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Polychaetous Annelids from Sagami Bay and the Sagami Sea, Central Japan

By

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今島 実*：相模湾と相模灘産多毛環虫類

Abstract: Polychaetous annelids from Sagami Bay and the Sagami Sea through the research project conducted during 2001–2005 by the National Science Museum, Tokyo, are examined taxonomically. A total of 289 species and 44 indeterminable species in 48 families of polychaetes are recognized. Four species are new to science: *Heteropelogenia japonica*, *Sigalion shinodaensis*, *Sigalion tanseimaruae* and *Eunice unibranchiata*. 18 species are new to the Japanese polychaetous fauna: *Labioleanira yhleni* and *Labiosthenolepis sibogae* (Sigalionidae), *Glycera brevicirris* (Glyceridae), *Marphysa bellii*, *Marphysa kinbergi* and *Marphysa mortenseni* (Eunicidae), *Scoloplos* (*Leodamas*) *rubra* (Orbiniidae), *Caulleriella hamata* (Cirratulidae), *Pherusa papillata* (Flabelligeridae), *Mediomastus californiensis* and *Notomastus hemipodus* (Capitellidae), *Phalacrostemma elegans* (Sabellariidae), *Amage arieticornuta*, *Melinna oculata* and *Sosane occidentalis* (Ampharetidae), *Pista agassizi* (Terebellidae), *Chone ecaudata* and *Megalomma vesiculosum* (Sabellidae).

Key words: Sagami Bay, the Sagami Sea, benthic polychaetes, new species, taxonomy

Introduction

The research project "Study on Environmental Changes in the Sagami Sea and Adjacent Coastal Area with Time Serial Comparison of Fauna and Flora" was organized by the National Science Museum, Tokyo during the period 2001–2005. Sagami Bay is situated on the southeastern coast of Honshu, the main Japanese island. It is a widely opened bay to the Sagami Sea where a strong warm Kuroshio Current which has its origin in equatorial waters. The width of the bay is about 40 km at its entrance between Joga-shima and Manazuru-zaki, and the long axis of the bay is about 20 km. It has about 1000 m deep at the bay entrance. The depth of the Sagami Sea is over 1000 m in most areas.

Polychaetes of Sagami Bay are knows through studies extending from Marenzeller (1879) to the present time. Marenzeller studied collections from the east coast of Enoshima, near Yokohama and

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adjacent areas, made by members of a geological expedition around the world in 1875–76. He recorded 30 species of which 24 were new and six others more widely known from Indo-Pacific areas. Afterwards, McIntosh (1885) reported on species based on collections made by the *Challenger* during a voyage around the world in 1872–76. Moore (1903) reported on species taken by the *U. S. S. Albatross* in 1900. The Swedish scientists, Hessle (1917 and 1925), Johansson (1922, 1927), and Jägersten (1937) described species collected by Professor Sixten Bock during 1914–16. Izuka (1912) reported 124 errantiate polychaetes from the Japanese waters, of which 56 species were collected from Sagami Bay. Afterwards, the polychaetes from Sagami Bay were reported from Suzaki by Okuda (1938a), from Hayama by Imajima (1968a), from Sagami Bay and the Sagami Sea by Imajima (1968b), from Misaki by Imajima & Hayashi (1969), from Manazuru by Imajima & Gamo (1970) and from Shimoda by Imajima (1982a). Most of the polychaetes from Sagami Bay have been collected from the eastern half of the bay by the late Emperor Showa (the Emperor Hirohito) during the years 1926–1988, the collection includes some additional specimens from off Shimoda of Izu Peninsula. A part of polychaetes in the collection, 148 species or subspecies in 20 families, were reported by Imajima (1997b, 2003).

In this survey polychaetes were collected from 123 stations, in depths between 7 and 1200 m, distributed all over the Sagami Bay and the Sagami Sea. The samples were collected by the R/V *Rinkai-Maru* of the Misaki Marine Biological Station, Graduate School of Science, The University of Tokyo, the T/V *Shin'yo-Maru* of the Tokyo University of Marine Science and Technology, the R/V *Tansei-Maru* of the Independent Administrative Institution, Japan Agency for Marine-Earth Science and Technology: JAMSTEC, the R/V *Tachibana* of the Manazuru Marine Laboratory for Science Education, Yokohama National University and the R/V *Suzaki II* of the Shimoda Marine Biological Station, College of Bioresource Sciences, Nihon University, and 8 fishing boats indicated in Table 1. Sampling was carried out by various types of biological dredges and gill-net. Details regarding sampling sites (Station no, latitude and longitude, depth) in the Sagami Bay and the Sagami Sea are given in Table 1. Two figures provide the detailed map of all localities mentioned in the text (Figs. 1, 2).

A total of 289 species and 44 indeterminable species in 48 families of polychaetes were recognized. Four species, *Heteropelogenia japonica*, *Sigalion shimodaensis*, *Sigalion tanseimaruae* and *Eunice unibranchiata* are new to science. 18 species, *Labioleanira yhleni* and *Labiosthenolepis sibogae* (Sigalionidae), *Glycera brevicirris* (Glyceridae), *Marphysa bellii*, *Marphysa kinbergi* and *Marphysa mortenseni* (Eunicidae), *Scoloplos* (*Leodamas*) *rubra* (Orbiniidae), *Caulleriella hamata* (Cirratulidae), *Pherusa papillata* (Flabelligeridae), *Mediomastus californiensis* and *Notomastus hemipodus* (Capitellidae), *Phalacrostemma elegans* (Sabellariidae), *Amage arieticornuta*, *Melinna oculata* and *Sosane occidentalis* (Ampharetidae), *Pista agassizi* (Terebellidae), *Chone ecaudata* and *Megalomma vesiculosum* (Sabellidae) are newly added to the Japanese polychaetous fauna. Forty-four indeterminable species could not be identified to species due to fragments, damaged or juvenile individuals. The type specimens and other specimens collected have been deposited at the Showa Memorial Institute, Tsukuba Research Center, National Science Museum, Tokyo (NSMT-Pol. S).

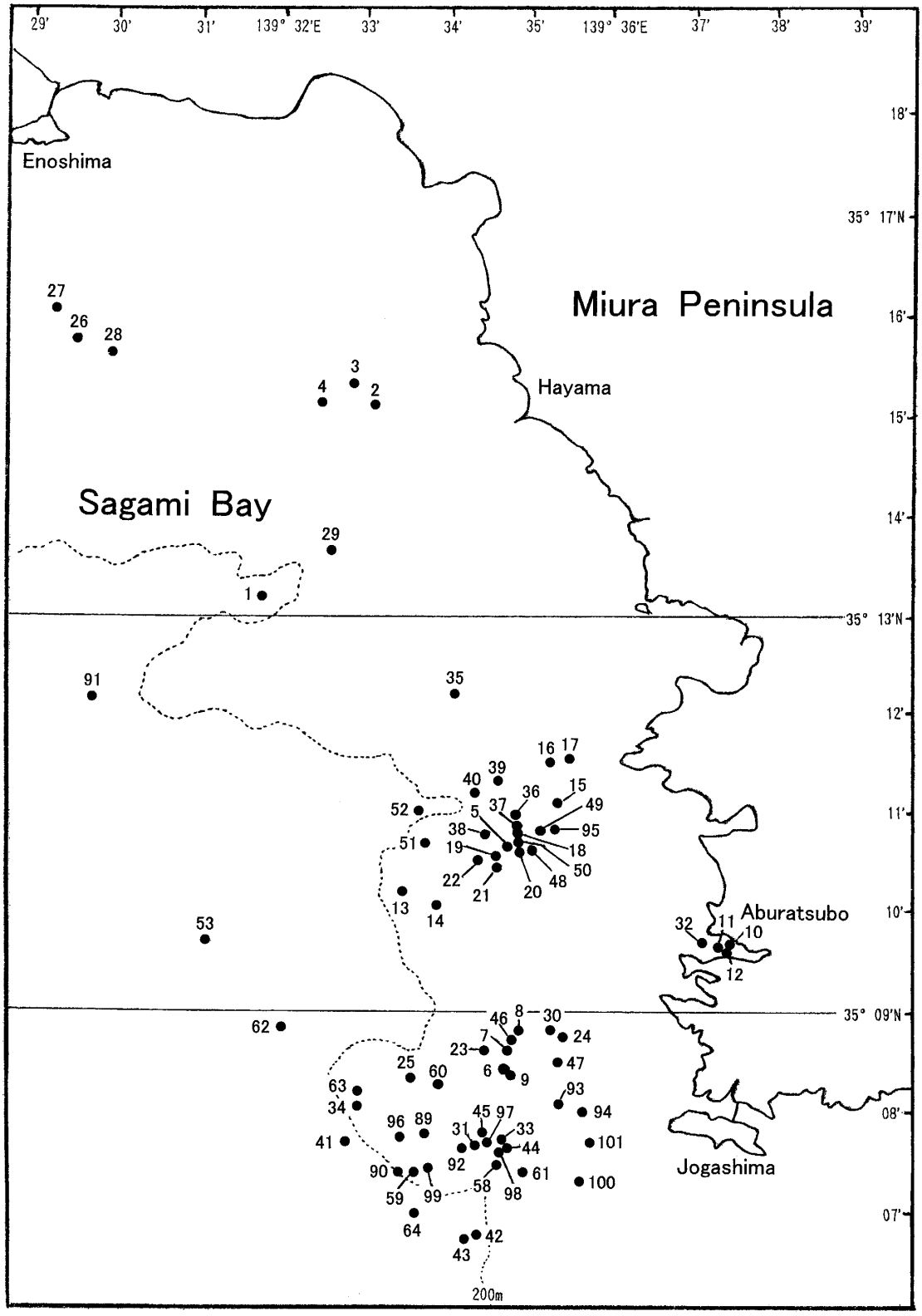

Fig. 1. Map of eastern sector of Sagami Bay, indicating the sampling stations, 1–53, 58–64, 89–101.

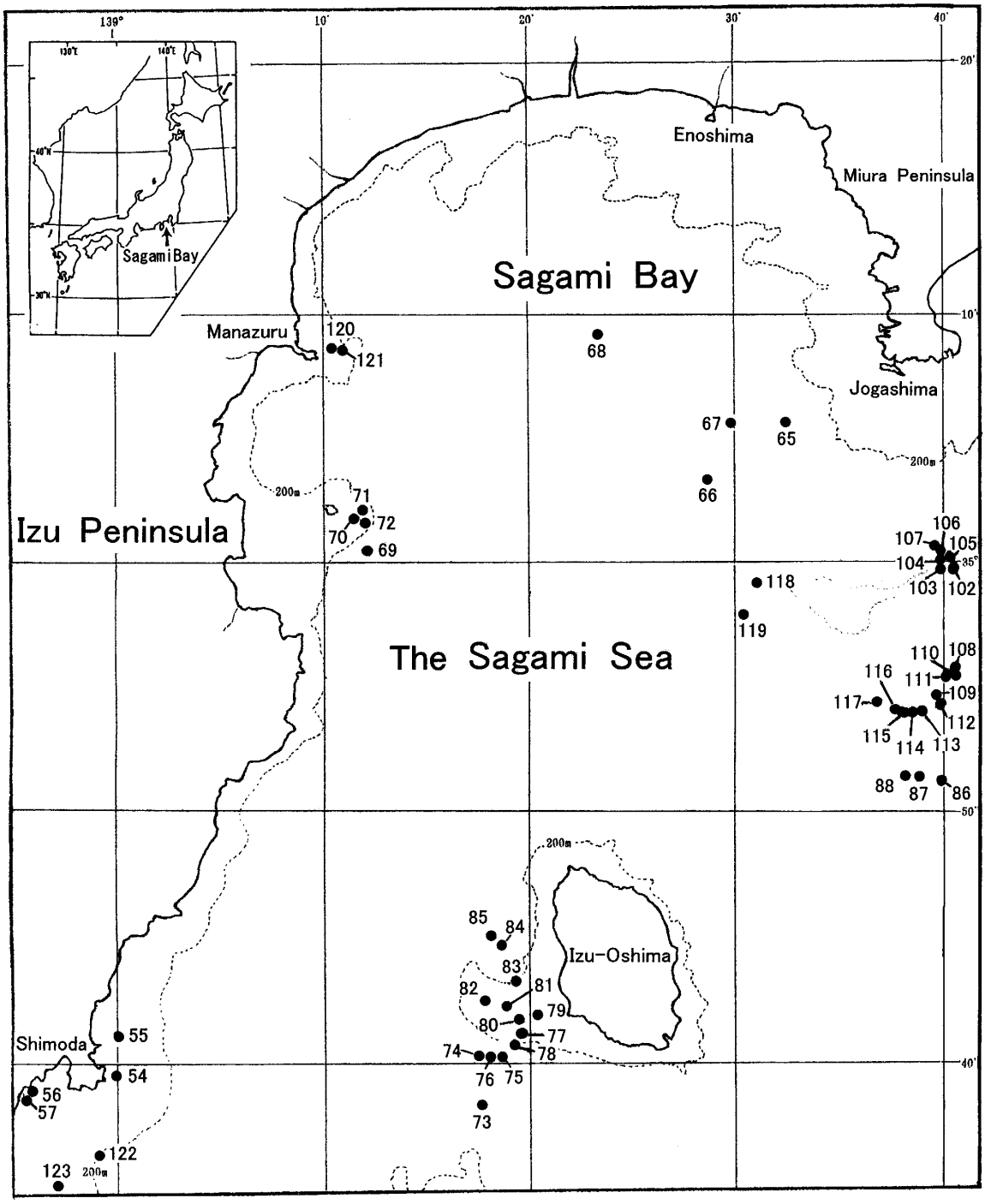

Fig. 2. Map of Sagami Bay through the Sagami Sea, indicating the sampling stations, 54–57, 65–88, 102–123.

Table 1. Collection data for stations at where polychaetes were collected in survey.

Stn.no.	Date	Position	Depth (m)	Collection		Gear
1	2001/04/16	35°13.2'N,139°31.8'E – 35°13.2'N,139°31.7'E	302 – 314	*Hajime-Maru*	St.1	Gill net
2	2001/04/16	35°15.1'N,139°33.1'E – 35°15.2'N,139°32.9'E	59 – 60	*Hajime-Maru*	St.3	Gill net
3	2001/04/16	35°15.3'N,139°32.8'E – 35°15.4'N,139°32.6'E	61 – 60	*Hajime-Maru*	St.4	Gill net
4	2001/04/16	35°15.1'N,139°32.4'E – 35°15.2'N,139°32.2'E	69 – 70	*Hajime-Maru*	St.5	Gill net
5	2001/04/16	35°10.6'N,139°34.8'E – 35°10.7'N,139°34.8'E	81 – 80	*Rinkai-Maru*	St.1	Dredge
6	2001/04/16	35°08.2'N,139°34.8'E – 35°08.6'N,139°34.7'E	87 – 87	*Rinkai-Maru*	St.2	Dredge
7	2001/07/05	35°08.2'N,139°34.8'E – 35°08.7'N,139°34.8'E	85 – 83	*Rinkai-Maru*	St.1	Dredge
8	2001/07/05	35°08.1'N,139°34.9'E – 35°08.6'N,139°34.9'E	84 – 80	*Rinkai-Maru*	St.2	Dredge
9	2001/07/05	35°08.0'N,139°34.7'E – 35°08.6'N,139°34.9'E	88 – 81	*Rinkai-Maru*	St.3	Dredge
10	2001/07/05	35°09.6'N,139°37.5'E – 35°09.7'N,139°37.5'E	7 – 8	*Rinkai-Maru*	St.4	Dredge
11	2001/07/05	35°09.6'N,139°37.4'E – 35°09.7'N,139°37.4'E	7 – 9	*Rinkai-Maru*	St.6	Dredge
12	2001/07/05	35°09.6'N,139°37.4'E – 35°09.6'N,139°37.4'E	8 – 8	*Rinkai-Maru*	St.7	Dredge
13	2002/02/05	35°10.2'N,139°33.5'E – 35°10.2'N,139°33.7'E	210 – 142	*Kiyomatsu-Maru*	St.1	Gill net
14	2002/02/05	35°10.1'N,139°33.9'E – 35°10.0'N,139°34.1'E	106 – 105	*Kiyomatsu-Maru*	St.2	Gill net
15	2002/02/05	35°11.1'N,139°35.4'E – 35°11.2'N,139°35.3'E	47 – 48	*Kiyomatsu-Maru*	St.3	Gill net
16	2002/02/05	35°11.5'N,139°35.3'E – 35°11.4'N,139°35.1'E	33 – 42	*Kiyomatsu-Maru*	St.4	Gill net
17	2002/02/05	35°11.5'N,139°35.5'E – 35°11.6'N,139°35.5'E	29 – 27	*Kiyomatsu-Maru*	St.5	Gill net
18	2002/02/05	35°10.8'N,139°34.9'E – 35°10.8'N,139°34.7'E	76 – 86	*Maruse-Maru*	St.2	Gill net
19	2002/02/05	35°10.6'N,139°34.7'E – 35°10.7'N,139°34.5'E	90 – 98	*Maruse-Maru*	St.3	Gill net
20	2002/02/05	35°10.6'N,139°34.9'E – 35°10.7'N,139°34.7'E	80 – 88	*Maruse-Maru*	St.4	Gill net
21	2002/02/05	35°10.5'N,139°34.7'E – 35°10.5'N,139°34.6'E	88 – 95	*Maruse-Maru*	St.5	Gill net
22	2002/02/05	35°10.6'N,139°34.4'E – 35°10.7'N,139°34.3'E	97 – 101	*Maruse-Maru*	St.6	Gill net
23	2002/02/05	35°08.7'N,139°34.5'E – 35°08.5'N,139°34.5'E	89 – 91	*Rinkai-Maru*	St.1	Dredge
24	2002/02/05	35°08.8'N,139°35.4'E – 35°08.7'N,139°35.5'E	66 – 65	*Rinkai-Maru*	St.2	Dredge
25	2002/02/05	35°08.4'N,139°33.7'E – 35°08.3'N,139°33.5'E	99 – 100	*Rinkai-Maru*	St.3	Dredge
26	2002/02/06	35°15.7'N,139°29.5'E – 35°15.6'N,139°29.6'E	60 – 70	*Yohei-Maru*	St.2	Gill net
27	2002/02/06	35°16.0'N,139°29.2'E – 35°15.9'N,139°29.3'E	67	*Yohei-Maru*	St.4	Gill net
28	2002/02/06	35°15.6'N,139°29.9'E – 35°15.5'N,139°30.1'E	65	*Yohei-Maru*	St.6	Gill net
29	2002/02/06	35°13.6'N,139°32.6'E – 35°13.5'N,139°32.7'E	70	*Yohei-Maru*	St.12	Gill net
30	2002/02/26	35°08.8'N,139°35.4'E – 35°08.7'N,139°35.7'E	66 – 53	*Chosuke-Maru*	St.3	Gill net
31	2002/02/26	35°07.9'N,139°34.5'E – 35°07.5'N,139°34.3'E	95 – 98	*Rinkai-Maru*	St.1	Dredge
32	2002/02/26	35°09.7'N,139°37.2'E – 35°09.7'N,139°37.1'E	12 – 12	*Rinkai-Maru*	St.3	Dredge
33	2002/02/27	35°07.9'N,139°34.5'E – 35°07.7'N,139°34.5'E	94 – 95	*Rinkai-Maru*	St.1	Dredge
34	2002/02/27	35°08.1'N,139°32.9'E – 35°07.6'N,139°32.8'E	240 – 418	*Rinkai-Maru*	St.3	Dredge
35	2002/03/05	35°12.2'N,139°34.1'E – 35°12.2'N,139°34.3'E	40	*Marutatsu-Maru*	St.2	Gill net
36	2002/03/08	35°11.0'N,139°34.9'E – 35°11.0'N,139°35.2'E	67 – 60	*Aoki-Maru No.2*	St.2	Gill net
37	2002/03/08	35°10.9'N,139°34.9'E – 35°10.9'N,139°35.2'E	73 – 62	*Aoki-Maru No.2*	St.5	Gill net
38	2002/03/08	35°10.8'N,139°34.5'E – 35°11.0'N,139°34.3'E	94 – 146	*Noboru-Maru*	St.2	Gill net
39	2002/03/08	35°11.3'N,139°34.7'E – 35°11.3'N,139°35.0'E	68 – 63	*Noboru-Maru*	St.5	Gill net
40	2002/03/08	35°11.2'N,139°34.4'E – 35°11.1'N,139°34.7'E	119 – 111	*Noboru-Maru*	St.6	Gill net
41	2002/03/08	35°08.0'N,139°32.9'E – 35°07.5'N,139°32.6'E	282 – 453	*Rinkai-Maru*	St.1	Dredge
42	2002/03/08	35°06.7'N,139°34.7'E – 35°06.8'N,139°34.1'E	310 – 381	*Rinkai-Maru*	St.2	Dredge
43	2002/03/08	35°06.7'N,139°34.6'E – 35°06.8'N,139°34.0'E	336 – 447	*Rinkai-Maru*	St.3	Dredge
44	2002/03/08	35°07.6'N,139°34.9'E – 35°07.7'N,139°34.7'E	92 – 92	*Rinkai-Maru*	St.4	Dredge
45	2002/03/08	35°07.6'N,139°34.8'E – 35°07.8'N,139°34.7'E	91 – 91	*Rinkai-Maru*	St.5	Dredge
46	2002/04/18	35°08.7'N,139°34.7'E – 35°08.5'N,139°34.6'E	86 – 89	*Rinkai-Maru*	St.1	Dredge
47	2002/04/18	35°08.4'N,139°35.3'E – 35°08.5'N,139°35.2'E	74 – 74	*Rinkai-Maru*	St.2	Dredge
48	2002/04/18	35°10.7'N,139°34.9'E – 35°10.8'N,139°34.8'E	81 – 81	*Rinkai-Maru*	St.3	Dredge
49	2002/04/18	35°10.8'N,139°34.9'E – 35°10.9'N,139°34.9'E	75 – 76	*Rinkai-Maru*	St.4	Dredge

Table 1 (Continued).

Stn.no.	Date	Position	Depth (m)	Collection		Gear
50	2002/05/21	35°10.6'N,139°34.8'E – 35°10.6'N,139°34.8'E	81 – 79	*Rinkai-Maru*	St.1	Dredge
51	2002/05/21	35°10.6'N,139°33.7'E – 35°10.7'N,139°33.8'E	140 – 149	*Rinkai-Maru*	St.2	Dredge
52	2002/05/21	35°11.0'N,139°33.7'E – 35°11.2'N,139°33.8'E	213 – 164	*Rinkai-Maru*	St.3	Dredge
53	2002/05/21	35°09.6'N,139°31.0'E – 35°10.0'N,139°31.0'E	336 – 303	*Rinkai-Maru*	St.4	Dredge
54	2002/05/29	34°39.5'N,139°01.3'E – 34°39.6'N,139°01.2'E	126 – 128	*Tansei-Maru*	St.IZE-1	Dredge
55	2002/05/29	34°41.1'N,139°00.8'E – 34°41.2'N,139°00.7'E	86 – 96	*Tansei-Maru*	St.IZE-3	Dredge
56	2002/05/29	34°38.8'N,138°56.6'E – 34°38.8'N,138°56.9'E	41 – 43	*Tansei-Maru*	St.SD-1	Dredge
57	2002/05/29	34°38.8'N,138°56.0'E – 34°38.8'N,138°55.9'E	32 – 32	*Tansei-Maru*	St.SD-2	Dredge
58	2002/06/20	35°07.5'N,139°34.6'E – 35°07.9'N,139°34.4'E	93 – 95	*Rinkai-Maru*	St.1	Dredge
59	2002/06/20	35°07.4'N,139°33.6'E – 35°07.8'N,139°33.2'E	121 – 156	*Rinkai-Maru*	St.2	Dredge
60	2002/07/31	35°08.4'N,139°33.8'E – 35°08.7'N,139°33.8'E	107 – 129	*Rinkai-Maru*	St.1	Dredge
61	2002/07/31	35°07.4'N,139°34.7'E – 35°07.7'N,139°34.8'E	92 – 89	*Rinkai-Maru*	St.2	Dredge
62	2002/10/20	35°08.6'N,139°32.0'E – 35°08.5'N,139°32.0'E	185 – 216	*Shin'yo-Maru*	St.1	Dredge
63	2002/10/20	35°08.3'N,139°32.9'E – 35°08.3'N,139°32.7'E	177 – 148	*Shin'yo-Maru*	St.2	Dredge
64	2002/10/22	35°07.0'N,139°33.7'E – 35°06.6'N,139°33.8'E	313 – 332	*Shin'yo-Maru*	St.5	Dredge
65	2002/10/22	35°05.6'N,139°32.3'E – 35°06.6'N,139°33.6'E	698 – 448	*Shin'yo-Maru*	St.6	Dredge
66	2002/10/22	35°03.4'N,139°28.7'E – 35°03.7'N,139°28.3'E	813 – 414	*Shin'yo-Maru*	St.8	Dredge
67	2002/10/22	35°05.7'N,139°29.7'E – 35°06.2'N,139°29.6'E	775 – 837	*Shin'yo-Maru*	St.9	Dredge
68	2002/10/22	35°09.4'N,139°23.4'E – 35°09.2'N,139°19.7'E	470 – 489	*Shin'yo-Maru*	St.13	Dredge
69	2002/10/23	35°00.5'N,139°12.3'E – 35°00.8'N,139°12.5'E	549 – 486	*Shin'yo-Maru*	St.23	Dredge
70	2002/10/23	35°01.8'N,139°11.6'E – 35°01.9'N,139°11.7'E	109 – 103	*Shin'yo-Maru*	St.24	Dredge
71	2002/10/23	35°02.0'N,139°11.9'E – 35°01.1'N,139°11.8'E	150 – 135	*Shin'yo-Maru*	St.25	Dredge
72	2002/10/23	35°01.6'N,139°12.0'E – 35°01.8'N,139°12.0'E	173 – 160	*Shin'yo-Maru*	St.26	Dredge
73	2002/10/24	34°38.4'N,139°17.8'E – 34°39.2'N,139°17.6'E	356 – 348	*Shin'yo-Maru*	St.27	Dredge
74	2002/10/24	34°40.0'N,139°17.5'E – 34°39.9'N,139°17.9'E	327 – 333	*Shin'yo-Maru*	St.28	Dredge
75	2002/10/24	34°40.2'N,139°18.6'E – 34°40.4'N,139°18.4'E	307 – 289	*Shin'yo-Maru*	St.29	Dredge
76	2002/10/24	34°40.6'N,139°18.1'E – 34°40.4'N,139°18.6'E	274 – 281	*Shin'yo-Maru*	St.29'	Dredge
77	2002/10/24	34°40.7'N,139°19.3'E – 34°40.8'N,139°19.0'E	252 – 228	*Shin'yo-Maru*	St.30	Dredge
78	2002/10/24	34°40.8'N,139°19.0'E – 34°40.8'N,139°19.3'E	225 – 231	*Shin'yo-Maru*	St.30'	Dredge
79	2002/10/24	34°41.9'N,139°20.4'E – 34°42.0'N,139°30.2'E	106 – 103	*Shin'yo-Maru*	St.32	Dredge
80	2002/10/24	34°42.2'N,139°19.0'E – 34°42.2'N,139°18.9'E	124 – 126	*Shin'yo-Maru*	St.33	Dredge
81	2002/10/24	34°42.5'N,139°17.7'E – 34°42.5'N,139°17.7'E	151 – 154	*Shin'yo-Maru*	St.34	Dredge
82	2002/10/24	34°43.2'N,139°16.8'E – 34°43.3'N,139°16.9'E	171 – 181	*Shin'yo-Maru*	St.35	Dredge
83	2002/10/24	34°43.4'N,139°19.3'E – 34°43.5'N,139°19.6'E	161 – 180	*Shin'yo-Maru*	St.36	Dredge
84	2002/10/24	34°44.5'N,139°18.6'E – 34°44.4'N,139°18.4'E	346 – 343	*Shin'yo-Maru*	St.38	Dredge
85	2002/10/24	34°45.0'N,139°18.2'E – 34°45.0'N,139°18.7'E	397 – 378	*Shin'yo-Maru*	St.39	Dredge
86	2002/10/25	34°51.3'N,139°40.1'E – 34°51.0'N,139°40.3'E	172 – 135	*Shin'yo-Maru*	St.41	Dredge
87	2002/10/25	34°51.6'N,139°38.1'E – 34°51.2'N,139°38.6'E	487 – 474	*Shin'yo-Maru*	St.43	Dredge
88	2002/10/25	34°51.6'N,139°37.5'E – 34°51.2'N,139°37.9'E	500 – 519	*Shin'yo-Maru*	St.44	Dredge
89	2003/01/22	35°07.9'N,139°33.7'E – 35°07.8'N,139°33.7'E	100 – 101	*Rinkai-Maru*	St.1	Dredge
90	2003/01/22	35°07.4'N,139°33.4'E – 35°07.4'N,139°33.4'E	177 – 200	*Rinkai-Maru*	St.2	Dredge
91	2003/01/22	35°12.2'N,139°29.6'E – 35°12.1'N,139°29.6'E	351 – 338	*Rinkai-Maru*	St.3	Dredge
92	2003/03/12	35°07.5'N,139°34.5'E – 35°07.4'N,139°34.4'E	93 – 95	*Rinkai-Maru*	St.1	Dredge
93	2003/03/12	35°08.0'N,139°35.4'E – 35°07.8'N,139°35.3'E	77 – 79	*Rinkai-Maru*	St.2	Dredge
94	2003/03/12	35°08.0'N,139°35.7'E – 35°07.9'N,139°35.7'E	67 – 72	*Rinkai-Maru*	St.3	Dredge
95	2003/03/12	35°10.9'N,139°35.2'E – 35°10.9'N,139°35.2'E	64 – 59	*Rinkai-Maru*	St.4	Dredge
96	2003/03/13	35°07.7'N,139°33.4'E – 35°07.5'N,139°33.3'E	104 – 204	*Rinkai-Maru*	St.5	Dredge
97	2003/03/13	35°07.6'N,139°34.3'E – 35°07.4'N,139°34.1'E	99 – 108	*Rinkai-Maru*	St.7	Dredge
98	2003/10/01	35°07.7'N,139°34.9'E – 35°07.8'N,139°34.8'E	89 – 88	*Rinkai-Maru*	St.1	Dredge

Stn.no.	Date	Position	Depth (m)	Collection		Gear
99	2003/10/01	35°07.5'N,139°34.1'E – 35°07.6'N,139°34.1'E	101 – 100	*Rinkai-Maru*	St.2	Dredge
100	2003/10/01	35°07.3'N,139°35.7'E – 35°07.4'N,139°35.7'E	79 – 78	*Rinkai-Maru*	St.3	Dredge
101	2003/10/01	35°07.8'N,139°35.8'E – 35°07.9'N,139°35.7'E	70 – 68	*Rinkai-Maru*	St.4	Dredge
102	2003/10/17	34°59.6'N,139°41.1'E – 34°59.7'N,139°41.1'E	81 – 78	*Shin'yo-Maru*	St.1	Dredge
103	2003/10/17	34°59.7'N,139°40.4'E – 34°59.9'N,139°40.4'E	91 – 94	*Shin'yo-Maru*	St.2	Dredge
104	2003/10/17	35°00.0'N,139°40.2'E – 35°00.0'N,139°40.3'E	97 – 108	*Shin'yo-Maru*	St.3	Dredge
105	2003/10/17	35°00.1'N,139°40.4'E – 35°00.1'N,139°40.5'E	199 – 210	*Shin'yo-Maru*	St.4	Dredge
106	2003/10/17	35°00.3'N,139°40.2'E – 35°00.2'N,139°40.5'E	300 – 274	*Shin'yo-Maru*	St.5	Dredge
107	2003/10/18	35°00.7'N,139°39.8'E – 35°00.5'N,139°40.0'E	530 – 324	*Shin'yo-Maru*	St.6	Dredge
108	2003/10/18	34°55.7'N,139°40.9'E – 34°55.7'N,139°40.9'E	108 – 104	*Shin'yo-Maru*	St.7	Dredge
109	2003/10/18	34°55.5'N,139°40.6'E – 34°55.4'N,139°40.8'E	240 – 223	*Shin'yo-Maru*	St.8	Dredge
110	2003/10/18	34°55.5'N,139°40.2'E – 34°55.4'N,139°40.5'E	375 – 275	*Shin'yo-Maru*	St.9	Dredge
111	2003/10/18	34°54.8'N,139°39.7'E – 34°54.8'N,139°39.9'E	348 – 312	*Shin'yo-Maru*	St.10	Dredge
112	2003/10/18	34°54.2'N,139°39.9'E – 34°54.3'N,139°39.3'E	315 – 365	*Shin'yo-Maru*	St.11	Dredge
113	2003/10/18	34°54.1'N,139°38.8'E – 34°54.4'N,139°38.9'E	460 – 534	*Shin'yo-Maru*	St.12	Dredge
114	2003/10/18	34°54.0'N,139°38.4'E – 34°54.3'N,139°38.5'E	525 – 634	*Shin'yo-Maru*	St.13	Dredge
115	2003/10/18	34°54.1'N,139°38.0'E – 34°54.4'N,139°38.2'E	712 – 671	*Shin'yo-Maru*	St.14	Dredge
116	2003/10/18	34°54.1'N,139°37.6'E – 34°53.5'N,139°37.4'E	776 – 790	*Shin'yo-Maru*	St.15	Dredge
117	2003/10/18	34°54.4'N,139°36.9'E – 34°54.6'N,139°37.3'E	840 – 801	*Shin'yo-Maru*	St.16	Dredge
118	2003/10/24	34°58.8'N,139°31.5'E – 34°59.2'N,139°31.2'E	900 – 950	*Shin'yo-Maru*	St.36	Dredge
119	2003/10/24	34°57.8'N,139°30.4'E – 34°58.3'N,139°30.0'E	1200–1195	*Shin'yo-Maru*	St.37	Dredge
120	2004/08/23	35°08.4'N,139°10.4'E – 35°08.3'N,139°10.3'E	52 – 56	*Tachibana*	St.2	Dredge
121	2004/08/23	35°08.3'N,139°11.1'E – 35°08.4'N,139°11.1'E	115 – 120	*Tachibana*	St.3	Dredge
122	2005/03/17	34°36.3'N,138°59.1'E – 34°36.6'N,138°59.2'E	210 – 193	*Suzaki II*	St.1	Dredge
123	2005/03/17	34°35.1'N,138°57.3'E	36 – 50	*Suzaki II*	St.4	Dredge

Description of Species

Order Phyllodocida

Family Chrysopetalidae Ehlers, 1864

Bhawania goodie Webster, 1884

Bhawania goodie Webster, 1884, p. 308; Day, 1967a, pp. 118–119, fig. 2. 1. a–f; Imajima & Hartman, 1964, p. 47.

Material: Stn. no. 123 (1 specimen).

Distribution: Red Sea, Indian Ocean, South Africa, Philippine Islands, Japan.

Chrysopetalum occidentale Johnson, 1897

Chrysopetalum occidentale Johnson, 1897, p. 161, pl. 5, figs. 15–16, pl. 6, figs. 17–19; Imajima, 2003, pp. 5–6.

Material: Stn. no. 13 (1); Stn. no. 36 (32); Stn. no. 37 (3); Stn. no. 59 (1); Stn. no. 63 (1); Stn. no. 70 (1); Stn. no. 71 (1); Stn. no. 87 (1); Stn. no. 89 (2); Stn. no. 95 (5).

Distribution: Southern California to western Mexico, Australia, Yellow Sea, Japan.

Family Pisionidae Southern, 1914

***Pisione* sp.**

Material: Stn. no. 123 (1). The specimen is only anterior fragment.

Family Aphroditidae Malmgren, 1867

Aphrodita aculeata Linnaeus, 1761

Aphrodita aculeata Linnaeus, 1758, p. 655; Imajima, 2003, pp. 6–10, figs. 3a–g, 4a–l, 5a–h.

Material: Stn. no. 24 (1); Stn. no. 31 (1).

Distribution: North Atlantic Ocean, Mediterranean Sea, Indian Sea, Japan.

Aphrodita japonica Marenzeller, 1879

Aphrodita japonica Marenzeller, 1879, pp. 111–112, pl. 1, fig. 2; Imajima, 2003, pp. 14–17, figs. 8a–j, 9a–m.

