

List of Japanese and North West Pacific octocoral collection in Uppsala University, Sweden (surveyed in 2012) and University of Copenhagen, Denmark (surveyed in 2012–2015).

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【要旨】

日本・デンマーク間の公式な関係は、1867年の修好通商航海条約、そして1870年の海底情報電信ケーブルの敷設について海底電信ケーブル会社のグレート・ノルディック（大北電信会社）と明治政府との間の約定が締結されたことに始まる。情報霸権の一環であった海底電信ケーブル敷設に伴うグレート・ノルディック及びその後の研究者によって日本から採集された海産生物標本は、主としてデンマークのコペンハーゲン大学 (NHMD, ZMUC)、そしてスウェーデンのウプサラ大学 (ME (UPSZTY, UPSZMC, UUZM)) に所蔵されたことが分かっていたが、その全体像は不明であった。2012年に最初の調査が行われた (松本2014)。本稿は2015年に新たに発見された標本及び、新種記載された *Melithaea sagamiensis* Matsumoto & Ofwegen, と *Melithaea suensonii* Matsumoto & Ofwegen, 2015の2種のタイプ標本を加えたリストである。

【キーワード】

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【Abstract】

The relation between Japan and Denmark officially started with the conclusion of the Treaty of Amity and Commerce in 1867, and contraction between the Japanese government and the Danish Telegraph Company in 1870, Biological materials from Det Store Nordiske were deposited in the University of Copenhagen, Denmark and Uppsala University, Sweden, but the details of Japanese and North-West Pacific cold-water coral collection were not clear until 2012 survey (Matsumoto, 2014). This manuscript shows the updated list of 2014 with newly found materials in 2015 and two new Type materials of

Melithaea sagamiensis Matsumoto & Ofwegen 2015 and *Melithaea suensonii* Matsumoto & Ofwegen, 2015 (Table 1).

【Keywords】

Cold water coral Deep-sea coral new species Store Nordiske
Submarine telegraph Cable

The relation between Japan and Denmark officially started with the conclusion of the Treaty of Amity and Commerce in 1867, and contraction between the Japanese government and the Danish Telegraph Company, "Det Store Nordiske" to manufacture and lay the submarine information telegraph cables in Japanese waters in 1870.

Det Store Nordiske Telegraf-Selskab A/S (Great Nordic Ltd. A/S or The Great Northern Telegraph Company in English:) is the telegraph company that was established in 1869 in Copenhagen, Denmark. Det Store Nordiske had a telegraph station at Belle Vue Hotel Oura, Nagasaki, Japan since 1871 (Petersen, 1919, Nagashima, 2013). On 12th Augsut, 1871, Nagasaki (Japan) - Shanghai (China) submarine-telegraph started, and Nagasaki-Vladivostok (Russia) submarine-tepegraph started on 1st January, 1872. During the telegraph cable layer construction or, facilitation, submarine cable laying vessel has by-caught several marine organisms including corals attached or tangled to cables. These biological materials were officially sent by Det Store Nordiske and deposited to Universities for scientific purpose.

The octocoral specimens collected from Japan and the North West Pacific (NWP) in 19-20 centuries in Museum of Evolution, Uppsala University, Sweden (ME (UPSZTY, UPSZMC), previously UUZM) and Zoological Museum, University of Copenhagen, Denmark (NHMD, previously ZMUC) were surveyed in 2012 (Matsumoto, 2014). In 2015, an additional specimen survey has been conducted at Univerisity of Copenhagen. In this manuscript, I am going to update the Japanese octocoral collection list including newly found materials (Table 1).

Based on the 2012 survey, two new species of Japanese octocoral *Melithaea sagamiensis*, Matsumoto & Ofwegen, 2015 and *Melithaea suensonii*, Matsumoto & Ofwegen, 2015 (family Melithaeidae) are described in Matsumoto & Ofwegen, 2015. Paratypes of *M. sagamiensis* are ZMUC ANT-000657, ZMUC ANT-000660 collected by Mortensen in 1914, Holotype of *M. suensonii* is ZMUC ANT-000565 collected by Suenson at off Nagasaki, the

East China Sea in 1900. The new species *M.suensoni* was named after the collector. One syntype material of *Melithaea frondosa* (Brundin, 1896) (family Melithaeidae) deposited in Uppsala (EM, UUZM) were re-described (UPSZTY 2164 (old number UUZM 67)). The material was also collected by Kapt. Suenson at Hirado Strait, Nagasaki, Japan (year unknown). As an erratum: ZMUC ANT-000651 is in "material examined" of *Melithaea tenuis* but also in "variation" of *M. sagamiensis* in Matsumoto & Ofwegen, 2015, The correkt species of ZMUC ANT-00651 is *Melithaea tenuis*.

E. Suenson or Kapt. Suenson is known to belong to Det Store Nordiske, Denmark. Suenson collected at least 76 specimen of octocorals (35 gorgonians (checked), 15 alcyonarians (checked), 7 pennatulaceans (checked) + 2 gorgonians (only in database) octocorals and 17 alcyonarians (database)) in NHMD (ZMUC) and 13 octocorals in Uppsala from North West Pacific.

In the database of GBIF-Sweden: Zoology (Museum of Evolution- Uppsala), his name is recorded as E.Svenson. There are only two octocoral collected by Suenson in GBIF data, however, there are additional 100 biological specimens with his name were recorded in GBIF data. (Matsumoto, 2014). The locality are, Formosa Strait (= Taiwan Strait, the East China Sea), Off Nagasaki (Japan, the East China Sea), Korea Strait, Vietnam (the South China Sea), Yangtze (China), Hong Kong (China) etc. In Japan,

There were two E. Suenson in Det Store Nordiske. The first famous E. Suenson in Japan is the director of Det Store Nordiskedouard Suenson (1842-1921). He visited Japan 1866-1867 (Suenson, 1869-70). When Japan and Denmark had agreement for the laying of submarine telegraph cable in 1870, Edouald Suenson joined at the meeting as a representative of Det Store Nordiske. He became the director of Det Store Nordiske from 1877 to 1908 (Ohno, 2012; Nagashima, 1989).

The second E. Suenson is Ejnar Suenson (1850-1923). He seemed to staye in Shaghai, China from about 1899 to 1912, He was a captain of submarine cable laying vessel of Det Store Nordiske. He collected specimens from Japan to Korea, China and Philippines. Suenson sent all kinds of animals found on the submarine cables. An ophiuroid *Astroclon suensoni* Mortensen, 1911 was named after him.

E. Suenson was initiated scientific practice by Japetus Steenstrup, a professor in Zoology, the University of Copenhagen from 1845 to 1885. According to the practice, he collected materials from the cable laying vessel. The conditions of his collection in NHMD

(ZMUC) is still good for a scientific purpose after 100 years.

Japetus Steenstrup was known to persuade Danish ship's captains and Danish officials in different countries to send specimens for the NHMD (ZMUC) collections. The connection to 'Det Store Nordiske' continued at least until 1911. An exclusive privilege of telegraph by Det Store Nordiske in Japan finished in 1913.

Before Suenson an engineer, Schonau, sent specimens.(pers. Comm. Prof. Dr. Ole Tendal, University of Copenhagen, 2012). Schonau collected 20 octocoral specimens in NHMD (ZMUC).

Hans Christiansen collected 11 (checked) and 2 (ZMUC database) octocorals from Japan and North West Pacific. He was a Suenson's successor as captain of the cable laying ship. (pers. Comm. Prof. Dr. Ole Tendal, University of Copenhagen, 2012).

The name of the Danish consul in Singapore, Svend Gad (pers. Comm. Prof. Dr. Ole Tendal, University of Copenhagen, 2012) also found on some specimen labels but he did not collect octocorals.

J. Petersen, or Kaptain Petersen collected 6 specimens from NWP of Uppsala (ME). His material also catalogued in 1892 in Natural History Museum, Wien, Austria (Matsumoto, 2015). Julius V. Petersen (1852-1928) was telegraph operator of Store Nordiske Office, Nagasaki, Japan in 1871. He mentioned that there were 7 Danish telegraph operators stayed in Bell vue Hotel, Nagasaki (Petersen, 1919). Frederik Kolvig (1848-1929) also mentioned J. Petersen, who was agent of .in 1874 (Nagashima 2013). It is not clear J. Petersen in the collection and Julius V. Petersen were same person.

Eighteen (checked) and 1 (database) octocorals donated by Store Nordiske are counted in ZMUC collection including E.Pagh's 2 material. The collector is sometimes mentioned as "cable damper", or "telegraph cable", Store Nordiske".

Mortensen who collected paratype of *M. sagamiensis* is Dr. Phil Th. Mortensen. Total 128 octocorals and one black coral from Japanese water were recognized in ZMUC. 2 other octocorals are listed in ZMUC database. Dr. Phil. Th. Mortensen was a biologist who worked on ophiuroids (Brittle stars), had Pacific Expedition was conducted between 1913 and 1916 (Mortensen, 1933). He visited Japan from April to July in 1914. See Table 2 of Matsumoto 2014 for the details of station during Expedition in Japan.

Total 31 specimens of octocorals and 2 specimens of black corals from Japanese waters collected by Dr. Sixten-Bock's 1913-1914 expedition were recognized in Uppsala University.

Throughout the survey in 2012 and 2015, it is obviously that the donation by Det Store Nordiske are quite large volume of the Japanese octocoral collection. Additional re-descriptions of these materials are undergoing and it suggests that there exist additional new species in the collection. Apparently, unsorted, unidentified materials in Copenhagen (ZMUC) are also valuable for scientific study. Uppsala (ME) collection has other highly important role because they include several Japanese type materials (Aurivillius, 1931; Brundin, 1896; Hedlund, 1890). All these materials need to be re-examined and re-described with current imaging analysis for future study on cold water coral fauna in Japan.

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List of Japanese and North West Pacific (NWP) octocoral specimen in UUZM, Uppsala University, Sweden and ZMUC, University of Denmark (updated from Matsumoto 2014; Table 1)

* Data are referred from specimen label, excluding “U” (Old number “UUZM” and “(Riksmuseum)” which are only referred from literature and could not be recognized by author in this study.
 **UPS27 or *UPS27MC are confirmed in database in GBIF (Global Biodiversity Information Facility)—Sweden, but were not checked by author in present study.
 Abbreviation: Uppsala Univ. Zool. Mus. (UUZM) = Museum of Evolution, Uppsala University (UPS27, UPS27MC); Zoological Museum, Natural History Museum of Denmark (NHMD, ZMUC); Naturhistoriska riksmuseet, Swedish Museum of Natural History, Stockholm, Sweden (Riksmuseum); Zoologische Staatssammlung München (ZSM).

