

# Deep-Sea Coral Taxa in the U.S. Gulf of Mexico: Depth and Geographical Distribution

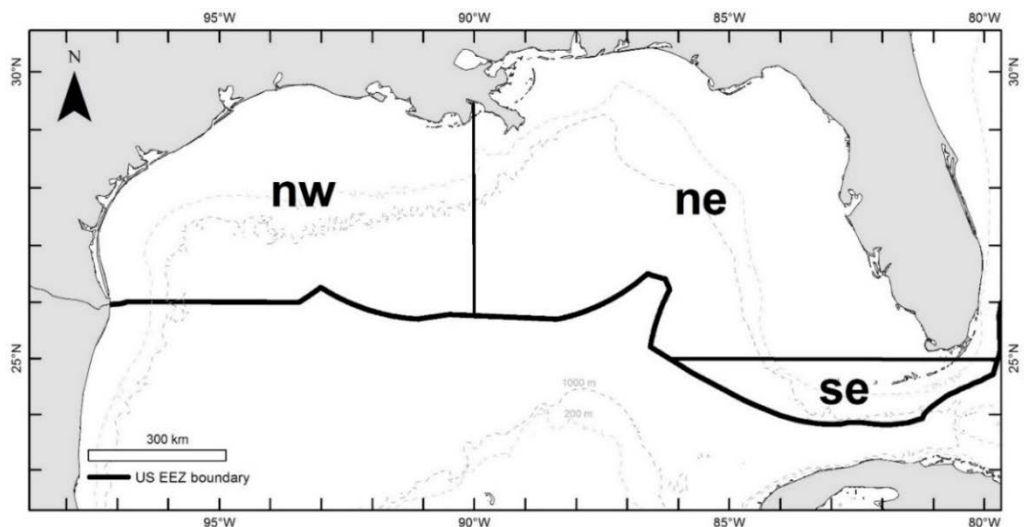
by Peter J. Etnoyer<sup>1</sup> and Stephen D. Cairns<sup>2</sup>

1. NOAA National Centers for Coastal Ocean Science, Charleston, S.C.
2. Department of Invertebrate Zoology, National Museum of Natural History, Smithsonian Institution, Washington, D.C.

This annex to the Gulf of Mexico chapter in “State of Deep-Sea Coral Ecosystems of the United States” provides lists deep-sea coral species in the Phylum Cnidaria, Classes Anthozoa and Hydrozoa, known to occur in the region (Figure 1). The list covers azooxanthellate, heterotrophic coral species that occur predominantly deeper than 50 m in U.S. waters of the Gulf of Mexico. Details are provided on depth ranges and known geographic distribution within the region (Table 1). The list is adapted from species lists presented in “Biodiversity of the Gulf of Mexico” (Felder & Camp 2009), which inventoried species found throughout the entire Gulf of Mexico including areas outside U.S. waters. Taxonomic names are generally those currently accepted in the World Register of Marine Species (<http://www.marinespecies.org>), and are arranged by order, then alphabetically by family, genus, and species. Data sources (references) listed are those principally used to establish geographic and depth distributions. Only those species found within the U.S. Gulf of Mexico Exclusive Economic Zone are presented here. Information from recent studies that have expanded the known range of species into the U.S. Gulf of Mexico have been included.

The total number of species of deep-sea corals documented for the U.S. Gulf of Mexico is 258. Octacorals have the highest species richness with a total of 132 species. Hexacorals have the next highest richness, with a total of 112 species, including 84 stony corals and 28 black corals. The Stylasteridae number 14 species and are nearly exclusively recorded in the southeast region. Only two other lace corals are documented from the Northeast region.

**Figure 1.** The U.S. Gulf of Mexico region as considered in this work. The Gulf of Mexico is divided into northwest (nw), northeast (ne), and southeast (se) sections as proposed in “Biodiversity of the Gulf of Mexico” (Felder & Camp 2009).



*Recommended citation:* Etnoyer PJ and Cairns SD (2017) Deep-Sea Coral Taxa in the U.S. Gulf of Mexico: Depth and Geographical Distribution. Online resource: <https://deepseacoraldata.noaa.gov/>.

**Table 1.** List of known deep-sea coral species in the Phylum Cnidaria, Class Anthozoa and Class Hydrozoa, and their reported distributions in U.S. Gulf of Mexico waters. Descriptions are summarized from Cairns et al. (2009), Cairns and Bayer (2009), Calder and Cairns (2009), and Opresko (2009) in "Biodiversity of the Gulf of Mexico," and modified by references since that time. Bold text and blue-shaded fields indicate newly described species, new list additions, or range extensions since Brooke and Schroeder (2007). No symbols before bold & blue-shaded species names indicate newly described species, asterisks (\*) denote new list additions, crosses (†) show name changes, and bold & blue-shaded depth and/or region fields represent range changes. "NR" indicates a lack of reported distribution or depth information. References are numbered to correspond with citations following the table.

Distribution: nw = northwest; ne = northeast; se = southeast; entire = throughout the U.S. Gulf of Mexico region.

