BENTHIC POLYCHAETOUS ANNELIDS
FROM BERING, CHUKCHI, AND BEAUFORT SEAS

By Donald J. Reish

Introduction

The earlier accounts on the study of the polychaetous annelids in Alaskan waters have been summarized by Hartman (1948). Since this date, several papers dealing with the polychaetes of Alaska or adjoining regions have appeared. Pettibone (1954) recorded 88 species from Point Barrow, Alaska. The monograph by Uschakov (1955) of the polychaetes of the Far Eastern seas is of particular value for work in Alaskan waters. The series of papers by Berkeley and Berkeley (1956, 1957, 1958, and 1960) have records of species for Alaska as well as British Columbia. Pelagic and benthic polychaetes collected from floating ice islands in the Arctic Ocean have been reported by Uschakov (1957) and Knox (1959). Levenstein (1960) listed 48 species from the western Bering Sea, 19 of which are reported herein. Seven species of polychaetes were found in a marine pond at Point Barrow, Alaska (Mohr et al, 1961).

1 These studies were aided in part by contracts between the Office of Naval Research, Department of the Navy, and the University of Southern California; and between Dr. John L. Mohr, University of Southern California, and the Arctic Institute of North America.

2 Department of Biology, Long Beach State College, Long Beach, California.
Since the offshore waters of Alaska have been investigated to a limited extent, quantitative collections made by John Tibbs in the Bering and Chukchi Seas have been particularly rewarding. Smaller collections made by R. Lavenberg from a floating ice island in Chukchi and Beaufort Seas and by the author in Beaufort Sea have been included in this report.

I am indebted to many people and organizations for their assistance during the course of this study (see footnote 1). I wish to express thanks to John Tibbs and R. Lavenberg for making most of these collections. Particular thanks are due the U.S. Coast Guard for permitting me to spend five days aboard the icebreaker U.S.S. Northwind in August 1953 to make bottom collections. I wish also to thank Dr. John L. Mohr, who introduced me to the Arctic biology and who made it possible to complete this study.

Materials and Methods.—Collections from the Bering and Chukchi Seas (Stations 5–60) were made by John Tibbs, University of Southern California, from R/V Hugh M. Smith in the summer of 1960 (see table 1 and fig. 1). The majority of the samples were taken with a Dietz-Lafond snapper, but some samples were taken with a small Hayward orange-peel bucket and by aqualung diving. The collections for Stations A–F and G–1 to G–6 were made by R. Lavenberg, University of Southern California, in the spring of 1960 from the ice island Bravo utilizing a small orange-peel bucket (Stations G–1 to G–6) and a biological dredge (Stations A–F). Collections from the Beaufort Sea (Stations R–1 to R–4) were made by me in August 1953 from the U.S. Coast Guard icebreaker Northwind. Samples were taken with either a Dietz-Lafond snapper or a small Hayward orange-peel bucket.

The method of preservation varied according to conditions and the preservative available. Mr. Tibbs washed samples through fine screens to retain, as much as possible, the smaller organisms. Sediment analysis was done by the personnel at the U.S. Naval Electronic Laboratory in San Diego. Sediment terminology follows the size classification of Udden-Wentworth (Barnes, 1959).

All material on which this study is based, including holotypes and paratypes, has been deposited in the U.S. National Museum.

Figure 1.—Station locations: stations 5–60 collected by John Tibbs from R/V Hugh M. Smith, July, August 1960; stations A–F dredged by R. Lavenberg from ice island drift station Bravo, April, May 1960; station G, 6 bottom samples taken by R. Lavenberg from drift station Bravo, May–August 1960; station R, 4 bottom samples taken by author from U.S. Coast Guard icebreaker Northwind August 1953.
<table>
<thead>
<tr>
<th>Station number</th>
<th>Date</th>
<th>N Latitude</th>
<th>W Longitude</th>
<th>Depth (in meters)</th>
<th>Sediment type based on median diameters</th>
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<td>-</td>
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<td>-</td>
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<td>-</td>
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<td>-</td>
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<td>-</td>
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<tr>
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<td>8/ 1/60</td>
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<td>168°44.0'</td>
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<td>silt</td>
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<tr>
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<td>70°21.0'</td>
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<td>42.6</td>
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Table 1.—Station locations—Continued