New number	Old number	Status	Species	Locality (En)	Depth	y/m/d	Collector	Remark
From Kapitan Suenson:								
1 UPS27Y2127	UUZM30	Type	<i>Solenocaulon mollis</i> Brundin, 1896	Korea Strait (Between Tsushima and Korea)	115m		Kapten Suenson	
2 UPS27Y2174	UUZM77b	Type	<i>Solenocaulon simplicex</i> Brundin, 1896	China-sea 30°44' N., 123°35' E.	(30fms)		Kapt. Suenson	
3 UPS27Y2163	UUZM66a	Type	<i>Dendronephthya suensonii</i> Holm, 1895	Japan, Hirado Strait				
4 UPS27Y154030	UUZM72B	LECTOT YPE	<i>Eietherobia rubra</i> (Brundin, 1896)	Japan, Tsugaru Strait				
5 UPS27Y2169	UUZM72A	LECTOT YPE	<i>Eietherobia rubra</i> (Brundin, 1896)	Japan, Hirado Strait, 33°5' N., 128°16' E.			Kapt. Suenson	
6 UPS27Y154031	UUZM72C	LECTOT YPE	<i>Eietherobia rubra</i> (Brundin, 1896)	Japan, Hirado Strait, 33°5' N., 128°16' E.			Kapt. Suenson	
7 UPS27Y2160	UUZM63		<i>Eietherobia rubra</i> (Brundin, 1896)	Japan, Hirado Strait (33°10' N., 129°16' E.)			Kapt. Suenson	
8 UPS27Y2164	UUZM67	Type	<i>Meithaea frondosa</i> (Brundin, 1896)	Japan, Hirado Strait, 33°10' N., 129°18' E.			Kapt. Suenson	
9 UPS27Y2182	UUZM85	Type	<i>Echinogorgia japonica</i> Aurivillius 1931	Japan, Hirado Strait, 33°5' N., 129°15' E.			Kapt. Suenson (Store Noriske)	
10 UPS27Y2178	UUZM81A	Type	<i>Plexauroides vernicosa</i> Brundin, 1896	Japan, Hirado Strait, 33°5' N., 129°15' E.			Kapt. Suenson	
11 UPS27Y2178	UUZM81B	Type	<i>Plexauroides vernicosa</i> Brundin, 1896	Japan, Hirado Strait, 33°5' N., 129°15' E.			Kapt. Suenson	
1 *UPS27MC82386	*UUZM84	—	<i>Echinomuricea peterseni</i> Hedlund, 1890	Japan, Hirado Strait, 33°5' N., 129°15' E.			Kapitan Suenson	
2 *UPS27MC82380	*UUZM78	—	<i>Muricella umbonata</i> Studer, 1878	Formosa Strait, 26°30' N., 121°30' E	36fms		Kapitan Suenson	
1 ZMUC ANT-000695	ZMUC150723-80		<i>Dendronephthya</i> sp.	100 miles W of Nagasaki, Japan, 32°-12'N., 128°-10'E	100 fms	1897/10/20	Suenson	
2 ZMUC ANT-000698	ZMUC150723-83		<i>Dendronephthya</i> sp.	Korea, 33°-41'N., 129°-25'E	50 fms	1898/1/12	Suenson	
3 ZMUC ANT-000699	ZMUC150723-84		<i>Dendronephthya</i> sp.	30 miles N of Nagasaki, Japan, 33°N., 129°-25'E.	30 fms	1898/5/13	Suenson	
4 ZMUC ANT-000700	ZMUC150723-85		<i>Dendronephthya</i> sp.	Hirado Strait, Japan, 33°-10'N., 129°-18'E	40 fms	1897/9/17	Suenson	
5 ZMUC ANT-000688	ZMUC150723-73		<i>Eietherobia rubra</i> (Brundin, 1896)	Japan	40 fms	1900/9/17	Suenson	
6 ZMUC ANT-000764	ZMUC120604-24		<i>Telosia</i> sp.	Nagasaki			Suenson	
7 ZMUC ANT-000565	ZMUC120430-12	Holotype	<i>Meithaea suensonii</i> Matsumoto & Ouwagen, 2015	Off Nagasaki, 32°22'N., 128°42'E.	170 fms	1900/12/25	Suenson	

New number	Old number	Status	Species	Locality (E/N)	Depth	y/m/d	Collector	Remark	
8	ZMUC ANT-0006571	ZMUC120430-05	<i>Melithaea japonica</i>	Vladivostok-Nagasaki, 33°38'N, 129°20'E.	36 fms	1890/5/14	Suenson?	Vladivostok : 1895/11/15	
9	ZMUC ANT-0005573	ZMUC120430-02	<i>Melithaea modesta</i>	80 miles off Nagasaki	150fms	1904/4/15	Suenson	previously identified as <i>Subergorgia</i>	
10	ZMUC ANT-000582	ZMUC120430-23	<i>Acanthogorgia</i> sp.	32°15'N, 128°20'E. ca. 100 miles off Nagasaki,	100 fms	1897/10/20	Suenson	Journal: 1900/7/29	
11	ZMUC ANT-000749	ZMUC150723-04	<i>Acanthogorgia multispinosa</i> Kük & Gorz.	32°12'N, 128°10'E.	320 m	1900/12/25	Suenson	det. Jürgensen, Journal: 23/11/1901, 2 colonies	
12	ZMUC ANT-000572	ZMUC120430-01	<i>Acanthogorgia</i> sp.	32°15'N, 128°20'E. 80 miles off Nagasaki	150fms	1904/4/14	Suenson	(Journal?) Th. Authon, 1911/4/19, ?V.F.???. Bottom temp. 35	
13	ZMUC ANT-000577	ZMUC120430-20	<i>Acanthogorgia</i> sp.	34°31'N, 129°38'E.	55 fms	1911/4/19	Suenson	Th. Authon	
14	ZMUC ANT-000578	ZMUC120430-14	<i>Acanthogorgia</i> sp.	32°12'N, 128°10'E.	100 fms	1897/10/20	Suenson	Bottom Temp. 61°F. 1911/10/1 1901/11/23	
15	ZMUC ANT-000583	ZMUC120430-18	<i>Acanthogorgia</i> sp.	Japan Tsugaru Strait	1880		Suenson		
16	#	ZMUC120604-08	? <i>Echinanomuricea</i> sp.	Korea Kyes, 37°N, 129°E.	45 fms	1882	Suenson		
17	ZMUC ANT-000673	ZMUC120430-19	? <i>Echinanomuricea</i>	Japan Tsugaru Strait	55 fms	1911/6/8	Suenson		
18	ZMUC ANT-000586	ZMUC120430-13	? <i>Euplexaura</i> sp.	34°31'N, 129°38'E.	55 fms	1911/6/8	Suenson	Bottom Temp. 61°F. 1911/10/1	
19	ZMUC ANT-000576	ZMUC120430-17	<i>Euplexaura</i> sp.	34°31'N, 129°38'E.	55 fms	1911/6/8	Suenson	Bottom Temp. 61°F. 1911/10/1	
20	ZMUC ANT-000575	ZMUC120430-16	? <i>Euplexaura</i> sp.	ca. 100 miles off Nagasaki	100 fms	1897/10/20	Suenson	Th. Authon	
21	ZMUC ANT-000584	ZMUC120430-26	? <i>Villogorgia</i> sp.	32°12'N, 128°40'E.	40 fms	1897/9/17	Suenson	Journal: 1900/7/29	
22	ZMUC ANT-000568	ZMUC120430-11	Plexauridae	33°10'N, 128°18'E.	60 fms	1882	Suenson		
23	ZMUC ANT-000569	ZMUC120430-03	Plexauridae	Kino-Son, 32°N, 126°50'E	36 fms	1890/5/14	Suenson	1885/11/15	
24	ZMUC ANT-000596	ZMUC120430-39	Plexauridae	Nagasaki	100 miles off Nagasaki	100 fms	1897/10/20	Suenson	
25	ZMUC ANT-000563	ZMUC120430-10	Plexauridae	33°8'N, 129°20'E.	100 fms	1897/10/20	Suenson		
26	ZMUC ANT-000581	ZMUC120430-24	Plexauridae	ca. 100 miles off Nagasaki, 32°12'N, 128°10'E.	100 fms	1897/10/20	Suenson	Journal: 1900/7/29	
27	ZMUC ANT-000570	ZMUC120430-04	<i>geronia</i>	Japan, Tsugaru Strait	1882		Suenson	Plexauridae	
28	ZMUC ANT-000579	ZMUC120430-25	<i>Plumarella</i> sp.	E. of Aseiu	1900/7/29		Suenson		
29	ZMUC ANT-000580	ZMUC120430-15	<i>Plumarella</i> sp.	32°12'N, 128°40'E.	100 fms	1897/10/20	Suenson		
30	ZMUC ANT-000769	ZMUC150723-43	<i>Callogorgia fibellum</i> (Ehrenberg, 1834)	East Asia, North West Pacific	1911/4/19		Suenson		
31	ZMUC ANT-000770	ZMUC150723-44	<i>Callogorgia fibellum</i> (Ehrenberg, 1834)	East Asia, North West Pacific	1900/7/29		Suenson		
32	ZMUC ANT-000748	ZMUC150723-03	<i>Plumarella longispina</i> Kinoshita, 1908	Nanso (Spratly Islands), the South China Sea	1901/11/15		Suenson		
33	ZMUC ANT-000564	ZMUC120430-08	<i>Chrysogorgia</i> sp.	32°22'N, 125°E	1900/7/2		Suenson		
34	ZMUC ANT-000574	ZMUC120430-21	<i>Chrysogorgia</i> sp.	32°22'N, 128°42'E.	170 fms	1900/12/25	Suenson		
35	ZMUC ANT-000585	ZMUC120430-22	<i>Chrysogorgia</i> sp.	ca. 100 miles off Nagasaki, 32°12'N, 128°10'E.	100 fms	1897/10/20	Suenson	Det en ikke absolute sikret at ?Kettem! Dry. Et summerhind 1901/11/23	
36	ZMUC ANT-000566	ZMUC120430-07	<i>Chrysogorgia</i> sp.	100 miles off Nagasaki, 32°12'N, 128°10'E.	100 fms	1897/10/20	Suenson	Journal: 1900/7/29?	
37	ZMUC ANT-000567	ZMUC120430-06	<i>Chrysogorgia</i> sp.	100 miles off Nagasaki, 32°12'N, 128°10'E.	105 fms	1897/10/26	Suenson?	? V.F. ?? "Store Nordiske"	
38	ZMUC ANT-000562	ZMUC120430-09	<i>Chrysogorgia</i> sp.	32°22'N, 128°45'0"E.	105 fms	1898/5/12	Suenson	1901/11/23	
39	ZMUC ANT-000737	ZMUC150723-88	Isididae	15 miles W of Nagasaki, Japan	1898/5/12		Suenson		
40	ZMUC ANT-000795	ZMUC150723-89	<i>Liparitidae</i> sp.	Tsugaru strait, Japan			Suenson		
41	ZMUC ANT-000799	ZMUC150723-10	<i>Pavonaria</i> sp.	Korea			Suenson		
42	ZMUC ANT-000754	ZMUC150723-11	<i>Pennatula murrayi</i> Kölliker, 1880	100 miles W of Nagasaki, Japan, 32°-12'N, 128°-10'E	105-128 fms	1897/10/28	Suenson		

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Sweden (surveyed in 2012) and University of Copenhagen, Denmark (surveyed in 2012–2015).

