THE BIRDS COLLECTED AND OBSERVED DURING THE CRUISE OF THE UNITED STATES FISHERIES STEAMER "ALBATROSS" IN THE NORTH PACIFIC OCEAN, AND IN THE BERING, OKHOTSK, JAPAN, AND EASTERN SEAS, FROM APRIL TO DECEMBER, 1906.

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The 1906 cruise of the United States Fisheries steamer *Albatross* had for its especial object the investigation of the fish and fisheries of the Japanese seas, where the ship spent most of the time. The journey out was made by way of the Aleutian Islands, at several of which we stopped, Petropaulski, Kamchatka, and the Kuril islands. We returned by way of Honolulu. As the purpose of the expedition was the investigation of fish and marine invertebrates, and the ship was usually occupied in work offshore, my opportunities for collecting birds were rather limited, especially as my time was largely taken up by my duties in connection with the marine work, as the representative of the Bureau of Fisheries. I brought back about 180 skins, chiefly from the Aleutian and Kuril islands and from Kamchatka. In addition to these many dead birds were examined and identified, but not preserved, mainly on account of their bulk, which would have necessitated devoting more time to them than I could spare. I kept very full notes at all times during the trip, and these, together with the specimens, form the basis of the present paper.

During the trip of the *Albatross* I was afforded every possible facility for ornithological work by the commanding officer, the late Commander Leroy M. Garrett, U. S. Navy, and after his untimely loss, in a prolonged spell of exceptionally heavy weather between Yokohama and Honolulu, by his successor, Lieut. Arthur J. Hepburn, U. S. Navy.

We left Sausalito, near San Francisco, on May 3, 1906, at 4.40 p. m., and sailed up the coast of California and Oregon to Puget Sound, arriving at Tacoma at 8 p. m. on the evening of the 9th. We left early the next morning for Dockton, Washington, where we went into dry dock. I spent that afternoon, the next day, and the following morning ashore hunting birds. We left at 4 p. m. on the 11th, going through the Colvos Passage to the Puget Sound Navy Yard at

Bremerton, where we arrived at about 7 p. m. Lieutenant Hepburn and I went by a local boat to Seattle the next morning on business, the *Albatross* meeting us there in the afternoon.

We left Seattle at 10.35 a. m. on the 13th, arriving at Union Bay, Vancouver Island, at 7 a. m. the next morning. I had two and a half days ashore here. We left at 7 a. m. on the 17th, and passed up the inland passage between Vancouver Island and the mainland, anchoring over night in Forward Bay, Johnstone Strait. At 6 a. m. on the 18th we got underway, stood westward through Johnstone Strait, and took the great circle course for Unalaska, where we secured to the wharf at Dutch Harbor at 4.19 p. m. on the 24th. We left Dutch Harbor early in the morning of the 28th, bound for Atka, where we arrived at 6.45 a. m. on the 30th, anchoring in Nazan Bay. On the way from Unalaska to Atka we passed close to that most interesting trio (previously pair) of volcanic islands, the Bogoslovs.

Leaving Atka at 6.05 a. m. on the 31st, we cruised about in Bering Sea in a general northerly direction, passing over Bower's Bank, our farthest north being lat. 54° 32′ 30″ N., which we reached in long. 179° 16′ 00″ E. on June 3 (omitting June 2). From Bower's Bank we went southward past Semisopochnoi and Amchitka, then in a westerly direction to Agattu, where we anchored, in McDonald Bay, at 7.51 p. m. on June 7. I spent the next morning ashore, but I had not got very far inland when I heard the whistle of the steamer and hastened back to the beach to find that in the meantime a wind had risen directly on shore which threatened to make the anchorage dangerous for the ship; even as it was we had a very hard pull back. I was forced to abandon a number of specimens here, all large birds, which I had shot and "cached" at various places, as the hurry call from the steamer compelled me to take the shortest route to the beach, and returning the way I had come would have entailed considerable delay. We left Agattu at 6.50 p. m. on the 8th for Attu, passing the Semichi Islands, and anchoring in Chichagof Harbor, Attu, at 4.12 p. m. on the 9th. I spent the evening ashore here, all the next day, and the morning of the 11th. We left at 3.59 p. m. on that date, and did some deep-sea work between Attu and Copper Island, arriving at Preobrajenia Bay, Copper Island, at 9.30 a. m. on June 13. Here I spent the afternoon and evening ashore. We left at 7 a. m. on the 14th, and at 9.10 a. m. on the 15th anchored in Nikolskoi Bay, Bering Island. I went ashore as soon as possible, returning about 8.30 p. m. We got underway at 5.05 a. m. on the 16th, and at 4.37 p. m. on the 17th arrived in Petropaulski, Kamchatka. We left Petropaulski at 8.20 a. m. on the 20th, sailing south along the Kamchatkan coast, rounding Cape Lopatka and sailing up the west coast to the mouth of the Aangan River, in about lat. 51° 30′ 00″ N. From this point we went south along the Kurils to Simushir, where at 8.27 a. m. on June 23 we came to anchor in Milne Bay.

At 8.05 the next morning we were again underway, and proceeded south, arriving in Hakodate, Japan, at 11.53 on June 27. On July 5 we made a short trip to Mororan for coal, returning on the 7th; on the 16th we left Hakodate for the Japan Sea, where we stayed nearly a month, calling in at an anchorage 2 miles north of Kodomari (July 16), Ebisu Byochi, Sado Island (July 18), Nanao (July 20), Tsuruga (July 23), Saigo Minato Harbor, Oki Islands (July 25), Matsushima (July 28), and Nagasaki (August 3). From Nagasaki we went southward among the Linschoten Islands, as far as lat. 29° 51′ 00″ N., long. 131° 02′ 00″ E., thence north to Kagoshima, where we arrived on August 17. From Kagoshima we went eastward along the southern Japanese coast, calling in at a harbor near Wado Misaki light (August 24), and going through the Inland Sea to Kobé, where we arrived on the 25th. We left Kobé on the 27th for Yokohama, calling at Yura-no-Uchi (August 27) and Oshima Ko (August 28, 29, and 30), and arriving on September 2. We left Yokohama on September 14, called in again at Hakodate on the 17th, at Iwanai, in Iwanai Byochi, on the 19th, at Otaru on the 20th, and on the 24th reached Korsakoff, Sakhalin, where I had a morning ashore. Before calling at Korsakoff we went up the west coast of Sakhalin (Gulf of Tartary) as far as lat. 47° 39′ 00″ N., which point we reached on September 23. From Korsakoff we went up the east coast of Sakhalin as far as Cape Patience ("Terpenia") (September 27), then across the Okhotsk Sea to the southernmost Kurils, and down the coast of Yezo to Hakodate, which we reached on October 4. From Hakodate we went south along the east coast of Hondo, anchoring off the village of Kugunari, To Shima peninsula, on the night of the 9th, and reaching Shimidzu in Suruga Gulf on the 12th. We worked in this vicinity until the 18th, returning to Shimidzu every night; on that date we left, cruising about to the southward until the 21st, when we called at Monagawa village in Fuki Ura, Sagami Kai. We worked about here, returning every night until the 25th, when we left for Yokohama, anchoring that night in Kaneda Bay, and reaching the Yokohama light-ship the next evening. On November 10 we left Yokohama for Honolulu, arriving on the 24th after a fifteen days' trip, and proceeding on December 2 to San Francisco, where we dropped anchor on the evening of the 10th.

A preliminary paper dealing with the new forms which I detected among the material studied in connection with this report was published in these Proceedings, vol. 32, pp. 467–475. In that paper I took occasion to call attention to the peculiarities of that curious finch, the *Emberiza variabilis* of Temminck, by erecting a new genus, *Tisa*, for its reception, a course long ago suggested by Doctor Stejneger.[a]

[a] Bull. 29, U. S. Nat. Mus., 1885, p. 247.

A second paper dealing with the habits of the more common Kamchatkan birds was published in The Auk, vol. 24, 1907, pp. 278–280.

I have adhered to the classification given in the American Ornithologists' Union check list, in spite of the fact that I consider it decidedly out of date, for the reason that, as this paper will be of most interest to American ornithologists, an arrangement familiar to them will have, in so far as they are concerned, certain advantages and will be much more convenient to use. Had this paper included only extra American species, I should have adopted the classification of Prof. Hans Gadow, as emended by subsequent authors, as I did in my papers on West Indian birds.

Before joining the *Albatross* I made a thorough study of the sea birds of the north Pacific, especially in regard to the most significant and striking differential characters, so that I might be able to identify them with certainty. Observations were made constantly with a good pair of marine binoculars while on shipboard. Previous experience with the land birds of both the nearctic and palæarctic regions in the field made the work on shore comparatively easy, so far as determination of species was concerned.

The vernacular names of American birds are, of course, those of the check list published by the American Ornithologists' Union. Dr. Leonhard Stejneger's various papers on Japanese birds, Seebohm's Birds of the Japanese Empire, and other standard works have been consulted for appropriate names for purely Asiatic species, while to the English names of Kamchatkan and Kurilian birds I have added the local Russian and native names, taken from Doctor Stejneger's works on the birds of Kamchatka and the Commander Islands and on the birds of the Kuril Islands.

Order PYGOPODES.

Suborder PODICIPEDES.

Family PODICIPIDÆ.

ÆCHMOPHORUS OCCIDENTALIS (Lawrence).

WESTERN GREBE.

This grebe was common in San Francisco Bay on the day we left, and we also found it common in the more open parts of Puget Sound.

COLYMBUS AURITUS Linnæus.

HORNED GREBE.

Rather common in Puget Sound, especially before reaching Port Townsend. In going up the Sound to Tacoma sea birds were very abundant until we were off Port Townsend, when their numbers rapidly diminished, and from then on, except for gulls and certain ducks, we saw comparatively few.

Suborder CEPPHI.

Family GAVIIDÆ.

GAVIA PACIFICA (Lawrence).

PACIFIC LOON.

Common off the mouth of the Columbia River, and again in Puget Sound as far as Port Townsend. Several were seen at Union Bay, Vancouver Island, and in the passage between Vancouver Island and the mainland, especially about the head of Georgia Gulf, where they were common. A single bird of this species was seen on one of the lakes on Agattu, and two near the beach at Simushir, in the Kurils.

GAVIA ARCTICA (Linnæus).

BLACK-THROATED LOON.

A single example of this species was seen flying over the sand bar separating the large pond from the sea behind the town of Petropaulski, Kamchatka.

GAVIA STELLATA (Pontoppidan).

RED-THROATED LOON.

Seen at sea off the mouth of the Columbia River, and in Puget Sound, but not met with past Port Townsend. A pair was observed near the shore at Agattu, a single bird at Atka, and a pair on a small pond on Bering Island.

Family ALCIDÆ.

Subfamily FRATERCULINÆ.

LUNDA CIRRHATA Pallas.

TUFTED PUFFIN. TOPOROK. ETUBIRGA. STUPIRK.

We first met with the Tufted Puffin the day after leaving San Francisco, when two were observed at sea; after that they became rather more common, occasional individuals, pairs, or small companies of three or four being seen all the way up to Puget Sound, except on the morning of May 8, at which time we were off the mouth of the Columbia River. In the Sound they were very common, usually in pairs, until the vicinity of Port Townsend was reached, after which none were seen until we passed Port Townsend again going north. In the passage between Vancouver Island and the mainland none were met with; but soon after we reached the open sea they reappeared, though in small numbers, and were observed continuously until we reached the Aleutian chain, becoming gradually more common as we approached Unalaska, being especially abundant in Unalga Pass, between Akutan and Unalaska. All about the shores of Unalaska and the neighboring islands, and everywhere we went in Bering Sea, they were common. On May 28 we visited the Bogos-

lov Islands, a group of three small volcanic islands, one of which was first reported in 1796, another in 1884, while the third we were fortunate enough to be the first to observe. This newest island was still steaming violently from fissures over its entire surface, but the other two islands were apparently cold. About Castle Island (which was the first to have been reported) could be seen with a glass myriads of sea birds, flying all about the shores, over the sea, and to a considerable height over the land. I have never anywhere seen any approach to the enormous number of birds about this island. On the sea in this vicinity large numbers of this species were seen, but even more numerous were the murres (*Uria*); so, as no other species of the family were observed, I judged that these were the birds which chiefly made up the vast numbers seen over the land. I may also mention that about the shores of Castle Island we saw many sea lions (*Eumetopias stelleri*), this being the only place where we found them in abundance.'

