellum sumatrense* Milne Edwards & Haime, 1848  
 =*Flabellum crenulatum* Milne Edwards & Haime, 1848  
 =*Flabellum elongatum* Milne Edwards & Haime, 1848
- angiostrum* (Folkesson, 1919) (15-136 m)
- aculeatum* (Milne Edwards & Haime, 1848) (11-132 m)  
 =?*Flabellum spinosum* Milne Edwards & Haime, 1848  
 =?*Flabellum variabile* Semper, 1872
- crassum* (Milne Edwards & Haime, 1848) (unknown depth)
- stokesii* (Milne Edwards & Haime, 1848) (12-256 m)  
 =*Flabellum owenii* Milne Edwards & Haime, 1848
- irregulare* (Semper, 1872) (11-42 m)
- cumingi* (Milne Edwards & Haime, 1848) (46-132 m)  
 =*F. irregulare* Tenison-Woods, 1878: 313 (junior homonym of Semper's 1872)
- incrustatum* Cairns, 1989 (30-415 m)
- formosum* Cairns, 1989 (42-933 m)  
 =*T. n. sp.* sensu Cairns, 1989: 73
- candeanum* (Milne Edwards & Haime, 1848) (70-290 m)  
 =*Flabellum elegans* Milne Edwards & Haime, 1848
- pusillum* Cairns, 1989 (85-460 m)
- dens* (Alcock, 1902) (286-555 m)
- paripavoninum* (Alcock, 1894) (394-1450 m)
- carinatum* Cairns, 1989 (30-274 m)
- trapezoideum* (Keller, 1981) (1630 m)
- truncum* (Cairns, 1982) (595-1896 m)
- arcuatum* Cairns, 1995 (350-364 m)
- gardineri* Cairns, in Cairns & Keller, 1993 (138 m)
- zuluense* Cairns, in Cairns & Keller, 1993 (62-84 m)
- multispinosum* Cairns, in Cairns & Keller, 1993 (62-183 m)
- vanuatu* (Wells, 1984) (240-335 m)
- phoenix* Cairns, 1995 (18-441 m)  
 =*T. sp. B* sensu Cairns, 1994: 79
- inconstans* (Marenzeller, 1904) (183 m)
- stabile* (Marenzeller, 1904) (786-3010 m)  
 =*Truncatoflabellum* sp. A sensu Cairns, 1994: 79

- =?T. sp. Zibrowius & Gili, 1990: 38 (Walvis Ridge)
- martensii* (Studer, 1878) (139-182 m)
- angustum* Cairns & Zibrowius, 1997 (195-530 m)
- mortenseni* Cairns & Zibrowius, 1997 (50-455 m)
- australiensis* Cairns, 1998 (90-220 m)
- veroni* Cairns, 1998 (15-119 m)
- macroeschara* Cairns, 1998 (18-201 m)
- vigintifarium* Cairns, 1999 (288-1050 m)
- mozambiquensis* Cairns, 2016 (106-112 m)
- Blastotrochus** Milne Edwards & Haime, 1848
- \**nutrix* Milne Edwards & Haime, 1848 (11-18 m)
- Placotrochides** Alcock, 1902
- \**scaphula* Alcock, 1902 (462-1628 m)
- =*Flabellum elongatum* Hu, 1987 (Pleistocene fossil) (junior homonym of ME&H, 1848)
- frustum* Cairns, 1979 (497-1378 m)
- cylindrica* Cairns, 2004 (1117-1402 m)
- minuta* Cairns, 2004 (119-458 m)
- =*minima* (sic) sensu Cairns, 2006: 52
- yapensis* Li, Cheng & Xu, 2017 (2700-2734 m)
- Javania** Duncan, 1876 [key Cairns 2004]
- \**insignis* Duncan, 1876 (46-1050 m)
- =*Flabellum weberi* Alcock, 1902
- cailleti* (Duchassaing & Michelotti, 1864) (30-2165 m)
- =*Galaxea eburnea* Pourtalès, 1871
- =*Desmophyllum eburneum* Moseley, 1881 (junior homonym and synonym)
- =*Desmophyllum nobile* Verrill, 1885
- =*Desmophyllum vitreum* Alcock, 1898
- =*Flabellum* sp. sensu Marenzeller, 1904
- =*Desmophyllum galapagense* Vaughan, 1906
- =*Desmophyllum delicatum* Yabe & Eguchi, 1942
- pseudoalabastra* Zibrowius, 1974 (625-1557 m)
- antarctica* (Gravier, 1914) (53-1280 m)
- =?*Desmophyllum pseudoseptata* Eguchi, 1965
- lamprotichum* (Moseley, 1880) (191-881 m)
- =?*Desmophyllum alabastrum* Alcock, 1902
- =*sibogae* Gardiner, 1904 (567 m) (new name for *D. alabastrum* Alcock, 1902)
- californica* Cairns, 1994 (62-170 m)
- borealis* Cairns, 1994 (247-348 m)
- =*Javania* n. sp. sensu Cairns, 1989: 76 (in text)
- =*Javania* sp. A sensu Cairns, 1991: 21
- fusca* (Vaughan, 1907) (271-1045 m)
- =*J.* sp. sensu Cairns, 1989
- =*J. pachythea* Cairns, 1995
- exserta* Cairns, 1999 (91-455 m)
- =*J.* sp. A sensu Cairns & Zibrowius, 1997: 165
- erhardti* Cairns, 2004 (35-44 m)
- cristata* Cairns & Polonio, 2013 (461-1647 m)
- Placotrochus** Milne Edwards & Haime, 1848
- \**laevis* Milne Edwards & Haime, 1848 (6-289 m)
- =*P. candeanus* Milne Edwards & Haime, 1848
- =*P. pedicellatus* Tenison-Woods, 1879