Higher Taxon	Species	Distribution	Depth range (m)	References
<b>Class Anthozoa</b>				
<b>Subclass Hexacorallia</b>				
<b>Order Antipatharia</b>				
Family Antipathidae	<b>*<i>Allopathes desbonni</i> (Duchassaing&amp;Michelotti, 1864)</b>	nw	44-1291	1
	<i>Antipathes atlantica</i> Gray, 1857	<b>ne, nw</b>	<b>20-91</b>	2
	<i>Antipathes furcata</i> Gray, 1857	ne, nw	<b>78-134</b>	2
	<i>Antipathes gracilis</i> Gray, 1860	se, ne, nw	<b>31-99</b>	3
	<b>*<i>Antipathes lenta</i> Pourtalès, 1871</b>	se, ne	42-92	4,5
	<i>Stichopathes lutkeni</i> Brook, 1889	nw, ne, se	<b>50-76</b>	3
	<b>*<i>Stichopathes occidentalis</i> (Gray, 1857)</b>	nw	70	6
	<b>*<i>Stichopathes pourtalesi</i> Brook, 1889</b>	<b>se</b>	<b>73-110</b>	7,8
Family Aphanipathidae	<b>*<i>Acanthopathes humilis</i> (Pourtalès, 1867)</b>	nw, se	129-494	4,9
	<i>Acanthopathes thyoides</i> (Pourtalès, 1880)	nw, se	<b>104-207</b>	4,7
	<i>Aphanipathes pedata</i> (Gray, 1857)	ne, nw	76-292	2
	<i>Aphanipathes salix</i> (Pourtalès, 1880)	nw, ne, se	106-263	2
	<b>*<i>Distichopathes filix</i> (Pourtalès, 1867)</b>	nw, se	51-490	9
	<i>Elatopathes abietina</i> (Pourtalès, 1874)	ne, nw, se	62-263	10
	<i>Phanopathes expansa</i> (Opresko & Cairns, 1992)	nw	<b>82-144</b>	7,11
	<i>Phanopathes rigida</i> (Pourtalès, 1880)	nw, se	64-419	10
Family Cladopathidae	<b>*<i>Sibopathes macrospina</i> Opresko, 1993</b>	ne	448-538	12
Family Leiopathidae	<i>Leiopathes glaberrima</i> (Esper, 1972)	entire	37-475	13
Family Myriopathidae	<i>Plumapathes pennacea</i> (Pallas, 1766)	nw, se	<b>29-91</b>	3
	<i>Tanacetipathes barbadensis</i> (Brook, 1889)	nw	60-346	2
	<b>*<i>Tanacetipathes hirta</i> (Gray, 1857)</b>	nw, se	51-179	2
	<i>Tanacetipathes tanacetum</i> (Pourtalès, 1880)	ne, nw, se	<b>60-117</b>	3
	<b>*<i>Tanacetipathes thamnea</i> (Warner, 1981)</b>	ne, se	70-106	7
Family Schizopathidae	<b>†<i>Bathypathes</i> sp.</b> (= <i>Bathypathes</i> cf. <i>alternata</i> Brook, 1889)	ne	364-424	14
	<i>Bathypathes patula</i> Brook, 1889	se, ne	348	14
	<b>*<i>Parantipathes tetrasticha</i> (Pourtalès, 1868)</b>	nw, se	173-428	2,4

Higher Taxon	Species	Distribution	Depth range (m)	References
Family Stylopathidae	<b>*Stylopathes americana</b> (Duchassaing & Michelotti, 1860) (= <i>Antipathes americana</i> )	nw	55-159	4,15
	† <b>Stylopathes columnaris</b> (Duchassaing, 1870) (= <i>Arachnopathes columnaris</i> , <i>Antipathes columnaris</i> )	se, ne, nw	62-346	2,15
	<b>*Stylopathes litocrada</b> Opresko, 2006	se, ne, nw	91-274	15
<b>Order Scleractinia</b>				
Family Anthemiphylliidae	<b>*Anthemiphyllia patera patera</b> Pourtalès, 1878	se	500-700	8
Family Caryophyllidae	<i>Anomocora fecunda</i> Pourtalès, 1871	se, ne	37-640	8,16,17
	<b>*Anomocora marchadi</b> Chevalier, 1966	ne	35-229	2,18
	<i>Anomocora prolifera</i> Pourtalès, 1871	ne	30-329	8
	<i>Caryophyllia</i> ( <i>Caryophyllia</i> ) <i>ambrosia caribbeana</i> Cairns, 1979	entire	183-2360	8
	<b>*Caryophyllia</b> ( <i>Caryophyllia</i> ) <i>barbadensis</i> Cairns, 1979	nw	109-249	18
	<i>Caryophyllia</i> ( <i>Caryophyllia</i> ) <i>berteriana</i> Duchassaing, 1850	se, ne, nw	99-1033	8,17
	<b>*Caryophyllia</b> ( <i>Caryophyllia</i> ) <i>horologium</i> Cairns, 1977	ne, nw	55-175	18,19
	<b>*Caryophyllia</b> ( <i>Caryophyllia</i> ) <i>polygona</i> Pourtalès, 1878	se, ne	310-1817	8
	<b>*Cladocora debilis</b> Milne Edwards & Haime, 1849	se, ne	11-400	2,18
	<b>*Coenocyathus caribbeana</b> Cairns, 2000	se	5-100	18
	<i>Coenocyathus parvulus</i> (Cairns, 1979)	se, ne, nw	97-399	2,8,20
	<i>Coenosmilia arbuscula</i> Pourtalès, 1874	se, ne, nw	74-622	8,20
	<i>Concentrotheca laevigata</i> (Portalès, 1871)	se, ne	183-576	8
	<i>Dasmosmilia lymani</i> (Portalès, 1871)	se, ne	37-366	8,19
	<i>Dasmosmilia variegata</i> (Portalès, 1871)	se, ne	110-421	8
	<i>Desmophyllum dianthus</i> (Esper, 1794)	se, ne	183-2250	8
	<b>*Labyrinthocyathus facetus</b> Cairns, 1979	se	385-402	8
	<b>*Labyrinthocyathus langae</b> Cairns, 1979	nw	506-810	8
	<i>Lophelia pertusa</i> (Linnaeus, 1758)	se, ne, nw	146-1200	2,8,13,21
	<i>Oxysmilia rotundifolia</i> (Milne Edwards & Haime, 1849)	se, ne, nw	46-640	2,8,20
	<i>Paracyathus pulchellus</i> (Philippi, 1842)	entire	17-250	8,19,20
	<i>Phacelocyathus flos</i> (Portalès, 1878)	se, ne	20-560	8
	<b>*Phyllangia americana americana</b> Milne Edwards & Haime, 1849	se, ne, nw	0-53	18,22
	<b>*Phyllangia pequegnatae</b> Cairns, 2000	ne, nw	48-112	18
	<b>*Polycyathus mayae</b> Cairns, 2000	se	127-309	18
	<b>*Polycyathus senegalensis</b> Chevalier, 1966	ne	12-143	2,18
	<i>Portalosmilia conferta</i> Cairns, 1978	ne, nw	55-191	2,16,18
	<i>Premocyathus cornuformis</i> (Portalès, 1868)	se, ne	137-931	8
	<b>*Rhizosmilia gerdae</b> Cairns, 1978	se	123-549	8,13
	<b>*Rhizosmilia maculata</b> (Portalès, 1874)	se, ne	1-508	18,19
<i>Solenosmilia variabilis</i> Duncan, 1873	se	220-1383	8	

