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Deep-sea Benthic Polychaetes off Pacific Coast of the Northern Honshu, Japan

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Abstract: Polychaetous annelids of the deep-sea off Pacific coast of the northern Honshu through the research project conducted during 2005-2007 by the National Museum of Nature and Science, Tokyo, were taxonomically examined. A total of 211 identified species and 32 indeterminable species in 43 families of polychaetes are recognized. Fourteen species are new to science: *Weberia abyssicola* (Polynoidae), *Sigalion orientalis* (Sigalionidae), *Glycera neorobusta*, *Glycera okai* and *Glycera semibranchiopoda* (Glyceridae), *Nereis abyssa* and *Rullierinereis profunda* (Nereididae), *Euphrosine digitalis* and *Euphrosine pseudonotialis* (Euphrosinidae), *Paradiopatra gracilis* (Onuphidae), *Naineris japonica* (Orbiniidae), *Laubieriopsis brevis japonica* (Fauveliopsidae), *Pseudoscalibregma orientalis* (Scalibregmatidae) and *Anobothrus wakatakamaruae* (Ampharetidae). Thirty-seven species are newly added to the Japanese polychaetous fauna. Eighty-six species are known also from the northwestern Pacific Ocean, including Sea of Okhotsk and Bering Sea. Forty species are known only from Japan, or endemic. The Fauveliopsidae is newly added to the Japanese fauna.

Key words: Off northern Honshu, deep-sea, polychaetes, new species, taxonomy.

Introduction

The deep-sea research project "Study on Deep-Sea Fauna and Conservation of Deep-Sea Ecosystem" was conducted during the period 2005-2007 off Pacific coast of the northern Honshu by the National Museum of Nature and Science, Tokyo. The Pacific coast of the northern Honshu is influenced by the cold Oyashio Current which originates in Arctic seas. The Oyashio Current goes toward the Boso Peninsula and causes a rapid decrease in temperature of the water which has been flowing northward as the warm Kuroshio Current. Its effects are greatest in winter when the cold current approaches the Boso Peninsula.

In this survey, polychaetes were collected from 232 stations, in depths between 150 and 5268 m, distributed all over off Pacific coast of the northern Honshu. Details regarding sampling sites (station, latitude and longitude, depth, date) are given in Table 1. The detailed map of all localities is mentioned in the text (Fig. 1). The samples were collected by the R/Vs *Wakataka-maru* and *Soyo-maru* of the Fisheries Research Agency (FRA) and R/V *Tansei-maru* of the Japan Agency for Marine-Earth Science and Technology (JAMSTEC). Sampling was carried out by various types of biological dredges and trawls.

The polychaete fauna from the deep-sea off Pacific coast of the northern Honshu was still poorly known. In this survey, a total of 211 identified species and 32 indeterminable species in 43 families of polychaetes were recognized. Fourteen species, *Weberia abyssicola* (Polynoidae), *Sigalion orientalis* (Sigalionidae), *Glycera neorobusta*, *Glycera okai* and *Glycera semibranchiopoda* (Glyceridae), *Nereis abyssa* and *Rullierinereis profunda* (Nereididae), *Euphrosine digitalis* and *Euphrosine pseudonotialis* (Euphrosinidae), *Paradiopatra gracilis* (Onuphidae), *Naineris japonica* (Orbiniidae), *Laubieriopsis brevis japonica* (Fauveliopsidae), *Pseudoscalibregma orientalis*

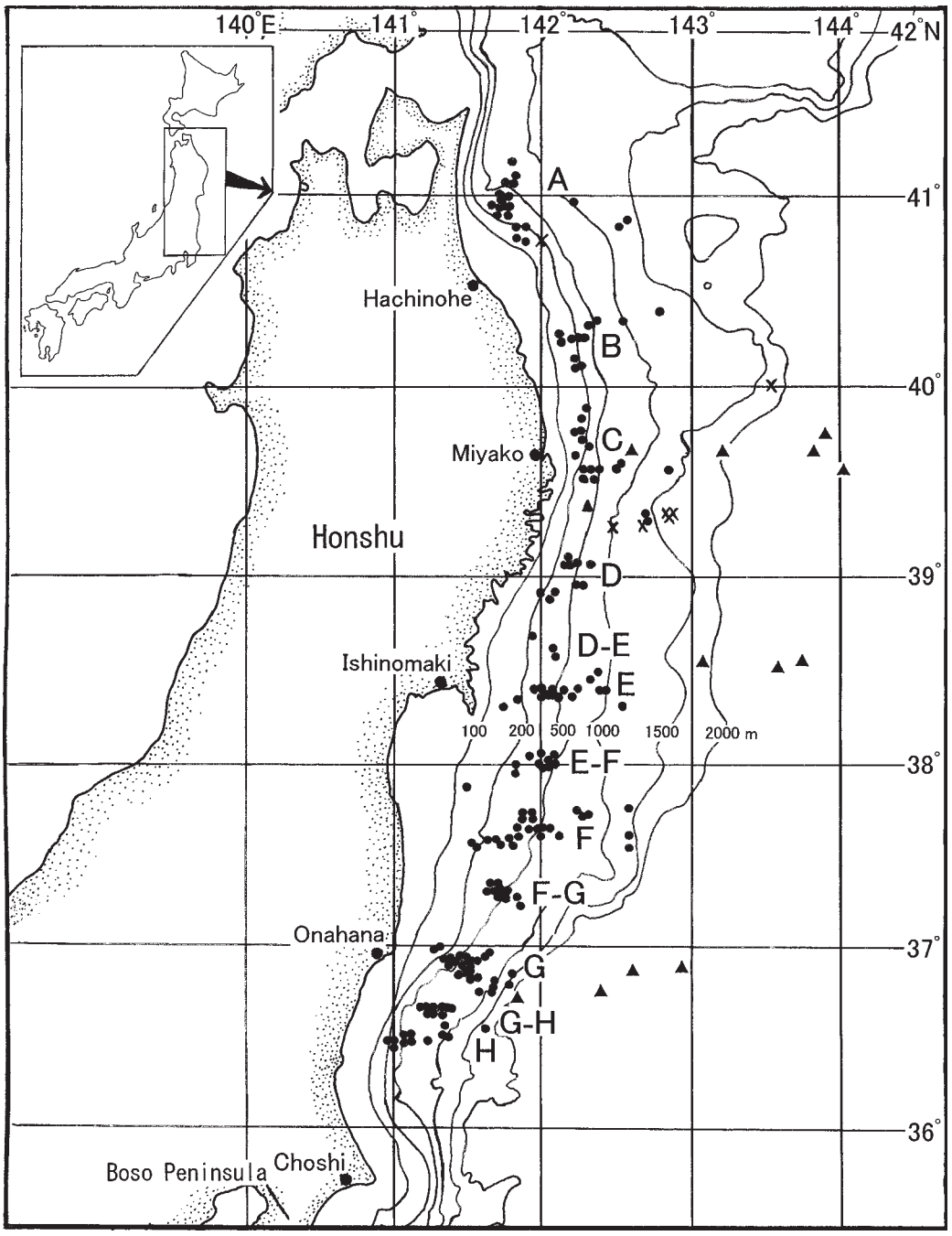

Fig. 1. Map showing collected stations of polychaetes in the benthic surveys operated by *Wakataka-maru* (●), *Soyo-maru* (▲) and *Tansei-maru* (×) during 2005–2007.

Table 1. Collection data for stations at where polychaetes were collected in surveys during 2005–2007.

Station	Position	Depth (m)	Date
WA05-E410	38°23.69′N,142°02.59′E–38°22.12′N,142°03.29′E	407–409	2005/10/25
WA05-E425	38°24.09′N,142°03.01′E–38°25.74′N,142°02.65′E	424–425	2005/10/25
WA05-E450	38°23.56′N,142°03.98′E–38°25.15′N,142°03.66′E	448–452	2005/10/25
WA05-E480	38°22.64′N,142°05.29′E–38°20.92′N,142°05.97′E	482–483	2005/10/25
WA05-E510	38°22.50′N,142°06.32′E–38°23.58′N,142°05.76′E	514–505	2005/10/25
WA05-E1000D	38°26.74′N,142°23.82′E	1005–1004	2005/10/26
WA05-E550	38°22.62′N,142°07.26′E–38°23.64′N,142°07.55′E	545–561	2005/10/26
WA05-E750	38°22.11′N,142°13.89′E–38°23.08′N,142°14.47′E	753–758	2005/10/26
WA05-E900	38°28.88′N,142°21.39′E–38°29.69′N,142°21.61′E	900–904	2005/10/26
WA05-F425	37°44.32′N,141°54.82′E–37°42.55′N,141°55.03′E	424–424	2005/10/27
WA05-F450	37°43.65′N,141°56.61′E–37°45.31′N,141°56.38′E	449–449	2005/10/27
WA05-F480	37°41.93′N,141°59.00′E–37°40.20′N,141°59.02′E	484–480	2005/10/27
WA05-F510	37°39.44′N,142°01.15′E–37°38.22′N,142°01.09′E	508–506	2005/10/27
WA05-F1200	37°47.60′N,142°37.12′E–37°47.40′N,142°37.17′E	1196–1196	2005/10/28
WA05-F900	37°46.70′N,142°18.75′E–37°45.73′N,142°19.06′E	900–904	2005/10/28
WA05-G150	36°59.79′N,141°17.45′E–37°01.31′N,141°17.80′E	151–150	2005/10/29
WA05-G210	36°57.13′N,141°22.78′E–36°58.48′N,141°23.86′E	211–210	2005/10/29
WA05-G280	36°55.43′N,141°24.87′E–36°54.05′N,141°24.17′E	277–279	2005/10/29
WA05-G310	36°56.28′N,141°26.93′E–36°54.64′N,141°26.50′E	299–314	2005/10/29
WA05-H150	36°29.90′N,140°57.05′E–36°31.28′N,141°58.14′E	154–156	2005/10/30
WA05-H310	36°29.03′N,140°59.48′E–36°30.51′N,141°00.43′E	311–306	2005/10/30
WA05-H350	36°28.11′N,140°59.64′E–36°29.16′N,141°00.34′E	352–352	2005/10/31
WA05-H450	36°29.47′N,141°02.66′E–36°30.30′N,141°03.57′E	450–457	2005/10/31
WA05-H510	36°30.63′N,141°05.21′E–36°31.41′N,141°06.12′E	507–510	2005/10/31
WA05-H380	36°29.09′N,141°00.84′E–36°30.04′N,141°01.66′E	380–384	2005/11/01
WA05-H650	36°30.84′N,141°11.47′E–36°31.63′N,141°12.55′E	661–647	2005/11/02
WA05-H750	36°33.63′N,141°20.09′E–36°34.12′N,141°21.17′E	748–758	2005/11/02
WA05-H900D	36°30.87′N,141°20.98′E	904–ND	2005/11/02
WA05-G410	36°56.76′N,141°33.30′E–36°58.10′N,141°34.44′E	411–411	2005/11/03
WA05-G550	36°58.17′N,141°37.95′E–36°59.05′N,141°38.63′E	560–557	2005/11/03
WA05-F350	37°37.54′N,141°47.32′E–37°39.17′N,141°47.35′E	355–351	2005/11/04
WA05-F380	37°38.58′N,141°50.55′E–37°40.28′N,141°50.65′E	387–379	2005/11/04
WA05-F410	37°43.09′N,141°53.92′E–37°44.84′N,141°53.54′E	411–411	2005/11/04
WA05-G425	36°53.21′N,141°29.20′E–36°52.11′N,141°27.67′E	427–418	2005/11/09
WA05-G450	36°51.57′N,141°28.68′E–36°52.75′N,141°30.01′E	454–448	2005/11/09
WA05-G510	36°51.57′N,141°30.34′E–36°52.36′N,141°31.43′E	507–509	2005/11/09
WA05-G1500D	36°48.39′N,141°47.74′E	1498–ND	2005/11/10
WA05-G750	36°46.16′N,141°35.36′E–36°45.58′N,141°34.75′E	750–750	2005/11/10
WA05-G900	36°49.87′N,141°40.98′E–36°49.31′N,141°40.53′E	901–901	2005/11/10
WA05-GH250	36°41.87′N,141°11.43′E–36°40.51′N,141°10.19′E	251–249	2005/11/11
WA05-GH280	36°40.11′N,141°11.09′E–36°41.48′N,141°12.34′E	278–278	2005/11/11
WA05-GH310	36°40.31′N,141°12.41′E–36°41.70′N,141°13.62′E	308–309	2005/11/11
WA05-GH350	36°39.69′N,141°13.53′E–36°40.97′N,141°14.99′E	344–351	2005/11/11
WA05-GH510	36°40.28′N,141°21.56′E–36°41.31′N,141°22.19′E	509–511	2005/11/11
WA05-GH510D	36°41.06′N,141°22.04′E	512–508	2005/11/11
WA05-GH380	36°40.37′N,141°15.62′E–36°38.96′N,141°14.48′E	376–381	2005/11/12
WA05-GH380D	36°38.97′N,141°14.25′E	378–373	2005/11/12
WA05-GH425	36°39.47′N,141°17.31′E–36°40.89′N,141°18.32′E	425–422	2005/11/13
WA05-GH450	36°41.55′N,141°20.06′E–36°40.16′N,141°18.98′E	454–452	2005/11/13
WA05-GH480	36°40.79′N,141°20.80′E–36°42.31′N,141°21.62′E	482–479	2005/11/13
WA05-FG250D	37°19.91′N,141°37.66′E	255–253	2005/11/14
WA05-FG350	37°20.32′N,141°43.15′E–37°22.02′N,141°43.12′E	352–346	2005/11/14
WA05-FG410	37°18.91′N,141°45.84′E–37°17.29′N,141°45.55′E	411–410	2005/11/14
WA05-FG450	37°18.83′N,141°47.21′E–37°20.47′N,141°47.51′E	450–446	2005/11/14
WA05-FG480	37°18.13′N,141°49.40′E–37°16.55′N,141°48.95′E	480–480	2005/11/14

Table 1. (Continued)

Station	Position	Depth (m)	Date
WA05-FG280	37˚20.52´N,141˚39.15´E-37˚22.08´N,141˚39.19´E	276-279	2005/11/15
WA05-FG310	37˚21.46´N,141˚41.16´E-37˚19.69´N,141˚41.20´E	311-312	2005/11/15
WA05-FG380	37˚19.45´N,141˚44.62´E-37˚21.11´N,141˚44.79´E	383-383	2005/11/15
WA05-FG425	37˚19.63´N,141˚46.54´E-37˚17.92´N,141˚46.24´E	426-426	2005/11/15
WA05-FG510D	37˚16.92´N,141˚50.04´E	516-515	2005/11/15
WA05-EF480	38˚00.42´N,142˚05.19´E-37˚58.86´N,142˚04.06´E	487-486	2005/11/16
WA05-EF510	38˚00.75´N,142˚05.72´E-38˚01.70´N,142˚06.34´E	505-514	2005/11/16
WA05-EF250	37˚59.82´N,141˚50.54´E-38˚01.03´N,141˚51.69´E	252-251	2005/11/17
WA05-EF250D	37˚58.74´N,141˚49.30´E	259-253	2005/11/17
WA05-EF425	37˚44.32´N,141˚54.82´E-38˚01.25´N,142˚03.82´E	433-418	2005/11/18
WA05-EF450D	38˚02.18´N,142˚04.82´E	452-454	2005/11/18
WA05-DE250D	38˚40.61´N,141˚55.34´E	249-249	2005/11/19
WA05-DE380D	38˚39.10´N,142˚02.22´E	375-ND	2005/11/19
WA05-DE510	38˚38.99´N,142˚07.27´E-38˚37.87´N,142˚07.20´E	511-511	2005/11/21
WA06-C550	39˚33.82´N,142˚18.45´E-39˚34.98´N,142˚18.54´E	ND-558	2006/10/05
WA06-C750	39˚33.45´N,142˚22.26´E-39˚34.17´N,142˚22.50´E	750-749	2006/10/05
WA06-C900D	39˚35.82´N,142˚32.11´E-39˚36.06´N,142˚32.30´E	891-893	2006/10/05
WA06-A150	40˚47.59´N,141˚49.39´E-40˚46.86´N,141˚51.13´E	155-149	2006/10/09
WA06-A150D	40˚46.53´N,141˚51.87´E-40˚46.47´N,141˚52.17´E	146-147	2006/10/09
WA06-A250D	40˚51.40´N,141˚50.94´E-40˚51.26´N,141˚51.14´E	267-266	2006/10/10
WA06-A450	40˚58.29´N,141˚45.93´E-40˚58.90´N,141˚45.38´E	466-474	2006/10/10
WA06-A510	41˚00.54´N,141˚46.18´E-41˚00.04´N,141˚46.93´E	511-510	2006/10/10
WA06-A350	40˚55.31´N,141˚42.87´E-40˚55.30´N,141˚43.83´E	360-364	2006/10/11
WA06-A410	40˚57.29´N,141˚43.51´E-40˚57.83´N,141˚43.04´E	409-421	2006/10/11
WA06-A650	41˚04.81´N,141˚48.98´E-41˚04.59´N,141˚49.15´E	663-662	2006/10/11
WA06-A1200D	40˚59.33´N,142˚12.73´E-40˚58.92´N,142˚12.86´E	1202-1201	2006/10/12
WA06-A1500D	40˚52.00´N,142˚33.35´E-40˚51.64´N,142˚33.78´E	1513-1512	2006/10/12
WA06-A900	41˚09.47´N,141˚53.69´E-41˚09.23´N,141˚53.75´E	883-882	2006/10/12
WA06-B450	40˚14.89´N,142˚15.33´E-40˚13.28´N,142˚16.08´E	461-475	2006/10/13
WA06-B750D	40˚21.81´N,142˚20.22´E-40˚22.12´N,142˚20.02´E	750-747	2006/10/13
WA06-B150	40˚13.62´N,142˚07.10´E-40˚15.10´N,142˚06.62´E	153-151	2006/10/14
WA06-B310D	40˚09.85´N,142˚13.24´E-40˚10.04´N,142˚13.21´E	305-305	2006/10/14
WA06-B350	40˚06.78´N,142˚14.98´E-40˚08.31´N,142˚14.64´E	348-353	2006/10/15
WA06-C350D	39˚48.86´N,142˚17.11´E-39˚49.03´N,142˚17.23´E	357-364	2006/10/15
WA06-D1500D	39˚18.74´N,142˚40.18´E-39˚17.99´N,142˚40.08´E	1521-1518	2006/10/17
WA06-D450D	39˚02.37´N,142˚10.53´E-39˚02.69´N,142˚10.57´E	460-460	2006/10/17
WA06-D750	38˚58.52´N,142˚16.33´E-38˚59.34´N,142˚16.47´E	749-745	2006/10/17
WA06-D550	39˚05.28´N,142˚12.76´E-39˚04.07´N,142˚12.68´E	548-551	2006/10/18
WA06-D210D	38˚56.42´N,141˚59.28´E-38˚56.24´N,141˚59.17´E	213-214	2006/10/19
WA06-G150	36˚59.76´N,141˚17.40´E-37˚01.43´N,141˚17.85´E	151-150	2006/10/26
WA06-G210	36˚57.00´N,141˚22.70´E-36˚58.40´N,141˚23.78´E	210-208	2006/10/26
WA06-G280	36˚55.51´N,141˚24.91´E-36˚54.01´N,141˚24.15´E	276-279	2006/10/26
WA06-G310	36˚56.22´N,141˚26.93´E-36˚54.75´N,141˚26.52´E	301-315	2006/10/26
WA06-G350	36˚56.17´N,141˚30.80´E-36˚57.90´N,141˚31.47´E	373-355	2006/10/27
WA06-G380	36˚53.36´N,141˚27.44´E-36˚54.52´N,141˚28.91´E	384-377	2006/10/27
WA06-G425	36˚53.19´N,141˚29.24´E-36˚52.05´N,141˚27.59´E	428-420	2006/10/27
WA06-G450	36˚51.52´N,141˚28.64´E-36˚52.70´N,141˚30.04´E	454-454	2006/10/27
WA06-G480	36˚51.23´N,141˚29.16´E-36˚50.01´N,141˚27.74´E	481-483	2006/10/28
WA06-G510	36˚51.37´N,141˚30.11´E-36˚52.13´N,141˚31.16´E	508-508	2006/10/28
WA06-G550	36˚58.14´N,141˚37.96´E-36˚59.18´N,141˚38.79´E	558-554	2006/10/28
WA06-G650	36˚50.20´N,141˚34.27´E-36˚50.92´N,141˚35.18´E	648-648	2006/10/28
WA06-F150	37˚35.25´N,141˚33.18´E-37˚36.74´N,141˚33.89´E	150-165	2006/10/29
WA06-F210	37˚36.89´N,141˚35.86´E-37˚38.24´N,141˚36.13´E	213-213	2006/10/29
WA06-F250	37˚38.14´N,141˚39.05´E-37˚36.39´N,141˚38.84´E	257-256	2006/10/29
WA06-F310	37˚36.77´N,141˚43.66´E-37˚36.08´N,141˚43.61´E	313-309	2006/10/29

Table 1. (Continued)

Station	Position	Depth (m)	Date
WA06-F350	37˚37.56´N,141˚47.32´E–37˚39.19´N,141˚47.42´E	353–350	2006/10/30
WA06-F380	37˚38.47´N,141˚50.54´E–37˚40.07´N,141˚50.61´E	386–379	2006/10/30
WA06-F410	37˚42.96´N,141˚53.93´E–37˚44.58´N,141˚53.56´E	411–411	2006/10/30
WA06-F425	37˚44.01´N,141˚54.82´E–37˚42.28´N,141˚55.05´E	425–424	2006/10/30
WA06-F450	37˚43.55´N,141˚56.56´E–37˚45.20´N,141˚56.40´E	450–450	2006/10/30
WA06-F480	37˚41.70´N,141˚58.98´E–37˚39.88´N,141˚59.02´E	483–478	2006/10/31
WA06-F510	37˚38.58´N,142˚01.11´E–37˚39.78´N,142˚01.38´E	503–511	2006/10/31
WA06-F550	37˚42.06´N,142˚04.07´E–37˚40.91´N,142˚04.73´E	546–551	2006/10/31
WA06-F650D	37˚44.92´N,142˚08.51´E–37˚45.23´N,142˚08.37´E	647–641	2006/10/31
WA06-F1500D	37˚34.64´N,142˚33.47´E–37˚35.02´N,142˚33.50´E	1511–1508	2006/11/01
WA06-F1500D(II)	37˚38.92´N,142˚34.09´E–37˚39.39´N,142˚34.32´E	1466–1471	2006/11/01
WA06-F750	37˚47.30´N,142˚12.20´E–37˚48.09´N,142˚11.96´E	749–747	2006/11/01
WA06-F900	37˚46.22´N,142˚18.93´E–37˚45.73´N,142˚19.10´E	904–909	2006/11/01
WA06-E1200D	38˚19.25´N,142˚31.74´E–38˚19.36´N,142˚31.65´E	1214–1213	2006/11/02
WA06-E750	38˚23.14´N,142˚14.52´E–38˚22.43´N,142˚14.10´E	758–756	2006/11/02
WA06-E900	38˚29.76´N,142˚21.63´E–38˚29.14´N,142˚21.50´E	905–908	2006/11/02
WA06-E410	38˚23.67´N,142˚02.55´E–38˚22.14´N,142˚03.27´E	406–409	2006/11/03
WA06-E450	38˚23.51´N,142˚03.99´E–38˚25.24´N,142˚03.61´E	448–451	2006/11/03
WA06-E480	38˚22.73´N,142˚05.21´E–38˚21.16´N,142˚05.89´E	480–484	2006/11/03
WA06-E510	38˚22.63´N,142˚06.29´E–38˚23.89´N,142˚05.73´E	514–506	2006/11/03
WA06-E510D	38˚23.81´N,142˚05.57´E–38˚24.11´N,142˚05.42´E	503–498	2006/11/03
WA06-E550	38˚23.42´N,142˚07.32´E–38˚22.30´N,142˚07.32´E	553–545	2006/11/03
WA06-E310	38˚23.15´N,141˚58.17´E–38˚21.48´N,141˚58.44´E	305–309	2006/11/04
WA06-E380	38˚23.40´N,142˚01.57´E–38˚21.94´N,142˚02.33´E	377–382	2006/11/04
WA06-E425	38˚24.23´N,142˚02.95´E–38˚24.92´N,142˚02.74´E	423–423	2006/11/04
WA06-E150	38˚20.03´N,141˚44.46´E–38˚18.24´N,141˚44.07´E	154–151	2006/11/05
WA06-E210	38˚22.23´N,141˚51.30´E–38˚23.99´N,141˚51.55´E	209–212	2006/11/05
WA06-FG425	37˚17.80´N,141˚46.21´E–37˚19.53´N,141˚46.55´E	426–425	2006/11/10
WA06-FG450	37˚18.81´N,141˚47.19´E–37˚20.50´N,141˚47.50´E	449–444	2006/11/10
WA06-FG480	37˚18.18´N,141˚49.47´E–37˚16.45´N,141˚48.83´E	480–477	2006/11/10
WA06-G1200D	36˚52.56´N,141˚48.58´E–36˚52.25´N,141˚48.23´E	1201–1182	2006/11/11
WA06-G900D	36˚47.53´N,141˚39.39´E–36˚47.32´N,141˚39.14´E	925–920	2006/11/11
WA06-H250D	36˚30.85´N,140˚59.58´E–36˚31.09´N,140˚59.78´E	248–248	2006/11/12
WA06-H310	36˚30.57´N,141˚00.56´E–36˚29.07´N,140˚59.52´E	309–310	2006/11/12
WA06-H210	36˚30.01´N,140˚58.35´E–36˚31.42´N,140˚59.00´E	213–193	2006/11/13
WA06-H450	36˚30.44´N,141˚03.63´E–36˚29.04´N,141˚02.32´E	456–447	2006/11/13
WA06-H480	36˚32.12´N,141˚05.99´E–36˚32.74´N,141˚06.90´E	481–480	2006/11/13
WA06-H550	36˚31.77´N,141˚08.69´E–36˚32.62´N,141˚09.78´E	561–557	2006/11/14
WA06-H650	36˚30.98´N,141˚11.69´E–36˚31.68´N,141˚12.69´E	659–646	2006/11/14
WA06-H750	36˚34.07´N,141˚20.52´E–36˚34.59´N,141˚21.26´E	736–732	2006/11/14
WA06-G750	36˚46.26´N,141˚35.48´E–36˚46.41´N,141˚35.68´E	753–754	2006/11/15
WA06-H1500D	36˚36.45´N,141˚36.21´E–36˚36.66´N,141˚36.14´E	1470–1450	2006/11/15
WA06-GH380	36˚40.37´N,141˚15.64´E–36˚38.90´N,141˚14.50´E	377–381	2006/11/16
WA06-GH450	36˚41.63´N,141˚20.13´E–36˚40.25´N,141˚19.03´E	453–450	2006/11/16
WA06-GH510	36˚40.26´N,141˚21.57´E–36˚41.23´N,141˚22.16´E	509–510	2006/11/16
WA06-GH425	36˚39.39´N,141˚17.30´E–36˚40.87´N,141˚18.31´E	425–422	2006/11/18
WA06-GH480	36˚40.68´N,141˚20.77´E–36˚42.18´N,141˚21.55´E	481–478	2006/11/18
WA06-GH480D	36˚40.01´N,141˚20.25´E–36˚39.82´N,141˚19.98´E	483–478	2006/11/18
WA06-FG310	37˚21.64´N,141˚41.16´E–37˚19.80´N,141˚41.20´E	312–313	2006/11/19
WA06-FG350	37˚22.16´N,141˚43.12´E–37˚20.39´N,141˚43.12´E	346–351	2006/11/19
WA06-FG350D	37˚22.78´N,141˚43.20´E–37˚23.20´N,141˚43.22´E	346–346	2006/11/19
WA06-FG380	37˚19.53´N,141˚44.62´E–37˚21.14´N,141˚44.77´E	382–382	2006/11/19
WA06-EF280	38˚02.72´N,141˚56.49´E–38˚04.51´N,141˚55.98´E	283–277	2006/11/21
WA06-EF425	38˚00.89´N,142˚03.75´E–38˚02.72´N,142˚04.13´E	414–431	2006/11/21
WA06-EF425D	38˚03.26´N,142˚03.97´E–38˚03.12´N,142˚04.05´E	420–424	2006/11/21

Table 1. (Continued)

Station	Position	Depth (m)	Date
WA06-EF350	38˚00.20´N,141˚59.86´E–37˚58.68´N,141˚59.32´E	356–357	2006/11/22
WA06-EF480	38˚00.45´N,142˚05.23´E–37˚59.23´N,142˚04.33´E	486–482	2006/11/22
WA06-EF510	38˚00.74´N,142˚05.75´E–38˚01.68´N,142˚06.61´E	504–531	2006/11/22
WA06-DE280D	38˚42.91´N,141˚58.34´E–38˚43.12´N,141˚58.37´E	284–285	2006/11/23
WA06-DE410	38˚39.29´N,142˚03.42´E–38˚40.92´N,142˚03.70´E	408–408	2006/11/24
WA06-DE450	38˚37.67´N,142˚04.48´E–38˚39.15´N,142˚04.74´E	450–446	2006/11/24
WA07-D550	39˚03.74´N,142˚12.75´E–39˚04.91´N,142˚12.69´E	556–545	2007/10/05
WA07-D750	38˚58.68´N,142˚16.04´E–38˚59.48´N,142˚16.58´E	754–751	2007/10/05
WA07-D900	39˚05.27´N,142˚20.04´E–39˚06.00´N,142˚20.07´E	898–905	2007/10/05
WA07-A250	40˚51.81´N,141˚50.57´E–40˚50.52´N,141˚51.90´E	273–258	2007/10/06
WA07-A250D	40˚50.96´N,141˚51.23´E–40˚50.88´N,141˚51.45´E	258–258	2007/10/06
WA07-A310	40˚49.39´N,141˚55.02´E–40˚50.59´N,141˚53.54´E	306–309	2007/10/06
WA07-A350	40˚55.26´N,141˚43.22´E–40˚55.02´N,141˚44.66´E	360–359	2007/10/07
WA07-A410	40˚57.91´N,141˚42.48´E–40˚57.46´N,141˚43.33´E	412–415	2007/10/09
WA07-A450	40˚58.71´N,141˚45.57´E–40˚58.03´N,141˚46.08´E	471–468	2007/10/09
WA07-A510	41˚00.58´N,141˚46.13´E–41˚00.42´N,141˚46.39´E	510–512	2007/10/09
WA07-A550	41˚00.85´N,141˚48.68´E–41˚00.59´N,141˚48.98´E	550–551	2007/10/09
WA07-A650	41˚04.91´N,141˚48.91´E–41˚04.05´N,141˚49.20´E	662–661	2007/10/10
WA07-A750	41˚07.61´N,141˚50.02´E–41˚07.38´N,141˚50.10´E	748–747	2007/10/10
WA07-A1500D	40˚50.46´N,142˚31.48´E–40˚50.16´N,142˚31.06´E	1402–1377	2007/10/11
WA07-B750	40˚19.67´N,142˚21.32´E–40˚20.14´N,142˚20.88´E	759–749	2007/10/11
WA07-B1200	40˚21.61´N,142˚33.94´E–40˚21.84´N,142˚33.75´E	1208–1200	2007/10/12
WA07-B1500D	40˚23.90´N,142˚48.52´E–40˚23.93´N,142˚48.18´E	1511–1514	2007/10/12
WA07-B450	40˚13.15´N,142˚15.68´E–40˚14.74´N,142˚15.35´E	454–459	2007/10/12
WA07-B510	40˚16.03´N,142˚16.01´E–40˚17.03´N,142˚15.58´E	510–509	2007/10/12
WA07-B310	40˚13.42´N,142˚12.38´E–40˚11.66´N,142˚12.78´E	309–307	2007/10/13
WA07-B350	40˚06.39´N,142˚15.08´E–40˚08.17´N,142˚14.64´E	350–352	2007/10/13
WA07-B410	40˚15.44´N,142˚14.12´E–40˚13.65´N,142˚14.55´E	420–412	2007/10/13
WA07-B410D	40˚16.88´N,142˚13.51´E–40˚17.11´N,142˚13.46´E	416–416	2007/10/13
WA07-B150	40˚14.98´N,142˚06.64´E–40˚13.31´N,142˚07.38´E	153–156	2007/10/14
WA07-C310	39˚47.25´N,142˚16.41´E–39˚45.56´N,142˚16.01´E	318–294	2007/10/14
WA07-C410	39˚50.27´N,142˚17.92´E–39˚48.45´N,142˚17.94´E	409–415	2007/10/14
WA07-C510	39˚52.47´N,142˚19.83´E–39˚51.20´N,142˚20.02´E	511–521	2007/10/14
WA07-C250	39˚40.02´N,142˚14.27´E–39˚41.66´N,142˚14.48´E	254–252	2007/10/15
WA07-C350	39˚45.66´N,142˚16.90´E–39˚47.41´N,142˚16.96´E	358–358	2007/10/15
WA07-C350D	39˚44.16´N,142˚16.90´E–39˚44.40´N,142˚16.86´E	355–354	2007/10/15
WA07-C1500D	39˚33.44´N,142˚51.27´E–39˚33.61´N,142˚53.31´E	1499–1480	2007/10/16
WA07-C550	39˚35.51´N,142˚18.58´E–39˚34.21´N,142˚18.48´E	552–559	2007/10/16
WA07-C650	39˚34.32´N,142˚20.32´E–39˚35.48´N,142˚20.30´E	659–644	2007/10/16
WA07-C750	39˚34.05´N,142˚22.48´E–39˚33.53´N,142˚22.32´E	748–749	2007/10/16
WA07-C900	39˚36.07´N,142˚32.68´E–39˚35.90´N,142˚32.46´E	900–893	2007/10/16
WA07-C450	39˚42.33´N,142˚18.03´E–39˚40.62´N,142˚17.72´E	467–458	2007/10/17
WA07-D1500D	39˚20.17´N,142˚40.07´E–39˚20.46´N,142˚40.25´E	1505–1489	2007/10/17
WA07-D450	39˚03.41´N,142˚10.43´E–39˚01.49´N,142˚10.54´E	448–463	2007/10/17
WA07-D510	39˚04.18´N,142˚11.75´E–39˚05.33´N,142˚12.01´E	505–513	2007/10/17
WA07-D210D	38˚57.42´N,141˚59.65´E–38˚57.74´N,141˚59.85´E	213–213	2007/10/18
WA07-D310	38˚53.52´N,142˚02.78´E–38˚54.97´N,142˚03.33´E	303–307	2007/10/18
WA07-D350	38˚55.08´N,142˚05.70´E–38˚53.52´N,142˚05.16´E	354–351	2007/10/18
SO06-M1-B	39˚40.4´N,143˚11.3´E	2018	2006/07/16
SO06-M3-B1	39˚40.8´N,143˚50.2´E	3937	2006/07/17
SO06-M3-B2	39˚45.7´N,143˚53.4´E	3960	2006/07/17
SO06-M4-B	39˚35.2´N,144˚02.4´E	4951	2006/07/17
SO07-C7-B	39˚40.0´N,142˚34.0´E–39˚40.0´N,142˚33.9´E	820–816	2007/08/05
SO07-K1	38˚34.5´N,143˚04.2´E–38˚33.2´N,143˚04.1´E	2043–2081	2007/08/06
SO07-K2	38˚31.2´N,143˚33.6´E–38˚31.1´N,143˚34.2´E	2968–3032	2007/08/06

Table 1. (Continued)

Station	Position	Depth (m)	Date
SO07-K3	38˚33.7´N,143˚41.2´E–38˚33.2´N,143˚41.5´E	4105–4181	2007/08/07
SO07-O4	36˚54.0´N,142˚56.6´E–36˚55.5´N,142˚57.3´E	5219–5268	2007/08/07
SO07-O1	36˚43.9´N,141˚49.1´E–36˚44.0´N,141˚48.9´E	2024–2020	2007/08/08
SO07-O2	36˚48.3´N,142˚22.3´E–36˚48.7´N,142˚22.1´E	2991–2948	2007/08/08
SO07-O3	36˚53.4´N,142˚37.0´E–36˚53.6´N,142˚36.8´E	4128–4094	2007/08/08
KT-07-29-M-1	39˚17.86´N,142˚28.40´E–39˚16.80´N,142˚27.37´E	1039–1041	2007/11/05
KT-07-29-M-2	39˚16.20´N,142˚41.07´E–39˚18.62´N,142˚43.73´E	1528–1603	2007/11/05
KT-07-29-M-3-1	39˚20.04´N,142˚50.99´E–39˚21.75´N,142˚51.90´E	1728–1719	2007/11/05
KT-07-29-M-3-2	39˚20.19´N,142˚51.40´E–39˚19.23´N,142˚49.18´E	1737–1709	2007/11/06
KT-07-29-H-1	40˚48.70´N,142˚00.05´E–40˚47.37´N,142˚00.49´E	497–454	2007/11/08
KT-07-29-H-2	40˚00.00´N,143˚31.37´E–41˚00.76´N,143˚30.25´E	2055–2032	2007/11/08
KT-07-29-M-3-3	39˚20.09´N,142˚51.17´E–39˚19.23´N,142˚49.05´E	1733–1695	2007/11/08

(Scalibregmatidae) and *Anobothrus wakatakamaruae* (Ampharetidae) are new to science. Thirty-seven species, *Bylgides macrolepida*, *Eunoe depressa*, *Gattyana ciliata*, *Harmothoe grandispina* and *Parahalosydna krassini* (Polynoidae), *Glycera branchiopoda* (Glyceridae), *Goniada brunnea* (Goniadidae), *Ceratocephala borealis* (Nereididae), *Drilonereis filum* (Oenonidae), *Phylo felix*, *Scoloplos* (*Leodamas*) *robustus* and *Scoloplos* (*Scoloplos*) *similis* (Orbiniidae), *Acrocirrus heterochaetus* (Acrocirridae), *Fauveliopsis glabra* (Fauveliopsidae), *Asychis auritus* (Maldanidae), *Ophelina acuminata* and *Travisia pupa* (Opheliidae), *Asclerocheilus beringianus* (Scalibregmatidae), *Myriochele olgae* (Oweniidae), *Amage delus*, *Ampharete longipaleolata*, *Amphicteis mederi*, *Amphicteis scaphobranchiata*, *Anobothrus gracilis*, *Lysippe labiata*, *Melinnopsis atlantica*, *Paramage scutata*, *Samythella bathycola* and *Samythella neglecta* (Ampharetidae), *Trichobranchus glacialis* (Trichobranchidae), *Artacama proboscidea*, *Nicolea zostericola*, *Scionella vinogradovi* and *Streblosoma bairdi* (Terebellidae), *Chone gracilis*, *Chone magna* and *Euchone analis* (Sabellidae) are newly added to the Japanese polychaetous fauna. Eighty-six species are known also from the northwestern Pacific Ocean, including Sea of Okhotsk and Bering Sea. Forty species are known only from Japan, or endemic (see Table 2). The Fauveliopsidae is newly added to the Japanese fauna.

Thirty-two 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 National Museum of Nature and Science, Tokyo (NSMT).

Description of Species

Order Phyllodocida
Family Aphroditidae Malmgren, 1867
Genus ***Aphrodita*** Linnaeus, 1758
Aphrodita aculeata Linnaeus, 1758

Aphrodita aculeata Linnaeus, 1758: 655; Chambers and Muir, 1997: 60–61, fig. 7; Barnich and Fiege, 2000: 132–136, figs. 1–2; Imajima, 2003: 6–10, figs. 3a–g, 4a–l, 5a–h.

Material. NSMT-Pol. 109494, WA05-F900 (2 specimens), NSMT-Pol. 109495, WA05-G450 (1), NSMT-Pol. 109496, WA05-GH380D (1), NSMT-Pol. 109497, WA05-GH450 (1), NSMT-Pol. 109498, WA05-H380 (1); NSMT-Pol. 109499, WA06-A1200D (11), NSMT-Pol. 109500,

WA06-E900 (1), NSMT-Pol. 109501, WA06-E1200D (1); NSMT-Pol. 110153, WA07-B1200 (4), NSMT-Pol. 110154, WA07-C1500D (1), NSMT-Pol. 110155, WA07-D900 (1).

Distribution. North Atlantic Ocean; Mediterranean Sea; Indian Sea; Japan.

Aphrodita goolmarris Hutchings and McRae, 1993

Aphrodita goolmarris Hutchings and McRae, 1993: 295–298, figs. 9, 10a–f, 11a–j, 59c, Tables 1, 3; Imajima, 2003: 10–14, figs. 6a–n, 7a–q.

Material. NSMT-Pol. 109502, WA05-F900 (1); NSMT-Pol. 109503, WA06-E380 (1), NSMT-Pol. 109504, WA06-FG380 (1).

Distribution. Australia; Japan.

Aphrodita negligens Moore, 1905

Aphrodita negligens Moore, 1905: 526–529, pl. 34, figs. 1–2, pl. 35, fig. 31; Pettibone, 1953: 70–72, pl. 34, figs. 308–316, pl. 35, figs. 317–324; Imajima and Hartman, 1964: 14; Imajima, 2003: 17–20, figs. 10a–i, 11a–n.

Material. NSMT-Pol. 109505, WA06-A150D (1), NSMT-Pol. 109506 , WA06-EF350 (1).

Distribution. Western Canada; Japan.

Aphrodita nipponensis Imajima, 2003

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

Material. NSMT-Pol. 109507, WA05-E900 (2), NSMT-Pol. 109510, WA05-EF450D (1), NSMT-Pol. 109508, WA05-F425 (4), NSMT-Pol. 109509, WA05-H900D (1); NSMT-Pol. 109511, WA06-B450 (1), NSMT-Pol. 109512, WA06-E310 (1), NSMT-Pol. 109513, WA06-E425 (1), NSMT-Pol. 109514, WA06-E510D (1), NSMT-Pol. 109516, WA06-EF350 (1), NSMT-Pol. 109515, WA06-EF480 (1), NSMT-Pol. 109517, WA06-F425 (1).

Distribution. Japan.

Aphrodita sibogae (Horst, 1916)

Aphroditella sibogae Horst, 1916: 66.

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

Material. NSMT-Pol. 109468, WA05-DE380D (8), NSMT-Pol. 109463, WA05-E450 (1), NSMT-Pol. 109467, WA05-E480 (2), NSMT-Pol. 109469, WA05-EF250 (1), NSMT-Pol. 109470, WA05-EF250D (5), NSMT-Pol. 109471, WA05-EF480 (3), NSMT-Pol. 109472, WA05-F380 (1), NSMT-Pol. 109487, WA05-F450 (3), NSMT-Pol. 109466, WA05-F480 (1), NSMT-Pol. 109473, WA05-FG350 (1), NSMT-Pol. 109464, WA05-FG450 (2), NSMT-Pol. 109465, WA05-G510 (1), NSMT-Pol. 109474, WA05-GH380D (1); NSMT-Pol. 109482, WA06-A250D (1), NSMT-Pol. 109475, WA06-A410 (3), NSMT-Pol. 109483, WA06-A450 (4), NSMT-Pol. 109476, WA06-A510 (5), NSMT-Pol. 109484, WA06-B450 (4), NSMT-Pol. 109486, WA06-D210D (2), NSMT-Pol. 109477, WA06-D450D (3), NSMT-Pol. 109478, WA06-DE410 (2), NSMT-Pol. 109479, WA06-E550 (2), NSMT-Pol. 109485, WA06-E1200D (1), NSMT-Pol. 109480, WA06-EF510 (1), NSMT-Pol. 109481, WA06-F410 (1); NSMT-Pol. 110143, WA07-A250D (2), NSMT-Pol. 110142, WA07-A310 (2), NSMT-Pol. 110144, WA07-A350 (4), NSMT-Pol. 110185, WA07-A510 (2),

NSMT-Pol. 110145, WA07-B310 (1), NSMT-Pol. 110146, WA07-B350 (1), NSMT-Pol. 110186, WA07-B410D (45), NSMT-Pol. 110187, WA07-B450 (3), NSMT-Pol. 110140, WA07-B510D (2), NSMT-Pol. 110147, WA07-C250 (1), NSMT-Pol. 110148, WA07-C310 (1), NSMT-Pol. 110149, WA07-C350 (2), NSMT-Pol. 110188, WA07-C350D (21), NSMT-Pol. 110150, WA07-C410 (3), NSMT-Pol. 110141, WA07-C450 (3), NSMT-Pol. 110151, WA07-C510 (1), NSMT-Pol. 110152, WA07-D210D (1), NSMT-Pol. 110189, WA07-D550 (1). NSMT-Pol. 110614, KT07-29-H-1 (15).

Distribution. West of Salawatti, Indonesian Archipelago; Japan.

Aphrodita talpa Quatrefages, 1865

Aphrodite talpa Quatrefages, 1865: 196–197, pl. 6, figs. 2–4.

Aphrodita talpa: Fauvel, 1925: 140–144, fig. 4; Monro, 1936: 82–83, fig. 3; Hutchings and McRae, 1993: 307–311, figs. 23a–f, 24a–k, 59c, tab. 1; Imajima, 2007: 25–26, fig. 9.

Material. NSMT-Pol. 109488, WA05-E410 (1), NSMT-Pol. 109489, WA05-F425 (4), NSMT-Pol. 109490, WA05-G510 (1); NSMT-Pol. 109491, WA06-E510D (1), NSMT-Pol. 109492, WA06-EF280 (1), NSMT-Pol. 109493, WA06-FG450 (1).

Distribution. Australia; New Zealand; Far Eastern seas; Bering Sea; Japan.

Genus ***Laetmonice*** Kinberg, 1856

Laetmonice japonica McIntosh, 1885

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

Laetmatonice japonica: Moore, 1903: 420; Izuka, 1912: 80–82, pl. 1, fig. 4, pl. 9, figs. 14–15; Fauvel, 1936a: 48; Uschakov and Wu, 1962a: 112.

Material. NSMT-Pol. 109442, WA05-G310 (1), NSMT-Pol. 109446, WA05-G425 (2), NSMT-Pol. 109443, WA05-G450 (6), NSMT-Pol. 109440, WA05-GH350 (6), NSMT-Pol. 109441, WA05-GH380 (7), NSMT-Pol. 109447, WA05-GH425 (1), NSMT-Pol. 109444, WA05-GH450 (5), NSMT-Pol. 109448, WA05-GH480 (16), NSMT-Pol. 109445, WA05-H380 (3); NSMT-Pol. 109450, WA06-G350 (3), NSMT-Pol. 109451, WA06-G425 (2), NSMT-Pol. 109453, WA06-G450 (1), NSMT-Pol. 109452, WA06-G480 (1), NSMT-Pol. 109767, WA06-G425 (1), NSMT-Pol. 109449, WA06-GH480 (4); NSMT-Pol. 110125, WA07-B1200 (5). NSMT-Pol. 110570, SO06-M3-B2 (4).

Distribution. Yellow Sea; Japan.

Laetmonice producta Grube, 1877

Laetmonice producta Grube, 1877: 512–513; McIntosh, 1885: 39–44, pl. 6, figs. 1–2, pl. 4A, figs. 1–8; Horst, 1917: 54–56, pl. 13, figs. 1–3; Uschakov, 1965: 105; Hutchings and McRae, 1993: 333–336, figs. 45a–f, 46a–j, 59E, tab. 6, 8–9; Imajima, 2003: 30–31, fig. 16a–s.

Material. NSMT-Pol. 109410, WA05-G150 (1), NSMT-Pol. 109411, WA05-G210 (2), NSMT-Pol. 109412, WA05-H150 (1); NSMT-Pol. 109458, WA06-A150 (8), NSMT-Pol. 109454, WA06-A150D (2), NSMT-Pol. 109462, WA06-B150 (5), NSMT-Pol. 109459, WA06-E150 (3), NSMT-Pol. 109460, WA06-E210 (1), NSMT-Pol. 109461, WA06-F150 (2), NSMT-Pol. 109457, WA06-G150 (3), NSMT-Pol. 109455, WA06-G210 (1), NSMT-Pol. 109456, WA06-H210 (3); NSMT-Pol. 110126, WA07-B150 (2), NSMT-Pol. 110127, WA07-C510 (1).

Distribution. Australia; off Kerguelen; Japan.

Laetmonice sp.

Material. NSMT-Pol. 110890, SO07-O4 (2).

Family Polynoidae Malmgren, 1867
Subfamily Harmothoinae Horst, 1917
Genus ***Bylgides*** Chamberlin, 1919
Bylgides macrolepida (Moore, 1905)

Antinoe macrolepida Moore, 1905: 538, pl. 35, figs. 21–23; Berkeley and Berkeley, 1948: 14, fig. 15; Hartman, 1948a: 6.
Antinoella macrolepida: Uschakov, 1958: 78, fig. 1A–E; Hartman, 1968: 41, figs. 1–3.
Bylgides macrolepida: Uschakov, 1982: 157–158, pl. 57, 1–6.

Material. NSMT-Pol. 110791, WA06-H480 (1); NSMT-Pol. 110792, WA07-A310 (1), NSMT-Pol. 110793, WA07-A350 (3), NSMT-Pol. 110794, WA07-B310 (1), NSMT-Pol. 110795, WA07-B410 (1), NSMT-Pol. 110796, WA07-B450 (1), NSMT-Pol. 110797, WA07-C310 (1), NSMT-Pol. 110798, WA07-C350D (7), NSMT-Pol. 110799, WA07-C410 (1), NSMT-Pol. 110800, WA07-D550 (1).

Description. Largest specimen 35 mm long, 17 mm wide including setae for 39 segments. Prostomium short, broad, deeply cleft; lobes broadly rounded anteriorly. Anterior eyes very large, occupying almost all anterior part of prostomium, posterior eyes very small at posterior end of lobe. Ceratophore of median antenna inserted in anterior notch, style long, extending distally nearly to ends of palps. Lateral antennae small, inserted ventrally on underside of prostomium.

Elytra 15 pairs, subcircular to reniform, covered with small, slightly curved, conical spines and a few slender clavate cilia. Parapodia biramous; notopodia small, neuropodia prominent, obliquely truncate, terminate in a slender acicular process. Notosetae few, each thick, nearly straight, with rows of spinelets. Neurosetae very numerous, long and slender; each slightly curved distally and distal region with rows of fine hairs throughout its length and with a long terminal bristle.

The genus and species are newly added to the Japanese polychaetous fauna.

Distribution. Southern Sakhalin; American coast from Alaska to California; Monterey Bay; Japan.

Genus ***Eunoe*** Malmgren, 1865
Eunoe barbata Moore, 1910

Eunoe barbata Moore, 1910: 334–338, pl. 28, figs. 1–6; Imajima and Hartman, 1964: 29–30, pl. 2, figs. a–f.

Material. NSMT-Pol. 109518, WA05-EF250 (4), NSMT-Pol. 109519, WA05-EF425 (1), NSMT-Pol. 109520, WA05-F380 (1), NSMT-Pol. 109521, WA05-FG310 (1), NSMT-Pol. 109522, WA05-FG380 (1), NSMT-Pol. 109523, WA05-FG480 (1), NSMT-Pol. 109524, WA05-G310 (8), NSMT-Pol. 109525, WA05-GH310 (6), NSMT-Pol. 109526, WA05-GH350 (2), NSMT-Pol. 109527, WA05-GH510 (1); NSMT-Pol. 109528, WA06-A250D (2), NSMT-Pol. 109529, WA06-A410 (1), NSMT-Pol. 109530, WA06-A510 (1), NSMT-Pol. 199531, WA06-D450D (1), NSMT-Pol. 109532, WA06-D550 (1), NSMT-Pol. 109533, WA06-DE410 (1), NSMT-Pol. 109534, WA06-DE450 (1), NSMT-Pol. 109535, WA06-E210 (2), NSMT-Pol. 109536, WA06-E380 (1), NSMT-Pol. 110313, WA06-F210 (1), NSMT-Pol. 109537, WA06-F250 (1), NSMT-Pol. 109538, WA06-F350

(3), NSMT-Pol. 110314, WA06-F380 (1), NSMT-Pol. 110315, WA06-F410 (1), NSMT-Pol. 109539, WA06-F425 (1), NSMT-Pol. 109540, WA06-FG310 (1), NSMT-Pol. 110316, WA06-FG350 (1), NSMT-Pol. 110317, WA06-FG450 (1), NSMT-Pol. 109541, WA06-FG480 (1), NSMT-Pol. 110318, WA06-G280 (1), NSMT-Pol. 110319, WA06-G310 (2), NSMT-Pol. 109542, WA06-G380 (3); NSMT-Pol. 110066, WA07-A310 (2), NSMT-Pol. 110067, WA07-A350 (1), NSMT-Pol. 110068, WA07-A510 (1), NSMT-Pol. 110069, WA07-B410 (3), NSMT-Pol. 110128, WA07-B450 (1), NSMT-Pol. 110070, WA07-B510 (1), NSMT-Pol. 110129, WA07-C310 (1), NSMT-Pol. 110130, WA07-C410 (1), NSMT-Pol. 110131, WA07-C450 (5), NSMT-Pol. 110132, WA07-D310 (1).

Distribution. California; Alaska; Japan.

Eunoe depressa Moore, 1905
(Fig. 2A–K)

Eunoe depressa Moore, 1905: 536–538, pl. 34, figs. 17–18, pl. 35, figs. 19–20; Uschakov, 1965: 128, fig. 33G–I.

Material. NSMT-Pol. 110326, WA06-E310 (1), NSMT-Pol. 110327, WA06-E750 (5), NSMT-Pol. 110328, WA06-F350 (1), NSMT-Pol. 110329, WA06-F425 (1), NSMT-Pol. 110330, WA06-F480 (1), NSMT-Pol. 110331, WA06-F510 (2), NSMT-Pol. 110332, WA06-G280 (2), NSMT-Pol. 110333, WA06-G425 (1), NSMT-Pol. 110334, WA06-H450 (1).

Description. Largest entire specimen 42 mm long, 15 mm wide including setae for 40 segments. Body dosally flattened, tapering slightly posteriorly. Dorsum with 2 transverse ciliated bands per segment.

Prostomium bilobed, wider than long, with distinct cephalic peaks. Two pairs of eyes, anterior pair circular, lying dorsolaterally at widest part of prostomium, posterior pair lying dorsally near posterior margin of prostomium, closer to midline. Ceratophore of median antenna large, cylindrical, inserted in anterior notch, style long, slender, gradually tapering to filiform tip. Lateral antennae with small ceratophores, inserted ventrally on underside of prostomium; styles short, slender, about half as long as median antenna. Palps thick, gently tapering to tips (Fig. 2A).

Elytra 15 pairs, on segments 2, 4, 5, 7, alternate segments to 21, 23, 26, 29 and 32, covering dorsum completely and overlapping medially and posteriorly. Elytra reniform, without fringe papillae (Fig. 2B); greater part of dorsal surface covered with numerous minute conical microtubercles (Fig. 2C, E) and sparse conical macrotubercles (Fig. 2C–D), and clavate papillae scattered on surface.

Tentacular segment not visible dorsally; tentaculophores lateral to prostomium, with 4–5 peristomial setae on each inner side; dorsal and ventral tentacular cirri tapering gradually to subterminal inflation and filiform tips. Segment 2 with first pair of elytra, biramous parapodia, and papillated buccal cirri considerably longer than following ventral cirri.

Parapodia biramous, similar along length of body. Notopodium smaller than neuropodium, conical with long acicular lobe. Neuropodium with subtriangular presetal acicular lobe with supra-acicular digitiform process from which aciculum projects; postsetal lobe shorter, distally triangular. Dorsal cirri with large, cylindrical cirrophores on posterior sides of notopodia; styles long, tapering to slight subterminal inflation and filiform tip, with few papillae. Ventral cirri shorter than neuropodium, cirriform, sparsely covered with minute papillae (Fig. 2F). Nephridial papillae short, from 5th parapodium onwards.

Noto- and neurosetae with entire tips. Notosetae thicker than neurosetae, slightly curved; outer ones in palisade, short, with spinous rows of fine serrations along convex edge (Fig. 2G); inner ones much longer, with numerous spinous rows of serrations, below bare, tapered tips (Fig.

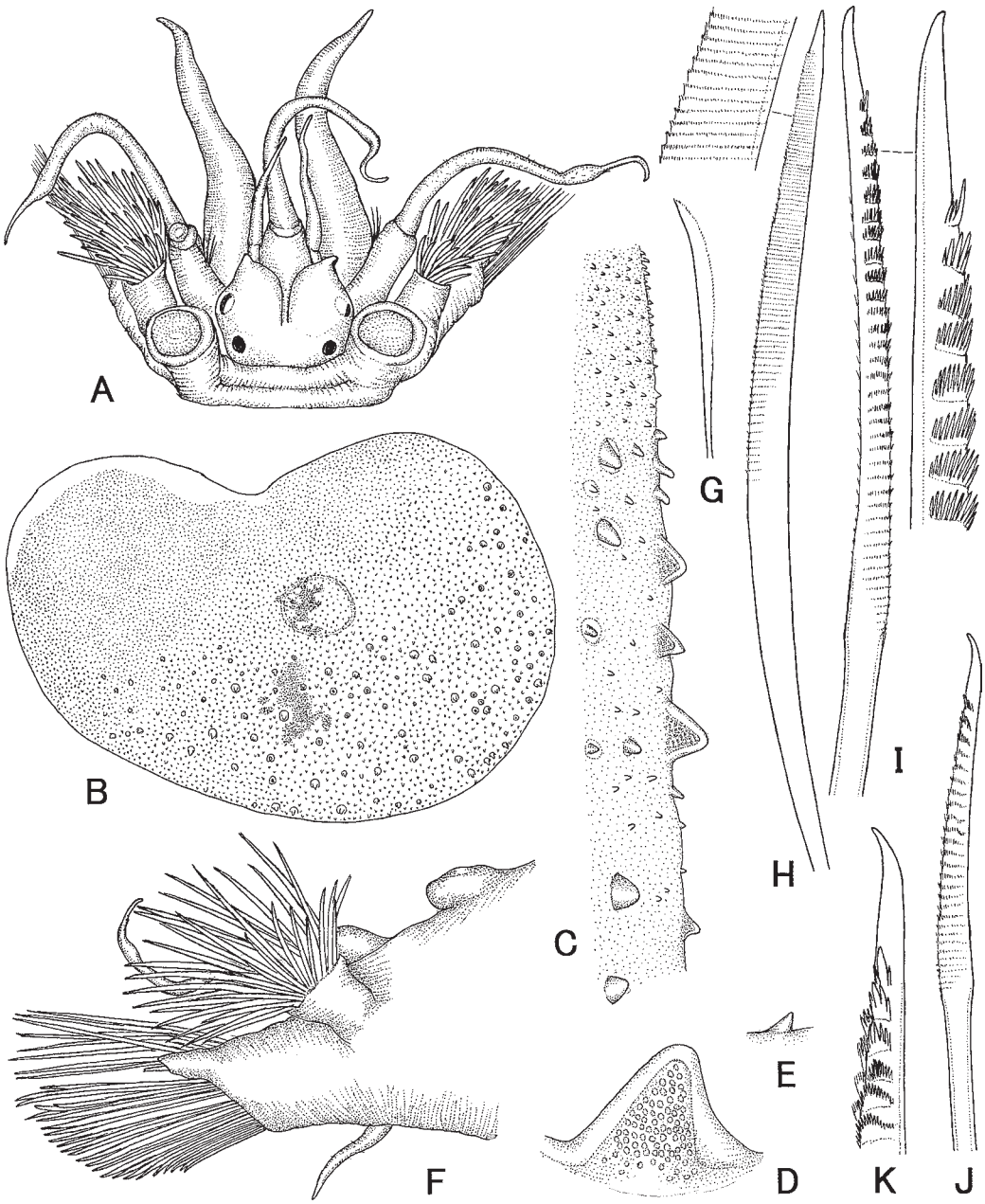

Fig. 2. *Eunoe depressa* Moore —A, anterior end, dorsal view, × 17; B, median elytron, × 13: C, macro- and microtubercles on elytral surface, × 50; D, macrotubercle, × 130; E, microtubercle, × 130; F, right cirrigerous parapodium from segment 16, anterior view, × 13; G, short, outer notoseta, × 63; H, long, inner notoseta, × 63, with detail of median part, × 160; I, upper neuroseta, × 102, with detail of tip, × 206; J, lower neuroseta, × 102; K, distal region of same, × 206.

2H). Neurosetae arranged in transverse rows; upper ones with spinous rows of strong serrations below distally bent entire tips (Fig. 2I); lower ones shorter, with few spinous rows of serrations (Fig. 2J–K). Pygidium with pair of long anal cirri on short cirrophores.

The species is newly added to the Japanese polychaetous fauna.

Distribution. Gulf of Alaska; northern part of Sea of Japan; Bering Sea; Sea of Okhotsk; Japan.

Eunoe shirikishinai Imajima and Hartman, 1964

Eunoe shirikishinai Imajima and Hartman, 1964: 30–31, pl. 3, figs. a–d.

Material. NSMT-Pol. 110133, WA07-B150 (1).
Distribution. Japan.

Genus ***Gattyana*** McIntosh, 1900

Gattyana ciliata Moore, 1902

(Figs. 3A–J, 4A–F)

Gattyana ciliata Moore, 1902: 263–266, pl. 13, figs. 14–19, pl. 14, fig. 20; Annenkova, 1937: 148, pl. 2, figs. 9, 11, pl. 4, fig. 33; Uschakov, 1965: 124, fig. 32A–C.

Material. NSMT-Pol. 109543, WA05-DE250D (31), NSMT-Pol. 109544, WA05-DE380D (22), NSMT-Pol. 109545, WA05-E425 (1), NSMT-Pol. 109546, WA05-EF250D (7), NSMT-Pol. 109547, WA05-F350 (1), NSMT-Pol. 109548, WA05-F410 (2), NSMT-Pol. 109549, WA05-F450 (2), NSMT-Pol. 109550, WA05-FG250D (1), NSMT-Pol. 109551, WA05-FG350 (2), NSMT-Pol. 109552, WA05-FG410 (1), NSMT-Pol. 109553, WA05-FG425 (1), NSMT-Pol. 109554, WA05-FG450 (2), NSMT-Pol. 109555, WA05-GH380 (2), NSMT-Pol. 109556, WA05-GH380D (1), NSMT-Pol. 109557, WA05-GH425 (1), NSMT-Pol. 109558, WA05-GH480 (1), NSMT-Pol. 109559, WA05-H380 (1); NSMT-Pol. 109560, WA06-A250D (7), NSMT-Pol. 109561, WA06-B310D (7), NSMT-Pol. 109562, WA06-C350D (10), NSMT-Pol. 109563, WA06-D210D (1), NSMT-Pol. 109564, WA06-EF425D (1), NSMT-Pol. 109565, WA06-FG350D (3); NSMT-Pol. 110134, WA07-A250D (9), NSMT-Pol. 110135, WA07-B410D (1), NSMT-Pol. 110136, WA07-C350 (1), NSMT-Pol. 110233, WA07-C350D (23). NSMT-Pol. 110615, KT07-29-H-1 (1).

Description. Largest entire specimen 40 mm long, 16 mm wide including setae for 36 segments. Body dorsally flattened, tapering slightly posteriorly. Dorsum with 2 transverse ciliated bands per segment.

Prostomium bilobed, wider than long, with distinct cephalic peaks. Two pairs of eyes, anterior pair circular, lying dorsolaterally under cephalic peaks of prostomium; posterior pair lying dorsally, near posterior edge of prostomium. Ceratophore of median antenna large, cylindrical, inserted in anterior notch, with cylindrical papillate style with subterminal enlargement and filamentous tip. Lateral antennae with small ceratophores, inserted ventrally on underside of prostomium; styles short, slender, about half as long as median antenna. Palps thick, gently tapering to tips, papillated (Fig. 3A).

Elytra 15 pairs, on segments 2, 4, 5, 7, alternate segments to 21, 23, 26, 29 and 32. Elytra large, covering dorsum completely overlapping medially and posteriorly; first pair oval, subsequent pairs subreniform. Elytra of first pair (Fig. 3B) with fringe of slender, long papillae along anterior border (Fig. 3C); median part of dorsal surface of elytron with numerous microtubercles with chitinous quadrilobate tips extremely variable in size and shape (Fig. 3D–F). Macrotubercles mainly occurring on posterior half of elytra and along anterior margin (Fig. 3G–I). Following elytra large reniform, with fringe of slender papillae along outer and posterior borders and scattered on surface. Greater part of dorsal surface of each elytron covered with microtubercles ranging from small, blunt knobs near anterior margins to larger, denticulate cones. Macrotubercles large, cylindrical with minute denticles on tips, along mainly inner and rear borders, and other macrotubercles crowding on anterior outer areas of each elytron; each large, cylindrical with some quadrifid tips (Fig. 3J).

Tentacular segment not visible dorsally; tentaculophores lateral to prostomium, with

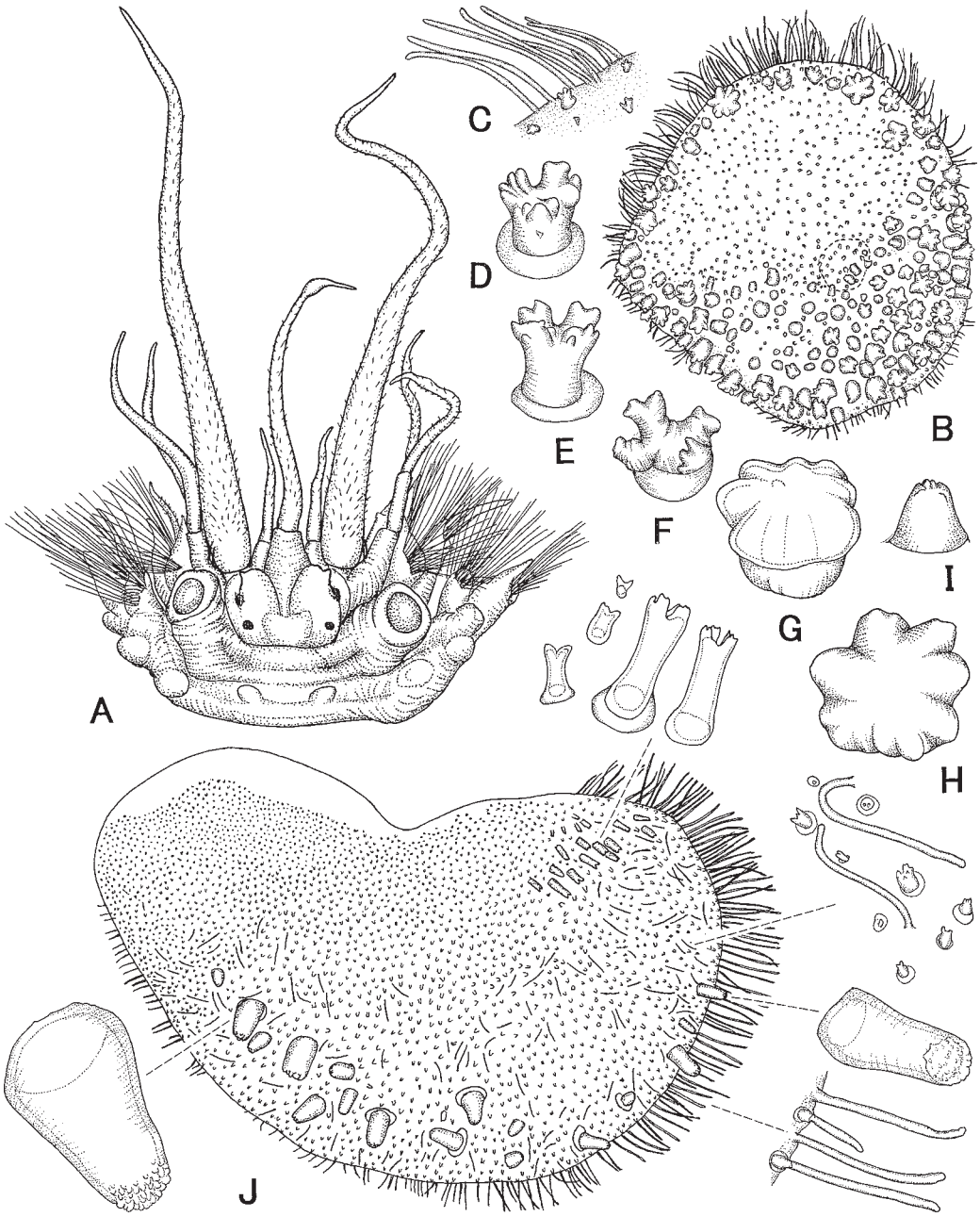

Fig. 3. *Gattyana ciliata* Moore. —A, anterior end, dorsal view, × 9; B, right 1st elytron, × 11; C, marginal papillae from 1st elytron, × 40; D–F, microtubercles on elytron, × 224; G–I, macrotubercles, × 54; J, median elytron, × 15, with detail of papillae and macrotubercles, × 72.

1–2 peristomial setae on each inner side; dorsal and ventral tentacular cirri tapering gradually to subterminal inflation and filiform tip, covered with slender, clavate papillae. Segment 2 with first pair of elytra, biramous parapodia, and ventral cirri much longer than following ventral cirri.