Material: Stn. no. 5 (1); Stn. no. 6 (2); Stn. no. 23 (2); Stn. no. 24 (2); Stn. no. 33 (5); Stn. no. 46 (6); Stn. no. 47 (3); Stn. no. 50 (1); Stn. no. 51 (1); Stn. no. 52 (4); Stn. no. 61 (1); Stn. no. 89 (1); Stn. no. 92 (1); Stn. no. 93 (8); Stn. no. 97 (4); Stn. no. 98 (1).

Distribution: Japan, Alaska, California.

Aphrodita negligens Moore, 1905

Aphrodita negligens Moore, 1905, pp. 526–529, pl. 34, figs. 1, 2, pl. 35, fig. 31; Pettibone, 1953, pp. 70–72, pl. 34, figs. 308–316, pl. 35, figs. 317–324; Imajima, 2003, pp. 17–20, figs. 10a–i, 11a–n.

Material: Stn. no. 97 (1).

Distribution: Western Canada, Japan.

Aphrodita nipponensis Imajima, 2003

Aphrodita nipponensis Imajima, 2003, pp. 20–23, figs. 12a–o, 13a–m.

Material: Stn. no. 24 (2).

Distribution: Japan.

Aphrodita sibogae (Horst, 1916)

Aphroditella sibogae Horst, 1916, pp. 66.

Aphrodita sibogae: Hutchings & McRae, 1993, p. 307, fig. 60, tab. 1; Imajima, 1997a, pp.152–153, fig. 2a–t; Imajima, 2003, pp. 23–26.

Material: Stn. no. 42 (1).

Distribution: West of Salawatti, Indonesian Archipelago, Japan.

Laetmonice japonica McIntosh, 1885

Laetmonice japonica McIntosh, 1885, pp. 50–51, pl. 8, fig. 1, pl. 4A, fig. 13, pl. 5A, figs. 9, 10: Imajima, 2003, pp. 26–29, figs. 14a–h, 15a–k; Imajima, 2005, p. 55.

Material: Stn. no. 6 (3); Stn. no. 7 (1); Stn. no. 9 (4); Stn. no. 33 (2); Stn. no. 45 (1); Stn. no. 46 (1); Stn. no. 56 (11); Stn. no. 55 (1); Stn. no. 58 (1); Stn. no. 89 (1); Stn. no. 119 (1).

Distribution: Japan, Yellow Sea.

Laetmonice producta Grube, 1877

Laetmonice producta Grube, 1877a, pp. 512–513; Imajima, 2003, pp. 30–31, fig. 16a–s; Imajima, 2005, p. 55.

Material: Stn. no. 34 (5); Stn. no. 41 (6); Stn. no. 42 (2); Stn. no. 43 (1); Stn. no. 76 (1); Stn. no.

110 (3); Stn. no. 111 (2); Stn. no. 112 (6).
Distribution: Australia, Japan.

Pontogenia dentata Imajima, 2003

Pontogenia dentata Imajima, 2003, pp. 31–37, figs. 17a–l, 18a–j, 19a–k; Imajima, 2005, p. 55.
Material: Stn. no. 31 (2); Stn. no. 58 (2); Stn. no. 59 (3); Stn. no. 61 (1).
Distribution: Japan.

Pontogenia sagamiana Imajima, 2003

Pontogenia sagamiana Imajima, 2003, pp. 40–46, figs. 23a–k, 24a–p, 25a–p; Imajima, 2005, p. 55.
Material: Stn. no. 6 (1); Stn. no. 31 (5); Stn. no. 33 (1); Stn. no. 58 (1); Stn. no. 99 (1); Stn. no. 102 (1); Stn. no. 104 (1).
Distribution: Japan.

Family Polynoidae Malmgren, 1867
Subfamily Arctonoinae Hanley, 1989

Paradyte levis (Marenzeller, 1902)

Scalisetosus levis Marenzeller, 1902, pp. 575–576, pl. 3, fig. 12.
Paradyte levis: Pettibone, 1969, p. 16; Imajima, 1997b, pp. 6–7, figs. 3a–f, 4a–g.
Material: Stn. no. 17 (1).
Distribution: Japan.

Subfamily Harmothoinae Horst, 1917

Harmothoe extenuata (Grube, 1840)

Polynoe extenuata Grube, 1840, p. 86.
Harmothoe extenuata: Ehlers, 1913, pp. 446–447; Imajima, 1997b, pp. 20–21; Imajima, 2005, p. 59.
Material: Stn. no. 6 (1); Stn. no. 15 (1); Stn. no. 42 (32); Stn. no. 93 (1); Stn. no. 95 (1); Stn. no. 99 (1); Stn. no. 104 (18); Stn. no. 105 (3); Stn. no. 108 (2); Stn. no. 110 (4); Stn. no. 111 (1); Stn. no. 112 (3); Stn. no. 118 (1); Stn. no. 122 (1).
Distribution: Circumpolar. Widespread in the Arctic, Mediterranean Sea, California, Japan.

Harmothoe imbricata (Linnaeus, 1767)

Aphrodita imbricata Linnaeus, 1767, p. 1084.
Harmothoe imbricata: Imajima, 1997b, pp. 29–31, fig. 14a–l.
Material: Stn. no. 21 (1); Stn. no. 31 (1); Stn. no. 40 (1); Stn. no. 98 (1); Stn. no. 100 (4).
Distribution: Great Britain, Arctic and north Pacific oceans, Indian Ocean, Japan.

***Harmothoe* spp.**

Material: Stn. no. 23 (2); Stn. no. 31 (5); Stn. no. 33 (6); Stn. no. 37 (6); Stn. no. 46 (2); Stn. no. 47 (2); Stn. no. 51 (1); Stn. no. 57 (1); Stn. no. 58 (1); Stn. no. 75 (6); Stn. no. 76 (25); Stn. no. 89 (4).

Paralepidonotus ampulliferus (Grube, 1878)

Polynoe ampullifera Grube, 1878, p. 35, pl. 3, fig. 5.
Paralepidonotus ampulliferus: Horst, 1915, p. 8; Imajima, 1997b, pp. 50–53, figs. 25a–g, 26a–j.

Material: Stn. no. 91 (2).

Distribution: Philippine Islands, East Africa, Red Sea, Australia, Marshall Islands, Japan.

Subfamily Iphioninae Baird, 1865

Iphione ovata Kinberg, 1855

Iphione ovata Kinberg, 1855, p. 383; Hartman, 1939, p. 27, pl.3, figs. 31, 32; Pettibone, 1986, pp. 16–19, fig. 6; Imajima, 2001a, pp. 62–63, fig. 38.

Iphione hirotai Izuka, 1912, pp. 63–65, pl. 7, figs. 8–15.

Material: Stn. no. 76 (2).

Distribution: Tropical and subtropical regions of Pacific and Indian oceans.

Subfamily Lepidastheniinae Pettibone, 1989

Lepidasthenia interrupta (Marenzeller, 1902)

Halosydna interrupta Marenzeller, 1902, p. 570, pl. 1, fig. 2.

Lepidasthenia interrupta: Seidler, 1924, pp. 163–164; Imajima, 1997b, pp. 57–59, fig. 28a–k.

Material: Stn. no. 37 (1); Stn. no. 52 (1); Stn. no. 111 (8).

Distribution: Japan.

Lepidasthenia izukai Imajima & Hartman, 1964

Polynoe longissima Izuka, 1912, pp. 34–36, pl. 1, fig. 1, pl. 4, figs. 1–5.

Lepidasthenia izukai Imajima & Hartman, 1964, pp. 22–23; Imajima, 1997b, pp. 54–55, fig. 27a–n.

Material: Stn. no. 10 (1); Stn. no. 97 (1).

Distribution: Japan, Yellow Sea.

Lepidasthenia ocellata (McIntosh, 1885)

Polynoe ocellata McIntosh, 1885, pp. 126–128, pl. 12, fig. 3, pl. 12A, figs. 18, 19.

Lepidasthenia ocellata: Imajima & Hartman, 1964, pp. 23–24.

Material: Stn. no. 94 (1); Stn. no. 95 (4); Stn. no. 101 (1).

Distribution: Japan.

***Lepidasthenia* sp.**

Material: Stn. no. 36 (1); Stn. no. 44 (1); Stn. no. 99 (2); Stn. no. 101 (1).

Subfamily Lepidonotinae Horst, 1917

Euphione chitoniformis (Moore, 1903)

Lepidonotus chitoniformis Moore, 1903, pp. 405–409, pl. 23, figs. 10, 11.

Euphione chitoniformis: Seidler, 1924, pp. 108–109; Imajima, 1997b, pp. 74–77, figs. 34a–k, 35a–f.

Material: Stn. no. 101 (1).

Distribution: Japan.

Halosydna brevisetosa Kinberg, 1855

Halosydna brevisetosa Kinberg, 1855, p. 385; Pettibone, 1953, pp. 17–20, pl. 3, figs. 20–24, pl. 4, figs. 25–33, pl. 5, figs. 34–42; Imajima, 1997b, p. 116.

Material: Stn. no. 37 (1).

Distribution: Alaska Peninsula to Mexico, North Japan Sea, Yellow Sea, Japan.

Hermilepidonotus helotypus (Grube, 1877)

Polynoe (*Lepidonotus*) *helotypus* Grube, 1877b, p. 49.

Hermilepidonotus helotypus: Pettibone, 1996, pp. 146–148, fig. 2; Imajima, 1997b, pp. 89–92, fig. 43a–l; Imajima, 2005, p. 59.

Material: Stn. no. 6 (2); Stn. no. 8 (1); Stn. no. 9 (3); Stn. no. 37 (6); Stn. no. 42 (20).

Distribution: Yellow Sea, Bering Sea, Okhotsk Sea, Japan.

Hyperhalosydna striata (Kinberg, 1855)

Lepidonotus striatus Kinberg, 1855, p. 384.

Hyperhalosydna striata: Hanley & Burke, 1991, pp. 54–57, fig. 17A–M.

Material: Stn. no. 42 (1).

Distribution: Australia, Philippines, Japan.

Lepidonotus albopustulatus Horst, 1915

Lepidonotus albo-pustulatus Horst, 1915, p. 4.

Lepidonotus albopustulatus: Imajima, 1997b, pp. 112–115, figs. 55a–i, 56a–l.

Material: Stn. no. 94 (3); Stn. no. 95 (1); Stn. no. 101 (1); Stn. no. 104 (1).

Distribution: East Indies, Japan.

Lepidonotus caelorus Moore, 1903

Lepidonotus caelorus Moore, 1903, pp. 412–414, pl. 23, fig. 12; Imajima, 1997b, pp. 103–107, figs. 50a–h, 51a–i.

Material: Stn. no. 20 (1); Stn. no. 34 (9); Stn. no. 52 (7); Stn. no. 54 (1); Stn. no. 58 (6); Stn. no. 59 (6); Stn. no. 61 (1); Stn. no. 74 (1); Stn. no. 75 (12); Stn. no. 76 (29); Stn. no. 77 (5); Stn. no. 78 (1); Stn. no. 80 (2); Stn. no. 82 (11); Stn. no. 86 (1); Stn. no. 89 (2); Stn. no. 91 (1); Stn. no. 97 (4); Stn. no. 104 (3); Stn. no. 110 (3).

Distribution: Japan, Alaska, Puget Sound, Oregon Coast.

Lepidonotus carinulatus (Grube, 1870)

Polynoe (*Lepidonotus*) *carinulatus* Grube, 1870, p. 488.

Lepidonotus carinulatus: Marenzeller, 1902, p. 571, pl. 1, fig. 4; Imajima, 1997b, pp. 95–98, figs. 45a–k, 46a–l.

Material: Stn. no. 33 (1); Stn. no. 47 (2); Stn. no. 52 (1); Stn. no. 60 (1); Stn. no. 86 (3); Stn. no. 98 (1); Stn. no. 99 (5); Stn. no. 100 (5); Stn. no. 101 (1); Stn. no. 104 (3); Stn. no. 105 (1); Stn. no. 111 (1); Stn. no. 112 (3).

Distribution: Red Sea, Indian Ocean, Australia, Philippines, Japan.

Lepidonotus glaber Imajima, 1997

Lepidonotus glaber Imajima, 1997b, pp. 100–103, figs. 47a–g, 48a–e, 49a–h.

Material: Stn. no. 112 (1).

Distribution: Japan.

Lepidonotus spiculus (Treadwell, 1906)

Polynoe spicula Treadwell, 1906, pp. 1151–1152, fig. 11.

Lepidonotus spiculus: Ruff, 1995, pp. 142–144, fig. 3. 16; Imajima, 1997b, pp. 107–112, figs. 52a–e, 53a–e, 54a–n.

Material: Stn. no. 6 (9); Stn. no. 7 (1); Stn. no. 9 (7); Stn. no. 15 (1); Stn. no. 30 (1); Stn. no. 31 (3); Stn. no. 36 (3); Stn. no. 45 (1); Stn. no. 94 (1); Stn. no. 98 (1); Stn. no. 104 (1); Stn. no. 123 (2).

Distribution: West coast of North America, Japan.

Nonparahalosydna pleiolepis (Marenzeller, 1879)

Polynoe (*Lepidonotus*) *pleiolepis* Marenzeller, 1879, pp. 114–115, pl. 1, fig. 4.

Nonparahalosydna pleiolepis: Uschakov, 1982, pp. 101–102, pl. 27, fig. 1–5; Imajima, 1997b, pp. 85–89, figs. 40a–f, 41a–f, 42a–j.

Material: Stn. no. 9 (1).

Distribution: Japan, Yellow Sea.

Family Acoetidae Kinberg, 1858

Eupanthalis aena (Moore, 1903)

Restio aenus Moore, 1903, pp. 423–426, pl. 24, figs. 21–24.

Eupanthalis aena: Pettibone, 1989, pp. 31–32, fig. 17; Imajima, 2001a, p. 144, fig. 69.

Material: Stn. no. 25 (1).

Distribution: Japan.

Eupolyodontes gulo (Grube, 1855)

Polyodontes gulo Grube, 1855, p. 83, pl. 3, fig. 2.

Eupolyodontes gulo: Fiege & Barnich, 1998, pp. 84–91, figs. 1–3; Imajima, 2001a, p. 145, fig. 70.

Material: Stn. no. 95 (1).

Distribution: Red Sea, New Caledonia, Japan.

Family Pholoidae Kinberg, 1858

Pholoides dorsipapillatus (Marenzeller, 1893)

Pholoe dorsipapillata Marenzeller, 1893, p. 30, pl. 1, fig. 3A–D.

Pholoides dorsipapillatus: Pettibone, 1992a, pp. 16–18, figs. 8–9; Imajima, 2001b, pp. 44–47, figs. 7a–i, 8a–f.

Material: Stn. no. 104 (1); Stn. no. 112 (3).

Distribution: Mid-Atlantic from Bermuda, Gulf of Mexico to Azores, Mediterranean Sea, Red Sea, North and South Africa, Japan.

Family Sigalionidae Malmgren, 1867

Euthalenessa festiva (Grube, 1875)

Leanira festiva Grube, 1875, p. 78.

Euthalenessa festiva: Pettibone, 1970a, pp. 12–19, figs. 6–11; Imajima, 2003, pp. 49–55, figs. 27a–h, 28a–f, 29a–e, 30a–c, 31a–m; Imajima, 2005, p. 60.

Material: Stn. no. 58 (1); Stn. no. 59 (1); Stn. no. 102 (1); Stn. no. 103 (1).

Distribution: Gulf of Iran, Philippines, Malay Archipelago, New Guinea, Australia, Marshall

Islands, Japan.

Heteropelogenia japonica sp. nov.

(Figs. 3A–G, 4A–K)

Type material: Holotype, NSMT-Pol. S H 466: the Sagami Sea, 34°39.5'N, 139°00.8'E – 34°39.6' N, 139°01.2'E, 126–128 m, May 2002 (Stn. no. 54). Paratypes, NSMT-Pol. S P 467: Stn. no. 24 (1 specimen) ; P 468: Stn. no. 49 (1); P 469: Stn. no. 61 (1); P 470: Stn. no. 102 (1).

Description: Holotype missing posterior end for 93 segments 60 mm long, 6 mm wide including parapodia. Body arched dorsally, mid-dorsum uncovered by elytra, ventrum flattened with small rounded papillae.

Prostomium and tentaculophores fused basally and partially withdrawn in segments II and III. Prostomium oval, with 2 pairs of eyes, ventral pair about 2 times larger than dorsal pair. Median antenna with large, bulbous ceratophore, curved ventrally; filiform style about as long as ceratophore. Tentaculophores fused basally and medially below ceratophore of median antenna, each with subulate lateral antenna on dorsal side; dorsal tentacular cirrus, about as long as median antenna, and longer ventral tentacular cirrus on outer side, and 2 bundles of long capillary notosetae on inner side. Palps long, tapered, emerging ventral to tentaculophores (Fig. 3A, B).

Parapodia biramous, notopodia short, smaller than neuropodia. Segment 2 with large elytrophores with small lateral branchiae and long ventral buccal cirri; postsetal lobe of neuropodium with short papillae on antero-lateral borders (Fig. 3C, D). Segment 3 with branchiae and long dorsal cirri, cirrophores long, extending to tips of notopodia, styles about length of cirrophores (Fig. 3E). Neuropodia with long digitiform extensions on presetal acicular lobes (Fig. 3F).

Following parapodia with notopodia smaller than neuropodia. Three ciliated ctenidia per parapodium in curved areas between notopodia and branchiae or between elytrophores. Notopodia subconical, with subdistal flanges enclosing numerous notosetae. Neuropodia with subconical acicular lobes, papillate distally. Ventral cirri with cirrophores with 2–5 long papillae, styles. Anterior, ventral and posterior sides of neuropodia covered with oval papillae, plus some long papillae on sides (Fig. 3G).

Elytra with scattered large and small sand grains and foraminifera. First pair of elytra elongate-oval, with short papillae, on anterior, lateral and posterior borders, and closely scattered filiform papillae, some with flattened tops on surfaces (Fig. 4A). Second pair of elytra subreniform with short papillae on borders; surfaces with scattered micropapillae (Fig. 4B). Following elytra squarish, with medial notch forming papillate processes and additional posterior papillate processes; lateral borders scalloped and fringed with long articulated papillae on crests and small rounded papillae in valleys (Fig. 4C).

Notosetae numerous spinous capillaries, extending anteriorly, dorsally and posteroventrally beyond ventral cirri. Neurosetae of segment 2 compound, stems slender, with long spinous regions, blades long, with slender, curved unidentate tips (Fig. 4D, E). Neurosetae of segment 3 compound, stems of upper ones thicker, with short spinous regions than those of segment 2 (Fig. 4F, G). Neurosetae of more posterior parapodia compound falcigers: upper ones with stems bearing 7 or so spinous rows, blades rather long, with bifid tips; lower ones slender, with long blades and bifid tips (Fig. 4H–K).

Remarks: *Heteropelogenia japonica* resembles *H. articulata* (Day, 1960) from South Africa, 430–

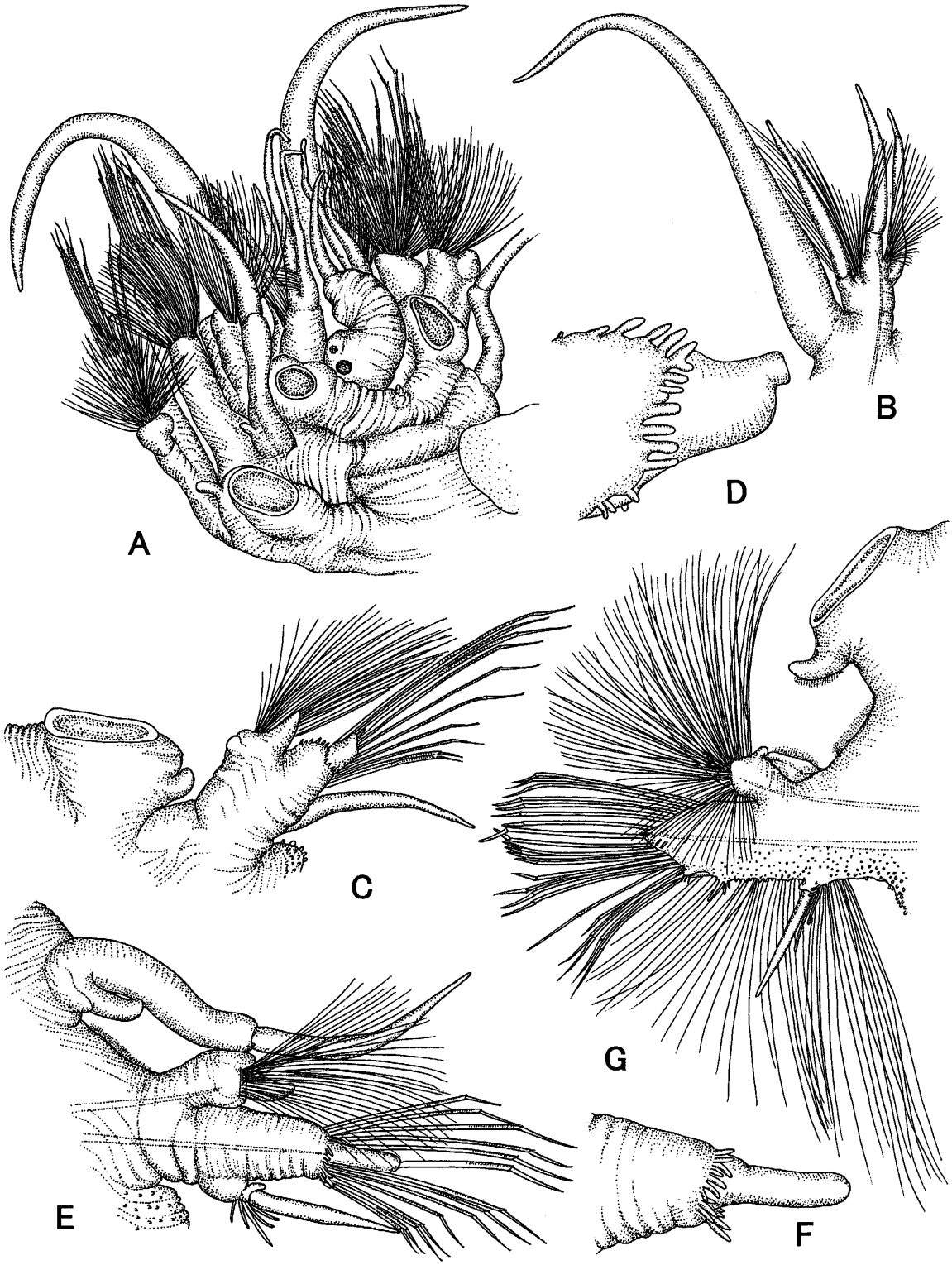

Fig. 3. *Heteropelogenia japonica* sp. nov. A, anterior end, dorso-lateral view, × 21; B, left segment 1, outer view, ×20; C, right parapodium of segment 2, posterior view, ×27; D, distal end of neuropodium from same, ×89; E, right parapodium of segment 3, posterior view, ×27; F, digitiform extension on presetal acicular lobe from same, ×50; G, right parapodium of segment 40, anterior view, ×22.

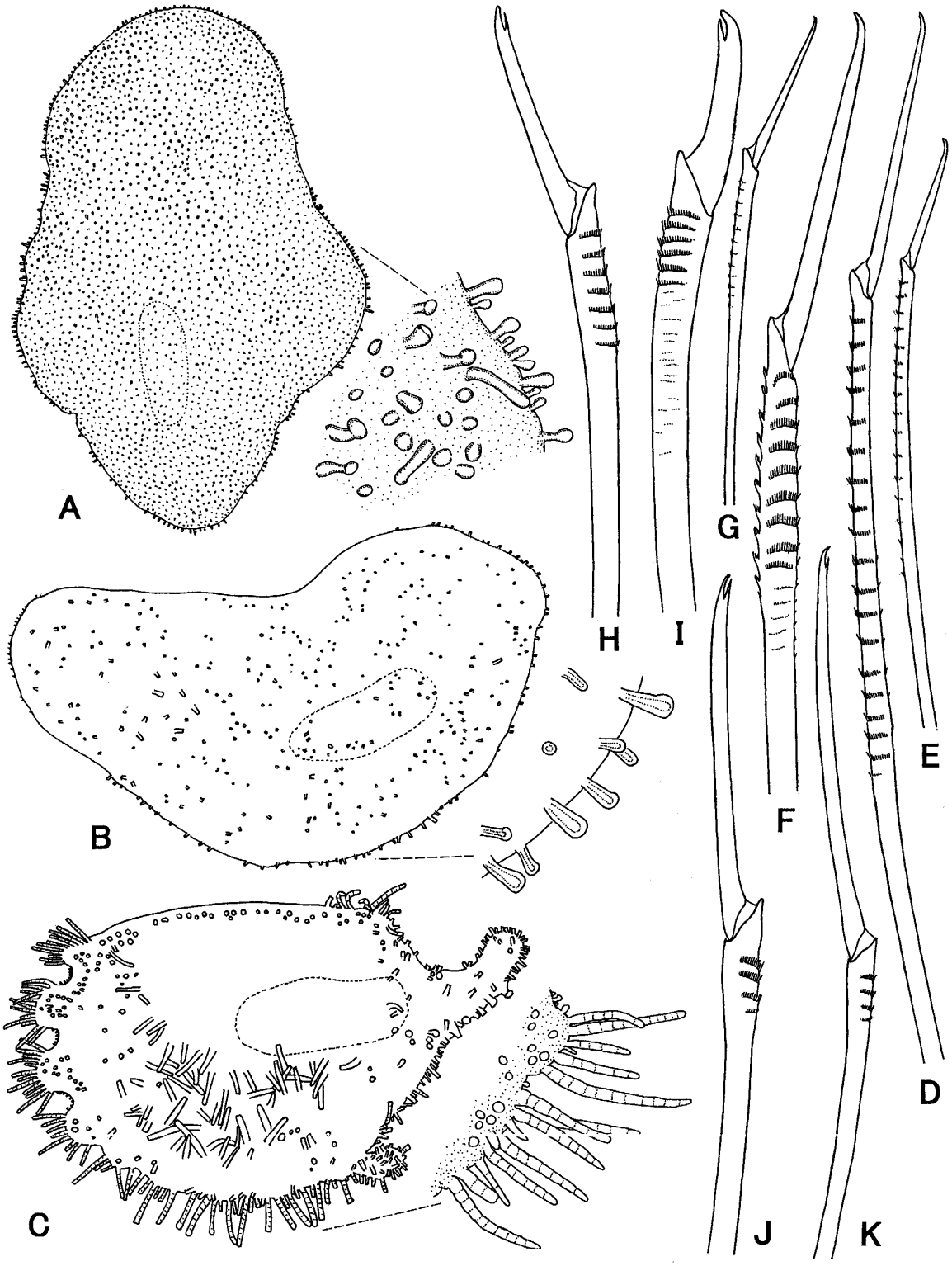

Fig. 4. *Heteropelogenia japonica* sp. nov. A, left first elytron, ×22, with detail of papillae, ×101; B, left second elytron, ×28, with detail of papillae, ×145; C, left middle elytron, ×28, with detail of papillae, ×81; D, E, upper (D) and lower (E) neurosetae from segment 2, ×153; F, G, upper (F) and lower (G) neurosetae from segment 3, ×153; H–K, upper (H), middle (I) and lower (J, K) neurosetae from segment 40, ×153.

445 m deep, in the features of the prostomium and parapodia. However, *H. japonica* may be distinguished from *H. articulata* by the characters of the anterior elytra with smooth margin, instead of having medial notch forming 2 papillate processes and additional 2 posterior papillate processes.

The genus is newly added to the Japanese polychaetous fauna.

Etymology: The species is named because it is the first species of the genus from Japanese waters.

Distribution: Japan.

Labioleanira yhleni (Malmgren, 1867)

(Figs. 5A–F, 6A–L)

Leanira yhleni Malmgren, 1867a, p. 140.

Labioleanira yhleni: Pettibone, 1992b, pp. 621–624, figs. 5, 6.

Material: Stn. no. 4 (1); Stn. no. 10 (1); Stn. no. 32 (5); Stn. no. 33 (1); Stn. no. 34 (4); Stn. no. 43 (1); Stn. no. 48 (1); Stn. no. 57 (1); Stn. no. 62 (1); Stn. no. 92 (1); Stn. no. 97 (3); Stn. no. 99 (2).

Description: All individuals consisting of anterior fragments, largest one 110 mm long, 7 mm wide including parapodia for 108 segments. Body subquadrangular, flattened dorsoventrally. Elytra covering mid-dorsum except anteriorly.

Prostomium and tentacular segment fused basally. Prostomium oval, wider than long, with 2 pairs of eyes, anterior pair large, hidden from view dorsally by lateral auricles, posterior pair of small eyes lateral to base of ceratophore. Median antenna with large, cylindrical ceratophore, with pair of prominent lateral auricles and long tapering style (Fig. 5A). Lateral antennae small, attached to inner dorsal side of tentacular segment. Palps very long, emerging ventral to tentacular segment, with large rounded inner and shorter, rounded outer palpal sheaths (Fig. 5B–E). Tentaculophores with long, tapering dorsal tentacular cirrus and short ventral tentacular cirrus; acicular lobe with 2 groups of long capillary setae extending anteriorly (Fig. 5C, D). Inner tentacular lobes lacking. Dorsal side of tentacular segment without ctenidium, but with 1-5 short stylodes between base of dorsal tentacular cirrus and lateral antenna (Fig. 5C, D).

Segment 2 with large, oval, flattened labial lobes on lateral lips of ventral mouth. Biramous parapodium with notopodium rounded, with circlet of filiform stylodes and radiating bundle of long capillary notosetae; large neuropodium with conical presetal acicular lobe with stylodes and bilobed postsetal lobe with stylodes. Ventral buccal cirri thick, tapered and slightly longer than following ventral cirri (Figs. 5F, 6A). Parapodia of segment 3 similar to segment 2, but with fewer stylodes and smaller ventral cirri, without dorsal cirri or dorsal tubercles (Fig. 6B, C).

Notopodium of more posterior parapodia cylindrical, with circlet of stylodes on subdistal bract and large digitiform distal stylode; large neuropodium with presetal conical acicular lobe and bilobed postsetal lobe with upper and lower groups of stylodes. Ventral cirrus slender, with basal knob (Fig. 6D, E). Branchiae attached to dorsal tubercles or elytrophores, beginning about segment 8–12, rudimentary more anteriorly. Parapodial ctenidia dorsal to notopodium, 3 per parapodium, beginning about segment 8–16.

Elytra on segments 2, 4, 5, 7... continuing on alternate segments to 27, then on every subsequent segment. First and second pairs of elytra small, rounded, without tubercles or papillae (Fig. 6F, G). Following elytra becoming progressively larger and elongate oval to subcordiform, with opaque area to place of attachment to elytrophore (Fig. 6H, I).

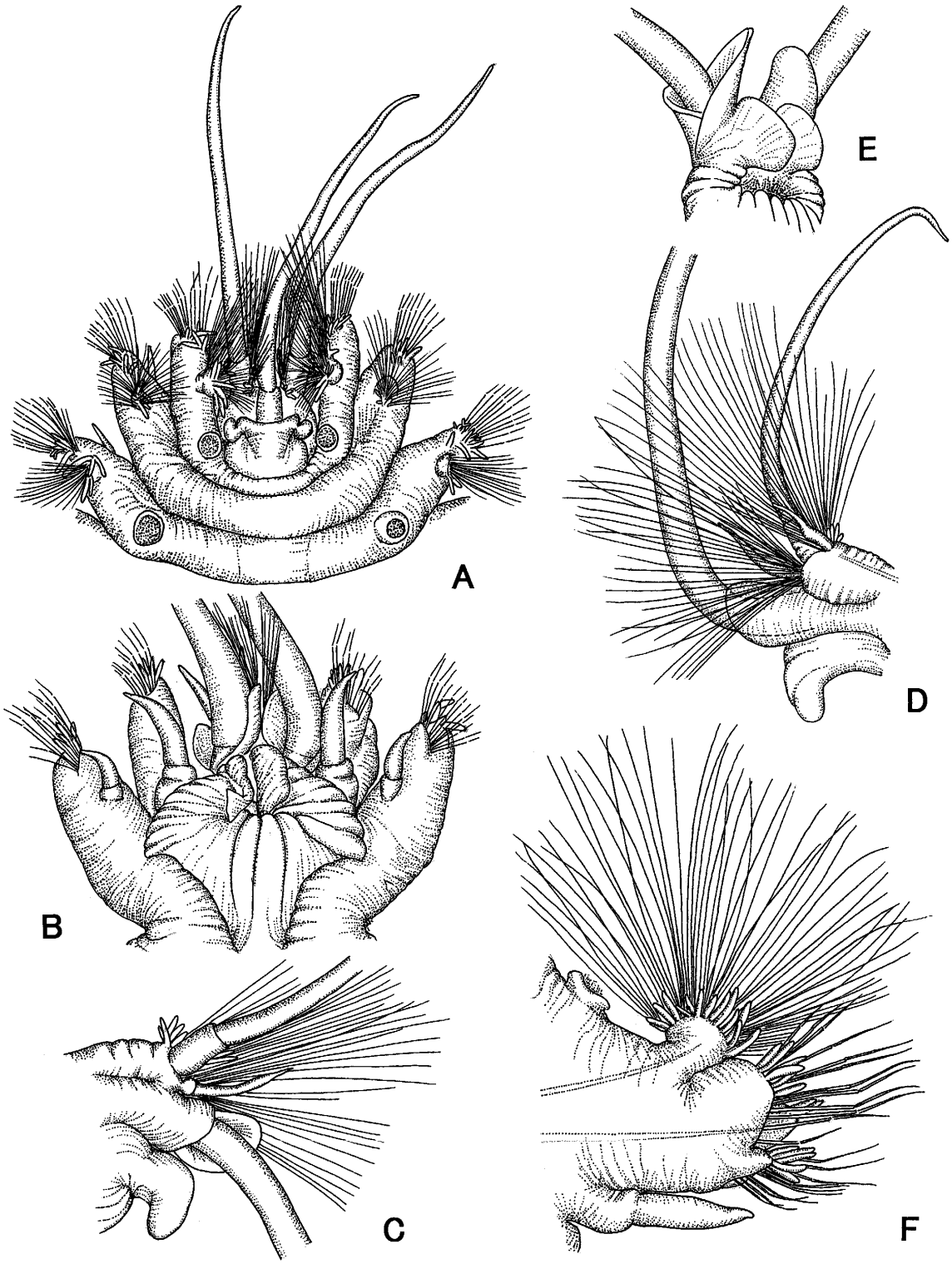

Fig. 5. *Labioleanira yhleni* (Malmgren). A, anterior end, dorsal view, ×14; B, same, ventral view, ×18; C, right segment 1, outer view, ×18; D, same, inner view, ×16; E, anterior end of another small specimen, latero-ventral view, showing labial lobes, ×29; F, right parapodium of segment 2, posterior view, ×27.