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<th>Sediment type based on median diameters</th>
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<td>–</td>
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<td>42.4</td>
<td>–</td>
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<tr>
<td>G–3</td>
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<td>71°53.0' 160°24.0'</td>
<td>42.1</td>
<td>–</td>
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<td>G–4</td>
<td>6/30/60</td>
<td>71°53.0' 160°24.0'</td>
<td>42.1</td>
<td>–</td>
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<td>–</td>
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<td>71°51.0' 160°20.0'</td>
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Discussion.—A total of 67 species, 2 of which are new, are reported herein from the Bering, Chukchi, and Beaufort Seas. The most numerous species in the collection are: Pholoe minuta, Glycinde wireni, Haploscoloplos elongatus, Cossura longocirrata, Tharyx multifilis?, Sternaaspis scutata, Heteromastus filiformis, and Myriochele heeri. The latter was the most frequently encountered species; it was particularly common at some of the stations south and east of St. Lawrence Island (see fig. 1). Principal associates with this tube-building polychaete were Pholoe minuta and Haploscoloplos elongatus, with Glycinde wireni and Tharyx multifilis? present less frequently.

In addition to the 2 new species encountered, new distributional records were established for 12 species. The northern distribution was extended for 8 species, namely, Arctonoæ pulchra, Harmothoe hartmanae, Typosyllis alternata, Micronephthys minuta, Haploscoloplos elongatus, Spiophanes bombyx, Travisia brevis, and Rhodine bitorquata. Four species are newly recorded from Alaskan waters: Naineris quadricuspida, Skardaria fragmentata, Cossura longocirrata, and Ophelia borealis.

Data on the geographical and depth distribution have been included for each species only when the information is new or not included in Pettibone (1954).
Family Polynoidae

*Arctonoe pulchra* (Johnson)

*Polynoe pulchra* Johnson, 1897, p. 177.


Material: Stations 42B(1), 54(1); Bering Sea; sandy silt. Pettibone (1953) lists the hosts from which *A. pulchra* has been taken; it is not known whether or not these specimens were free living or commensal.

Distribution: *Arctonoe pulchra* was known previously from Gulf of Alaska to Cedros Islands, Lower California, Japan, and Okhotsk Sea. The northern distribution is extended herein to the Diomede Islands.

*Eunoe oerstedi* Malmgren

*Eunoe oerstedi* Malmgren, 1865, p. 61, pl. 8, fig. 3.—Pettibone, 1954, pp. 219–220, fig. 26d.—Berkeley and Berkeley, 1956, p. 234.

Material: Stations 54(1), 57(1); Bering and Chukchi Seas; silty sand.

*Gattyana cirrosa* (Pallas)

*Aphrodita cirrosa* Pallas, 1766, p. 95, pl. 8, figs. 3–6.


Material: Stations 54(1), G–6(1); Chukchi Sea.

*Gattyana iphonelloides* (Johnson)

*Harmothoe iphonelloides* Johnson, 1901, pp. 391–392, pl. 1, figs. 2–7.


Material: Stations 54(1); Little Diomede Island.

*Harmothoe hartmanae* Pettibone

*Harmothoe hartmanae* Pettibone, 1948, pp. 412–413, fig. 1; Pettibone, 1953, pp. 36–37, pl. 17, figs. 147–154.

Material: Stations 54(1); Little Diomede Island.

Remarks: This species is known previously from three specimens from Puget Sound, Washington. *Harmothoe hartmanae* is distinguished from the cosmopolitan species *H. imbricata* chiefly on the basis of its elytra. This species may be simply a variant of *H. imbricata*, a view suggested previously by Hartman (1959).

Distribution: The northern limits are extended herein to Little Diomede Island.

*Harmothoe imbricata* (Linnaeus)

*Aphrodita imbricata* Linnaeus, 1767, p. 1084.

Material: Stations 35(1), 39(1), 54(21); Bering and Chukchi Seas; silty sand and sandy silt.

*Lagisca rarispina* (Sars)

*Polynoe rarispina* Sars 1861, p. 60.


*Lagisca rarispina* Malmgren [sic].—Berkeley and Berkeley, 1948, p. 16, figs. 18–19.

*Lagisca rarispina* (Sars).—Hartman, 1959, p. 85.