New number	Old number	Status	Species	Locality (En)	Depth	y/m/d	Collector	Remark
43	ZMUC ANT-000768	ZMUC150723-42	<i>Pennatula phosphorea</i> var <i>longisinuosa</i> (<i>Virgularia juncea</i> (Pallas, 1766))	North West Pacific			Suenson	Kongl. Museum, dry
44	ZMUC ANT-000755	ZMUC150723-70	<i>Virgularia guttata</i> (Herklots, 1863)	Korea	31N, 124E	21 fms	Suenson	Journal: 1882, same bottle with ZMUC-ANT-000576-583
45	ZMUC ANT-000779	ZMUC	Undet. Alcyonacea	East Asia, North West Pacific	1897/10/20		Suenson	Journal: 1901/11/23
46	ZMUC ANT-000689	ZMUC150723-74	Undet. Alcyonacea	East Asia, North West Pacific	1897/10/20		Suenson	Journal: 1901/11/23
47	ZMUC ANT-000690	ZMUC150723-75	Undet. Alcyonacea	East Asia, 12N, 128°-10°E	1897/10/20		Suenson	Journal: 1901/11/23
48	ZMUC ANT-000691	ZMUC150723-76	Undet. Alcyonacea	42°-3°N, 120°-30°E	400 fms	1900/1/1	Suenson	Journal: 1901/11/23
49	ZMUC ANT-000694	ZMUC150723-79	Undet. Alcyonacea	41°-58°N, 130°-30°E	620 fms	1900/1/2	Suenson	Journal: 1900/10/15
50	ZMUC ANT-000693	ZMUC150723-78	Undet. Alcyonacea	15 miles W of Nagasaki, Japan,	60 fms	1903/12	Suenson	Journal: 1911/4/19
51	ZMUC ANT-000687	ZMUC150723-72	Undet. Alcyonacea	32°-40°N, 129°-34°E	60 fms	1903/12	Suenson	Journal: 1911/4/19
52	ZMUC ANT-000692	ZMUC150723-77	Undet. Alcyonacea	80 miles W of Nagasaki, Japan,	100 fms	1904/5/15	Suenson	Bottom Temp: 55°F; Journal: 1911/04/19
53	ZMUC ANT-000696	ZMUC150723-81	Undet. Alcyonacea	32°-15°N, 128°-20°E				2 species; Journal: 1900/01/29?
54	ZMUC ANT-000697	ZMUC150723-82	Undet. Alcyonacea	W of Nagasaki, Japan,				Almost impossible to read the label: faded
55	ZMUC ANT-000701	ZMUC150723-86	Undet. Alcyonacea	33°-13°N, 129°-28°E	90 fms	1898/5/13	Suenson	Large Bottle, wet
56	ZMUC ANT-000754	ZMUC150723-71	Undet. Gorgonacea	Tsugaru strait, Japan				
57	ZMUC ANT-000794	ZMUC150723-87	Undet. Pennatulacea	North West Pacific	55 fms		Suenson	
1			<i>Chrononepthe intermedia</i> (Thomson & Dean, 1931)	Formosa Strait			Suenson	
2	*ZMUC	Dendronephthya aculeata	Kükenthal, 190	North West Pacific			Suenson	<i>Spongodes intermedia</i>
3	*ZMUC	Dendronephthya aculeata	Holm, 1895	North West Pacific			Suenson	<i>Spongodes aculeata</i>
4	*ZMUC	Dendronephthya aculeata	Pütter, 1900	North West Pacific			Suenson	<i>Roxasia armata</i>
5	*ZMUC	Dendronephthya aculeata	Gray, 1862	North West Pacific			Suenson	<i>Roxasia armata</i> , 5 specimen
6	*ZMUC	Dendronephthya aculeata	Utinomi, 198	North West Pacific			Suenson	<i>Roxasia divaricata</i>
7	*ZMUC	Dendronephthya aculeata	Kükenthal, 190	North West Pacific			Suenson	<i>Morcheilana dormidicola</i>
8	*ZMUC	Dendronephthya aculeata	Verrill, 1864	North West Pacific			Suenson	<i>Roxasia armacea</i>
9	*ZMUC	Dendronephthya aculeata	Utinomi, 1982	North West Pacific			Suenson	<i>Spongodes gigantea</i>
10	*ZMUC	Dendronephthya laxa	Wright & Studer, 1889	North West Pacific			Suenson	<i>Morcheilana gloriosa</i>
11	*ZMUC	Dendronephthya mollis	Holm, 1895	North West Pacific			Suenson	<i>Roxasia laxa</i>
12	*ZMUC	Dendronephthya mollis	Pütter Kükenthal, 1905	North West Pacific			Suenson	<i>Roxasia mollis</i> , 2 specimen
13	*ZMUC	Dendronephthya mollis	Kükenthal, 1905	North West Pacific			Suenson	<i>Roxasia pütteri</i>
14	*ZMUC	Dendronephthya mollis	Studer, 1888	North West Pacific			Suenson	<i>Roxasia radiata</i>
15	*ZMUC	Dendronephthya mollis	Holm, 1895	North West Pacific			Suenson	<i>Spongodes semperi</i> , 3 specimen
16	*ZMUC	Dendronephthya mollis	Henderson, 19	North West Pacific			Suenson	<i>Roxasia tenera</i>
17	*ZMUC	Dendronephthya mollis	Versbus, 1907	North West Pacific			Suenson	<i>Morcheilana tripartita</i>
18	*ZMUC	Dendronephthya mollis	Acanthogorgia armata	North West Pacific			Suenson	Could not find material in 2015 survey
19	*ZMUC	Dendronephthya mollis	Narella alimani	North West Pacific			Suenson	Could not find material in 2015 survey
From Schönnau ("Store Nordiske")								
1	ZMUC ANT-000708	ZMUC150723-12	<i>Acanthogorgia</i> sp.	Japan, 33°-9°N, 129°-18°E	40 fms	1898/5/23	Schönnau	same bottle with ZMUC-ANT-000709
2	ZMUC ANT-000709	ZMUC150723-13	Plexauridae	Japan, 33°-9°N, 129°-18°E	40 fms	1898/5/23	Schönnau	same bottle with ZMUC-ANT-000708
3	ZMUC ANT-000710	ZMUC150723-14	<i>Acanthogorgia</i> sp.	Japan, 32°10'N, 128°20'E	100 fms	1898/5/23	Schönnau	same bottle with ZMUC-ANT-000711-712-713
4	ZMUC ANT-000711	ZMUC150723-15	<i>Acanthogorgia</i> sp.	Japan, 32°10'N, 128°20'E	100 fms	1898/5/23	Schönnau	same bottle with ZMUC-ANT-000710-711-713
5	ZMUC ANT-000712	ZMUC150723-16	<i>Acanthogorgia</i> sp	Japan, 32°10'N, 128°20'E	100 fms	1898/5/23	Schönnau	same bottle with ZMUC-ANT-000710-711-713

New number	Old number	Status	Species	Locality (E _N)	Depth	y/m/d	Collector	Remark	
6	ZMUC ANT-000713	ZMUC150723-17	<i>Acanthogorgia</i> sp.	Japan, 32°10'N., 128°20'E	100 fms	1898/5/23	Schönnau	same bottle with ZMUC-ANT-000710-71-712	
7	ZMUC ANT-000715	ZMUC150723-19	<i>Plumarella</i> sp.	Japan, 32°10'N., 128°20'E	100 fms	1898/5/23	Schönnau	2 colonies	
8	ZMUC ANT-000719	ZMUC150723-23	<i>Chrysogorgia</i> sp.	Japan, 32°10'N., 128°20'E	100 fms	1898/5/23	Schönnau		
9	ZMUC ANT-000720	ZMUC150723-24	? <i>Echinogorgia</i> sp.	Japan, 32°10'N., 128°22'E	40 fms	1898/5/23	Schönnau		
10	ZMUC ANT-000721	ZMUC150723-25	gorgonian	Japan, 32°9'N., 129°8'E	100 fms	1897/4/10	Schönnau		
11	ZMUC ANT-000722	ZMUC150723-26	<i>Melithaea corymbosa</i>	36°13'N., 129°10'E	40 fms	1898/5/23	Schönnau	Store Nordiske same bottle with ZMUC-ANT-00015;	
12	ZMUC ANT-000718	ZMUC150723-22	<i>Melithaea corymbosa</i>	33°9'N., 128°18'E	100 fms	1898/5/23	Schönnau	colour: pink	
13	ZMUC ANT-000717	ZMUC150723-21	<i>Melithaea corymbosa</i>	32°10'N., 128°20'E	100 fms	1898/5/23	Schönnau	same bottle with ZMUC-ANT-00016;	
14	ZMUC ANT-000716	ZMUC150723-20	<i>Melithaea tenuis</i>	32°10'N., 128°20'E	100 fms	1898/5/23	Schönnau	colour: orange	
15	ZMUC ANT-000680	ZMUC150723-54	Acyonidae	Nagasaki (or Wladivostok), 41°-50°N., 124°-53°E	1898/5/10	Schönnau	Kgl Vet. & Lbiskt Zool Samling, Journal: 1895/11/14		
16	ZMUC ANT-000681	ZMUC150723-55	Acyonacea	Japan, 32°10'N., 128°20'E	100 fms	1898/5/23	Schönnau	Store Nordiske	
17	ZMUC ANT-000682	ZMUC150723-56	<i>Dendronephthya</i> sp.	Nagasaki (or Wladivostok), 33°-5'N., 128°-22'E	25 fms	1893/7	Schönnau	Temp: 70° F, Journal: 1895/11/14	
18	ZMUC ANT-000683	ZMUC150723-57	<i>Dendronephthya</i> sp.	Nagasaki (or Wladivostok), 33°-5'N., 128°-20'E	25 fms	1893/7	Schönnau	Temp: 70° F	
19	ZMUC ANT-000797	ZMUC150723-91	unidentified Pennatulacea	100 miles. W of Nagasaki, Japan, 32°-12'N., 128°-10'E	105 fms	1897/10/28	Schönnau	Store Nordiske	
20	ZMUC ANT-000785	ZMUC	<i>Virgularia gustaviana</i> (Herklotz, 1863)	China, Jangtskiang	5 fms	1890/4/26	Schönnau	same bottle with ZMUC-ANT-000576-582	
From Kapt. Hans Christiansen (=?Kapt. H. Christiansen, =?Kapt. H. Christiansen, not A.F. Christensen, or T.A. Christensen, or T.A. Christensen) ("Store Nordiske")									
1	ZMUC ANT-000684	ZMUC150723-58	<i>Dendronephthya</i> sp.	Japan, 32°-15'N., 128°-20'E	100 fms	1926/4/17	Kapt. H. Christiansen	Journal: 1926/12/1	
2	ZMUC ANT-000685	ZMUC150723-59	<i>Dendronephthya</i> sp.	Japan, 32°-15'N., 128°-20'E	100 fms	1926/4/17	Kapt. H. Christiansen	Journal: 1926/12/1	
3	ZMUC ANT-000707	ZMUC150723-11	? <i>Echinogorgia</i> sp.	North West Pacific, 32°-15'N., 132°-20'E	100 fms	1926/4/17	Kapt. H. Christiansen	Journal: 1926/12/1	
4	ZMUC ANT-000706	ZMUC150723-10	<i>Paradis</i> sp.	North West Pacific, 32°-15'N., 128°-20'E	100 fms	1926/4/17	Kapt. H. Christiansen	Journal: 1926/12/1	
5	ZMUC ANT-000605	ZMUC120604-63	Plexauridae	Tsushima Strait, 33°-50'N., 129°-25'E.	55 fms	1956/12/12	Kapt. H. Christiansen	18 dC, Stymd. Journal: 1957/5/1	
6	ZMUC ANT-000705	ZMUC150723-09	Ellisellidae	North West Pacific, 32°-15'N., 128°-20'E	100 fms	1926/4/17	Kapt. H. Christiansen	Journal: 1926/12/1	
7	ZMUC ANT-000714	ZMUC150723-18	<i>Plumarella</i> sp.	Japan, 32°-15'N., 128°-20'E	100 fms	1926/4/17	Kapt. H. Christiansen		
9	ZMUC ANT-000753	ZMUC150723-69	<i>Virgularia gustaviana</i> (Herklotz, 1863)	North West Pacific, 32°-28'N., 119°-40° E	1992/10/13	Christiansen	date is too recent		
8	ZMUC ANT-000686	ZMUC150723-60	Undet. Alcyonacea	Japan, 33°-10'N., 129°-18' E	1912/4/23	Kapt. H. Christiansen	Bottom T: 62° F		
9	ZMUC ANT-000674	ZMUC150723-61	Undet. Alcyonacea	Japan, 32°-48'N., 129°-37'E	1956/12/12	Kapt. H. Christiansen	Store Nordisk, wet. "09/04/1913"		
10	ZMUC ANT-000702	ZMUC150723-06	Undet. Gorgonacea	Japan, Tsurushima Strait, 33°-50'N., 129°-25'E	55 fms	1956/12/12	Kapt. H. Christiansen	Temperature: 18° C; journal: 1957/5/1, wet	
1		*ZMUC	<i>Dendronephthya decussatospinosa</i>	North West Pacific			?=ZMUC ANT-000684		
2		*ZMUC	<i>Dendronephthya laxa</i> Wright & Struder, 1889	North West Pacific			?=ZMUC ANT-000685		

List of Japanese and North West Pacific octocoral collection in Uppsala University, Sweden (surveyed in 2012) and University of Copenhagen, Denmark (surveyed in 2012–2015).