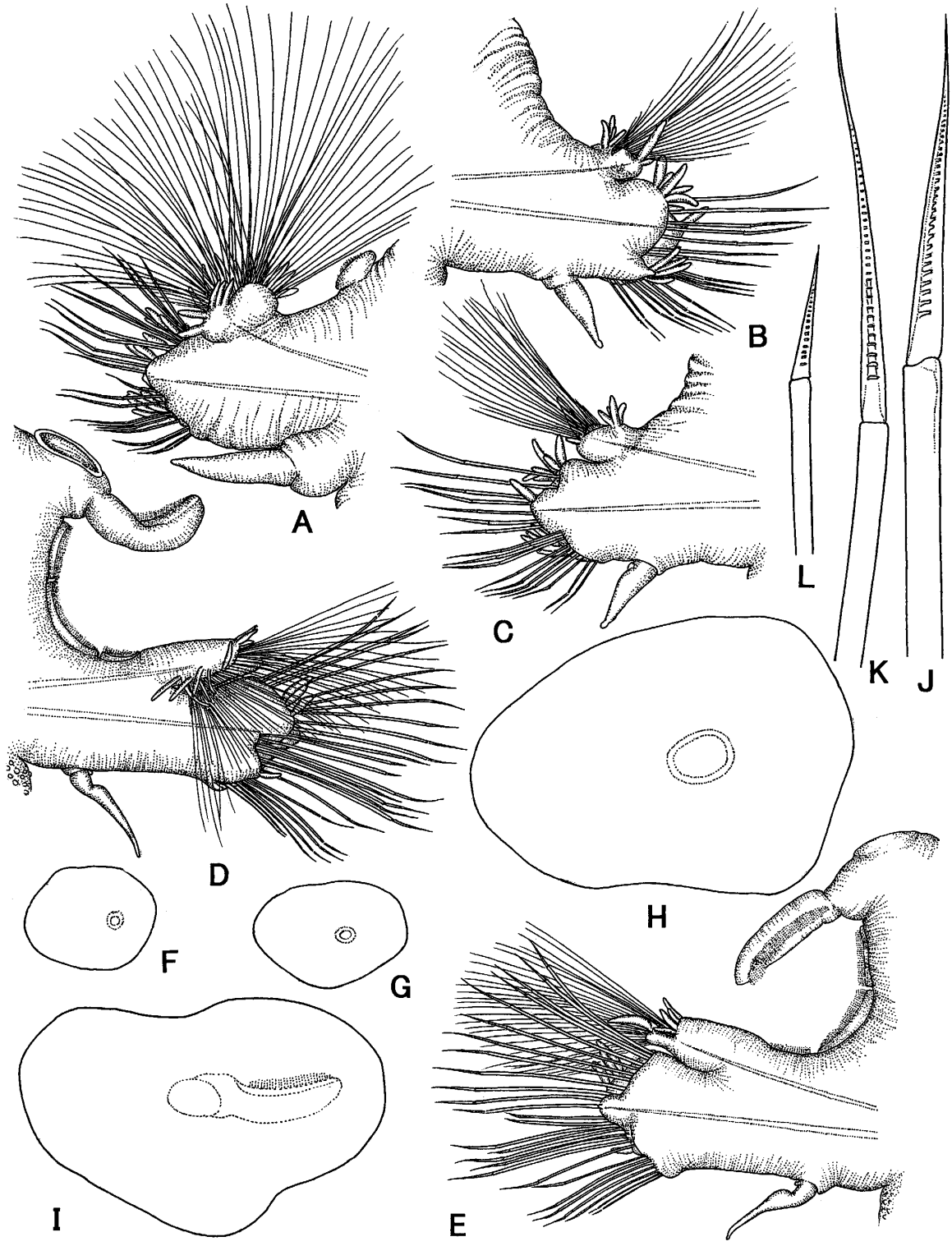

Fig. 6. *Labioleanira yhleni* (Malmgren). A, right parapodium of segment 2, anterior view, ×25; B, right parapodium of segment 3, posterior view, ×25; C, same, anterior view, ×25; D, right parapodium of segment 50, posterior view, ×24; E, same, anterior view, ×24; F, right first elytron, ×14; G, right second elytron, ×14; H, right 21st elytron, ×14; I, right 100th elytron, ×14; J–L, upper (J), middle (K) and lower (L) compound spinigers of segment 50, ×165.

Neurosetae all compound spinigers with rather long canaliculate blades, lower ones more slender than upper ones (Fig. 6J–L). All parapodia without additional simple spinose neurosetae.

The species is reported for the first time from Japanese waters.

Distribution: North-east Atlantic Ocean, France, Spain, Mediterranean Sea, West Africa, Japan.

Labiosthenolepis laevis (McIntosh, 1885)

Leanira laevis McIntosh, 1885, pp. 156–157, pl. 20, fig. 4, pl. 23, figs. 10,11, pl. 14A, fig. 3.

Labiosthenolepis laevis: Pettibone, 1992b, pp. 615–618, figs. 1, 2; Imajima, 2005, pp. 60–62, figs. 18a–g, 19a–f, 20a–f.

Material: Stn. no. 33 (1); Stn. no. 34 (3); Stn. no. 48 (1); Stn. no. 57 (1); Stn. no. 97 (5); Stn. no. 99 (2); Stn. no. 106 (1).

Distribution: South Pacific Ocean, off New Zealand, Japan.

Labiosthenolepis sibogae (Horst, 1917)

(Figs. 7A–E, 8A–N)

Leanira sibogae Horst, 1917, pp. 115–117, pl. 24, figs. 1–3.

Labiosthenolepis sibogae: Pettibone, 1992b, pp. 618–619, figs. 3, 4.

Material: Stn. no. 11 (1); Stn. no. 32 (6).

Description: Largest individual 70 mm long, 4.5 mm wide including parapodia for 141 segments. Body elongate, flattened dorsoventrally. Elytra overlapping anteroposteriorly, leaving mid-dorsum uncovered.

Prostomium and tentaculophores fused basally. Prostomium oval, about twice as wide as long. Median antenna with long, stout ceratophore on anterodorsal side of prostomium, with large winglike lateral auricles and very long, tapering style. Lateral antennae short, subulate, fused to dorsal-inner sides of tentaculophores. Of 2 pairs of eyes posterior pair lateral to base of ceratophore. Palps very long, emerging ventral to tentacular segment, with large oval inner and shorter outer rounded palpal sheaths. Tentaculophores each with single aciculum, long dorsal tentacular cirrus, slightly shorter than median antenna, and much shorter ventral tentacular cirrus (Fig. 7A). L-shaped inner tentacular lobe fused basally to inner palpal sheath, radiating bundle of long capillary setae on outer side of tentacular segment. Dorsal side of tentacular segment with oval ctenidium and few short stylodes between lateral antenna and base of dorsal tentacular cirrus (Fig. 7B).

Segment 2 with flattened tongue-like labial lobes on lateral lips of ventral mouth. Biramous parapodium with notopodium rounded, with circlet of filiform stylodes and radiating bundle of long capillary notosetae; larger neuropodium with conical presetal acicular lobe with stylodes and shorter bilobed postsetal lobe with stylodes. Ventral buccal cirri extending about to tip of neuropodium (Fig. 7C). Parapodia of segments 3 and 4 similar to segment 2, but with shorter ventral cirri, without dorsal cirri or dorsal tubercles on segment 3 (Fig. 7D, E).

More posterior parapodia with branchiae beginning segment 6, attached to dorsal tubercles or elytrophores, small at first, becoming longer, digitiform more posteriorly. Parapodial ctenidia dorsal to notopodium, 3 per parapodium, beginning about segment 12. Notopodium with circlet of stylodes on subdistal bract and extra long distal stylode. Neuropodium with presetal conical acicular lobe with distal stylodes and bilobed postsetal lobe with upper and lower groups of stylodes; short ventral cirrus with basal knob (Fig. 8A, B).

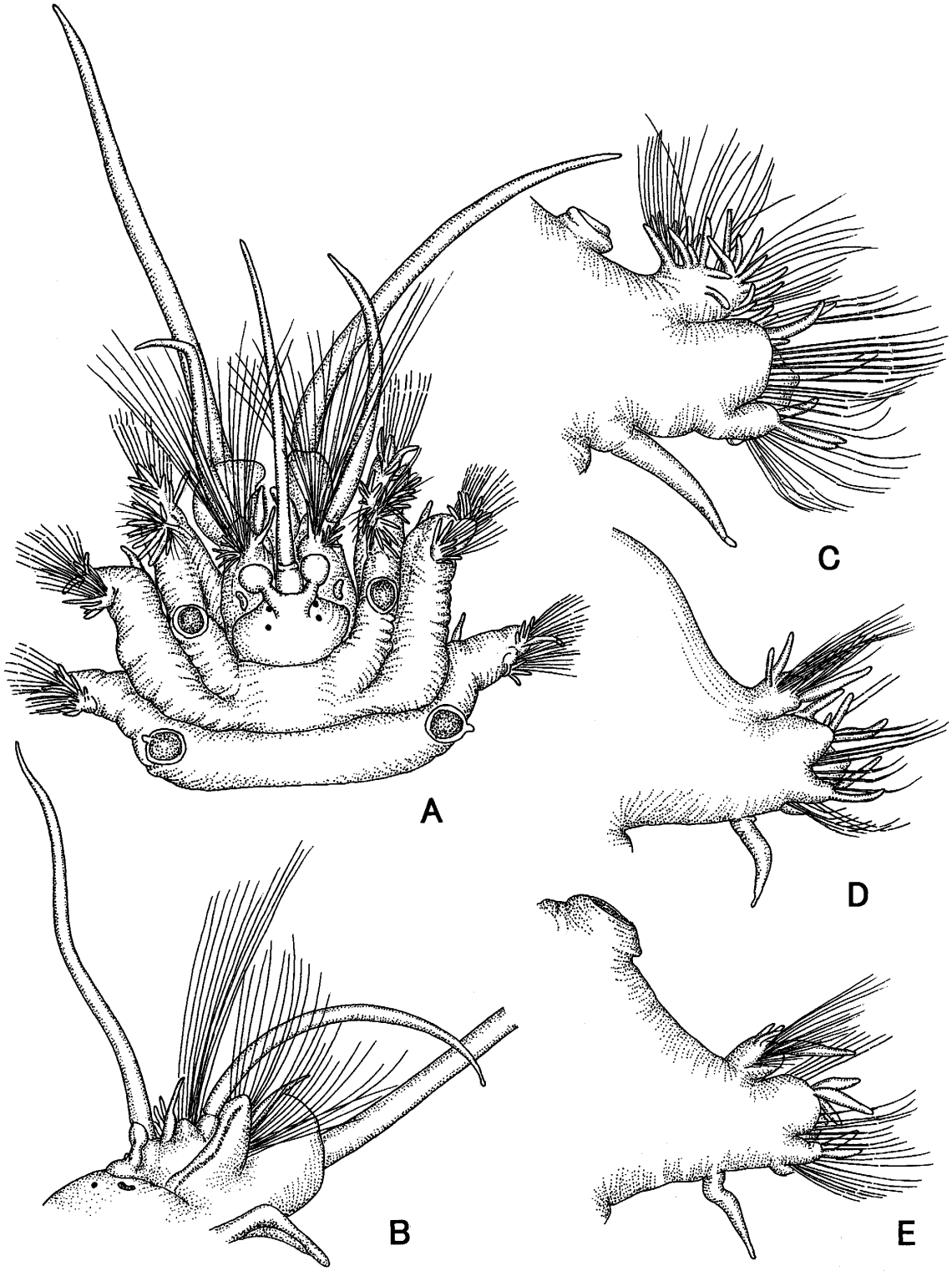

Fig. 7. *Labiosthenolepis sibogae* (Horst). A, anterior end, dorsal view, ×24; B, left segment 1, inner view, left palp partially shown, ×29; C, right parapodium of segment 2, posterior view, ×38; D, right parapodium of segment 3, posterior view, ×38; E, right parapodium of segment 4, posterior view, ×38.

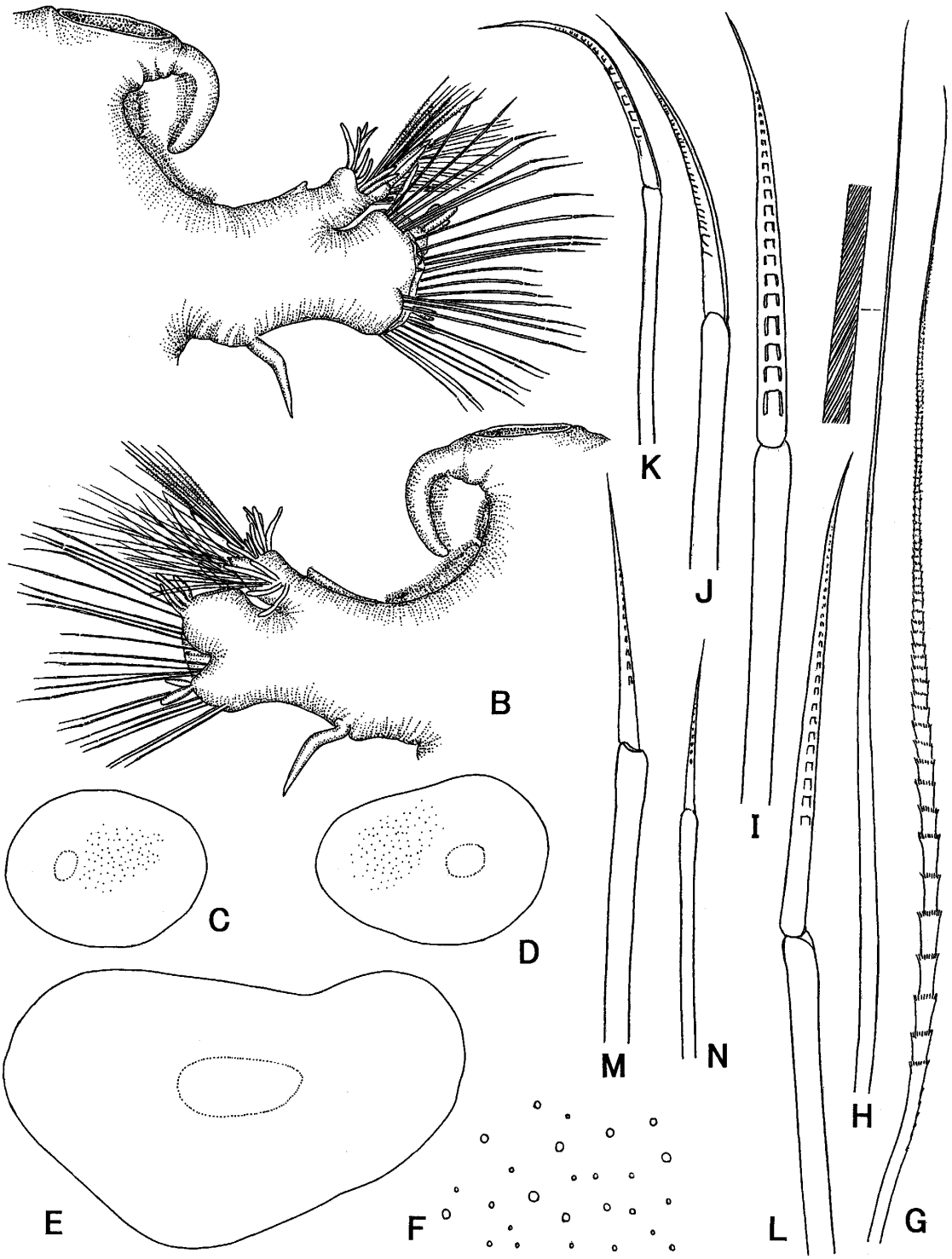

Fig. 8. *Labiosthenolepis sibogae* (Horst). A, left parapodium of median segment, anterior view, ×30; B, same, posterior view, ×30; C, left first elytron, ×27; D, right second elytron, ×27; E, left elytron of median segment, ×27; F, micropapillae on elytron, ×136; G, spinose capillary notoseta, ×288; H, smooth capillary notoseta, ×288, with detail of part, ×580; I–K, upper (I), middle (J) and lower (K) compound spinigers of segment 2, ×288; L–N, upper (L), middle (M) and lower (N) compound spinigers of median segment, ×288.

Elytra on segments 2, 4, 5, 7... continuing on alternate segments to 27, then on every subsequent segment. First and second pairs of elytra oval, with uniformly distributed conical microtubercles on surfaces, elytral margin smooth (Fig. 8C, D, F). Following elytra becoming progressively larger and subreniform in shape, with opaque area to their place of attachment (Fig. 8E).

Notosetae of 2 kinds, upper ones spinose (Fig. 8G), lower ones smooth (Fig. 8H). Neurosetae all compound spinigers with rather long canaliculate blades, lower ones more slender, with shorter blades (Fig. 8I–N).

The species is reported for the first time from Japanese waters.

Distribution: Indo-Pacific, Malay Archipelago, Maldives, Australia, Tonga, Japan.

Neoleanira areolata (McIntosh, 1885)

Leanira areolata McIntosh, 1885, pp. 151–153, pl. 21, fig. 3, pl. 25, figs. 8, 9, pl. 13A, fig. 1.

Neoleanira areolata: Pettibone, 1970b, pp. 372–376, figs. 5, 6; Imajima, 2003, pp. 56–59, figs. 32a–h, 33a–d, 34a–i; Imajima, 2005, p. 62.

Material: Stn. no. 52 (18); Stn. no. 91 (3); Stn. no. 106 (1); Stn. no. 107 (1); Stn. no. 113 (1); Stn. no. 116 (1); Stn. no. 118 (1); Stn. no. 119 (1).

Distribution: Japan, Okhotsk Sea, Bering Sea, off Washington to southern California.

***Sigalion shimodaensis* sp. nov.**

(Figs. 9A–H, 10A–H, 11A–D)

Type material: Holotype, NSMT-Pol. S H 471: Off Shimoda, the Sagami Sea, 34°38.8'N, 138° 56.0'E – 34°38.8'N, 138°55.9'E, 32–32 m, May 2002 (Stn. no. 57). Paratypes, NSMT-Pol. S P 472: Stn. no. 57 (2); P 473: Stn. no. 56 (1).

Description: Holotype missing posterior end for 67 segments 28 mm long, 2.7 mm wide including parapodia. Body with smooth dorsal and ventral surfaces.

Prostomium ovate, situated dorsally on segments 1 and 2, with 2 small digitiform lateral antennae on anterior margin, median antenna lacking. Two pairs of small black subdermal eyes in rectangular arrangement present on anterior half of prostomium (Fig. 9A). Palps long, smooth and tapered, emerging anteriorly from basal regions of first parapodia; each palp bounded laterally by palpal sheaths. Pair of nuchal organs between prostomium and elytrophores of segment 2.

Parapodia of tentacular segment uniramous, anteriorly directed and medially fused, with pair of tentacular cirri; ventral tentacular cirri slightly longer than dorsal tentacular cirri. Pair of nuchal organs between prostomium and elytrophores of segment 2. All other parapodia biramous. Segment 2 with large elytrophores with solitary ctenidial processes dorsally on elytrophores. Neuropodia larger than notopodia with presetal lobe; ventral buccal cirri extending beyond to tip of neuropodium (Fig. 9B). Parapodia of segment 3 fused dorsally with segment 2, with long dorsal cirrus (Fig. 9B). Neuropodia distally expanded with projecting acicular lobes; superior neuropodial postsetal lobe rudimentary and inferior neuropodial postsetal lobe conspicuous throughout. Large ciliated ctenidial pads, 2 per parapodium on segments 2 and 3, and 3 per parapodium thereafter, occur between elytrophores and notopodia. Solitary ctenidia processes dorsally on elytrophores from segment 4, and on posterior faces of parapodia from segment 3. Solitary ctenidia also present on posterior faces of prapodia from segment 4 (Fig. 9C). Cirriform branchiae with ciliated inner margins present from parapodia of segment 4 and on all parapodia (Fig. 10A). More posterior parapodia with notopodia and

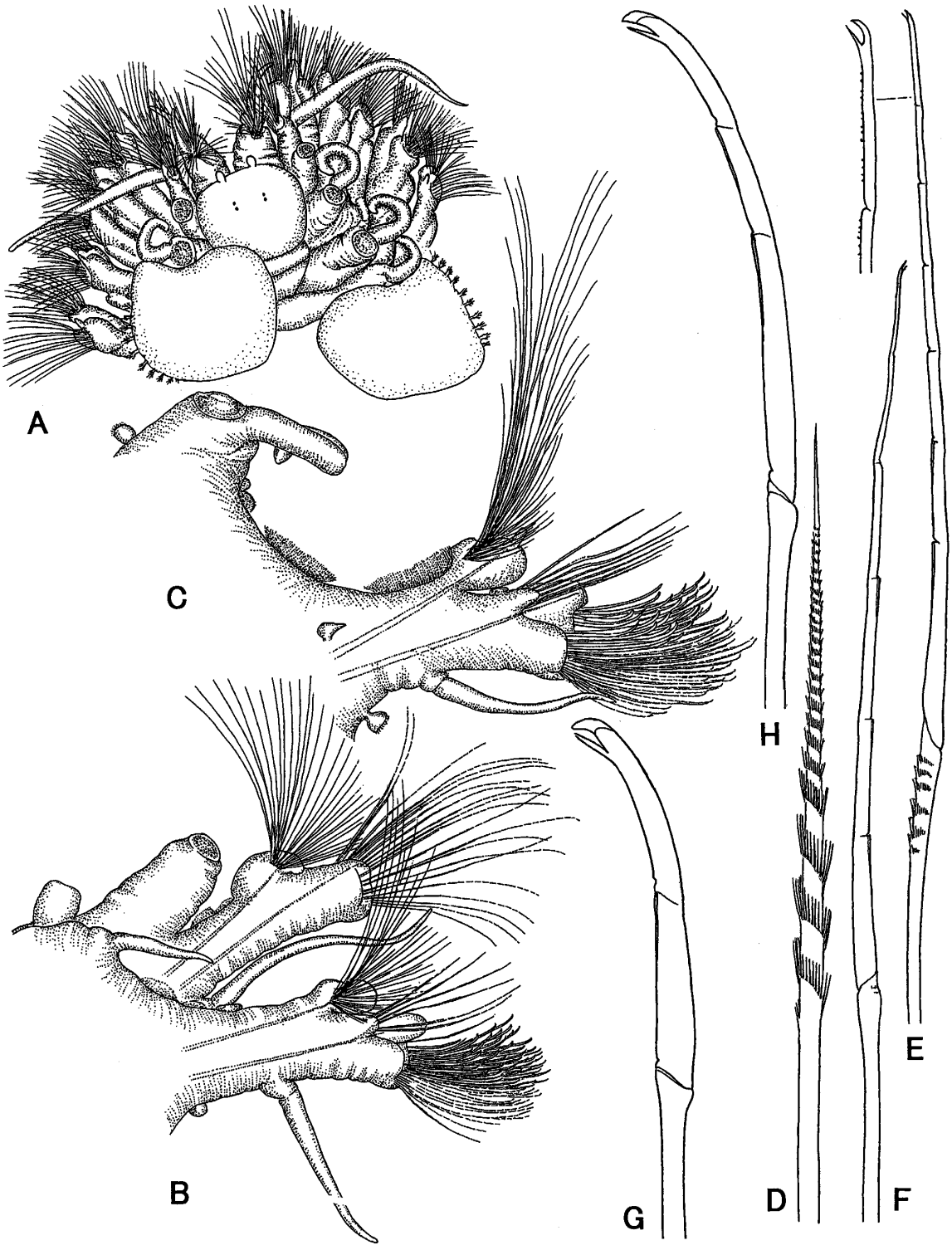

Fig. 9. *Sigalion shimodaensis* sp. nov. A, anterior end, dorsal view, ×20; B, right parapodia of segments 2 and 3, posterior view, ×47; C, right parapodium of segment 4, posterior view, ×47; D, spinose neuroseta from segment 5, ×502; E, upper compound multiarticulate neuroseta with spinosed shaft from same, ×320, with detail of distal region, ×642; F, same, with smooth shaft, ×320; G, H, upper inferior compound neurosetae with blades of 2 and 3 articles from segment 4, ×320.

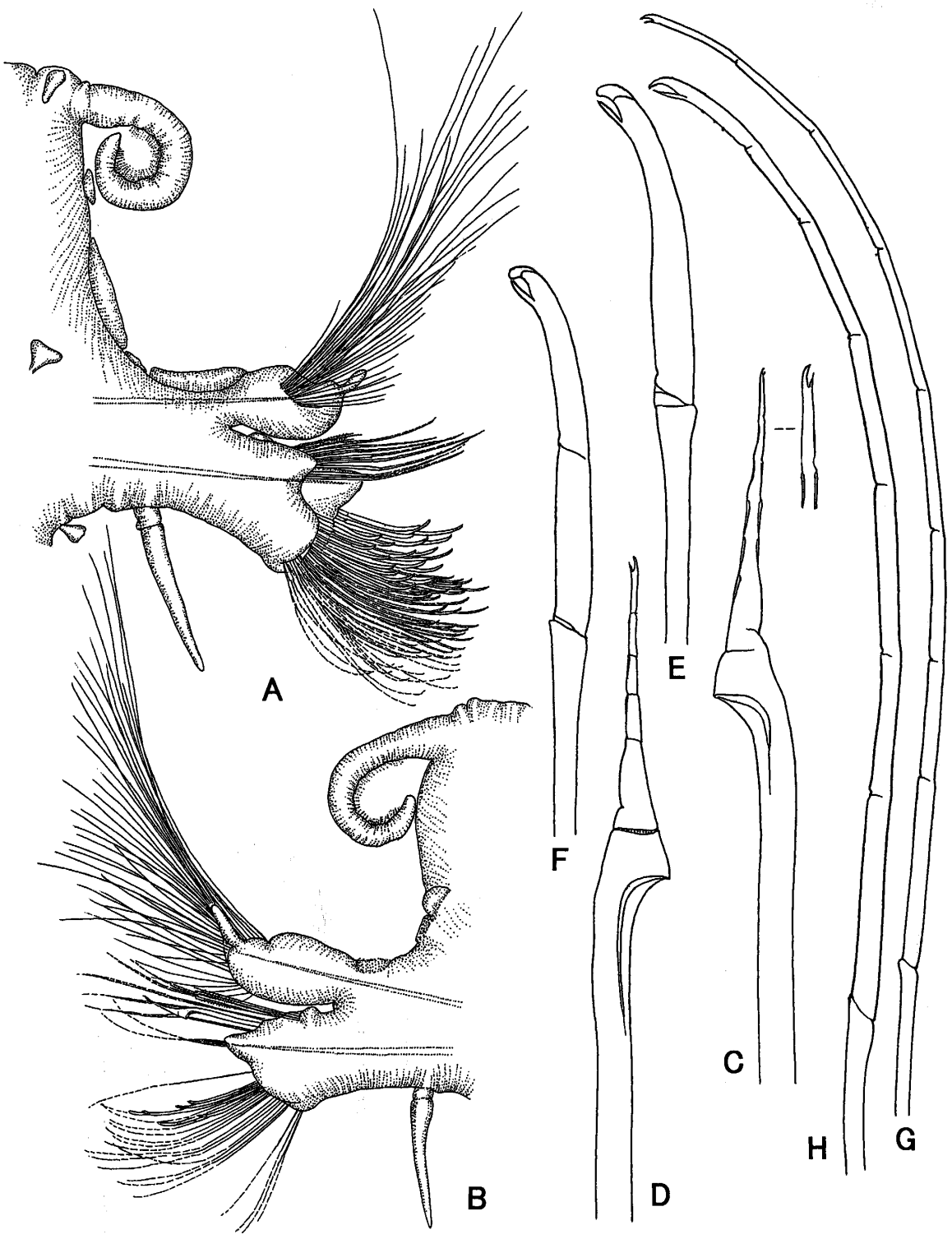

Fig. 10. *Sigalion shimodaensis* sp. nov. A, right parapodium of segment 6, posterior view, ×50; B, right parapodium of segment 16, anterior view, ×50; C, hooked compound multiarticulate falciger from segment 16, ×320, with detail of distal region, ×642; D, same from segment 62, ×320; E, F, upper inferior compound neurosetae with blades of single (E) and 2 (F) articles from segment 6, ×320; G, H, lower inferior compound multiarticulate neurosetae, ×320.

neuropodia of approximately equal length, each with single acicula. Notopodia club-shaped, with presetal distal stylode from segment 4. Neuropodia distally expanded with projecting acicular lobes and more or less flattened anterior and posterior faces. Superior neuropodial postsetal lobe triangular and rudimentary; inferior neuropodial postsetal lobe rounded, conspicuous throughout (Fig. 10B). Ventral cirri with distinct cirrophores.

Elytra on setigers 2, 4, 5, 7, then alternate setigers to 27, and thereafter on all setigers, completely covering dorsum. First pair of elytra oval (Fig. 11A), remainder subrectangular (Fig. 11B, C). Outer lateral margin of each elytron with large fringe papillae; about 9–10 on median elytra (Fig. 11C), but first pair with fewer (Fig. 11A). Each fringe papilla pinnate, with up 8 slender pinnules either side. Fringe papillae usually with 2 shorter, single robust basally inserted and dorsally directed papillae (Fig. 11D). Last fringe papilla on each elytron followed by lateral row of 1–2 pinnules; solitary short papilla on posterior margin (Fig. 11C).

Notopodia with simple distally bifurcate spinose capillaries. Superior neurosetae in 2 oblique rows running posteriorly above acicular lobe. Upper group with 5–6 simple spinose setae, beginning from segment 5, spinules surrounding shaft (Fig. 9D). Lower group with compound multiarticulate falcigers with 6–7 articles. Setal shafts of upper falcigers coarsely spinose (Fig. 9E), but those of median and posterior setae smooth (Fig. 9F). Single very robust compound falciger with hooked shaft

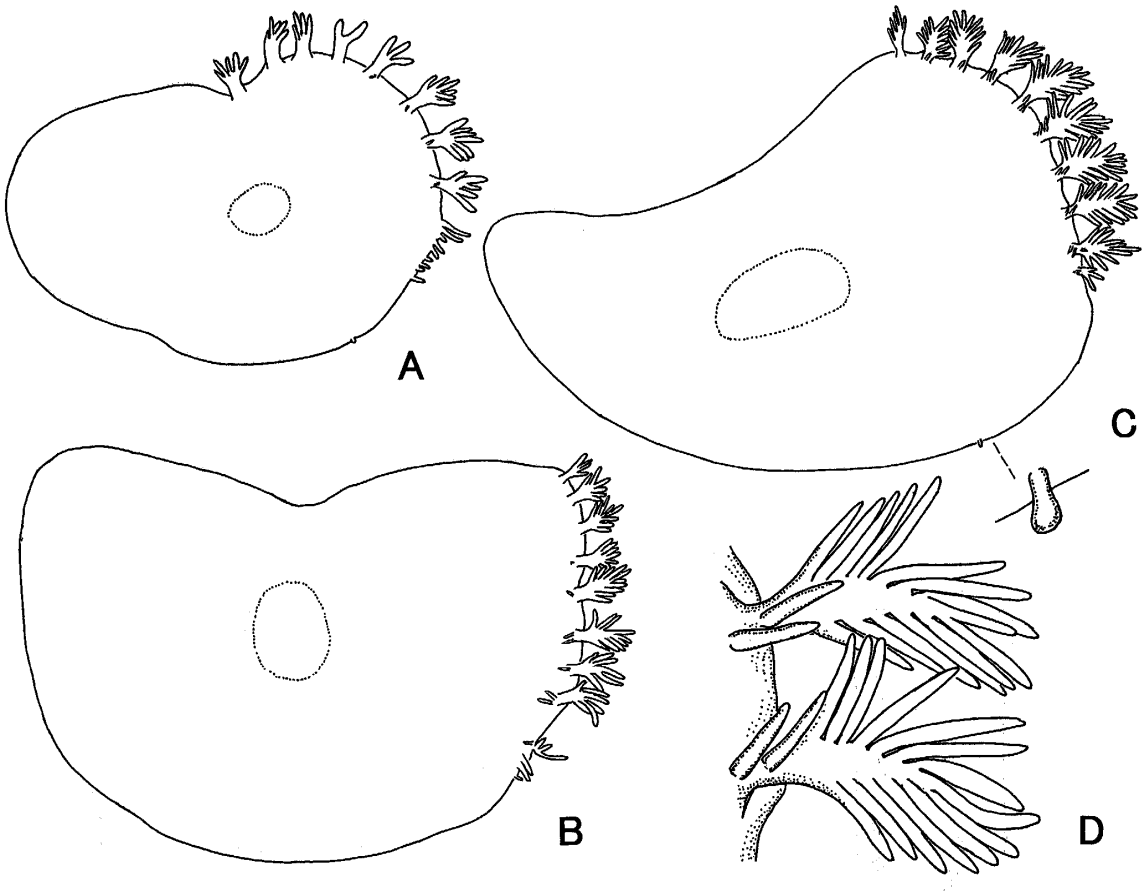

Fig. 11. *Sigalion shimodaensis* sp. nov. A, right first elytron, ×53; B, right third elytron, ×53; C, right elytron from segment 31, ×53, with detail of solitary short papilla, ×338; D, elytron fringe papillae from same, ×196.

occurring from segment 14 in median superior position (Fig. 10C, D). Inferior neurosetae include 4 or 5 robust compound falcigers with blades of 1–4 articles in upper posterior position (Figs. 9G, H; 10E, F); remainder slender and multiarticulate (Fig. 10G, H). Subrostral regions of all inferior neurosetae smooth.

Remarks: *Sigalion shimodaensis* closely resembles *S. taquari* Amaral & Nonato, 1984 from Brazil and *Sigalion* sp. A by Mackie & Chambers (1990) from Argentina in that: (1) the median antenna is lacking, (2) the median superior neurosetae include single particularly large compound falciger with hooked shaft. However, *S. shimodaensis* may be distinguished from above *S. taquari* and *Sigalion* sp. A in the occurrence of the branchiae; *S. shimodaensis* has branchiae from parapodia of segment 4 rather than from segment 5 in *Sigalion* sp. A, and from segment 6 in *S. taquari*.

Etymology: Named after the type locality, Shimoda.

Distribution: Japan.

***Sigalion tanseimaruae* sp. nov.**

(Figs. 12A–G, 13A–G, 14A–E)

Type material: Holotype, NSMT-Pol. S H 474: Off Suzaki, the Sagami Sea, 34°39.5'N, 139°01.3'E – 34°39.6'N, 139°01.2'E, 126–128 m, May 2002 (Stn. no. 54).

Description: Holotype missing posterior end for 51 segments 23 mm long, 4 mm wide including parapodia. Body with smooth dorsal and ventral surfaces.

Prostomium ovate, situated on segments 1 and 2. Three small digitiform antennae, lacking ceratophores; paired small lateral antennae wide apart on anterior half of prostomium, smaller median antenna inserted on posterior half of prostomium. Two pairs of small black subdermal eyes in rectangular arrangement present on anterior half of prostomium (Fig. 12A). Palps long, smooth and tapered, emerging anteriorly from basal regions of first parapodia; each palp bounded laterally by palpal sheaths. Pair of nuchal organs between prostomium and elytrophores of segment 2.

Parapodia of tentacular segment (setiger 1) uniramous, anteriorly directed and medially fused, with pair of tentacular cirri. Ventral tentacular cirri slightly longer than dorsal tentacular cirri. Facial tubercle lacking. All other parapodia biramous. Segment 2 with small elytrophores with solitary ctenidial processes dorsally on elytrophores. Notopodia smaller than neuropodia, with elongate presetal lobe; neuropodia elongate, with presetal distal lobe and long tapered ventral cirrus (Fig. 12B). Parapodia of segment 3 fused dorsally with segment 2, not visible in dorsal view, but with small laterally projecting dorsal cirrus (Fig. 12C); dorsal cirrus present segment 6, 8 and alternate segments to 26. From segment 3 each neuropodium with small blunt tubercles anteriorly at insertion of superior neurosetae; same setae on posterior face followed by small rounded postsetal lobe (Fig. 13A–C). Cirriform branchiae, with ciliated inner margins present on all elytrophores from segment 5, but without on dorsal tubercles (Fig. 13B). Notopodia elongated and longer than neuropodia from about segment 10; with small tubercles anteriorly at insertion of notosetae (Fig. 13D, E).