Material: Stations 54(10), 57(1); Bering and Chukchi Seas.

Remarks: Pettibone (1954) listed *L. rarispina* as a synonym of *Harmothoe extenuata* (Grube). Hartman (1959) transferred this latter species to the genus *Lagisca* and listed these two as separate species. The presence of long rod-shaped papillae on the elytrae of *L. rarispina*, lacking on *L. extenuata*, is believed to be of sufficient difference to retain these as separate species.

Distribution: Known from Washington to Chukchi Sea, Hudson Bay, and North Atlantic to depths of 420 meters.

**Family Sigalionidae**

*Pholoe minuta* (Fabricius)

*Aphrodita minuta* Fabricius, 1780, p. 314.


Material: Stations 5(10), 14(4), 15(2), 19(25), 21(2), 33(2), 34(14), 35(7), 39(1), 41B(3), 43(6), 45(8), 46(2), 47(2), 48(4), 49(3), 50(5), 52(8), 53(9), 56(1), 57(4), 60(1), G–1(1), G–5(2); Bering and Chukchi Seas; sandy silt or silty sand.

**Family Phyllodocidae**

*Anaitides groenlandica* (Oersted)

*Phyllodoce groenlandica* Oersted, 1843, p. 192.


Material: Stations 50(1), R–3(1); Bering and Beaufort Seas.

Distribution: Northern Hemisphere in depths to 54.8 meters.

*Anaitides maculata* (Linnaeus)

*Nereis maculata* Linnaeus, 1767, p. 1086.

*Phyllodoce* (*Anaitides*) *maculata*.—Berkeley and Berkeley, 1948, p. 46, fig. 67.

Material: Stations 25(5), 35(1), 48(1), 49(14), 54(1); Bering Sea; sandy silt.
Eteone longa (Fabricius)

Nereis longa Fabricius, 1780, p. 300.
Eteone longa.—Berkeley and Berkeley, 1948, p. 41, figs. 57, 58.—Pettibone, 1954, p. 234, fig. 27h.

Material: Stations 5(2), 21(1), 27(1), 34(1), 35(4), 42B(1), 50(1), 52(1), 54(2), 58(1), 59(2), 60(2), G-1(1), G-4(1); Bering and Chukchi Seas.

Family Syllidae

Autolytus prismaticus (Müller)

Nereis prismatica Müller, in Fabricius, 1780, p. 302.
Autolytus prismaticus (Fabricius) [sic].—Pettibone, 1954, pp. 249–252, figs. 20a–b.

Material: Stations 54(2); Little Diomede Island.

Exogone naidina Oersted

Exogone naidina Oersted, 1845, p. 20, pl. 2.—Pettibone, 1954, p. 258, fig. 281.

Material: Station 25(1); Bering Sea.

Typosyllis alternata (Moore)

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

Material: Station 57(26); Chukchi Sea; silty sand.

Distribution: This species was known from western Canada south to western Mexico, in shallow waters. The distribution is extended herein into the Chukchi Sea.

Typosyllis fasciata (Malmgren)

Syllis fasciata Malmgren, 1867, p. 161.
Syllis (Typosyllis) fasciata.—Pettibone, 1954, pp. 254–255, figs. 28c–e.

Material: Station 57(1); Chukchi Sea; silty sand.

Family Nereididae

Nereis pelagica Linneaeus


Material: Station 42B(1); Bering Sea; sandy silt.

Family Sphaerodorididae

Sphaerodororum minutum (Webster and Benedict)

Ephesia minuta Webster and Benedict 1887, p. 728, pl. 4, figs. 64–66.—Chamberlin, 1920, p. 13B.
Sphaerodororum minutum.—Berkeley and Berkeley, 1948, pp. 27–28, fig. 34.—Hartman, 1961, p. 80.

Material: Station G-4(1); Chukchi Sea.

Distribution: In shallow depths from Arctic Ocean, Alaska to southern California, North Atlantic and New England.
Family Nephtyidae

*Micronephthys minuta* (Theél)


Material: Stations 7(2), 14(1), 21(2), 33(5), 35(1), 39(1), 41B(1), 42B(1), 43(1), 45(1), 49(2), 50(1), 52(2), 55(2), 56(1), 59(1), G–1(3), G–5(2), B(1); sandy silt or silty sand; 16.5 to 143.8 meters.