Higher Taxon	Species	Distribution	Depth range (m)	References
Family Caryophyllidae, cont.	<i>Stephanocyathus (Odontocyathus) coronatus</i> (Pourtalès, 1867)	se, ne	543-1250	3,8
	<i>Stephanocyathus (Stephanocyathus) diadema</i> (Moseley, 1876)	se, ne	795-2553	3,8
	<b>*Stephanocyathus (Stephanocyathus) laevifundus Cairns, 1977</b>	se	300-1158	8
	<i>Stephanocyathus (Stephanocyathus) paliferus</i> Cairns, 1977	se, ne	220-715	3,8
	<b>*Tethocyathus cylindraceus (Pourtalès, 1868)</b>	se, nw	183-649	8
	<b>*Thalamophyllia gombergi Cairns, 1979</b>	se	188-220	8
	<i>Thalamophyllia riisei</i> (Duchassaing & Michelotti, 1860)	se, nw	4-914	8,10,23
	<i>Trochocyathus (Trochocyathus) rawsonii</i> Pournalès, 1874	se, ne	55-700	8
Family Deltocyathidae	<i>Deltocyathus calcar</i> Pournalès, 1874	se, ne	81-675	8,17
	<i>Deltocyathus eccentricus</i> Cairns, 1979	se, ne, nw	183-910	8
	<i>Deltocyathus italicus</i> (Michelotti, 1838)	entire	403-2634	8,17
	<b>*Deltocyathus moseleyi Cairns, 1979</b>	se	201-777	8
	<b>*Deltocyathus pourtalesi Cairns, 1979</b>	se	311-567	8
Family Dendrophylliidae	<i>Balanophyllia (Balanophyllia) floridana</i> Pournalès, 1868	se, ne	13-220	18,19,24
	<i>Balanophyllia (Balanophyllia) palifera</i> Pournalès, 1878	se, nw	53-708	8,17,24
	<b>*Bathypsammia fallosocialis Squires, 1959</b>	se	213-805	8
	<i>Bathypsammia tintinnabulum</i> (Pournalès, 1868)	se, ne	210-1115	8
	<i>Cladopsammia manuelensis</i> (Chevalier, 1966)	se, ne, nw	70-366	8
	<i>Dendrophyllia alternata</i> Pournalès, 1880	nw	276-900	8
	<i>Eguchipsammia cornucopia</i> (Pournalès, 1871)	se, ne	91-300	8,17
	<b>*Eguchipsammia gaditana (Duncan, 1873)</b>	se	97-505	18
	<i>Enallopsammia profunda</i> (Pournalès, 1867)	se, ne	403-1748	8
	<b>*Enallopsammia rostrata (Pournalès, 1878)</b>	se	300-1646	8
	<b>*Rhizopsammia goesi (Lindstrom, 1877)</b>	se, ne	5-119	18,24
	<b>*Thecopsammia socialis Pournalès, 1868</b>	se	214-878	8
	<b>*Trochopsammia infundibulum Pournalès, 1878</b>	se	532-1472	8
Family Flabellidae	<b>*Flabellum (Flabellum) floridanum Cairns, 1991</b>	se, ne	80-366	8,19
	<i>Flabellum (Ulocyathus) moseleyi</i> Pournalès, 1880	se, ne	216-1097	8
	<i>Javana cailleti</i> (Duchassaing & Michelotti, 1864)	se, ne, nw	30-1809	8,16,20
	<i>Polymyces fragilis</i> (Pournalès, 1868)	entire	75-822	8,10
Family Fungiacyathida	<i>Fungiacyathus (Bathyactis) crispus</i> (Pournalès, 1871)	ne	366-852	8
	<b>*Fungiacyathus (Bathyactis) symmetricus (Pournalès,</b>	se	183-1664	8
Family Gardineriidae	<b>*Gardineria paradoxa (Pournalès, 1868)</b>	se	91-700	8
Family Guyniidae	<i>Guynia annulata</i> (Duncan, 1872)	entire	30-653	8,20
Family Oculinidae	<i>Madrepora carolina</i> (Pournalès, 1871)	se, ne, nw	53-1003	6,8,16
	<i>Madrepora oculata</i> Linnaeus, 1758	se, ne, nw	80-1500	8
	<b>*Oculina tenella Pournalès, 1871</b>	se, ne	25-159	18
	<i>Oculina varicosa</i> Lesueur, 1821	ne	5-80	23,26

Higher Taxon	Species	Distribution	Depth range (m)	References
Family Pocilloporidae	* <i>Madracis asperula</i> Milne Edwards & Haime, 1849	se, ne, nw	24-311	16,18,20
	<i>Madracis brueggemanni</i> Ridley, 1881	ne, nw	51-130	18,20
	<i>Madracis myriaster</i> (Milne Edwards & Haime, 1849)	se, ne, nw	20-1220	8,20
	<i>Madracis pharensis pharensis</i> (Heller, 1868)	se, ne	11-333	2,18
Family Rhizangiidae	* <i>Astrangia poculata</i> (Ellis & Solander, 1786)	entire	0-263	18,27
	* <i>Astrangia solitaria</i> (Lesueur, 1817)	se, ne	0-51	2,22
Family Stenocyathidae	<i>Stenocyathus vermiformis</i> (Pourtalès, 1868)	se, ne, nw	165-835	8,10
Family Schizocyathida	* <i>Portalocyathus hispidus</i> (Pourtalès, 1878)	se	349-1006	8
	<i>Schizocyathus fissilis</i> Pourtalès, 1874	se, ne, nw	88-640	19,28
Family Turbinoliidae	<i>Deltocyathoides stimpsonii</i> (Pourtalès, 1871)	se	110-553	8
	* <i>Peponocyathus folliculus</i> (Pourtalès, 1868)	se	284-457	8