Elytra on segments 2, 4, 5, 7... continuing on alternate segments to 27, then on every subsequent segment, completely covering dorsum. First and second pairs of elytra oval, each with 4 large fringe papillae and additional pinnules occurring on lower sections of fringe papillae, each fringe papilla with 3–8 clavate pinnules either side (Fig. 14A). Following elytra becoming progressively larger and subrectangular, with large fringe papillae along outer lateral margin, with up to 8 on anterior elytra and 9 on median elytra (Fig. 14B, C). Each fringe papilla pinnate, with up to 22 long slender pinnules

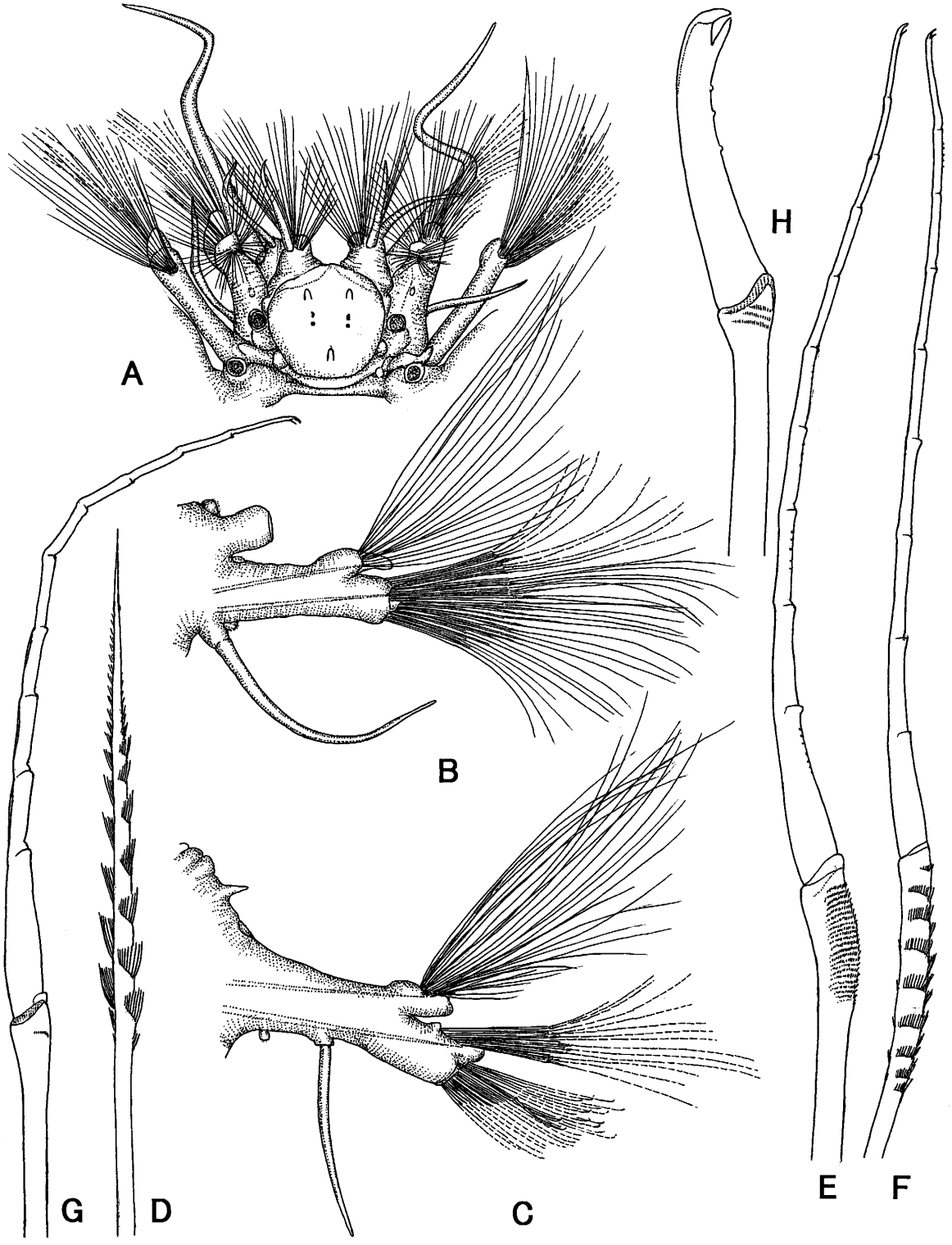

Fig. 12. *Sigalion tanseimaruae* sp. nov. A, anterior end, dorsal view, ×21; B, right parapodium of segment 2, posterior view, ×34; C, right parapodium of segment 3, posterior view, ×34; D, simple spinose seta, ×389; E, F, superior compound multiarticulate neuroseta, ×338; G, lower inferior compound multiarticulate neuroseta, ×338; H, upper inferior compound neuroseta with single article, ×338.

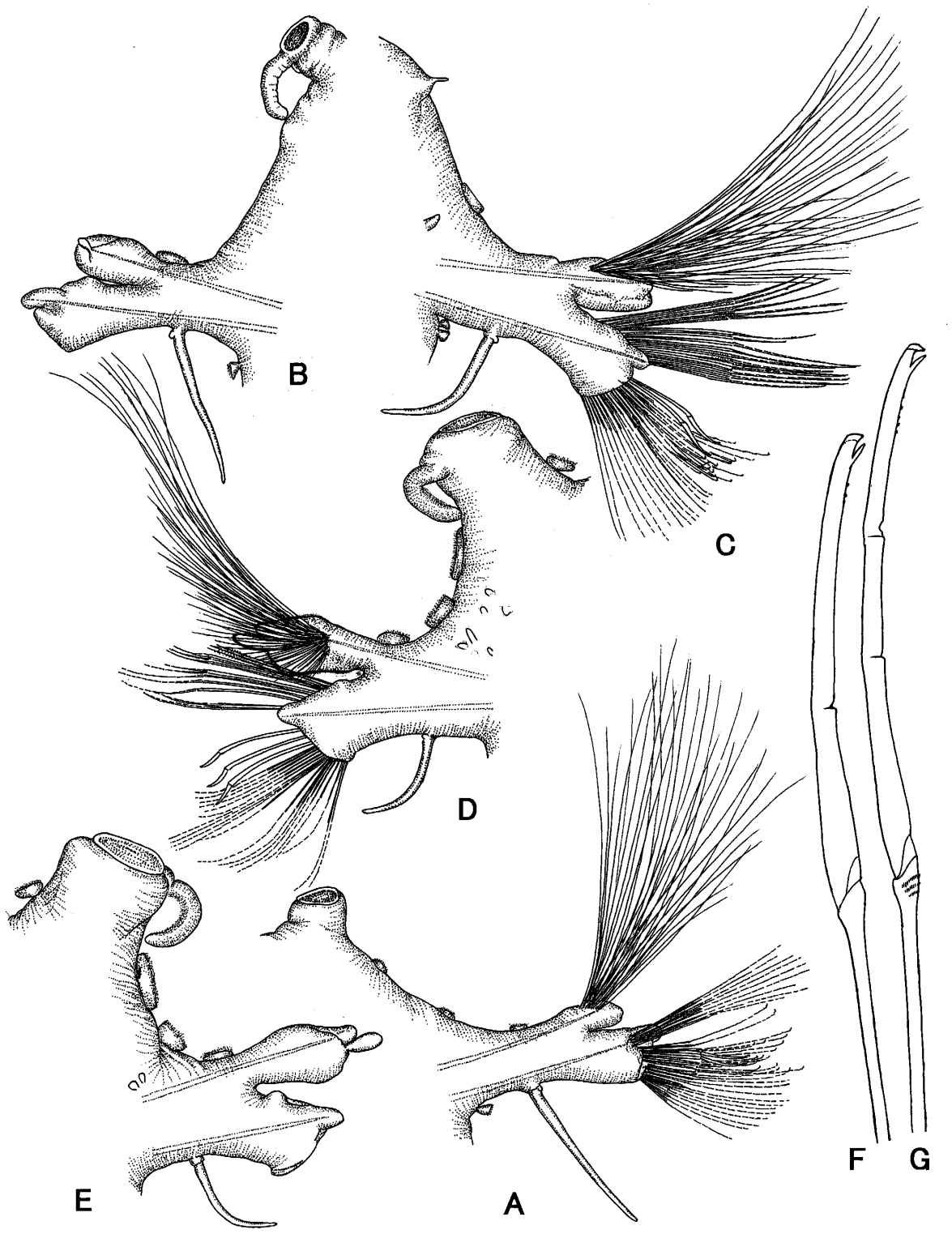

Fig. 13. *Sigalion tanseimaruae* sp. nov. A, right parapodium of segment 4, posterior view, ×30; B, right parapodium of segment 5, anterior view, ×34; C, right parapodium of segment 6, posterior view, ×34; D, left parapodium of segment 36, posterior view, ×34; E, same, anterior view, setae omitted, ×34; F, G, upper inferior neurosetae with blades of 2 and 3 articles, ×287.

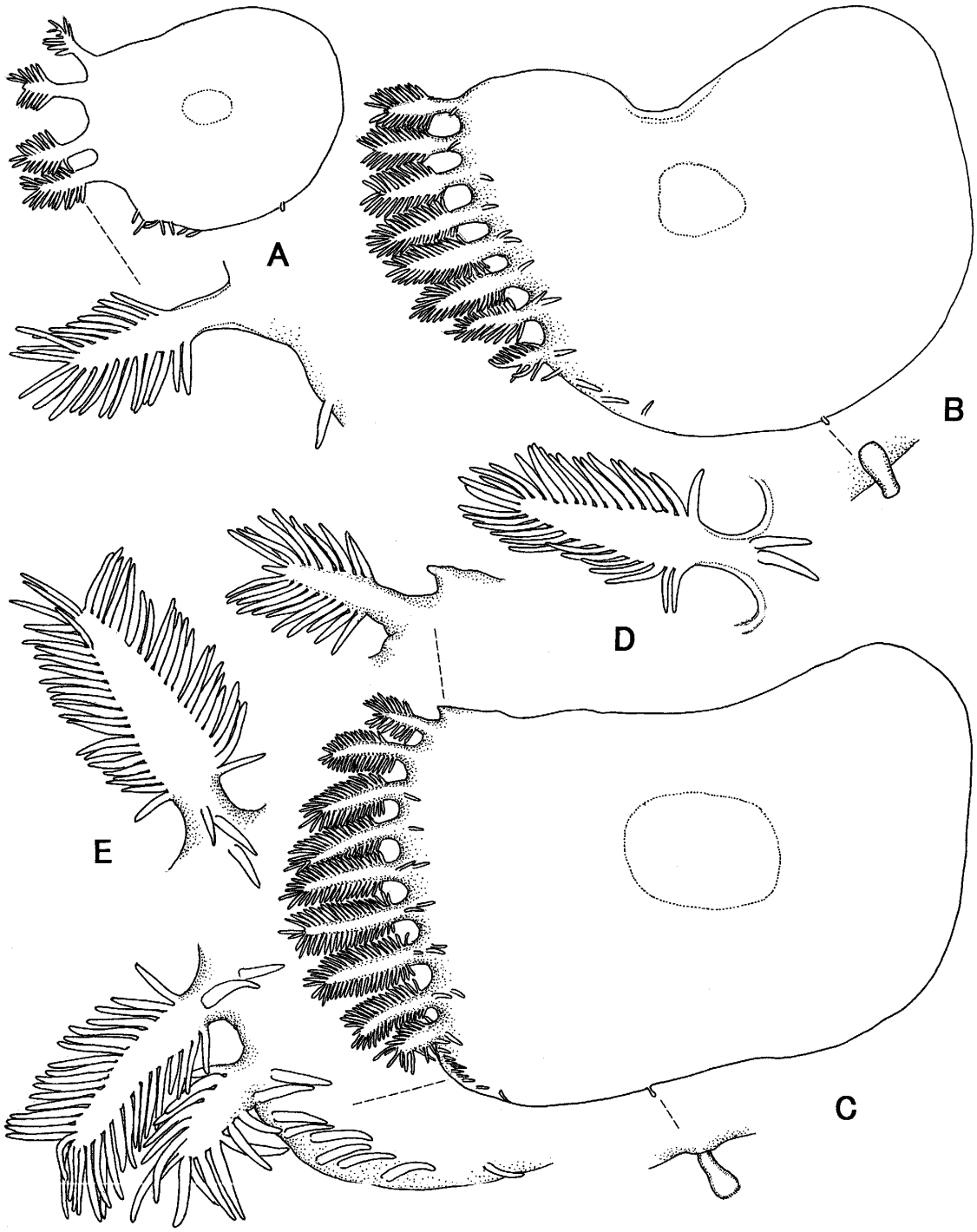

Fig. 14. *Sigalion tanseimaruae* sp. nov. A, left first elytron, ×55, with detail of lower elytral fringe papilla, ×138; B, left third elytron, ×55, with detail of solitary short papilla, ×277; C, left 29th elytron, ×55, with detail of upper and lower elytral fringe papillae, ×138, and solitary short papilla, ×277; D, E, elytral fringe papillae on third elytron (D) and same on 29th elytron (E), ×138.

either side, and with 1–3 shorter, single robust basally inserted and dorsally directed papillae (Fig. 14D, E). Last fringe papilla on each elytron followed by lateral row of 4–7 pinnules (Fig. 14C). Solitary short papilla occurring on posterior margin of elytra (Fig. 14B, C).

Notosetae distally bifurcate, with fine spinules surrounding shafts. Neurosetae of segment 2 all slender bidentate compound multiarticulate falcigers with about 13 articles. Neurosetae of segment 3 similar, but with few articles. Superior neurosetae in 2 oblique rows running posteriorly above acicular lobe. Upper row with 5–6 simple spinose setae, beginning from segment 23, spinules surrounding shaft (Fig. 12D). Lower row with many compound multiarticulate falcigers, subrostral regions of shafts changing from coarsely spinose (Fig. 12E) in dorsal position, to finely spinose (Fig. 12F) and then smooth in posterior position. Terminal articles of some multiarticulate blades with small irregularly distributed teeth on inner margins (Figs. 12F, 13F, G). Neurosetae arranged in dense bundle below acicular lobe and include, in upper posterior position, several robust compound falcigers with blades of 1–5 articles; usually 1–4 with single article (Fig. 12H) and up to 5 with 2–5 articles (Fig. 13F, G); distal article of blades with small teeth on inner margins. Remaining inferior neurosetae compound multiarticulate falcigers, more slender than superior counterparts, but with similar number of articles. Shaft of all inferior neurosetae with smooth subrostral regions (Fig. 12G). Pygidium unknown.

Remarks: *Sigalion tanseimaruae* resembles *S. mathildae* Audouin & M. -Edwards (in Cuvier 1830) re-examined by Mackie & Chambers (1990) from France in having three antennae on the prostmium and many slender pinnules either side in the fringe papilla pinnate. However, *S. tanseimaruae* differs from *S. mathildae* in that: (1) the branchiae are present from segment 5, on only elytrophores rather than from segment 4 on all elytrophores and dorsal tubercles, (2) the elytral fringe papillae number 8–9 on the outer lateral margin of all elytra rather than 12–17, (3) the simple spinose setae are present from segment 20 rather than from segment 4.

Etymology: Named after the R/V *Tansei-Maru*, Ocean Research Institute, University of Tokyo, which collected this specimen.

Distribution: Japan.

Sthenelais brachiata Imajima, 2003

Sthenelais brachiata Imajima, 2003, pp. 60–65, figs. 35a–e, 36a–i, 37a–e, 38a–j.

Material: Stn. no. 97 (2); Stn. no. 98 (1).

Distribution: Japan.

Family Phyllodocidae Williams, 1852

Subfamily Eteoninae Bergström, 1914

Eteone japanensis McIntosh, 1901

Eteone japanensis McIntosh, 1901, p. 222; Imajima, 2003, pp. 75–77, fig. 46a–m.

Material: Stn. no. 51 (1); Stn. no. 59 (1); Stn. no. 98 (2).

Distribution: Japan.

Eteone longa (Fabricius, 1780)

Eteone longa: Fauvel, 1923, pp. 172–173, textfig. 62a–d; Berkeley & Berkeley, 1948, p. 41, textfig. 57, 58; Imajima & Hartman, 1964, p. 61, pl. 12, figs. d–g.

Material: Stn. no. 6 (1); Stn. no. 36 (1); Stn. no. 37 (2).

Distribution: North Atlantic and north Pacific oceans, Bering Sea, Japan.

Eulalia bilineata (Johnston, 1840)

Eulalia bilineata: Malmgren, 1865, p. 99, pl. 13, fig. 26; Imajima & Hartman, 1964, pp. 61–62, pl. 13, figs. a–d; Imajima, 2005, p. 78.

Material: Stn. no. 25 (1); Stn. no. 31 (1); Stn. no. 36 (1); Stn. no. 51 (1); Stn. no. 52 (1); Stn. no. 58 (3); Stn. no. 59 (8); Stn. no. 100 (1); Stn. no. 104 (1); Stn. no. 123 (1).

Distribution: North Sea, Atlantic Ocean, Mediterranean Sea, California, Yellow Sea, Japan.

Mysta ctena Kato, Pleijel & Mawatari, 2001

Mysta ctena Kato, Pleijel & Mawatari, 2001, pp. 21–27, figs. 1–3; Imajima, 2003, pp. 80–82, figs. 48a–f, 49a–e.

Material: Stn. no. 111 (1).

Distribution: Japan.

Sige falsa (Day, 1960)

Eulalia (*Sige*) *falsa* Day, 1960, pp. 303–304, fig. 6a–c.

Sige falsa: Pleijel, 1991, p. 261; Imajima, 2003, pp. 87–89, fig. 53a–g.

Material: Stn. no. 6 (1); Stn. no. 37 (2).

Distribution: South Africa, Japan.

Subfamily Notophyllinae Pleijel, 1991

Nereiphylla castanea (Marenzeller, 1879)

Carobia castanea Marenzeller, 1879, pp. 127–128, pl. 3, fig. 2.

Nereiphylla castanea: Pleijel, 1991, p. 257; Imajima, 2003, pp. 89–91, fig. 54a–k.

Material: Stn. no. 8 (1); Stn. no. 13 (1); Stn. no. 34 (1); Stn. no. 36 (1); Stn. no. 37 (1); Stn. no. 41 (2); Stn. no. 46 (1); Stn. no. 57 (5); Stn. no. 59 (1); Stn. no. 63 (1); Stn. no. 75 (1); Stn. no. 89 (1); Stn. no. 105 (1).

Distribution: Japan, Sea of Okhotsk, Indian Ocean, Australia, Gulf of Mexico, west coast of North America.

Notophyllum sagamianum Izuka, 1912

Notophyllum sagamianum Izuka, 1912, pp. 210–211, pl. 21, figs. 7–9; Imajima, 2003, pp. 96–98, fig. 59a–j.

Material: Stn. no. 7 (1).

Distribution: Japan.

Subfamily Phyllodocinae Örsted, 1843

Paranaitis polynoides (Moore, 1909)

Anaitis polynoides Moore, 1909a, pp. 339–342, pl. 16, figs. 19–21.

Paranaitis polynoides: Hartman, 1968, p. 291, figs. 1–3; Blake, 1994a, pp. 164–165, fig. 4. 22; Imajima, 2003, pp. 98–99, fig. 60a–i.

Material: Stn. no. 46 (1); Stn. no. 47 (1); Stn. no. 98 (2).

Distribution: Western Canada to central and southern California, Gulf of Mexico, Sea of Japan, Japan.

Phyllodoce lineata tosaensis Imajima, 2001

Phyllodoce lineata tosaensis Imajima, 2001b, p. 56, fig. 15a–g; Imajima, 2003, pp. 101–103, fig. 62a–h.

Material: Stn. no. 24 (1); Stn. no. 50 (1); Stn. no. 51 (1); Stn. no. 61 (1); Stn. no. 100 (2); Stn. no. 121 (2).

Distribution: Japan.

Phyllodoce madeirensis Langerhans, 1880

Phyllodoce (*Anaitis*) *madeirensis* Langerhans, 1880, pp. 307–308, pl. 17, fig. 44a, b.

Phyllodoce madeirensis: Fauvel, 1914, pp. 111–113, pl. 6, figs. 5–13; Imajima, 2003, pp. 103–107, fig. 63a–h; Imajima, 2005, p. 78.

Material: Stn. no. 6 (3); Stn. no. 8 (1); Stn. no. 9 (3); Stn. no. 14 (1); Stn. no. 33 (1); Stn. no. 34 (1); Stn. no. 36 (6); Stn. no. 37 (2); Stn. no. 45 (3); Stn. no. 58 (6); Stn. no. 59 (3); Stn. no. 60 (1); Stn. no. 77 (3); Stn. no. 80 (3); Stn. no. 89 (5); Stn. no. 95 (5); Stn. no. 97 (2); Stn. no. 99 (4); Stn. no. 101 (1); Stn. no. 104 (4); Stn. no. 107 (1); Stn. no. 123 (2).

Distribution: North Atlantic, Gulf of Mexico, Caribbean Sea, Gulf of Guinea, Japan.

***Phyllodoce* sp.**

Material: Stn. no. 59 (5); Stn. no. 77 (1); Stn. no. 80 (1); Stn. no. 95 (2); Stn. no. 98 (2).

Family Glyceridae Grube, 1850

Glycera alba (O. F. Müller, 1776)

Nereis alba O. F. Müller, 1776, p. 217, pl. 2, figs. 6, 7.

Glycera alba: Izuka, 1912, pp. 247–248, pl. 23, figs. 8, 9; O'Connor, 1987, pp. 174–175, fig. 5; Imajima, 2003, pp. 107–109, fig. 64a–h; Imajima, 2005, p. 78.

Material: Stn. no. 61 (1); Stn. no. 93 (1); Stn. no. 97 (2); Stn. no. 98 (2); Stn. no. 99 (1); Stn. no. 100 (1); Stn. no. 121 (1).

Distribution: Norway, Atlantic and Indian oceans, Yellow Sea, Japan.

Glycera brevicirris Grube, 1870

Glycera brevicirris: Böggemann, 2002, pp. 44–47, figs. 34–36.

Material: Stn. no. 59 (1).

The species is reported for the first time from Japanese waters, but not described here.

Distribution: West and east Atlantic, Gulf of Mexico, Red Sea, Indian Ocean, Indo-Pacific, Japan.

Glycera lapidum Quatrefages, 1865

Glycera lapidum Quatrefages, 1865, pp. 187–188; O'Connor, 1987, pp. 184–186, figs. 14, 15: Imajima, 2003, pp. 109–112, fig. 66a–j.

Material: Stn. no. 33 (1); Stn. no. 58 (2); Stn. no. 59 (1); Stn. no. 61 (1); Stn. no. 98 (3); Stn. no. 99 (2); Stn. no. 102 (6); Stn. no. 103 (7); Stn. no. 104 (2); Stn. no. 108 (1); Stn. no. 111 (1); Stn. no. 112 (1);

Stn. no. 114 (1).

Distribution: Iceland, Mediterranean Sea, Japan.

Glycera nicobarica Grube, 1868

Glycera nicobarica Grube, 1868, pp. 24–25, pl. 3, fig. 1; Böggemann & Fiege, 2001, p. 43; Imajima, 2003, p. 112, fig. 67a–h.

Glycera chirori Izuka, 1912, pp. 245–246, pl. 2, fig. 18, pl. 24, fig. 13.

Material: Stn. no. 11 (2); Stn. no. 12 (1); Stn. no. 24 (1); Stn. no. 31 (1); Stn. no. 32 (5); Stn. no. 46 (1); Stn. no. 47 (2); Stn. no. 52 (5); Stn. no. 89 (1); Stn. no. 106 (3).

Distribution: Japan, Amboina, China.

Glycera onomichiensis Izuka, 1912

Glycera onomichiensis Izuka, 1912, pp. 244–245, pl. 24, figs. 10–12; Imajima, 2003, pp. 112–115, fig. 68a–f; Imajima, 2005, p. 78.

Material: Stn. no. 24 (1); Stn. no. 33 (1); Stn. no. 42 (1); Stn. no. 46 (1); Stn. no. 47 (1); Stn. no. 49 (1); Stn. no. 50 (1); Stn. no. 61 (2); Stn. no. 89 (1); Stn. no. 92 (1); Stn. no. 93 (2); Stn. no. 94 (1); Stn. no. 98 (1); Stn. no. 99 (1); Stn. no. 108 (1): Stn. no. 121 (2).

Distribution: Japan, Yellow Sea, South Viet Nam.

Glycera oxycephala Ehlers, 1887

Glycera oxycephala Ehlers, 1887, p.121, pl. 41, figs. 7–11; Böggemann, 2002, pp. 40–41, figs. 22–24.

Material: Stn. no. 74 (3); Stn. no. 79 (1).

Distribution: Northwest Atlantic, Gulf of Mexico, Mediterranean Sea, Australia, Canada, Japan.

Glycera tesselata Grube, 1863

Glycera tesselata Grube, 1863, pp. 41–42, pl. 4, fig. 4; Gallardo, 1968, pp. 70–71, pl. 21, figs. 1–6; Imajima, 2003, p. 117, fig. 69h–l; Imajima, 2005, p. 81.

Material: Stn. no. 5 (1); Stn. no. 9 (1); Stn. no. 30 (1); Stn. no. 31 (3); Stn. no. 33 (1); Stn. no. 36 (4); Stn. no. 37 (1); Stn. no. 41 (1); Stn. no. 51 (1); Stn. no. 58 (1); Stn. no. 59 (1); Stn. no. 86 (1); Stn. no. 89 (8); Stn. no. 97 (3).

Distribution: Mediterranean Sea, North Atlantic Ocean, western Canada to California, Indo-Pacific areas, Japan.

Family Goniadidae Kinberg, 1866

Goniada annulata Moore, 1905

Goniada annulata Moore, 1905, pp. 549–553, pl. 36, figs. 45–48; Uschakov, 1955, p. 173, fig. 48f i; Hilbig, 1994a, pp. 220–222, fig. 7. 2; Imajima, 1997a, pp. 169–170, fig. 8a–j; Imajima, 2003, p. 118.

Material: Stn. no. 52 (7); Stn. no. 111 (1); Stn. no. 118 (3).

Distribution: Alaska to western Mexico, Sea of Okhotsk, Japan.

Goniada brunnea goronba Imajima, 2003

Goniada brunnea goronba Imajima, 2003, pp. 118–121, figs. 70a–i, 71a–h.

Material: Stn. no. 49 (1); Stn. no. 50 (1); Stn. no. 51 (2); Stn. no. 61 (1).

Distribution: Japan.

Goniada japonica Izuka, 1912

Goniada japonica Izuka, 1912, pp. 232–234, pl. 23, figs. 1–6: Imajima & Hartman, 1964, p. 239.

Material: Stn. no. 98 (1); Stn. no. 103 (1).

Distribution: Japan.

Goniada maculata Örsted, 1843

Goniada maculata: Okuda, 1939, pp. 233–234, textfig. 8; Gardiner, 1976, pp. 167–169, fig. 19c–f; Imajima, 1997a, p. 169.

Material: Stn. no. 106 (1); Stn. no. 107 (4).

Distribution: Western Europe, Gulf of Iran, Atlantic of northeastern North America, Alaska, Yellow Sea, Japan.

Goniada sagamiana Imajima, 2003

Goniada sagamiana Imajima, 2003, pp. 121–125, figs. 72a–l, 73a–h, 74a–e.

Material: Stn. no. 47 (1); Stn. no. 49 (2); Stn. no. 50 (2); Stn. no. 89 (1); Stn. no. 92 (1).

Distribution: Japan.

***Goniada* spp.**

Material: Stn. no. 5 (2); Stn. no. 6 (1); Stn. no. 23 (2); Stn. no. 24 (5); Stn. no. 25 (2); Stn. no. 33 (1); Stn. no. 34 (3); Stn. no. 41 (1); Stn. no. 46 (1); Stn. no. 51 (1); Stn. no. 64 (1); Stn. no. 65 (1) Stn. no. 89 (1); Stn. no. 90 (1); Stn. no. 91 (2).

Family Sphaerodoridae Malmgren, 1867

***Clavodorum* sp.**

Material: Stn. no. 105 (1).

***Ephesiella* sp. A**

Material: Stn. no. 93 (1); Stn. no. 97 (1).

***Ephesiella* sp. B**

Material: Stn. no. 93 (8); Stn. no. 97 (3); Stn. no. 102 (1).

Sphaerodoropsis biserialis (Berkeley & Berkeley, 1944)

Sphaerodorum biserialis Berkeley & Berkeley, 1944, pp. 3–4, figs. 1–3.

Sphaerodoridium biserialis: Lützen, 1961, p. 415; Imajima, 1969, pp. 154–155, fig. 3a–d.

Sphaerodoropsis biserialis: Hartman & Fauchald, 1971, p. 70.

Material: Stn. no. 95 (1); Stn. no. 111 (1).

Distribution: Canadian Arctic Ocean, Japan.

Sphaerodorum gracilis (Rathke, 1843)

Ephesia gracilis: Fauvel, 1911, pp. 15–17, pl. 1, figs. 7–9.

Sphaerodorum gracilis: Lützen, 1961, p. 414; Imajima, 1969, pp. 152–153, fig. 1a–c; Imajima, 2001b, p. 58.

Material: Stn. no. 91 (1); Stn. no. 112 (1); Stn. no. 118 (1).

Distribution: Norway, Bering Sea, Japan.

Family Hesionidae Malmgren, 1867

Amphiduros fuscescens (Marenzeller, 1875)

Oxydromus fuscescens Marenzeller, 1875, pp. 143–146, pl. 2, fig. 1.

Amphiduros fuscescens: Pleijel, 1993, pp. 176–178, fig. 13A–H; Imajima, 2003, pp. 127–129, fig. 76a–i; Imajima, 2005, pp. 81–82.

Material: Stn. no. 80 (1); Stn. no. 84 (1); Stn. no. 89 (1).

Distribution: Mediterranean Sea, Adriatic Sea, Japan.

Gyptis lobatus (Hessle, 1925)

Oxydromus lobatus Hessle, 1925, pp. 24–25, textfig. 7a–d.

Gyptis lobatus: Hilbig, 1994b, pp. 252–253, fig. 9. 4; Imajima, 2003, pp. 129–132, fig. 77a–l.

Material: Stn. no. 102 (1).

Distribution: Japan.

Hesiospina similis (Hessle, 1925)

Kefersteinia similis Hessle, 1925, pp. 29–32, textfig. 10.

Hesiospina similis: Imajima & Hartman, 1964, p. 81, pl. 15, figs. a–f; Imajima, 2003, pp. 134–136, fig. 79a–g.

Material: Stn. no. 15 (1); Stn. no. 36 (4); Stn. no. 95 (3); Stn. no. 102 (27); Stn. no. 103 (4); Stn. no. 104 (3); Stn. no. 105 (12); Stn. no. 106 (2); Stn. no. 108 (2); Stn. no. 109 (16); Stn. no. 111 (2).

Distribution: Japan.

Leocratides filamentosus Ehlers, 1908

Leocratides filamentosus Ehlers, 1908, pp. 63–64, pl. 6, figs. 8–12: Imajima, 2003, pp. 136–138, fig. 80a–g; Imajima, 2005, p. 82.

Material: Stn. no. 82 (2).

Distribution: Japan.

Family Pilargidae St. Joseph, 1899

Ancistrosyllis groenlandica McIntosh, 1879

Ancistrosyllis groenlandica McIntosh, 1879a, p. 502, pl. 65, figs. 3, 20; Imajima, 1987, pp. 153–155, fig. 2a–k.

Material: Stn. no. 105 (2); Stn. no. 106 (1); Stn. no. 114 (3).

Distribution: West Greenland, off northeastern South America, Mediterranean Sea, Japan.

Sigambra phuketensis Licher & Westheide, 1997

Sigambra phuketensis Licher & Westheide, 1997, pp. 13–14, fig. 3; Imajima, 2001a, p. 186, fig. 89.

Material: Stn. no. 105 (2); Stn. no. 106 (2).

Distribution: Andaman Sea, South China Sea, Japan.

Synelmis albini (Langerhans, 1881)

Ancistrosyllis albini Langerhans, 1881, pp. 107–108, fig. 16a–e.

Synelmis albini: Pettibone, 1966, pp. 191–195, figs. 19–21; Imajima, 1987, pp. 157–158, fig. 4a–k; Imajima, 2005, p. 83.

Material: Stn. no. 15 (1); Stn. no. 30 (1); Stn. no. 46 (1); Stn. no. 58 (1); Stn. no. 71 (3); Stn. no. 77 (1); Stn. no. 89 (1); Stn. no. 97 (1); Stn. no. 102 (4); Stn. no. 103 (3); Stn. no. 105 (1); Stn. no. 109 (14); Stn. no. 112 (1); Stn. no. 121 (2).

Distribution: Widespread in tropical and subtropical oceans.

Family Syllidae Grube, 1850

Subfamily Autolytinae Rioja, 1925

***Autolytus* spp.**

Material: Stn. no. 15 (1); Stn. no. 36 (1); Stn. no. 58 (1); Stn. no. 73 (1); Stn. no. 95 (2); Stn. no. 123 (22).

All specimens are juvenile individuals.

Myrianida pachycera (Augener, 1913)

Autolytus pachycerus Augener, 1913, pp. 257–260, pl. 2, figs. 11, 12, textfig. 40a–c.

Myrianida pachycera: Imajima, 1966b, pp. 79–82, textfig. 26a–l; Imajima, 2003, pp. 140–141.

Material: Stn. no. 89 (1).

Distribution: Australia, Japan.

Subfamily Eusyllinae Rioja, 1925

Amblyosyllis speciosa Izuka, 1912

Amblyosyllis speciosa Izuka, 1912, p. 183, pl. 20, fig. 1; Imajima & Hartman, 1964, pp. 106–108, pl. 23, figs. A–i; Imajima, 1966c, pp. 86–88, textfig. 27a–g.

Material: Stn. no. 95 (1); Stn. no. 123 (2).

Distribution: Japan.

Eusyllis longicirrata Imajima, 1966

Eusyllis longicirrata Imajima, 1966c, pp. 94–97, textfig. 30a–f.

Material: Stn. no. 59 (1).

Distribution: Japan.

Odontosyllis maculata Uschakov, 1950

Odontosyllis maculata Uschakov, 1950, p. 178, pl. 1, fig. 5, textfig. 16; Imajima & Hartman, 1964, pp. 113–114, pl. 26, figs. a–g.

Material: Stn. no. 9 (1); Stn. no. 33 (1); Stn. no. 98 (1).

Distribution: Kamchatka, Japan.

Odontosyllis trilineata Imajima, 2003

Odontosyllis trilineata Imajima, 2003, pp. 143–145, fig. 82a–l.

Material: Stn. no. 46 (2); Stn. no. 47 (1); Stn. no. 61 (1); Stn. no. 121 (1).

Distribution: Japan.

Odontosyllis undecimdonta Imajima & Hartman, 1964

Odontosyllis undecimdonta Imajima & Hartman, 1964, pp. 114–116, pl. 26, figs. H, i, pl. 27, figs. A–e; Imajima, 2003, p. 145.

Material: Stn. no. 34 (1); Stn. no. 36 (3); Stn. no. 37 (1); Stn. no. 47 (2); Stn. no. 61 (1); Stn. no. 95 (1); Stn. no. 101 (1).

Distribution: Japan.

Pionosyllis uraga Imajima, 1966

Pionosyllis uraga Imajima, 1966c, pp. 114–116, textfig. 37a–g; Imajima, 2003, pp. 145–146.

Material: Stn. no. 36 (1); Stn. no. 89 (2); Stn. no. 95 (2); Stn. no. 110 (1).

Distribution: Japan.

Subfamily Exogoninae Rioja, 1925

Brania clavata (Claparède, 1863)

Brania clavata Claparède, 1863, p. 41, pl. 13, fig. 29; Rioja, 1943, p. 215, figs. 7–11, 31; Imajima, 1966a, pp. 393–395, textfig. 1a–g.

Material: Stn. no. 123 (1).

Distribution: English Channel, Mediterranean Sea, Mexico, Bering Sea, Yellow Sea, Japan.

Exogone gemmifera Pagenstecher, 1862

Exogone gemmifera: Fauvel, 1923, pp. 305–306, fig. 117a–d; Uschakov & Wu, 1962, p. 60; Imajima, 1966a, pp. 396–397, textfig. 2a–h; Imajima, 2003, p. 149.

Material: Stn. no. 36 (2); Stn. no. 58 (1); Stn. no. 95 (1); Stn. no. 123 (1).

Distribution: France, Atlantic Ocean, Mediterranean Sea, Bering Sea, Yellow Sea, Japan.

Exogone uniformis Hartman, 1961

Exogone uniformis Hartman, 1961, pp. 73–74, pl. 6, fig. 1, pl. 7, figs. 1–4; Imajima, 1966a, pp. 400–401, textfig. 4a–j; Imajima, 2003, p. 149.

Material: Stn. no. 36 (5); Stn. no. 58 (1); Stn. no. 95 (3); Stn. no. 106 (2).

Distribution: Southern California, Japan.

Exogone verugera (Claparède, 1868)

Exogone verugera: Fauvel, 1934, pp. 312–313; Imajima & Hartman, 1964, p. 116.

Material: Stn. no. 36 (2).

Distribution: Western and southern Europe, western Canada south to Mexico, Japan.

Sphaerosyllis erinaceus Claparède, 1863

Sphaerosyllis erinaceus Claparède, 1863, pp. 45–46, pl. 13, fig. 38; Pettibone, 1963, pp. 135–136, fig. 35a; Imajima, 1966a, pp. 402–404, textfig. 5a–g; Imajima, 2003, p. 150.

Material: Stn. no. 31 (1); Stn. no. 73 (1); Stn. no. 76 (2); Stn. no. 89 (5); Stn. no. 95 (11); Stn. no. 97 (1). Stn. no. 100 (1); Stn. no. 106 (2); Stn. no. 123 (3).

Distribution: Mediterranean Sea, Atlantic Ocean, Arctic Ocean, Yellow Sea, Japan.

Sphaerosyllis hirsuta Ehlers, 1897

Sphaerosyllis hirsuta Ehlers, 1897, p. 48, pl. 3, figs. 58–60; Imajima & Hartman, 1964, pp. 116–117, pl. 27, figs. f–i; Imajima, 2003, p. 150.