*Falcatoflabellum* Cairns, 1995

\**rauolensis* Cairns, 1995 (366-402 m)

*Monomyces* Ehrenberg, 1834

*pygmaea* (Risso, 1826) (5-150 m)

=\**Monomyces anthophyllum* Ehrenberg, 1834

=*Coelocyathus typicus* M. Sars, 1857

=*Rhizotrochus affinis* Duncan, 1873

*rubrum* (Quoy & Gaimard, 1833) (typical form; 0-410 m)

--*rubrum* forma *nobile* Holdsworth, 1862

=*Desmophyllum gracile* Studer, 1878

--*rubrum* forma *latum* Studer, 1878

=*Cylicia vacua* Tenison-Woods, 1879

=*Flabellum rugulosum* Tenison-Woods, 1880

=*Flabellum harmeri* Gardiner, 1929

*Rhizotrochus* Milne Edwards & Haime, 1848

\**typus* Milne Edwards & Haime, 1848 (20-1048 m)

=?*R. vegetans* Haime, 1860

=*R. worsleyi* Wood-Mason & Alcock, 1891

=*R. crateriformis* Alcock, 1893

=*R. palaoensis* Yabe & Eguchi, 1942

=*R. niinoi* Yabe & Eguchi, 1942

=*Monomyces uchiuraensis* Eguchi, 1972

=*Monomyces* n. sp. Boshoff, 1981

*levidensis* Gardiner, 1899 (1-73 m)

*tuberculatus* (Tenison-Woods, 1879) (0-73 m)

=*Flabellum tubuliferum* Tenison-Woods, 1880

=*Rhizotrochus radiatus* Dennant, 1904

*flabelliformis* Cairns, 1989 (228-1050 m)

*Polomyces* Cairns, 1979

\**fragilis* (Pourtalès, 1868) (75-822 m)

=*Rhizotrochus tulipa* Pourtalès, 1874

*montereyensis* (Durham, 1947) (69-212 m)

=*Flabellum tannerense* Durham & Barnard, 1952

*wellsi* Cairns, 1991 (355-1203 m)

Superfamily GUYNIOIDEA Hickson, 1910

Family GUYNIIDAE Hickson, 1910

*Guynia* Duncan, 1872

\**annulata* Duncan, 1872 (28-653 m)

=*Pyrophyllia inflata* Hickson, 1910

=*Guynia* n. sp. sensu Goreau & Wells, 1967

Family SCHIZOCYATHIDAE Stolarski, 2000

*Schizocyathus* Pourtalès, 1874

\**fissilis* Pourtalès, 1874 (88-1300 m)

*Pourtalocyathus* Cairns, 1979

\**hispidus* (Portalès, 1878) (349-1006 m)

=*Flabellum* sp. a sensu Vaughan, 1921 (fossil)

*Temnotrochus* Cairns, 1995

\**kermadecensis* Cairns, 1995 (321-402 m)

