

International Journal of Scientific Research and Reviews

Distribution List of Hydrozoa In Indian Coast

Arun G.¹, Rajaram R.^{1*} and Yogesh Kumar Yogesh J.S.²

¹Department of Marine Science, Bharathidasan University Tiruchirappalli - 620 024, Tamil Nadu, India. ¹Email: arun.biotek@gmail.com. Mobile No: 9944770432

^{1*}Department of Marine Science, Bharathidasan University Tiruchirappalli - 620 024, Tamil Nadu, India. ^{1*}Email: drrajaram69@rediffmail.com. Mobile No: 9842874661

²Zoological Survey of India, MARC, Digha, West Bengal - 721428, India.
Email: coralyogeeth@gmail.com. Mobile No: 9476006830

ABSTRACT

Hydrozoa are a fascinating group widely present in all water habitats and also have many research gaps. The studies on this important component of the waterbody hydroids in India coast are merely concerned. The purpose of this study is to provide the distribution details of Hydroids from Indian coast. A compilation of all published literature revealed that, a total of 155 species belongs to 91 genera and 48 families under the class Hydrozoa, Phylum Cnidaria. The distribution of Hydrozoa in the Indian coast is in the following order West coast (125sp.) > East coast (27sp.) > Andaman and Nicobar (20sp.) > Gulf of Mannar (19sp.) > Gulf of Kuchchh (3sp.) > Lakshadweep (1sp.). The maximum distributional records has been reported along West Coast of India and Minimum in Lakshadweep Islands. The distributional records revealed on the basis of available literatures, the order Leptothecata is maximum distributed with 90 species belongs 44 genus and 21 families and minimum diversity was observed in the order Limnomedusae with only 1 species belongs 1 genus and 1 family. Moreover the revised accepted names of 13 species, 5 inquirendum species and 1 revised spelling of the species also be discussed.

KEY WORDS: Checklist, Cnidaria, Distribution, Hydrozoa, Indian coast.

***Corresponding author**

R. Rajaram

Department of Marine Science,

Bharathidasan University Tiruchirappalli - 620 024,

Tamil Nadu, India.

Email: drrajaram69@rediffmail.com. Mobile No: 9842874661

INTRODUCTION

Hydrozoa are fascinating group widely present in all waters habitats liable to all depth and regional latitudes¹. The classification of this diversified heterogenous group having exclusive confusion based on their contradictory stages of complex life cycle². Class Hydrozoa³, consists of typical two monophyletic clads - Hydroidolina and Trachylina contains 3,702 valied species with morphological apomorphic variations^{1, 4}. Hydrozoans are sessile, colony, consists of individual polyps rarely solitary and /or pelagic, having synapomorphic basal disc, pedicle, hydranth, tentacles, endo and ectodermal layer, ectoderm originated gonads, velum present except obelia, absence of septae, polyps produce buds and or transform as an identical organism instead of fission, with some exceptional all hydranths are tiny in size⁴. The studies on this vital carnivorous water animal in India coast are very minimal. The first known records on Indian hydrozoan was made by Annandale (1907)⁵, followed by Ritchie (1910)⁶, Thornely (1916)⁷, Gravely (1927)⁸, Leloup (1932)⁹, Mammen (1963; 1965; 1965a)^{10, 11, 12}, Chhapgar and Kevalramani (1974)¹³, Rengarajan (1975)¹⁴, Rao (1993)¹⁵, CMFRI (2010)¹⁶, Nagale et al (2012; 2013)^{17, 18}, Pandya et al(2013)¹⁹, Nagale and Apte(2014)²⁰. So far the the distributional records not been finalised to the poorly known Indian water Hydroids (2005)²¹. Here the purpose of compiled report to pioneering the first updated distributional checklist to simplify the the effort to know about class Hydrozoa from Indan waters.

MATERIAL SOURCES

The checklist of cnidocytic Hydroids was compiled with the scattered litratures, survey programmes and publication records from Indian coastal waters. The taxonomic position, later accepted name of species, doubtful taxon of the species were checked/ confirmed by the database by WoRMS²² and cnidarian.myspace.info and the classification are followed by Bouillon et al (2006)¹ and Daly et al (2007)⁴.