Distribution: Previously known from the Russian Arctic Ocean; this report extends the distribution of *M. minuta* into Bering, Chukchi, and Beaufort Seas.

*Nephtys ciliata* (Müller)

*Nereis ciliata* Müller, 1789, p. 14, pl. 89, figs. 1–4.


Material; Stations 5(1), 12(1), 15(1); Bering Sea; silty sand or sandy silt.

*Nephtys longosetosa* Oersted

*Nephtys longosetosa* Oersted, 1843, p. 195, pl. 6, figs. 75–76.—Berkeley and Berkeley, 1948, p. 52, fig. 76.—Pettibone, 1954, p. 268, fig. 301.

Material: Stations 13(1), 17(2), 30(1), R–1(1); Bering and Beaufort Seas; sandy silt.

*Nephtys paradoxa* Malm

*Nephtys [sic] paradoxa* Malm, 1874, p. 78, pl. 1, fig. 2.


Material: Station G–5(1); Chukchi Sea.

Family Goniodidae

*Glycinde wireni* Arwidsson


Family Lumbrineridae

*Lumbrineris fragilis* (Müller)

*Lumbrineris fragilis.* Müller, 1776, p. 216.


Material: Stations 26(1), 28(1), 57(5), G–2(1), G–3(1), G–6(1), B(6); Bering, Chuckchi, and Beaufort Seas; silty sand or sandy silt.
Family Orbiniidae

_Haploscoloplos elongatus_ (Johnson)

*Scoloplos elongata* Johnson, 1901, pp. 412-413, pl. 10, figs. 105-110.


Material: Stations 5(42), 8(1), 28(3), 32(1), 33(10), 34(8), 35(6), 39(5), 40(1), 42B(47), 43(7), 45(5), 46(2), 47(2), 48(6), 49(14), 50(3), 52(18), 55(3), 57(5), 58(1), 59(1), 60(17), G-6(1), B(3), C(1), R-2(1), R-3(2); sandy silt or silty sand.

Remarks: Recently Imajima (1963) identified, with reservation, two specimens from Okhotsk Sea as belonging to this species. These specimens lacked furcate setae in abdominal notopodia.

Distribution: _Haploscoloplos elongatus_ was known previously from the Icy Cape, Alaska, south to western Mexico. The distribution of this species is extended herein into the Beaufort Sea.

_Naineris quadricuspida_ (Fabricius)

*Nais quadricuspida* Fabricius, 1780, p. 315.

_Naineris quadricuspida._—Fauvel, 1927, pp. 23-24, figs. 8a-g.—Uschakov, 1955, p. 260, pl. 37E, fig. Zh.

Material: Stations 54(1), Little Diomede Island.

Distribution: This species is known from the North Atlantic, Arctic, and Russian Pacific Oceans. Hartman (1961) found a single individual off Santa Catalina Island that she stated agrees most nearly with _N. quadricuspida_. This report is the first for this species in Alaska.

_Scoloplos armiger_ (Müller)

_Lumbricus armiger_ Müller, 1776, p. 215.


Material: Stations 15(3), 18(1), 19(1), 21(3), 26(1), 41B(4), 45(1), 52(1); Bering Sea; silty sand or sandy silt.

Family Apistobranchidae

_Skardaria fragmentata_ Wesenberg-Lund


Material: Stations 5(1), 19(14), R-3(1); sand; 12.8 to 67.1 meters depth.

Distribution: This species is known only from the two reports cited above and the present findings. The type locality is Iceland in six meters. Hartman (1961) reported it from southern California.
Family Paraonidae

*Aricia* suecica? Eliason


Material: Station 19(1). An anterior fragment comes from Bering Sea from fine sand in 132 feet.

Remarks: Only an anterior fragment present in these collections. It resembles *A. suecica* Eliason as reported by Hartman (1948) as *A. heteroseta* Hartman (see Hartman, 1957, pp. 318–319), but since this specimen lacked a posterior end, positive identification could not be made. *Aricia suecica* is known from Denmark, British Isles, southern Alaska, and possibly (fide Hartman, 1957) western Canada and Russian Arctic localities.

*Paraonis* gracilis (Tauber)

*Aonides gracilis* Tauber, 1879, p. 115.