Family STENOCYATHIDAE Stolarski, 2000

*Stenocyathus* Pourtalès, 1871

- \**vermiformis* (Portalès, 1868) (110-1500 m)
  - =*Caryophyllia simplex* Duncan, 1878
  - =*Caryophyllia carpenteri* Duncan, 1878
  - =*Stenocyathus washingtoni* Cecchini, 1914
  - =*Stenocyathus decamera* Ralph & Squires, 1962

*Truncatoguynia* Cairns, 1989

- \**irregularis* Cairns, 1989 (80-334 m)
  - =*T. sp.* sensu Cairns, 1989: 43

*Pedicellocyathus* Cairns, 1995

- \**keyesi* Cairns, 1995 (70-194 m)

Superfamily VOLZEIOIDEA Melnikova, 1974

FAMILY GARDINERIIDAE Stolarski, 1996

*Gardineria* Vaughan, 1907

- \**hawaiiensis* Vaughan, 1907 (142-1200 m)
  - =*G. musorstomica* Cairns, 1989
  - =*G. sp. A* sensu Cairns, 1995:111 (LHSMC, 291-378 m)
- paradoxa* (Portalès, 1868) (91-700 m)
  - =*Duncania barbadensis* Portalès, 1874
- minor* Wells, 1973 (2-146 m)
- simplex* (Portalès, 1878) (46-241 m)
- philippinensis* Cairns, 1989 (192-494 m)

[[Flabellidae, n. gen., n. sp. sensu Seig & Zibrowius 1989:192, figs. 1g-j [not *Stolarskiocyathus*, =*Faustinocyathus neocaledonia* ms]

*Stolarskiocyathus* Cairns, 2004

- \**pocilliformis* Cairns, 2004 (342-367 m)
  - =[Gardineriidae fam. n, Gen. n. sensu Stolarski, 1996: 350, figs 6A-F

Suborder DENDROPHYLLIINA

FAMILY DENDROPHYLLIIDAE Gray, 1847

*Balanophyllia* Wood, 1844

Western Atlantic:

- cyathoides* (Portalès, 1871) (45-494 m)
- palifera* Portalès, 1878 (53-708 m)
- wellsi* Cairns, 1977 (412-575 m)
- (*Eupsammia*) *caribbeana* Cairns, 1977 (33-86 m)
- (*Eupsammia*) *pittieri* Vaughan, 1919 (fossil)
  - =*B. grandis* Cairns, 1977 (Recent; 40-96 m)
- dineta* Cairns, 1977 (27-274 m)
- hadros* Cairns, 1979 (238-274 m)
- bayeri* Cairns, 1979 (274-311 m)
- floridana* Portalès, 1868 (13-220 m)

Eastern Atlantic:

- regia* Gosse, 1853 (2-100 m)
  - =*Balanophyllia brevis* Duncan, 1882
  - =*Balanophyllia balaerica* Lacaze-Duthiers, 1897
- cellulosa* Duncan, 1873 (80-850 m)
- helenae* Duncan, 1876 (18 m)
- striata* Duncan, 1876 (18 m)