Higher Taxon	Species	Distribution	Depth range (m)	References
<b>Subclass Octocorallia</b>				
<b>Order Helioporacea</b>				
Family Lithotelestidae	* <i>Epiphaxum breve</i> Bayer, 1992	ne	76-107	29
<b>Order Alcyonacea</b>				
Family Acanthogorgiidae	* <i>Acanthogorgia aspera</i> Pourtalès, 1867	se, nw	56-1370	30-32
	* <i>Acanthogorgia schrammi</i> (Duch. & Michelotti, 1864)	ne	37-475	33,34
Family Alcyoniidae	<i>Anthomastus (Bathyalcyon) robustus delta</i>	nw	68-423	30,35
Family Anthothelidae	* <i>Anthothela grandiflora</i> (Sars, 1856)	ne	457	33
	* <i>Anthothela tropicalis</i> Bayer, 1961	nw	165-283	36
	* <i>Iciligorgia schrammi</i> Duchassaing, 1870	se	11-366	36
Family Chrysogorgiidae	<i>Chrysogorgia averta</i> Pante & Watling, 2011	ne	2281-2383	37
	<i>Chrysogorgia desbonni</i> Duchassaing & Michelotti, 1864	se	155-595	38
	<i>Chrysogorgia elegans</i> (Verrill, 1883)	entire	128-1716	30,38
	* <i>Chrysogorgia fewkesii</i> Verrill, 1883	se	430-1200	38
	* <i>Chrysogorgia multiflora</i> Deichmann, 1936	se	1021-1200	38
	<i>Chrysogorgia spiculosa</i> (Verrill, 1883)	entire	914-2265	38
	* <i>Chrysogorgia thyriformis</i> Deichmann, 1936	se	146-526	30,38
	<i>Iridogorgia magnispiralis</i> Watling, 2007	ne	2229	39
	<i>Iridogorgia splendens</i> Watling, 2007	ne	1422-2229	39
* <i>Trichogorgia viola</i> Deichmann, 1936	se	79	34	
Family Clavulariidae	* <i>Carijoa operculata</i> (Bayer, 1961)	se	76-298	36
	* <i>Carijoa riisei</i> (Duchassaing & Michelotti, 1860)	ne, nw, se	13-732	30,33,36
	* <i>Clavularia rudis</i> (Verrill, 1922)	nw, ne	1373-2207	40
	* <i>Scleranthelia rugosa</i> var. <i>rugosa</i> (Pourtalès, 1867)	se, nw	494	30,41
	* <i>Scleranthelia rugosa</i> var. <i>musiva</i> Studer, 1878	se, ne	110-188	33
	* <i>Stereotelesto corallina</i> (Duchassaing, 1870)	nw	8-183	30
	<i>Telesto flavula</i> Deichmann, 1936	se, ne	49-64	30,36

Higher Taxon	Species	Distribution	Depth range (m)	References
Family Clavulariidae, cont.	<i>Telesto fruticulosa</i> Dana, 1846	nw	33-183	30
	<b>*Telesto nelleae</b> Bayer, 1961	se	27-298	36
	<i>Telesto sanguinea</i> Deichmann, 1936	se, ne	24-110	30,36
	<b>*Telestula tubaria</b> (Wright & Studer, 1889)	se	1281-1464	33
Family Coralliidae	<b>*†Hemicorallium niobe</b> (Bayer, 1964) (= <i>Corallium niobe</i> )	nw	2229-2400	40
Family Ellisellidae	† <i>Ellisella atlantica</i> (Toeplitz, 1929) (= <i>Ctenocella (Viminella) atlantica</i> )	nw	24-214	20,30,34
	† <i>Ellisella elongata</i> (Pallas, 1766) (= <i>Ctenocella (Ellisella) elongata</i> ; <i>Ellisella barbadensis</i> ; <i>Ctenocella (Viminella) barbadensis</i> )	se, ne, nw	20-479	20,30,36
	† <i>Ellisella funiculina</i> (Duchassaing & Michelotti, 1864) (= <i>Ctenocella (Viminella) funiculina</i> )	se, ne, nw	49-481	20,30,34
	<b>*†Ellisella grandis</b> (Verrill, 1901) (= <i>Ctenocella (Ellisella) grandis</i> )	se	66	34
	<b>*†Ellisella schmitti</b> (Bayer, 1961) (= <i>Ctenocella (Ellisella) schmitti</i> )	se, nw	27-92	20,43
	<b>*Nicella americana</b> Toeplitz, 1919	ne, nw	62-100	44
	<i>Nicella deichmannae</i> Cairns, 2007	ne, nw, se	62-188	45
	<i>Nicella guadalupensis</i> (Duchassaing & Michelotti, 1860)	se, ne, nw	62-311	16,30,46
	<i>Nicella hebes</i> Cairns, 2007	ne, nw	70-188	16,20,30,33
	<i>Nicella obesa</i> Cairns, 2007	ne	48-274	33,45
	<i>Nicella robusta</i> Cairns, 2007	ne, nw	106-188	33,45
	<i>Nicella toeplitzae</i> Viada & Cairns, 2007	ne, nw	69-188	33,45
	<b>*Riisea paniculata</b> Duchassaing & Michelotti, 1860	nw, ne	93-188	16,20,30
	Family Gorgoniidae	<b>*Leptogorgia barbadensis</b> (Bayer, 1961)	se	27-76
<b>*Leptogorgia cardinalis</b> (Bayer, 1961)		se, ne	19-309	36,42
<b>*Leptogorgia euryale</b> (Bayer, 1952)		ne, nw	5-77	30,36
<b>*Leptogorgia medusa</b> (Bayer, 1952)		ne	13-77	30,36
<i>Leptogorgia stheno</i> (Bayer, 1952)		ne, nw	26-183	30,36
<b>*Leptogorgia virgulata</b> (Lamarck, 1815)		ne, nw	3-82	30,36
Family Isididae	<i>Acanella arbuscula</i> (Johnson, 1862)	ne, nw	475-2390	30
	<b>*Acanella eburnea</b> (Pourtalès, 1868)	se, ne	309-2834	34
	<b>*Chelidonis aurantiaca mexicana</b> Bayer & Stefani, 1987	nw, ne	426-581	39,48
	<i>Keratoisis flexibilis</i> (Pourtalès, 1868)	se	170-592	31
	<b>*Lepidisis caryophyllia</b> Verrill, 1883	se	1003-1064	33
	<b>*Lepidisis longiflora</b> (Verrill, 1883)	se	958-1160	31
	<b>*Lepidisis simplex</b> (Verrill, 1883)	se	611-1160	31
	<b>*Stenisis humilis</b> (Deichmann, 1936)	ne	180-222	34,48
Family Keroeidae	<b>*Thelogorgia studeri</b> Bayer, 1992	se	62	47