About the rocky shores of Atka we saw the Tufted Puffin frequently, though in the parts we visited it could not be called abundant. At Agattu, however, it was the most numerous sea bird, occurring by hundreds along the cliffs and bluffs in the vicinity of Macdonald Bay where we lay at anchor. Most of them were flying aimlessly back and forth along the coast, now and then taking short excursions out over the sea only to return a few minutes later, while many were sitting on the water. We found dozens of their burrows on shore, mainly along the gravelly grass-covered bluffs facing the sea, but also along the sides of a ravine which makes inland half a mile or more from the coast from the head of Macdonald Bay. Most of the burrows (which are somewhat large for the size of the bird and resemble those made by foxes) were rather high, the lowest being some 15 or 20 feet above the beach, and in the ravine they chose the steepest places, near the top. No eggs were found, although many of the birds were seen to come out of the burrows, and one was captured by some sailors from the ship before it had time to get away. Perhaps this was largely due to a rather general reluctance on the part of the men to investigate deep holes tenanted by birds with such formidable beaks.

After leaving Agattu we found these birds common off Semichi, about Attu and Copper Island, and everywhere at sea. On Torporkov ("Puffin") Island, at the entrance to the harbor of Nikolskoi, Bering Island, we found them by thousands, and they were especially abundant on the water in the outer harbor.

On the way from Bering Island to Petropaulski they were not at all numerous; they were rather common about Avacha Bay, but the numbers here could not be compared with those about the western Aleutian or Commander islands. We saw them frequently

down the Kamchatkan coast to Cape Lopatka, and up into the Okhotsk Sea as far as we went; they were rather common down the Kurils to Simushir, then occasional to the northern end of Yezo.

FRATERCULA CORNICULATA (Naumann).

HORNED PUFFIN. IPATKA. IPATOK. MATSCHIR.

We first met with the Horned Puffin in Unalga Pass, near Unalaska, where it was rather common. It was found about the shores of Unalaska and Atka, and a few companies of six or eight were seen at Agattu, together with some single birds. A few individuals were found at Copper Island, and one or two at Bering Island. They were nowhere nearly as abundant as the preceding.

Subfamily ÆTHIINÆ.

CERORHINCA MONOCERATA (Pallas).

RHINOCEROS AUKLET.

This species was observed in limited numbers at Atka and at Agattu, and in the northern Kurils I occasionally noticed small companies on the water as far south as Simushir.

PTYCHORAMPHUS ALEUTICUS (Pallas).

CASSIN'S AUKLET.

Cassin's Auklets were common at sea in flocks from about southern Oregon to Puget Sound, except in the vicinity of the Columbia River. In Puget Sound they were abundant until we passed Port Townsend. After leaving Union Bay we saw them frequently until we reached the upper part of Georgia Gulf, where they were abundant, the numbers again falling off until we reached the open sea. Here we saw hundreds of them in flocks of from 10 to 50, well offshore. They were also noticed about Unalaska, Agattu, and Atka, and a few were seen just outside the harbor at Attu.

PHALERIS PSITTACULUS (Pallas).

PAROQUET AUKLET. BJELE-BRUSKI. NAATSCHU.

This bird was rather numerous in Unalga Pass as we approached the harbor of Unalaska, and was met with at Atka, Agattu, and Attu, though in small numbers. One flock of five was seen at Bering Island, off some cliffs west of the town, and we saw these Auklets occasionally in the Kurils as far south as Simushir, where there were a number about the rocks.

ÆTHIA CRISTATELLA (Pallas).

CRESTED AUKLET. KONJUGA. KOROKORA. TURUTURA.

A few Crested Auklets were seen near Unalaska, but at Atka, Attu, and especially at Agattu, they were much more numerous. We saw

a few about the Commander Islands, down the Kamchatkan coast to Cape Lopatka, and among the Kurils, where they were common about Simushir. We saw occasional individuals among the southern Kurils almost as far south as Yezo.

ÆTHIA PYGMÆA (Gmelin).

WHISKERED AUKLET. MALINKA KONJUGA. PETUSCHKA. TURUTURK.

ÆTHIA PUSILLA (Pallas).

LEAST AUKLET.

Owing to my inability positively to distinguish these two species in life, I have thought it best to enter my observations under a double heading. Probably most of my remarks refer to *Æ. pusilla* among the Aleutians and to *Æ. pygmæa* in the Kurils.

Abundant in Unalga Pass, and common about Atka, Attu, and especially Agattu; a number of these small auklets were seen about the Commander Islands, down the Kamchatkan coast, and off the Kurils. They were extremely numerous at sea on the day after leaving Simushir, but after that we did not meet with them.

SYNTHLIBORAMPHUS ANTIQUUS (Gmelin).

ANCIENT MURRELET. STARIK. WINGOROUTSCH.

Ancient Murrelets were very common all about the shores of the Aleutian Islands and in the bays and harbors, being rather more numerous about Atka, Attu, and especially Agattu, than elsewhere; they were rather common about Copper and Bering islands, and a few were noticed along the eastern Kamchatkan coast, and down the Kurils as far as Simushir.

BRACHYRAMPHUS MARMORATUS (Gmelin).

MARBLED MURRELET.

The Marbled Murrelet was first noticed in Puget Sound, where it was rather common as far as Port Townsend; a number were seen in different places in the channel between Vancouver Island and the mainland, especially just before entering Seymour narrows. On reaching the open sea we found these birds very common until it became dark, after which we saw no more until we reached Unalaska, where a number were met with in Unalga Pass and about the rocky shores of the island. A female was secured in the inner harbor, near the Dutch Harbor wharf.

BRACHYRAMPHUS, species.

MURRELET.

A few birds belonging to this genus were seen in Avacha Bay, Kamchatka, and down the coast toward Cape Lopatka; but as none were secured their identity is doubtful.

CEPPHUS CARBO Pallas.

SOOTY GUILLEMOT.

This species was only seen near Sakhalin Island, where a few were found in the outer part of Aniwa Bay, and two pairs on the east coast, near Cape Patience.

CEPPHUS COLUMBA Pallas.

PIGEON GUILLEMOT. KAJURKA. SVISTUN.

The Pigeon Guillemot was very common about Unalaska, as well as about all the other Aleutians which we visited. At Agattu and Attu many scattered pairs were found about the cliffs, where they were probably breeding, although I found no eggs. This bird was common at Copper and Bering islands, and we met with occasional pairs at various places in Bering Sea, near the Bogoslovs among others, and also in the Pacific as much as 200 miles from Unalaska.

CEPPHUS SNOWI Stejneger.

SNOW'S GUILLEMOT.

We found Snow's Guillemot common about Cape Lopatka and down the Kurils as far south as the northern end of Yezo. Although I judged from their actions that these birds were breeding on Simushir, I was not fortunate enough to find any eggs.

Subfamily ALCINÆ.

URIA TROILLE CALIFORNICA (H. Bryant).

CALIFORNIA MURRE.

The California Murre was first seen on the day after leaving San Francisco, and from then on, becoming rather more frequent until we were off the mouth of the Columbia River, where they were abundant in flocks of from six to twenty or more. Many companies were seen sitting on logs which had been brought down by the river. They remained numerous until we were well inside the Straits of Fuca, when their numbers fell off, and they finally disappeared off Port Townsend. In the passage between Vancouver Island and the mainland they were very abundant at the northern end of Georgia Gulf and about the entrance of the Seymour Narrows, but were not seen anywhere else. Between Vancouver Island and Unalaska occasional individuals or pairs were seen, becoming more frequent near Unalga Pass, where they were very common. We found them about all the Aleutian Islands, but apparently much less abundant toward the west and about the Commander Islands. They were very common at sea in the vicinity of the Bogoslovs, as already noticed under *Lunda cirrhata*.

URIA LOMVIA ARRA (Pallas).

PALLAS' MURRE. ARE. HARA.

We found this species common at Unalaska and thence westward throughout the Aleutian and Commander islands. They were common about Petropaulski, where one was seen near the town, and down the coast to Cape Lopatka. They were frequent at sea off the Kurils, and common near Simushir. We found them rather common about the rocky shores of Yezo between Hakodate and Mororan. On July 16, when we left Hakodate for the Japan Sea, we found them very numerous all along the rocky shores of Yezo, usually singly, but sometimes in flocks of from ten to twenty-five individuals. The single birds at this time were almost always accompanied by a young chick, so small and inconspicuous on the water that its presence would often have been unnoticed had it not been for its shrill whistle. On September 24, in Aniwa Bay, Sakhalin Island, we found murres very common offshore, and we also found them numerous on the first of October along the northern and eastern shores of Yezo and the southern Kuril Islands. Doubtless many of the murres seen about the Bogoslovs, as noted under *Lunda cirrhata*, were of this species.

Order LONGIPENNES.

Family STERCORARIIDÆ.

STERCORARIUS POMARINUS (Temminck).

POMARINE JAEGER.

A single bird of this species was seen on June 3, on Bower's Bank in Bering Sea. This was the only record for the whole trip.

STERCORARIUS PARASITICUS (Linnæus).

PARASITIC JAEGER. RASBOJNIK.

This jaeger was of rather frequent occurrence in Bering Sea, and was met with on Bower's Bank and about the Aleutians. On land I met with it twice, once at Agattu and once on Bering Island. In the Kurils one was seen at sea north of Simushir.

STERCORARIUS LONGICAUDUS Vieillot.

LONG-TAILED JAEGER.

A Long-tailed Jaeger was seen off the coast of southern Oregon on May 7, another about halfway between Vancouver Island and the Aleutians, and a third on Bower's Bank.

Family LARIDÆ.

Subfamily LARINÆ.

RISSA TRIDACTYLA POLLICARIS Ridgway.

PACIFIC KITTIWAKE. GAVARUSCHKA. KIRUGA. KERÓO.

The Pacific Kittiwake was common in Unalga Pass and in all parts of Bering Sea visited by us, especially on Bower's Bank. A few were seen between Bering Island and Kamchatka, and in the Kurils they were found until we were about half way between Simushir and Yezo.

RISSA BREVIROSTRIS (Bruch).

RED-LEGGED KITTIWAKE. KRASNO-NOGAJA. GAVARUSCHKA.

The Red-legged Kittiwake was seen in small numbers at sea near Unalaska, but became more common in the western part of the Aleutian chain and about the Commander Islands. It was not found in Kamchatka nor in the Kurils.

LARUS BARROVIANUS (Ridgway).

POINT BARROW GULL.

The only Point Barrow Gull observed during the whole trip was on the morning of September 28 while we were anchored in Patience Bay, Sakhalin.

LARUS GLAUCESCENS Naumann.

GLAUCOUS-WINGED GULL. TSCHAIKA.

A few of these gulls were seen about San Francisco Bay the day we left. Two were noticed following the ship on May 7, when we were off the Oregon coast, and another the next day. They were common in all parts of Puget Sound, and abundant about Union Bay, Vancouver Island. We picked them up at sea 20 miles or more south of the Aleutian chain, and found them abundant in Unalga Pass and about Unalaska. They were common at Atka, Attu, and Agattu, especially about the lakes on the last-named island, where several were shot. A few were also noticed about the Commander Islands.

LARUS SCHISTISAGUS Stejneger.

SLATY-BACKED GULL. OUNEMAS.

I found a few of these gulls in Unalga Pass, near Unalaska, but did not meet with the species again until we reached the Commander Islands, when a few were seen both at Copper and Bering islands. About Petropaulski, however, this species was abundant, and it was also abundant at Simushir, in the Kurils, where I secured eight at a small pond near the sea. One of these birds had two unbroken eggs, apparently of some species of cormorant (*Phalacrocorax*), in its stomach, and another a small octopus. We found this species common about the eastern shore of Sakhalin the latter part of September.

LARUS OCCIDENTALIS Audubon.

WESTERN GULL.

The Western Gull was common about San Francisco Bay when we left, and several were seen following the ship at different times until we reached Puget Sound, after which we did not meet with this species.

LARUS VEGÆ Palmén.

VEGA GULL.

This gull was rather common in Unalga Pass, near Unalaska, and was seen again, though not in any numbers, in Avacha Bay, Kamchatka. I have no other records.

LARUS CALIFORNICUS Lawrence.

CALIFORNIA GULL.

The California Gull was common about the bay when we left San Francisco, and individuals were seen following the ship until we reached the mouth of the Columbia River.

LARUS BRACHYRHYNCHOS Richardson.

SHORT-BILLED GULL.

This species was rather common off the mouth of the Columbia River, and was also seen in Puget Sound.

LARUS HEERMANNI Cassin.

HEERMANN'S GULL.

Heermann's Gull was seen occasionally in San Francisco Bay on the day of leaving, but was not met with subsequently.

LARUS CRASSIROSTRIS Vieillot.

JAPANESE BAND-TAILED GULL.

We first met with this species in Hakodate harbor, where it was abundant about the shipping. I was surprised not to see it in Volcano Bay and about Mororan, but it was common along the west coast of Nipon, especially in Nanao harbor, about Sado Island, the Oki Islands, Matsushima, along the Korean coast, and in the Korean Straits. A few were seen at Nagasaki and Kagoshima, and it was common in Tokyo Bay and about Yokohama. I also saw a few at Otaru (Yezo), and it was common in Aniwa Bay, Sakhalin. When we returned from Sakhalin to Hakodate in October it appeared to be just as common as it had been in June and July.