Material: Stn. no. 15 (1); Stn. no. 25 (1); Stn. no. 36 (35); Stn. no. 122 (3).

Distribution: Southern South America, Kurile Islands, Japan.

Subfamily Syllinae Rioja, 1925

Haplosyllis spongicola (Grube, 1855)

Syllis spongicola Grube, 1855, pp. 104–105, pl. 4, fig. 4.

Haplosyllis spongicola: Hartman, 1945, pp. 15–16; Imajima, 1966d, pp. 220–221, textfig. 38a–h; Imajima, 2003, p. 153.

Material: Stn. no. 95 (1); Stn. no. 123 (4).

Distribution: Mediterranean Sea, Atlantic and Indian oceans, southern California to Panama, West Indian region, Japan.

Haplosyllis spongicola tentaculata (Marion, 1879)

Syllis spongicola var. *tentaculata* Marion, 1879, p. 19.

Haplosyllis spongicola tentaculata: Imajima, 1966d, pp. 221–223, textfig. 38i–n; Imajima, 2003, pp. 153–154; Imajima, 2005, p. 83.

Material: Stn. no. 95 (2).

Distribution: Gulf of Naples, Japan.

Syllis ramosa McIntosh, 1879

Syllis ramosa McIntosh, 1879b, p. 720; McIntosh, 1885, pp. 198–205, pl. 31, fig. 1, pl. 33, figs. 11–14, pl. 15A, figs. 18, 19, pl. 16A, fig. 1, pl. 34A, figs. 8–13; Izuka, 1912, pp. 187–190, pl. 20, figs. 7, 8.

Material: Stn. no. 123 (1).

Distribution: Philippine Islands, Japan.

Syllis spongiphila Verrill, 1885

Syllis spongiphila Verrill, 1885, p. 435; Hartman, 1944a, p. 339, pl. 24, fig. 10; Imajima, 1966d, pp. 250–251, textfig. 49l–s; Imajima, 2003, pp. 157–158; Imajima, 2005, p. 83.

Material: Stn. no. 15 (1); Stn. no. 59 (1); Stn. no. 88 (1); Stn. no. 89 (1); Stn. no. 95 (2); Stn. no. 97 (1).

Distribution: Massachusettes, Falkland Islands, western Canada, Japan.

Trypanosyllis (Trypanedenta) taeniaformis (Haswell, 1886)

Syllis taeniaformis Haswell, 1886, pp. 741–742, pl. 50, figs. 4–5.

Trypanosyllis taeniaformis: Augener, 1913, p. 230.

Trypanosyllis (*Trypanedenta*) *taeniaformis*: Imajima & Hartman, 1964, pp. 127–128, pl. 30, figs. h–k; Imajima, 1966d, pp. 239–241, textfig. 45a–i; Imajima, 2005, p. 84.

Material: Stn. no. 36 (3); Stn. no. 77 (1).

Distribution: Southeastern Australia, Red Sea, Palau Islands, Japan.

Trypanosyllis* (*Trypanobia*) *depressa (Augener, 1913)

Haplosyllis depressa Augener, 1913, pp. 216–217, pl. 3, figs. 29–30, textfig. 27.

Trypanosyllis (*Trypanobia*) *depressa*: Imajima, 1966d, pp. 242–243, textfig. 46a–f.

Material: Stn. no. 36 (2).

Distribution: Australia, Japan.

Typosyllis aciculata orientalis Imajima & Hartman, 1964

Typosyllis aciculata orientalis Imajima & Hartman, 1964, pp. 130–132, pl. 31, figs. e, f, pl. 32, figs. a–t; Rho & Lee, 1987, p. 82, fig. 4; Imajima, 2003, pp. 162–163.

Material: Stn. no. 6 (8); Stn. no. 15 (4); Stn. no. 31 (1); Stn. no. 33 (1); Stn. no. 34 (1); Stn. no. 36 (50); Stn. no. 37 (7); Stn. no. 40 (2); Stn. no. 46 (2); Stn. no. 59 (5); Stn. no. 89 (2); Stn. no. 95 (10); Stn. no. 110 (3); Stn. no. 123 (3).

Distribution: Japan, Yellow Sea.

Typosyllis alternata (Moore, 1908)

Syllis alternata Moore, 1908, pp. 323–325, figs. a–f.

Typosyllis alternata: Hartman, 1948, p. 21; Imajima, 1966e, pp. 273–275, textfig. 58a–l; Imajima, 2005, p. 84.

Material: Stn. no. 58 (1); Stn. no. 59 (1); Stn. no. 68 (1); Stn. no. 75 (1); Stn. no. 76 (1); Stn. no. 77 (1); Stn. no. 95 (3); Stn. no. 122 (1); Stn. no. 123 (9).

Distribution: Alaska, California, Vancouver Island, Japan.

Typosyllis cornuta (Rathke, 1843)

Ehlersia (*Syllis*) *cornuta*: Langerhans, 1879, p. 537.

Langerhansia cornuta: Hartman, 1959, p. 210; Imajima, 1966e, pp. 256–259, textfig. 51a–o.

Typosyllis cornuta: Licher, 1999, pp. 57–64, figs. 27–28; Imajima, 2003, pp. 164–165; Imajima, 2005, p. 84.

Material: Stn. no. 48 (1); Stn. no. 50 (1); Stn. no. 51 (1); Stn. no. 58 (2); Stn. no. 89 (3); Stn. no. 92 (2); Stn. no. 95 (9); Stn. no. 97 (1); Stn. no. 98 (2); Stn. no. 105 (1); Stn. no. 106 (2).

Distribution: Arctic, Atlantic, Indian and Pacific oceans; Mediterranean Sea, Japan.

Typosyllis ehlersioides Marenzeller, 1890

Typosyllis ehlersioides Marenzeller, 1890, pp. 4–5, fig. a; Imajima, 1966e, pp. 279–282, textfig. 60a–o.

Material: Stn. no. 123 (2).

Distribution: Bering Sea, Japan.

Typosyllis fasciata (Malmgren, 1867)

Syllis fasciata Malmgren, 1867a, p. 161-162, pl. 8, fig. 47, pl. 9, fig. 52.

Typosyllis fasciata: Imajima & Hartman, 1964, pp. 135–136, pl. 33, figs. j–o.

Material: Stn. no. 101 (1).

Distribution: North Atlantic and Pacific oceans, Japan.

Typosyllis prolifera (Krohn, 1852)

Syllis prolifera Krohn, 1852, p. 66.

Syllis (*Typosyllis*) *prolifera*: Fauvel, 1923, pp. 261–262, fig. 97a–g.

Typosyllis prolifera: Imajima, 1966e, pp. 292–294, textfig. 65a–n; Imajima, 2003, p. 166.

Material: Stn. no. 84 (2); Stn. no. 95 (1).

Distribution: Mediterranean Sea, Atlantic and Indian oceans, Japan.

Typosyllis regulata Imajima, 1966

Typosyllis regulata Imajima, 1966e, pp. 289–292, textfig. 64a–n; Imajima, 2003, pp. 166–167; Imajima, 2005, p. 84.

Material: Stn. no. 46 (2); Stn. no. 61 (2); Stn. no. 82 (1); Stn. no. 95 (1); Stn. no. 105 (1).

Distribution: Japan.

Typosyllis variegata (Grube, 1860)

Syllis (*Typosyllis*) *variegata*: Fauvel, 1923, p. 262, textfig. 97h–n.

Typosyllis variegata: Imajima & Hartman, 1964, pp. 137–138, pl. 34, figs. a–i.

Material: Stn. no. 36 (10); Stn. no. 77 (1); Stn. no. 80 (1).

Distribution: Western and southern Europe, Indo-Pacific areas, Japan.

***Typosyllis* sp.**

Material: Stn. no. 8 (1); Stn. no. 36 (35); Stn. no. 42 (1).

Family Nereididae Johnston, 1845

Ceratonereis hircinicola (Eisig, 1870)

Nereis hircinicola Eisig, 1870, pp. 103–105, pl. 11, figs. 3–4.

Ceratonereis hircinicola: Day, 1967a, p. 327; Imajima, 1972, pp. 67–69, figs. 14, 17; Imajima, 2003, pp. 168–170.

Material: Stn. no. 36 (1); Stn. no. 37 (1); Stn. no. 77 (5).

Distribution: Mediterranean Sea, Japan.

***Neanthes* sp.**

Material: Stn. no. 36 (6); Stn. no. 94 (1) , Stn. no. 95 (2); Stn. no. 102 (3); Stn. no. 104 (1); Stn. no. 108 (1).

Nereis denhamensis Augener, 1913

Nereis denhamensis: Kott, 1951, pp. 99–101, figs. 3s–y, 4l–q; Imajima, 1972, pp. 120–122, fig. 38a–m, fig. 51.

Material: Stn. no. 6 (1); Stn. no. 9 (3); Stn. no. 61 (3); Stn. no. 77 (2).

Distribution: Australia, Japan.

Nereis jacksoni Kinberg, 1866

Nereis jacksoni Kinberg, 1866, p. 169; Fauvel, 1953, pp. 189–190, fig. 95e; Wu, Sun & Yang, 1985, pp. 97–99, fig. 51A–J.

Material: Stn. no. 15 (1); Stn. no. 86 (1).

Distribution: Australia, New Zealand, Bay of Bengal, Japan.

Nereis pelagica Linnaeus, 1758

Nereis pelagica Linnaeus, 1758, p. 654; Day, 1967a, p. 315, fig. 14. 7. f–j; Imajima, 1972, pp. 142–146, figs. 48, 49, 51; Imajima, 2003, pp. 174–175.

Material: Stn. no. 15 (1); Stn. no. 36 (20).

Distribution: Norway to Mediterranean Sea, West Africa, New England region of America, Japan.

Nicon moniloceras (Hartman, 1940)

Leptonereis glauca moniloceras Hartman, 1940, p. 217, pl. 34, figs. 42–46.

Nicon moniloceras: Hartman, 1959, p. 274; Chlebovitsch & Wu, 1962, pp. 35, 44–45, pl. 1, figs. B–E; Imajima, 1972, pp. 53–55, fig. 8a–j, 11.

Material: Stn. no. 75 (1).

Distribution: California south to western Mexico, Yellow Sea, Japan.

Platynereis bicanaliculata (Baird, 1863)

Nereis bicanaliculata Baird, 1863, p. 109.

Platynereis bicanaliculata: Hartman, 1954, pp. 36–39, figs. 38, 39; Wu, 1967, pp. 57–58, fig. 5a–b; Imajima, 1972, pp. 76–79, figs. 18, 19, 22.

Material: Stn. no. 29 (1); Stn. no. 35 (1).

Distribution: Western Canada south to western Mexico, Australia, Japan.

Platynereis dumerilii Audouin & M. -Edwards, 1833)

Nereis dumerilii: Webster, 1879, p. 234.

Platynereis dumerilii: Fauvel, 1953, pp. 218–219, fig. 111a–f; Imajima, 1967, pp. 422–423, fig. 6a–e; Imajima, 1972, pp. 80–82, figs. 20, 22.

Material: Stn. no. 19 (1).

Distribution: Atlantic, Pacific and Indian oceans, Mediterranean Sea, Japan.

***Rullierinereis* sp.**

Material: Stn. no. 122 (1).

Family Nephtyidae Grube, 1850

Aglaophamus japonicus Imajima & Takeda, 1985

Aglaophamus japonicus Imajima & Takeda, 1985, pp. 73–75, fig. 8a–l.

Material: Stn. no. 33 (1); Stn. no. 103 (1); Stn. no. 109 (5); Stn. no. 111 (1).

Distribution: Japan.

Aglaophamus lobatus Imajima & Takeda, 1985

Aglaophamus lobatus Imajima & Takeda, 1985, pp. 75–78, fig. 9a–m; Imajima, 2005, p. 86.

Material: Stn. no. 24 (1); Stn. no. 33 (2).

Distribution: Japan.

Aglaophamus malmgreni (Théel, 1879)

Nephthys malmgreni Théel, 1879, p. 26, pl. 1, fig. 17, pl. 2, fig. 17.

Aglaophamus malmgreni: Pettibone, 1956, p. 557; Imajima & Takeda, 1985, pp. 68–70, fig. 6a–n.

Material: Stn. no. 34 (1); Stn. no. 52 (4); Stn. no. 105 (1); Stn. no. 107 (1); Stn. no. 108 (1); Stn. no. 109 (1); Stn. no. 118 (2).

Distribution: Arctic Ocean, Bering Sea, north Japan Sea, Japan.

Aglaophamus sinensis (Fauvel, 1932)

Nephthys sinensis Fauvel, 1932, pp. 536–537, fig. 1a–c.

Aglaophamus sinensis: Hartman, 1950, p. 117; Fauchald, 1968, pp. 12–13, figs. 16–18; Imajima & Takeda, 1985, pp. 65–68, figs. 4a–i, 5a–d.

Material: Stn. no. 56 (1); Stn. no. 57 (1).

Distribution: Yellow Sea, Viet Nam, Japan.

***Aglaophamus* sp.**

Material: Stn. no. 52 (4); Stn. no. 64 (2); Stn. no. 87 (1); Stn. no. 88 (3); Stn. no. 93 (1).

Inermonephtys japonica Imajima & Takeda, 1985

Inermonephtys japonica Imajima & Takeda, 1985, pp. 59–63, fig. 2a–q; Imajima, 2003, pp. 179–200.

Material: Stn. no. 34 (1); Stn. no. 47 (1); Stn. no. 51 (1); Stn. no. 56 (1); Stn. no. 57 (1); Stn. no. 61 (2); Stn. no. 93 (1); Stn. no. 95 (2); Stn. no. 97 (1); Stn. no. 98 (2); Stn. no. 102 (3); Stn. no. 103 (4); Stn. no. 104 (1).

Distribution: Japan.

Nephtys caeca (Fabricius, 1780)

Nephtys caeca: Verrill, 1881, pp. 294–296, 307, 314; Berkeley & Berkeley, 1948, p. 54, figs. 80–81; Imajima, 1961, pp. 88–89, fig. 4; Imajima & Takeda, 1985, pp. 63–67, figs. 12a–m, 14.

Material: Stn. no. 10 (2).

Distribution: North Atlantic, Pacific and Arctic oceans, California, Yellow Sea, Japan.

Nephtys paradoxa Malm, 1874

Nephthys paradoxa: Fauvel, 1914, p. 199.

Nephtys paradoxa: Hartman, 1944a, pp. 335, 339, pl. 15, fig. 6; Fauchald, 1963, pp. 13–15, figs. 1A, 2B, 3C; Imajima & Takeda, 1987, pp. 50–52, figs. 5a–i, 6.

Material: Stn. no. 53 (1).

Distribution: North Atlantic Ocean, Bering Strait, Greenland, Japan.

Nephtys polybranchia Southern, 1921

Nephtys polybranchia Southern, 1921, pp. 607–609, pl. 24, fig. 11A–G, textfig. 11a–b; Okuda, 1940, pp. 14–15, fig. 7; Imajima & Takeda, 1985, pp. 54–57, figs. 7a–j, 8.

Material: Stn. no. 32 (1); Stn. no. 56 (1).

Distribution: Madras, Gulf of Siam, Yellow Sea, Japan.

Family Paralacydoniidae Pettibone, 1963

Paralacydonia paradoxa Fauvel, 1913

Paralacydonia paradoxa Fauvel, 1913, p. 54, fig. 55; Blake, 1994b, pp. 363–367, fig. 14. 1; Imajima, 2003, pp. 180–182, fig. 90a–j.

Material: Stn. no. 33 (2); Stn. no. 34 (2); Stn. no. 41 (1); Stn. no. 52 (1); Stn. no. 59 (1); Stn. no. 70 (1); Stn. no. 89 (1); Stn. no. 98 (1); Stn. no. 100 (2); Stn. no. 121 (1).

Distribution: Mediterranean Sea, South Africa, off Massachusetts, Yellow Sea, off southern California, Japan.

Order Amphinomida

Family Amphinomidae Savigny, 1818

Chloeia flava (Pallas, 1766)

Chloeia flava: McIntosh, 1885, pp. 8–13, pl. 3, figs. 1–3, pl. 1A, figs. 7–9; Izuka, 1912, pp. 223–225, pl. 2, fig. 4, pl. 22, figs. 3–5; Imajima, 2003, pp. 182–183.

Material: Stn. no. 56 (8); Stn. no. 57 (3); Stn. no. 55 (1); Stn. no. 58 (1); Stn. no. 59 (3); Stn. no. 89 (6); Stn. no. 98 (1); Stn. no. 99 (1); Stn. no. 102 (1); Stn. no. 103 (6); Stn. no. 104 (2); Stn. no. 105 (1); Stn. no. 109 (1).

Distribution: Indian Ocean, Sri Lanka, Australia, Philippines, Japan.

Family Euphrosinidae Williams, 1851

Euphrosine polyclada Imajima, 2003

Euphrosine polyclada Imajima, 2003, pp. 194–197, figs. 98a–i, 99a–i.

Material: Stn. no. 6 (15); Stn. no. 9 (4); Stn. no. 24 (3); Stn. no. 31 (3); Stn. no. 33 (4); Stn. no. 46 (2); Stn. no. 58 (7); Stn. no. 59 (1); Stn. no. 61 (4); Stn. no. 74 (1); Stn. no. 75 (2); Stn. no. 89 (4); Stn. no. 97 (1); Stn. no. 98 (4); Stn. no. 99 (10); Stn. no. 100 (11); Stn. no. 121 (2).

Distribution: Japan.

Euphrosine ramosa Imajima, 2003

Euphrosine ramosa Imajima, 2003, pp. 198–200, fig. 100a–m; Imajima, 2005, p.88.

Material: Stn. no. 6 (1); Stn. no. 95 (1).

Distribution: Japan.

Order Eunicida

Family Onuphidae Kinberg, 1865

Subfamily Hyalinoeciinae Paxton, 1986

Anchinothria cirrobranchiata (Moore, 1903)

Onuphis cirrobranchiata Moore, 1903, pp. 451–453, pl. 25, figs. 60–63.

Anchinothria cirrobranchiata: Paxton, 1986a, p. 29; Imajima, 1999, pp. 5–9, figs. 2a–g, 3a–l.

Material: Stn. no. 41 (1); Stn. no. 42 (1); Stn. no. 105 (1).

Distribution: Japan.

Anchinothria crassisetosa (Chamberlin, 1919)

Onuphis crassisetosa Chamberlin, 1919, pp. 295–300, pl. 42, figs. 1–6, pl. 43, figs. 1–7.

Anchinothria crassisetosa: Paxton, 1986a, p. 29; Imajima, 1999, pp. 9–13, figs. 4a–e, 5a–e, 6a–p.

Material: Stn. no. 44 (4).

Distribution: Off Panama, off Galapagos Islands, Japan.

Hyalinoecia tubicola (O. F. Müller, 1776)

Nereis tubicola Müller, 1776, p. 18.

Hyalinoecia tubicola: Moore, 1903, p. 444; Orensanz, 1974, pp. 114–117, fig. 13; Imajima, 1999, pp. 31–34, figs. 18a–h, 19a–s; Imajima, 2005, p. 88.

Material: Stn. no. 31 (1); Stn. no. 34 (10); Stn. no. 41 (24); Stn. no. 42 (4); Stn. no. 58 (4); Stn. no. 59 (57); Stn. no. 80 (1); Stn. no. 88 (2); Stn. no. 90 (3); Stn. no. 97 (3); Stn. no. 103 (1); Stn. no. 104 (1); Stn. no. 105 (2); Stn. no. 108 (1); Stn. no. 111 (1); Stn. no. 112 (6).

Distribution: East Atlantic from Greenland to south Africa; Mediterranean Sea, Indian Ocean, New Zealand, California, Japan.

Nothria itoi Maekawa & Hayashi, 1989

Nothria itoi Maekawa & Hayashi, 1989, pp. 68–70, fig. 5a–m; Imajima, 1999, pp. 40–42, figs. 22a–j, 23a–p.

Material: Stn. no. 34 (16); Stn. no. 41 (1); Stn. no. 98 (16).

Distribution: Japan.

Nothria oblonga Imajima, 1999

Nothria oblonga Imajima, 1999, pp. 42–46, figs. 24a–g, 25a–n.

Material: Stn. no. 56 (6).

Distribution: Japan.

Nothria otsuchiensis Imajima, 1986

Nothria otsuchiensis Imajima, 1986, pp. 108–110, fig. 8a–r; Imajima, 1997a, p. 178; Imajima, 1999, pp. 46–51, fig. 26a–f; Imajima, 2005, p. 88.

Material: Stn. no. 6 (37); Stn. no. 9 (3); Stn. no. 23 (2); Stn. no. 25 (4); Stn. no. 31 (21); Stn. no. 33 (31); Stn. no. 44 (1); Stn. no. 92 (3); Stn. no. 96 (1); Stn. no. 97 (10); Stn. no. 100 (47); Stn. no. 103 (25); Stn. no. 121 (6); Stn. no. 122 (3).

Distribution: Japan.

Subfamily Onuphinae Audouin & M. -Edwards, 1833

***Kinbergonuphis* sp.**

Material: Stn. no. 121 (15).

***Notonuphis* sp.**

Material: Stn. no. 87 (47).

Paradiopatra simplex Imajima, 1999

Paradiopatra simplex Imajima, 1999, pp. 81–82, figs. 45a–j, 46a–j, 47a–n.

Material: Stn. no. 122 (3); Stn. no. 123 (1).

Distribution: Japan.

Paradiopatra striata (Uschakov, 1950)

Onuphis parva striata Uschakov, 1950, p. 193, fig. 25.

Paradiopatra parva striata: Paxton, 1986a, p. 38.

Paradiopatra striata: Imajima, 1999, pp. 84–88.

Material: Stn. no. 5 (8); Stn. no. 23 (1); Stn. no. 25 (5); Stn. no. 42 (7); Stn. no. 70 (1); Stn. no. 97 (4); Stn. no. 103 (30); Stn. no. 121 (1).

Distribution: Sea of Okhotsk, Japan.

Paradiopatra unica Imajima, 1999

Paradiopatra unica Imajima, 1999, pp. 88–92, figs. 48a–h, 49a–m; Imajima, 2005, p. 88.

Material: Stn. no. 43 (1).

Distribution: Japan.

Paradiopatra willemoesii (McIntosh, 1885)

Nothria willemoesii McIntosh, 1885, pp. 322–327, pl. 26A, figs. 1–4, pl. 35A, fig. 1, pl. 41, figs. 4–10.

Paradiopatra willemoesii: Paxton, 1986a, p. 38; Imajima, 1999, pp. 92–95, figs. 50a–h, 51a–g, 52a–o, 53a–b.

Material: Stn. no. 9 (1); Stn. no. 14 (2); Stn. no. 18 (1); Stn. no. 20 (3); Stn. no. 21 (1); Stn. no. 22 (2); Stn. no. 26 (1); Stn. no. 27 (1); Stn. no. 28 (1); Stn. no. 30 (1); Stn. no. 38 (1); Stn. no. 58 (1); Stn. no. 93 (1).

Distribution: Amboina, Port Darwin, East China Sea, Japan.

Rhamphobrachium (Spinigerium) brevibrachiatum (Ehlers, 1875)

Diopatra brevibrachiata Ehlers, 1875, pp. 49–52, pl. 3, figs. 11–21.

Paranorthia brevicornuta Moore, 1903, pp. 448–451, pl. 25, figs. 52–56; Izuka, 1912, pp. 108–109.

Rhamphobrachium (*Spinigerium*) *brevibrachiatum*: Paxton, 1986b, pp.89–92, fig. 9a–g; Imajima, 1999, pp. 102–108, figs. 56a–f, 57a–s.

Material: Stn. no. 6 (1); Stn. no. 23 (3); Stn. no. 24 (1); Stn. no. 25 (9); Stn. no. 31 (2); Stn. no. 33 (20); Stn. no. 34 (13); Stn. no. 41 (5); Stn. no. 45 (3); Stn. no. 46 (2); Stn. no. 51 (5); Stn. no. 58 (44); Stn. no. 59 (13); Stn. no. 61 (4); Stn. no. 62 (7); Stn. no. 66 (1); Stn. no. 70 (11); Stn. no. 71 (22); Stn. no. 72 (2); Stn. no. 74 (5); Stn. no. 81 (1); Stn. no. 87 (5); Stn. no. 88 (1); Stn. no. 89 (20); Stn. no. 92 (12); Stn. no. 97 (15); Stn. no. 98 (8); Stn. no. 99 (23); Stn. no. 109 (3); Stn. no. 110 (4); Stn. no. 111 (1); Stn. no. 112 (2).

Distribution: English Channel to Mediterranean Sea, off Virginia, Florida, Japan.

Family Eunicidae Savigny, 1818

Eunice fauchaldi Miura, 1986

Eunice fauchaldi Miura, 1986, pp. 297–301, figs. 24–27; Imajima, 2001b, pp. 74–75; Imajima, 2005, p. 89.

Material: Stn. no. 6 (115); Stn. no. 7 (15); Stn. no. 8 (17); Stn. no. 9 (85); Stn. no. 13 (2); Stn. no. 15 (2); Stn. no. 17 (2); Stn. no. 23 (7); Stn. no. 25 (5); Stn. no. 31 (185); Stn. no. 33 (28); Stn. no. 34 (25); Stn. no. 36 (33) Stn. no. 37 (1); Stn. no. 41 (2); Stn. no. 42 (7); Stn. no. 44 (7); Stn. no. 45 (5); Stn.

no. 46 (26); Stn. no. 47 (9); Stn. no. 51 (2); Stn. no. 56 (12); Stn. no. 55 (1); Stn. no. 61 (38); Stn. no. 62 (3); Stn. no. 70 (32); Stn. no. 71 (45); Stn. no. 76 (1); Stn. no. 81 (1); Stn. no. 84 (1); Stn. no. 87 (8); Stn. no. 88 (6); Stn. no. 89 (215); Stn. no. 91 (1); Stn. no. 92 (11); Stn. no. 93 (2); Stn. no. 94 (1); Stn. no. 96 (1); Stn. no. 97 (29); Stn. no. 98 (136); Stn. no. 99 (110); Stn. no. 100 (235); Stn. no. 101 (5).

Distribution: Japan.

Eunice indica Kinberg, 1865

Eunice indica Kinberg, 1865, p. 562; Imajima & Hartman, 1964, pp. 255–256; Yang & Sun, 1988, pp. 181–182, fig. 79e–h; Imajima, 1997a, p. 183.

Material: Stn. no. 1 (2); Stn. no. 5 (2); Stn. no. 7 (2); Stn. no. 23 (8); Stn. no. 24 (5); Stn. no. 25 (7); Stn. no. 31 (42); Stn. no. 34 (87); Stn. no. 36 (1); Stn. no. 39 (1); Stn. no. 41 (25); Stn. no. 44 (1).

Distribution: Indonesia, East China Sea, Japan.

Eunice kobiensis McIntosh, 1885

Eunice kobiensis McIntosh, 1885, pp. 278–280, figs. 37, 38, pl. 38, figs. 12, 13, pl. 20A, figs. 1, 3; Uschakov, 1955, p. 232, fig. 75; Miura, 1977a, pp. 15–17, fig. 7a–n; Fauchald, 1992, pp. 186–188, fig. 61a–i, tab. 19, 20.

Material: Stn. no. 30 (1); Stn. no. 40 (1).

Distribution: Japan, Gulf of Alaska.

Eunice masudai Miura, 1986

Eunice masudai Miura, 1986, pp. 276–278, figs. 5, 6.

Material: Stn. no. 110 (3); Stn. no. 111 (1); Stn. no. 112 (1).

Distribution: Japan.

Eunice mucronata Moore, 1903

Eunice mucronata Moore, 1903, pp. 437–440, pl. 25, figs. 42–45; Miura, 1986, pp. 305–308, figs. 30, 31.

Material: Stn. no. 1 (3); Stn. no. 7 (4); Stn. no. 34 (80); Stn. no. 41 (26); Stn. no. 52 (4); Stn. no. 53 (4); Stn. no. 91 (1); Stn. no. 106 (3); Stn. no. 107 (5); Stn. no. 112 (3); Stn. no. 113 (3).

Distribution: Japan.

Eunice northioidea Moore, 1903

Eunice northioidea Moore, 1903, pp. 433–435, pl. 25, figs. 36–38.

Material: Stn. no. 41 (1); Stn. no. 42 (1).

Distribution: Japan.

Eunice unibranchiata **sp. nov.**

(Fig. 15A–G, 16A–J)

Type material: Holotype, NSMT-Pol. S H 475: the Sagami Sea, 35°12.2'N, 139°29.6'E – 35°12.1'N, 139°29.6'E, 351–338 m, Jan. 2003 (Stn. no. 91). Paratypes, NSMT-Pol. S P 476: same locality as holotype (2 specimens).

Description: Holotype of complete specimen 133 mm long, 4.5 mm wide including parapodia for

126 setigers. Anterior body with convex dorsum and flattened ventrum, becoming circular in cross-section in mid body and dorsoventrally flattened posteriorly, slowly tapering posteriorly.

Prostomium 2 rounded lobes, nearly as wide as peristomium, well separated medially. Antennae in a horseshoe, evenly spaced. All antennae strongly articulated with moniliform articulations; maximum number of articulations 15 in median antenna. Median antenna reaching setiger 5; lateral antennae reaching setiger 3; palps reaching posterior edge of posterior peristomial ring. Dark eyes between bases of outer and lateral antennae. Peristomium about as wide as anterior part of body; anterior ring massive, about 3 times as long as posterior ring. Peristomial cirri to middle of posterior peristomial ring, with 4–5 cylindrical or drop-shaped articulations (Fig. 15A, B).

First setigers with short parapodia; each with obliquely truncate acicular lobe, straight presetal and rounded postsetal lobes. Dorsal cirri long, digitiform with 3 articulations; ventral cirri short and thick (Fig. 15C). Following all neuropodial acicular lobes obliquely truncate with aciculae emerging above midline. Pre- and postsetal lobes low, transverse folds. Notopodial cirri long and digitiform, with 3 long indistinct articulations (Fig. 15D–G). First 6 ventral cirri very large, digitiform. Ventral cirri basally inflated from setiger 7 through setiger 27. Inflated bases large, scoop-shaped with narrow tips tapering, broadly conical (Fig. 15E, F). Afterwards ventral cirri increasingly digitiform, gradually loosing basal inflation (Figs. 15G, 16A, B).

Branchiae from setiger 6 to setiger 104. Branchiae all single digitiform filaments, about as long as notopodial cirri, but anterior and posterior branchiae shorter than dorsal cirri (Figs. 15D, 16B). Superior fascicle of neurosetae include marginally serrated capillary setae (Fig. 16C) and pectinate setae. Pectinate setae tapering, flat, with 10–11 teeth, 1 marginal tooth longer than other (Fig. 16D). Inferior fascicle with compound heterogomph falcigers with stout, nearly triangular bidentate blades (Fig. 16E). Proximal teeth larger than distal teeth, sharp-tipped, directed laterally. Hoods asymmetrically bluntly pointed. Distal portion of shafts and hoods covered with surficial spines. Subacicular hooks first present from setiger 28, present in all setigers thereafter, paired in some setigers. Hooks dark, proximal teeth larger than distal teeth, directed obliquely distally (Fig. 16F). Aciculae paired, black, tapering, slightly curved dorsally (Fig. 16G). Mandibles with slender sclerotized shafts and high calcareous cutting plates (Fig. 16H). Maxillae hard and calcified; maxillary formula: Mx I = 1 + 1, Mx II = 5 + 5, Mx III = 8 + 0, Mx IV = 6 + 8, Mx V = 1 + 1, Mx VI = 1 + 1 (Fig. 16I). Pygidium with dorsal anus and paired ventral anal cirri with 8–9 articulations (Fig. 16J).

Remarks: *Eunice unibranchiata* resembles *E. nicidioformis* Treadwell (1906) from off Hawaiian Islands in that: the single branchial filaments are present from setiger 6; the antennae have distinct cylindrical or drop-shaped articulations and the bidentate subacicular hooks are first present from setiger 25. However, *E. unibranchiata* differs from *E. nicidioformis* in that: the branchiae are as long as dorsal cirri in the most setigers rather than shorter than dorsal cirri, and the posterior branchiae are single short digitiform rather than branchiae form a vascularized sleeve around the base of the notopodial cirri.

Eunice unibranchiata also resembles *E. makemoana* (Chamberlin, 1919) from Paumotu Islands in having articulated antennae and single branchial filaments. However, *E. unibranchiata* may be distinguished from *E. makemoana* in that the subacicular hooks are black and bidentate rather than yellow and tridentate.

Etymology: The species is named in having single branchial filaments in the most setigers,

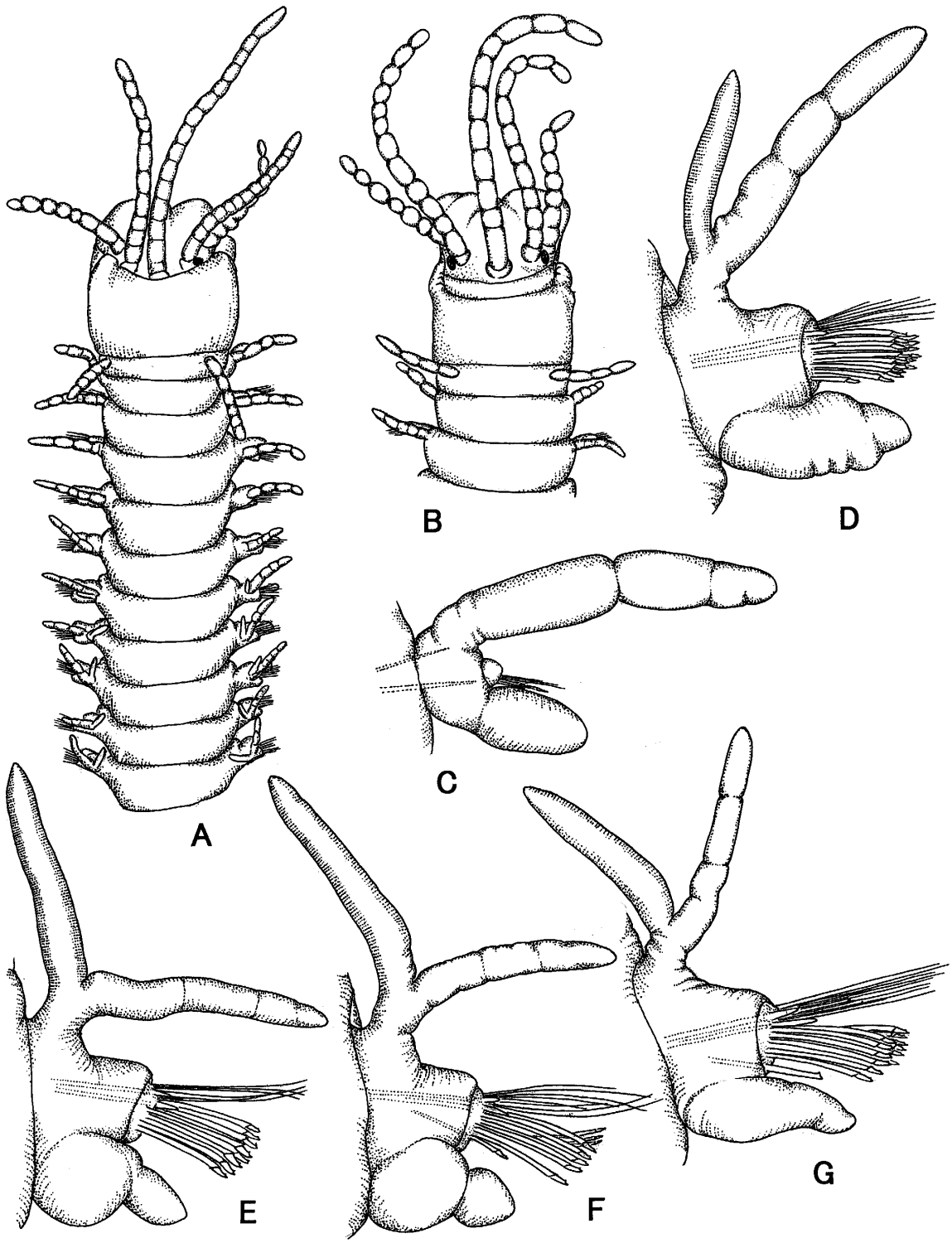

Fig. 15. *Eunice unibranchiata* sp. nov. A, anterior end of holotype, dorsal view, ×6; B, same of paratype, dorsal view, ×10; C, left parapodium of setiger 1, anterior view, ×28; D, same of setiger 6, same view, ×28; E, same of setiger 14, same view, ×28; F, same of setiger 20, same view, ×28; G, same of setiger 30, same view, ×28.