- thalassae* Zibrowius, 1980 (385-1150 m)
- Southwest Indian Ocean:
- diffusa* Harrison & Poole, 1909 (6-274 m)
- capensis* Verrill, 1865 (27-37 m)
- bonaespei* Van der Horst, 1938 (unknown depth)
- diademata* Van der Horst, 1927 (165 m)
- vanderhorsti* Cairns, 2001 (nom. nov.) (51-59 m)  
 =*B. ponderosa* Van der Horst, 1926, not *B. ponderosa* Vaughan, 1900)
- Northern Indian Ocean:
- taprobanae* Bourne, 1905 (unknown depth)
- gemmifera* Klunzinger, 1879:55 (81 m)
- scabra* Alcock, 1893: 144 (unknown depth)
- (*Eupsammia*) *regalis* (Alcock, 1893: 144) (59 m)
- merguiensis* Duncan, 1889 (unknown depth)
- Eastern Australia:
- yongei* Crossland, 1952: 167 (shallow)
- bairdiana* Milne Edwards and Haime, 1848 (6-548 m)  
 =*B. buccina* Tenison-Woods, 1878  
 =*Heteropsammia elliptica* Tenison-Woods, 1878
- dentata* Tenison-Woods, 1879 (66-135 m)
- dilatata* Dennant, 1904 (shallow)
- spongiosa* Cairns, 2004 (11-18 m)
- New Zealand:
- chnous* Squires, 1962 (140-549 m)  
 =*Thecopsammia* sp, *Balanophyllia* sp. sensu Gardiner, 1929
- crassitheca* Cairns, 1995 (190-508 m)
- Japan:
- japonica* Cairns, 2001 (nom. nov.) (154-237 m)  
 =*B. teres* Cairns, 1994, not *E. teres* Romer, 1863  
 [*B.* sp. A sensu Cairns, 1994: 84 (=cf. *B. italica* Y & E, 1942) (Japan, 56-100 m)]
- Hawaiian Islands:
- diomedaeae* Vaughan, 1907 (110-307 m)  
 =*B. diomedaeae* var. *mauensis* Vaughan, 1907
- laysanensis* Vaughan, 1907 (238-400 m)
- Central west Pacific:
- scabrosa* (Dana, 1846) (unknown depth)
- (*Eupsammia*) *stimpsonii* (Verrill, 1865: 150) (18-95 m)  
 =*Eupsammia stimpsoniana* Verrill, 1866: 29 (misspelling of *stimpsonii*)  
 =*Rhodopsammia socialis* Semper, 1872  
 =*Rhodopsammia affinis* Semper, 1872  
 =*Rhodopsammia incerta* Semper, 1872  
 =*Leptopsammia conica* van der Horst, 1922 (not *B. conica* Osasco, 1897)  
 =*Balanophyllia sumbayaensis* Cairns, 2001 (nom. nov. for *L. conica*)
- (*Eupsammia*) *carinata* (Semper, 1872) (33-124 m)  
 =*Rhodopsammia amoena* Semper, 1872
- parallela* (Semper, 1872: 258) (18 m)
- dubia* (Semper, 1872) (55 m)
- kalakauai* Wright, 1882 (unknown depth)
- profundicella* Gardiner, 1899: 169 (73 m)
- (*Eupsammia*) *imperialis* Kent, 1871 (18-120 m)  
 =*Balanophyllia malaccensis* Kent, 1871

- curringii* Milne Edwards & Haime, 1848 (65-307 m)  
 =*Rhodopsammia ovalis* Semper, 1872
- rediviva* Moseley, 1881 (90-256 m)
- gemma* (Moseley, 1881) (137-522 m)
- cornu* Moseley, 1881 (60-520 m) not *B. cornu* Sokolow, 1894 (junior homonym)
- parvula* Moseley, 1881 (192-300 m)
- crassiseptum* Cairns & Zibrowius, 1997 (183-250 m)
- gigas* Moseley, 1881 (90-640 m)  
 =*B. hawaiiensis* Vaughan, 1907
- serrata* Cairns & Zibrowius, 1997 (190-194 m)
- generatrix* Cairns & Zibrowius, 1997 (96-535 m)
- tenuis* Van der Horst, 1922: 63 (may be colonial; 15 m)
- desmophyllioides* Vaughan, 1907 (95-1050 m)
- ?*corniculans* (Alcock, 1902a: 114) (needs neotype; may be colonial; unknown depth)
- iwayamaensis* Abe, 1938: 506 (may be colonial; 1-3 m)
- Eastern Pacific:
- cedrosensis* Durham, 1947 (66-119 m)  
 =*B. tiburonensis* Durham, 1947
- elegans* Verrill, 1864 (0-293 m)
- galapagensis* Vaughan, 1906 (18-462 m)  
 =*B. osburni* Durham & Barnard, 1952
- Subantarctic:
- malouinensis* Squires, 1961 (75-1137 m)  
 [B. sp. sensu Cairns, 1982: 54 (Falkland Islands, 247-253 m)]
- Leptopsammia* Milne Edwards & Haime, 1848
- \**stokesiana* Milne Edwards & Haime, 1848 (46-69 m)
- formosa* (Gravier, 1915) (400-900 m)  
 =*Thecopsammia imperfecta* Gravier, 1915
- britannica* (Duncan, 1870) (160-665 m)  
 =*Balanophyllia* (*Thecopsammia*) *socialis* var. *costata* and *jeffreysia* Duncan, 1870
- pruvoti* Lacaze Duthiers, 1897 (3-150 m)  
 =*L. microcardia* Doderlein, 1913
- chevalieri* Zibrowius, 1980 (70-500 m)
- trinitatis* Hubbard & Wells, 1987 (15-40 m)
- queenslandiae* Wells, 1964 (87 m)
- crassa* van der Horst, 1922 (22-187 m)
- poculum* (Alcock, 1902) (90 m)  
 =*L. poculum* Van der Horst, 1922 (junior homonym and synonym)
- columna* Folkson, 1919 (20 m)
- Endopsammia* Milne Edwards & Haime, 1848
- \**philippensis* Milne Edwards & Haime, 1848 (0-62 m)
- regularis* (Gardiner, 1899) (8-73 m)
- pourtalesi* (Durham & Barnard, 1952) (unknown depth)
- Endopachys* Lonsdale, 1845
- grayi* Milne Edwards & Haime, 1848 (37-386 m)  
 =*E. weberi* Alcock, 1902  
 =*E. oahense* Vaughan, 1907  
 =*E. japonicum* Yabe & Eguchi, 1932  
 =*E. vaughani* Durham, 1947  
 =*Tropidocyathus longiseptum* Latypov, 2017
- bulbosa* Cairns & Zibrowius, 1997 (220-251 m)