One of the birds observed at Hakodate had the central pair of rectrices entirely white, making a conspicuous break in the black tail band.

LARUS RIDIBUNDUS BRUNNEICEPHALUS (Jerdon).

EASTERN BLACK-HEADED GULL.

I found this gull abundant about the large pond behind the town at Petropaulski, and it was occasionally seen about the inner harbor.

LARUS PHILADELPHIA (Ord).

BONAPARTE'S GULL.

Bonaparte's Gull was a common species in San Francisco Bay when we left, and three small flocks were seen at sea during the afternoon of May 7 off the coast of Oregon. In Puget Sound a small flock was seen as we were passing Port Townsend on our way north. Just as we were entering the Seymour Narrows we saw a large flock of fifty or more of these birds, which is the last record I have for the species.

Subfamily STERNINÆ.

STERNA PARADISÆA Brünnich.

ARCTIC TERN. MARTISCHKA.

The Arctic Tern was met with in small numbers about Atka, Agattu, Attu, and once off Semichi. Single individuals were observed on Bower's Bank, off Semisopochnoi, and near Bering Island.

Terns were also met with off the mouth of the Columbia River and sparingly in Puget Sound, but I am not certain of the species.

STERNA SINENSIS Gmelin.

ORIENTAL LESSER TERN.

A few terns, probably of this species, were seen among the Linschoten Islands, south of Kiusiu.

Order TUBINARES.

Family DIOMEDEIDÆ.

Subfamily DIOMEDEINÆ.

DIOMEDEA NIGRIPES Audubon.

BLACK-FOOTED ALBATROSS.

We picked up the Black-footed Albatross on the first day out from San Francisco, when they were abundant, from four to six or more following the ship all the time until we reached the vicinity of the Columbia River, where they disappeared. We met them again about half an hour after leaving the channel between Vancouver Island and the mainland. Here they were very common, becoming more so as we proceeded west, and reaching their maximum abundance well within sight of the Aleutian Islands. On the day we reached Unalaska, about 20 miles southeast of that island twenty-two of

these birds were collected at the stern of the ship by trailing a piece of meat in the water. When we were within about 10 miles of the island they began to leave, one by one sailing off over the sea out of sight, until, less than half an hour afterward, they were all gone, nor were there any in sight, although the meat was still trailing out astern. It is very remarkable that this species should never be found in any of the enclosed seas bordering the north Pacific, in all of which *D. albatrus* occurs, especially as it is common to within sight of the islands separating those seas from the ocean.

On June 6 a Black-footed Albatross was seen just before coming to anchor in Agattu, about 20 miles offshore; on the 12th, between Attu and Copper Island, one was noticed about the stern in the morning, and two in the afternoon. On June 25 we saw a number between Simushir and Yezo, and again on October 1 they were common off the northern coast of Yezo, but only on the Pacific side of the Kuril chain.

We next met with this species on the first day out from Yokohama, homeward bound, and the birds followed us continuously until we were near the island of Kaui, when they disappeared, to reappear again just east of Molokai, after which they remained common until we were near the Californian coast. They were not nearly so abundant in this part of the Pacific as in the northeast, from California north to Alaska.

Specimens of this bird were obtained about 70 miles west of the Queen Charlotte Islands, at sea. The birds were shot from the ship and picked up by means of a small boat. The uninjured members of the flock, a dozen or more in number, were exceedingly tame, and would remain on the water until the boat was within a few feet of them before taking wing.

I examined carefully with a glass all the dark-colored albatrosses which came within range of the ship, as there was a possibility of the occurrence of *Phabetria palpebrata* (Forster) (=*fuliginosa* of authors) in these waters, it having been recorded from the coast of Oregon; but as it is easily distinguishable on the wing both from *D. nigripes* and immature *D. albatrus*, I have no hesitation in referring all the birds seen in this region to one or the other of these last two species.

DIOMEDEA ALBATRUS Pallas.

SHORT-TAILED ALBATROSS. ALBATROS. PONGAPITH. ATO.

We first saw this species about 200 miles east of Unalaska on the day before our arrival at Dutch Harbor. On the next day two were seen near the Aleutian chain, one of them within 5 miles of the islands. Two more were seen between Attu and Copper Island on June 12; on the 20th one was observed about 20 miles off the Kamchatkan coast, and the next day another in the Okhotsk Sea, near

the mouth of the Aangan River. On October 1 this species was very common about the southern end of the Kurils, on both the inside and outside of the chain.

From these meager notes one might infer that the Short-tailed Albatross was rather rare in the north Pacific, but I believe rather the contrary is the case. Unlike *D. nigripes*, this species is exceedingly shy at sea, and under ordinary circumstances keeps at a very considerable distance from ships, so that it stands much less chance of being observed than that species.

DIOMEDEA IMMUTABILIS Rothschild.

LAYSAN ALBATROSS.

On November 12, two days after leaving Yokohama for Honolulu, a white albatross was observed, apparently darker above than *D. albatrus;* during the succeeding days it became more common until we reached the island of Kaui, after which we did not meet with it. Most probably the species was *D. immutabilis* of Laysan.

Subfamily FULMARINÆ.

FULMARUS GLACIALIS GLUPISCHA Stejneger.

PACIFIC FULMAR. GLUPISCH.

The Pacific Fulmar was first seen the day after leaving San Francisco, when a single individual was observed. The next day several were seen; subsequently they became more and more common until we were off the mouth of the Columbia River, where they were abundant in flocks of sometimes as many as 40 or 50 individuals. After entering Puget Sound no more were seen until we again reached the open sea, where they were common and remained so until we were near Unalaska, when their number fell off. Only a few were seen about that island, and occasional ones in the different parts of Bering Sea which we visited. Rather more were seen on Bower's Bank and off Semisopochnoi than elsewhere. Except for three seen between Agattu and Attu (off Semichi) none were observed until we left Attu for Copper Island, when they reappeared. We found them very common about the cliffs of Copper Island near the town, and they were also rather common about Bering Island. They were numerous along the Kamchatkan coast to Cape Lopatka, and abundant on the cod banks in the Okhotsk Sea, where a hundred or more were observed about the cod-fishing barkentine *S. N. Castle,* which was lying there at anchor. Of all this large flock only two were in the white plumage, the proportion of light to dark birds being very much less on the Asiatic than on the American side of the north Pacific. This fulmar was common in the Kurils, and we saw it until the day before reaching Hakodate. It was not observed about Simushir, however; but at Milne Bay, where we anchored, there are no cliffs suitable

for a nesting site. In La Pérouse Strait we next saw this species, and found it common along the east coast of Sakhalin and across the Okhotsk Sea to the southern Kurils, where, on October 1, it was very abundant. On November 11, the first day out of Yokohama, homeward bound, we again saw the Pacific Fulmar, but only one or two individuals; others were observed on the 12th and 13th, and again on December 10, off the Californian coast.

FULMARUS RODGERSII Cassin.

RODGERS' FULMAR.

Rodgers' Fulmar was identified with certainty only on a few occasions, and only between Vancouver Island and Unalaska. A fine example came within a few feet of me when I was out in a small boat 70 miles west of the Queen Charlotte Islands, and several were seen in the wake of the ship in company with *F. glacialis glupischa*.

Subfamily PUFFININAE.

PUFFINUS GRISEUS (Gmelin).

SOOTY SHEARWATER.

On September 26, when southeast of Cape Patience, Sakhalin, a number of these birds were observed. I have no other records.

PUFFINUS TENUIROSTRIS (Temminck).

SLENDER-BILLED SHEARWATER. TSCHORNIJ GLUPISCH.

I saw this bird only once, on September 30, in the Okhotsk Sea, near the southern Kurils.

PUFFINUS LEUCOMELAS Temminck.

TEMMINCK'S SHEARWATER.

This was the only sea-bird seen in the Japan Sea, where it appeared to be not uncommon. We rarely saw more than six or eight in a day, however, but this was probably due to the fact that, like *Diomedea albatrus*, this species will not ordinarily come near a ship, acting rather as if repelled by its presence. We found this bird in every part of the Japan Sea south of the straits of Tsugaru; about Sado and the Oki Islands, Matsushima, and along the Korean coast. South of the Korean Straits it became rather more common, especially among the Linschoten Islands. From Kagoshima to Yokohama along the southern coast of Japan we found this species in considerable numbers, especially off the little harbor at Oshima Ko, where we saw flocks of fifty or more individuals. We did not meet with this bird east of Sagami Bay.

BULWERIA BULWERI Jardine and Selby.

BULWER'S PETREL.

Bulwer's Petrel was rather common among the Linschoten Islands, off the southern end of Kiusiu, and also among the Seven Islands south of Yokohama. I was able to recognize this interesting species at once, having previously made its acquaintance among the Azores and between the Azores and Gibraltar.

Subfamily PROCELLARIINAE.

OCEANODROMA FURCATA (Gmelin).

FORK-TAILED PETREL. STURMOFKA.

The Fork-tailed Petrel appeared as soon as we were well out to sea after leaving the channel between Vancouver Island and the mainland, rapidly becoming more common as we approached the Aleutians, until the day before reaching Unalaska, when they were very abundant. They were common in Unalga Pass, and we found them on Bower's Bank and commonly about all the Aleutians, and as far west as Copper Island. On Agattu they were apparently breeding in holes along the sides of a deep ravine which makes in from the sea at Macdonald Bay, most of them being met with more than a quarter of a mile inland. They were frequently seen flying up and down this ravine to and from the sea, and entering and leaving burrows in its sides. We did not see these birds after leaving Copper Island, where they were common, until we reached the Kurils, where they were again rather numerous until we were south of Simushir, after which this species was not met with again.

OCEANODROMA LEUCORHOA (Vieillot).

LEACH'S PETREL. MALINKA TSCHORNAJA STURMOFKA.

Leach's Petrel was noticed shortly after leaving the channel between Vancouver Island and the mainland, and was occasionally seen all the way up to the Aleutians, although never as common as *O. furcata*. About the islands they were sometimes seen by day, but not very often; at night, however, they were attracted by the lights of the ship and could be heard chirping all about, like so many bats. Doubtless *O. furcata* was common at night about the ship also, but as all the birds which were caught on board were of the present species I can make no positive statement that such was the case, although I have examined specimens of the latter species taken on shipboard at night at Kiska. After leaving Copper Island, where the species was not uncommon, we did not see it again until we were south of Paramushir, where it became again common until we were well south of Simushir. The greatest number heard on any

one night was about 100 miles northeast of the last-named island. On August 16, in the Linschoten Islands, a single bird, apparently of this species, was observed.

Salvin[a] mentions a specimen from the Kurils in the British Museum with some white at the base of the outer rectrices and also along the outer web of the outermost feathers. A specimen from Copper Island in my collection exhibits this peculiarity, but Kurilian birds have no more white on the tail than others in the National Museum collection from the North Atlantic; so I believe it to be merely a case of individual variation, as, except for this one example, there is no difference between my birds and a series from the north Atlantic.

OCEANODROMA HOMOCHROA (Coues).

ASHY PETREL.

A few of these birds were seen when we were well out from San Francisco, and occasionally during the next day.

Order STEGANOPODES.

Family PHAËTHONTIDÆ.

PHAËTHON CANDIDUS (Draper).

WHITE TROPIC BIRD.

On August 15, when we were in the Linschoten Islands, two pairs and a single bird of this species, at different times, came close to the ship and, after circling about a few times, disappeared in the direction of the islands.

PHAËTHON RUBRICAUDA Boddaert.

RED-TAILED TROPIC BIRD.

One example of this handsome species was observed on August 14, while we were in the Linschoten Islands. It can hardly be doubted that both these species are much more common about southern Japan than is commonly supposed.

Family SULIDÆ.

SULA LEUCOGASTRA Boddaert.

BOOBY.

A single Booby passed low over the bows of the ship in the afternoon of August 14, when we were among the Linschoten Islands. It was the only one seen.

So far as I know, this group of islands has never been visited by an ornithologist. From their geographical position, as well as the greatly diversified conditions which obtain there, it would be surprising if a thorough survey did not yield extremely interesting results.

[a] Cat. Birds Brit. Mus., vol. 25, 1896, p. 349.

Family PHALACROCORACIDÆ.[a]

PHALACROCORAX FILAMENTOSUS Temminck and Schlegel.

TEMMINCK'S CORMORANT.

What was probably this species was very common about the shores of Matsushima at the time of our visit.

PHALACROCORAX AURITUS ALBOCILIATUS Ridgway.

FARRALONE CORMORANT.

It being impossible to separate this from the following form in observations taken on shipboard, I have arbitrarily placed my records from San Francisco to Puget Sound under the present heading, and the notes from Puget Sound north under *P. a. cincinatus* as roughly representing the distribution of the two subspecies at the time of my visit.

This cormorant was seen near the entrance of San Francisco Bay, and was common outside. We met with it at sea all along the coast, and it was abundant off the mouth of the Columbia River.