Parapodia biramous, similar along length of body. Notopodium smaller than neuropodium, conical, with short acicular lobe. Neuropodium with longer, subtriangular presetal acicular lobe with supra-acicular digitiform process, and shorter, rounded postsetal lobe. Dorsal cirri with large,

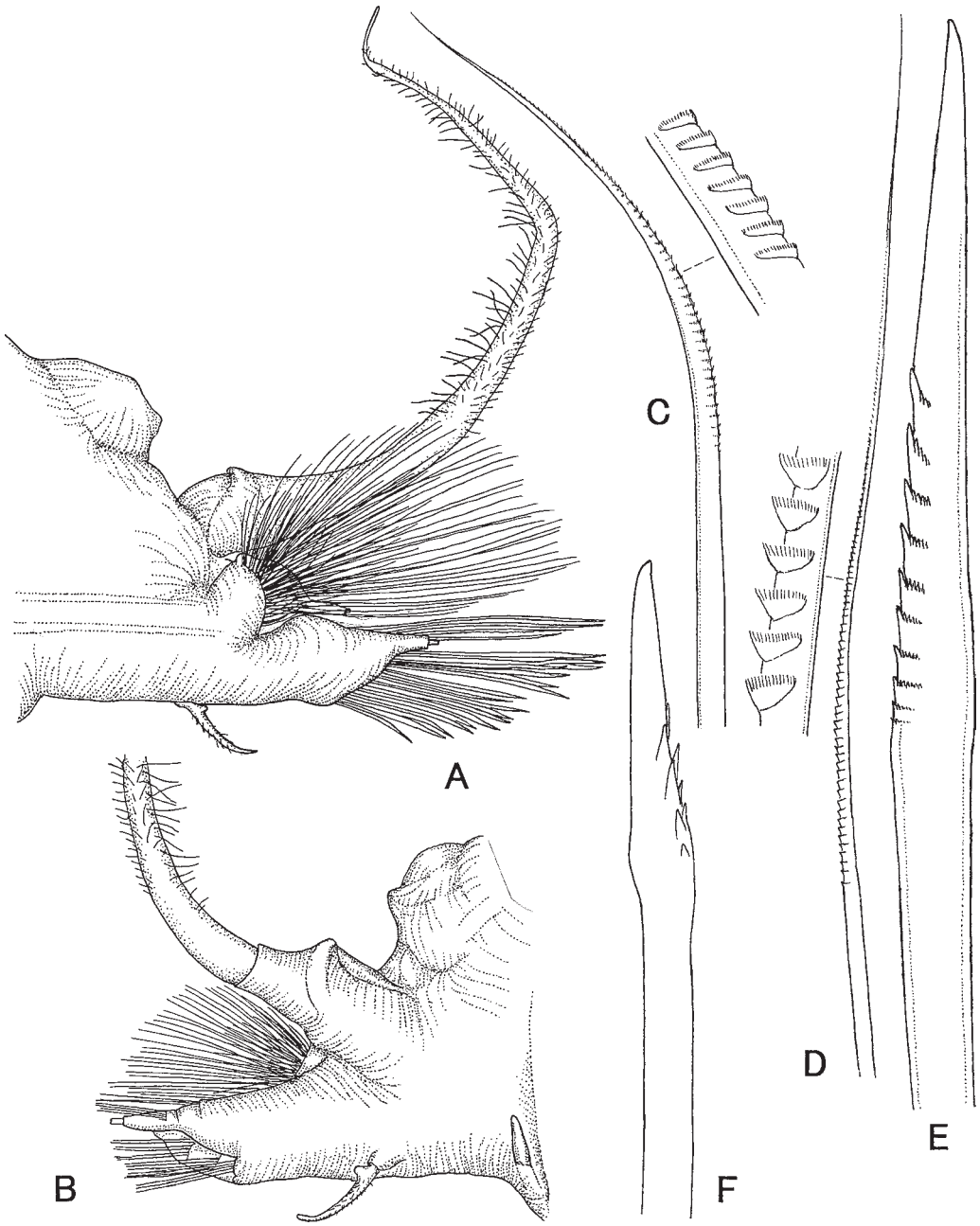

Fig. 4. *Gattyana ciliata* Moore. —A, median parapodium, anterior view, × 11; B, same, posterior view, distal parts of dorsal cirrus, notosetae and neurosetae omitted, × 11; C, short, outer notoseta from median parapodium, × 120, with detail of part, × 338; D, long, inner notoseta from same, × 67, with detail of part, × 338; E, upper neuroseta from same, × 108; F, lower neuroseta from same, × 170.

cylindrical cirrophores on posterior sides of notopodia; styles long, tapering to slight subterminal inflation and filiform tip, with slender, long papillae. Ventral cirri shorter than neuropodium, cirriform, sparsely covered with minute papillae. Nephridial papillae short, from 5th parapodium onwards (Fig. 4A–B).

Notosetae of one kind longer, fine-tipped distally flexible with many more rows of spines

(Fig. 4C–D). Neurosetae larger than notosetae, all unidentate, slightly arched to terminal hook. Neurosetae of supra-acicular group longer and thicker than subacicular ones, with about 10 spinous rows below long unidentate tips (Fig. 4E); neurosetae of subacicular group, with short spinous regions of 4 to 5 transverse rows of spines (Fig. 4F). Pygidium with pair of long anal cirri on short cirrophores.

The species is newly added to the Japanese polychaetous fauna.

Distribution. Chuckchee Sea from Bering Sea; Japan.

Genus ***Harmothoe*** Kinberg, 1856

Harmothoe aspera (Hansen, 1878)

Harmothoe aspera: Ditlevsen, 1917: 35, pl. 2, fig. 7; Annenkova, 1937: 152, pl. 1, fig. 3; Uschakov, 1955: 157, fig. 36; Imajima and Hartman, 1964: 32–33, pl. 4, figs. a–h.

Material. NSMT-Pol. 110137, WA07-B510 (3).

Distribution. North Sea; Arctic Ocean; Sea of Okhotsk; Japan.

Harmothoe extenuata (Grube, 1840)

Polynoe extenuata Grube, 1840: 86.

Harmothoe extenuata : Ehlers, 1913: 446–447; Pettibone, 1953: 31; Imajima, 1961: 83; Imajima and Hartman, 1964: 33–34, pl. 5, figs. a–e; Imajima, 1997b: 20–21; Imajima, 2006: 325.

Material. NSMT-Pol. 109566, WA05-GH510D (1).

Distribution. Circumpolar. Widespread in the Arctic, Mediterranean Sea, California, Japan.

Harmothoe grandispina Annenkova, 1937
(Fig. 5A–I)

Harmothoe impar grandispina Annenkova, 1937: 152, pl. 1, fig. 2; Uschakov, 1965: 140, fig. 41F.

Material. NSMT-Pol. 110345, WA05-FG280 (2), NSMT-Pol. 110346, WA05-FG380 (1).

Description. All specimens somewhat damaged. Anterior fragment consisting of 8 segments 9 mm long and 8 mm wide including parapodia.

Prostomium bilobed, wider than long, with distinct cephalic peaks. Two pairs of eyes, anterior pair circular, lying dorsolaterally at widest part of prostomium, posterior pair lying dorsally near posterior margin of prostomium, closer to midline. Ceratophore of median antenna large, cylindrical, inserted in anterior notch, style missing. Lateral antennae with small ceratophores, inserted ventrally on underside of prostomium; styles short, about two-third as long as prostomium (Fig. 5A). Palps missing. Pharynx with 9 pairs of marginal soft papillae and 2 pairs of chitinous jaws.

Only four pairs of elytra, on segments 2, 4, 5 and 7, overlapping medially and posteriorly. Elytra of first pair oval, with fringe of short papillae along outer-lateral border, dorsal surface covered with numerous conical microtubercles. Macrotubercles large horn-like, confined to single row near external border (Fig. 5B). Following elytra large reniform; dorsal surface of each elytron covered with conical microtubercles, and about 10 horn-like macrotubercles arranged along rear borders; marginal fringe of slender papillae inserted between 2 macrotubercles (Fig. 5C).

Tentacular segment not visible dorsally; tentaculophores lateral to prostomium, with 1 peristomial seta on each inner side; right dorsal tentacular cirrus tapering gradually to filiform tip (Fig.

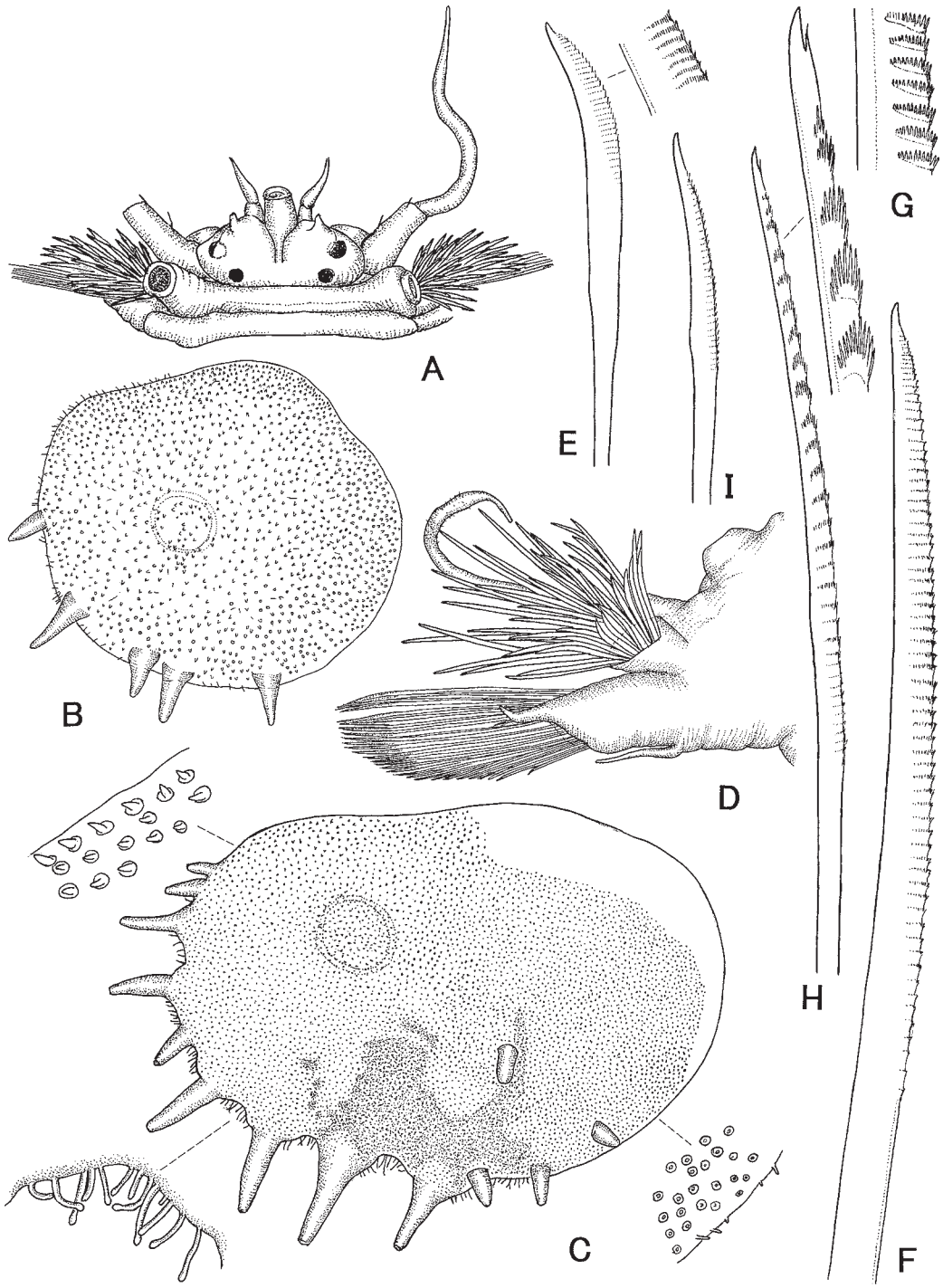

Fig. 5. *Harmothoe grandispina* Annenkova. —A, anterior end, dorsal view, × 17; B, left 1st elytron, × 28; C, left elytron from segment 5, × 23, with detail of parts, × 112; D, right parapodium, anterior view, × 19; E, outer notoseta, × 124, with detail of part, × 250; F, inner notoseta, × 124; G, detail of part of inner notoseta, × 250; H, upper neuroseta, × 124, with detail of tip, × 320; I, lower neuroseta, × 160.

5A); left dorsal and ventral tentacular cirri missing. Segment 2 with first pair of elytra, biramous parapodia, and ventral cirri much longer than following ventral cirri.

Parapodia biramous; notopodium smaller than neuropodium, conical, with short acicular lobe. Neuropodium with longer, subtriangular presetal acicular lobe with supra-acicular digitiform process, and shorter, rounded postsetal lobe. Dorsal cirri with large, cylindrical cirrophores on posterior sides of notopodia; styles long, tapering to slight subterminal inflation and filiform tip. Ventral cirri shorter than neuropodium, cirriform, sparsely covered with minute papillae (Fig. 5D).

Notosetae stouter than neurosetae; outer ones in palisade, short, with close-set spinous rows along convex edge (Fig. 5E); inner ones much larger, with distinct numerous spinous rows below bare, tapered tips (Fig. 5F–G). Neurosetae long, straight; upper ones with longest spinous regions with many alternating rows of strong serrations below fine, bidentate tips (Fig. 5H); lower ones with few rows of fine serrations below unidentate tips (Fig. 5I).

The species is newly added to the Japanese polychaetous fauna.

Distribution. Sea of Japan; Japan.

Harmothoe imbricata (Linnaeus, 1767)

Aphrodita imbricata Linnaeus, 1767: 1084.
Harmothoe imbricata: Tebble and Chambers, 1982: 30–31, figs. 7a, 9a–b; Imajima, 1997b: 29–31, fig. 14a–l.

Material. NSMT-Pol. 110559, WA07-C410 (1).

Distribution. Great Britain; Arctic and north Pacific oceans; Indian Ocean; Japan.

Harmothoe impar (Johnston, 1839)

Polynoe impar Johnston, 1839: 436.
Harmothoe impar: Ditlevsen, 1917: 12, pl. 2, fig. 16, pl. 3, fig. 11; Uschakov, 1955: 157, fig. 41A–E; Imajima and Hartman, 1964: 34, pl. 6, figs. a–g.

Material. NSMT-Pol. 110344, WA05-FG380 (2), NSMT-Pol. 109567, WA05-FG410 (1); NSMT-Pol. 110138, WA07-A550 (1), NSMT-Pol. 110139, WA07-B750 (2). NSMT-Pol. 110616, KT07-29-M-2 (1), NSMT-Pol. 110617, KT07-29-M-3-2 (1).

Distribution. North Atlantic; Mediterranean Sea; Arctic Ocean; southern California; Sea of Okhotsk; Japan.

Subfamily Lepidastheniinae Pettibone, 1989
Genus ***Lepidasthenia*** Malmgren, 1867
Lepidasthenia interrupta (Marenzeller, 1902)

Halosydna interrupta Marenzeller, 1902: 570, pl. 1, fig. 2.
Polynoe semierma Moore, 1903: 402–403, pl. 23, figs. 2–3; Izuka, 1912: 30–31.
Lepidasthenia interrupta: Seidler, 1924: 163–164; Imajima and Hartman, 1964: 22; Imajima, 1997b: 57–59, fig. 28a–k.

Material. NSMT-Pol. 109734, WA05-EF450D (1), NSMT-Pol. 109766, WA05-GH510D (1), NSMT-Pol. 109786, WA05-H380 (1).

Distribution. Japan.

Lepidasthenia izukai Imajima and Hartman, 1964

Polynoe longissima Izuka, 1912: 34–36, pl. 1, fig. 1, pl. 4, figs. 1–5.
Lepidasthenia izukai Imajima and Hartman, 1964: 22–23; Imajima, 1997b: 54–55, fig. 27a–n.

Material. NSMT-Pol. 109869, WA05-EF450D (1), NSMT-Pol. 109568, WA05-GH380D (2).
Distribution. Japan; Yellow Sea.

Lepidasthenia magnacornuta (Moore, 1903)

Hylosynda magnacornuta Moore, 1903: 419–420, pl. 23, fig. 18.
Polynoe magnacornuta: Izuka, 1912: 40.
Lepidasthenia magnacornuta: Seidler, 1924: 165–167; Imajima and Hartman, 1964: 23.

Material. NSMT-Pol. 109569, WA05-FG410 (1), NSMT-Pol. 109570, WA05-G425 (1).
Distribution. Japan.

Subfamily Lepidonotinae Willey, 1902
Genus ***Lepidonotus*** Leach, 1816
Lepidonotus glaber Imajima, 1997

Lepidonotus glaber Imajima, 1997b: 100–103, figs. 47a–g, 48a–e, 49a–h; Imajima, 2006: 327.

Material. NSMT-Pol. 110500, WA07-C310 (1).
Distribution. Japan.

Genus ***Parahalosydna*** Horst, 1915
Parahalosydna krassini (Annenkova, 1952)
(Fig. 6A–I)

Lepidasthenia (?) *krassini* Annenkova, 1952: 148, fig. 1.
Parahalosydna krassini: Uschakov, 1965: 113, fig. 23A–D.

Material. NSMT-Pol. 110340, WA06-EF425D (12).

Description. All specimens divided into anterior and posterior parts; largest anterior body 13 mm long, about 10 mm wide including parapodia for 17 setigers. Styles of median and lateral antennae, tentacular and dorsal cirri, with brownish pigmentation. Body dorsoventrally flattened, without color markings.

Prostomium bilobed, wider than long, without cephalic peaks. Two pairs of black eyes in quadrate arrangement, anterior pair slightly lying dorsolaterally. Ceratophore of median antenna, large, cylindrical, inserted in anterior notch; style smooth, cylindrical basally, tapering to filiform tip. Lateral antennae inserted terminally on distal ends of prostomium, on same level as median antenna; styles short, about half as long as style of median antenna, with filiform tips. Palps short, stout basally, gently tapering to tips. Tentacular segment not visible dorsally. Tentaculophores lateral to prostomium, 2 pairs of dorsal and ventral tentacular cirri longer than style of median antenna (Fig. 6A). Pharynx with 9 pairs of marginal soft papillae and 2 pairs of chitinous jaws (Fig. 6B).

Elytra 15 pairs, on segments 2, 4, 5, 7, and alternate segments to 29. Elytra covering dorsum entirely. Elytra delicate, translucent, without fringe of papillae; surface of elytra with many conical and digitate microtubercles (Fig. 6C–D).

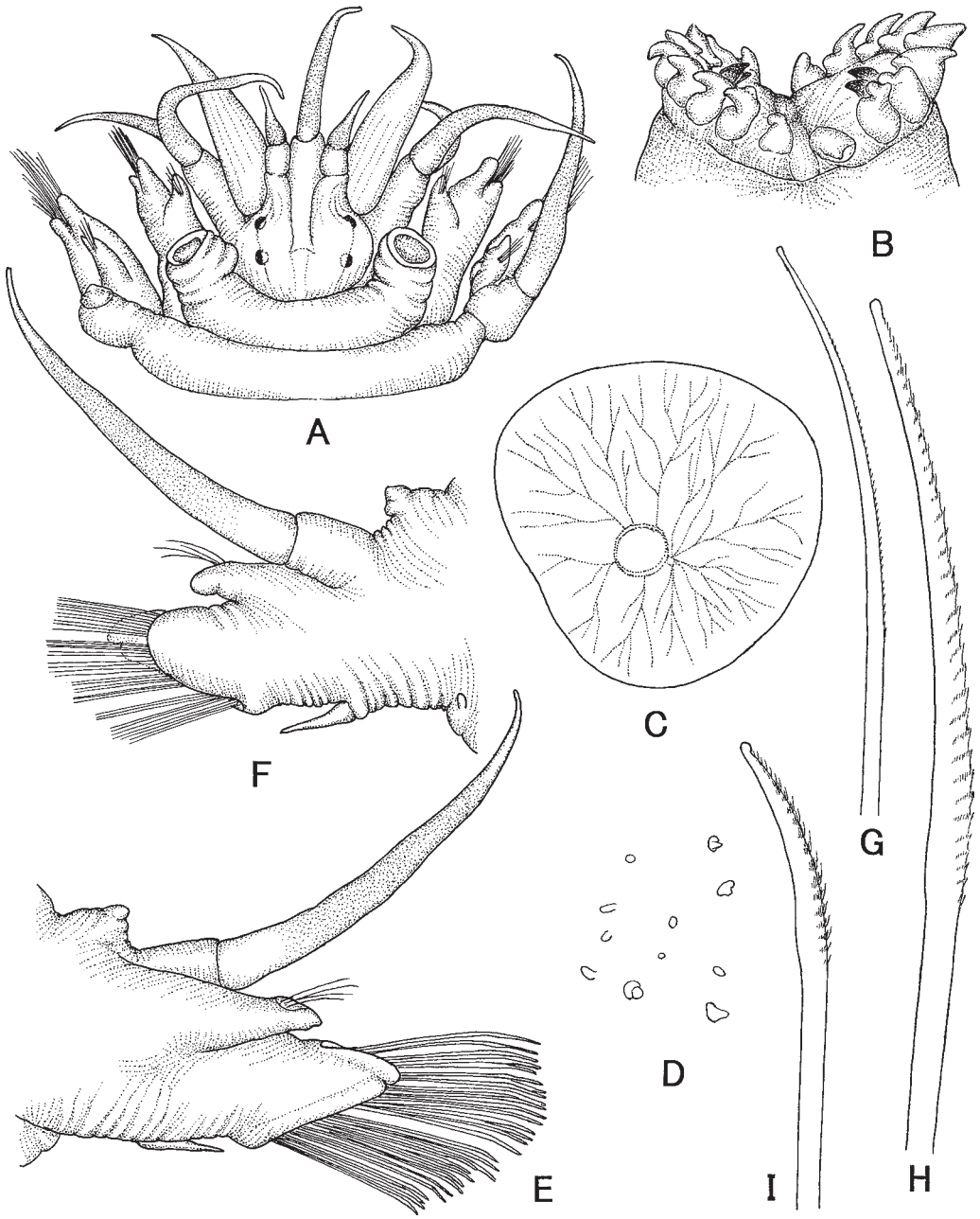

Fig. 6. *Parahalosydna krassini* (Annenkova). —A, anterior end, dorsal view, × 18; B, marginal papillae of pharynx, lateral view, × 12; C, median elytron, × 11; D, microtubercles on elytron, × 170; E, left cirrigerous parapodium from segment 12, anterior view, × 23; F, same, posterior view, distal parts of neurosetae omitted, × 23; G, notoseta, × 266; H, upper neuroseta, × 266; I, lower neuroseta, × 266.

Second segment with first pair of elytra, biramous parapodia, and smooth ventral buccal cirri longer than following ventral cirri. Parapodia biramous and similar along length of body. Notopodium very small, conical, on anterior face of neuropodium (Fig. 6E). Neuropodium with subtriangular presetal acicular lobe; postsetal lobe shorter than presetal one, rounded distally (Fig. 6F). Dorsal cirrophores large and cylindrical, styles long, tapering gradually to filiform tips (Fig. 6E–F).

Ventral cirri short, smooth, with slender tips (Fig. 6F). Nephridial papillae from segment 8 onwards. Upper three to four notosetae short and slender, tapering to rounded tips, with many spinous rows (Fig. 6G). Neurosetae stout, upper ones slender, with long region of fine serrations below rounded tips (Fig. 6H); lower ones with few rows of fine serrations below rounded tips (Fig. 6I). Pygidium with pair of long anal cirri.

The species is newly added to the Japanese polychaetous fauna.

Distribution. Sea of Okhotsk; Chuckchee Sea; Japan.

Genus ***Weberia*** Horst, 1915

Weberia abyssicola sp. nov.

(Figs. 7A–E, 8A-D)

Type material. Holotype—NSMT-Pol. H 480, Stn. KT07-29-M-3-2, off Miyako, 39˚20.19´N, 142˚51.40´E–39˚19.23´N, 142˚49.18´E, 1737–1709 m, Nov. 6, 2007.

Description. Body of holotype somewhat incomplete, for elytra as well as most dorsal cirri lacking, flattened, fusiform, 10 mm long, 3.2 mm wide including setae, with 25 segments. Dorsum with large tubercles at base of dorsal cirrus and on median line of each segment (Fig. 7A–B).

Prostomium oval, with prolonged stout ceratophores of lateral antennae, nearly two-third as long as prostomium, styles short, with papilliform tips. Median prostomial antenna with massive ceratophore from anterior half of prostomium, style broken off. Palps stumpy, conical. No eyes visible. Tentacular segment not visible dorsally, with stout tentaculophores lateral to prostomium, with 2 pairs of dorsal and ventral tentacular cirri (Fig. 7A).

Elytra 12 pairs, on segments 2, 4, 5, 7, 9, 11, 13, 15, 17, 19, 21 and 23, but almost not preserved; anterior elytron small, elliptical, widely exposing dorsum. Median elytron larger than anterior one rounded, margin and surface covered with small conical tubercles and bearing 1–3 large warts (Fig. 7B–D).

Parapodia biramous, similar along length of body except first parapodium (Fig. 8A). Notopodium smaller than neuropodium, digitiform, on anterodorsal side of neuropodium, with aciculum, without notosetae (Fig. 8B). Neuropodium with large, rounded presetal lobe and unequally bilobed postsetal lobe; upper part short, rounded and lower part horn-like, with cylindrical papillae arranged in 2 rows along under side (Fig. 8B–C); ventral cirri absent except setiger 1. Dorsal cirri with prominent cirrophores connected by a ridge with dorsal tubercles; styles cylindrical bearing micropapillae, tapering to digitate tips (Fig. 8B). Neurosetae all unidentate simple setae 3–4 per fascicle, with many rows of minute spines (Fig. 8D). Aciculum numbering 1 in a parapodium. Pygidium with a pair of short anal cirri (Fig. 7E).

Remarks. *Weberia abyssicola* can be distinguished from known species, *W*. *pustulata* Horst, 1915 from Flores Sea (694–794 m), *W*. *nodulosa* (Ditlevsen, 1917) from south of Iceland (1089 fms.) and *W*. *nodulosa pacifica* (Uschakov, 1950) from Sea of Okhotsk (1366 m), in the feature of the characteristic neuropodium.

The genus is reported as a part of the Japanese polychaetous fauna for the first time.

Etymology. The species is named after the habitat of the specimen.

Distribution. Japan (1737–1709 m depth).

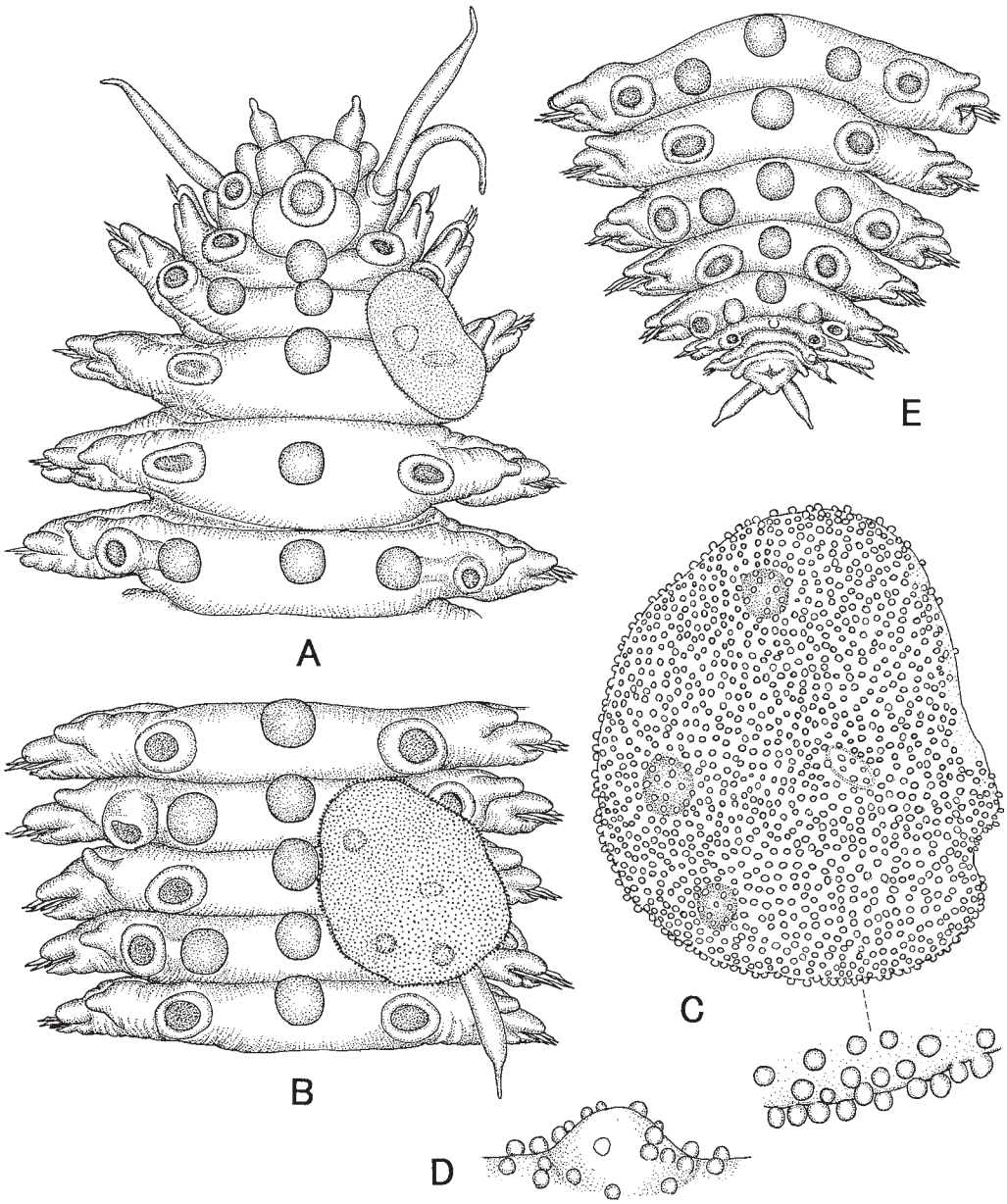

Fig. 7. *Weberia abyssicola* sp. nov. —A, anterior end, dorsal view, × 22; B, median part of body, dorsal view, × 22; C, elytron on segment 13, × 45, with detail of elytral margin with conical tubercles, × 122; D, large wart on elytron, × 122; E, posterior end, dorsal view, × 22.

Family Acoetidae Kinberg, 1858
Genus ***Acoetes*** Audouin and Milne-Edwards, 1832
Acoetes jogasimae (Izuka, 1912)

Panthalis jogasimae Izuka, 1912: 68–71, pl. 2, fig. 6, pl. 8, figs. 1–6; Imajima and Hartman, 1964: 41; Wu, Sun and Chen, 1980: 114.

Acoetes jogasimae: Pettibone, 1989: 98; Imajima, 1997b: 122–126, figs. 60a–i, 61a–o, 62a–j.

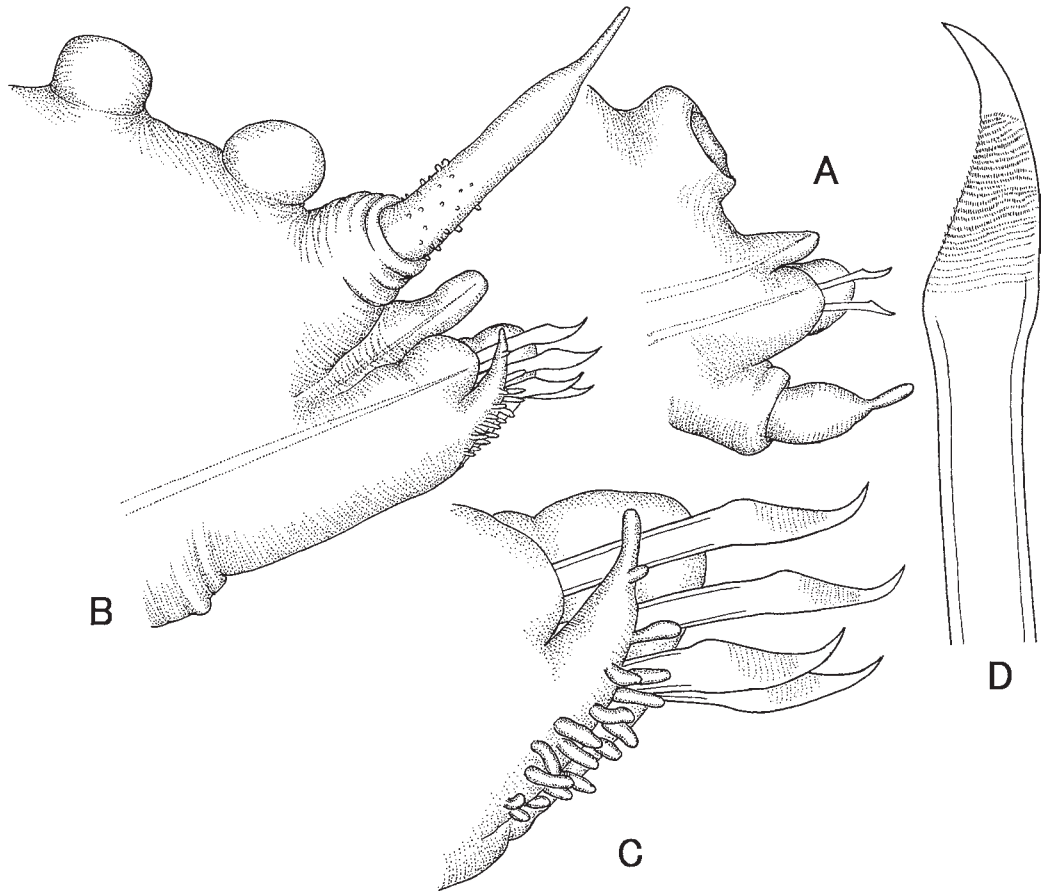

Fig. 8. *Weberia abyssicola* sp. nov. —A, right elytragerous parapodium from segment 2, posterior view, × 48; B, right cirrigerous parapodium from segment 14, same view, × 43; C, neuropodium from same parapodium, same view, × 113; D, neuroseta from same parapodium, × 240.

Material. NSMT-Pol. 110347, WA06-H250D (3).
Distribution. Japan; South China Sea.

Family Pholoidae Kinberg, 1858
Genus ***Pholoe*** Johnston, 1839
Pholoe sp.

Material. NSMT-Pol. 109905, WA05-DE250D (3); NSMT-Pol. 110272, WA06-DE280D (12).

Family Sigalionidae Malmgren, 1867
Genus ***Labioleanira*** Pettibone, 1992
Labioleanira sp.

Material. NSMT-Pol. 110864, SO07-C7-B (4).

Genus ***Leanira*** Kinberg, 1855
Leanira sp.

Material. NSMT-Pol. 110865, SO07-O3 (15).

Genus ***Neoleanira*** Pettibone, 1970
Neoleanira areolata (McIntosh, 1885)

Leanira areolata McIntosh, 1885: 151–153, pl. 21, fig. 3, pl. 25, figs. 8–9, pl. 13A, fig. 1.
Sthenolepis areolata: Moore, 1910: 391; Izuka, 1912: 89–90, pl. 10, fig. 8; Imajima and Hartman, 1964: 42–43.
Neoleanira areolata: Pettibone, 1970: 372–376, figs. 5–6; Imajima, 2003: 56–59, figs. 32a–h, 33a–d, 34a–i; Imajima, 2005: 62.

Material. NSMT-Pol. 109571, WA05-DE380D (8), NSMT-Pol. 109572, WA05-E1000D (1), NSMT-Pol. 109573, WA05-EF450D (6), NSMT-Pol. 109574, WA05-F900 (1), NSMT-Pol. 109575, WA05-FG450 (1), NSMT-Pol. 109576, WA05-G210 (1), NSMT-Pol. 109577, WA05-GH350 (1), NSMT-Pol. 109578, WA05-GH380D (2), NSMT-Pol. 109579, WA05-GH425 (1), NSMT-Pol. 109580, WA05-GH480 (1), NSMT-Pol. 109581, WA05-GH510 (1), NSMT-Pol. 109582, WA05-H310 (1); NSMT-Pol. 109583, WA06-A450 (1), NSMT-Pol. 109584, WA06-A510 (5), NSMT-Pol. 109585, WA06-EF425D (2), NSMT-Pol. 109586, WA06-F480 (1), NSMT-Pol. 109587, WA06-F900 (1), NSMT-Pol. 109588, WA06-G550 (1), NSMT-Pol. 109589, WA06-G900D (1), NSMT-Pol. 109590, WA06-GH480D (2); NSMT-Pol. 110072, WA07-A410 (1), NSMT-Pol. 110073, WA07-A450 (7), NSMT-Pol. 110074, WA07-B410 (1), NSMT-Pol. 110075, WA07-B410D (4), NSMT-Pol. 110076, WA07-D900 (1). NSMT-Pol. 110891, SO07-C7-B (1).

Distribution. Sea of Okhotsk; Bering Sea; off Washington to southern California; Japan.

Genus ***Sigalion*** Audouin and Milne-Edwards, 1830
Sigalion orientalis sp. nov.
(Figs. 9A–D, 10A–D, 11A–H)

Type material. Holotype—NSMT-Pol. H 481, Stn. WA06-D210D, off Sanriku, 38˚56.42´N, 141˚59.28´E–38˚56.24´N, 141˚59.17´E, 213–214 m, Oct. 19, 2006. Paratypes—NSMT-Pol. P 482, Stn. WA06-D210D (1), same locality as holotype; NSMT-Pol. P 483, Stn. WA06-A150D, off Sanriku, 146–147 m, Oct. 9, 2006 (1).

Description. All specimens missing posterior ends; holotype 20 mm long, 5 mm wide including parapodia for 28 setigers.

Prostomium rectangular, situated dorsally on segments 1 and 2, with 2 small digitiform lateral antennae on anterior margin, median antenna absent. 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. 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; dorsal tentacular cirri slightly longer than ventral tentacular cirri (Fig. 9 B). All other parapodia biramous. Segment 2 with small elytrophores, notopodia smaller than neuropodia; neuropodia elongate, with triangular presetal lobe and long tapered ventral cirri extending beyond tip of neuropodium (Fig. 9C). Parapodia of segment 3 fused dorsally with segment 2, with long dorsal cirrus (Fig. 9D). Notopodia with elongate presetal lobe, neuropodia distally expanded with projecting acicular lobes; superior neuropodial postsetal lobe rudimentary and inferior neuropodial

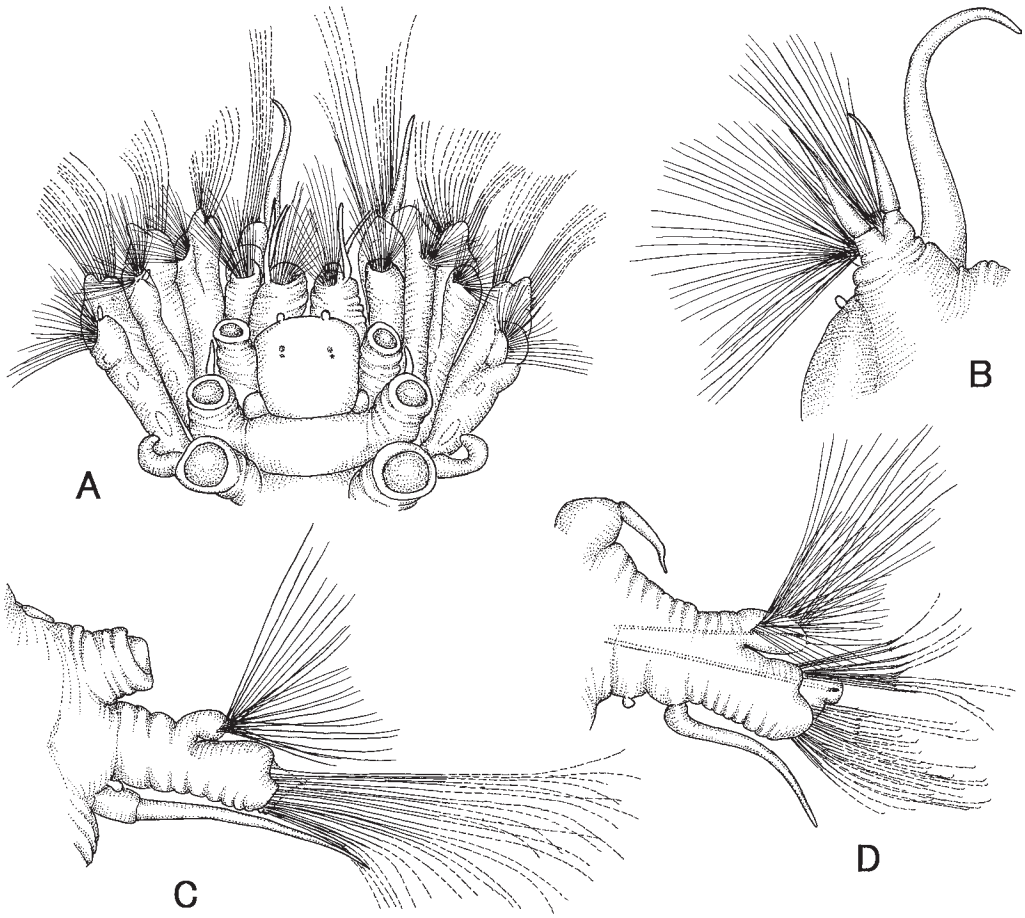

Fig. 9. *Sigalion orientalis* sp. nov. —A, anterior end, dorsal view, × 16; B, right tentacular segment, outer view, × 23; C, right parapodium of segment 2, posterior view, × 26; D, right parapodium of segment 3, same view, × 26.

postsetal lobe conspicuous throughout. Large ciliated ctenidial pads, 3 per parapodium on segment 4 thereafter, occur between elytrophores and notopodia. Solitary ctenidia present on under faces of parapodia of segments 3–5, and also present on posterior faces of parapodia from segment 4 through all segments. Cirriform branchiae with ciliated inner margins present from parapodia of segment 5 and on all parapodia (Fig. 10A). Ventral cirri with distinct cirrophores. More posterior parapodia with notopodia and neuropodia of approximately equal length, each with single aciculum. 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 (Fig. 10B).

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, remainder subrectangular (Fig. 10C). Outer lateral margin of each elytron with large 13–17 fringe papillae. Each fringe papilla pinnate, with up 7 slender pinnules either side. Fringe papillae with usually 3 shorter, single robust basally inserted and some pinnules occurring on surface of elytra (Fig. 10D). Solitary short papilla occurring on posterior margin of elytra (Fig. 10C).

Notopodia with simple distally bifurcate spinose capillaries (Fig. 11A). Neurosetae of segment 2 all slender bidentate compound multiarticulate falcigers with 6–15 articles. Neurosetae of segment 3 similar, but with few articles. Superior neurosetae in 2 oblique rows running posteriorly

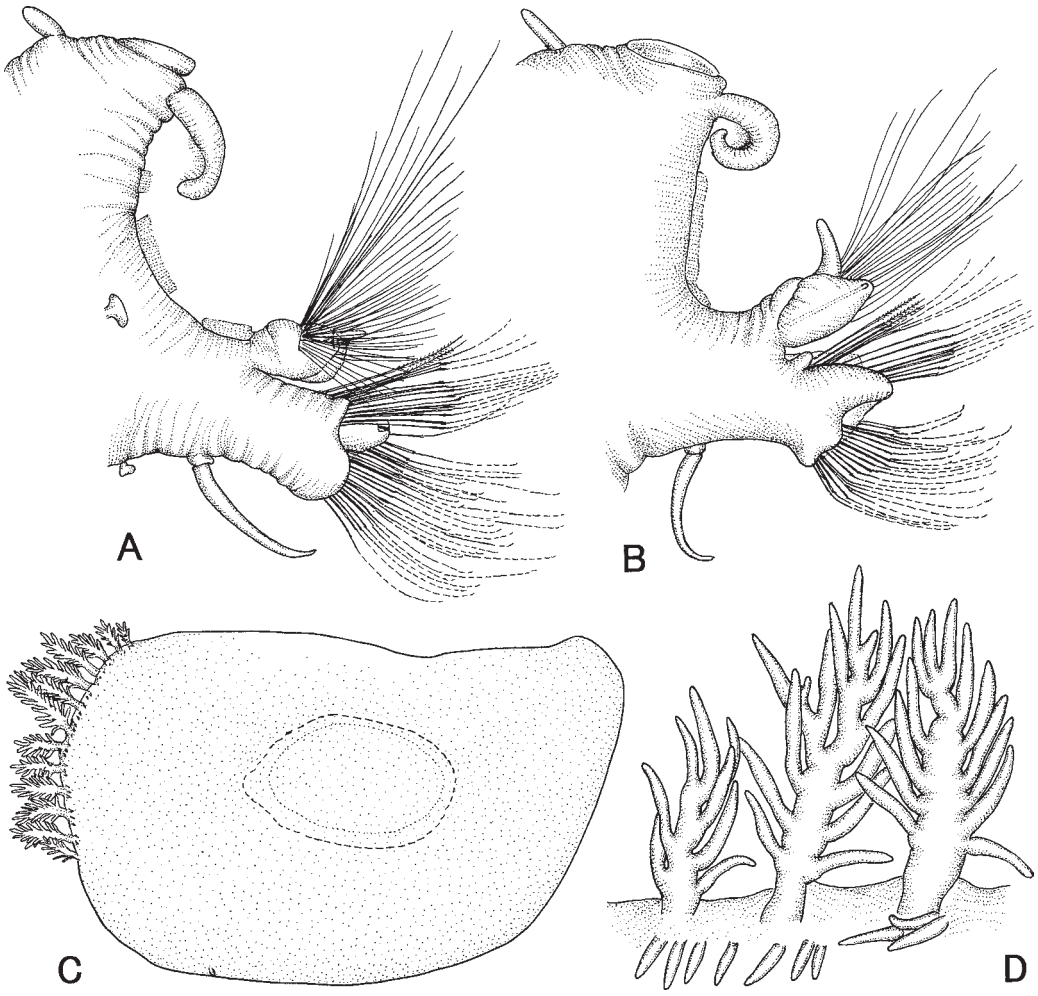

Fig. 10. *Sigalion orientalis* sp. nov. —A, right parapodium of segment 5, posterior view, × 26; B, left parapodium of segment 28, anterior view, × 26; C, left elytron from segment 28, × 30; D, elytron fringe papillae from same, × 150.

above acicular lobe. Upper group with 2–3 simple spinose setae, beginning from segment 4, spinules surrounding shaft (Fig. 11B). Lower group with compound multiarticulate falcigers with 10–11 articles. Setal shafts of upper falcigers coarsely spinose (Fig. 11C), but those of median and posterior setae smooth. Terminal article of multiarticulate blades with small irregularly distributed teeth on inner margins (Fig. 11D). Inferior neurosetae arranged in dense bundle below acicular lobe and include 4 or 5 robust compound falcigers with blades of 2–5 articles in upper posterior position (Fig. 11E–F). Remaining inferior neurosetae compound multiarticulate falcigers, more slender than superior counterparts; distal article of blades with small teeth on inner margins. Shaft of all inferior neurosetae with smooth subrostral regions (Fig. 11G–H).

Remarks. *Sigalion orientalis* resembles *S. edwardsi* Kinberg, 1856 of syntypes from Argentina examined by Mackie and Chambers (1990) in that, the presence of branchiae on all elytrophores and dorsal tubercles from setiger 5 and the number of elytral fringe papillae (up to 7). However, *S. orientalis* differs from *S. edwardsi* in that: (1) the median antenna is lacking rather than present, (2) the simple spinose neurosetae are present from setiger 4 rather than from setiger 6, (3) the robust compound multiarticulate falcigers with coarsely spinose subrostral regions

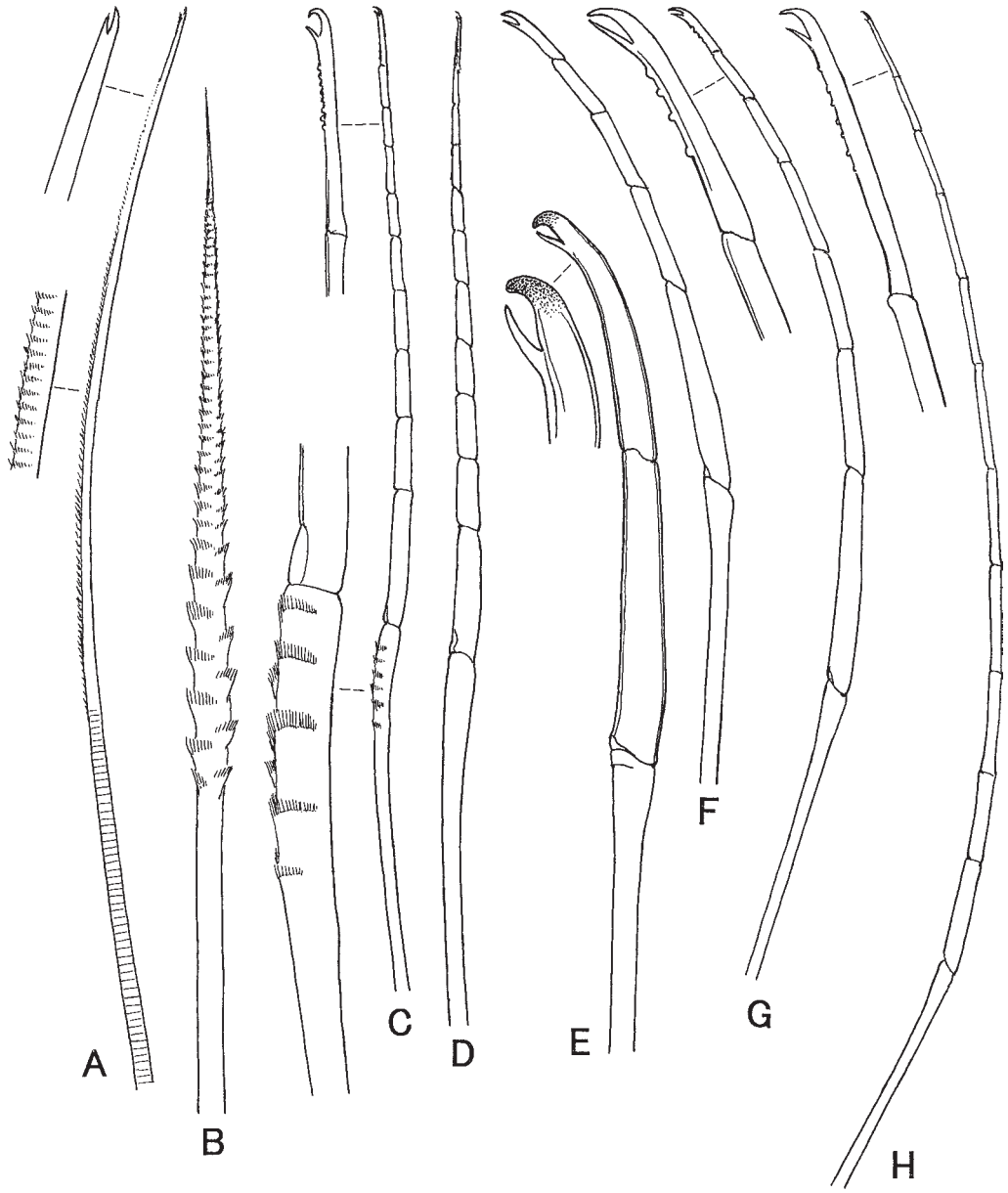

Fig. 11. *Sigalion orientalis* sp. nov. —A, notoseta, × 375, with detail of distal and median regions, × 755; B, simple spinose seta, × 375; C, upper compound multiarticulate neuroseta with spinosed shaft, × 190, with detail of distal region, × 755 and shaft, × 530; D, same with smooth shaft, × 190; E, upper inferior compound neuroseta with blade of 2 articles, × 242, with detail of distal region, × 480; F, same with blade of 5 articles, × 190; G–H, lower inferior compound multiarticulate neurosetae, × 190, with detail of distal region, × 755.

absent rather than present, (4) compound falcigers with single articule blade among the superior neurosetae absent rather than present.

Sigalion orientalis can be distinguished from *S. mathildae* Audouin and Milne-Edwards (in Cuvier, 1830) in the form of the elytral fringe papillae and the presence of branchiae from setiger 5. *S. mathildae* is commonly found in intertidal shallow sublittoral (to 25 m) sands throughout Europe from the Mediterranean to Scotland. *Sigalion orientalis* differs markedly from *S. shimo-*

daensis Imajima (2006) in the presence of branchiae and setal structures.

Etymology. The species name is after Asian district where the specimens were collected.

Distribution. Japan (146–214 m depth).

Family Phyllodocidae Williams, 1852
Subfamily Eteoninae Bergström, 1914
Genus ***Eulalia*** Savigny, 1818
Eulalia bilineata (Johnston, 1840)

Eulalia bilineata: Malmgren, 1865: 99, pl. 13, fig. 26; Fauvel, 1923: 162–163, fig. 58a–e; Imajima and Hartman, 1964: 61–62, pl. 13, figs. a–d; Imajima, 1988: 125; Imajima, 1992: 127; Imajima, 1994: 108; Imajima, 1997a: 166; Imajima, 2001a: 55.

Material. NSMT-Pol. 110563, WA06-B750D (1).

Distribution. North Sea; Atlantic Ocean; Mediterranean Sea; Pacific Ocean of western Canada; Japan.

Eulalia sp.

Material. NSMT-Pol. 110348, WA06-GH480D (3).

Genus ***Mysta*** Malmgren, 1865
Mysta sp.

Material. NSMT-Pol. 110349, WA06-GH480D (1).

Subfamily Phyllodocinae Örsted, 1843
Genus ***Paranaitis*** Southern, 1914
Paranaitis polynoides (Moore, 1909)

Anaitis polynoides Moore, 1909: 339–342, pl. 16, figs. 19–21.
Phyllodoce (*Paranaitis*) *polynoides*: Berkeley and Berkeley, 1948: 44, figs. 62–63; Banse and Hobson, 1974: 44, fig. 10j.
Paranaitis polynoides: Hartman, 1936: 117, 119; Hartman, 1968: 291, figs. 1–3; Hartman and Reish, 1950: 12; Uschakov, 1972: 141–142, pl. 7, figs. 1–4; Blake, 1994a: 164–165, fig. 4.22; Imajima, 2003: 98–99, fig. 60a–i.

Material. NSMT-Pol. 110363, WA07-C350D (1).

Distribution. Western Canada to central and southern California; Gulf of Mexico; Sea of Japan; Kurile Islands; Japan.

Genus ***Phyllodoce*** Savigny, 1818
Phyllodoce groenlandica (Oersted, 1843)

Phyllodoce groenlandica: Bergström, 1914: 141–143, fig. 42; Fauvel, 1923: 153–154, fig. 54f–i.
Phyllodoce (*Anaitides*) *groenlandica*: Berkeley and Berkeley, 1948: 46, fig. 66; Uschakov, 1950: 170; Uschakov, 1972: 133–134, fig. 5, 1–4.
Anaitides groenlandica: Hartman, 1948a: 19; Imajima, 1963: 181, pl. 12, fig. 10.

Material. NSMT-Pol. 110350, WA05-E1000D (6), NSMT-Pol. 110351, WA05-FG510D (2), NSMT-Pol. 110352, WA05-GH425 (1), NSMT-Pol. 110353, WA05-GH510D (5), NSMT-Pol. 110354, WA05-H510 (3), NSMT-Pol. 110355, WA05-H900D (2); NSMT-Pol. 110356, WA06-

F1500D II (2), NSMT-Pol. 110357, WA06-G900D (3), NSMT-Pol. 110358, WA06-GH480D (4); NSMT-Pol. 110359, WA07-A650 (1), NSMT-Pol. 110360, WA07-D210D (1), NSMT-Pol. 110361, WA07-D900 (18), NSMT-Pol. 110362, WA07-D1500D (1).

Distribution. Greenland; Arctic Ocean; Sea of Japan; west coast of North America; Bering Sea; Sea of Okhotsk; Japan.

Phyllodoce lineate tosaensis Imajima, 2001

Phyllodoce lineate tosaensis Imajima, 2001a: 56–57, fig. 15.

Material. NSMT-Pol. 110275, WA06-B750D (1), NSMT-Pol. 110290, WA06-D210D (7).
Distribution. Japan.

Phyllodoce madeirensis Langerhans, 1880

Phyllodoce (*Anaitis*) *madeirensis* Langerhans, 1880: 307–308, pl. 17, fig. 44a–b.
Phyllodoce (*Anaitides*) *madeirensis*: Fauvel, 1923: 150–151, fig. 53d–h; Rullier, 1965: 21; Day, 1967a: 145, fig. 5.2.d–g; Uschakov, 1972: 138, pl. 6, figs. 7–8.
Phyllodoce madeirensis: Fauvel, 1914: 111–113, pl. 6, figs. 5–13; Imajima, 2003: 103–107, fig. 63a–h; Imajima, 2005: 78.

Material. NSMT-Pol. 110778, WA05-G210D (5); NSMT-Pol. 110779, WA06-DE280D (1), NSMT-Pol. 110780, WA06-E1200D (13), NSMT-Pol. 110781, WA06-G1200D (16), NSMT-Pol. 110783, WA06-GH480D (1), NSMT-Pol. 110782, WA06-H1500D (1).

Distribution. North Atlanti; Gulf of Mexico; Caribbean Sea; Gulf of Guinea; Japan.

Family Glyceridae Grube, 1850
Genus ***Glycera*** Savigny, 1818
Glycera branchiopoda Moore, 1911
(Fig. 12A–M)

Glycera branchiopoda Moore, 1911: 302–304, pl. 20, figs. 155–156, pl. 21, figs. 157–159; Böggemann, 2002: 41–42, figs. 25–27.

Material. NSMT-Pol. 110320, WA06-B750D (3), NSMT-Pol. 110321, WA06-D450D (1), NSMT-Pol. 110322, WA06-E510D (5), NSMT-Pol. 110323, WA06-F650D (3), NSMT-Pol. 110324, WA06-FG350D (6); NSMT-Pol. 110325, WA07-A650 (2).

Description. Complete largest specimen 45 mm long, about 4 mm wide including parapodia for 110 setigers. Mid-body segments triannulate; two anterior annuli of about same length, posterior annulus slightly longer. Conical prostomium consisting of 9 rings; terminal annulus bearing 2 pairs of slender antennae (Fig. 12A). Proboscis with two types of papillae; numerous digitiform papillae with straight, longitudinal ridges (Fig. 12B–C), and isolated, broader, oval to globular papillae with ridges (Fig. 12D). Aileron with inner ramus united to outer ramus by a triangular inter-ramal plate (Fig. 12E).

First 2 parapodia uniramous, following parapodia biramous. Two slender digitiform presetal lobes: in anterior parapodia both lobes of about same length (Fig. 12F–G), in mid-body notopodial lobe distinctly longer and wider than neuropodial lobe (Fig. 12H–L), in posterior parapodia both lobes becoming slightly slimmer and notopodial lobe shorter than neuropodial one (Fig. 12M). One postsetal lobe short, rounded, sometimes blunt triangular (Fig. 12G, I, K, M). Dorsal cirri distinctly visible from 3rd parapodia, short digitiform, inserted on body wall far above parapodial base. Ventral cirri slender digitiform; in anterior parapodia about as long as presetal lobes (Fig.

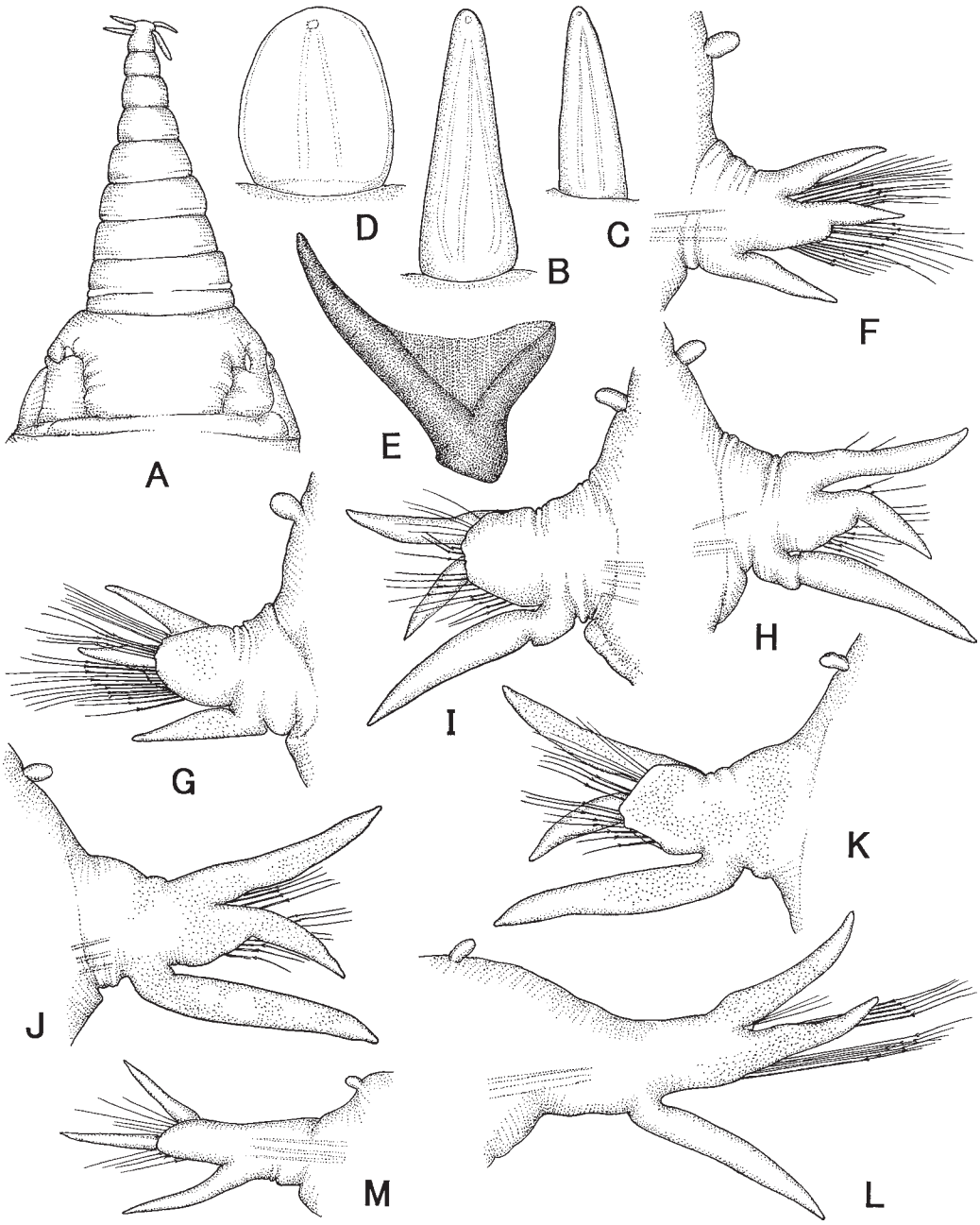

Fig. 12. *Glycera branchiopoda* Moore. —A, anterior end, dorsal view, × 32; B–D, proboscidial papillae, × 300; E, aileron, × 53; F, left parapodium from setiger 20, anterior view, × 38; G, same, posterior view, × 38; H, left parapodium from setiger 40, anterior view, × 38; I, same, posterior view, × 38; J, left parapodium from setiger 60, anterior view, × 38; K, same, posterior view, × 38; L, left parapodium from setiger 87, anterior view, × 38; M, left parapodium from setiger 108, posterior view, × 38.

12F); in following parapodia distinctly longer and wider than notopodial presetal lobes (Fig. 12H–M); situated medio-ventrally on parapodia. Branchiae absent. Notopodia with simple capillaries, neuropodia with spinigerous compound setae.

The species is newly added to the Japanese polychaetous fauna.

Distribution. Mexico; California; Puget Sound; Gulf of Alaska; Japan.

Glycera capitata Oersted, 1842

Glycera capitata: O'Connor, 1987: 183–184, fig. 13; Böggemann, 2002: 34–37, figs. 16–18; Imajima, 2007: 223, fig. 66.

Material. NSMT-Pol. 110094, WA07-C350D (1), NSMT-Pol. 110095, WA07-D210D (1).
Distribution. North Atlantic Ocean; boreal and arctic seas; Alaska to California; Japan.

Glycera neorobusta sp. nov.
(Fig. 13A–N)

Type material. Holotype—NSMT-Pol. H 484, Stn. WA06-A1500D, off Sanriku, 40°52.00´N, 142°33.35´E–40°51.64´N, 142°33.78´E, 1513–1512 m, Oct. 12, 2006.

Description. Holotype missing posterior end 88 mm long, 13 mm wide including parapodia for 133 setigers. Mid-body segments biannulate; anterior annulus about as long as posterior one. Conical prostomium consisting of 9 rings (Fig. 13A). Proboscis with two types of papillae: numerous conical papillae with 5–7 ridges (Fig. 13B–E); isolated, broader, oval to globular papillae with 6 ridges (Fig. 13F); ridges more U-shaped. Aileron with triangular base (Fig. 13G).

First two parapodia uniramous. Following anterior parapodia with 2 triangular presetal lobes of about same length, and 1 postsetal lobe large, rounded (Fig. 13H). From about setiger 10 postsetal lobe slightly incised, and appearing 2 presetal and 2 postsetal lobes. Two triangular presetal lobes of anterior region about same length, longer than postsetal lobes with pointed end distally (Fig. 13I–J); postsetal lobes low, triangular, notopodial lobe shorter than neuropodial lobe (Fig. 13I).

In median parapodia presetal lobes becoming mammiform, wider basally and distally pointed (Fig. 13K); postsetal lobes rounded to blunt triangular, slightly shorter than presetal lobe (Fig. 13L). In more posterior parapodia pre- and postsetal lobes becoming mammiform with pointed tips (Fig. 13M–N), presetal lobes slightly longer than postsetal lobes. Dorsal cirri from 3rd parapodia conical, inserted on body wall slightly above parapodial base. Ventral cirri triangular, shorter than postsetal lobes, situated medio-ventrally on parapodia. Branchiae non-retractile, blister-like, starting from about 100th parapodia, situated dorsally on parapodial bases (Fig. 13M–N). Notosetae thin capillaries with finely serrated edge; neurosetae compound spinigers with finely serrated blades.

Remarks. *Glycera neorobusta* is closely allied to *G. robusta* Ehlers, 1868 and *G. pseudorobusta* Böggemann and Fiege, 2001 in having the conical proboscidial papillae and the blister-like branchiae dorsally of parapodial bases. However, *G. neorobusta* is distinguished from the each of both species in the parapodia with the mammiform pre- and postsetal lobes and the proboscidial papillae with U-shaped ridges.

Etymology. This species is named for its great similarity to *Glycera robusta* Ehlers.

Distribution. Japan (1513–1512 m depth).

Glycera okai sp. nov.
(Fig. 14A–J)

Glycera sp. C, Imajima, 2007: 246, fig. 82.

Type material. Holotype—NSMT-Pol. H 485, Stn. WA06-DE280D, off Sanriku, 38°42.91´N,

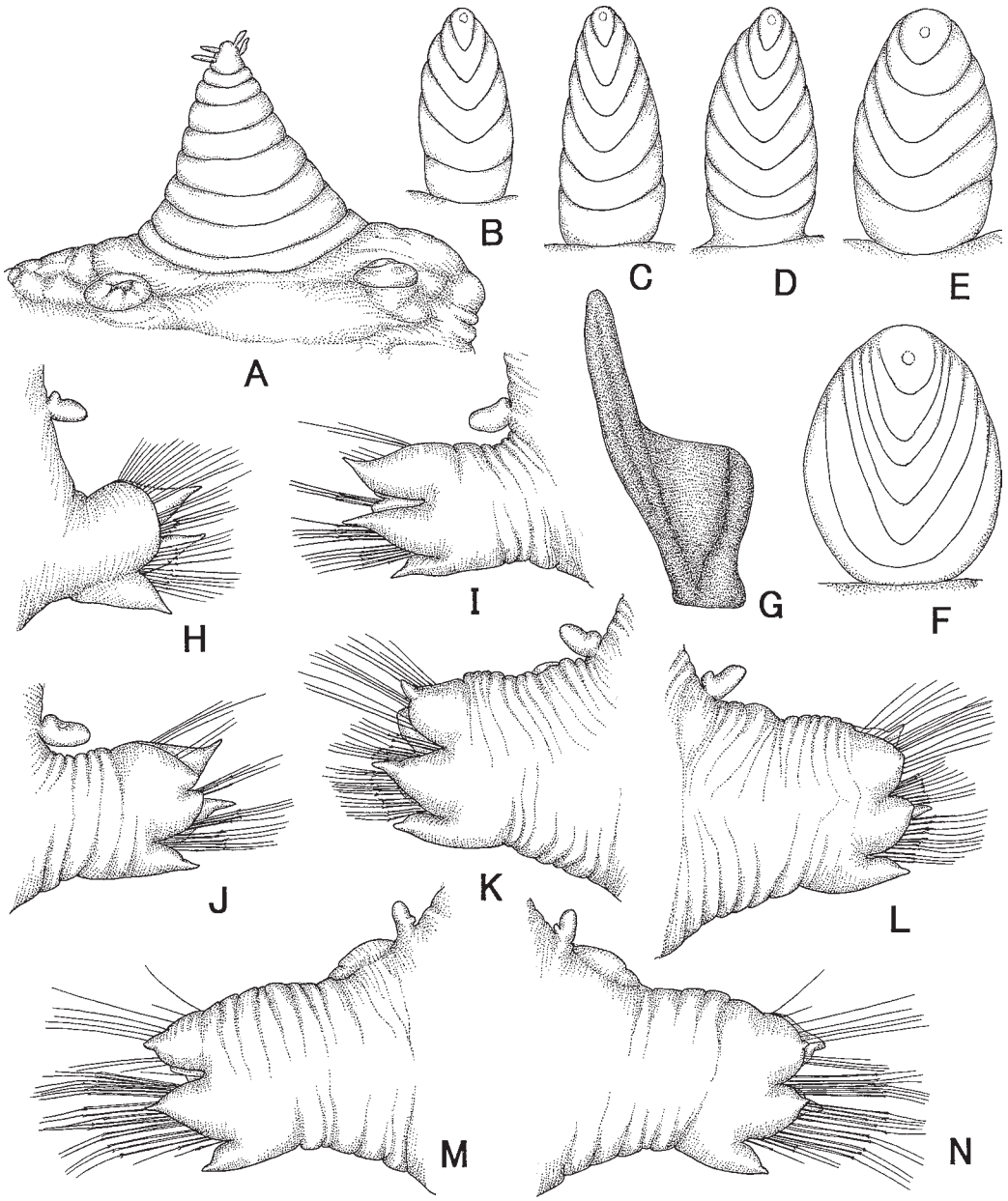

Fig. 13. *Glycera neorobusta* sp. nov. —A, anterior end, dorsal view, × 14; B–F, proboscidial papillae, B–D, × 400, E–F, × 360; G, aileron, × 20; H, right parapodium from setiger 6, posterior view, × 19; I, right parapodium from setiger 20, anterior view, × 16; J, same, posterior view, × 16; K, right parapodium from setiger 50, anterior view, × 16; L, same, posterior view, × 16; M, right parapodium from setiger 106, anterior view, × 16; N, same, posterior view, × 16.

141˚58.34´E–38˚43.12´N, 141˚58.37´E, 284–285 m, Nov. 23, 2006. Paratype—NSMT-Pol. P 486, Stn. WA07-A1500D, off Sanriku, 1402–1377 m, Oct. 11, 2007 (1).

Description. Holotype of largest, complete specimen 123 mm long, 8 mm wide including parapodia for 214 setigers. Mid-body segments biannulate, anterior annulus slightly longer than posterior one.

