

Cold-water Corals Online Appendix

Phylogenetic list of the 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: October 2021 (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

troglodyta 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)

discussus Kitahara and Cairns, 2021 (315-416 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)

muricatus Kitahara and Cairns, 2021 (1490-2650 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
acuta Kitahara and Cairns, 2021 (265-735 m)
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)
owensae Kitahara and Cairns, 2021 (250-1270 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
haimeii 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. concepcionensis* 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 *galapagenis* 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) (pentameral; 55-516 m)

[cf. *porcellana* Cairns & Zibrowius, 1997: 84 (hexameral; 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)
kelleriae 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)
octonaria 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)
quadrangenaria 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)
fontinalis Kitahara and Cairns, 2021 (280-500 m)
gravieri Kitahara and Cairns, 2021 (200-520 m)
scitula Kitahara and Cairns, 2021 (240-560 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)
 = *Tropidocyathus longiseptum* Latypov, 2017
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 (Pourtales, 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 (octameral; 2-6 m)
humanni Cairns, 2000 (21 m)
parvulus (Cairns, 1979) (97-399 m) [Not *Caryophyllia parvula* Montanaro, 1929]
sebroeki Kitahara, Capel & Migotto, 2020 (18-30 m)
nanus Kitahara and Cairns, 2021 (210-436 m)
- 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)
Faustinocyathus Kitahara and Cairns, 2021
neocaledonensis Kitahara and Cairns, 2021 (516-570 m)
 =Flabellidae, n. gen., n. sp. sensu Seig & Zibrowius 1989:192, figs. 1g-j
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)
Distolotrochus Kitahara and Cairns, 2021
lozoueti Kitahara and Cairns, 2021 (236-920 m)
Multiplexcyathus Kitahara and Cairns, 2021
trochocyathoides Kitahara and Cairns, 2021 (250 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)
circularis Cairns, 2021 (390-594 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)
gordonii 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)
boucheti Kitahara and Cairns, 2021 (43-1475 m)
kompos Kitahara and Cairns, 2021 (530-575 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)
coactilis Kitahara and Cairns, 2021 (300-430 m)
irrugatus Kitahara and Cairns, 2021 (213-500 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)
durhami Kitahara and Cairns, 2021 (242-510 m)
milleri Kitahara and Cairns, 2021 (124-614 m)
peysonneli Kitahara and Cairns, 2021 (250-510 m)
 “*Paracyathus*” *vittatus* Dennant, 1906 (31 m)
 sp. A sensu Kitahara and Cairns, 2021: 616 (New Caledonia, 1000-1005 m)
 sp. B sensu Kitahara and Cairns, 2021: 618 (New Caledonia, 282-397 m)
 sp. C sensu Kitahara and Cairns, 2021: 619 (New Caledonia, 289-380 m)
 sp. sensu 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
 =Agelecyathus *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)
muelleræ (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)
crosnieri Kitahara and Cairns, 2021 (236-650 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)
 cidaris Kitahara and Cairns, 2021 (485-713 m)
 =sp. sensu Cairns & Parker, 1992: 26 (Tasmania, 520 m)
 [*bipatella* (Alcock, 1902) (a juvenile specimen of an unknown species;)]
***Stephanocyathus* (*Odontocyathus*)** Moseley, 1881
 **coronatus* (Portalès, 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)
hexagona Kitahara and Cairns, 2021 (489-996 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 cycliciodes* Tenison-Woods, 1879
 =*H. pulchellus* Rehberg, 1892
 =*Homophyllia incrustans* Dennant, 1906
hemisphaericus Gray, 1849 (2-140 m)
 =*Spongiocyathus typicus* Folkesson, 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)
hourigani Cairns, 2021 (70-823 m)(replacement name for junior homonym: *D. striatum* Cairns, 1979)
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)
senaria Kitahara and Cairns, 2021 (200-550 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)
Oxysmilium Duchassaing, 1870
 ***rotundifolia** (Milne Edwards & Haime, 1848) (46-640 m)
 =*Desmophyllum incertum* Duchassaing & Michelotti, 1860
 =*Lophosmilium urena* Duchassaing, 1870
 =*Parasmilium 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 wellsi* 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
 - =*Dendrosmilia nomlandi* Durham & Barnard, 1952
- Coenosmilia*** 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* (Pourtalès, 1871) (30-329 m)
 =*Ceratotrochus johnsoni* Duncan, 1882
- marchadi* (Chevalier, 1966) (32-229 m)
 =?*Trochosmilia elongata* Studer, 1878
- gigas* (van der Horst, 1931) (183-510 m)
- Pourtalosmilia*** Duncan, 1884
- anthophyllites* (Ellis & Solander, 1786) (25-300 m)
 =*Coenocyathus corsicus* Milne Edwards & Haime, 1848
 =**Blastosmilia pourtalesi* Duncan, 1878
 =*Coenosmilia repens* Chevalier, 1966
- conferta* Cairns, 1978 (55-191 m)
- Phacelocyathus*** Cairns, 1979
- **flos* (Pourtalès, 1878) (20-255 m)
 [sp. sensu Zibrowius & Grygier, 1985: 121 (Indian Ocean, 55-131 m)]
- Solenosmilia*** Duncan, 1873
- **variabilis* Duncan, 1873 (220-2165 m)
 =*Solenosmilia jeffreyi* Alcock, 1898
 =*Solenosmilia* sp. sensu Keller, 1975
- australis* Cairns & Polonio, 2013 (650-1620 m)
- Dasmosmilia*** Pourtalès, 1880
- **lymani* (Pourtalès, 1871) (37-366 m)
 =*Goniocyathus pacifica* Yabe & Eguchi, 1932
- variegata* (Pourtalès, 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)
perexiguus Kitahara and Cairns, 2021 (370-1980 m)
[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 herdmanni* 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 (Pourtales, 1871) (110-600 m)
 =*Notocyathus* sp. sensu Lewis, 1965
 sentus Kitahara and Cairns, 2021 (1070-1400 m)
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