Material: Stations 5(2), 17(1), 35(6), 43(1), 50(1), 57(1), G–4(1); Bering and Chukchi Seas; sandy silt or silty sand.

Distribution: Widely distributed from the Arctic to the Antarctic in the Atlantic, the Russian Pacific, and the Bering and Chukchi Seas.

Family Magelonidae

*Magelona alata,* new species

**Figure 2**

Material: Stations 5(4), 7(1), 15(1), 17(1), 19(1), 34(1), 35(2), 49(1), 50(4), 57(1), and 60(3); Bering Sea and Beaufort Seas.

Description: Three of 24 specimens complete and in poor condition. Length 4–5 mm. with 22–27 setigerous segments. Some incomplete specimens 4 to 20 mm. in length with 7–65 setigerous segments. Holotype incomplete, 12 mm. long with 17 segments. One specimen from Station 50 with brown pigment laterally on segments 8–17; all other specimens colorless. Pygidium lacking anal processes.

Prostomium broad with frontal horns (fig. 2a); with crescent-shaped cephalic ridges. Two palpi generally present, densely papillated.

Parapodia of segments 1–8 similar (fig. 2b), notopodium with small presetal lobe, well-developed foliaceous postsetal lobe. Dorsal cirrus becoming progressively smaller towards posterior thoracic region. Neuropodial presetal lobe small, postsetal lobe foliaceous but becoming small in posterior thoracic region. Single-winged capillary setae (fig. 2c), numbering about 20 per each lobe of parapodium, present through segment 9. Segment 9 constricted.
Figure 2.—Magelona alata, new species: a, anterior end; b, thoracic parapodium; c, thoracic capillary seta; d, abdominal parapodium; e, abdominal hooded hook.
Abdominal postsetal lobes of notopodium and neuropodium folioceous (fig. 2d). Dorsal cirrus lacking. Setae all hooded hooks consisting of two teeth at nearly right angles (fig. 2e), numbering about 12 per each lobe of parapodium.

Remarks: Twenty-one species have been described previously for the genus *Magelona*. Jones (1963) recently listed the known species and included a key to these species. *Magelona alata* belongs to that group of nine species possessing bidentate hooded hooks in the posterior region. This group can be divided further by the presence or absence of frontal horns. *Magelona alata* has frontal horns as do *M. annulata* Hartman-Schröder (1962), *M. phyllisae* Jones (1963), *M. longicornis* Johnson (1901), *M. pacifica* Monro (1933), and *M. cerae* Hartman and Reish (1950). *Magelona alata*, *M. pacifica*, and *M. phyllisae* all have single-winged capillary setae through segment 9. These three species can be distinguished by the different degree of development of the parapodial lobes.

Ecology: *Magelona alata* was taken in depths of 11-67.1 meters, more frequently from silts than from fine and very fine sands.

Type locality: Station 5 (fig. 1), Bristol Bay area of Bering Sea, 56°54' north latitude and 163°45' west longitude at a depth of 67.1 meters.

Type material: Holotype, three paratypes, and additional specimens have been deposited in the U.S. National Museum.

**Family Spionidae**

*Prionospio malmgreni* Claparède


Material: Stations 21(1), 43(1), G-1(1), G-5(1), B(5), R-4(1); Bering, Chukchi, and Beaufort Seas; fine sand or silt.

*Spio filicornis* (Müller)

*Nereis filicornis* Müller, 1776, p. 218.


Material: Stations 5(1); Bering Sea; silt.

*Spiophanes bombyx* (Claparède)

*Spio bombyx*. Claparède, 1870, p. 485.


Material: Stations 15(1), 34(2), 53(1); Beaufort Sea; fine or very fine sand.

Distribution: Known previously from the Mediterranean Sea, Vancouver Island south to California and Japan. These four speci-
mens in Bering Sea extend its northward distribution in the Western Hemisphere.

**Family Cirratulidae**

*Cirratulidae seetosa* Malmgren


Material: Stations G–5(3); Chukchi Sea.

*Cirratulus cirratus* (Müller)

*Lumbricus cirratus* Müller, 1776, p. 214.


Material: Stations 54(4); Little Diomede Island.

*Cossura longocirrata* Webster and Benedict


Material: Stations 5(69), 33(1), 42B(8), 43(1), 52(12), 55(8), 56(23), 59(10), 60(3), G–1(2); Bering and Beaufort Seas; silty or very fine sands.