**Notophyllia** Dennant, 1899  
*recta* Dennant, 1906 (40-458 m)  
*etheridgi* Hoffmeister, 1933 (37-238 m)  
*piscacauda* Cairns, 1998 (22-51 m)  
*hecki* Cairns, 2004 (342-414 m)

**Bathypsammia** Marenzeller, 1907  
*\*tintinnabulum* (Pourtalès, 1868) (183-549 m)  
*fallosocialis* Squires, 1959 (213-805 m)

**Thecopsammia** Pourtalès, 1868  
*\*socialis* Pourtalès, 1868 (183-879 m)  
*elongata* Moseley, 1881 (271-576 m)

**Trochopsammia** Pourtalès, 1878  
*\*infundibulum* Pourtalès, 1878 (532-1472 m)

**Pourtalopsammia** Cairns, 2001  
*\*togata* (Van der Horst, 1927) (155-775 m)

**Heteropsammia** Milne Edwards & Haime, 1848  
*cochleata* (Spengler, 1781) (facultative; 6-622 m)  
 =\**H. michelini* Milne Edwards & Haime, 1848  
 =*H. rotundata* Semper, 1872  
 =*H. ovalis* Semper, 1872 (fossil)  
 =*H. aphrodes* Alcock, 1893  
 =? *H. pisum* Alcock, 1902  
 =*H. ovalis* var. *formosensis* Yabe & Eguchi, 1932 (Pliocene)  
 =*H. ovalis* var. *japonica* Yabe & Eguchi, 1932 (Pliocene)  
 =*H. cochleata* var. *alta* Yabe & Eguchi, 1932 (Pliocene)  
 =*H. michelini* var. *formosus* Hu, 1987 (Pleistocene)

*eupsammides* (Gray, 1849) (facultative; 1-38 m)  
 =*H. geminata* Verrill, 1870  
 =*H. multilobata* Moseley, 1881  
*moretonensis* Wells, 1964 (11-48 m)

**Balanopsammia** Ocaña & Brito, 2013  
*wirtzi* Ocaña & Brito, 2013

**Eguchipsammia** Cairns, 1994  
*\*cornucopia* (Pourtalès, 1871) (91-960 m)  
 =*Dendrophyllia* n. sp. a sensu Vaughan, 1921: 133 (fossil)  
*strigosa* Cairns, 2000 (25-77 m)  
*gaditana* (Duncan, 1873) (30-988 m)  
 =*Balanophyllia praecipua* Gardiner & Waugh, 1939  
*fistula* (Alcock, 1902) (86-910 m)  
 =*Dendrophyllia oahensis* Vaughan, 1907  
*serpentina* (Vaughan, 1907) (200-362 m)  
*japonica* (Rehberg, 1892) (senior homonym of *D. japonica* van der Horst, 1922) (114-1050 m)  
*wellsi* (Eguchi, 1968) (32-196 m)  
*stigosa* Cairns, 2001 (25-77 m)