RESULT AND DISCUSSION

Totally 155 species comprise of 91 genus under 48 families diversity of indian water class Hydrozoa were recorded. On distribution, 21 families of 90 species and 44 genera under order leptothecata, 16 families of 36 species and 27 genus under order anthoathecata, 5 families of 17 species and 10 genus under order siphonophorae in subclass Hydroidolinae and the subclass Trachylina, 2 families of 7 species and 6 genera under order trachymedusae, 2 families of 2 species and 2 genera under order narcomedusae, 1 families of 2 species and 1 genera under order limnomedusae, 1 families of 1 species and 1 genus under order actinulidae. The distribution of Hydrozoa in the Indian coast is in the following order West coast (125sp.) > East coast (27sp.) >

Andaman and Nicobar (20sp.) > Gulf of Mannar (19sp.) > Gulf of Kuchchh (3sp.) > Lakshadweep (1sp.).

TABLE 1: LIST OF DISTRIBUTION RECORDS OF HYDROZOA IN INDIA COASTS

Sl. No.	Species Name	Andaman and Nicobar Islands	Lakshadweep	East Coast	West Coast	Gulf Of Kachchh	Gulf Of Mannar	References
Kingdom Animalia Phylum Cnidaria Class Hydrozoa								
Subclass HYDROIDOLINA								
Order Anthoathecata								
Suborder Filifera								
Family Bougainvilliidae Lütken, 1850								
1	<i>Bimeria vestita</i> Wright, 1859			+	+		+	Annandale, 1907; Mammen, 1963
2	<i>Bougainvillia fulva</i> Agassiz and Mayer, 1899				+			Nagale <i>et al.</i> , 2012
3	<i>Garveia fraciscana</i> Torrey, 1902				+		+	Mammen, 1963; Leloup, 1932
4	<i>Rhizorhagium palori</i> Mammen, 1963				+			Mammen, 1963
Family CYTAEIDIDAE								
5	<i>Cytaeis tetrastyla</i> Eschscholtz, 1829				+			Nagale <i>et al.</i> , 2012
Family EUDENDRIIDAE Agassiz, 1862								
6	<i>Eudendrium capillare</i> Alder, 1856				+			Mammen, 1963
Family HYDRACTINIIDAE Agassiz, 1862								
7	<i>Clavactinia gallensis</i> Thornely, 1904			+				Leloup, 1932
8	<i>Hydractinia epidocleensis</i> Leloup, 1931			+	+			Leloup, 1932; Mammen, 1963
9	<i>Hydractinia ocellata</i> Agassiz and Mayer, 1902				+			Nagale <i>et al.</i> , 2012
Family Oceaniidae Eschscholtz, 1829								
10	<i>Rhizogeton nudus</i> Broch, 1910							Mammen, 1963
11	<i>Turritopsis dohrni</i> Weismann, 1883				+			Mammen, 1963
Family PANDEIDAE Haeckel, 1879								
12	<i>Amphinema rugosum</i> Mayer, 1900				+			Nagale <i>et al.</i> , 2012
13	<i>Leuckartiara octona</i> Fleming, 1823				+			Mammen, 1963
14	<i>Merga tergestina</i> Neppi and Stiasny, 1912				+			Nagale <i>et al.</i> , 2012
Suborder Capitata								
Family CLADOCORYNIDAE Allman, 1872								
15	<i>Cladocoryne floccose</i> Rotch, 1871					+		Nagale and Apte, 2014
16	<i>Cladocoryne littoralis</i> Mammen, 1963				+			Mammen, 1963
17	<i>Cladocoryne travancorensis</i> Mammen, 1963				+			Mammen, 1963
Family CORYMORPHIDAE Allman, 1872								
18	<i>Corymorpha bigelowi</i> Maas, 1905				+			Nagale <i>et al.</i> , 2012

