

INTERIOR OF ST. LAWRENCE ISLAND

Looking west from the top of the mountain at Cape Kialegak, at the southeast end of the island.



CAPE KIALEGAK
Southeast end of St. Lawrence Island.

THE BIRDS OF ST. LAWRENCE ISLAND, BERING SEA

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During the summer of 1930, Henry B. Collins, jr., of the Division of Anthropology of the United States National Museum, made an expedition to St. Lawrence Island, Bering Sca. Although the chief aims of his trip were in the fields of archeology and anthropology, he used his spare time to advantage in collecting biological material as well. Among the latter were 109 bird skins, constituting the largest single ornithological collection ever made on that island. These specimens have been carefully studied and form the basis of this paper, but inasmuch as so little has been written about the bird life of St. Lawrence Island, I have included all previously published data as well, making the present contribution as complete as possible.

St. Lawrence Island is one of the northwestern outliers of the area covered by the American Ornithologists' Union Check-List, the official list of the birds of the North American faunal region, but geographically it is as much a part of Asia as of North America. Because of its position as a spatial link between the Palearctic and the Nearctic regions, St. Lawrence Island possesses more interest than might otherwise be attached to a semibarren island of its size. (Figs. 1 and 2.)

The best description of St. Lawrence Island is that given by John Muir in his book "The Cruise of the Corwin." Unfortunately many of his statements about the theoretical glaciation of the island have since been discredited, and recent expert opinion has been to the effect that the island never was glaciated. By omitting the inaccurate statements of past history, however, we may extract a fair picture of the place from Muir's writings.

St. Lawrence Island, the largest in Bering Sea, is situated at a distance of about 120 miles off the mouth of the Yukon, and 45 miles from the nearest point on the coast of Siberia. It is about 100 miles in length from east to west and 15 miles in average width, a dreary, cheerless-looking mass of black lays, dotted with volcanoes, covered with snow, without a single tree * * *.

* * * It is traversed by numerous valleys and ridges and low gaps
* * *. Nearly all the volcanic cones with which the central part of the
island is in great part covered * * * present well-formed craters but little
weathered as yet.

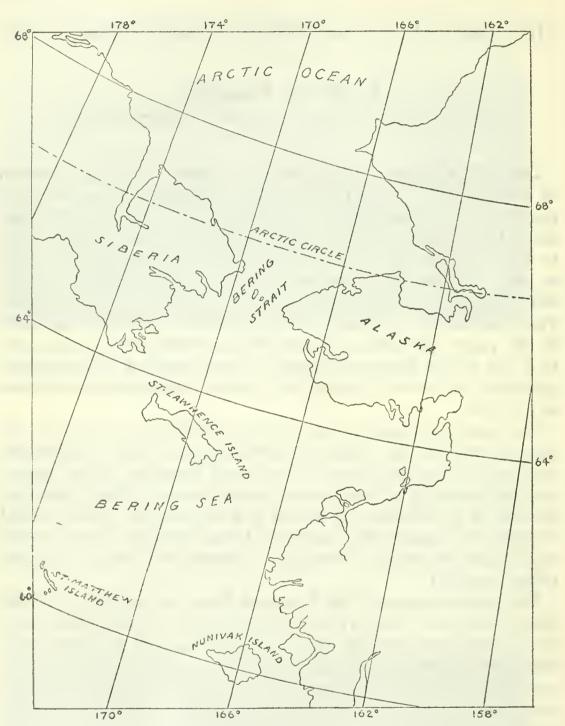


FIGURE 1.—Map of the Berlng Sea region, showing the location of St. Lawrence
Island with reference to Asia and North America

All the surface of the low grounds * * * is covered with wet, spongy tundra of mosses and lichens, with patches of blooming heathworts and dwarf willows, and grasses and sedges, diversified here and there by drier spots, planted with larkspurs, saxifrages, daisies, primulas, anemones, ferns, etc. These form gardens with a luxuriance and brightness of color little to be hoped for in so cold and dreary-looking a region.

In another place he writes of the advent of summer on the island. On May 28 winter was still in full possession of the place, but 11 days later he found—

* * * the dwarf willows, drabas, erigerons, and saxifrages pushing up their buds and leaves, on spots bare of snow, with wonderful rapidity. This was the beginning of spring at the northwest end of the island. On July 4 the flora seemed to have reached its highest development. The bottoms of the * * * valleys were in many places covered with tall grasses and carices evenly planted and forming meadows of considerable size, while the drier portions, and the sloping grounds about them were enlivened with gay, highly colored flowers, * * *

The environmental conditions existing at present in St. Lawrence Island are very different from those that obtained there in the Tertiary, but the avifauna is wholly that of the surrounding tundra

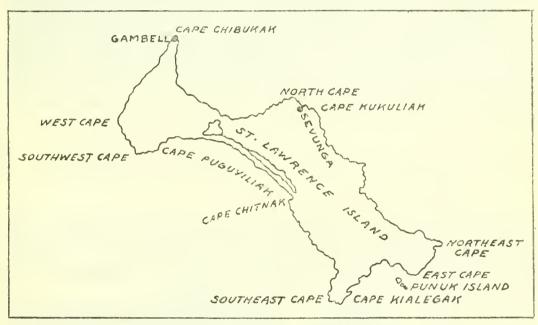


FIGURE 2.—St. Lawrence Island, Bering Sea, showing localities mentioned in this paper

country of Siberia on the one hand and of Alaska on the other. At the suggestion of Prof. R. W. Chaney, of the Carnegie Institution of Washington, Collins searched for, and found, fossiliferous shales of Tertiary age, which, on examination, proved to contain remains of sequoias, poplars, and other plants. The former existence of these trees on the island, now so destitute of arboreal vegetation, is looked upon by Chaney as strong evidence of a former land connection across Bering Straits between Siberia and Alaska, as sequoias have been found in a fossilized state in both those regions and in Mongolia, although they are now restricted in living condition to California. That the birds do not reflect the history of the island is not remarkable, as the distance from the west end of the island to Siberia is only some 40 miles, a readily negotiable flight for any of the birds now inhabiting it.

Surrounded by angry seas, closed to navigation for a good part of the year, St. Lawrence Island has been visited but rarely, in contrast to some of the other islands, such as the Pribilofs, and most of the few parties that touched its bleak shores remained for only very short periods of time. In fact, so little work has been done there in natural history that it is possible to outline every such attempt in a short paper such as this.

The first mention of the island is to be found in Vitus Bering's journal. On August 8, 1728, when in latitude 64° 30' N., Bering met with eight Chukchi men who asked him who he was and why he came. "On being invited on board, they put one man over, * * * swam over to have a talk with us. A little later the boat moved up to us and the men in it told us a short distance from here the coast turns to the west, and that not far ahead of us is an island. We located this island, which we named St. Lawrence, in honor of the day, and found on it a few huts but no people, although I twice sent the midshipmen to look for them." It may be noted that while the date in the journal reads August 8, the map shows that St. Lawrence Island was visited on August 10. There is nothing in Bering's account to indicate that he or any of his men actually landed on the island, and, as a matter of fact, Dall 2 writes definitely that Bering did not land there but merely cruised off its shores.

In 1767 Lieutenant Sind saw several clusters of small islands, which were probably the peaks of the old volcanoes on St. Lawrence and which seemed like separate little islands in the fog. He did not land there, and his journey leaves us no richer in information about St. Lawrence.

In 1777 Capt. James Cook saw the western highlands of the island and named the land Clerke's Island. In the account of his celebrated voyage we find that "* * Clerke's Island * * * stands in the latitude of 63° 15′, and in the longitude of 190° 30′. It seemed to be an island of considerable extent, in which are several hills, all connected by low ground, so that it looks, at a distance, like a group of islands." In another entry is the first note on record of the bird life of this island: "About midnight, the Isle of St. Lawrence was five or six miles distant * * *. We were ac-

¹ Bering's voyages. An account of the efforts of the Russians to determine the relation of Asia and America, vol. 1, p. 18, 1922. Edited by F. A. Golder; published by the American Geographical Society.

² Dall, W. H., A critical review of Bering's first expedition, 1725-1730, together with a translation of his original report upon lt, with a map. Nat. Geogr. Mag., vol. 2, no. 2, p. 31, 1890.

⁸ Cook, Capt. James, and King, Capt. James, A voyage to the Pacific Ocean, undertaken by command of His Majesty, for making discoveries in the Northern Hemisphere: Performed under the direction of Captains Cook, Clerke, and Gore in the year 1776, 1777, 1778, 1779, and 1780, vol. 3, pp. 83, 84, 1784.

⁴ Idem. vol. 4, pp. 19, 20.



GAMBELL, NORTHWEST END OF ST. LAWRENCE ISLAND
Photo taken in October, 1930.



THE MOUNTAIN BACK OF GAMBELL





TWO VIEWS OF THE CAPE AT GAMBELL

companied with sea fowl of various sorts, and observed some guillemots and small crested hawks." Cook believed to the end that Clerke's and St. Lawrence were two separate islands, and we find that on the map in Pennant's "Arctic Zoology" the island is called Clerke's Island.

St. Lawrence Island was first actually visited in 1816, when Kotzebue's party, of whom Eschscholtz was the naturalist, landed there. They returned again in 1817, when Louis Choris also landed there on June 28 (July 10 old style). Kotzebue's contribution to knowledge of the fauna of the island is not very extensive. All he wrote in this connection was that the "* * reindeer, which belongs to both coasts, seems to be wanting in St. Lawrence Island."

Choris 6 figures Alcella pygmaca from St. Lawrence Island, this being the first definitely identifiable bird record for the island.