**Rhizopsammia** Verrill, 1870  
*\*pulchra* Verrill, 1870 (“low water”)  
*bermudensis* Wells, 1972 (8-12 m)  
*goesi* (Lindström, 1877) (5-119 m)  
*nuda* van der Horst, 1926 (5.5-220 m)  
*verrilli* van der Horst, 1922 (2-278 m)  
 =? *R. chamissoi* Wells, 1954

- =*Balanophyllia scheeri* Durham, 1962  
*minuta* van der Horst, 1922 (0-176 m)  
 var. *mutsuensis* Yabe & Eguchi, 1932  
 var. *bikiniensis* Wells, 1954  
*wellingtoni* Wells, 1982 (2-43 m)  
*wettsteini* Scheer & Pillai, 1983 (4 m)  
*annae* (van der Horst, 1933) (0-80 m)  
*compacta* Sheppard & Sheppard, 1991 (35-110 m)
- Astroides* Quoy & Gaimard, 1827  
*calycularis* (Pallas, 1766) (0-30 m)  
 =\**Astroides luteus* Quoy & Gaimard, 1827
- Cladopsammia* Lacaze-Duthiers, 1897  
 \**rolandi* Lacaze-Duthiers, 1897 (12-50 m)  
*echinata* Cairns, 1984 (222-470 m)  
*gracilis* (Milne Edwards & Haime, 1848) (0-95 m)  
 =?*Dendrophyllia conferta* Quelch, 1866  
 =?*Dendrophyllia coarctata* Duncan, 1889: 17  
 =?*Dendrophyllia elegans* van der Horst, 1922 (not *D. elegans* Duncan, 1866)  
 =?*Dendrophyllia klunzingeri* van der Horst, 1926  
 =*Tubastraea coccinea tijamaensis* Eguchi, 1968  
*eguchii* (Wells, 1982) (1-85 m)  
 =*Dendrophyllia arbuscula* var. *compressa* Eguchi & Sasaki, 1973  
*manuelensis* (Chevalier, 1966) (55-366 m)  
*willeyi* (Gardiner, 1899) (shallow)  
*caboverdiana* Ocaña & Brito, 2015 (4-10 m)
- Morabeza* Ocaña, Brito & Espinosa, 2019  
*benitoi* Ocaña & Brito, 2019 (20 m)
- Dendrophyllia* Blainville, 1830  
**Group 1** sensu Cairns, 2001 (monopodial, axial corallites):  
 \**ramea* (Linnaeus, 1758) (40-150 m)  
*granosa* Studer, 1878 (91 m)  
*minuscula* Bourne, 1905 (unknown depth)  
*cribrosa* Milne Edwards & Haime, 1851 (7-40 m)  
 =*Coenopsammia ramiculosa* Rehberg, 1892  
*ijimai* Yabe & Eguchi, 1934 (10-366 m)  
 =?*D. subcornigera cylindrica* Eguchi, 1968  
*velata* Crossland, 1952 (shallow)  
*indica* Pillai, 1969 (1967) (true date 1969; 5 m)  
*carleenae* Nemenzo, 1983 (unknown depth)
- Group 2** sensu Cairns, 2001 (bushy):  
*cornigera* (Lamarck, 1816) (89-600 m)  
*radians* (Wright, 1882) (unknown depth)  
*cladonia* Van der Horst, 1927 (49-457 m)  
*arbuscula* Van der Horst, 1922 (2-353 m)  
 =*B. nouhuysi* van der Horst, 1922  
 =*D. horsti* Gardiner & Waugh, 1939  
 =?*D. erecta* Nemenzo, 1960  
 =?*D. sphaerica* Nemenzo, 1960  
 =?*D. subcornigera subcornigera* Eguchi, 1968  
*robusta* (Bourne, 1905) (unknown depth)  
*aculeata* Latypov, 1990 (11-21 m)