Conical prostomium consisting of 9 rings; terminal annulus bearing 2 pairs of slender

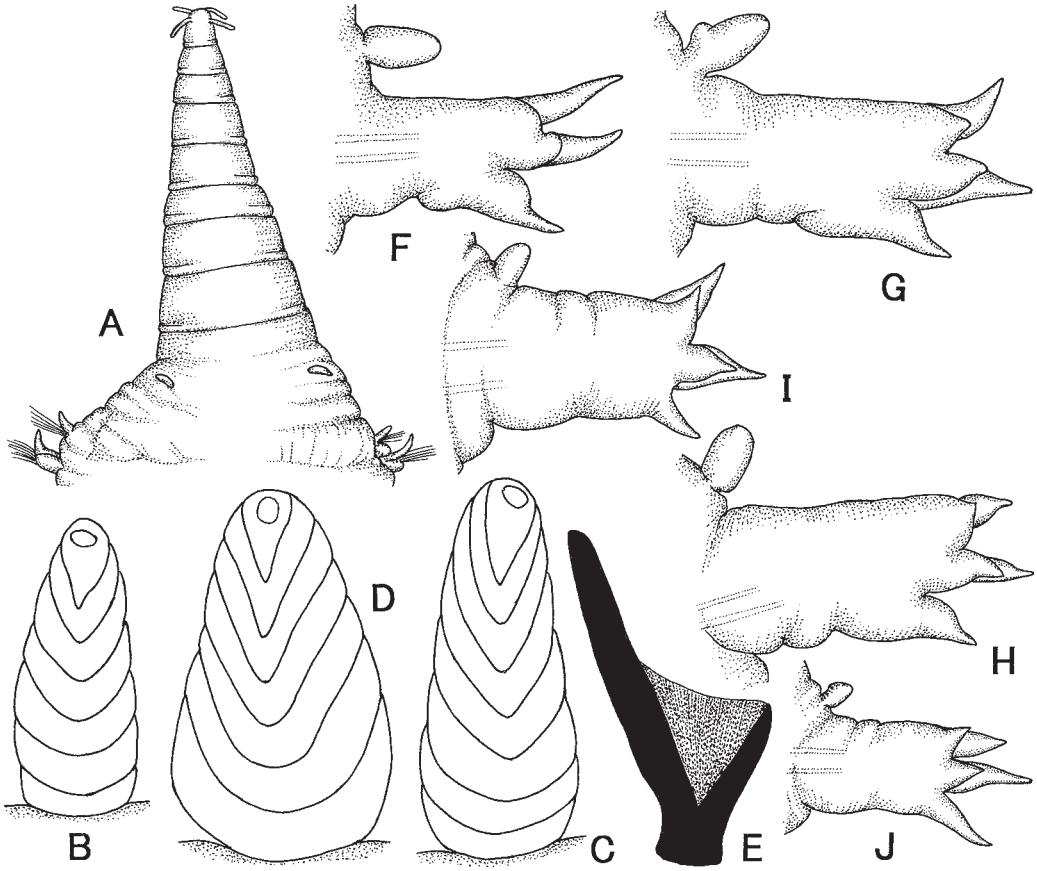

Fig. 14. *Glycera okai* sp. nov. —A, anterior end, dorsal view, × 22; B–D, proboscidial papillae, × 657; E, aileron, × 65; F, right parapodium from setiger 10, posterior view, × 26; G, same from setiger 20, same view, × 26; H, same from setiger 50, same view, × 26; I, same from posterior setiger, same view, × 26; J, same from near posterior end, same view, × 26.

antennae (Fig. 14A). Proboscis with two types of papillae: numerous conical papillae with 6–7 ridges (Fig. 14B–C); isolated, broader, globular papillae with 6 ridges (Fig. 14D); ridges more U-shaped. Aileron with inner ramus united to outer ramus by a triangular inter-ramal plate (Fig. 14E).

First two parapodia uniramous. Following anterior parapodia with 2 triangular presetal lobes of about same length, and notopodial postsetal lobes low, hill-like and neuropodial lobes rounded (Fig. 14F). In following parapodia neuropodial presetal lobes becoming longer than notopodial lobes and slightly slimmer posteriorly (Fig. 14G–J). Two shorter postsetal lobes distinctly triangular, always notopodial lobes shorter than neuropodial lobe (Fig. 14G–J). Dorsal cirri distinctly visible from 3rd parapodia, conical, inserted on body wall slightly above parapodial base. Ventral cirri triangular to digitiform, shorter than postsetal lobes, but more posterior cirri slender and elongated, about as long as neuropodial presetal lobe (Fig. 14J). Branchiae absent.

Remarks. *Glycera okai* is closely allied to *G. knoxi* Kirkegaard, 1995 from New Zealand (55–2677 m), in the structures of pre- and postsetal lobes of parapodia. However, *G. okai* has only conical and globular papillae with 6–7 U-shaped ridges, whereas *G. knoxi* has numerous conical papillae with 4–6 U-shaped ridges and isolated, broader, oval to globular papillae without ridges.

Etymology. The species name is after the Director Kenji Oka, of the Marine Biological Re-

search Institute of Japan Co. Ltd., who always support my taxonomic study on the Japanese polychaetes.

Distribution. Japan (284–1402 m depth).

Glycera semibranchiopoda sp. nov.
(Fig. 15A–M)

Type material. Holotype—NSMT-Pol. H 487, Stn. WA 05-FG510D, off Sanriku, 37˚16.92´N, 141˚50.04´E, 516–515 m, Nov. 15, 2005. Paratypes—NSMT-Pol. P 488, Stn. WA05- FG510D, same locality as holotype (2); NSMT-Pol. 489, Stn. WA05-DE380D, off Sanriku, 375 m, Nov. 19, 2005 (3); NSMT-Pol. P 490, Stn. WA05-FG250D, off Sanriku, 255–253 m, Nov. 14, 2005 (3); NSMT-Pol. P 491, Stn. WA05-GH510D, off Kashima Sea, 512–508 m, Nov. 11, 2005 (1); NSMT-Pol. P 492, Stn. WA05-H900D, off Kashima Sea, 904 m, Nov. 2, 2005 (2); NSMT-Pol. P 493, Stn. WA06-E510D, off Sanriku, 503–498 m, Nov. 3, 2006 (3); NSMT-Pol. P 494, Stn. WA06-GH480D, off Kashima Sea, 483–478 m, Nov. 18, 2006 (3).

Description. All specimens missing posterior end, holotype of largest one 40 mm long, about 4 mm wide including parapodia for 87 setigers. Mid-body segments triannulate; all annuli of about same length. Conical prostomium consisting of 9 rings; terminal annulus bearing 2 pairs of slender antennae (Fig. 15A). Proboscis with two types of papillae; numerous digitiform or conical papillae with straight, longitudinal ridges (Fig. 15B–D), and isolated, broader, oval to globular papillae with ridges (Fig. 15E). Aileron with inner ramus united to outer ramus by a triangular inter-ramal plate (Fig. 15F).

First 2 parapodia uniramous, following parapodia biramous. Two presetal lobes digitiform, notopodial presetal lobe slightly shorter than neuropodial one throughout all parapodia (Fig. 15G–L). One postsetal lobe short, rounded with a distal small notch (Fig. 15J–K, M). Dorsal cirri distinctly visible from 3rd parapodia, short digitiform, inserted on body wall far above parapodial base. Ventral cirri digitiform; in anterior parapodia about as long as postsetal lobes (Fig. 15J); in following parapodia distinctly longer and wider than anterior ones (Fig. 15K, M); situated medioventrally on parapodia. Branchiae absent. Notopodia with simple capillaries, neuropodia with spinigerous compound setae.

Remarks. *Glycera semibranchiopoda* shows some similarities to *G. branchiopoda* Moore, 1911 from California. Both species have the same types of proboscidial papillae, ailerons, digitiform presetal lobes and ventral cirri. However, *Glycera semibranchiopoda* can be distinguished from *G. branchiopoda* in having short notopodial presetal lobes than neuropodial presetal lobes throughout all parapodia, the notopodial presetal lobes of *G. branchiopoda* are elongated and longer than the neuropodial ones. *Glycera semibranchiopoda* and *G. guatemalensis* Böggemann and Fiege, 2001 from Guatemala show almost identical proboscidial papillae and parapodial structures. However, the ailerons of *G. guatemalensis* have deeply incised bases rather than pointed triangular bases.

Etymology. The species is named in having allied characteristics of *G. branchiopoda*.

Distribution. Japan (253–904 m depth).

Glycera tesselata Grube, 1863

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

Material. NSMT-Pol. 110096, WA07-B150 (1), NSMT-Pol. 110097, WA07-D210D (1), NS-

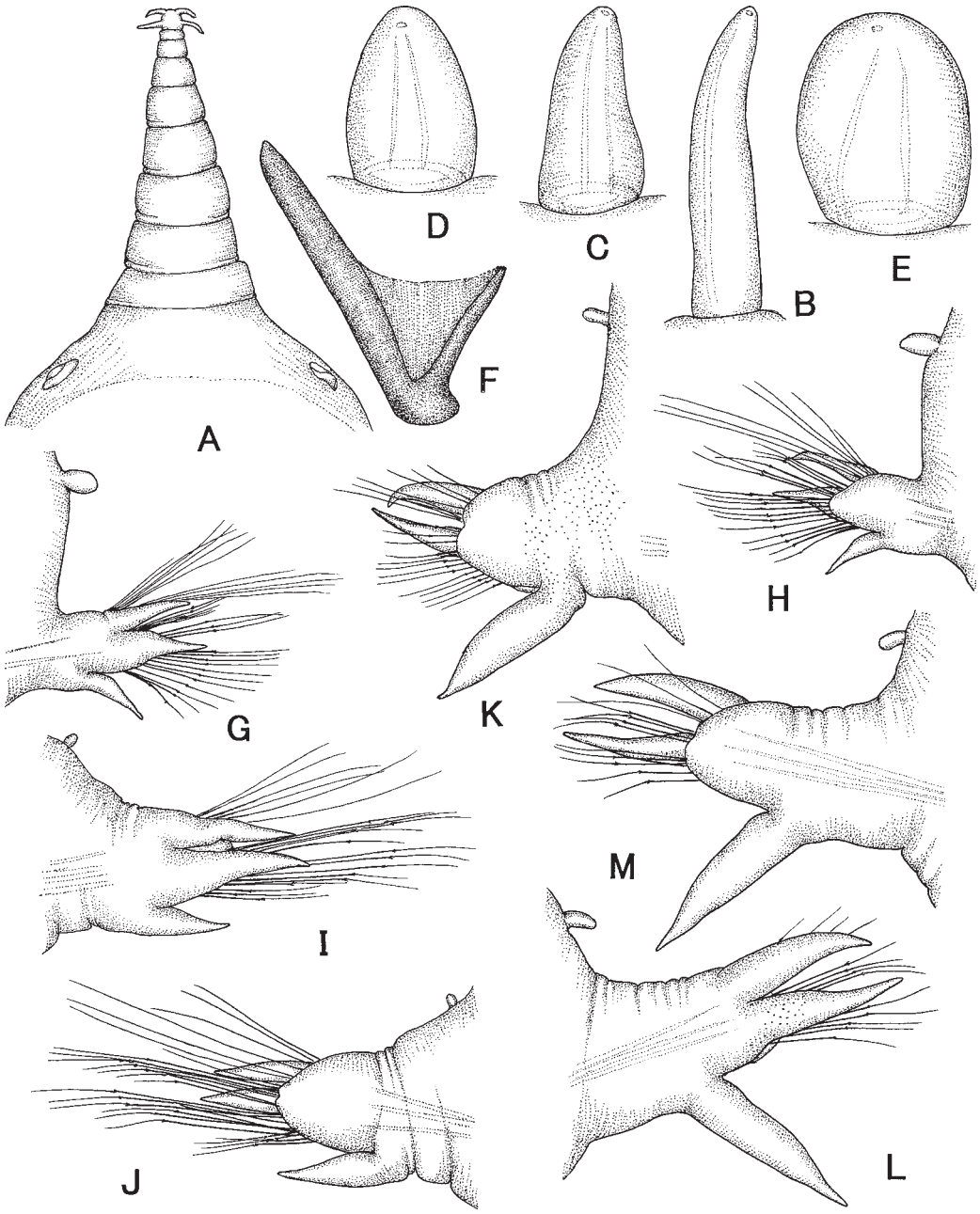

Fig. 15. *Glycera semibranchiopoda* sp. nov. —A, anterior end, dorsal view, × 32; B–E, proboscidial papillae, × 300; F, aileron, × 53; G, left parapodium from setiger 5, anterior view, × 42; H, same, posterior view, × 42; I, left parapodium from setiger 20, anterior view, × 42; J, same, posterior view, × 42; K, left parapodium from setiger 50, same view, × 42; L, left parapodium from setiger 80, anterior view, × 42; M, same, posterior view, × 42.

MT-Pol. 110098, WA07-D900 (1).

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

Glycera sp.

Material. NSMT-Pol. 110866, SO07-C7-B (1).

Family Goniadidae Kinberg, 1866
Genus ***Glycinde*** Müller, 1858
Glycinde sp.

Material. NSMT-Pol. 110867, SO07-O2 (1).

Genus ***Goniada*** Audouin and Milne-Edwards, 1833
Goniada brunnea Treadwell, 1906
(Fig. 16A–M)

Goniada brunnea Treadwell, 1906: 1174, figs. 67–70; Pettibone, 1963: 228, figs. 57a–b; Hilbig, 1994a: 222–224, fig. 7.3; Böggemann, 2005: 86–89, figs. 45–46.

Material. NSMT-Pol. 110029, WA05-FG510D (1), NSMT-Pol. 110030, WA05-GH510D (4); NSMT-Pol. 110031, WA06-G900D (1), NSMT-Pol. 110032, WA06-H250D (3); NSMT-Pol. 110099, WA07-A1500D (2), NSMT-Pol. 110100, WA07-C1500D (1), NSMT-Pol. 110101, WA07-D1500D (1).

Description. Largest specimen missing posterior part 73 mm long, about 3 mm wide including parapodia for 165 setigers. Segments in both anterior and posterior regions uniannulate.

Prostomium broadly triangular, depressed, consisting of 9 rings; frontal margin of distal annulus broad and truncated, with 2 pairs of small conical antennae; dorsal ones inserted slightly more proximal than ventral ones. Basal ring fused with peristomium, much longer than preceding annuli, without eyes (Fig. 16A). Proboscis covered with small, heart-shaped proboscideal papillae with short stalks (Fig. 16B). Terminal jaws surrounded by 18 soft papillae (Fig. 16C). Two macrognaths 4 to 5 fangs (Fig. 16D–E); dorsal arc with 4 smaller, simple inverted Y-shaped micrognaths (Fig. 16F), ventral arc with 7 H- and W-shaped compound micrognaths (Fig. 16G–H). Proboscideal base armed with 15 to 17 broadly V-shaped chevrons on each side; largest ones in middle of each group (Fig. 16I).

First parapodia with only one neuropodial pre- and postsetal lobes (Fig. 16J); second, lower presetal lobe developed from setiger 2–6; both presetal lobes digitiform, upper one slightly broader than lower one; conical to triangular postsetal lobe always distinctly shorter. Dorsal cirri foliaceous with slightly constricted base; ventral cirri long and conical (Fig. 16K). From setiger 44–45 each parapodium biramous with conical to triangular notopodial presetal lobes and shorter, rounded to slightly conical postsetal lobes; parapodia enlarged and with noto- and neuropodia clearly separated. Neuropodial presetal lobes in median and posterior setigers each triangular, and widely separated distally; neuropodial postsetal lobes broad and triangular, shorter than presetal lobes. Ventral cirri becoming more conical, distinctly shorter than neuropodial postsetal lobes (Fig. 16L). Notosetae capillary. Neurosetae compound spinigers with blades of different lengths (Fig. 16 M).

The species is newly added to the Japanese polychaetous fauna.

Distribution. North Atlantic; Indo-Pacific; southwest, central and northeast Pacific; Japan.

Goniada foliacea Moore, 1903

Goniada (*Leonnatus*) *foliacea* Moore, 1903: 457–460, pl. 26, figs. 75–76; Böggemann, 2005: 80–84, figs. 41–42.

Fig. 16. *Goniada brunnea* Treadwell. —A, anterior end, dorsal view, × 21; B, proboscidial papilla, × 680; C, dissected proboscis, showing soft papillae, macrognaths and micrognaths, × 24; D, E, macrognaths, × 83; F, microgath in dorsal arc, × 287; G–H, micrognaths in ventral arc, × 145; I, chevrons, × 45; J, left parapodium from setiger 1, posterior view, × 75; K, left parapodium from setiger 20, same view, × 70; L, left parapodium from setiger 73, same view, × 57; M, part of compound spiniger, × 792.

Goniada annulata Moore, 1905: 549–553, pl. 36, figs. 45–48; Uschakov, 1955: 173, fig. 48F–I; Hilbig, 1994a: 220–222, fig. 7.2; Imajima, 1997a: 169–170, fig. 8a–j; Imajima, 2003: 118.

Material. NSMT-Pol. 110021, WA05-DE380D (4), NSMT-Pol. 110022, WA05-E1000D (1), NSMT-Pol. 110023, WA05-EF450D (1), NSMT-Pol. 110024, WA05-FG450 (1), NSMT-Pol. 110025, WA05-FG510D (4), NSMT-Pol. 110026, WA05-G1500D (1), NSMT-Pol. 110027, WA05-

GH380D (1), NSMT-Pol. 110028, WA05-GH510D (1); NSMT-Pol. 109661, WA06-D450D (1), NSMT-Pol. 109662, WA06-E510D (15), NSMT-Pol. 109663, WA06-E1200D (2), NSMT-Pol. 109664, WA06-EF425D (3), NSMT-Pol. 109665, WA06-F1500D II (2), NSMT-Pol. 109666, WA06-FG350D (2), NSMT-Pol. 109667, WA06-GH480D (11), NSMT-Pol. 109668, WA06-H250D (1); NSMT-Pol. 110089, WA07-A450 (1), NSMT-Pol. 110090, WA07-A650 (1), NSMT-Pol. 110091, WA07-B410D (4), NSMT-Pol. 110092, WA07-C350D (8), NSMT-Pol. 110093, WA07-D900 (1).

Distribution. Northwest Atlantic; east Indian Ocean; Indo Pacific; Alaska to western Mexico; Sea of Okhotsk; Japan.

Goniada maculata Oersted, 1843

Goniada maculata: Okuda, 1939: 233–234, textfig. 8; Gardiner, 1976: 167–169, fig. 19c–f; Imajima, 1997a: 169; Böggemann, 1998: 97, 99; Böggemann, 2005: 104–114, figs. 57–58.

Material. NSMT-Pol. 110033, WA05-DE250D (7), NSMT-Pol. 110034, WA05-EF480 (1), NSMT-Pol. 110035, WA05-FG250D (40), NSMT-Pol. 110036, WA05-GH510D (1); NSMT-Pol. 110037, WA06-D210D (1), NSMT-Pol. 110039, WA06-DE280D (47), NSMT-Pol. 110040, WA06-E510D (1), NSMT-Pol. 110041, WA06-GH480D (1); NSMT-Pol. 110102, WA07-B410D (7), NSMT-Pol. 110103, WA07-D210D (8).

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

Goniada vorax (Kinberg, 1866)

Leonnatus vorax Kinberg, 1866: 247.
Goniada distorta Moore, 1903: 461–464, pl. 26, fig. 77.
Goniada sagamiana Imajima, 2003: 121–125, figs. 72–74.
Goniada vorax: Böggemann, 2005: 126–129, figs. 67–68.

Material. NSMT-Pol. 110042, WA05-FG510D (1).

Distribution. West Atlantic; Caribbean Sea, northeast Atlantic; Mediterranean Sea; Indian Ocean; northwest and southwest Pacific; Japan.

Family Sphaerodoridae Malmgren, 1867

Genus ***Clavodorum*** Hartman and Fauchald, 1971

Clavodorum sp.

Material. NSMT-Pol. 110828, SO07-C7-B (62), NSMT-Pol. 110829, SO07-K1 (1), NSMT-Pol. 110830, SO07-K2 (2). NSMT-Pol. 110608, KT07-29-H-1 (1), NSMT-Pol. 110609, KT07-29-M-1 (16).

Genus ***Ephesiella*** Chamberlin, 1919

Ephesiella brevicapitis (Moore, 1909)

Sphaerodorum brevicapitis Moore, 1909: 335–336, pl. 15, figs. 13–14; Hartman, 1968: 607–608, figs. 1–2.
Ephesiella brevicapitis: Fauchald, 1972a: 96, pl. 19, figs. a–f; Kudenov, 1994: 233–234, fig. 8.1; Imajima, 2001b: 164, fig. 77.

Material. NSMT-Pol. 109651, WA06-DE280D (1). NSMT-Pol. 110826, SO07-C7-B (3),

NSMT-Pol. 110827, SO07-K3 (8).

Distribution. Central California; western Mexico; Japan.

Genus ***Sphaerodoropsis*** Hartman and Fauchald, 1971

Sphaerodoropsis biserialis (Berkeley and Berkeley, 1944)

Sphaerodorum biserialis Berkeley and Berkeley, 1944: 3, figs. 1–3.
Sphaerodoridium biserialis: Lützen, 1961: 415; Imajima, 1969: 154–155, fig. 3a–d.
Sphaerodoropsis biserialis: Fauchald, 1974: 272, fig. 3.17; Kudenov, 1994: 234–236, fig. 8.2; Imajima, 2001b: 167, fig. 80.

Material. NSMT-Pol. 109652, WA06-DE280D (5), NSMT-Pol. 109653, WA06-GH480D (1). NSMT-Pol. 110604, KT07-29-H-1 (1), NSMT-Pol. 110854, KT07-29-M-1 (2), NSMT-Pol. 110607, KT07-29-M-3-2 (2).

Distribution. Canada; Alaska south to California and western Mexico; Japan.

Sphaerodoropsis minuta (Webster and Benedict, 1887)

Ephesia minuta Webster and Benedict, 1887: 728–729, pl. 4, figs. 64–66.
Sphaerodorum minutum: Fauvel, 1923: 380–381, fig. 149a–c; Uschakov, 1955: 222, fig. 70.
Sphaerodoridium minutum: Hartman, 1965: 94; Imajima, 1969: 153–154, fig. 2a–d.
Sphaerodoropsis minuta: Fauchald, 1974: 275, fig. 3.7.

Material. NSMT-Pol. 110605, KT07-29-H-1 (9).

Distribution. Spitzbergen; Arctic and Atlantic oceans; Pacific Ocean from western Canada to California; Alaska; Bering Sea; Japan.

Genus ***Sphaerodorum*** Oersted, 1843

Sphaerodorum gracilis (Rathke, 1843)

Ephesia gracilis: Fauvel, 1923: 377–378, fig. 148a–f.
Sphaerodorum gracilis: Pettibone, 1963: 207–208, fig. 52a–c; Imajima, 1969: 152–153, fig. 1a–c; Fauchald, 1974: 278–279, fig. 4.1–5.

Material. NSMT-Pol. 109654, WA05-DE250D (15), NSMT-Pol. 109655, WA05-G280 (1); NSMT-Pol. 109656, WA06-A450 (1), NSMT-Pol. 109657, WA06-D450D (1), NSMT-Pol. 109658, WA06-G900D (1); NSMT-Pol. 110381, WA07-A450 (1), NSMT-Pol. 110382, WA07-B410D (3), NSMT-Pol. 110383, WA07-C350D (4), NSMT-Pol. 110384, WA07-D210D (2). NSMT-Pol. 110606, KT07-29-H-1 (19).

Distribution. Atlantic Ocean off Europe and America; Japan.

Family Hesionidae Sars, 1862

Genus ***Podarkeopsis*** Laubier, 1961

Podarkeopsis glabra (Hartman, 1961)

Oxydromus arenicolus glabrus Hartman, 1961: 68.
Podarkeopsis glabra: Hilbig, 1994b: 261–263, fig. 9.9; Imajima, 2007: 449, fig. 142.

Material. NSMT-Pol. 109593, WA05-FG250D (1).

Distribution. California to Alaska; Japan.

Family Pilargidae St. Joseph, 1899
Genus ***Ancistrosyllis*** McIntosh, 1879
Ancistrosyllis groenlandica McIntosh, 1879

Ancistrosyllis groenlandica McIntosh, 1879: 502, pl. 65, figs. 3, 20; Imajima, 1987: 153–155, fig. 2a–k; Imajima, 2001b: 180, fig. 83.

Material. NSMT-Pol. 109594, WA05-FG510D (1), NSMT-Pol. 109595, WA05-GH510D (2); NSMT-Pol. 109596, WA06-E1200D (1), NSMT-Pol. 110365, WA06-GH480D (1), NSMT-Pol. 109597, WA06-H1500D (1); NSMT-Pol. 110366, WA07-A1500D (1), NSMT-Pol. 110367, WA07-B1500D (1), NSMT-Pol. 110368, WA07-C1500D (1).

Distribution. West Greenland; off northeastern South America; Mediterranean Sea; Japan.

Genus ***Cabira*** Webster, 1879
Cabira sp.

Material. NSMT-Pol. 110599, KT07-29-H-2 (1).

Genus ***Sigambra*** Müller, 1858
Sigambra bassi (Hartman, 1947)

Ancistrosyllis bassi Hartman, 1947a: 501–504, pl. 61, figs. 1–7.
Sigambra bassi: Pettibone, 1966: 186, fig. 16a–f; Hartman, 1968: 389, figs. 1–5; Salazar- Vallejo, 1986: 200; Blake, 1994b: 287–288, fig. 10.7; Licher and Westheide, 1997: 6–10, figs. 1–2; Imajima, 2001b: 184, fig. 87.

Material. NSMT-Pol. 109598, WA05-FG250D (1).
Distribution. Gulf of Mexico; NW Atlantic Ocean; NE Pacific Ocean; Japan.

Sigambra bidentata Britaev and Saphronova, 1981

Sigambra bidentata Britaev and Saphronova, 1981: 1315–1316, textfig. 1; Salazar-Vallejo, 1990: 511; Imajima, 2001b: 185, fig. 88.

Material. NSMT-Pol. 109599, WA05-G1500D (1); NSMT-Pol. 110364, WA06-H1500D (1)
Distribution. Sea of Japan; Japan.

Sigambra spp.

Material. NSMT-Pol. 110831, SO07-C7-B (1), NSMT-Pol. 110832, SO07-K3 (1), NSMT-Pol. 110833, SO07-O2 (2). NSMT-Pol. 110600, KT07-29-H-2 (1).

All specimens are missing characteristic posterior ends.

Family Syllidae Williams, 1851
Subfamily Autolytinae Rioja, 1925
Genus ***Autolytus*** Grube, 1850
Autolytus sp.

Material. NSMT-Pol. 110369, WA05-DE380D (4).

Subfamily Eusyllinae Rioja, 1925
Genus ***Eusyllis*** Malmgren, 1867
Eusyllis blomstrandi Malmgren, 1867

Eusyllis blomstrandi: Fauvel, 1923: 293–294, fig. 112h–m; Pettibone, 1954: 260–261, fig. 28g–i; Imajima, 1966a: 92–94, text-fig. 29a–h; Imajima, 1996: 50, fig. 36.

Material. NSMT-Pol. 110370, WA05-DE380D (4), NSMT-Pol. 110371, WA05-EF250D (1); NSMT-Pol. 110372, WA06-A250D (1), NSMT-Pol. 110373, WA06-GH480D (2); NSMT-Pol. 110374, WA07-B410D (1), NSMT-Pol. 110375, WA07-D210D (1).

Distribution. Spitsbergen; Iceland; Mediterranean Sea; Alaska; Massachusetts; Japan.

Subfamily Exogoninae Rioja, 1925
Genus ***Exogone*** Oersted, 1845
Exogone breviantennata Hartmann-Schröder, 1959

Exogone breviantennata Hartmann-Schröder, 1959: 125–127, figs. 75–78; Imajima, 1996: 9, fig. 3; Imajima, 2001a: 59.
Exogone verugera: Imajima, 1966b: 399, textfig. 3a–h.

Material. NSMT-Pol. 109600, WA05-DE380D (1); NSMT-Pol. 109601, WA06-A450 (3).

Distribution. Mediterranean Sea; Mexico; South Africa; Australia; Japan.

Exogone sp.

Material. NSMT-Pol. 110574, SO06-M1-B (30).

Genus ***Sphaerosyllis*** Claparède, 1863
Sphaerosyllis erinaceus Claparède, 1863

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

Material. NSMT-Pol. 109602, WA06-A450 (5). NSMT-Pol. 110855, KT07-29-H-1 (1).

Distribution. Mediterranean Sea; Atlantic Ocean; Yellow Sea; Japan.

Sphaerosyllis sp.

Material. NSMT-Pol. 110575, SO06-M1-B (10).

Subfamily Syllinae Rioja, 1925
Genus ***Syllis*** Savigny, 1818
Syllis spongiphila Verrill, 1885

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

Material. NSMT-Pol. 109603, WA05-G425 (1), NSMT-Pol. 109604, WA05-GH380 (1); NSMT-Pol. 110571, WA06-E380 (1), NSMT-Pol. 109605, WA06-GH425 (4).

Distribution. Massachusettes; Falkland Islands; western Canada; Japan.

Genus ***Typosyllis*** Langerhans, 1879
Typosyllis alternata (Moore, 1908)

Syllis alternata Moore, 1908: 323–325, figs. a–f.
Typosyllis alternata: Hartman, 1948a: 21; Imajima, 1966d: 273–275, textfig. 58a–l; Imajima, 2005: 84.

Material. NSMT-Pol. 109606, WA05-DE380D (1), NSMT-Pol. 109607, WA05-G310 (1), NSMT-Pol. 109608, WA05-GH380D (1); NSMT-Pol. 110572, WA06-DE280D (1), NSMT-Pol. 109609, WA06-G900D (1), NSMT-Pol. 109610, WA06-GH480D (8).

Distribution. Alaska; California; Vancouver Island; Japan.

Typosyllis spp.

Material. NSMT-Pol. 110376, WA05-DE250D (2), NSMT-Pol. 110377, WA05-EF250D (1); NSMT-Pol. 110378, WA06-B310D (1); NSMT-Pol. 110379, WA07-B410D (1).

Family Nereididae Johnston, 1865
Genus ***Ceratocephala*** Malmgren, 1867
Ceratocephala borealis Wesenberg-Lund, 1950
(Figs. 17A–I, 18A–F)

Ceratocephala borealis Wesenberg-Lund, 1950: 18–19, chart 25, pl. 5, figs. 19–21, pl. 6, figs. 23–25.

Material. NSMT-Pol. 110385, WA05-DE380D (2), NSMT-Pol. 110386, WA05-E1000D (3), NSMT-Pol. 110387, WA05-EF250D (4), NSMT-Pol. 110388, WA05-G1500D (1); NSMT-Pol. 110389, WA06-B750D (2), NSMT-Pol. 110390, WA06-E1200D (1), NSMT-Pol. 110391, WA06-H250D (1).

Description. All specimens missing posterior ends; largest one 30 mm long, 6 mm wide at anterior body including parapodia for 32 setigers. Body slender, slightly flattened, opaque white in alcohol.

Prostomium wider than long, with 2 thick palps and 2 more slender frontal antennae fused in pairs at bases. Palps with stout ceratophores and short palpostyles. Styles of antennae extending to level of palps. Eyes not recognized. Four pairs of tentacular cirri with short, thick cirratophores; longest one extending to setiger 4, smooth, tapering towards tips (Fig. 17A–B). Proboscis with typical two regions in extrusion, with curved jaws, transparent yellowish-brown with 5 coarse teeth (Fig. 17C). Proboscis with soft papillae only on oral ring as follows: area V with three large coniform papillae (Fig. 17D), areas VII–VIII with seven papillae of same size (Fig. 17E).

First 2 parapodial segments uniramous; dorsal cirri of usual cirriform type, with rather stout, cylindrical cirrophores; neuropodia with median presetal ligule, ventral ligule and postsetal acicular lobe; neurosetae surrounding ligule semilunaryly as a thin membrane; aciculum black, distally tapering in curved tip; ventral cirri simple (Fig. 17F–G). Following parapodia all biramous, noto- and neuropodia deeply separated from each other. Notopodia with large, conspicuous, slender digitate presetal ligule and short, triangular to digitate postsetal lobes. Neuropodia larger than notopodia, with digitate presetal ligules and short ventral ligule on ventral edge. Ventral cirri bifurcated, upper one longer than lower one; two cirri arissing from common base (Fig. 17H–I). From 11th parapodia dorsal cirri transformed into long sausage-shaped cirrophore with slender dorsal cirrus at tip (Fig. 18A).

Setae entirely composite, spinigerous; all notosetae in supra-acicular bundle slightly

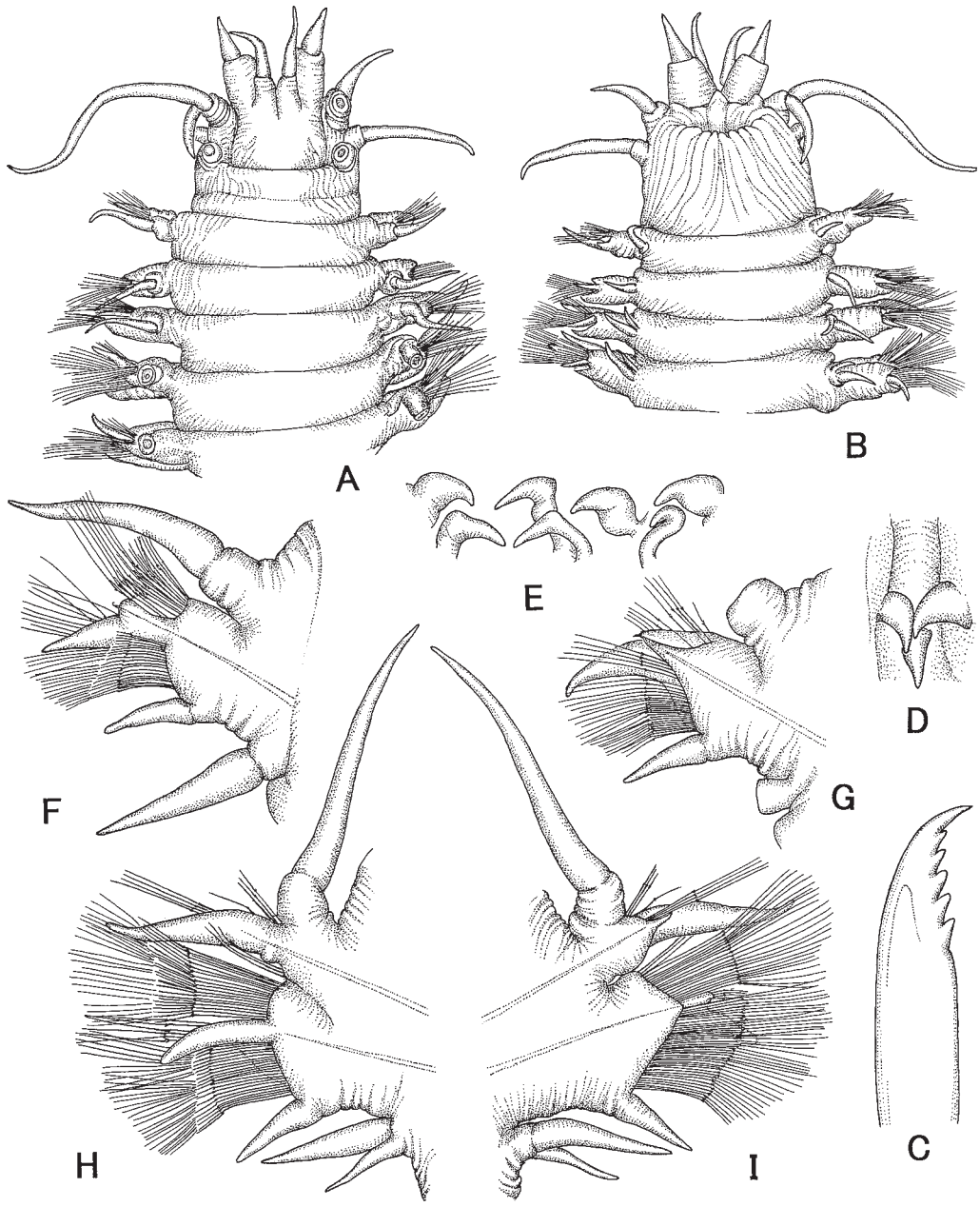

Fig. 17. *Ceratocephala borealis* Wesenberg-Lund. —A, anterior end, dorsal view, × 13; B, same, ventral view, × 13; C, jaw, × 22; D, papillae on area V of proboscis, × 30; E, papillae on areas VII–VIII of proboscis, × 30; F, 1st right parapodium, anterior view, × 34; G, 1st left parapodium, posterior view, dorsal and ventral cirri lacking, × 34; H, 3rd right parapodium, anterior view, × 30; I, same, posterior view, × 30.

heterogomph spinigers with long appendages with minutely serrated margin (Fig. 18B–C); those in infra-acicular bundle with short appendages. Neurosetae in supra-acicular bundle slightly heterogomph spinigers with long appendages with coarsely serrated margin (Fig. 18D); those in infra-acicular bundle homogomph spinigers with short appendages with minutely serrated margin (Fig. 18E–F).

The species is newly added to the Japanese polychaetous fauna.

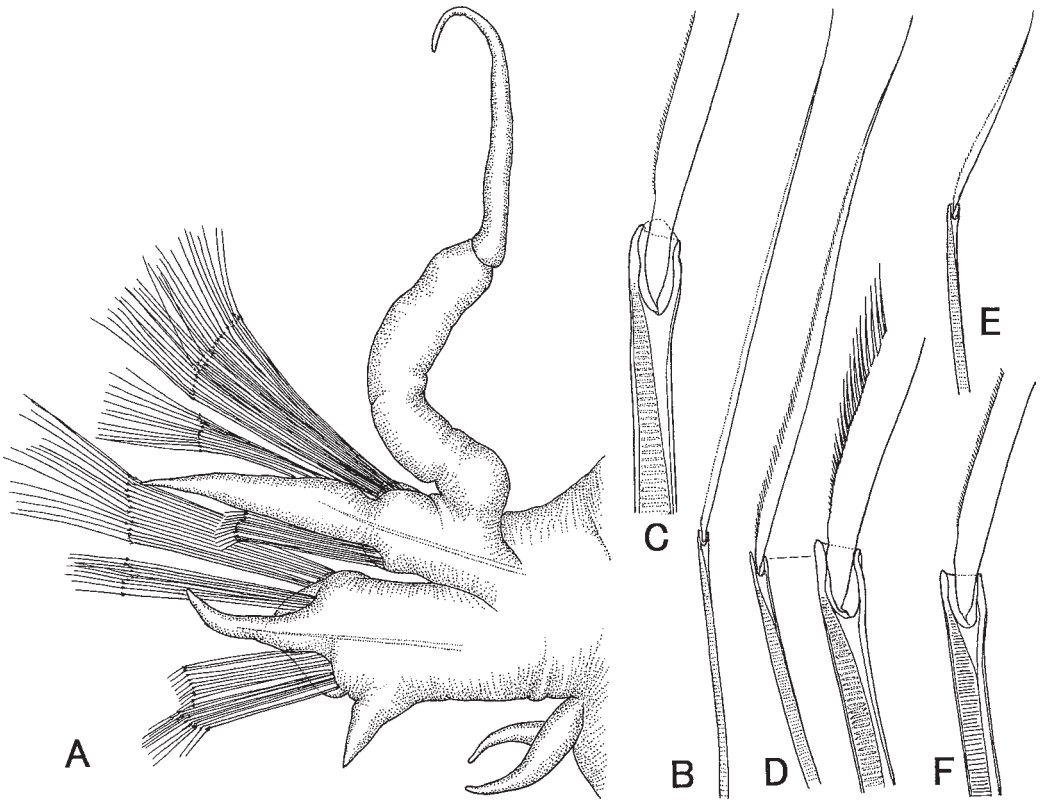

Fig. 18. *Ceratocephala borealis* Wesenberg-Lund. —A, 12th right parapodium, anterior view, × 32; B, notoseta in supra-acicular bundle, × 153; C, setal shaft of same, × 428; D, neuroseta in supra-acicular bundle, × 153, with detail of setal shaft, × 428; E, neuroseta in infra-acicular bundle, × 153; F, setal shaft of same, × 428.

Distribution. West of Greenland (599–1096 m depths); Japan.

Genus ***Nereis*** Linnaeus, 1758
Nereis abyssa sp. nov.
(Figs. 19A–F, 20A–J)

Type material. Holotype—NSMT-Pol. H 495, Stn. WA05-DE510, off Sanriku, 38˚38.99´N, 142˚07.27´E–38˚37.87´N, 142˚07.20´E, 511–511 m, Nov. 21, 2005. Paratypes—NSMT-Pol. P 496, Stn. WA05-GH380, off Kashima Sea, 376–381 m, Nov. 12, 2005 (3); NSMT-Pol. P 497, Stn. WA06-A510, off Sanriku, 511–510 m, Oct. 10, 2006 (1); NSMT-Pol. P 498, Stn. WA06-D550, off Sanriku, 548–551 m, Oct. 18, 2006 (5); NSMT-Pol. P 499, Stn. WA06-E410, off Sanriku, 408–408 m, Nov. 24, 2006 (2).

Other material. NSMT-Pol. 110393, WA05-E510 (1), NSMT-Pol. 110394, WA05-F510 (3), NSMT-Pol. 110395, WA05-F900 (1), NSMT-Pol. 110396, WA05-FG425 (4), NSMT-Pol. 110397, WA05-FG480 (3), NSMT-Pol. 110398, WA05-G550(1), NSMT-Pol. 110399, WA05-G900 (2), NSMT-Pol. 110400, WA05-GH250 (2), NSMT-Pol. 110401, WA05-GH280 (6), NSMT-Pol. 110402, WA05-GH380 (16), NSMT-Pol. 110403, WA05-GH425 (1), NSMT-Pol. 110404, WA05-GH450 (1), NSMT-Pol. 110405, WA05-GH480 (1), NSMT-Pol. 110406, WA05-H450 (2), NSMT-Pol. 110407, WA05-H510 (1), NSMT-Pol. 110408, WA05-H900D (1); NSMT-Pol. 110410,

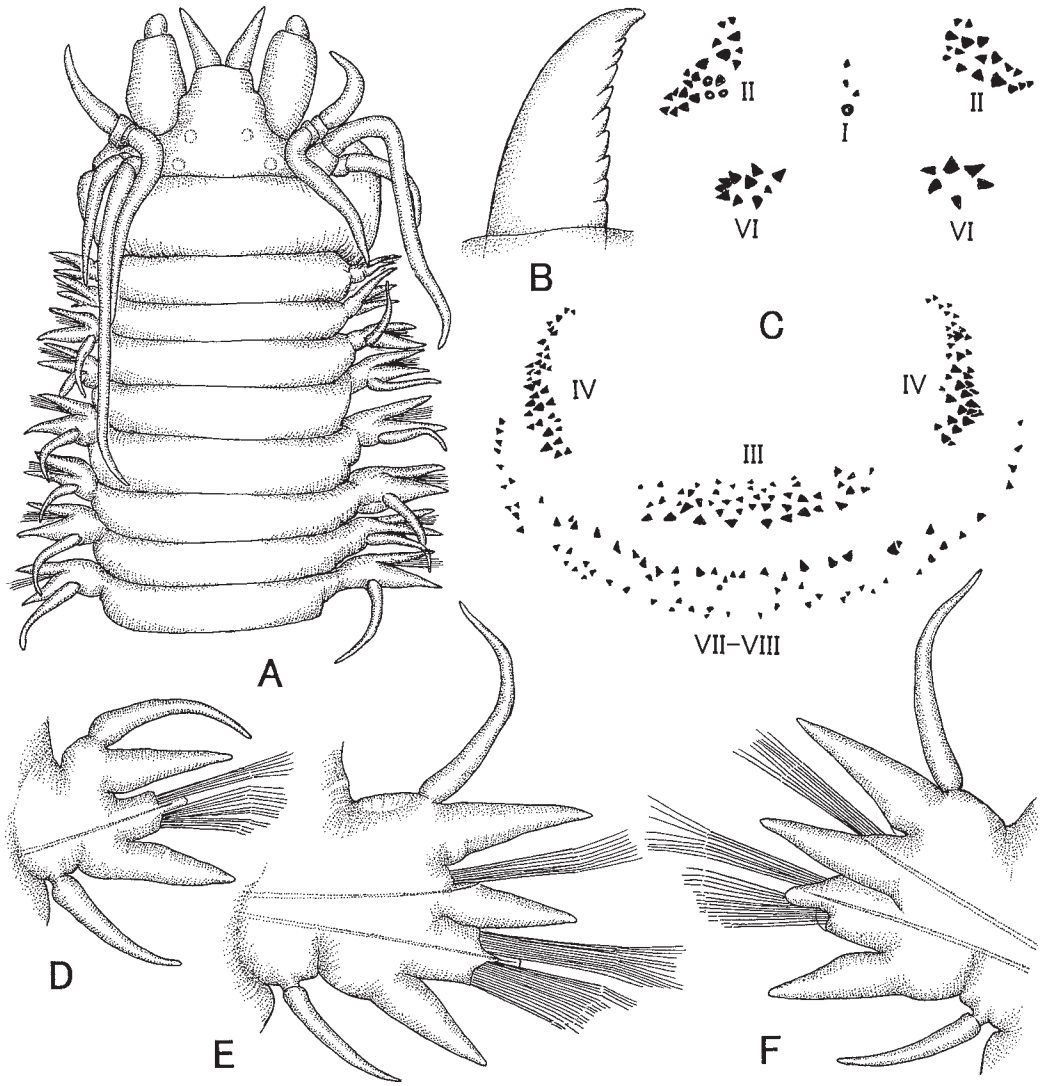

Fig. 19. *Nereis abyssa* sp. nov. —A, anterior end, dorsal view, × 9; B, jaw, × 18; C, paragnaths in areas I–VIII, × 36; D, right parapodium from setiger 2, posterior view, × 23; E, same from setiger 6, same view, × 23; F, same, anterior view, × 23.

WA06-B450 (1), NSMT-Pol. 110411, WA06-C750 (2), NSMT-Pol. 110413, WA06-DE450 (7), NSMT-Pol. 110414, WA06-E150 (1), NSMT-Pol. 110416, WA06-E550 (1), NSMT-Pol. 110417, WA06-E750 (1), NSMT-Pol. 110418, WA06-E900 (1), NSMT-Pol. 110419, WA06-F250 (3), NSMT-Pol. 110420, WA06-F510 (3), NSMT-Pol. 110421, WA06-F550 (2), NSMT-Pol. 110422, WA06-F900 (1), NSMT-Pol. 110423, WA06-FG480 (14), NSMT-Pol. 110415, WA06-G480 (1), NSMT-Pol. 110424, WA06-GH425 (5), NSMT-Pol. 110425, WA06-GH510 (4); NSMT-Pol. 110392, WA07-A410 (4), NSMT-Pol. 110409, WA07-B150 (1), NSMT-Pol. 110412, WA07-B310 (1), NSMT-Pol. 110426, WA07-B410 (1), NSMT-Pol. 110427, WA07-B510 (1), NSMT-Pol. 110428, WA07-C410 (2), NSMT-Pol. 110429, WA07-C510 (12), NSMT-Pol. 110430, WA07-C550 (3), NSMT-Pol. 110431, WA07-C650 (4), NSMT-Pol. 110432, WA07-C1500D (3), NSMT-Pol. 110433, WA07-D510 (1), NSMT-Pol. 110434, WA07-D550 (3).

Description. Holotype in median size 65 mm long, 6 mm wide including parapodia for 82

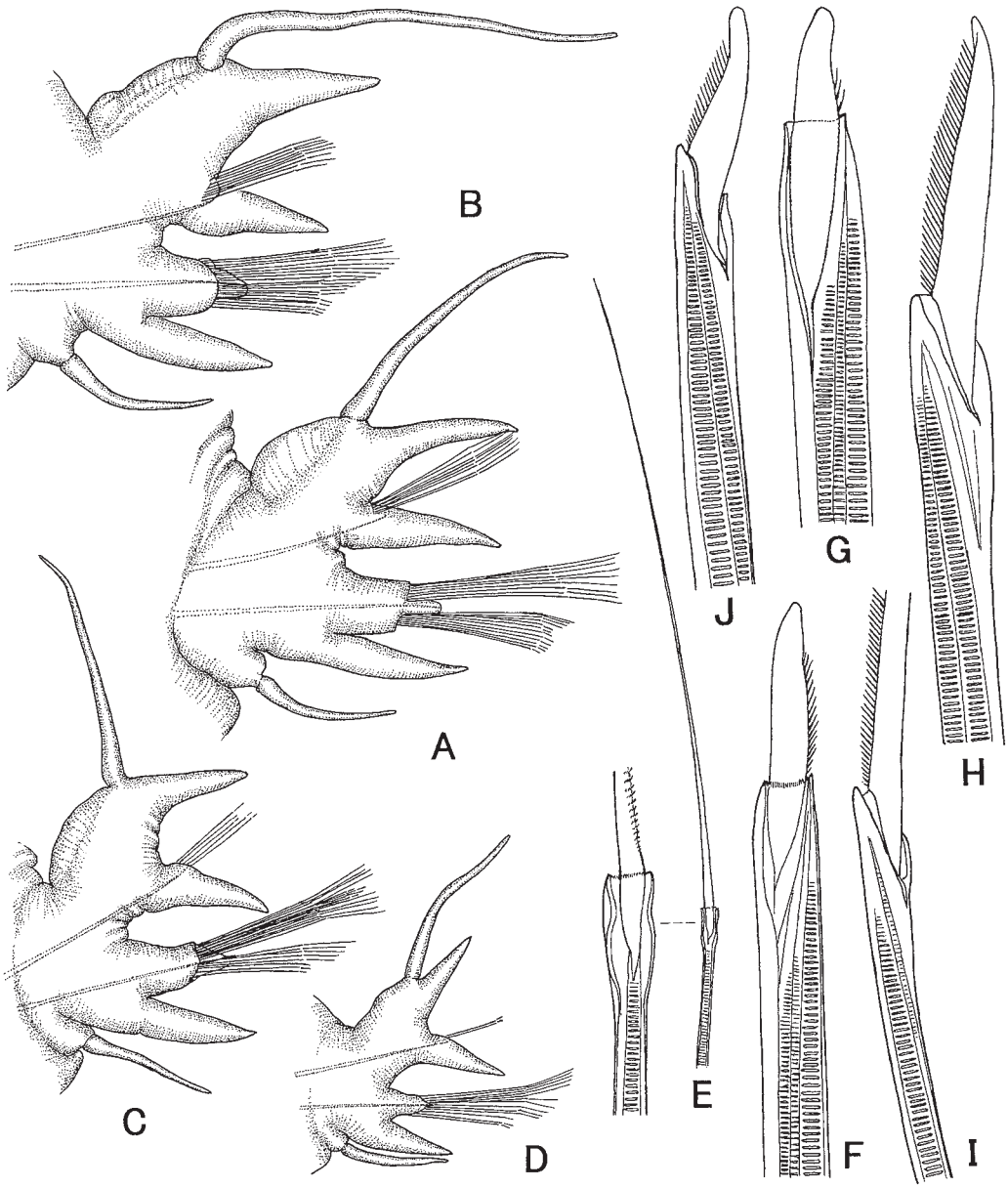

Fig. 20. *Nereis abyssa* sp. nov. —A, right parapodium from setiger 26, posterior view, × 23; B, same from setiger 30 in large paratype, same view, × 18; C, same from setiger 50, same view, × 23; D, same from setiger 70, same view, × 23; E, notopodial homogomph spiniger from setiger 26, × 196, with detail of distal part of shaft, × 612; F, notopodial homogomph falciger from setiger 50, × 612; G, notopodial homogomph falciger from posterior setiger, × 612; H, neuropodial heterogomph falciger in upper bundle from same, × 612; I, neuropodial heterogomph spiniger in lower bundle from same, × 612; J, neuropodial heterogomph falciger in lower bundle from same, × 612.

setigerous segments. Body robust, flattened, color yellowish brown in spirit, without pigmented pattern.

Prostomium hexagonal, with straight, narrow, entire anterior margin. Frontal antennae longer than half length of prostomium; eyes absent, but 2 pairs of sunken depressions representing positions of missing eyes present. Palps thick, each with globular palpostyle. Peristomium about twice

as long as first setiger; four pairs tentacular cirri, longest extending to setiger 5 (Fig. 19A).

Pharynx with slender, blackish brown jaws curving more towards tips, with 8 teeth reduced to low undulations distally (Fig. 19B). Paragnaths conical, dark brown, arranged as follows: Area I = 4; II = 18 (right) – 20 (left) in 3 oblique arcs; III = 47 in 3 transverse rows; IV = 35 – 36 in oblique crescent; V = 0; VI = 6 (right) – 10 (left) in small oval patch; VII-VIII = 65 in 2–3 irregular rows, some of the larger cones forming single row anteriorly (Fig. 19C).

First 2 pairs of parapodia uniramous, with slender dorsal cirrus and acutely conical notopodial ligule; neuropodium similar to those of following setigers (Fig. 19D). Parapodia biramous from setiger 3 posteriorly. Dorsal cirrus about 1.5 times length of upper notopodial ligule in anterior setigers, elongating to 2–2.5 times length of ligule posteriorly. Upper and lower notopodial ligules acutely conical, upper ligules slightly longer than lower ligules in anterior region (Figs. 19E–F; 20A–B), and upper ligules with thickened glandular border (Fig. 20A–B). Neuropodial acicular lobes subtriangular; neuropodial ligules subequal in size and shape to notopodial lower ligules. Ventral cirri slender, about as long as neuropodial ligules. Parapodia of middle and posterior regions grandually modified; notopodium becoming slightly elevated posteriorly (Fig. 20C–D); upper and lower notopodial ligules similar in length.

Notopodia with homogomph spinigers with minute serrations along cutting margin (Fig. 20E) in anterior parapodia, thereafter a single homogomph falciger appearing from setigers 30–38, short blade with slender teeth along cutting margin (Fig. 20F). More posterior notopodia with only 1–2 homogomph falcigers with short rod-like blade with few serrations along cutting margin (Fig. 20G). Neuropodia with homogomph spinigers and heterogomph falcigers (Fig. 20H) in upper bundle, and heterogomph spinigers (Fig. 20I) and heterogomph falcigers (Fig. 20J) in lower bundle. Acicula black, occurring singly in each noto- and neuropodium. Pygidium with a pair of anal cirri.

Remarks. *Nereis abyssa* resembles *N. anoculis* Hartman, 1960 from Tanner Basin (1414–1486 m) and San Nicolas Basin (1670 m) off southern California, in the features of the parapodia prolonged in their basal parts. However, *N. abyssa* have many paragnaths on areas VII-VIII instead of a single row of 4 cones.

Etymology. The species is named after the habitat in deep seas.

Distribution. Japan (151–1499 m).

Genus ***Rullierinereis*** Pettibone, 1971
Rullierinereis profunda sp. nov.
(Figs. 21A–E, 22A–M)

Type material. Holotype—NSMT-Pol. H 500, Stn. SO06-M1-B, off Miyako, 39˚40.4´N, 143˚11.3´E, 2018 m, Jul. 16, 2006. Paratypes—NSMT-Pol. P 501, Stn. SO06-M1-B, same locality as holotype (13).

Description. Holotype of largest, complete specimen, 16 mm long, 1 mm wide including parapodia for 76 setigerous segments. Color in spirit uniformly tan.

Prostomium pentagonal and slightly longer than wide, with short tapered frontal antennae inserted close together. Eyes not visible. Palps thick and elbowed, palpostyles directed medially (Fig. 21A–B). Achaetous tentacular segment about twice length of following segment. Four pairs of slender tentacular cirri, longest one about as long as length of tentacular segment, and shortest one about half as long as longest one. Pharyngeal jaws translucent yellow, distally curved, each one bearing 7 cutting teeth (Fig. 21C); paragnaths or papillae not observed.

First 2 parapodial segments uniramous (Fig. 21D). Dorsal cirri subulate, subequal in length

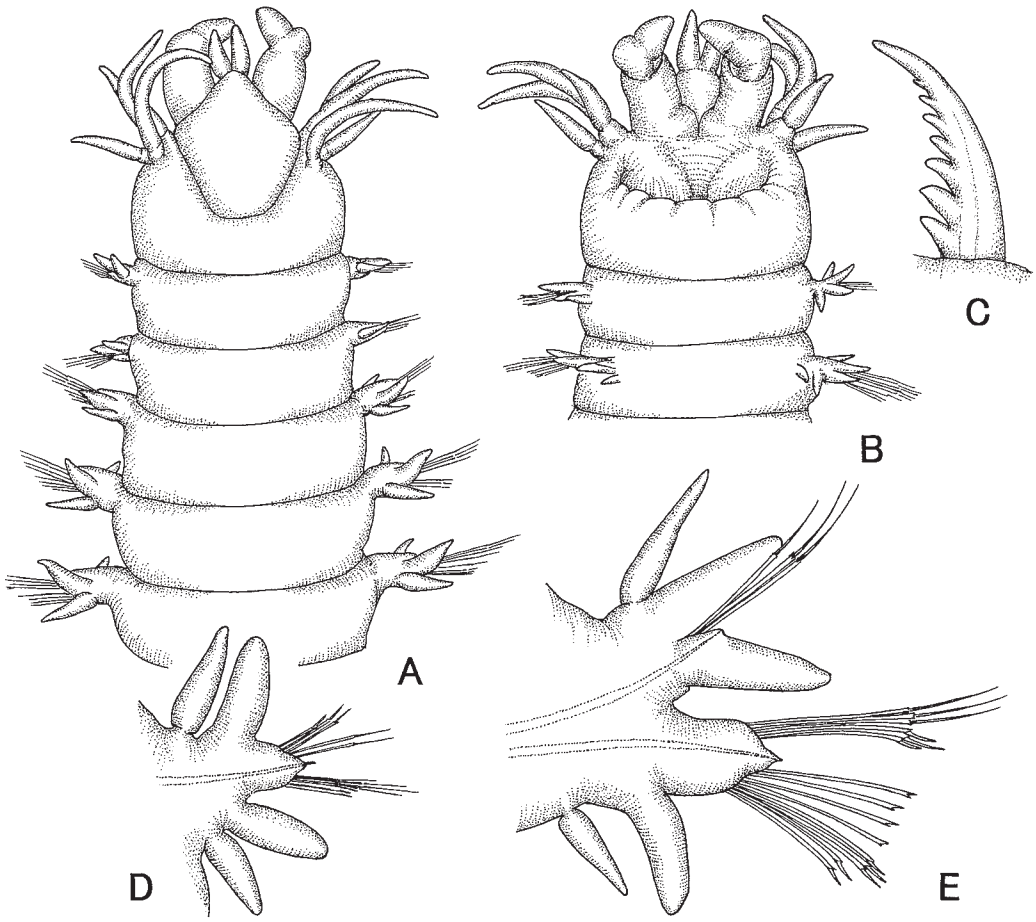

Fig. 21. *Rullierinereis profunda* sp. nov.—A, anterior end, dorsal view, × 45; B, same, ventral view, × 48; C, pharyngeal jaw, × 107; D, left parapodium from setiger 1, anterior view, × 130; E, same from setiger 5, same view, × 130.

of notopodial ligules; neuropodial acicular lobes subtriangular; neuropodial ligules subequal in size and shape to notopodial ligules. Ventral cirri short, subulate. Upper bundle of neurosetae homogomph spinigers and heterogomph falcigers; lower bundle of neurosetae heterogomph spinigers and heterogomph falcigers. Following parapodia of anterior region (Fig. 21E) with upper and lower notopodial ligules large, subulate and 3 homogomph spinigers (Fig. 22A). Upper bundles of neurosetae with homogomph spinigers and heterogomph falcigers with moderately long appendages (Fig. 22B), lower bundles with heterogomph spinigers and heterogomph falcigers with somewhat shorter appendages (Fig. 22C). In parapodia of middle regions (Fig. 22D), upper notopodial ligules gradually reduced to small ligules than lower ligules posteriorly, with notopodial homogomph spinigers (Fig. 22E) and stout homogomph falcigers with short, rod-like appendage with minute serrations along cutting edge (Fig. 22F). Upper bundle of neurosetae homogomph spinigers and heterogomph falcigers; low bundle heterogomph spnigers and heterogomph falcigers (Fig. 22G). Posterior parapodia slightly modified (Fig. 22H), notopodia with single stout homogomph falciger (Fig. 22I) with short, rod-like appendage with 5 coarse teeth along cutting edge. Neuropodia with homogomph spinigers with long appendages (Fig. 22J) and heterogomph falcigers in upper acicular positions, and heterogomph spinigers with rather short appendages (Fig. 22K) and heterogomph falcigers (Fig. 22L) in lower acicular positions.

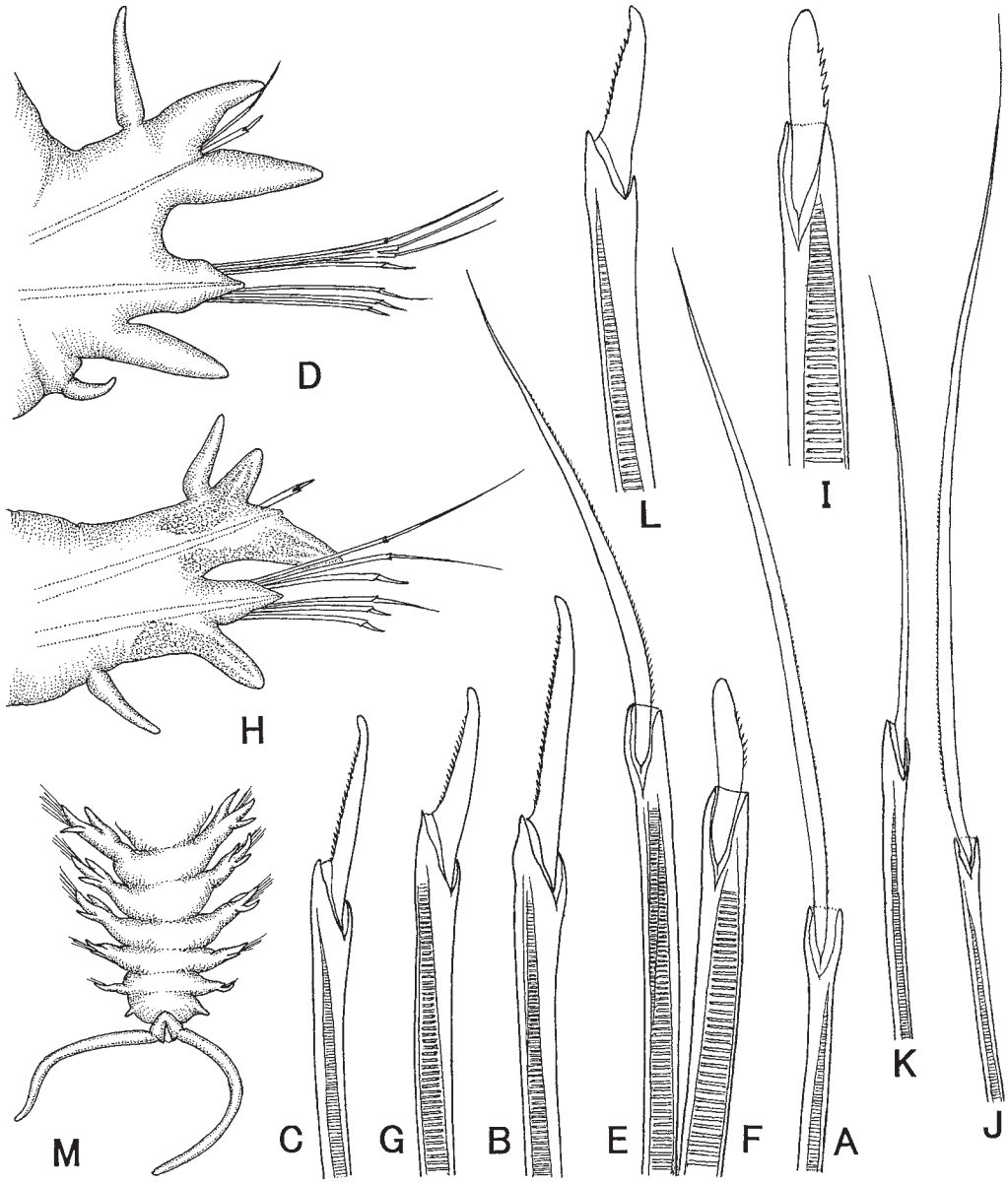

Fig. 22. *Rullierinereis profunda* sp. nov.—A, notopodial homogomph spiniger from setiger 5, × 846; B, neuropodial heterogomph falciger in upper bundle from same, × 846; C, same in lower bundle from same, × 846; D, left parapodium from median setiger, anterior view, × 130; E, notopodial homogomph spiniger from same, × 846; F, notopodial homogomph falciger from same, × 846; G, neuropodial heterogomph falciger in lower bundle from same, × 846; H, left parapodium from posterior setiger, anterior view, × 130; I, notopodial homogomph falciger from same, × 864; J, neuropodial homogomph spiniger in upper bundle from same, × 580; K, heterogomph spiniger in lower bundle from same, × 580; L, heterogomph falciger in same, × 864; M, posterior end, dorsal view, × 48.

Pygidium with ventral slender anal cirri and dorsal anus (Fig. 22M).

Remarks. This species is referred to *Rullierinereis* Pettibone (1971) because the pharynx lacks paragnaths and papillae, and the notopodia have homogomph spinigers and homogomph falcigers in posterior setigers. *Rullierinereis profunda* can be distinguished from known eight

species, *Rullierinereis mexicana* (Treadwell, 1942), *R. bahamensis* (Hartmann-Schröder, 1958), *R. zebra* (Rullier, 1963), *R. uncinata* (Hartman, 1965), *R. misakiensis* (Imajima and Hayashi, 1969), *R. gallardoi* (Pettibone, 1971), *R. hancocki* (Fauchald, 1977) and *R. anoculata* (Cantone, 1982), in the structures of the characteristic prostomium and palps, and of the appendages of notopodial homogomph falcigers.

Etymology. The species is named after the habitat of the specimens.

Distribution. Japan (2018 m depth).

Family Nephtyidae Grube, 1850
Genus ***Aglaophamus*** Kinberg, 1866
Aglaophamus japonicus Imajima and Takeda, 1985

Aglaophamus japonicus Imajima and Takeda, 1985: 73–75, fig. 8a–l; Imajima, 2006: 357.

Material. NSMT-Pol. 109611, WA05-FG250D (2).

Distribution. Japan.

Aglaophamus malmgreni (Théel, 1879)

Nephthys malmgreni Théel, 1879: 26, pl. 1, fig. 17, pl. 2, fig. 17.
Aglaophamus malmgreni: Pettibone, 1956: 557; Imajima and Takeda, 1985: 68–70, fig. 6a–n.

Material. NSMT-Pol. 109612, WA05-DE380D (1), NSMT-Pol. 109613, WA05-FG250D (5), NSMT-Pol. 109614, WA05-GH510D (2); NSMT-Pol. 109784, WA06-DE280D (4), NSMT-Pol. 109615, WA06-E510D (1), NSMT-Pol. 109785, WA06-GH480D (4), NSMT-Pol. 109616, WA06-H250D (1). NSMT-Pol. 110812, SO07-C7-B (2), NSMT-Pol. 110813, SO07-K1 (10), NSMT-Pol. 110814, SO07-K2 (1), NSMT-Pol. 110815, SO07-O1 (3). NSMT-Pol. 110618, KT07-29-H-2 (6), NSMT-Pol. 110619, KT07-29-M-1 (1), NSMT-Pol. 110620, KT07-29-M-2 (3), NSMT-Pol. 110621, KT07-29-M-3-2 (28), NSMT-Pol. 110622, KT07-29-M-3-3 (37).

Distribution. Arctic Ocean; Bering Sea; north Japan Sea; Japan.

Aglaophamus sinensis (Fauvel, 1932)

Nephthys sinensis Fauvel, 1932a: 536–537, fig. 1a–c.
Aglaophamus sinensis: Hartman, 1950: 117; Fauchald, 1968: 12–13, figs. 16–18; Imajima and Takeda, 1985: 65–68, figs. 4a–i, 5a–d.

Material. NSMT-Pol. 109617, WA06-A150D (5).

Distribution. Yellow Sea; Viet Nam; Japan.

Aglaophamus spp.

Material. NSMT-Pol. 110451, WA05-EF450D (1), NSMT-Pol. 110452, WA05-G280 (4); NSMT-Pol. 110459, WA06-D210D (1), NSMT-Pol. 110453, WA06-F650D (1); NSMT-Pol. 110454, WA07-B410D (3), NSMT-Pol. 110455, WA07-B1200 (6), NSMT-Pol. 110456, WA07-C900 (4), NSMT-Pol. 110457, WA07-C1500D (1), NSMT-Pol. 110458, WA07-D210D (3). NSMT-Pol. 110623, KT07-29-M-3-3 (3).

Genus ***Nephtys*** Cuvier, 1817

Nephtys caeca (Fabricius, 1780)

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

Material. NSMT-Pol. 110071, WA07-D210D (1).

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

Nephtys longosetosa Oersted, 1843

Nephthys longisetosa: Verrill, 1881: 295, 319; Okuda, 1939: 231–232.

Nephtys longosetosa: Hartman, 1944a: 339, pl. 15, fig. 7; Pettibone, 1963: 204–205, fig. 47a; Imajima and Takeda, 1987: 60–61, figs. 10a–i, 14.

Material. NSMT-Pol. 109618, WA05-DE250D (1), NSMT-Pol. 109619, WA05-EF250D (1), NSMT-Pol. 109620, WA05-FG250D (15); NSMT-Pol. 109621, WA06-C900D (1), NSMT-Pol. 109622, WA06-D210D (2), NSMT-Pol. 109623, WA06-E510D (2), NSMT-Pol. 109624, WA06-EF425D (3).

Distribution. Northern Atlantic Ocean; Alaska to California; Bering Sea; Sea of Okhotsk; Yellow Sea; Japan.

Nephtys oligobranchia Southern, 1921

Nephthys oligobranchia Southern, 1921: 610–611, pl. 24, fig. 12A–C; Fauvel, 1932b: 119; Okuda, 1943: 100–102, figs. 1–3; Uschakov and Wu, 1962b: 25–26, pl. 3, I; Uschakov and Wu, 1979: 55–57, fig. 17, I; Lee and Jae, 1983: 23–24, fig. 2, pl. II, E–H.

Nephtys oligobranchia: Imajima and Takeda, 1987: 47–50, figs. 4a–l, 6.

Material. NSMT-Pol. 110624, KT07-29-H-1 (18), NSMT-Pol. 110625, KT07-29-M-1 (22), NSMT-Pol. 110626, KT07-29-M-2 (1).

Distribution. Indian Ocean; Yellow Sea; Japan.

Nephtys paradoxa Malm, 1874

Nephthys paradoxa: Fauvel, 1914: 199.

Nephtys paradoxa: Hartman, 1944a: 335, 339, pl. 15, fig. 6; Fauchald, 1968: 13–15, figs. 1A, 2B, 3C; Imajima and Takeda, 1987: 50–52, figs. 5a–i, 6.

Material. NSMT-Pol. 109787, WA05-DE380D (1), NSMT-Pol. 109788, WA05-GH380D (2); NSMT-Pol. 109789, WA06-A1500D (1), NSMT-Pol. 109790, WA06-D1500D (2), NSMT-Pol. 109791, WA06-GH480D (8), NSMT-Pol. 109792, WA06-H250D (5), NSMT-Pol. 109793, WA06-H1500D (1); NSMT-Pol. 110077, WA07-A450 (4), NSMT-Pol. 110078, WA07-C1500D (1), NSMT-Pol. 110079, WA07-D1500 (1). NSMT-Pol. 110629, KT07-29- M-3-1 (1)

Distribution. North Atlantic Ocean; Bering Strait; Greenland; Japan.

Nephtys punctata Hartman, 1938

Nephtys punctata Hartman, 1938: 155–156, fig. 67; Berkeley and Berkeley, 1942: 193; Imajima and Takeda, 1987: 61–63, figs. 11a–m, 14.