PHALACROCORAX AURITUS CINCINATUS (Brandt).

WHITE-CRESTED CORMORANT.

Double-crested cormorants were very common in Puget Sound up to Port Townsend, but less so from there on. They were occasionally seen, however, about Dockton, and two were noticed in Union Bay, Vancouver Island. I have a note of a few being seen in Unalga Pass near Unalaska, and I found them at Atka, Attu, and Agattu.

PHALACROCORAX PENICILLATUS (Brandt).

BRANDT'S CORMORANT.

This bird was common about San Francisco Bay when we left, and was seen along the coast rather commonly as far north as the Columbia River.

PHALACROCORAX PELAGICUS RESPLENDENS Audubon.

BAIRD'S CORMORANT.

We found this cormorant common about the Golden Gate, and abundant all the way up to Puget Sound. On the second day out we passed two flocks, one of fifty or more and the other of upward of one hundred and fifty individuals. It was very abundant off the

[a] PHALACROCORAX PERSPICILLATUS Pallas.

PALLAS' CORMORANT.

I had hoped that some trace of this magnificent species, which formerly occurred on Bering Island, might be found on some of the little-known islands and rocks at the extreme western end of the Aleutian chain, but in this I was disappointed. It is undoubtedly quite extinct.

mouth of the Columbia River in large flocks, and was common in Puget Sound as far as Port Townsend, where the numbers fell off and the bird gradually disappeared.

PHALACROCORAX PELAGICUS PELAGICUS Pallas.

PELAGIC CORMORANT. MALINKIJ URIL.

This bird was very common about the Aleutians, being first seen in Unalga Pass near Unalaska, and from then on commonly whenever we were near land. It was especially abundant about Agattu and off Semichi, and we found it at Copper and Bering islands, frequently along the coast of Kamchatka, and down the Kurils as far as Simushir, about the cliffs of which island a number were seen. Probably they were breeding here, as in the stomach of a gull (*Larus schistisagus*) I found two cormorant's eggs, possibly belonging to this species.

PHALACROCORAX URILE (Gmelin).

RED-FACED CORMORANT. BOLSCHOJ URIL.

I only identified this species with certainty a few times; near Agattu, near Bering Island, near Cape Lopatka, and once in the northern Kurils, where a specimen flew across the bow of the ship within a few feet of me.

Order ANSERES.

Family ANATIDÆ.

Subfamily MERGINÆ.

MERGUS AMERICANUS (Cassin).

AMERICAN MERGANSER.

I have one record for this species. A male was seen on May 26 on a small pond near Dutch Harbor, Unalaska, and another, possibly the same bird, was seen at the same place on the next day. A bird probably of this species was seen on one of the lakes at Agattu.

MERGUS MERGANSER MERGANSER (Linnæus).

GOOSANDER. MERGANSER. BOLSCHOJ KRACHAL. TUIPE.

A pair of these birds was found on a large pond near Milne Bay, Simushir.

MERGUS SERRATOR (Linnæus).

RED-BREASTED MERGANSER. KRAKHAL.

A small flock of Red-breasted Morgansers was seen in the outer bay at Unalaska on May 25.

Subfamily ANATINÆ.

ANAS PLATYRHYNCHOS Linnæus.

MALLARD. SELESENN. SA'ANGITSCH. SAAITSCHITSCH.

The Mallard was common in the large swamp near Nikolskoi, Bering Island, but I saw it nowhere else.

NETTION CRECCA (Linnæus).

TEAL. TSCHIROK.

Some of these teal were observed in the swamp on Bering Island.

NETTION CAROLINENSIS (Gmelin).

GREEN-WINGED TEAL.

I have a note that a bird of this species was seen at Unalaska on May 25.

DAFILA ACUTA (Linnæus).

PINTAIL. VOSTROCHVOST. PAKARICHU. CLAGI.

I noticed a few birds of this species in the large swamp near the town of Nikolskoi, Bering Island.

Subfamily FULIGULINÆ.

MARILA MARILA (Linnæus).

SCAUP. TSCHERNIK.

The scaup was abundant in Puget Sound, up to and past Port Townsend, but we did not find it in the more narrow portions. It was, however, common about Union Bay, and occasionally seen in the inland passage wherever it widened out. It was rather common at Atka and Agattu.

AYTHYA VALLISNERIA (Wilson).

CANVAS-BACK.

We only noticed the Canvas-back in Puget Sound, where it was rather common in the wider reaches before we reached Port Townsend.

HARELDA HYEMALIS (Linnæus).

OLD-SQUAW. SAFKA. AANGA.

I obtained an adult male of this species in breeding plumage at Simushir on June 23. It was extremely emaciated and apparently unable to fly. A tumor about an inch and a half long in the body cavity probably accounted for the bird's condition. The testicles were not enlarged.

HISTRIONICUS HISTRIONICUS (Linnæus).

HARLEQUIN DUCK. KAMENUSCHKA.

The Harlequin Duck was very common at Unalaska about the rocky shores, usually in small flocks. It was common about Atka, where one or two were seen inland on a small stream; on Attu and Agattu it was also numerous on the streams as well as along the coast; a number were seen at Copper and Bering islands, and a few at Simushir in the Kurils.

SOMATERIA V-NIGRA Gray.

PACIFIC EIDER. PISTRAK.

The Pacific Eider was common at Agattu and Attu. On the former island a nest with four eggs was found near the beach on June 8. This bird was usually seen along the rocky portions of the shore, and was particularly numerous about Macdonald Bay, Agattu, and the entrance of the harbor at Attu.

OIDEMIA AMERICANA Swainson.

AMERICAN SCOTER.

This scoter was seen in Puget Sound and about Union Bay, Vancouver Island, but was not nearly so abundant as *O. deglandii* or *O. perspicillata*.

OIDEMIA STEJNEGERI Ridgway.

STEJNEGER'S SCOTER. TURPAN.

On September 30 and October 1, when among the small low islands northeast of Yezo, and the southernmost Kurils, we found these ducks very common, usually in small flocks. As they were not seen at this point when we passed in the summer, I judged these birds to be migrants on their way south. We did not find them about the other Kurils nor about Kamchatka.

OIDEMIA DEGLANDII Bonaparte.

WHITE-WINGED SCOTER.

We saw a few White-winged Scoters on May 7 off the Oregon coast, and on the next day found them abundant off the mouth of the Columbia River. They were common everywhere in Puget Sound, and very abundant at the time of our visit at Union Bay, Vancouver Island, far outnumbering any other duck. I saw a single pair in Unalga Pass, but did not meet with it again in the Aleutians.

OIDEMIA PERSPICILLATA (Linnæus).

SURF SCOTER.

In Puget Sound this duck was common, although not so abundant as *O. deglandii;* it was common at Union Bay, and a few were seen

at Attu and Agattu. It was also rather common at sea when we were off the mouth of the Columbia River.

Subfamily ANSERINAE.

BRANTA CANADENSIS HUTCHINSII (Richards).

HUTCHINS' GOOSE.

This goose is the most abundant bird on Agattu, where it breeds by thousands. When we approached the shore we saw a number of geese flying about the cliffs and bluffs, and soaring in circles high in air. On landing I walked up the beach to the left and soon came to a small stream which enters the sea through a gap in the high bluffs, when I saw fifty or more of these birds along the bank preening their feathers. From this point I walked inland over the rough pasture-like country toward a lake where this stream rises. Geese were seen on all sides in great abundance, walking about the grassy hillsides in companies of six or eight to a dozen, or flying about from one place to another. When on the ground they were comparatively shy; at about 100 yards distant they would stop feeding and watch my movements; at about 50 yards they generally took wing; but instead of flying away they would circle about and fly toward me, often not more than 10 feet over my head, as if to see what sort of a strange beast it was which thus intruded on their domains. I shot nine, using merely a very light charge of powder with an ounce of No. 10 shot which I had brought with me for the purpose of securing specimens of song sparrows (*Melospiza*) and longspurs (*Calcarius*); even with that light load I secured two at one discharge of my 12-bore. I believe I could have killed a hundred or more in the course of a morning's walk had there been any object in so doing. The actions of these geese on this seldom visited and desolate island reminded me of the accounts given by travelers who have visited Kerguelen of the habits of the native teal (*Dafilula eatoni*) there. Although common on the seashore, these geese were more abundant inland, especially in marshy places, and where there was an abundant growth of long rank grass.

When I had gone inland between a mile and a mile and a half from the sea, a recall was blown from the ship, as a strong breeze had come up from the sea which made the anchorage unsafe, and I was forced to take a bee line to the beach, abandoning my geese, which I had "cached" along the route by which I had come, to be picked up on my return. On reaching the beach I sent a sailor back to my nearest pile of birds, consisting of four of these geese, three *Larus glaucescens*, some puffins (*Lunda cirrhata*) and other Alcidae, and a few ducks, and he soon returned with the geese and gulls. I found it impossible to prepare the skins of any large birds that evening, so they were stowed away until such a time as I could find leisure

to attend to them. The next day I found that, owing to their having been placed near some steam pipes, the geese were too far gone for preservation, and I was reluctantly obliged to throw them away. I took color notes and measurements of each specimen, however, which may prove of interest.

No. 1. Dimensions: Wing 14.90 inches; tail 5.75 inches; rectrices 16. White cheek patches confluent on throat, with a few scattered dark feathers in the median line; white collar about lower neck continuous all around, but only about half an inch wide; white of anal region sharply marked off from brown of breast and abdomen.

No. 2. Wing 15.75 inches; tail 5.62 inches; rectrices 16; white cheek patches divided for their anterior half by a black peninsula three-quarters of an inch wide at the base, narrowing to five-eighths of an inch at its end, and a row of scattered black specks from the end of the peninsula to the posterior border of the cheek patches in the median line of the throat; collar on lower neck 1 inch wide, but narrowing toward dorsal surface, where it is crossed by a bar of black, one-quarter of an inch in width, in the median line; underparts as in No. 1.

No. 3. Wing 16.12 inches; tail 5 inches; rectrices 14; cheek patches divided for their anterior half as in No. 2; white collar on lower neck three-quarters of an inch wide in front, decreasing in width toward dorsal surface, where it is crossed by a bar of black; underparts as in Nos. 1 and 2.

No. 4. Wing 15.25 inches; tail 5.50 inches; rectrices 16; cheek patches small, and entirely separated by an isthmus three-quarters of an inch wide at the anterior and posterior ends, narrowing to one-half an inch in the middle; white collar on lower neck one-quarter of an inch wide in front, narrowing behind, where it is much broken up and divided by a black bar in the median line; upper surface somewhat darker than the lower, the other birds having been uniformly colored; this specimen was also slightly darker throughout, and was apparently brooding, a large patch on the breast being bare of feathers.

In a patch of long grass near the top of a bluff just behind the beach I found a nest containing three eggs belonging to this species.

At Attu I found this goose not uncommon, but they do not breed there. Several were seen on a small islet to the right of the harbor entrance, and others flying overhead at various places in the lowlands. The natives here told me of their breeding in great abundance on Agattu, and also in lesser numbers at Semichi, and they also said that the ravens on those islands steal their eggs and bury them for winter consumption. The absence of foxes from Agattu and Semichi undoubtedly accounts for the occurrence of this species on these islands in such abundance.

Order HERODIONES.

Suborder HERODII.

Family ARDEIDÆ.

Subfamily ARDEINÆ.

ARDEA HERODIAS FANNINI Chapman.

NORTHWEST COAST HERON.

This bird was observed several times about Union Bay, Vancouver Island.

ARDEA, species.

HERON.

Herons were seen at various places along the Japanese coast, at the Oki Islands, Matsushima, and in the Linschoten Islands. One was also seen on October 1 among the small islands northeast of Yezo. As no specimens were obtained, their identity is uncertain, though I am almost sure that the last was an example of *Ardea cinerea jouyi*.

Order PALUDICOLÆ.

Suborder GRUES.

Family GRUIDÆ.

GRUS CANADENSIS (Linnæus).

LITTLE BROWN CRANE.

On the morning of June 8 while ashore on Agattu Island I encountered a pair of these birds, but could not succeed in getting anywhere near them. On being flushed they never flew for any great distance, but always alighted far out in the open pasture-like areas, out of reach from any rocks or other suitable cover. I tried twice to creep up on them under the lee of some small hills, only to find that they had walked a long way from the spot where they had settled, and I therefore gave up the chase as hopeless.

Order LIMICOLÆ.

Family PHALAROPODIDÆ.

PHALAROPUS FULICARIUS (Linnæus).

RED PHALAROPE.

The only time I observed this bird was just before reaching Unalaska. On the morning of the day we reached that island thousands of these birds were seen, mostly in flocks of from fifty to a hundred or more,

but many singly or in small companies. Most of the birds were flying about in an aimless sort of way, but many were on the water. When we were about 5 miles from the coast the birds began to get less frequent and finally disappeared.