19	<i>Corymorpha nutans</i> M. Sars, 1835				+			Nagale et al., 2012
20	<i>Euphysa aurata</i> Forbes, 1848				+			Nagale et al., 2012
Family CORYNIDAE Johnston, 1836								
21	<i>Coryne muscoides</i> Linnaeus, 1761				+			Mammen, 1963
22	<i>Dicylocoryne filamentata</i> Annandale, 1907				+			Annandale, 1907
Family MOERISIIDAE Poche, 1914								
23	<i>Moerisia inkermanica</i> Paltschikowa-Ostroumowa, 1925				+			Nagale et al., 2012
Family PENNARIIDAE McCrady, 1859								
24	<i>Pennaria disticha</i> McCrady, 1859				+			Leloup, 1932; Nagale and Apte, 2013
Family PORPITIDAE Goldfuss, 1818								
25	<i>Porpita porpita</i> Linnaeus, 1758				+	+		Pandya et al., 2005; CMFRI, 2010; Apte et al., 2012
26	<i>Verella vellella</i> Linnaeus, 1758				+			Pandya et al., 2013
Family SPHAEROCORYNIDAE Prévôt, 1959								
27	<i>Sphaerocoryne bedoti</i> Pictet, 1893				+			Mammen, 1963
Family TUBULARIIDAE Fleming, 1828								
28	<i>Ectopleura crocea</i> Agassiz, 1862				+	+		Mammen, 1963; Gravely, 1927; Nagale and Apte, 2013
29	<i>Ectopleura dumortierii</i> Van Beneden, 1844					+		Nagale et al., 2012
30	<i>Ectopleura larynx</i> Ellis and Solander, 1786					+		Nagale et al., 2012
31	<i>Ectopleura sacculifera</i> Kramp, 1957					+		Nagale et al., 2012
32	<i>Ectopleura viridis</i> Pictet, 1893					+		Nagale and Apte, 2013
33	<i>Zyzyzus warreni</i> Calder, 1988						+	Nagale and Apte, 2014
Family ZANCLEIDAE Russell, 1953								
34	<i>Zanclea indica</i> Mammen#, 1963					+		Mammen, 1963
35	<i>Zanclea costata</i> Gegenbaur, 1857					+		Nagale et al., 2012
Family CAPITATA INCERTAE SEDIS								
36	<i>Cnidocodon leopoldi</i> Bouillon, 1978					+		Nagale et al., 2012
Order Leptothecata								
Suborder Conica								
Family AEQUOREIDAE Eschscholtz, 1829								
37	<i>Aequorea australis</i> Uchida, 1947					+		Nagale et al., 2012
38	<i>Aequorea conica</i> Browne, 1905					+		Nagale et al., 2012
39	<i>Aequorea forskalea</i> Péron and Lesueur, 1810					+		Nagale et al., 2012
40	<i>Aequorea pensilis</i> Haeckel, 1879					+		Nagale et al., 2012
41	<i>Aequorea tenuis</i> Agassiz, 1862					+		Nagale et al., 2012
42	<i>Aequorea vitrina</i> Gosse, 1853				+			Srichandan et al., 2015
Family AGLAOPHENIDAE Agassiz, 1862								
43	<i>Aglaophenia pluma</i> Linnaeus, 1758					+		Venugopalan and Wagh, 1986
44	<i>Aglaophenia septata</i> Ritchie, 1909	+						Ritchie, 1910
45	<i>Gymnangium balei</i> Marktanner-Turneretscher, 1890	+						Ritchie, 1910
46	<i>Gymnangium hians</i> Busk, 1852	+						Ritchie, 1910