New number	Old number ("Store Nordiske")	Status	Species	Locality (En)	Depth	y/m/d	Collector	Remark
From Kapitan J. Petersen ("Store Nordiske")								
1 UPSZY153	UZUNM6	Type	<i>Acanthogorgia inermis</i> (Hedlund, 1890) (Spec.)	40 miles N. of Hongkong	50m		J. Petersen	
2 UPSZY145	UZNM48a	Type	<i>Acanthogorgia hedlundii</i> Auriillus, 1931	Formosa Strait, 50 miles S. of Amoy	35fms		J. Petersen	omsatt 1931
3 UPSZY146	UZNM49	Type	<i>Echinomuricea petersoni</i> Hedlund, 1890	40 miles N. of Hongkong			J. Petersen	
4 UPSZY129	UZNM32	Type	<i>Euplexaura anastomosans</i> Brundin, 1896	Japan			Kapt. J. Petersen	
5 UPSZY149	UZNM52	Type	<i>Euplexaura multiflora</i> Auriillus, 1931	40 miles N. of Hongkong	30fms		J. Petersen	Kjellman
6 UPSZY154	UZNM57	Type	<i>Pliacogorgia foliata</i> (Auriillus, 1931)	50 miles N. of Hongkong	35fms		Kapt. J. Petersen	<i>Pseudodictysea foliata</i> TYPE
From E.Pagh ("Store Nordiske")								
1 ZMUC ANT-000703	ZMUC150723-07	unidentified		32°21'N., 128°41'E	98-110 fms	1928/8/7	E.Pagh	Store Nordiske, Journal: 1957/5/1
2 ZMUC ANT-000704	ZMUC150723-08	<i>Melithaea sagamensis</i>		32°21'N., 128°41'E	98-110 fms	1928/8/7	E.Pagh	Store Nordiske
From "Store Nordiske"								
1 ZMUC ANT-000676	ZMUC150723-63	<i>Dendronephthya</i> spp.		Japan, 32°59'15"N., 129°-23°50"E 21 fms	1933/8/6		Store Nordiske	
2 ZMUC ANT-000677	ZMUC150723-64	<i>Dendronephthya</i> sp.		Japan, 32°-42°54'N. 129°-44°24"E 31 fms	1931/8/31		Store Nordiske	
3 ZMUC ANT-000678	ZMUC150723-65	<i>Nephthea</i> sp.		Japan, 35°-00'N. 130°-05'E	67 fms	1934/6/23	Store Nordiske	
4 ZMUC ANT-000675	ZMUC150723-62	<i>Nidalia</i> sp.		Japan, 32°-26'N., 128°-37'E, st.11	136 fms	1933/6/25	Store Nordiske	
5 ZMUC ANT-000732	ZMUC150723-33	<i>Melithaea</i> sp.		32°26'N., 128°-37'E	136 fms		Store Nordiske	
6 ZMUC ANT-000626	ZMUC120604-19	NOT <i>Melithaea</i> sp.		32°59'15"N., 129°-23°50"E	21 fms	1933/8/6	Store Nordiske	
7 ZMUC ANT-000733	ZMUC150723-34	? <i>Echinogorgia</i> sp.		North West Pacific, 32°-59'15" N. 129°-23°50"E	21 fms	1933/8/6	Store Nordiske	
8 ZMUC ANT-000679	ZMUC150723-66	<i>Euplexaura</i> sp.		Japan, 35°00'N., 130°05'E	67 fms	1934/6/23	Store Nordiske	
9 ZMUC ANT-000760	ZMUC120604-06a	<i>Calyptrophora</i> sp.		Japan, Bonin Is. (Ogasawara)	750 fms	1957/5/14	Store Nordiske	
10 ZMUC ANT-000761	ZMUC120604-06b	<i>Narella</i> sp.		Japan, Bonin Is. (Ogasawara)	750 fms	1957/5/14	Store Nordiske	
11 ZMUC ANT-000762	ZMUC120604-07	<i>Parastenella</i> sp.		32°-21'N., 128°-39'E	120-200 fms	1933/3/4	Store Nordiske	
12 ZMUC ANT-000731	ZMUC150723-32	<i>Chrysogorgia</i> sp.		North West Pacific,			Telegraf-Comp.	
13 ZMUC ANT-000734	ZMUC150723-35	Undet. Gorgonacea		32°-42°54' N. 128°-44°20"E	31 fms	1931/8/31	Store Nordiske	
14 ZMUC ANT-000735	ZMUC150723-36	Undet. Gorgonacea		North West Pacific, 32°-42°54' N. 128°-44°20"E	31 fms	1931/8/31	Store Nordiske	
15 ZMUC ANT-000736	ZMUC150723-37	Undet. Gorgonacea		North West Pacific, 32°-42°54' N. 128°-44°20"E	31 fms	1931/8/31	Store Nordiske	
16 ZMUC ANT-000796	ZMUC150723-90	Undet. Pennatulacea		North West Pacific, 36°-02°57' N. 128°-47°33"E	159-382 fms	1932/1/15	Store Nordiske	
		<i>Dendronephthya mucronata</i> (Putter, 1900 North West Pacific)					Telegraf	Spongodes mucronata

*ZMUC

New number From Dr. Th. Mortensen, 1914	Old number (IUZM)	Status	Species	Locality (En)	Depth	y/m/d	Collector	Remark
1 -			(<i>Primnoa pacifica</i> Kinoshita, 1907)	(Japan, Sagami Bay, Okinose)	(600m)	(1914)	(Dr. Th. Mortensen)	Two polyps from specimens collected in <i>Aurivillius</i> , 1931 (subsampled from ZMUC2), not in UPSZY database "See <i>Aurivillius</i> 1931 page 295. The polyps described there presumably comes from this specimen?"
1 ZMUC-ANT-000494	ZMUC-120430-27		<i>Primnoa pacifica</i> Kinoshita, 1907	Japan, Sagami Sea, Okinose	400fms	1914/7	Kuma (Dr. Th. Morten)	bought from Kuma
2 ZMUC-ANT-000791	ZMUC-150723-38		<i>Bathyacryon robustum</i> Versluys, 1906	North West Pacific			Dr. Th. Mortensen	Bathyacryon-robustum
3 ZMUC-ANT-000751	ZMUC-150723-67		<i>Dendronephthya</i> sp.	Japan, Sagami-Bay, Okinose			Dr. Th. Mortensen	Large Bottle
4 ZMUC-ANT-000792	ZMUC-150723-39		<i>Pseudodictiochamus hicksoni</i> Versluys, 1907	Japan, Sagami-Bay, Okinose	802	1914/6/12	Dr. Th. Mortensen	
5 ZMUC-ANT-000723	ZMUC-150723-46		<i>Telosia</i> sp.	Japan, Sagami-Bay, Okinose	60 fms	1914/6/11	Dr. Th. Mortensen	Hard Bottom
6 ZMUC-ANT-000724	ZMUC-150723-47		<i>Telosia</i> sp.	Japan, Sagami-Bay, Okinose	60 fms	1914/6/11	Dr. Th. Mortensen	Hard Bottom
7 ZMUC-ANT-000725	ZMUC-150723-48		<i>Telosia</i> sp.	North West Pacific, 33-51°N., 130-31E	26 fms	1914/5/18	Dr. Th. Mortensen	Gear: swabs
8 ZMUC-ANT-000646	ZMUC-120604-40		<i>Melithaea corymbosa</i>	Off Nagasaki, 32°15'N., 128°12'E.	90 fms	1914/5/15	Dr. Th. Mortensen	Hard Bottom, Gear: Shveber, Hyateri-Maru
9 ZMUC-ANT-000688	ZMUC-120604-42		<i>Melithaea corymbosa</i>	Japan, Sagami Bay	80-120	1914/6/19	Dr. Th. Mortensen	
10 ZMUC-ANT-000650	ZMUC-120604-76		<i>Melithaea corymbosa</i>	Japan, Sagami Bay, Off Misaki	ca 250	1914/6/10	Dr. Th. Mortensen	Sandy mud, Gears/wabs
11 ZMUC-ANT-000590	ZMUC-120430-44		<i>Melithaea corymbosa</i>	Japan, Sagami Sea, Okinose	100 fms	1914/6/15	Dr. Th. Mortensen	
12 ZMUC-ANT-000554	ZMUC-120604-66		<i>Melithaea corymbosa</i>	Japan, Sagami Sea, Okinose	100 fms	1914/6/23	Dr. Th. Mortensen	Hard bottom, Gear:swabs
13 ZMUC-ANT-000461?	ZMUC-120604-73		<i>Melithaea corymbosa</i>	Japan, Sagami Sea, Okinose	100 fms	1914/6/23	Dr. Th. Mortensen	Hard bottom, Gear:swabs
14 ZMUC-ANT-000587	ZMUC-120604-40		<i>Melithaea corymbosa</i>	Japan, Sagami Sea, Okinose	100 fms	1914/6/26	Dr. Th. Mortensen	Hard bottom, Gear:swabs
15 ZMUC-ANT-000659	ZMUC-120604-41		<i>Melithaea corymbosa</i>	Japan, Sagami Sea, Okinose	200 fms	1914/7/1	Dr. Th. Mortensen	
16 ZMUC-ANT-000591	ZMUC-120430-41		<i>Melithaea japonica</i>	Japan, Sagami Bay, Misaki	1-2 fms	1914/6/24	Dr. Th. Mortensen	
17 ZMUC-ANT-000771	ZMUC-150723-45(1)		<i>Melithaea japonica</i>	Japan, Sagami-Bay, Misaki	2 fms	1914/6/1	Dr. Th. Mortensen	dry
18 ZMUC-ANT-000772	ZMUC-150723-45(2)		<i>Melithaea japonica</i>	Japan, Sagami-Bay, Misaki	2 fms	1914/6/1	Dr. Th. Mortensen	dry
19 ZMUC-ANT-000773	ZMUC-150723-45(3)		<i>Melithaea japonica</i>	Japan, Sagami-Bay, Misaki	2 fms	1914/6/1	Dr. Th. Mortensen	dry
20 ZMUC-ANT-000374	ZMUC-150723-45(4)		<i>Melithaea japonica</i>	Japan, Sagami Bay, Okinose	60 fms	1914/6/11	Dr. Th. Mortensen	Hard bottom, Gear:swabs
21 ZMUC-ANT-000595	ZMUC-120604-45		<i>Melithaea modesta</i>	Japan, Sagami Bay, Okinose	60 fms	1914/6/11	Dr. Th. Mortensen	Hard bottom, Gear:swabs
22 ZMUC-ANT-000649	ZMUC-120604-75		<i>Melithaea sagamensis</i> Matsumoto & Ovigen, 2015	Japan, Sagami Sea, Okinose	200 fms	1914/7/1	Dr. Th. Mortensen	Hard Bottom
23 ZMUC-ANT-000657	ZMUC-120604-69		Paratype	Japan, Sagami Sea, Okinose				
24 ZMUC-ANT-000660	ZMUC-120604-72		Paratype	Japan, Sagami Sea, Okinose	200 fms	1914/7/1	Dr. Th. Mortensen	Hard Bottom
25 ZMUC-ANT-000694	ZMUC-120430-46		<i>Melithaea tenuis</i>	Japan, Sagami Bay	80-120	1914/6/19	Dr. Th. Mortensen	
26 ZMUC-ANT-000651	ZMUC-120604-77		<i>Melithaea tenuis</i>	Japan, Sagami Bay, Off Misaki	fms	1914/6/10	Dr. Th. Mortensen	Sandy mud, Gears/wabs
27 ZMUC-ANT-000661	ZMUC-120604-23		<i>Melithaea tenuis</i>	Japan, Sagami Sea	300 fms	1914/6/29	Dr. Th. Mortensen	Hard bottom, Gear:swabs
28 ZMUC-ANT-000656	ZMUC-120604-68		<i>Melithaea tenuis</i>	Japan, Sagami Bay, Off Misaki Biological Station	200 fms	1914/6/30	Dr. Th. Mortensen	Sand, Gears/wabs
29 ZMUC-ANT-000593	ZMUC-120430-38		<i>Melithaea tenuis</i>	Japan, Sagami Bay	400 fms	1914/7/2	Dr. Th. Mortensen	Gear: swabs.
30 ZMUC-ANT-000592	ZMUC-120430-37		<i>Melithaea undulata</i>	Japan, Sagami Sea	500 fms	1914/6/25	Dr. Th. Mortensen	Gear: swabs.
31 ZMUC-ANT-000552	ZMUC-120604-62		<i>Melithaea</i> sp.	Japan, 34°20'N., 130°10'E	60 fms	1914/5/18	Dr. Th. Mortensen	Dredging, No. 11, Sand Shell,
32 ZMUC-ANT-000589	ZMUC-120430-43		<i>Melithaea</i> sp.	Japan, Sagami Sea, Okinose	60 fms	1914/6/11	Dr. Th. Mortensen	Hard bottom, Gear:swabs
33 ZMUC-ANT-000648	ZMUC-120604-74		<i>Melithaea</i> sp.	Japan, Sagami Bay, Okinose	60 fms	1914/6/11	Dr. Th. Mortensen	same bottle with a large colony of Hydrozoa
34 ZMUC-ANT-000750	ZMUC-150723-05		<i>Melithaea</i> sp.	Japan, Sagami-Bay, Misaki	2 fms	1914/6	Dr. Th. Mortensen	
35 ZMUC-ANT-000739	ZMUC-150723-29(1)		<i>Melithaea</i> sp.	Japan, Sagami-Bay, Misaki	7 fms	1914/6/25	Dr. Th. Mortensen	

List of Japanese and North West Pacific octocoral collection in Uppsala University, Sweden (surveyed in 2012) and University of Copenhagen, Denmark (surveyed in 2012–2015).