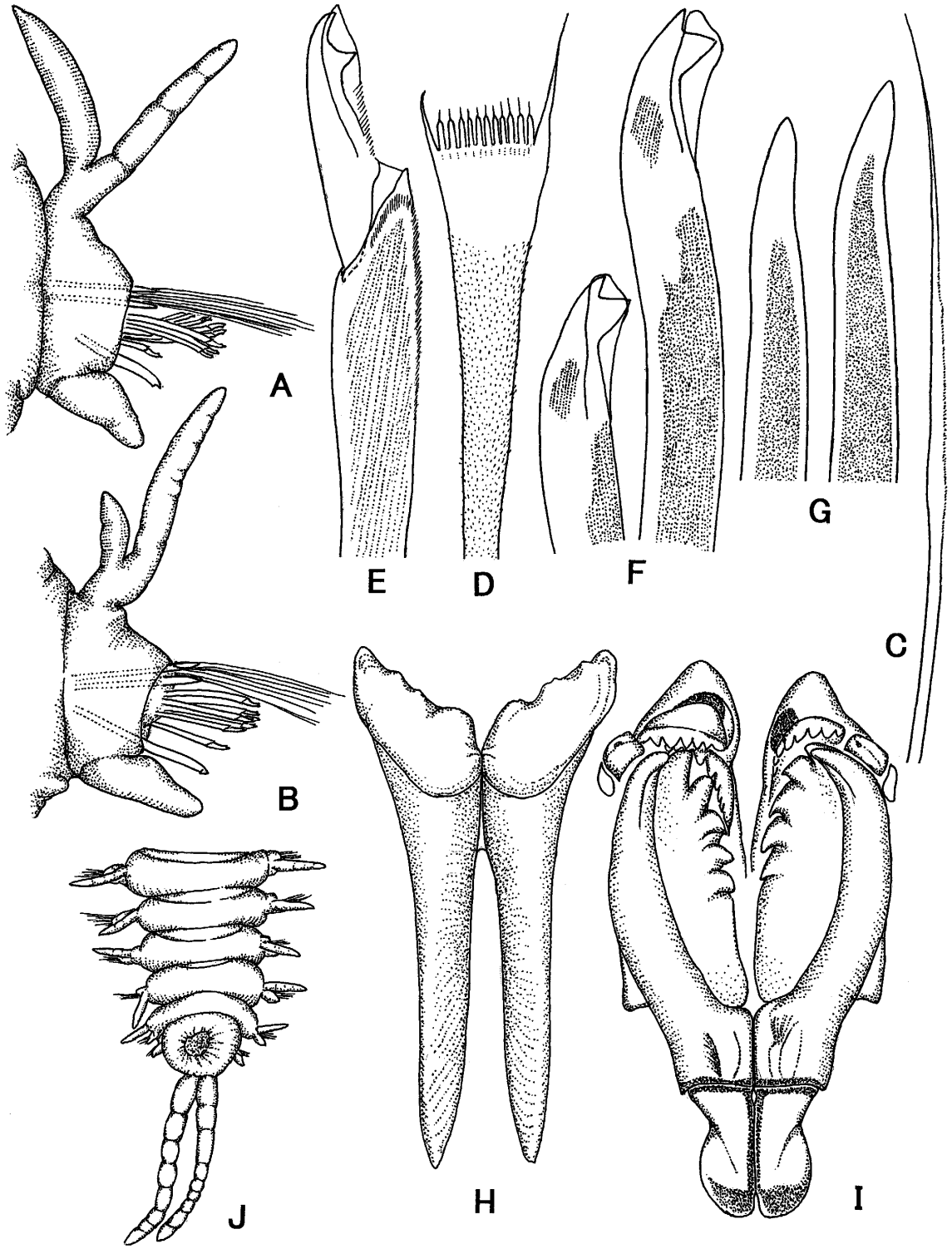

Fig. 16. *Eunice unibranchiata* sp. nov. A, left parapodium of setiger 70, anterior view, ×32; B, same of setiger 100, same view, ×32; C, capillary seta, ×170; D, pectinate seta, ×646; E, compound falciger, ×363; F, subacicular setae, ×184; G, aciculae, ×153; H, mandibles, ×17; I, maxillae, ×17; J, posterior end, dorsal view, ×16.

except posterior region.

Distribution: Japan.

Eunice yamamotoi Miura, 1986

Eunice yamamotoi Miura, 1986, pp. 285–287, figs. 13, 14; Imajima, 2005, p. 90.

Material: Stn. no. 76 (2); Stn. no. 80 (5); Stn. no. 87 (2); Stn. no. 91 (1); Stn. no. 96 (1).

Distribution: Japan.

Euniphysa spinea (Miura, 1977)

Eunice spinea Miura, 1977b, pp. 64–67, fig. 2a–p.

Euniphysa spinea Miura, 1986, pp. 313–315, figs. 35–37; Imajima, 2005, p. 90.

Material: Stn. no. 47 (2); Stn. no. 97 (1).

Distribution: Japan.

Lysidice ninetta A. & M. -Edwards, 1833

Lysidice collaris: Marenzeller, 1879, pp. 136–137, pl. 5, fig. 2.

Lysidice ninetta: Fauvel, 1923, pp. 411–412, fig. 162a–g; Day, 1967a, p. 403, fig. 17. 8. g–i; Miura, 1977b, pp. 76–79, fig. 7a–n.

Material: Stn. no. 36 (2); Stn. no. 52 (1); Stn. no. 77 (1): Stn. no. 95 (1); Stn. no. 102 (1); Stn. no. 106 (1); Stn. no. 107 (1); Stn. no. 110 (1); Stn. no. 123 (2).

Distribution: Red Sea, Mediterranean Sea, Atlantic, Indian and Pacific oceans, Japan.

Marphysa bellii (Audouin & M. -Edwards, 1834)

(Figs. 17A–K, 18A–G)

Marphysa bellii: McIntosh, 1910, pp. 448–451, pls. 55, 60, 63, 65, 86; Fauvel, 1923, p. 410, fig. 161i–q; Pettibone, 1963, pp. 238–239, fig. 63a–d; George & Hartmann-Schröder, 1985, pp. 108–109, fig. 31A–D.

Material: Stn. no. 50 (3).

Description: Complete specimen 38 mm long, 3.2 mm wide including parapodia for 145 segments. Body slender, dorsoventrally flattened except anterior region.

Prostomium rounded, not bilobed, with 2 small eyes. Five occipital antennae short, smooth, median antenna longest extending to anterior margin of setiger 2, other antennae about as long as peristomium. Anterior peristomial ring about 1.3 times longer than posterior one (Fig. 17A, B).

First few parapodia smaller than subsequent ones but all similar in structure, dorsal cirri short and subulate (Fig. 17C). Parapodia with low presetal lobe, conical acicular lobe, and conical postsetal lobe in prebranchial and branchial segments; dorsal cirri subulate to long, filiform about as long as setae, ventral cirri thick conical (Fig. 17D, E). All parapodial lobes gradually reduced to very low folds in postbranchial segments, dorsal cirri becoming long filiform, longer than parapodia (Fig. 17F, G).

Branchiae first present on setigers 11 to 12, only 13–15 pairs, with 15–18 filaments per branchia, pectinately arranged above dorsal cirri and larger than dorsal cirri, meeting middorsally where best developed (Fig. 17E).

Setae in dense fascicles, particularly in anterior segments, superior fascicle with simple capillaries long and delicate (Fig. 17H) and pectinate setae with 4–7 teeth, outer ones prolonged (Fig.

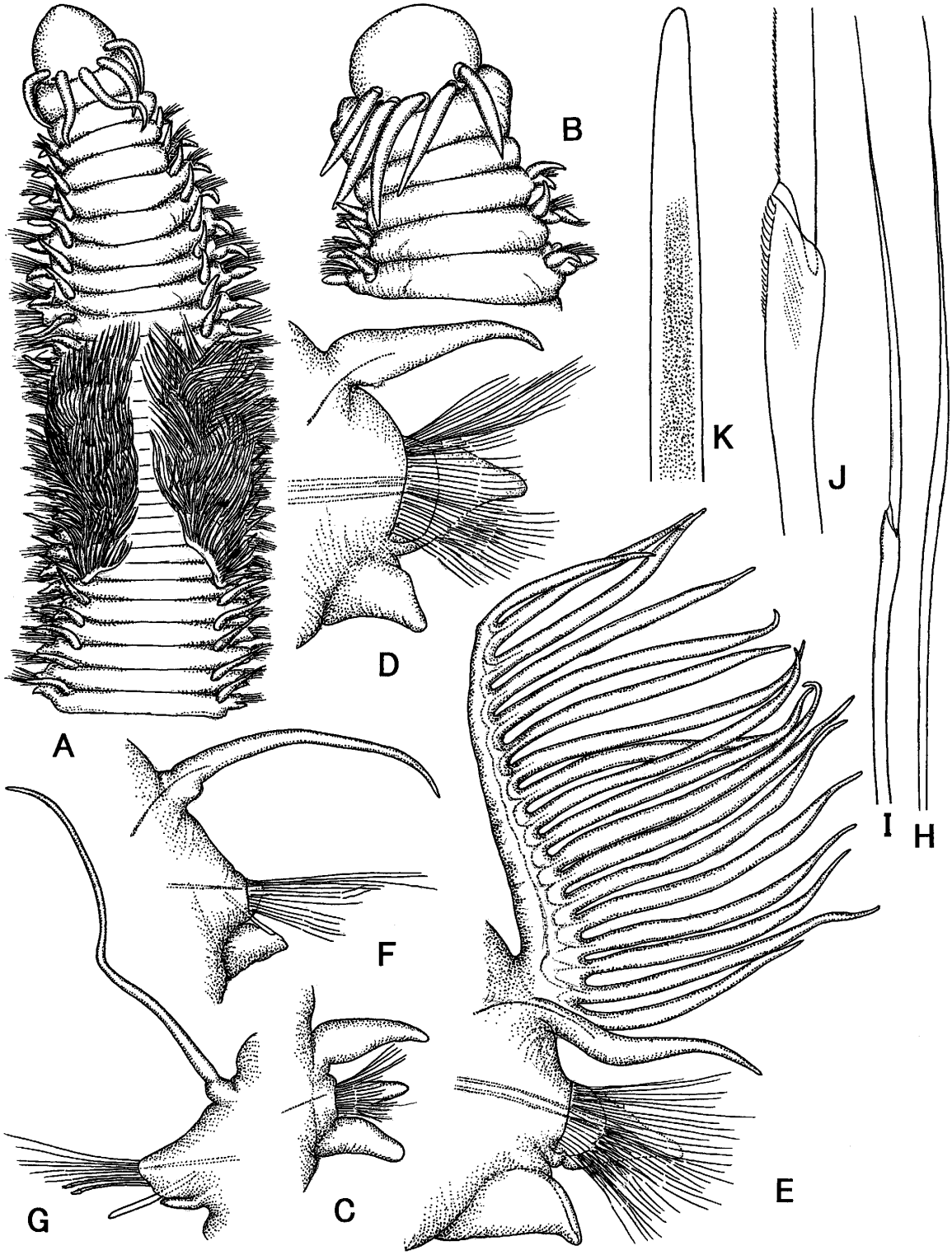

Fig. 17. *Marphysa bellii* (Audouin & M. -Edwards). A, anterior end, dorsal view, ×16; B, anterior end of other large specimen, dorsal view, ×16; C, left parapodium of setiger 1, anterior view, ×47; D, same of setiger 10, same view, ×47; E, same of setiger 20, same view, ×47; F, same of setiger 36, same view, ×47; G, same of posterior setiger, posterior view, ×47; H, capillary seta, ×320; I, compound spiniger, ×338; J, rostrum of setal shaft, ×1045; K, aciculum, ×338.

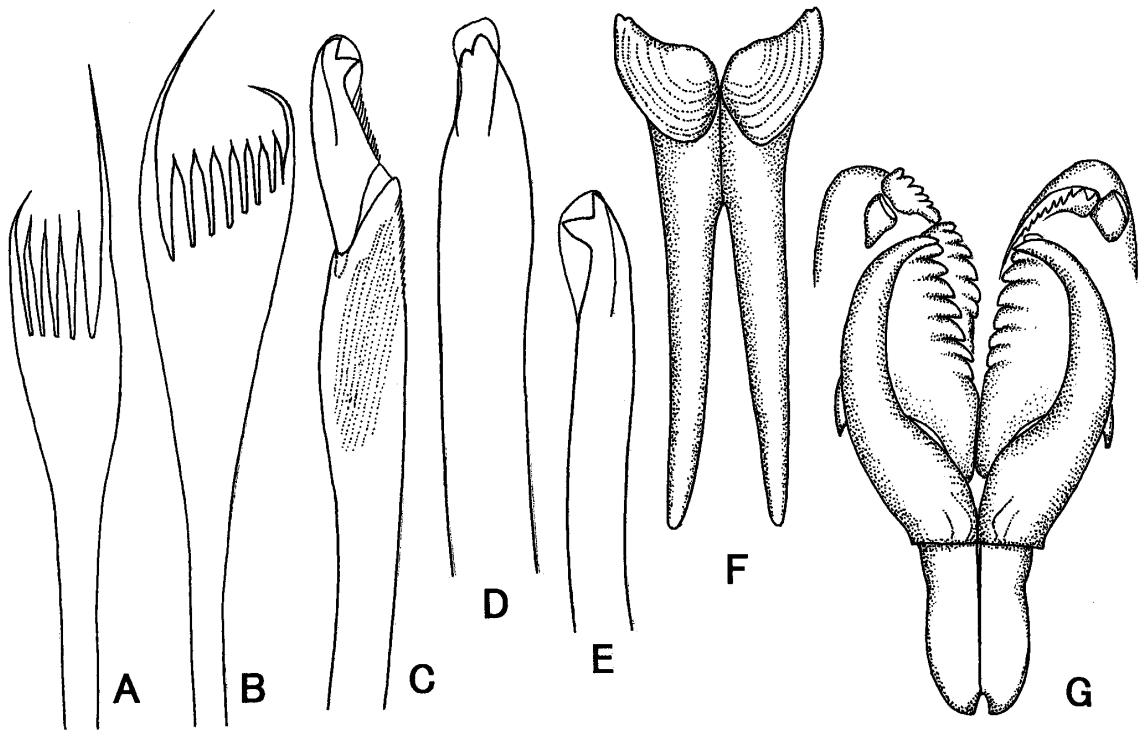

Fig. 18. *Marphysa bellii* (Audouin & M. -Edwards). A, pectinate seta from setiger 20, ×890; B, same from setiger 68, ×890; C, compound falciger, ×680; D, subacicular hook from middle parapodium, ×680; E, same from posterior parapodium, ×680; F, mandibles, ×54; G, maxillae, ×54.

18A, B). Inferior fascicle with compound heterogomph spinigers with elongated tapering blades (Fig. 17I, J) and heterogomph falcigers with stout bidentate hooded hooked blades (Fig. 18C); distal portion of shafts and hoods covered with surficial spines, appearing serrated in side view. Subacicular hooks first present in setigers 25–28, dark, bidentate, with short, truncate hoods (Fig. 18D, E). Acicula dark, 1 or 2 per parapodium, with straigh, tapering free ends (Fig. 17K); notoaciculae very fine.

Cutting plate of mandibles with calcified oarshaped tips (Fig. 18F). Maxillae light brown, maxillary formula: Mx I = 1 + 1, Mx II = 6–7 + 7–8, Mx III = 6–7 + 0, Mx IV = 4–6 + 8–9, Mx V = 1 + 1 (Fig. 18G).

The species is reported for the first time from Japanese waters.

Distribution: North and Central Atlantic, English Channel, Mediterranean Sea, West Africa, West Indies, off Massachusetts, Florida, Japan.

Marphysa kinbergi McIntosh, 1910

(Figs. 19 A–H, 20A–E)

Marphysa kinbergi McIntosh, 1910, pp. 451–452, pl. 74, figs. 9, 9a; pl. 83, figs. 6–6a.

Material: Stn. no. 5 (1).

Description: Body missing posterior end for 120 setigers 62 mm long, 4 mm wide including parapodia. Body convex dorsally, flattened ventrally. Prostomium wider than long and evenly rounded, with short anterior incision continued to ventral groove extending to prostomium. Five occipital antennae in a horseshoe, slender, smooth; median antenna longest, about 2 times as long as

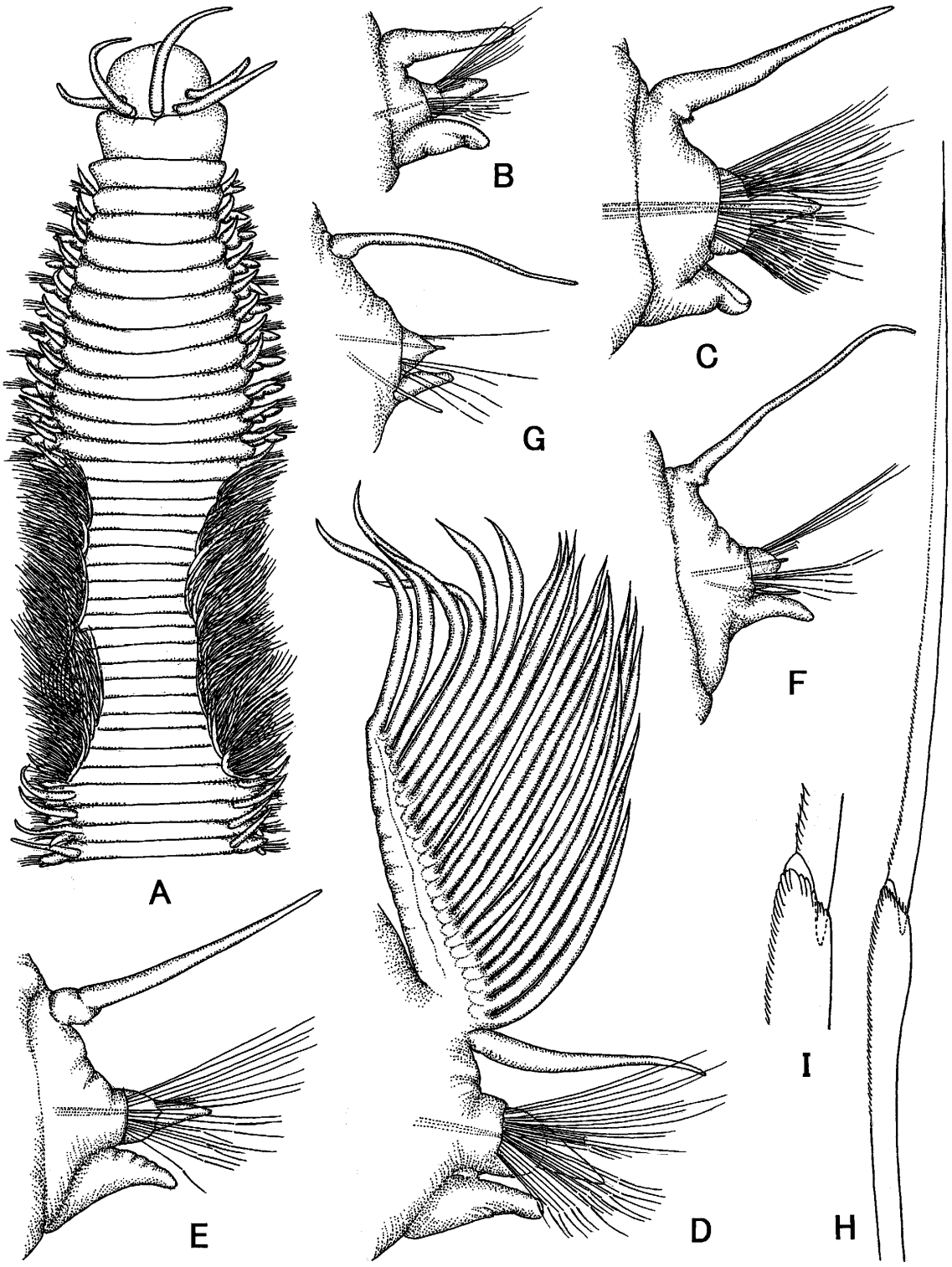

Fig. 19. *Marphysa kinbergi* McIntosh. A, anterior end, dorsal view, ×9; B, left parapodium of setiger 1, anterior view, ×28; C, same of setiger 12, same view, ×28; D, same of setiger 22, same view, ×28; E, same of setiger 32, same view, ×28; F, same of setiger 58, same view, ×28; G, same of setiger 116, same view, ×28; H, composite spiniger, ×540; I, upper end of shaft, ×940.

prostomium, inner lateral antennae about 2/3 as long as median antenna, outer lateral antennae about as long as prostomium. Pair of small elyes present posterior to outer lateral occipital antennae. Anterior peristomial ring about 1.5 times longer than posterior one (Fig. 19A).

First few parapodia smaller than subsequent ones but all similar in structure of prebranchial parapodia. First setiger with low transverse presetal lobe, rounded acicular lobe and large triangular postsetal lobe; slender dorsal cirri longer than postsetal lobe, thickset ventral cirri with constricted base (Fig. 19B). Parapodia with low presetal lobes, conical acicular lobe, and triangular postsetal lobe; dorsal cirri subulate to long, filiform extending beyond tip of setae, ventral cirri thick conical (Fig. 19C–E). Postsetal lobes gradually reduced to low, transverse fold; presetal lobes conical and pointed in posterior setigers (Fig. 19F, G).

Branchiae first present on setiger 14 numbering 17 pairs, with 20–22 filaments per branchia, pectinately arranged above dorsal cirri and larger than dorsal cirri (Fig. 19D). Superior fascicle with long, capillary setae with serrated cutting margin and pectinate setae; pectinate setae occurring from first setiger, and with 8 teeth, outer ones prolonged (Fig. 20A). Inferior fascicle with compound heterogomph spinigers with long, slender blades, blades with minutely serrated margin (Fig. 19H); upper end of shaft distinctly serrated (Fig. 19I). Subacicular hooks first present in setiger 40, dark, clearly unidentate, slightly curved (Fig. 20B). Acicula dark, 1–3 per parapodium, with straight, tapering free ends (Fig. 20C).

Mandibles with slender shafts and high calcareous cutting plates (Fig. 20D). Maxillae hard and calcified; maxillary formula: Mx I = 1 + 1, Mx II = 7 + 8, Mx III = 7 + 0, Mx IV = 5 + 7, Mx V = 1 + 1 (Fig. 20E).

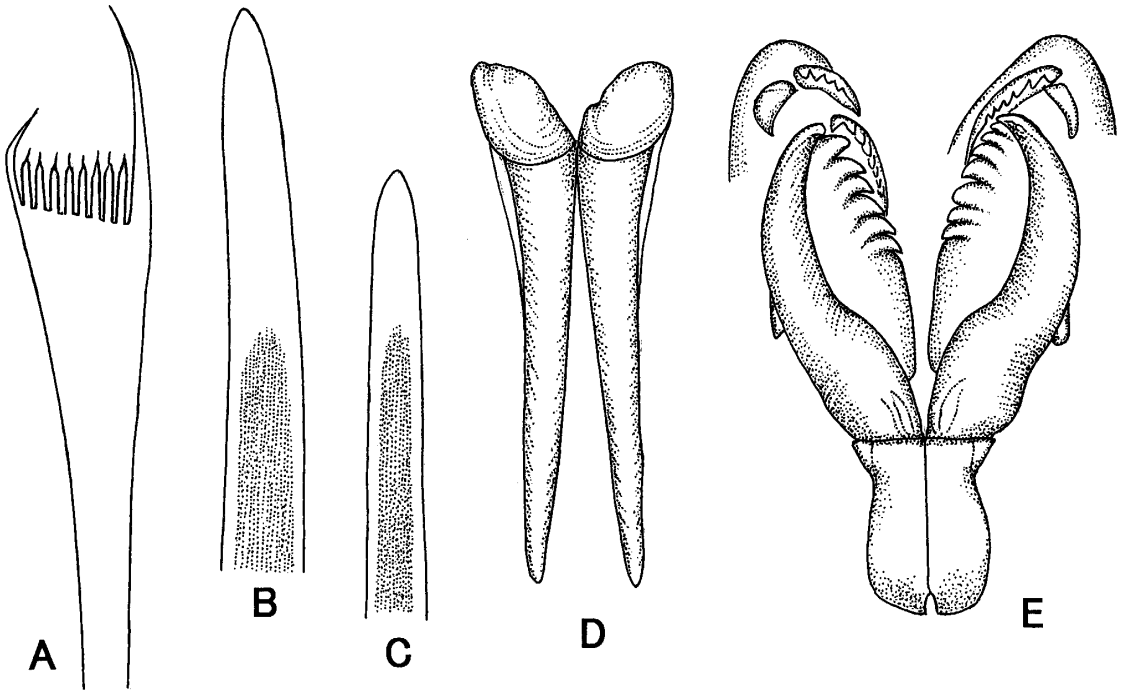

Fig. 20. *Marphysa kinbergi* McIntosh. A, Pectinate seta, ×890; B, subacicular hook, ×390; C, aciculum, ×390; D, mandibles, ×21; E, maxillae, ×22.

The species is reported for the first time from Japanese waters.

Remarks: *Marphysa kinbergi* resembles *M. disjuncta* Hartman (1961) from southern California in the branchiae limited to a short anterior region. However, the upper end of the shaft of the composite spinigers is distinctly serrated in *M. kinbergi* rather than smooth in *M. disjuncta*. The blades of the composite spinigers long and serrated in *M. kinbergi* rather than smooth and comparatively short in *M. disjuncta*.

Distribution: Cape Finisterre of Atlantic Ocean, Japan.

Marphysa mortenseni Monro, 1928

(Figs. 21A–L, 22A–F)

Marphysa mortenseni Monro, 1928, pp. 86–88, figs. 9–12; Hartman, 1961, pp. 83–84; Fauchald, 1970, pp. 63–64, pl. 7, fig. e; Gathof, 1984, pp. 40–15 to 40–17, figs. 40–11, 12a–h.

Material: Stn. no. 47 (1).

Description: Body missing posterior end for 62 setigers 28 mm long, 3.5 mm wide including parapodia. Body convex dorsally, flattened ventrally. Prostomium conical, slightly wider than long, not notched anteriorly, with ventral groove extending to posterior part of prostomium. Two small eyes present. Five short subulate occipital antennae all equal in length. Anterior peristomial ring about 1.5 times longer than posterior one (Fig. 21A–C).

First few parapodia smaller than subsequent ones, with subulate dorsal and ventral cirri (Fig. 21D). Parapodia with low presetal lobe, conical acicular lobe, and conical postsetal lobe. Dorsal cirri bifurcate from setiger 13 (Fig. 21E), and gradually developing to bifurcate (Fig. 21F), and conspicuously bifurcated on setiger 35 (Fig. 21G). Ventral cirri short, conical. Branchiae beginning on setiger 26 and continuing to end of fragment, situated dorsally on dorsal cirri, with up to 4 filaments (Fig. 21H).

Notosetae represented by 2–4 notoacicula in dorsal cirri (Fig. 21I). Superior fascicle of neurosetae with bilimbated capillaries with minutely serrated margin (Fig. 21J, K) and 3–4 pectinate setae with 7–8 teeth, outer ones prolonged (Fig. 21L). Inferior fascicle with compound heterogomph falcigers with bidentate hooded blades (Fig. 22A); distal portion of shafts and hoods covered with surficial spines, appearing serrated in side view. Subacicular hooks first present in setigers 32–34, brown, bidentate, with short, truncate hoods (Fig. 22B). Acicula dark brown to black, 1–3 per parapodium, with straigh, tapering free ends (Fig. 22C). Cutting plate of mandibles deformed quadrangle and calcified (Fig. 22E). Maxillae yellow, maxillary formulae: Mx I = 1 + 1, Mx II = 8 + 8, Mx III = 7 + 0, Mx IV = 4 + 10, Mx V = 1 + 1 (Fig. 22F).

The species is reported for the first time from Japanese waters.

Distribution: Pacific side of Panama, southern California, Gulf of Mexico, Japan.

Marphysa sanguinea (Montagu, 1815)

Marphysa sanguinea: Fauvel, 1923, pp. 408–410, fig. 161a–h; Okuda, 1937a, pp. 286–287, fig. 31a–e; Pettibone, 1963, pp. 236–238, fig. 62a–k; Imajima, 1967, p. 432; Miura, 1977b, pp. 74–76, fig. 6a–q.
Marphysa iwamushi: Izuka, 1907, pp. 141–143.

Material: Stn. no. 41 (1).

Distribution: Mediterranean Sea, Atlantic, Indian and Pacific oceans, Japan.

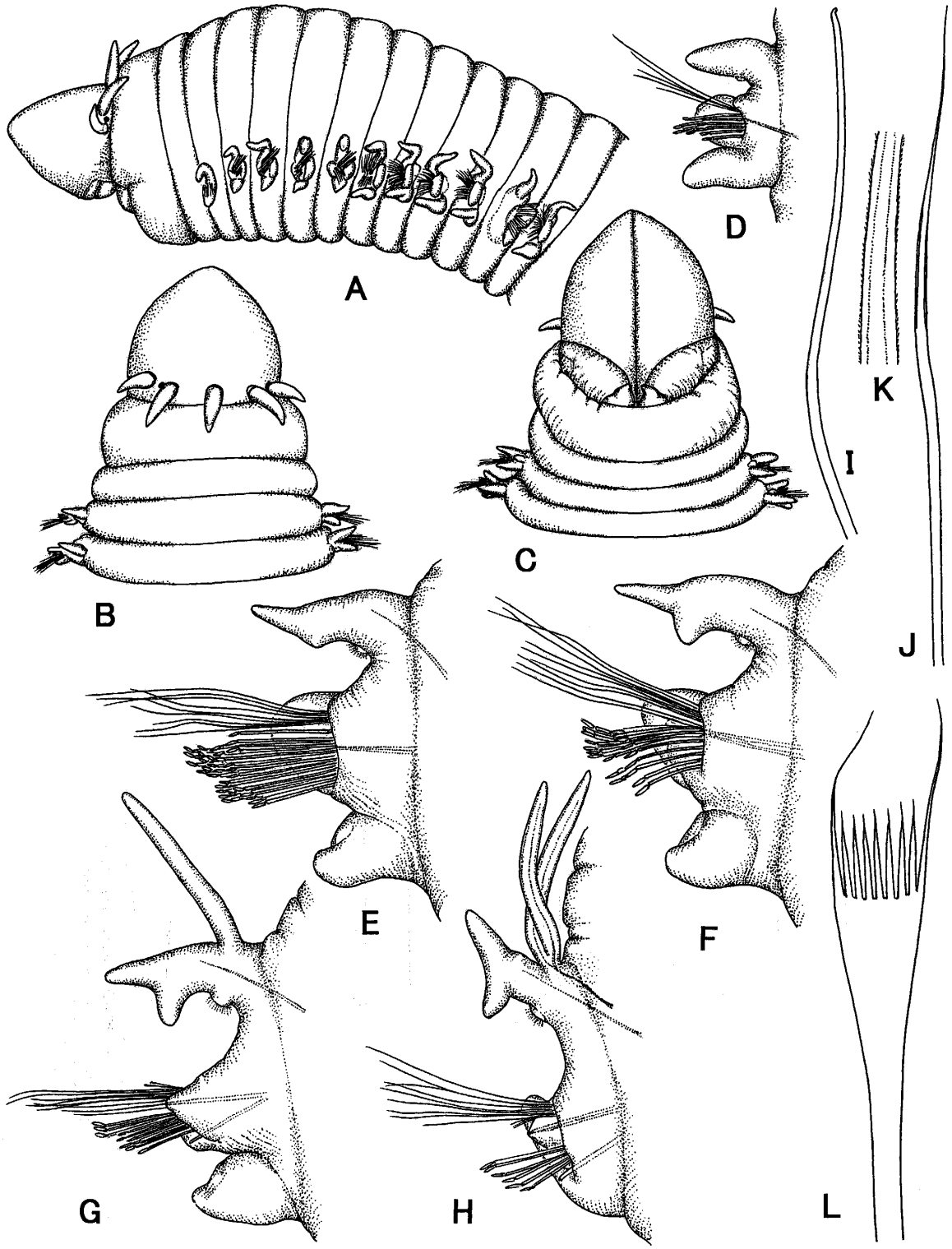

Fig. 21. *Marphysa mortenseni* Monro. A, anterior end, lateral view, ×15; B, anterior end, dorsal view, ×17; C, same, ventral view, ×17; D, right parapodium of setiger 1, anterior view, ×53; E, same of setiger 13, same view, ×53; F, same of setiger 20, same view, ×53; G, same of setiger 35, same view, ×53; H, same of setiger 59, same view, ×53; I, notoaciculum, ×420; J, limbate capillary seta, ×217; K, part of same, ×612; L, pectinate seta, ×890.

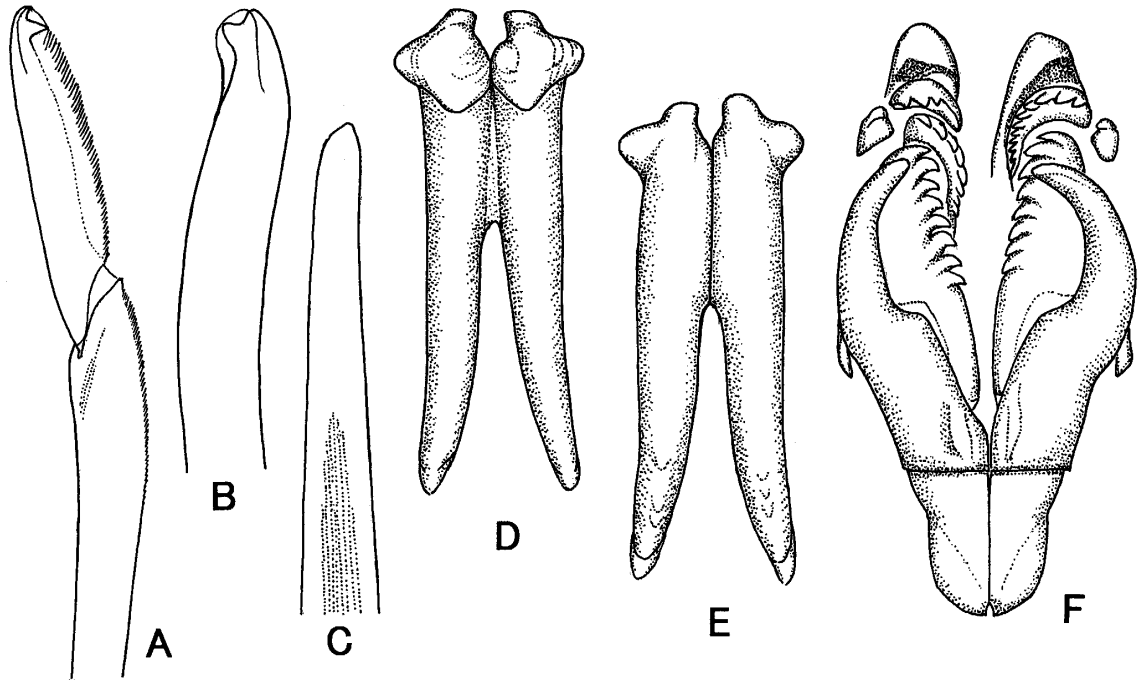

Fig. 22. *Marphysa mortenseni* Monro. A, compound falciger, ×522; B, subacicular hook, ×430; C, aciculum, ×430; D, E, mandibles, ventral (D) and dorsal (E) views, ×33; F, maxillae, ×33.

Nematonereis unicornis (Grube, 1840)

Nematonereis unicornis: Fauvel, 1923, pp. 412–413, fig. 162h–n; Imajima & Hartman, 1964, pp. 260–261; Miura, 1979, pp. 40–41, fig. 6a–g; Imajima, 2005, pp. 75–76.

Material: Stn. no. 76 (1).

Distribution: Indo-Pacific area, Mediterranean Sea, Japan.

Palola siciliensis (Grube, 1840)

Eunice siciliensis: Fauvel, 1923, p. 405, fig. 150e–m.

Palola siciliensis: Imajima & Hartman, 1964, p. 261; Gardiner, 1976, pp. 178–179, fig. 21t–v; Imajima, 2005, p. 90.

Material: Stn. no. 77 (1).

Distribution: Mediterranean Sea, Atlantic and Pacific oceans, South China Sea, Japan.