LOBIPES LOBATUS (Linnæus).

NORTHERN PHALAROPE.

The Northern Phalarope was common on the pools in the marshes on Bering Island, but was not met with anywhere else.

Family SCOLOPACIDÆ.

ARQUATELLA MARITIMA COUESI Ridgway.

ALEUTIAN SANDPIPER. LAJDINIJ KULIK.

The Aleutian Sandpiper was very common on the Aleutian Islands, especially at Atka, Agattu, and Attu, and was also found on the Commander Islands. If frequents the more rocky portions of the shores, where it is usually very tame, and is abundant in the inland marshy districts and along the swampy banks of the streams. The cry is loud and clear, bearing a striking resemblance to the call of the Flicker (*Colaptes auratus*). At Attu and Agattu I found them most abundant, occurring everywhere in the marshy lowlands and along the shore, singly or in pairs. At Attu, although more common in the lowlands than anywhere else, they were found high up on the mountains wherever the snow had melted sufficiently to uncover the moss underneath. They were frequently seen about a large bare patch on the summit of one of the mountains to the left of the harbor entrance. On the side of one of these mountains, 700 feet or more above the valley, I found a nest of this species with four eggs, near an extensive patch of snow. The nest was deep cup-shaped, with the edges even with the surrounding moss; the eggs were brownish olive, rather dark, spotted and blotched, chiefly at the larger end, with deep brown and purplish gray.

PISOBIA DAMACENSIS (Horsfield).

LONG-TOED STINT.

I found this trim little species rather common in the large swamp at Bering Island, where specimens were secured.

HETERACTITIS INCANUS (Gmelin).

WANDERING TATLER. TSCHORNIJ KULIK.

This species was seen at Unalaska near Dutch Harbor, at Agattu, and at Attu, but was nowhere common. The specimens brought back are from Unalaska.

Family APHRIZIDÆ.

ARENARIA MELANOCEPHALA (Vigors).

BLACK TURNSTONE. KIDMALGIK.

On the first day out of San Francisco, May 4, we saw several small flocks of these birds on their way north; each succeeding day they became more abundant until on the afternoon of May 8 we saw them by thousands, in flocks of from ten or twenty to several hundred. At one time, about 2 o'clock in the afternoon, the whole sea appeared dotted with white, so abundant were they. All the birds noticed were headed up the coast, going the same direction as we.

In the mornings these birds were comparatively rare; they began to appear about 11, and increased in numbers until about 2, when they were very abundant; shortly after 3 there was a falling off until by half past 4 few, if any, were to be seen. This was true every day we were at sea on the voyage from San Francisco to Puget Sound. Whether they spent the night and early morning on the neighboring shores or resting on the water I am unable to say; but all we saw were on the wing; possibly there were other shore birds in these multitudes, but all which came near the ship were of this species.

Order GALLINÆ.

Suborder PHASIANI.

Family TETRAONIDÆ.

Subfamily TETRAONINÆ.

BONASA UMBELLUS SABINI (Douglas).

OREGON RUFFED GROUSE.

I never found ruffed grouse nearly so common as this subspecies was about Union Bay, Vancouver Island. They were abundant in all the wooded districts, and the males were heard drumming on all sides.

LAGOPUS LAGOPUS ALEXANDRÆ J. Grinnell.

ALEXANDER'S WILLOW PTARMIGAN.

Lagopus lagopus alexandræ J. Grinnell, Univ. of California Publ., Zool., vol. 5, 1909, No. 2, p. 204 (Feb. 18).

In the course of my work upon the collections which I made while on the *Albatross*, I had occasion to enter rather deeply into the question of the recognizable forms belonging to the willow ptarmigan group in North America. The results from this study were not entirely satisfactory, owing to the absence of material from certain important intermediate districts, and of specimens from all localities in strictly comparable plumages, so the work was temporarily laid aside until further material might become available. Mr. Joseph

Grinnell had, in the course of his work on Alaskan birds, become interested in the problem presented by the willow ptarmigan. I explained to him the general results which I had attained from the study of the material in Washington, and urged him to name the southern Alaskan form, which he has done. As I have had no opportunity of again taking up the question, I give in the following paragraphs, without change, the notes I made in 1907, hoping that they may prove of some value.

A careful examination of the material available in Washington, consisting of 115 specimens of North American willow ptarmigan, has convinced me that there are at least two well-marked forms of this bird inhabiting the country, in addition to the subspecies found in Newfoundland (*Lagopus lagopus alleni* Stejneger), which appear to be readily distinguishable from birds from Norway. I have not been able to examine specimens from eastern North America south of Labrador, except from Newfoundland, but the indications are that a race inhabits this district which is similar to *Lagopus lagopus alexandræ*, but which will probably turn out to be a new form peculiar to the region.

There seem to be slight, but apparently constant, differences between birds from various parts of the northwest, which I have considered collectively as *Lagopus lagopus alexandræ*. For instance, the bird inhabiting the mountains of southeastern Alaska differs from that of the coasts of the Alaska peninsula and the islands adjacent, while these, again, are not quite the same as others from the coast of Norton Sound. With but 32 specimens from the entire Territory of Alaska, however, I cannot hope to solve the problem. At any rate, although perfectly distinct from *L. l. albus*, *L. l. alexandræ* exhibits much more plasticity than the well-marked and comparatively stable northern form. The color comparisons were made from 12 specimens from the Shumagin Islands and 6 from Alaska in the perfected spring plumage, and over twice as many from northern Labrador, taken at the same time and apparently in the same plumage.

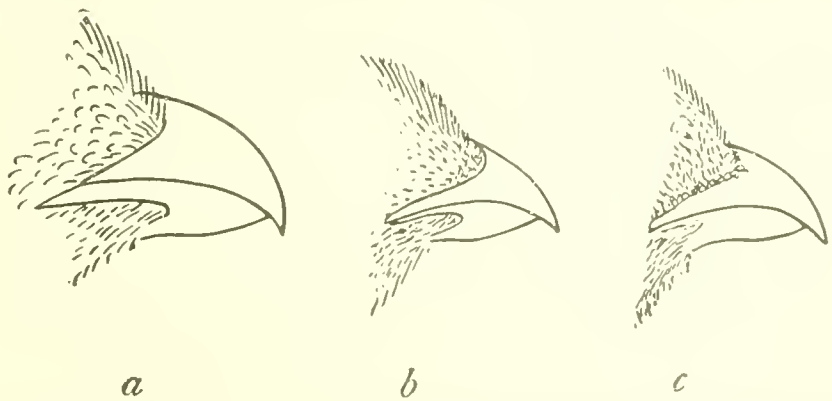
I have examined specimens from the following localities: Twenty from Newfoundland, 60 from Labrador, 3 from central arctic North America, 18 from the mainland of Alaska, 2 from Kadiak Island, and 12 from the Shumagin Islands. Three examples from Norway were regarded as true *Lagopus lagopus lagopus*.

Of these specimens, all those from Labrador and central arctic America, with others from Point Barrow, Kotzebue Sound, Cape Lisbourne, Kowak River, Yukon River, and near St. Michaels, belong to a well-differentiated race, with the beak very large, high, and stout, the culmen strongly arched, and usually with a prominent ridge from the inferior corner of the maxilla to in front of the nostril. They are identical among themselves, it being impossible to tell from the ex-

amination of any one specimen whether it was taken in Alaska or in Labrador. A number of young birds in various stages from Labrador, besides the 60 adults examined, show that this character of the large beak is assumed at a very early age. My Norwegian specimens have very small beaks, not noticeably larger than those of *Lagopus mutus* from the same locality.

In regard to the nomenclature, Gmelin, in 1788,[a] based the name [*Tetrao*] *albus* upon the "Lagopède de la Baye d'Hudson" of Buffon,[b] which is unmistakably this form. The other references cited by Gmelin under this species, as well as under his [*Tetrao*] *lagopus* of the previous page, include old and new world forms of both the *Lagopus lagopus* and *Lagopus mutus* groups jumbled together.

This form should be known, therefore, as *Lagopus lagopus albus*, the type-locality being Hudson's Bay, and the habitat from northern Labrador westward and northwestward, reaching the Alaskan shores



SUBSPECIES OF LAGOPUS LAGOPUS. *a*. LAGOPUS LAGOPUS ALBUS (FROM A SPECIMEN FROM UNGAVA). *b*. LAGOPUS LAGOPUS ALEXANDRÆ (FROM A SPECIMEN FROM THE SHUMAGIN ISLANDS). *c*. LAGOPUS LAGOPUS LAGOPUS (FROM A SPECIMEN FROM NORWAY).

of the Arctic Ocean south in Alaska to parts of the lower Yukon valley and St. Michaels.

Lagopus lagopus alexandræ is a somewhat smaller form, with a much smaller and weaker beak, the culmen regularly curved as in *L. l. lagopus*. The general coloration above is deep rich chestnut, thickly and finely vermiculated with black, each feather narrowly tipped with white; upper throat and face dusky; sides of head and neck, lower throat, and fore neck clear chestnut, the breast becoming finely vermiculated with black, increasing in extent posteriorly; sides and flanks very dark and clouded with blackish, the feathers tipped with buff; most of wings and under tail-coverts, middle of underparts, thighs, and feet, white.

Measurements (average): Wing 193 mm.; tail 120 mm.; tarsus 38 mm.; middle toe 28.5 mm.; culmen 17.5 mm.; depth of bill at base 12 mm.; distance from inferior corner of maxilla to tip of culmen 21.5 mm.; width of bill at base 12 mm.

[a] Syst. Nat., vol. 1, pt. 2, p. 750.

[b] Hist. Nat. Ois., vol. 2, 1771, p. 276 [but *not* pl. 9].

Judging from my material this appears to be a more richly colored, darker, more finely marked form than *L. l. albus*, the markings above finer, with much less rufous, and the lower part of the præpectus finely vermiculated, instead of clouded with black.

The single specimen in my collection was obtained by Mr. F. M. Chamberlain on July 13, 1905, on Twin Rift Peak above McDonald Lake in southeastern Alaska, at an elevation of about 3,000 feet. It is a male bird, and was followed by a brood of young at the time of capture, although the ground was still covered with patches of snow.

This bird differs in some respects from the series of *L. l. alexandræ* from other parts of Alaska; the culmen is strongly curved toward the tip instead of regularly curved for its entire length, and the general coloration is darker and more rufous, the feathers above tipped with buff instead of white. It measures: Wing 190 mm.; tail 117 mm.; tarsus 39 mm.; middle toe 27 mm.; culmen 19 mm.; depth of bill 11 mm.; distance from inferior corner of maxilla to tip of culmen 23 mm.; width of bill at base 12 mm. It is possible that it may represent a new race peculiar to the mountains of southeastern Alaska, but a large series will be necessary definitely to determine this point.

KEY TO THE AMERICAN SUBSPECIES OF LAGOPUS LAGOPUS.

I. Shafts of primaries and secondaries black; primaries conspicuously marked with black in distal portion (*Newfoundland*).

Lagopus lagopus alleni (Stejneger).

II. Shafts of secondaries, and usually of primaries, white; no black markings on primaries.

a. Bill very large, high, and stout, culmen strongly curved; size large (wing about 196 mm.; tail 125 mm.; tarsus 40 mm.); coloration above dusky, coarsely vermiculated with rufous and grayish buff (*northern Labrador, westward and northwestward to northern Alaska, reaching Point Barrow, Kotzebue Sound, Cape Lisbourne, and Kowak River*).

Lagopus lagopus albus [a] (Gmelin).

b. Bill moderate, culmen regularly curved; size smaller (wing about 193 mm.; tail 120 mm.; tarsus 38 mm.); coloration above chestnut, vermiculated with black, and sometimes also with buff (*southern Alaska, from coasts of Norton Sound and Alaska Peninsula, including Kadiak and the Shumagin Islands, southeastward to mountains of southeastern Alaska*).

Lagopus lagopus alexandræ J. Grinnell.

LAGOPUS LAGOPUS, subspecies.

WILLOW PTARMIGAN.

Some form of Willow Ptarmigan was found to be not uncommon in the lowlands behind Petropaulski, Kamchatka, but the birds were very shy and I did not succeed in getting any specimens.

[a] *Type-locality.*—Hudson Bay.

LAGOPUS RUPESTRIS NELSONI Stejneger.

NELSON'S PTARMIGAN.

I found this bird rather common about the summit of the mountain on Dutch Harbor Island, Unalaska, and also saw it frequently on the lower slopes, except in the immediate vicinity of Dutch Harbor. At the time of my visit the birds were mostly paired, and were very shy, rarely allowing a near approach. Most of the birds were in the dark plumage, but many were mottled with white and one was noticed almost entirely white. The males were very noisy, and their croaking could be heard on all sides; several were seen to fly up into the air to a considerable height and then sail down, emitting their peculiar croaking rattle. The powers of flight possessed by these birds is very great; few that were flushed alighted within half a mile, and several flew directly out across the bay toward the mountains on the other side, over two miles away. Practically all the birds seen were on or in the immediate vicinity of snow, none being found in the comparatively level grassy districts near the towns of Dutch Harbor or Unalaska, where the snow had all melted. On the rugged northeastern end of Dutch Harbor Island, however, the birds were found on the mossy lower slopes, and one or two on the seacoast itself about the mouth of snow-filled ravines. The six specimens obtained are all typical and exhibit no peculiarities.