- laboreli* Zibrowius & Brito, 1984 (1-70 m)  
*incisa* (Crossland, 1952) (shallow)  
*suprарbuscula* Ogawa & Takahashi, 2000 (90 m)  
*paragracilis* Ogawa & Takahashi, 2000 (?=*Cladopsammia*) (1-10 m)  
*futojiku* Ogawa & Takahashi, 2000 (2 m)  
*minima* Ogawa & Takahashi, 2000 (2 m)
- Group 3** sensu Cairns, 2001 (sympodial):  
*alternata* Pourtalès, 1880 (276-900 m)  
*dilatata* Van der Horst, 1927 (97-132 m)  
*californica* Durham, 1947 (42-462 m)  
*johnsoni* Cairns, 1991 (373-462 m)  
*oldroydae* Oldroyd, 1924 (nom. correct: spelled *oldroydi* originally; (40-576 m)  
    =*D. cortezi* Durham & Barnard, 1952  
*boschmai* *boschmai* van der Horst, 1926 (nom. nov.; 40-200 m)  
    =*D. japonica* van der Horst, 1922, not Rehberg, 1892 (the latter is an *Eguchipsammia*)  
    *boschmai cyathoheloides* Eguchi, 1965 (55-100 m)  
*florulenta* Alcock, 1902 (69-243 m)  
    =*D. florentula* van der Horst, 1922 (junior synonym and homonym)  
    =*D. florentula* (sic) Wells, 1954  
*alcocki* (Wells, 1954) (118-1200 m)  
    =*D. palita* Squires & Keyes, 1967  
    [*D. semiramea* Blainville, 1834 (nom. nud.)
- Group Unknown**  
*cecilliana* Milne Edwards & Haime, 1848 (unknown depth)
- Enallopsammia** Michelotti, 1871  
*rostrata* (Pourtalès, 1878) (110-2165 m)  
    =*Amphihelia adminicularis* Rehberg, 1892  
    =*Dendrophyllia* (*Coenopsammia*) *amphelioides* Alcock, 1902  
    =*Coenopsammia amphelioides* var. *cucullata* Vaughan, 1907  
    =*E. amphelioides disticha* Eguchi, 1968  
*profunda* (Pourtalès, 1867) (403-1748 m)  
*pusilla* (Alcock, 1902) (371-805 m)  
    =*E. marenzelleri* Zibrowius, 1973
- Tabastraea** Lesson, 1829  
    \**coccinea* Lesson, 1829 (0-110 m)  
        =? *Caryophyllia flexuosa* Ellis & Solander, 1786 (*nomen oblitum*)  
        =*Lobopsammia aurea* Quoy & Gaimard, 1833  
        =*Dendrophyllia aurantiaca* Quoy & Gaimard, 1833  
        =*Coenopsammia ehrenbergiana* Milne Edwards & Haime, 1848  
        =*Coenopsammia gaimardi* Milne Edwards & Haime, 1848  
        =*Coenopsammia tenuilamellosa* Milne Edwards & Haime, 1848  
        =*Coenopsammia urvillei* Milne Edwards & Haime, 1848  
        =*Coenopsammia radiata* Verrill, 1864  
        =*Coenopsammia manni* Verrill, 1866: 30  
        =*Astropsammia pedersenii* Verrill, 1869  
        =*Dendrophyllia surcularis* Verrill, 1869  
        =*Pachypsammia valida* Verrill, 1866: 30  
        =? *Placopsammia darwini* Duncan, 1876  
        =*Dendrophyllia* (*Coenopsammia*) *affinis* Duncan, 1889  
        =*Dendrophyllia turbinata* Nemenzo, 1960  
*micranthus* (Ehrenberg, 1834) (0-50 m)

=*Dendrophyllia nigrescens* Dana, 1846  
=*Dendrophyllia aequiserialis* Milne Edwards & Haime, 1848  
=*Dendrophyllia viridis* Milne Edwards & Haime, 1848  
=*Dendrophyllia micranthus* var. *grandis* Crossland, 1952

***diaphana*** (Dana, 1846) (1-30 m)

=*Dendrophyllia sibogae* van der Horst, 1922

=*Dendrophyllia micranthus* var. *fruticosa* Nemenzo, 1960

***faulkneri*** Wells, 1982 (3-5 m)

***tagusensis*** Wells, 1982 (1-43 m)

***floreana*** Wells, 1982 (2-5 m)

***Dichopsammia*** Song, 1994

\****granulosa*** Song, 1994 (April; 20-30 m)

=*Schizopsammia songae* Cairns, 1994 (October)

#### INCERTAE SEDIS

“***Cylicia***” ***inflata*** Pourtalès, 1878 (Cuba, 183-443 m)

Unnamed species (epithecate "*Cylicia*") sensu Cairns & Zibrowius, 1997:198 (Indonesia, 30-68 m)

***Bachyrochus simplex*** Duncan, 1876: 436 (“Gaspar Strait”, 22 m)