Family Lumbrineridae Malmgren, 1867

Augeneria bidens (Ehlers, 1887)

Lumbriconereis bidens Ehlers, 1887, p. 103, pl. 31, figs. 7–17.

Augeneria bidens: Orensanz, 1973, p. 372; Uebelacker, 1984a, pp. 41–17 to 41–18, figs. 41–13, 14a–h.

Augeneria tentaculata Monro, 1930, pp. 140–142, fig. 52a–k; Imajima & Higuchi, 1975, pp. 7–8, fig. 1a–j.

Material: Stn. no. 98 (2); Stn. no. 109 (2).

Distribution: Antarctic area, Argentine, Gulf of Mexico, Japan.

Lumbrinerides bidentatus Imajima, 1985

Lumbrinerides bidentatus Imajima, 1985, pp. 178–180, fig. 5a–l.

Material: Stn. no. 71 (1).

Distribution: Japan.

Lumbrineris japonica (Marenzeller, 1879)

Lumbriconereis japonica Marenzeller, 1879, pp. 137–138, pl. 5, fig. 3.

Lumbrineris japonica: Imajima & Hartman, 1964, pp. 263–264; Imajima, 2001b, pp. 78–79.

Material: Stn. no. 34 (2); Stn. no. 36 (7); Stn. no. 37 (6); Stn. no. 41 (1); Stn. no. 42 (1); Stn. no. 43 (3); Stn. no. 47 (1); Stn. no. 50 (1); Stn. no. 56 (1); Stn. no. 59 (1); Stn. no. 62 (5); Stn. no. 70 (2); Stn. no. 72 (1); Stn. no. 82 (6); Stn. no. 89 (2); Stn. no. 95 (1); Stn. no. 98 (1); Stn. no. 99 (12); Stn. no. 106 (1); Stn. no. 109 (1); Stn. no. 112 (2); Stn. no. 115 (1); Stn. no. 117 (1); Stn. no. 119 (4).

Distribution: Japan, Indo-Pacific areas, Pacific of California south to western Mexico.

Lumbrineris latreilli (A. & M. -Edwards, 1834)

Lumbriconereis latreilli: Fauvel, 1923, p. 431, fig. 171m–r.

Lumbrineris latreilli: Hartman, 1944b, pp. 158–159, pl. 9, figs. 213–216; Imajima, 1997a, pp. 186–187.

Material: Stn. no. 5 (1); Stn. no. 25 (3); Stn. no. 30 (1); Stn. no. 31 (3); Stn. no. 33 (7); Stn. no. 34 (1); Stn. no. 45 (1); Stn. no. 46 (2); Stn. no. 47 (3); Stn. no. 55 (1); Stn. no. 59 (8); Stn. no. 61 (5); Stn. no. 84 (1); Stn. no. 92 (2); Stn. no. 93 (1); Stn. no. 97 (2); Stn. no. 98 (5); Stn. no. 99 (2); Stn. no. 100 (3); Stn. no. 102 (1); Stn. no. 104 (3); Stn. no. 105 (10); Stn. no. 109 (4); Stn. no. 111 (5); Stn. no. 114 (1); Stn. no. 118 (7); Stn. no. 121 (3).

Distribution: Atlantic, Pacific and Indian oceans, Mediterranean Sea, Japan.

Ninoe japonica Imajima & Higuchi, 1975

Ninoe japonica Imajima & Higuchi, 1975, pp. 14–15, fig. 4a–k.

Material: Stn. no. 24 (4); Stn. no. 41 (1); Stn. no. 47 (1); Stn. no. 48 (1).

Distribution: Japan.

Ninoe palmata Moore 1903

Ninoe palmata Moore 1903, pp. 456–457, pl. 26, figs. 68–71; Imajima & Higuchi, 1975, pp. 10–14, fig. 3a–m; Imajima, 1997a, p. 184.

Material: Stn. no. 5 (8); Stn. no. 24 (1); Stn. no. 31 (1); Stn. no. 34 (3); Stn. no. 42 (2); Stn. no. 46 (3); Stn. no. 48 (1); Stn. no. 49 (4); Stn. no. 50 (9); Stn. no. 51 (8); Stn. no. 52 (1); Stn. no. 59 (1); Stn. no. 61 (1); Stn. no. 62 (4); Stn. no. 72 (1); Stn. no. 89 (1); Stn. no. 97 (3); Stn. no. 99 (2).

Distribution: Japan, Yellow Sea.

Scoletoma fragilis (O. F. Müller, 1776)

Lumbricus fragilis O. F. Müller, 1776, p. 216.

Lumbrineris fragilis: Hartman, 1944b, p. 139.

Scoletoma fragilis: Frame, 1992, pp. 208–210, fig. 8; Imajima, 2001a, p. 360, fig. 161.

Material: Stn. no. 62 (2); Stn. no. 64 (1).

Distribution: Iceland, Norway, Denmark, Mediterranean Sea, Japan.

Scoletoma heteropoda (Marenzeller, 1879)

Lumbriconereis heteropoda Marenzeller, 1879, pp. 138–139, pl. 5, fig. 4, pl. 6, fig. 1.

Lumbrineris heteropoda: Hartman, 1942, pp. 121–123, textfig. 10e–g; Imajima & Higuchi, 1975, pp. 28–30, fig. 11a–m.

Scoletoma heteropoda: Imajima, 2001a, p. 361, fig. 162.

Material: Stn. no. 50 (1); Stn. no. 113 (1).

Distribution: Japan, southern Sakhalin, Yellow Sea.

Scoletoma nipponica (Imajima & Higuchi, 1975)

Lumbrineris nipponica Imajima & Higuchi, 1975, pp. 22–24, fig. 8a–m.

Scoletoma nipponica: Imajima, 2001a, p. 363, fig. 164.

Material: Stn. no. 64 (1); Stn. no. 91 (1); Stn. no. 106 (1).

Distribution: Japan.

Family Arabellidae Hartman, 1944

Arabella iricolor (Montagu, 1804)

Nereis iricolor Montagu, 1804, p. 82.

Arabella iricolor: Fauvel, 1923, pp. 438–439, fig. 175a–h; Day, 1967a, p. 446, fig. 17. 18. i–m; Imajima, 1997a, p. 187.

Material: Stn. no. 5 (1); Stn. no. 25 (1); Stn. no. 42 (1); Stn. no. 47 (1); Stn. no. 51 (1); Stn. no. 56 (1); Stn. no. 57 (1); Stn. no. 59 (1); Stn. no. 89 (1); Stn. no. 94 (1); Stn. no. 95 (1); Stn. no. 98 (1); Stn. no. 108 (1).

Distribution: Cosmopolitan in temperate and tropical waters.

Drilonereis robustus (Moore, 1903)

Laranda robusta Moore, 1903, pp. 454–455, pl. 26, figs. 64–65.

Drilonereis robustus: Imajima & Hartman, 1964, p. 266; Imajima, 2001b, p. 79.

Material: Stn. no. 5 (1); Stn. no. 25 (1); Stn. no. 31 (3); Stn. no. 33 (2); Stn. no. 34 (3); Stn. no. 41 (4); Stn. no. 42 (1); Stn. no. 43 (1); Stn. no. 44 (1); Stn. no. 46 (1); Stn. no. 49 (3); Stn. no. 51 (2); Stn. no. 52 (2); Stn. no. 53 (2); Stn. no. 63 (1); Stn. no. 66 (1); Stn. no. 68 (1); Stn. no. 71 (1); Stn. no. 89 (1); Stn. no. 92 (1); Stn. no. 95 (1); Stn. no. 96 (1); Stn. no. 97 (2); Stn. no. 98 (2); Stn. no. 105 (2); Stn. no. 106 (2).

Distribution: Japan.

Notocirrus japonicus (Okuda, 1939)

Arabella geniculata var. *japonica* Okuda, 1939, pp. 237–238, textfig. 10.

Notocirrus japonica: Imajima & Hartman, 1964, pp. 266–267.

Material: Stn. no. 23 (1); Stn. no. 33 (1).

Distribution: Japan.

Family Lysaretidae Kinberg, 1865

Oenone fulgida (Savigny, 1818)

Aglaura fulgida Savigny, 1818, p. 326.

Oenone fulgida: Ebbs, 1966, pp. 539–545, figs. 11a–j, 12a–j; Imajima, 1967, pp. 435–437, fig. 11a–m.

Material: Stn. no. 16 (1); Stn. no. 36 (3); Stn. no. 37 (1); Stn. no. 94 (1); Stn. no. 95 (4); Stn. no. 108 (1).

Distribution: Southern Africa, Indian Ocean, Australia, Pacific coast of California, Japan.

Family Dorvilleidae Chamberlin, 1919

Dorvillea similis (Crossland, 1924)

Staurocephalus (*Dorvillea*) *similis* Crossland, 1924, pp. 100–106, figs. 119–126.

Dorvillea (*Dorvillea*) *similis*: Reish, 1968, p. 220: Imajima, 1992, pp. 143–146, figs. 9a–t, 10a–j.

Material: Stn. no. 102 (1).

Distribution: Suez, Marshall Islands, northwest of Sumatra, Japan.

***Dorvillea* sp.**

Material: Stn. no. 45 (1); Stn. no. 104 (2); Stn. no. 118 (1).

Shistomeringos caeca (Webster & Benedict, 1884)

Staurocephalus caecus Webster & Benedict, 1884, p. 721, pl. 4, figs. 44–48.

Shistomeringos caeca: Oug, 1978, pp. 286–288, fig. 2A–E; Imajima, 2001a, p. 413, fig. 172.

Material: Stn. no. 121 (1).

Distribution: Atlantic coast of North America, Japan.

Schistomeringos rudolphi (dell Chiaje, 1828)

Nereis Rudolphi dell Chiaje, 1828, p. 176.

Schistomeringos rudolphi: Jumars, 1974, pp. 104–106, fig. 1; Imajima, 2001a, p. 416, fig. 174.

Material: Stn. no. 85 (2); Stn. no. 95 (1); Stn. no. 109 (1); Stn. no. 122 (1); Stn. no. 123 (2).

Distribution: Mediterranean Sea, east coast of America, Japan.

Order Orbiniida

Family Orbiniidae Hartman, 1942

***Haploscoloplos* sp.**

Material: Stn. no. 114 (2).

Leitoscoloplos pugettensis (Pettibone, 1957)

Scoloplos (*Scoloplos*) *pugettensis* Pettibone, 1957, p. 162.

Leitoscoloplos pugettensis: Mackie, 1987, pp. 8–9, fig. 8; Imajima, 1997a, p. 188.

Material: Stn. no. 102 (1); Stn. no. 103 (4); Stn. no. 106 (1); Stn. no. 109 (3).

Distribution: Puget Sound, Nanaimo, Japan.

***Phylo* sp.**

Material: Stn. no. 87 (3); Stn. no. 88 (1).

Scoloplos* (*Scoloplos*) *armiger (O. F. Müller, 1776)

Scoloplos armiger: Ehlers, 1901, pp. 169–170; Fauvel, 1927, pp. 20–21, fig. 6k–q; Okuda, 1938a, p. 98; Blake, 1996a, pp. 15–17, fig. 1. 5.

Material: Stn. no. 93 (2); Stn. no. 94 (1); Stn. no. 95 (2); Stn. no. 98 (1).

Distribution: North Atlantic and Pacific oceans, California, Japan.

Scoloplos* (*Leodamas*) *rubra (Webster, 1879)

Aricia rubra Webster, 1879, pp. 253–255, pl. 9, figs. 123–126.

Scoloplos (*Leodamas*) *rubra*: Hartman, 1957, p. 291, pl. 32, figs. 1–6; Ruiping & Dejian, 1987, p. 162, fig. 7F–M.

Material: Stn. no. 72 (1); Stn. no. 80 (1); Stn. no. 102 (2).

The species is reported for the first time from Japanese waters, but not described here.

Distribution: Yellow Sea, South China Sea, Japan.

Family Paraonidae Cerruti, 1909

Aricidea* (*Acmira*) *catherinae Laubier, 1967

Aricidea catherinae Laubier, 1967, pp. 112–118, figs. 4a–e, 5a–d.

Aricidea (*Acmira*) *catherinae*: Blake, 1996b, pp. 56–57, fig. 2. 14; Lovell, 2002, pp. 42–44, fig. 5A–C.

Material: Stn. no. 106 (1).

Distribution: Mediterranean Sea, Western North Atlantic, California, Andaman Sea, Japan.

Aricidea* (*Acmira*) *simplex Day, 1963

Aricidea suecica simplex Day, 1963a, pp. 364–365, fig. 3a, b.

Aricidea (*Acmira*) *simplex*: Blake, 1996b, pp. 63–64, fig. 2. 18; Imajima, 2001a, p. 433, fig. 178.

Aricidea neosuecica nipponica Imajima, 1973, pp. 263–265, fig. 5a–f.

Material: Stn. no. 41 (1); Stn. no. 50 (1); Stn. no. 70 (1); Stn. no. 72 (1); Stn. no. 95 (1); Stn. no. 102 (1); Stn. no. 105 (3).

Distribution: South Africa, Atlantic Ocean, New Zealand, Bering Sea, California, Japan.

Aricidea* (*Aedicira*) *belgicae (Fauvel, 1936)

Paraonis Belgicae Fauvel, 1936a, pp. 29–31, fig. 3.

Aricidea (*Aedicira*) *belgicae*: Hartman, 1957, p. 327; Imajima, 2001a, p. 435, fig. 180.

Aedicira belgicae: Hartman, 1965, pp. 133–135; Imajima, 1973, pp. 277–279, fig. 13a–k.

Material: Stn. no. 102 (1); Stn. no. 106 (1); Stn. no. 109 (1).

Distribution: Antarctic Ocean, off northeastern South America, South Africa, Japan.

Aricidea* (*Allia*) *antennata Annenkova, 1934

Aricidea antennata Annenkova, 1934, p. 658, figs. 2, 3.

Aricidea uschakovi: Imajima, 1973, pp. 256–258, fig. 1a–k.

Material: Stn. no. 113 (1).

Distribution: North Japan Sea, western Canada, Southern California, Japan.

Cirrophorus branchiatus Ehlers, 1908

Cirrophorus branchiatus Ehlers, 1908, pp. 124–126, pl. 17, figs. 5–9; Day, 1963b, pp. 423–424, textfig. 9l–o; Imajima, 1973, pp. 274–275, fig. 11a–g.

Material: Stn. no. 43 (1).

Distribution: Southern Africa, British Isles, east coast of America, Japan.

***Cirrophorus* sp.**

Material: Stn. no. 36 (1).

Levinsenia gracilis (Tauber, 1879)

Aonides gracilis Tauber, 1879, p. 115.

Levinsenia gracilis: Mesnil & Caullery, 1898, pp. 135–137; Blake, 1996b, pp. 33–34, fig. 2. 1; Imajima, 1997a, p. 193.

Paraonis gracilis minuta: Imajima, 1973, pp. 284–285, fig. 16a–f.

Material: Stn. no. 42 (1); Stn. no. 105 (2); Stn. no. 106 (8); Stn. no. 109 (1); Stn. no. 118 (1).

Distribution: Cosmopolitan in continental shelf and slope depths.

Paradoneis lyra (Southern, 1914)

Paraonis (*Paraonides*) *lyra* Southern, 1914, pp. 94–95, pls. 9–10, fig. 22a–g.

Paradoneis lyra: Hartman, 1965, p. 140; Imajima, 1997a, pp. 193–194.

Paraonides lyra: Imajima, 1973, pp. 287–288, fig. 18a–e.

Material: Stn. no. 102 (2); Stn. no. 106 (5).

Distribution: Western Iceland, Black Sea, South Africa, Pacific of Southern California, Massachusetts, Japan.

Paradoneis nipponica (Imajima, 1973)

Paraonides nipponica Imajima, 1973, pp. 290–291, fig. 19a–j.

Paradoneis nipponica: Imajima, 2001a, p. 447, fig. 192.

Material: Stn. no. 95 (1).

Distribution: Japan.

Order Spionida

Family Poecilochaetidae Hannerz, 1956

Poecilochaetus granulatus Imajima, 1989

Poecilochaetus granulatus Imajima, 1989, pp. 94–99, figs. 17a–e, 18a–h, 19a–i.

Material: Stn. no. 23 (1); Stn. no. 31 (1); Stn. no. 58 (1); Stn. no. 93 (4); Stn. no. 97 (11); Stn. no. 99 (1); Stn. no. 104 (1).

Distribution: Japan.

***Poecilochaetus* sp.**

Material: Stn. no. 47 (1); Stn. no. 103 (1).

Family Spionidae Grube, 1850

Laonice cirrata (Sars, 1851)

Nerine cirrata Sars, 1851, p. 207.

Laonice cirrata: Fauvel, 1927, p. 38, fig. 12a–e; Day, 1967b, p. 480, fig. 18. 6. h–k; Imajima, 1997a, p. 196.

Material: Stn. no. 25 (1); Stn. no. 31 (9); Stn. no. 33 (32); Stn. no. 34 (2); Stn. no. 38 (1); Stn. no. 41 (2); Stn. no. 44 (3); Stn. no. 45 (1); Stn. no. 46 (1); Stn. no. 47 (3); Stn. no. 48 (4); Stn. no. 49 (1); Stn. no. 52 (1); Stn. no. 53 (1); Stn. no. 58 (4); Stn. no. 60 (4); Stn. no. 61 (1); Stn. no. 95 (1); Stn. no. 98

(6); Stn. no. 99 (1); Stn. no. 106 (5); Stn. no. 112 (2); Stn. no. 113 (1).

Distribution: Northern Norway, north Atlantic and Pacific oceans, Japan.

Malacoceros indicus (Fauvel, 1928)

Scolelepis indica Fauvel, 1928, pp. 93–94, fig. 2g–m.

Malacoceros indicus: Pettibone, 1963, p. 99; Blake & Kudenov, 1978, p. 195; Imajima, 1991a, pp. 6–9, figs. 2a–g, 3a–j.

Material: Stn. no. 93 (1).

Distribution: Indian Ocean, New Caledonia, southwest Africa, Japan.

Paraprionospio CII

Paraprionospio CII Yokoyama & Tamai, 1981, pp. 313–315, fig. 6.

Material: Stn. no. 48 (2); Stn. no. 49 (1); Stn. no. 58 (1); Stn. no. 59 (1); Stn. no. 95 (1).

Distribution: Japan.

***Polydora* spp.**

Material: Stn. no. 15 (3); Stn. no. 36 (4); Stn. no. 37 (1); Stn. no. 39 (1).

Prionospio (Prionospio) depauperata Imajima, 1990

Prionospio (*Prionospio*) *depauperata* Imajima, 1990, pp. 114–118, figs. 6a–d, 7a–l; Imajima, 1997a, p. 194.

Material: Stn. no. 95 (2).

Distribution: Japan.

Prionospio (Prionospio) variegata Imajima, 1990

Prionospio (*Prionospio*) *variegata* Imajima, 1990, pp. 137–139, fig. 20a–l.

Material: Stn. no. 15 (2); Stn. no. 36 (44); Stn. no. 95 (6).

Distribution: Japan.

***Prionospio* spp.**

Material: Stn. no. 64 (1); Stn. no. 70 (3); Stn. no. 95 (1); Stn. no. 106 (2); Stn. no. 123 (2).

Spiophanes bombyx (Claparède, 1870)

Spio bombyx Claparède, 1870b, pp. 485–487, pl. 12, fig. 12.

Spiophanes bombyx: Mesnil, 1896, pp. 249–257, pl. 15, figs. 1–31; Foster, 1971, pp. 40–43, figs. 66–75; Imajima, 1991b, pp. 128–132, figs. 8a h, 9a n; Imajima, 2001b, p. 80.

Material: Stn. no. 31 (1); Stn. no. 70 (2); Stn. no. 97 (1).

Distribution: North and South Atlantic, Mediterranean Sea, South Africa, Western Canada to Southern California, Bering Sea, Japan.

Spiophanes japonicum Imajima, 1991

Spiophanes japonicum Imajima, 1991b, pp. 123–128, figs. 5a–h, 6a–h, 7a–n; Imajima, 1997a, p. 195.

Material: Stn. no. 83 (1); Stn. no. 112 (2).

Distribution: Japan.

Spiophanes kroeyeri Grube, 1860

Spiophanes kroyeri Grube, 1860, p. 88.

Spiophanes kroeyeri: Fauchald, 1972, p. 99, fig. 4c–d; Light, 1977, pp. 79–80, fig. 5d; Imajima, 1991b, pp. 118–123, figs. 2a–d, 3a–h, 4a–o; Imajima, 1997a, p. 194.

Material: Stn. no. 24 (1); Stn. no. 34 (3); Stn. no. 36 (2); Stn. no. 66 (2); Stn. no. 98 (1); Stn. no. 106 (1).

Distribution: Greenland, western Norway, Australia, Ross Sea, Japan.

Spiophanes urceolata Imajima, 1991

Spiophanes urceolata Imajima, 1991b, pp. 132–136, figs. 10a–c, 11a–g, 12a–l; Imajima, 1997a, p. 195.

Material: Stn. no. 23 (1); Stn. no. 25 (18); Stn. no. 31 (3); Stn. no. 33 (3); Stn. no. 34 (3); Stn. no. 46 (1); Stn. no. 52 (1); Stn. no. 62 (1); Stn. no. 66 (2); Stn. no. 70 (14); Stn. no. 71 (48); Stn. no. 72 (1); Stn. no. 96 (1); Stn. no. 97 (1); Stn. no. 99 (8); Stn. no. 112 (1); Stn. no. 113 (2).

Distribution: Japan.

Family Magelonidae Cunningham & Ramage, 1888

***Magelona* sp.**

Material: Stn. no. 47 (1); Stn. no. 50 (1); Stn. no. 109 (1).

Family Chaetopteridae Malmgren, 1867

***Chaetopterus* sp.**

Material: Stn. no. 123 (1).

***Mesochaetopterus* sp.**

Material: Stn. no. 25 (3); Stn. no. 31 (1); Stn. no. 33 (2).

Family Cirratulidae Carus, 1863

Caulleriella hamata (Hartman, 1948)

Tharyx hamatus Hartman, 1948, pp. 37–38, fig. 10a–e.

Caulleriella hamata: Hartman, 1961, pp. 107–108; Hartman, 1969, pp. 231–232.

Material: Stn. no. 123 (1).

The species is reported for the first time from Japanese waters, but not described here.

Distribution: Alaska south to southern California, Japan.

Chaetozone spinosa Moore, 1903

Chaetozone spinosa Moore, 1903, pp. 468–470, pl. 26, figs. 73–74; Hartman, 1969, pp. 243–244; Imajima, 1997a, p. 197.

Material: Stn. no. 36 (1); Stn. no. 41 (1); Stn. no. 42 (2); Stn. no. 66 (1); Stn. no. 68 (1); Stn. no. 88 (1); Stn. no. 113 (1); Stn. no. 114 (4).

Distribution: Japan, southern California.

***Chaetozone* spp.**

Material: Stn. no. 13 (1); Stn. no. 15 (1); Stn. no. 24 (1); Stn. no. 36 (3); Stn. no. 37 (1); Stn. no. 42 (1); Stn. no. 50 (1); Stn. no. 66 (3); Stn. no. 76 (1); Stn. no. 91 (1); Stn. no. 114 (4).

Cirratulus cirratus (Müller, 1776)

Cirratulus cirratus: Fauvel, 1927, p. 94, fig. 33a–g; Imajima & Hartman, 1964 p. 298; Hartmann-Schröder, 1971, pp. 358–359, fig. 125; Imajima, 1997a, pp. 197–198.

Material: Stn. no. 15 (1); Stn. no. 24 (1); Stn. no. 31 (1); Stn. no. 33 (1); Stn. no. 36 (1); Stn. no. 41 (4); Stn. no. 46 (1); Stn. no. 47 (1); Stn. no. 51 (1); Stn. no. 52 (1); Stn. no. 61 (1); Stn. no. 97 (2); Stn. no. 98 (1); Stn. no. 100 (1).

Distribution: Western and southern Europe, central and southern California, Japan.

Cirriformia tentaculata (Montagu, 1808)

Terebella tentaculata Montagu, 1808, p. 110.

Cirriformia tentaculata: Imajima & Hartman, 1964, p. 299.

Cirratulus comosus Marenzeller, 1879, pp. 147–148, pl. 6, fig. 7.

Audouinia comosa: Okuda, 1937b, p. 51, pl. 2, fig. B.

Material: Stn. no. 2 (1); Stn. no. 3 (1); Stn. no. 4 (1); Stn. no. 5 (4); Stn. no. 36 (2); Stn. no. 37 (1); Stn. no. 46 (1); Stn. no. 49 (1); Stn. no. 95 (5).

Distribution: Western and southern Europe; cosmopolitan, Japan.

***Dodecaceria* sp.**

Material: Stn. no. 36 (3); Stn. no. 68 (5); Stn. no. 95 (2).

***Tharyx* spp.**

Material: Stn. no. 59 (1); Stn. no. 61 (1); Stn. no. 62 (1); Stn. no. 64 (1); Stn. no. 87 (1); Stn. no. 89 (1); Stn. no. 95 (2); Stn. no. 101 (1); Stn. no. 113 (3); Stn. no. 114 (3).

Order Cossurida

Family Cossuridae Day, 1963

***Cossula* sp.**

Material: Stn. no. 106 (4); Stn. no. 107 (1).

Order Flabelligerida

Family Flabelligeridae Saint-Joseph, 1894

Pherusa eruca (Claparède, 1870)

Trophonia eruca Claparède, 1870a, p. 105.

Stylarioides eruca: Okuda, 1937b, pp. 52–53, textfigs. 2, 3.

Pherusa eruca: Imajima & Hartman, 1964, pp. 302–303.

Material: Stn. no. 34 (2); Stn. no. 41 (1); Stn. no. 46 (1); Stn. no. 51 (1); Stn. no. 58 (1); Stn. no. 59 (1); Stn. no. 60 (3); Stn. no. 62 (5); Stn. no. 80 (2); Stn. no. 91 (2).

Distribution: Mediterranean Sea, Atlantic Ocean, eastern Pacific Ocean, Japan.

Pherusa papillata (Johnson, 1901)

Trophonia papillata Johnson, 1901, p. 416.

Pherusa papillata: Hartman, 1969, pp. 303–304, figs. 1–6.

Material: Stn. no. 15 (1); Stn. no. 36 (9); Stn. no. 37 (1).

The species is reported for the first time from Japanese waters, but not described here.

Distribution: Alaska south to southern California, Japan.

Pherusa parmata (Grube, 1877)

Stylarioides parmatus: Fauvel, 1936b, pp. 74–75; Fauvel, 1953, pp. 346–347, fig. 179b.

Pherusa parmata: Imajima & Hartman, 1964, p. 303; Day, 1967b, pp. 658–659, fig. 32. 2. a–c.

Material: Stn. no. 8 (2); Stn. no. 31 (1); Stn. no. 86 (1); Stn. no. 90 (1); Stn. no. 102 (1); Stn. no. 106 (1); Stn. no. 107 (1); Stn. no. 110 (1).

Distribution: Philippine Islands, Indo-Pacific areas, New Zealand, South Africa, Yellow Sea, Japan.

Pherusa plumosa (Müller, 1776)

Amphitrite plumosa Müller, 1776, p. 216.

Stylarioides plumosa: Okuda, 1937b, p. 52, pl. 2, fig. C.

Pherusa plumosa: Imajima & Hartman, 1964, pp. 303–304.

Material: Stn. no. 64 (1).

Distribution: Atlantic and Pacific oceans, Japan.

***Pherusa* spp.**

Material: Stn. no. 62 (5); Stn. no. 69 (1); Stn. no. 87 (1); Stn. no. 89 (1).

Order Sternaspida

Family Acrocirridae Banse, 1969

***Acrocirrus* spp.**

Material: Stn. no. 62 (1); Stn. no. 82 (1); Stn. no. 91 (1); Stn. no. 104 (1).

Family Sternaspidae Carus, 1863

Sternaspis scutata (Ranzani, 1817)

Thalassema scutatum Ranzani, 1817, p.1461.

Sternaspis scutata: Moore, 1903, p. 487; Okuda, 1936, pp.151–152, textfig. 5; Imajima & Hartman, 1964, pp. 310–311; Imajima, 1997a, p. 199.

Material: Stn. no. 51 (5); Stn. no. 106 (1).

Distribution: Arctic, Atlantic, Pacific and Indian oceans, Japan.

Order Capitellida

Family Capitellidae Grube, 1862

***Anotomastus* sp.**

Material: Stn. no. 47 (1); Stn. no. 89 (1); Stn. no. 121 (1).

Capitella capitata capitata (Fabricius, 1780)

Lumbricus capitatus Fabricius, 1780, p. 279.

Capitella capitata: Fauvel, 1927, p.154, fig. 55a–h; Hartman, 1947, p.404, pl. 43, figs. 1–2.

Material: Stn. no. 95 (2).

Distribution: North Atlantic, Southern California, Mediterranean Sea, Bering Sea, Japan.

Capitella capitata floridana Hartman, 1959

Capitella capitata floridana Hartman, 1959, pp. 159–160, pl. 3, figs. 4–6; Wu, 1964, p. 265, fig. 4e.

Material: Stn. no. 84 (1).

Distribution: Florida, Chinese coasts, Japan.

Dasybranchus caducus (Grube, 1846)

Dasymallus caducus Grube, 1846, p. 166.

Dasybranchus caducus: Eisig, 1887, p. 823, pl. 16, figs. 1–6, 8–12, pl. 32, figs. 1–4; Imajima & Hartman, 1964, pp. 312–313; Imajima, 2005, p. 92.

Material: Stn. no. 23 (1); Stn. no. 36 (5); Stn. no. 37 (2); Stn. no. 44 (1); Stn. no. 47 (1); Stn. no. 52 (1); Stn. no. 72 (1); Stn. no. 84 (1); Stn. no. 93 (2); Stn. no. 94 (2); Stn. no. 95 (5).

Distribution: Mediterranean Sea, Red Sea, Indian Ocean, Japan.

Mediomastus californiensis Hartman, 1944

Mediomastus californiensis Hartman, 1944c, pp. 264–265, pl. 26, figs. 64–65; Blake, 2000, pp. 78–79, fig. 4. 12.

Material: Stn. no. 36 (1); Stn. no. 106 (1).

The species is reported for the first time from Japanese waters, but not described here.

Distribution: North America, Gulf of Mexico; Alaska to southern California, Japan.

Notomastus hemipodus Hartman, 1945

Notomastus (*Clistomastus*) *hemipodus* Hartman, 1945, p. 38.

Notomastus hemipodus: Day, 1973, p. 100; Blake, 2000, pp. 81–83, fig. 4. 13.

Material: Stn. no. 120 (1).

Distribution: North Carolina, Gulf of Mexico, California, Japan.

Notomastus latericeus Sars, 1851

Notomastus latericeus Sars, 1851, p. 199; Fauvel, 1927, p. 143, fig. 49a–h; Uschakov, 1955, p. 325, fig. 121a, b; Imajima & Hartman, 1964, p. 313; Imajima, 1997a, pp. 199–200.

Material: Stn. no. 25 (1); Stn. no. 31 (2); Stn. no. 33 (3); Stn. no. 34 (6); Stn. no. 41 (3); Stn. no. 42 (3); Stn. no. 43 (1); Stn. no. 46 (4); Stn. no. 47 (6); Stn. no. 49 (2); Stn. no. 50 (2); Stn. no. 51 (1); Stn. no. 53 (2); Stn. no. 58 (1); Stn. no. 61 (1); Stn. no. 62 (4); Stn. no. 70 (1); Stn. no. 71 (1); Stn. no. 72 (2); Stn. no. 87 (2); Stn. no. 88 (1); Stn. no. 89 (5); Stn. no. 91 (4); Stn. no. 95 (2); Stn. no. 97 (4); Stn. no. 98 (5); Stn. no. 99 (11); Stn. no. 100 (1); Stn. no. 104 (1); Stn. no. 105 (1); Stn. no. 109 (2); Stn. no. 111 (1); Stn. no. 113 (4); Stn. no. 114 (1); Stn. no. 118 (2); Stn. no. 121 (2).

Distribution: Western and southern Europe, Okhotsk Sea, Japan.

***Parheteromastus* sp.**

Material: Stn. no. 36 (4).

Family Maldanidae Malmgren, 1867

Subfamily Clymenurinae Imajima & Shiraki, 1982

Clymenura* (*Cephalata*) *aciculata Imajima & Shiraki, 1982

Clymenura (*Cephalata*) *aciculata* Imajima & Shiraki, 1982a, pp. 21–22, fig. 6a–n.

Material: Stn. no. 113 (2).

Distribution: Japan.

Clymenura* (*Cephalata*) *columbiana (Berkeley, 1929)

Leiochone columbiana Berkeley, 1929, pp. 315–316, pl. 1, figs. 1–9.

Clymenura (*Cephalata*) *columbiana*: Imajima & Shiraki, 1982a, pp. 23–24, fig. 7a–l; Imajima, 1997a, p. 201.

Material: Stn. no. 66 (2); Stn. no. 118 (1); Stn. no. 121 (1).

Distribution: Pacific of western Canada, Japan.

Clymenura* (*Cephalata*) *lankesteri (McIntosh, 1885)

Praxilla lankesteri McIntosh, 1885, pp. 403–404, pl. 25A, fig. 3.

Clymenura (*Cephalata*) *lankesteri*: Imajima & Shiraki, 1982a, pp. 16–19, figs. 3a–n, 4a–d; Imajima, 2001b, p. 82.

Material: Stn. no. 113 (3); Stn. no. 114 (1).

Distribution: West coast of Norway, Sea of Okhotsk, Japan.

Subfamily Euclymeninae Arwidsson, 1907

Clymenella complanata Hartman, 1969

Clymenella complanata Hartman, 1969, pp. 435–436, figs. 1–3; Imajima & Shiraki, 1982b, pp. 47–49, fig. 20a–k; Imajima, 2001b, p. 82.

Material: Stn. no. 50 (1); Stn. no. 51 (1); Stn. no. 52 (4); Stn. no. 93 (1).

Distribution: California, Japan.

Clymenella koellikeri (McIntosh, 1885)

Praxilla köllikeri McIntosh, 1885, pp. 402–403, pl. 46, fig. 6, pl. 25A, fig. 2, pl. 37A, figs. 3, 8.

Clymenella köllikeri: Imajima & Shiraki, 1982b, pp. 52–54, figs. 23a–h, 24a–b; Imajima, 1997a, p. 203.

Material: Stn. no. 34 (1); Stn. no. 43 (1); Stn. no. 117 (1).

Distribution: Fiji Island, Japan.

Euclymene uncinata Imajima & Shiraki, 1982

Euclymene uncinata Imajima & Shiraki, 1982b, pp. 70–71, fig. 33a–l.

Material: Stn. no. 106 (1); Stn. no. 116 (1).

Distribution: Japan.

Isocirrus planiceps (Sars, 1872)

Isocirrus planiceps: Arwidsson, 1907, pp. 137–143, pl. 3, figs. 98–107, pl. 8, figs. 276–280, pl. 11, figs. 348, 351; Imajima & Shiraki, 1982b, pp. 73–74, fig. 35a–j.

Material: Stn. no. 41 (1).

Distribution: Norway, Japan.

Maldanella harai (Izuka, 1902)

Clymene harai Izuka, 1902, pp. 111–113, pl. 3, figs. 9–12.

Maldanella harai: Fauvel, 1914, pp. 260–261, pl. 23, fig. 1; Imajima & Hartman, 1964, pp. 319–320; Imajima & Shiraki, 1982b, pp. 55–56, fig. 25a–h.

Material: Stn. no. 33 (2); Stn. no. 34 (1); Stn. no. 41 (1); Stn. no. 42 (1); Stn. no. 43 (1); Stn. no. 44 (2); Stn. no. 52 (1); Stn. no. 58 (2); Stn. no. 64 (1); Stn. no. 70 (1); Stn. no. 87 (2); Stn. no. 98 (5); Stn. no. 99 (1); Stn. no. 101 (1); Stn. no. 106 (9); Stn. no. 109 (4); Stn. no. 113 (4); Stn. no. 118 (2).

Distribution: Japan, Atlantic and Indian oceans, Okhotsk Sea.

Maldanella niijimense Imajima & Shiraki, 1982

Maldanella niijimense Imajima & Shiraki, 1982b, pp. 56–58, fig. 26a–k.

Material: Stn. no. 46 (2).

Distribution: Japan.