Captain Beechey took his ship, H. M. S. Blossom, to St. Lawrence Island in 1826, and Vigors, in his report on the ornithology of that famous voyage, lists Ciceronia pusilla (under the name Cerorhinea occidentalis) as being brought off from St. Lawrence Island in great abundance.

The island was not visited again until the now historic cruise of the Corwin in 1881, when E. W. Nelson and John Muir, among others, landed on St. Lawrence. Nelson recorded about 20 forms of birds, this being the first attempt at a list of its avifauna. The total time spent on the island was short, May 28 to 31 and June 7 to 9. H. W. Elliott and Lucien M. Turner also made short visits to St. Lawrence Island about this time.

A number of the members of the Harriman Alaska Expedition spent part of a day, July 13, 1899, on St. Lawrence Island. The landing party included Robert Ridgway, C. Hart Merriam, A. K. Fisher, and L. J. Cole. Unfortunately but little opportunity was given to make observations on the birds. They collected 16 specimens of 6 species and made notes on 3 others. Doctor Fisher has very kindly sent me his notes of that day for use in this paper.

During the summer of 1896, Alvin Seale and N. B. Scofield made a journey to Point Barrow and passed close by St. Lawrence Island on July 1, and noted three species there.

W. Sprague Brooks and Joseph Dixon spent a good part of June, 1913, on St. Lawrence Island and noted 22 kinds of birds, collecting specimens of the majority. F. Seymour Hersey was on the island

⁵ Pennant, Thomas, Arctic zoology, voi. 2, map. 2, 1785.

⁶ Choris, L., Voyage pittoresque autour du monde, p. 20, 1822.

⁷ Vigors, N. A., in Beechey, F. W., The zoology of Captain Beechey's voyage; compiled from the collections and notes made by Captain Beechey, the officers and naturalist of the expedition during a voyage to the Pacific and Bering's Straits performed in His Majesty's ship Blossom under the command of Capt. F. W. Beechey. * * in the years 1825, 26, 27, and 28. Ornithology, pp. 13-40, pl. i-xliv, 1839.

for two days, July 24 and 25, in 1914. Alfred M. Bailey and Russell W. Hendee collected on St. Lawrence late in June and early in July, 1921, and Hendee again visited it in August, 1922. They found a resident teacher on the island, Mr. Dupertius, of the Bureau of Education, who was interested in birds and who had made some observations there. Except for a few fragments given by Bailey, none of Dupertius's notes have been published.

F. L. Jaques passed close by St. Lawrence in 1928 and noted three

species of birds offshore.

Finally, in the summer of 1930, Henry B. Collins, jr., spent several months on the island from June 19 to October 22, and collected birds as time permitted.

The present paper is merely a descriptive list of the birds known to occur on St. Lawrence Island. Undoubtedly other species will have to be added as more collecting is done there, especially among the small land birds and the shorebirds. Mr. Collins tells me that he saw some hawks there but was unable to procure a specimen. No published record of a hawk from St. Lawrence Island is known to me, so that is another form to be added in the future.

Inasmuch as Harry S. Swarth, of the California Academy of Sciences, is working on a comprehensive paper on the Bering Sea avifauna, I have not attempted any interpretative work on any of the distributional problems and am restricting this paper to the status of a reference list.

The present list contains 61 species of birds. Of these the following eight have not been recorded from the island before:

Gavia arctica pacifica. Gavia stellata. Mareca penclope. Limosa lapponica baucri.

Larus argentatus vegae. Cepphus grylle mandti. Cuculus canorus bakeri. Nyetea nyetea.

In addition to the 61 species now definitely known from St. Lawrence Island, three others have been stated by Nelson 8 to occur there "undoubtedly." These birds, for which definite records are lacking, are Nettion carolinense, the green-winged teal, Phaeopus hudsonicus, the Hudsonian curlew, and Pisobia bairdi, Baird's sandpiper.

The reference to the original description of each species is given, and this is followed by a complete synonymy as far as the literature of St. Lawrence Island is concerned. All the birds collected by Collins, as well as those obtained by the Harriman Expedition, are in the United States National Museum (including the collection of the Biological Survey).

The specimens without data, listed in this paper, were purchased by Mr. Collins from various Eskimos at Gambell.

⁸ Nelson, E. W., Birds of Bering Sea and the Arctic Ocean. Cruise of the revenue-steamer Corwin in Alaska and the NW. Arctic Ocean in 1881, pp. 88, 90, 97, 1883.

The photographs illustrating this paper (pls. 1-6) are all by Mr. Collins.

Family GAVIIDAE, Loons

GAVIA ADAMSI (Gray)

YELLOW-BILLED LOON

Colymbus adamsi Gray, Proc. Zool. Soc. London, 1859, p. 167 (Russian America through Bering Straits=Alaska).

Garia adamsi, Bailey, Conder, vol. 27, p. 26, 1925.

Collins collected two adult specimens in good summer plumage. Unfortunately neither was sexed or dated. Both were taken at Gambell, in the northwestern part of the island. Bailey saw one near the old village of Kookooluk (Kukuliak) on June 28, the only previous record for St. Lawrence. It is not known whether it breeds there.

This species is said to be a late-nesting bird. It is all the more unfortunate that the present two specimens are without dates, as they may be migrants or may have been late enough to have been breeding on St. Lawrence.

A third specimen, a female, taken on October 14, is in fresh winter plumage. Judging by its smaller size, it appears that the two summer-plumaged birds were males.

GAVIA ARCTICA PACIFICA (Lawrence)

PACIFIC LOON

Colymbus pacificus Lawrence, in Baird, Cassin, and Lawrence, Report of explorations and surveys, etc., for a railroad from the Mississippi River to the Pacific Ocean, vol. 9, Birds, pp. liv, 887, 889, 1858 ("San Diego, Calif., and Puget Sound"=Presidio, near San Francisco, Calif.).

Collins obtained 10 of these loons, two of them juvenals, the rest adults of both sexes, all in winter plumage. The specimens with dates were taken from September 23 to October 16. A full-grown juvenal was shot on September 23. A male, collected on October 14, still has some of the summer plumage on the back and has a few black feathers on the chin and throat. All were collected at Gambell.

I am not aware of any satisfactory way of telling winter-plumaged specimens of G. a. viridigularis from G. a. pacifica and regret the absence of summer adults from St. Lawrence Island. Hartert 9 gives measurements that imply a longer bill in viridigularis. If we use this as a criterion, all the present birds are pacifica.

The postnuptial molt must follow very quickly on the termination of nesting activities, as all but one of the adults are in full winter plumage.

Die Vögel der paläarktischen Fauna, vol. 2, p. 1461, 1920.

A number of the birds have the new remiges only partly grown and were probably quite flightless at the time. All the loons appear to shed all their wing quills simultaneously. It is worthy of note that they first acquire the more somber winter feathering and then go through the temporary period of flightlessness.

This bird was not previously known to inhabit St. Lawrence Island.

GAVIA STELLATA (Pontoppidan)

RED-THROATED LOON

Colymbus Stellatus Pontoppidan, Danske Atlas e. Konge-Riget Dannemark med dets naturlige Egenskaber, vol. 1, p. 621, 1763 (no locality mentioned = Denmark).

Collins obtained two adults in breeding plumage and two birds in winter feathering. The two latter are females, one adult and one immature. The summer birds are without dates; the adult female in winter dress was shot on October 9; the immature bird in September. All were taken at Gambell.

The red-throated loon has not been recorded from St. Lawrence Island before. It is rather strange that Brooks, Bailey, Hendee, and others who made collections and observations there should have failed to see it, and it may be assumed that it is less numerous on the island than the Pacific loon.

Family DIOMEDEIDAE, Albatrosses

DIOMEDEA ALBATRUS Pallas

SHORT-TAILED ALBATROSS

Diomedea albatrus Pallas, Spicilegia zoologica, etc., vol. 1. fasc. v, p. 28, 1769 (ad oram Kamtschatcae orientalum * * * ad insulam Beringil=Bering Sea).

Diomedea brachyura, Nelson, Birds of Bering Sea, etc., Cruise of the Corwin, p. 111, 1883.

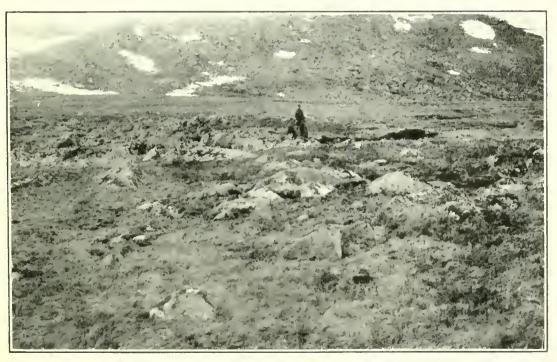
Diomedea albatrus, Turner, Contr. Nat. Hist. Alaska, no. 11, p. 128, 1886.—Nelson, Report upon natural history collections made in Alaska, p. 61, 1887.

Nelson notes that "adults of this species were seen between St. Lawrence Island and Plover Bay, Siberia, and the mandibles of two specimens were obtained in the ruined villages on St. Lawrence Island." Turner saw this albatross at sea near the island, but it appears that the only definite records for the island itself are the two mandibles found by Nelson, and these may have gotten there by hand of man. Collins collected a maxilla of this species in the second oldest village site at Gambell. The ruins with which it was associated are at least 1,000 years old.



NEST AND YOUNG OF RAVEN (CORVUS CORAX PRINCIPALIS)

On cliff back of Gambell.



VIEW AT GAMBELL



CORMORANTS NESTING ON PUNUK ISLAND Four miles off the east end of St. Lawrence Island.