odonthercus Kitahara and Cairns, 2021 (110-280 m)
Cryptotrochus Cairns, 1988
 **carolinensis* Cairns, 1988 (320-338 m)
 javanus Cairns, 1988 (585 m)
 brevipalus Cairns, 1999 (466-700 m)
 palacrotenes Kitahara and Cairns, 2021 (150-680 m)
 aequus Kitahara and Cairns, 2021 (223-288 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)
 strongylus Kitahara and Cairns, 2021 (600 m)
 **cairnsi* Garberoglio, 2018
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
 maestratii Kitahara and Cairns, 2021 (200-730 m)
Endocyathopora Cairns, 1989
 **laticostata* Cairns, 1989 (46-100 m)
Trematotrochus Tenison-Woods, 1879
 hedleyi Dennant, 1906 (150-457 m)
 corbicula (Pourtalès, 1878) (400-576 m)
Kionotrochus Dennant, 1906
 **suteri* Dennant, 1906 (44-622 m)
Platytrachus 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)
 distichus Kitahara and Cairns, 2021 (270-503 m)
Peponocyathus Gravier, 1915
 folliculus (Pourtalès, 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)
Microtrochus Kitahara and Cairns, 2021
 odous Kitahara and Cairns, 2021 (568-570 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. patagonicum* 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)
kerguelensis Cairns & Zibrowius, 2016 (195-1218 m)
foreti Kitahara and Cairns, 2021 (280-1058 m)
 =*Flabellum* sp. cf. *moseleyi* sensu Cairns & Zibrowius, 1997 and Cairns, 2004
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
 angiosomum (Folkeson, 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)
madrasensis Tenjing, Krishna, Samuel, Purvaya, 2019
quadratum Kitahara and Cairns, 2021 (57-76 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)
prolatus Kitahara and Cairns, 2021 (155-1180 m)
vermiculatus Kitahara and Cairns, 2021 (252-351 m)
willeyi Kitahara and Cairns, 2021 (200-700 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)
deforgesii Kitahara and Cairns, 2021 (200-348 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

=*Cylidia 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)
- alloiteau* Kitahara and Cairns, 2021 (230-445 m)

Stolarskiyathus 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
- crassithec*a 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:

- diomedae* Vaughan, 1907 (110-307 m)
= *B. diomedae* 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
- cumingii* 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)
(Eupsammia) disjuncta Kitahara and Cairns, 2021 (67-105 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. vaghani* 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)

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

Heteropsammia Milne Edwards & Haime, 1848
cochleata (Spengler, 1781) (facultative; 6-622 m)
 =*H. michelinii* 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* (Portalès, 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)
serrula Kitahara and Cairns, 2021 (250-270 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)
cylindrica Kitahara and Cairns, 2021 (155-700 m)
laciniosa Kitahara and Cairns, 2021 (200-390 m)
propagata Kitahara and Cairns, 2021 (8-155 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 tijjimaensis* Eguchi, 1968
 eguchii (Wells, 1982) (1-85 m)
 = *Dendrophyllia arbuscula* var. *compressa* Eguchi & Sazaki, 1973
 manuelensis (Chevalier, 1966) (55-366 m)
 willei (Gardiner, 1899) (shallow)
 caboverdiana (Ocaña & Brito, 2015) (4-10 m)
 alisae Kitahara and Cairns, 2021 (100-560 m)
 cheni Kitahara and Cairns, 2021 (276-400 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)
suprarbuscula 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
romanoae Kitahara and Cairns, 2021 (90-602 m)
 [*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
Tubastraea 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 (Coenosammia) 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 “*Culicia*”) sensu Cairns & Zibrowius, 1997:198 (Indonesia, 30-68 m)
 - Bachytrochus simplex*** Duncan, 1876: 436 (“Gaspar Strait”, 22 m)