Material. NSMT-Pol. 109625, WA05-DE250D (1), NSMT-Pol. 109626, WA05-DE380D (1), NSMT-Pol. 109627, WA05-E1000D (1), NSMT-Pol. 109628, WA05-EF250D (8), NSMT-Pol. 109629, WA05-EF450D (5), NSMT-Pol. 109630, WA05-FG250D (3), NSMT-Pol. 109631, WA05-FG510D (1), NSMT-Pol. 109632, WA05-G1500D (1), NSMT-Pol. 109633, WA05-H900D (2); NSMT-Pol. 109634, WA06-A1200D (5), NSMT-Pol. 109794, WA06-D210D (1), NSMT-Pol. 109635, WA06-DE280D (4), NSMT-Pol. 109636, WA06-EF425 (5), NSMT-Pol. 109637, WA06-F650D (1), NSMT-Pol. 109638, WA06-F750 (4), NSMT-Pol. 109639, WA06-F1500D II (3), NSMT-Pol. 109795, WA06-FG350D (1), NSMT-Pol. 109640, WA06-G900D (6), NSMT-Pol. 109641, WA06-G1200D (4), NSMT-Pol. 109642, WA06- H1500D (3); NSMT-Pol. 110080, WA07-A250D (3), NSMT-Pol. 110081, WA07-A650 (2), NSMT-Pol. 110082, WA07-A1500D (1), NSMT-Pol. 110083, WA07-B410D (15), NSMT-Pol. 110084, WA07-B1500D (3), NSMT-Pol. 110085, WA07-C350D (2), NSMT-Pol. 110086, WA07-C1500D (4), NSMT-Pol. 110087, WA07-D210D (6), NSMT-Pol. 110088, WA07-D900 (3). NSMT-Pol. 110816, SO07-C7-B (2). NSMT-Pol. 110627, KT07-29-H-2 (1), NSMT-Pol. 110628, KT07-29-M-1 (1), NSMT-Pol. 110629, KT07-29-M-3-1 (4), NSMT-Pol. 110630, KT07-29-M-3-2 (4).

Distribution. Alaska to California; Kamchatka; Japan.

Family Paralacydoniidae Pettibone, 1963
Genus ***Paralacydonia*** Fauvel, 1913
Paralacydonia paradoxa Fauvel, 1913

Paralacydonia paradoxa Fauvel, 1913: 54, fig. 55; Blake, 1994c: 364–365, fig. 14.1; Imajima, 2003: 180–182, fig. 90a–j.

Material. NSMT-Pol. 109643, WA05-EF250D (1), NSMT-Pol. 109644, WA05-G280 (2), NSMT-Pol. 109645, WA05-G1500D (3), NSMT-Pol. 109646, WA05-GH510D (3); NSMT-Pol. 109647, WA06-E510D (1), NSMT-Pol. 109648, WA06-E1200D (1), NSMT-Pol. 109649, WA06-G1200D (1), NSMT-Pol. 109650, WA06-GH480D (9); NSMT-Pol. 110380 WA07-C1500D (3). NSMT-Pol. 110601, KT07-29-H-2 (7), NSMT-Pol. 110602, KT07-29-M-3-1 (1), NSMT-Pol. 110611, KT07-29-M-3-2 (2), NSMT-Pol. 110603, KT07-29-M-3-3 (1).

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

Order Amphinomida
Family Euphrosinidae Williams, 1851
Genus ***Euphrosine*** Lamarck, 1818
Euphrosine digitalis sp. nov.
(Fig. 23A–G)

Euphrosine borealis: Imajima, 2007: 472, fig. 144 (not Oersted, 1843).

Type material. Holotype—NSMT-Pol. H 502, Stn. WA06-G425, off Kashima Sea, 36˚53.19´N, 141˚29.24´E–36˚52.05´N, 141˚27.59´E, 428–420 m, Oct. 27, 2006. Paratypes—NSMT-Pol. P 503, Stn. WA06-G425, same locality as holotype (2); NSMT-Pol. P 504, Stn. WA05- GH450, off Kashima Sea, 454–452 m, Nov. 13, 2005 (2).

Description. Holotype 18 mm long, about 7 mm wide excluding setae at median region for 28 setigers. Body whitish yellow in spirit. Median dorsal field narrow, about one sixth body width.

Prostomium well developed, with pair of large dorsal eyes lateral to median antenna (Fig. 23A); ventral eyes inserted just anterior to palpal antennae (Fig. 23B). Median antenna short, about

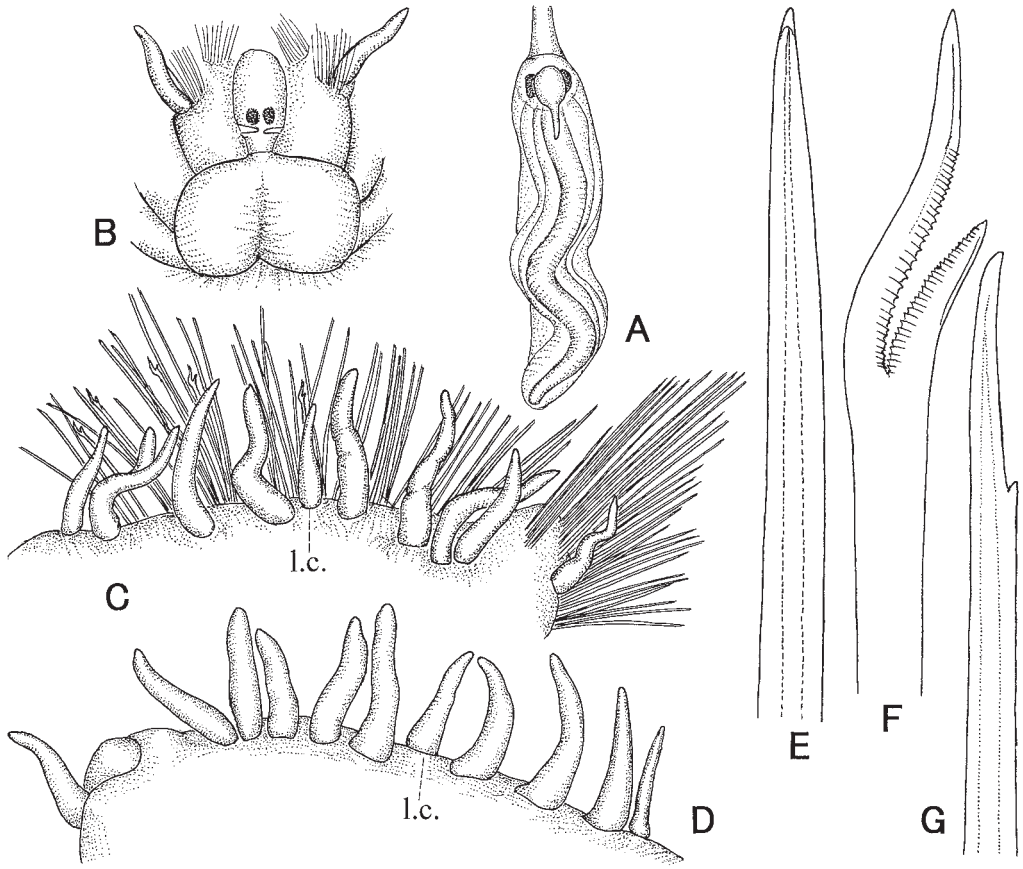

Fig. 23. *Euphrosine digitalis* sp. nov. —A, prostomium and caruncle, dorsal view, × 20; B, prostomium and setiger 1, anteroventral view, × 23; C, right setiger 14, posterior view, × 23; D, left setiger 9 omitted setae, same view, × 23; E, slender notoseta, × 300; F, ringent notoseta, × 300; G, neuroseta, × 300.

one sixth length of caruncle, tapering distal style. Palpal antennae short, digitiform. Caruncle appearing trilobed dorsoventrally, all lobes connected by thin ventral membrane; dorsal lobe extending to setiger 4. Palps large, elliptical, paired, separated by mid-ventral groove (Fig. 23B).

Parapodia biramous, with parapodial cirri from setiger 1, with spreading notosetal and whorl-like neurosetal fascicles. Notopodia not raised above dorsum. Neuropodia resembling flat circular pad (Fig. 23C–D). Notosetae arrayed in 3 tiers: simple, slender notosetae (Fig. 23E) in anterior and posterior tiers; ringent notosetae (Fig. 23F) present in middle tier with simple notosetae. Neurosetae all bifurcate, each with long prong distally recurved, falcate, having a short prong (Fig. 23G).

Branchiae present from setiger 1, simple, cirriform, numbering 7 pairs per segment where best developed in midbody segments (Fig. 23C–D), slightly longer than dorsal, lateral and ventral cirri, but gill 1 of 2 or 3 parapodia in middle body having bifurcate filaments (Fig. 23C). Lateral cirrus arising between gill 3 and gill 4, digitiform, shorter than branchiae (Fig. 23C–D).

Remarks. *Euphrosine digitalis* allied to *E. longesetosa* Horst, 1903, *E. pilosa* Horst, 1903 and *E. armata* Kudenov, 1993 in having entire cirriform branchiae. *E. digitalis* differs from *E. longesetosa* and *E. armata* in having lateral cirri inserted between gill 3 and gill 4. *E. digitalis* resembles *E. pilosa* in having lateral cirri inserted between gill 3 and gill 4 and smooth notosetae. However, *E. digitalis* can be distinguished from *E. pilosa* in that, (1) the lateral lobes of the caruncle fused to one another rather than the lateral lobes separated from the median lobe, and free from the body

wall (Horst, 1912, pl. 1, fig. 1), (2) the notosetae in the anterior and posterior tiers are simple, slender, without short prong rather than having a developed, large short prong and (3) the specimens are benthic in depths of 420 m rather than pelagic worms.

Etymology. The species is named in having slender digitate branchiae.

Distribution. Japan (420–454 m depth).

Euphrosine pseudonotialis sp. nov.
(Fig. 24A–G)

Type material. Holotype—NSMT-Pol. H 505, Stn. WA06-G425, off Kashima Sea, 36˚53.19´N, 141˚29.24´E–36˚52.05´N, 141˚27.59´E, 428–420 m, Oct. 27, 2006.

Description. Holotype 15 mm long, about 8 mm wide at median region for 27 setigers. Body in spirit whitish yellow, lacking pigmentation. Dorsomedian field narrow, about one fifth body

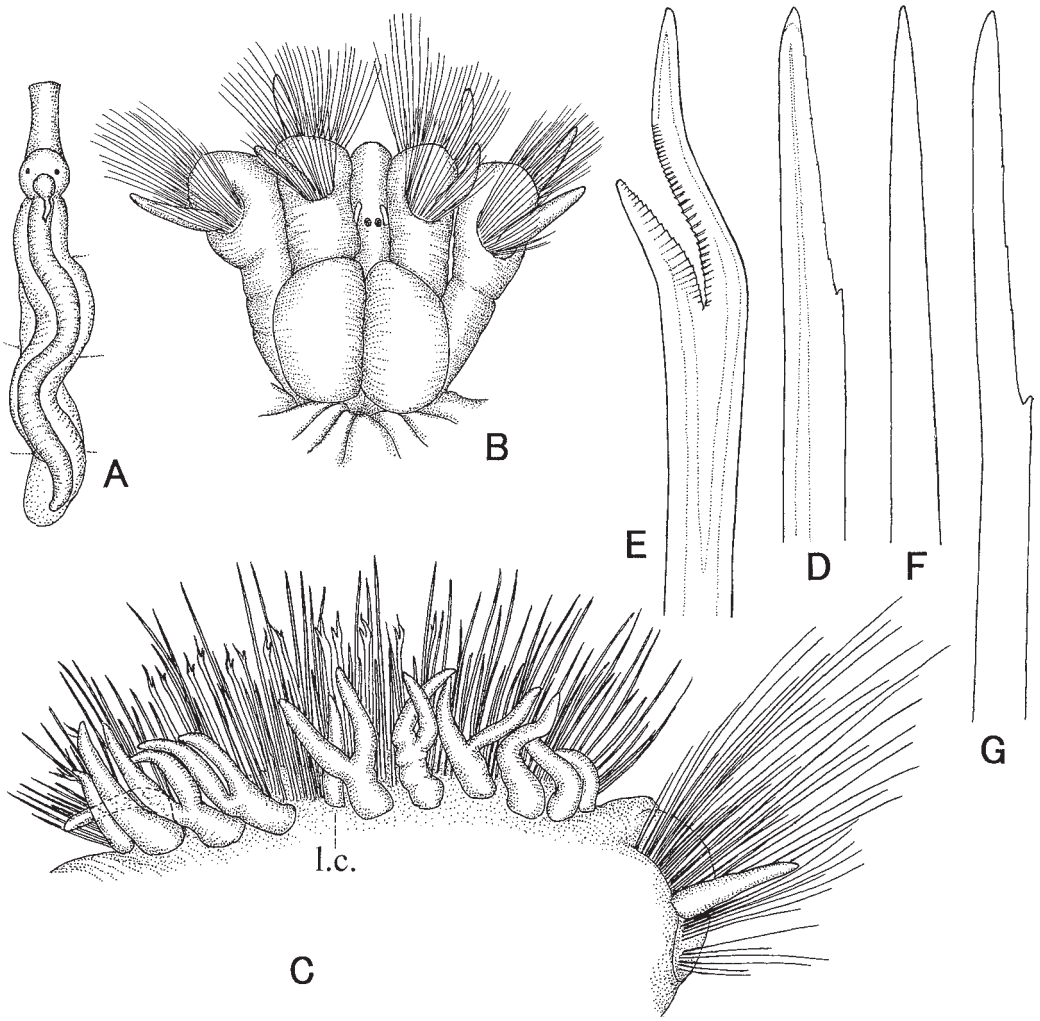

Fig. 24. *Euphrosine pseudonotialis* sp. nov. —A, prostomium and caruncle, dorsal view, × 16; B, prostomium and setigers 1–2, anteroventral view, × 29; C, right setiger 13, posterior view, × 24; D, notoseta of anterior tier, × 306; E, ringent notoseta, × 270; F, simple notoseta, × 306; G, superior neuroseta, × 270.

width.

Prostomium well developed, with pair of small dosal eyes located upper-lateral to median antenna (Fig. 24A); ventral eyes inserted just anterior to palpal antennae. Median antenna short, about one seventh length of caruncle, distal style cirriform.fl Palpal antennae short, digitiform (Fig. 24B). Caruncle appearing bilobed dorsoventrally, dorsal lobe extending to setiger 4, ventral lobe to setiger 3. Palps large, elliptical, paired, separated by mid-ventral groove leading directly to mouth (Fig. 24B).

Parapodia biramous, with parapodial cirri from setiger 1, with spreading notosetal and whorl-like neurosetal fascicles separated by narrow interramal gap occupied by branchiae 8; all with dorsal, lateral and ventral cirri from setiger 1 to end of body. Notopodia not raised above dorsum. Neuropodia resembling flat circular pad (Fig. 24C). Notosetae shorter than neurosetae, of two basic kinds, arrayed in 3 tiers: bifurcate notosetae in anterior and posterior tiers distally calcified, inner surface of long prongs serrated with characteristic scalelike denticles and short prong extremely minute (Fig. 24D); ringent notosetae (Fig. 24E) present in middle tier associated with long simple notosetae (Fig. 24F). Neurosetae all bifurcate, slenderer than notosetae, generally smooth, long prong of superior bristles sometimes serrated inconspicuously on inner surface (Fig. 24G).

Branchiae present from setiger 1, numbering 9 pairs per segment where best developed in midbody segments, having 6 bifurcate and 3 simple nonbranching cirriform (Fig. 24C). Branchiae about one half the length of longest notosetae. Dorsal and lateral cirri similar in size and shape; ventral cirri slightly longer. Lateral cirrus arising between gill 3 and gill 4, digitiform, shorter than branchiae.

Remarks. *Euphrosine pseudonotialis* is most closely allied to *E. notialis* Ehlers, 1900 from Strait of Magellan. Both species have same types of the body and branchiae. However, *E. pseudonotialis* can be distinguished from *E. notialis* in that, (1) the lateral cirri are inserted between third and fourth branchial pairs rather than second and third branchial pairs, (2) the bifurcate notosetae have extremely minute short prong rather than considerable size. *E. pseudonotialis* resembles *E. bicirrata* Moore, 1905 from northeast Pacific in having the branchiae as 2 simple cirriform filaments per gill and occasionally one. However, *E. pseudonotialis* can be distinguished in the structures of the median antenna, notosetae and neurosetae.

Etymology. The species is named in having allied characteristics of *E. notialis*.

Distribution. Japan (420–428 m depth).

Order Eunicida
Family Onuphidae Kinberg, 1865
Subfamily Hyalinoeciinae Paxton, 1986
Genus ***Anchinothria*** Paxton, 1986
Anchinothria macrobranchiata (McIntosh, 1885)

Nothria macrobranchiata McIntosh, 1885: 320–322, pl. 41, figs. 6–7, textfigs.77–78; Moore, 1903: 445.
Onuphis macrobranchiata: Izuka, 1912: 100–101.
Paranorthia macrobranchiata: Imajima and Hartman, 1964: 248.
Anchinothria macrobranchiata: Paxton, 1986: 28; Imajima, 1999: 13–16, figs. 7a–g, 8a–l.

Material. NSMT-Pol. 110801, SO07-O2 (33).

Distribution. Japan.

Genus ***Nothria*** Malmgren, 1867
Nothria grossa Imajima, 1989

Nothria grossa Imajima, 1989a: 1–7, figs. 2a–y, 3a–e; Imajima, 1999: 36–40, figs. 20a–i, 21a–o.
Nothria abyssala Imajima, 1989a: 6–10, fig. 4a–z.

Material. NSMT-Pol. 109684, WA05-DE380D (11), NSMT-Pol. 109685, WA05-E550 (19), NSMT-Pol. 109686, WA05-F350 (3), NSMT-Pol. 109687, WA05-F450 (1), NSMT-Pol. 109688, WA05-FG380 (3), NSMT-Pol. 109689, WA05-FG410 (1), NSMT-Pol. 109690, WA05-G410 (1), NSMT-Pol. 109691, WA05-G425 (4), NSMT-Pol. 109692, WA05-G450 (4), NSMT-Pol. 109693, WA05-G1500D (5), NSMT-Pol. 109694, WA05-GH380D (4), NSMT-Pol. 109695, WA05-GH450 (1), NSMT-Pol. 109696, WA05-H150 (1), NSMT-Pol. 109697, WA05-H380 (6); NSMT-Pol. 109698, WA06-C350D (2), NSMT-Pol. 109699, WA06-E480 (2), NSMT-Pol. 109700, WA06-E510 (2), NSMT-Pol. 109701, WA06-E550 (2), NSMT-Pol. 109702, WA06-EF425D (11), NSMT-Pol. 109703, WA06-EF510 (2), NSMT-Pol. 109704, WA06-F310 (3), NSMT-Pol. 109705, WA06-F350 (3), NSMT-Pol. 109706, WA06-F380 (3), NSMT-Pol. 109707, WA06-F410 (3), NSMT-Pol. 109708, WA06-F425 (4), NSMT-Pol. 109709, WA06-F450 (3), NSMT-Pol. 109710, WA06-FG310 (1), NSMT-Pol. 109711, WA06-FG350 (7), NSMT-Pol. 109712, WA06-G350 (4), NSMT-Pol. 109713, WA06-G380 (5), NSMT-Pol. 109714, WA06-G425 (2), NSMT-Pol. 109715, WA06-G450 (4), NSMT-Pol. 109716, WA06-G480 (1), NSMT-Pol. 109717, WA06-GH380 (48), NSMT-Pol. 109718, WA06-GH425 (60), NSMT-Pol. 109719, WA06-GH450 (41), NSMT-Pol. 109720, WA06-GH480D (18), NSMT-Pol. 109721, WA06-H1500D (1); NSMT-Pol. 110106, WA07-A250D (2), NSMT-Pol. 110107, WA07-C350D (5), NSMT-Pol. 110108, WA07-C410 (11), NSMT-Pol. 110109, WA07-D310 (1), NSMT-Pol. 110110, WA07-D350 (6), NSMT-Pol. 110111, WA07-D450 (1).

Distribution. Japan.

Subfamily Onuphinae Audouin and Milne-Edwards, 1833
Genus ***Epidiopatra*** Augener, 1918
Epidiopatra rugosa Kucheruk, 1979

Epidiopatra rugosa Kucheruk, 1979: 1228–1229, fig. 2; Imajima, 1999: 57–61, figs. 30a–g, 31a–l, 32a–j; Imajima, 2005: 88.

Material. NSMT-Pol. 109670, WA05-DE380D (1), NSMT-Pol. 109671, WA05-E1000D (1), NSMT-Pol. 109672, WA05-FG510D (2), NSMT-Pol. 109673, WA05-G1500D (3), NSMT-Pol. 109674, WA05-GH510D (1), NSMT-Pol. 109675, WA05-H900D (15); NSMT-Pol. 109676, WA06-E510D (2), NSMT-Pol. 109677, WA06-F750 (1), NSMT-Pol. 109678, WA06-F1500D (6), NSMT-Pol. 109679, WA06-F1500D II (17), NSMT-Pol. 109680, WA06-G900D (5), NSMT-Pol. 109681, WA06-G1200D (7), NSMT-Pol. 109682, WA06-GH480D (4), NSMT-Pol. 109683, WA06-H1500D (4); NSMT-Pol. 110104, WA07-B1500D (5), NSMT-Pol. 110105, WA07-D900 (3).

Distribution. Japan.

Genus ***Onuphis*** Audouin and Milne-Edwards, 1833
Onuphis geophiliformis (Moore, 1903)

Nothria geophiliformis Moore, 1903: 445–448, pl. 25, figs. 57–59; Imajima and Hartman, 1964: 244–245.
Onuphis geophiliformis: Maekawa and Hayashi, 1989: 72–74, fig. 7a–j; Imajima, 1997a: 182–183; Maekawa and Hayashi, 1999: 169–173, fig. 3a–j.

Material. NSMT-Pol. 109723, WA06-GH480D (8), NSMT-Pol. 109724, WA06-H250D (2), NSMT-Pol. 109725, WA06-H1500D (3).

Distribution. Eastern Pacific Ocean; Alaska; southern California; Japan.

Onuphis holobranchiata Marenzeller, 1879

Onuphis holobranchiata Marenzeller, 1879: 132–134, pl. 4, fig. 1; Izuka, 1912: 106–108, pl. 11, figs. 10–12; Imajima, 1986: 94–95, fig. 2a–q.

Material. NSMT-Pol. 109726, WA06-GH480D (30), NSMT-Pol. 109727, WA06-H250D (22), NSMT-Pol. 110565, WA06-H1500D (2); NSMT-Pol. 110112, WA07-D210D (2).

Distribution. Japan.

Onuphis imajimai Maekawa and Hayashi, 1989

Onuphis imajimai Maekawa and Hayashi, 1989: 77–79, fig. 10a–k; Maekawa and Hayashi, 1999: 178–182, fig. 6a–k; Imajima, 2001a: 73.

Material. NSMT-Pol. 109728, WA06-E510D (43), NSMT-Pol. 109768, WA06-E1200D (1), NSMT-Pol. 109729, WA06-F1500D II (21), NSMT-Pol. 109769, WA06-G900D (1), NSMT-Pol. 109730, WA06-G1200D (4), NSMT-Pol. 109731, WA06-GH480D (346), NSMT-Pol. 109732, WA06-H480 (36), NSMT-Pol. 109733, WA06-H1500D (12); NSMT-Pol. 110113, WA07-A650 (7), NSMT-Pol. 110114, WA07-D1500D (1).

Distribution. Japan.

Onuphis opalina (Verrill, 1873)

Nothria opalina Verrill, 1873: 102.

Onuphis opalina: Fauchald, 1982: 50–51, fig. 14b, tab. 16; Imajima, 1986: 97–99, fig. 3a–s; Imajima, 1997a: 182; Maekawa and Hayashi, 1999: 188–189.

Material. NSMT-Pol. 109735, WA05-EF250D (12), NSMT-Pol. 109736, WA05-FG250D (1), NSMT-Pol. 109737, WA05-FG510D (10), NSMT-Pol. 109738, WA05-G1500D (7), NSMT-Pol. 109739, WA05-GH510D (64), NSMT-Pol. 109746, WA05-H900D (1); NSMT-Pol. 109740, WA06-D210D (31), NSMT-Pol. 109741, WA06-F1500D (1), NSMT-Pol. 109742, WA06-F1500D II (3), NSMT-Pol. 109743, WA06-G1200D (3), NSMT-Pol. 109744, WA06-GH480D (7), NSMT-Pol. 109745, WA06-H1500D (2); NSMT-Pol. 110115, WA07-D210D (105).

Distribution. Atlantic Ocean; northern Japan.

Onuphis taraba Maekawa and Hayashi, 1989

Onuphis taraba Maekawa and Hayashi, 1989: 79–81, fig. 11a–n; Maekawa and Hayashi, 1999: 195–196, fig. 11a–j.

Material. NSMT-Pol. 109747, WA06-E510D (5), NSMT-Pol. 109748, WA06-F1500D II (1), NSMT-Pol. 109749, WA06-GH480D (21), NSMT-Pol. 109750, WA06-H250D (3), NSMT-Pol. 109751, WA06-H1500D (5).

Distribution. Japan.

Genus ***Paradiopatra*** Ehlers, 1887
Paradiopatra crassa Imajima, 1999

Paradiopatra crassa Imajima, 1999:75–77, figs. 41a–h, 42a–k; Imajima, 2001a: 73.

Material. NSMT-Pol. 110116, WA07-D210D (1).
Distribution. Japan.

Paradiopatra gracilis sp. nov.
(Figs. 25A–G, 26A–O, 27A–E)

Type material. Holotype—NSMT-Pol. H 506, Stn. WA06-F1500D II, off Sanriku, 37˚38.92´N, 142˚34.09´E–37˚39.39´N, 142˚34.32´E, 1466–1471 m, Nov. 1, 2006. Paratypes—NSMT-Pol. P 507, Stn. WA06-F1500D II, same locality as holotype (6); NSMT-Pol. P 508, Stn. WA06-F1500D, off Sanriku, 1511–1508 m, Nov. 1, 2006 (20); NSMT-Pol. P 509, Stn. WA07-A1500D, off Sanriku, 1402–1377 m, Oct. 11, 2007 (8).

Other material. NSMT-Pol. 110554, WA05-E1000D (10), NSMT-Pol. 110555, WA05-H900D (9); NSMT-Pol. 110556, WA06-D210D (2), NSMT-Pol. 110557, WA06-E1200D (18), NSMT-Pol. 110560, WA06-G900D (576), NSMT-Pol. 110561, WA06-G1200D (72), NSMT-Pol. 110562, WA06-H1500D (3); NSMT-Pol. 110564, WA07-C1500D (3).

Description. Most specimens missing posterior ends; a complete largest specimen 68 mm long, 1.2 mm wide for 144 setigers. Holotype lacking posterior end 39 mm long, 1.4 mm wide including parapodia for 66 setigers. Body cylindrical through first 4 setigers, then dorsoventrally flattened. Color in preserved specimen pale, without pigmentation exept a part of prostomium.

Prostomium suboval, with pair of clavate frontal lips and a brown oval pattern on anterodorsal and posterodorsal parts of prostomium. Ceratophores of antennae arranged in semicircle, with 3–5 proximal rings and a long distal ring. Styles of palps reaching to setiger 2, lateral antennae to setiger 5, median antenna to setiger 3. Eyes and nuchal grooves not observed. Peristomium slightly shorter than following setigers; peristomial cirri absent (Fig. 25A–C).

Anterior 3 pairs of parapodia slightly modified, not prolonged. Parapodia 1 and 2 similar in size and shape, with rounded presetal lobes and spindle-shaped postsetal lobes with broad bases, as long as ventral cirrus; dorsal cirri digitiform, slightly longer than postsetal lobes (Fig. 25D–E). Parapodia 3 slightly smaller than former, with subulate postsetal lobes; dorsal cirri similar to those of first 2 setigers, but ventral cirri followed by transitory cirri (Fig. 25F), replaced by ventral glandular pads from setiger 4 (Fig. 25G).

Branchiae first present from setiger 8 (setigers 8–10 in paratypes), as simple filament (Fig. 26A), bifid from setiger 14 (setigers 12–14 in paratypes) (Fig. 26B), trifid in setigers 21–40 (setigers 22–36 in paratypes) (Fig. 26C), thereafter gradually diminishing to bifid (Fig. 26D) and single filament posteriorly; last branchia on setiger 53 (setigers 50–56 in paratypes). Abranchial posterior parapodia much smaller, with short dorsal cirri (Fig. 26E).

First 3 pairs of modified parapodia with single upper simple (Fig. 26F) or limbate setae (Fig. 26G) and 4 bidentate pseudocompound hooks with distinct second tooth; hoods long, acutely distally pointed (Fig. 26H–K). Acicula number 2–3 in a fascicle, thick and distally bent, with slender pointed end (Fig. 26L–M). Parapodia 4 with upper limbate setae (Fig. 26N) and lower cultriform setae (Fig. 26O) replaced by pseudocompound hooks. Following setigers with limbate setae, slender pectinate setae (Fig. 27A) and bidentate subacicular hooks (Fig. 27B); pectinate setae with about 20 fine teeth present from setiger 9; subacicular hooks first present on setiger 9, usually 2 in fascicle.

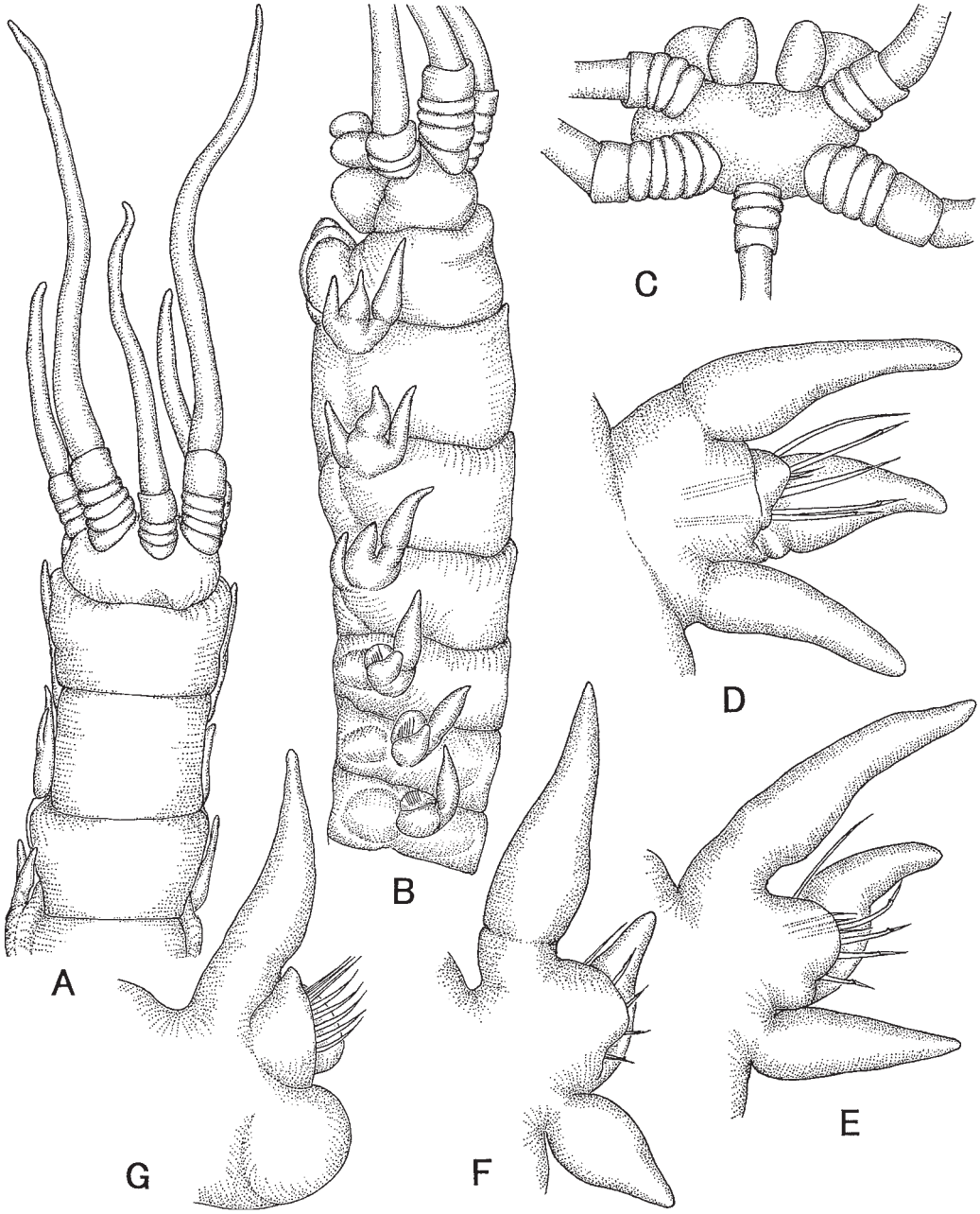

Fig. 25. *Paradiopatra gracilis* sp. nov. —A, anterior end, dorsal view, × 25; B, anterior end of paratype, lateral view, × 31; C, prostomium and ceratophores of antennae, frontal view, × 48; D, left parapodium from setiger 1, anterior view, × 75; E, same from setiger 2, same view, × 75; F, same from setiger 3, same view, × 75; G, right parapodium from setiger 4, posterior view, × 75.

Mandibles fragile, united at distal end for short distance (Fig. 27C). Maxillary formula: Mx I=1+1, Mx II=6–8+8, Mx III=7–8+0, Mx IV=7+7–8, Mx V=1+1 (Fig. 27D).

Pygidium small, bearing 2 pairs of ventrally inserted anal cirri, upper pair longer than lower pair (Fig. 27E).

Remarks. This species possesses characters that fit neither *Paradiopatra* Ehlers, 1887 nor

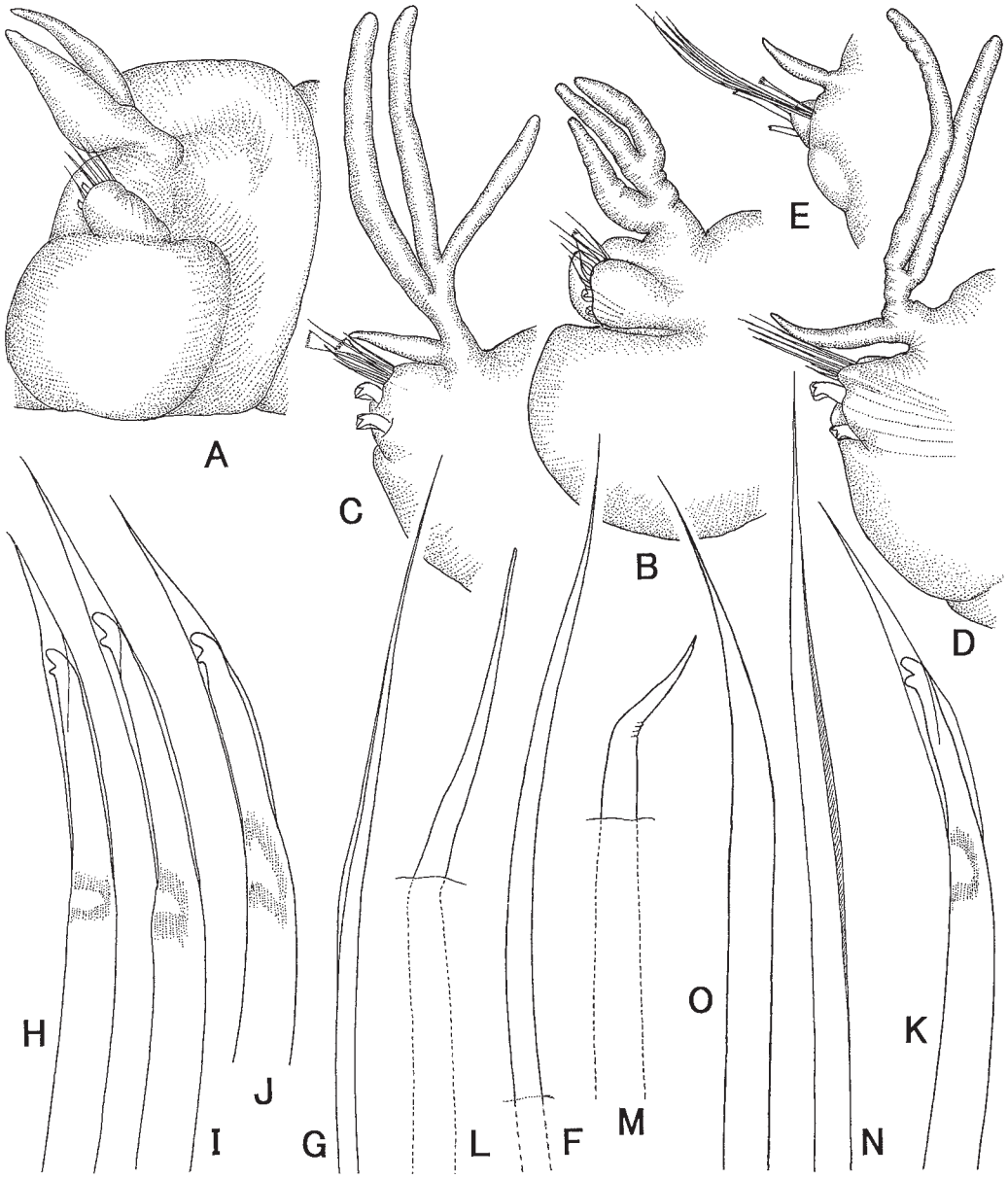

Fig. 26. *Paradiopatra gracilis* sp. nov. —A, left parapodium from setiger 9, posterior view, × 70; B, same from setiger 16, same view, × 70; C, same from setiger 30, same view, × 70; D, same from setiger 45, same view, × 70; E, same from setiger 65, same view, × 70; F, upper simple seta from setiger 1, × 578; G, limbate seta from setiger 3, × 287; H–I, bidentate pseudocompound hooks from setiger 1, × 578; J, same from setiger 2, × 578; K, same from setiger 3, × 578; L–M, acicula, × 578; N, limbate seta from setiger 4, × 513; O, lower cultriform seta, × 513.

Notonuphis Kucheruk, 1978 as they are presently defined. It has pseudocompound hooks with long, pointed hoods, and 3 anterior pairs of modified parapodia. However, it has no peristomial cirri, and has branchiae with simple at first, pectinate with 3 filaments where best developed. In contrast, *Paradiopatra* has peristomial cirri, and *Notonuphis* has no branchiae.

According to Dr. Hannelore Paxton (personal communication) the value of peristomial cirri

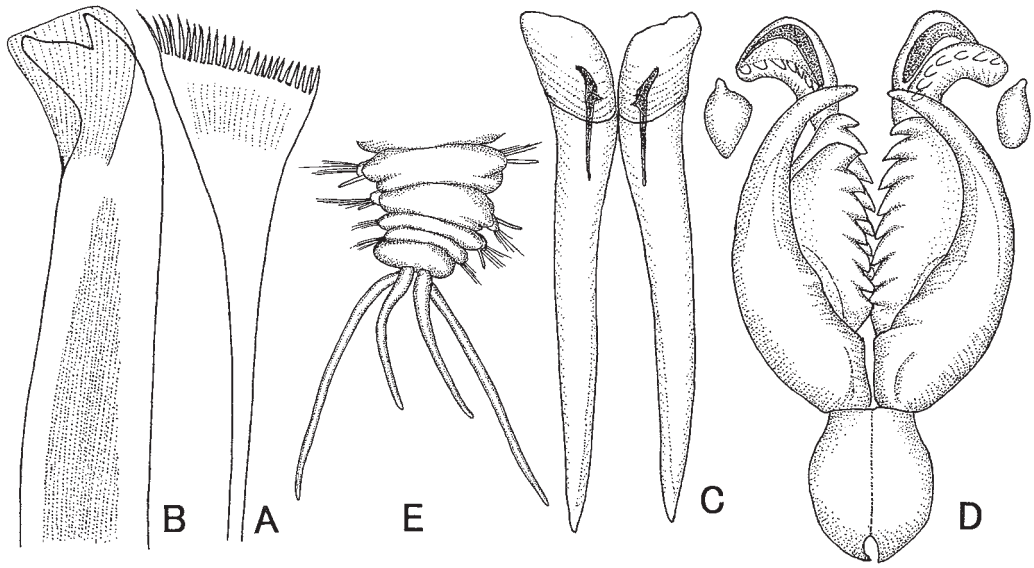

Fig. 27. *Paradiopatra gracilis* sp. nov. —A, pectinate seta, × 680; B, subacicular hook, × 477; C, mandibles, × 67; D, maxillae, × 64; E, posterior end, ventral view, × 30.

as a systematic character has been overstated in the past, and *Notonuphis*, and the new species, are basically *Paradiopatra* species without peristomial cirri. Nataliya Budaeva is currently revising the *Paradiopatra* complex and will be redefining the genus *Paradiopatra* in the near future.

Etymology. The specific name, *gracilis*, is Latin for slender, referring to the relatively slender appearance of the body of this species.

Distribution. Japan (213–1511 m depth).

Paradiopatra striata (Uschakov, 1950)

Onuphis parva striata Uschakov, 1950: 193, fig. 25; Uschakov, 1955: 234, figs. 74b, 77j.
Paradiopatra parva striata: Paxton, 1986: 38.
Paradiopatra striata: Imajima, 1986: 110–114, fig. 9a–t; Imajima, 1999: 84–88; Imajima, 2001a: 74.

Material. NSMT-Pol. 109752, WA05-DE380D (9), NSMT-Pol. 109753, WA05-EF250D (15), NSMT-Pol. 110566, WA05-FG250D (1), NSMT-Pol. 109754, WA05-FG510D (2), NSMT-Pol. 109755, WA05-G280 (1), NSMT-Pol. 109756, WA05-G1500D (1), NSMT-Pol. 109757, WA05-GH380D (6); NSMT-Pol. 109758, WA06-A150D (1), NSMT-Pol. 109759, WA06-D210D (2), NSMT-Pol. 109760, WA06-E510D (6), NSMT-Pol. 109761, WA06-FG350D (1), NSMT-Pol. 109762, WA06-G900D (233), NSMT-Pol. 109763, WA06-GH480D (4), NSMT-Pol. 109764, WA06-H250D (55), NSMT-Pol. 109765, WA06-H1500D (3); NSMT-Pol. 110117, WA07-C1500D (6), NSMT-Pol. 110118, WA07-D210D (62).

Distribution. Sea of Okhotsk; Japan.

Family Eunicidae Savigny, 1818
Genus ***Eunice*** Cuvier, 1817
Eunice mucronata Moore, 1903

Eunice mucronata Moore, 1903: 437–440, pl. 25, figs. 42–45; Miura, 1986: 305–308, figs. 30–31; Imajima, 2001a: 75; Imajima, 2007: 354–355, fig. 109.

Material. NSMT-Pol. 109770, WA05-FG510D (2), NSMT-Pol. 109771, WA05-G425 (3), NSMT-Pol. 109772, WA05-GH380 (2), NSMT-Pol. 109773, WA05-GH380D (22), NSMT-Pol. 109774, WA05-GH425 (1), NSMT-Pol. 109775, WA05-H380 (1), NSMT-Pol. 109776, WA05-H750 (1); NSMT-Pol. 109777, WA06-A150D (5), NSMT-Pol. 109778, WA06-E1200D (1), NSMT-Pol. 109779, WA06-EF425D (1), NSMT-Pol. 110567, WA06-FG425 (2), NSMT-Pol. 109780, WA06-G380 (2), NSMT-Pol. 109781, WA06-G650 (1), NSMT-Pol. 109782, WA06- G900D (5), NSMT-Pol. 109783, WA06-GH480D (56).

Distribution. Japan.

Family Lumbrineridae Malmgren, 1867
Genus ***Augeneria*** Monro, 1930
Augeneria bidens (Ehlers, 1887)

Lumbriconereis bidens Ehlers, 1887: 103, pl. 31, figs. 7–17.
Augeneria bidens: Orensanz, 1973: 372; Uebelacker, 1984a: 41-17–18, figs. 41-13, 14a–h; Imajima, 2001b: 340, fig. 141; Imajima, 2006: 373.
Augeneria tentaculata Monro, 1930: 140–142, fig. 52a–k; Imajima and Higuchi, 1975: 7–8, fig. 1a–j.

Material. NSMT-Pol. 109796, WA05-G1500D (1). NSMT-Pol. 110817, SO06-M4-B (1). NSMT-Pol. 110840, KT07-29-H2 (1).

Distribution. Antarctic area; Argentine; Gulf of Mexico; Japan.

Genus ***Eranno*** Kinberg, 1865
Eranno abyssicola (Uschakov, 1950)
(Figs. 28A–H, 29A–K)

Lumbriconereis abyssicola Uschakov, 1950: 195, fig. 27; Uschakov, 1965: 220, fig. 80G–K.
Eranno abyssicola: Orensanz, 1990: 78; Frame, 1992: 194–195.

Material. NSMT-Pol. 110301, WA05-E1000D (2), NSMT-Pol. 110302, WA05-FG250D (1), NSMT-Pol. 110303, WA05-FG450 (1), NSMT-Pol. 110304, WA05-GH510D (2); NSMT-Pol. 110305, WA06-F650D (1), NSMT-Pol. 110306, WA06-F750 (1), NSMT-Pol. 110310, WA06-FG350D (1), NSMT-Pol. 110307, WA06-GH480D (1), NSMT-Pol. 110308, WA06-H480 (1), NSMT-Pol. 110309, WA06-H1500D (1); NSMT-Pol. 110714, WA07-B410D (5), NSMT-Pol. 110715, WA07-D210D (2). NSMT-Pol. 110892, SO07-O1 (1), NSMT-Pol. 110841, SO07-O2 (22), NSMT-Pol. 110893, SO07-O3 (1).

Description. Largest specimen missing posterior end 76 mm long, 4 mm wide for 234 setigers. Body cylindrical, without pigments.

Prostomium depressed triangle, shorter than basal wide, with nuchal organs. Peristomium consisting of 2 apodous and asetigerous rings, ventrally developed into pair of buccal cushions; both segments partly fused ventrally (Fig. 28A–B).

First parapodia comparatively large, with low presetal lobe and small flattened, bluntly rounded postsetal lobe (Fig. 28C). Following about 30 parapodia subequal in size, but postsetal lobes gradually reduced to small triangular ones (Fig. 28D). In about setiger 30, pre- and postsetal lobes becoming subequal size; both lobes obliquely truncated (Fig. 28E). Median and posterior parapodia becoming slender, postsetal lobes distally pointed (Fig. 28F–G). In more posterior setigers postsetal lobes digitate, slightly larger than presetal ones (Fig. 28H).

First parapodia with 6 limbate setae (Fig. 29A) in upper bundle, and 7 hooded hooks and 2 limbate setae in lower bundle (Fig. 28C); hooks slender than following ones, with long hood and

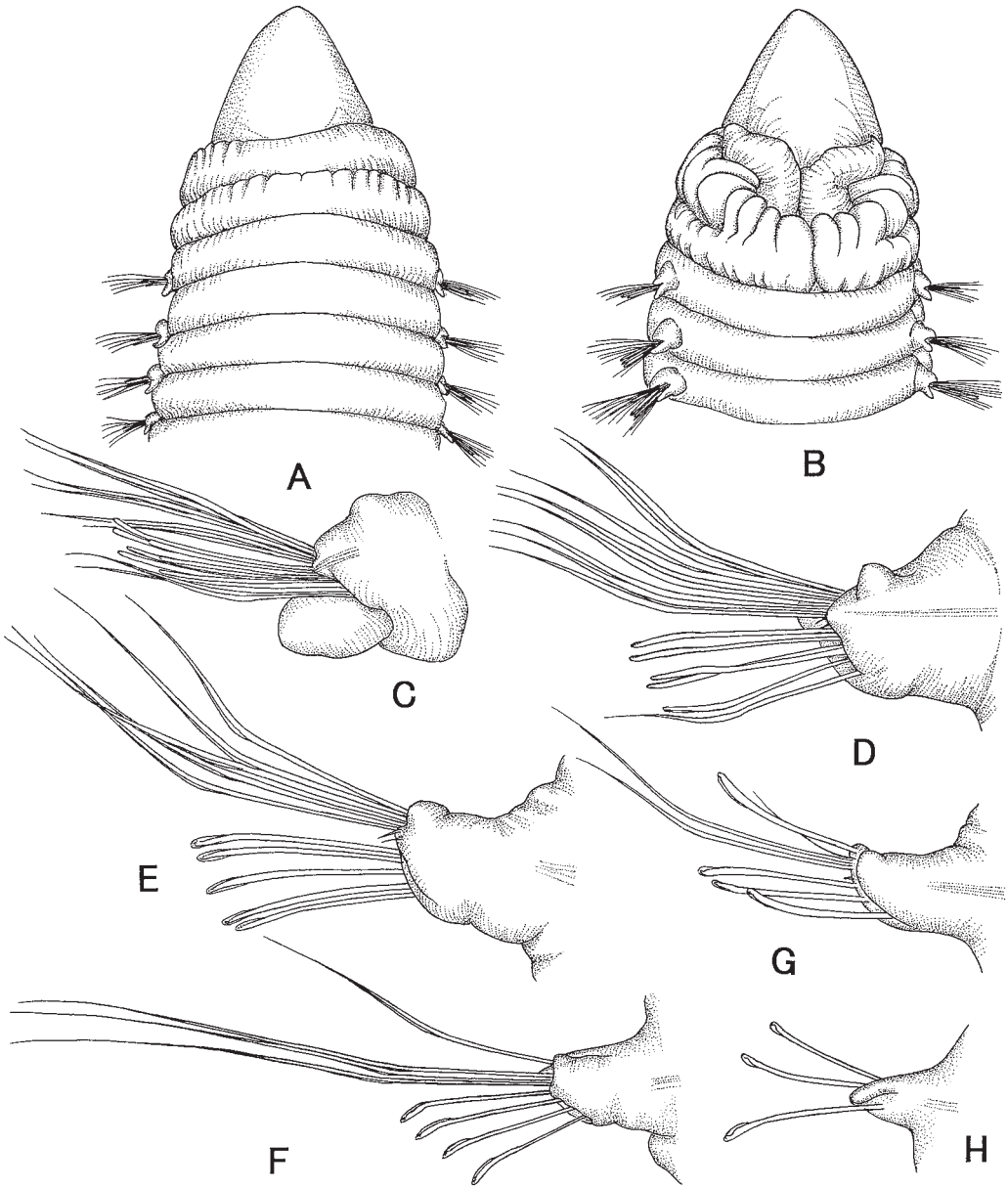

Fig. 28. *Eranno abyssicola* (Uschakov). —A, anterior end, dorsal view, × 15; B, same, ventral view, × 15; C, right parapodium from setiger 1, anterior view, × 66; D, same from setiger 20, same view, × 42; E, same from setiger 30, same view, × 42; F, same from setiger 46, same view, × 42; G, same from setiger 58, same view, × 42; H, same from setiger 230, same view, × 42.

a fang surmounted by minute 10 teeth in tandem (Fig. 29B). Limbate setae in upper bundle becoming extremely elongated with slender tips; lower limbate setae reduced in number (Fig. 28D), and replaced by hooded hooks from about setiger 30 (Fig. 28E). Limbate setae with whiplike tips on setigers 30–60 (Fig. 28F). Hooded hooks on anterior parapodia with long hood (Fig. 29C), hooks bulbous in median and posterior setigers, with large main fang and 8–11 irregular teeth in tandem (Fig. 29D–H). Aciculae yellowish brown, numbering 2–3 in parapodia, with long acute tips (Fig. 29I) protruding through parapodial wall.

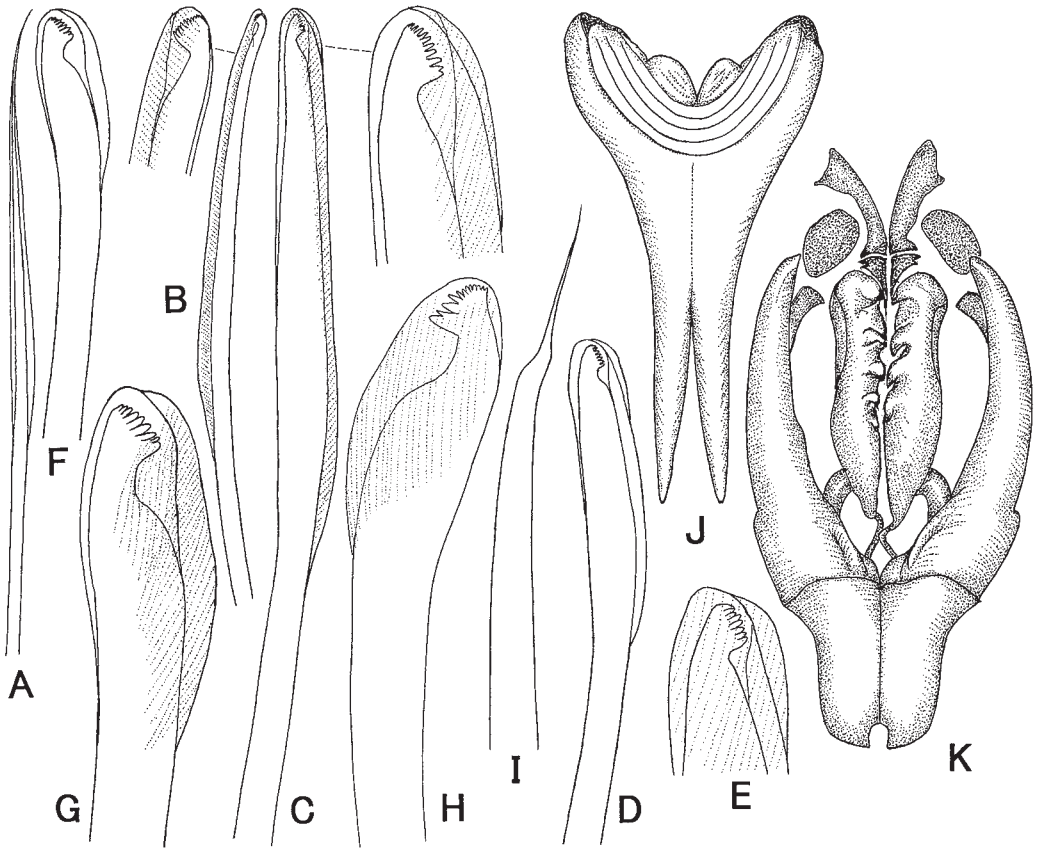

Fig. 29. *Eranno abyssicola* (Uschakov). —A, limbate seta from setiger 1, × 145; B, hooded hook from setiger 1, × 287, with detail of distal end, × 842; C, same from setiger 20, × 287, with detail of distal end, × 842; D, same from setiger 30, × 287; E, distal end of hook from setiger 30, × 578; F, hooded hook from setiger 58, × 287; G, distal part of same hook, × 578; H, hooded hook from setiger 230, × 513; I, aciculum, × 405; J, mandibles, × 22; K, maxillae, × 22.

Mandibles long and slender, fused for two thirds of their length (Fig. 29J). Maxillary carriers broad, slightly constricted (Fig. 29K); MI forceps long; MII two thirds the length of MI, with 4 or 5 asymmetrically arranged teeth, distal tooth largest, MII attached to MI by long broad basal support in addition to small connecting membrane; MIII bidentate; MIV large soft plate, tapering to single tooth; MV square, weakly sclerotized plates.

The species is newly added to the Japanese polychaetous fauna.

Distribution. Sea of Okhotsk; Japan.

Eranno bifurcata (McIntosh, 1885)

Lumbriconeris bifurcata McIntosh, 1885: 241–243, pl. 36, figs. 10–12, pl. 17, fig. 16, textfigs. 7–8; Izuka, 1912: 142–143; Uschakov, 1955: 242, fig. 80A–F.

Lumbrineris bifurcata: Imajima and Hartman, 1964: 262; Imajima and Higuchi, 1975: 26–28, fig. 10a–n; Imajima, 1997a: 185–186.

Lumbrineris ezoensis Uchida, 1968: 599–600, fig. 4.

Eranno bifurcata: Imajima, 2001b: 342, fig. 143.

Material. NSMT-Pol. 110248, WA06-A1200D (11), NSMT-Pol. 110249, WA06-D210D (5), NSMT-Pol. 110250, WA06-D450D (2), NSMT-Pol. 110251, WA06-DE280D (4), NSMT-Pol.

110252, WA06-E510D (1), NSMT-Pol. 110253, WA06-EF425D (1); NSMT-Pol. 110716, WA07-A450 (1), NSMT-Pol. 110254, WA07-A650 (15), NSMT-Pol. 110717, WA07-C350 (6), NSMT-Pol. 110718, WA07-D210 (1), NSMT-Pol. 110568, WA07-D900 (1).

Distribution. Pacific coast of North America; Japan.

Eranno tosaensis Imajima, 2001

Eranno tosaensis Imajima, 2001a: 76–78, figs. 20–21.

Material. NSMT-Pol. 110914, WA05-DE250D (1), NSMT-Pol. 110915, WA05-EF250D (1); NSMT-Pol. 110916, WA06-D450D (1), NSMT-Pol. 110917, WA06-DE280D (1), NSMT-Pol. 110918, WA06-EF425D (1), NSMT-Pol. 110919, WA06-GH480D (1).

Distribution. Japan.

Genus ***Lumbrineris*** Blainville, 1828

Lumbrineris inflata Moore, 1911

Lumbrineris inflata Moore, 1911: 289–291, pl. 19, figs. 128–132, pl. 20, figs. 133–134; Berkeley and Berkeley, 1948: 97–98, figs. 150–152; Day, 1967a: 435–436, fig. 17.16.d–h; Imajima and Higuchi, 1975: 20–22, fig. 7a-l; Imajima, 1994: 112; Imajima, 1997a: 185.

Lumbriconereis inflata: Uschakov and Wu, 1962c: 66.

Material. NSMT-Pol. 110119, WA07-B410D (4). NSMT-Pol. 110842, SO07-C7-B (1).

Distribution. Northeast Pacific; south to Gulf of California; Bering Sea; Yellow Sea; Japan.

Lumbrineris japonica (Marenzeller, 1879)

Lumbriconereis japonica Marenzeller, 1879: 137–138, pl. 5, fig. 3; Izuka, 1912: 139–140, pl. 14, figs. 17–18.

Lumbrineris japonica: Imajima and Hartman, 1964: 263–264; Fauchald, 1970: 91–92, pl. 14, figs. e–f: Imajima and Higuchi, 1975: 30–32, fig. 12a–n; Imajima, 2001a: 78–79.

Material. NSMT-Pol. 109797, WA05-GH510D (2); NSMT-Pol. 109798, WA06-F650D (1), NSMT-Pol. 109799, WA06-F750 (1), NSMT-Pol. 109800, WA06-G900D (9): NSMT-Pol. 110120, WA07-A1500D (1). NSMT-Pol. 110843, SO07-C7-B (7). NSMT-Pol. 110836, KT07-29-H-1 (2), NSMT-Pol. 110837, KT07-29-H-2 (1), NSMT-Pol. 110835, KT07-29-M-3-2 (2).

Distribution. Indo Pacific areas; Pacific of California south to western Mexico; Japan.

Lumbrineris latreilli (Audouin and Milne-Edwards, 1834)

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

Lumbrineris latreilli: Hartman, 1944b: 158–159, pl. 9, figs. 213–216; Pettibone, 1963: 258–260, fig. 67a–c; Fauchald, 1970: 94–97, pl. 15, figs. f–h; Hartmann-Schröder, 1971: 253–255, fig. 84a–h; Imajima and Higuchi, 1975: 32–36, fig. 13a–m; Imajima, 2001a: 79.

Lumbrinereis latreilli: Berkeley and Berkeley, 1948: 98–99, figs. 154–156.

Material. NSMT-Pol. 109801, WA05-E1000D (1), NSMT-Pol. 109802, WA05-EF250D (6), NSMT-Pol. 109803, WA05-FG250D (1), NSMT-Pol. 109804, WA05-GH510D (16); NSMT-Pol. 109805, WA06-EF425D (2), NSMT-Pol. 109806, WA06-GH480D (57), NSMT-Pol. 109807, WA06-H1500D (1); NSMT-Pol. 110121, WA07-B410D (2), NSMT-Pol. 110122, WA07-C1500D (2), NSMT-Pol. 110460, WA07-D210D (1). NSMT-Pol. 110844, SO07-C7-B (24). NSMT-Pol. 110838, KT07-29-M-1 (4), NSMT-Pol. 110839, KT07-29-M-3-1 (1).

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

Genus ***Ninoe*** Kinberg, 1865
Ninoe palmata Moore, 1903

Ninoe palmata Moore, 1903: 456–457, pl. 26, figs. 68–71; Izuka, 1912: 137–139; Uschakov and Wu, 1962a: 120, pl. 4z–o; Imajima and Hartman, 1964: 264; Imajima, 1968: 141; Imajima and Higuchi, 1975: 10–14, fig. 3a–m; Imajima, 1997a: 184; Imajima, 2006: 374.

Material. NSMT-Pol. 109808, WA05-FG250D (1); NSMT-Pol. 109809, WA06-E1200D (1). NSMT-Pol. 110845, SO07-K3 (3). NSMT-Pol. 110846, SO07-O1 (1).

Distribution. Yellow Sea; Japan.

Genus ***Paraninoe*** Levenstein, 1977
Paraninoe simpla Moore, 1905

Paraninoe simpla Moore, 1905: 547–549, pl. 35, fig. 30, pl. 36, figs. 39–44; Imajima, 2001b: 399, fig. 160.
Lumbrineris abyssalis Imajima and Higuchi, 1975: 16–20, fig. 6a–r.

Material. NSMT-Pol. 109810, WA06-F650D (1); NSMT-Pol. 110123, WA07-A1500D (1), NSMT-Pol. 110124, WA07-C1500D (2). NSMT-Pol. 110847, SO07-C7-B (1). NSMT-Pol. 110849, KT07-29-H-2 (1), NSMT-Pol. 110848, KT07-29-M-2 (1).

Distribution. Alaska; Japan.

Genus ***Scoletoma*** Blainville, 1828
Scoletoma longifolia (Imajima and Higuchi, 1975)

Lumbrineris longifolia Imajima and Higuchi, 1975: 24–26, fig. 9; Imajima, 1994: 112.
Lumbriconereis debilis Uschakov and Wu, 1962c: 65, pl. 3k–m.

Material. NSMT-Pol. 110808, WA06-GH480D (16). NSMT-Pol. 110850, SO07-C7-B (2). NSMT-Pol. 110851, SO07-K2 (43), NSMT-Pol. 110852, SO07-O3 (1). NSMT-Pol. 110853, KT07-29-H-1 (1).

Distribution. Japan; Yellow Sea.

Scoletoma nipponica (Imajima and Higuchi, 1975)

Lumbrineris nipponica Imajima and Higuchi, 1975: 22–24, fig. 8a–m; Imajima, 1992: 129; Imajima, 1994: 112.
Scoletoma nipponica: Imajima, 2001b: 363, fig. 164; Imajima, 2006: 375.

Material. NSMT-Pol. 110311, WA07-B410D (1), NSMT-Pol. 110312, WA07-C1500D (2).

Distribution. Japan.

Family Oenonidae Kinberg, 1865
Genus ***Drilonereis*** Claparède, 1870
Drilonereis falcata japonica Imajima, 1964
(Figs. 30A–G, 31A–J)

Drilonereis falcata japonica Imajima, 1964: 244, figs. 21–27.

Material. NSMT-Pol. 110719, WA05-EF250D (1), NSMT-Pol. 110720, WA05-FG510D (1);

NSMT-Pol. 110721, WA06-D450D (1), NSMT-Pol. 110722, WA06-DE280D (1), NSMT-Pol. 110723, WA06-E480 (1), NSMT-Pol. 110724, WA06-E1200D (1), NSMT-Pol. 110725, WA06-GH480D (2), NSMT-Pol. 110726, WA06-H1500D (2); NSMT-Pol. 110727, WA07-A1500D (2), NSMT-Pol. 110728, WA07-B410D (2), NSMT-Pol. 110729, WA07-C1500D (1).

Description. Largest specimen missing posterior end 140 mm long, 3 mm wide including parapodia for 194 setigerous segments. Body evenly reddish brown, cylindrical, with conspicuous parapodia throughout.

Prostomium spatulate, depressed conical, slightly longer than wide, with median dorsal furrow; nuchal organs inconspicuous, without eyes (Fig. 30A–B). Peristomium consisting of 2 rings, each as long as following setigers and first ring slightly wider than prostomial base.

Parapodia conspicuous and of subequal shape throughout length of body, slightly small in first 2 setigers (Fig. 30C), presetal lobes truncate, postsetal lobes conical, pointing dorsad, both lobes divergent; notopodial papilla minute (Fig. 30D–G). Pharynx armed with mandibles and 5 pairs of maxillae. Mandibles well sclerotized, roughly triangular, about half as long as M I, free from one another (Fig. 31A). Maxillae with slender carriers, about 1.5 times as long as M I,

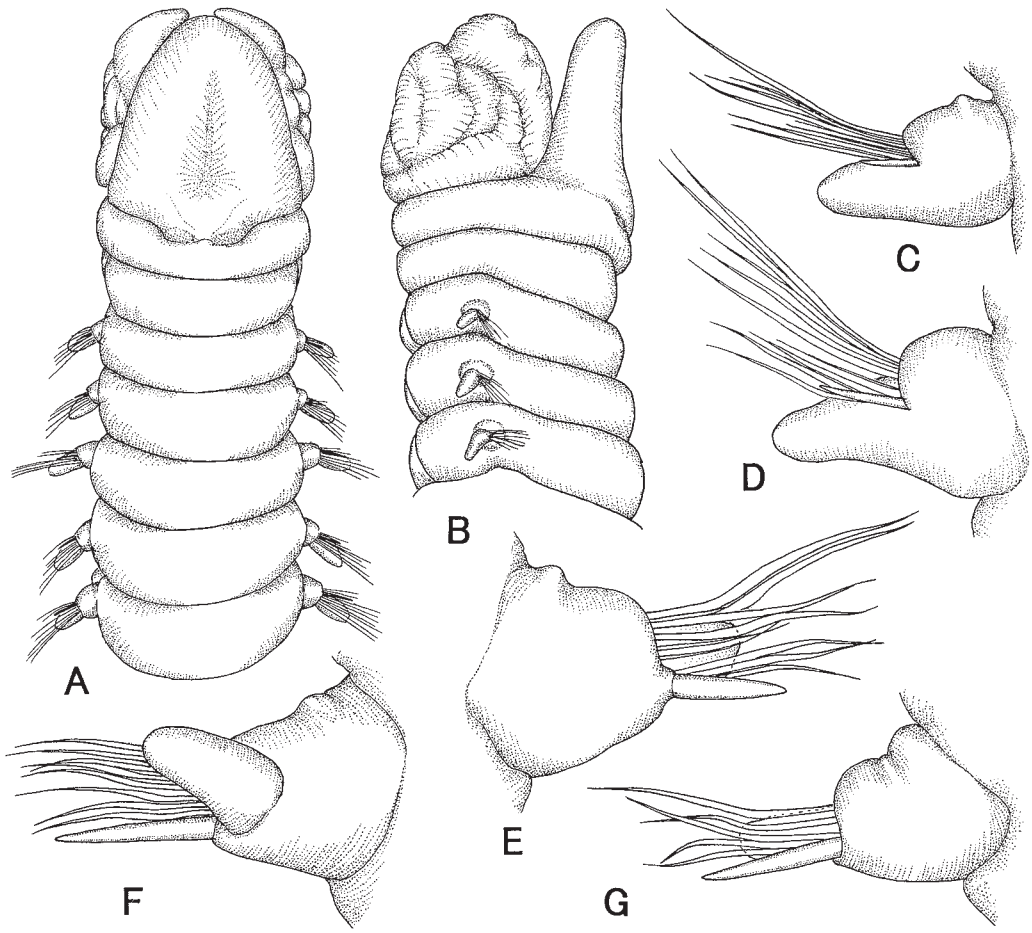

Fig. 30. *Drilonereis falcata japonica* Imajima. —A, anterior end, dorsal view, × 20; B, same, lateral view, × 20; C, right parapodium from setiger 1, anterior view, × 67; D, same from setiger 5, anterior view, × 67; E, left parapodium from setiger 50, same view, × 67; F, same from setiger 100, posterior view, × 67; G, right parapodium from setiger 190, anterior view, × 67.

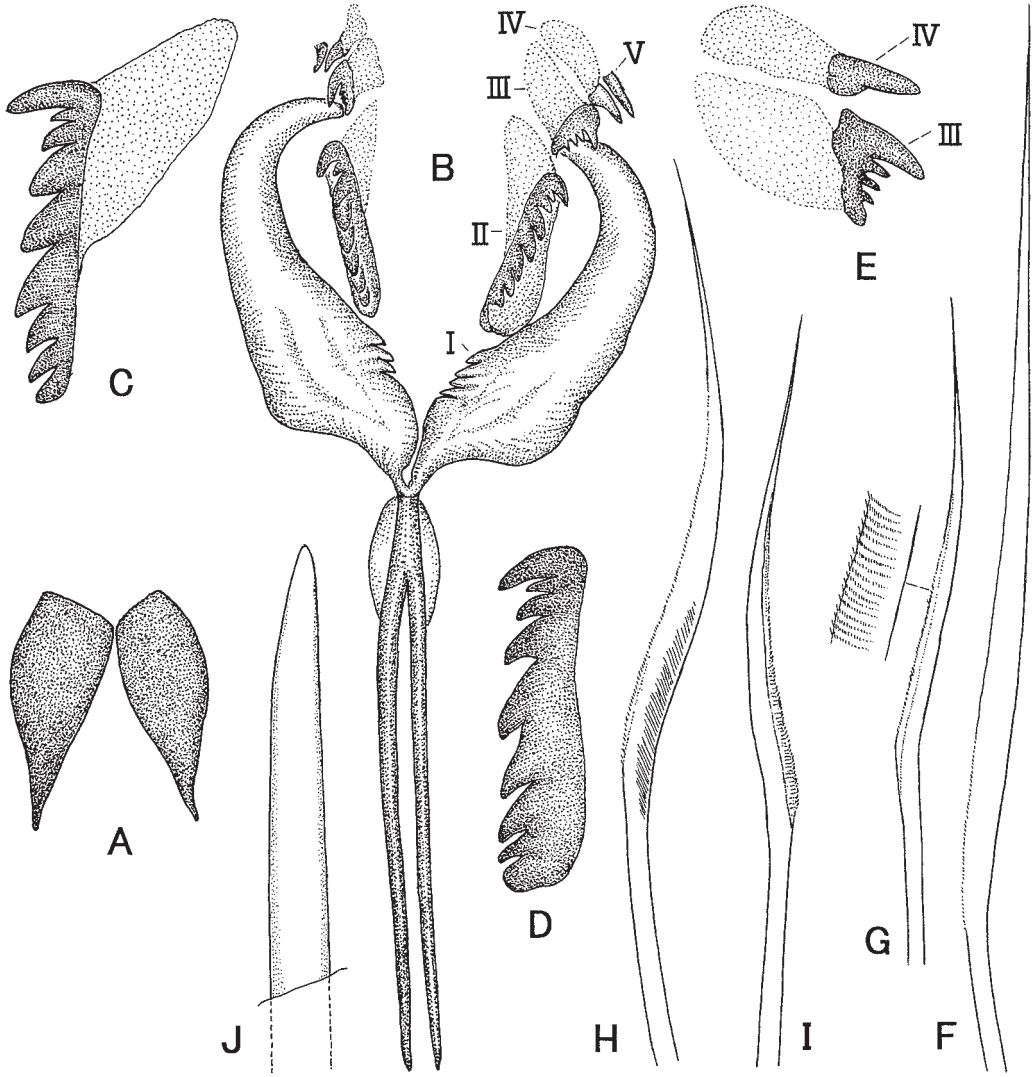

Fig. 31. *Drilonereis falcata japonica* Imajima. —A, mandibles, × 40; B, maxillae, × 40; C, right MII, × 80; D, left MII, × 80; E, right MIII and MIV, × 80; F, upper limbate seta from anterior parapodium, × 228; G, lower limbate seta from same, × 228, with detail of part, × 642; H, upper limbate seta from posterior parapodium, × 228; I, lower limbate seta from same, × 228; J, acicular spine, × 338.

anteriorly fused over short distance; ventral unpaired piece short, oval (Fig. 31B). M I strongly falcate, with 3 or 4 large basal teeth; M II with 8 teeth, subdistal one smallest (Fig. 31C–D); M III with 4 teeth, 1 large and 3 small (Fig. 31E); M IV and M V each with one pointed tooth (Fig. 31B, E). Limbate setae weakly geniculate, with finely serrated wings, setae in upper bundle longer than lower ones (Fig. 31F–I). Acicular spine (Fig. 31J) first present from setigers 1–3, protruding furthest in posterior setigers, and longer than postsetal lobes in middle and posterior setigers (Fig. 31E–G).