Higher Taxon	Species	Distribution	Depth range (m)	References
Family Nephtheidae	<b>*Pseudodrifa nigra (Pourtalès, 1868)</b> (= <i>Capnella nigra</i> ; <i>Eunephtya nigra</i> )	se	183-804	31
Family Nidaliidae	<i>Chironephtya agassizii</i> (Deichmann, 1936)	se, ne, nw	14-185	16,20,30,31
	<i>Chironephtya caribaea</i> (Deichmann, 1936)	nw	16-183	30
	<b>*Nidalia deichmannae Utinomi, 1954</b>	se, nw	201-421	49
	<b>*Nidalia dissidens Verseveldt &amp; Bayer, 1988</b>	nw	<b>274-410</b>	39
	<i>Nidalia occidentalis</i> Gray, 1835	se, ne, nw	30-311	16,20,30,36,49
Family Paragorgiidae	<b>*Paragorgia johnsoni Gray, 1862</b>	nw	<b>439-476</b>	32,40
	<b>*Paragorgia regalis Nutting, 1912</b>	ne	<b>1369-1370</b>	40
	<b><i>Sibogorgia cauliflora</i> Herrera, Baco, Sanchez, 2010</b>	ne	<b>2206-2443</b>	32,40,50
Family Plexauridae	<i>Bebryce cinerea</i> Deichmann, 1936	ne, nw	<b>64-274</b>	31
	<b>*Bebryce grandis Deichmann, 1936</b>	ne, nw	<b>58-100</b>	34
	<i>Bebryce parastellata</i> Deichmann, 1936	se, ne	40-514	31
	<i>Thesea nutans</i> (Duchassaing & Michelotti, 1864)	se, ne, nw	37-188	20,30
	<i>Hypnorgia pendula</i> Duchassaing & Michelotti, 1864	ne, nw	<b>60 -109</b>	31,51
	<b>*Lytrea plana (Deichmann, 1936)</b>	se, ne, nw	18-77	31,34,52
	<b>*Muricea laxa Verrill, 1864</b>	se, ne	18-128	36,42
	<i>Muricea pendula</i> Verrill, 1864	ne, nw	13-125	30,36
	<i>Muriceides hirta</i> (Pourtalès, 1868)	se, ne, nw	<b>53-595</b>	30,31,34
	<b>*Muriceides küenthali (Broch, 1912)</b>	ne	53-1300	34
	<b>*Paramuricea biscaya Grasshoff, 1977</b>	ne, nw	<b>882-2441</b>	39,40
	<i>Paramuricea multispina</i> Deichmann, 1936	nw	527	40
	<i>Paramuricea placomus</i> (Linnaeus, 1758)	se	<b>462</b>	53
	<i>Placogorgia mirabilis</i> Deichmann, 1936	se, ne	53-185	34
	<i>Placogorgia rudis</i> Deichmann, 1936	ne, nw	<b>64-127</b>	20
	<i>Placogorgia tenuis</i> (Verrill, 1883)	se, ne	76-479	30,31,34
	<b>*Placogorgia tribuloides Bayer, 1959</b>	se	51-373	54
	<i>Scleracis guadalupensis</i> (Duchassaing & Michelotti, 1860)	se, ne, nw	<b>51-262</b>	20,30,34
	<b>*Scleracis petrosa Deichmann, 1936</b>	se, ne	62-1604	34
	<i>Spinimuricea atlantica</i> (Johnson, 1862)	se, ne, nw	183-530	41
	<i>Swiftia casta</i> (Verrill, 1883)	se, nw	53-616	55
	<b>*Swiftia exserta (Ellis &amp; Solander, 1786)</b>	se, ne, nw	21-494	20,30,34
	<b>*Swiftia koreni (Studer, 1889)</b>	ne	221-985	31,39
	<b>*Swiftia pallida Madsen, 1970</b>	ne, nw	<b>1371-1427</b>	40
	<b>*Thesea citrina Deichmann, 1936</b>	ne	<b>87</b>	51
	<i>Thesea grandiflora</i> Deichmann, 1936	se, ne, nw	101-260	20,30,34
	<b>*Thesea granulosa Deichmann, 1936</b>	ne, nw	<b>73-298</b>	20,51
	<b>*Thesea guadalupensis Duchassaing &amp; Michelotti, 1860</b>	ne, nw	<b>81-159</b>	20,51
	<b>*Thesea hebes Deichmann, 1936</b>	se, ne	<b>78-377</b>	34,51
	<b>*Thesea nivea Deichmann, 1936</b>	se, ne, nw	<b>63-120</b>	30,51
	<i>Thesea parviflora</i> Deichmann, 1936	se, nw	<b>62-216</b>	30,34,51