47	<i>Gymnangium insigne</i> Aallman, 1874				+	Mammen, 1965b
48	<i>Lytocarpia annandalei</i> Ritchie, 1910				+	Ritchie, 1910
49	<i>Macrorhynchia gravely</i> Mammen, 1965				+	Mammen, 1965b Ritchie, 1910; Mammen, 1965; Nagale and Apte, 2013
50	<i>Macrorhynchia philippina</i> Kirchenpauer, 1872		+	+	+	Ritchie, 1910; Borradaile, 1905; Mammen, 1965
51	<i>Macrorhynchia phoenicea</i> Busk, 1852		+	+	+	Ritchie, 1910
52	<i>Monoserius pennarius</i> Linnaeus, 1758				+	Mammen, 1965b
53	<i>Taxella eximia</i> Aallman, 1874				+	Ritchie, 1910
54	<i>Taxella gracilicaulis</i> Jaderholm, 1903				+	
Family BLACKFORDIIDAE Bouillon, 1984						
55	<i>Blackfordia virginica</i> Mayer, 1910				+	Nagale et al., 2012
Family EIRENIDAE Haeckel, 1879						
56	<i>Eirene ceylonensis</i> Browne, 1905				+	Annandale, 1907 Nagale et al., 2012
57	<i>Eirene hexanemalis</i> Goette, 1886				+	Nagale et al., 2012
58	<i>Eirene menoni</i> Kramp, 1953				+	Nagale et al., 2012
59	<i>Eugymnanthea psammobionta</i> Salvini-Plawen and Chandrasekhara Rao, 1973				+	Rao, 1993
60	<i>Eutima commensalis</i> Santhakumari, 1970				+	Nagale et al., 2012
61	<i>Eutima gracilis</i> Forbes and Goodsir, 1853				+	Nagale et al., 2012
62	<i>Eutima orientalis</i> Browne, 1905				+	Nagale et al., 2012
63	<i>Eutonina indicans</i> Romanes, 1876				+	Nagale et al., 2012
64	<i>Helgicirrho malayensis</i> Stiasny, 1928				+	Nagale et al., 2012
Family HALECIIDAE Hincks, 1868						
65	<i>Halecium halecinum</i> (Linnaeus, 1758)				+	Leloup, 1932
66	<i>Halecium tenellum</i> Hincks, 1861				+	Mammen, 1965a
67	<i>Nemalecium lighti</i> (Hargitt, 1924)				+	Nagale and Apte, 2014
Family HALOPTERIDIDAE Millard, 1962						
68	<i>Antennella quadriaurita</i> Ritchie, 1909				+	Leloup, 1932 Ritchie, 1910; Thornely, 1904; Mammen, 1965
69	<i>Antennella secundaria</i> Gmelin, 1791				+	Nagale et al., 2012
70	<i>Halopteris diaphana</i> Heller, 1868				+	Mammen, 1965b
71	<i>Monostaechas quadridens</i> McCrady, 1859				+	
Family HEBELLIDAE Fraser, 1912						
72	<i>Hebella corrugata</i> Thornely#, 1904				+	Mammen, 1965a
73	<i>Hebella crateroides</i> Ritchie, 1909				+	Ritchie, 1910
74	<i>Hebella dispolians</i> Warren, 1909				+	Mammen, 1965a
75	<i>Hebella scandens</i> Bale, 1888				+	Mammen, 1965a
Family KIRCHENPAUERIIDAE Stechow, 1921						
76	<i>Kirchenpaueria halecioides</i> Alder, 1859				+	Leloup, 1932; Mammen, 1965b
77	<i>Pycnotheca mirabilis</i> Allman, 1883				+	Mammen, 1965b
Family LAFOEIDAE Agassiz, 1865						
78	<i>Acryptolaria crassicaulis</i> Allman, 1888				+	Leloup, 1932
Family LOVENELLIDAE Russell, 1953						
79	<i>Eucheilota menoni</i> Kramp, 1959				+	Nagale et al., 2012

Family MALAGAZZIIDAE Bouillon, 1984				
80	<i>Malagazzia carolinae</i> Mayer, 1900		+	Nagale et al., 2012
81	<i>Malagazzia condensum</i> Kramp, 1953		+	Nagale et al., 2012
82	<i>Malagazzia multitentaculatum</i> Menon, 1932		+	Nagale et al., 2012
83	<i>Octophialucium indicum</i> Kramp, 1958		+	Nagale et al., 2012
Family PHIALELLIDAE Russell, 1953				
84	<i>Phialella quadrata</i> Forbes, 1848		+	Srichandan et al., 2015
85	<i>Phialella fragilis</i> Uchida, 1938		+	Nagale et al., 2012
Family PLUMULARIIDAE McCrady, 1859				
86	<i>Plumularia warreni</i> Stechow, 1919		+	Mammen, 1965b
87	<i>Plumularia floridana</i> Nutting, 1900		+	Mammen, 1965b
88	<i>Plumularia polycladia</i> Mammen, 1965		+	Mammen, 1965b
Family SERTULARIIDAE Lamouroux, 1812				
89	<i>Diphasia digitalis</i> Busk, 1852		+	Mammen, 1965a
90	<i>Diphasia mutulata</i> Busk, 1852	+	+	Ritchie, 1910; Leloup, 1932
91	<i>Diphasia thornelyi</i> Ritchie, 1909	+		Ritchie, 1910
92	<i>Dynamena crisioides</i> Lamouroux, 1824		+	Leloup, 1932; Mammen, 1965a; Nagale and Apte, 2013
93	<i>Dynamena disticha</i> Bosc, 1802	+	+	Mammen, 1965a; Leloup, 1932
94	<i>Dynamena moluccana</i> Pictet, 1893		+	Thornely, 1904
95	<i>Dynamena quadridentata</i> Ellis and Solander, 1786		+	Mammen, 1965a; Nagale and Apte, 2013
96	<i>Idiellana pristis</i> Lamouroux, 1816		+	Mammen, 1965a; Nagale and Apte, 2013
97	<i>Salacia tetracythara</i> Lamouroux, 1816		+	Mammen, 1965a
98	<i>Sertularia marginata</i> (Kirchenpauer, 1864)		+	Mammen, 1965a
99	<i>Sertularia tongensis</i> (Stechow, 1919)		+	Leloup, 1932; Mammen, 1965a
100	<i>Sertularia tumida</i> Allman, 1877		+	Mammen, 1965a
101	<i>Sertularia turbinata</i> (Lamouroux, 1816)		+	Mammen, 1965a
Family THYROSCYPHIDAE Stechow, 1920				
102	<i>Thyroscyphus fruticosus</i> Esper, 1783	+	+	Ritchie, 1910
103	<i>Thyroscyphus ramosus</i> Allman, 1877		+	Mammen, 1965a
Family TIARANNIDAE Russell, 1940				
104	<i>Modeeria rotunda</i> Quoy and Gaimard, 1827		+	Leloup, 1932
Suborder Proboscidoidea				
Family CAMPANULARIIDAE Johnston, 1836				
105	<i>Obelia bidentata</i> Clark, 1875		+	Mammen, 1965a Leloup, 1932
106	<i>Obelia geniculate</i> Linnaeus, 1758		+	Mammen, 1965a; Nagale and Apte, 2013
107	<i>Obelia dichotoma</i> Linnaeus, 1758		+	Mammen, 1965a
108	<i>Cuspidella humilis</i> Hincks#, 1866		+	Venugopalan and Wagh, 1986
109	<i>Clytia gracilis</i> Sars, 1850		+	Mammen, 1965a
110	<i>Clytia brevicyathus</i> Mammen, 1965		+	Mammen, 1965a