Distribution: This species was reported originally from Maine; subsequently it has been found in North Atlantic, Russian Pacific, and the state of Washington. These reports from the Bering and Chukchi Seas represent new localities for this species.

*Tharyx multifilis*? Moore

*Tharyx multifilis* Moore, 1909, pp. 267–268, pl. 9, fig. 43.—Berkeley and Berkeley, 1952, pp. 34–35, fig. 62.


Ecology: This polychaete was found chiefly from the stations with silts; a few specimens were taken from either fine or very fine sandy bottoms.

Remarks: Morphologically and ecologically these specimens resemble *T. multifilis* with the exception of the small size (10–15 mm.) of the present material. These specimens lack the dark-colored cardiac body as characterized by the smaller and related species *T. parvus* Berkeley. Because of the size difference and because of the few distinguishing characters in this genus, I am referring this material questionably to *T. multifilis*.

Distribution: Vancouver Island to southern California.
BENTHIC POLYCHAETOUS ANNELOIDS—REISH 145

Family Flabelligeridae

*Brada villosa* (Rathke)

*Siphonostoma villosum* Rathke, 1843, p. 215, pl. 11, figs. 11–12.


Material: Stations 31(3), 49(1), R–1(1); Bering and Beaufort Seas; silt.

Family Scalibregmidae

*Scalibregma inflatum* Rathke


Material: Stations 33(1), 51(1), 58(1), 59(1), R–2(1); Bering, Chukchi, and Beaufort Seas; silt.

Family Opheliidae

*Ammotrypane aulogaster* Rathke


Material: Stations 5(2), 34(1), 41(1), 48(1); Bering Sea; silt or very fine sands.

Distribution: Cosmopolitan, in moderate depths. This is the first report of *A. aulogaster* from the Bering Sea.

*Ophelia borealis* Quatrefages


Material: Stations 48(1); silt.

Distribution: Previously known from Greenland, North Sea, and Irish Sea; this report extends its distribution into the Bering Sea.

*Travisia brevis* Moore


Material: Stations 26(2), 40(2), C(1); very fine sands.

Distribution: This species is known from Okhotsk, Bering, and Beaufort Seas and from Humpback, Alaska, to southern California.

Family Sternaspidae

*Sternaspis scutata* (Vanzani)

*Thalassema scutata* Ranzani, 1817, p. 1457, pl. 11, figs. 10–13.

Material: Stations 5(5), 17(1), 35(1), 47(1), 48(1), 49(27), 50(4),
52(6), 55(2), 56(1), 57(1), B(5), R-2(11), R-3(57); Bering, Chukchi, and Beaufort Seas; sandy silt, silty sands, or silts.

Family Capitellidae

*Capitella capitata* (Fabricius)

*Capitella capitata.*—Pettibone, 1954, pp. 298-299, figs. 33r-u.

Material: Stations 54(5), 2(1), 6(1); Little Diomede Island and Chukchi Sea.

Remarks: One specimen collected at Little Diomede Island on July 30, 1956, was incubating eggs within its tube.

*Heteromastus filiformis* (Claparède)

*Capitella filiformis* Claparède, 1864, p. 509, pi. 4, fig. 10.


Material: Stations 5(12), 30(1), 34(2), 35(2), 47(7), 48(6), 50(1), 52(4), 53(2), 55(3), 56(4), 57(3), 59(9), 60(8); Bering and Chukchi Seas; silts.

Distribution: Widely distributed in the Northern Hemisphere; previously it has been reported from the West Bering Sea by Levenstein. This is the first report of *H. filiformis* from Chukchi Sea.

Family Maldinidae

*Maldane sarsi* Malmgren


Material: Stations 55(9), 56(73), 60(1), G-3(1), G-5(1), G-6(2), B(5); Chukchi and Beaufort Seas; silts.

*Nicomache lumbricalis* (Fabricius)

*Sabella lumbricalis* Fabricius, 1780, p. 374.


Material: Stations 59(2), B(1); Chukchi and Beaufort Seas; silts.

*Petaloproctus tenuis* (Théel)

*Maldane tenuis* Théel, 1879, p. 57.


