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THE
FUR SEALS AND FUR-SEAL ISLANDS
OF THE
NORTH PACIFIC OCEAN.

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XXII.—LIST OF CRUSTACEA KNOWN TO OCCUR ON AND NEAR THE PRIBILOF ISLANDS

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The Crustacea occurring at the Pribilof Islands are by no means restricted to that archipelago. For example, of the Brachyura or true crabs, *Hyas coarctatus* and *Chionæcetes opilio* are circumpolar, while *Oregonia gracilis* and *Hyas lyratus* are very common in the North Pacific. The hairy crabs or horse crabs, *Telmessus* and *Erimacrus*, reach their fullest development in Bering Sea. The former, *T. cheiragonus*, was first recorded by Tilesius, the Russian naturalist, from specimens collected by Steller at Avacha Bay, Kamchatka, where it occurred in great abundance, and was used for food by the sailors. It extends southward to Oregon.

The three triangular anomuran crabs, *Lithodes brevipes*, *Dermaturus mandtii* and *Hapalogaster grebnitzkii* are distinctively Bering Sea species, inhabiting that body of water and the Aleutian Islands. Nine species of North Pacific hermit crabs (*Pagurus*) are known to inhabit the shores of the Pribilofs. Most of these are of recent discovery. Of the sixteen shrimps enumerated eight are circumpolar.

It is to be expected that a more thorough study of the lower forms of Crustacea will add many names to the list given below.

- Oregonia gracilis** Dana. 25 to 26 fathoms; U. S. Fish Commission.
Hyas coarctatus Leach. 20 to 62 fathoms; U. S. Fish Commission.
Hyas lyratus Dana. 25 to 62 fathoms; U. S. Fish Commission.
Chionæcetes opilio (O. Fabricius). 20 to 65 fathoms; U. S. Fish Commission.
Telmessus cheiragonus (Tilesius). St. Paul Island; Palmer and Elliott.
Erimacrus isenbeckii (Brandt). St. Paul Island; Palmer and Elliott. 29 to 41 fathoms; U. S. Fish Commission.
Lithodes brevipes Milne-Edwards. Young. St. Paul Island; Palmer and Elliott. 25 to 47 fathoms; U. S. Fish Commission.
Dermaturus mandtii Brandt. 25 fathoms; U. S. Fish Commission.
Hapalogaster grebnitzkii Schalfew. 25 fathoms; U. S. Fish Commission.
Pagurus alaskensis Benedict. St. Paul Island.
Pagurus aleuticus Benedict. 56 to 65 fathoms; U. S. Fish Commission.
Pagurus brandti Benedict. 65 fathoms; U. S. Fish Commission.
Pagurus confragosus Benedict. 57 to 65 fathoms; U. S. Fish Commission.
Pagurus dalli Benedict. 26 fathoms; U. S. Fish Commission.

¹The lists of Anomura and Isopoda were made from specimens determined by Dr. James E. Benedict.

Pagurus rathbuni Benedict. 47 to 65 fathoms; U. S. Fish Commission.

Pagurus splendescens Owen. 41 to 62 fathoms; U. S. Fish Commission.

Pagurus trigonocheirus (Stimpson). 26 to 57 fathoms; U. S. Fish Commission.

Pagurus undosus Benedict. 20 fathoms; U. S. Fish Commission. St. Paul Island; Palmer and Elliott.

Crangon communis, sp. nov. 40 to 121 fathoms; taken at 31 stations by the U. S. Fish Commission steamer *Albatross*.

Allied to *C. crangon* (L.). The most noticeable differences are as follows: Two median spines on the carapace, considerably in front of the middle; rostrum longer, more slender and spatulate; eyes larger; first to fifth abdominal segments each with a transverse posterior smooth flattened crest; third to fifth segments with a similar median longitudinal crest; sixth segment with two prominent blunt longitudinal keels.

Dimensions of female.—Length of carapace from tip of rostrum, 16 mm.; width, 11 mm.; length of body from tip of rostrum to tip of telson, 64 mm.

Type locality.—Lat. $57^{\circ} 4' 20''$ N., long. $170^{\circ} 52' 30''$ W.; 51 fathoms, station 3441

Types.—U. S. Nat. Mus., No. 22826.

This species is one of the most abundant shrimps in Bering Sea. It can not be confused with *C. intermedia* Stimpson, in which the posterior of the median spines is at the middle of the carapace, and in which the first two abdominal segments have a median carina.

Crangon intermedia Stimpson. 32 to 34 fathoms; at 3 stations of the *Albatross*.

Sclerocrangon sharpi Ortman. 54 fathoms; *Albatross*.

Nectocrangon lar (Owen). 33 to 368 fathoms; 36 stations of the *Albatross*.

Nectocrangon crassa, sp. nov. 17 to 34 fathoms; at 6 stations of the *Albatross*.