Higher Taxon	Species	Distribution	Depth range (m)	References
Family Plexauridae, cont.	<i>Thesea rubra</i> Deichmann, 1936	ne, nw	64-837	16,51
	* <i>Thesea rugosa</i> Deichmann, 1936	se, ne, nw	90-301	20,30,34
	* <i>Thesea solitaria</i> (Pourtales, 1868)	se, ne	185-318	34
	<i>Villogorgia nigrescens</i> Duchassaing & Michelotti, 1860	se, ne	58-478	16,34,51
Family Primnoidae	* <i>Acanthoprimnoa goesi</i> (Aurivillius, 1931)	se	137-595	56
	* <i>Acanthoprimnoa pectinata</i> Cairns & Bayer, 2004	se	164-476	33
	<i>Callogorgia americana</i> Cairns & Bayer, 2002	nw, se	183-732	57
	<i>Callogorgia delta</i> Cairns & Bayer, 2002	ne, nw	366-913	39,58
	<i>Callogorgia gracilis</i> (Milne Edwards & Haime, 1857)	nw	82-514	20,30,59
	* <i>Callogorgia linguimaris</i> Cairns & Bayer, 2003	nw	506	33
	* <i>Calyptrophora trilepis</i> (Pourtales, 1868)	se	593-911	60
	* <i>Candidella imbricata</i> (Johnson, 1862)	se, ne	514-2063	60
	* <i>Narella pauciflora</i> Deichmann, 1936	se, nw	738-1473	56
	* <i>Paracalyptrophora carinata</i> Cairns & Bayer, 2004	nw	530-574	40,57
	* <i>Paracalyptrophora duplex</i> Cairns & Bayer, 2004	se	374-555	57
	* <i>Plumarella aurea</i> (Deichmann, 1936)	se	567	60
	* <i>Plumarella dichotoma</i> Cairns & Bayer, 2004	se	488-1065	39,60
	* <i>Plumarella pellucida</i> Cairns & Bayer, 2004	se	439-1160	39,60
<i>Plumarella pourtalesii</i> (Verrill, 1983)	se	198-882	60	
Family Spongiodermidae	* <i>Callipodium rubens</i> (Verrill, 1872)	ne, nw	9-92	30,36
	<i>Diodogorgia nodulifera</i> (Hargitt, 1901)	se, ne	30-183	36,42
	<i>Titanideum frauenfeldii</i> (Kölliker, 1865)	se	13-327	36
<b>Order Pennatulacea</b>				
Family Anthoptilidae	* <i>Anthoptilum grandiflorum</i> (Verrill, 1879)	ne	2400	33
Family Funiculinidae	<i>Funiculina quadrangularis</i> (Pallas, 1766)	ne, nw	55-2866	30,55
Family Protoptilidae	* <i>Protoptilum thomsoni</i> Kölliker, 1872	ne, nw	357-512	34
Family Umbellulidae	<i>Umbellula guentheri</i> Kölliker, 1880	ne	1342	55
	<i>Umbellula lindahli</i> Kölliker, 1874	se	2067-2866	30,31
Family Virgulariidae	* <i>Acanthoptilum agassizii</i> Kölliker, 1872	se, ne	64-183	34
	* <i>Acanthoptilum oligacis</i> Bayer, 1958	ne	183	34
	* <i>Acanthoptilum pourtalesii</i> Kölliker, 1870	se	22-80	31
	* <i>Stylatula antillarum</i> Kölliker, 1872	ne	100-183	34
	* <i>Stylatula elegans</i> (Danielssen, 1860)	se	27-1005	34
	* <i>Virgularia mirabilis</i> (Müller, 1776)	ne, nw	36-366	55
	* <i>Virgularia presbytes</i> Bayer, 1955	ne, nw	9-110	30,36



Higher Taxon	Species	Distribution	Depth range (m)	References
<b>Class Hydrozoa</b>				
<b>Subclass Hydroidolina</b>				
<b>Order Anthoathecata</b>				
Family Stylasteridae	<i>Crypthelia floridana</i> Cairns, 1986	se	593–823	61
	<i>Distichopora foliacea</i> Pourtalès, 1868	se	183–527	61
	<b>*<i>Errina cochleata</i> Pourtalès, 1867</b>	se	194–534	61
	<b>*<i>Lepidopora biserialis</i> Cairns, 1986</b>	se	196–370	61
	<i>Pliobothrus echinatus</i> Cairns, 1986	<b>se</b>	<b>175</b>	61
	<b>*<i>Pliobothrus symmetricus</i> Pourtalès, 1868</b>	se	150–400	61
	<i>Stylaster aurantiacus</i> Cairns, 1986	se	123–377	61
	<b>*<i>Stylaster complanatus</i> Pourtalès, 1867</b>	se	183–707	61
	<b>*<i>Stylaster duchassaingi</i> Pourtalès, 1867</b>	ne, se	42–692	61
	<i>Stylaster erubescens</i> Pourtalès, 1868	ne, se	146–965	61
	<i>Stylaster filigranus</i> Pourtalès, 1871	se	384–549	61
	<i>Stylaster laevigatus</i> Cairns, 1986	se	123–759	61
	<i>Stylaster miniatus</i> (Portalès, 1869)	se	146–530	61
	<b>*<i>Stylaster roseus</i> (Pallas, 1766)</b>	se	1–73	61,62

## Notes

- a. Specimen *Tubastraea coccinea* is a Pacific species introduced into the western Atlantic, and is not native to the Gulf of Mexico.

## Literature Cited

- Brooke S, Schroeder WW (2007) State of Deep Coral ecosystems in the Gulf of Mexico Region: Texas to the Florida Straits. In: Lumsden SE, Hourigan TF, Bruckner AW, Dorr G (eds) The State of Deep Coral Ecosystems of the United States. U.S. Department of Commerce, NOAA Technical Memorandum CRCP 3, Silver Spring, MD
- Cairns SD, Bayer F (2009) Octocorallia (Cnidaria) of the Gulf of Mexico. In: Felder DL, Camp DK (eds) Gulf of Mexico origin, waters, and biota: biodiversity. Texas A&M University Press, College Station, TX
- Cairns SD, Jaap WC, Lang JC (2009) Scleractinia (Cnidaria) of the Gulf of Mexico. In: Felder DL, Camp DK (eds) Gulf of Mexico origin, waters, and biota: biodiversity. Texas A&M University Press, College Station, TX
- Calder DR, Cairns SD (2009) Hydroids (Cnidaria: Hydrozoa) of the Gulf of Mexico. In: Felder DL, Camp DK (eds) Gulf of Mexico origin, waters, and biota: biodiversity. Texas A&M University Press, College Station, TX
- Felder DL, Camp DK (eds) (2009) Gulf of Mexico origin, waters, and biota: biodiversity. Texas A&M University Press, College Station, TX