New number	Old number	Status	Species	Locality (En)	Depth	v/m/d	Collector	Remark
36	ZMUC ANT-000743	ZMUC 150723-29 (5)	<i>Meitiheaa</i> sp.	Japan, Sagami-Bay, Misaki	7 fms	1914/6/25	Dr. Th. Mortensen	
37	ZMUC ANT-000740	ZMUC 150723-29 (2)	<i>Meitiheaa</i> sp.	Japan, Sagami-Bay, Misaki	7 fms	1914/6/25	Dr. Th. Mortensen	
38	ZMUC ANT-000741	ZMUC 150723-29 (3)	<i>Meitiheaa</i> sp.	Japan, Sagami-Bay, Misaki	7 fms	1914/6/25	Dr. Th. Mortensen	
39	ZMUC ANT-000742	ZMUC 150723-29 (4)	<i>Meitiheaa</i> sp.	Japan, Sagami-Bay, Misaki	7 fms	1914/6/25	Dr. Th. Mortensen	
40	ZMUC ANT-000738	ZMUC 150723-29 (6)	<i>Meitiheaa</i> sp.	Japan, Sagami-Bay, Misaki	7 fms	1914/6/25	Dr. Th. Mortensen	
41	ZMUC ANT-000744	ZMUC 150723-30	<i>Meitiheaa</i> sp.	Japan, Sagami-Bay, Misaki	7 fms	1914/5/27	Dr. Th. Mortensen	
42	ZMUC ANT-000745	ZMUC 150723-31	<i>Meitiheaa</i> sp.	Japan, Sagami-Bay, Misaki	2 fms	1914/4/27	Dr. Th. Mortensen	
43	ZMUC ANT-000767	ZMUC 150723-41	<i>Meitiheaa</i> sp.	Japan, Sagami-Bay, Misaki	2 fms	1914/6/1	Dr. Th. Mortensen	dry
44	ZMUC ANT-000607	ZMUC 150723-28(1)	<i>Meitiheaa</i> sp.	North West Pacific			Dr. Th. Mortensen	with ARM120604-64/ZMUC ANT-000606
45	ZMUC ANT-000608	ZMUC 150723-28(2)	<i>Meitiheaa</i> sp.	North West Pacific			Dr. Th. Mortensen	1 NOT octocoralla, dry
46	ZMUC ANT-000609	ZMUC 150723-28(3)	<i>Meitiheaa</i> sp.	North West Pacific			Dr. Th. Mortensen	with ARM120604-64/ZMUC ANT-000606
47	ZMUC ANT-000610	ZMUC 150723-28 4	<i>Meitiheaa</i> sp.	North West Pacific			Dr. Th. Mortensen	1 NOT octocoralla, dry
48	ZMUC ANT-000638	ZMUC 120604-32	<i>Parisia</i> sp. (minor?)	32°15'N, 128°12' E.	90 fms	1914/5/15	Dr. Th. Mortensen	with ARM120604-64/ZMUC ANT-000606
49	ZMUC ANT-000639	ZMUC 120604-33	<i>Parisia</i> sp. (<i>fruticosa</i> ?)	32°15'N, 128°12' E.	90 fms	1914/5/15	Dr. Th. Mortensen	1 NOT octocoralla, dry
50	ZMUC ANT-000620	ZMUC 120604-31	<i>Acalygeorgia</i> sp.	Nagasaki	1914		Dr. Th. Mortensen	with ARM120604-64/ZMUC ANT-000606
51	ZMUC ANT-000665	ZMUC 120604-61	<i>Acalygeorgia</i> sp.	Japan, 33°51'N, 130°3' E	26 fms	1914/5/18	Dr. Th. Mortensen	1 NOT octocoralla, dry
52	ZMUC ANT-000621	ZMUC 120604-51	<i>Acanthogorgia</i> sp.	Japan, Sagami Sea, Okinose	100 fms	1914/6/23	Dr. Th. Mortensen	Dredging No.13, Sand S Kallund
53	ZMUC ANT-000666	ZMUC 120604-60	<i>Acanthogorgia</i> sp.	Japan, 34°20'N., 130°10' E	60 fms	1914/5/18	Dr. Th. Mortensen	Hard bottom
54	ZMUC ANT-000667	ZMUC 120604-57	<i>Acanthogorgia</i> sp.	Japan, Sagami Bay	80-120	1914/6/19	Dr. Th. Mortensen	Dredging No.11, Sand Shell,
55	ZMUC ANT-000623	ZMUC 120604-49	<i>Acanthogorgia</i> sp.	Japan, Sagami Bay, off the Misaki Biological Station	80-120	1914/6/10	Dr. Th. Mortensen	Hard bottom
56	ZMUC ANT-000668	ZMUC 120604-54	<i>Acanthogorgia</i> sp.	Japan, Sagami Bay, Okinose	60 fms	1914/6/11	Dr. Th. Mortensen	Sand, Gear-swabs
57	ZMUC ANT-000669	ZMUC 120604-55	<i>Acanthogorgia</i> sp.	Japan, Sagami Bay, Okinose	60 fms	1914/6/11	Dr. Th. Mortensen	Hard bottom
58	ZMUC ANT-000670	ZMUC 120604-56	<i>Acanthogorgia</i> sp.	Japan, Sagami Bay, Okinose	60 fms	1914/6/11	Dr. Th. Mortensen	Gear-swabs
59	ZMUC ANT-000622	ZMUC 120604-52	<i>Acanthogorgia</i> sp.	Japan, Sagami Sea, Okinose	100 fms	1914/6/23	Dr. Th. Mortensen	Hard bottom
60	ZMUC ANT-000624	ZMUC 120604-53	<i>Acanthogorgia</i> sp.	Japan, Sagami Sea, Okinose	200 fms	1914/7/1	Dr. Th. Mortensen	Hard bottom
61	ZMUC ANT-000629	ZMUC 120604-30	<i>Anthogorgia</i> bocki;	Japan, Sagami Sea, Okinose	100 fms	1914/6/26	Dr. Th. Mortensen	Gear-swabs
62	ZMUC ANT-000645	ZMUC 120604-39	<i>Bedyce</i> sp.	32°15'N, 128°12' E.	90 fms	1914/5/15	Dr. Th. Mortensen	Hard bottom, Gear: Shveber, Hyateri-
63	ZMUC ANT-000631	ZMUC 120604-27	<i>Discogorgia</i> sp.	Japan, Sagami Bay, Okinose	60 fms	1914/6/11	Dr. Th. Mortensen	Maru
64	ZMUC ANT-000630	ZMUC 120604-25	? <i>Discogorgia</i> sp.	Japan, Sagami Bay, Okinose	60 fms	1914/6/11	Dr. Th. Mortensen	Hard bottom, Gear: swabs
65	ZMUC ANT-000632	ZMUC 120604-46	? <i>Echinomuricea</i>	Japan, Sagami Sea, Okinose	ca.50	1914/6/11	Dr. Th. Mortensen	Hard bottom, Gear: swabs
66	ZMUC ANT-000763	ZMUC 120604-20	? <i>Eunicella pendula</i>	Japan, Sagami Bay, Okinose	fms		Dr. Th. Mortensen	
67	ZMUC ANT-000628	ZMUC 120604-26	? <i>Eunicella pendula</i>	Japan, Sagami Bay, Okinose	60 fms	1914/6/11	Dr. Th. Mortensen	Hard bottom, Gear: swabs
68	ZMUC ANT-000627	ZMUC 120604-29	? <i>Eunicella pendula</i>	Japan, Sagami Bay, Okinose	60 fms	1914/6/11	Dr. Th. Mortensen	Hard bottom, Gear: swabs
69	ZMUC ANT-000747	ZMUC 150723-02	? <i>Eunicella</i>	Japan, Sagami Bay, Misaki	40 fms	1914/7	Alan Owston (Dr. Th. Mortensen)	bought from A. Owston, Other label present in the glass, with the following info: 21/3/03 Canada Gulf, S. Bay" (???)
70	ZMUC ANT-000643	ZMUC 120604-37	<i>Euplexaura</i> sp.	32°15'N, 128°12' E.	90 fms	1914/5/15	Dr. Th. Mortensen	Hard Bottom, Gear: Shveber, Hyateri-
71	ZMUC ANT-000640	ZMUC 120604-34	? <i>Keroändes</i>	32°15'N, 128°12' E.	90 fms	1914/5/15	Dr. Th. Mortensen	Maru
72	ZMUC ANT-000653	ZMUC 120604-65	? <i>Keroändes</i> sp.	Japan, Sagami Sea, Okinose	100 fms	1914/6/23	Dr. Th. Mortensen	Hard bottom