Remarks. The subspecies is characterized in the following respects; (1) the pharynx is armed with 5 pairs of maxillae, and mandibles are present, (2) the parapodia are well developed throughout length of the body, (3) acicular spines are first present from setigers 1–5.

Distribution. Japan.

Drilonereis filum (Claparède, 1868)
(Figs. 32A–H, 33A–F)

Lumbriconereis filum Claparède, 1868: 454, pl. 9, fig. 1.
Drilonereis filum: Fauvel, 1923: 436, fig. 174a–h; Orensanz, 1974: 395–397, fig. 6; Hartman, 1968: 799–800, figs. 1–2.

Material. NSMT-Pol. 110730, WA05-EF250D (1).

Description. Specimen missing posterior end for 81 setigerous segments 53 mm long, 4 mm wide including parapodia. Body almost cylindrical, with conspicuous parapodia throughout. Color in spirit brown.

Prostomium spatulate, wider than long, rounded anteriorly, with median dorsal furrow. Nuchal

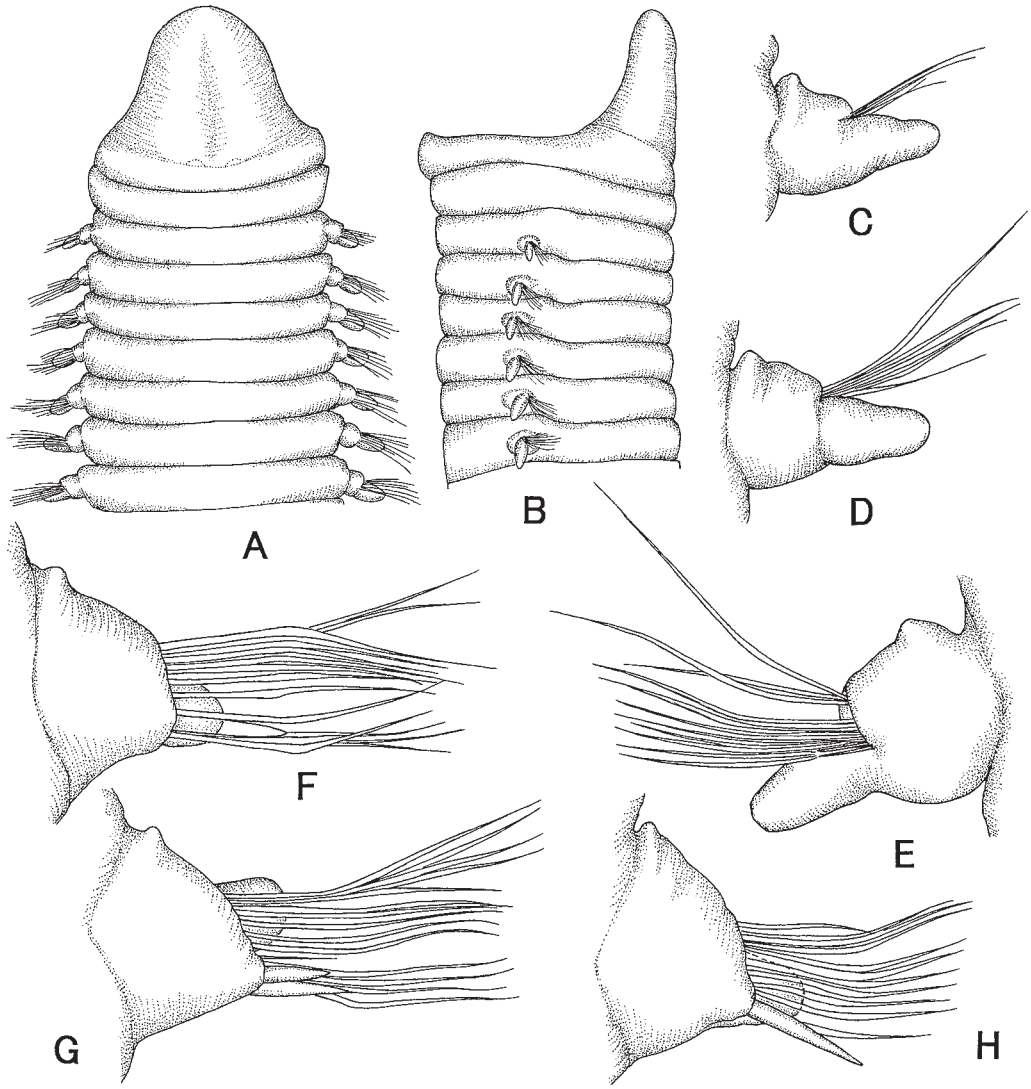

Fig. 32. *Drilonereis filum* (Claparède). —A, anterior end, dorsal view, × 15; B, same, lateral view, × 15; C, left parapodium from setiger 1, anterior view, × 57; D, same from setiger 5, same view, × 57; E, right parapodium from setiger 11, same view, × 57; F, left parapodium from setiger 40, same view, × 57; G, same from setiger 44, same view, × 57; H, same from setiger 82, same view, × 57.

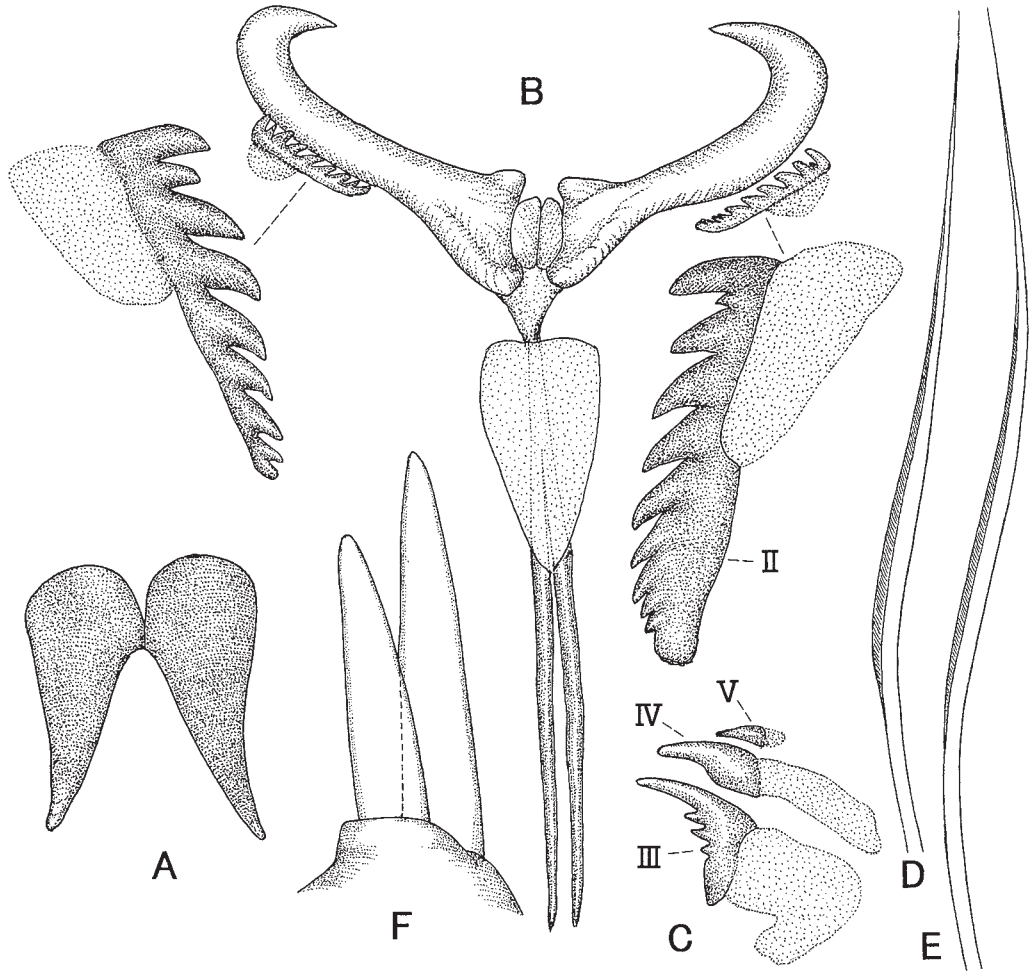

Fig. 33. *Drilonereis filum* (Claparède). —A, mandibles, × 35; B, maxillae, × 28, with detail of left and right maxillae II, × 76; C, right maxillae III–V, × 76; D–E, limbate setae, × 214; F, acicular spines from setiger 44, × 236.

organs inconspicuous. Peristomium with 2 rings, the anterior one indistinctly separated from prostomium, about as wide as prostomial base and slightly shorter than second ring and subsequent setigers (Fig. 32A–B).

Parapodia conspicuous and of equal shape throughout length of body, slightly small in few anterior setigers; presetal lobes truncate, postsetal lobes conical pointing dorsad; notopodial papilla minute (Fig. 32C–H).

Pharynx armed with mandibles and 5 pairs of maxillae. Mandibles well sclerotized, roughly triangular, fused along short distal area (Fig. 33A). Maxillae with long, slender carriers and lanceolate unpaired ventral piece; M I large, strongly falcate, basally smooth; M II with 8 to 10 teeth, subdistal one smallest; M III with 4 teeth, 1 large and 3 small; M IV and M V each with one pointed tooth (Fig. 33B–C). Setae narrowly limbate with smooth wings, more straight and slender (Fig. 33D–E). Acicular spine first present from setiger 10, usually single, sometimes 2 per parapodium (Fig. 33F).

The species is newly added to the Japanese polychaetous fauna.

Distribution. Mediterranean Sea; California; Japan.

Genus ***Notocirrus*** Schmarda, 1861
Notocirrus japonicus (Okuda, 1939)

Arabella geniculata var. *japonica* Okuda, 1939: 237–238, textfig. 10.
Notocirrus japonicus: Imajima and Hartman, 1964: 266–267.

Material. NSMT-Pol. 109811, WA05-EF250D (1), NSMT-Pol. 109812, WA05-GH510D (1); NSMT-Pol. 109813, WA06-A150D (1), NSMT-Pol. 109814, WA06-DE280D (1), NSMT-Pol. 109815, WA06-G1200D (1); NSMT-Pol. 110757, WA07-D210D (1).

Distribution. Japan.

Order Orbiniida
Family Orbiniidae Hartman, 1942
Genus ***Califia*** Hartman, 1957
Califia calida Hartman, 1957

Orbiniid n. g. and sp. Hartman, 1955: 179.
Califia calida Hartman, 1957: 306–308, pl. 42, figs. 1–3; Hartman, 1969: 17–18; Blake, 1996a: 11–12, fig. 1.3; Imajima, 1997a: 191, fig. 12a–h.

Material. NSMT-Pol. 110165, WA05-GH510D (3).

Distribution. San Pedro Basin; California; Japan.

Genus ***Leitoscoloplos*** Day, 1977
Leitoscoloplos pugettensis (Pettibone, 1957)

Scoloplos (*Scoloplos*) *pugettensis* Pettibone, 1957: 162.
Leitoscoloplos pugettensis: Mackie, 1987: 8–9, fig. 8; Blake, 1996a: 9–10, fig. 1.2; Imajima, 1997a: 188.

Material. NSMT-Pol. 109669, WA06-DE280D (9).

Distribution. Puget Sound; British Columbia; Japan.

Genus ***Naineris*** Blainville, 1828
Naineris japonica sp. nov.
(Figs. 34A–E, 35A–G)

Type material. Holotype—NSMT-Pol. H 510, Stn. WA07-B410D, off Sanriku, 40˚16.88´N, 142˚13.51´E–40˚17.11´N, 142˚13.46´E, 416–416 m, Oct. 13, 2007. Paratypes—NSMT-Pol. P 511, Stn. WA06-EF425D, off Sanriku, 420–424 m, Nov. 21, 2006 (2); NSMT-Pol. P 512, Stn. WA07-C350D, off Sanriku, 355–354 m, Oct. 15, 2007 (2).

Description. All specimens missing posterior ends, holotype of largest one 23 mm long, 3.3 mm wide including parapodia for 44 setigerous segments. Body greatly expanded and dorsoventrally flattened in thoracic region, parapodia elevated, forming distinct mid-dorsal trough; thoracic segments less crowded than those in abdomen. Thorax consisting of peristomium and 17 setigers.

Prostomium broadly spatulate and truncated at its frontal margin; eyes absent; nuchal organs not evident (Fig. 34A–B). Peristomium uniannulate, achaetous, and forming posterior lip of large mouth (Fig. 34C). Branchiae first present from setiger 5; each branchia long, digitate, pointed apically in thoracic region (Fig. 34E), then becoming flattened, with short conical tips in abdominal region (Fig. 35B). Thoracic notopodia with long, digitate postsetal lobes. Thoracic neuropodia

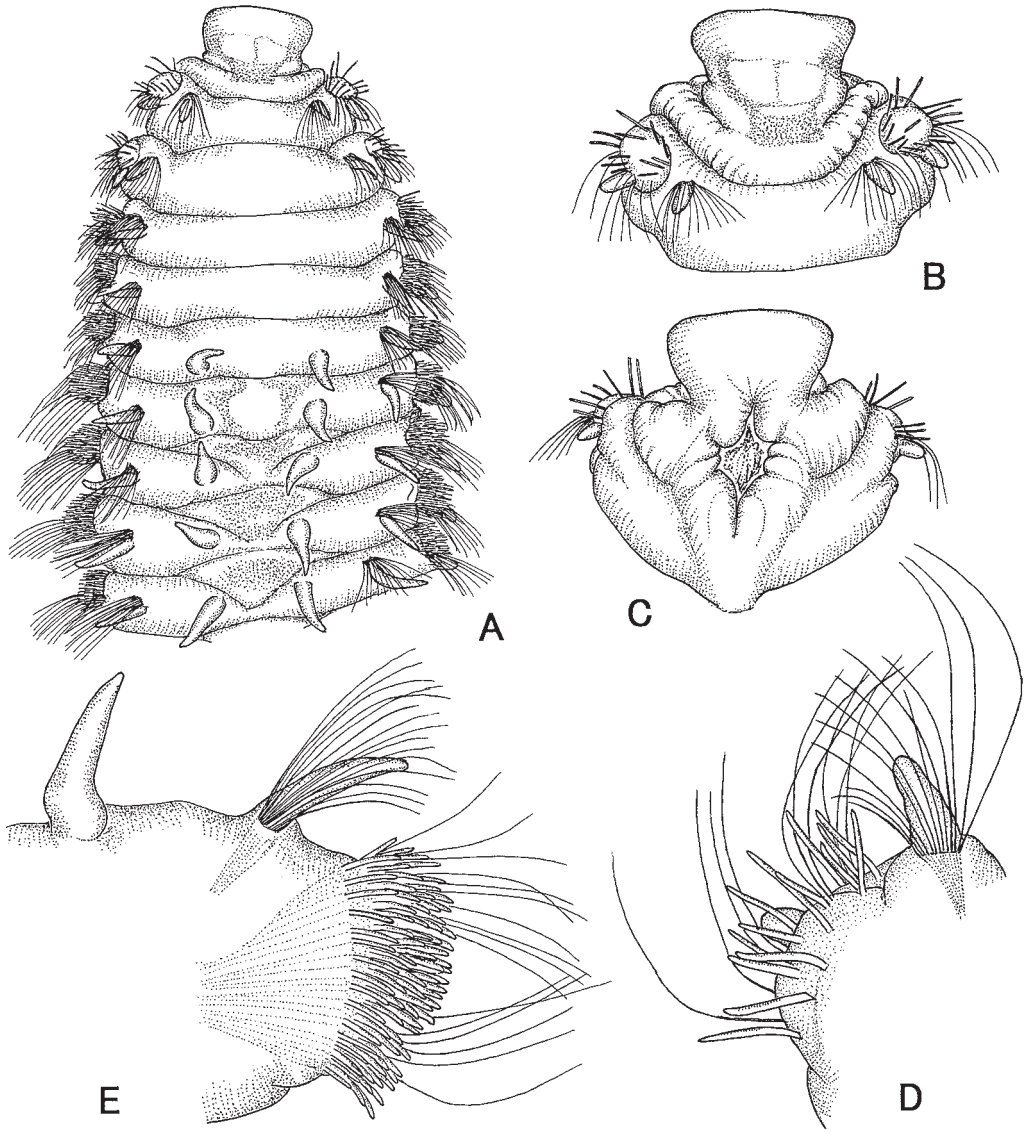

Fig. 34. *Naineris japonica* sp. nov. —A, anterior end, dorsal view, × 17; B, prostomium and first setiger, same view, × 25; C, same, ventral view, × 25; D, right thoracic parapodium from setiger 1, anterior view, × 63; E, left thoracic parapodium from setiger 8, same view, × 40.

with a conical postsetal lobe at middle part of postsetal ridge (Fig. 34D, 35A). Abdominal notopodia slender, distally tapering postsetal lobes; abdominal neuropodia bilobed, with infra-acicular lobe longest (Fig. 35B). Thoracic notosetae camerated capillaries (Fig. 35C); abdominal segments with capillaries and furcate setae (Fig. 35G). Thoracic neurosetae include camerated capillaries and ridged uncini with partial transparent hood (Fig. 35D); those arranged in 4–5 rows with 10–15 in a row at maximum developed (Fig. 34E); uncini in anterior row of fascicle shorter (Fig. 35E) than posterior ones (Fig. 35F). Uncini in first setiger circularly arranged in a row around neuropodial lobe (Fig. 34D). Abdominal neurosetae include fine, delicate capillaries.

Remarks. *Naineris japonica* resembles *N. grubei* (Gravier, 1909) in the shape of the prostomium and having 17 thoracic setigerous segments. However, *N. japonica* differs from *N. grubei* as

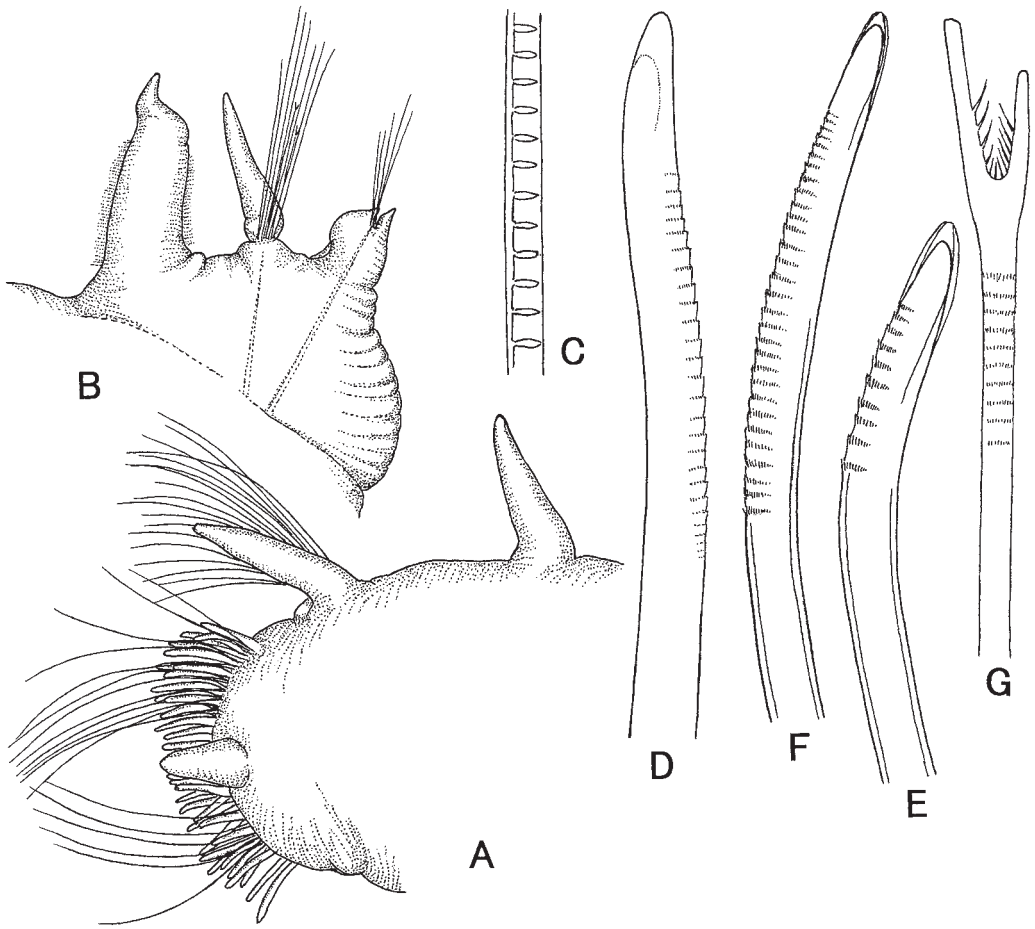

Fig. 35. *Naineris japonica* sp. nov. —A, left thoracic parapodium from setiger 8, posterior view, × 42; B, left abdominal parapodium from setiger 26, anterior view, × 42; C, part of notoseta, × 680; D, neuropodial uncinus from setiger 1, × 432; E, neuropodial uncinus in anterior row of fascicle, × 370; F, same in posterior row of fascicle, × 370; G, furcate seta from abdominal notopodium, × 990.

follows; (1) the branchiae are present from setiger 5 rather than setiger 7, (2) the thoracic neuropodial ridge has a short lobe at its midlength rather than with a short lobe at its superior edge and (3) abdominal notopodia have capillaries and furcate setae rather than without furcate setae.

Etymology. The species is named because it was collected from Japanese waters.

Distribution. Japan (354–424 m depth).

Genus ***Phylo*** Kinberg, 1866

Phylo felix Kinberg, 1866

(Fig. 36A–I)

Phylo felix Kinberg, 1866: 251–252; Hartman, 1948b: 105–106, pl. 15, fig. 10; Hartman, 1953: 37–38; Hartman, 1957: 262–265, pl. 23, figs.1–7.

Material. NSMT-Pol. 110435, WA05-DE380D (1), NSMT-Pol. 110436, WA05-EF450D (2), NSMT-Pol. 110437, WA05-GH380D (1); NSMT-Pol. 110438, WA06-EF425D (1), NSMT-Pol.

110439, WA06-GH480D (1); NSMT-Pol. 110440, WA07-B410D (12), NSMT-Pol. 110441, WA07-C350D (10).

Description. All specimens missing posterior ends; largest one 29 mm long, about 3 mm wide for 65 setigers. Dorsum elevated through 4th setiger and depressed to concave in segments farther back. Thorax divided into anterior and posterior regions: anterior encompassing setigers 1–10; posterior including setigers 11–17; transitional to abdominal region on setiger 18.

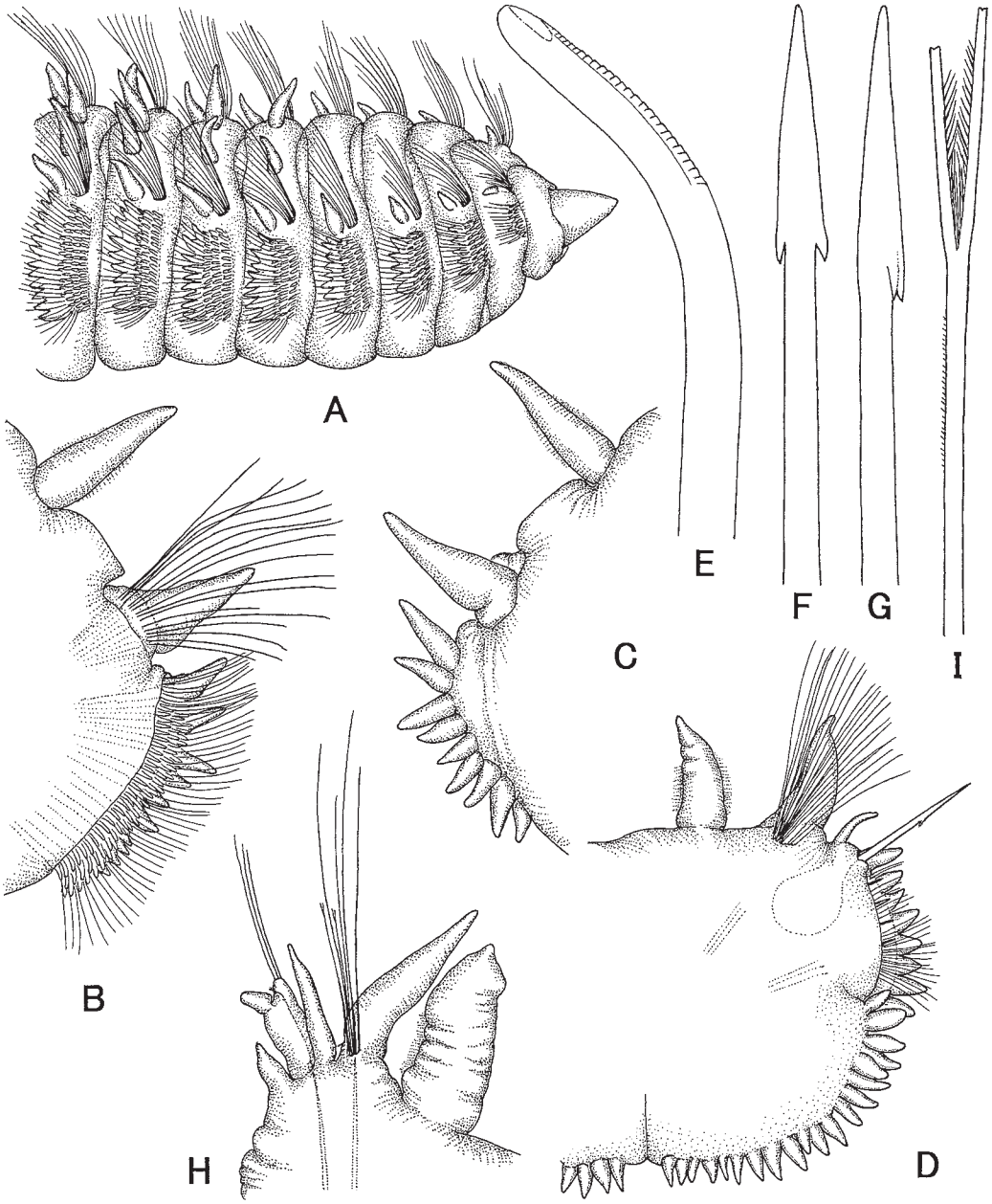

Fig. 36. *Phylo felix* Kinberg. —A, anterior end, lateral view, × 16; B, left parapodium from setiger 7, anterior view, × 32; C, same, posterior view, × 32; D, left parapodium from setiger 13, anterior view, × 24; E, thoracic neuropodial uncinus, × 493; F–G, modified spines from posterior thoracic segment, × 145; H, right parapodium from setiger 30, anterior view, × 47; I, furcate seta from abdominal notopodium, × 697.

Prostomium small, conical, lateral margins with pigment in lateral depressions. Thoracic notopodia with long, simple postsetal lobes and fascicles of pointed setae (Fig. 36A). First 10 thoracic neuropodia with parapodial ridges flanked by postsetal fringe; subpodial or ventral papillae absent. First neuropodia with 2 or 3 lobes, gradually increasing to 9 to 12 lobes on middle and posterior thoracic segments (Fig. 36A–C). Ventral fringe first present on 11th setiger and increasing to 20 lobes on 15th setiger (Fig. 36D), absent after thoracic segment 20.

Branchiae present from setiger 5, continuing to end of body; branchia with wide base, lingulate, laterally fimbriated. Thoracic notosetae slender camerated capillaries. Thoracic neurosetae of two kinds; 3 to 5 rows of yellow uncini distally curved and transversely ridged, distally hooded (Fig. 36E); setae in posterior row longer, distally pointed, with transverse series of fine spinelets.

From 11th setiger uncini replaced by dark brown modified spearlike spines (Fig. 36F–G), number 4 to 6 in anterior transverse row. These spines present in setigers 11 to 16. Uppermost spine projects from neuropodium, more conspicuous than others; posterior pointed setae and inferior uncinal rows remain as in front but more limited in number. Anterior abdominal parapodia with 2–3 postsetal neuropodial lamellae; remaining parapodia with long, slender notopodial postsetal lobes and shorter neuropodial lobes, interramal cirri and ventral cirrus (Fig. 36H). Interramal cirrus present as long simple lobe, from second last thoracic or not before first abdominal segment, continued back through long abdominal region. Abdominal notopodia with 1–3 furcate setae (Fig. 36I) in bundle, accompanied by pointed setae. Abdominal neuropodia with 3–6 slender pointed setae.

The species is newly added to the Japanese polychaetous fauna.

Distribution. Brazil; Patagonia; California; Mexico; East Falkland Islands; Japan.

Phylo fimbriatus (Moore, 1903)

Aricia fimbriata Moore, 1903: 464–467, pl. 24, figs. 31–35; Okuda, 1937a: 99–100, textfigs. 1–2.
Phylo fimbriatus: Imajima and Hartman, 1964: 276–277; Imajima, 1997a: 189.

Material. NSMT-Pol. 110442, WA05-GH380D (1), NSMT-Pol.0110443, WA05-GH510D (1).

Distribution. Japan.

Phylo nudus (Moore, 1911)

Aricia nuda Moore, 1911: 311–315, pl. 21, figs. 172–176; Fauvel, 1953: 303–304, fig. 157a–d.
Phylo nudus: Hartman, 1957: 268; Hartman, 1969: 39, figs. 1–4; Sun and Yang, 1987: 158, fig. 5; Blake, 1996a: 13, fig. 1.4; Imajima, 1997a: 188–189, fig. 11a–l.

Material. NSMT-Pol. 110444, WA05-E1000D (1); NSMT-Pol. 110445, WA06-A1200D (1), NSMT-Pol. 110446, WA06-D450D (1), NSMT-Pol. 110447, WA06-EF425D (1); NSMT-Pol. 110448, WA07-B410D (2), NSMT-Pol. 110449, WA07-D900 (10).

Distribution. Southern California; Burma; East and South China seas; Japan.

Genus ***Scoloplos*** Blainville, 1828

Scoloplos* (*Leodamas*) *robustus (Kinberg, 1866) comb. nov.

(Figs. 37A–E, 38A–H)

Alcandra robusta Kinberg, 1866: 251; Kinberg, 1910: 62–63, pl. 24, fig. 6; Hartman, 1948b: 106; Hartman, 1957: 295, pl. 31, fig. 5.

Material. NSMT-Pol. 110804, WA05-GH380D (1).

Description. Body divided into 3 parts, and total consisting of 93 mm long, 5 mm wide for 130 setigers. Prostomium short, bluntly conical. Peristomium broad, achaetous, anteriorly bearing a pair of dorso-lateral nuchal organs; eyes absent (Fig. 37A).

Thorax with 15 setigers. Thoracic notopodia with lanceolate lobes (Fig. 37B–D); neuropodial lobes digitate (Fig. 37B) or shorter and broader (Fig. 37C–D). Postsetal lobes of notopodia gradually increase in size along thorax. No subpodal or stomach papillae.

Branchiae present from setiger 5, initially small, digitate, rapidly increasing in size, becoming long, slender and triangular. Branchiae laterally ciliated, generally longer than notopodial lamellae.

In abdomen notopodial postsetal lobes abruptly increase in size, becoming more foliaceous (Fig. 37E), then gradually reduced posteriorly (Fig. 38A–B). Anterior neuropodia weakly bilobed; rudimentary inner lobe lost, uniramous condition evident in later setigers (Figs. 37E, 38A–B).

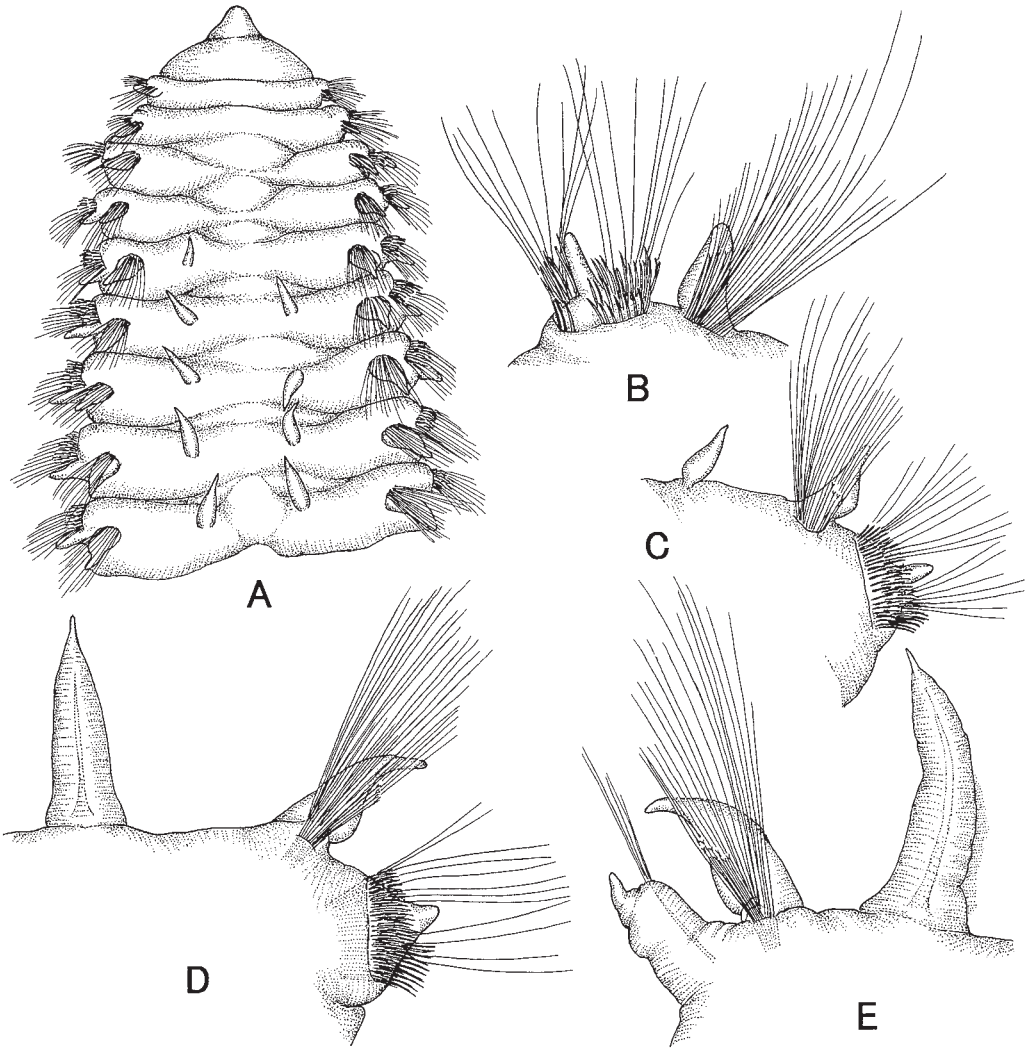

Fig. 37. *Scoloplos* (*Leodamas*) *robustus* (Kinberg). —A, anterior end, dorsal view, × 15; B, right parapodium from setiger 1, anterior view, × 44; C, left parapodium from setiger 5, same view, × 23; D, left parapodium from setiger 15, same view, × 23; E, right parapodium from setiger 25, same view, × 23.

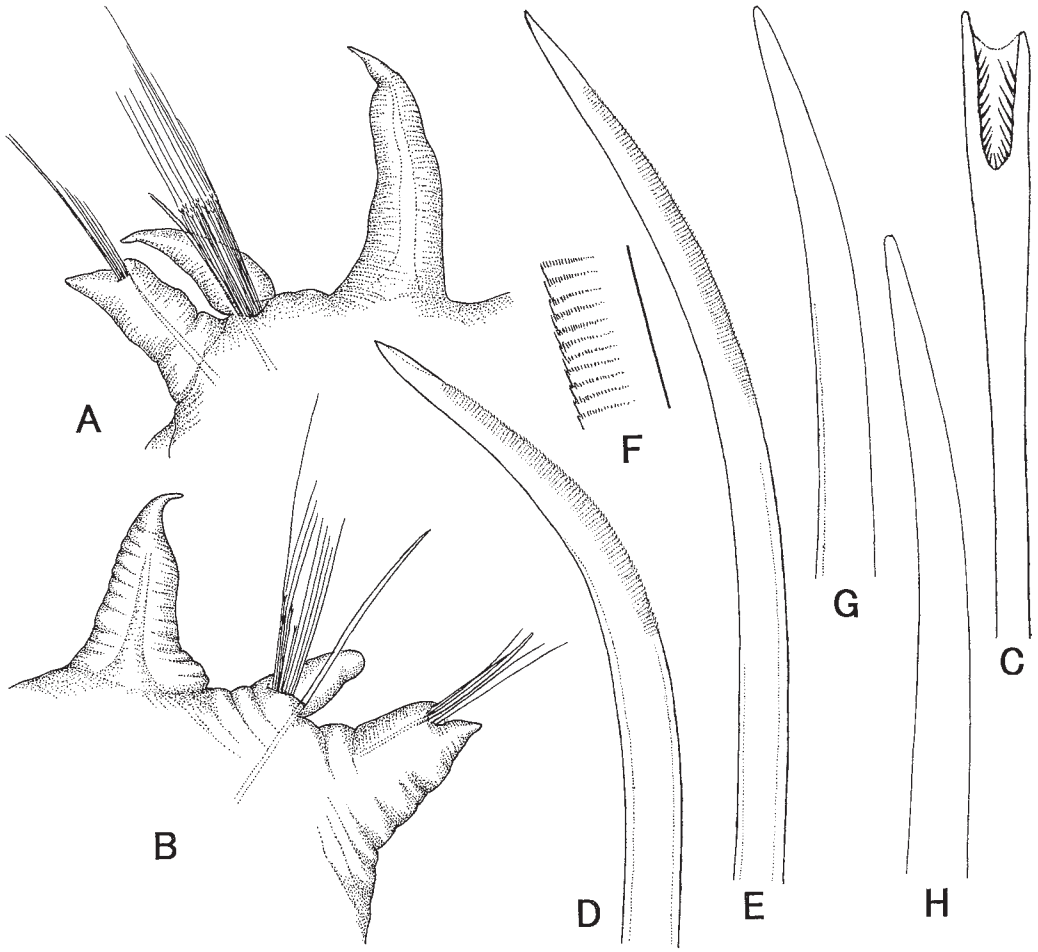

Fig. 38. *Scoloplos* (*Leodamas*) *robustus* (Kinberg). —A, right parapodium from setiger 40, anterior view, × 26; B, left parapodium from setiger 70, same view, × 33; C, furcate seta, × 717; D, uncinus in anterior row, × 285; E, same in posterior row, × 285; F, part of uncinus, × 717; G, protruding aciculum from posterior notopodium, × 224; H, same from posterior neuropodium, × 224.

Subpodal papillae and interramal cirri lacking.

Thoracic notosetae camerated capillaries and 4–5 furcate setae (Fig. 38C); furcate setae present from the first parapodia. Thoracic neurosetae including camerated capillaries and conspicuous transverse, palisaded rows of curved uncini. Uncini occurring from setiger 1, those in anteriormost row shorter and more sharply bent near tip (Fig. 38D) than posteriormost ones (Fig. 38E); all conspicuously denticulated along cutting edge (Fig. 38F).

Abdominal notopodia with long camerated capillaries, 8–10 furcate setae and a protruding aciculum (Figs. 37F, 38B, G); neuropodia with fine, camerated capillaries and a protruding aciculum occurring from posterior setigers (Fig. 38B, H).

Remarks. As mentioned by Hartman (1957), *Alcandra robusta* can be referred to *Scoloplos* (*Leodamas*) Kinberg by the characteristics of the prostomium, branchiae and setae. However, the type specimen is only thoracic segments, so that the abdominal region is not known.

This species is characterized as follows: the thorax consists of 15 setigers; the branchiae are present from the fifth setigerous segment and continue on all other segments; the notopodia of the thorax and abdomen have camerated capillaries and furcate setae; the thoracic neuropodia have

camerated capillaries and a number of uncini; the posterior noto- and neuropodia have singly occurring curved acicula that extends from the both rami; the subpodal papillae and interramal cirri are absent.

The species is newly added to the Japanese polychaetous fauna.

Distribution. Off Brazil; Japan.

Scoloplos* (*Scoloplos*) *similis Mackie, 1987
(Fig. 39A–F)

Scoloplos similis Mackie, 1987: 24, fig. 24.

Material. NSMT-Pol. 110805, WA05-DE380D (3), NSMT-Pol. 109591, WA05-FG250D (18); NSMT-Pol. 109592, WA06-DE280D (5), NSMT-Pol. 110806, WA06-E510D (2), NSMT-Pol. 110807, WA06-GH480D (10).

Description. Largest specimen missing posterior end 11 mm long, about 0.8 mm wide including parapodia for 42 setigers.

Prostomium pointed, longer than wide; eyes absent; paired nuchal slits laterally. Peristomial ring about as long as setiger 1 (Fig. 39A). Thorax with 14 setigers. Thoracic notopodial postsetal lobes single, slender triangular; thoracic neuropodial postsetal lobes mammiform to triangular for first 12 setigers (Fig. 39B), bifurcate thereafter (Fig. 39C).

Branchiae present from setiger 11, initially short and triangular (Fig. 39C), then becoming larger and erect, subdistally swollen, ciliated along inner margin, approximately same length as notopodial lobes (Fig. 39D). More posteriorly, branchiae becoming somewhat strap-like, with blunt tips (Fig. 39E).

Abdominal notopodial postsetal lobes single, slender, digitate (Fig. 39D–E). Abdominal neuropodia bilobed, inner lobe longer and more robust, with a distinct subpodal notch at insertion of short, subpodal flange (Fig. 39D–E). Pair of small subpodal papillae present setigers 14 to 20 (Fig. 39D), thereafter only single papilla evident (Fig. 39E). Interramal cirri present on setigers 14 to 23 in cirriform shape (Fig. 39D).

Thoracic notosetae camerated capillaries. Thoracic neuropodia possess a number of camerated capillaries and about 10 serrate uncini with small hood (Fig. 39F); uncini appearing from first parapodia. Abdominal notosetae all camerated capillaries, forked setae not seen. Abdominal neurosetae 2–3 camerated capillaries.

Remarks. The examined specimens differ from the type specimen from the South Africa in some characteristics in that, the setigerous number of the thoracic region (14 setigers instead of 15) and the appearance of the branchiae (from setiger 11 instead of 12). It is likely that those are merely variants of characters.

The species is newly added to the Japanese polychaetous fauna.

Distribution. South Africa; Japan.

Family Paraonidae Cerruti, 1909
Genus ***Aricidea*** Webster, 1879
Aricidea* (*Acmira*) *simplex Day, 1963

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

Aricidea (*Acmira*) *simplex*: Blake, 1996b: 63–64, fig. 2.18; Imajima, 1997a: 193; Imajima, 2001b: 433, fig. 178; Lovell, 2002: 45–46, fig. 7A–C.

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

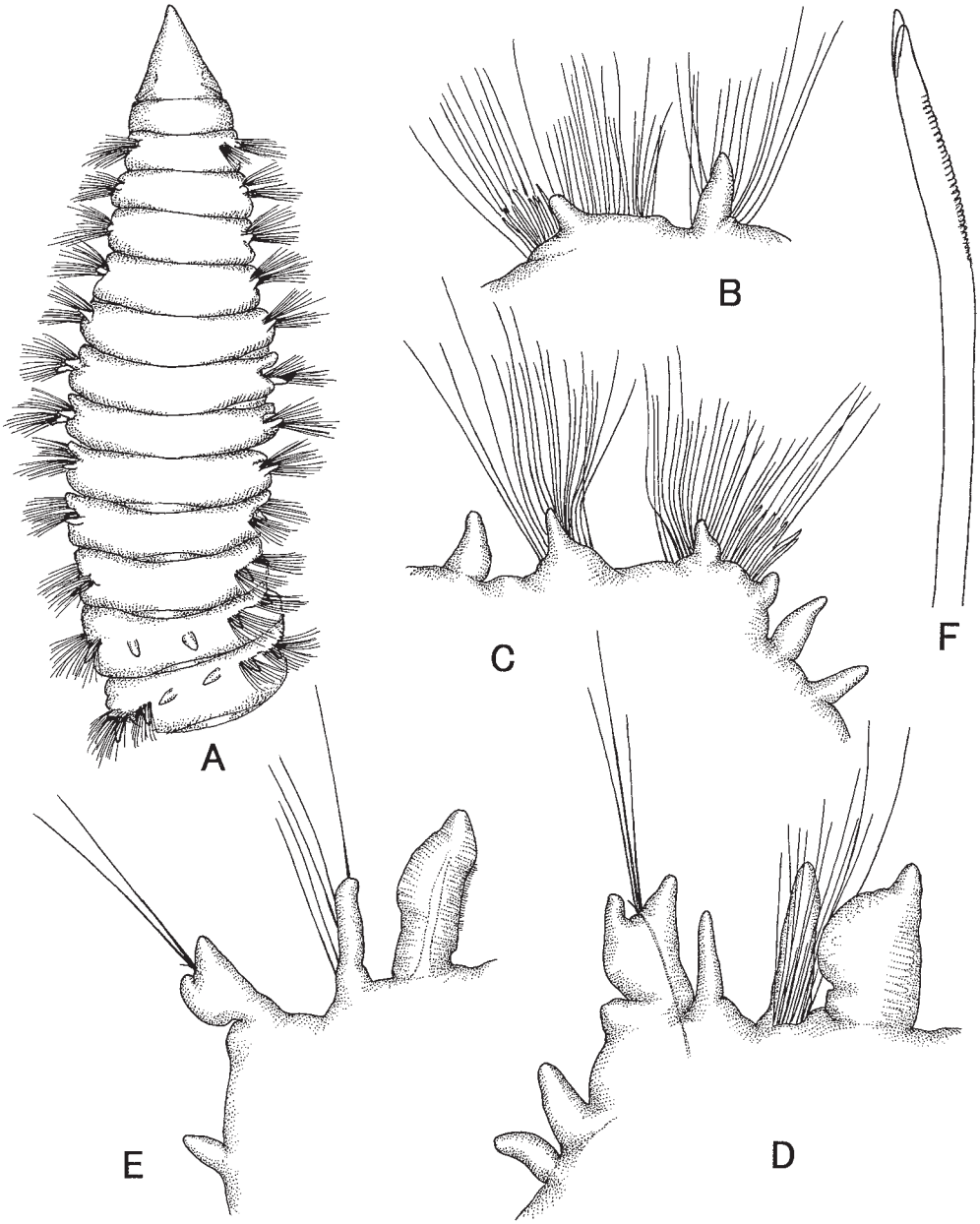

Fig. 39. *Scoloplos* (*Scoloplos*) *similis* Mackie. —A, anterior end, dorsal view, × 34; B, left parapodium from setiger 5, posterior view, × 107; C, right parapodium from setiger 13, same view, × 107; D, right parapodium from setiger 17, anterior view, × 107; E, left parapodium from setiger 27, posterior view, × 107; F, serrate uncinus, × 680.

Material. NSMT-Pol. 109816, WA05-DE380D (3); NSMT-Pol. 110495, WA06-GH480D (3).
Distribution. South Africa; Atlantic Ocean; New Zealand; Bering Sea; California; Japan.

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

Paraonis belgicae Fauvel, 1936b: 29–31, fig. 3.

Aricidea (*Aedicira*) *belgicae*: Hartman, 1957: 327; Imajima, 2001b: 435, fig. 180.
Aedicira belgicae: Hartman, 1965: 133–135; Imajima, 1973: 277–279, fig. 13a–k.

Material. NSMT-Pol. 109817, WA05-GH510D (1); NSMT-Pol. 110496, WA06-DE280D (11), NSMT-Pol. 110497, WA06-G1200D (1), NSMT-Pol. 110498, WA06-GH480D (2), NSMT-Pol. 110499, WA06-H1500D (1).

Distribution. Antarctic Ocean; off northeastern South America; South Africa; Japan.

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

Aricidea antennata Annenkova, 1934a: 658, figs. 2–3.
Aricidea uschakovi: Imajima, 1973: 256–258, fig. 1a–k; Imajima, 2006: 377.
Aricidea (*Allia*) *antennata*: Blake, 1996b: 48–50, fig. 2.10.

Material. NSMT-Pol. 109818, WA05-GH510D (1); NSMT-Pol. 110501, WA06-GH480D (1).

Distribution. North Japan Sea; western Canada; Southern California; Japan.

***Aricidea* (*Allia*)** sp.

Material. NSMT-Pol. 110612, KT07-29-H-1 (1).

Gens ***Cirrophorus*** Ehlers, 1908

Cirrophorus branchiatus Ehlers, 1908

Cirrophorus branchiatus Ehlers, 1908: 124–126, pl. 17, figs. 5–9; Day, 1963b: 423–424, textfig. 9l–o; Day, 1967b: 563, fig. 24.3.a–e; Imajima, 1973: 274–275, fig. 11a–g.

Material. NSMT-Pol. 110613, KT07-29-M-3-3 (2).

Distribution. Southern Africa; British Isles; Japan.

Genus ***Levinsenia*** Mesnil, 1897

Levinsenia gracilis (Tauber, 1879)

Aonides gracilis Tauber, 1879: 115.
Levinsenia gracilis: Mesnil and Caullery, 1898: 135–137; Blake, 1996b: 33–34, fig. 2.1; Imajima, 1997a: 193.
Paraonis gracilis minuta Hartmann-Schröder, 1965: 197–198, figs. 181–182; Imajima, 1973: 284–285, fig. 16a–f.

Material. NSMT-Pol. 110502, WA06-E1200D (1), NSMT-Pol. 110503, WA06-GH480D (1).

Distribution. Cosmopolitan in continental shelf and slope depths.

Genus ***Paradoneis*** Hartman, 1965

Paradoneis lyra (Southern, 1914)

Paraonis (*Paraonides*) *lyra* Southern, 1914: 94–95, pls. 9–10, fig. 22a–g; Fauvel, 1927: 72–73, fig. 24a–f.
Paraonides lyra lyra: Day, 1963b: 425.
Paradoneis lyra: Hartman, 1965: 140; Imajima, 1997a: 193–194; Imajima, 2006: 378.
Paraonides lyra: Imajima, 1973: 287–288, fig. 18a–e.

Material. NSMT-Pol. 109819, WA05-DE380D (4), NSMT-Pol. 110505, WA05-GH510D (11); NSMT-Pol. 110504, WA06-GH480D (5).

Distribution. Western Ireland; Denmark; Black Sea; South Africa; Pacific of Southern California; Massachusetts; Japan.

Order Spionida
Family Poecilochaetidae Hannerz, 1956
Genus ***Poecilochaetus*** Claparède, 1875
Poecilochaetus granulatus Imajima, 1989

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

Material. NSMT-Pol. 110541, WA06-GH480D (1).
Distribution. Japan.

Family Spionidae Grube, 1850
Genus ***Laonice*** Malmgren, 1867
Laonice cirrata (Sars, 1851)

Nerine cirrata Sars, 1851: 207.
Spionides japonicus: Moore, 1907: 204–206, pl. 16, figs. 31–34.
Laonice cirrata: Fauvel, 1927: 38, fig. 12a–e; Okuda, 1937b: 222; Imajima and Hartman, 1964: 281–282; Day, 1967b: 480, fig. 18.6.h–k; Imajima, 2006: 378–379.

Material. NSMT-Pol. 110156, WA05-DE250D (2), NSMT-Pol. 110157, WA05-DE380D (30), NSMT-Pol. 110158, WA05-E1000D (1), NSMT-Pol. 110159, WA05-EF450D (4), NSMT-Pol. 110160, WA05-FG250D (1), NSMT-Pol. 110161, WA05-FG510D (1); NSMT-Pol. 110487, WA06-D450D (1), NSMT-Pol. 110488, WA06-DE280D (9), NSMT-Pol. 110489, WA06-E510D (14), NSMT-Pol. 110162, WA06-EF425D (1), NSMT-Pol. 110163, WA06-FG350D (12), NSMT-Pol. 110164, WA06-GH480D (7); NSMT-Pol. 110492, WA07-A250D (30), NSMT-Pol. 110493, WA07-A1500D (1), NSMT-Pol. 110494, WA07-B410D (24).
Distribution. Northern Norway; north Atlantic and Pacific oceans; Japan.

Genus ***Prionospio*** Malmgren, 1867
Prionospio* (*Prionospio) bocki Söderström, 1920

Prionospio bocki Söderström, 1920: 234–235, figs. 142–143; Day, 1967b: 490; Maciolek, 1985: 336; Imajima, 1990: 122–124, figs. 10a–c, 11a–j.

Material. NSMT-Pol. 110481, WA05-DE380D (2); NSMT-Pol. 110482, WA06-E510D (2), NSMT-Pol. 110483, WA06-EF425D (1), NSMT-Pol. 110484, WA06-GH480D (2).
Distribution. Madagascar; Japan.

Prionospio* (*Prionospio) depauperata Imajima, 1990

Prionospio (*Prionospio*) *depauperata* Imajima, 1990: 114–118, figs. 6a–d, 7a–l; Imajima, 1994: 114; Imajima, 1997a: 194.

Material. NSMT-Pol. 110788, WA05-DE250D (5), NSMT-Pol. 110789, WA05-FG250D (198); NSMT-Pol. 110790, WA06-DE280D (39).
Distribution. Japan.

Prionospio* (*Prionospio*) *dubia Day, 1961

Prionospio malmgreni var. *dubia* Day, 1961: 489–490, fig. 3j–n.
Prionospio (*Prionospio*) *dubia*: Maciolek, 1985: 336–339, figs. 2–3; Imajima, 1990: 118–121, figs. 8a–e, 9a–h.

Material. NSMT-Pol. 109870, WA05-DE380D (1), NSMT-Pol. 109871, WA05-EF250D (1); NSMT-Pol. 109873, WA06-GH480D (7), NSMT-Pol. 109872, WA06-H250D (8); NSMT-Pol. 110485, WA07-D210D (1).

Distribution. South Africa; North Carolina; Virginia; Bay of Biscay; Mediterranean Sea; Sweden; Surinam; Japan.

Prionospio sp.

Material. NSMT-Pol. 110573, WA06-DE280D (6). NSMT-Pol. 110635, KT07-29-H-1 (1).

Genus ***Spiophanes*** Grube, 1860

Spiophanes japonicum Imajima, 1991

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

Material. NSMT-Pol. 109874, WA06-H250D (1).
Distribution. Japan.

Spiophanes kroyeri Grube, 1860

Spiophanes kroyeri Grube, 1860: 88.
Spiophanes kroeyeri: Fauchald, 1972a: 99, fig. 4c–d; Light, 1977: 79–80, fig. 5d; Imajima, 1991: 118–123, figs. 2a–d, 3a–h, 4a–o; Imajima, 1997a: 194; Imajima, 2006: 380.

Material. NSMT-Pol. 109875, WA05-E1000D (35), NSMT-Pol. 109876, WA05-GH510D (2), NSMT-Pol. 109877, WA05-H900D (2); NSMT-Pol. 109878, WA06-B750D (3), NSMT-Pol. 109879, WA06-E1200D (1), NSMT-Pol. 109880, WA06-F650D (1), NSMT-Pol. 109881, WA06-G1200D (4), NSMT-Pol. 109882, WA06-GH480D (3), NSMT-Pol. 109883, WA06-H250D (1), NSMT-Pol. 109884, WA06-H1500D (17); NSMT-Pol. 110486, WA07-D900 (1).

Distribution. Greenland; western Norway; Australia; Ross Sea; Japan.

Family Chaetopteridae Malmgren, 1867
Genus ***Spiochaetopterus*** Sars, 1853

Spiochaetopterus typicus Sars, 1856

Spiochaetopterus typicus: Uschakov, 1965: 271, fig. 106A–D.

Material. NSMT-Pol. 110894, WA06-A450 (23), NSMT-Pol. 110895, WA06-A510 (3), NSMT-Pol. 110896, WA06-DE280D (1), NSMT-Pol. 110897, WA06-E510 (19), NSMT-Pol. 110898, WA06-EF425D (5), NSMT-Pol. 110899, WA06-F1500D II (1), NSMT-Pol. 110900, WA06-FG350D (3), NSMT-Pol. 110901, WA06-G900D (4), NSMT-Pol. 110902, WA06- G1200D (1), NSMT-Pol. 110903, WA06-GH480D (156), NSMT-Pol. 110904, WA06-H250D (13), NSMT-Pol. 110905, WA06-H1500D (2); NSMT-Pol. 110906, WA07-A450 (21), NSMT-Pol. 110907, WA07-A650 (1), NSMT-Pol. 110908, WA07-A1500D (31), NSMT-Pol. 110909, WA07-B310 (1), NSMT-

Pol. 110910, WA07-B410D (147), NSMT-Pol. 110911, WA07-B1500D (4), NSMT-Pol. 110912, WA07-D210D (1), NSMT-Pol. 110913, WA07-D1500D (5).

The species is newly added to the Japanese polychaetous fauna.

Distribution. Far Eastern seas; Japan.

Family Cirratulidae Carus, 1863

Genus ***Aphelochaeta*** Blake, 1991

Aphelochaeta sp.

Material. NSMT-Pol. 110636, WA05-FG510D (1), NSMT-Pol. 110637, WA05-G1500D (1); NSMT-Pol. 110638, WA06-F650D (1), NSMT-Pol. 110639, WA06-G900D (1), NSMT-Pol. 110640, WA06-H250D (1). NSMT-Pol. 110641, KT07-29-H-1 (2).

Genus ***Chaetozone*** Malmgren, 1867

Chaetozone setosa Malmgren, 1867

Chaetozone setosa Malmgren, 1867a: 96, pl. 14, fig. 84; Uschakov, 1965: 279, fig. 110A–F; Blake, 1996c: 274–276, fig. 8.1; Imajima, 1997a: 197.

Material. NSMT-Pol. 110642, WA05-H250D (3). NSMT-Pol. 110643, KT07-29-H-1 (10).

Distribution. Arctic and subarctic seas; Japan.

Chaetozone spinosa Moore, 1903

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

Material. NSMT-Pol. 110644, WA05-GH380D (1); NSMT-Pol. 110645, WA06-GH480D (1), NSMT-Pol. 110646, WA06-H250D (3).

Distribution. Southern California; Japan.

Chaetozone sp.

Material. NSMT-Pol. 110647, WA05-EF250D (6); NSMT-Pol. 110648, WA06-DE280D (15).

Genus ***Cirratulus*** Lamarck, 1801

Cirratulus cirratus (Müller, 1776)

Cirratulus cirratus: Fauvel, 1927: 94, fig. 33a–g; Imajima and Hartman, 1964: 298; Hartmann-Schröder, 1971: 258–259, fig. 125; Imajima, 1997a: 197–198; Imajima, 2006: 381.

Material. NSMT-Pol. 110576, WA05-DE250D (2), NSMT-Pol. 110577, WA05-G280 (1), NSMT-Pol. 110578, WA05-GH380 (4), NSMT-Pol. 110579, WA05-H310 (2), NSMT-Pol. 110580, WA05-H350 (2), NSMT-Pol. 110581, WA05-H380 (6), NSMT-Pol. 110582, WA05-H510 (1); NSMT-Pol. 110583, WA06-A150D (1), NSMT-Pol. 110584, WA06-B350 (1), NSMT-Pol. 110585, WA06-DE450 (1), NSMT-Pol. 110586, WA06-G380 (1), NSMT-Pol. 110587, WA06-H310 (1); NSMT-Pol. 110588, WA07-B310 (1), NSMT-Pol. 110589, WA07-B410 (5), NSMT-Pol. 110590, WA07-B410D (1), NSMT-Pol. 110591, WA07-C310 (10), NSMT-Pol. 110592, WA07-C350D (1), NSMT-Pol. 110593, WA07-C410 (1), NSMT-Pol. 110594, WA07-C450 (2). NSMT-Pol. 110598,

KT07-29-M-3-1 (1).

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

Genus ***Monticellina*** Laubier, 1961

Monticellina tesselata (Hartman, 1960)

Tharyx tesselata Hartman, 1960: 126–127, pl. 11, figs. 1–4; Reish, 1968: 86.
Monticellina tesselata: Blake, 1996c: 328–329, fig. 8.27; Imajima, 1997a: 198; Imajima, 2001a: 80–81.

Material. NSMT-Pol. 110595, WA05-DE380D (18); NSMT-Pol. 110597, WA06-E510D (2), NSMT-Pol. 110596, WA06-GH480D (5).

Distribution. Central and southern California; Japan.

Genus ***Timarete*** Kinberg, 1866

Timarete sp.

Material. NSMT-Pol. 110649, WA06-F1500D II (1).

Order Cossurida

Family Cossuridae Day, 1963

Genus ***Cossura*** Webster and Benedict, 1887

Cossura spp.

Material. NSMT-Pol. 110506, WA05-EF250D (3), NSMT-Pol. 110507, WA05-FG250D (1), NSMT-Pol. 110508, WA05-GH510D (3); NSMT-Pol. 110509, WA06-E510D (2), NSMT-Pol. 110510, WA06-G1200D (2), NSMT-Pol. 110511, WA06-GH480D (21); NSMT-Pol. 110512, WA07-D210D (1). NSMT-Pol. 110857, KT07-29-H-1 (2), NSMT-Pol. 110856, KT07-29-M-1 (1).

All specimens are missing characteristic posterior ends.

Order Flabelligerida

Family Flabelligeridae Saint-Joseph, 1894

Genus ***Brada*** Stimpson, 1854

Brada granulata Malmgren, 1867

Brada granulata Malmgren, 1867b: 194, pl. 12, fig. 71; Uschakov, 1965: 287, fig. 115A–C.

Material. NSMT-Pol. 110667, WA07-C310 (1).

The species is newly added to the Japanese polychaetous fauna.

Distribution. Northern part of Sea of Japan; Sea of Okhotsk; Bering Sea; Japan.

Brada ochotensis Annenkova, 1922

Brada ochotensis Annenkova, 1922: 39; Uschakov, 1965: 287, fig. 115J.

Material. NSMT-Pol. 110668, WA07-B410D (1).

The species is newly added to the Japanese polychaetous fauna.

Distribution. Sakhalin; Bering Sea; Chuckchee Sea; Japan.

Brada sachalina Annenkova, 1922

Brada sachalina Annenkova, 1922: 39; Uschakov, 1955: 310, fig. 115K–L.
Brada mamillata: Imajima, 1964: 246–247, figs. 33–38 (not McIntosh, 1885).

Material. NSMT-Pol. 110664, WA05-GH510D (1); NSMT-Pol. 109820, WA06-B310D (1); NSMT-Pol. 110665, WA07-B410D (21).

Distribution. Sakhalin; Japan.

Brada villosa (Rathke, 1843)

Siphonostoma villosum Rathke, 1843: 215, pl. 11, figs. 11–12.
Brada villosa: Haase, 1915: 203; Fauvel, 1927: 121; Okuda, 1937c: 53–54, pl. 2, fig. D; Uschakov, 1955: 311, fig. 115D–H; Imajima and Hartman, 1964: 302; Imajima, 1997a: 199; Blake, 2000a: 5–7, fig. 1.1.

Material. NSMT-Pol. 110669, WA06-E1200D (1), NSMT-Pol. 110670, WA06-F1500D (4), NSMT-Pol. 110671, WA06-F1500D II (5), NSMT-Pol. 109821, WA06-H1500D (3); NSMT-Pol. 110672, WA07-C350D (1), NSMT-Pol. 110673, WA07-D1500D (4).

Distribution. Norway; Mediterranean Sea; Atlantic Ocean; Japan.

Genus ***Pherusa*** Oken, 1807

Pherusa plumosa (O. F. Müller, 1776)

Amphitrite plumosa O. F. Müller, 1776: 216.
Stylaroides plumosa: Okuda, 1937c: 52, pl. 2, fig. C.
Pherusa plumosa: Støp-Bowitz, 1948: 13; Imajima and Hartman, 1964: 303–304; Imajima, 1988: 127; Imajima, 1994: 118; Imajima, 1997a: 198–199.

Material. NSMT-Pol. 109822, WA05-FG510D (4), NSMT-Pol. 109823, WA05-GH380D (1); NSMT-Pol. 109824, WA06-E1200D (1), NSMT-Pol. 109825, WA06-F650D (1), NSMT-Pol. 109826, WA06-GH480D (3), NSMT-Pol. 109827, WA06-H1500D (1); NSMT-Pol. 110674, WA07-D310 (1).

Distribution. Atlantic and Pacific oceans; Japan.

Family Acrocirridae Banse, 1969?

Genus ***Acrocirrus*** Grube, 1872

Acrocirrus heterochaetus Annenkova, 1934

Acrocirrus heterochaetus Annenkova, 1934b: 326–327, fig. 7; Hartman, 1948a: 38–39, fig. 11a–c; Uschakov, 1965: 282, fig. 112A–D.

Material. NSMT-Pol. 110513, WA06-A350 (1); NSMT-Pol. 110514, WA07-B410 (2), NSMT-Pol. 110515, WA07-C350D (1).

The species is newly added to the Japanese polychaetous fauna.

Distribution. Sea of Japan; Sea of Okhotsk; Alaska Peninsula; Japan.

Family Fauveliopsidae

Genus ***Fauveliopsis*** McIntosh, 1922

Fauveliopsis glabra (Hartman, 1960)

(Fig. 40A–H)

Brada glabra Hartman, 1960: 129–130, pl. 14, figs. 1–2.
Fauveliopsis glabra: Hartman, 1969: 283–284, figs. 1–2; Hartman and Fauchald, 1971: 116–117; Levenstein, 1972: 173, tab. 2, fig. 1; Blake and Petersen, 2000: 35–38, figs. 3.1–3.3.

Material. NSMT-Pol. 110882 (5), 110888 (2), 110889 (1), WA06-H480, NSMT-Pol. 110758, WA06-H1500D (5); NSMT-Pol. 110883, WA07-C1500D (3), NSMT-Pol. 110759, WA07-D900 (1). NSMT-Pol. 110760, SO07-C7-B (99), NSMT-Pol. 110761, SO07-K2 (6), NSMT-Pol. 110762,

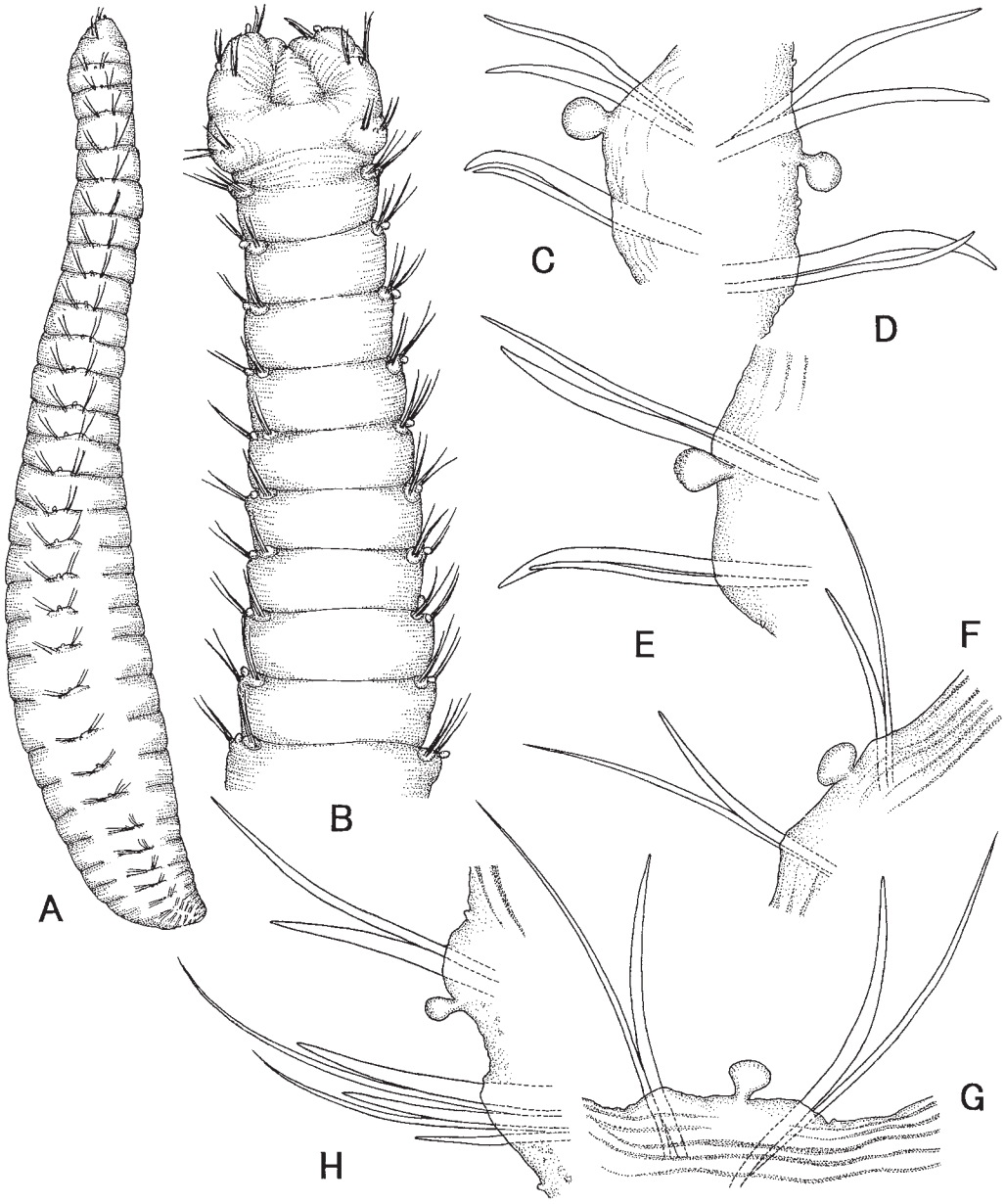

Fig. 40. *Fauveliopsis glabra* (Hartman). —A, entire animal in lateral view, × 15; B, anterior body, dorsal view, × 30; C, left parapodium of setiger 1, posterior view, × 136; D, right parapodium of setiger 2, same view, × 136; E, left parapodium of setiger 3, same view, × 136; F, left parapodium of setiger 4, same view, × 136; G, left parapodium of setiger 10, same view, × 136; H, left parapodium of setiger 30, same view, × 136.