111	<i>Clytia globosa</i> Mayer, 1900			+	Nagale et al., 2012
112	<i>Clytia linearis</i> Thorneley, 1900	+	+	+	Leloup, 1932
113	<i>Clytia hemisphaerica</i> Linnaeus, 1767			+	Mammen, 1965a Mammen, 1965a; Leloup, 1932
114	<i>Clytia noliformis</i> McCrady, 1859		+	+	Calder, 1991
115	<i>Clytia liguiliformis</i> Mammen, 1965			+	Mammen, 1965a
116	<i>Clytia crenata</i> Mammen, 1965			+	Mammen, 1965a
117	<i>Campanularia erythraea</i> Stechow, 1923			+	Mammen, 1965a
118	<i>Campanularia clytioides</i> # Lamouroux, 1824			+	Mammen, 1965a
119	<i>Orthopyxis everta</i> Clark, 1876			+	Mammen, 1965a
Family PHYLACTOTHECIDAE					
120	<i>Hydrodendron mirabile</i> Hincks, 1866			+	Mammen, 1965a; Leloup, 1932
Family SERTULARELLIDAE					
121	<i>Calamphora campanulata</i> Warren, 1908			+	Mammen, 1965a
122	<i>Sertularella tenella</i> Alder, 1857			+	Mammen, 1965a
123	<i>Sertularella quadridens</i> Bale, 1884	+		+	Ritchie, 1910; Leloup, 1932
124	<i>Sertularella distans</i> Lamouroux#, 1816			+	Mammen, 1965a
Family TIAROPSIDAE					
125	<i>Tiaropsidium japonicum</i> Kramp, 1932			+	Nagale et al., 2012
Family ZYGOPHYLACIDAE					
126	<i>Zygophylax arborescens</i> Leloup, 1931			+	Leloup, 1932
Order Siphonophorae					
Suborder Calycophorae					
Family ABYLIDAE Agassiz, 1862					
127	<i>Bassia bassensis</i> Quoy and Gaimard, 1833			+	Srichandan et al., 2015
128	<i>Enneagonum hyalinum</i> Quoy and Gaimard, 1827			+	Nagale et al., 2012
Family DIPHYIDAE Quoy and Gaimard, 1827					
129	<i>Diphyes chamissonis</i> Huxley, 1859			+	Srichandan et al., 2015
130	<i>Diphyes dispar</i> Chamisso and Eysenhardt, 1821			+	Srichandan et al., 2015
131	<i>Eudoxoides mitra</i> Huxley, 1859			+	Srichandan et al., 2015
132	<i>Eudoxoides spiralis</i> Bigelow, 1911			+	Nagale et al., 2012
133	<i>Lensia cossack</i> Totton, 1941			+	Nagale et al., 2012
134	<i>Lensia fowleri</i> Bigelow, 1911			+	Nagale et al., 2012
135	<i>Lensia multilobata</i> Rengarajan, 1973			+	Nagale et al., 2012
136	<i>Lensia subtilis</i> Chun, 1886			+	Nagale et al., 2012
137	<i>Muggiaea delsmanni</i> Totton, 1954			+	Nagale et al., 2012
138	<i>Sulculeolaria monoica</i> Chun, 1888			+	Nagale et al., 2012
139	<i>Sulculeolaria turgida</i> Gegenbaur, 1854			+	Nagale et al., 2012
Family HIPPOPODIIDAE Kolliker, 1853					
140	<i>Vogtia pentacantha</i> Kolliker, 1853			+	Nagale et al., 2012
Suborder Cystonectae					
Family PHYSALIIDAE Brandt, 1835					
141	<i>Physalia physalis</i> Linnaeus, 1758			+	Pandya et al., 2013
Suborder Physonectae					