New number	Old number	Status	Species	Locality (En)	Depth	y/m/d	Collector	Remark
73	ZMUC ANT-000641	ZMUC-120604-35	<i>Paracis</i> sp.	32°15'N, 128°12'E.	90 fms	1914/5/15	Dr. Th. Mortensen	Hard Bottom, Gear: Shveber, Hyateri-Maru
74	ZMUC ANT-000642	ZMUC-120604-36	<i>Paracis</i> sp.	32°15'N, 128°12'E.	90 fms	1914/5/15	Dr. Th. Mortensen	Hard Bottom, Gear: Shveber, Hyateri-Maru
75	ZMUC ANT-000633	ZMUC-120604-47	<i>Paracis</i> sp.	Japan, Sagami Bay, Okinose	60 fms	1914/6/11	Dr. Th. Mortensen	Hard bottom, Gear:swabs
76	ZMUC ANT-000616	ZMUC-120604-16	<i>Filiigela mitsukurii</i>	32°15'N, 128°17'E.	90 fms	1914/5/15	Dr. Th. Mortensen	Hard Bottom, Hyateri maru, swabs
77	ZMUC ANT-000611	ZMUC-120604-09	<i>Filiigela mitsukurii</i>	33°41'N, 128°50'E.	75 fms	1914/5/17	Dr. Th. Mortensen	Sand. Trawl
78	ZMUC ANT-000664	ZMUC-120604-59	<i>Filiigela mitsukurii</i>	Japan, 34°20'N, 130°10'E	60 fms	1914/5/18	Dr. Th. Mortensen	Dredging No. 11, Sand Shell,
79	ZMUC ANT-000655	ZMUC-120604-67	<i>Filiigela mitsukurii</i>	Japan, Sagami Bay, Off Misaki Biological Station	200 fms	1914/6/30	Dr. Th. Mortensen	Sand, Gear:swabs
80	ZMUC ANT-000644	ZMUC-120604-38	? <i>Villogorgia</i> sp.	32°15'N, 128°12'E.	90 fms	1914/5/15	Dr. Th. Mortensen	Hard Bottom, Gear: Shveber, Hyateri-Maru
81	ZMUC ANT-000632	ZMUC-120604-28	? <i>Villogorgia</i> sp.	Japan, Sagami Bay, Okinose	60 fms	1914/6/11	Dr. Th. Mortensen	Hard bottom, Gear:swabs
82	ZMUC ANT-000765	ZMUC150/723-27	<i>Gorgoniidae</i>	Japan, Sagami Bay, 16 m vtsf. Misaki	200 fms	1914/5/13	Dr. Th. Mortensen	Bottom: Sand; Gear: trawl
83	ZMUC ANT-000766	ZMUC-120430-28	<i>Arthrogorgia jinmai</i> Kinoshita.	Japan, Sagami Sea, Okinose	400 fms	1914/7	Kuma (Dr. Th. Mortensen)	bought from Kuma
84	ZMUC ANT-000597	ZMUC-120430-35	<i>Callogeorgia</i> sp.	Japan, Sagami Sea	500 fms	1914/6/25	Dr. Th. Mortensen	Gear: swabs
85	ZMUC ANT-000619	ZMUC-120604-12	<i>Callogeorgia</i> or <i>Farellia</i>	Japan, Sagami Sea, Okinose	400 fms	1914/7	Kuma (Dr. Th. Mortensen)	bought from Kuma
86	ZMUC ANT-000618	ZMUC-120604-11	<i>Paracalyptrophora kerberti</i>	Japan, Sagami Sea, Okinose	400 fms	1914/7	Kuma (Dr. Th. Mortensen)	bought from Kuma
87	ZMUC ANT-000625	ZMUC-120604-48	<i>Parastenella</i> sp.	Japan, Sagami Sea, Okinose	400 fms	1914/7	Kuma (Dr. Th. Mortensen)	bought from Kuma
88	ZMUC ANT-000606	ZMUC-120604-64	<i>Parastenella</i> sp.	Japan, Sagami Bay	1914	Dr. Th. Mortensen	Kuma (Dr. Th. Mortensen)	bought from Kuma, Korea all pa
89	ZMUC ANT-000759	ZMUC-120604-04	<i>Plumarella acuminata</i> Kinoshita	Japan, Sagami Sea, Okinose	400 fms	1914/7	Dr. Th. Mortensen	Stener, Gear:swabs
90	ZMUC ANT-000663	ZMUC-120604-58	? <i>Plumarella</i> (<i>Dicholaphis</i>)	Japan, Sagami Sea	400 fms	1914/6/1-7	Dr. Th. Mortensen	Gear:swabs
91	ZMUC ANT-000647	ZMUC-120604-41	<i>Plumarella</i> sp.	32°15'N, 128°12'E.	60 fms	1914/5/15	Dr. Th. Mortensen	Hard Bottom, Gear:swabs, Hyateri-Maru
92	ZMUC ANT-000602	ZMUC-120430-29	<i>Plumarella</i> sp.	Japan, Sagami Sea, Okinose	60 fms	1914/6/11	Dr. Th. Mortensen	Hard bottom, Gear:swabs
93	ZMUC ANT-000603	ZMUC-120430-30	<i>Plumarella</i> sp.	Japan, Sagami Bay, Okinose	60 fms	1914/6/11	Dr. Th. Mortensen	Hard bottom, Gear:swabs
94	ZMUC ANT-000526	ZMUC-120604-50	<i>Plumarella</i> sp.	Japan, Sagami Sea, Okinose	100 fms	1914/6/11	Dr. Th. Mortensen	Hard bottom, Gear:swabs
95	ZMUC ANT-000612	ZMUC-120604-10a	<i>Plumarella</i> sp.	Japan, Sagami Sea, Okinose	100 fms	1914/6/11	Dr. Th. Mortensen	Hard Bottom
96	##	ZMUC-120604-10b	<i>Plumarella</i> sp.	Japan, Sagami Sea, Okinose	100 fms	1914/6/11	Dr. Th. Mortensen	Hard Bottom
97	ZMUC ANT-000800	ZMUC-120430-34	<i>Plumarella</i> sp.	Japan, Sagami Sea, Okinose	100 fms	1914/6/15	Dr. Th. Mortensen	Hard bottom, Gear:swabs
98	ZMUC ANT-000634	ZMUC-120604-22	<i>Plumarella</i> sp.	Japan, Sagami Sea, Okinose	100 fms	1914/6/23	Dr. Th. Mortensen	Hard bottom, Gear:swabs
99	ZMUC ANT-000691	ZMUC-120430-33	<i>Plumarella</i> sp.	Japan, Sagami Sea, Okinose	100 fms	1914/6/26	A. Ouston (Dr. Th. Mortensen)	bought from Alan Ouston, 1914/07.
100	ZMUC ANT-000757	ZMUC-120604-02	<i>Thouarella</i> sp.	Japan, Sagami Bay, Enoshima	1903/3	Mortensen	Coll. 1903/03	Coll. 1903/03
101	ZMUC ANT-000635	ZMUC-120604-21	<i>Thouarella</i> sp.	Japan, Sagami Sea, Okinose	200 fms	1914/7/1	Dr. Th. Mortensen	Hard bottom, Gear:swabs
102	ZMUC ANT-000758	ZMUC-120604-03	<i>Chrysogorgia</i> sp.	Japan, Sagami Sea, Okinose	600 fms	1907	Kuma (Dr. Th. Mortensen)	bought from Kuma
103	ZMUC ANT-000658	ZMUC-120604-70	<i>Chrysogorgia</i> sp.	Japan, Sagami Sea, Okinose	100 fms	1914/6/23	Dr. Th. Mortensen	Hard bottom, Gear:swabs
104	ZMUC ANT-000599	ZMUC-120430-32	<i>Chrysogorgia</i> sp.	Japan, Sagami Sea, Okinose	100 fms	1914/6/25	Kuma (Dr. Th. Mortensen)	bought from Kuma
105	ZMUC ANT-000756	ZMUC-120604-01	<i>Chrysogorgia</i> sp.	Japan, Sagami Sea, Okinose	400 fms	1914/7	Kuma (Dr. Th. Mortensen)	bought from Kuma
106	ZMUC ANT-000613	ZMUC-120604-14a	<i>Chrysogorgia</i> sp.	Japan, Sagami Sea, Okinose	400 fms	1914/7	Kuma (Dr. Th. Mortensen)	bought from Kuma
107	ZMUC ANT-000614	ZMUC-120604-14b	<i>Chrysogorgia</i> sp.	Japan, Sagami Sea, Okinose	400 fms	1914/5/15	Dr. Th. Mortensen	Hard Bottom, "Hyateri-Maru"
108	ZMUC ANT-000615	ZMUC-120604-15	<i>Radicipes</i> ? <i>verilli</i>	32°15'N, 128°17'E.	90 fms	1914/7		Gear:swabs

List of Japanese and North West Pacific octocoral collection in Uppsala University,
Sweden (surveyed in 2012) and University of Copenhagen, Denmark (surveyed in 2012–2015).

New number	Old number	Status	Species	Locality (En)	Depth	y/m/d	Collector	Remark
109	ZMUC ANT-000698	ZMUC-120430-36	? <i>Radicipes</i>	Japan, Sagami Sea, Okinose	100 fms	1914/6/26	Dr. Th. Mortensen	Hard bottom, Gearswabs
110	ZMUC ANT-000617	ZMUC-120604-13	<i>Keratoisis</i>	Japan, Sagami Sea, Okinose	400 fms	1914/7	Kuna (Dr. Th. Mortensen)	bought from Kuma
111	ZMUC ANT-000636	ZMUC-120604-18	Isididae	32°15'N, 128°12'E.	90 fms	1914/5/15	Dr. Th. Mortensen	Hard Bottom, Gear- swabs, Hyateri- Maru
112	ZMUC ANT-000746	ZMUC-150723-01	Isididae	Japan, Sagami Sea, Okinose	400 fms	1914/7	Kuna (Dr. Th. Mortensen)	bought from Kuma. 3 colonies.
113	ZMUC ANT-000637	ZMUC-120604-17	Isididae	Japan, Sagami-Bay	?	Dr. Th.	Large Bottle, wet	
114	ZMUC ANT-000752	ZMUC-150723-68	<i>Pennatula murraii</i> Kölleker, 1880 <i>Gavermularia obesa</i> Valenciennes in Milne Edwards & Haime, 1850	North West Pacific	100 fms	1914/6/23	Dr. Th. Mortensen	<i>Cavernularia obesa</i>
115	ZMUC		Undet. Alcyonacea	Japan, Sagami-Bay, Okinose	100 fms	1914/6/23	Dr. Th. Mortensen	Hard Bottom, Gear- skrab, 2 species
116	ZMUC ANT-000726	ZMUC-150723-49	Undet. Alcyonacea	Japan, Sagami-Bay, Okinose	1914/6	Dr. Th. Mortensen	same bottle with ZMUC-ANT-	
117	ZMUC ANT-000727	ZMUC-150723-50	Undet. Alcyonacea	North West Pacific	1914/6	Dr. Th. Mortensen	000728-730, wet	
118	ZMUC ANT-000728	ZMUC-150723-51	Undet. Alcyonacea	North West Pacific	1914/6	Dr. Th. Mortensen	same bottle with ZMUC-ANT-	
119	ZMUC ANT-000729	ZMUC-150723-52	Undet. Alcyonacea	North West Pacific	1914/6	Dr. Th. Mortensen	000728-730, wet	
120	ZMUC ANT-000730	ZMUC-150723-53	Undet. Alcyonacea	North West Pacific	1914/6	Dr. Th. Mortensen	same bottle with ZMUC-ANT-	
121	ZMUC ANT-000800	ZMUC-150723-93	Undet. Pennatulacea	Japan, Sagami-Bay, Okinose	100 fms	1914/7	Kuna (Dr. Th. Mortensen)	Bought from Kuma, wet
122	ZMUC ANT-000801	ZMUC-150723-94	Undet. Pennatulacea	Japan, Sagami-Bay, outside	70 fms	1914/7/10	Dr. Th. Mortensen	Gear: skrab, wet
123	ZMUC ANT-000802	ZMUC-150723-95	Undet. Pennatulacea	Japan, North West Pacific, 32°-117°N, 128°-11°E	110 fms	1914/5/14	Dr. Th. Mortensen	Bottom Sand, Gear: trawl
124	ZMUC ANT-000803	ZMUC-150723-96	Undet. Pennatulacea	North West Pacific, 32°-15°N, 128°-12°E	70 fms	1914/5/15	Dr. Th. Mortensen	Hard bottom, Gear: skrab, wet, 3 species
125	ZMUC ANT-000804	ZMUC-150723-97	Undet. Pennatulacea	Japan, Sagami-Bay, Misaki	1914/7	Alan Ovson (Dr. Th. Mortensen)	Bought from Alan Owsten, wet	
126	ZMUC ANT-000805	ZMUC-150723-98	Undet. Pennatulacea	Japan, Sagami-Bay, Misaki	1914/4/28	Dr. Th. Mortensen	coast	
127	ZMUC ANT-000806	ZMUC-150723-99	Undet. Pennatulacea	Japan, North West Pacific, 33°-41°N, 128°-56°E	75 fms	1914/5/17	Dr. Th. Mortensen	Bottom Sand, Gear: trawl, wet
128	ZMUC ANT-000807	ZMUC-150723-100	Undet. Pennatulacea	Japan, North West Pacific, 32°-20°N, 130°-10°E	60 fms	1914/5/18	Dr. Th. Mortensen	Bottom Sand, Gear: skrab, wet (8 specimen)
1	ZMUC ANT-000804	ZMUC-120430-31	Antipatharia	Japan, Sagami Sea, Okinose	60 fms	1914/6/11	Dr. Th. Mortensen	Hard bottom, Gearswabs
1	*ZMUC		<i>Dendronephthya padavensis</i> Henderson, 1909	North West Pacific		Dr. Th. Mortensen	<i>Roxasia padavensis</i>	
2	*ZMUC		<i>Dendronephthya rigida</i> Studer, 1888	North West Pacific		Dr. Th. Mortensen	<i>Roxasia rigida</i>	
From J. Jordan			Pteroides sp.	Japan, Nagasaki		James Jordan	Journal: 1911/06/29, Store Nordiske?	
From K. Degugan						K. Degugan	det. by Broch?; 1934	
1	ZMUC-ANT-000495	ZMUC-120604-05	<i>Pinnina pacifica</i> Kuroshita, 1907	Japan Sea, 42°16'21"N, 131°03'E.	730- 780m	1931/10/7	K. Degugan	
From Doflein								
1	ZMUC ANT-000793	ZMUC-150723-40 (ZSM)	<i>Scyllium splendens</i> (Thomson & Henderson, 1906)	Japan, Sagami-Bay, Haidashi	100 fms	1904	Doflein	ZSM (Zoologische Staatsammlung München, Germany)
From Salmi								
1	ZMUC-ANT-000164		<i>Haliceptrum abies</i> Kölleker, 1872	Japan				
1	ZMUC		<i>Pteroides breviradiatum</i> Kölleker, 1869	NWP				
Salmin								
Salmin								2 specimen