Family PROCELLARIIDAE, Shearwaters, Fulmars

FULMARUS GLACIALIS RODGERSI Cassin

RODGER'S FULMAR

Fulmarus Rodgersii Cassin, Proc. Acad. Nat. Sci. Philadelphia, 1862 (Oct. 28), p. 326 (South Indian Ocean=North Pacific).

Fulmarus glacialis rodgersi, Nelson, Birds of Bering Sea, etc., Cruise of the Corwin, p. 112, 1883; Report upon natural history collections made in Alaska, p. 62, 1887.—A. O. U. check-list of North American birds, ed. 4, p. 12, 1931.

Fulmarus glacialis rodgersii, Hartert, Die Vögel der paläarktischen Fauna, vol. 2, p. 1438, 1920.

Fulmarus glacialis glupischa, Brooks, Bull. Mus. Comp. Zoöl., vol. 59, pp. 368, 369, 1915.

Fulmarus rodgersi, Bent, U. S. Nat. Mus. Bull. 121, p. 46, 1922.

Nelson saw this fulmar in abundance off St. Lawrence Island. Brooks noted quite a number during the last week in May, while crossing Bering Sea from Cape Zhipanov, Kamchatka, to St. Lawrence Island. According to Hartert and Bent, this bird breeds on St. Lawrence Island.

Family HYDROBATIDAE, Small Petrels

OCEANODROMA FURCATA (Gmelin)

FORK-TAILED PETREL

Procellaria furcata GMELIN, Systema naturae, vol. 1, pt. ii. p. 561, 1789 (based on the Fork-tail Petrel, Pennant, Arctic zoology, vol. 2, p. 535: In glacie maris Americam et Asiam interfluentis="among the ice between Asia and America," Pennant).

Occanodroma furcata, Nelson, Report upon natural history collections made in Alaska, p. 64, 1887.—Godman, Monograph of the petrels, p. 37, 1907-1910.

This petrel figures in the present list solely on the basis of Nelson's statement that during "the cruise of the *Corwin*, in 1881, these petrels were seen on several occasions in Bering Straits and about St. Lawrence Island and in Plover Bay, Siberia."

Family PHALACROCORACIDAE, Cormorants

PHALACROCORAX PELAGICUS PELAGICUS Pallas

PELAGIC CORMORANT

Phalacrocorax pelagicus Pallas, Zoographia Rosso-Asiatica, vol. 2, p. 303,
 pl. 76, 1811 (maris Camtschatici orientalis et Americanorum insularum incola=Aleutian Islands).

Phalacrocorax pelagicus pelagicus, Brooks, Bull. Mus. Comp. Zoöl., vol. 59, p. 397, 1915.—Bent, U. S. Nat. Mus. Bull. 107, p. 275, 1919.—Bailey, Condor, vol. 27, p. 167, 1925.—A. O. U. check-list of North American birds, ed. 4, p. 24, 1931.

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Nelson ¹⁰ does not definitely record this cormorant from St. Lawrence Island, but writes that it is the "commonest of its kind * * about the shores of the various islands in Bering Sea * *." Bent records it as breeding on St. Lawrence, and Bailey found the birds "fairly abundant at St. Lawrence Island, where they were nesting along the cliffs below Sivunga, the first week in July."

Collins brought back four specimens, three adults and one fully grown immature just beginning to molt from the brown plumage to the lustrous violet and greenish black of the adult state. This immature bird was a male, shot on July 22; two of the adults are without data; the last adult, a male, was collected on October 11. All were taken at Gambell.

The year-old immature bird is in an early stage of molt, although it was collected so late in the summer. It would seem that this species is as variable in its molting season as is the double-crested cormorant, *P. auritus auritus*, of which Lewis 11 writes as follows:

The time of beginning of the molt out of the first winter plumage varies much in different individuals * * * it may begin as early as February, while in the same birds it does not appear to begin before the first of the following August. Some individuals apparently complete it by the middle of July or some afterwards, while in others it is still incomplete at the end of September * * *.

Brooks found this species beginning to lay by June 2, on St. Lawrence, "and eggs in an advanced state of incubation were taken * * * on June 28."

PHALACROCORAX URILE (Gmelin)

RED-FACED CORMORANT

Pelecanus Urile GMELIN, Systema naturae, vol. 1, pt. ii, p. 575, 1789 (in Camtschatcae rupestribus maritimis=Kamchatka).

Phalacrocorax urile, Nelson, Report upon natural history collections made in Alaska, p. 65, 1887.

Nelson is the only naturalist who has recorded the red-faced cormorant from St. Lawrence Island. According to him, it is a "more or less common summer resident" there.

Family ANATIDAE, Ducks, Geese, Swans cygnus columbianus (Ord)

WHISTLING SWAN

Anas columbianus Ord, in Guthrie's Geography, 2d Amer. ed., p. 319, 1815 (below the great narrows of the Columbia River).

Olor columbianus, Brooks, Bull. Mus. Comp. Zoöl., vol. 59, p. 388, 1915.

Nelson, E. W., Birds of Bering Sea and the Arctic Ocean. Cruise of the revenue-steamer Corwin in Alaska and the NW. Arctic Ocean in 1881, p. 103, 1883.

¹¹ Lewis, Harrison F., The natural history of the double-crested cormorant (Phalacrocorax auritus auritus (Lesson).) Ru-Mi-Lou Books, Ottawa, Canada, p. 58, 1929.

Cygnus columbianus, Bailey, Condor, vol. 27, p. 206, 1925.—Bent, U. S. Nat. Mus. Bull. 130, p. 292, 1925.—A. O. U. check-list of North American birds, ed. 4, p. 36, 1931.—Peters, Check-list of the birds of the world, vol. 1, p. 144, 1931.

Brooks saw two pairs of swans flying past the southeast point of St. Lawrence Island on June 28, 1913. Bailey writes that a resident teacher on the island, "Mr. Dupertius, of the Bureau of Education, showed me a photograph which he had made of four young downy swans in their nest on St. Lawrence Island during the summer of 1922. He tells me the species breeds there regularly."

The members of the Harriman Expedition also saw a couple of swans on the island (at a distance the large white objects were first identified as polar bears), and later in the same day they found a pair with young, feeding in a slough. One downy young one was collected.

Collins noted the presence of swans on the island in the summer of 1930 but was unable to obtain a specimen.

PHILACTE CANAGICA (Sevastianoff)

EMPEROR GOOSE

Anas canagious Sevastianoff, Nova Acta Acad. Sci. Imp. Petropol., vol. 13, p. 349, pl. 10, 1802 [probably Kanaga (or Kyktak) Island, Aleutian Islands].

Philacte canagica, Nelson, Birds of Bering Sea, etc., Cruise of the Corwin, p. 95, 1883.—Turner, Contr. Nat. Hist. Alaska, no. 11, p. 142, 1886.—Nelson, Report upon natural history collections made in Alaska, p. 89, 1887.—Nelson, Bird-Lore, vol. 15, p. 129, 1913.—Brooks, Bull. Mus. Comp. Zoöl., vol. 59, p. 389, 1915.—Hersey, Smithsonian Misc. Coll., vol. 66, no. 2, p. 22, 1916.—Bailey, Condor, vol. 27, p. 205, 1925.—Bent, U. S. Nat. Mus. Bull. 130, p. 268, 1925.—Jaques, Auk, vol. 47, p. 364, 1930.—A. O. U. check-list of North American birds, ed. 4, p. 39, 1931.—Peters, Check-list of the birds of the world, vol. 1, p. 149, 1931.

Anser canagicus, Hartert, Die Vögel der paläarktischen Fauna, vol. 2, p. 1290, 1920.

The emperor goose is one of the most notable birds of St. Lawrence Island, breeding there in large numbers, especially in the lagoon and lake area in the southern part of the island. Nelson saw great numbers of them along the southwestern coast. Brooks noted them abundantly, during the latter part of June, "flying to and from a marsh by a large lagoon." Hersey was "told repeatedly that emperor geese occur in large numbers on the south side of St. Lawrence Island during the period when engaged in the postnuptial moult, and "he believes "that the center of their abundance to-day is on this island." Bailey writes that Hendee saw this species daily during the first week in July.

He was working the north shore, which, according to the natives, is not a good locality for this species, the lagoons along the southern side being the main breeding ground. * * * St. Lawrence Island has been considered the

center of abundance of the emperor goose, but from my experience I believe the southern shore of Kotzebue Sound to be their favorite breeding ground.

Dixon ¹² found these geese to be very numerous on the island. On June 25 he saw flocks of from 7 to 20. He saw in all more than 100 birds, but none of those dissected showed signs of breeding, and he found no recent nests.

Collins procured two adults and two fully grown immature birds with dark heads. The latter two, a male and a female, were shot on September 21; an adult male was taken on September 18; and an unsexed adult on October 2. All are in rather fresh plumage. All were collected at Gambell.

The immature male has a little more white on the postero-median portion of the abdomen than the female of corresponding age.

ANSER ALBIFRONS ALBIFRONS (Scopoli)

WHITE-FRONTED GOOSE

Branta albifrons Scopoli, Annus I Historico-Naturalis, p. 69, 1769 (no locality given=Carniola).

Anser albifrons gambeli, Nerson, Report upon natural history collections made in Alaska, p. 83, 1887.

Nelson writes that during the summer of 1881 a number of these geese were found feeding on St. Lawrence Island.

Collins tells me that he saw some grayish geese there during the summer of 1930, but was unable to shoot one.

MARECA PENELOPE (Linnaeus)

EUROPEAN WIDGEON

Anas penelope Linnaeus, Systema naturae, ed. 10, vol. 1, p. 126, 1758 (Europe; restricted type locality, Sweden).

Collins brought back an unsexed, undated bird, taken at Gambell. By plumage it is a female and is clearly referable to *penelope* and not to *americana*, as it has a very rufous-brown head, and abundantly gray-freckled axillars.