Praxillella gracilis (Sars, 1861)

Praxillella gracilis: Arwidsson, 1907, pp. 183–191, pl. 4, fig. 153–155, pl. 5, figs. 156–158, pl. 9, fig. 302–307, pl. 12, fig. 367; Berkeley & Berkeley, 1952, p. 50, figs. 101, 102; Imajima & Shiraki, 1982b, pp. 61–63, fig. 28a–k; Imajima, 1997a, pp. 203–204.

Material: Stn. no. 5 (1); Stn. no. 64 (3); Stn. no. 66 (8); Stn. no. 113 (3).

Distribution: North Atlantic, Mediterranean Sea, Southern California to western Canada, Japan.

Praxillella pacifica Berkeley, 1929

Praxillella affinis var. *pacifica* Berkeley, 1929, pp. 313–314; Hartman, 1969, pp. 475–476.

Praxillella pacifica: Imajima & Shiraki, 1982b, pp. 58–60, fig. 27a–l.

Material: Stn. no. 5 (2); Stn. no. 48 (6); Stn. no. 49 (8); Stn. no. 50 (4); Stn. no. 51 (2); Stn. no. 70 (2); Stn. no. 71 (1); Stn. no. 89 (6); Stn. no. 92 (1); Stn. no. 109 (1); Stn. no. 111 (1); Stn. no. 112 (1).

Distribution: Southern California north to western Canada, Japan.

Praxillella praetermissa (Malmgren, 1865)

Praxilla praetermissa Malmgren, 1865, p. 191.

Praxillella praetermissa: Day, 1967b, pp. 642–644, fig. 30. 7. i–l; Imajima & Shiraki, 1982b, pp. 63–65, fig. 29a–n; Imajima, 1997a, p. 204.

Material: Stn. no. 46 (1); Stn. no. 64 (2); Stn. no. 70 (1); Stn. no. 71 (2); Stn. no. 89 (9); Stn. no. 91 (2); Stn. no. 99 (1).

Distribution: North Atlantic from Norway to Spain, Mediterranean Sea, Japan.

Subfamily Lumbriclymeninae Arwidsson, 1907

Clymenopsis cingulata (Ehlers, 1887)

Clymene cingulata Ehlers, 1887, pp. 185–188, pl. 47, figs. 2–5.

Clymenopsis cingulata: Hartman & Barnard, 1960, pp. 144–145; Imajima & Shiraki, 1982a, pp. 30–32, fig. 12a–k.

Material: Stn. no. 25 (1); Stn. no. 34 (1); Stn. no. 42 (1); Stn. no. 46 (1); Stn. no. 47 (2); Stn. no. 51 (3); Stn. no. 59 (3); Stn. no. 64 (1); Stn. no. 71 (2); Stn. no. 89 (1); Stn. no. 109 (5); Stn. no. 116 (1); Stn. no. 118 (8).

Distribution: Southern California, Greenland, Japan.

Lumbriclymene japonica (McIntosh, 1885)

Nicomache japonica McIntosh, 1885, pp. 399–400, pl. 46, fig. 5, pl. 24A, fig. 20.

Lumbriclymene japonica: Imajima & Shiraki, 1982a, pp. 26–28, figs. 9a–r, 10a–d; Imajima, 1997a, p. 201.

Material: Stn. no. 66 (59); Stn. no. 68 (7); Stn. no. 106 (3); Stn. no. 111 (1); Stn. no. 121 (3).

Distribution: Japan.

***Lumbriclymene* sp.**

Material: Stn. no. 93 (1).

Notoproctus pacificus (Moore, 1906)

Lumbriclymene pacifica Moore, 1906, pp. 246–248, pl. 12, figs. 40–42.

Notoproctus pacificus: Berkeley & Berkeley, 1952, pp. 56–57, figs. 117, 118; Imajima, 1964, pp. 249–251, figs. 42–50; Imajima & Shiraki, 1982a, pp. 24–26, fig. 8a–m.

Material: Stn. no. 68 (1); Stn. no. 74 (1); Stn. no. 87 (8); Stn. no. 102 (1); Stn. no. 107 (1); Stn. no. 111 (1); Stn. no. 112 (1).

Distribution: Southern California, western Canada and Alaska, Japan.

Subfamily Maldaninae Arwidsson, 1907

Chirimia biceps (Sars, 1861)

Asychis biceps: Arwidsson, 1907, pp. 263–271, pl. 6, figs. 200–207, pl. 10, figs. 339–344; Imajima & Shiraki, 1982b, pp. 77–80, fig. 37a–t.

Chirimia biceps biceps: Light, 1991, p. 139.

Material: Stn. no. 41 (1); Stn. no. 106 (1).

Distribution: Iceland, Greenland, California, western Mexico, Japan.

Maldane cristata Treadwell, 1923

Maldane cristata Treadwell, 1923, pp. 9–10, figs. 5–8; Imajima & Shiraki, 1982b, pp. 84–86, fig. 40a–n; Imajima, 1997a, pp. 205–206.

Material: Stn. no. 34 (1); Stn. no. 50 (2); Stn. no. 51 (2); Stn. no. 52 (2); Stn. no. 64 (7); Stn. no. 66 (2); Stn. no. 118 (4); Stn. no. 119 (1).

Distribution: Southern California to western Mexico, Japan.

Maldane pigmentata (Imajima & Shiraki, 1982)

Asychis pigmentata Imajima & Shiraki, 1982b, pp. 82–83, fig. 39a–k.

Maldane pigmentata: Imajima, 1996, p. 288, fig. 233; Imajima, 1997a, p. 205.

Material: Stn. no. 24 (1); Stn. no. 52 (1).

Distribution: Japan.

Metasychis gotoi (Izuka, 1902)

Maldane gotoi Izuka, 1902, pp. 109–111, pl. 3, figs. 1–8.

Asychis gotoi: Imajima & Shiraki, 1982b, pp. 75–77, fig. 36a–l.

Metasychis gotoi: Light, 1991, p. 139; Imajima, 1997a, pp. 204–205; Imajima, 2001b, p. 86.

Material: Stn. no. 24 (1); Stn. no. 43 (1); Stn. no. 47 (1); Stn. no. 52 (13); Stn. no. 66 (1); Stn. no. 106 (1); Stn. no. 114 (1).

Distribution: Indo-Pacific areas, Adriatic Sea, California, Japan.

Subfamily Nicomachinae Arwidsson, 1907

Nicomache (Loxochona) quadrispinata Arwidsson, 1907

Nicomache (*Loxochona*) *quadrispinata* Arwidsson, 1907, pp. 108–113, pl. 3, figs. 80–84, pl. 5, figs. 179–180, pl. 8, figs. 262–267; Imajima & Shiraki, 1982a, pp. 39–42, fig. 17a–m.

Material: Stn. no. 23 (1); Stn. no. 33 (4); Stn. no. 34 (3); Stn. no. 47 (1); Stn. no. 98 (3); Stn. no. 99 (1); Stn. no. 100 (1).

Distribution: Norway, Greenland, Japan.

Nicomache (Nicomache) lumbricalis (Fabricius, 1780)

Nicomache lumbricalis: Arwidsson, 1907, pp. 86–93, pl. 8, figs. 244, 245; Imajima & Shiraki, 1982a, pp. 35–37, fig. 14a–n; Imajima, 1997a, p. 202; Imajima, 2001b, p. 86.

Material: Stn. no. 15 (1); Stn. no. 44 (1); Stn. no. 58 (1); Stn. no. 91 (2).

Distribution: Greenland, North Sea, Bering Sea, Japan.

Nicomache (Nicomache) minor Arwidsson, 1907

Nicomache minor Arwidsson, 1907, pp. 100–104, pl. 2, figs. 68–73, pl.8, figs. 252–256; Uschakov, 1955, p. 338, fig. 124E; Imajima & Shiraki, 1982a, p. 39, fig. 16a–m.

Material: Stn. no. 45 (1).

Distribution: Norway, Okhotsk Sea, Bering Sea, Japan.

Subfamily Rhodininae Arwidsson, 1907

Rhodine loveni Malmgren, 1865

Rhodine loveni: Arwidsson, 1907, pp. 64–74, pl. 2, figs. 39–52, pl. 7, figs. 235, 236, pl. 11, figs. 346, 347; Hartman, 1966, p. 72, pl. 23, figs. 9–11; Imajima & Shiraki, 1982a, pp. 32–35, fig. 13a–m; Imajima, 1997a, p. 202.

Material: Stn. no. 25 (1); Stn. no. 34 (2); Stn. no. 41 (1); Stn. no. 42 (1); Stn. no. 53 (1); Stn. no. 58 (1); Stn. no. 64 (1); Stn. no. 66 (1); Stn. no. 68 (2); Stn. no. 70 (1); Stn. no. 71 (5); Stn. no. 91 (1); Stn. no. 98 (1); Stn. no. 105 (1); Stn. no. 106 (1); Stn. no. 114 (1); Stn. no. 116 (1); Stn. no. 118 (1).

Distribution: Arctic boreal, Japan.

Order Opheliida

Family Opheliidae Malmgren, 1867

Armandia lanceolata Willey, 1905

Armandia lanceolata Willey, 1905, pp. 288–289, pl. 5, fig. 120; Okuda, 1938a, pp. 99; Imajima & Hartman, 1964, p. 306.

Material: Stn. no. 37 (1); Stn. no. 44 (1); Stn. no. 46 (2); Stn. no. 58 (3); Stn. no. 70 (1); Stn. no. 95 (1); Stn. no. 97 (1).

Distribution: Indo-Pacific areas, Japan.

Armandia simodaensis Takahashi, 1938

Armandia simodaensis Takahashi, 1938, pp. 152–154, 3 textfigs; Imajima & Hartman, 1964, pp. 306–307.

Material: Stn. no. 61 (1); Stn. no. 74 (1).

Distribution: Japan.

Ophelina acuminata Oersted, 1843

Ophelina acuminata Oersted, 1843, p. 46; Day, 1967b, p. 579, fig. 25. 2. i–j; Imajima, 1997a, p. 206.

Ammotrypane aulogaster: Fauvel, 1927, p. 133, fig. 47a–e; Imajima & Hartman, 1964, pp. 305–306.

Material: Stn. no. 23 (2); Stn. no. 24 (1); Stn. no. 31 (3); Stn. no. 33 (1); Stn. no. 46 (1); Stn. no. 51 (1); Stn. no. 52 (2); Stn. no. 61 (1); Stn. no. 91 (4); Stn. no. 100 (1); Stn. no. 107 (1); Stn. no. 109 (5).

Distribution: North Atlantic, Indian Ocean, Bering Sea, Japan.

Polyophthalmus pictus (Dujardin, 1839)

Polyophthalmus pictus: Fauvel, 1936b, p.75; Imajima & Hartman, 1964, p. 309.

Material: Stn. no. 15 (1); Stn. no. 36 (2); Stn. no. 102 (1).

Distribution: Atlantic, Pacific and Indian oceans, Japan.

Travisia japonica Fujiwara, 1933

Travisia japonica Fujiwara, 1933, pp. 91–103, pls. 1, 2, textfigs. 1–11; Uschakov, 1955, p. 332, fig. 120: H–J.

Material: Stn. no. 74 (2); Stn. no. 109 (1); Stn. no. 112 (2).

Distribution: Japan, west coast of south Sakhalin.

Family Scalibregmidae Malmgren, 1867

Oncoscolex pacificus borealis Imajima & Hartman, 1964

Oncoscolex pacificus borealis Imajima & Hartman, 1964, p. 304.

Oncoscolex pacificus Berkeley, 1930, p. 68.

Material: Stn. no. 24 (1); Stn. no. 36 (5); Stn. no. 91 (1); Stn. no. 95 (4); Stn. no. 102 (1); Stn. no. 105 (1); Stn. no. 106 (1); Stn. no. 107 (1); Stn. no. 117 (1).

Distribution: Western Canada, Kurile Islands, Japan.

Scalibregma inflatum Rathke, 1843

Scalibregma inflatum: Okuda, 1936, pp. 148–149, textfig. 1; Imajima & Hartman, 1964, p. 305;

Imajima, 2001b, p. 87.

Material: Stn. no. 34 (1); Stn. no. 105 (1); Stn. no. 106 (1); Stn. no. 113 (1).

Distribution: Norway, Atlantic and Pacific oceans, Japan.

Order Oweniida

Family Oweniidae Rioja, 1917

Galathowenia scotiae (Hartman, 1978)

Myriochele scotiae Hartman, 1978, pp. 188–190, fig. 32a–d.

Galathowenia scotiae: Parapar, 2001, pp. 404–412, figs. 1, 2, tab. 1.

Galathowenia wilsoni: Imajima & Morita, 1987, p. 98, figs. 7a–k, 8e–f.

Material: Stn. no. 66 (2); Stn. no. 71 (1); Stn. no. 91 (1); Stn. no. 107 (2); Stn. no. 118 (2).

Distribution: Antarctic Sea, Japan.

Myriochele danielsseni Hansen, 1879

Myriochele danielsseni Hansen, 1879, p. 270, tab. 2, figs. 9–11; Nilsen & Holthe, 1985, pp. 22–23, figs. 5, 6, 12a; Imajima & Morita, 1987, pp. 91–94, figs. 5a–i, 8a, b.

Material: Stn. no. 58 (2); Stn. no. 70 (4); Stn. no. 71 (2); Stn. no. 89 (7); Stn. no. 96 (2); Stn. no. 105 (1).

Distribution: North Sea, Norwegian Sea, Polar Sea, Japan.

Myriochele heeri Malmgren, 1867

Myriochele heeri Malmgren, 1867b, pp. 101–102, tab. 7, fig. 37; Blake & Dean, 1973, p. 37, fig. 2; Nilsen & Holthe, 1985, pp. 21–22, figs. 3, 4, 11c–e; Imajima & Morita, 1987, pp. 90–91, figs. 3a–k, 4e–h.

Material: Stn. no. 50 (1); Stn. no. 66 (1); Stn. no. 67 (1); Stn. no. 74 (2).

Distribution: Norwegian Sea, South Atlantic Ocean, Polar Sea, Sea of Okhotsk, Japan.

Myriochele oculata Zaks, 1922

Myriochele oculata Zaks, 1922, pp. 171–174, figs. 1–3; Nilsen & Holthe, 1985, pp. 23–25, fig. 7.

Galathowenia oculata: Imajima & Morita, 1987, pp. 94–97, figs. 6a–j, 8c, d.

Material: Stn. no. 46 (1); Stn. no. 49 (1); Stn. no. 50 (1); Stn. no. 51 (4); Stn. no. 89 (1).

Distribution: Kara Sea, Norwegian Sea, Bering Sea, British Colombia, Japan.

Owenia fusiformis delle Chiaje, 1842

Owenia fusiformis: Okuda, 1937c, pp. 252–253, textfig. 27; Nilsen & Holthe, 1985, pp. 19–21, fig. 1a, b; Imajima & Morita, 1987, pp. 87–90, figs. 2a–k, 4a–d; Imajima, 1997a, p. 207.

Material: Stn. no. 5 (1); Stn. no. 23 (1); Stn. no. 30 (1); Stn. no. 33 (3); Stn. no. 34 (5); Stn. no. 41 (1); Stn. no. 44 (2); Stn. no. 45 (3); Stn. no. 46 (4); Stn. no. 49 (1); Stn. no. 58 (2); Stn. no. 59 (1); Stn. no. 90 (1); Stn. no. 92 (1); Stn. no. 93 (5); Stn. no. 97 (1); Stn. no. 99 (1); Stn. no. 100 (3); Stn. no. 121 (1).

Distribution: World-wide, Japan.

Order Terebellida

Family Pectinariidae Quatrefages, 1865

Cistenides okudai Imajima & Hartman, 1964

Cistenides okudai Imajima & Hartman, 1964, pp. 328–329.

Material: Stn. no. 59 (1); Stn. no. 89 (1); Stn. no. 97 (2).

Distribution: Japan.

***Pectinaria* spp.**

Material: Stn. no. 9 (1); Stn. no. 32 (3); Stn. no. 33 (1); Stn. no. 121 (1).

Family Sabellariidae Johnston, 1865

***Idanthyrsus* sp.**

Material: Stn. no. 71 (1).

Lygdamis giardi (McIntosh, 1885)

Sabellaria (*Pallasia*) *giardi* McIntosh, 1885, pp. 421–422, pl. 47, fig. 7, pl. 26A, figs. 13–15.

Lygdamis giardi: Okuda, 1938b, pp. 237–241, textfigs. 1–3; Imajima, 2001b, p. 89.

Material: Stn. no. 80 (1); Stn. no. 102 (1); Stn. no. 103 (2); Stn. no. 104 (1); Stn. no. 121 (1).

Distribution: Western Australia, Japan.

Phalacrostemma elegans Fauvel, 1911

Phalacrostemma elegans Fauvel, 1911, p. 3, fig. 3; Day, 1967b, pp. 669–670, fig. 33. 1. a–g.

Material: Stn. no. 100 (1).

The species is reported for the first time from Japanese waters, but not described here.

Distribution: Madeira, Japan.

Family Ampharetidae Malmgren, 1867

Amage arieticornuta Moore, 1923

Amage arieticornuta Moore, 1923, pp. 207–210, pl. 17, figs. 14–18.

Material: Stn. no. 41 (2).

Distribution: Off coast of southern California, Japan.

***Amage* spp.**

Material: Stn. no. 31 (2); Stn. no. 33 (1); Stn. no. 42 (1); Stn. no. 45 (1); Stn. no. 53 (15).

Amphicteis gunneri (Sars, 1835)

Amphitrite gunneri Sars, 1835, p. 50.

Amphicteis gunneri: Hessle, 1917, p. 116; Imajima & Hartman, 1964, pp. 331–332; Imajima, 2001b, pp. 89–90.

Material: Stn. no. 5 (3); Stn. no. 6 (1); Stn. no. 7 (1); Stn. no. 23 (6); Stn. no. 24 (3); Stn. no. 25 (6); Stn. no. 31 (12); Stn. no. 32 (1); Stn. no. 33 (23); Stn. no. 44 (3); Stn. no. 45 (2); Stn. no. 46 (6); Stn. no. 47 (5); Stn. no. 48 (1); Stn. no. 51 (8); Stn. no. 53 (1); Stn. no. 54 (1); Stn. no. 58 (5); Stn. no. 61 (2); Stn. no. 101 (2).

Distribution: Arctic and boreal parts of north Atlantic Ocean; northeastern South America; Indian Ocean, Japan.

***Amphicteis* spp.**

Material: Stn. no. 23 (1); Stn. no. 25 (1); Stn. no. 31 (4); Stn. no. 41 (1); Stn. no. 42 (1); Stn. no. 46 (3); Stn. no. 62 (1); Stn. no. 64 (12); Stn. no. 66 (11); Stn. no. 68 (1); Stn. no. 70 (3); Stn. no. 71 (2); Stn. no. 73 (1); Stn. no. 74 (1); Stn. no. 87 (3); Stn. no. 88 (2); Stn. no. 99 (4).

***Auchenoplax crinita* Ehlers, 1887**

Auchenoplax crinita Ehlers, 1887, pp. 209–214, pl. 44, figs. 10–16; Kirkegaard, 1959, p. 80; Hartman, 1965, pp. 216–217, pl. 47a–d; Imajima, 1997a, pp. 210–211, fig. 13a–h.

Material: Stn. no. 34 (3); Stn. no. 46 (1); Stn. no. 51 (4); Stn. no. 58 (1); Stn. no. 64 (1); Stn. no. 66 (8); Stn. no. 70 (1); Stn. no. 71 (1); Stn. no. 105 (1); Stn. no. 117 (1).

Distribution: Atlantic of New England, northeastern South America, off Morocco, Japan.

***Melinna oculata* Hartman, 1969**

Melinna oculata Hartman, 1969, pp. 567–568, figs. 1–6; Hilbig, 2000, pp. 225–227, fig. 8. 26.

Material: Stn. no. 23 (1); Stn. no. 25 (1); Stn. no. 31 (1); Stn. no. 37 (1).

Distribution: Central and southern California, Japan.

***Melinna* spp.**

Material: Stn. no. 47 (2); Stn. no. 49 (2); Stn. no. 51 (2); Stn. no. 62 (1); Stn. no. 70 (3); Stn. no. 71 (5); Stn. no. 72 (2); Stn. no. 84 (1); Stn. no. 98 (1); Stn. no. 99 (1).

***Sosane occidentalis* (Hartman, 1969)**

Anobothrus occidentalis Hartman, 1969, p. 555, figs. 1–3.

Sosane occidentalis: Williams, 1987, pp. 251–252, fig. 1B.

Material: Stn. no. 33 (5); Stn. no. 45 (1): Stn. no. 46 (1); Stn. no. 56 (1).

The species is reported for the first time from Japanese waters, but not described here.

Distribution: Central and southern California, Japan.

***Sosane sulcata* Malmgren, 1866**

Sosane sulcata Malmgren, 1866, p. 368, pl. 26, fig. 79; Uebelacker, 1984b, pp. 51–11 to 51–14, fig. 8; Hayashi & Hanaoka, 1997, pp. 385–388, fig. 2a–f.

Material: Stn. no. 41 (2); Stn. no. 56 (2).

Distribution: North Sea, Mediterranean Sea, Atlantic Ocean, Gulf of Mexico, Japan.

Family Trichobranchidae Malmgren, 1866

***Terebellides lineata* Imajima & Williams, 1985**

Terebellides lineata Imajima & Williams, 1985, pp. 14–15, fig. 4a–c; Imajima, 1997a, p. 212.

Material: Stn. no. 25 (1); Stn. no. 36 (3); Stn. no. 52 (4); Stn. no. 91 (2); Stn. no. 99 (1); Stn. no. 106 (2); Stn. no. 109 (4); Stn. no. 118 (4).

Distribution: Japan.

***Terebellides* spp.**

Material: Stn. no. 23 (1); Stn. no. 31 (2); Stn. no. 33 (5); Stn. no. 34 (1); Stn. no. 42 (1); Stn. no. 43

(1); Stn. no. 44 (1); Stn. no. 46 (2); Stn. no. 47 (1); Stn. no. 48 (2); Stn. no. 49 (1); Stn. no. 61 (2).

Family Terebellidae Malmgren, 1867

Amphitrite oculata Hessle, 1917

Amphitrite oculata Hessle, 1917, p. 186; Okuda & Yamada, 1954, pp. 193–194, textfig. 8.

Material: Stn. no. 6 (4); Stn. no. 8 (3); Stn. no. 13 (2); Stn. no. 23 (23); Stn. no. 24 (5); Stn. no. 25 (8); Stn. no. 31 (62); Stn. no. 33 (153); Stn. no. 36 (76); Stn. no. 37 (32); Stn. no. 44 (23); Stn. no. 45 (18); Stn. no. 46 (60); Stn. no. 47 (7); Stn. no. 50 (5); Stn. no. 51 (78); Stn. no. 58 (17); Stn. no. 61 (3); Stn. no. 91 (4); Stn. no. 95 (53); Stn. no. 101 (8); Stn. no. 110 (1); Stn. no. 111 (16); Stn. no. 121 (14).

Distribution: Japan.

Nicolea gracilibranchis (Grube, 1878)

Nicolea gracilibranchis: Marenzeller, 1884, p. 207, pl. 2, fig. 2; Hessle, 1917, p. 173; Imajima & Hartman, 1964, p. 341.

Material: Stn. no. 6 (4); Stn. no. 8 (1); Stn. no. 33 (10); Stn. no. 36 (3); Stn. no. 37 (2); Stn. no. 41 (1); Stn. no. 94 (1); Stn. no. 95 (1).

Distribution: Philippine Islands, Indian Ocean, Hawaii, Japan.

Pista agassizi Hilbig, 2000

Pista agassizi Hilbig, 2000b, pp. 267–268, fig. 9. 15.

Material: Stn. no. 33 (15); Stn. no. 98 (1); Stn. no. 100 (1).

The species is reported for the first time from Japanese waters, but not described here.

Distribution: Southern California, Japan.

Pista elongata Moore, 1909

Pista elongata Moore, 1909b, pp. 270–272, pl. 9, figs. 270–272; Okuda, 1937b, pp. 60–61, textfig. 8; Imajima & Hartman, 1964, p. 343.

Pista maculata Marenzeller, 1884, pp. 204–205, pl. 1, fig. 5.

Material: Stn. no. 50 (1); Stn. no. 68 (1); Stn. no. 95 (1).

Distribution: California north to western Canada, Japan.

Pista fasciata, sensu McIntosh, 1885

Pista fasciata McIntosh, 1885, pp. 452–453, pl. 49, fig. 5, pl. 27A, fig. 28, pl. 38A, fig. 3.

Material: Stn. no. 6 (1); Stn. no. 7 (1); Stn. no. 9 (1); Stn. no. 23 (2); Stn. no. 24 (4); Stn. no. 25 (7); Stn. no. 31 (15); Stn. no. 33 (42); Stn. no. 42 (1); Stn. no. 44 (1); Stn. no. 46 (32); Stn. no. 47 (26); Stn. no. 49 (1); Stn. no. 51 (9); Stn. no. 58 (32); Stn. no. 61 (20); Stn. no. 63 (1); Stn. no. 64 (1); Stn. no. 80 (1); Stn. no. 89 (9); Stn. no. 92 (2); Stn. no. 93 (2); Stn. no. 97 (2); Stn. no. 113 (1); Stn. no. 121 (6).

Distribution: Japan.

Terebella ehrenbergi Grube, 1870

Terebella ehrenbergi: Hessle, 1917, pp. 188–189; Imajima & Hartman, 1964, p.346.

Material: Stn. no. 5 (1); Stn. no. 13 (1); Stn. no. 23 (1); Stn. no. 25 (4); Stn. no. 31 (5); Stn. no. 36 (17); Stn. no. 37 (8); Stn. no. 42 (3); Stn. no. 44 (1); Stn. no. 45 (1); Stn. no. 58 (1); Stn. no. 59 (6); Stn.

no. 76 (2); Stn. no. 77 (2); Stn. no. 82 (4); Stn. no. 91 (1); Stn. no. 94 (10); Stn. no. 95 (38); Stn. no. 101 (2); Stn. no. 113 (1).

Distribution: Red Sea, Indo-Pacific areas, Japan.

Order Sabellida

Family Sabellidae Malmgren, 1867

Branchiomma cingulata (Grube, 1870)

Branchiomma cingulata: Johansson, 1927, pp. 161–162; Imajima & Hartman, 1964, p. 335; Imajima, 1997a, pp. 213–214.

Dasychone japonica McIntosh, 1885, pp. 500–501, pl. 30A, figs. 22–24, pl. 39A, fig. 5.

Material: Stn. no. 37 (1); Stn. no. 104 (1).

Distribution: Indo-Pacific areas, Australia, Japan.

Chone ecaudata (Moore, 1923)

Jasmineira ecaudata Moore, 1923, pp. 246–248.

Chone ecaudata: Hartman, 1942, pp. 135–136, fig. 15e–g; Hartman, 1969, pp. 663–664.

Material: Stn. no. 123 (31).

Distribution: Southern California, Japan.

***Chone* spp.**

Material: Stn. no. 25 (1); Stn. no. 36 (2); Stn. no. 54 (2); Stn. no. 99 (1); Stn. no. 102 (2); Stn. no. 103 (2).

***Euchone* sp.**

Material: Stn. no. 98 (2); Stn. no. 99 (3); Stn. no. 100 (4); Stn. no. 103 (3); Stn. no. 109 (2); Stn. no. 118 (1).

Megalomma vesiculosum (Montagu, 1815)

Amphitrite vesiculosa Montagu, 1815, p. 19, pl. 5, fig. 1.

Branchiomma vesiculosum: Fauvel, 1927, p. 315, fig. 109a–q.

Megalomma vesiculosum: Day, 1967b, pp. 758–760, fig. 37. 1. p–u.

Material: Stn. no. 123 (1).

The species is reported for the first time from Japanese waters, but not described here.

Distribution: North Atlantic Ocean, Mediterranean Sea, Indian Ocean, Yellow Sea, Japan.

Potamilla acuminata Moore & Bush, 1904

Potamilla acuminata Moore & Bush, 1904, pp. 159–161, pl. 11, figs. 3–6, pl. 12, fig. 41; Imajima & Hartman, 1964, p. 359.

Material: Stn. no. 110 (1).

Distribution: Japan.

***Sabella* sp.**

Material: Stn. no. 95 (4).

Family Serpulidae Savigny, 1818

Hydroides albiceps (Grube, 1870)

Serpula (*Eupomatus*) *albiceps* Grube, 1870, pp. 520–521.

Hydroides albiceps: Straughan, 1967, p. 220, fig. 6; Imajima, 1976a, pp. 133–135, fig. 8a–v; Imajima, 1982b, p. 44.

Material: Stn. no. 15 (3); Stn. no. 36 (2); Stn. no. 37 (1).

Distribution: Red Sea, Australia, Japan.

Hydroides elegans (Haswell, 1883)

Eupomatus elegans Haswell, 1883, p. 633, pl. 12, fig. 1.

Hydroides elegans: Zibrowius, 1971, pp. 721–727, figs. 56–64; Imajima, 1976b, pp. 237–238, fig. 3a–n; Imajima, 1982b, p. 46.

Material: Stn. no. 36 (5).

Distribution: Australia, Mediterranean Sea, Caribbean Sea, Hawaiian Islands, Palau Islands, Japan.

Hydroides fusicola Mörch, 1863

Hydroides (*Eupomatus*) *fusicola* Mörch, 1863, p. 374.

Hydroides fusicola: Zibrowius, 1971, p. 694; Imajima, 1976b, pp. 235–236, fig. 1a–k; Imajima, 1978, p. 53.

Material: Stn. no. 15 (2); Stn. no. 36 (6).

Distribution: South Kuril, Japan.

Hydroides multispinosa Marenzeller, 1884

Hydroides multispinosa Marenzeller, 1884, pp. 216–217, pl. 4, fig. 2; Zibrowius, 1972a, pp. 443–444, fig. 3; Imajima, 1976b, pp. 238–240, fig. 4a–k.

Material: Stn. no. 15 (7); Stn. no. 16 (1); Stn. no. 36 (5).

Distribution: Japan.

Janita fimbriata (dell Chiaje, 1822)

Omphalopomopsis fimbriata: Zibrowius, 1968, pp. 149–151, pl. 6, figs. 13–21.

Janita fimbriata: Zibrowius, 1972b, p. 122: Imajima, 1979, pp. 174–176, fig. 7a–o.

Material: Stn. no. 101 (1).

Distribution: Mediterranean Sea, Atlantic and Indian oceans, Malagasy, Japan.

Josephella marenzelleri Caullery & Mesnil, 1896

Josephella marenzelleri: Zibrowius, 1968, pp. 172–174, pl. 9, figs. 14–22; Uchida, 1978, pp. 34–36, pl. 11, figs. A–K, tab. 4; Imajima, 1979, p. 181.

Material: Stn. no. 102 (1).

Distribution: Atlantic Ocean, Mediterranean Sea, Queensland, Japan.

Metavermilia gravitesta Imajima, 1978

Metavermilia gravitesta Imajima, 1978, pp. 64–65, fig. 7a–m.

Material: Stn. no. 99 (1).
Distribution: Japan.

Paraprotis pulchra Imajima, 1979

Paraprotis pulchra Imajima, 1979, pp. 179–181, fig. 9a–o.
Material: Stn. no. 121 (1).
Distribution: Japan.

Placostegus tridentatus (Fabricius, 1780)

Placostegus tridentatus: Wolleback, 1912, pp. 117–118, pl. 47, figs. 1–8, pl. 51, figs. 2–3; Zibrowius, 1973, pp. 74–75; Imajima, 1978, pp. 67–69, fig. 9a–l.
Material: Stn. no. 25 (1); Stn. no. 36 (11); Stn. no. 45 (1); Stn. no. 90 (1); Stn. no. 102 (1).
Distribution: Atlantic Ocean, Mediterranean Sea, Japan.

***Serpula* sp.**

Material: Stn. no. 15 (1).

Spirobranchus latiscapus (Marenzeller, 1884)

Pomatostegus latiscapus Marenzeller, 1884, pp. 218–219, pl. 4, fig. 5.
Spirobranchus latiscapus: Fauvel, 1936b, p. 89: Imajima & Hartman, 1964, pp. 373–374; Imajima, 1977, p. 106.
Material: Stn. no. 58 (1).
Distribution: Japan, Sulu Sea, New Zealand, Hawaiian Islands.

Spirobranchus tetraceros (Schmarda, 1861)

Spirobranchus tetraceros: ten Hove, 1970, pp. 3–14, figs. 1–27; Imajima, 1979, pp. 177–178, fig. 8.
Material: Stn. no. 37 (2).
Distribution: Caribbean Sea, Indian Ocean, Australia, Palau Islands, Pacific coast of America, Japan.

***Vermiliopsis infundibulum/glandigera*-group**

Vermiliopsis infundibulum/glandigera-group: ten Hove, 1975, pp. 55–59; Imajima, 1976a, pp. 139–141, fig. 11a–o.
Material: Stn. no. 6 (1); Stn. no. 9 (2); Stn. no. 36 (1); Stn. no. 37 (1); Stn. no. 58 (2); Stn. no. 63 (1); Stn. no. 89 (1); Stn. no. 90 (1).
Distribution: Circum (sub-) tropical, Japan.

Vermiliopsis labiata (Costa, 1861)

Serpula labiata Costa, 1861, p. 32, pl. 7, fig. 2.
Vermiliopsis labiata: Zibrowius, 1972b, pp. 117–118; Imajima, 1977, pp. 95–97, fig. 4b–o.
Material: Stn. no. 90 (1).
Distribution: Mediterranean Sea, Gulf of Guinea, Japan.

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要　約

相模湾と相模灘における動植物相の特徴を明らかにすることを目的とした総合調査が，独立行政法人国立科学博物館によって2001年から2005年にかけて実施された．この間，他機関の調査船や漁船の協力のもとに，123地点から得られた多毛類の分類学的研究を行った．

日本における多毛類の分類学的研究はMarenzeller (1879) によってはじめられ，McIntosh (1885), Moore (1903), Hessle (1917, 1925) などが相模湾とその他の海域から報告している．日本人では飯塚啓が1902年から14年にかけて研究し，1912年には日本各地から124種を報告し，そのうち相模湾産は56種であった．その後Okuda (1938) が下田付近の須崎から74種を，今島 (1968a) が葉山から87種を，今島 (1968b) が相模湾と相模灘から31種の深海性多毛類を，今島・林 (1969) が三崎から61種，Imajima & Gamo (1970) が真鶴から29種，そしてImajima (1982a) が下田から149種と31未確定種を報告した．昭和天皇は1926年から1988年にわたって，相模湾の主に東方海域の底生動物を集中的に採集され，そのうち多毛類はImajima (1997, 2003) が研究し，現在のところ20科，148種が明らかにされているが，未研究の標本を加えて230種くらいと予想される．

本調査では東京大学大学院理学研究科附属臨海実験所の臨海丸，独立行政法人海洋研究開発機構の淡青丸，東京海洋大学の神鷹丸，横浜国立大学附属理科教育実習施設のたちばな，日本大学生物資源科学部臨海実験所のすざきIIと8隻の漁船の協力を得て，主に三浦半島西岸沖合と南方海域，伊豆半島東岸，伊豆大島西岸沖などの123地点から48科，289種と44未確定種の多毛類が確認された．このうち次の4種，*Heteropelogenia japonica*, *Sigalion shimodaensis*, *Sigalion tanseimaruae*, *Eunice unibranchiata* は新種である．また，18種，*Labioleanira yhleni*, *Labiosthenolepis sibogae* (Sigalionidae), *Glycera brevicirris* (Glyceridae), *Marphysa bellii*, *Marphysa kinbergi*, *Marphysa mortenseni* (Eunicidae), *Scoloplos (Leodamas) rubra* (Orbiniidae), *Caulleriella hamata* (Cirratulidae), *Pherusa papillata* (Flabelligeridae), *Mediomastus californiensis*, *Notomastus hemipodus* (Capitellidae), *Phalacrostemma elegans* (Sabellariidae), *Amage arieticornuta*, *Melinna oculata*, *Sosane occidentalis* (Ampharetidae), *Pista agassizi* (Terebellidae), *Chone ecaudata*, *Megalomma vesiculosum* (Sabellidae) は日本から初めて記録された．44未確定種はいずれも個体が不完全か幼体で種名まで明らかにできなかったが，これらを加えると本調査で300種以上の多毛類が出現したことになる．諸般の事情により相模湾と相模灘の中央部での調査が実施されなかったが，今後，この海域の水深1000～2000 mで集中的な調査が行われると，更に多毛類の種数が増加し，新知見が得られるであろう．

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