New number	Old number	Status	Species	Locality (En)	Depth	y/m/d	Collector	Remark
2 ZMUC-ANT-000146		Lect-Notype	<i>Ptereoidea chinense</i> Kolliker 1872	NWP, Japan			Samin	
From Dr. Sixten Bock's Japan-Expedition:								
1 UPSZTY116993	UZM78a	Type	<i>Iolligorgia boninensis</i> Auriwillius, 1931	Japan, Bonin Islands (Ogasawara) E.N. of Chichijima	115fms	1914/8/15	Dr.Sixten Bock	formol. (E.N.E. of Chichijima, in Auriwillius, 1931)
2 UPSZTY2175	UZM78b	Type	<i>Iolligorgia boninensis</i> Auriwillius, 1931	Japan, Bonin Islands (Ogasawara), E.N. of Chichijima	1914/8/15	Dr.Sixten Bock	formol	*collection date in the database (1914/4) and Auriwillius, 1931 (1914/6) are different pers.comm. Ms.Majlon, UPSZTY, 2014
3 UPSZMC 6235	UZM56		<i>Melithaea rabeifera</i> Kukenthal	Japan, Sagami Bay, Misaki Biolog. Station		(1914/6)->1914/4	Dr.Sixten Bock	
4 in exhibition room	UZM		<i>Subergorgia</i> sp.	Japan, Bonin Islands (Ogasawara) E.N. of Chichijima	1914/8/15	Dr.Sixten Bock	in exhibition room	
5 UPSZTY2148	UZM51	Type	<i>Acalycigorgia wreni</i> Auriwillius, 1931	Japan, Kyushu 130°3' E., 33°51' N.	26fms	1914/5/18	Dr.Sixten Bock	bottom skalsand. (Kūshū, 34°20'N., 130°20' E. 100m in Auriwillius, 1931)
6 UPSZTY2167	UZM70c	Paratype	<i>Acanthogorgia boninensis</i> Auriwillius, 193	Japan, Bonin Islands (Ogasawara) E. of Channel (north of Chichijima)	70fms	1914/8/1	Dr.Sixten Bock	Depth 20 fms and locality E of Channel between Chichijima and Hahajima in Auriwillius, 1931. UPSZMC database: Cotype to the Museum of Natural History, Gothenburg, april 1931? =spec. 2 of <i>Acanthogorgia boninensis</i> mihi. var. Auriwillius, 1931?
7 UPSZTY2167	UZM70a	Holotype	<i>Acanthogorgia boninensis</i> Auriwillius, 193	Japan, Bonin Islands (Ogasawara), E. of Chichijima	100m	1914/8/1	Dr.Sixten Bock	UPSZMC database: Cotype to the Museum of Natural History, Gothenburg, april 1933.
8 UPSZTY2167	UZM70b	Cotype	<i>Acanthogorgia boninensis</i> Auriwillius, 193	Japan, Bonin Islands (Ogasawara), Higashijima E. 2 miles	90fms	1914/8/7	Dr.Sixten Bock	= <i>Acanthogorgia boninensis</i> mihi. var. Auriwillius, 1931? UPSZMC database: Cotype to the Museum of Natural History, Gothenburg, april 1931?
9 UPSZTY2168	UZM71a	Type (Spec.12)	<i>Acanthogorgia dofleini</i> var. <i>spinosa</i> Auriwillius 193	Japan, Kyushu, Goto Islands, 5 miles off Paras Rock 128°12'E., Coral Bank	90fms	1914/5/15	Dr.Sixten Bock	formol. (160m in Auriwillius, 1931)
10 UPSZTY2168	UZM71b	(Spec.22)	<i>Acanthogorgia dofleini</i> var. <i>spinosa</i> Auriwillius 193	Japan, Kyushu, Goto Islands, 5 miles off Paras Rock 128°12'E., Coral Bank	90fms	1914/5/15	Dr.Sixten Bock	formol.
11 UPSZTY2179	UZM82	Type	<i>Acanthogorgia gotoensis</i> Auriwillius, 1931	Japan, Kyushu, Goto Islands, 5 miles off Pallas Rock, 128°12'E., Coral Bank	90fms	1914/5/15	Dr.Sixten Bock	formol.
12 UPSZTY2145	UZM486	Type (Spec.b)	<i>Acanthogorgia helundi</i> Auriwillius, 1931	Japan, Kyushu, Kagoshima-Goto Islands ller. Okinoshima	1914/5/13-5/15	Dr.Sixten Bock	formol. (1914/5/18, 34°20' N., 130°20' E. in Auriwillius, 1931)	
13 UPSZTY2147	UZM50	Type	<i>Anthogorgia bocki</i> Auriwillius, 1931	Japan, Bonin Islands (Ogasawara), E. of Chichijima	90fms	1914/8/1	Dr.Sixten Bock	Upsatt 1932, Upsala Mus.
14 UPSZTY2181	UZM84	Type	<i>Bebryce bocki</i> Auriwillius, 1931	Japan, Bonin Islands (Ogasawara), E. of Chichijima	120m	1914/8/1	Dr.Sixten Bock	formol. (depth 100m in Auriwillius, 1931)
15 UPSZTY2166	UZM69	Type	<i>Bebryce boninensis</i> Auriwillius, 1931	Japan, Bonin Islands (Ogasawara), E.N.E. of Anojima	150m	1914/8/15	Dr.Sixten Bock	formol. (at 100 fathoms in Auriwillius, 1931). Anojima-Anrijima or Anejima
16 in exhibition room	UZM		<i>Euplexaura</i> sp.	Japan, Sagami Bay	400-500m	1914	Dr.Sixten Bock	Upsala Mus. in exhibition room

List of Japanese and North West Pacific octocoral collection in Uppsala University, Sweden (surveyed in 2012) and University of Copenhagen, Denmark (surveyed in 2012–2015).

New number	Old number	Status	Species	Locality (En)	Depth	y/m/d	Collector	Remark
17 UPSZTY2165	UZM68	Type	<i>Filiigella boninensis</i> (Aurivillius, 1931)	Japan Bonin Islands (Ogasawara), E. of Chichijima	100m	1914/8/1	Dr.Sixten Bock	<i>Filiigella boninensis</i> , filmol, Aurivillius, 1931, Upsala Mus.
18 UPSZMC 62382	UZM	(spec.10-)	<i>Filiigella mitsukurii</i> (Kishimoto)	Japan, Kyushu, Okinoshima	200m	1914/5/18	Dr.Sixten Bock	UPSZMC database, in exhibition room, GBIF2826467 (Catalog no.365)
19 UPSZTY2171	UZM74	Type	<i>Villigorgia cristata</i> Aurivillius, 1931	Japan, Bonin Islands (Ogasawara), East of Chichijima	120m	1914/8/1	Dr.Sixten Bock	formol, (120–180m in Aurivillius, 1931, Upsala Mus.)
20 UPSZTY2161	UZM64	Type	<i>Villigorgia japonica</i> Aurivillius, 1931	Japan, Kyushu, Goto Islands, 5 miles of Pallas Rock, 128°12'E, Coral Bank	90fms	1914/5/15	Dr.Sixten Bock	formol, (lat. 32°15'N., Dredge, 160m, Ups.Mus. In Aurivillius, 1931, Ups. Mus.)
21 UPSZTY2150	UZM53	Type	<i>Villigorgia teretiflora</i> Aurivillius, 1931	Japan, Bonin Islands (Ogasawara), E. of Chichijima, Japan, Kyushu, Goto Islands, Pallas Rock, 32°15' N., 128°12'E, Coral Bank	160m	1914/8/1	Dr.Sixten Bock	(90 fathoms in Aurivillius, 1931, Ups. Mus.)
22 UPSZTY2151	UZM54	Type	<i>Callogorgia cristata</i> Aurivillius, 1931	Japan, Sagami Bay, Okinose	400fms	1914/6/30	Dr.Sixten Bock	in Aurivillius, 1931. 4 Fragments.
23 UPSZTY2155	UZM58	Type	<i>Narella japonensis</i> (Aurivillius, 1931)	Japan, Bonin Islands (Ogasawara), E. of the Channel	70fms	1914/8/1	Dr.Sixten Bock	formol
24 UPSZTY2162	UZM65	Type	<i>Plumarella dofleini</i> var. <i>bonnensis</i> Aurivillius	Japan, Sagami Bay, Okinose	600m	1914/6/26	Dr.Sixten Bock	probably paratype of <i>Thouarella hilgendorfi</i> forma <i>plumatis</i> Aurivillius, 1931 and depth: 400fms in Aurivillius, 1931, in exhibition room.
25 UPSZTY2176	UZM79?		<i>Thouarella hilgendorfi</i> Th.Stud.	Japan, Sagami Bay, Okinose	400fms	1914/6/26	Dr.Sixten Bock	one colony in Aurivillius, 1931, not in UPSZMC database. In exhibition room.
26 in exhibition room	UZM		<i>Chrysogorgia excavata</i> Kük.	Japan, Sagami Bay, South of Misaki	1914	Dr.Sixten Bock	Cotype to the Museum of Natural History, Gothenburg, April 1933 in UPSZMC database, pers.comm.	
27 UPSZTY2170	UZM73		Type (Ex: <i>Chrysogorgia sphaerica</i> Aurivillius, 1931)	Japan, Sagami Bay, Okinose	400fms	1914/7/8	Dr.Sixten Bock	Majlon, Uppsala.
28 UPSZTY2177	UZM80	Type (Ex: <i>Acanella microsculptata</i> Aurivillius, 1931)	<i>Acanella microsculptata</i> Aurivillius, 1931 miles off Pallas Rock, 128°12'E East of Coral bank	Japan, Sagami, Misaki	90fms	1914/5/15	Dr.Sixten Bock	formol, depth 160m in Aurivillius, 1931
29 in exhibition room	UZM		<i>Keratoisis</i> sp.	Japan, Sagami, Misaki	1905/3/28	Dr.Sixten Bock	Upsala Mus. in exhibition room	
30 in exhibition room	UZM		<i>Cavernularia habereri</i> Moroff	Japan, Sagami, Misaki	1914/6/22	Dr.Sixten Bock	Sandy beach, large ebb??, In exhibition room.	
31 in exhibition room	UZM		<i>Scytalium martensi</i> Kölliker, 1870	Japan, Kyushu, Goto Islands	200–300m	1914/5/14	Dr.Sixten Bock	Upsala Mus. in exhibition room
1 in exhibition room	UZM		<i>Antipathes densa</i>	Japan, Kyushu, Goto Islands	1914/5/15	Dr.Sixten Bock	Antipatharia, Upsala Mus. In exhibition room.	
2 in exhibition room	UZM		<i>Bathyphantes</i>	Japan, Kyushu, Goto Islands	200–300m	1914/5/15	Dr.Sixten Bock	Antipatharia, Upsala Mus.
1 *UPSZMC 62257	UZM115		<i>Melithaea corymbosa</i> Kükenthal	Japan, Sagami Bay, Misaki Biol. Station	(1914)–	Dr.Sixten Bock	in Aurivillius, 1931, UPSZMC database, GBIF2596670 (Catalog no.370)	
2 *GBIF2596673	(UZM)		<i>Melithaea modesta</i> Kükenthal	Japan, Sagami Bay, Misaki	1914/6/23	Dr.Sixten Bock	GBIF2596673 (Catalog no.372)	
3 *GBIF2596671	(UZM)		<i>Melithaea modesta</i> Kükenthal	Japan, Sagami Bay, Misaki	1914/6/26	Dr.Sixten Bock	GBIF2596671 (Catalog no.370)	
4 *GBIF2596672	(UZM)		<i>Melithaea modesta</i> Kükenthal	Japan, Sagami Bay, Misaki	1914/6/26	Dr.Sixten Bock	GBIF2596672 (Catalog no.371)	
5 *GBIF2596674	(UZM)		<i>Melithaea modesta</i> var. <i>abyssicola</i>	Japan, Sagami Bay, Misaki	(1914/6/26–27)	Dr.Sixten Bock	GBIF2596674 (Catalog no.373)	
6 *UPSZMC 62355	(UZM)		Kükenthal	Japan, Sagami Bay, Misaki	(400–500m)	Dr.Sixten Bock	in Aurivillius, 1931, UPSZMC database	
7 *GBIF2596678	(UZM)		<i>Melithaea</i> sp. aff. habereri Kükenthal	Japan, Sagami Bay, Misaki, Okinose	(ca.700m)	Dr.Sixten Bock	(in Aurivillius, 1931, date 1914/6/26 in UPSZMC database, GBIF2596678 (Catalog no.370))	
8 *UPSZMC 62352	(UZM)		<i>Melithaea</i> sp. aff. tenuis Kükenthal	Japan Sagami Bay, Misaki, Straight out from the Misaki Biological Station	(200m)	1914/7/1	Dr.Sixten Bock	UPSZMC database, GBIF2596677 (Catalog no.376)