This duck has not been recorded previously from St. Lawrence Island.

DAFILA ACUTA TZITZIHOA (Vieillot)

AMERICAN PINTAIL

Anas tzitzihoa Vieillot, Nouv. Diet. d'Hist. Nat., vol. 5, p. 163, 1816 (Mexique). Dafila acuta Nelson, Birds of Bering Sea, etc., Cruise of the Corwin, p. 96, 1883; Report upon natural history collections made in Alaska, p. 69, 1887. Anas acuta tzitzihoa, Phillips, Natural history of the ducks, vol. 2, p. 308, 1923.

Nelson saw several pintails on St. Lawrence Island in the summer of 1881, but apparently he did not collect any. Collins obtained one immature male at Gambell in August. It is quite impossible to

¹² Auk, vol. 33, p. 373, 1916.

determine the subspecific identity of such a specimen satisfactorily, but Phillips considers St. Lawrence Island as within the breeding range of the American race tzitzihoa, with which I have identified Collins's bird. It has the broad speculum supposed to be characteristic of tzitzihoa.

NYROCA MARILA (Linnaeus)

GREATER SCAUP DUCK

Anas Marila Linnaeus, Fauna Suecica. ed. 2, p. 39, 1761 (in Lapponia=Lapland).

Fulix marila, Nelson, Birds of Bering Sea, etc., Cruise of the Corwin, p. 97, 1883.

Nelson states that this duck occurs on St. Lawrence Island. Beyond this bare statement nothing seems to be known of it as a member of the avifauna of that island.

CLANGULA HYEMALIS (Linnaeus)

OLD-SQUAW

Anas hyemalis Linnaeus, Systema naturae, ed. 10, vol. 1, p. 126, 1758 (in Europa et America arctica=northern provinces of Sweden).

Harelda glacialis, Nelson, Birds of Bering Sea, etc., Cruise of the Coricin, p. 99, 1883.

Harelda hyemalis, Brooks, Bull. Mus. Comp. Zoöl., vol. 59, p. 392, 1915.

Clangula hyemalis, Bailey, Condor, vol. 27, p. 170, 1925.—Phillips, Natural history of the ducks, vol. 3, p. 350, 1925.

Nelson saw old-squaws about St. Lawrence Island during his visit there in June and July, 1881. Brooks found them very common, in pairs and small flocks, on June 2. He notes that when "paired, the female very often flies ahead of the male, as does the female eider. A set of six fresh eggs was taken at St. Lawrence Island, June 25, 1913." Bailey obtained a set of five eggs there on July 9. While on the island with the other naturalists of the Harriman Expedition on July 13, 1899, Dr. A. K. Fisher obtained a specimen of this duck.

Collins obtained a male at Gambell in August and a female there on October 17. Both birds are in a molting condition.

HISTRIONICUS HISTRIONICUS PACIFICUS Brooks

WESTERN HARLEQUIN DUCK

Histrionicus histrionicus pacificus Brooks, Bull. Mus. Comp. Zeöl., vol. 59, no. 5, p. 393, Sept., 1915 (Cape Shipunski, Kamchatka).

Histrionicus histrionicus, Hersey, Smithsonian Misc. Coll., vol. 66, no. 2, p. 18, 1916.

Histrionicus histrionicus pacificus, Bailey, Condor, Vol. 27, p. 197, 1925.—Bent, U. S. Nat. Mus. Bull. 130, p. 62, 1925.

Nelson ¹³ does not definitely list this duck from St. Lawrence Island, but states that it is found on "the shores and islands of Bering Sea." Hersey saw a few to the east of St. Lawrence Island, and Bailey saw three birds on the island on June 28.

Collins obtained a female at Gambell on June 27, and an unsexed bird, probably also a female, on October 2. The June specimen is in molt.

According to Bent, this duck probably breeds on St. Lawrence Island.

POLYSTICTA STELLERI (Pallas)

STELLER'S EIDER

Anas stelleri Pallas, Spicilegia zoologica, etc., vol. 1, fasc. 6, p. 35, pl. v, 1769 (east Kamchatka).

Polysticta stelleri, Nelson, Birds of Bering Sea, etc., Cruise of the Corwin, p. 99, 1883.—Brooks, Bull. Mus. Comp. Zoöl., vol. 59, p. 395, 1915.—Hersey, Smithsonian Misc. Coll., vol. 66, no. 2, p. 19, 1916.—Bent, U. S. Nat. Mus. Bull. 130, p. 73, 1925.—A. O. U. check-list of North American birds, ed. 4, p. 55, 1931.

Eniconetta stelleri, Nelson, Report upon natural history collections made in Alaska, p. 75, 1887.

Nelson found Steller's eider evidently breeding in small numbers around the first of July in the brackish ponds on St. Lawrence Island.

Brooks found a number of large flocks on the south side of the island on June 25. These flocks consisted mostly of males. Hersey found them common on the island also.

Bailey 14 definitely states that Hendee saw none of these birds during his week's stay on the island.

Collins collected an adult male in breeding plumage on June 8 at Gambell. The black of the back, rump, and upper tail coverts has relatively little of the violaceous sheen as compared with other specimens from Alaska. The blackish chin and throat patch are broadly connected posteriorly with the dark collar. The width of the connection appears to be very variable; in some specimens it is reduced to a very fine line, in others (as in the present case) it is as much as 12 millimeters wide.

SOMATERIA V-NIGRA Gray

PACIFIC EIDER

Somateria V-nigra Gray, Proc. Zool. Soc. London, 1855, p. 212, pl. 107, Feb., 1856 (Kotzebue Sound [Alaska]).

Somateria v-nigra, Brooks, Bull. Mus. Comp. Zoöl., vol. 59, p. 396, 1915.— Balley, Condor, vol. 27, p. 200, 1925.

¹³ Birds of Bering Sea and the Arctic Ocean. Cruise of the Corwin in Alaska and the NW. Arctic Ocean in 1881, p. 98, 1883.

¹⁴ Condor, vol. 27, p. 197, 1925.

Nelson ¹⁵ writes that this eider is found everywhere about the shores and islands of Bering Sea, but gives no definite mention of St. Lawrence Island. Brooks found the species common in pairs early in June. Bailey writes that "great flocks of them were seen along the edge of the ice * * * from King Island to St. Lawrence Island."

Collins obtained a third-grown juvenal female on September 21; three adult males, all in molt, on September 27, October 11, and October 20; and four adult females, June 1, October 12, and October 20. The last four show a great deal of variation in coloration; the two October birds are in fresh plumage, the June bird and one without date are in worn condition.

The juvenal bird is in natal down, with the first pennaceous feathering just beginning to show on the wings, tail, breast, and belly.

The adult males taken on September 27 and October 11 have brownish heads, necks, and breasts; the one shot on October 20 has the head largely white with the heavy black crown patch, and has a white neck and breast, scapulars, and interscapulars.

According to Phillips,¹⁶ the males begin to molt into the eclipse plumage, illustrated by the three specimens discussed above, soon after the first of July, and this plumage is often retained in part until November.

When on St. Lawrence Island on July 13, 1899, the Harriman Expedition saw a few of these ducks, but did not collect any. It would be interesting to know how early the postnuptial molt begins on that island.

SOMATERIA SPECTABILIS (Linnaeus)

KING EIDER

Anas spectabilis Linnaeus, Systema naturae, ed. 10, vol. 1, p. 123, 1758 (in Canada, Svecia=Sweden).

Somateria spectabilis, Nelson, Report upon natural history collections made in Alaska, p. 79, 1887.—Brooks, Bull. Mus. Comp. Zoöl., vol. 59, p. 395, 1915.—Hersey, Smithsonian Misc. Coll., vol. 66, no. 2, p. 20, 1916.—Bent, U. S. Nat. Mus. Bull. 130, p. 118, 1925.—Phillips, Natural history of the ducks, vol. 4, p. 117, 1926.—A. O. U. check-list of North American birds, ed. 4, p. 57, 1931.—Peters, Check-list of the birds of the world, vol. 1, p. 180, 1931.

Nelson reported king eiders as being common on St. Lawrence Island; Brooks found them numerous about Cape Chibukak, in pairs and small flocks, on June 2; Hersey writes that "during the summer the king eider occurs regularly as far south as St. Lawrence Island where they doubtless breed * * *." According to Phillips,

16 Natural history of the ducks, vol. 4, p. 83, 1926.

¹⁵ Blrds of Bering Sea and the Arctic Ocean. Cruise of the revenue-steamer Corwin in Alaska and the NW. Arctic Ocean in 1881, p. 101, 1883.

William Percy also recorded this eider from St. Lawrence, but I am not aware of this being published elsewhere.

Collins obtained two adult males, one on June 1, the other without date. Both were shot near Gambell, and both are in fine, breeding plumage.

ARCTONETTA FISCHERI (Brandt)

SPECTACLED EIDER

Fuligula Fischeri Brandt, Fuligulam Fischeri novam avium speciem, pp. 10, 14, 1 pl., 1847 (St. Michael, Alaska).

Arctonetta fischeri, Brooks, Bull. Mus. Comp. Zoöl., vol. 59, p. 395, 1915.— Hersey, Smithsonian Misc. Coll., vol. 66, no. 2, p. 19, 1916.

Brooks collected three specimens of the spectacled eider from a small flock on the south shore of St. Lawrence Island, on June 25, 1913. Hersey observed this species in small numbers, apparently on the north side of the island.

OIDEMIA AMERICANA Swainson

AMERICAN SCOTER

Oidemia americana Swainson, in Swainson and Richardson, Fauna Boreali-Americana, vol. 2, p. 450, 1831 (1832) (Hudson Bay, latitude 57° N.).