LAGOPUS RUPESTRIS ATKHENSIS (Turner).

TURNER'S PTARMIGAN.

At Atka I was much surprised to find ptarmigan abundant all over the grassy lowlands, and none at all even on the lower slopes of the mountain, just the reverse of my experience at Unalaska. As on that island, the birds were usually in pairs and very shy, rising a long distance away. Their white wings made them very conspicuous. They never went far after being flushed, however, and, the ground being fairly level, it was usually possible to obtain a second shot. Ptarmigan appear to be much more numerous here than at Unalaska, occurring even in the vicinity of the town, and I had no trouble in securing all the specimens I wished.

LAGOPUS EVERMANNI Elliot.

ATTU PTARMIGAN.

I did not find this bird at all common on Attu, doubtless because I did not succeed in locating its favorite haunts. During an entire day's trip over the mountains on the right of the harbor, behind the town, and about the large lake at the summer encampment only three were seen, one in the mountains above the lake and two in the

lowlands between the town and the lake. All three were shot. On arriving at the ship one of the men told me he had never seen ptarmigan so common as about the summit of the mountains at the left of the harbor entrance. As he had had considerable experience with ptarmigan in seldom visited portions of Alaska, and was a reliable man, I arranged to visit the locality the next day with him as a guide in order to obtain a series of this little known species. We started early and reached the place a little before noon, but, although the droppings of the birds were extremely abundant everywhere, we saw none of the birds themselves. Just as we were preparing to leave, after searching the whole district thoroughly, a fine cock came flying over from one of the neighboring peaks and was promptly secured. On our way back to the shore we saw one other which was chased for over a mile but without success. The only male specimen taken is darker than any in the National Museum collection, being sooty black with but few traces of rusty vermiculations.

LAGOPUS RIDGWAYI Stejneger.

RIDGWAY'S PTARMIGAN. KUROPATKA.

Although we searched the mountains about the town on Copper Island carefully, we found none of these birds and only a very few of their droppings; at Bering Island we also failed to find them, our search, however, being limited to the lowlands behind the town. The birds are, nevertheless, common in certain parts of both islands.

Order COLUMBÆ.

Family COLUMBIDÆ.

COLUMBA FASCIATA Say.

BAND-TAILED PIGEON.

A small flock of Band-tailed Pigeons was seen at Union Bay, Vancouver Island, but, as the birds were very shy, specimens could not be secured.

Order RAPTORES.

Suborder FALCONES.

Family FALCONIDÆ.

Subfamily BUTEONINÆ.

MILVUS ATER MELANOTIS (Temminck and Schlegel).

SIBERIAN BLACK KITE.

This species was very common about all the Japanese towns we visited, but I did not notice it at the Oki Islands, Sado Island, nor Matsushima. It was particularly abundant at Hakodate, where I counted twenty-two sailing about together over some object of

mutual interest in a field. This bird in the Japanese harbors plays the part of scavenger, assisting the numerous gulls. It is very adept at picking bits of food up from the water, devouring it afterwards on the wing.

?BUTEO BUTEO JAPONENSIS (Gmelin).

JAPANESE BUZZARD.

On Matsushima a *Buteo* was very common, which may have been this species.

AQUILA CHRYSAËTOS (Linnæus).

GOLDEN EAGLE.

I observed this species once on Unalaska and several times on Atka, where it appears to be rather common.

THALASSAËTUS PELAGICUS (Pallas).

KAMCHATKAN SEA EAGLE.

On May 26 while collecting birds in the broad valley which makes up into the mountains in a southerly direction from the town of Unalaska, in company with Dr. F. E. McCullouch, U. S. Navy, of the *Albatross*, I saw a bird of this species. It sailed across the valley almost directly above our heads and very low down. I happened to have a Winchester repeating rifle with me at the time. The bird offered an exceptionally easy shot, but unfortunately the rifle missed fire. On returning to the ship, Prof. J. O. Snyder, of Stanford University, California, told me of a peculiar eagle he had seen which I have no doubt was the same bird; he had met with it about a mile away from the place where I saw it. A thorough survey of these islands may show that this species, as well as *Haliaëtus albicilla*, which has been recently recorded from Unalaska, are of more or less regular occurrence throughout the whole group.

I subsequently met with this bird in Kamchatka where I saw several examples in the vicinity of Petropaulski, and in the island of Sakhalin, where I saw two near Korsakoff.

HALIAËTUS ALBICILLA BROOKSI (Hume).

EASTERN GRAY SEA EAGLE.

This bird was seen a few times in the vicinity of Petropaulski, and once near Korsakoff, Sakhalin.

Specimens of white-tailed sea eagles from eastern Asia, the Commander Islands, and Japan are small, and are apparently identical with specimens in the National Museum collection from northern India, belonging to the race which has been named *brooksi* by Hume. Probably Aleutian and northwestern American records should be referred to this form.

HALIAËTUS LEUCOCEPHALUS ALASCANUS C. H. Townsend.

ALASKAN BALD EAGLE.

Bald eagles were very common about Union Bay, Vancouver Island, and abundant at Unalaska. They were very common at Atka, where on a small island off the coast an Indian shot 175 last winter to prevent their making depredations on the young of a colony of blue foxes which had been established there. I did not see any of these eagles on Agattu, Attu, or the Commander Islands.

Family FALCONIDÆ.

FALCO PEREGRINUS ANATUM (Bonaparte).

DUCK HAWK.

In my collection there is a typical young female of this subspecies, secured by Mr. F. M. Chamberlain off the Colombian coast, about 100 miles southwest of Panama, in November, 1903. It agrees with another specimen from Colombia in the National Museum collection, and with specimens from the United States.

FALCO PEREGRINUS PEALEI Ridgway.

PEALE'S FALCON. TSCHORNIJ JASTRIP. AGULEK.

This species was observed on all the Aleutian Islands we visited, but did not appear to be abundant. It was noticed at Bering Island, and several were seen at Simushir in the Kurils. Peale's Falcon is strikingly different from the Peregrine in life, appearing at a little distance quite black. About the rocky and barren shores of the Aleutian and Kuril islands the actions of this bird are in every way similar to those of its representative *Falco peregrinus anatum* in its winter haunts along the shores of the West Indies.

Family PANDIONIDÆ.

PANDION HALIAËTUS (Linnæus), subspecies.

OSPREY.

Ospreys were common about Petropaulski at the time of my visit, but I did not notice them anywhere else.

The material available is insufficient for me to form an opinion as to the identity of the east Asiatic with the European or with the American bird; they appear, however, to be slightly nearer the latter.

PANDION HALIAËTUS CAROLINENSIS (Gmelin).

AMERICAN OSPREY.

The Fish Hawk was not uncommon about Union Bay, Vancouver Island, at the time of my visit.

Order STRIGES.

Family STRIGIDÆ.

ASIO FLAMMEUS (Pontoppidan).

SHORT-EARED OWL.

At Unalaska I saw Short-eared Owls frequently in the low grassy district near Dutch Harbor, but they were very shy, and I did not succeed in getting any specimens. I did not happen to see this bird at any other point during the entire cruise.

STRIX OCCIDENTALE CAURINUM (Merriam).

MERRIAM'S SPOTTED OWL.

This owl was not uncommon in the woods about Union Bay, Vancouver Island.

SURNIA ULULA DOLIATA (Pallas).

SIBERIAN HAWK OWL.

Some species of owl was very common about Petropaulski at the time of my visit. It occurred along the ridge of hills behind the town, wherever there were large trees. The birds were very noisy, and kept up a continual hooting all day long. Owing to the dense, and in some places almost impenetrable, undergrowth, I found it impossible to approach any of them, although several hours were wasted in the attempt. As this is the only owl known from this locality at this season, it seems probable that this was the form.

From certain remarks made by authors, it would seem as if the Hawk Owl of Kamchatka represented a good subspecies, distinguished by a greater development in the amount of white in the plumage; but a specimen from Petropaulski collected by Dr. W. H. Dall, in the National Museum, while rather light in general coloration, is easily matched by specimens of *S. u. doliata* from other parts of its range. The record of *Surnia ulula* from Alaska should be referred to this form, *Surnia ulula doliata* (Pallas).

Order COCCYGES.

Suborder CUCULI.

Family CUCULIDÆ.

Subfamily CUCULINÆ.

CUCULUS CANORUS TELEPHONUS (Heine).

EASTERN CUCKOO. KAKKOK.

The Eastern Cuckoo was abundant in the scrubby growth about Petropaulski, and its loud and clear "cuck-oo," which was heard all through the day from sunrise to sunset, was one of the characteristic bird notes of the locality.

Suborder ALCYONES.

Family ALCEDINIDÆ.

CERYLE ALCYON (Linnæus).

BELTED KINGFISHER.

I found the Belted Kingfisher rather common about Dockton, Washington, and about Union Bay, Vancouver Island, at the time of my visit.

Order PICI.

Family PICIDÆ.

PICUS MARTIUS (Linnæus).

GREAT BLACK WOODPECKER. KUMAGERA.

Dryocopus martius reichenowi KOTHE, Orn. Monatsb., June, 1906, p. 95.

I saw a single specimen of this handsome and striking species near the town of Korsakoff, Sakhalin.

Kothe has bestowed a subspecific name upon this bird in the eastern part of its range; but a specimen in the U. S. National Museum taken by Doctor Stejneger at Cape Patience, Sakhalin, agrees perfectly with examples from Europe. Mr. Buturlin, in a recent study of this species, has also come to the conclusion that there is no recognizable eastern form.

DRYOBATES VILLOSUS HARRISII (Audubon).

HARRIS' WOODPECKER.

This woodpecker was rather common about Dockton, Washington, and Union Bay, Vancouver Island. Specimens secured are typical of the race.

DRYOBATES PUBESCENS GAIRDNERII (Audubon).

GAIRDNER'S WOODPECKER.

Gairdner's Woodpecker was common about Dockton, Washington, principally in clearings in which were scattered dead trees.

COLAPTES AURATUS LUTEUS (Bangs).

NORTHERN FLICKER.

The National Museum collection contains a Flicker which was captured on St. Georges Island, Pribiloff group, in the autumn of 1904 by James Judge. In a letter dated October 5, 1904, he mentions the bird as "recently shot." This appears to be the first record of this species for the Bering Sea islands.

COLAPTES CAFER SATURATIOR (Ridgway).

NORTHWESTERN FLICKER.

The Northwestern Flicker was common at Dockton, Washington, and at Union Bay, Vancouver Island. A female secured at the latter locality is typical of the form.

YUNX TORQUILLA (Linnæus).

WRYNECK. ARISU.

A male Wryneck was captured on board the *Albatross* on October 2, when off the northeast coast of Yezo, near the southern Kurils. It is darker above and below than any of the specimens of this species in the National Museum collection, even darker than the specimen from Urakami, Kiusiu, mentioned by Doctor Stejneger.[a] The measurements are: Wing, 79 mm.; tail, 65 mm.; culmen, 15 mm.; tarsus, 20 mm.; middle toe, 17 mm.

Order MACROCHIRES.

Suborder CYPSELI.

Family MICROPODIDÆ.

Subfamily MICROPODINÆ.

MICROPUS PACIFICUS (Latham).

WHITE-RUMPED SWIFT.

What appeared to be this species was very abundant about the rugged shores and summits of the more inaccessible rocky hills on Matsushima.

Suborder TROCHILI.

Family TROCHILIDÆ.

SELASPHORUS RUFUS (Gmelin).

RUFOUS HUMMINGBIRD.

This elegant little hummingbird was very common about Dockton, Washington, and about Union Bay, Vancouver Island.

Order PASSERES.

Suborder CLAMATORES.

Family TYRANNIDÆ.

MYIOCHANES RICHARDSONII (Swainson).

WESTERN WOOD PEEWEE.

This species was found not uncommonly about Dockton at the time of our visit.

EMPIDONAX DIFFICILIS Baird.

WESTERN FLYCATCHER.

Common about Dockton, Washington, and Union Bay, Vancouver Island. Other flycatchers were seen at these localities, but as no specimens were secured I can not be sure of their identity.

[a] Proc. U. S. Nat. Mus., vol. 15, 1892, p. 296.

Suborder OSCINES.

Family ZOSTEROPIDÆ.

? ZOSTEROPS STEJNEGERI (Seebohm).

STEJNEGER'S WHITE-EYE.