New number	Old number	Status	Species	Locality (En)	Depth	y/m/d	Collector	Remark
9 *UPSZMC 62353	(UJZM)		<i>Melithaea tenuis</i> Kükenthal	Japan, Sagami Bay, Okinose	300–400m	1914/6/26	Dr.Sixten Book	UPSZMC database, GBIF2996675 (Catalog no.374)
10 *UPSZMC 62351	(UJZM)		<i>Melithaea tenuis</i> Kükenthal	Japan, Sagami Bay, Okinose	(400fms)	1914/6/30	Dr.Sixten Book	depth 400 fms in Auriwillius, 1931, 600m in UPSZMC database, GBIF2996676 (Catalog no.375)
11 *GBIF2642183			<i>Melithaea</i> sp.	Japan, Sagami Bay, Misaki	1914/6/25	Dr.Sixten Book	GBIF2642183 (Catalog no.653)	
12 *GBIF2642185			<i>Melithaea</i> sp.	Japan, Sagami Bay, Misaki	1914/6/25	Dr.Sixten Book	GBIF2642185 (Catalog no.655)	
13 *GBIF2642186			<i>Melithaea</i> sp.	Japan, Sagami Bay, Misaki	1914/6/25	Dr.Sixten Book	GBIF2642186 (Catalog no.656)	
14 *UPSZMC 62377	(UJZM)		<i>Parisis austalis</i> Wright & Studer	Japan, Bonin Islands (Ogasawara), E. of Chichijima	100m	1914/8/1	Dr.Sixten Book	in Auriwillius, 1931, UPSZMC database, GBIF2651373 (Catalog no.567)
15 *UPSZMC 62378	(UJZM)		<i>Parisis minor</i> Wright & Studer	Japan, Kyushu, Goto Islands, 6 miles off Pallas Rock, Coral bank	160m	1914/5/15	Dr.Sixten Book	in Auriwillius, 1931, UPSZMC database, GBIF2651374 (Catalog no.568)
16 *UPSZMC 62379	(UJZM)		<i>Acanthogorgia gracilima</i> var. <i>lata</i> Kükenthal	Japan, Sagami Bay, Okinose	400fms	1914/6/26	Dr.Sixten Book	in Auriwillius, 1931, UPSZMC database, GBIF2596681 (Catalog no.569)
17 *UPSZMC 62373	(UJZM)		<i>Keroedoides koreni</i> Kinoshita	Japan, Kyushu, Goto Islands, 5 miles off Pallas Rock	5	1914/5/15	Dr.Sixten Book	in Auriwillius, 1931, UPSZMC database, GBIF2634449 (Catalog no.570)
18 *UPSZMC 62385	(UJZM)		<i>Paracis</i> cf. <i>ijimai</i> Kinoshita	Japan, Sagami Bay, Okinose	(300fms)	1914/6/23	Dr.Sixten Book	in Auriwillius, 1931, UPSZMC database, GBIF2650010 (Catalog no.571)
19 *UPSZMC 62383	UJZM		<i>Filiigella mitsukurii</i> (Kinoshita)	Japan, Kyushu, Okinoshima	26 fms	1914/5/18	Dr.Sixten Book	in Auriwillius, 1931, not in UPSZMC database, GBIF2626469 (Catalog no.566)
20 *GBIF2626469	(UJZM)		(spec.18) <i>Filiigella mitsukurii</i> (Kinoshita, 1909)	Japan, Sagami Bay, Misaki	(450m)	(1914)–	Dr.Sixten Book	in Auriwillius, 1931, not in UPSZMC database, GBIF2634449 (Catalog no.567)
21 *UPSZMC 62384	(UJZM)		(spec.19) <i>Filiigella mitsukurii</i> (Kinoshita, 1909)	Japan, Sagami Bay, Okinose	(400fms)	(1914)–	Dr.Sixten Book	in Auriwillius, 1931, in UPSZMC database, depth is 600m and date is 1914/6/30
22 *UPSZMC 62381			<i>Filiigella mitsukurii</i> (Kinoshita, 1909)	Goto Islands, Okinoshima, 28 miles N and 1/2 mile E Shirase lighthouse.	1914/5/17	Dr.Sixten Book	UPSZMC database, GBIF2626470 (Catalog no.568)	
23 *UPSZMC 62342	(UJZM)		<i>Acanthoprimnoa cristata</i> (Kükenthal & Gorczawsky, 1908)	Japan, Sagami Sea, off Misaki	140fms (1914)–	1914/6/6	Dr.Sixten Book	in Auriwillius, 1931, collected data is 6/6 1914 in UPSZTY database, GBIF2653356 (Catalog no.735)
24 *UPSZMC 62341	(UJZM)		<i>Calyptraphora japonica</i> Gray	Japan, Kyushu, Goto Islands, off Pallas Rock 32°15' N., 128°12' E. Coral Bank	160m	1914/5/15	Dr.Sixten Book	in Auriwillius, 1931, in UPSZTY database, GBIF2606943 (Catalog no.479)
25 *UPSZMC62343	(UJZM)		<i>Paramstenella doederleini</i> (Wright & Studer, Japan, Sagami, Okinose	(300fms)	(1914)		Dr.Sixten Book	5 specimen in Auriwillius, 1931, in UPSZMC database
26 *UPSZMC 79955	(UJZM)		<i>Plumarella adhaearans</i> Nutting	Japan, Sagami, Okinose	(100fms) → 400– 600 m	(1914/6/23)	Dr.Sixten Book	depth data are different between in Auriwillius, 1931 (100 fms) and in UPSZMC database (400–600m), Pers.comm. Majon, UPSZTY, 2014
27 *UPSMC62364	(UJZM)		<i>Chrysogorgia</i> sp. aff. <i>flexilis</i> (Wright & Studer)	Japan	1914		Dr.Sixten Book	in Auriwillius, 1931, in UPSZTY database, GBIF2610929 (Catalog no.522)
28 *GBIF2626473			<i>Funicularia quadrangularis</i> (Pallas, 1766)	Japan, Kyushu, Goto Islands	1914/5/15	Dr.Sixten Book	GBIF2626473 (Catalog no.571)	
29 *GBIF262679			<i>Pennatula imbricata</i> Herklots, 1858	Japan, Kyushu, S. Nagasaki	1914/1/17	Dr.Sixten Book	GBIF2652678 (Catalog no.703)	
30 *GBIF2652680			<i>Pennatula imbricata</i> Herklots, 1858	Japan, Kyushu, Goto Islands	1914/5/17	Dr.Sixten Book	GBIF2652680 (Catalog no.704)	
31 *GBIF2652682			<i>Pennatula imbricata</i> Herklots, 1858	Japan, Kyushu, Goto Islands	1914/5/17	Dr.Sixten Book	GBIF2652682 (Catalog no.706)	
32 *GBIF2652681			<i>Pennatula imbricata</i> Herklots, 1858	Japan, Kyushu, Okinoshima	1914/5/18	Dr.Sixten Book	GBIF2652681 (Catalog no.705)	
33 *GBIF2652683			<i>Pennatula murrayi</i> Kölliker, 1880	Japan, Kyushu, Goto Islands	1914/5/17	Dr.Sixten Book	GBIF2652683 (Catalog no.707)	
34 *GBIF2652684			<i>Pennatula murrayi</i> Kölliker, 1880	Japan, Bonin Islands (Ogasawara), Chichijima Islands	1914/8/1	Dr.Sixten Book	GBIF2652684 (Catalog no.708)	

List of Japanese and North West Pacific octocoral collection in Uppsala University, Sweden (surveyed in 2012) and University of Copenhagen, Denmark (surveyed in 2012–2015).

New number	Old number	Status	Species	Locality (En)	Depth	y/m/d	Collector	Remark
1 –	(UUZM)		(<i>Corallium</i> sp. aff. <i>eraticum</i> Krishnoue)	(Japan, Kyushu, Goto Islands, 5 miles off Pallas Rock)	(160m)	(1914/5/15)	(Dr. Sixten Bock)	in Aurivillius, 1931. not in UPSZMC database
2 –	(UUZM)		(<i>Parisis minor</i> Wright & Studer)	(Japan, Bonin Islands, E. of Chichijima)	(80fms)	(1914/8/1)	(Dr. Sixten Bock)	in Aurivillius, 1931. not in UPSZTY database
3 –	(UUZM)		(<i>Acahyvorgia insermis</i> (Hedlund, 1890))	(Japan, Kyushu, off Oronoshima, 45°33'51" N., 130°3' E.)	(45–50m)	(1914/5/18)	(Dr. Sixten Bock)	in Aurivillius, 1931. not in UPSZMC database
4 –	(UUZM)		(<i>Acalyvorgia wienii</i> Aurivillius, 1931)	(Japan, Kyushu, 34°20'N., 130°20' E.)	(100m)	(1914/5/18)	(Dr. Sixten Bock)	in Aurivillius, 1931. not in UPSZMC database, folmol
5 –	(UUZM)		(<i>Acanthogorgia</i> sp. ?aff. <i>gracilimana</i> Kukenthal, 1908)	(Japan, Bonin Islands (Ogasawara), 2 miles off Higashijima)	(400fms)	(1914/6/30)	(Dr. Sixten Bock)	in Aurivillius, 1931. not in UPSZMC database, folmol
6 –	(UUZM)	Paratype	(<i>Villologorgia cristata</i> Aurivillius, 1931)	(Japan, Bonin Islands, NW. of Port Lloyd)	(160m)	(1914/8/7)	(Dr. Sixten Bock)	Bottom: Sand and shells, in Aurivillius, 1931. not in UPSZMC database
7 –	(UUZM)	Type	(<i>Villologorgia cristata</i> var. <i>pæliolata</i> Aurivillius, 1931)	(Japan, Kyushu, Goto Islands, 5 miles off Pallas Rock, 32°15' N., 128°12' E., Coral Bank)	(70fms)	(1914/7/31)	(Dr. Sixten Bock)	Bottom: Sand in Aurivillius, 1931. not in UPSZMC database
8 –	(UUZM)	Paratype	(<i>Thouarella hijigendofii</i> forma <i>plumatis</i> Aurivillius, 1931)	(Japan, Kyushu, Goto Islands)	(100fms)	(1914/5/15)	(Dr. Sixten Bock)	in Aurivillius, 1931. not in UPSZTY database
9 –	(UUZM)		(spec. 2–9, (<i>Filigella mitsukurii</i> (Kinoshita, 1909) (Ex 2) (<i>Chrysogorgia sphaerica</i> Aurivillius, 1931) (Ex 2) (<i>Acanella microsculptata</i> Aurivillius, 1931) (Ex 3) (<i>Acanella microsculptata</i> Aurivillius, 1931); (Japan, Goto Islands)	(Japan, Kyushu, off Kagoshima, off Bonin Islands, 9–21 miles W. to S.)	(160m)	(1914/5/15)	(Dr. Sixten Bock)	in Aurivillius, 1931, not in UPSZMC database
10 –	(UUZM)				(100fms)	(1914/6/26)	(Dr. Sixten Bock)	in Aurivillius, 1931. folmol. Not in UPSZTY database
11 –	(UUZM)					(1914/5/13)	(Dr. Sixten Bock)	in Aurivillius, 1931. folmol. Not in UPSZTY database
12 –	(UUZM)					(1914/5/15)	(Dr. Sixten Bock)	in Aurivillius, 1931. folmol. Not in UPSZTY database
From T. Gislén								
1 in exhibition room								
2 in exhibition room								
1 *GBIF2642187								
2 *GBIF2642184								
3 *GBIF2600659								
From A. Stuxberg, Vega Expedition (No. 1083)								
1	(Riksmuseum, No. 173)	(spec. 1)	(<i>Filigella mitsukurii</i> (Kinoshita))	(30°40' N., 120°40' E.)	(70fms)	(1879/10/28)	(The Vega Expedition)	in Aurivillius, 1931, Riksmuseum
2	(Riksmuseum, No. 175)		(<i>Acanthogorgia vegae</i> Aurivillius, 1931)	(Japan, Yedo Bay)	(65fms)	(1879/10/11)		in Aurivillius, 1931, Riksmuseum, Yedo Bay=Tokyo Bay