Oedemia americana, Nelson, Birds of Bering Sea, etc., Cruise of the Corwin, p. 102, 1883.

Oidemia americana, Nelson, Report upon natural history collections made in Alaska, p. 80, 1887.

The American scoter occurs sparingly upon St. Lawrence Island. Nelson is the only naturalist who has recorded it there.

MERGUS SERRATOR Linnaeus

RED-BREASTED MERGANSER

Mergus Serrator Linnaeus, Systema naturae, ed. 10, vol. 1, p. 129, 1758 (in Europa=Sweden).

Merganscr serrator, Nelson, Report upon natural history collections made in Alaska, p. 66, 1887.

Mergus serrator, Phillips, Natural history of the ducks, vol. 4, p. 281, 1926.

Nelson found the red-breasted merganser breeding on St. Lawrence Island in the summer of 1881.

Collins collected one unsexed bird (probably a female) at Gambell in September. The specimen is in fairly fresh plumage.

Family GRUIDAE, Cranes

GRUS CANADENSIS CANADENSIS (Linnaeus)

LITTLE BROWN CRANE

Ardea canadensis Linnaeus, Systema naturae, ed. 10, vol. 1, p. 141, 1758 (based on the Brown and Ash-colour'd Crane, Edwards, Natural history of birds, p. 133: In America septentrionali=Hudson Bay).

Grus canadensis, Nelson, Report upon natural history collections made in Alaska, p. 95, 1887.—Brooks, Bull. Mus. Comp. Zoöl., vol. 59, p. 388, 1915.

Nelson recorded the little brown crane as a summer resident on St. Lawrence Island. Brooks saw two pairs at the southeast end of the island, "where a pair and one juvenile about a week old were taken June 27, 1913."

Collins noted the presence of this bird in the summer of 1930, but he was not able to obtain a specimen.

Family CHARADRIIDAE, Plovers, Turnstones, Surf-birds

CHARADRIUS SEMIPALMATUS Bonaparte

SEMIPALMATED PLOVER

Charadrius semipalmatus Bonaparte, Journ. Acad. Nat. Sci. Philadelphia, vol. 5, p. 98, 1825 (new name for Tringa hiaticula Wilson; coast of New Jersey). Aegialites semipalmatus, Nelson, Birds of Bering Sea, etc., Cruise of the Corwin, pp. 84-85, 1883.

Nelson found this plover on St. Lawrence Island, thereby establishing its place in the known avifauna of the island.

PLUVIALIS DOMINICA FULVA (Gmelin)

PACIFIC GOLDEN PLOVER

Charadrius fulvus GMELIN, Systema naturae, vol. 1, pt. ii, p. 687, 1789 (based on the Fulvous Plover, Latham, Synopsis, vol 3, p. 211: In Tahiti maritimis et uliginosis=Society Islands).

Charadrius dominicus, Nelson, Report upon natural history collections made in Alaska, p. 124, 1887.

Charadrius dominicus fulvus, Nelson, Report upon natural history collections made in Alaska, p. 125, 1887.

As was pointed out long ago by Nelson, the relationships of the golden plovers of the Bering Sea coasts and islands are involved, because both dominica and fulva intergrade there. Nelson examined a long series and decided that on "the Siberian coast of Bering Sea the typical Asiatic form is found common, and is of much rarer occurrence on the Alaskan coast, from the peninsula of Alaska north to Point Barrow. On this stretch of coast to the island of St. Lawrence dominicus is the predominating form, but specimens are found grading in a regular series from this bird to the fulvus of the Asiatic region * * *."

Bailey,¹⁷ quoting Bangs, states that Wainwright, Alaska, must be close to the meeting ground of the two races.

Collins collected 5 specimens at Gambell—2 males, 2 unsexed, and 1 female—in September. All these birds I refer to fulva and not to

¹⁷ Condor, vol. 28, p. 85, 1926.

dominica, although I am not unmindful of the fact that Nelson came to the opposite conclusion. According to Hartert, fulva is smaller, having wings 164 to 175 mm. in length, as against 176 to 186 mm. in dominica. The wing lengths of the present five birds are as follows: Males, 165, 163; female, 161.5; unsexed, 163, 168 mm. All are, therefore, referable to fulva on the basis of size. The present specimens are all very yellow on the upper parts, thereby also agreeing better with fulva than with dominica. They are all in fresh plumage.

Nelson recorded both races from St. Lawrence Island, but in view of the intermediate nature of the place I feel it would be misleading to claim that there were two forms of golden plover there. It would, perhaps, be more to the point to call all the St. Lawrence birds

intermediates between the two subspecies.

ARENARIA INTERPRES INTERPRES (Linnaeus)

EUROPEAN TURNSTONE

Tringa Interpres Linnaeus, Systema naturae, ed. 10, vol. 1, p. 148, 1758 (in Europa et America septentrionali=Islands of Gothland, Sweden).

Strepsilas interpres, Nelson, Birds of Bering Sea, etc., Cruise of the Corwin,

pp. 82, 83, 1883.

Arenaria interpres, Nelson, Report upon natural history collections made in Alaska, p. 128, 1887.

Arenaria interpres interpres, Bailey, Condor, vol. 28, pp. 85, 86, 1926.—Bent,

U. S. Nat. Mus. Bull. 146, p. 293, 1929.

Nelson saw a number of mated pairs with nests on St. Lawrence Island the last of June, 1881. Bailey writes that a "few turnstones were noted on the gravel beach in the vicinity of Gambel village, on St. Lawrence Island, and Hendee found one downy young, which had left the nest June 29."

As Bailey states, the birds from Cape Halkett and from Wales. Alaska, would have to be considered A. i. oahuensis (Bloxham) if that race be recognized. This is probably true also for the St. Lawrence Island birds. The status of oahuensis seems doubtful, however.

ARENARIA MELANOCEPHALA (Vigors)

BLACK TURNSTONE

Strepsilas melanocephalus Vigors, Zool. Journ., vol. 4, p. 356, Jan., 1829 (northwest coast of [North] America).

Arenaria melanocephala, Nelson, Report upon natural history collections made in Alaska, p. 129, 1887.

Nelson observed this species sparingly on St. Lawrence Island. No one else has recorded it since.

¹⁸ Die Vögel der paläarktischen Fauna, vol. 2, pp. 1551, 1552, 1920.

Family SCOLOPACIDAE, Snipe, Woodcock, Sandpipers

ARQUATELLA PTILOCNEMIS PTILOCNEMIS (Coues)

PRIBILOF SANDPIPER

Tringa ptilocnemis Coues, in Elliott, Report on the Seal Islands of Alaska (not paged), 1873 (St. George Island, Pribilof Islands).

Arquatella philocnemis, Nelson, Birds of Bering Sea, etc., Cruise of the Corwin, p. 86, 1883.—Hanna, Condor, vol. 23, p. 51, 1921.

Tringa ptilocnemis Nelson, Report upon natural history collections made in Alaska. p. 105, 1887.

Arquatella maritima ptilocnemis, Hersey, Smithsonian Misc. Coll., vol. 66, no. 2, p. 24, 1916.

Erolia maritima ptilocnemis, Hartert, Die Vögel der paläarktischen Fauna, vol. 2, p. 1592, 1920.

Arquatella ptiloenemis ptiloenemis, Bent, U. S. Nat. Mus. Bull. 142, pp. 153, 159, 1927.—A. O. U. check-list of North American birds, ed. 4, p. 118, 1931.

Nelson found a single pair of these sandpipers on the south shore of St. Lawrence Island in June, 1881. Hersey saw a few on the north side of the island on July 24, 1914. Hanna overlooked Hersey's note, as he thought there was but a single record for the bird for St. Lawrence Island. He suspected "that the birds have some other extensive breeding ground than St. George, St. Paul, and St. Mathew Islands, because in September and October large flocks came to the two former islands; these appear to contain many more individuals than are in existence on all three. Whether St. Lawrence Island supplies the extra number or not remains for future determination."

The Harriman Expedition obtained one male and two females on July 13, 1899, and Collins got a male at Gambell in September, 1930 The last-mentioned specimen is in an advanced stage of molt. It is a peculiar bird in that it has the darker color of *couesi* and the larger size of *ptiloenemis* (wing length 128 mm.).

ARQUATELLA PTILOCNEMIS COUESI Ridgway

ALEUTIAN SANDPIPER

Arquatella coucsi Ridgway, Bull. Nuttall Orn. Club, vol. 5, p. 160, July, 1880 (Aleutian Islands and coast of Alaska=Attu Island, Aleutian Islands).

Arquatella maritima couesi, Brooks, Bull. Mus. Comp. Zoöl., vol. 59, p. 386. 1915.—Bailey, Condor, vol. 27, p. 236, 1925.

Arquatella ptilocnemis couesi, Bent, U. S. Nat. Mus. Bull. 142, p. 166, 1927.

Brooks noted a few at the southeast end of St. Lawrence Island during June, 1912. He collected specimens, now in the Museum of Comparative Zoölogy, at Cambridge, Mass. Bailey saw several during the first week in July.

St. Lawrence Island appears to be a meeting place of typical ptilocnemis and of couesi—northern and southern races of the same species, just as it is for the eastern and western forms of the golden plover.

PISOBIA MELANOTOS (Vieillot)

PECTORAL SANDPIPER

Tringa melanotos Vieillot, Nouv. Dict. d'Hist. Nat., nouv. éd., vol. 34, p. 462, 1819 (Paraguay).

Pisobia maculata, BAILEY, Condor, vol. 28, p. 31. 1926.

The only published record for St. Lawrence Island is Bailey's observational one. He saw some pectoral sandpipers there on July 29. The Harriman Expedition, however, obtained a female specimen on the island on July 13, 1899.