## References

1. de Pourtalès LF (1867) Contributions to the fauna of the Gulf Stream at great depths. *Bulletin of the Museum of Comparative Zoölogy, Harvard* 1:103-142
2. Cairns SD, Opresko DM, Hopkins TS, Schroeder WW (1993) New records of deep-water Cnidaria (Scleractinia and Antipatharia) from the Gulf of Mexico. *Northeast Gulf Science* 13:1-11
3. Cairns SD (1977) Biological results of the University of Miami deep-sea expeditions. 125. A revision of the recent species of *Stephanocyathus* (Anthozoa: Scleractinia) in the western Atlantic, with descriptions of two new species. *Bulletin of Marine Science* 27:729-739
4. Opresko DM (1972) Redescriptions and reevaluations of the antipatharians described by L.F. de Pourtales. *Bulletin of Marine Science* 97:950-1017
5. de Pourtalès LF (1871) Deep-Sea Corals. III. Catalogue of the Museum of Comparative Zoölogy, Harvard 4:93.
6. Opresko DM (2009) Antipatharia (Cnidaria) of the Gulf of Mexico. In: Felder DL, Camp DK (eds) *Gulf of Mexico—Origins, Waters, and Biota Biodiversity*. Texas A&M University Press, College Station, Texas
7. Nuttall MF (2013) Antipatharian diversity and habitat suitability mapping in the mesophotic zone of the Northwestern Gulf of Mexico. Master of Science, Texas A&M University,
8. Cairns SD (1979) The deepwater Scleractinia of the Caribbean Sea and adjacent waters. *Studies on the fauna of Curaçao and other Caribbean Islands* 57:1-341
9. Schroeder WW (2002) Observations of *Lophelia pertusa* and the surficial geology at a deep-water site in the northeastern Gulf of Mexico. *Hydrobiologia* 471:29-33
10. Cairns SD (1997) A generic revision and phylogenetic analysis of the Turbinoliidae (Cnidaria: Scleractinia). *Smithsonian Contributions to Zoology* 591:1-55
11. Opresko DM, Cairns SD (1992) New species of black coral (Cnidaria: Antipatharia) from the Northern Gulf of Mexico. *NE Gulf Science* 12:93-97
12. Opresko DM (1993) A new species of *Sibopathes* (Cnidaria: Anthozoa: Antipatharia: Antipathidae) from the Gulf of Mexico. *Proceedings of the Biological Society of Washington* 106:195-203
13. Moore D, Bullis HR (1960) A deep-water coral reef in the Gulf of Mexico. *Bulletin of Marine Science* 10
14. Opresko DM (1974) A study of the classification of the Antipatharia (Coelenterata:Anthozoa) with redescriptions of eleven species. Ph.D., University of Miami, Miami, FL
15. Opresko DM (2006) Revision of the Antipatharia (Cnidaria: Anthozoa). Part V. Establishment of a new family, Stylopathidae. *Zool Med Leiden* 80-4:109-138
16. Ludwick JC, Walton WR (1957) Shelf-edge, calcareous prominences in northeastern Gulf of Mexico. *Bulletin of the American Association of Petroleum Geologists* 41:2054-2101
17. Viada ST, Cairns S (1987) Range extensions of ahermatypic Scleractinia in the Gulf of Mexico. *Northeast Gulf Science* 9:131-134
18. Cairns SD (2000) A revision of the shallow-water azooxanthellate Scleractinia of the western Atlantic. *Studies on the Fauna of Curacao and other Caribbean Islands* 75:1-240
19. Cairns S (1977) Stony Corals: I. Caryophylliina and Dendrophylliina (Anthozoa: Scleractinia). *Memoirs of the Hourglass Cruises* 3:1-27
20. Rezak R, Bright TJ, McGrail DW (1985) *Reefs and banks of the Northwestern Gulf of Mexico: their geological, biological, and physical dynamics*. John Wiley and Sons, New York, NY
21. Opresko DM, de Laia Loiola L (2008) Two New Species of *Chrysopathes* (Cnidaria: Anthozoa: Antipatharia) from the Western Atlantic. *Zootaxa* 1707:49-59
22. Zlatarski V (1982) Description systématique. In: Zlatarski V, Estalella NM (ed) *Les Scléactiniaires de Cuba*. Academy of Sciences Bulgare, Sofia, Bulgaria
23. Reed JK, Rogers S (2011) Final Cruise Report of the Florida Shelf-Edge Expedition (FLoSEE) Deepwater Horizon Oil Spill Response: Survey OF Deepwater and Mesophotic Reef Ecosystems in the Eastern Gulf of Mexico and Southeastern Florida. Harbor Branch Oceanographic Institute
24. Cairns SD (1977) Biological results of the University of Miami Deep-Sea Expeditions. 121. A review of the recent species of *Balanophyllia* (Anthozoa: Scleractinia) in the western Atlantic, with descriptions of four new species. *Proceedings of the Biological Society of Washington* 90:132-148
25. Fenner D, Banks K (2004) Orange cup coral *Tubastraea coccinea* invades Florida and Flower Garden Banks, Northwestern Gulf of Mexico. *Coral Reefs* 23:505-507
26. Barnette MC (2006) Observations of the deepwater coral *Oculina varicosa* in the Gulf of Mexico. NOAA Technical