SO07-O1 (1). NSMT-Pol. 110886, KT07-29-H-1 (1), NSMT-Pol. 110763, KT07-29-M-1 (1), NSMT-Pol. 110764, KT07-29-M-3-2 (3), NSMT-Pol. 110887, KT07-29- M-3-3 (2).

Description. Body more or less club-shaped, rounded truncate anteriorly, somewhat thicker and more cylindrical over long middle region, narrow in curved far posterior region, with segmental furrows poorly defined (Fig. 40A); 7–8 mm long, about 1 mm wide at middle region and with 34–35 setigers. Body surface with transverse ridges interrupted at more or less regular intervals by numerous minute, narrow papillae. Color in spirit light tan.

Prostomium usually invaginated, causing some contraction of setiger 1. Anterior setal region comprising setigers 1–3, with modified setae (Fig. 40B); notopodia of setiger 1 each with 2 weakly falcate, slender, subequal spines; neuropodia of setiger 1 usually with 2 falcate spines; upper spine thick, broad, and strongly hooked; lower one slender, about one-third as wide as upper one (Fig. 40C). Noto- and neuropodia of setigers 2–3 each with 2 subequal falcate spines similar to those of notopodia of setiger 1 (Fig. 40D–E). Middle setal region beginning on setiger 4; all parapodia with single acicular spine and capillary seta in each ramus, with spines initially being more slender than those of setigers 1–3 (Fig. 40F), then becoming longer, thicker and more curved than those of setiger 4 (Fig. 40G). Posterior setal region characterized by segments with multiple neurosetae, 3 acicular spines and 2 capillaries (Fig. 40H).

Interramal papilla stalked, close to notosetae on setigers 1–4, and shifting to more medial position between rami (Fig. 40G), then becoming closer to notosetae (Fig. 40H). Genital papillae visible on posterior part of setiger 10, immediately anterodorsal to anteriorly oriented setae of right parapodium 11 (Fig. 40B). Pygidium circular flattened dorsal lobe bending ventrally, forming cover over anus.

The species is newly added to the Japanese polychaetous fauna.

Distribution. California; Japan.

Genus ***Laubieriopsis*** Petersen, 2000

Laubieriopsis brevis japonica subsp. nov.

(Fig. 41A–J)

Type material. Holotype—NSMT-Pol. H 513, Stn. SO07-K3, off Kinkazan, Ishinomaki, 38˚33.7´N, 143˚41.2´E–38˚33.2´N, 143˚41.5´E, 4105–4181 m, Aug. 7, 2007. Paratypes—NSMT-Pol. P 514, Stn. SO07-K3 (32), same locality as holotype; NSMT-Pol. P 515, Stn. WA05-G1500D, off Kashima Sea, 1498 m, Nov. 10, 2005 (1); NSMT-Pol. P 516, Stn. SO07-K1, off Kinkazan, Ishinomaki, 2043–2081 m, Aug. 6, 2007 (42); NSMT-Pol. P 517, Stn. SO07-O1, off Onahama, 2024–2020 m, Aug. 8, 2007 (1); NSMT-Pol. P 518, Stn. SO07-O3, off Onahama, 4128–4094 m, Aug. 8, 2007 (1); NSMT-Pol. P 519, Stn. KT07-29-H-2, off Hachinohe, 2055–2032 m, Nov. 8, 2007 (37); NSMT-Pol. P 520, Stn. KT07-29-M-3-2, off Miyako, 1737–1709 m, Nov. 6, 2007 (6); NSMT-Pol. P 521, Stn. KT07-29-M-3-3, off Miyako, 1733–1695 m, Nov. 9, 2007 (8).

Description. Holotype complete, linear, of similar width throughout, 5 mm long, about 0.33 mm wide at median region; length of paratypes 4–10 mm long; all specimens including holotype and paratypes consisting of 16 segments. Body surface relatively smooth but covered with conical micropapillae throughout of surface under higher magnification. Anterior body with segmental annulations and furrows poorly defined, subsequent segments with no evidence of segmental furrows (Fig. 41A).

Prostomium with rounded lobe apparent on anterior margin, most specimens retracted prostomium, with pair of nuchal organs. Peristomium distinct, about half as long as setiger 1 (Fig. 41B).

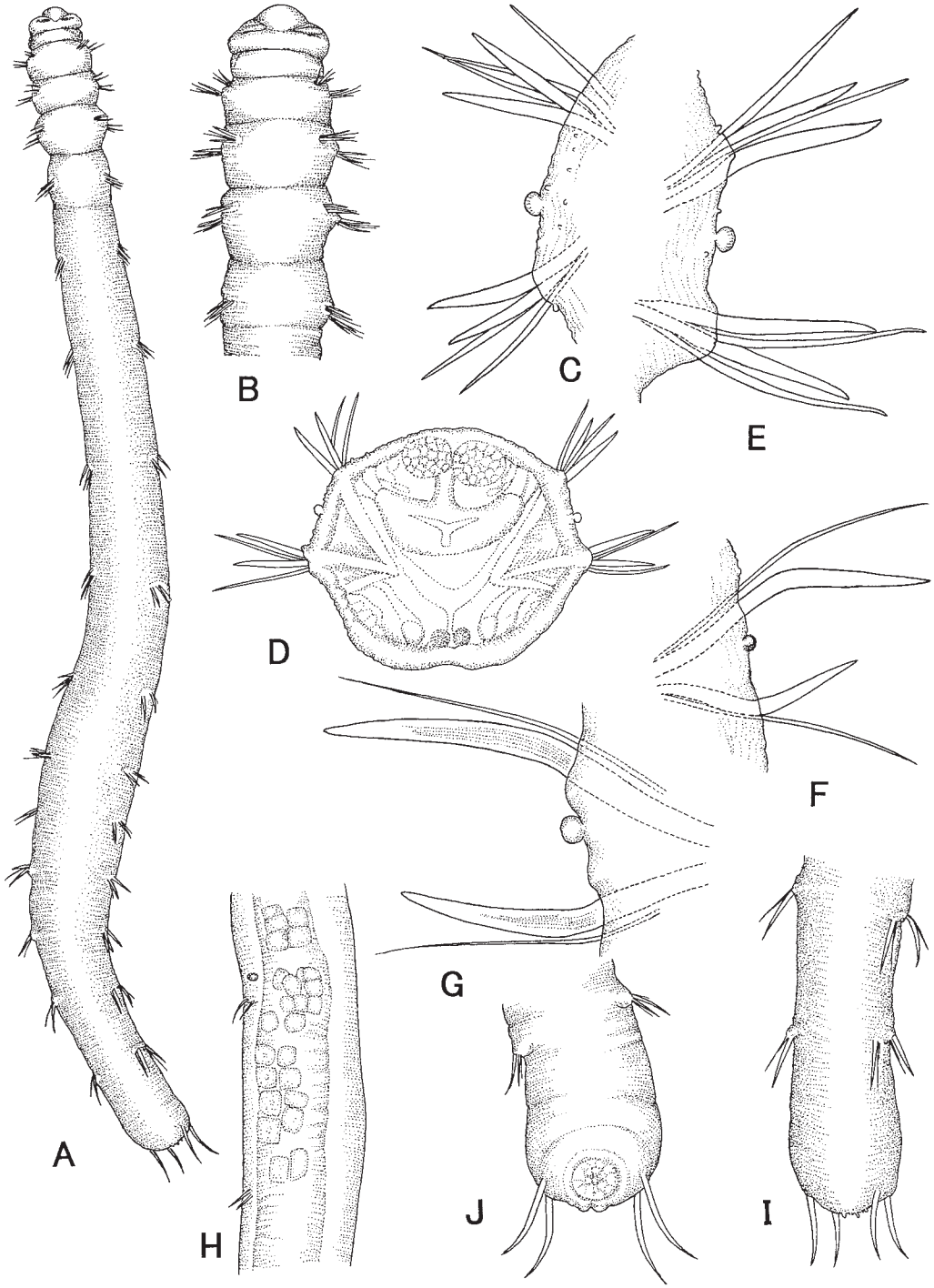

Fig. 41. *Laubieriopsis brevis japonica* subsp. nov. —A, entire animal in dorsal view, × 34; B, anterior end, dorsal view, × 60; C, left parapodium from setiger 1, anterior view, × 287; D, cross section of second setiger, posterior view, × 137; E, right parapodium from setiger 2, anterior view, × 287; F, right parpodium from setiger 9, same view, × 287; G, left parapodium from setiger 15, same view, × 287; H, setigers 6–8 showing genital papilla, lateral view, × 60; I, posterior end, dorsal view, × 60; J, pygidium, ventral view, × 84.

First four setigers wider than long, with modified aciculars in laterally directed fascicles: each noto- and neuropodium with 2 thick weakly falcate, slender, subequal spines and 2–3 narrower spines (Fig. 41C–E). Parapodia of middle and posterior setal regions with gently curving, single acicular spine and one capillary seta in each ramus (Fig. 41F–G). Interramal papilla short-stalked or sessile, situated midway between rami in anterior parapodia (Fig. 41C–E), thereafter becoming closer to notosetae (Fig. 41F–G).

Genital papillae bearing on both sides at posterior edge of setiger 6, just anterior to notochaetae of setiger 7 (Fig. 41H).

Last segment well developed, with 4 large, long acicular spines slightly flexed distally, and directed nearly straight back (Fig. 41I). Boundary between distal part of last segment and pygidium indistinct. Anus terminal, usually withdrawn within rounded pygidium, with 2 small papillae at middorsal margin (Fig. 41J).

Remarks. The subspecies can be distinguished from the stem, *Laubieriopsis brevis* (Hartman, 1965) from Antarctic Sea, in having the rounded pygidium instead of having a broad posterior slit between the bases of the acicular spines.

Etymology. The subspecies is named because it is the first species of the genus *Laubieriopsis* from Japanese waters.

Distribution. Japan (1498–4181 m depth).

Order Sternaspida
Family Sternaspidae Carus, 1863
Genus ***Sternaspis*** Otto, 1821
Sternaspis scutata (Ranzani, 1807)

Thalassema scutatum Ranzani, 1817: 1461.
Sternaspis scutata: Moore, 1903: 487; Okuda, 1936: 151–152, textfig. 5; Imajima and Hartman, 1964: 310–311; Imajima, 1997a: 199; Petersen, 2000: 328–329, fig. 11. 3. B–C.

Material. NSMT-Pol. 109842, WA05-DE250D (42), NSMT-Pol. 109843, WA05-DE380D (264), NSMT-Pol. 109844, WA05-E1000D (1), NSMT-Pol. 109845, WA05-EF250 (1), NSMT-Pol. 109846, WA05-EF250D (12), NSMT-Pol. 109847, WA05-FG250D (66), NSMT-Pol. 109848, WA05-FG480 (2), NSMT-Pol. 109849, WA05-FG510D (3), NSMT-Pol. 109850, WA05-G1500D (3), NSMT-Pol. 109851, WA05-GH380 (3), NSMT-Pol. 109852, WA05-GH380D (3), NSMT-Pol. 109853, WA05-GH510D (1); NSMT-Pol. 110736, WA06-A410 (1), NSMT-Pol. 110737, WA06-C550 (1), NSMT-Pol. 109854, WA06-D210D (7), NSMT-Pol. 109855, WA06-D450D (15), NSMT-Pol. 109856, WA06-DE280D (85), NSMT-Pol. 109857, WA06-E510 (1), NSMT-Pol. 109858, WA06-E510D (22), NSMT-Pol. 110738, WA06-E1200D (2), NSMT-Pol. 109859, WA06-EF425D (1), NSMT-Pol. 109860, WA06-F1500D II (6), NSMT-Pol. 109861, WA06-FG350D (2), NSMT-Pol. 110739, WA06-G510 (2), NSMT-Pol. 109862, WA06-G900D (3), NSMT-Pol. 109863, WA06-G1200D (1), NSMT-Pol. 109864, WA06-GH380 (1), NSMT-Pol. 109865, WA06-GH450 (1), NSMT-Pol. 109866, WA06-GH480D (5), NSMT-Pol. 109867, WA06-H250D (68), NSMT-Pol. 110450, WA06-H480 (6), NSMT-Pol. 109868, WA06-H1500D (4); NSMT-Pol. 110558, WA07-A450 (4), NSMT-Pol. 110731, WA07-A650 (5), NSMT-Pol. 110732, WA07-B410D (116), NSMT-Pol. 110733, WA07-C1500D (2), NSMT-Pol. 110734, WA07-D210D (135), NSMT-Pol. 110735, WA07-D900 (2).

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

Order Capitellida
Family Capitellidae Grube, 1862
Genus ***Capitella*** Blainville, 1828
Capitella capitata (Fabricius, 1780)

Lumbricus capitatus Fabricius, 1780: 279.
Capitella capitata: Fauvel, 1927: 154, fig. 55a–h; Hartman, 1947b: 404, pl. 43, figs. 1–2; Imajima and Hartman, 1964: 311–312.

Material. NSMT-Pol. 110657, WA05-FG280 (1), NSMT-Pol. 110658, WA05-G425 (1); NSMT-Pol. 110659, WA07-C510 (1).
Distribution. North Atlantic; Southern California; Mediterranean Sea; Bering Sea; Japan.

Genus ***Leiochrides*** Augener, 1914
Leiochrides sp.

Material. NSMT-Pol. 110661, WA05-G1500D (2).

Genus ***Notomastus*** Sars, 1850
Notomastus hemipodus Hartman, 1945

Notomastus (*Clistomastus*) *hemipodus* Hartman, 1945: 38.
Notomastus hemipodus: Day, 1973: 100; Blake, 2000b: 81–83, fig. 4.13; Imajima, 2006: 383.

Material. NSMT-Pol. 110921, WA05-G1500D (2).
Distribution. North Carolina; Gulf of Mexico; California; Japan.

Notomastus latericeus Sars, 1851

Notomastus latericeus Sars, 1851: 199; Fauvel, 1927: 143, fig. 49a–h; Uschakov, 1955: 325, fig. 121A–B; Imajima and Hartman, 1964: 313; Imajima, 1997a: 199–200.

Material. NSMT-Pol. 109896, WA05-DE380D (1), NSMT-Pol. 109895, WA05-E1000D (8), NSMT-Pol. 110542, WA05-FG250D (1), NSMT-Pol. 109897, WA05-FG510D (1), NSMT-Pol. 109898, WA05-G1500D (1), NSMT-Pol. 109899, WA05-H900D (7); NSMT-Pol. 109900, WA06-E510D (1), NSMT-Pol. 109901, WA06-E1200D (3), NSMT-Pol. 109904, WA06-F650D (1), NSMT-Pol. 109902, WA06-G900D (1), NSMT-Pol. 109903, WA06-GH480D (10); NSMT-Pol. 110543, WA07-A1500D (1), NSMT-Pol. 110545, WA07-B410D (1), NSMT-Pol. 110544, WA07-B1500D (6), NSMT-Pol. 110546, WA07-C1500D (2), NSMT-Pol. 110547, WA07-D900 (1). NSMT-Pol. 110862, KT07-29-H-2 (1).
Distribution. Western and southern Europe; Sea of Okhotsk; Japan.

Genus ***Pseudoleiocapitella*** Harmelin, 1964
Pseudoleiocapitella sp.

Material. NSMT-Pol. 110662, WA06-B750D (1), NSMT-Pol. 110663, WA06-F650D (1), NSMT-Pol. 110660, WA07-C1500D (1).
The genus is reported as a part of the Japanese polychaetous fauna for the first time.

Family Maldanidae Malmgren, 1867
Subfamily Clymenurinae Imajima and Shiraki, 1982
Genus ***Clymenura*** Verrill, 1900

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

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

Material. NSMT-Pol. 109927, WA05-DE250D (1), NSMT-Pol. 109928, WA05-DE380D (8), NSMT-Pol. 109929, WA05-EF450D (1).

Distribution. Japan.

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

Leiochone columbiana Berkeley, 1929: 315–316, pl. 1, figs. 1–9.
Clymenura (*Cephalata*) *columbiana*: Imajima and Shiraki, 1982a: 23–24, fig. 7a–1; Imajima, 1997a: 201.

Material. NSMT-Pol. 109930, WA05-DE380D (1), NSMT-Pol. 109931, WA05-EF250D (1), NSMT-Pol. 109932, WA05-GH510D (2).

Distribution. Pacific of western Canada; Japan.

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

Praxilla lankesteri McIntosh, 1885: 403–404, pl. 25A, fig. 3.
Leiochone borealis Arwidsson, 1907: 156–163, pl. 3, figs. 108–115, pl. 4, figs. 116–117, pl. 9, figs. 281–283, pl. 11, figs. 352–353.
Clymenura borealis: Hartman, 1959: 456.
Clymenura (*Cephalata*) *lankesteri*: Imajima and Shiraki, 1982a: 16–19, figs. 3a–n, 4a–d; Imajima, 1997a: 200–201.

Material. NSMT-Pol. 109933, WA05-GH510D (8); NSMT-Pol. 109934, WA06-EF425D (3), NSMT-Pol. 109935, WA06-F650D (2), NSMT-Pol. 109936, WA06-GH480D (14); NSMT-Pol. 110166, WA07-B1500D (1).

Distribution. Sea of Okhotsk; west coast of Norway; Japan.

Clymenura* (*Cephalata*) *longicaudata Imajima and Shiraki, 1982

Clymenura (*Clymenura*) *longicaudata* Imajima and Shiraki, 1982a: 19–21, fig. 5a–p.

Material. NSMT-Pol. 110167, WA07-B1500D (1).

Distribution. Japan.

***Clymenura* (*Cephalata*)** sp.

Material. NSMT-Pol. 110818, SO07-O2 (11).

Clymenura* (*Clymenura*) *japonica Imajima and Shiraki, 1982

Clymenura (*Clymenura*) *japonica* Imajima and Shiraki, 1982a: 12–15, fig. 2a–m; Imajima, 1997a: 200.

Material. NSMT-Pol. 109937, WA05-DE250D (4), NSMT-Pol. 109938, WA05-DE380D (1), NSMT-Pol. 109939, WA05-E1000D (1), NSMT-Pol. 109940, WA05-EF250D (2), NSMT-Pol.

109941, WA05-FG250D (7), NSMT-Pol. 109942, WA05-GH510D (1); NSMT-Pol. 109943, WA06-G900D (4).

Distribution. Japan.

Subfamily Euclymeninae Arwidsson, 1907

Genus ***Clymenella*** Verrill, 1873

Clymenella koellikeri (McIntosh, 1885)

Praxilla koellikeri McIntosh, 1885: 402–403, pl. 46, fig. 6, pl. 25A, fig. 2, pl. 37A, figs. 3, 8.
Clymenella koellikeri: Imajima and Shiraki, 1982b: 52–54, figs. 23a–h, 24a–b; Imajima, 1997a: 203.

Material. NSMT-Pol. 109912, WA05-GH510D (1).

Distribution. Fiji Island; Japan.

Genus ***Euclymene*** Verrill, 1900

Euclymene uncinata Imajima and Shiraki, 1982

Euclymene uncinata Imajima and Shiraki, 1982b: 70–71, fig. 33a–l.

Material. NSMT-Pol. 109944, WA05-E1000D (1); NSMT-Pol. 109945, WA06-GH480D (1).

Distribution. Japan.

Genus ***Isocirrus*** Arwidsson, 1907

Isocirrus planiceps (Sars, 1872)

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

Material. NSMT-Pol. 110341, WA06-A150D (1); NSMT-Pol. 110168, WA07-A650 (1).

Distribution. Norway; Japan.

Genus ***Maldanella*** McIntosh, 1885

Maldanella harai (Izuka, 1902)

Clymene harai Izuka, 1902: 111–113, pl. 3, figs. 9–12.
Maldanella harai: Fauvel, 1914: 260–261, pl. 23, fig. 1; Fauvel, 1927: 186, fig. 64i–n; Fauvel, 1953: 383–384, fig. 199i–n; Uschakov, 1955: 342, fig. 126E–G; Imajima and Hartman, 1964: 319–320; Imajima and Shiraki, 1982b: 55–56, fig. 25a–h.
Axiothea campanulata Moore, 1903: 485–487, pl. 27, figs. 97–99.
Maldanella robusta Moore, 1906: 236–239, pl. 11, figs. 31–32.

Material. NSMT-Pol. 109962, WA05-DE380D (12), NSMT-Pol. 109963, WA05- EF250D (2), NSMT-Pol. 109964, WA05-H900D (1); NSMT-Pol. 109965, WA06-D450D (3), NSMT-Pol. 109966, WA06-EF425D (4), NSMT-Pol. 109967, WA06-FG350D (1), NSMT-Pol. 109968, WA06-GH480D (4).

Distribution. Atlantic and Indian oceans; Sea of Okhotsk; Japan.

Maldanella sp.

Material. NSMT-Pol. 110802, SO07-O2 (2).

Genus ***Microclymene*** Arwidsson, 1907

Microclymene caudata Imajima and Shiraki, 1982

Microclymene caudata Imajima and Shiraki, 1982b: 65–67, fig. 30a–o; Imajima, 1997a: 204.

Material. NSMT-Pol. 109973, WA05-DE380D (2), NSMT-Pol. 109974, WA05-EF250D (1); NSMT-Pol. 110342, WA06-EF425D (2), NSMT-Pol. 110343, WA06-H250D (4).

Distribution. Japan.

Genus ***Praxillella*** Verrill, 1881

Praxillella gracilis (Sars, 1861)

Praxillella gracilis: Arwidsson, 1907: 183–191, pl. 4, figs. 153–155, pl. 5, figs. 156–158, pl. 9, figs. 302–307, pl. 12, fig. 367; Fauvel, 1927: 178–179, fig. 62m–p; Mesnil and Fauvel, 1939: 4–5, fig. 1; Berkeley and Berkeley, 1952: 50, figs. 101–102; Hartman, 1969: 477–478; Imajima and Shiraki, 1982b: 61–63, fig. 28a–k; Imajima, 1997a: 203–204.

Material. NSMT-Pol. 109984, WA05-DE380D (4), NSMT-Pol. 109985, WA05-EF250D (8), NSMT-Pol. 109986, WA05-G280 (2), NSMT-Pol. 109987, WA05-GH510D (2), NSMT-Pol. 109988, WA05-H900D (1); NSMT-Pol. 109989, WA06-B750D (2), NSMT-Pol. 109990, WA06-EF425D (1), NSMT-Pol. 109991, WA06-G900D (1), NSMT-Pol. 109992, WA06-G1200D (3), NSMT-Pol. 109993, WA06-GH480D (1), NSMT-Pol. 109994, WA06-H250D (2), NSMT-Pol. 109995, WA06-H480 (1); NSMT-Pol. 110176, WA07-B1500D (4), NSMT-Pol. 110177, WA07-D210D (1).

Distribution. Southern California north to western Canada; north Atlantic and western Europe; Mediterranean Sea; Japan.

Praxillella pacifica Berkeley, 1929

Praxillella affinis var. *pacifica* Berkeley, 1929: 313–314; Berkeley and Berkeley, 1952: 49–50, figs. 97–100; Hartman, 1969: 475–476.

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

Material. NSMT-Pol. 109996, WA05-EF250D (5), NSMT-Pol. 109997, WA05-GH380D (1); NSMT-Pol. 109998, WA06-EF425D (1), NSMT-Pol. 109999, WA06-G900D (1), NSMT-Pol. 110000, WA06-G1200D (1), NSMT-Pol. 110001, WA06-GH480D (17), NSMT-Pol. 110002, WA06-H250D (2). NSMT-Pol. 110633, KT07-29-H-2 (1).

Distribution. Southern California north to western Canada; Japan.

Praxillella praetermissa (Malmgren, 1865)

Praxilla praetermissa Malmgren, 1865: 191.

Praxillella praetermissa: Arwidsson, 1907: 192–204, pl. 4, figs. 136a–143, pl. 9, figs. 294–296, pl. 12, figs. 361–363; Day, 1967b: 642–644, fig. 30.7.i–l; Imajima and Shiraki, 1982b: 63–65, fig. 29a–n; Imajima, 1997a: 204.

Material. NSMT-Pol. 110003, WA05-DE380D (5), NSMT-Pol. 110004, WA05-GH510D (10); NSMT-Pol. 110005, WA06-F750 (1), NSMT-Pol. 110006, WA06-GH480D (46), NSMT-Pol. 110007, WA06-H1500D (1); NSMT-Pol. 110178, WA07-C1500D (1), NSMT-Pol. 110179, WA07-D210D (1). NSMT-Pol. 110634, KT07-29-M-3-1 (1).

Distribution. Arctic; North Atlantic from Norway to Spain; Mediterranean Sea; Japan.

Subfamily Lumbriclymeninae Arwidsson, 1907
Genus ***Clymenopsis*** Verrill, 1900
Clymenopsis cingulata (Ehlers, 1887)

Clymene cingulata Ehlers, 1887: 185–188, pl. 47, figs. 2–5.
Clymenopsis cingulata: Hartman, 1960: 144–145; Imajima and Shiraki, 1982a: 30–32, fig. 12a–k; Imajima, 1997a: 201–202.

Material. NSMT-Pol. 109913, WA05-DE380D (1), NSMT-Pol. 109914, WA05-E1000D (1), NSMT-Pol. 109915, WA05-EF250D (4), NSMT-Pol. 109916, WA05-G1500D (1); NSMT-Pol. 109917, WA06-E510D (2), NSMT-Pol. 109918, WA06-E1200D (1), NSMT-Pol. 109919, WA06-EF425D (3), NSMT-Pol. 109920, WA06-F1500D (1), NSMT-Pol. 109921, WA06-F1500D II (3), NSMT-Pol. 109922, WA06-G900D (3), NSMT-Pol. 109923, WA06-G1200D (6), NSMT-Pol. 109924, WA06-GH480D (17), NSMT-Pol. 109925, WA06-H250D (10), NSMT-Pol. 109926, WA06-H1500D (5).

Distribution. Southern California; Greenland; Japan.

Genus ***Lumbriclymene*** Sars, 1872
Lumbriclymene japonica (McIntosh, 1885)

Nicomache japonica McIntosh, 1885: 399–400, pl. 46, fig. 5, pl. 24A, fig. 20.
Lumbriclymene japonica: Imajima and Shiraki, 1982a: 26–28, fig. 9a–r, fig. 10a–d; Imajima, 1997a: 201.

Material. NSMT-Pol. 109946, WA05-EF250D (1), NSMT-Pol. 109947, WA05-GH510D (3); NSMT-Pol. 109948, WA06-G900D (1). NSMT-Pol. 110819, SO07-O2 (3).

Distribution. Japan.

Genus ***Notoproctus*** Arwidsson, 1907
Notoproctus pacificus (Moore, 1906)

Lumbriclymene pacifica Moore, 1906: 246–248, pl. 12, figs. 40–42.
Notoproctus pacificus: Berkeley and Berkeley, 1952: 56–67, figs. 117–118; Hartman, 1948a: 8; Hartman, 1969: 469; Imajima, 1964: 249–251, figs. 42–50; Imajima and Shiraki, 1982a: 24–26, fig. 8a–m; Imajima, 2001a: 83.

Material. NSMT-Pol. 109979, WA05-DE380D (1), NSMT-Pol. 109980, WA05-EF250D (1), NSMT-Pol. 109981, WA05-GH380D (7), NSMT-Pol. 109982, WA05-GH510D (10); NSMT-Pol. 109983, WA06-EF425D (1); NSMT-Pol. 110174, WA07-B410D (4), NSMT-Pol. 110175, WA07-C1500D (1).

Distribution. Southern California; western Canada and Alaska; Japan.

Genus ***Praxillura*** Verrill, 1880
Praxillura tanseiana Imajima and Shiraki, 1982

Praxillura tanseiana Imajima and Shiraki, 1982a: 29–30, fig. 11a–n.

Material. NSMT-Pol. 110008, WA05-EF250D (1), NSMT-Pol. 110009, WA05-GH380D (3); NSMT-Pol. 110010, WA06-G900D (2), NSMT-Pol. 110011, WA06-H250D (1).

Distribution. Japan.

Subfamily Maldaninae Arwidsson, 1907
Genus ***Asychis*** Kinberg, 1867
Asychis auritus Uschakov, 1950
(Fig. 42A–I)

Asychis auritus Uschakov, 1950: 214; Uschakov, 1965: 321–322, fig. 127 H–I; Light, 1991: 140.

Material. NSMT-Pol. 110335, WA05-E1000D (3), NSMT-Pol. 110336, WA05-GH510D (2); NSMT-Pol. 110337, WA06-B750D (23), NSMT-Pol. 110338, WA06-C900D (1), NSMT-Pol. 110339, WA06-F650D (2).

Description. Largest complete specimen 200 mm long, 6 mm wide for 19 setigerous segments, an apodous preanal segment and pygidium. First seven setigers distinctively biannulate. First setiger with low collar ventrally (Fig. 42A).

Cephalic plate elliptical; prostomium broad, rounded with smooth margin. Cephalic rim divided into three lobes by deep lateral notches; lateral rim auricular, wide, more elevated with smooth margin. Posterior rim crenulated by small serrations. Cephalic keel broad and short. Nuchal organs deeply curved; inner shanks nearly parallel to each other, less than half length of cephalic plate; outer shanks turn outward posteriorly, about half as long as inner shanks (Fig. 42 B).

First setigerous segment uniramous, with only notopodial fascicle consisting of short and long limbate capillaries arranged in two rows (Fig. 42C–D). Median notopodial fascicle with long, distally spinous setae (Fig. 42E). Neuropodial uncini present from second setiger with six uncini in linear series; median neuropodia with about 30 uncini. Uncini typical rostrate, with teeth in transverse arc above main fang and gular bristles (Fig. 42F–G).

Anal plate forming deep, funnel-like pocket; posterior wall of dorsal lobe expanded, with two acute angles near lateral incisions produced into cirri; and median elongated cirrus; ventral lobe with undulating margin (Fig. 42H–I). Anal pore present dorsally on plate (Fig. 42H).

The species is newly added to the Japanese polychaetous fauna.

Distribution. West coast of south Sakhalin; Kamchatka; Sea of Okhotsk; Japan.

Genus ***Chirimia*** Light, 1991
Chirimia biceps (Sars, 1861)

Asychis biceps: Arwidsson, 1907: 263–271, pl. 6, figs. 200–207, pl. 10, figs. 339–344; Imajima and Shiraki, 1982b: 77–80, fig. 37a–t.
Asychis lacera Moore, 1923: 235–237.
Asychis lobata Fauchald, 1972b: 256–258, pl. 52, figs. a–f.
Chirimia biceps biceps: Light, 1991: 139; Imajima, 1997a: 205.

Material. NSMT-Pol. 109906, WA05-GH380D (1), NSMT-Pol. 109907, WA05-GH510D (2), NSMT-Pol. 109908, WA05-H900D (2); NSMT-Pol. 109909, WA06-F650D (1), NSMT-Pol. 109910, WA06-G900D (3), NSMT-Pol. 109911, WA06-GH480D (7).

Distribution. Iceland; Greenland; California; Scotland; Atlantic coast of Europe; western Mexico; Japan.

Genus ***Maldane*** Grube, 1860
Maldane cristata Treadwell, 1923

Maldane cristata Treadwell, 1923: 9–10, figs. 5–8; Hartman, 1956: 295–296; Imajima and Shiraki, 1982b: 84–86, fig. 40a–n; Imajima, 1997a: 205–206; Imajima, 2006: 386.

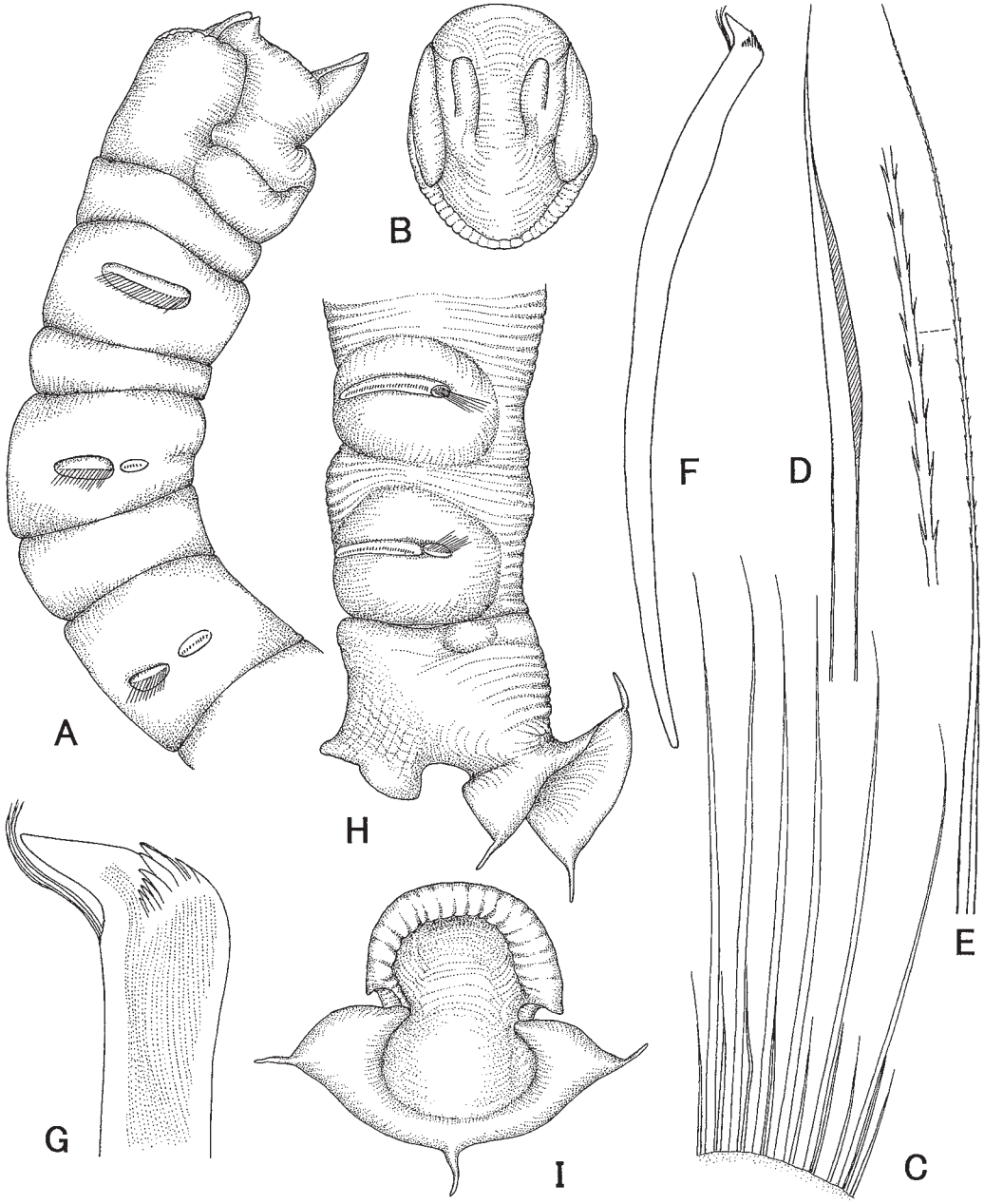

Fig. 42. *Asychis auritus* Uschakov. —A, anterior end, lateral view, × 7; B, cephalic plate, frontal view, × 7; C; part of notosetal fascicle, × 50; D, short limbate capillary notoseta, × 238; E, spinous capillary notoseta, × 250, with detail of part, × 642; F, rostrate uncinus, × 118; G, distal end of same, × 426; H, posterior end, lateral view, × 6; I, anal plate, posterior view, × 6.

Maldane sarsi: McIntosh, 1885: 392–393; Okuda, 1939: 239–240; Imajima and Hartman, 1964: 317–318.

Material. NSMT-Pol. 109949, WA05-DE380D (2), NSMT-Pol. 109950, WA05-EF250D (4), NSMT-Pol. 109951, WA05-GH510D (5), NSMT-Pol. 109952, WA05-H900D (7); NSMT-Pol. 109953, WA06-E510D (14), NSMT-Pol. 109954, WA06-F650D (6), NSMT-Pol. 109955, WA06-

G900D (75), NSMT-Pol. 109956, WA06-G1200D (1), NSMT-Pol. 109957, WA06-GH480D (22), NSMT-Pol. 109958, WA06-H250D (58), NSMT-Pol. 109959, WA06-H1500D (1); NSMT-Pol. 110169, WA07-D210D (10), NSMT-Pol. 110170, WA07-D900 (6). NSMT-Pol. 110633, KT07-29-H-2 (1).

Distribution. Southern California to western Mexico; Japan.

Maldane pigmentata (Imajima and Shiraki, 1982)

Asychis pigmentata Imajima and Shiraki, 1982b: 82–83, fig. 39a–k.
Maldane pigmentata: Imajima, 1996: 288, fig. 233; Imajima, 1997a: 205; Imajima, 2001a: 85–86; Imajima, 2006: 387.

Material. NSMT-Pol. 109960, WA05-EF250D (1); NSMT-Pol. 109961, WA06-H250D (2).
Distribution. Japan.

Maldane sp.

Material. NSMT-Pol. 110820, SO07-C7-B (3).

Genus ***Metasychis*** Light, 1991

Metasychis disparidentata (Moore, 1904)

Maldane disparidentata Moore, 1904: 494–496, pl. 38, figs. 28–31.
Maldane (*Asychis*) *disparidentata*: Takahashi, 1938: 209–211, textfig. 12.
Asychis disparidentata: Berkeley and Berkeley, 1952: 46–47, figs. 89–90; Imajima and Hartman, 1964: 316–317; Hartman, 1969: 423; Imajima and Shiraki, 1982b: 80–82, fig. 38a–k.
Metasychis disparidentata: Light, 1991: 141.

Material. NSMT-Pol. 109969, WA06-A900 (2), NSMT-Pol. 109970, WA06-F650D (2).
Distribution. Western Canada south of southern California; Japan.

Metasychis gotoi (Izuka, 1902)

Maldane gotoi Izuka, 1902: 109–111, pl. 3, figs. 1–8.
Maldane coronata Moore, 1903: 483–485, pl. 27, figs. 94–96.
Asychis gotoi: Fauvel, 1932b: 205; Fauvel, 1953: 387, fig. 200a–b; Okuda, 1938a: 100; Okuda, 1939: 239; Mesnil and Fauvel, 1939: 16–17, fig. 11; Uschakov, 1955: 345, fig. 127A–D; Imajima and Hartman, 1964: 317; Imajima, 1972: 13; Imajima and Shiraki, 1982b: 75–77, fig. 36a–l.
Asychis shaccotanus Uchida, 1968: 603–604.
Metasychis gotoi: Light, 1991: 139; Imajima, 1997a: 204–205; Imajima, 2001a: 86.

Material. NSMT-Pol. 109971, WA06-E550 (1), NSMT-Pol. 109972, WA06-H250D (2).
Distribution. Indo-Pacific areas; Adriatic Sea; California; Japan.

Subfamily Nicomachinae Arwidsson, 1907
Genus ***Nicomache*** Malmgren, 1865

Nicomache* (*Nicomache*) *lumbricalis (Fabricius, 1780)

Nicomache lumbricalis: Arwidsson, 1907: 86–93, pl. 8, figs. 244–245; Fauvel, 1927: 190–191, fig. 66a–i; Wesenberg-Lund, 1948: 23–27, figs. 10, 11d–f; Wesenberg-Lund, 1950: 41; Hartman, 1948a: 42; Hartman, 1969: 465; Berkeley and Berkeley, 1952: 54–55, figs. 111–112; Pettibone, 1954: 305–306, fig. 34i–j; Uschakov, 1955: 336, fig. 124A–D; Imajima, 1964: 248–249, figs. 39–41; Day, 1967b: 621, fig. 30.1.i–o; Hartmann-Schröder, 1971: 428–430, fig. 149a–f; Imajima

and Shiraki, 1982a: 35–37, fig. 14a–n; Imajima, 1997a: 202.
Nicomache (*Nicomache*) *lumbricalis*: Imajima, 2001a: 86.
Nicomache benthaliana McIntosh, 1885: 400, pl. 46, fig. 8, pl. 24A, fig. 21.

Material. NSMT-Pol. 109975, WA05-E1000D (1), NSMT-Pol. 109976, WA05-GH510D (3); NSMT-Pol. 109977, WA06-D210D (1), NSMT-Pol. 109978, WA06-D1500D (1); NSMT-Pol. 110171, WA07-A510 (1), NSMT-Pol. 110172, WA07-B1500D (1), NSMT-Pol. 110173, WA07-D1500D (1).

Distribution. Greenland; North Sea; Kara Sea, Bering Sea; Pacific coast of North America; Japan.

***Nicomache* (*Nicomache*)** sp.

Material. NSMT-Pol. 110821, SO06-M1-B (1), NSMT-Pol. 110822, SO06-M3-B2 (1), NSMT-Pol. 110823, SO06-M4-B (1); NSMT-Pol. 110824, SO07-O2 (1).

Subfamily Rhodininae Arwidsson, 1907
Genus ***Rhodine*** Malmgren, 1865
Rhodine loveni Malmgren, 1865

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

Material. NSMT-Pol. 110012, WA05-DE380D (8), NSMT-Pol. 110013, WA05-EF250D (4), NSMT-Pol. 110014, WA05-FG510D (1), NSMT-Pol. 110015, WA05-GH380D (1), NSMT-Pol. 110016, WA05-GH510D (3); NSMT-Pol. 110017, WA06-E510D (1), NSMT-Pol. 110018, WA06-EF425D (4), NSMT-Pol. 110019, WA06-FG350D (1), NSMT-Pol. 110020, WA06-GH480D (16); NSMT-Pol. 110180, WA07-A650 (1), NSMT-Pol. 110181, WA07-A1500D (20), NSMT-Pol. 110182, WA07-B1500D (1), NSMT-Pol. 110183, WA07-D210D (16), NSMT-Pol. 110184, WA07-D1500D (1). NSMT-Pol. 110825, SO07-C7-B (1).

Distribution. Arctic boreal; Japan.

Order Opheliida
Family Opheliidae Malmgren, 1867
Genus ***Ophelina*** Oersted, 1843
Ophelina acuminata Oersted, 1843

Ophelina acuminata: Hobson and Banse, 1981: 62, fig. 13f; Hartmann-Schröder, 1996: 427, fig. 209; Blake, 2000c: 158–159, fig. 7.5.
Ammotrypane aulogaster: Berkeley and Berkeley, 1952: 92, figs. 186–187; Okuda, 1936: 149–150, textfigs. 2–3; Imajima and Hartman, 1964: 305–306; Imajima, 1997a: 206.

Material. NSMT-Pol. 109885, WA05-DE250D (8), NSMT-Pol. 110773, WA05-DE380D (2), NSMT-Pol. 109886, WA05-FG250D (43), NSMT-Pol. 109887, WA05-FG510D (11), NSMT-Pol. 109888, WA05-G1500D (2), NSMT-Pol. 110774, WA05-GH510D (6); NSMT-Pol. 109889, WA06-D210D (1), NSMT-Pol. 109890, WA06-E510D (3), NSMT-Pol. 109891, WA06-E1200D (6), NSMT-Pol. 109892, WA06-F1500D II (1), NSMT-Pol. 109893, WA06-FG350D (2), NSMT-Pol. 109894, WA06-GH480D (9). NSMT-Pol. 110861, KT07-29-H-1 (7).

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

Ophelina arctica (McIntosh, 1879) comb. nov.
(Fig. 43A–D)

Ammotrypanella arctica McIntosh, 1879: 505, pl. 65, fig. 12; Fauvel, 1914: 246–247, pl. 22, figs. 14–19.

Material. NSMT-Pol. 110775, WA05-FG250D (20); NSMT-Pol. 110776, WA06-DE280D (15), NSMT-Pol. 110777, WA06-GH480D (3). NSMT-Pol. 110859, KT07-29-H-1 (1), NSMT-Pol. 110860, KT07-29-H-2 (1), NSMT-Pol. 110858, KT07-29-M-1 (56).

Description. Body elongate, weakly annulated with deep midventral groove and 2 lateral grooves throughout; largest specimen 12 mm long, 0.8 mm wide for 35 setigers; anal tube 0.6 mm long. Branchiae from setiger 2, continuing to posterior end, except 4 abranchiate prepygidial segments.

Prostomium narrow, sharply pointed, with terminal palpode; prostomial and lateral eyes absent. Lateral nuchal organs conspicuous, forming a deep fissure (Fig. 43A). Parapodia biramous, reduced; noto- and neuropodia with small fascicles of slender capillaries (Fig. 43B). Posterior end terminating in distinct cylindrical anal tube, with terminal opening, and bearing 24–26 short subequal digitate papillae and one long, unpaired ventral cirrus at end (Fig. 43C–D). Small specimen

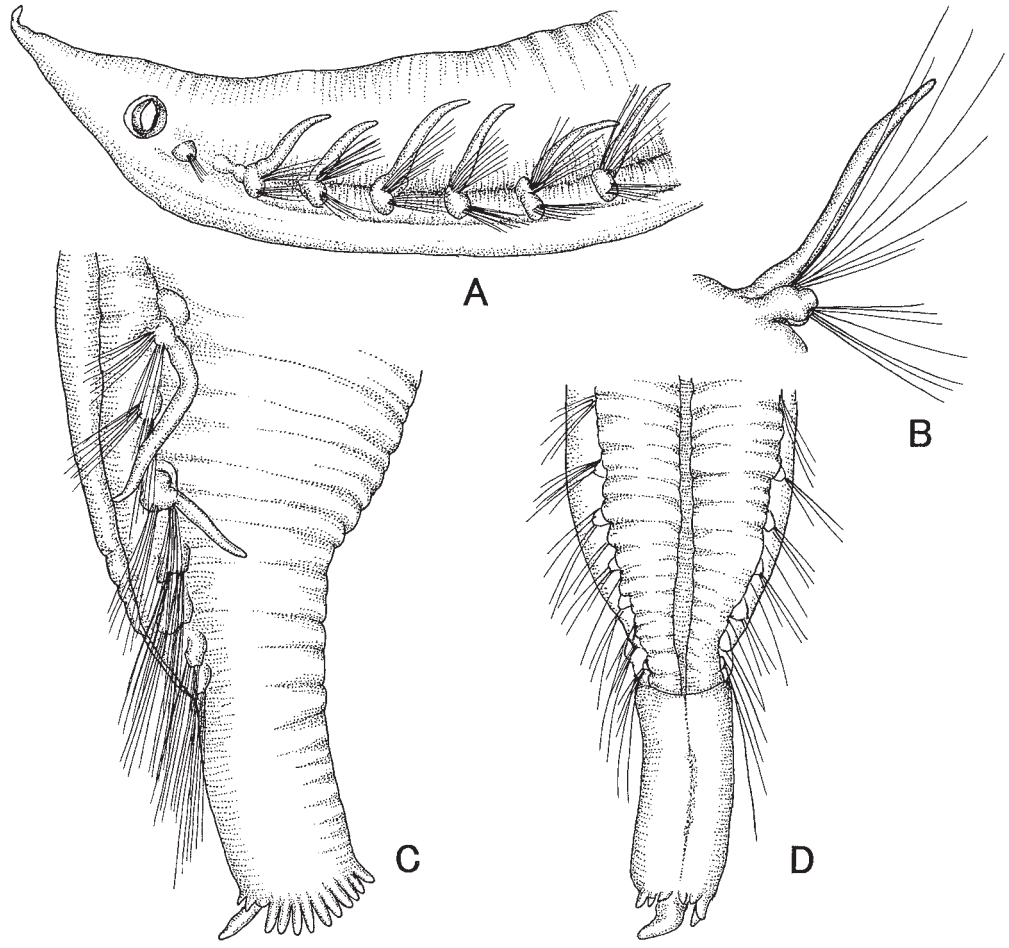

Fig. 43. *Ophelina arctica* (McIntosh). —A, anterior end, lateral view, × 26; B, median parapodium, anterior view, × 72; C, posterior end, lateral view, × 53; D, same, ventral view, × 53.

with anal tube bearing 8 short papillae at end.

The species is newly added to the Japanese polychaetous fauna.

Remarks. *Ophelina arctica* is similar to *O. breviata* (Ehlers, 1913) in having long cylindrical anal tube. However, the anal tube of *O. arctica* has more distinct conical terminal papillae rather than a lobulate edge. Moreover, the both species are distinguished in the structure of the abranchiate prepygidial segments. The anal tubes of the examined specimens are provided with 24–26 digitate papillae rather than short papillae in the McIntosh's specimen. The differentiation of this character appears to be an environmental effect.

Distribution. Atlantic Ocean; Japan.

Ophelina breviata (Ehlers, 1913).
(Fig. 44A–F)

Ammotrypane breviata Ehlers, 1913: 523–524, pl. 39, figs. 1–7; Pettibone, 1954: 295–296, fig. 33l–n; Berkeley, 1966: 847–848.
Ophelina breviata: Hobson and Banse, 1981: 62, fig. 13g.

Material. NSMT-Pol. 110809, WA06-DE280D (1); NSMT-Pol. 110810, WA06-E510D (7); WA06-GH480D (6).

Description. Largest specimen 12.4 mm long, anal tube 0.6 mm long for total length of 13 mm, about 0.5 mm wide across middle of body, with 28 setigers. Body subcylindrical, further back compressed from sides, more or less rigid, with midventral groove present throughout; segmental furrows and annulations poorly developed. Branchiae from setiger 2 (Fig. 44A), continuing to posterior end except 4 abranchial prepygidial segments (Fig. 44B–D).

Prostomium conical, tapering to narrow tip bearing terminal palpode; prostomial and lateral eyes absent. Lateral nuchal organs conspicuous, forming a deep fissure faintly pigmented at bottom. Proboscis soft, with lobes, not fringed (Fig. 44A).

Parapodia biramous, reduced; noto- and neuropodia with small fascicles of slender capillaries (Fig. 44E–F); notosetae longer than neurosetae. Posterior end terminating in distinct cylindrical anal tube, with smooth or wrinkles along its hinder margin except at its dorsal peak.

The species is newly added to the Japanese polychaetous fauna.

Distribution. Kaiser Wilhelm Land; East Greenland; Arctic Alaska; British Columbia; Japan.

Genus ***Travisia*** Johnston, 1840

Travisia brevis Moore, 1923

Travisia brevis Moore, 1923: 220–221; Berkeley and Berkeley, 1952: 90–91, fig. 183; Imajima, 1964: 247; Hobson and Banse, 1981: 62, fig. 13h; Blake, 2000c: 161–162, fig. 7.7.

Material. NSMT-Pol. 110516, WA05-DE380D (11), NSMT-Pol. 110517, WA05-E750 (2), NSMT-Pol. 110518, WA05-EF250D (5), NSMT-Pol. 110519, WA05-EF450D (5), NSMT-Pol. 110520, WA05-F900 (7), NSMT-Pol. 110521, WA05-FG250D (8), NSMT-Pol. 110522, WA05-FG510D (1), NSMT-Pol. 110523, WA05-G750 (1), NSMT-Pol. 110524, WA05-G900 (2), NSMT-Pol. 110525, WA05-G1500D (1), NSMT-Pol. 110526, WA05-H650 (2), NSMT-Pol. 110527, WA05-H750 (1), NSMT-Pol. 110528, WA05-H900D (2); NSMT-Pol. 110529, WA06-B750D (5), NSMT-Pol. 110530, WA06-D450D (4), NSMT-Pol. 110666, WA06-DE280D (2), NSMT-Pol. 110531, WA06-E510D (1), NSMT-Pol. 110532, WA06-EF425D (22), NSMT-Pol. 110533, WA06-F650D (3), NSMT-Pol. 110534, WA06-G900D (7), NSMT-Pol. 110535, WA06-GH480D (3); NSMT-Pol. 110536, WA07-B1500D (2), NSMT-Pol. 110537, WA07-C350D (1), NSMT-Pol.

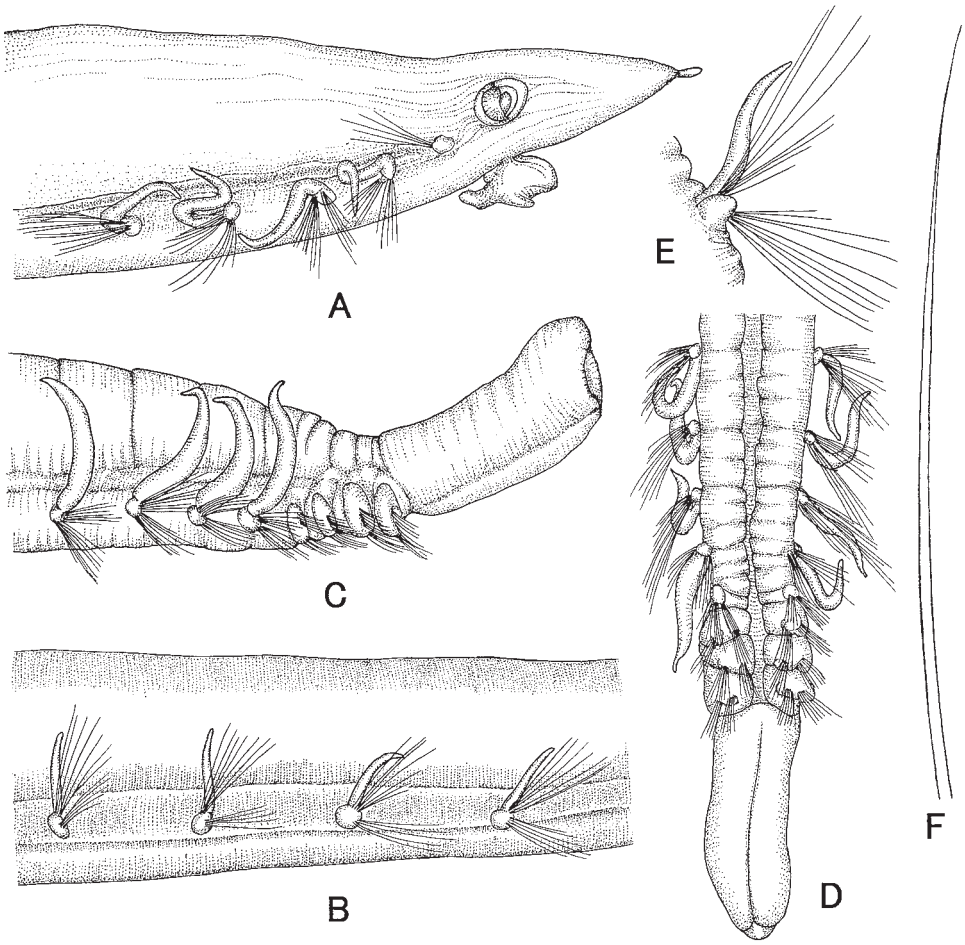

Fig. 44. *Ophelina breviata* (Ehlers). —A, anterior end, dorsal view, × 32; B, part of body, showing setigers 11–14, lateral view, × 32; C, posterior end, same view, × 32; D, same, ventral view, × 32; E, parapodium from setiger 16, anterior view, × 65; F, notoseta, × 266.

110538, WA07-C750 (1), NSMT-Pol. 110539, WA07-D750 (3), NSMT-Pol. 110540, WA07-D900 (1).

Distribution. Arctic-boreal; circumpolar; Japan.

Travisia pupa Moore, 1906
(Fig. 45A–E)

Travisia pupa Moore, 1906: 228, pl. 11, fig. 23; Berkeley and Berkeley, 1952: 89–90, figs. 181–182; Uschakov, 1965: 301, fig. 120F–G; Hobson, 1976: 139; Hobson and Banse, 1981: 62, fig. 13j; Blake, 2000c: 163, fig. 7.8.

Material. NSMT-Pol. 110651, WA05-GH510D (2); NSMT-Pol. 110652, WA06-D750 (1), NSMT-Pol. 110653, WA06-G650 (2), NSMT-Pol. 110654, WA06-H550 (1), NSMT-Pol. 110655, WA06-H650 (3), NSMT-Pol. 110656, WA06-H750 (1).

Description. Largest specimen 35 mm long, 9 mm wide for 29 setigers and added to 1 achaetous anterior segment and 4 achaetous preanal segments. Body distinctly fusiform, covered with numerous vesicles or pustules in several sizes from anterior to posterior end; these vesicles

becoming large, warty on posterior part of each annulus. Anterior setigers triannulate to about 16 (Fig. 45A, C–D), thereafter uniannulate (Fig. 45E).

Prostomium small, conical; eyes absent (Fig. 45A). Peristomium uniannulate, achaetous; first setigers forming mouth (Fig. 45B). Parapodial lappets inconspicuous. Nephridiopores present on setigers 3–14 (Fig. 45D). Setae all capillaries, with fine hairs. Branchiae simple, cirriform, from setiger 2 to 22 (Fig. 45A–E). Pygidium with ring of 17 small anal papillae, preceded by 3–6 preanal constricted setigers.

The species is newly added to the Japanese polychaetous fauna.

Distribution. Alaska to western Mexico; Sea of Okhotsk; Japan.

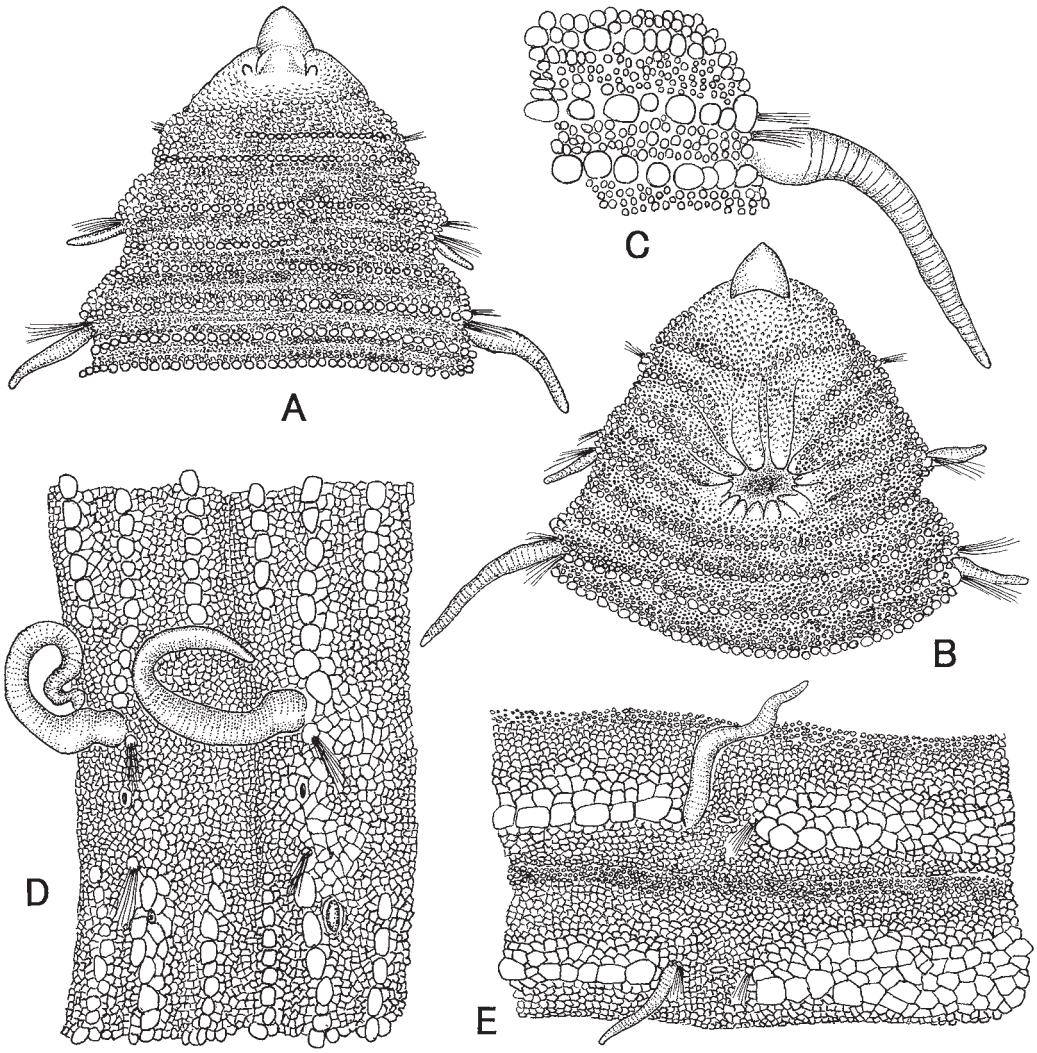

Fig. 45. *Travisia pupa* Moore. —A, anterior end, dorsal view, × 11; B, same, ventral view, × 11; C, right parapodium from setiger 3, dorsal view, × 25; D, setigers 10 and 11, lateral view, × 17; E, setigers 18 and 19, same view, × 17.

Family Scalibregmatidae Malmgren, 1867
Genus ***Asclerocheilus*** Ashworth, 1901
Asclerocheilus beringianus Uschakov, 1955
(Figs. 46A–D, 47A–F)

Asclerocheilus beringianus Uschakov, 1955: 315, fig. 116I–L; Uschakov, 1965: 292, fig. 116I–L; Levenstein, 1966: 48; Hobson and Banse, 1981: 60, fig. 12a; Blake, 2000d: 137–138, fig. 6.2.

Material. NSMT-Pol. 109834, WA06-E1200D (1).

Description. Body missing posterior end 19 mm long, 3 mm wide with 22 setigerous segments, somewhat thicker anteriorly, but not swollen or distended, narrowing posteriorly. Body surface covered with annulated rings, up to 4 per segment, each with square, blocked-shaped elevated pads forming transverse rows on dorsum and ventrum (Fig. 46A–B).

Prostomium reduced, triangular, bearing 2 round frontal horns; prostomium may be withdrawn deeply into peristomium, only fully visible in frontal view (Fig. 46C). Multiple nuchal organs visible on either side of prostomium, large and bulbous; eyes absent. Peristomium narrow achaetous ring, forming lateral lips around mouth (Fig. 46C).

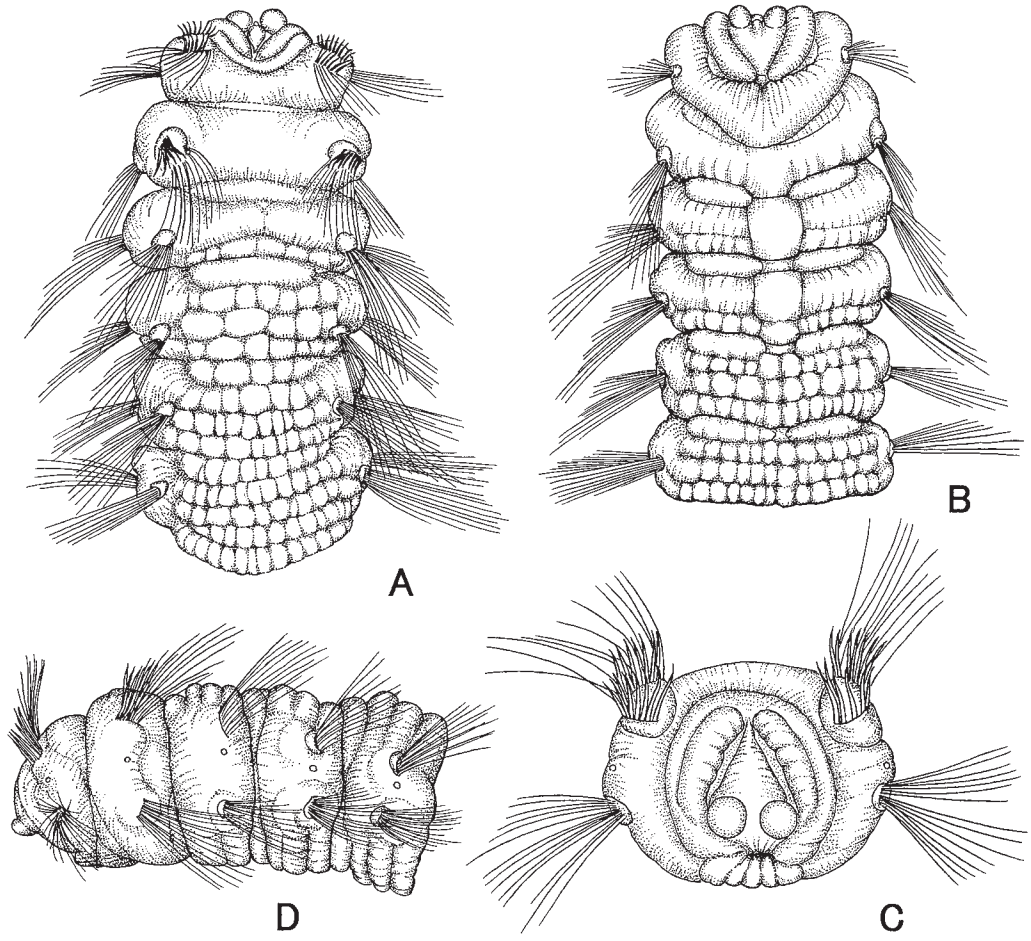

Fig. 46. *Asclerocheilus beringianus* Uschakov. —A, anterior end, dorsal view, × 14; B, same, ventral view, × 14; C, prostomium and setiger 1, frontal view, × 27; D, anterior end, lateral view, × 14.

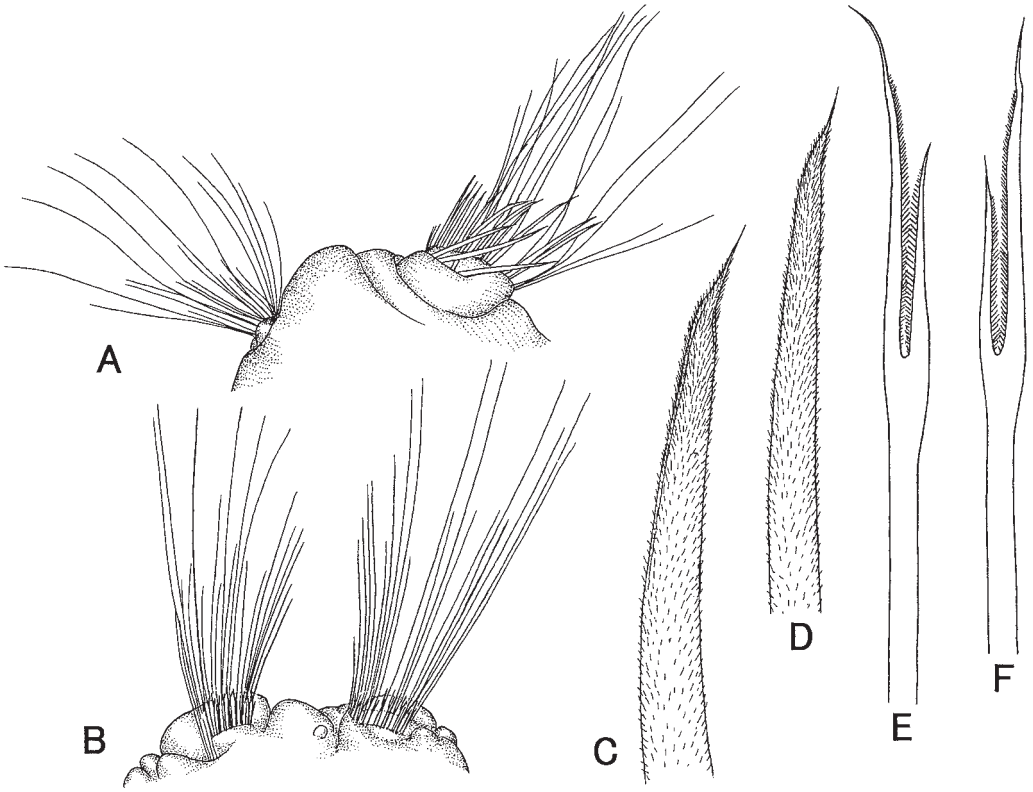

Fig. 47. *Asclerocheilus beringianus* Uschakov. —A, right parapodium from setiger 1, anterior view, × 36; B, same from setiger 15, same view, × 36; C–D, hirsute spines from setiger 1 (C) and setiger 2 (D), × 367; E–F, lyrate setae, × 500.

Setigers 1 and 2 not subdivided by annuli (Fig. 46A–D); setiger 3 triannulate; setiger 4 and following segments quadriannulate; annuli divided dorsally and ventrally into lumpy blocked pads providing complex areolated appearance to body surface. Pads of ventral midline of setigers 3 and 4, forming distinct longitudinal row, large, rectangular, and biannulate from setiger 5 (Fig. 46B). Branchiae absent.

Parapodia swollen, with setal tori throughout; parapodial cirri and lamellae absent (Fig. 47A–B). Interramal sense organs small, inconspicuous, occurring from setiger 1 (Fig. 47D). All setigers with noto- and neuropodial fascicles of slender capillaries, setigers 1 and 2 with additional 2 rows of curved, hirsute notopodial spines (Fig. 47C–D); these sharply pointed, 17–18 spines in setiger 1, 7–10 spines in setiger 2 (Fig. 47A). Setiger 3 and following with capillaries and lyrate setae (Fig. 47E–F), few at first, then up to 10 per fascicle, with unequal tynes bearing distinct bristles on inner margins. Pygidium unknown.

The species is newly added to the Japanese polychaetous fauna.

Distribution. Bering Sea; northern California; Japan.

Genus ***Pseudoscalibregma*** Ashworth, 1901

Pseudoscalibregma orientalis sp. nov.

(Figs. 48A–D, 49A–G)

Type material. Holotype—NSMT-Pol. H 522, Stn. WA05-GH510D, off Kashima Sea,

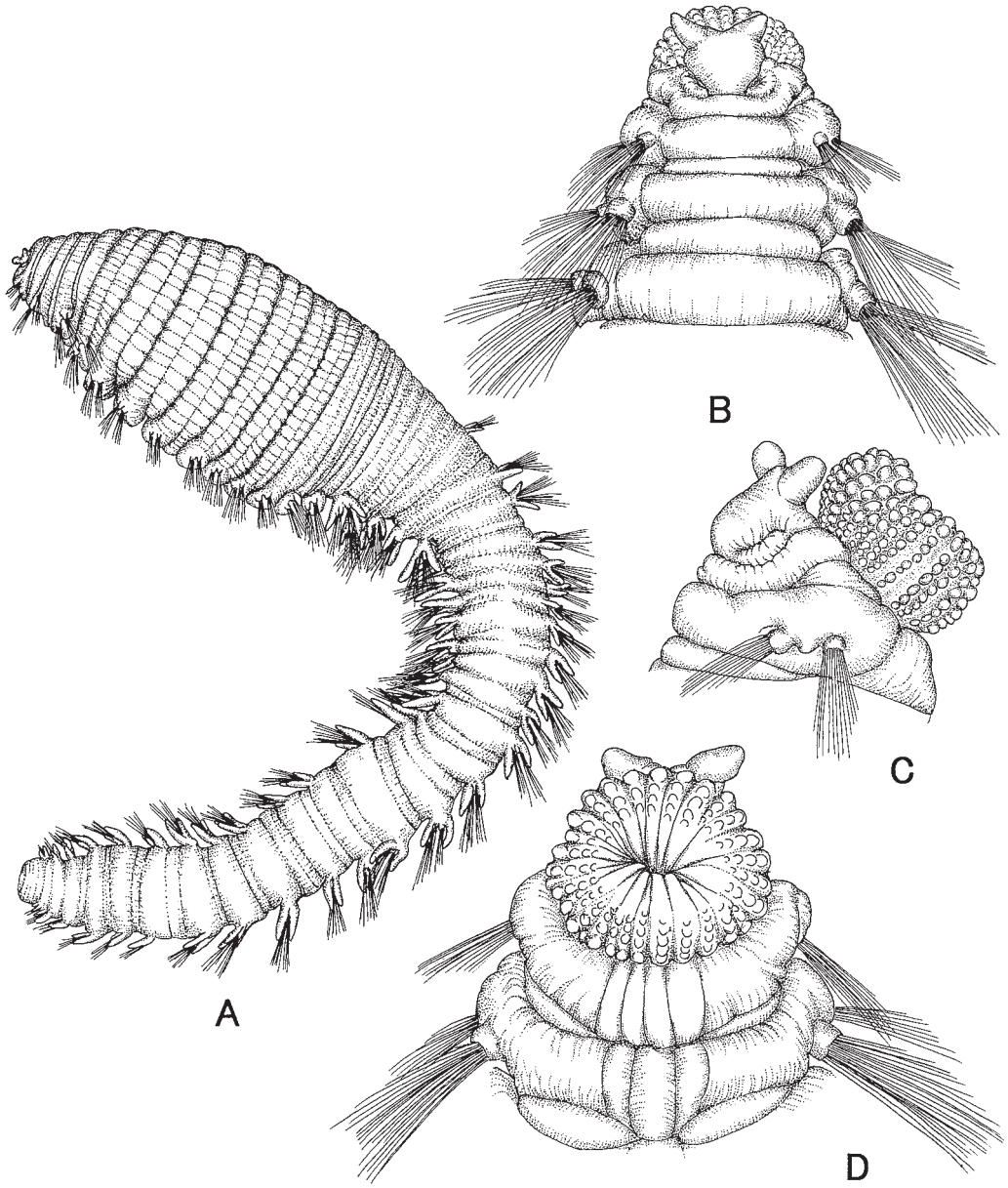

Fig. 48. *Pseudoscalibregma orientalis* sp. nov. —A, entire animal in dorsal view, × 5; B, anterior end, dorsal view, × 15; C, same, lateral view, × 20; D, same, ventral view, × 20.