I found a species of *Zosterops*, whether *Z. stejnegeri* or *Z. japonicus* I am unable to say, common on Matsushima in the Sea of Japan.

Family ALAUDIDÆ.

ALAUDA ARVENSIS BLAKISTONI Stejneger.

KAMCHATKAN SKYLARK.

The Kamchatkan Skylark was rather common in the meadows about Petropaulski where it was in full song, and I met with a few about the sand dunes near Nikolskoi, on Bering Island.

Family CORVIDÆ.

Subfamily GARRULINÆ.

PICA PICA KAMTSCHATICA Stejneger.

KAMCHATKAN MAGPIE. KAKUK.

This fine magpie was common about Petropaulski at the time of our visit, and was perhaps the most conspicuous bird. I found it in all situations, but most frequently on scrubby hillsides. It was very shy and difficult to approach.

CYANOCITTA STELLERI STELLERI (Gmelin).

STELLER'S JAY.

Steller's Jay was common in the woods about Dockton, Washington, and Union Bay, Vancouver Island.

Subfamily CORVINÆ.

CORVUS CORAX PRINCIPALIS Ridgway.

NORTHERN RAVEN.

The raven is the only corvine bird found in the Aleutian Islands, although the American Magpie occurs on the Alaska peninsula and on the Shumagins. On Unalaska and Atka I found these birds very common, and, about the towns, very bold. They frequented the sea front of the town of Unalaska, and several were seen about the houses of the town on Atka. Away from the villages, however, they were very shy, and I found it difficult to secure specimens. They were most abundant along the beaches and cliffs bordering the sea, but in these situations they were very shy, much more so than the eagles. I saw none on Agattu, nor did I find any traces of them, although they occur there; possibly their distribution on that island is local. On

Attu comparatively few were seen, not more than six or seven during the entire stay; but here again they may have deserted the district about the harbor for some of the streams where the salmon were running where they could be sure of a good supply of food.

CORVUS CORAX BEHRINGIANUS Dybowski.

COMMANDER ISLAND RAVEN. VORÓN.

I only saw this species once, on Copper Island, about the cliffs near the sea.

CORVUS CORAX KAMTSCHATICUS Dybowski.

KAMCHATKAN RAVEN.

This bird also I only met with once, on the summit of a hill on the farther side of the large pond near Petropaulski.

CORVUS BRACHYRHYNCHOS CAURINUS (Baird).

NORTHWEST CROW.

I saw a few of these crows at Dockton, Washington, and found them abundant at Union Bay, Vancouver Island. They were common along the beach in front of the town and about the houses, as well as in the woods along the shore. They were quite unsuspicious, and I had no trouble in securing specimens.

CORVUS CORONE ORIENTALIS (Eversmann).

EASTERN CARRION CROW.

The Eastern Carrion Crow was common along the coasts near Petropaulski. There were a number on the wooded peninsula which separates the harbor of Petropaulski from Avacha Bay, where I found several nests in the trees along the crest of the bluff on the outer side. My efforts to reach them were, however, unsuccessful.

On Simushir I found a pair of these birds about the cliffs at the right hand end of the sandy beach at Milne Bay.

The few crows observed on Matsushima were apparently of this species.

CORVUS MACRORHYNCHOS JAPONENSIS (Bonaparte).

JAPANESE RAVEN.

This crow was very common at Hakodate, about the town, especially in the park, as well as about the harbor. Individuals first boarded us long before we came to an anchorage, and, making the foreyard their headquarters, were quick to seize any opportunity for making off with pieces of meat or other provisions left unguarded. At Mororan they were also common, the first ones coming out to meet us when we were 2 miles or more from shore, and, as their visit had not been anticipated, their raid on the meat hung up in the

port gangway, was very successful. They were rather more bold here than at Hakodate, and frequented the hurricane deck, perching on the davits or the flagstaff at the stern watching for opportunities. They were quite fearless, but always managed to elude the vengeance of the cook or the men.

In the Oki Islands there was a large crow roost in the outskirts of the town, the birds being apparently of this species.

NUCIFRAGA CARYOCATACTES KAMCHATKENSIS Barrett-Hamilton.

KAMCHATKAN NUTCRACKER.

A few of these birds were seen on a hill near Petropaulski, in a grove of pines.

Family FRINGILLIDÆ.

PINICOLA ENUCLEATOR KAMTSCHATKENSIS (Dybowski).

KAMCHATKAN PINE GROSBEAK.

On June 17 I shot a male Pine Grosbeak on one of the hills behind Petropaulski. Although in immature plumage it was singing and the testicles were enlarged, indicating that probably it was a breeding bird. No others were seen.

This specimen, compared with a series of eight *P. e. enucleator* from Norway, Sweden, and north Russia, shows no difference in size. A male from Sweden, and also a male from Pomerania, match it exactly in every dimension. In color, however, it is a purer, clearer gray, the yellow on the head more golden and brighter.

PYRRHULA PYRRHULA KAMTSCHATICA (Taczanowski).

KAMCHATKAN BULLFINCH.

I saw a few of these bullfinches about Petropaulski, but did not succeed in getting any specimens.

CARPODACUS PURPUREUS CALIFORNICUS (Baird).

CALIFORNIA PURPLE FINCH.

This species was very common about the town at Union Bay, Vancouver Island, where specimens were secured. A nest was found on May 15 containing half-grown young. It was in a thick bush, about three feet from the ground.

CARPODACUS ERYTHRINUS GREBNITSKII Stejneger.

GREBNITSKI'S SCARLET ROSE FINCH.

These handsome birds were abundant about the scrubby hillsides near Petropaulski, their pretty whistling song being, except that of *Calliope calliope*, the most characteristic bird note of the locality. Red and gray males appeared to be about equally common, the gray birds equaling the red in vocal efforts. Two of the latter which were secured (both in song at the time) had the sexual organs developed, and appeared to be breeding birds.

LEUCOSTICTE TEPHROCOTIS GRISEONUCHA (Brandt).

ALEUTIAN LEUCOSTICTE. PETUSCHÓK.

The Aleutian Leucosticte was common on the Aleutian Islands we visited, and also on Copper and Bering islands. At Unalaska and Atka it was most frequent at moderate elevations, about patches of snow, only one or two being seen in the valleys. At Attu and on the Commander Islands I found it most commonly along the seacoast, especially about rocky beaches. At Attu I found a pair about some cliffs just behind a narrow beach, whose actions led me to suspect that they had a nest in the vicinity, but I was unable to find it. I did not find this species on Agattu.

Measurements of a series of 28 specimens from Unalaska, Atka, Adak, Kiska, Attu, and from Copper and Bering islands, show a tendency to an increase in size toward the west, which is correlated with a slight increase in intensity of coloration, the Unalaska birds averaging smaller and duller, and the Commander Island birds larger and brighter, the others being intermediate.

CHLORIS SINICA USSURIANUS Hartert.

USSURILAND GREENFINCH.

The Ussuriland Greenfinch was very common on Matsushima, in the Sea of Japan, where it frequented hillsides covered with scrubby bushes. In habits it appeared to be similar to the common Goldfinch (*Carduelis carduelis*).

PASSERINA NIVALIS TOWNSENDI Ridgway.

TOWNSEND'S SNOW BUNTING. SNIEGIROK.

Townsend's Snowflake is a common bird on all the Aleutian and on the Commander islands. It is usually very wary, and specimens are hard to secure. At Unalaska I found the Snowflakes common only in the higher altitudes, where the ground was largely covered with snow. They were here extremely shy, and I only succeeded in getting four. At Atka also they were only found in the higher elevations where the ground was mainly snow covered, and I had great difficulty in obtaining specimens, more than in shooting ptarmigan. I did not find this species on Agattu; but I was unable to visit the more snowy districts of the island. On Attu and on the Commander Islands this bird was most common along the seacoast, especially about rocky beaches, where it was not at all difficult to get within range. At Attu, indeed, I saw none at all in the snowy districts.

As in the case of the other resident finches of the Aleutian Islands, birds from Unalaska average the smallest, the average size gradually increasing, reaching a maximum on the Commander Islands.

One of my males from Unalaska has the feathers of the rump tipped with rusty (May 27, 1906). Two of the females in my collection have considerable rusty on the rump, and all some on the scapulars. All the males have black bills. The females have dusky bills, except one from Attu, which has the mandible except the tip yellow.

On June 9, at Attu, I found a nest of this species, with four eggs. It was in a recess under a large bowlder, about a foot from the opening, which was almost completely hidden by a large tuft of grass. It was situated on the beach to the right of the harbor entrance, not much above high-water mark. The male was flushed from the nest and secured.

CALCARIUS LAPPONICUS ALASCENSIS Ridgway.

ALASKAN LONGSPUR.

The Longspur is the most abundant bird throughout the Aleutian and Commander islands. Although occurring everywhere except in the highest altitudes, it is most common on the lower levels. Besides the Song Sparrow (*Melospiza*) this was the only small bird I found on Agattu.

Birds from the Aleutian Islands appear to average rather more brilliant in coloration than those from the mainland, the difference, however, being very slight. Aleutian specimens show a slight average tendency toward deeper colors toward the western part of the chain, not, however, approaching in richness of coloration *C. l. coloratus* of the Commander Islands.

Measurements of forty-seven specimens from the Aleutian and Commander islands show a tendency toward increased size at the western end of the chain and on the Commander Islands, the smallest birds coming from Unalaska, and the largest from Bering Island. The Commander Island birds, although bearing the same relation in size to birds from Attu and Agattu as birds from these islands do to others from Atka, are markedly different in color; and it is interesting to note that, while Commander Island birds are in size just what we should expect did *C. l. alascanus* occur there, the color is wholly different.

Aleutian specimens of *C. l. alascanus* are somewhat larger than continental birds.

CALCARIUS LAPPONICUS COLORATUS Ridgway.

COMMANDER ISLAND LONGSPUR. TSCHELUTSCHJÉK.

This form is very common on the Commander Islands. Besides differing greatly in color, especially the females, from Aleutian birds, there is a decided difference in the notes; in addition to the regular song, which is the same as with *C. l. alascanus*, they have another consisting of three somewhat whistling notes, very clear and sweet.

Nineteen specimens from Copper and Bering islands show very little individual variation in color.

PASSERCULUS SANDWICHIENSIS SANDWICHIENSIS (Gmelin).

SANDWICH SPARROW.

This species was abundant on Unalaska, in the grassy lowlands. I obtained fourteen specimens near Dutch Harbor. I did not find it on any of the other islands we visited. It was also common at Union Bay, Vancouver Island, in grassy places near the shore.

ZONOTRICHIA LEUCOPHRYS NUTTALLI Ridgway.

NUTTALL'S SPARROW.

Nuttall's sparrow was very common in the clearings and more open places about Dockton, Washington. The birds were in full song at the time of our visit. Specimens secured are typical of this subspecies.

TISA VARIABILIS (Temminck).

GRAY BUNTING.

Tisa variabilis A. H. CLARK, Proc. U. S. Nat. Mus., vol. 32, 1907, p. 468.

This species was rather common about Petropaulski, but was very retiring; I only found it in dense alder thickets, where it was usually seen on or near the ground. Owing to the difficulty of penetrating these thickets without making considerable noise and startling all the inhabitants, I was only able to secure a single specimen, which I found, together with its mate, near a spring by the side of the large pond behind Petropaulski.

MELOSPIZA CINEREA MORPHNA Oberholser.

RUSTY SONG SPARROW.

The Rusty Song Sparrow was very common about Dockton, Washington, occurring in all open places and clearings. It was also abundant about Union Bay, Vancouver Island. On May 13, at the latter locality, I secured a young bird with the tail feathers nearly the full length, and found several others, one of which was taken, just able to fly.

Specimens from both localities agree with others from Seattle, Washington, and Victoria, British Columbia, and are typical of the subspecies.

MELOSPIZA MELODIA SANAKA McGregor.

ALEUTIAN SONG SPARROW.

I was not fortunate enough to find this form at Unalaska, although I searched carefully for it. At Atka it occurred, though not abundantly, in the rank grass along the beaches, and in the gorge of the small stream which flows through the town. At Agattu I found it in the tall grass along the shore about Macdonald Bay and along the marshy banks of the lower reaches of the stream which enters the sea at this point. At Attu it occurred in the grassy areas all along the

shore and about the town. This bird does not appear to be abundant anywhere, and seems to be strictly limited to the vicinity of the sea.

A series of 29 birds from Unalaska, Atka, Kiska, Adak, Agattu, and Attu show considerable individual and seasonal variation in the intensity of the gray in the plumage. Birds from the western end of the chain appear to average rather grayer than those from Unalaska. They are also a trifle larger.

In the National Museum collection there are 5 fully grown young from Unalaska, 3 shot on July 12, 1 on August 14, and 1 on August 15; 1 from Kiska, taken July 7; a young bird, just able to fly, from Attu, June 11, and another, nearly fully grown, from Attu, June 20.

PIPILO MACULATUS OREGONUS (Bell).