Memorandum

27. Peters E, Cairns SD, Pilson MEQ, Wells JW, Jaap WC, Lang JC, Vasleski CEC, Gollahon LSP (1988) Nomenclature and biology of *Astrangia poculata* (=A. danae = A. astreiformis) (Cnidaria: Anthozoa). *Proceedings of the Biological Society of Washington* 101:234-250
28. Wheaton J, Jaap WC (1988) Corals and other prominent benthic Cnidaria of Looe Key National Marine, Sanctuary, Florida. *Florida Marine Research Publications* 43:1-25
29. Bayer FM (1992) The helioporacean octocoral *Epiphaxum*, recent and fossil: a monographic iconography. *Studies in Tropical Oceanography* 15:76
30. Giammona C (1978) Octocorals in the Gulf of Mexico - their taxonomy and distribution with remarks on their paleontology. PhD dissertation, Texas A&M University, Corpus Christi, TX,
31. Deichmann E (1936) The Alcyonaria of the western part of the Atlantic Ocean. *Memoirs of the Museum of Comparative Zoölogy at Harvard College* 53:1-317, 337 pls.
32. Herrera S, Shank TM (2015) RAD sequencing enables unprecedented phylogenetic resolution and objective species delimitation in recalcitrant divergent taxa. *bioRxiv*
33. NMNH (2016) NMNH Invertebrate Zoology Collections - Online Collection Database; Accessed 02/12/2016. In: *National Museum of Natural History SI* (ed), Washington, D.C.
34. Bayer FM (1957) Additional records of Western Atlantic octocorals. *Journal of the Washington Academy of Sciences* 47:379-390
35. Bayer FM (1993) Taxonomic status of the octocoral genus *Bathyalcyon* (Alcyoniidae: Anthomastidae), with descriptions of a new subspecies from the Gulf of Mexico and a new species of *Anthomastus* from Antarctic waters. *Precious Corals and Octocoral Research* 1:3-13
36. Bayer FM (1961) The shallow-water Octocorallia of the West Indian Region. *Studies on the Fauna of Curaçao and other Caribbean Islands* 12:1-373
37. Pante E, Watling L (2011) *Chrysogorgia* from the New England and Corner Seamounts: Atlantic-Pacfic connections. *Journal of the Marine Biological Association of the United Kingdom* 92:911-927
38. Cairns SD (2001) Studies on western Atlantic Octocorallia (Coelenterata: Anthozoa). Part 1: The genus *Chrysogorgia* Duchassaing & Michelotti, 1864. *Proceedings of the Biological Society of Washington* 114:746-787
39. Quattrini AM, Georgian SE, Byrnes L, Stevens A, Falco R, Cordes EE (2013) Niche divergence by deep-sea octocorals in the genus *Callogorgia* across the continental slope of the Gulf of Mexico. *Molecular ecology* 22:4123-4140
40. Quattrini AM, Etnoyer PJ, Doughty C, English L, Falco R, Renion N, Rittinghouse M, Cordes EE (2014) A phylogenetic approach to octocoral community structure in the deep Gulf of Mexico. *Deep-Sea Res Pt II* 99:92-102
41. Bayer FM (1981) On some genera of stoloniferous octocorals (Coelenterata: Anthozoa), with descriptions of new taxa. *Proceedings of the Biological Society of Washington* 94:878-901
42. Grimm D, Hopkins TS (1977) A preliminary characterization of the octocorallian and scleractinian diversity at the Florida Middle Grounds. *Proceedings of the Third International Coral Reef Symposium* 1:136-141
43. Bayer F, Grasshoff M (1994) The genus group taxa of the family Ellisellidae, with clarification of the genera established by J. E. Gray (Cnidaria: Octocorallia). *Senckenbergiana biologia* 74:21-45
44. National Oceanic and Atmospheric Administration (NOAA) (2015) National Database for Deep-Sea Corals and Sponges (version 20150814-1). NOAA Deep Sea Coral Research & Technology Program, Available at: <https://deepseacoraldata.noaa.gov/>
45. Cairns SD (2007) Studies on western Atlantic Octocorallia (Gorgonacea: Ellisellidae). Part 7: The genera *Riisea* Duchassaing & Michelotti, 1860 and *Nicella* Gray, 1870. *Proceedings of the Biological Society of Washington* 120:1-38
46. Bayer F, Deichmann E (1960) The Ellisellidae (Octocorallia) and their bearing on the zoogeography of the eastern Pacific. *Proceedings of the Biological Society of Washington* 73:175-182
47. Bayer FM (1992) *Thelogorgia*, a new genus of gorgonacean octocorals, with descriptions of four new species from the western Atlantic. *Bulletin of Marine Science* 49:506-537
48. Bayer F, Stefani J (1987) New and previously known taxa of isidid octocorals (Coelenterata: Gorgonacea), partly from Antarctic waters. *Proceedings of the Biological Society of Washington* 100:937-991
49. Verseveldt J, Bayer FM (1988) Revision of the genera *Bellonella*, *Eleutherobia*, *Nidalia* and *Nidaliopsis* (Octocorallia: Alcyoniidae and Nidaliidae), with descriptions of two new genera. *Zoologische Verhandelingen* 245:1-132
50. Herrera S, Baco A, Sanchez JA (2010) Molecular systematics of the bubblegum coral genera (Paragorgiidae, Octocorallia) and description of a new deep-sea species. *Molecular phylogenetics and evolution* 55:123-135
51. Etnoyer PJ, Wickes LN, Silva M, Dubick JD, Balthis L, Salgado E, MacDonald IR (2016) Decline in condition of gorgonian octocorals on mesophotic reefs in the northern Gulf of Mexico: before and after the Deepwater Horizon oil spill. *Coral Reefs* 35:77-90

52. Bayer FM (1981) Key to the genera of Octocorallia exclusive of Pennatulacea (Coelenterata, Anthozoa), with diagnoses of new taxa. Proceedings of the Biological Society of Washington
53. Reed JK, Pomponi SA, Weaver D, Paull CK, Wright AE (2005) Deep-water sinkholes and bioherms of South Florida and Pourtales Terrace- habitat and fauna. Bulletin of Marine Science 77:267-296
54. Bayer FM (1959) A review of the gorgonacean genus *Placogorgia* Studer, with a description of *Placogorgia tribuloides*, a new species from the Straits of Florida. Journal of the Washington Academy of Sciences, Book 49
55. Bayer FM (1952) New western Atlantic records of octocorals (Coelenterata: Anthozoa), with descriptions of three new species. Journal of the Washington Academy of Sciences 42:183-189
56. Cairns SD, Bayer FM (2003) Studies on western Atlantic Octocorallia (Coelenterata: Anthozoa). Part 3. The genus *Narella* Gray, 1870. Proceedings of the Biological Society of Washington 116:617-648
57. Cairns SD, Bayer FM (2004) Studies on western Atlantic Octocorallia (Coelenterata: Anthozoa). Part 4: The genus *Paracalyptrophora* Kinoshita, 1908. Proceedings of the Biological Society of Washington 117:114-139
58. Bayer FM, Cairns SD, Cordeiro RTS, Pérez CD (2015) New records of the genus *Callogorgia* (Anthozoa: Octocorallia) in the western Atlantic, including the description of a new species. Journal of the Marine Biological Association of the United Kingdom 95:905-911
59. Cairns SD, Bayer FM (2002) Studies on western Atlantic Octocorallia (Coelenterata, Anthozoa): Part 2: The genus *Callogorgia* Gray, 1858. Proceedings of the Biological Society of Washington 115:840-867
60. Cairns SD, Bayer FM (2004) Studies on Western Atlantic Octocorallia (Coelenterata: Anthozoa). Part 5: The Genera *Plumarella* Gray, 1870; *Acanthoprimum*, n. Gen.; and *Candidella* Bayer, 1954. Proceedings of the Biological Society of Washington 117:447-487
61. Cairns SD (1986) A Revision of the Northwest Atlantic Stylasteridae (Coelenterata:Hydrozoa). Smithsonian Contributions to Zoology 418:1-131
62. Horta-Puga G, Carricart-Ganivet JP (1990) *Stylaster roseus* (Pallas, 1766): first record of a stylasterid (Cnidaria: Hydrozoa) in the Gulf of Mexico. Bulletin of Marine Science 47:575-576