PELIDNA ALPINA SAKHALINA (Vieillot)

RED-BACKED SANDPIPER

Scolopax sakhalina Vietllot, Nouv. Dict. d'Hist. Nat., nouv. éd., vol. 3, p. 359, 1816 (en Russie=Sakhalin Island, Okhotsk Sea).

Pelidna alpina americana, Nelson, Birds of Bering Sea, etc., Cruise of the Corwin, p. 88, 1883.

Pelidna alpina pacifica; Pelidna alpina sakhalina, BAILEY, Condor, vol. 28, p. 33, 1926.

Pelidna alpina sakhalina, Brooks, Bull. Mus. Comp. Zoöl. vol. 59, p. 386, 1915.

Nelson found this bird to be common on St. Lawrence Island. The Harriman Expedition obtained three examples on July 13, 1899. Bailey noted several pairs there the first week in July, "where they were no doubt breeding, as specimens we took had their sex organs well developed." Brooks saw, but did not collect, this species, during the latter part of June, 1913.

EREUNETES PUSILLUS (Linnaeus)

SEMIPALMATED SANDPIPER

Tringa pusilla LINNAEUS, Systema naturae, ed. 12, vol. 1, p. 252, 1766 (based on La Petite Alouette de mer de S. Domingue. Cinclus Dominiconsis minor, Brisson, Ornithologie, vol. 5, p. 222: In Domingo=Santo Domingo, West Indies).

Ereunetes pusillus, Nelson, Birds of Bering Sea, etc., Cruise of the Corwin, p. 88, 1883.

According to Nelson, the semipalmated sandpiper is a common summer resident on St. Lawrence Island.

EREUNETES MAURII Cabanis

WESTERN SANDPIPER

Ereunetes Mauri Cabanis, Journ. f. Orn., Nov., 1856, p. 419, 1857 (Cuba). Ereunetes occidentalis, Nelson, Report upon natural history collections made in Alaska, p. 114, 1887.

Nelson writes that, although this species "is not recorded from the Seal and Aleutian Islands, I have seen the bird at St. Lawrence Island."

LIMOSA LAPPONICA BAUERI Naumann

PACIFIC GODWIT

Limosa Baueri Naumann, Naturgeschichte der Vögel Deutschlands, vol. S, p. 429, 1836 (Neuholland=Australia).

Collins obtained two immature males at Gambell, on August 1 and 23, respectively. These constitute the first records for this species for St. Lawrence Island. They have short bills—culmen lengths of 61 and 63 mm., as against 76 to 120 mm. in the adults. They have darker, less whitish, rump feathers than a bird of corresponding age from Cape Bolskoi Baranov, eastern Siberia.

Family PHALAROPODIDAE, Phalaropes

PHALAROPUS FULICARIUS (Linnacus)

RED PHALAROPE

Tringa Fulicaria Linnaeus, Systema naturae, ed. 10, vol. 1, p. 148, 1758 (based on the Red Coot-footed Tringa, Edwards, Natural history of birds, p. 142: In America=Hudson Bay).

Crymophilus fulicarius, Nelson, Report upon natural history collections made in Alaska, p. 98, 1887.

Phalaropus fulicarius Nelson, Birds of Bering Sea, etc., p. 91, 1883.—Brooks, Bull. Mus. Comp. Zoöl., vol. 59, p. 387, 1915.—Balley, Condor, vol. 27, p. 233, 1925.—Bent, U. S. Nat. Mus. Bull. 142, p. 14, 1927.

Nelson found this bird nesting on St. Lawrence Island. Brooks recorded it as common east of Cape Chibukak, June 24, on the south side of the island, June 25, and at the southeastern end on June 27, 1913. Bailey saw these birds on the island, and Hendee found a nest with two eggs there on July 1.

The Harriman Expedition obtained two males and saw a number of others about some sloughs on the island.

Collins collected a male in breeding plumage on July 24, and two males in winter plumage on October 1 and 7; all were taken at Gambell.

LOBIPES LOBATUS (Linnaeus)

NORTHERN PHALAROPE

Tringa tobata Linnaeus, Systema naturae, ed. 10, vol. 1, p. 148, 1758 (lobata in Emendanda, p. 824) (based on the Cock Coot-footed Tringa, Edwards, Natural history of birds, p. 143: In America septentrionali, Lapponia Hudson Bay).

Lobipes hyperboreus, Nelson, Birds of Bering Sea, etc., Cruise of the Corwin, p. 91, 1883.

Lobipes lobatus, Brooks, Bull. Mus. Comp. Zoöl., vol. 59, p. 387, 1915.

In discussing the distribution of the phalaropes in Bering Sea, Nelson states that "the Northern Phalarope appears to be the only species breeding in the Aleutian chain and thence north to St. Lawrence Island, where the Red Phalarope nests." Brooks found the northern phalarope quite common at the southeast end of the island on June 27. On June 26 he collected a clutch of eggs about one-quarter incubated.

Family STERCORARIIDAE, Skuas, Jaegers

STERCORARIUS POMARINUS (Temminck)

POMARINE JAEGER

Lestris pomarinus TEMMINCK, Manuel d'ornithologie, p. 514, 1815 (1814) (les regions du cercle arctique, accidentel sur les côtes de Hollande et de France).

Dr. A. K. Fisher informs me that when he was on St. Lawrence Island with the Harriman Expedition, on July 13, 1899, he saw several pomarine jaegers flying over the tundra in the manner of marsh hawks. He suggests that they were probably after meadow mice, as these mammals were found in stomachs of specimens taken in other localities.

Collins collected two females in the light phase, on July 10 and August 6, respectively, and one unsexed, undated bird in the dark phase; all were shot at Gambell. All three are in good, fairly fresh plumage.

STERCORARIUS PARASITICUS (Linnaeus)

PARASITIC JAEGER

Larus parasiticus Innaeus, Systema naturae, ed. 10, vol. 1, p. 136, 1758 (intra tropicum Cancri, Europae, Americae, Asiae=coast of Sweden).

Stercorarius parasiticus, Nelson, Birds of Bering Sea, etc., Cruise of the Corwin, p. 111, 1883.—Seale, Proc. Acad. Nat. Sci. Philadelphia, 1898, p. 130.—Balley, Condor, vol. 27, p. 101, 1925.

Nelson saw the parasitic jaeger at St. Lawrence Island, as did also Seale on July 1, 1896, and Hendee during the first week in July, 1921.

STERCORARIUS LONGICAUDUS Vicillot

LONG-TAILED JAEGER

Stercorarius longicuudus Vieillot, Nouv. Dict. d'Hist. Nat., nouv. éd., vol. 32, p. 157, 1819 (le nord de l'Europe. de l'Asie et de l'Amerique).

· Stereorarius longicaudus, Bent, U. S. Nat. Mus. Bull. 113, p. 28, 1921.—Bailey, Condor, vol. 27, p. 102, 1925.

Bent records this bird as breeding on St. Lawrence Island. Hendee saw several there during the first week in July.

Family LARIDAE, Gulls, Terns

LARUS HYPERBOREUS Gunnerus

GLAUCOUS GULL

Larus hyperboreus Gunnerus, in Leem, Beskrivelse over Finnarkens Lapper p. 226 (note), 1767 (northern Norway).

Larus barrovianus, Nelson, Report upon natural history collections made in Alaska, p. 52, 1887.

Larus hyperboreus, Jaques, Ank, vol. 47, p. 358, 1930.

In his report on the birds of Bering Sea ¹⁹ Nelson writes of this gull (under the name *Larus glaucus*) to the effect that it breeds on all the islands and shores of Bering Sea. In his later report he gives the first definite record for St. Lawrence Island and states that the bird breeds in that place.

Dr. A. K. Fisher informs me that one specimen of this gull was secured by the Harriman Expedition and that others were seen the day they landed on St. Lawrence Island (July 13, 1899).

Jaques noted these birds north of the island, but none "were seen much south of St. Lawrence Island."

LARUS GLAUCESCENS Naumann

GLAUCOUS-WINGED GULL

Larus glaucescens Naumann, Naturgeschichte der Vögel Deutschlands, vol. 10, p. 351, 1840 (Nord-Amerika).

Larus glaucescens, Brooks, Bull. Mus. Comp. Zoöl., vol. 59, p. 373, 1915.—Ridgway, U. S. Nat. Mus. Bull. 50, vol. 8, p. 598, 1919.—Bent, U. S. Nat. Mus. Bull. 113, p. 73, 1921.—Hartert, Die Vögel der paläarktischen Fauna, vol. 2, p. 1734, 1921.

Brooks found this species breeding at St. Lawrence Island. A set of eggs taken by him on June 20 was very advanced in incubation.

LARUS ARGENTATUS VEGAE Palmén

VEGA GULL

Larus argentatus Brünn. var. Veyae Palmén, in Nordenskiöld, Vega-Expeditionens Vetenskapliga Iakttagelser, vol. 5, p. 370, 1887 (Pidlin and vicinity, extreme northeastern Siberia).

Collins collected two Vega gulls, thereby adding this species to the known avifauna of St. Lawrence Island. Both birds were taken

¹⁰ Nelson, E. W., Birds of Bering Sea and the Arctic Ocean. Cruise of the revenue-steamer Corwin in Alaska and the NW. Arctic Ocean in 1881, p. 106, 1883.

at Gambell; unfortunately both are without further data. Both are in worn plumage, and both have a little black on the rectrices. One bird is otherwise in full adult plumage; the other has a considerable number of darkish markings on the head.