36˚41.06´N, 141˚22.04´E, 512–508 m, Nov. 11, 2005. Paratypes—NSMT-Pol. P 523, Stn. WA05-GH510D, same locality as holotype (8); NSMT-Pol. P 524, Stn. WA05-E1000D, off Sanriku, 1005–1004 m, Oct. 26, 2005 (1); NSMT-Pol. P 525, Stn. WA05-GH380D, off Kashima Sea, 378–373 m, Nov. 12, 2005 (7); NSMT-Pol. P 526, Stn. WA06-EF425D, off Sanriku, 420–424 m, Nov. 21, 2006 (2); NSMT-Pol. P 527, Stn. WA06-F650D, off Sanriku, 647–641 m, Oct. 31, 2006 (1); NSMT-Pol. P 528, Stn. WA06-GH480D, off Kashima Sea, 483–478 m, Nov. 18, 2006 (18).

Description. Body more or less arenicoliform, anterior half expanded to variable degree, posterior region tapered. Holotype consisting of anterior region of 21 mm long, 11 mm wide with 13 setigers, and posterior region of 25 mm long, 5 mm wide with 24 setigers (Fig. 48A). Largest

paratype 43 mm long for 37 setigers.

Prostomium T-shaped, with lateral processes projecting anterolaterally, nuchal organs visible on either side of prostomium, eyes lacking (Fig. 48B). Peristomium achaetous, not concealing posterior margin of prostomium, narrow dorsally and laterally, but broad ventrally. Mouth ventral, represented by short transverse slit at junction between peristomium and setiger 1. Proboscis papillated sac, with 24–25 longitudinal rows of small conical papillae (Fig. 48C–D).

All setigers with biannulate. Body surface of anterior region tessellate, each segmental annulation with single series of raised rectangular or square pads. Epidermal pads above notopodia of setigers 1–3 inconspicuous. Venter with distinct mid-ventral row of large epidermal pads; pads bulbous, rectangular, becoming smaller and biannulate from about setiger 6–7. Branchiae absent.

Parapodia on first 13 setigers small and conical with low presetal lobes (Fig. 49A–C), without dorsal and ventral cirri; from setiger 14 noto- and neuropodia developed, with dorsal and ventral cirri (Fig. 49A), thereafter increasing in size, continuing to posterior end. Noto- and neuropodia in posterior region elongated, each subequal in size, with distally rounded pre- and postsetal lobes (Fig. 49D–E). Dorsal and ventral cirri digitate, conspicuous, dorsal cirri longer than ventral ones. In posteriormost region preanal segments lacking parapodia and setae. Interramal sense organs from setiger 1 as single small ciliated papillae. Pygidium with smooth margin around anal aperture.

All setigers with slender capillaries in both rami, with those of anterior fascicles more numerous. Setiger 1 with additional row of very short, slender, inconspicuous, pointed and bifurcate spines (Fig. 49F). Setiger 2 and following with furcate setae in same anterior position as short spines of setiger 1; each furcate seta with unequal tynes having numerous spinose on inner margin (Fig. 49G).

Remarks. Following Ashworth (1901) and Kudenov and Blake (1978), the scalibregmid genus *Pseudoscalibregma* included *P. parvum* (Hansen, 1878) from Norway, *P. pallens* Levenstein, 1962 from Central Pacific and *P. chilensis* (Hartmann-Schröder, 1965) from Chile.

Pseudoscalibregma orientalis is distinguishable from above three species in having distinctly more robust noto- and neuropodia in the posterior region.

The genus is reported as a part of the Japanese fauna for the first time.

Etymology. The species is named because it is the first species of the genus, *Pseudoscalibregma* from the Asian district.

Distribution. Japan (373–1005 m depth).

Genus ***Scalibregma*** Rathke, 1843

Scalibregma inflatum Rathke, 1843

Scalibregma inflatum: Okuda, 1936: 148–149, textfig. 1; Okuda, 1938a: 99; Imajima and Hartman, 1964: 305; Imajima, 1997a: 206; Imajima, 2001a: 87.

Material. NSMT-Pol. 109835, WA05-DE250D (7), NSMT-Pol. 109836, WA05-EF250D (1), NSMT-Pol. 109837, WA05-FG250D (8); NSMT-Pol. 109838, WA06-B750D (1), NSMT-Pol. 109839, WA06-DE280D (7), NSMT-Pol. 109840, WA06-E510D (1), NSMT-Pol. 109841, WA06-GH480D (1); NSMT-Pol. 110868, WA07-B410D (1). NSMT-Pol. 110869, SO07-K2 (1).

Distribution. Norway; Atlantic and Pacific oceans; Alaska; Japan.

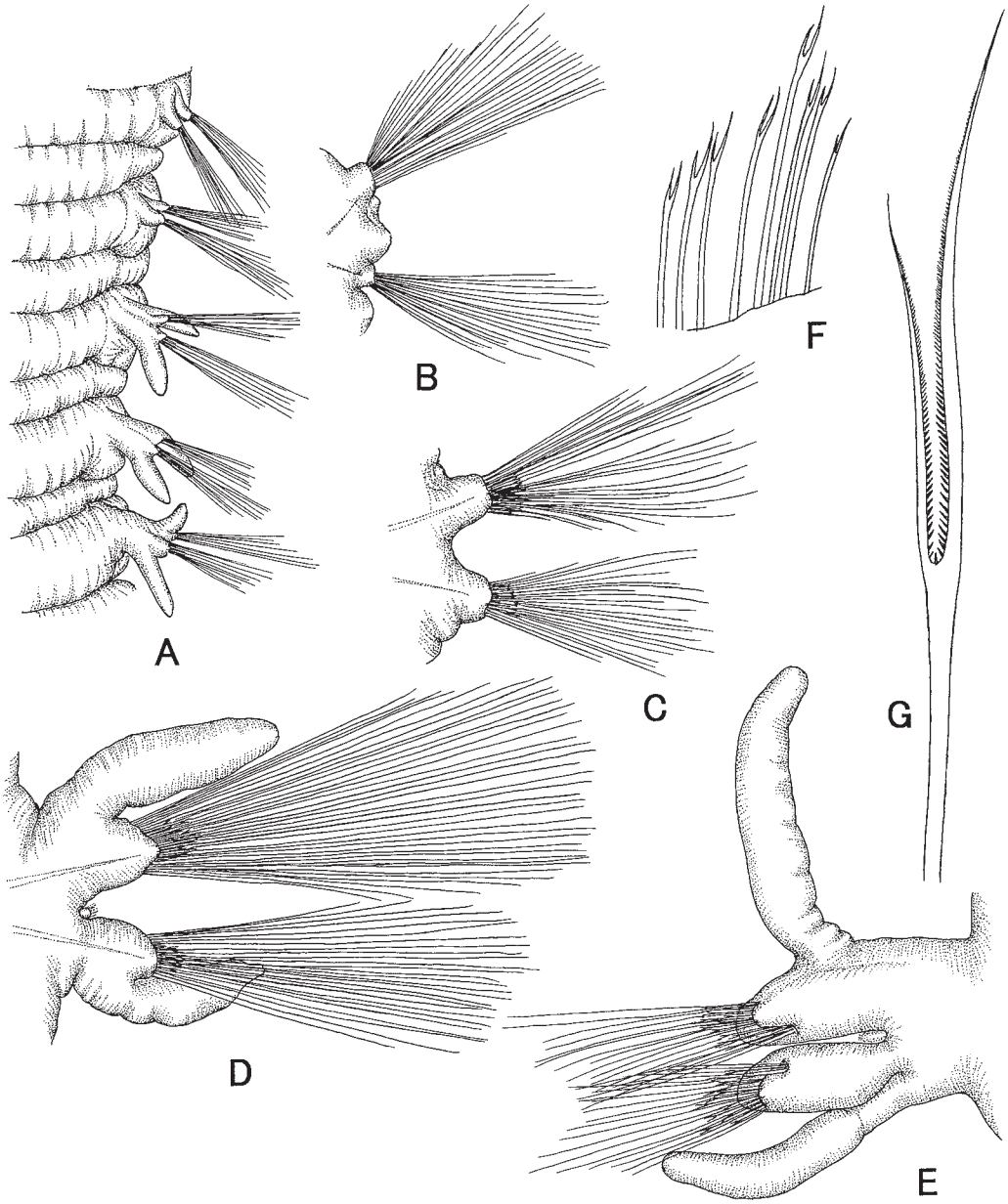

Fig. 49. *Pseudoscalibregma orientalis* sp. nov. —A, right parapodia on setigers 12–16, dorsal view, × 10; B, left parapodium from setiger 1, anterior view, × 28; C, same from setiger 8, same view, × 28; D, same from setiger 15, same view, × 27; E, same from setiger 25, posterior view, × 28; F, bifurcate spines from setiger 1, × 578; G, furcate seta, × 578.

Order Oweniida
Family Oweniidae Rioja, 1917
Genus ***Galathowenia*** Kirkegaad, 1959
Galathowenia oculata (Zaks, 1922)

Myriochele oculata Zaks, 1922: 171–174, figs. 1–3; Nilsen and Holthe, 1985: 23–25, figs. 7–8.
Galathowenia oculata: Kirkegaard, 1983: 604–605; Blake, 1984: 114; Imajima and Morita, 1987: 94–97, figs. 6a–j, 8c–d; Imajima, 1994: 119–120; Imajima, 1997a: 207; Blake, 2000e: 103–104, fig. 5.1.

Material. NSMT-Pol. 110038, WA05-DE250D (97), NSMT-Pol. 110064, WA05-DE380D (33), NSMT-Pol. 110065, WA05-FG250D (2); NSMT-Pol. 110548, WA06-D210D (1), NSMT-Pol. 110549, WA06-DE280D (2).

Distribution. Kara Sea; Norwegian Sea; Bering Sea; British Colombia; Japan.

Galathowenia scotiae (Hartman, 1978)

Myriochele scotiae Hartman, 1978: 188–190, fig. 32a–d.
Galathowenia scotiae: Parapar, 2001: 404–412, figs. 1–2, tab. 1.
Galathowenia wilsoni Blake, 1984: 114–116, fig. 2a–d; Imajima and Morita, 1987: 98, figs. 7a–k, 8e–f; Imajima, 1997a: 207; Imajima, 2001a: 88.

Material. NSMT-Pol. 110550, WA05-DE250D (58), NSMT-Pol. 110551, WA06- DE380D (2), NSMT-Pol. 110043, WA05-E1000D (975), NSMT-Pol. 110552, WA05-FG250D (4); NSMT-Pol. 110740, WA06-A1200D (1), NSMT-Pol. 110741, WA06-E1200D (150), NSMT-Pol. 110742, WA06-F1500D II (3), NSMT-Pol. 110743, WA06-G900D (15).

Distribution. Ross Sea; Amundsen Sea; Japan.

Genus ***Myriochele*** Malmgren, 1867
Myriochele heeri Malmgren, 1867

Myriochele heeri Malmgren, 1867a: 101–102, tab. 7, fig. 37; Blake and Dean, 1973: 37, fig. 2; Nilsen and Holthe, 1985: 21–22, figs. 3–4, 11c–e; Imajima and Morita, 1987: 90–91, figs. 3a–k, 4e–h; Imajima, 1997a: 208; Imajima, 2001a: 88.

Material. NSMT-Pol. 110744, WA05-DE250D (31), NSMT-Pol. 110745, WA05-DE380D (39), NSMT-Pol. 110746, WA05-EF250D (2), NSMT-Pol. 110747, WA05-FG250D (18); NSMT-Pol. 110748, WA06-D210D (54), NSMT-Pol. 110749, WA06-D450D (1), NSMT-Pol. 110750, WA06-E510D (4), NSMT-Pol. 110751, WA06-EF425D (6), NSMT-Pol. 110752, WA06-G900D (14).

Distribution. Norwegian Sea; South Atlantic Ocean; Polar Sea; Sea of Okhotsk; Japan.

Myriochele olgae Blake, 2000

Myriochele olgae Blake, 2000e: 111–113, fig. 5.5.

Material. NSMT-Pol. 110753, WA05-DE250D (31), NSMT-Pol. 110754, WA05-DE380D (4), NSMT-Pol. 110755, WA05-E1000D (1), NSMT-Pol. 110756, WA05-FG250D (2).

The species is newly added to the Japanese polychaetous fauna.

Distribution. California; Japan.

Myriochele sp.

Material. NSMT-Pol. 110872, KT07-29-H-2 (2), NSMT-Pol. 110870, KT07-29-M-3-2 (7), NSMT-Pol. 110871, KT07-29-M-3-3 (1).

Genus ***Owenia*** dell Chiaje, 1842
Owenia spp.

Material. NSMT-Pol. 110765, WA05-DE250D (100), NSMT-Pol. 110766, WA05-DE380D (4); NSMT-Pol. 110767, WA06-A150D (1); NSMT-Pol. 110768, WA07-A250D (4). NSMT-Pol. 110873, KT07-29-H-1 (3).

Order Terebellida
Family Pectinariidae Quatrefages, 1865
Genus ***Amphictene*** Savigny, 1818
Amphictene japonica (Nilsson, 1928)

Pectinaria (*Amphictene*) *japonica* Nilsson, 1928: 52–54, textfig. 16.
Pectinaria japonica: Okuda, 1934: 321–324, textfigs. 1–3; Imajima and Hartman, 1964: 327.

Material. NSMT-Pol. 110044, WA05-DE250D (266), NSMT-Pol. 110045, WA05-DE380D (32), NSMT-Pol. 110046, WA05-E1000D (36), NSMT-Pol. 110047, WA05-EF250D (35), NSMT-Pol. 110048, WA05-FG250D (4), NSMT-Pol. 110049, WA05-G280 (1); NSMT-Pol. 110050, WA06-A1200D (5), NSMT-Pol. 110051, WA06-D450D (2), NSMT-Pol. 110052, WA06-DE280D (1), NSMT-Pol. 110053, WA06-E510D (1), NSMT-Pol. 110054, WA06- E1200D (77), NSMT-Pol. 110055, WA06-EF425D (9), NSMT-Pol. 110056, WA06-F1500D II (22), NSMT-Pol. 110057, WA06-FG350D (1), NSMT-Pol. 110058, WA06-G900D (5), NSMT-Pol. 110059, WA06-G1200D (10), NSMT-Pol. 110060, WA06-GH380 (1), NSMT-Pol. 110063, WA06-GH480D (5), NSMT-Pol. 110061, WA06-H250D (9), NSMT-Pol. 110062, WA06- H1500D (111); NSMT-Pol. 110702, WA07-A1500D (4), NSMT-Pol. 110703, WA07-B1200 (4), NSMT-Pol. 110704, WA07-C1500D (12), NSMT-Pol. 110705, WA07-D900 (33). NSMT-Pol. 110874, SO07-C7-B (5). NSMT-Pol. 110863, KT07-29-M-3-3 (2).

Distribution. Japan.

Genus ***Cistenides*** Malmgren, 1866
Cistenides hyperborea Malmgren, 1866

Cistenides hyperborea: Moore, 1903: 479.
Pectinaria (*Cistenides*) *hyperborea*: Okuda, 1937c: 56–57, pl. 2, fig. F, textfig. 5.

Material. NSMT-Pol. 110706, WA07-A250D (8).

Distribution. Atlantic Ocean; Arctic boreal regions; Japan.

Family Sabellariidae Johnston, 1865
Genus ***Lygdamis*** Kinberg, 1867
Lygdamis giardi (McIntosh, 1885)

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

Eupallasia giardi: Augener, 1927: 236, textfig. 14.
Lygdamis giardi: Okuda, 1938b: 237–241, figs. 1–3; Imajima, 2001a: 89.

Material. NSMT-Pol. 110553, WA06-GH425 (1).
Distribution. Western Australia; Japan.

Family Ampharetidae Malmgren, 1867
Genus ***Amage*** Malmgren, 1866
Amage auricula Malmgren, 1866

Amage auricula Malmgren, 1866: 371; Marenzeller, 1884: 198–199, pl. 2, fig. 6; Hessle, 1917: 120–121; Imajima and Hartman, 1964: 330; Imajima, 1997a: 209–210.

Material. NSMT-Pol. 110920, WA05-DE380D (1).
Distribution. Boreal Atlantic and Arctic oceans; Japan.

Amage delus (Chamberlin, 1919)
(Fig. 50A–N)

Sabellides delus Chamberlin, 1919: 455–456, pl. 77, fig. 13.
Amage delus: Fauchald, 1972b: 278–280, pl. 56, figs. a–c.

Material. NSMT-Pol. 110191, WA06-A650 (3), NSMT-Pol. 110192, WA06-E510D (2), NSMT-Pol. 110193, WA06-E550 (1); NSMT-Pol. 110461, WA07-A550 (16), NSMT-Pol. 110462, WA07-A650 (11), NSMT-Pol. 110463, WA07-A750 (2), NSMT-Pol. 110464, WA07-C900 (20). NSMT-Pol. 110834, SO07-C7-B (13), NSMT-Pol. 110885, SO07-O3 (1).

Description. Largest specimen 30 mm long, 6 mm wide at thorax, consisting of 14 thoracic setigers, 11 uncinigerous and 12 abdominal segments. Body short, tumid, with wide and square thorax; abdomen quickly tapering to small pygidium.

Prostomium with rounded mid-superior lobe bearing lateral extensions, posteriorly bordered by transverse nuchal organs; U-shaped inferior lobe surrounding superior lobe (Fig. 50 A–B). Segments 1 and 2 fused dorsally and laterally, separate ventrally, both forming large lower lip (Fig. 50C); buccal tentacles smooth. Paleae absent. Four pairs of smooth, large branchiae on 3 visible segments, arranged nearly segmentally with 2 pairs on segment 3 (setiger 1) and 1 pair each on segments 4 and 5 (setigers 2, 3); posterior pair connected to base of notopodia by thickened ridges (Fig. 50D–E).

Segments 3 and 4 fused laterally, bearing first notopodia; reduced, displaced ventrally by outer branchia, bearing few fine, short setae (Fig. 50E–F). Subsequent notopodia gradually lengthening, conical throughout with short, triangular postsetal lobe in addition to conical ventral cirri (Fig. 50G). Neuropodia with uncini first present on setiger 4, paddle-shaped without dorsal cirri (Fig. 50D, G). Abdominal notopodial rudiments large, bluntly digitiform and curved inward (Fig. 50H); neuropodia progressingly elongate toward pygidium, last pair projecting beyond anus, with small dorsal cirri (Fig. 50N). Notosetae fairly stout, limbate (Fig. 50I); thoracic and abdominal uncini with 4–5 teeth in single row above inconspicuous rostral point and rounded basal prow (Fig. 50J–M).

Pygidium with 2 thick, clavate dorsolateral anal cirri and several low, rounded ventral lobes (Fig. 50I).

The species is newly added to the Japanese polychaetous fauna.

Distribution. Southern California; Japan.

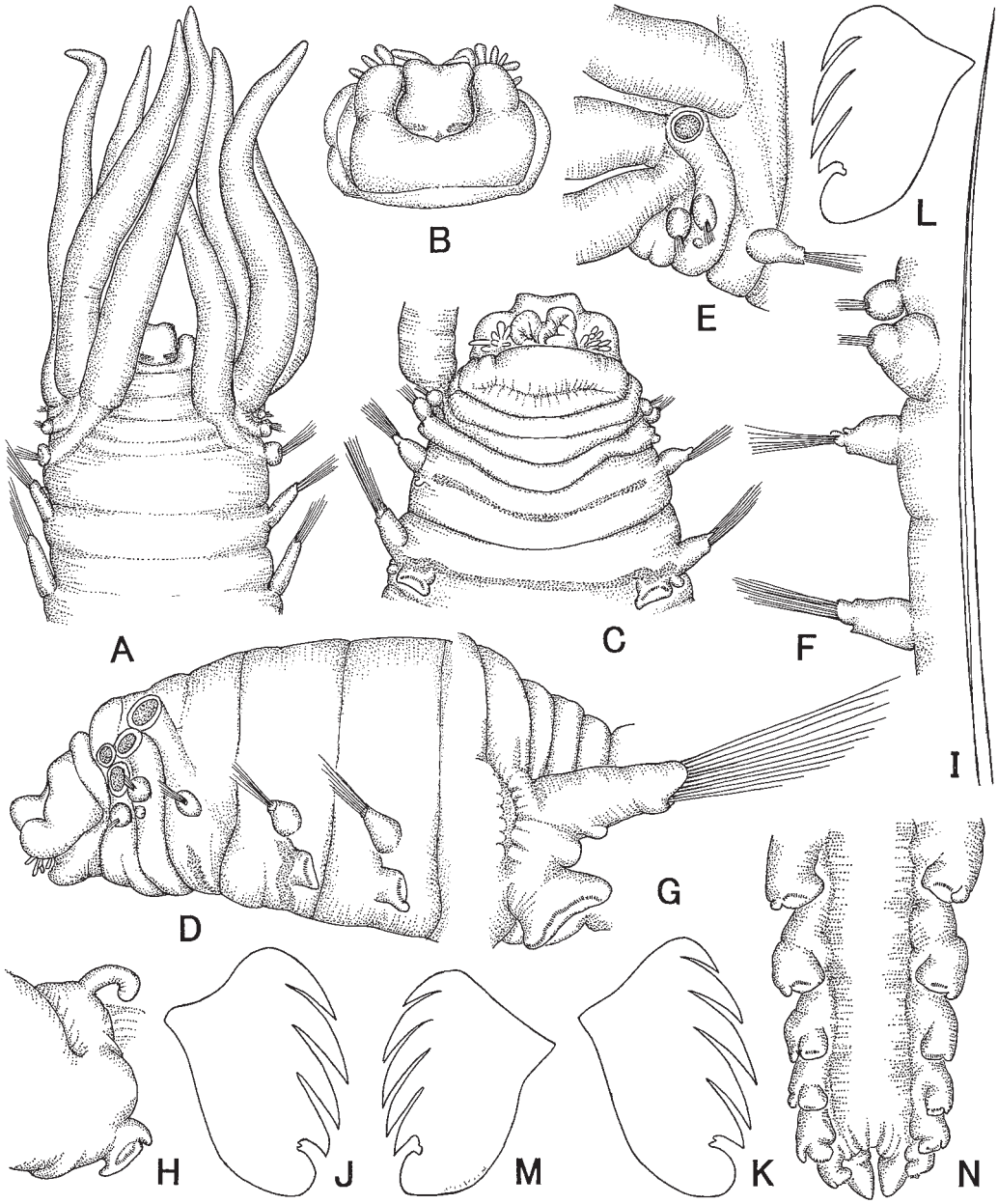

Fig. 50. *Amage delus* (Chamberlin). —A, anterior end, dorsal view, × 7; B, prostomium, same view, × 15; C; anterior end, ventral view, × 7; D, anterior end, lateral view, × 7; E, segments 3 to 6, same view, × 15; F, left parapodia of segments 3 to 7, dorsal view, × 15; G, last thoracic parapodium, anterior view, × 15; H, abdominal parapodium, same view, × 15; I, notoseta, × 120; J–K, thoracic uncini, × 705; L–M, abdominal uncini, × 705; N, posterior end, ventral view, × 22.

Genus ***Ampharete*** Malmgren, 1866
Ampharete longipaleolata Uschakov, 1950
(Fig. 51A–N)

Ampharete longipaleolata Uschakov, 1950: 218–219, pl. 2, fig. 33; Uschakov, 1955: 367–368, fig. 136E–G.

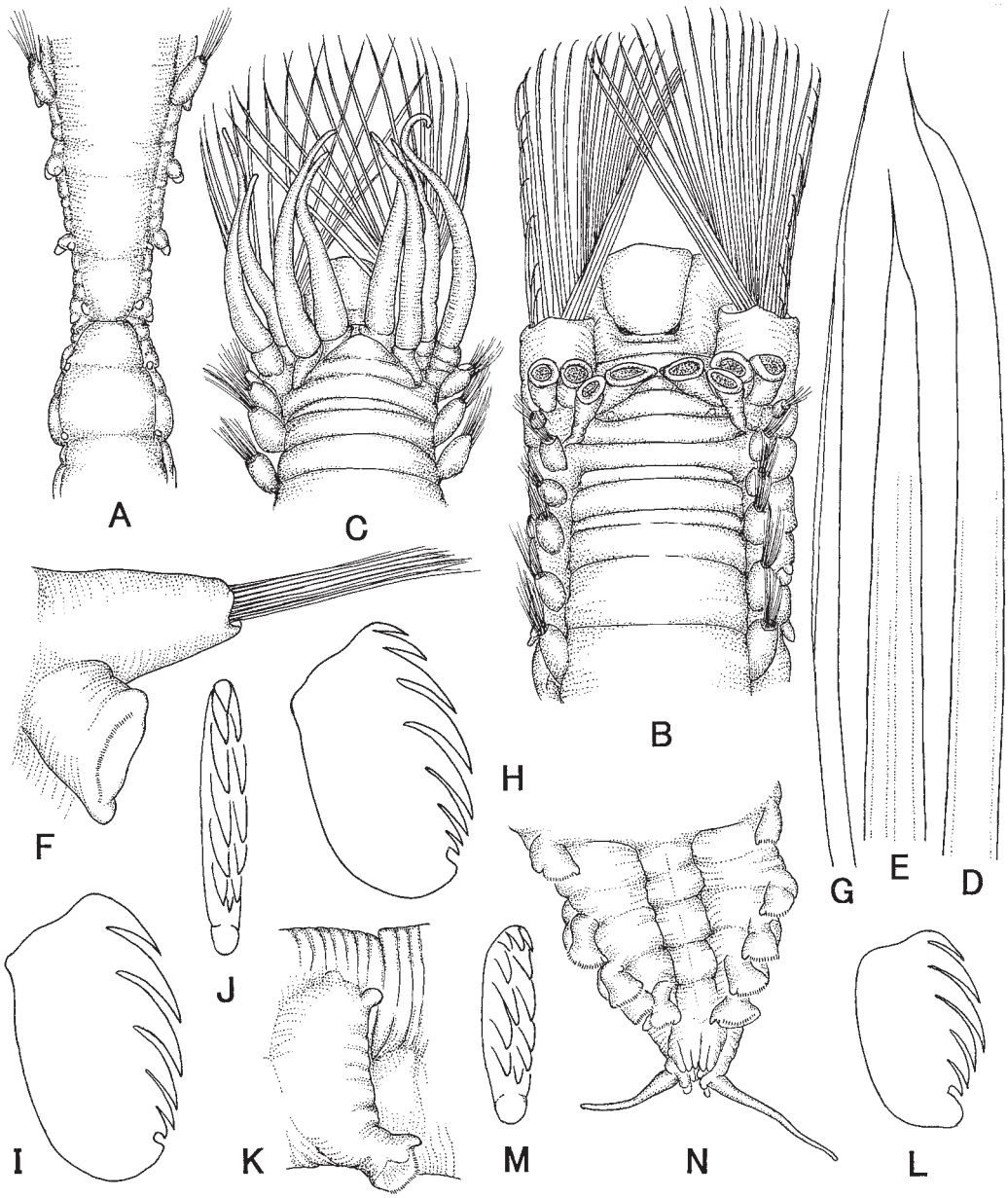

Fig. 51. *Ampharete longipaleolata* Uschakov. —A, last thoracic and anterior abdominal segments, dorsal view, × 6; B, anterior end, same view, × 9; C, same from others, same view, × 9; D–E, paleae, × 140; F, thoracic parapodium, anterior view, × 25; G, notoseta, × 127; H–J, thoracic uncini, lateral and frontal views, × 748; K, abdominal parapodium, anterior view, × 25; L–M, abdominal uncini, lateral and frontal views, × 957; N, posterior end, ventral view, × 17.

Material. NSMT-Pol. 110194, WA05-DE380D (2), NSMT-Pol. 110195, WA05-FG410 (1), NSMT-Pol. 110196, WA05-FG425 (1), NSMT-Pol. 110197, WA05-FG450 (1); NSMT-Pol. 110198, WA06-E450 (4), NSMT-Pol. 110199, WA06-E480 (3), NSMT-Pol. 110200, WA06-E510 (5), NSMT-Pol. 110201, WA06-E510D (5), NSMT-Pol. 110202, WA06-E550 (1), NSMT-Pol. 110203, WA06-F410 (1), NSMT-Pol. 110204, WA06-F480 (1); NSMT-Pol. 110468, WA07-A1500D (1).

Description. Largest specimen 43 mm long, 4.5 mm wide at thorax, consisting of 14 thoracic setigers, 12 uncinigerous and 13 abdominal segments. Body slender, widest anteriorly, gradually tapering toward pygidium, with distinct constriction between third and fourth abdominal segment (Fig. 51A).

Prostomium roughly pentagonal, with large mid-superior lobe surrounded by inferior lobe, with nuchal organs at postectal corners of mid-superior lobe (Fig. 51B). Segments 1 and 2 separate dorsally and ventrally, with segment 1 forming smooth lower lip; segment 2 very short but distinct. Buccal tentacles slender, smooth.

Segment 3 with anterior 3 pairs of branchiae and paleae; branchiae subulate, usually slightly separated by narrow dorsomedian gap and bases of inner branchiae fused for short length (Fig. 51C). Paleae wide, very long, about 4 times as long as prostomium, abruptly tapering to acute tips, in crowded semicircular fascicles 22–24 per fascicle (Fig. 51B, D–E). Segments 4 and 5 fused laterally, bearing bases of fourth pair of branchiae fused to dorsal body wall, branchia emerging between inner and middle anterior pairs and 2 minute nephridial papillae just inside branchial bases, carrying small first pair of notopodia (Fig. 51B).

Following notopodia cylindrical (Fig. 51F), with limbate notosetae, tapering to acute tip (Fig. 51G). Thoracic uncinigers first present on setiger 3, with short neuropodial cirri. Uncini with double row of 5–7 teeth above rostral point and basal prow (Fig. 51H–J). Anterior abdominal segments with tiny, papilliform notopodial rudiments (Fig. 51K), posteriorly gradually decreasing and replaced by low glandular ridges above neuropodial lobes. Neuropodia with short, conical dorsal cirri; uncini smaller than thoracic uncini, with 2–3 rows of teeth (Fig. 51L–M).

Pygidium short, narrow, with 2 slender lateral cirri and circlet of low, rounded papillae between cirri (Fig. 51N).

The species is newly added to the Japanese polychaetous fauna.

Distribution. Sea of Okhotsk; Japan.

Genus ***Amphicteis*** Grube, 1850
Amphicteis mederi Annenkova, 1929
(Figs. 52A–D, 53A–I)

Amphicteis mederi Annenkova, 1929: 499–500, pl. 38, figs. 45–46, pl. 39, fig. 58; Uschakov, 1955: 376, fig. 139K–M.

Material. NSMT-Pol. 110205, WA05-DE380D (9), NSMT-Pol. 110206, WA05-FG510D (2), NSMT-Pol. 110207, WA05-GH510D (6), NSMT-Pol. 110208, WA05-H900D (2); NSMT-Pol. 110209, WA06-A150D (2), NSMT-Pol. 110210, WA06-A250D (1), NSMT-Pol. 110211, WA06-DE280D (1), NSMT-Pol. 110212, WA06-G900D (1); NSMT-Pol. 110469, WA07-A250D (4), NSMT-Pol. 110470, WA07-D900 (1).

Description. Largest specimen 42 mm long, 5 mm wide at thorax, consisting of 17 thoracic setigers, 14 uncinigerous and 15 abdominal segments. Body long, slender, gently tapering toward pygidium.

Prostomium longer than wide, with mid-superior lobe divided into 2 straight, thick ridges; posterior prostomial lobe surrounding mid-superior lobe, bearing long, conspicuous glandular

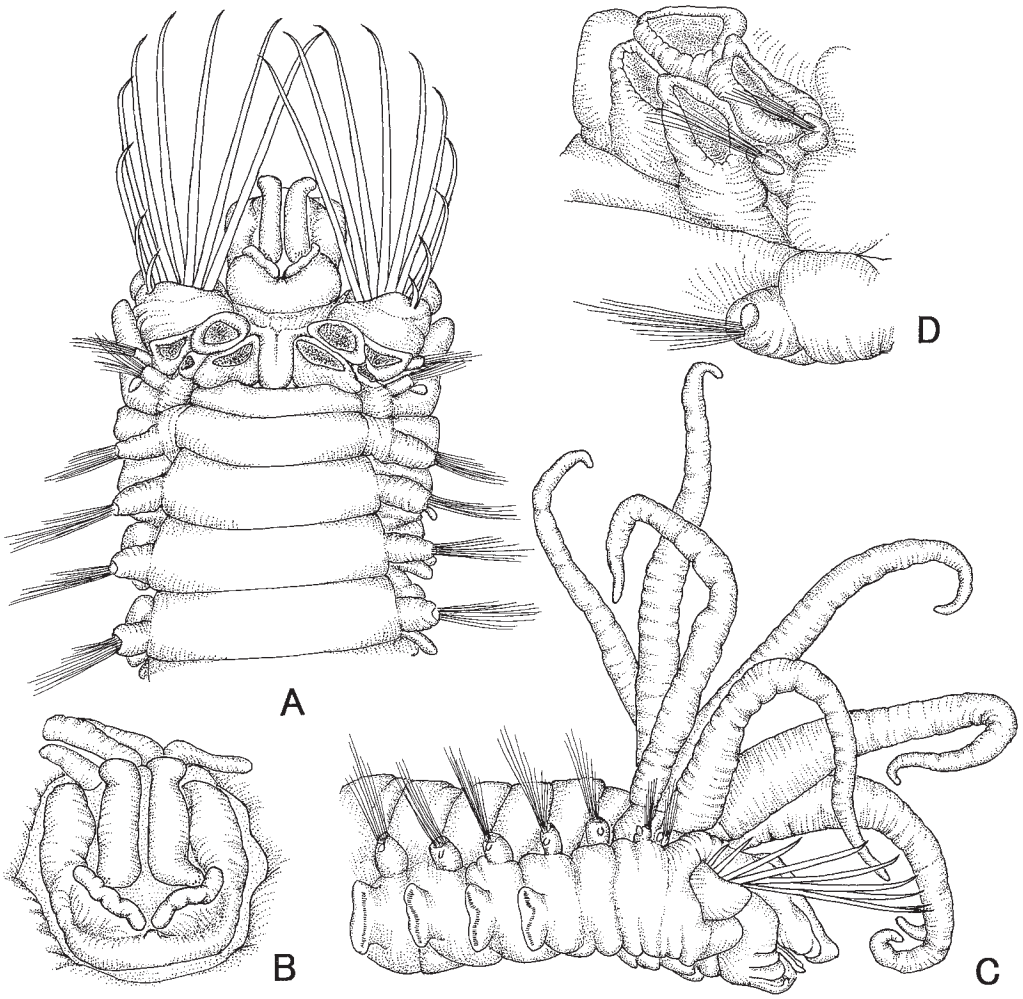

Fig. 52. *Amphicteis mederi* Annenkova. —A, anterior end, dorsal view, × 9; B, prostomium, same view, × 14; C, anterior end, lateral view, × 9; D, anterior segments, dorsolateral view, × 26.

ridges on anterior margin; central part of prostomium bearing 2 lateral groups of small eyespots, usually concealed by glandular ridges (Fig. 52A–B). Single papilla occurring between glandular ridges (Fig. 52B). Segments 1 and 2 fused, produced into crenulated lower lip ventrally. Branchiae long, with broad bases leaving fairly large scars when breaking off (Fig. 52A, D), tapered to filiform tips (Fig. 52C); in 2 groups of 2, separated by narrow median gap occupied by notched branchial pad (Fig. 52A).

Paleae well developed, about 9–10 per fascicle (Fig. 52A), coppery, tapering to slightly hooked with rounded tip (Fig. 53A). First 2 notopodia on segments 4, 5 small and conical, with triangular postsetal lobes and fine setae (Fig. 52D); subsequent notopodia larger, with distinct foliaceous ventral cirri and conical presetal lobes (Fig. 53B). Fully developed notosetae stiff, limbate. Thoracic neuropodia from segment 7 (setiger 4) well-developed, paddle-shaped; all neuropodia in same width. Thoracic uncini with single row of 5 teeth above inconspicuous rostral point and narrow basal prow (Fig. 53C–D). Abdominal notopodia rudiments present throughout, small but distinct, involute-digitiform to rounded (Fig. 53E). Abdominal neuropodia narrower than thoracic ones, gradually lengthening toward pygidium, with short dorsal cirri (Fig. 53E). Abdominal uncini

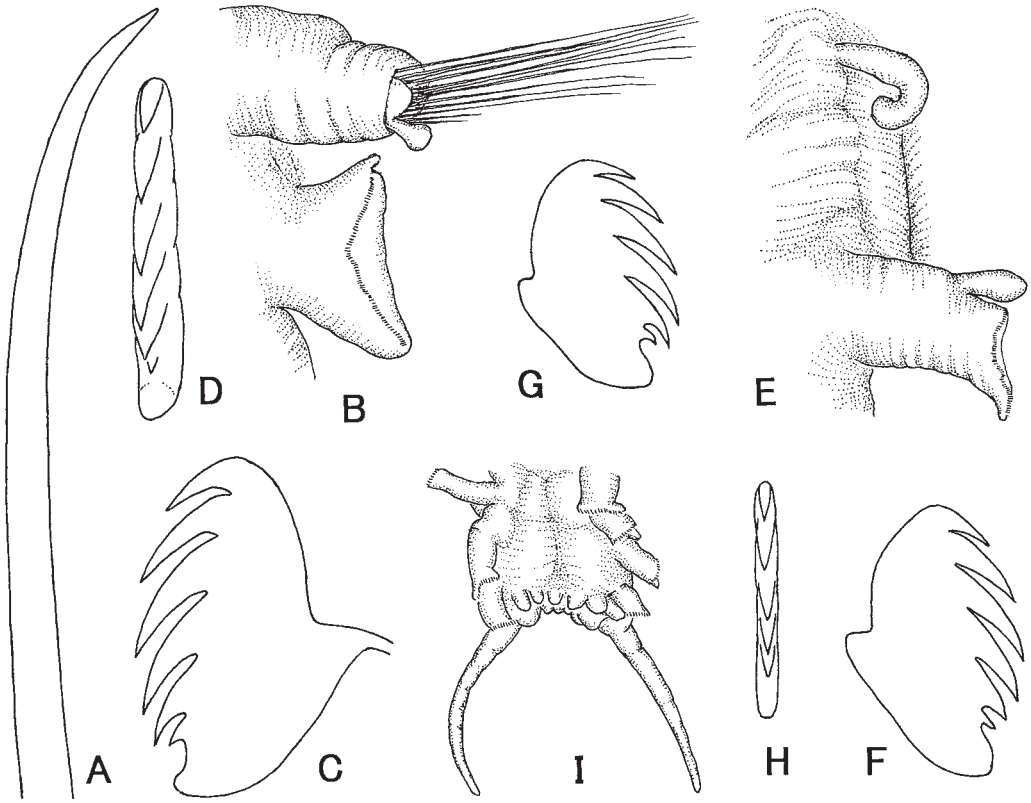

Fig. 53. *Amphicteis mederi* Annenkova. —A, palea, × 70; B, thoracic parapodium, anterior view, × 25; C–D, thoracic uncini, lateral and frontal views, × 717; E, abdominal parapodium, anterior view, × 32; F–H, abdominal uncini, lateral and frontal views, × 717; I, posterior end, ventral view, × 17.

smaller than thoracic ones, with single row of 5 teeth above small rostral point and narrow basal prow (Fig. 53F–H).

Pygidium small, with 2 long, filiform lateral anal cirri and 6 dorsal and 5 ventral rounded lobes (Fig. 53I).

The species is newly added to the Japanese polychaetous fauna.

Distribution. Seas of Japan and Okhotsk; Kuril Islands; Japan.

Amphicteis scaphobranchiata Moore, 1906
(Figs. 54A–H, 55A–H)

Amphicteis scaphobranchiata Moore, 1906: 255–257, pl. 12, figs. 54–61; Berkeley and Berkeley, 1952: 68–69, figs. 139–141; Uschakov, 1955: 376; Imajima, 1961: 95–96, textfig. 11a–c; Hartman, 1969: 549–550, figs. 1–6; Fauchald, 1972b: 286–287, pl. 58, fig. c; Uebelacker, 1984b: 51-18–20, figs. 51-13, 14a–e; Hilbig, 2000: 188–190, fig. 8.7.

Material. NSMT-Pol. 110213, WA06-E510D (5), NSMT-Pol. 110214, WA06-EF425D (7), NSMT-Pol. 110215, WA06-F750 (2), NSMT-Pol. 110216, WA06-H480 (2), NSMT-Pol. 110217, WA06-H1500D (3); NSMT-Pol. 110471, WA07-A650 (1).

Description. Largest specimen 47 mm long, about 5 mm wide at thorax, consisting of 17 thoracic setigers, 14 uncinigerous and 15 abdominal segments. Body with wide thorax tapering toward pygidium.

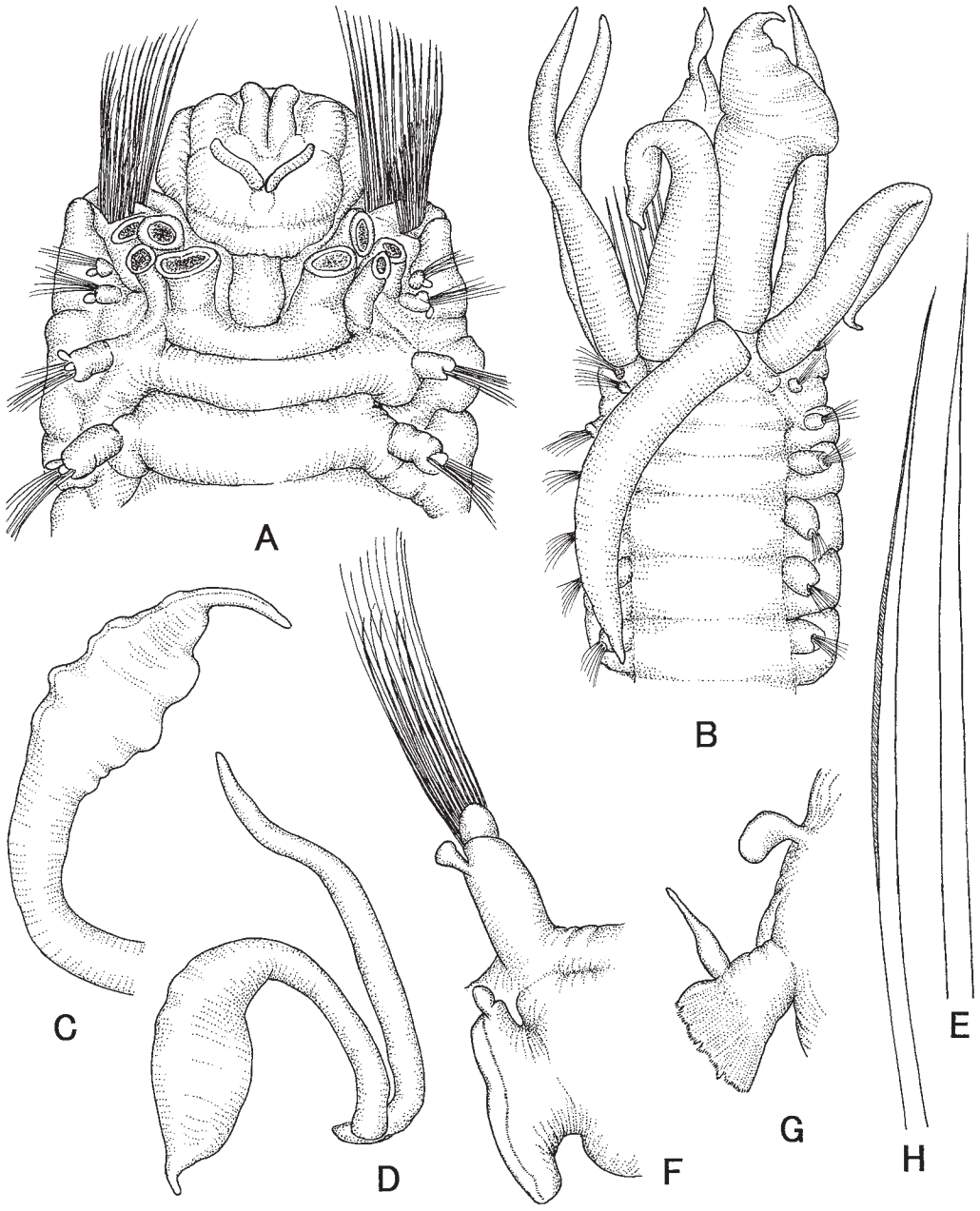

Fig. 54. *Amphicteis scaphobranchiata* Moore. —A, anterior end, branchiae omitted, dorsal view, × 11; B, anterior end, same view, × 16; C, anteromedial branchia, × 18; D, anteromedial and anterolateral branchiae, × 16; E, palea, × 67; F, thoracic parapodium, lateral view, × 32; G, abdominal parapodium, same view, × 23; H, notoseta, × 108.

Prostomium wider than long, with mid-superior lobe divided into 2 straigh, thick ridges joined by thin, lamellar middle part. Posterior prostomial lobe bearing long, conspicuous glandular ridges on anterior margin; central part of prostomium bearing 2 lateral groups of small eyespots and pairs nuchal organs median to eyes, usually concealed by glandular ridges (Fig. 54A).

Segments 1 and 2 fused, produced ventrally into smooth lower lip. Branchiae large, as long as 9 setigers, anteromedial pair broadly foliaceous with scalloped anterior margin bearing a

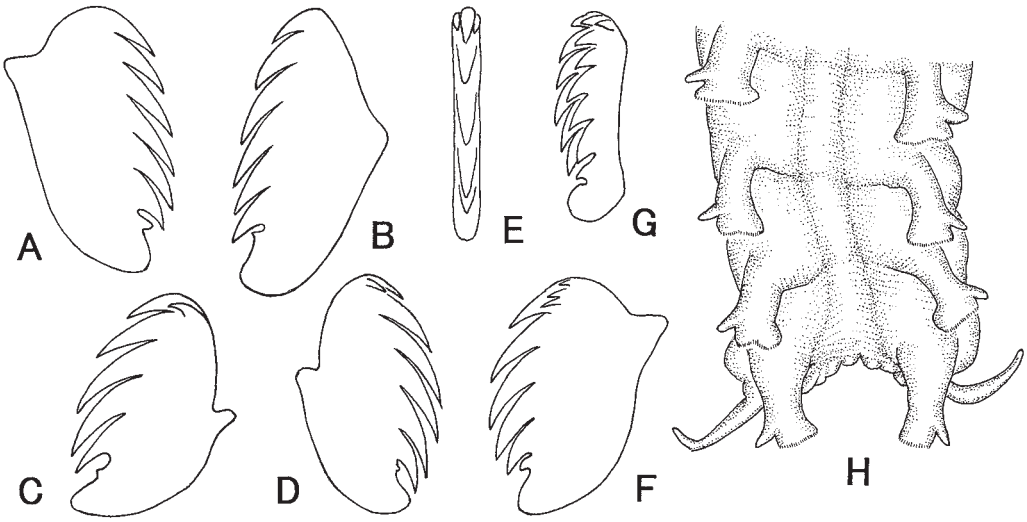

Fig. 55. *Amphicteis scaphobranchiata* Moore. —A–B, thoracic uncini, lateral view, × 935; C–E, abdominal anterior uncini, lateral and frontal views, × 935; F–G, abdominal posterior uncini, lateral and frontal views, × 935; H, posterior end, ventral view, × 25.

filiform hooked tip, others cylindrical and tapered to filiform tips (Fig. 54B–D); in 2 rows of 2, separated by broad median gap occupied by large branchial membrane or pad about half as wide as branchial bases (Fig. 54A).

Paleae well developed, tapering abruptly to hairlike tips (Fig. 54E), about 15–23 per fascicle. First 2 notopodia small and conical, with triangular postsetal lobes and few fine setae (Fig. 54A); subsequent notopodia larger, with foliaceous ventral cirri in addition to presetal lobes (Fig. 54F); thoracic uncinigers well-developed, paddle-shaped with conical dorsal cirri. Abdominal notopodial rudiments present throughout involute-digitiform to rounded (Fig. 54G); neuropodia progressingly elongate toward pygidium, last pair projecting beyond anus, with small dorsal cirri. Notosetae fairly stout, limbate (Fig. 54H); thoracic (Fig. 55A–B) and anterior abdominal uncini (Fig. 55C–E) with 5–6 teeth in single row above inconspicuous rostral point and rounded basal prow; middle and posterior abdominal uncini with several rows of teeth above large basal prow (Fig. 55F–G).

Pygidium with 2 slender, clavate dorsolateral anal cirri and several low, rounded lateral and ventral lobes (Fig. 55H).

The species is newly added to the Japanese polychaetous fauna.

Distribution. British Colombia to California; Gulf of Mexico; Sea of Okhotsk; Japan.

Genus ***Amphisamytha*** Hessle, 1917
Amphisamytha japonica Hessle, 1917
(Fig. 56A–L)

Amphisamytha japonica Hessle, 1917: 114–115, pl. 1, figs. 7–8; Imajima and Hartman, 1964: 332.

Material. NSMT-Pol. 110218, WA06-H250D (1).

Description. Specimen 16 mm long, 3 mm wide at thorax, consisting of 17 thoracic setigers, 14 uncinigerous and 13 abdominal segments. Body slender, widest anteriorly, gradually tapering toward pygidium.

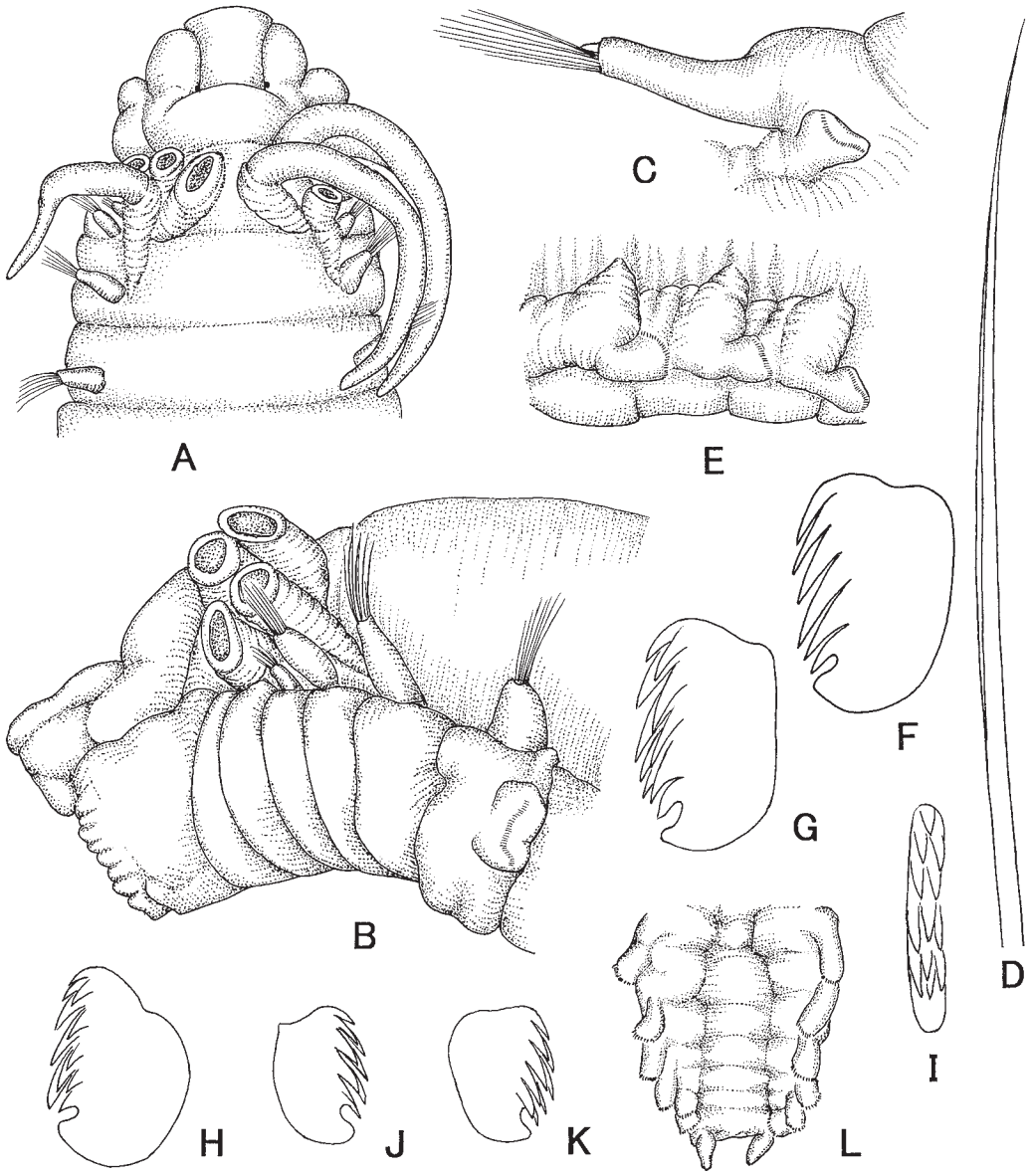

Fig. 56. *Amphisamytha japonica* Hessle. —A, anterior end, dorsal view, × 12; B, anterior end, lateral view, × 26; C, thoracic parapodium, anterior view, × 26; D, notoseta, × 170; E, abdominal neuropodia, lateral view, × 26; F–I, thoracic uncini, lateral and frontal views, × 990; J–K, abdominal uncini, lateral view, × 990; L, posterior end, ventral view, × 26.

Prostomium distinctly trilobed, with large mid-superior lobe surrounded by inferior lobe, with eyes at postectal corners of mid-superior lobe (Fig. 56A). Segments 1 and 2 separate ventrally, with segment 1 forming crenulated lower lip; segment 2 short but distinct (Fig. 56B). Segment 3 with first 2 pairs of branchiae; segment 4 with posterior 2 pairs of branchiae and minute first notopodia bearing few very fine setae. Posterior pairs of branchiae associated with segments 5 and 6, bases fused to dorsal body wall; branchiae separated by narrow dorsomedian gap. Branchiae slender, cylindrical about 1.5 times as long as body width. Paleae absent.

Fully developed biramous parapodia from segment 7 (setiger 4) through segment 20.

Thoracic notopodia slightly inflated to cylindrical, simple throughout with presetal lobes; limbate notosetae tapering to acute tip. Thoracic uncinigers small rounded pinnules with crowded uncini (Fig. 56C–D). Abdominal neuropodia longer than thoracic, lengthening toward posterior end, last pair reaching edge of pygidium; parapodial cirri and notopodial rudiments absent (Fig. 56E). Thoracic uncini with 2–3 rows of 6 teeth above basal prow (Fig. 56F–I); abdominal uncini smaller than thoracic, with 3 rows of 5 teeth above basal prow (Fig. 56J–K).

Pygidium with 2 short ventrolateral anal cirri (Fig. 56L).

Remarks. The branchiae of the type specimen from Sagami Bay, in 300 m are arranged as 3 anterior and 1 posterior pair, whereas the examined specimen has 2 anterior and 2 posterior pairs. Hilbig (2000) said; the branchiae on 2 or 3 visible segments in this genus, arranged 3+1, 2+2, or 2+1+1 are depending on the degree of relaxation at the time of death, therefore that branchial configurations are not a good character in this genus.

Distribution. Japan.

Genus ***Anobothrus*** Levinsen, 1883

Anobothrus gracilis (Malmgren, 1866)

(Figs. 57A–G, 58A–H)

Ampharete gracilis Malmgren, 1866: 365, pl. 26, fig. 75.
Anobothrus gracilis: Levinsen, 1883: 162; Hilbig, 2000: 192–194, fig. 8.9.

Material. NSMT-Pol. 110219, WA05-EF250D (1), NSMT-Pol. 110220, WA05-FG510D (2), NSMT-Pol. 110221, WA05-G280 (3), NSMT-Pol. 110222, WA05-GH510D (14); NSMT-Pol. 110223, WA06-H250D (16). NSMT-Pol. 110472, WA07-A1500D (1), NSMT-Pol. 110473, WA07-B1500D (1), NSMT-Pol. 110474, WA07-C1500D (1), NSMT-Pol. 110475, WA07-D210D (1). NSMT-Pol. 110224, SO06-M3-B1 (1), NSMT-Pol. 110803, SO07-K3 (3).

Description. Largest specimen 26 mm long, about 3 mm wide at thorax, consisting of 16 thoracic setigers including paleae, 12 uncinigerous and 14 abdominal segments. Body slender, linear, tapering posteriorly to rounded pygidium, with more or less distinct constriction between second and third abdominal segment (Fig. 57A).

Prostomium roughly pentagonal, with large mid-superior lobe surrounded by inferior lobe, with nuchal organs at postectal corners of mid-superior lobe, eyespots not recognized (Fig. 57B). Peristomium and segment 2 fused laterally and ventrally, produced into smooth lower lip. Four pairs of smooth branchiae cylindrical, slender, on 2 visible segments, arranged in a transverse row of 3 pairs and single pair behind on either side, left and right group not separated by dorsomedian gap and bases of inner branchiae fused for short length (Fig. 57B–D).

Paleae slender, tapering gradually to hairlike tips (Fig. 57E), in crowded semicircular fascicles of about 20 (Fig. 57B). First notopodia on segment 4, smallest, directly behind base of outermost branchia, reduced to thin fascicle of short, very fine setae (Fig. 57B–D). Following notopodia increasing in size, cylindrical, without lobes or cirri (Fig. 58A), largest in mid thoracic segments, bearing larger, limbate setae (Fig. 57F). Thoracic uncinigers beginning on setiger 4 wide, paddle-shaped; abdominal neuropodia (Fig. 58B) narrower and gradually lengthening toward pygidium.

Notopodia in setiger 5 (unciniger 2) connected by often weakly defined dorsal ridge; notopodia of fifth-to-last setiger (setiger 11, unciniger 8) slightly elevated dorsally, connected by thickened dorsal glandular ridge (Fig. 57C–D), and bearing modified setae with finely pilose, more abruptly tapering tips (Fig. 57G). Thoracic uncini in a single series numbering 60 in anterior unciniger, and fewer in the more posterior unciniger. Thoracic uncini avicular with doble row of 7 teeth above rounded basal prow (Fig. 58C–E), abdominal uncini with 3–4 rows of 3–7 teeth above

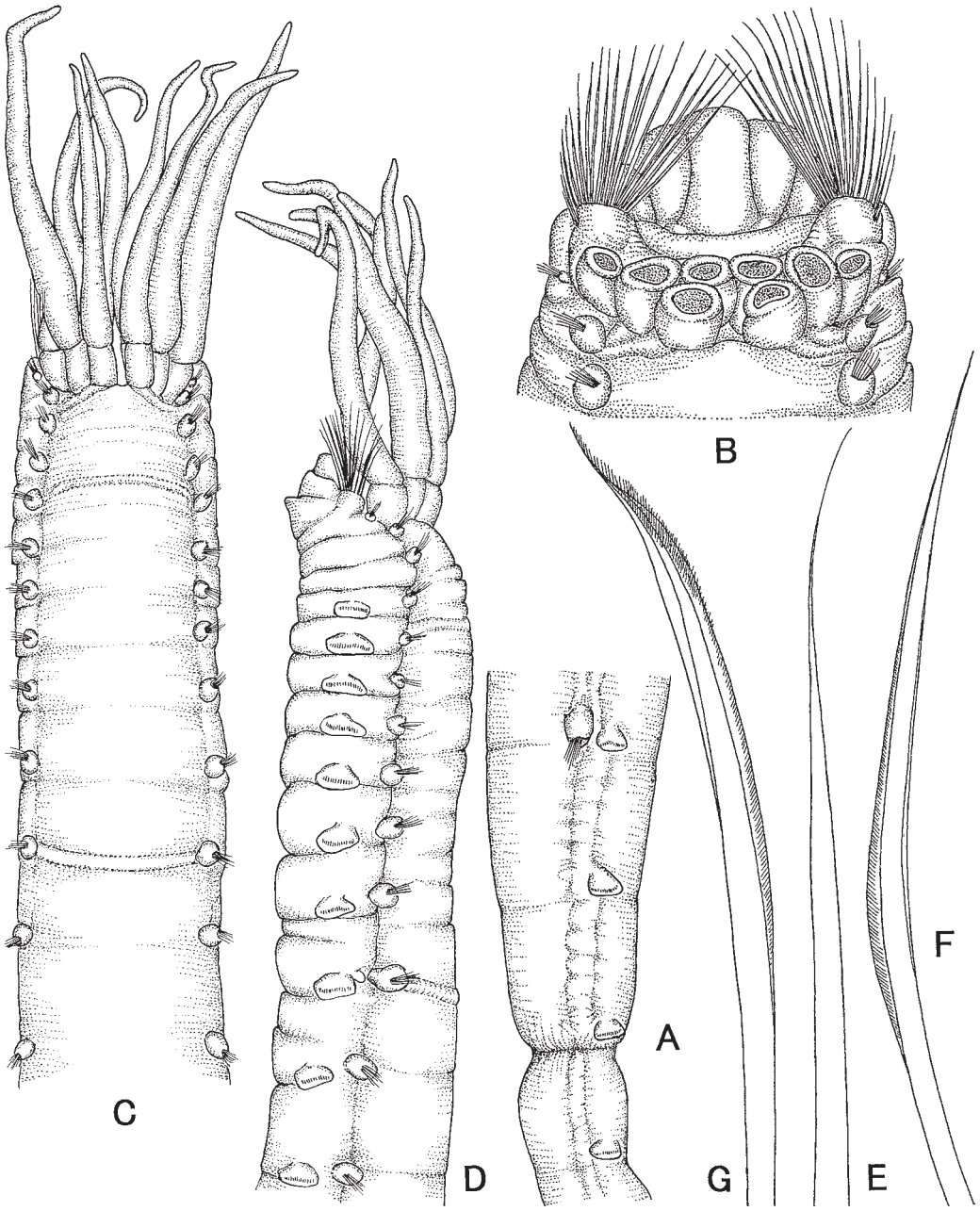

Fig. 57. *Anobothrus gracilis* (Malmgren). —A, last thoracic and three abdominal segments, lateral view, × 12; B, anterior end, dorsal view, × 20; C, anterior end, same view, × 12; D, same, lateral view, × 12; E, tip of palea, × 100; F, tip of regular notoseta, × 245; G, tip of modified notoseta, × 287.

rostral point and basal prow (Fig. 58F–G).

Pygidium with terminal anus surrounded by 2 large dorsal and 3 small ventrolateral papillae (Fig. 58H). Tubes with mucous inner lining and thin outer layer of fine mud particles.

The species is newly added to the Japanese polychaetous fauna.

Distribution. Arctic and boreal Atlantic Ocean; California; Japan.

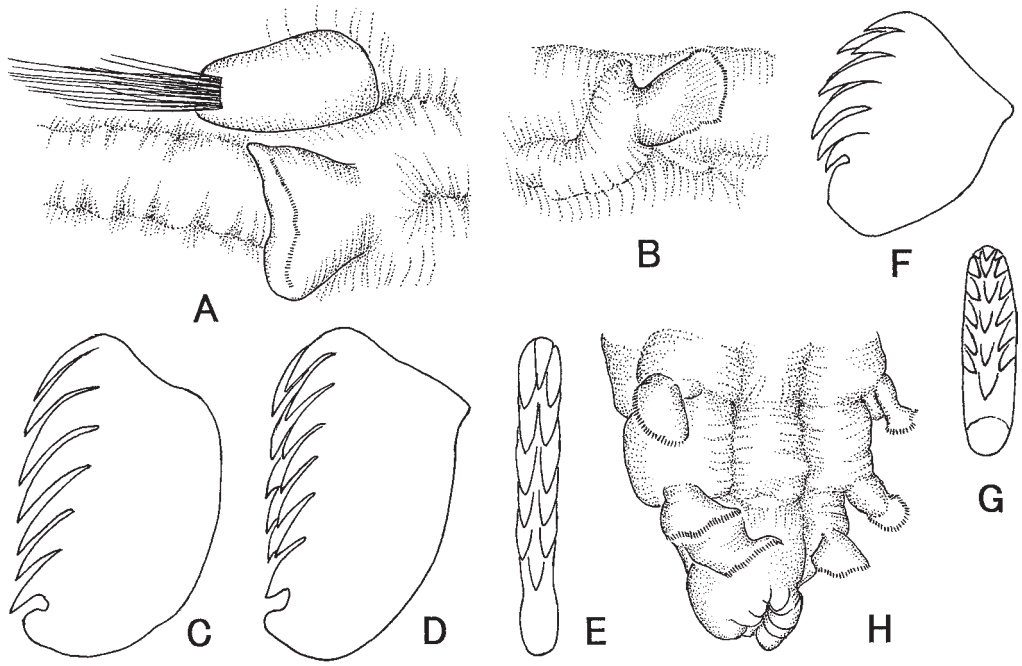

Fig. 58. *Anobothrus gracilis* (Malmgren). —A, thoracic parapodium, × 38; B, anterior abdominal unciniger, × 38; C–E, thoracic uncini, lateral and frontal views, × 1045; F–G, abdominal uncini, lateral and frontal views, × 1045; H, posterior end, ventrolateral view, × 28.

Anobothrus wakatakamaruae sp. nov.
(Figs. 59A–F, 60A–L)

Type material. Holotype—NSMT-Pol. H 529, Stn. WA05-EF450D, off Sanriku, 38˚02.18´N, 142˚04.82´E, 452–454 m, Nov. 18, 2005. Paratypes—NSMT-Pol. P 530, Stn. WA05-FG510D, off Sanriku, 516–515 m, Nov. 15, 2005 (3).

Description. Holotype 15 mm long, about 1.8 mm wide at thorax, consisting of 14 thoracic setigers, 12 uncinigerous and 12 abdominal segments. Body slender, linear, gently tapering toward pygidium, with distinct constriction between third and fourth abdominal segment (Fig. 59A).

Prostomium roughly rectangular, distinctly trilobed with large mid-superior lobe surrounded by inferior lobe, concealed by paleae and branchial bases; nuchal organs present but eyes not observed (Fig. 59B). Segments 1 and 2 free dorsally, fused and somewhat obscured laterally and free ventrally, produced into smooth lower lip. Buccal tentacles numerous, slender, with 4 longitudinal rows of short pinnae on lateral sides (Fig. 59C). Branchiae about as long as first 11 setigers, cylindrical, slender, arising from segment 3 in a straight row of 3 and 1 behind on either side, separated by narrow median gap; posterior pair of branchiae associated with segment 6 (setiger 2), bases fused to dorsal body wall (Fig. 59D–E). Paleae prominent, wide and slender, tapering gradually to long, curved hairlike tips, arising from large cylindrical lobes in dense, fan-shaped fascicles of about 25–26 per fascicle (Figs. 59F, 60A). Segments 4 and 5 fused, bearing small but distinct notopodium with developed notosetae; second notopodium on segment 6, also bearing developed notosetae (Fig. 60B). Fully developed, biramous parapodia from segment 7. Notopodia 4 and 5 connected by dorsal glandular bands (Fig. 59D–E); notopodia of fourth-to-last setiger (setiger 11)

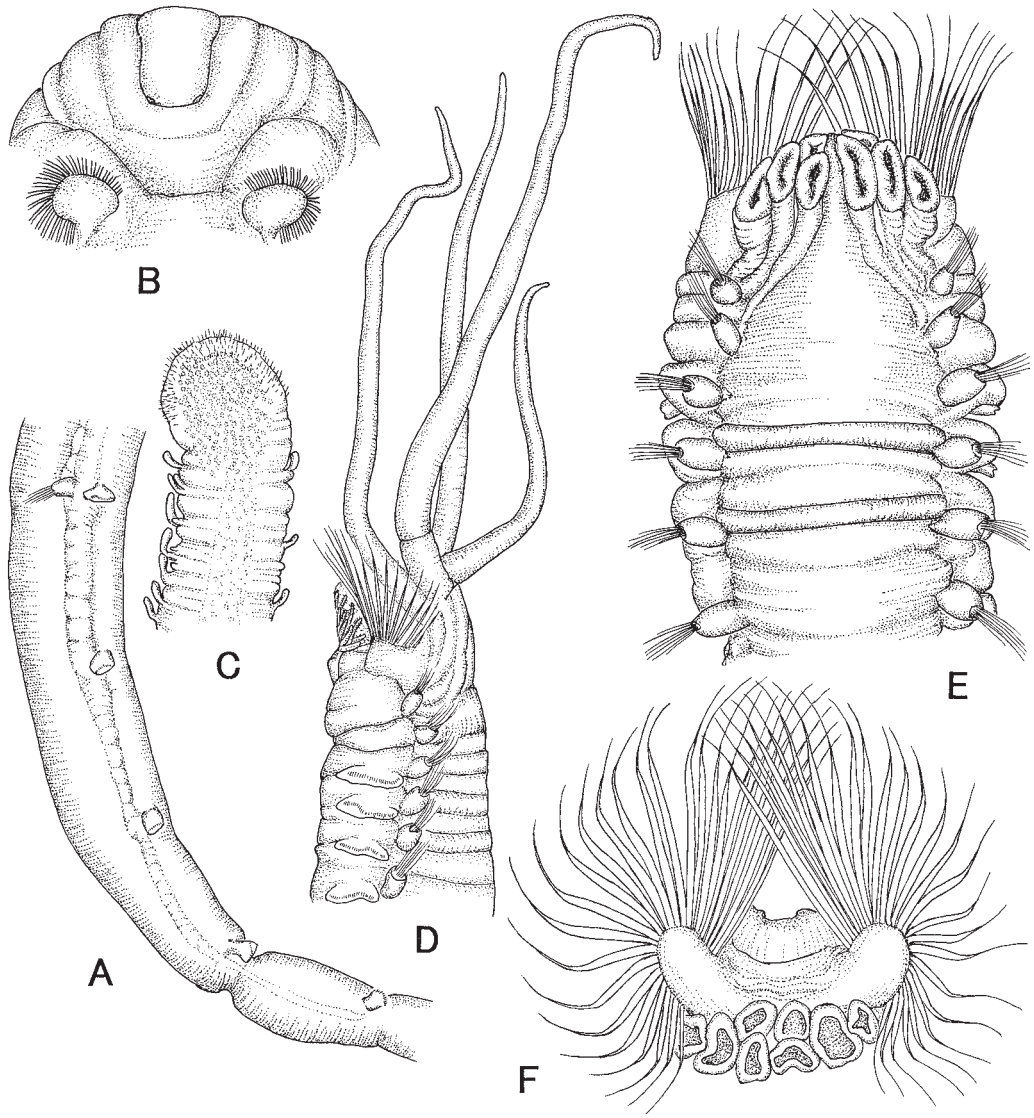

Fig. 59. *Anobothrus wakatakamaruae* sp. nov. —A, last thoracic and four abdominal segments, lateral view, × 10; B, anterior end, dorsal view, × 27; C, tip of buccal tentacle, × 256; D, anterior end, lateral view, × 14; E, anterior end, dorsal view, × 16; F, paleae in fascicles, frontal view, × 27.

slightly elevated dorsally, connected by prominent, thickened ciliated dorsal ridge and bearing modified setae with finely pilose (Fig. 60C–D).