Family AGALMATIDAE Brandt, 1835			
142	<i>Agalma elegans</i> Sars, 1846	+	Srichandan <i>et al.</i> , 2015
143	<i>Agalma okenii</i> Eschscholtz, 1825	+	Nagale <i>et al.</i> , 2012
Subclass Trachylina			
Order Actinulida			
Family HALAMMOHYDRIDAE Remane, 1927			
144	<i>Halammohydra andamanensis</i> ChandrasekharaRao, 1978	+	Rao, 1978
145	<i>Halammohydra chauhani</i> ChandrasekharaRao, 1975	+	Rao, 1975
Order Limnomedusae			
Family OLINDIIDAE Haeckel, 1879			
146	<i>Aglauropsis vannuccii</i> Thomas and Chhapgar, 1975	+	Nagale <i>et al.</i> , 2012
Order Narcomedusae			
Family CUNINIDAE Bigelow, 1913			
147	<i>Cunina duplicate</i> Maas, 1893	+	Vannucci and Santhakumari, 1971
Family SOLMUNDAEGINIDAE			
148	<i>Solmundella bitentaculata</i> Quoy and Gaimard, 1833	+	Nagale <i>et al.</i> , 2012
Order Trachymedusae			
Family GERYONIIDAE Péron and Lesueur, 1810			
149	<i>Geryonia proboscidalis</i> Forsskål, 1775	+	Nagale <i>et al.</i> 2012
150	<i>Liriope tetraphylla</i> Chamisso and Eysenhardt, 1821	+	Nagale <i>et al.</i> , 2012
Family RHOPALONEMATIDAE Russell, 1953			
151	<i>Aglantha elata</i> Haeckel, 1879	+	Nagale <i>et al.</i> , 2012
152	<i>Aglaura hemistoma</i> Peron and Lesueur, 1810	+	Srichandan <i>et al.</i> , 2015
153	<i>Amphogona apicata</i> Kramp, 1957	+	Nagale <i>et al.</i> , 2012
154	<i>Amphogona apsteini</i> (Vanhöffen, 1902)	+	Nagale <i>et al.</i> , 2012
155	<i>Rhopalonema velatum</i> Gegenbaur, 1857	+	Nagale <i>et al.</i> , 2012
Total no. of species		20	1 27 125 3 19

+ - species recorded in the concern coasts of India, Taxonomically uncleared/incomplete (#)

TABLE 2: GENUS LEVEL DISTRIBUTION RECORDS OF HYDROZOA IN INDIA COASTICH WERE NOT INCLUDED IN TABLE 1

Sl. No.	Species Name	Andaman and Nicobar Islands	Lakshadweep	East Coast	West Coast	Gulf Of Kachchh	Gulf Of Mannar	References
Kingdom Animalia								
Phylum Cnidaria								
Class Hydrozoa								
Subclass HYDROIDOLINA								
Order Anthoathecata								
Family CLADONEMATIDAE Gegenbaur, 1856								
1	<i>Cladonema</i> sp. Dujardin, 1843			+				Srichandan <i>et al.</i> , 2015
Family CORYNIDAE Johnston, 1836								
2	<i>Sarsia</i> sp. Lesson, 1843			+				Srichandan <i>et al.</i> , 2015
Family HYDRACTINIIDAE Agassiz, 1862								
3	<i>Podocoryna</i> sp M. Sars, 1846			+				Srichandan <i>et al.</i> , 2015
Order Leptothecata								
Family LOVENELLIDAE Russell, 1953								
4	<i>Eucheilota</i> sp McCrady, 1859				+			Nagale <i>et al.</i> , 2012
Order Siphonophorae								
Family ABYLIDAE Agassiz, 1862								
5	<i>Abylopsis</i> sp. Chun, 1888			+				Srichandan <i>et al.</i> , 2015
Family DIPHYIDAE Quoy and Gaimard, 1827								
6	<i>Diphyes</i> sp. Cookson 1965			+				Srichandan <i>et al.</i> , 2015
7	<i>Lensia</i> sp. Totton 1932			+				Srichandan <i>et al.</i> , 2015
8	<i>Muggiaea</i> sp. Busch, 1851			+				Srichandan <i>et al.</i> , 2015
9	<i>Sulculeolaria</i> sp. Blainville 1830			+				Srichandan <i>et al.</i> , 2015