Allied to *N. alaskensis* Kingsley in having three spines on the median line of the carapace and a smaller spine or spinule just behind the rostrum. The carapace differs from that of *N. alaskensis* in being shorter and broader. All the abdominal segments are sculptured and keeled; the first to fifth have a blunt median keel, very short and hump-like in the first and second segments; the first three segments have transverse sulci; the keel of the fifth segment disappears toward the posterior margin; the sixth segment is much shorter than in *N. alaskensis*; its double keel is not continued to the posterior margin, and this margin is devoid of the sharp spines present in *N. alaskensis*.

Dimensions of female.—Length of carapace, 13 mm.; width, 10.5 mm.; length of body from tip of rostrum to tip of telson, 48.5 mm.

Type locality.—Lat. $57^{\circ} 4' 4''$ N., long. $170^{\circ} 24'$ W.; 26 fathoms, station 3557.

Types.—U. S. Nat. Mus., No. 22827.

Spirontocaris spinus (Sowerby). 41 to 121 fathoms; at 13 stations of the *Albatross*.

Spirontocaris gaimardii (Milne-Edwards). 20 to 368 fathoms; at 17 stations.

Spirontocaris gibba (Kröyer). 50 to 52 fathoms; at 2 stations.

Spirontocaris barbata, sp. nov.

Carapace with two spines on the anterior margin, one below the eye, the other at the middle of the antenna. Dorsal carina extending to the posterior third of the carapace. Rostrum about one-third longer than the carapace; upper margin straight, armed with five teeth, one of which is on the carapace proper; distal two-fifths of upper margin unarmed; extremity acute; lower limb of slight depth and tapering from near the base to the tip, armed with about nine small teeth and denticles, diminishing in size and distance apart, toward the tip of the rostrum.

Inner antennæ about two-thirds length of rostrum. Scale of outer antennæ about seven-eighths length of rostrum. Maxillipeds reaching a little over one-half length of rostrum.

Abdomen with the fourth, fifth, and posterior half of the third segment carinated, the carina of each segment prolonged in a slender, sharp spine; carina of third segment with a subterminal hump; postero-lateral angle of fifth segment armed with a spine; posterior margin of the sixth segment armed with a median and lateral spine, also a spinule at the inferior angle.

Dimensions of female.—Length of carapace, to orbit, 12 mm.; length to tip of rostrum, 19.6 mm.; length of body from tip of rostrum to tip of telson, 74.5 mm.

Type locality.—Lat. $56^{\circ} 18' N.$, long. $169^{\circ} 38' W.$; 86 fathoms, station 3497.

Type.—U. S. Nat. Mus., No. 22828.

Spirontocaris camtschatica (Stimpson). 20 fathoms; at station 3438, *Albatross*.

Spirontocaris macilenta (Kröyer). 39 fathoms; station 3511.

Spirontocaris avina, sp. nov.

Carapace with one anterior spine, below the eye; lower angle with a minute spinule. Anterior half of carapace dorsally carinated; a small spine at the anterior fifth; in front of this spine arises a thin arcuate crest which forms the chief part of the rostrum. Rostrum short, extending beyond the carapace about one third of its length, but not reaching the penult joint of the antennular peduncle; its lamellate crest, half of which is above the carapace, is armed with about thirteen small crowded spines; extremity beak-like, straight, slightly deflexed, acute, unarmed above, one or two teeth near the end below. Antennulæ extending considerably beyond the antennal scale. Antennal peduncle a little shorter than antennular peduncle; scale extending two-thirds its length beyond the rostrum. Maxillipeds slightly longer than antennal scale. Legs long and weak.

Abdomen smooth, not carinate; third segment produced over the fourth, posterior margin convex; posterior angle of fourth segment armed with a spinule; of fifth and sixth with a spine.

Dimensions of female.—Length of carapace, to orbit, 9 mm.; length of rostrum beyond posterior line of orbit, 3 mm.; length of body 35 mm.

Type locality.—North of Unalaska, lat. $54^{\circ} 00' 45'' N.$, long. $166^{\circ} 53' 50'' W.$; 351 fathoms, station 3330.

Types.—U. S. Nat. Mus., No. 22829.

Spirontocaris polaris (Sabine). St. Paul Island (Brandt); William Palmer, June 21, 1890.

Pandalus borealis Kröyer. 36 to 121 fathoms; very abundant; taken at 34 stations by the *Albatross*.

Pandalus montagui Leach. 25 to 121 fathoms; taken at 22 stations. less abundant than the last.

Pandalus dapifer Murdoch. 36 to 50 fathoms; at 3 stations.

Rocinela belliceps (Stimpson). St. Paul Island; F. W. True.

Arcturus beringanus Benedict. 32 fathoms; U. S. Fish Commission.

Idotea ochotensis Brandt. Seal stomach. St. Paul Island; F. A. Lucas.

Synidotea biscuspida (Owen). 49 to 62 fathoms; U. S. Fish Commission.

Synidotea nebulosa Benedict. 32 fathoms; U. S. Fish Commission.

Anonyx nugax (Phipps). Seal stomach. St. Paul Island; F. A. Lucas.

Amphipoda of family *Lysianassidae*. Seal stomach. St. Paul Island; F. A. Lucas.

Branchipus sp. St. George Island; F. A. Lucas.