RISSA TRIDACTYLA POLLICARIS Ridgway

PACIFIC KITTIWAKE

Rissa tridactyla pollicaris Stejneger MS., Ridgway, in Baird, Brewer, and Ridgway, Water birds of North America, vol. 2, p. 202, 1884 (Kotzebue Sound, Alaska).

Rissa tridaetyla kotzebuei, Nelson, Birds of Bering Sea, etc., Cruise of the Corwin, p. 105, 1883.

Rissa triductyla pollicaris, Seale, Proc. Acad. Nat. Sci. Philadelphia, 1898, p. 131.—Bailey, Condor, vol. 27, pp. 103, 104, 1925.—Jaques, Auk, vol. 47, p. 358, 1930.

Nelson found these kittiwakes about the shores of St. Lawrence Island during the last days of June, 1881. Bailey found them "to be abundant * * * at St. Lawrence Island, where they were already nesting. I saw many of their eggs along the cliffs below Sivunga on July 8." Seale saw great numbers of these birds.

Hersey ²⁰ saw kittiwakes on the high cliffs near Gambell. Jaques found the species common at sea near St. Lawrence Island.

Collins collected seven specimens, all at Gambell, during October. Most of the birds are unsexed. Four of them have the tail terminally banded with black, a considerable extent of black on the hind neck, interscapulars, and upper wing coverts, and black bills, and are obviously young birds. The other three are adults with pale yellow bills. The young birds are in fairly fresh plumage; the adults are abraded.

XEMA SABINI (Sabine)

SABINE'S GULL

Larus sabini J. Sabine, Trans. Linn. Soc. London, vol. 12, pt. ii, p. 522, pl. 29, 1819 (west coast of Greenland, latitude 75° 29', longitude 60° 9', Sabine Islands, near Melville Bay).

Xema sabinei, Nelson, Birds of Bering Sea, etc., Cruise of the Corwin, p. 109, 1883.

Xema sabinii, Nelson, Report upon natural history collections made in Alaska, p. 56, 1887.

Xema sabini, Bent, U. S. Nat. Mus. Bull. 113, p. 196, 1921.—Dwight, Bull. Amer. Mus. Nat. Hist., vol. 52, p. 328, 1925.

Nelson notes that Sabine's gull occurs "in small numbers off St. Lawrence Island, but is unknown from the other Bering Sea islands." Bent writes that this gull breeds on St. Lawrence Island.

²⁰ Smithsonian Misc. Coll., vol. 66, no. 2, p. 4, 1916.

Collins obtained four adults and one young of this species, all at Gambell, in July and August (two of the specimens are undated).

The July adult is in very fresh plumage; the two taken in August are somewhat worn. The abrasion on the primaries is of interest in that the white tips wear off more quickly laterally than terminally, leaving the feathers with a narrow white terminal bar from which protrudes, distally, a slender white shaft with a few white barbs on either side. Finally this protruding part also wears off. One of the adults (undated) has the outer greater upper primary coverts tipped with white; the others have no white on these feathers. The young bird is in fresh plumage (undated).

STERNA PARADISEA Brünnich

ARCTIC TERN

Sterna Paradisaea Brünnich, Ornithologia Borealis, p. 46, 1764 (E Christiansöe=Christiansöe Island, Denmark).

Sterna paradisaca, Nelson, Report upon natural history collections made in Alaska, p. 58, 1887.—Brooks, Bull. Mus. Comp. Zoöl., vol. 59, p. 372, 1915.—Bailey, Condor, vol. 27, p. 164, 1925.

Nelson writes that the arctic tern "occurs on St. Lawrence and St. Matthew's Islands, where it breeds."

Brooks found a colony of some 25 pairs breeding "on a sand spit in the large lagoon on the south side of St. Lawrence Island in June, 1913. Several sets of eggs taken June 25 showed that incubation had started." Bailey saw several daily during the latter part of June and early part of July.

Collins collected a female at Gambell on August 21. It is in an advanced stage of molt and appears to be a young bird coming into

adult plumage.

Family ALCIDAE, Auks, Murres, Auklets

URIA LOMVIA ARRA (Pallas)

PALLAS'S MURRE

Cepphus Arra Pallas, Zoographia Rosso-Asiatica, vol. 2, p. 347, 1811 (in oceano orientali circa Camtschatcam).

Uria lomvia arra, Nelson, Report upon natural history collections made in Alaska, p. 45, 1887.—Seale, Proc. Acad. Nat. Sci. Philadelphia, p. 130, 1898.—Hersey, Smithsonian Misc. Coll., vol. 66, no. 2, p. 10, 1916.—Bailey, Condor, vol. 27, p. 66, 1925.

Nelson saw large numbers of these murres off St. Lawrence Island. Hersey found the species breeding on the cliffs behind Gambell, and Bailey records that Hendee found them extremely numerous on the island during the first week in July. They were then just beginning to nest, and ravens and kittiwakes were seen flying off with their eggs.

Seale wrote that "off St. Lawrence Island July 1 murres were far more abundant than any other species of bird."

Collins obtained a male on June 1, a female on August 6 and another on August 10, and still another on September 4. All were collected at Gambell. All are adults.

CEPPHUS GRYLLE MANDTI (Mandt)

MANDT'S GUILLEMOT

Uria mandtii Licht., Mandt, Observationes in historiam naturalem et anatomiam comparatam in itinere Groenlandico factae, p. 30, 1822 (Spitzbergen).

Collins collected a young male at Gambell, on November 23, 1930. It is in fairly fresh plumage. This is the only St. Lawrence record I know of.

CEPPHUS COLUMBA Pallas

PIGEON GUILLEMOT

Cepphus Columba Pallas, Zoographia Rosso-Asiatica, vol. 2, p. 348, 1811 (in oceano arctico pariterque circa Camtschatcam et in omni freto inter Sibiriam et Americam=Bering Sea).

Cepphus columba, Bailey, Condor, vol. 27, p. 66, 1925.

Bailey found the pigeon guillemot to be abundant on St. Lawrence Island, nesting along the cliffs near Sevunga and below Gambell. It is strange that Nelson, Brooks, and others overlooked this bird if it is really abundant.

Collins collected an adult male on July 14 and another, both in breeding plumage, on August 16 and a young bird on October 11, all at Gambell. The August bird is very much abraded.

CYCLORRHYNCHUS PSITTACULA (Pallas)

PAROQUET AUKLET

Alca psittacula Pallas, Spicilegia zoologica, etc., vol. 1, fasc. 5, p. 13, pls. ii, v, figs. 4-6, 1769 (insulas partim versus laponiam partim versus Americam septentrionalem sparsus=Kamchatka).

Cyclorrhynchus psittaculus, Nelson, Report upon natural history collections made in Alaska, pp. 40, 41, 1887.

Phalaris psittacula, Hersey, Smithsonian Misc. Coll., vol. 66, no. 2, p. 9, 1916.—Ridgway, U. S. Nat. Mus. Bull. 50, vol. 8, p. 765, 1919.—Bailey, Condor, vol. 27, p. 63, 1925.

Nelson found this peculiar auklet abundant on St. Lawrence Island. Hersey noted that this species appeared to be less numerous than the crested auklet or the least auklet.

Bailey writes that there "is a large nesting colony of sea birds below Gambell village on the southwest (northwest) side of St. Law-

rence Island, which Hendee visited, and he reported a number of this species * * * which were nesting, or preparing to nest, among the gigantic boulders * * *. I visited a fine colony of birds near the reindeer-herding camps of Sivunga, on the north shore of St. Lawrence Island, about 60 miles from Gambell. * * * this species of auklet seemed to prefer burrows near the top of the cliff where they could not be molested. The Paroquet Auklets were quite tame and often peered inquisitively at us, even after the murres, cormorants, and other auklets had taken wing."

Collins collected a female at Gambell on July 1. The bird is in fresh plumage and is fully adult.

AETHIA CRISTATELLA (Pallas)

CRESTED AUKLET

Alca cristalella Pallas, Spicilegia zoologica, etc., vol. 1, fasc. 5, p. 18, pls. iii, v, figs. 7-9, 1769 (ultimarum versus Japoniam insularum maxime incola et eirea insulam Matmey=Yesso, Japan, to Kamchatka).

Simorhynchus cristatellus, Nelson, Report upon natural history collections made in Alaska, pp. 41, 42, 1887.

Acthia cristatella, Townsend, Bird-Lore, vol. 15, p. 134, 1913.—Brooks, Bull. Mus. Comp. Zoöl., vol. 59, p. 370, 1915.—Hersey, Smithsonian Misc. Coll., vol. 66, no. 2, p. 9, 1916.—Bailey, Condor, vol. 27, p. 64, 1925.

Nelson found the crested auklet extremely numerous among the ice off St. Lawrence Island. Brooks found it common at Cape Chibukak on June 3; Hersey noted its abundance near Gambell, July 24 and 25. Bailey writes that on "St. Lawrence Island, these birds were present with the other auklets in both the colonies * * *. The summits of the cliffs were lined with a confused jumble of boulders among which this species and the least auklets made their homes,"

Collins collected 10 specimens, all at Gambell. The six with dates were taken late in June and in July and August. One unsexed specimen has the bill as in the winter condition, that is, it has shed the nasal and suprarictal cuirass.

AETHIA PUSILLA (Pallas)

LEAST AUKLET

Uria pusilla Pallas, Zoographia Rosso-Asiatica, vol. 2, p. 373, 1811 (circa Camtschatcam).

Cerorhinea occidentalis?, Vigors, The zoology of Captain Beechey's voyage to the Pacific and Behring's Strait. Ornithology, p. 34, 1839.

Simorhynchus pusillus, Nelson, Report upon natural history collections made in Alaska, p. 43, 1887.