Thoracic notopodia simple, cylindrical throughout, without lobes or cirri; thoracic uncinigers first present in setiger 3 wide, paddle-shaped (Fig. 60E). Abdominal neuropodia narrower and gradually lengthening toward pygidium; dorsal cirri absent (Fig. 60F). Thoracic and anterior abdominal uncini with double row of 6–7 teeth above rostral point and rounded basal prow (Fig. 60G, H); middle and posterior abdominal uncini with 3 rows of 6–7teeth above rostral point and rounded basal prow (Fig. 60I–K).

Pygidium with terminal anus surrounded by 2 slender lateral cirri and 5 very small papillae in dorsal arc and 7 papillae in ventral arcs (Fig. 60L).

Remarks. *Anobothrus wakatakamaruae* resembles *A. paleatus* Hilbig, 2000 from California

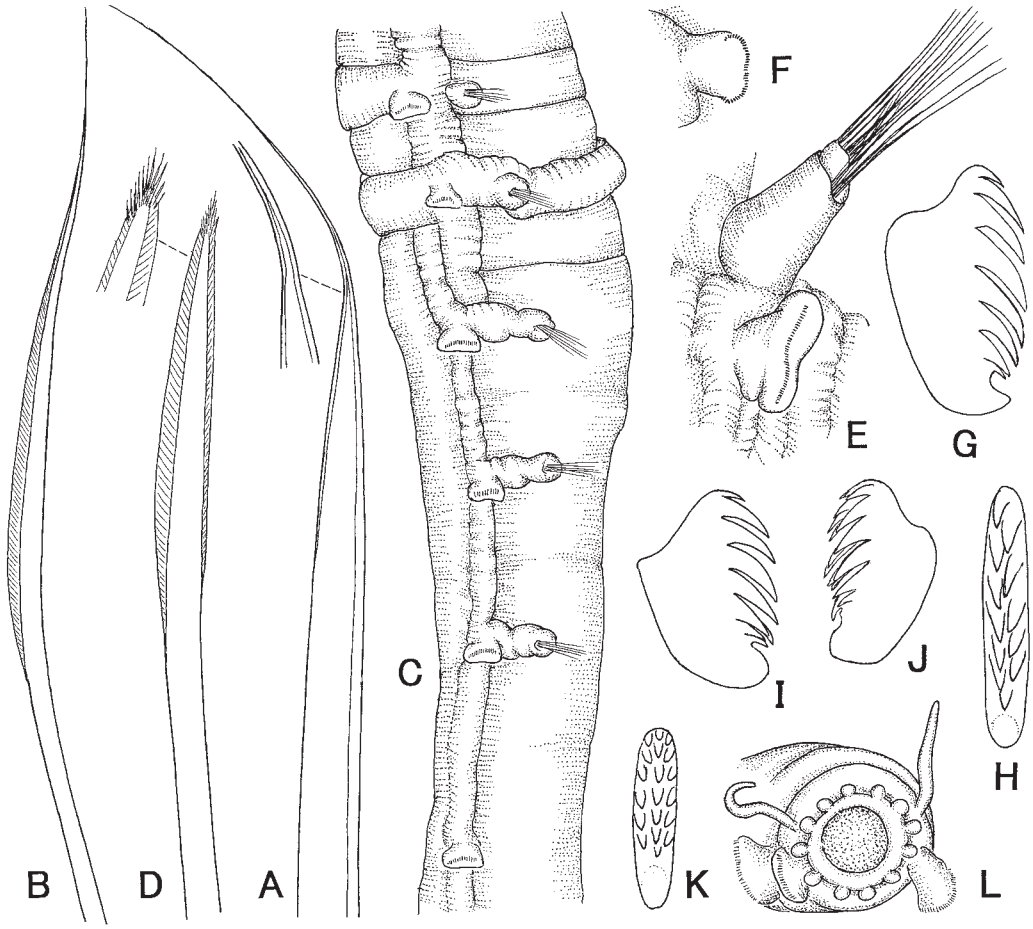

Fig. 60. *Anobothrus wakatakamaruae* sp. nov. —A, palea, × 112, with detail of distal region, × 162; B, notoseta, × 206; C, posterior thoracic segments, showing ciliated dorsal ridge, lateral view, × 29; D, modified seta, × 320, with detail of distal region, × 642; E, thoracic parapodium, anterior view, × 34; F, abdominal unciniger, same view, × 34; G–H, thoracic uncini, in lateral and frontal views, × 935; I–K, abdominal uncini, lateral and frontal views, × 935; L, posterior end, viewed from the rear, × 50.

(in 550 to 610 m) in the notopodia of the fourth-to-last setiger (setiger 11, unciniger 9) are connected by thickened dorsal ridge and the position of the abdominal constriction. However, *A. wakatakamaruae* can be distinguished from *A. paleatus* in that the notopodia 4 and 5 are connected by the dorsal glandular ridges rather than only notopodium 5, and both are also differentiated each other in the morphology of the paleae and modified setae.

Etymology. The species is named after the R/V *Wakataka-maru*, FRA, which collected these specimens.

Distribution. Japan (452–516 m depth).

Genus ***Auchenoplax*** Ehlers, 1887

Auchenoplax crinita Ehlers, 1887

Auchenoplax crinita Ehlers, 1887: 209–214, pl. 44, figs. 10–16; Fauvel, 1936b: 95–96; Hartman, 1965: 216–217, pl. 47, figs. a–d; Imajima, 1997a: 210–211, fig. 13a–h.

Material. NSMT-Pol. 109420, WA05-DE380D (7), NSMT-Pol. 109421, WA05-EF250D (2), NSMT-Pol. 109422, WA05-EF450D (13), NSMT-Pol. 109423, WA05-FG510D (4); NSMT-Pol. 110225, WA06-DE280D (1), NSMT-Pol. 110226, WA06-E510D (11), NSMT-Pol. 110227, WA06-EF425D (17), NSMT-Pol. 110228, WA06-FG350D (2), NSMT-Pol. 110229, WA06-FG480 (1), NSMT-Pol. 110230, WA06-G900D (3), NSMT-Pol. 110231, WA06-GH480D (15), NSMT-Pol. 110232, WA06-H250D (13).

Distribution. Atlantic of New England; northeastern South America; southern Florida; Japan.

Genus ***Lysippe*** Malmgren, 1866
Lysippe labiata Malmgren, 1866
(Fig. 61A–M)

Lysippe labiata Malmgren, 1866: 367, pl. 26, fig. 78; Hessle, 1917: 109–110; Berkeley and Berkeley, 1956: 241; Hilbig, 2000: 206–207, fig. 8.16.

Material. NSMT-Pol. 110234, WA05-DE380D (1), NSMT-Pol. 110235, WA05-EF250D (2); NSMT-Pol. 110236, WA06-E510D (1), NSMT-Pol. 110237, WA06-EF425D (1), NSMT-Pol. 110239, WA06-GH480D (1), NSMT-Pol. 110238, WA06-H250D (4).

Description. Largest specimen 16 mm long, 2 mm wide at thorax, consisting of 16 thoracic setigers, 13 uncinigerous 12 abdominal segments. Body slender, widest in thorax, gradually tapering toward pygidium.

Prostomium trilobed, with wide mid-superior lobe surrounded by inferior lobes with patches of brown pigment; nuchal organs at postectal corners of mid-superior lobe, without eyes and glandular ridges (Fig. 61A–B). Buccal tentacles few, pinnate. Segments 1 and 2 fused, ventrally produced into large, scoop-shaped, crenulated lower lip usually protruding beyond prostomium and visible in dorsal view (Fig. 61B). Segment 3 with small, thin paleae arising from large cylindrical lobe (Fig. 61C) and anterior 2 pairs of branchiae; posterior 2 pairs of branchiae associated with segments 4 and 5, bases fused to dorsal body wall; left and right group separated by wide dorsomedian gap (Fig. 61A–B). Branchiae slender, cylindrical, as long as 8 setigers (Fig. 61D).

First notopodia on segment 4 reduced in size but bearing developed notosetae; second notopodia on segment 5, also somewhat reduced in size but bearing well-developed notosetae. Notopodia from segment 7 fully developed, cylindrical, without lobes and cirri (Fig. 61E), with stiff, long setae (Fig. 61F). First thoracic uncinigers on setiger 4 small pinnules, lengthening in posterior abdominal segments; dorsal cirri absent (Fig. 61G). Thoracic uncini with 3 rows of 4–5 teeth above rostral point and basal prow (Fig. 61H–J); abdominal uncini crested, with about 4 rows of teeth above rostral point and basal prow (Fig. 61K–L).

Pygidium with 2 slender lateral anal cirri, about as wide as last segment, and low, rounded lobes (Fig. 61M).

The species is newly added to the Japanese polychaetous fauna.

Distribution. Arctic; Greenland; Iceland; Denmark; Alaska to California; Sea of Japan, Japan.

Genus ***Melinna*** Malmgren, 1867
Melinna cristata (Sars, 1851)

Melinna cristata: Wollebaek, 1912: 65–67, pl. 14, figs. 1–9; Hessle, 1917: 92–93; Uschakov, 1955: 363, fig. 134G; Hartman, 1965: 218–219; Fauchald, 1972b: 418; Yang and Sun, 1988: 280, fig. 134a–g; Mackie and Pleijel, 1995: 104–111, figs. 1–3, tab. 1; Imajima, 1997a: 209.

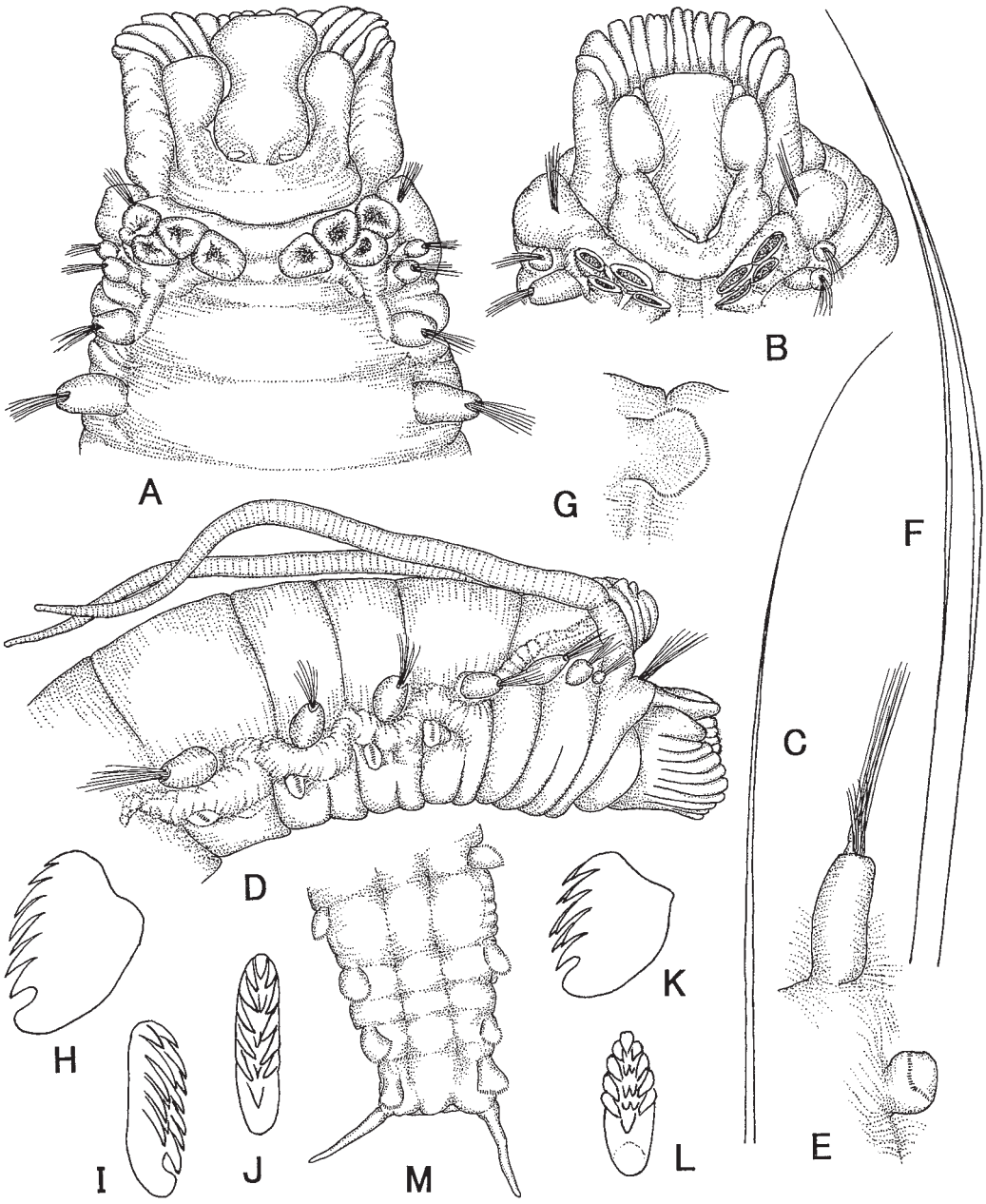

Fig. 61. *Lysippe labiata* Malmgren. —A, anterior end, dorsal view, × 29; B, anterior end from others, same view, × 29; C; palea, × 280; D, anterior end, lateral view, × 29; E, thoracic parapodium, anterior view, × 49; F, notoseta, × 255; G, abdominal unciniger, anterior view, × 49; H–J, thoracic uncini, lateral and frontal views, × 1045; K–L, abdominal uncini, lateral and frontal views, × 1045; M, posterior end, ventral view, × 42.

Material. NSMT-Pol. 110240, WA05-E1000D (1); NSMT-Pol. 110241, WA06-A1200D (18), NSMT-Pol. 110242, WA06-E510D (1), NSMT-Pol. 110243,WA06-G900D (1), NSMT-Pol. 110244, WA06-GH480D (1); NSMT-Pol. 110465, WA07-A1500D (3).

Distribution. Arctic and boreal seas; Japan.

Melinna elisabethae McIntosh, 1914

Melinna elisabethae McIntosh, 1914: 106; McIntosh, 1922: 86–88, pl. 119, fig. 1, pl. 125, figs. 2–2b; Uschakov, 1955: 363; Banse and Hobson, 1968: 45; Fauchald, 1972b: 418; Banse, 1979: 1549; Imajima, 1994:121–122, fig. 3a–k.

Material. NSMT-Pol. 110245, WA06-DE280D (3); NSMT-Pol. 110466, WA07-A250D (1), NSMT-Pol. 110467, WA07-D210D (2).

Distribution. Arctic Sea; Sea of Okhotsk; Puget Sound, Washington; Japan.

Genus ***Melinnopsis*** McIntosh, 1885

Melinnopsis atlantica McIntosh, 1885

(Figs. 62A–I, 63A–G)

Melinnopsis atlantica McIntosh, 1885: 441–442, pl. 27A, fig. 18.

Material. NSMT-Pol. 110246, WA06-H1500D (7). NSMT-Pol. 110884, SO07-O3 (5).

Description. Largest complete specimen 28 mm long, 2.5 mm wide at thorax, consisting of 18 thoracic segments, 15 setigerous, 13 uncinigerous and 39 abdominal segments. Body slender, almost linear, widest at level of postbranchial membrane, gradually tapering toward pygidium.

Prostomium wider than long, with scalloped anterior margin; posterior edge developed into raised transverse glandular ridge, and paired nuchal organs just anterior to ridge (Fig. 62A). Eyes lacking. Segments 1 and 2 fused to prostomium dorsally, forming smooth, padlike lower lip ventrally. Buccal tentacles smooth, slender to stout.

Segments 3 to 6 fused dorsally and laterally, forming lateral wings with 4 rows of needlelike neurosetae (Fig. 62B–C); segments 3 and 4 fused ventrally, forming ventral fold with smooth edge. Segment 3 bearing branchiae, arranged 2+2, fused basally, long and subulate. Nuchal hooks absent. Segment 4 with neurosetae only (Fig. 62D); segment 5 with first notosetae, very fine and short (Fig. 62F), emerging more or less directly from body wall, no visible notopodia. Postbranchial membrane with smooth anterior margin (Fig. 62B). Segment 6 also with small fascicle of fine notosetae and short transverse linear series of needlelike neurosetae (Fig. 62E).

Regular biramous parapodia from segment 7, with developed notopodia and neuropodial pinnules bearing uncini. Notopodia slightly inflated to cylindrical, with presetal lobes and stiff, long setae; thoracic uncinigers small, paddle-shaped, with short dorsal cirri and numerous crowded uncini (Fig. 62G). Abdominal notopodial rudiments small conical but distinct; neuropodial pinnules becoming narrower with short linear series of uncini (Fig. 62H). Notosetae in two rows, anterior short limbate setae and posterior long ones (Fig. 62I). Thoracic uncini with single row of 4–5 teeth over basal prow (Fig. 63A–C), abdominal uncini with 2–3 large teeth surmounted by crest of about 7 smaller ones, large rostral point, and rounded basal prow (Fig. 63D–F).

Pygidium cylindrical, with extending dorsal papilla and slightly crenulated posterior margin (Fig. 63G).

The species is newly added to the Japanese polychaetous fauna.

Remarks. The holotype collected from off Chesapeake Bay, North America, 1700 fathoms is somewhat damaged, but it has some characteristics peculiar to the species.

Distribution. Off Chesapeake Bay, North America; Japan.

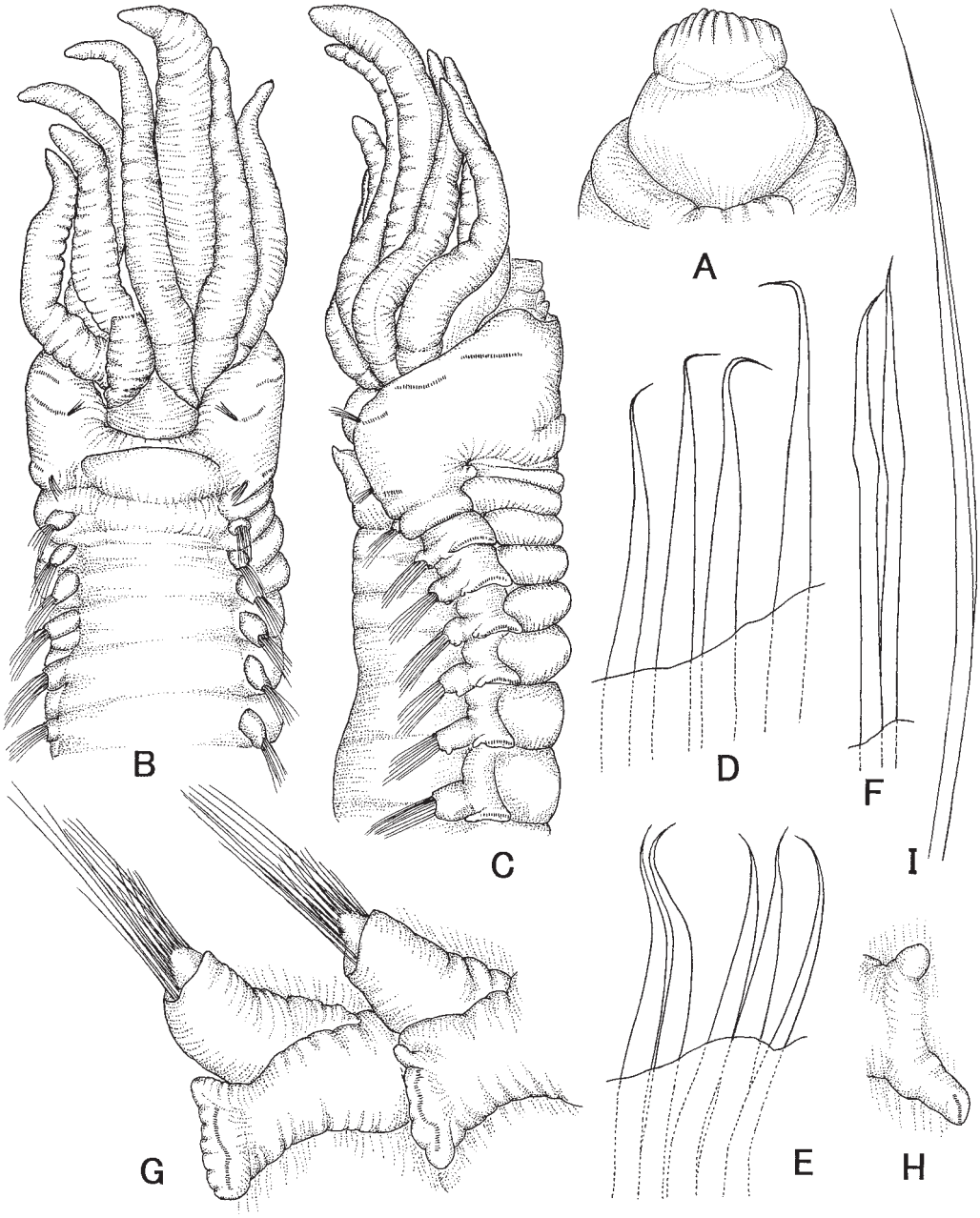

Fig. 62. *Melinnopsis atlantica* McIntosh. —A, prostomium, dorsal view, × 14; B, anterior end, same view, × 14; C, same, lateral view, × 14; D, needlelike neurosetae from segment 4, × 560; E, same from segment 6, × 560; F, first notosetae, × 300; G, thoracic parapodia, anterior view, × 42; H, abdominal parapodium, same view, × 56; I, notoseta, × 150.

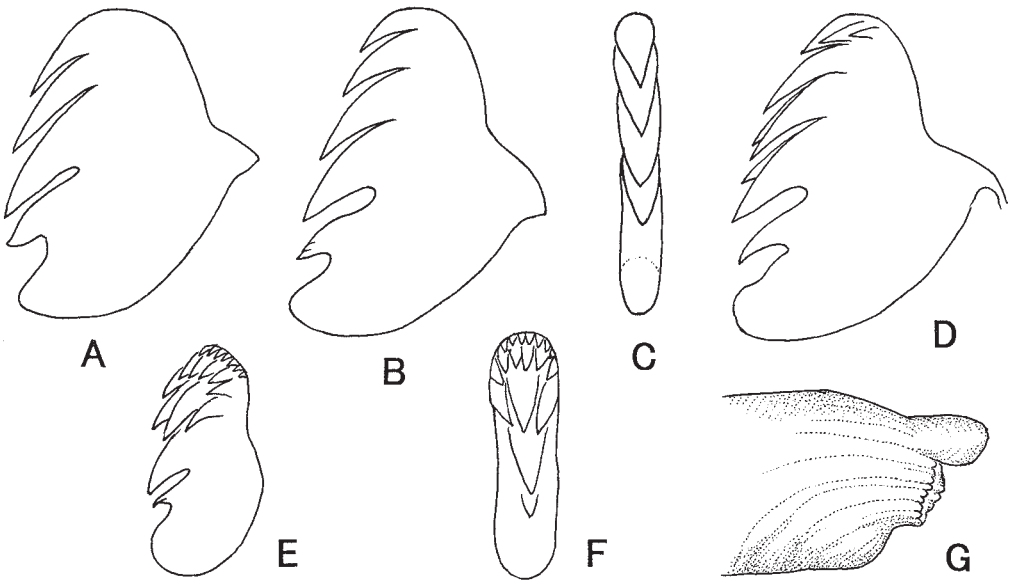

Fig. 63. *Melinnopsis atlantica* McIntosh. —A–C, thoracic uncini, lateral and frontal views, × 1100; D–F, abdominal uncini, lateral and frontal views, × 1100; G, pygidium, lateral view, × 35.

Genus ***Paramage*** Caullery, 1944
Paramage scutata (Moore, 1923)
(Fig. 64A–M)

Amage scutata Moore, 1923: 210–212, pl. 17, figs. 19–24.
Paramage scutata: Williams, 1987: 254–255, fig. 2B; Hilbig, 2000: 214–215, fig. 8.20.

Material. NSMT-Pol. 110476, WA06-A650 (1), NSMT-Pol. 110477, WA06-B750D (1), NSMT-Pol. 110478, WA06-E510D (2), NSMT-Pol. 110479, WA06-FG350D (1); NSMT-Pol. 110480, WA07-D900 (1).

Description. Largest complete specimen 36 mm long, 10 mm wide including parapodia at thorax, consisting of 12 thoracic setigers and 2 asetigerous, 11 uncinigerous and 12 abdominal segments. Body widest in thorax, tumid, quickly tapering in abdomen toward small pygidium.

Prostomium wider than long, distinctly trilobed, with nuchal organs at postectal corners of mid-superior lobe, without glandular ridges (Fig. 64A). Paleae absent. Segments 1 and 2 separate dorsally, fused laterally and ventrally, produced into lower lip and lateral auricular folds. Segment 3 also produced into lateral auricular folds, bearing first 2 pairs of branchiae and 1 pair of vestigial notopodia. Segments 4 and 5 with 1 pair of branchiae each and vestigial notopodia; vestigial notopodia of segment 5 setigerous, notosetae very fine, barely emerging from parapodium (Fig. 64B). Branchiae smooth, cylindrical and tapered (Fig. 64C). Segment 6 with fully developed notopodia; following 10 setigers with regular, biramous parapodia.

Notopodia cylindrical, simple throughout with triangular presetal lobes in addition to foliaceous ventral cirri; uncinigers well-developed, paddle-shaped (Fig. 64D). Abdominal notopodial rudiments conspicuous, distally inflated, coiled inwards; neuropodia shorter, with short dorsal cirri (Fig. 64E). Notosetae in dense fascicles, long, slender, narrowly limbate (Fig. 64F). Thoracic uncini bearing single row of 5 teeth and rounded basal prow (Fig. 64G); inferior thoracic uncini with three rows of 4 large teeth (Fig. 64H). Abdominal uncini with single or three rows of 4 teeth over basal prow (Fig. 64I–L).

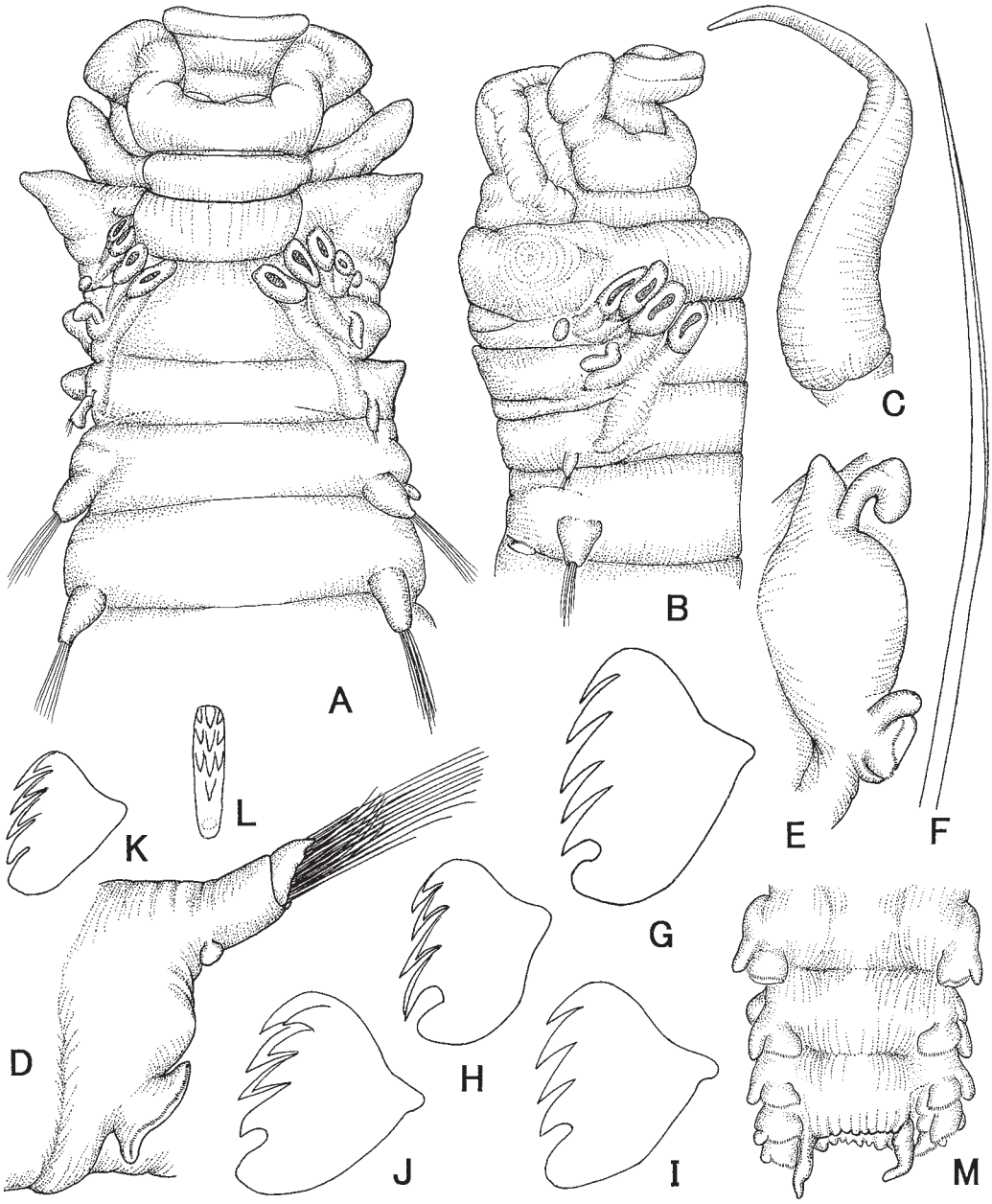

Fig. 64. *Paramage scutata* (Moore). —A, anterior end, dorsal view, × 14; B, same, lateral view, × 14; C; branchia, × 16; D, last thoracic parapodium, anterior view, × 10; E, second abdominal parapodium, same view, × 16; F, notoseta, × 60; G, superior thoracic uncinus, lateral view, × 880; H, inferior thoracic uncinus, same view, × 880; I–L, abdominal uncini, lateral and frontal views, × 880; M, posterior end, ventral view, × 10.

Pygidium with 2 digitiform ventrolateral anal cirri and several small, rounded lobes (Fig. 64M).

The species is newly added to the Japanese polychaetous fauna.

Distribution. California; Japan.

Genus ***Samythella*** Verrill, 1873
Samythella bathycola Uschakov, 1950
(Fig. 65A–K)

Samythella bathycola Uschakov, 1950: 220–221, pl. 2, 10, fig. 34; Uschakov, 1955: 374, fig. 139A–F.

Material. NSMT-Pol. 110247, WA05-FG450 (1).

Description. Specimen 35 mm long, about 3 mm wide at thorax, consisting of 15 thoracic setigers, 12 uncinigerous and 28 abdominal segments. Body slender, widest in thorax, gradually tapering toward pygidium.

Prostomium wider than long, trilobed, with mid-superior lobe wider than lateral lobes, without eyes, nuchal and glandular ridges; anterior end of prostomium slightly upturned. Paleae absent. Buccal tentacles conspicuous, densely covered with cilia on lateral and ventral sides (Fig. 65A–B). Segments 1 and 2 fused, concealed by branchial bases dorsally, forming large, somewhat inflated, finely crenulated lower lip ventrally. Segment 3 with first notopodia bearing fine, short setae and with 3 pairs of branchiae, filiform, in nearly straight row, 1 pair slightly behind on either side; branchial bases of left and right group fused each others (Fig. 65C). Segments 5 to 7 with gradually increasing notopodia, and parapodia in segment 8 (setiger 5, unciniger 2) extremely smaller than others, with short setae.

Fully developed biramous parapodia from setiger 6; thoracic notopodia simple, cylindrical throughout, neuropodia fairly long pinnules with very crowded and numerous uncini (Fig. 65D). Abdominal neuropodia much narrower but longer than thoracic, with fewer uncini and digitate dorsal cirri, shorter than pinnule; notopodial rudiments conical (Fig. 65E). Notosetae narrowly limbate; thoracic and abdominal uncini similar, with single row of 5–7 teeth above small rostral point and narrow basal prow (Fig. 65F–J).

Pygidium with many cylindrical papillae (Fig. 65K).

The species is newly added to the Japanese polychaetous fauna.

Distribution. Sea of Okhotsk; Japan.

Samythella neglecta Wollebaek, 1912
(Fig. 66A–L)

Samythella neglecta Wollebaek, 1912: 62–64, pl. 12, figs. 1–9.

Material. NSMT-Pol. 110282, WA05-FG410 (2), NSMT-Pol. 110283, WA05-FG510D (1).

Description. Largest specimen 32 mm long, 3 mm wide at thorax, consisting of 15 thoracic setigers, 12 uncinigerous and 32 abdominal segments. Body linear, tapering slightly toward pygidium.

Prostomium approximately as wide as long; lateral sides tapering anteriorly, with truncated anterior margin and two poorly marked longitudinal ridges; yellowly pigmented, crescent-shaped nuchal organs along posterior margin of inferior lobe (Fig. 66A). Segments 1 and 2 fused, dorsally concealed by branchial bases, ventrally produced into slightly inflated, distinctly crenulated lower lip. Paleae absent. Buccal tentacles conspicuous, slightly shorter than branchiae. Segment 3 with 3 pairs of branchiae in nearly straight row, 1 pair slightly behind on either side and bearing first small notopodia with reduced setal fascicle; each branchia connected basally by membrane about as wide as branchial bases (Fig. 66B–C).

First fully developed biramous parapodia in segment 6; notopodia simple, cylindrical throughout, uncinigers long, narrow pinnules (Fig. 66D). Abdominal neuropodia somewhat longer, with

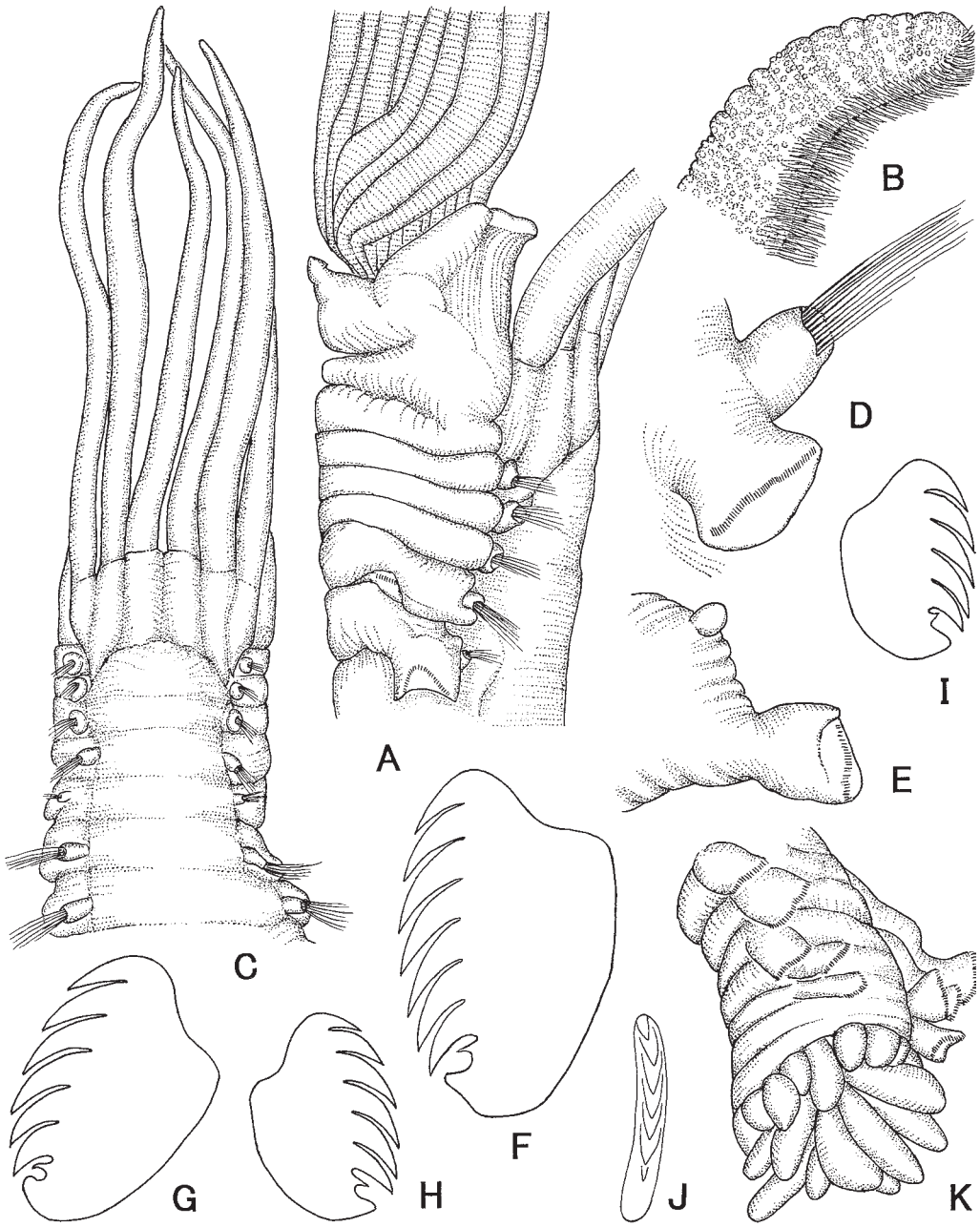

Fig. 65. *Samythella bathycola* Uschakov. —A, anterior end, lateral view, × 18; B, distal part of buccal tentacle, × 153; C; anterior end, dorsal view, × 12; D, thoracic parapodium, anterior view, × 36; E, abdominal parapodium, same view, × 53; F–G, thoracic uncini, lateral view, × 842; H–J, abdominal uncini, lateral and frontal views, × 842; K, pygidium, ventrolateral view, × 53.

tiny notopodial rudiments (Fig. 66E). Notosetae narrowly limbate (Fig. 66F); thoracic and abdominal uncini similar, with single row of 5–6 teeth above small rostral point and narrow basal prow (Fig. 66G–J).

Pygidium very small, with terminal anus surrounded by 10 conical papillae (Fig. 66K–L).

The species is newly added to the Japanese polychaetous fauna.

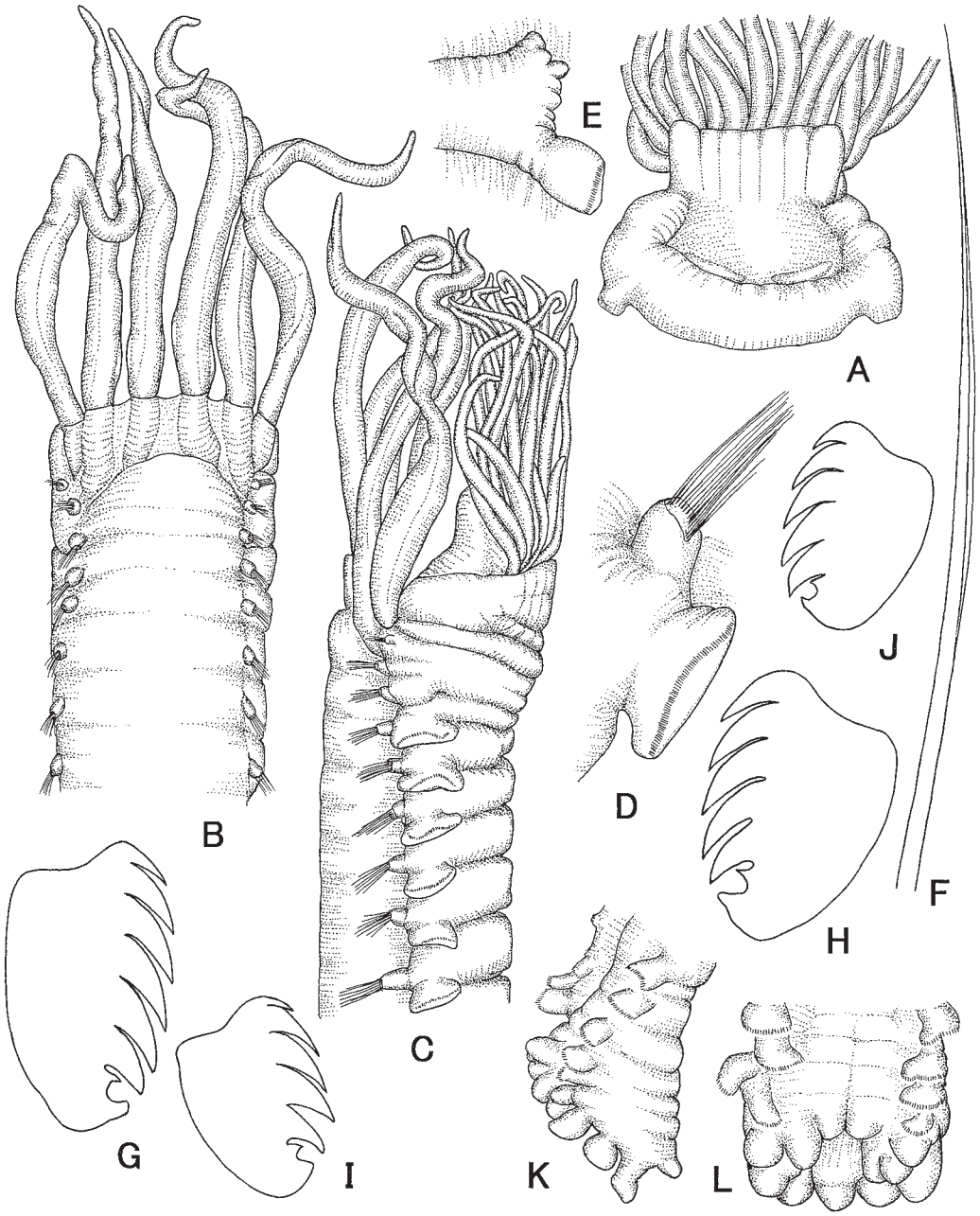

Fig. 66. *Samythella neglecta* Wollebaek. —A, prostomium, dorsal view, × 15; B, anterior end, same view, × 10; C; same, lateral view, × 10; D, thoracic parapodium, anterior view, × 34; E, abdominal neuropodium, same view, × 34; F, notoseta, × 160; G–H, thoracic uncini, × 817; I–J, abdominal uncini, × 817; K–L, posterior end, lateral (K) and ventral (L) views, × 34.

Distribution. Norwegian Sea (depth: 225–1977 m); Japan.

Family Trichobranchidae Malmgren, 1866
Genus ***Terebellides*** Sars, 1835
Terebellides horikoshii Imajima and Williams, 1985

Terebellides horikoshii Imajima and Williams, 1985: 15–16, fig. 4d–f.

Material. NSMT-Pol. 110284, WA06-A1200D (1), NSMT-Pol. 110285, WA06-B750D (2), NSMT-Pol. 110286, WA06-E1200D (1), NSMT-Pol. 110287, WA06-EF425D (1), NSMT-Pol. 110288, WA06-GH480D (7), NSMT-Pol. 110289, WA06-H1500D (3); NSMT-Pol. 110707, WA07-A250D (1), NSMT-Pol. 110708, WA07-A450 (3), NSMT-Pol. 110709, WA07-A650 (4), NSMT-Pol. 110710, WA07-C1500D (1).

Distribution. Off Kamchatka; Japan.

Terebellides intoshi Caullery, 1915

Terebellides intoshi Caullery, 1915: 111, figs. 1–2; Caullery, 1944: 186, fig. 149; Hessle, 1917: 142; Imajima and Williams, 1985: 9–10, fig. 2a–c; Imajima, 1997a: 212.

Material. NSMT-Pol. 110291, WA05-E1000D (1), NSMT-Pol. 110292, WA05-GH510D (1).
Distribution. East Indies; Japan.

Terebellides japonica Moore, 1903

Terebellides stroemi var. *japonica* Moore, 1903: 478; Hessle, 1917: 142.
Terebellides japonica: Imajima and Williams, 1985: 10–11, fig. 2d–f; Imajima, 1997a: 211.

Material. NSMT-Pol. 110293, WA05-GH510D (1).
Distribution. Japan.

Terebellides kobei Hessle, 1917

Terebellides kobei Hessle, 1917: 140, pl. 1, fig. 9, textfig. 32; Imajima and Hartman, 1964: 352; Imajima and Williams, 1985: 11–13, fig. 3a–c; Imajima, 1997a: 211–212.

Material. NSMT-Pol. 110294, WA06-GH480D (11), NSMT-Pol. 110711, WA06-H480 (1).
Distribution. Japan.

Terebellides lineata Imajima and Williams, 1985

Terebellides lineata Imajima and Williams, 1985: 14–15, fig. 4a–c; Imajima, 1997a: 212; Imajima, 2006: 391.

Material. NSMT-Pol. 110295, WA05-FG250D (7); NSMT-Pol. 110296, WA06-F650D (2), NSMT-Pol. 110297, WA06-G900D (9), NSMT-Pol. 110298, WA06-G1200D (1), NSMT-Pol. 110299, WA06-H1500D (2); NSMT-Pol. 110712, WA07-A250D (1), NSMT-Pol. 110713, WA07-D210D (2). NSMT-Pol. 110876, KT07-29-M-1 (1), NSMT-Pol. 110877, KT07-29-M-3-1 (1).

Distribution. Japan.

Genus ***Trichobranchus*** Malmgren, 1865
Trichobranchus bibranchiatus Moore, 1903

Trichobranchus bibranchiatus Moore, 1903: 477–478, pl. 27, figs. 83–85; Hessle, 1917: 134; Imajima and Williams, 1985: 16–17, fig. 5a–h.

Material. NSMT-Pol. 110300, WA06-GH480D (3).
Distribution. Japan.

Trichobranchus glacialis Malmgren, 1866

Trichobranchus glacialis Malmgren, 1866: 395, pl. 24, fig. 65; Fauvel, 1927: 288–289, fig. 100a–h; Uschakov, 1955: 382, fig. 142E–G.

Material. NSMT-Pol. 110928, WA06-E510D (1).
The species is newly added to the Japanese polychaetous fauna.
Distribution. Sea of Japan; Sea of Okhotsk; Bering Sea; Japan.

Family Terebellidae Malmgren, 1867
Genus ***Amphitrite*** Müller, 1771
Amphitrite cirrata Müller, 1771

Amphitrite cirrata: Moore, 1903: 473; Fauvel, 1927: 251–252, fig. 86i–o; Okuda, 1937c: 58; Okuda, 1938a: 102; Imajima and Hartman, 1964: 335; Day, 1967b: 746–747, fig. 36.9.m–q; Imajima, 1997a: 212; Imajima, 2001a: 92.

Material. NSMT-Pol. 110255, WA05-FG480 (1), NSMT-Pol. 110256, WA05-G450 (1), NSMT-Pol. 110257, WA05-G750 (2); NSMT-Pol. 110258, WA06-EF425D (1), NSMT-Pol. 110259, WA06-F510 (5), NSMT-Pol. 110260, WA06-F750 (4), NSMT-Pol. 110261, WA06-G900D (1), NSMT-Pol. 110262, WA06-G1200D (5), NSMT-Pol. 110263, WA06-GH480D (8), NSMT-Pol. 110264, WA06-H1500D (1).

Distribution. North Atlantic; Bering Sea; Pacific of western Canada to central California; Japan.

Amphitrite edwardsii (Quatrefages, 1865)

Amphitrite edwardsii: Fauvel, 1927: 245–246, fig. 84a–i; Okuda, 1939: 240, textfig. 12; Imajima and Hartman, 1964: 335–336; Imajima, 1997a: 212–213.

Material. NSMT-Pol. 110265, WA05-GH380 (1), NSMT-Pol. 110266, WA05-GH380D (1).
Distribution. Western Europe; Falkland Islands; Japan.

Amphitrite ramosissima Marenzeller, 1884

Amphitrite ramosissima Marenzeller, 1884: 200–201, pl. 1, fig. 2.
Amphitrite bifurcata Moore, 1903: 471–472, pl. 26, fig. 78.
Neoamphitrite ramosissima Hessle, 1917: 181.
? *Amphitrite bifurcata* Okuda, 1936: 155.

Material. NSMT-Pol. 110875, KT07-29-M-3-3 (2).
Distribution. Japan.

Genus ***Artacama*** Malmgren, 1866
Artacama proboscidea Malmgren, 1866

Artacama proboscidea Malmgren, 1866: 394–395, pl. 23, fig. 60; Hessle, 1917: 194–195, pl. 2, fig. 13; Uschakov, 1955: 400, fig. 152I–L.

Material. NSMT-Pol. 110267, WA05-DE380D (1); NSMT-Pol. 110268, WA06-B750D (1), NSMT-Pol. 110269, WA06-F650D (1), NSMT-Pol. 110270, WA06-FG350D (1), NSMT-Pol. 110271, WA06-GH480D (7).

The species is newly added to the Japanese polychaetous fauna.

Distribution. Seas of Japan and Okhotsk; Japan.

Genus ***Eupolymnia*** Verrill, 1900
Eupolymnia congruens (Marenzeller, 1884)

Polymnia congruens Marenzeller, 1884: 207–208, pl. 2, fig. 3.
Polymnia nesidensis japonica Moore, 1903: 475.
Eupolymnia congruens: Imajima and Hartman, 1964: 337–338.

Material. NSMT-Pol. 109828, WA06-A1200D (1), NSMT-Pol. 109829, WA06-D550 (1), NSMT-Pol. 109830, WA06-EF425D (10), NSMT-Pol. 109831, WA06-F380 (1), NSMT-Pol. 109832, WA06-F425 (1), NSMT-Pol. 109833, WA06-F550 (1), NSMT-Pol. 110922, WA06-F1500 (2), NSMT-Pol. 110923, WA06-FG425 (3), NSMT-Pol. 110924, WA06-FG480 (8), NSMT-Pol. 110925, WA06-G550 (1), NSMT-Pol. 110926, WA06-G900D (1), NSMT-Pol. 110927, WA06-GH480D (1).

Distribution. Alaska; California; Japan.

Genus ***Nicolea*** Malmgren, 1866
Nicolea zostericola (Oersted, 1844)

Nicolea zostericola: Malmgren, 1865: 381, pl. 26, fig. 76; Fauvel, 1927: 261–262, fig. 90g–n; Uschakov, 1950: 223; Uschakov, 1965: 366, fig. 146B–D.

Material. NSMT-Pol. 110929, WA05-DE380D (42), NSMT-Pol. 110930, WA05-EF450D (3).

The species is newly added to the Japanese polychaetous fauna.

Distribution. Seas of Japan and Okhotsk; Bering Sea.

Genus ***Pista*** Malmgren, 1866
Pista cristata (Müller, 1776)

Pista cristata: Malmgren, 1866: 382, pl. 22, fig. 59; Okuda, 1938a: 102; Uschakov, 1965: 364, fig. 144A–C.

Material. NSMT-Pol. 110273, WA06-EF425D (4), NSMT-Pol. 110274, WA06-GH480D (45).

Distribution. Atlantic; Seas of Japan and Okhotsk; Japan.

Pista macrolobata Hessle, 1917

Pista macrolobata Hessle, 1917: 157, pl. 2, fig. 4.

Material. NSMT-Pol. 110276, WA05-DE380D (1), NSMT-Pol. 110277, WA05-GH380D (1).
Distribution. Japan (Ogasawara Islands).

Genus ***Scionella*** Moore, 1903
Scionella vinogradovi (Uschakov, 1955)

Pista vinogradovi Uschakov, 1955: 386, fig. 143D–F.
Scionella vinogradovi: Hartman, 1965: 74; Banse and Hobson, 1968: 46; Saphronova, 1991: 241–243, figs. 1–3.

Material. NSMT-Pol. 110278, WA05-DE380D (1), NSMT-Pol. 110279, WA05-FG510D (1); NSMT-Pol. 110280, WA06-D450D (1), NSMT-Pol. 110281, WA06-GH480D (5).
The species is newly added to the Japanese polychaetous fauna.
Distribution. Sea of Okhotsk; Bering Sea; Japan.

Genus ***Streblosoma*** Sars, 1872
Streblosoma bairdi (Malmgren, 1866)

Grymaea bairdi Malmgren, 1866: 388, pl. 19, fig. 69.
Streblosoma Bairdi: Hessle, 1917: 211; Uschakov, 1965: 378, fig. 152A–E.

Material. NSMT-Pol. 110784, WA05-E1000D (1), NSMT-Pol. 110785, WA05-G1500D (2); NSMT-Pol. 110786, WA06-E1200D (1), NSMT-Pol. 110787, WA06-H1500D (1).
The species is newly added to the Japanese polychaetous fauna.
Distribution. Atlantic; Seas of Japan and Okhotsk; Japan.

Order Sabellida
Family Sabellidae Malmgren, 1867
Genus ***Chone*** Kröyer, 1856
Chone gracilis Moore, 1906

Chone gracilis Moore, 1906: 257–259, pl. 12, figs. 62–66; Banse, 1972: 470–472, fig. 4.

Material. NSMT-Pol. 110677, WA05-FG510D (3), NSMT-Pol. 110678, WA05-G280 (15), NSMT-Pol. 110679, WA05-GH510D (6); NSMT-Pol. 110684, WA06-E510D (1), NSMT-Pol. 110685, WA06-F650D (6).
The species is newly added to the Japanese polychaetous fauna.
Distribution. Alaska; Japan.

Chone magna (Moore, 1923)

Euchone magna Moore, 1923: 245–246, pl. 18, figs. 45–46.
Chone magna: Hartman, 1969: 669; Banse, 1972: 472–473, fig. 5.

Material. NSMT-Pol. 110675, WA05-EF250D (15); NSMT-Pol. 110686, WA06-E750 (7), NSMT-Pol. 110687, WA06-F900 (7), NSMT-Pol. 110688, WA06-F1500 (12).
The species is newly added to the Japanese polychaetous fauna.
Distribution. California; Japan.

Chone sp.

Material. NSMT-Pol. 110878, KT07-29-M-2 (1), NSMT-Pol. 110879, KT07-29-M-3-1 (1), NSMT-Pol. 110880, KT07-29-M-3-2 (14), NSMT-Pol. 110881, KT07-29-M-3-3 (3).

Genus ***Demonax*** Kinberg, 1867
Demonax aulaconota (Marenzeller, 1884)

Sabella aulaconota Marenzeller, 1884: 210, pl. 2, fig. 8; Johansson, 1927: 124–125; Fauvel, 1936a: 84.
Demonax aulaconota: Imajima and Hartman, 1964: 356.

Material. NSMT-Pol. 110689, WA05-E1000D (8), NSMT-Pol. 110690, WA05-F510 (1), NSMT-Pol. 110691, WA05-FG425 (1), NSMT-Pol. 110692, WA05-G450 (1), NSMT-Pol. 110693, WA05-G750 (28), NSMT-Pol. 110694, WA05-G1500 (1), NSMT-Pol. 110695, WA05-GH380D (1); NSMT-Pol. 110696, WA06-F510 (1), NSMT-Pol. 110697, WA06-F1500D II (3), NSMT-Pol. 110698, WA06-G480 (1), NSMT-Pol. 110699, WA06-G750 (13), NSMT-Pol. 110700, WA06-G900D (92), NSMT-Pol. 110701, WA06-H1500D (74).

Distribution. Japan.

Genus ***Euchone*** Malmgren, 1866
Euchone analis (Kröyer, 1856)

Sabella analis Kröyer, 1856: 17.
Euchone analis: Malmgren, 1866: 406; 1867: 223; Berkeley and Berkeley, 1952: 121–122, figs. 250–251; Pettibone, 1954: 339; Uschakov, 1965: 395; Hartmann- Schröder, 1971: 521; Banse, 1972: 482–483, fig. 9a-c.

Material. NSMT-Pol. 110680, WA05-EF250D (1), NSMT-Pol. 110681, WA05-F1200 (2), NSMT-Pol. 110682, WA05-FG410 (4), NSMT-Pol. 110683, WA05-FG450 (2).

The species is newly added to the Japanese polychaetous fauna.

Distribution. North Atlantic; Alaska; Sea of Okhotsk; Japan.

Family Serpulidae Savigny, 1818
Genus ***Crucigera*** Benedict, 1887
Crucigera zygophora (Johnson, 1901)

Crucigera zygophora Johnson, 1901: 433–434, pl. 19, figs. 205–208; Bush, 1904: 233, pl. 29, fig. 5, pl. 31, fig. 2, pl. 33, fig. 3, pl. 39, figs. 8–13, 15, 17, 20; Imajima, 1988: 128; Imajima, 1996: 305, fig. 243.
Serpula (*Crucigera*) *zygophora*: Uschakov, 1965: 400, fig. 160F.

Material. NSMT-Pol. 110676, WA07-A250 (1).

Distribution. Sea of Okhotsk; Bering Sea; Alaska; California; Japan.

Summary of Result

A total of 243 species including 32 indeterminable species, belonging to 43 families, were obtained by this survey. The following breakdown illustrates the degree of their endemism, and other facts of their distributional character:

14 species are newly described.

37 species are newly added to the Japanese polychaetous fauna.

Table 2. Species of polychaetes, with the degree of their endemism and other facts of their distributional characters.

Family	Species	New species	New to Japan	Also in northwestern Pacific areas	Endemic to Japan	Collected depth (m)
Aphroditidae	*Aphrodita aculeata*					898-1499
	A. goolmarris					377-904
	A. negligens					146-357
	A. nipponensis				×	305-904
	A. sibogae					213-1214
	A. talpa			×		277-509
	Laetmonice japonica					299-3960
	L. producta			×		146-521
	Laetmonice sp.					5219-5268
Polynoidae	*Bylgides macrolepida*		×	×		294-556
	Eunoe barbata			×		209-551
	E. depressa		×	×		276-758
	E. shirikishinai				×	153-156
	Gattyana ciliata		×	×		253-497
	Harmothoe aspera			×		509-510
	H. extenuata			×		508-900
	H. grandispina		×	×		276-383
	H. imbricata			×		409-415
	H. impar			×		383-1737
	Lepidasthenia interrupta				×	380-512
	L. izukai					373-454
	L. magnacornuta				×	410-427
	Lepidonotus glaber				×	294-318
	Parahalosydna krassini		×	×		420-424
	Weberia abyssicola	×				1709-1737
Acoetidae	*Acoetes jogasimae*					248-248
Pholoidae	*Pholoe* sp.					249-285
Sigalionidae	*Labioleanira* sp.					816-820
	Leanira sp.					4094-4128
	Neoleanira areolata			×		210-1005
	Sigalion orientalis	×				146-214
Phyllodocidae	*Eulalia bilineata*					747-750
	Eulalia sp.					478-483
	Mysta sp.					478-483
	Paranaitis polynoides			×		354-355
	Phyllodoce groenlandica			×		213-1505
	P. lineata tosaensis				×	213-750
	P. madeirensis					210-1470
Glyceridae	*Glycera branchiopoda*		×	×		346-750
	G. capitata			×		213-355
	G. neorobusta	×				1512-1513
	G. okai	×				284-1402
	G. semibranchiopoda	×				253-904
	G. tesselata			×		153-905
	Glycera sp.					816-820
Goniadidae	*Glycinde* sp.					2948-2991
	Goniada brunnea		×	×		248-1505
	G. foliacea			×		248-1498
	G. maculata			×		213-512
	G. vorax			×		515-516
Sphaerodoridae	*Clavodorum* sp.					454-3032
	Ephesiella brevicapitis					284-4181

Table 2. (Continued)

Family	Species	New species	New to Japan	Also in northwestern Pacific areas	Endemic to Japan	Collected depth (m)
	Sphaerodoropsis biserialis			×		284–1737
	S. minuta			×		454–497
	Sphaerodorum gracilis					213–925
Hesionidae	*Podarkeopsis glabra*			×		253–255
Pilargidae	*Ancistrosyllis groenlandica*					508–1514
	Cabira sp.					2032–2055
	Sigambra bassi			×		253–255
	S. bidentata					1450–1498
	Sigambra spp.					816–4181
Syllidae	*Autolytus* sp.					375
	Eusyllis blomstrandi			×		213–483
	Exogone breviantennata					375–474
	Exogone sp.					2018
	Sphaerosyllis erinaceus					454–497
	Sphaerosyllis sp.					2018
	Syllis spongiphila					376–427
	Typosyllis alternata			×		284–925
	Typosyllis spp.					249–416
Nereididae	*Ceratocephala borealis*		×			248–1498
	Nereis abyssa	×				151–1499
	Rullierinereis profunda	×				2018
Nephtyidae	*Aglaophamus japonicus*				×	253–255
	A. malmgreni			×		248–3032
	A. sinensis					146–147
	Aglaophamus spp.					213–1733
	Nephtys caeca			×		213–213
	N. longosetosa			×		213–893
	N. oligobranchia					454–1603
	N. paradoxa			×		248–1728
	N. punctata			×		213–2055
Paralacydoniidae	*Paralacydonia paradoxa*					253–2055
Euphrosinidae	*Euphrosine digitalis*	×				420–454
	E. pseudonotialis	×				420–428
Onuphidae	*Anchinothria macrobranchiata*				×	2948–2991
	Epidiopatra rugosa				×	375–1515
	Nothria grossa				×	154–1498
	Onuphis geophiliformis			×		248–1470
	O. holobranchiata				×	213–1470
	O. imajimai				×	478–1505
	O. opalina			×		213–1515
	O. taraba				×	248–1471
	Paradiopatra crassa				×	213–213
	P. gracilis	×				213–1511
	P. striata			×		146–1499
Eunicidae	*Eunice mucronata*				×	146–1214
Lumbrineridae	*Augeneria bidens*					1498–4951
	Eranno abyssicola			×		213–4128
	E. bifurcata					213–1202
	E. tosaensis				×	249–483
	Lumbrineris inflata			×		416–820
	L. japonica					454–2055
	L. latreilli					213–1728

Table 2. (Continued)

Family	Species	New species	New to Japan	Also in northwestern Pacific areas	Endemic to Japan	Collected depth (m)
	Ninoe palmata					253-4181
	Paraninoe simpla			×		641-2055
	Scoletoma longifolia					454-4128
	S. nipponica				×	416-1499
Oenonidae	*Drilonereis falcata japonica*				×	253-1499
	D. filum		×			253-259
	Notocirrus japonicus				×	146-1201
Orbiniidae	*Califia calida*					508-512
	Leitoscoloplos pugettensis					284-285
	Naineris japonica	×				354-424
	Phylo felix		×			354-483
	P. fimbriatus				×	373-512
	P. nudus					416-1202
	Scoloplos (*Leodamas*) *robustus*		×			373-378
	Scoloplos (*Scoloplos*) *similis*		×			253-503
Paraonidae	*Aricidea* (*Acmira*) *simplex*			×		375-483
	A. (*Aedicira*) *belgicae*					284-1470
	A. (*Allia*) *antennata*			×		478-512
	Aricidea (*Allia*) sp.					454-497
	Cirrophorus branchiatus					1695-1733
	Levinsenia gracilis					478-1214
	Paradoneis lyra					375-512
Poecilochaetidae	*Poecilochaetus granulatus*				×	478-483
Spionidae	*Laonice cirrata*			×		253-1402
	Prionospio (*Prionospio*) *bocki*					375-503
	P. (*P.*) *depauperata*				×	249-285
	P. (*P.*) *dubia*					213-483
	Prionospio sp.					284-497
	Spiophanes japonicum				×	248-248
	S. kroyeri					248-1470
Chaetopteridae	*Spiochaetopterus typicus*			×		213-1514
Cirratulidae	*Aphelochaeta* sp.					248-1498
	Chaetozone setosa			×		248-497
	C. spinosa					248-483
	Chaetozone sp.					253-285
	Cirratulus cirratus					146-1728
	Monticellina tesselata					375-503
	Timarete sp.					1466-1471
Cossuridae	*Cossura* spp.					213-1201
Flabelligeridae	*Brada granulata*			×		294-318
	B. ochotensis			×		416-416
	B. sachalina			×		305-512
	B. villosa					354-1511
	Pherusa plumosa					303-1470
Acrocirridae	*Acrocirrus heterochaetus*		×	×		354-420
	Acrocirrus sp.					1709-1737
Fauveliopsidae	*Fauveliopsis glabra*		×			454-3032
	Laubieriopsis brevis japonica	×				1498-4181
Sternaspidae	*Sternaspis scutata*					213-1499
Capitellidae	*Capitella capitata*			×		276-521
	Leiochrides sp.					1498
	Notomastus hemipodus					1498

Table 2. (Continued)

Family	Species	New species	New to Japan	Also in northwestern Pacific areas	Endemic to Japan	Collected depth (m)
	N. latericeus			×		253–2055
	Pseudoleiocapitella sp.		×			641–750
Maldanidae	*Clymenura* (*Cephalata*) *aciculata*				×	249–454
	C. (*C.*) *columbiana*					253–512
	C. (*C.*) *lankesteri*			×		420–1514
	C. (*C.*) *longicaudata*				×	1511–1514
	Clymenura (*Cephalata*) sp.					1511–2991
	Clymenura (*Clymenura*) *japonica*				×	249–1005
	Clymenella koellikeri					508–512
	Euclymene uncinata				×	478–1005
	Isocirrus planiceps					146–662
	Maldanella harai			×		253–904
	Maldanella sp.					2948–2991
	Microclymene caudata				×	248–424
	Praxillella gracilis					213–1514
	P. pacifica					248–2055
	P. praetermissa					213–1728
	Clymenopsis cingulata					248–1515
	Lumbriclymene japonica				×	253–2991
	Notoproctus pacificus			×		253–1499
	Praxillura tanseiana				×	248–904
	Asychis auritus		×	×		508–1005
	Chirimia biceps					373–925
	Maldane cristata					213–2055
	M. pigmentata				×	248–259
	Maldane sp.					816–820
	Metasychis disparidentata					647–883
	M. gotoi					248–553
	Nicomache (*Nicomache*) *lumbricalis*			×		213–1521
	Nicomache (*Nicomache*) sp.					2018–4951
	Rhodine loveni			×		213–1514
Opheliidae	*Ophelina acuminata*			×		213–1498
	O. arctica					253–2055
	O. breviata		×	×		284–503
	Travisia brevis			×		253–1514
	T. pupa		×	×		508–749
Scalibregmatidae	*Asclerocheilus beringianus*		×	×		1213–1214
	Pseudoscalibregma orientalis	×				373–1005
	Scalibregma inflatum			×		249–3032
Oweniidae	*Galathowenia oculata*			×		213–375
	G. scotiae					249–1471
	Myriochele heeri			×		213–925
	M. olgae		×			249–1005
	Myriochele sp.					2032–2055
	Owenia spp.					146–497
Pectinariidae	*Amphictene japonica*				×	248–1733
	Cistenides hyperborea			×		258–258
Sabellariidae	*Lygdamis giardi*					422–425
Ampharetidae	*Amage auricula*			×		375
	A. delus		×			661–4128
	Ampharete longipaleolata		×	×		375–1402

Table 2. (Continued)

Family	Species	New species	New to Japan	Also in northwestern Pacific areas	Endemic to Japan	Collected depth (m)
	Amphicteis mederi		×	×		146–925
	A. scaphobranchiata		×	×		420–1470
	Amphisamytha japonica				×	248–248
	Anobothrus gracilis		×	×		213–4181
	A. wakatakamaruae	×				452–516
	Auchenoplax crinita					248–925
	Lysippe labiata		×	×		248–503
	Melinna cristata			×		478–1402
	M. elisabethae			×		213–285
	Melinnopsis atlantica		×			1450–4128
	Paramage scutata		×			346–905
	Samythella bathycola		×	×		446–450
	S. neglecta		×			410–516
Trichobranchidae	*Terebellides horikoshii*			×		258–1499
	T. intoshi					508–1005
	T. japonica				×	508–512
	T. kobei				×	478–483
	T. lineata				×	213–1728
	Trichobranchus bibranchiatus				×	478–483
	T. glacialis		×	×		498–503
Terebellidae	*Amphitrite cirrata*			×		420–1470
	A. edwardsii					373–381
	A. ramosissima				×	1695–1733
	Artacama proboscidea		×	×		346–750
	Eupolymnia congruens			×		379–1515
	Nicolea zostericola		×	×		375–454
	Pista cristata			×		420–483
	P. macrolobata				×	373–378
	Scionella vinogradovi		×	×		375–516
	Streblosoma bairdi		×	×		1004–1498
Sabellidae	*Chone gracilis*		×	×		277–647
	C. magna		×			253–1515
	Chone sp.					1528–1737
	Demonax aulaconota				×	373–1498
	Euchone analis		×	×		253–1196
Serpulidae	*Crucigera zygophora*			×		258–273

40 species are known only from Japan, or endemic.

86 species are known also from the northwestern Pacific Ocean, including Sea of Okhotsk and Bering Sea.

These data are analyzed in the Table 2.

Of these samples, the species-rich families were Maldanidae (27 spp.) Ampharetidae (16 spp.), Polynoidae (16 spp.), Onuphidae (11 spp.) and Lumbrineridae (11 spp.). Eleven families were represented by single species.

The most species were collected from the bathyal zone (400–2000 m). However, the following species are extended to the abyssal zone (2000–6000 m):

Laetmonice japonica
Laetmonice sp.
Laubieriopsis brevis japonica
Notomastus latericeus

Leanira sp.
Glycinde sp.
Clavodorum sp.
Ephesiella brevicapitis
Cabira sp.
Aglaophamus malmgreni
Nephtys punctata
Paralacydonia paradoxa
Anchinothria macrobranchia
Augeneria bidens
Eranno abyssicola
Fauveliopsis glabra
Clymenura (*Cephalata*) sp.
Maldanella sp.
Praxillella pacifica
Maldane cristata
Nicomache (*Nicomache*) sp.
Ophelina arctica
Scalibregma inflatum
Myriochele sp.
Amage delus
Anobothrus gracilis
Melinnopsis atlantica

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