OREGON TOWHEE.

This bird was very common at Dockton, Washington, and at Union Bay, Vancouver Island, occurring mainly in the more open places.

Nine specimens, representing both localities, agree with Puget Sound specimens in the National Museum collection.

HYPOCENTOR AUREOLUS (Pallas).

YELLOW-BREASTED BUNTING. GOLDAMMER.

I found this bird very common about Petropaulski, especially in pastures with scattered trees and bushes and on scrubby hillsides. Their song, which is very sweet and pleasing, was heard on all sides, this bird ranking next after *Carpodacus erythrinus grebnitskii* and *Calliope calliope* as the third best vocalist of the district.

A critical examination of twenty-one males of this species (Petropaulski, 8; Bering Island, 3; Yezo, 2; Goto Islands, 1; Siberia, 2; north Russia, 1; Tungchou, China, 1, shot in the spring; and Yezo 2, and Canton 1, shot in the autumn and winter) shows that the Kamchatkan birds average the largest, being considerably larger than Japanese. The Siberian specimens agree in size with Japanese, and the example from northern Russia is rather larger. The winter birds from China and Japan are larger than breeding examples, indicating a northern origin. There is no color variation correlating with locality. While there is considerable individual variation, especially in regard to the dusky about the head and the extent of the black centers to the dorsal feathers and in the intensity of the maroon collar, I find that the two finest and most handsome specimens, which are practically alike in every way, come one from the Goto Islands and the other from Petropaulski. These specimens have the maroon collar mixed with dusky feathers and bordered anteriorly with black.

HYPOCENTOR RUSTICA (Pallas).

RUSTIC BUNTING.

This species was not rare about Petropaulski, although not as abundant as the preceding, frequenting the scrubby hillsides.

A series of twelve males from Petropaulski, Bering Island, Yezo, and Pekin, China, shows no appreciable difference in coloration correlated with locality. The Kamchatkan birds are the largest, the Japanese specimens intermediate, and the Chinese ones the smallest.

PASSER MONTANUS MONTANUS (Linnæus).

TREE SPARROW.

Sparrows were very common about all the Japanese towns, the Tree Sparrow of Europe becoming the House Sparrow of the east. One can not help noticing many advantages in having this neat, quiet, and unobtrusive little bird about a town rather than its larger, noisier, and more obstreperous relative. On Matsushima also this species was common about the houses and in the cultivated fields.

A specimen from Hakodate, taken July 3, 1906, and two males from Fusan, taken on November 8, 1885, agree well with European examples in color, but, as in the case of all the eastern specimens in the museum, the beak is somewhat stouter. Although I have referred the eastern birds to true *Passer montanus montanus*, I am not certain that it would not be better to recognize them as *Passer montanus orientalis*.

Family HIRUNDINIDÆ.

HIRUNDO ERYTHROGASTER Boddaert.

BARN SWALLOW.

A few Barn Swallows were noticed about the village of Unalaska at the time of our visit.

HIRUNDO TYTLERI Jerdon.

BROWN-BELLIED SWALLOW.

This species was seen at Petropaulski at the time of our visit. They were not numerous, and none were obtained.

HIRUNDO RUSTICA GUTTURALIS (Scopoli).

EASTERN CHIMNEY SWALLOW.

This swallow was common about the Japanese towns, especially at Hakodate, where it was frequently seen to enter houses. I also found it common on Matsushima.

Family VIREONIDÆ.

VIREO GILVUS SWAINSONII (Baird).

WESTERN WARBLING VIREO.

The Western Warbling Vireo was fairly common about Dockton, Washington, but I only met with one or two at Union Bay.

Family MNIOTILTIDÆ.

HELMINTHOPHILA CELATA LUTESCENS Ridgway.

LUTESCENT WARBLER.

This warbler was rather common in the thickets about Dockton, Washington, and Union Bay, Vancouver Island. A pair from the latter locality are very dusky; but this is probably accounted for by the fact that they were secured near the wharf where steamers are coaled and the plumage had become infiltrated with fine coal dust.

DENDROICA ÆSTIVA RUBIGINOSA (Pallas).

PALLAS' WARBLER.

The Yellow Warbler was the commonest of the warblers at Dockton and Union Bay, occurring about all the more open places and clearings in the woods.

DENDROICA AUDUBONI (Townsend).

AUDUBON'S WARBLER.

Audubon's Warbler was common both at Dockton and Union Bay, occurring mainly in the fir trees.

DENDROICA NIGRESCENS (Townsend).

BLACK-THROATED GRAY WARBLER.

The Black-throated Gray Warbler was common both at Dockton and Union Bay, occurring about clearings in the woods. Specimens obtained are typical.

Other species of this genus were seen about Dockton and Union Bay, but no specimens were obtained.

GEOTHYLPIS TOLMIEI (Townsend).

MACGILLIVRAY'S WARBLER.

This species was common in the more open places about Dockton and Union Bay, Vancouver Island.

Family MOTACILLIDÆ.

MOTACILLA LUGENS Kittlitz.

BLACK-BACKED KAMCHATKAN WAGTAIL.

This bird was common about Petropaulski, frequenting the seashore, especially about rocky beaches. I also found it at Simushir in the Kurils, where I am certain it was breeding.

MOTACILLA, species.

WHITE WAGTAIL.

A White Wagtail, apparently a migrant, was the commonest small bird observed at Sakhalin, occurring abundantly about the beaches and about the piers and jetties of Korsakoff. Two which were observed at close range appeared to be *M. lugens*, but, as none were secured, their identity is uncertain.

BUDYTES FLAVUS SIMILLIMUS Hartert.

KAMCHATKAN YELLOW WAGTAIL.

This bird was common in the lowlands about Petropaulski, especially in a broad valley which makes inland from the large pond near the town. Five males were secured here. Two examples from Plover Bay, Siberia, are difficult to place; they appear to be intermediate, one being somewhat nearer *B. f. alascanus* and the other nearer the present form.

ANTHUS GUSTAVI Swinhoe.

SCHLEGEL'S TITLARK. INKATSCHUGI.

This Pipit was common near the town on Copper Island and on the grassy lowlands of Bering Island. It was plentiful also in the lowlands about Petropaulski.

ANTHUS RUBESCENS (Tunstall).

AMERICAN PIPIT.

The American Pipit was found in the higher elevations on Unalaska, just below the snow line, but was not very common. A female secured had eggs nearly ready to lay. I did not meet with it anywhere else.

ANTHUS JAPONICUS Swinhoe.

JAPANESE ALPINE PIPIT.

I found this bird common in the grassy lowlands near Milne Bay, Simushir, but very shy and hard to get. The males were in full song at the time of our visit, June 23. Specimens secured agree with others from Japan.

PIPASTES MACULATUS (Jerdon).

EASTERN TREE PIPIT.

This bird was common about Petropaulski, more especially about the taller birch trees on the hills, from the top of which it would send forth its loud, clear, cheerful song, much after the manner of *Seiurus aurocapillus*.

Family TROGLODYTIDÆ.

NANNUS HIEMALIS PACIFICUS (Baird).

WESTERN WINTER WREN.

The Western Winter Wren was common about Dockton and Union Bay. There was at least one other species of wren at these places, but as I did not obtain specimens I can not be sure of the identity.

NANNUS MELIGERUS (Oberholser).

ATTU WREN.

I found this wren common about the cliffs and rocky shores of Attu Island and in the gorge of the stream which enters the sea to the right of the town. I was not fortunate enough to find any other wrens in the Aleutian Islands.

NANNUS PALLESCENS (Ridgway).

COMMANDER ISLAND WREN. LIMASCHINKA.

At Copper Island one or two of these wrens were seen about the cliffs near the town, but they did not seem to be common. I did not find them on Bering Island.

Family CERTHIIDÆ.

CERTHIA FAMILIARIS OCCIDENTALIS Ridgway.

WESTERN BROWN CREEPER.

This bird was not uncommon in the woods about Dockton, Washington, and Union Bay, Vancouver Island.

Family PARIDÆ.

PENTHESTES RUFESCENS RUFESCENS Townsend.

CHESTNUT-BACKED CHICKADEE.

The Chestnut-backed Chickadee was common about Dockton and Union Bay, usually in small flocks. Specimens secured are typical of the race.

PENTHESTES KAMTSCHATICA (Bonaparte).

KAMCHATKAN CHICKADEE.

A small company of these pretty little titmice was seen on one of the hillsides near Petropaulski.

PERIPARUS ATER INSULARIS Hellmayr.

JAPANESE COAL-TIT.

A male of this form was caught on shipboard off Iwanai, on the east coast of Hondo, September 19, 1906. It is identical with others from Japan in the National Museum collection.

PSALTRIPARUS MINIMUS SATURATUS Ridgway.

NORTHWESTERN BUSH-TIT.

This bird was common in the bushes about Dockton, Washington. Specimens brought back are typical of this subspecies.

ACANTHOPNEUSTE BOREALIS XANTHODRYAS (Swinhoe).

ARCTIC WILLOW WARBLER.

A typical example of this subspecies, a female, was caught on board the *Albatross* in the Okhotsk Sea, about 7 miles west of Kunashir, Kurils, on October 1, 1906.

ACROCEPHALUS JAPONICUS (Cassin).

JAPANESE REED WARBLER.

When I visited Simushir, in the Kurils, on June 23, 1906, I found this species abundant in the tall rank grass just back of the beach and about the piles of driftwood. It was by far the commonest bird on the island. The only other small birds I saw near Milne Bay were *Anthus japonicus*, which was rather common on the grassy lowlands behind the fringe of rank beach grass, and *Motacilla lugens*, which was not very common and only seen along the rocky seacoast.

The seven specimens secured agree with others in the National Museum collection from the other Kurils and Japan.

ACROCEPHALUS OCHOTENSIS (Middendorf).

MIDDENDORF'S GRASSHOPPER WARBLER.

When we were off the eastern coast of Sakhalin, and for the first half of the journey across the Okhotsk Sea, many birds of this genus, resembling those I had found on Simushir, but paler and more olive in color, came on board. I have tentatively referred them to *A. ochotensis*, although I can not be positive of the identification, as none were secured.

HYLOCICHLA GUTTATA GUTTATA (Pallas).

HERMIT THRUSH.

The Hermit Thrush was occasionally seen in the woods near Dockton and about Union Bay, but did not appear to be common.

PLANESTICUS MIGRATORIUS PROPINQUUS Ridgway.

WESTERN ROBIN.

The Western Robin was not uncommon about the more extensive clearings in the vicinity of Dockton and Union Bay and in the outskirts of those two towns. Puget Sound specimens are deeper in color than birds from more southern localities, especially on the breast, and I believe that eventually it will be found advisable to recognize them as a distinct race.

PETROPHILA MANILLA (Boddaert).

BLUE AND RED ROCK THRUSH. ISO HIO-DORI.

This bird was not uncommon on Matsushima, in the Sea of Japan.

CALLIOPE CALLIOPE (Pallas).

RUBY-THROATED NIGHTINGALE. KAMCHATKAN NIGHTINGALE.

The "Kamchatkan Nightingale" was the most abundant bird about Petropaulski and also the best songster. Its fine, clear song was the most characteristic bird note of the place, and was heard from sunrise to sunset. This species shows a preference for hillsides covered with scrubby growth, in which it is very adept at concealing itself. It is also common on the lowlands where any little clumps of bushes occur sufficient to afford it shelter. Most of its time is spent on or near the ground, but the song is usually delivered from the tops of the bushes or the lower limbs of small trees. If surprised in such a situation, the bird is very quick to take refuge in the thick underbrush.

At Simushir I found two or three pairs of this species among the driftwood well beyond high-water mark. They were rather shy and kept well under cover. From their actions I judged that they were breeding here.

A careful examination of twenty males of this species shows that breeding birds from Kamchatka are appreciably larger than those from Yezo in all dimensions. The birds appear to fall into two classes in regard to size; a larger, measuring, wing 78–83 (80.5) mm.; tail, 61–67 (64) mm.; tarsus, 29–32 (30.5) mm., which is the size of the Kamchatkan birds; and a smaller, measuring, wing 72–76 (74) mm.; tail, 58–60 (59) mm; tarsus, 27–30 (28.5) mm., which is the size of breeding birds from Yezo.

Of autumn and winter birds belonging to the first class, the National Museum possesses specimens from the following localities: Hakodate, Yezo (2); at sea off Kinkesan Light, Hondo; Yaeyama Island; Amoy, China; Malate, Philippines; and of the second class from Tung Chow, China (2); Malate, Philippines; and Nepal.

I can find no constant difference in color between birds from different localities not apparently the result of individual variation, but my material is unsatisfactory in this respect.

During the first two weeks of October, when we were about the southern Kurils and the eastern coast of Yezo and Hondo, these birds were frequent visitors to the ship. One was captured on October 10, several miles east of Kinkesan Light, on the coast of Hondo.