Acthia pusilla, Brooks, Bull. Mus. Comp. Zoöl., vol. 59, p. 371, 1915.—Hersey, Smithsonian Misc. Coll., vol. 6, no. 2, p. 9, 1916.—Hartert, Die Vögel der paläarktischen Fauna, vol. 3, p. 1787, 1921.—Balley, Condor, vol. 27, p. 64, 1925.

Ciceronia pusilla, Ridgway, U. S. Nat. Mus. Bull. 50, vol. 8, p. 768, 1919.

Finsch ²¹ discussed the unpublished copper plates of J. F. v. Brandt's work for the Icones Avium Rossicarum, and identified the figures and their names and localities. Figures 6 and 7 on plate VI are given on page 21 as follows: "6.7. Phaleris pygmaea-Simorhynchus pusillus (Pall.)—St. Lorenz." On page 81, however, under the account of Simorhynchus pusillus, no mention is made of St. Lawrence Island. It is doubtful if Brandt's figure was drawn from a bird from St. Lawrence Island.

Vigors states that "specimens of these birds were brought off from St. Lawrence Island in great abundance." Nelson found the species abundant there and so did Hersey, Brooks, and Bailey. Thus, Brooks found "them in enormous numbers at St. Lawrence Island." Bailey writes that this species "is the most abundant of the auklets * * *. At St. Lawrence Island we saw thousands of them in the breeding colony at Sivunga, where they were preparing to nest among the rocks and rounded boulders."

Collins collected a male and a female at Gambell in July. Both are in somewhat worn plumage.

AETHIA PYGMAEA (Gmelin)

WHISKERED AUKLET

Alca pygmaea GMELIN, Systema naturae, vol. 1, pt. ii, p. 555, 1789 (based on the Pygmy Auk, Pennant, Arctic zoology, vol. 2, p. 513: Circa insulam avium inter Asiam septentrionalem et Americam=Islands in Bering Sea).

Mormon cristatellus (not Alca cristatella Pallas, 1769), Cuvier, in Choris's Voyage pittoresque autour du monde, Îles Aléoutiennes, p. 20, pl. 12, 1882.

Alcella pygmaea, Ridgway, U. S. Nat. Mus. Bull. 50, vol. 8, p. 772, 1919.

M. Choris received specimens of the whiskered auklet from the natives of St. Lawrence Island. Ridgway considers Cuvier's name, based on one of Choris's specimens, as a synonym of pygmaea, but he appears to consider the locality open to question.

FRATERCULA CORNICULATA (Naumann)

HORNED PUFFIN

Mormon corniculata NAUMANN, Isis, vol. 9, Band ii, Heft 8, col. 782 (pl. vii, figs. 3, 4), 1821 (Kamchatka).

Fratercula corniculata, Turner, Contr. Nat. Hist. Alaska, no. 11, p. 119, 1886.—
Bent, U. S. Nat. Mus. Bull. 107, p. 103, 1919.—Bailey, Condor, vol. 27, p. 62, 1925.

²¹ Abh. Naturw. Ver. Bremen, vol. 1, 1872.





ESKIMO NETTING AUKLETS NEAR GAMBELL

The least and crested auklets are the species caught most frequently.



Turner listed the horned puffin as a breeding bird on St. Lawrence Island. Bailey found it "very abundant at King and St. Lawrence Islands on June 27 and 28, doubtless then beginning to lay. * * * They were even more abundant at St. Lawrence Island along the cliffs on the north side, and in the colonies on the southwest (northwest!) near Gambell village."

Collins collected six adults of both sexes at Gambell in August and September.

LUNDA CIRRHATA (Pallas)

TUFTED PUFFIN

Alca cirrhata Pallas, Spicilegia zoologica, etc., vol. 1, fasc. v, p. 7, pls. i, v. figs. 1-3, 1769 (in mari inter Kamtschatcam et Americam Archipelagumque Kurilum=Bering Sea).

Lunda cirrhata, Turner, Contr. Nat. Hist. Alaska, no. 11, p. 117, 1886.—Bailey, Condor, vol. 27, p. 62, 1925.

Turner first recorded the tufted puffin from St. Lawrence Island. Bailey found it fairly common there, as did Collins, who collected four adults at Gambell late in June and in August.

Family CUCULIDAE, Cuckoos

CUCULUS CANORUS BAKERI Hartert

Cuculus canorus bakeri Harrerr, Die Vögel der paläarktischen Fauna, vol. 2, p. 948, 1912 (Shillong, Khasia Hills).

Cuculus canorus bakeri, Friedmann and Riley, Auk, vol. 48, p. 269, 1931.—
A. O. U. check-list of North American birds, ed. 4, p. 159, 1931.

An adult female, obtained by Collins at Gambell on July 1, 1930, is the only record, not only for St. Lawrence Island but for the entire Nearctic realm, for this dark form of the European cuckoo.

Family STRIGIDAE, Owls

NYCTEA NYCTEA (Linnaeus)

SNOWY OWL

Strix Nyctea Linnaeus, Systema naturae, ed. 10, vol. 1, p. 93, 1758 (in Europa et America septentrionali=Sweden).

Collins obtained two males at Gambell, one on September 18 and the other on October 2. The latter is almost immaculately white underneath and has only a very few brownish marks on the tertials and rectrices; the former specimen is more abundantly marked with dark brown.

The snowy owl does not seem to have been recorded from St. Lawrence Island before.

Family CORVIDAE, Crows, Magpies, Jays

CORVUS CORAX PRINCIPALIS Ridgway

NORTHERN RAVEN

Corvus corax principalis Ridgway, Manual of North American birds, p. 361, 1887 (Greenland to Alaska, etc.=St. Michael, Alaska).

Corvus corax sinuatus, Nelson, Report upon natural history collections made in Alaska, p. 165, 1887.

Corvus corax principalis, Bailey, Condor, vol. 28, p. 165, 1926.

Nelson and Elliott both saw ravens on St. Lawrence Island. Bailey writes that a few were "seen daily by Hendee on St. Lawrence Island, where they were preying upon the cliff-nesting birds." He saw some there himself as well.

Collins found this bird breeding quite commonly on the island and procured an adult female at Gambell on August 16. (Pl. 4.)

Family MOTACILLIDAE, Wagtails, Pipits

BUDYTES FLAVUS ALASCENSIS Ridgway

ALASKA YELLOW WAGTAIL

Budytes flavus alascensis Ridgway, Proc. Biol. Soc. Washington, vol. 16, p. 105, Sept. 30, 1903 (St. Michael, Alaska).

Budytes flavus leucostriatus, Nelson, Report upon natural history collections made in Alaska, p. 206, 1887.

The only data on this bird in St. Lawrence Island is Nelson's statement that it is "found along the entire Bering Sea coast, wherever suitable localities are found, extending its range to St. Matthews and St. Lawrence Islands."

St. Lawrence Island birds should be carefully studied, as it may be that they may turn out to be *simillima* Hartert. Hartert ²² writes that *simillima* seems to breed only in Kamchatka and wanders over Bering Island, east Siberia, and Chosen. As far as I know, no one has actually collected any specimens on St. Lawrence Island.

Family FRINGILLIDAE, Finches, Buntings, Grosbeaks ACANTHIS LINARIA HOLBOELLI (Brehm)

HOLBÖLL'S REDPOLL

Linaria holboellii Brehm, Handbuch Vögel Deutschlands, p. 280, 1831 (middle Germany=winter migrant).

Acanthis holboelli, Brooks, Bull. Mus. Comp. Zoöl., vol. 59, p. 404, 1915.

²² Die Vögel der paläarktischen Fauna, vol. 1, pp. 289-291, 1905.

Brooks collected a breeding female on St. Lawrence Island on June 27, 1913.

Collins obtained an unsexed adult on October 16 at Gambell.

CALCARIUS LAPPONICUS ALASCENSIS Ridgway

ALASKA LONGSPUR

Calcarius lapponicus alasecusis Ridgway, Auk, vol. 15, p. 320, Oct., 1898 (St. Paul's Island, Prybilov group, Alaska).

Centrophanes lapponicus, Nelson, Birds of Bering Sea, etc., Cruise of the Corwin, p. 69, 1883.

Calearius lapponicus, Nelson, Report upon natural history collections made in Alaska, p. 183, 1887.

Calcarius lapponicus alascensis, Nelson, Bird-Lore, vol. 15, p. 202, 1913.—Brooks, Bull. Mus. Comp. Zoöl., vol. 59, p. 409, 1915.—Bailey, Condor, vol. 28, p. 167, 1926.

Nelson found this longspur breeding commonly on the island. The Harriman Expedition stopped at St. Lawrence Island for part of a day, July 13, 1899, and three of the members, C. H. Merriam, A. K. Fisher, and L. A. Fuertes, collected five adults and one young bird. Doctor Fisher informs me that the bird was common and was the only land bird observed.

Brooks found the birds to be numerous, as did also Bailey, who found a nest with four eggs.

PLECTROPHENAX NIVALIS NIVALIS (Linnaeus)

Snow Bunting

Emberiza nivalis Linnaeus, Systema naturae, ed. 10, vol. 1, p. 176, 1758 (in Alpibus Lapponiae, etc.=Lapland).

Plectrophenax nivalis, Nelson, Birds of Bering Sea, etc., pp. 68, 69, 1883; Report upon natural history collections made in Alaska, p. 180, 1887.

Plectrophenax nivalis nivalis, Brooks, Bull. Mus. Comp. Zeöl., vol. 59, p. 407, 1915.—Balley, Condor, vol. 28, p. 166, 1926.

Nelson found this bird breeding on St. Lawrence Island. Brooks found it common there in June, as did also Bailey in July.

Collins obtained a fully grown young bird at Gambell. Unfortunately, the specimen lacks data.