The checklist with accepted taxonomic name from the earlier positions viz., *Lobocoryne travancorensis*, *Cladocorynopsis littoralis*²⁴ and *Hebella thankasseriensis*²⁵ Mammen, 1963, accepted as *Cladocoryne travancorensis*, *Cladocoryne littoralis*²⁴ Mammen 1963 and *Hebella dispolians*²⁵ Warren, 1909. *Sertularella parvula* Mammen, 1965, accepted as *Sertularia tongensis*²⁶ Stechow, 1919, *Plumularia indica* Mammen, 1965 accepted as *Plumularia floridana*²⁵ Nutting, 1900, *Gymnangium eximium* Allman, 1874, accepted as *Taxella eximia*²⁷ Aallman, 1874, *Halicornaria balei* Marktanner-Turneretscher, 1890 accepted as *Gymnangium baleli*²⁵ Hincks 1874, *Halicornaria gracilicauli*, Jaderholm, 1903, accepted as *Taxella gracilicaulis*²⁷ Jaderholm, 1903, *Halicornaria hians* Busk, 1852, accepted as *Gymnangium hians*²⁴ Busk, 1852. *Stegopoma fastigiata*, Alder, 1860, accepted as *Modeeria rotunda*²⁹ Quoy&Gaimard, 1827, *Sertularella minuscula* Billard, 1925, accepted as *Sertularia tongensis*²⁶ Stechow, 1919. *Anthohydra psammobionta*, Plawen &

ChandrasekharaRao,1973, accepted as *Eugymnanthea psammobionta*²⁴ Salvini - Plawen & Chandrasekhara Rao, 1973. *Obelia bicuspidata* Clarke, 1875 accepted as *Obelia bidentata*²⁵ Clarke, 1875. The Taxonomically uncleared/incomplely defines species in this list are indicated with the symbol (#) in suffix of the species name. The incorrect formation species *Dynamena thankasseriensis* Mammen, 1965 was mentioned with the corrected form *Dynamena quadridentata*³⁰ Ellis and Solander, 1786 also the old form of Family Olindiasidae Haeckel, 1879 was mentioned as a corrected form of Family Olindiidae³¹ Haeckel, 1879. The eight genus level indications are not verified with their all species of their concern genera, hence not treated as species and listed separate Table 2.

CONCLUSION

The comprehensive accounts on India water distribution was not well documented. Few existint data on their diversity were concentrated many decads back and resent data are regional specific. Also there is a lack of updated and accepted nomenclature of the groups. In this study concern to resolve this existing hampers in field of hydrozoan.

ACKNOWLEDGEMENT

The authors acknowledge for the providing facilities to conduct this research.

REFERENCE:

1. Bouillon J, Gravili C, Gili JM, Boero F. An introduction to Hydrozoa. Memoires du Museum national d'Histoire naturelle. 2006; 194:1–591.
2. Cartwright P, Nawrocki AM. Character Evolution in Hydrozoa (phylum Cnidaria). Integrative and comparative biology. 2010; 50: 456-472.
3. Owen R. Lectures on the Comparative Anatomy and Physiology of the Vertebrate Animals: Delivered at the Royal College of Surgeons of England, in 1844 and 1846;(2)
4. Daly M, Brugler M.R, Cartwright P, Collins AG, Dawson MN, Fautin DG, France, SC, McFadden CS, Opresko DM, Rodriguez E, Romano SL. The phylum Cnidaria: A review of phylogenetic patterns and diversity 300 years after Linnaeus. Zootaxa. 2007;1668: 127-182.
5. Annandale N. The Fauna of brackish ponds at Port Canning, lower Bengal. Part IV. Hydrozoa. Records of Indian Museum. 1907;1:139 -144.
6. Ritchie J. The hydroids of the Indian museum. Records of Indian museum (Calcutta). 1910; 5: 1–30.