Material: Station R-4(1); Beaufort Sea.
Praxillella praetermissa (Malmgren)

Praxilla praetermissa Malmgren, 1865, p. 191.

Material: Stations 5(1), 7(1), 21(1), 27(1), 34(1), 35(2), 40(1), 41B(1), 49(1), 50(1), 52(2), 58(1); Bering and Chukchi Seas; variety of substrate types.

Rhodine bitorquata Moore


Material: Stations 29(2), 39(1), 40(3), 43(3), 52(2), 56(8), 57(3); variety of substrate types.

Distribution: This species was known previously from Vancouver Island to southern California. The discovery of *R. bitorquata* in the Bering and Chukchi Seas extends its northern distribution.

Family Oweniidae

Myriochele heeri Malmgren

Myriochele heeri Malmgren, 1867, p. 211.—Fauvel, 1927, pp. 204–205, fig. 71h–m.—Berkeley and Berkeley, 1956, p. 238.

Material: Stations 5(1), 26(2), 27(1), 28(3), 34(495), 35(971), 39(1), 43(189), 45(677), 46(7), 48(98), 50(501), 52(2), 53(10), 57(3); Bering Sea; silts, fine and very fine sands.

Distribution: Widely distributed throughout the colder waters of the Northern Hemisphere.

Family Sabellariidae

Idanthyrsus ornamentatus Chamberlin

Idanthyrsus ornamentatus Chamberlin, 1919, pp. 262–263, pl. 3, figs. 2–5.—Hartman, 1944, p. 337, pl. 31, fig. 34.

Material: Stations 42B(2), 49(3), 52(1), 57(4); Bering Sea; silts or very fine sands.

Remarks: Okuda (1938) regarded *I. ornamentatus* Chamberlin as a synonym of *I. armatus*. This viewpoint was followed by Pettibone (1954) but not Hartman (1944). The present material from the Bering and Chukchi Seas agrees with the account by Hartman. Detailed comparisons of these two species from various localities are warranted to determine whether or not one or two species are involved.

Distribution: Given by Hartman (1948) as northern California to Alaska.
Family Pectinariidae

*Cistenides granulata* (Linnaeus)

*Sabella granulata* Linnaeus, 1767, p. 1268.

*Pectinaria (Cistenides) granulata* (Linnaeus).—Pettibone, 1954, pp. 312–314, figs. 35i–k.

Material: Stations 57(1), R–2(10), R–3(5); Chukchi and Beaufort Seas; silts.

Family Ampharetidae

*Ampharete acutifrons* (Grube)

*Amphideis acutifrons* Grube, 1860, p. 109, pl. 5, fig. 6.


Material: Stations 46(2), 57(3), G–6(4), B(1); Bering and Chukchi Seas; silt.

*Asabellides sibirica* Wirén, 1883, p. 418.


Material: Stations 5(1), 46(2), B(2), R–2(2), R–3(2); Bering, Chukchi, and Beaufort Seas; silt.

Family Terebellidae

*Amphitrite cirrata* Müller

*Amphitrite cirrata* Müller, 1776, p. 188.—Berkeley and Berkeley, 1952, p. 86, fig. 175.—Pettibone, 1954, pp. 321–322, figs. 36g–h.

Material: Stations 54(2); Little Diomede Island.

*Lysilla loveni* Malmgren

*Lysilla loveni* Malmgren, 1866, p. 393.—Fauvel, 1927, pp. 286–287, figs. 99f–i.—Uschakov, 1955, p. 403, pl. 150, fig. G.

Material: Stations G–5(1); Chukchi Sea.

Distribution: Arctic Ocean, North Atlantic, Chukchi Sea, and Sea of Japan; shallow water to 338.9 meters.

*Nicolea zostericola* (Oersted)

*Terebella zostericola* Oersted in Grube, 1860, p. 98.


Material: Stations 54(1): Little Diomede Island.

Remarks: Fauvel (1927) separated *N. zostericola* from *N. venustula* on the basis of 15 thoracic segments in the former and 17 in the latter.
Wesenberg-Lund (1950) regarded _N. zostericola_ as a synonym of _N. venustula_ because specimens from a single locality possessed 15–17 thoracic segments. Pettibone (1954) concurred with this. Herpin (1925, in Wesenberg-Lund, 1950) found a difference in egg-laying habits between these two. I believe additional data, especially developmental, are needed before this question can be resolved. I am retaining the use of _N. zostericola_ to indicate the specimen from Little Diomede Island possessed 15 thoracic segments.


_Thelepus cincinnatus_ (Fabricius)

_Amphitrite cincinnata_ Fabricius, 1780, p. 236.

_Thelepus cincinnatus_.—Pettibone, 1954, pp. 327–328, fig. 37d.

Material: Station 57(1); Chukchi Sea; silt.

Family Trichobranchidae

_Terebellides stroemi_ Sars


Material: Stations 35(1), 41B(1), 43(1), 45(1), 57(4), 58(2), 60(1), G–4(1), G–5(1), R–3(1); Bering, Chukchi, and Beaufort Seas; variety of substrate types.

Family Sabellidae

_Chone duneri_ Malmgren


Material: Stations 42B(1); Bering Sea; silt.

_Chone infundibuliformis_ Kröyer


Material: Stations 35(14); Bering Sea; very fine sand.

_Euchone analis_ (Kröyer)


Material: Station 35(1); Bering Sea; silt.
Euchone trisegmentata, new species

Material: Station 5(7).

Description: All specimens complete, measured 5–7 mm. long, including the tentacles, and 0.3 mm. wide. All have 8 thoracic and 9 abdominal segments; the last 3 abdominal segments comprise the anal depression (fig. 3a). Two specimens contained ova in the coelom. Branchial crown with 3 pinnate radioles per side, each radiole with numerous filaments and united by a membrane for ½ of their length. Collar little developed dorsally but is produced centrally into two lobes.

Thoracic notopodia composed of superior single-winged capillary setae (fig. 4b) and inferior subspatulate setae (fig. 4c). Thoracic neuropodial long-handled uncini provided with a large tooth and six smaller ones (fig. 4d).

Anterior abdominal notopodia with acicular hooks, each with a large tooth and nine smaller teeth (fig. 4e). Setae of neuropodium and anal depression region are simple capillary ones.

Remarks: Ten species of the genus Euchone are known from the Pacific Ocean. Euchone trisegmentata comes closest to E. rosea Langerhans. Both species are the smallest known members of the genus and each have only 17 setigerous segments, the fewest number known; however, there are 4 segments to the anal depression in E. rosea and only 3 in E. trisegmentata. There are 5 radioles per side in E. rosea and only 3 in E. trisegmentata. The types of setae are similar in both species but vary in shape and in the number of secondary teeth in the long-handed uncini and acicular hooks.

Ecology: Euchone trisegmentata was taken from a substrate composed of silts at a depth of 67.1 meters. Sixteen additional species of polychaetes were present in this quantitative sample. The dominant species were Glycinde wireni (88 specimens), Cossura longocirrata (69), Haploscoloplos elongatus (42), and Tharyx multijilisl? (38).

Type locality: Station 5 (fig. 1), Bristol Bay area of Bering Sea, 56°54’ north latitude and 163°45’ west longitude at a depth of 67.1 meters.

Type material: The holotype and six paratypes have been deposited in the U.S. National Museum.

Potamilla neglecta (Sars)

Sabella neglecta Sars, 1851, p. 203.


Material: Stations 57(20), R–3(1); Chukchi and Beaufort Seas.
Figure 3.—*Euchone trisegmentata*, new species: *a*, posterior end; *b*, thoracic notopodial capillary seta; *c*, thoracic notopodial subspatulate seta; *d*, thoracic neuropodial uncinnus; *e*, abdominal notopodial avicular hooks.
**Pseudopotamilla reniformis** (Müller)

*Amphitrite reniformis* Müller, 1771, p. 194.

*Sabella reniformis* Leuckart [sic], 1849, p. 183, pl. 3, fig. 8.


*Pseudopotamilla reniformis* (Leuckart) [sic].—Berkeley and Berkeley, 1952, pp. 116–117, fig. 239.


*Pseudopotamilla reniformis* (Müller).—Hartman, 1945, p. 47.

Material: Station 57(1); Chukchi Sea; silt.

**Family Serpulidae**

*Dexiospira spirillum* (Linnaeus)

*Serpula spirillum* Linnaeus, 1758, p. 785.


Material: Station 54(4); Little Diomede Island.

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