7. Thornely LR. Report on the hydroids collected by Mr. James Hornell at OkhamandalinKattiawar in 1905–6. Report to the Government of Baroda on the marine zoology of Okhamandal in Kattiawar,(1016) Part II. Williams and Northgate, London. 1916;147–150.
8. Gravely FH. The littoral fauna of Krusadai island in the Gulf of Manaar. Hydrozoa. Bulletin of Madras Government, Museum of Natural History Society. 1927; 1: 7–20.
9. Leloup E. Une Collection D'HydropolypesAppartenantL'Indian Museum De Calcutta. Records of Indian museum (Calcutta). 1932; 34: 131–170.
10. Mammen TA. On a collection of hydroids from South India. I. Suborder Athecata. Journal of the Marine Biological Association of India. 1963; 5: 27–61.
11. Mammen Tan, On a collection of hydroids from South India. II. Suborder Thecata (excluding family Plumulariidae). Journal of the Marine Biological Association of India. 1963; 7: 1–57.
12. Mammen TA. On a collection of hydroids from South India. III. Suborder Thecata (family Plumulariidae). Journal of the Marine Biological Association of India. 1965; 7: 291–324.
13. Chhapgar BF, Kevalramani. Maharashtra State Gazetteers. General series: Fauna. The Director, Government Printing, Stationary, Maharashtra State,Bombay. 1974; 707: 175–176.
14. Rengarajan K. Distribution of siphonophores along the west coast of India and the Laccadive Sea. Journal of the Marine Biological Association of India. 1975; 17: 56-72.
15. Rao GC. Littoralmeiofauna of Little Andaman.Records of Zoological survey of India, Occasional paper. 1993; 155:120.
16. CMFRI. Unusual occurrence of Porpita porpitain Aadri beach,Gujrat.CMFRI Neswletter126 (July–September). 2010; 1–23.
17. Nagale P, Bhavne D, Apte DA. Review of Hydrozoa from Maharashtra. Patrons. 2012; 84.
18. Nagale P, Apte D. Some hydroids (Cnidaria: Hydrozoa: Hydroidolina) from the Konkan coast, Maharashtra, India. Journal of Threatened Taxa. 2013;5:4814 – 4818.
19. Pandya KM, Parikh KV, Dave CS, Mankodi PC. Occurrence of Hydrozoans from the Saurashtra Coast of Gujarat, India. Research Journal of Marine Sciences. 2013; 1: 1-3.
20. Nagale P, Apte D. Intertidal hydroids (Cnidaria: Hydrozoa: Hydroidolina) from the Gulf of Kutch, Gujarat, India. Marine Biodiversity Records. 2014; 7: 116.
21. Venkataraman K, Wafar MV. Coastal and marine biodiversity of India. Indian Journal of Marine Sciences. 2005; 34: 57-75.
22. Margulis L, Schwartz KV, Five Kingdoms: an illustrated guide to the Phyla of life on earth 1998. 3rd edition. Freeman: New York, NY (USA). ISBN 0-7167-3027-8. xx, 520 pp.

23. Owen R. Lectures on the comparative anatomy and physiology of the invertebrate animals. [Online] 1843. [cited 2018 sept 09] Available from URL: <http://www.marinespecies.org/aphia.php?p=taxdetails&id=1337>
 24. Schuchert P. World Hydrozoa Database. *Lobocoryne* Mammen, (1963) 2018. Available from URL: <http://www.marinespecies.org/aphia.php?p=taxdetails&id=135334>.
 25. Land J. van der. UNESCO-IOC Register of Marine Organisms (URMO) 2008. Available from URL: <http://www.marinespecies.org/urmo/>
 26. Galea HR. Additional shallow-water thecate hydroids (Cnidaria: Hydrozoa) from Guadeloupe and Les Saintes, French Lesser Antilles. *Zootaxa*. 2010; 2570: 1–40.
 27. Ronowicz M, Boissin E, Postaire B, Bourmaud CAF, Gravier-Bonnet N, Schuchert P. Modern alongside traditional taxonomy—Integrative systematics of the genera *Gymnangium* Hincks, 1874 and *Taxella* Allman, 1874 (Hydrozoa, Aglaopheniidae). *PLOS ONE*. 2017; 12: 1-43.
 28. Billard A. Note sur le *Sertularella tricincta* n. sp. Bulletin de la Société Zoologique de France. 1939; 64: 248-250.
 29. Edwards C. The medusa *Modeeria rotunda* and its hydroid *Stegopoma fastigiatum*, with a review of *Stegopoma* and *Stegolaria*. Journal of the Marine Biological Association of the United Kingdom. 1973; 53: 573-600.
 30. Watson JE. Hydroids (Cnidaria: Hydrozoa) from southern Queensland. Memoirs of the Museum of Victoria. 2002; 59: 337-354.
 31. Jankowski T. The freshwater medusae of the world - a taxonomic and systematic literature study with some remarks on other inland water jellyfish. *Hydrobiologia*. 2001; 462: 91-113.
-